Columbia River Basin Restoration Program Working Group Virtual Meeting

December 15, 2025

AGENDA OVERVIEW

9:00-9:10 Welcome, Agenda Review, and Introductions

9:10-9:25 EPA Updates

9:25-9:45 Partner Updates

9:45-10:20 Transboundary Watershed Grantee Panel: ID-MT-WA Projects

10:20-10:30 BREAK

10:30-11:25 Grantee Lightning Talks: Science and Monitoring

11:25-12:25 Toxics Monitoring Subgroup Updates

- Screening Values and Monitoring Dashboard Updates
- CRB Monitoring Strategy Vision Update
- Yakama Nation Basin-wide Implementation Plan

12:25-12:30 Wrap Up and Next Steps

IF YOU EXPERIENCE TECHNICAL DIFFICULTIES…

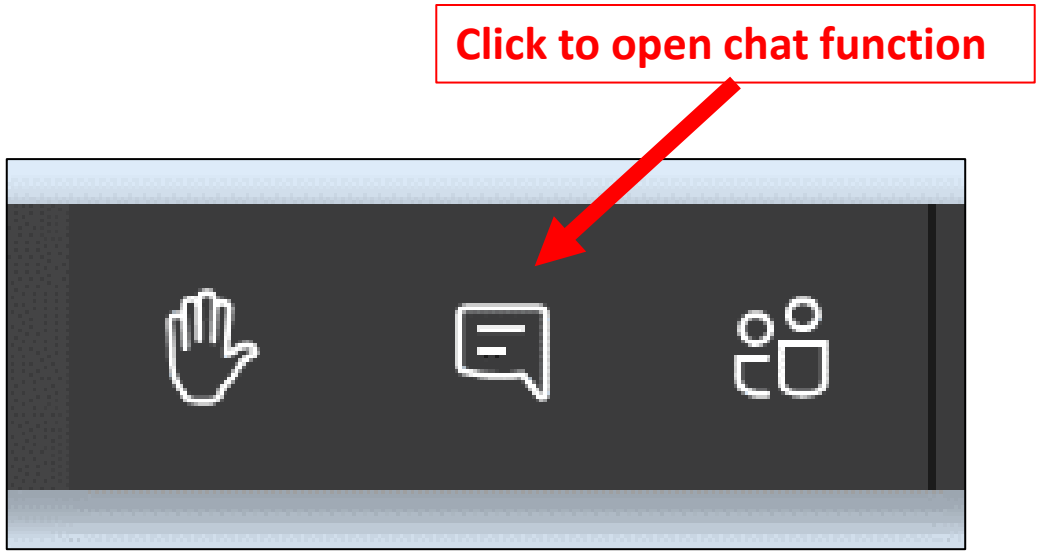
Send a message in the chat or email to:

Peter Brumm – Brumm.Peter@epa.gov

INTRODUCTIONS

- Please introduce yourself in the Teams chat

  tell us your **name** and **organization**
- **Please keep yourself on mute** unless you are speaking
- For those on the phone, press *6 to mute/un-mute your line



EPA UPDATES

EPA Administrator Zeldin's "Powering the Great American Comeback Initiative"

- **<u>Pillar 1: Clean Air, Land, and Water for Every American</u>**
- **Pillar 2:** Restore American Energy Dominance
- **<u>Pillar 3: Permitting Reform, Cooperative Federalism, and Cross-Agency Partnership</u>**
- **Pillar 4:** Make the United States the Artificial Intelligence Capital of the World
- **Pillar 5:** Protecting and Bringing Back American Auto Jobs

COLUMBIA RIVER BASIN RESTORATION PROGRAM VISION STATEMENT

"The EPA Columbia River Basin Restoration Program – through the implementation of CWA Section 123 – will be a catalyst for basin wide toxics reduction work efforts; enabling communities to access unimpaired watersheds with healthy fish and wildlife and quantifiable toxics reductions in fish, wildlife, and water."

FUNDING ASSISTANCE

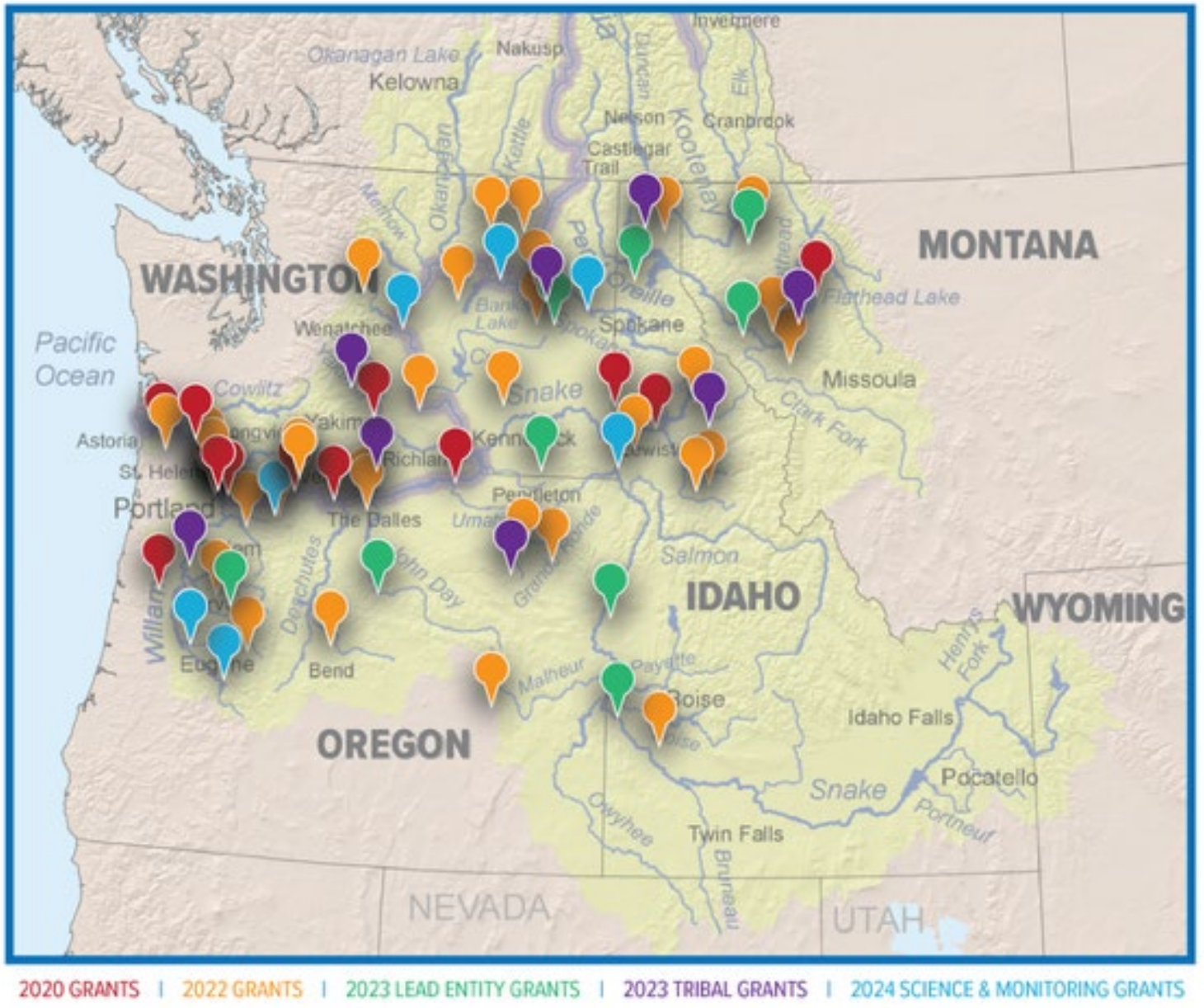
Total: 64 grants, $91M

2024:
7 Science & Monitoring grants
$10.3M awarded

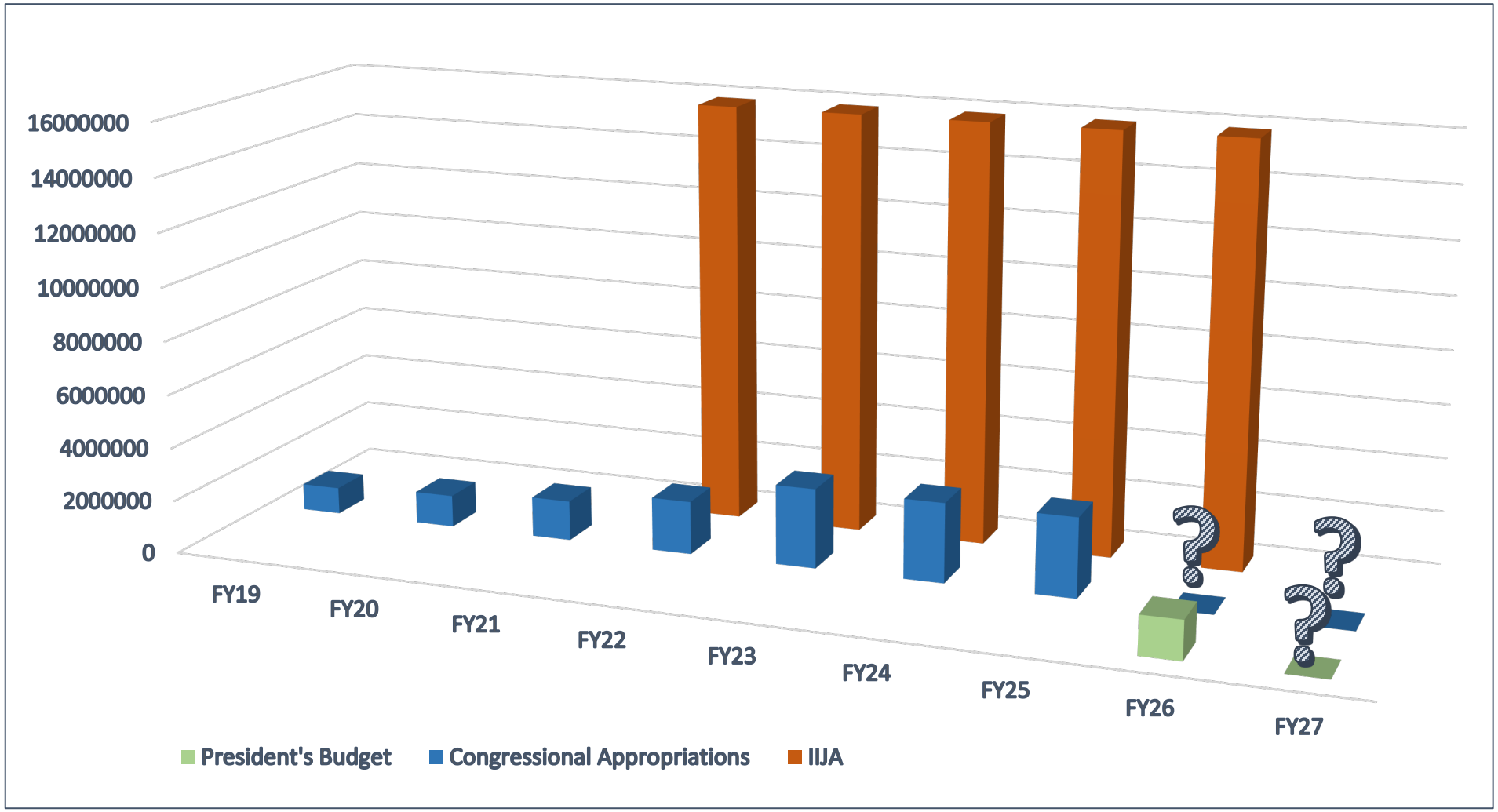
2023:
8 Tribal Lead grants
10 Toxic Reduction Lead grants
$72M awarded

2022:
25 grants
$6.9M awarded
21 completed and closing

2020:
14 grants
$1.9M awarded
14 completed and closed



Columbia River Basin Restoration Program Funding Amounts Over Time



WORKING GROUP UPDATES

How to Stay Engaged

SPRING MEETING:

Planning in-person meeting in Portland, Oregon in late April 2026
(pending approval)

Day 1: afternoon site tour or TMS Workshop
Day 2: CRBR Working Group Meeting

ONGOING COMMUNITIES OF PRACTICE

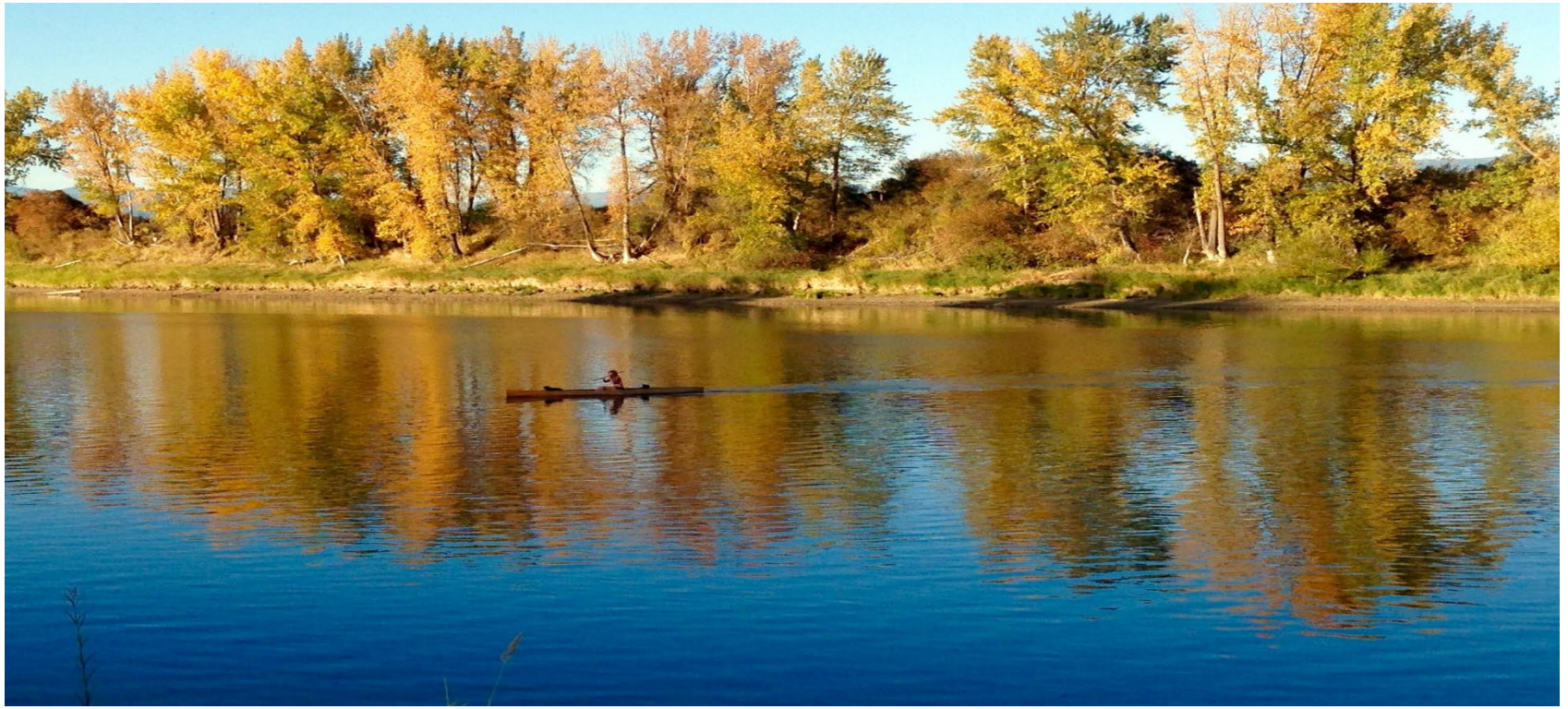
Toxics Monitoring Subgroup
Toxics Reduction Lead Grantees
Tribal Lead Grantees

WE ALWAYS WELCOME YOUR FEEDBACK!

Reach out to Robin or any team member with your suggestion

PARTNER UPDATES

Share Your Updates!



TRANSBOUNDARY WATERSHED GRANTEE PANEL

COLUMBIA RIVER BASIN RESTORATION PROGRAM

EPA

ID-MT-WA TRANSBOUNDARY WATERSHED GRANTEE PANEL

MODERATOR: Tyler Chatriand, EPA R10 Mining Advisor and TWG Lead

PANELISTS:

- **Andy Ulven**, Montana Department of Environmental Quality, Water Quality Planning Bureau Chief
- **Jade Clinkenbeard**, Idaho Department of Environmental Quality, Watershed Analyst
- **Genny Hoyle**, Kootenai Tribe, Environmental Director
- **Kelly Parker**, Confederated Salish Kootenai Tribes, Grant Specialist
- **Whitney Fraser**, Lodestone Environmental Consulting, Principal Scientist
- **Yvette Joseph**, Confederated Tribes of the Colville Reservation, CERCLA Coordinator and Tribal Member

https://www.epa.gov/grants/us-british-columbia-transboundary-watershed-grant-program

The following presentations are supported in part by a grant from the U.S. Environmental Protection Agency. The views expressed are solely those of the grantees and do not necessarily reflect those of the Agency. EPA does not endorse any products or commercial services mentioned in these presentations.

