



COLUMBIA RIVER BASIN  
RESTORATION PROGRAM

## Columbia River Basin Restoration Program (CRBRP) AD HOC TOXICS MONITORING MEETING SUMMARY

MARCH 2, 2022



# Columbia River Basin Restoration Program (CRBRP)

## Ad Hoc Toxics Monitoring Meeting Summary

March 2, 2022 10:00–12:00 (PST)

**Goal:** Advance recommendations from the [2010 Columbia River Toxics Reduction Action Plan](#) and specifically the [June 2021 Monitoring Webinar](#) proposal to develop a steering committee to guide long-term monitoring.

**Meeting Objective:** Initiate the development of a strategy for coordination of long-term monitoring of toxics and sharing of resulting data at the Columbia River Basin scale.

**Participants:** Ben Jarvis, Idaho Department of Environmental Quality; Catherine Corbett, Lower Columbia Estuary Partnership; Cavan Gerrish, U.S. Bureau of Reclamation; Dianne Barton, Columbia River Inter-Tribal Fish Commission; Keith Dublanica, Washington State Governor's Salmon Recovery Office; Ken Clark, Nez Perce Tribe; Ken Merrill, Kalispel Tribe; Laura Shira, Yakama Nation; Margaret Drennan, Washington State Department of Agriculture; Ralph Myers, Idaho Power; Shawn Young, Kootenai Tribe of Idaho; Tamara Knudson, Spokane Tribe; David Gruen, Oregon Department of Environmental Quality; Will Hobbs, Washington State Department of Ecology; James Medlen, Washington State Department of Ecology; Michael Fischer, EPA Region 8; Lauren Mcdaid, EPA Region 10; Mark Jankowski, EPA Region 10; Lisa Kusnierz, EPA Region 10; Karen Simpson, EPA Region 8; and Nicole Taylor, EPA Region 10.

**Invited but not in Attendance:** Aaron Borisenko, Oregon Department of Environmental Quality; Genny Hoyle, Kootenai Tribe of Idaho; Gina Hoff, U.S. Bureau of Reclamation; Jay Hesse, Nez Perce Tribe; Karl Rains, Washington State Department of Ecology; Laura Robinson, Upper Columbia United Tribes; Rodney Cawston, Colville Tribes; Scott Hauser, Upper Snake River Tribes; Peter Brumm, EPA Region 8.

**Meeting Conveners:** Mary Lou Soscia, EPA Region 10 Columbia Basin Coordinator, and Jen Bayer, U.S. Geological Service Pacific Northwest Aquatic Monitoring Partnership.

**Meeting Facilitator:** Greg Frey, Council Oak (EPA contractor) **Notetaker:** Sam Cimino, USGS/PNAMP.

## Discussion Summary

We appreciated participation and input from twenty-three participants from eighteen entities from around the Columbia River Basin.

Mary Lou Soscia shared brief background information describing past work towards a toxics monitoring program, including the [Columbia River Basin Toxics Reduction Action Plan](#), [Columbia River Basin Contaminants of Concern Framework](#), and recent meetings where this was discussed ([2021 February Meeting](#); [2021 June Meeting](#)).

Jen Bayer summarized feedback to date around the concept of a new monitoring workgroup, based on review of past efforts and recent outreach, and offered this list of proposed goals for the Toxics Monitoring Workgroup:

- Providing a forum to exchange toxics monitoring information, discuss challenges, and coordinate monitoring activities to complement existing CRBRP working group meetings.
- Developing a strategy for coordinated monitoring activities across tributaries, compatible with emerging mainstem monitoring and existing estuary monitoring efforts.
- Working to develop a shared data management system.
- Identifying priority contaminants for future monitoring efforts.
- Holding an annual meeting to discuss and identify research needs.

Jen also included some ideas about what not to do:

- Repeat CRBRP Working Group activities/role.
- Be prescriptive.