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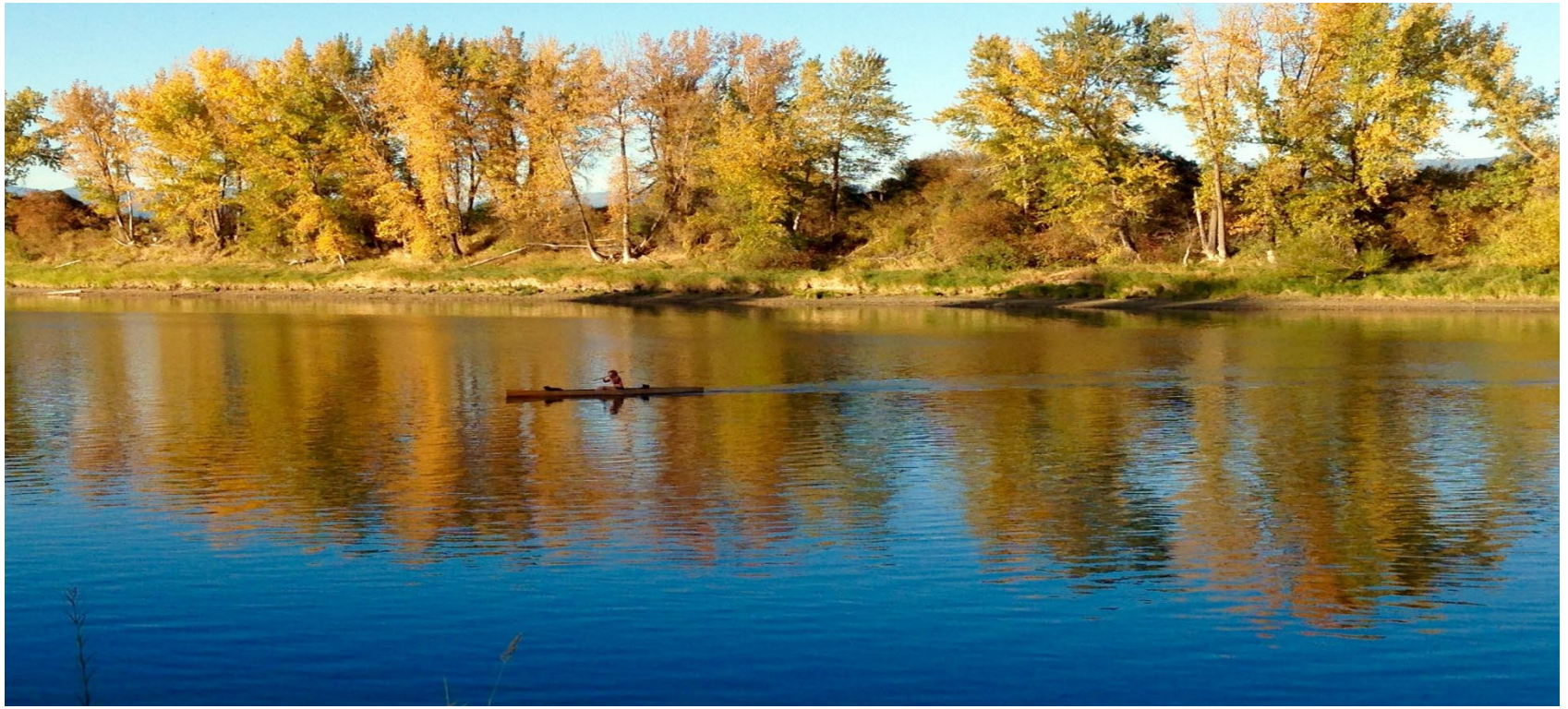
GRANTEE LIGHTENING TALKS: SCIENCE AND MONITORING



COLUMBIA RIVER BASIN RESTORATION PROGRAM

EPA

GRANTEE PRESENTATIONS

10:30-11:25 EPA Science and Monitoring Grantee Presentations

- **Brooke Stowell**, Nez Perce Water Quality Program Coordinator
- **Cailin Sinclair**, OSU Postdoc Scholar supporting Freshwater Trust
- **Will Hobbs**, WA Dept of Ecology Senior Environmental Scientist
- **Pat Heins**, ODEQ State Biosolids and Water Reuse Coordinator
- **Paige Haxton-Evans**, ODEQ Toxics and Groundwater Quality Monitoring Program Coordinator
- **Manuel Garcia-Jaramillo**, PhD, OSU Assistant Professor
- **Maggie Todd**, Spokane Tribe Water and Fish Biologist
- **Jason McLellan**, Colville Tribes Subdivision Manager

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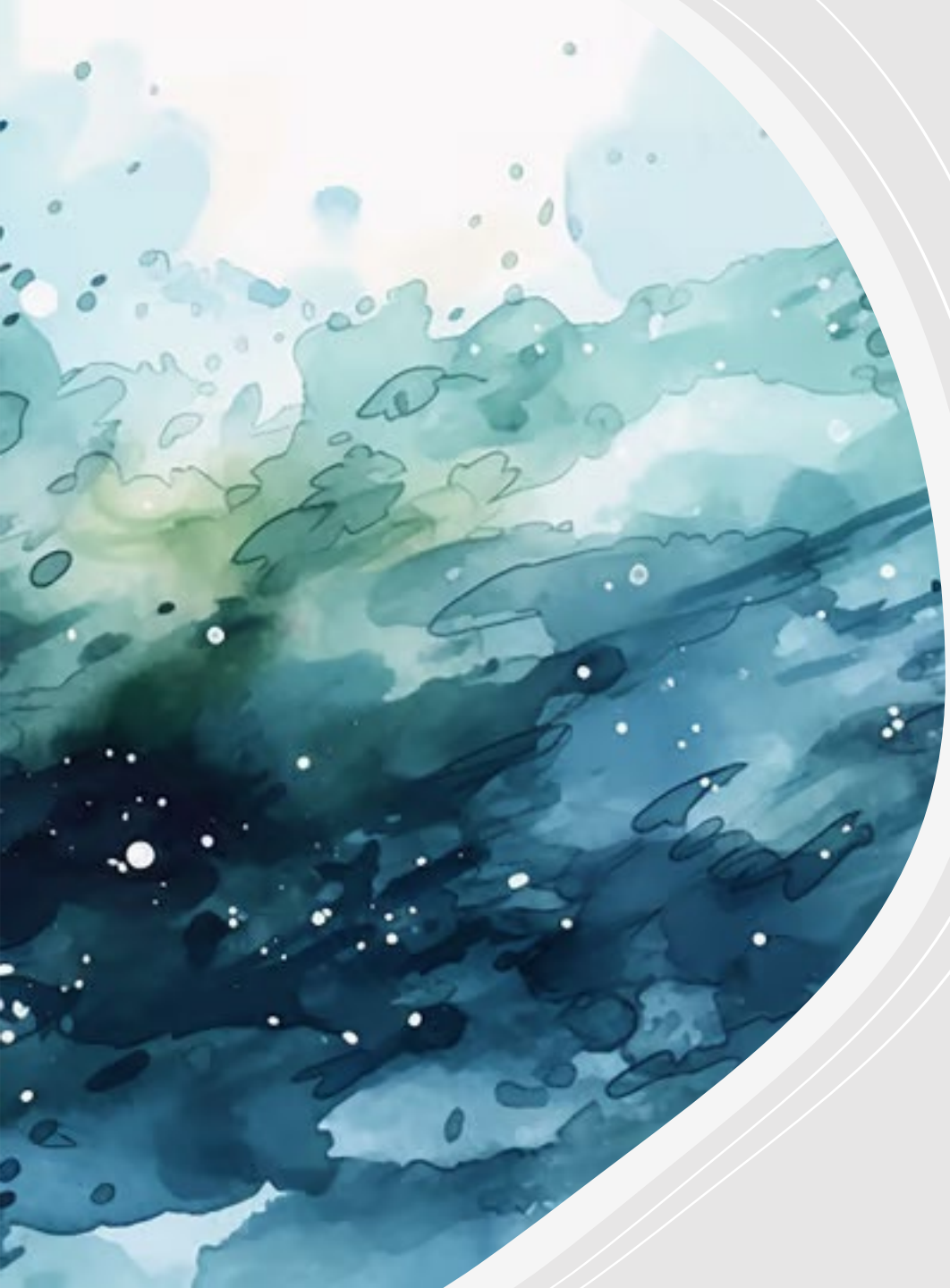


Emerging Contaminants in the Clearwater River

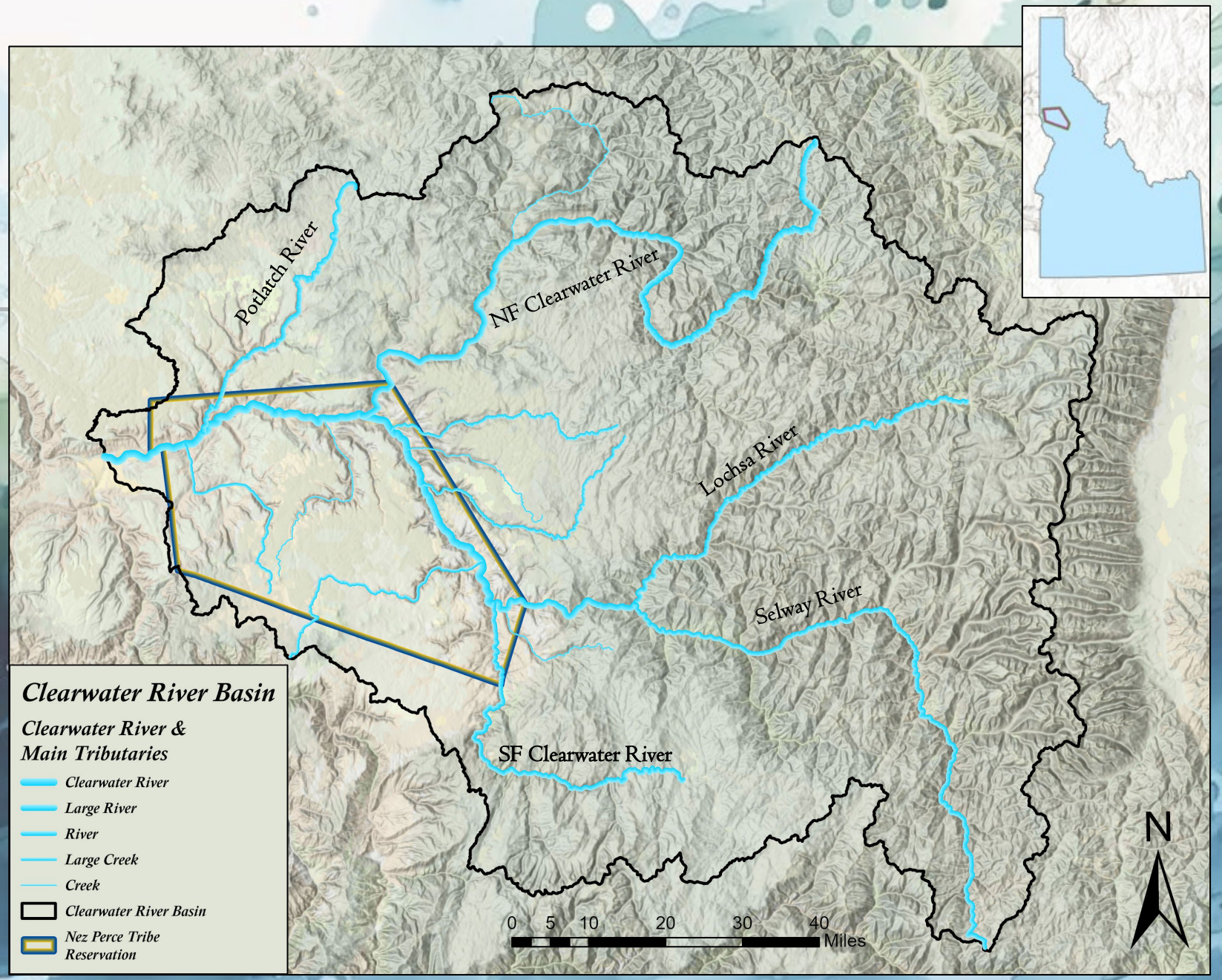
Presenter: Brooke Stowell

Columbia River Basin Restoration Working Group

December 15, 2025

Project Location

- Clearwater River Watershed, HUC 17060306
- Middle-upper Columbia River Basin (CRB)



Summary of Previous Projects

CRB Phase I

- Purpose: Surface Water & Sediment Sampling in Tributaries
- Parameters: Nutrients, Metals, Mercury, Legacy Pesticides
- Results: Nutrient Exceedances at all sites, Arsenic at select sites

CRB Phase II

- Purpose: Surface Water & Sediment Sampling, Biotic Tissues in Clearwater River
- Parameters: Nutrients, Metals, Mercury, Pesticides, PCBs, PBDEs
- Results: Surface Water exceedances for Nutrients and Arsenic; Biotic Tissue exceedances for all parameters

CRB Phase III

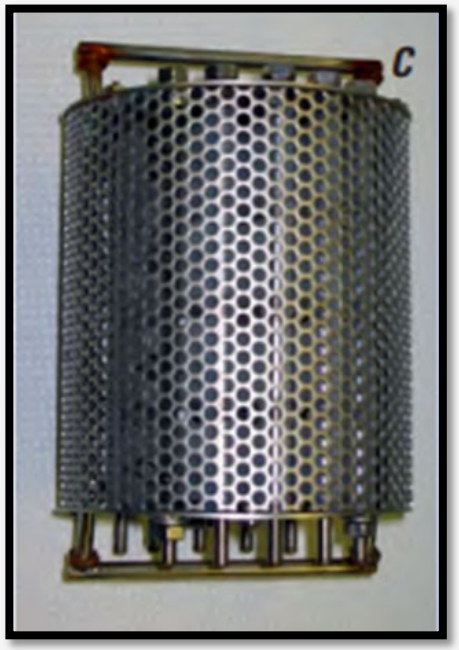
- Purpose: Surface Water Sampling in Clearwater River & Dworshak Reservoir
- Parameters: PPCPs, PFAS/PFOS, PBDEs, total and Methyl Mercury
- Results: Hits for all parameters, none exceeding human health criteria

CRB Phase IV

We know from previous studies that complex chemicals are present in the Clearwater River.

Problem:

1. Mixture effects of complex chemicals are not understood.
2. Can not assess potential biological effects in aquatic ecosystems without understanding mixture effects.
3. Current data only represents snapshots in time. Can not assess chronic exposure conditions with current data.



Solution! POCIS Sampler

Image Credit: USGS publication
https://pubs.usgs.gov/tm/tm1d4/pdf/tm1d4.pdf

CRB Phase IV

Data Analysis:

- ToxEval and ToxMixtures R packages
- ToxCast Database

Outreach and Reporting:

1. Multi-Media Outreach: website updates, virtual newsletters
2. Share results and outreach to stakeholders and watershed managers
3. USGS published article

Questions?

Contact Information:

Brooke Stowell

Water Quality Program Coordinator

Nez Perce Tribe Water Resources Division

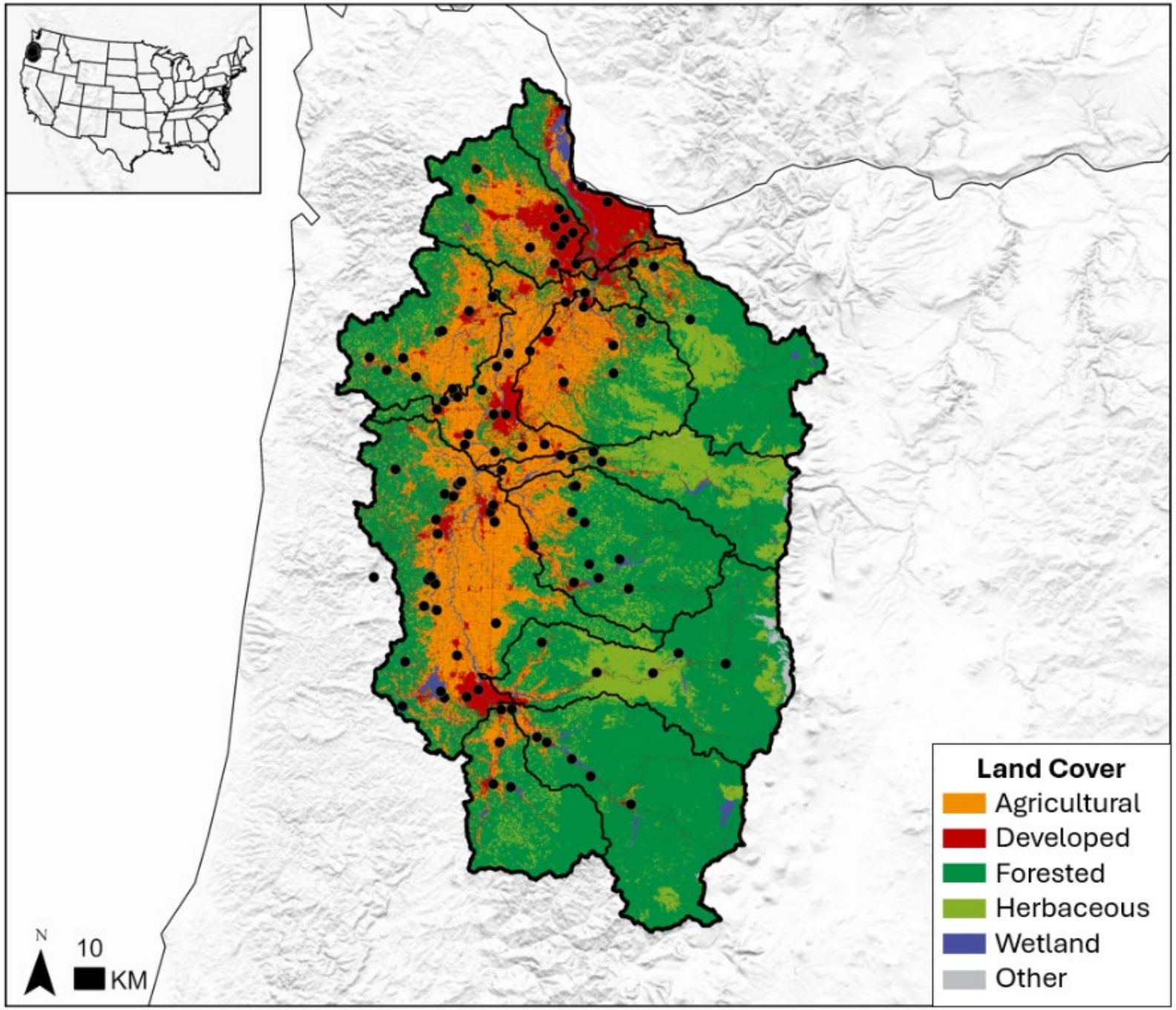
brookec@nezperce.org

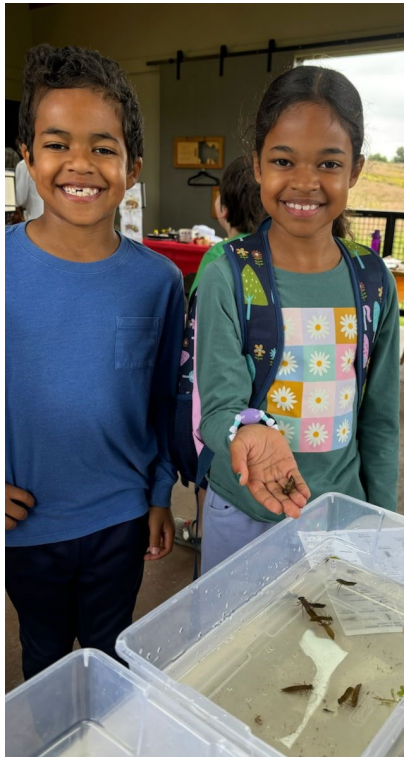
208-843-7368 Ext. 3904

Engaging Communities to Monitor Mercury Risk in the Columbia River Basin: intensive application of a national biosentinel network at a regional scale

Oregon State University, U.S. Geological Survey

2022-2025

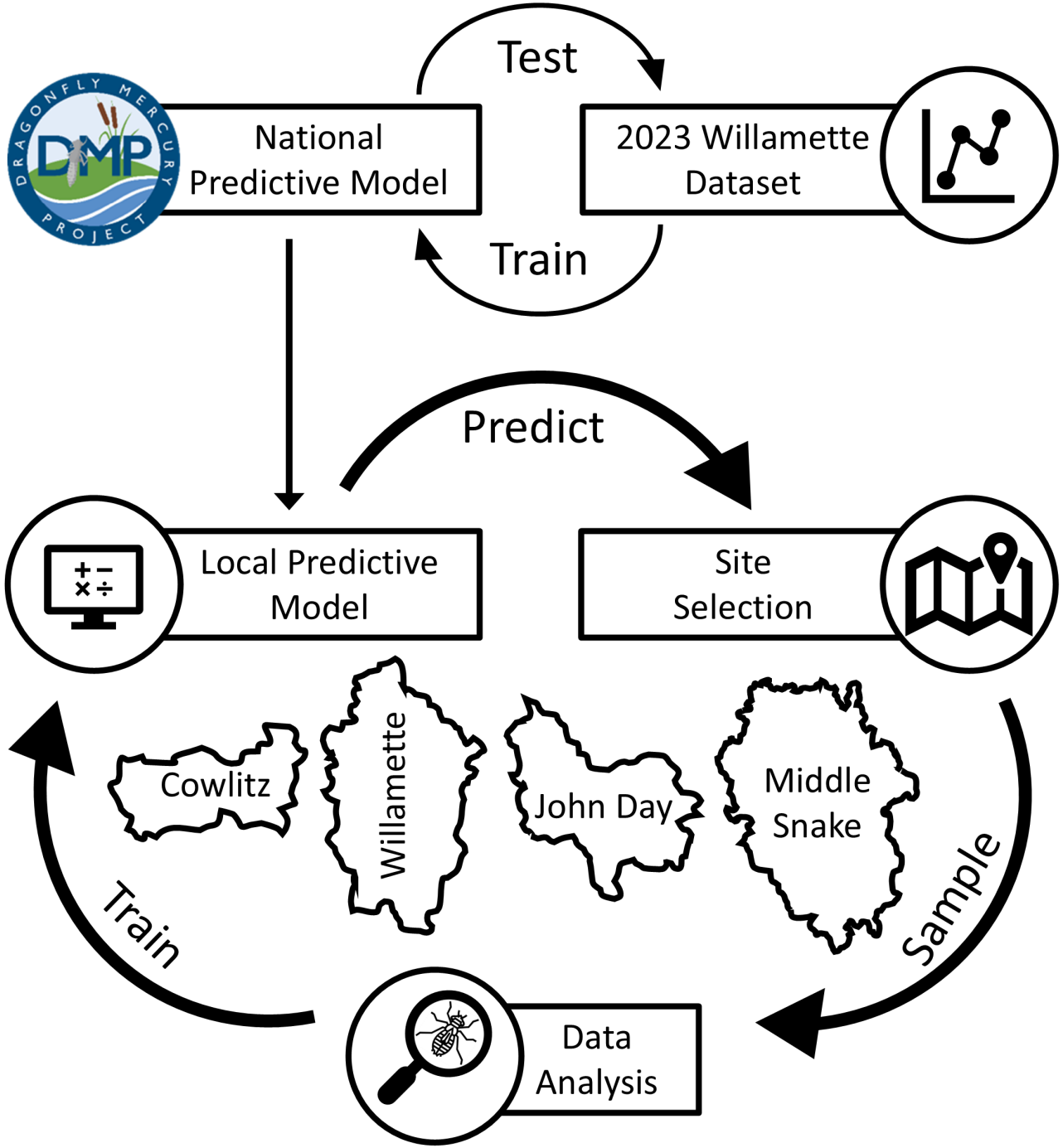

Land Cover
Agricultural
Developed
Forested
Herbaceous
Wetland
Other
N
10
KM

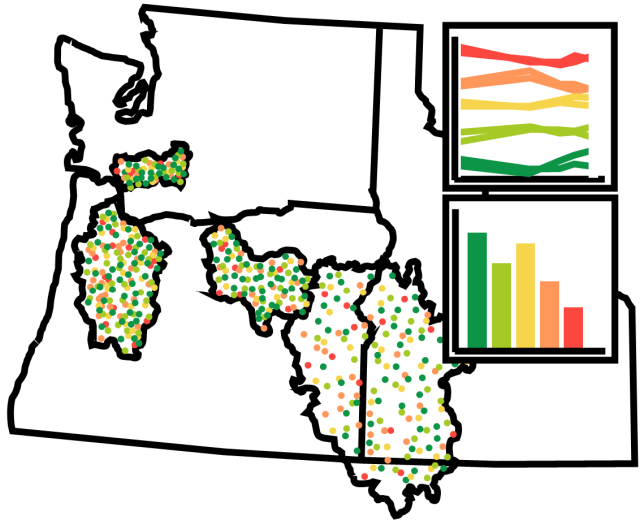


Mercury Risk in the Columbia River Basin: expanding a biosentinel monitoring network to model risk, identify pathways, and empower mitigation and management

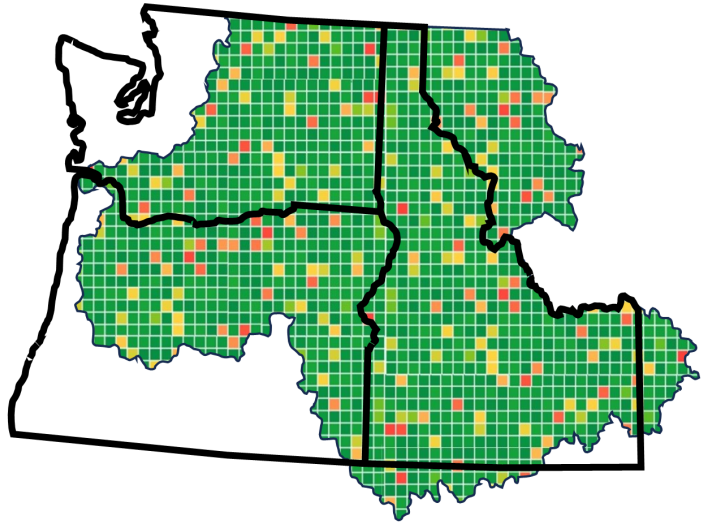
The Freshwater Trust, Oregon State University,
U.S. Geological Survey

2024-2028

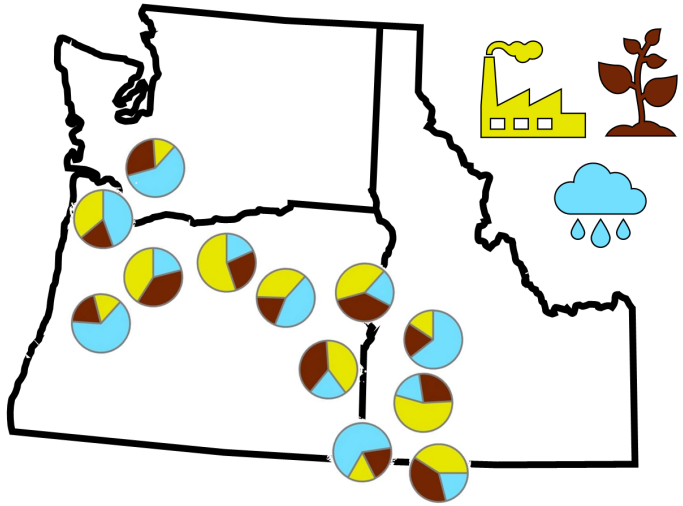

Test
National Predictive Model
2023 Willamette Dataset
Train
Predict
Local Predictive Model
Site Selection
Cowlitz
Willamette
John Day
Middle Snake
Train
Sample
Data Analysis



1 Spatial & Temporal Trends



2 Basin-Wide Hg Risk Prediction



3 Source Pathways Identified

4 Management Efficacy

Collaboration Opportunities

- Reed canary grass management projects
- Agricultural management projects
- Sites/landowners in the Cowlitz, John Day, Middle Snake, or Willamette River watersheds

cailin.sinclair@oregonstate.edu

Columbia River Basin Toxics Monitoring Network and Resident Fish Movement

William Hobbs

Environmental Assessment Program, Toxic Studies Unit

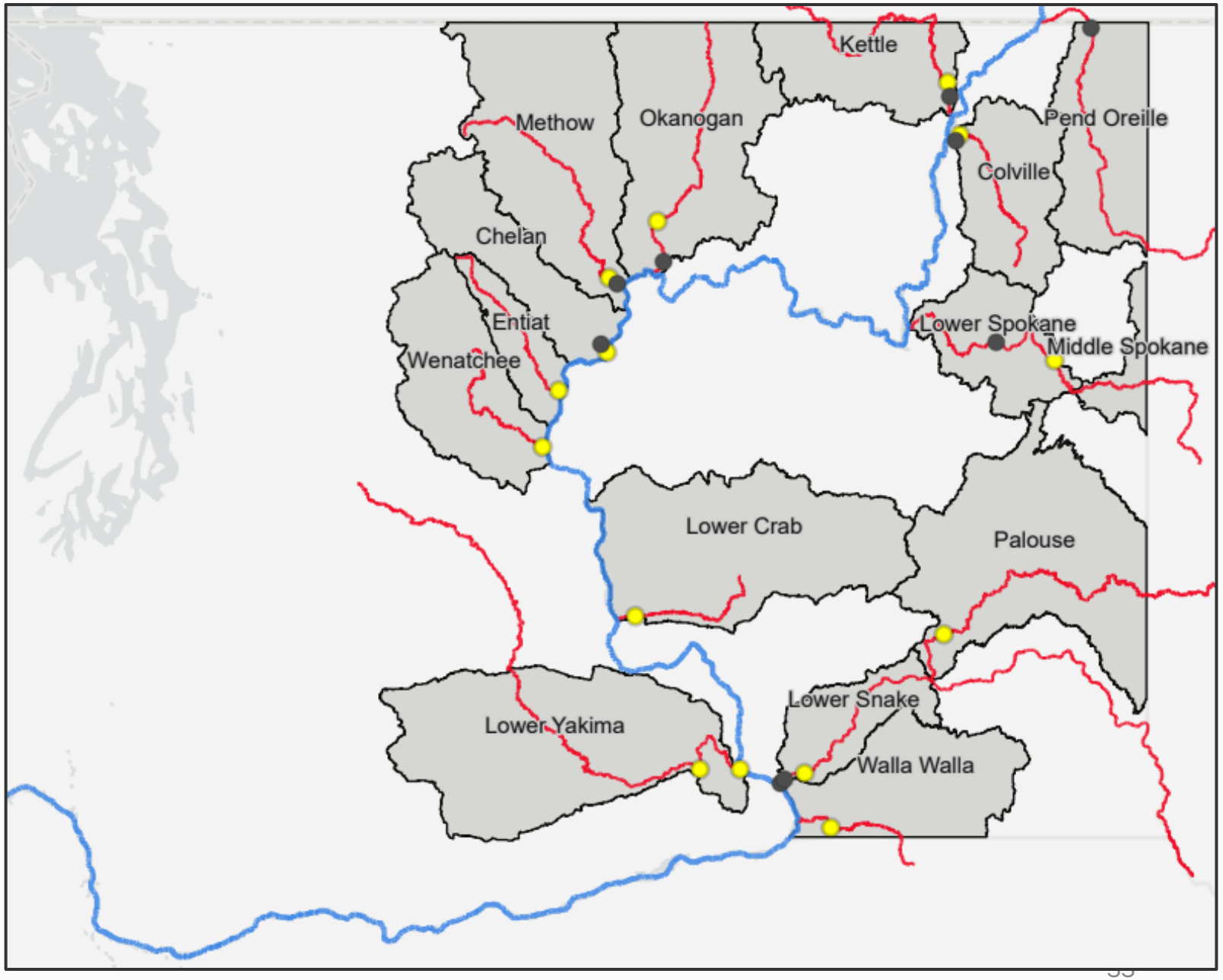
Goal 1

Sample and assess contaminant load and concentrations at a network of monitoring stations in major tributaries to the mainstem Columbia River

- Major Tributary monitoring stations in the mid and upper-Columbia
- Synoptic survey of inputs (concentrations and loads) to the mainstem at high and low flow – fixed stations with flow gages
- PCBs, PDBEs and chlorinated pesticides (e.g. DDx)
- Establish bioconcentration factors at the lower trophic levels

Sites

- One location per tributary, except Snake and Yakima.
- 2 - 4 sampling events depending on media
- **Passive** – Low Density Polyethylene (water and sediment) and biofilm
- **Active** –large volume samples (250L; particulate and dissolved phase)



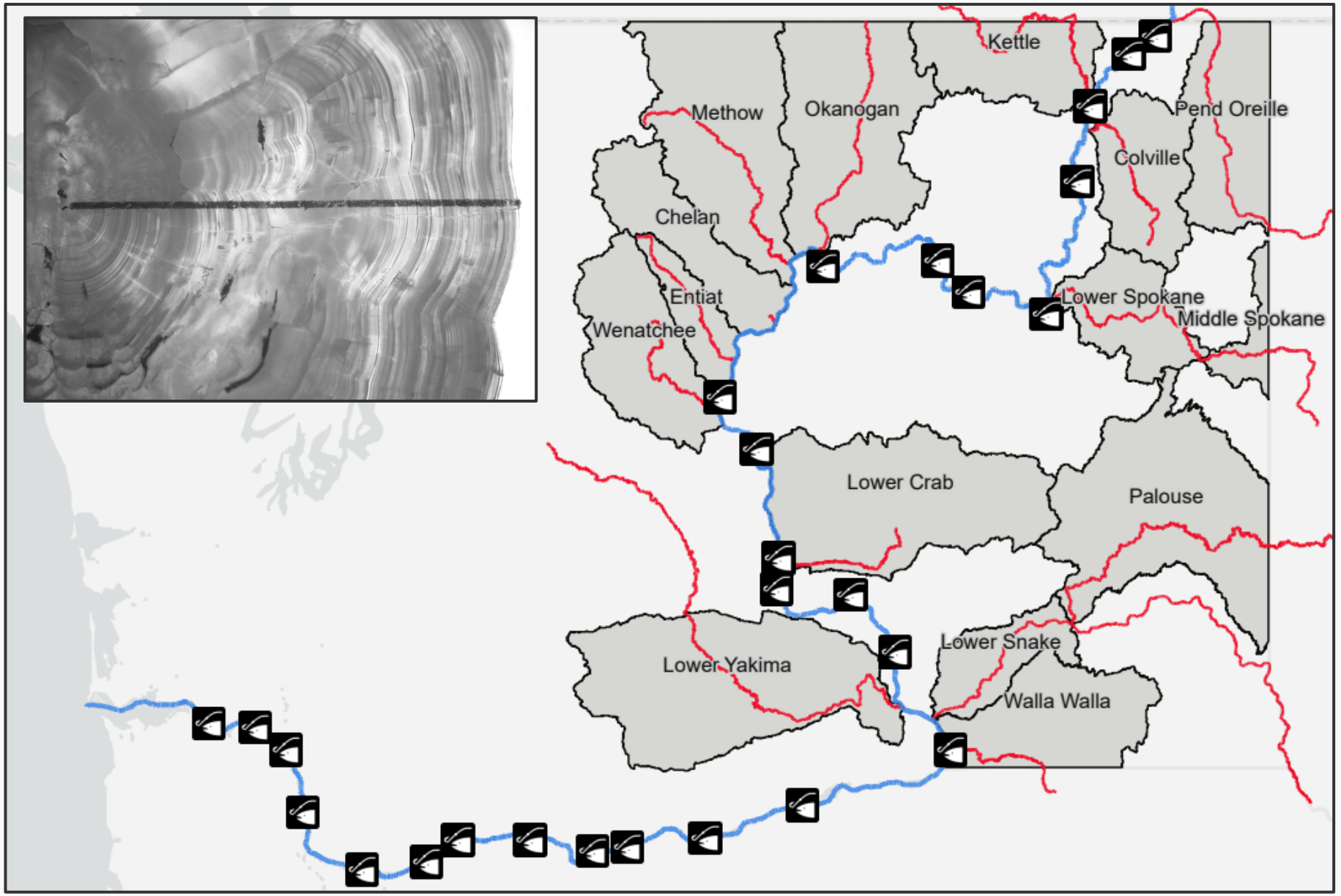
Goal 2

Establish and evaluate a baseline dataset for resident fish otolith microchemistry and fish life history

- Collaboration with WDFW, Otolith and Aging Labs
- Establish the movement and provenance of resident fish tissues used in contaminant monitoring.
- Grab samples at ECY ambient WQ stations to establish a geochemical baseline for otolith microchemistry.
- Use Ecology's Freshwater Fish Contaminant Monitoring Program collections (2024-2027) in the Mainstem Columbia R. to describe the geographic provenance of fish tissues used in toxics monitoring.
- PCBs, PDBEs, chlorinated pesticides (e.g. DDx), Hg and PFAS.
- Pilot study in the Wenatchee Basin with archived fish otoliths

Sites

- Water: 50-60 sites sampled quarterly for 2 years.
- Fish:
  - 2024: Columbia R-1 (estuary to Bonneville Dam);
  - 2025: Columbia R-2, lower (Bonneville Dam to McNary Dam)
  - 2026: Columbia R-3, middle (McNary Dam to Priest Rapids Dam)
  - 2027: Columbia R-4, middle (Priest Rapids Dam to Grand Coulee Dam)
  - 2028: Columbia R-5, upper (Grand Coulee Dam to Northport)



Project Timeline

Project year	Federal fiscal period	Project planning and manufacturing of equipment	Final published QAPP	Sampling for Toxics	Sampling for metals / isotopes	Project data reduction	Project final report and data archiving
1	10/01/2024 - 03/31/2025						
1	04/01/2025 - 09/30/2025			Aug/Sept 2025			
2	10/01/2025 - 03/31/2026			May/June 2026			
2	04/01/2026 - 09/30/2026			Aug/Sept 2026			
3	10/01/2026 - 03/31/2027			May/June 2027	WY 2027		
3	04/01/2026 - 09/30/2027			Aug/Sept 2027	WY 2027		
4	10/01/2027 - 03/31/2028				WY 2028		
4	04/01/2028 - 09/30/2028				WY2028		
5	10/01/2028 - 03/31/2029						
5	04/01/2029 - 09/30/2029						