Laura Shira shared a brief overview of progress to date and next steps for the Yakama Mainstem Toxics Monitoring Framework Project, which was initiated in FY20 as a CRBRP grantee (grant summary [here](#)). This project will develop a Monitoring Framework and Community Engagement and Outreach Plan to establish a long-term Monitoring Program aimed at tracking the status and trends of toxics in fish, water, sediments, and invertebrates in the Middle and Upper Columbia River mainstem. While this project focuses on the mainstem only (not tributaries), the Yakama Nation is supportive of Basin-wide efforts and linking mainstem to tributary monitoring work as well as shared data management solutions. This project has conducted a thorough exercise to agree on vision and mission statements, objectives, and goals for the mainstem monitoring framework as well as capturing interests and needs applicable to the tributaries. This extensive work can be used as a starting point for Basin-wide discussions.

There has been agreement for over two decades on the need for a coordinated toxics monitoring program and access to the resulting data. This monitoring workgroup can help turn goals into actions. Mary Lou Soscia and Jen Bayer proposed several questions to seek agreement on actions to move forward. The first two questions were discussed at length; a third topic was introduced with the intent to share as an idea, get some immediate reactions, and ask the group to come prepared for further discussion at the next meeting.

**Question 1: Should there be a document describing agreed upon sampling and analytical methods and concerns for Columbia River Basin toxics monitoring? Who would prepare it?**

Responses to Question 1 focused on the following themes:

- **Consistency.** Attendees were generally in favor of using standardized Quality Assurance Project Plans (QAPPs) and standard operating procedures (SOPs) for the mainstem and tributaries to ensure consistency. Comparing methods with others in the Basin would be beneficial and make data more broadly useful. EPA's probabilistic monitoring design and sampling protocol is one example that could be a starting point. Another area where consistency is key is between labs—comparing results from labs and ensuring that labs are accredited by a third party will help the labs work better together and enable more parties to utilize the results.
- **Baseline/Minimum Standard.** Documenting the objectives of different programs in a centralized location could serve as a minimum standard for the Basin that users can tailor to their own needs. Parties in the basin have various standards or monitoring thresholds, so any effort to coordinate should ensure that recommended methods are consistent with meeting those thresholds to ensure others can use the data.
- **Flexibility.** An option would be to develop a general QAPP for the Basin with more specific sampling and analysis plans for users to choose from. This could be more of a clearinghouse of SOPs, with guidance or examples on how to use the resources. Some kind of training support for monitoring staff would be helpful. This flexibility will keep the product from being too prescriptive.
- **Challenges.** A few challenges will need to be overcome, including:
  - How would the group determine which SOP to recommend when different plans disagree?
  - What would it take to ensure that data are comparable and interchangeable?
  - How to ensure flexibility for a variety of users?
  - Managing the volume of documents will be a large amount of work and would need to be updated periodically. It is unclear who could take on that effort.
- **Other Thoughts.** Jen Bayer introduced the idea of coordinating existing work to develop a scientifically defensible design that includes the Basin tributaries. The Columbia Habitat Monitoring Program (CHAMP) could serve as example, where people would follow the same protocol for a core list of metrics and all data would go to a central repository. Laura Shira added that the Yakama Nation is working to compile documents and develop a generalized QAPP and specific SOPs for the mainstem.

## Question 2: What are the monitoring gaps of greatest concern?

General responses to this question focused on the scope and funding—a well-defined scope will be essential to keep monitoring efforts manageable, and conditions on current funding limit the viability of longer-term monitoring. Other areas of concern included:

- **Source Identification.** Identifying and controlling sources of toxics is a priority. Monitoring to identify tributaries and locations of these sources would be helpful. This might require targeted (as opposed to probabilistic) monitoring, so integration with a Basin-wide monitoring program will require some flexibility. Another consideration is to distinguish between acute releases from point sources versus averages over time.
- **Contaminants of Emerging Concern** are an obvious gap. One example is 6PPD-quinone (a tire additive), which is acutely toxic to Coho salmon. Existing monitoring programs are not looking for emerging contaminants like this, so they might be more critical in the future than some legacy contaminants that have been banned or phased out.
- **Other priorities** include:
  - Existing monitoring design for the lower Columbia (which is planned, but not funded), focusing on ambient concentrations, sediment, and fish;
  - Juvenile salmonids; and
  - Dioxin that is being generated by the pulp and paper industry.