Thank you

William Hobbs

william.hobbs@ecy.wa.gov

Biosolids & PFAS

Oregon DEQ Water Quality

10/30/2025

EPA Columbia River Basin Restoration

The TEAM

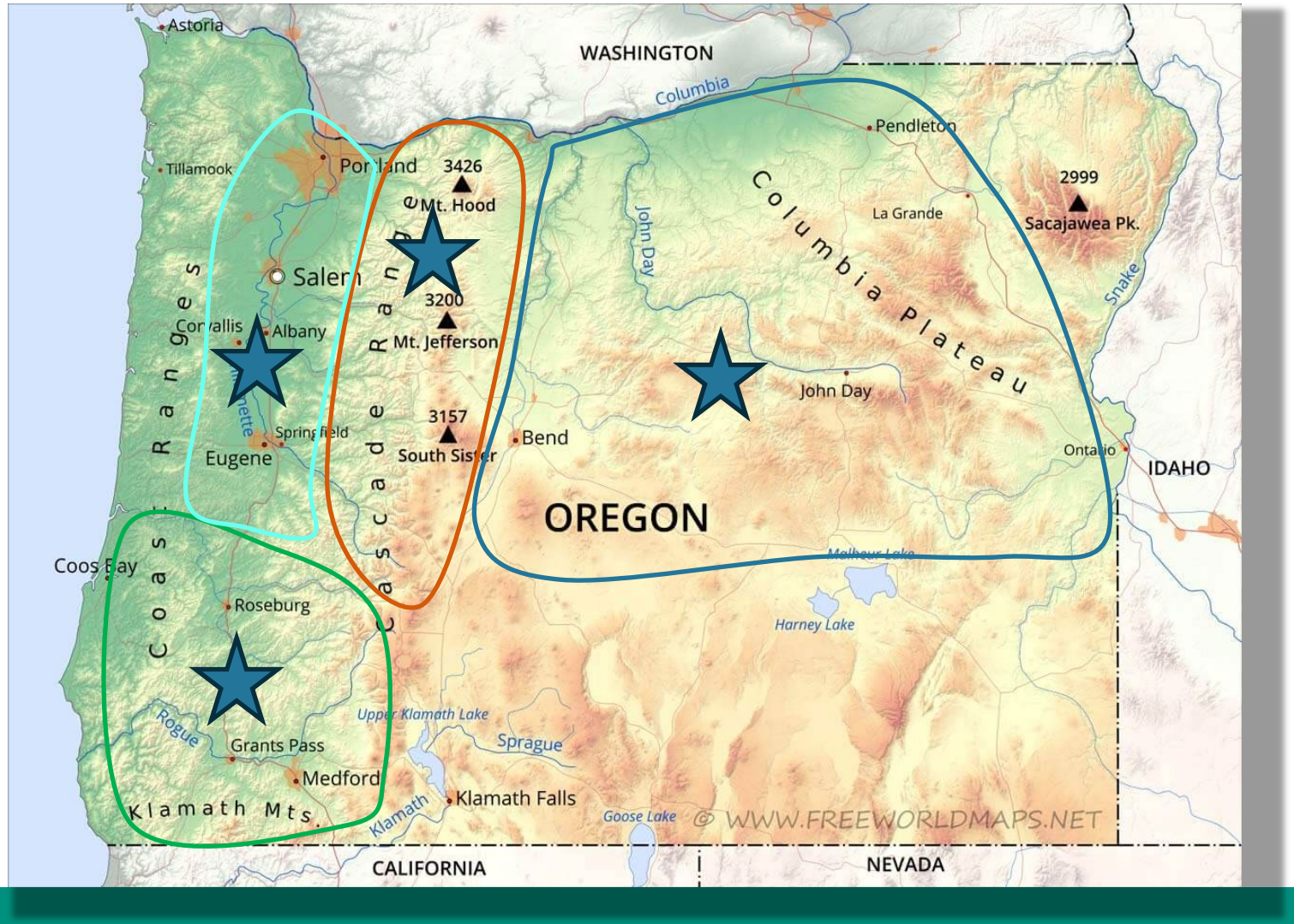
Funding

- Oregon general fund (2024 session HB 2947)
- EPA's CRB grant
- Oregon Association of Clean Water Agencies (ACWA)

Participants

- Oregon DEQ
- ACWA
- OSU
- Volunteer WWTPs & their farmers

Study locations



What are we looking at?

PFAS in:

- Class B Biosolids cake that are land applied
- Soil in fields that have received biosolids for 7 years or more
  a) Surface
  b) Rooting zone
  c) Vadose zone
- Crop grown on these fields (grass seed, alfalfa, pasture)
- One control field and crop for each region

Analysis

- EPA Method 1633

  40 compounds
- OSU novel method - LC/HR MS

  Custom database the looks at >13K PFAS.

Mapping and Prioritizing Toxic Contaminants in the Columbia River Basin: Innovative Techniques and Community Collaborations

Presenting today:

Manuel Garcia-Jaramillo, Ph.D.
Assistant Professor
Department of Environmental and Molecular Toxicology
Oregon State University

Columbia Working Group Meeting - December 2025

Our Team at OSU:

Manuel Garcia-Jaramillo

Kim Anderson

Lane Tidwell

Stephen Good

Diana Rohlman

Taylor Vogel

Gerrad Jones

Robyn Tanguay

Chris Schmokel

Serhan Mermer

Shawn Tucker

Kenneth Lee

Cady Lancaster

PROJECT OVERVIEW

EPA CRB Solicitation

1 Monitoring to evaluate trends

WHY

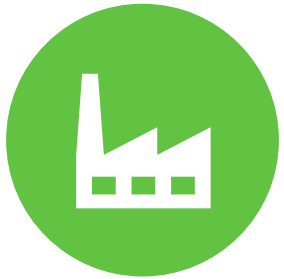
Presence of toxics found in fish, wildlife, water, sediment raise concern about:

- Health of the Basin's aquatic ecosystem
- Potential risk to human health

Potential contributions to contamination / barriers to fish population recovery:

Flood control

Power generation



Industry

Urban development

Mining

Agricultural practices

PROJECT OVERVIEW

EPA CRB Solicitation

2 Promote community knowledge

COLUMBIA RIVERKEEPER

Project partners

Website

Webinars

Newsletter

Infographics

PROJECT OVERVIEW

OSU Project

This project is focused on **identifying and prioritizing toxic organic contaminants** in the Lower Columbia River (LCR).

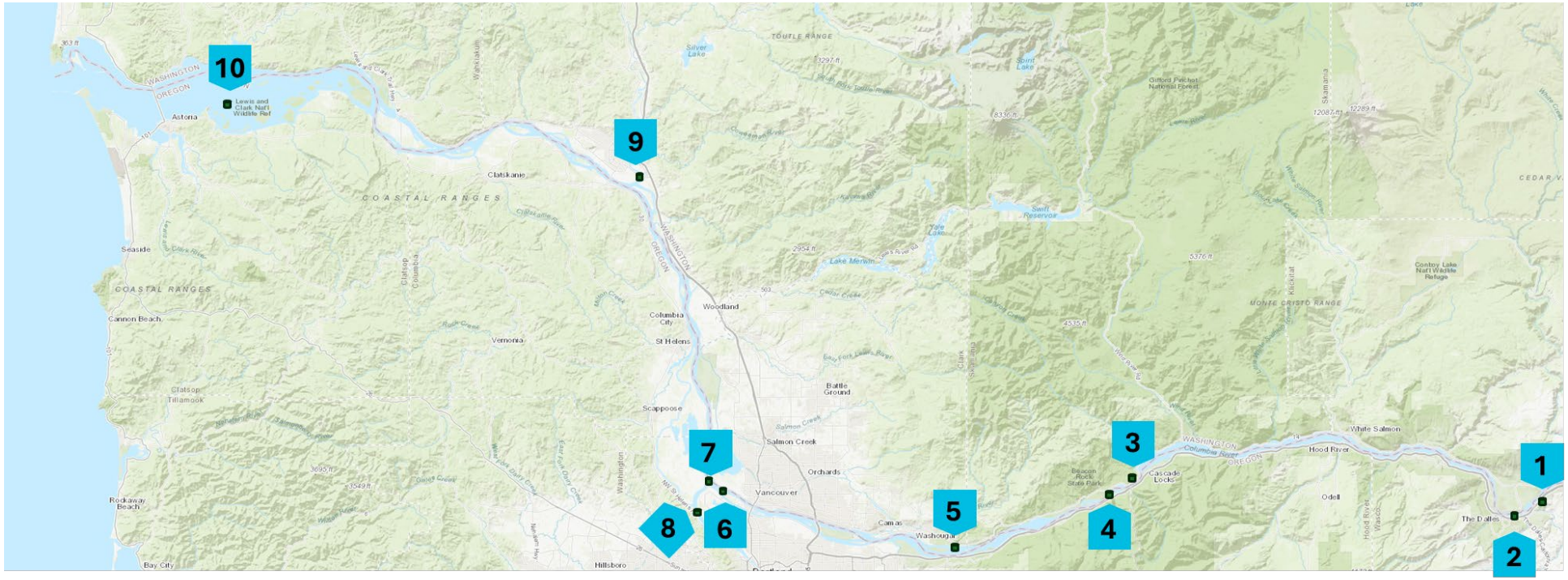
Characterization & Spatiotemporal trend analysis for organic contaminants

Identify possible sources and fate of contaminants

Novel Methods and Approaches

PROJECT GOALS

Monitor contaminants in a 170-mile region of the Lower Columbia River.



PROJECT GOALS

Evaluate toxicity to help us prioritize which chemicals to focus on.

Zebrafish as a research model

- There are thousands of chemicals in our environment.
- We are always exposed to mixtures of chemicals.

- Humans and zebrafish share >70% similar genes.
- 84% of human disease genes are also in zebrafish.

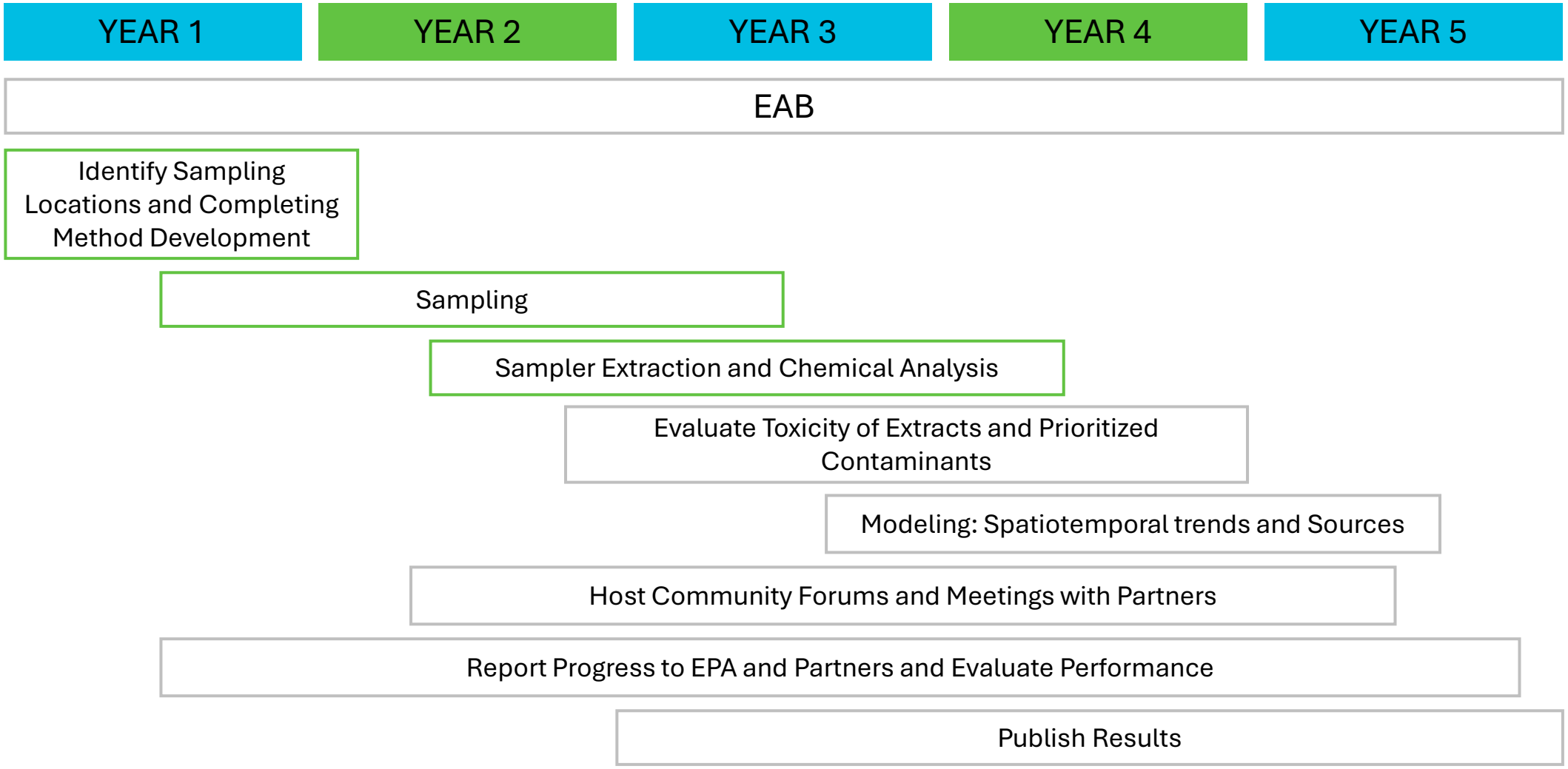
- Humans and zebrafish have many of the same organs.
- Zebrafish develop very quickly – from a single cell to swimming fish in 5 days.

PROJECT GOALS

Identify sources of prioritized chemicals.

Develop models for chemical contaminants in the Lower Columbia River.

TIMELINE


YEAR 1
YEAR 2
YEAR 3
YEAR 4
YEAR 5
EAB
Identify Sampling Locations and Completing Method Development
Sampling
Sampler Extraction and Chemical Analysis
Evaluate Toxicity of Extracts and Prioritized Contaminants
Modeling: Spatiotemporal trends and Sources
Host Community Forums and Meetings with Partners
Report Progress to EPA and Partners and Evaluate Performance
Publish Results

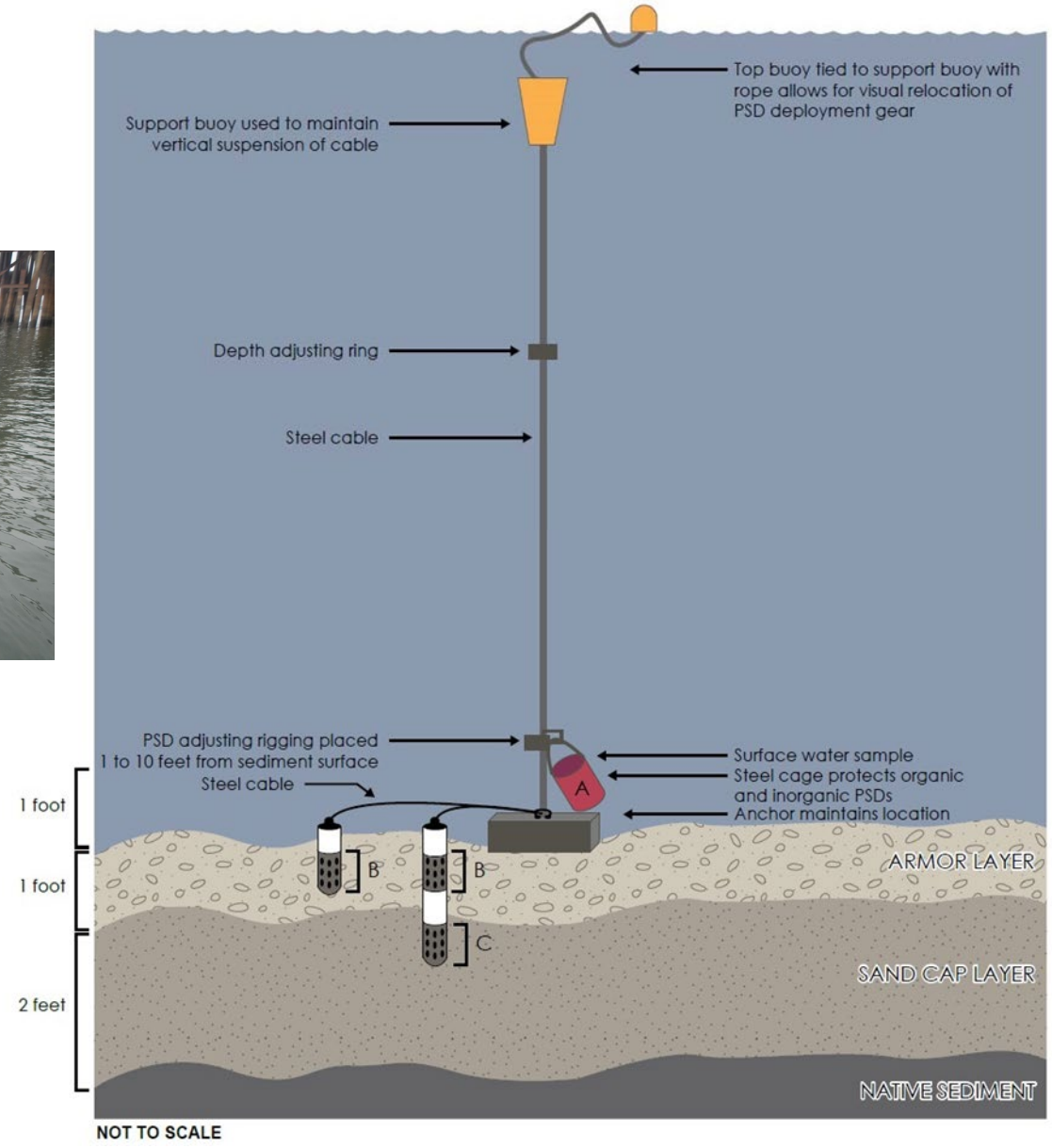
SAMPLING

Passive Sampling Devices

Water

These samplers are suspended in the water. The metal cage protects against small creatures and dirt.

Water Passive Sampling Device.
https://youtu.be/M08r3Ss5VVg



SAMPLING

200 miles of Columbia River

- Upstream of The Dalles (rm 193) to Russia Island (rm 16)
- ~ 2 weeks on river/travel per month for 13 months
- ~ 2 weeks per month for pre-field and post prep per month

SAMPLING LOCATIONS

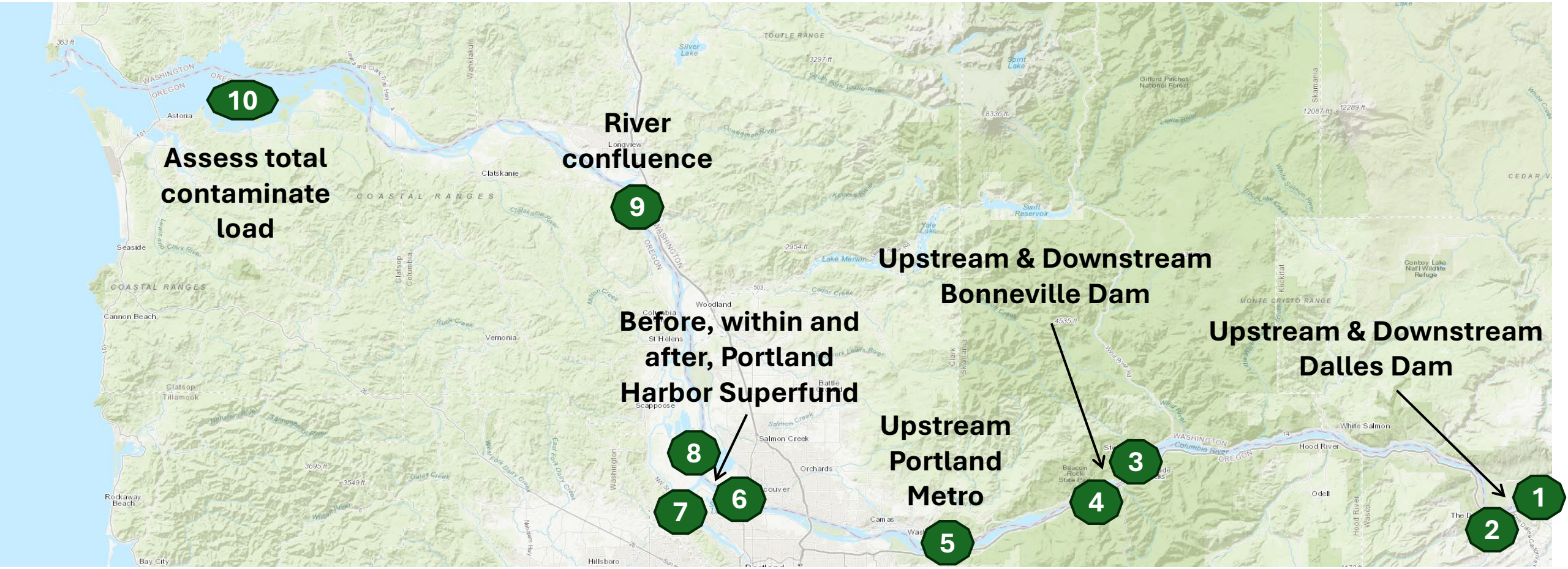
Locations selected based on:

Scientific interest
Above / Below dams

Accessibility
Year round, inclement weather

Community interest
Informed by an External Advisory Board

SAMPLING LOCATIONS



SAMPLING LOCATIONS

Current locations

1 RM 193. The Dalles – Upstream

2 RM 191. The Dalles – Downstream

SAMPLING LOCATIONS

Current locations

3 RM 147. Bonneville – Upstream

4 RM 144.5. Bonneville – Downstream

SAMPLING LOCATIONS

Current locations – limited/no accessibility during low water

RM 134. Dalton Point

RM 130. Rooster Rock

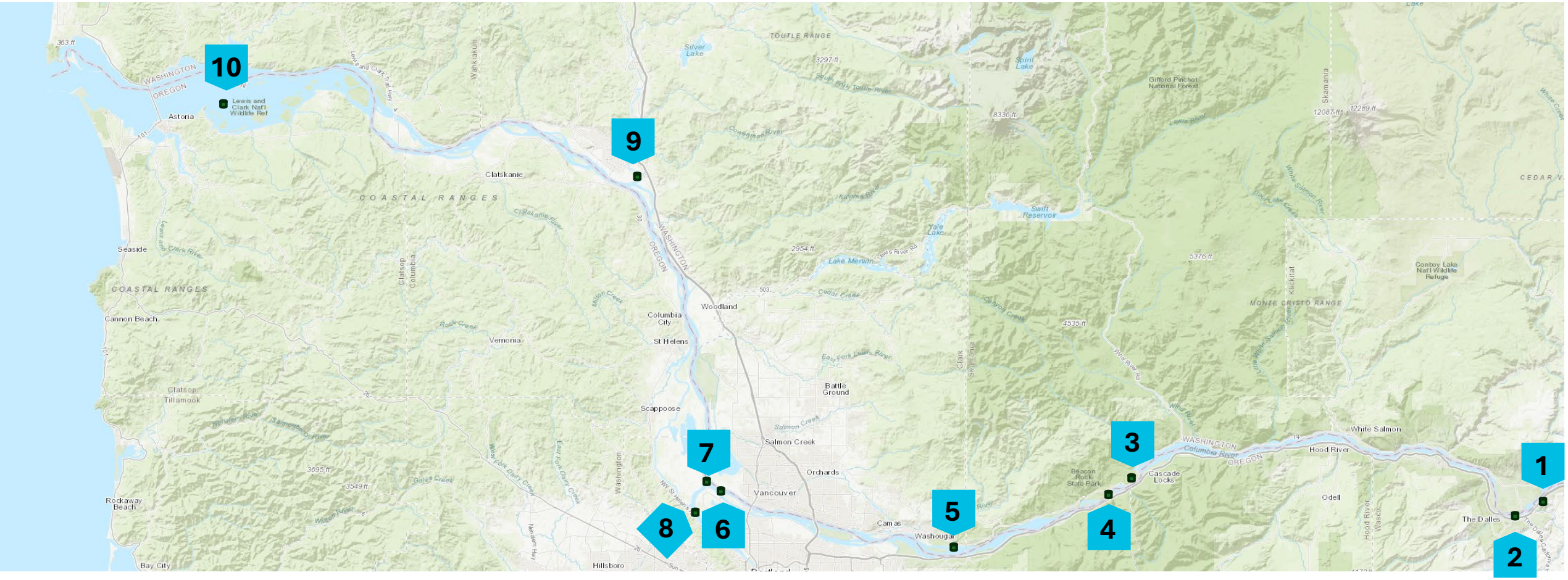
SAMPLING LOCATIONS

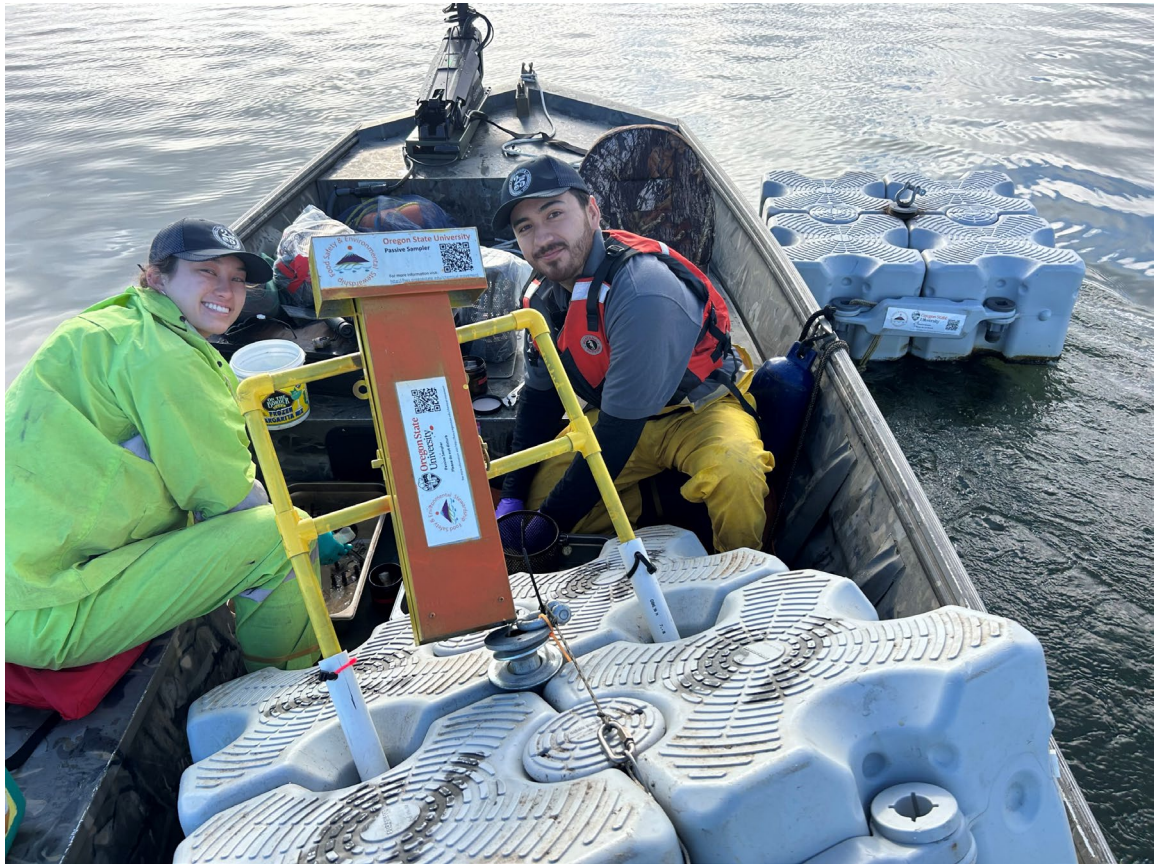
Current locations

5 RM 109. Chinook landing

9 Russian Island

SAMPLING LOCATIONS




Oregon State University
Passive Sampler

ACKNOWLEDGEMENTS

Oregon State University

Garcia-Jaramillo Lab
Manuel Garcia-Jaramillo, PhD
Cady Lancaster, PhD
Kenneth Lee

Anderson Lab
Kim Anderson, PhD
Lane Tidwell, PhD

Good Lab
Stephen Good, PhD

Jones Lab
Gerrad Jones, PhD

Mermer Lab
Serhan Mermer, PhD
Chris Schmokel, FRA

Rohlman Lab
Diana Rohlman, PhD
Taylor Vogel, MPH

Tanguay Lab
Robyn Tanguay, PhD

Columbia Riverkeeper
Lauren Goldberg
Lorri Epstein

OSU Superfund & EHSC

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BIODIVERSITY RESEARCH INSTITUTE
innovative wildlife science

Suspended Sediment Trap Design and Use – Upper Columbia River

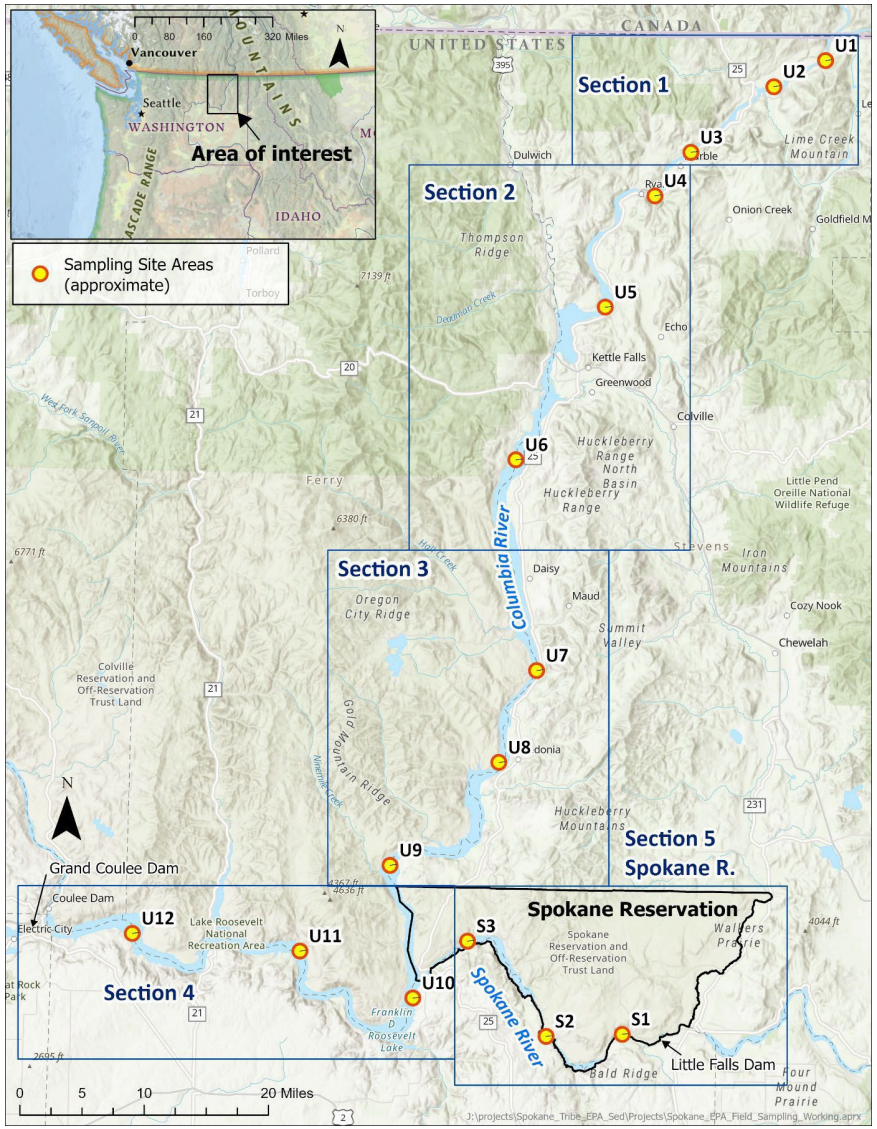
October 20, 2025

Overview

- Design based on other published studies
  - e.g., Masson et al. 2018. Sampling of suspended particulate matter using particle traps in the Rhône River: Relevance and representativeness for the monitoring of contaminants. *Science of the Total Environment, 637*: 538-549.
- Purpose:
  - To collect suspended sediment for chemical/physical analysis
  - Not intended to be used to quantify sediment load being carried in the water column
- Timeline
  - 2023: Design and field testing
  - 2024: Deployed at 15 sites in April and July/August
  - 2025: Deployed at 10 sites in April
  - 2026-2027: Planning to deploy at 10 sites in April

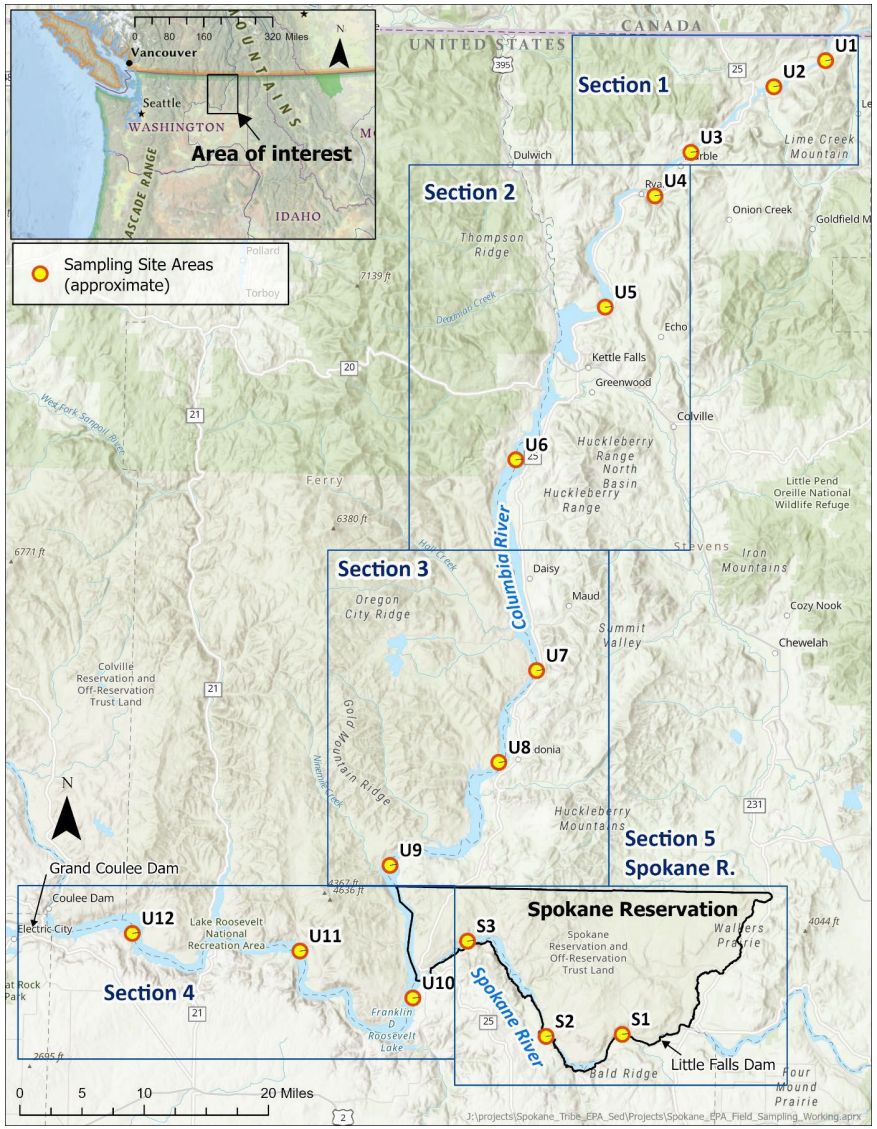
Trap Deployment

- 15 sites in 2024
- 10 sites in 2025-2027
- Deployed in thalweg were suspended sediment is expected

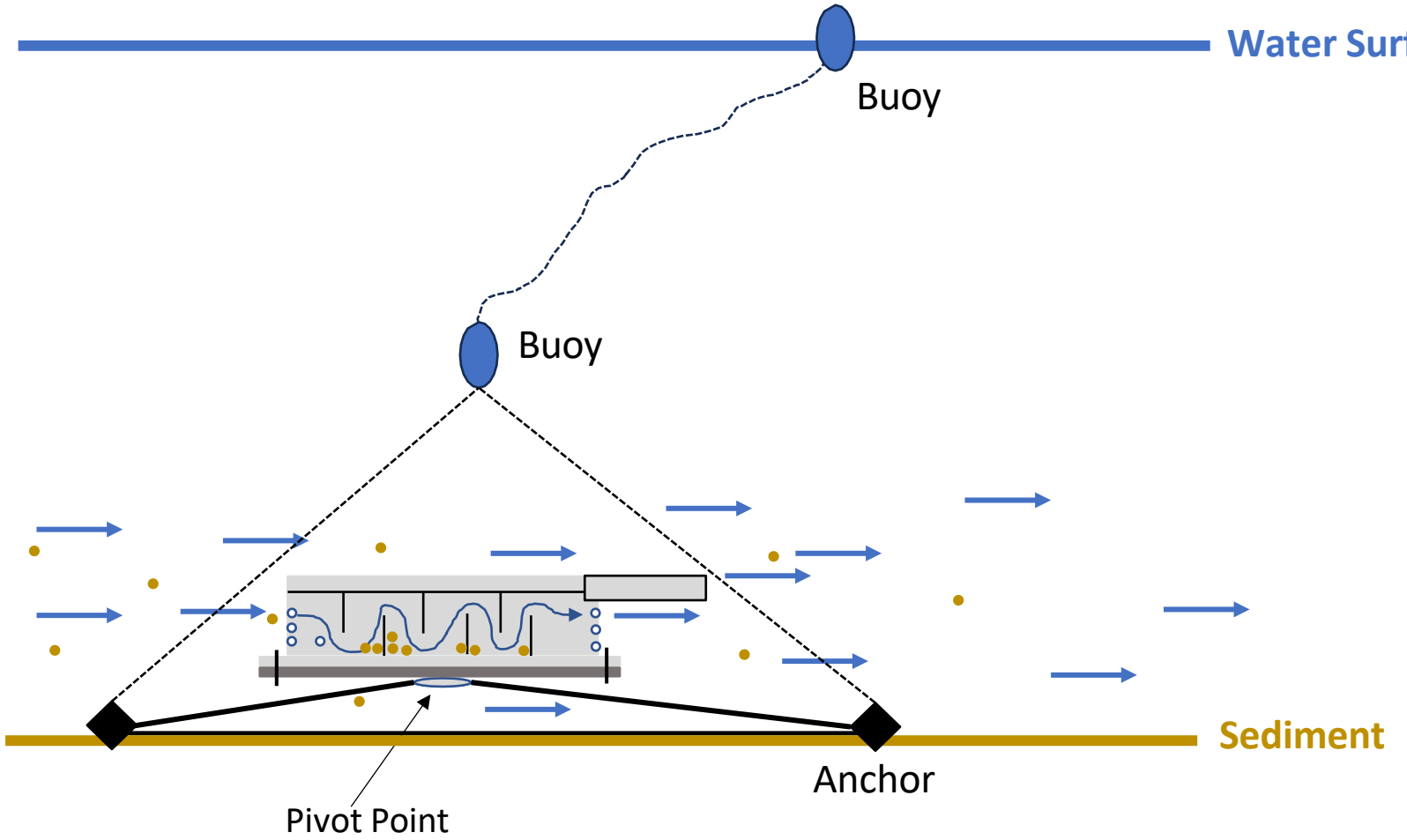


Trap Recovery

- 2024
  - 12/15 sites July/August
  - 8/15 sites October
- 2025
  - 10/10 sites July/August
- Issues
  - Empty traps
  - Missing traps
    - Fast currents, buoys missing
    - Some recovered, some not

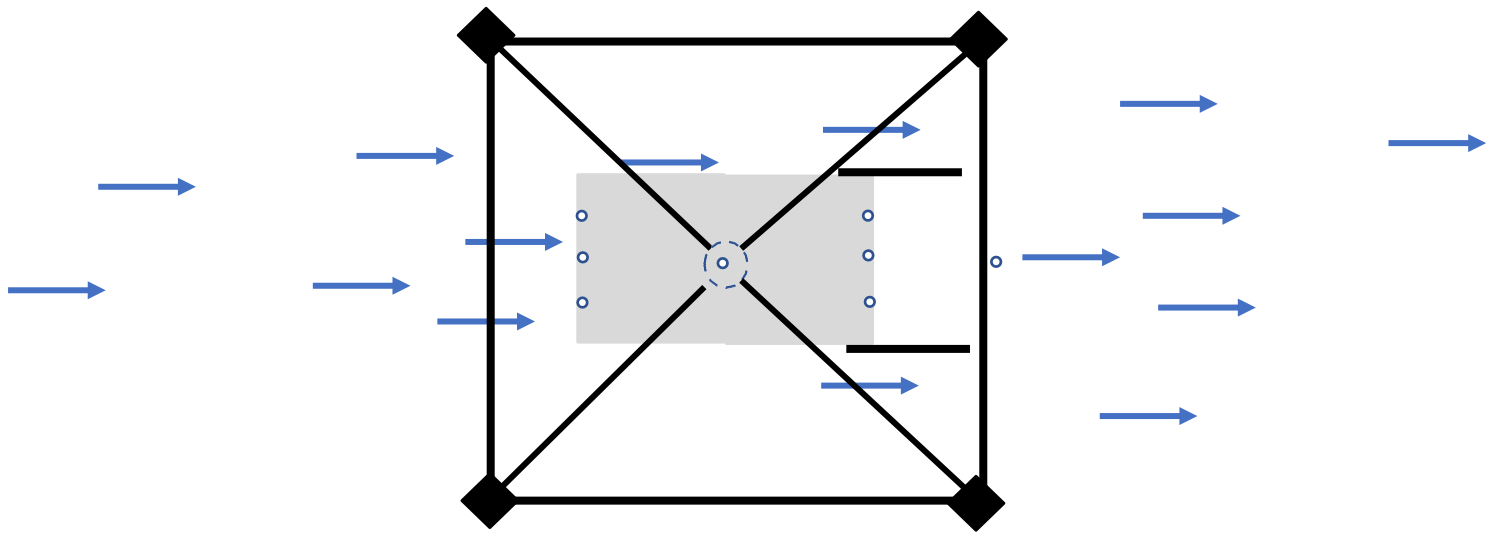


Trap Design: Side View



6” off bottom, buoy line off the top that connect, 4’x4’ frame footprint, 12” wide by 20”, ½” holes on front, 6-8” deep, anchors on corners

Trap Design: Top View



Fins keep front of the collection box facing into the current.

Trap Pictures

Monitoring and Assessment of the Effects of Selenium and Other Metal(loid)s on Burbot (*Lota lota*) Health in the Upper Columbia River

Jason McLellan
Confederated Tribes of the Colville Reservation

Jess Brandt, Margot Grimmelpont
University of Connecticut

Molly Webb, Brian Balmer
US Fish and Wildlife Service

Heather Walsh, Travis Schmidt
US Geological Survey

Ben Colman
University of Montana

Background

- History of metals contamination in the upper Columbia Basin
- Metals deposition in Lake Roosevelt from upstream sources
- Long-standing concern of Confederated Tribes of the Colville Reservation (CTCR)

Questions

- What are the metal(loid) profiles of burbot in lower, middle, and upper Lake Roosevelt?

- Are metal(loid) profiles of burbot in Lake Roosevelt different than those of burbot from a reference lake without an extensive history of mining activity in its upstream drainage?

- Is there a relationship between tissue metal(loid) concentrations and physiological stress responses in wild fish (i.e., multivariate stress) to inform the health status of wild burbot in Lake Roosevelt?

Objectives

1. Determine metal(loid) profiles in wild burbot tissues.

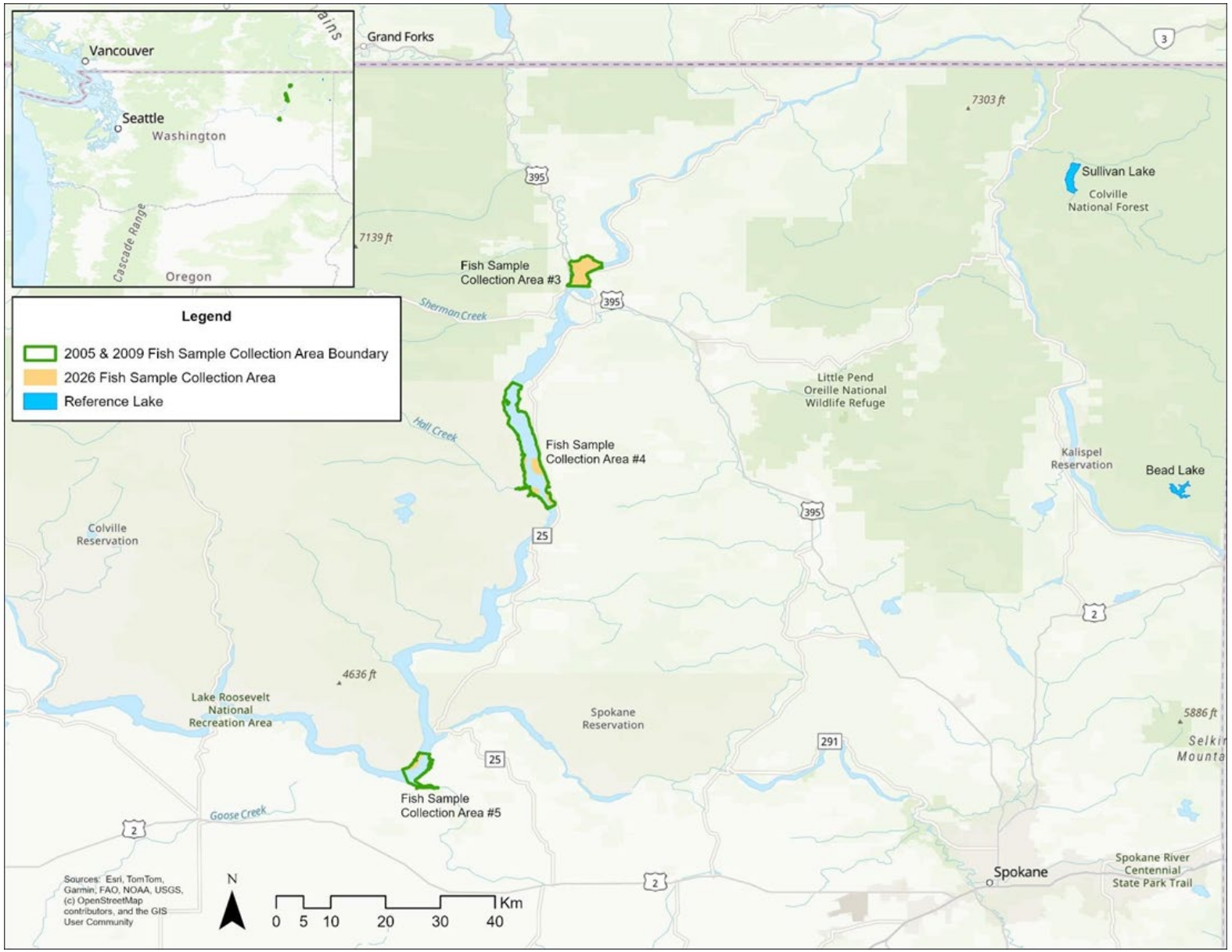
2. Evaluate health parameters in wild burbot.

Approach

- Capture burbot
  - Lake Roosevelt
  - reference lake

- Sample tissues
  - Blood
  - Muscle
  - Gonad
  - Liver
  - Spleen
  - Gill
  - Kidney
  - Otoliths

- Analyze samples
  - Metal(loid)s (n=56)
  - Histopathology
  - Gene expression
  - Oxidative stress
    - Vitamins
    - biomarkers



Schedule

- QAPP – under review
- Field Sampling – February 2026
- Lab Sample Processing – February-June 2026
- Data analysis – 2026-2027
- Reporting/Manuscripts – 2028-2029

Questions

COLUMBIA RIVER BASIN
RESTORATION PROGRAM

EPA USGS

Columbia River Basin Restoration Program Toxics Monitoring Subgroup Update

December 15, 2025

TOXICS MONITORING SUBGROUP UPDATE

11:25-12:25 TMS Update and Yakama Nation Implementation Plan

- Screening Values Update (Patrick Moran)
- Monitoring Dashboard Demo (Katia Rar)
- Monitoring Strategy Vision Update (Ashley Zanolli / Patrick Moran)
- Yakama Nation Basin-Wide Implementation Plan (Sherrie Duncan / Laura Shira)
- Q&A / Discussion

TOXICS MONITORING SUBGROUP

Purpose: Develop a community of practice to share information on monitoring, and leverage activities within and outside of EPA funded grants.

Three virtual meetings and one workshop each year

TMS CORE TEAM

Role

- Support towards the coordination of a basin-wide network of toxics monitoring projects
- Support for participants in collecting, publishing, and synthesizing data

Core Team Members

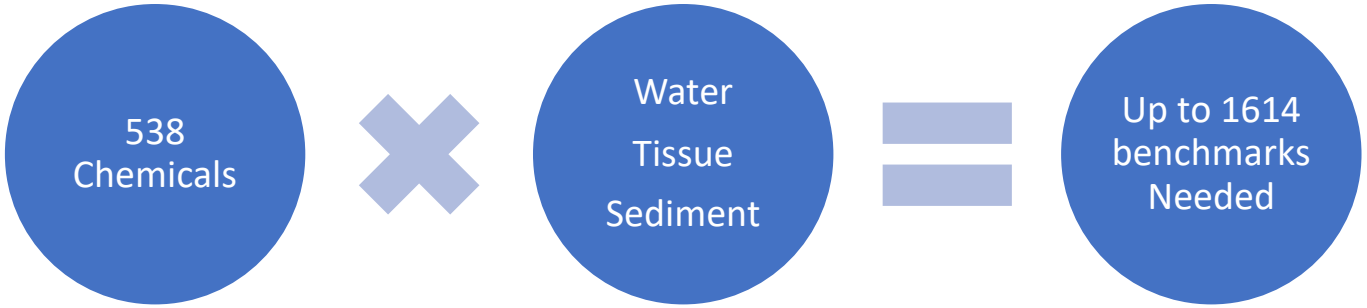
- Patrick Moran, USGS
- Mark Jankowski, EPA
- Lisa Kusnierz, EPA
- Meghan Dunn, EPA
- Ashley Zanolli, EPA
- Sarah Dunn, USGS

Contact us anytime! gs-crbtoxmon@usgs.gov

CORE TEAM PROJECT UPDATES

- Screening Values
- Monitoring Dashboard
- Monitoring Strategy Vision

SCREENING VALUE UPDATE



- Need for consensus screening values to aid with interpretation of monitoring data across the basin for prioritization and adaptive management activities
- Started with ecological screening values, but crossover with human health is possible
- Program QAPPs have been reviewed: 538 chemicals being monitored
- Have identified resources to acquire benchmarks for some of these 538

Other Considerations and Next Steps

Ecological screening values for metals will generally be current water quality guidelines (e.g., Clean Water Act 304(a) criteria)

Sediment and/or tissue benchmarks for chemicals are ‘to be determined’

We have resumed ecological screening value selection. Resources have been stretched.

Human health screening values will be addressed in coordination with partners

Monitoring Dashboard Demo

Katia Rar (EPA R10 GIS) and Patrick Moran (USGS)

Image: Steven Pavlov

MONITORING MATRIX CONTENT

Project Basics

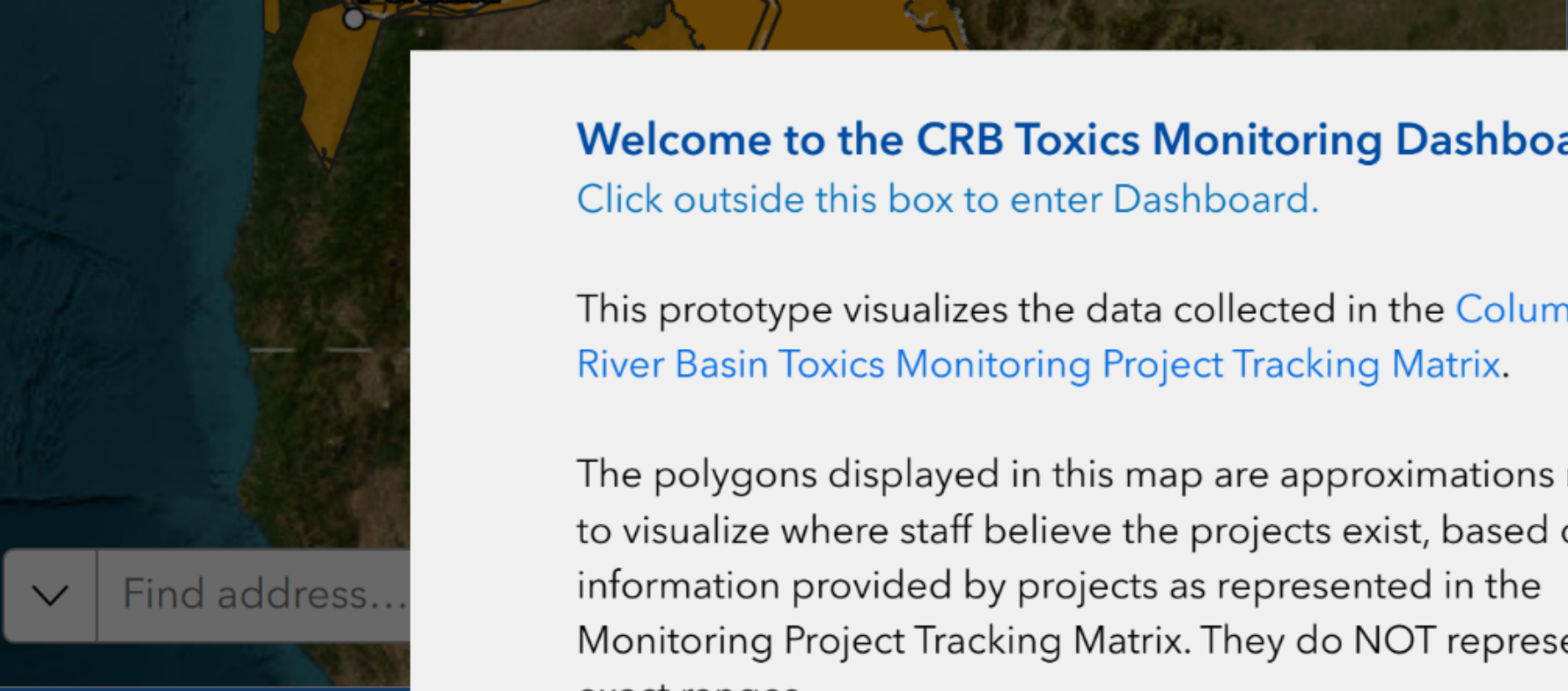
- Title & Purpose
- Lead entity & contact info
- Geographic scope & mainstem or tributary
- Monitoring start/end dates
- Monitoring type

Parameters and Methods

- Parameters monitored
- Sampling site #s & frequency
- Media
- QAPP
- Analytical method – CWA/other or novel?

Looking Forward

- Comparison thresholds?
- Primary source pathway?
- Mitigation solution proposed?



Welcome to the CRB Toxics Monitoring Dashboard

Click outside this box to enter Dashboard.

This prototype visualizes the data collected in the Columbia River Basin Toxics Monitoring Project Tracking Matrix.

The polygons displayed in this map are approximations meant to visualize where staff believe the projects exist, based on information provided by projects as represented in the Monitoring Project Tracking Matrix. They do NOT represent exact ranges.

Data filters were added to this version of the matrix to allow for filtering of projects my parameters, methodology, and media.

For more information contact gs-crbtoxmon@usgs.gov.

Background: In 2022, during several ad hoc meetings with members of the Columbia River Basin Restoration Program (CRBRP) Working Group, individuals recognized the need for

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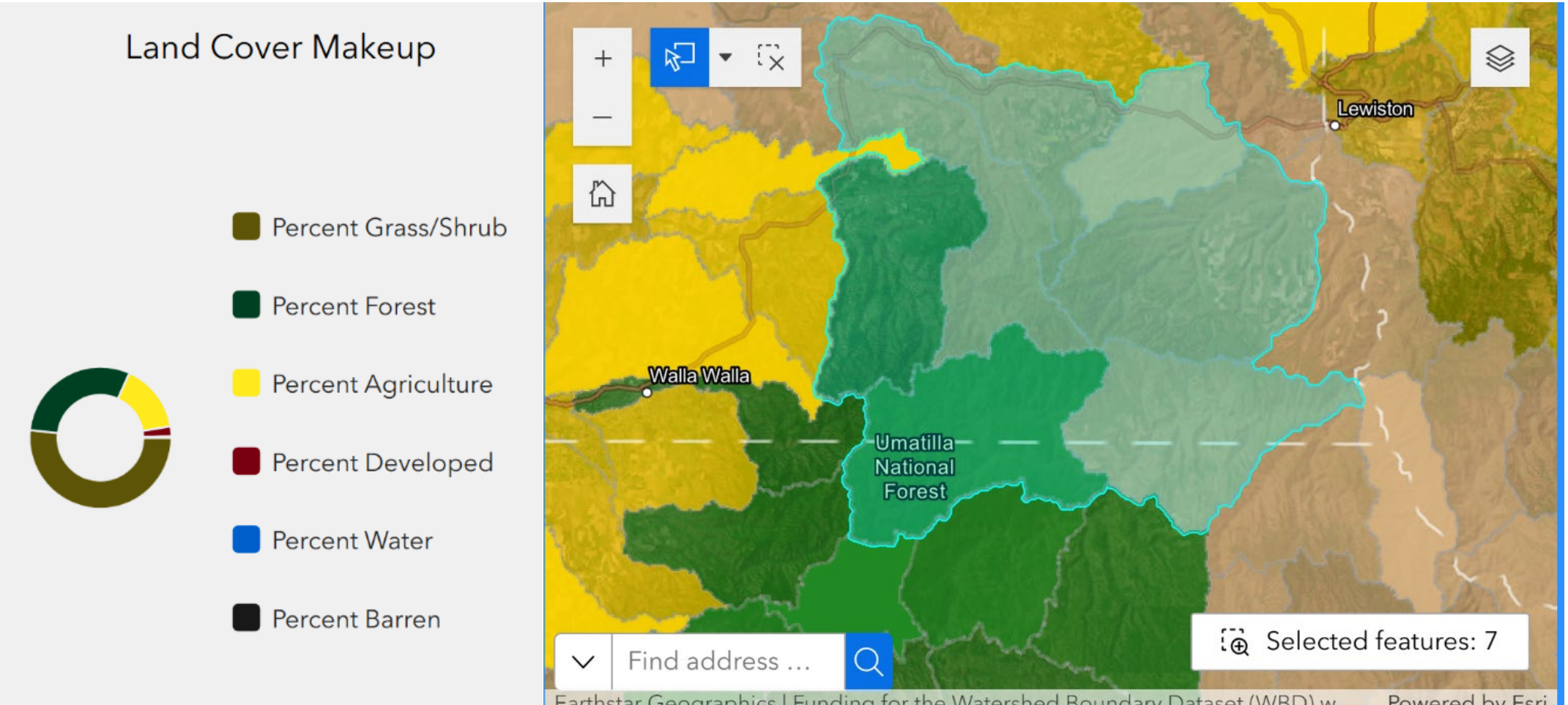
Recap of Recent Monitoring Dashboard Updates

- Incorporated Toxics Release Inventory (TRI) data

- Added Land Cover layers (example below)



What Questions Do You Have?

Access the app with the link or scan the QR code:

Link to monitoring dashboard app

DRAFT VISION FOR COLUMBIA RIVER BASIN MONITORING STRATEGY

COLUMBIA RIVER BASIN
RESTORATION PROGRAM

EPA USGS

CWA Section 123

- **Assess trends in water quality**, including trends that affect uses of the water of the Columbia River Basin
- **Collect, characterize, and assess data on water quality** to identify possible causes of environmental problems
- **Establish a voluntary, competitive grant program** supporting actions [through pollution reduction projects]
- **Establish a Columbia River Basin Restoration Working Group** that shall
  - recommend and prioritize projects and actions; and
  - review the progress and effectiveness of projects and actions implemented.

Current Status and Engagement Process

- **Spring 2025:** Engaged 21 partner organizations and grantees in listening sessions (Thank you!)
- **Strong support emerged** for voluntary, high-level strategy providing coordination
- **Received feedback at June TMS workshop and WG Meeting** as part of ongoing engagement through summer and fall 2025
- **Respond to feedback and develop updated version** Fall 2025 – Spring 2026
- **Multiple feedback opportunities:** Written feedback through Slido, meeting discussions, future meetings

The Toxics Monitoring Strategy Vision

A comprehensive, collaborative approach for monitoring toxic pollutants to assess trends and inform water quality protection and restoration activities across jurisdictions and sub-basins in the Columbia River Basin.

The monitoring strategy should inform not only those in the Working Group but should guide implementation by all people and entities that share concern for the quality of waters of the Columbia Basin and align fragmented efforts without superseding partner priorities.

DRAFT STRATEGIC GOALS OVERVIEW

1. Sustain and grow the **partnership to monitor** toxic pollution across the Basin.

2. **Identify and prioritize pollutants** in Columbia Basin waters by evaluating risk to humans and aquatic life.

3. Assess the **status and trends** and locations of priority pollutants in water, sediment, and/or fish.

4. Utilize **new tools and approaches** to evaluate legacy, emerging chemicals, and mixtures.

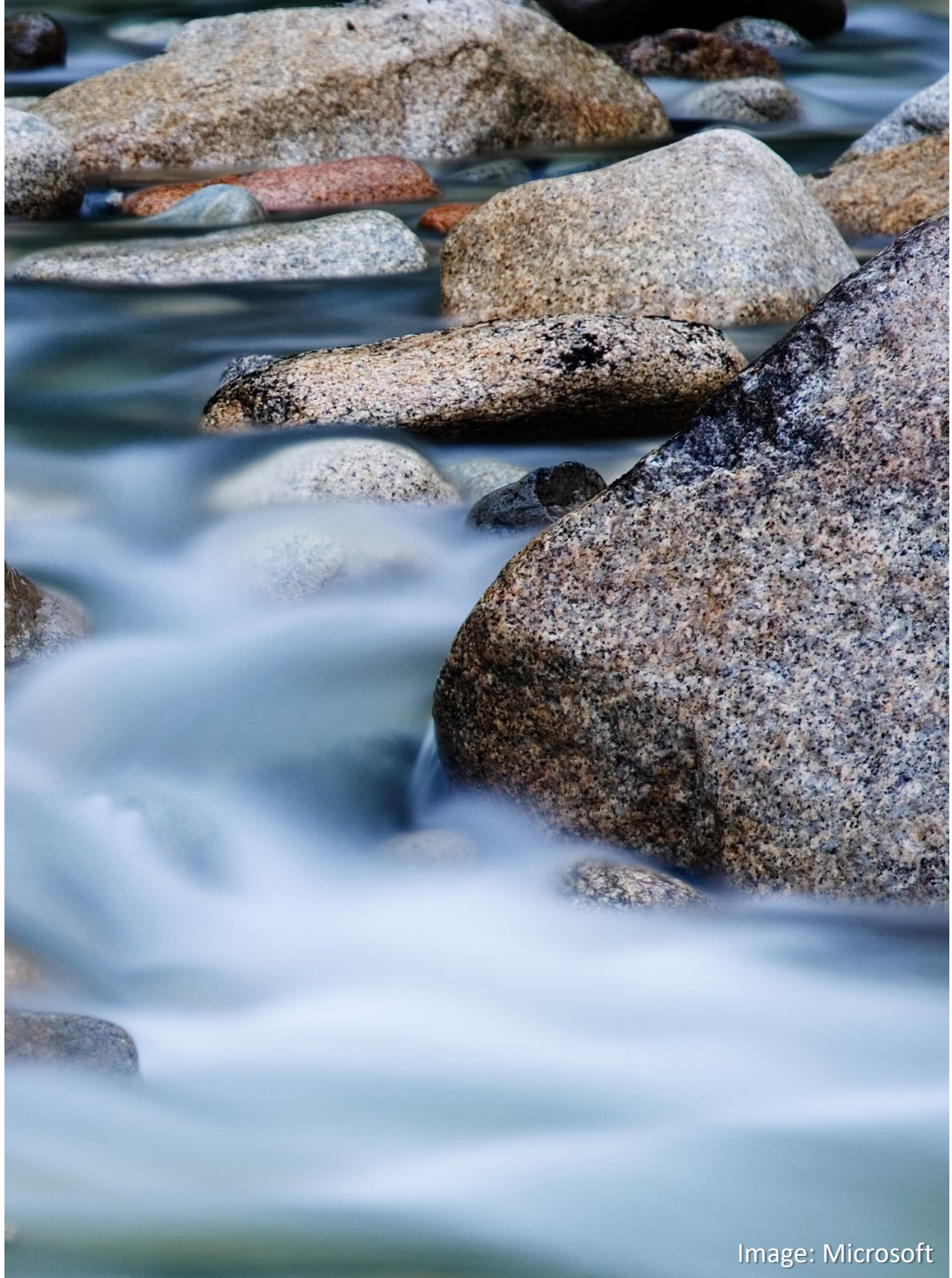


Image: Microsoft

Scope of Monitoring Strategy

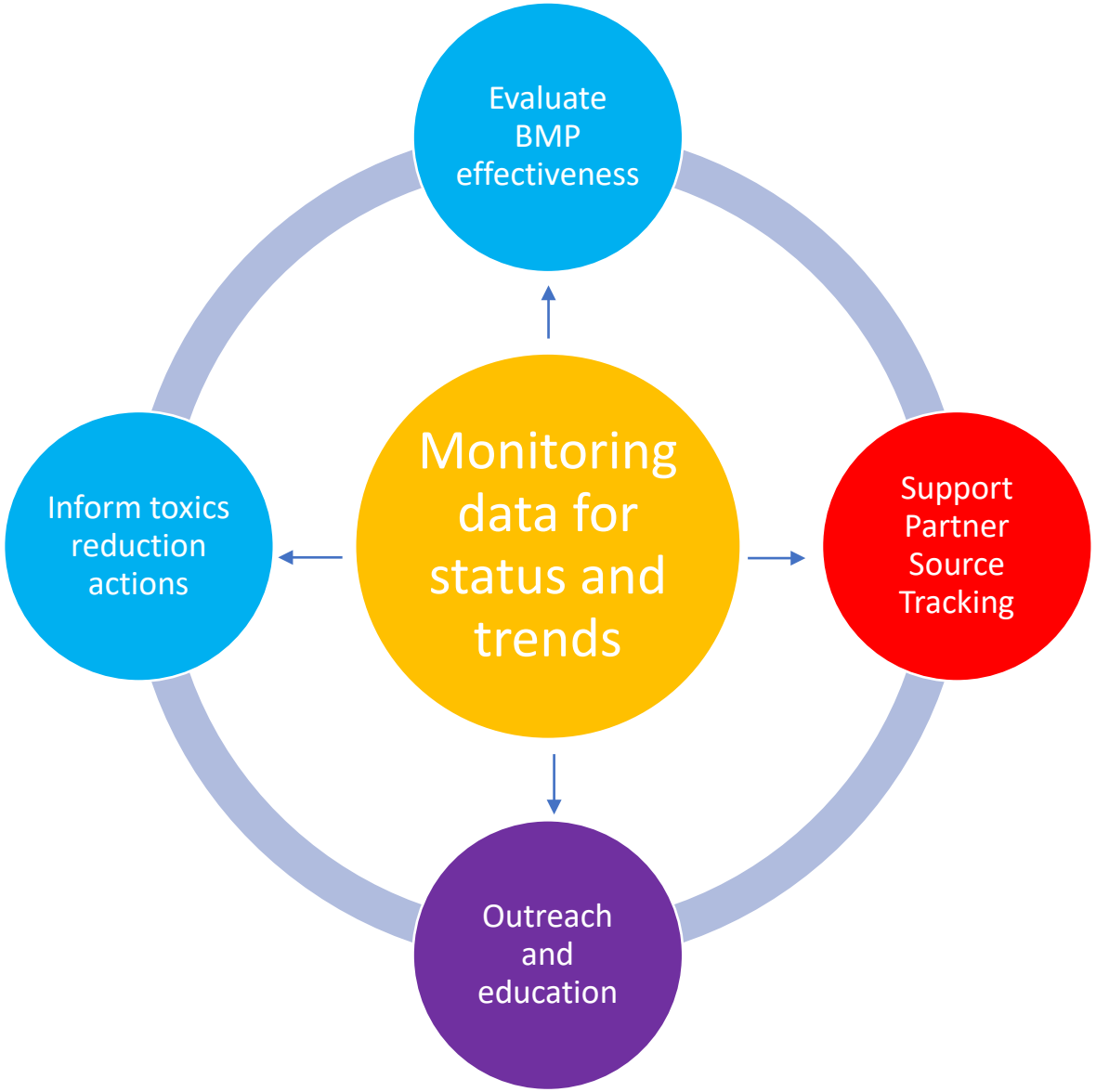
What's In Scope vs. Out of Scope

Monitoring Strategy Focus: The strategy addresses status and trends assessment per Clean Water Act Section 123, including what to monitor, where, and how to ensure data quality and comparability.

Responsibilities beyond scope of Monitoring Strategy

- CRBRP & Working Group responsibilities beyond the monitoring strategy scope:
  - ❑ Direct linkages between monitoring results and toxics reduction actions
  - ❑ Storytelling and results communication for public audiences
  - ❑ BMP effectiveness monitoring integration with program evaluation
- Governance structures for implementation – see YN Implementation Plan
- Long-term funding sustainability

Monitoring Strategy Objective Compared to CRBR Working Group and Partner Responsibilities



Feedback Summary and Planned Updates

Tribal Sovereignty and Cultural Values

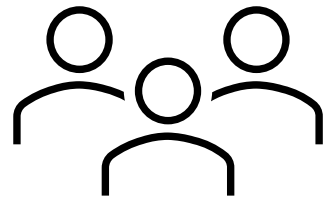
What We Heard: The critical importance of integrating tribal values, protecting sovereign rights, and monitoring tribally important species throughout the strategy.

Response:

- The strategy and CRBRP program aim to incorporate tribal values and protect fish and aquatic life, and we will continue engaging Tribes for feedback
- Tribally important species (salmon, lamprey, sturgeon) will be incorporated into monitoring priorities
- We will explore congruence with tribal toxics reduction plans and priorities in the adaptive management section

Feedback Summary and Planned Updates

Community Engagement and Public Communication



What We Heard: Strong desire for accessible public reporting, transparent monitoring activities, and support for interpreting results.

Response:

- Develop reporting mechanisms through periodic status and trends reports
- Enhance existing monitoring dashboard to show current activities and locations (improve data access by uploading data to Water Quality Portal)
- Clarify TMS network's role in results interpretation and communication
- Create community of practice support for data analysis through the TMS
- Establish regular external expert panel reviews for adaptive management

Feedback Summary and Planned Updates

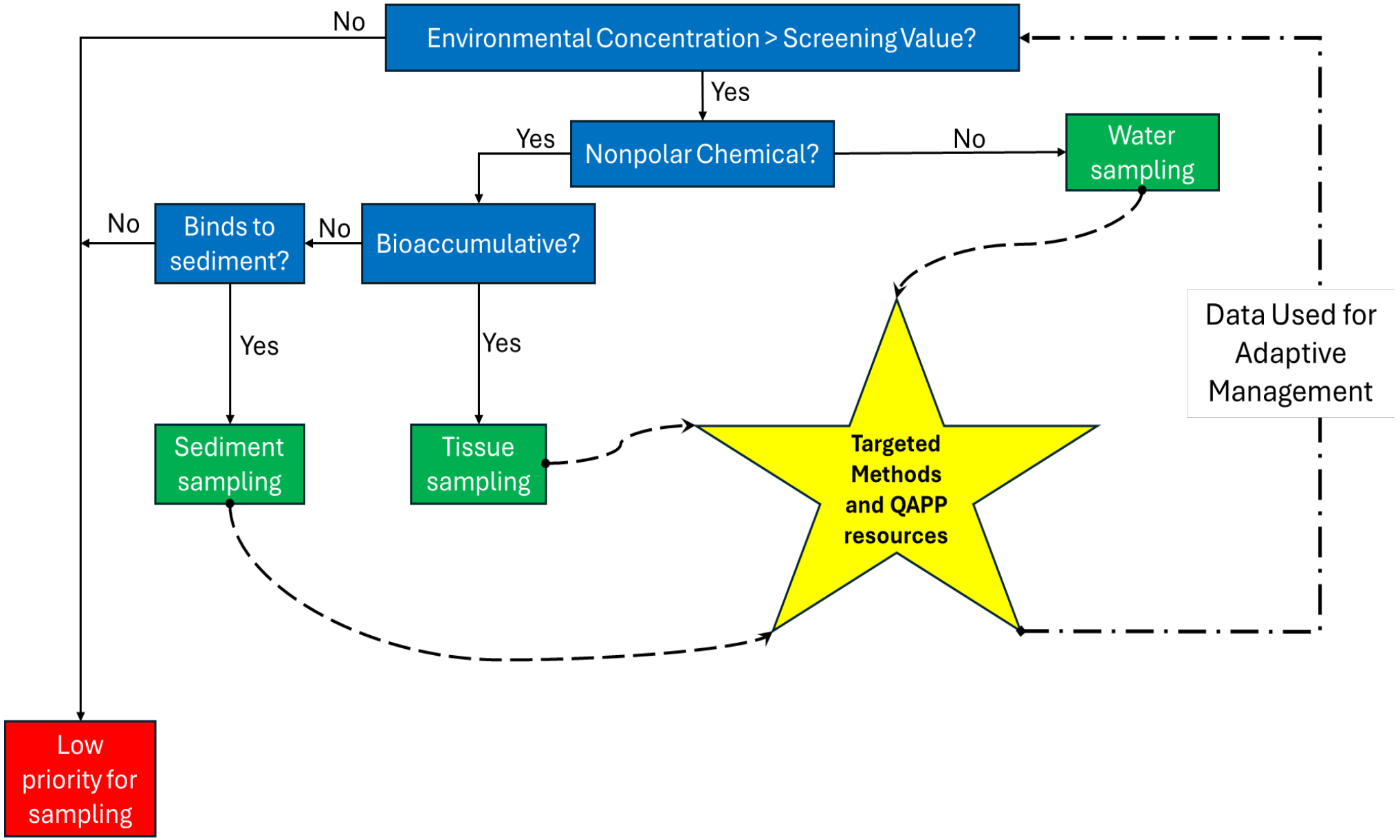
Emerging Contaminants and Historical Resources

What We Heard: Requests to prioritize the 2020 CRBRP Contaminants of Concern Framework and improve data Integration.

Response:

- Reference and integrate the 2020 basin-specific Contaminants of Concern Framework and impaired waters reference list
- Include historical studies dating back to 1985 in background section
- Work toward integrating Canadian National Pollution Release Inventory (NPRI) data for transboundary contamination (anticipated 2026)

DRAFT flowchart to guide selection of chemical monitoring priorities



Notes:

- Flow chart is for one chemical at a time
- Water sampling may include passive samplers
- Identification of "indicator species" to sample will be subject to focused TMS discussion
- Identification of "indicator pollutants" will be subject to focused TMS discussion

Feedback Summary and Planned Updates

Feedback Not Included in Planned Updates

- **Cyanotoxins:** Outside CRBRP scope as they are naturally occurring, but may be accelerated from excess nutrients.
- **PFAS Geodatabase Expansion & Microplastics:** Deferred pending clearer risk drivers and additional research. Much active research in this area currently.
- Out of scope comments mentioned previously on slide 35 that are part of the broader program.

Feedback Summary and Planned Updates

Pathway and Source Monitoring

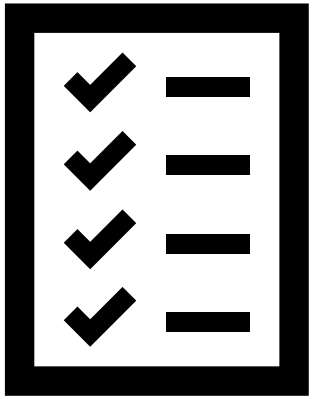
What We Heard: Interest in monitoring intermediate discharge pathways and connecting results to sources.

Response:

- Work with USGS on hydrologic modeling and GIS tools incorporating population and road density
- Note that connecting monitoring results to specific sources remains a program-wide responsibility beyond the strategy scope
- Source tracking, source reduction a program-wide challenge, and not specifically TMS

Feedback Summary and Planned Updates

Monitoring Protocols and Quality Assurance



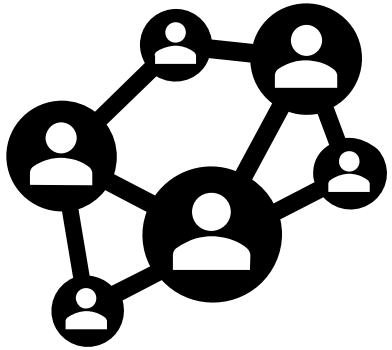
What We Heard: Support for standardized yet flexible protocols that accommodate different environmental conditions and local concerns.

Response:

- Proceed as planned with development of QAPP template including decision-tree tools that input project-specific Data Quality Objectives (DQOs) and output appropriate Standard Operating Procedures (SOPs)
- Create quality assurance templates and parameter standardization guidance for field staff
- Maintain customizable approach for local toxics concerns while ensuring basin-wide consistency

Feedback Summary and Planned Updates

Governance and Coordination



What We Heard: Questions about monitoring program governance, federal responsibility interstate mainstem waters, and coordination mechanisms.

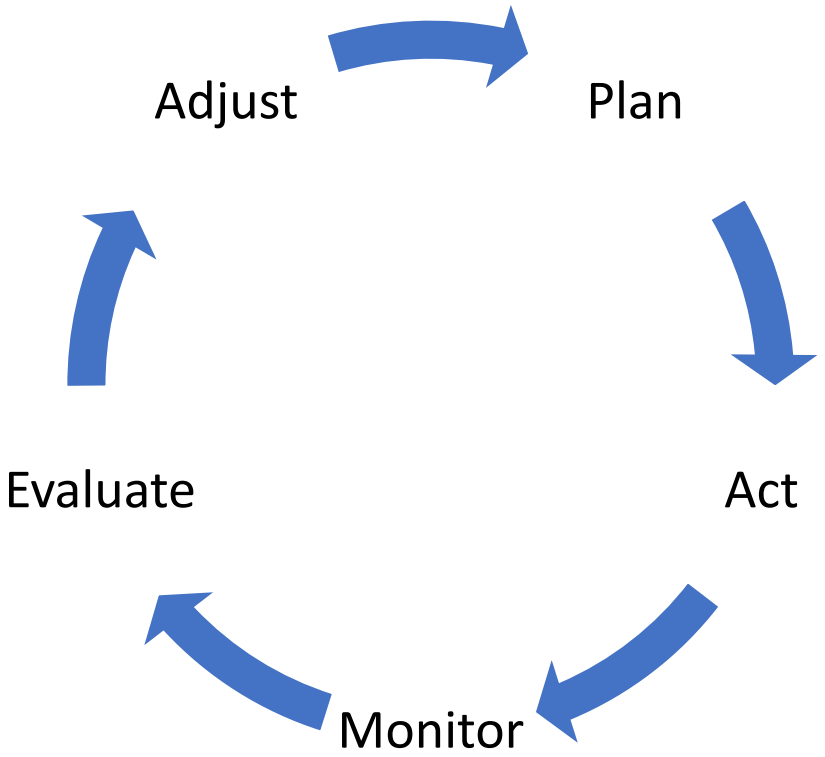
Response:

- Clarify federal responsibility for mainstem interstate boundary waters (pending additional discussion with states, Tribes, and CRB Federal Caucus)
- Continue coordination with state partners through TRL lead calls and TMS participation
- Address food security and food safety questions to the extent possible through indicator species and contaminant prioritization
- The Yakama Nation has developed a complementary implementation plan for a lead organization to address partnership-level responsibility and proposed governance, which was shared with the Working Group in August 2025.

Feedback Summary and Planned Updates

Adaptive Management

- Consider results from Tribal Reduction Lead, Tribal Lead, and Science and Monitoring grants
- Collaborate with Yakama Nation on mainstem monitoring plan and expansion into tributaries and lower basin with Lower Columbia Estuary Partnership
- Seek partner input on adaptive management decision and continual improvement
- Consider how monitoring data and reported status and trends point to areas for further investigation



Next Steps

TMS meeting – December 3, 2025

Feedback on Monitoring Strategy shared with Working Group – December 15, 2025

Share updated draft and engage TMS and Working Group – April 21-22, 2026

Finalize strategy – Fall 2026


Image: Amy Puls

WANT TO GET INVOLVED?!

Next TMS Meeting:
Tuesday, April 21, 2026 (Tentative)

Reach out to us anytime!

The TMS Core Team

- Patrick Moran (USGS)
- Mark Jankowski (EPA)
- Lisa Kusnierz (EPA)
- Meghan Dunn (EPA)
- Ashley Zanolli (EPA)
- Sarah Dunn (USGS/PNAMP)

Questions?
Want to join the TMS distribution list?
Email us at gs-crbtoxmon@usgs.gov

Columbia River Basin Monitoring Program Draft Implementation Plan

Presented by Laura Shira and Sherrie Duncan, Yakama Nation

Image: Steven Pavlov

Yakama Nation Columbia River Basin

Draft Implementation Plan for a Basin-Wide Monitoring Program

June 10 and 12, 2025

Laura Shira and Sherrie Duncan, Yakama Nation Fisheries

Columbia River Basin Partnership

Draft Implementation Plan for a Basin-Wide Monitoring Program

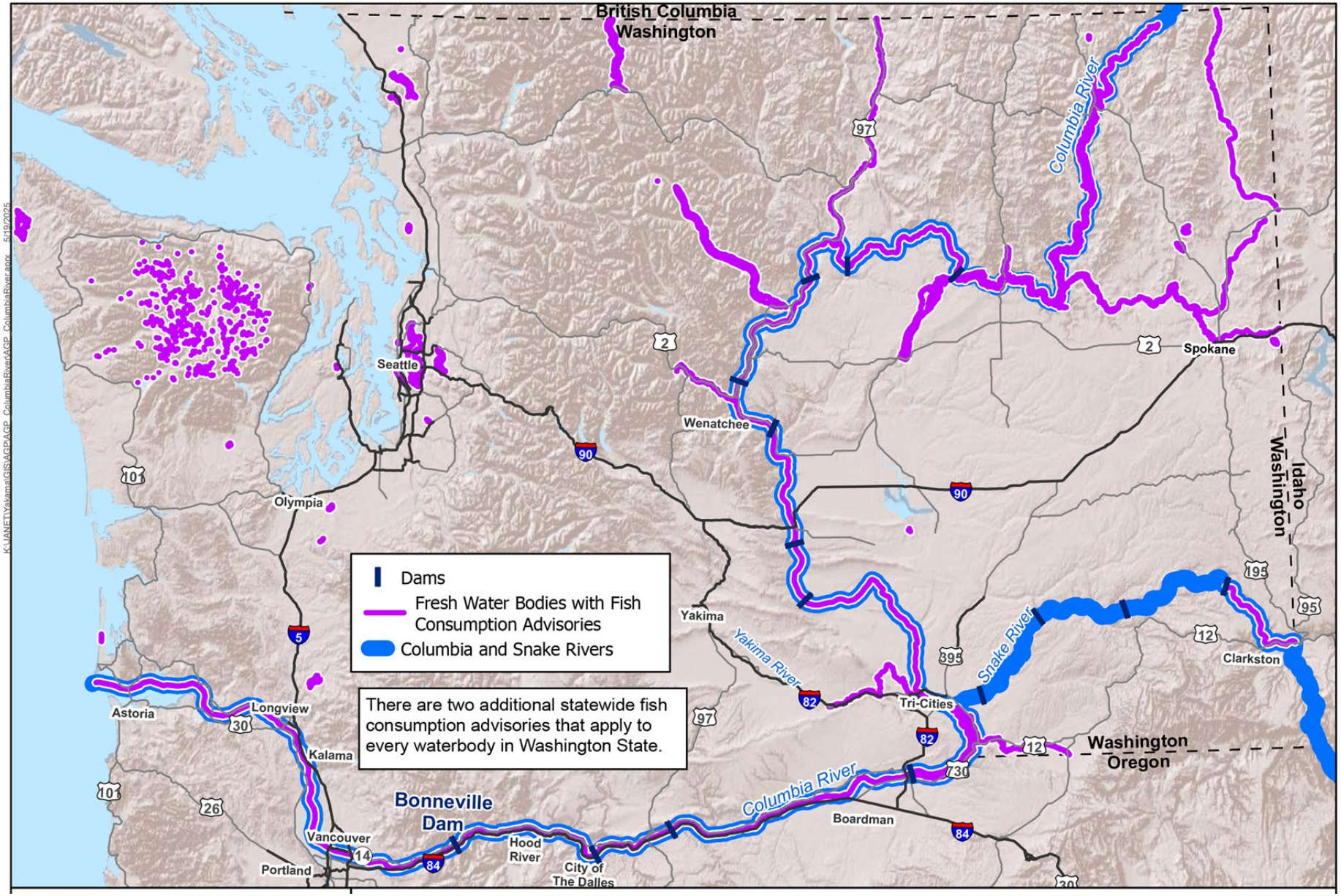
The Yakama Nation
Department of Natural Resources, Fisheries
Superfund Section

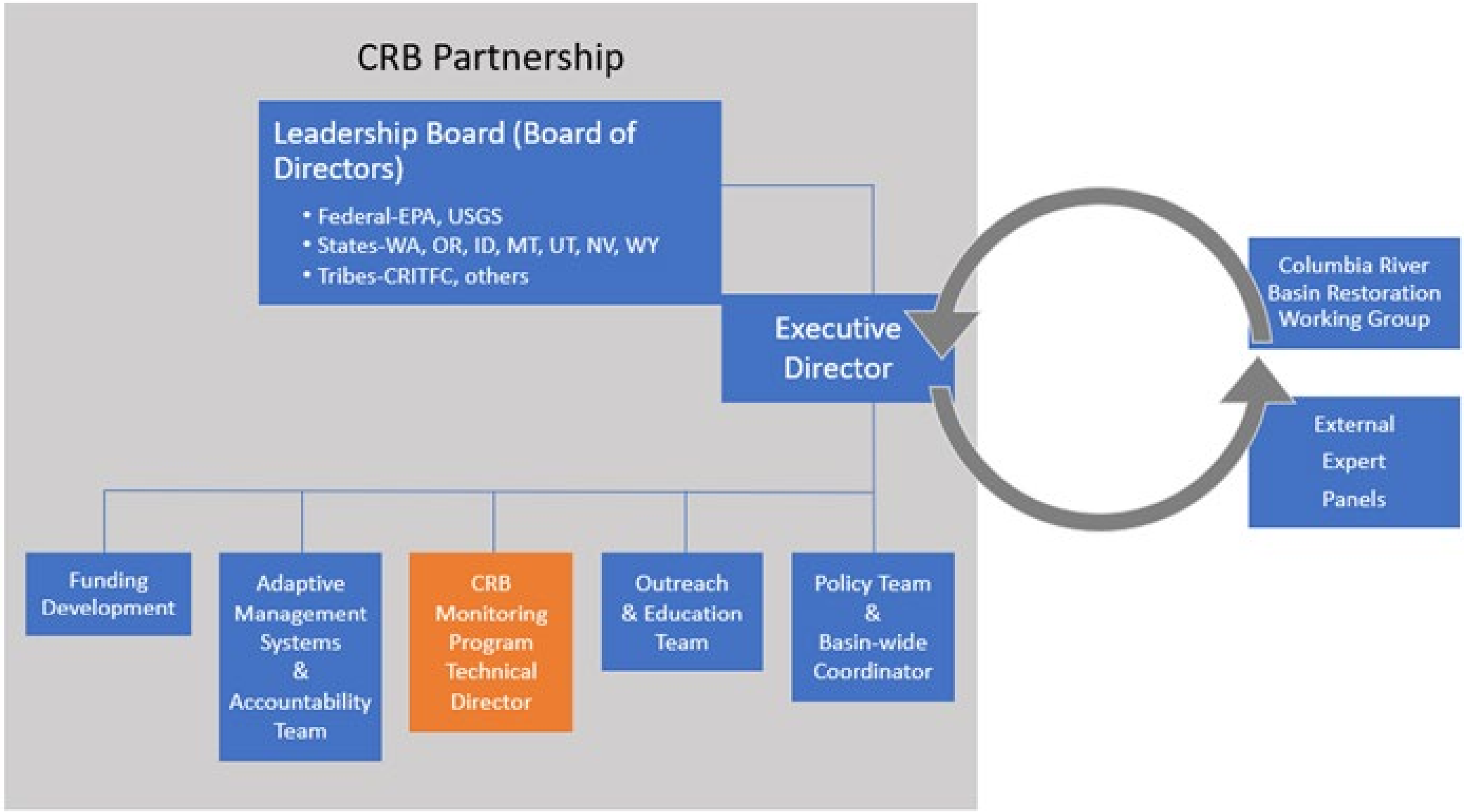
And

Janet Knox, LG

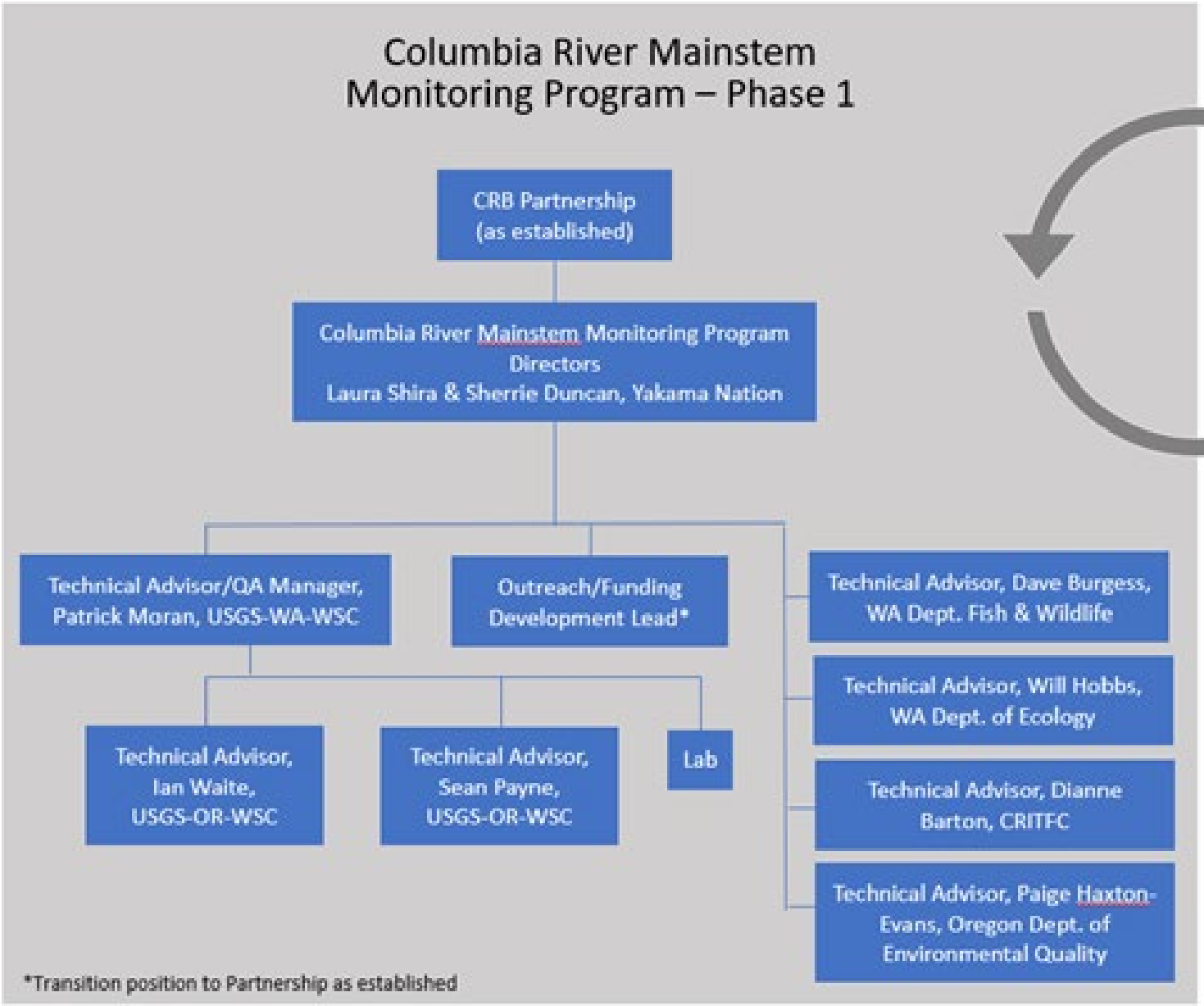
MOTT MACDONALD

May 2025


British Columbia
Washington
Columbia River
Seattle
Spokane
Wenatchee
Olympia
Idaho
Washington
Dams
Fresh Water Bodies with Fish Consumption Advisories
Columbia and Snake Rivers
There are two additional statewide fish consumption advisories that apply to every waterbody in Washington State.
Yakima
Yakima River
Snake River
Clarkston
Tri-Cities
Washington
Oregon
Astoria
Longview
Kalama
Bonneville Dam
Columbia River
Boardman
Vancouver
Portland
Hood River
City of The Dalles


CRB Partnership
Leadership Board (Board of Directors)
• Federal-EPA, USGS
• States-WA, OR, ID, MT, UT, NV, WY
• Tribes-CRITFC, others
Executive Director
Columbia River Basin Restoration Working Group
External Expert Panels
Funding Development
Adaptive Management Systems & Accountability Team
CRB Monitoring Program Technical Director
Outreach & Education Team
Policy Team & Basin-wide Coordinator

Columbia River Mainstem Monitoring Program – Phase 1



Resources

- Confederated Tribes and Bands of the Yakama Nation - https://www.yakama.com/
- Yakama Nation Fisheries - https://www.yakamafish-nsn.gov/restore/projects/columbia-river-mainstem-water-quality-monitoring-program
- “Land of the Yakamas” - https://yakamafish-nsn.gov/LandOfTheYakamas

WRAP UP

Thank you for your feedback!

Please complete our brief meeting evaluation at www.slido.com and enter the code **#CREvaluation**

Or, scan the QR code below.