## Question 3: We propose that toxics monitoring data be published to the EPA Exchange Network's WQX data system and that we create a new dashboard to access Columbia River Basin data. We have 3 related questions:

- **Do you currently publish any data to WQX (water quality, toxics, other data types?)**
  - Many state, federal, tribal, watershed councils, and probably others use WQX for publishing their data. The infrastructure is there and the people at WQX can help to facilitate.
  - WQX accepts data for biota, as long as there is an existing data exchange standard. The system can expand (i.e., it is possible to create new standards as needed).
  - Uploading data requires trained staff and some computing infrastructure, which is a limitation for many.
  - Entities need flexibility with federal long-term funding to build capacity for using WQX.
  - Washington State Department of Ecology (ECY) has an internal database, but not sure if it interacts with WQX. Also, not sure if quality control data can come along with the data in WQX.
  - Reclamation sends general water quality data to WQX but does not currently analyze for many toxics.
  - Washington State Department of Agriculture uploads to ECY's EIM database. It is a perennial to-do list item to upload to WQX, but staff capacity is a limitation.
- **Do you currently have capacity in your agency or Tribe to publish toxics data to the WQX?**
  - Kootenai Tribe of Idaho does not have the capacity and lacks dedicated funds for long-term toxics monitoring.
  - One agency database for environmental data exchanges a bit with WQX but not sure if toxics data exchange.
  - Might be necessary to facilitate the creation of some exchange standards; would be necessary to support data mapping from individual data providers' systems to the standard and ensure staff capacity to publish data and metadata.
- **Do you have reservations about using WQX for publishing these data?**
  - The group ran out of time before discussing this question.

## Next Steps

The next meeting will be scheduled either on April 26 from 1:00–3:00 PM (Pacific) or April 28 from 10:00–12:00 Noon (Pacific).



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# Columbia River Basin Restoration Program

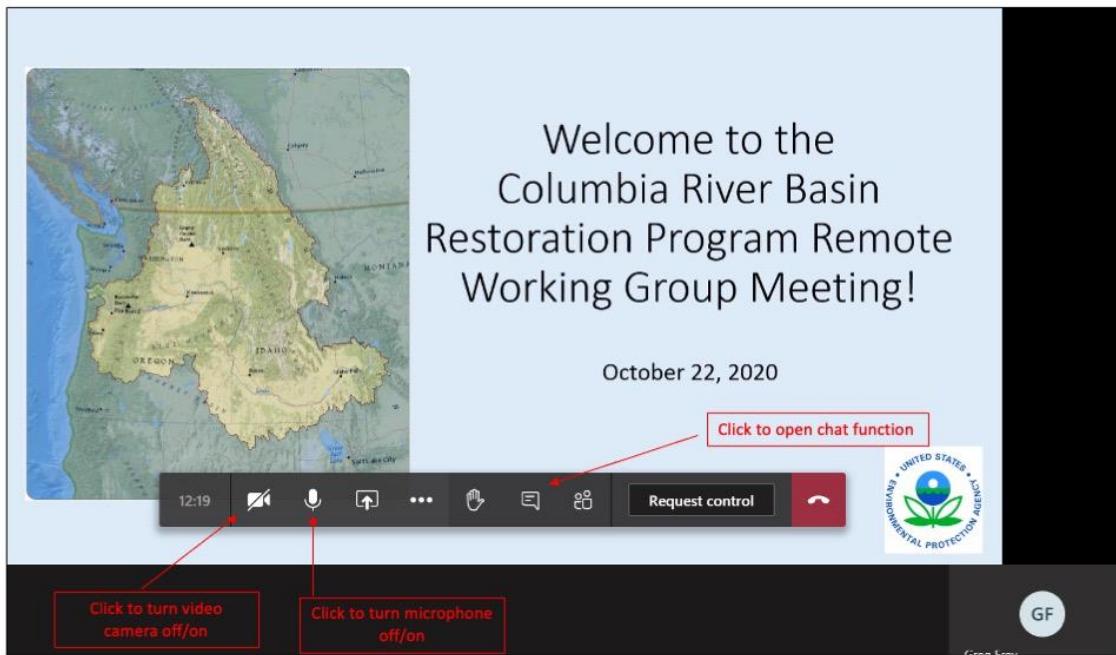
**Ad Hoc Toxics Monitoring Sub-Group Meeting**

**March 2, 2022**

## Agenda Overview

- Welcome & Introductions
- Background
  - Mary Lou Soscia (EPA), Jen Bayer (USGS), Laura Shira (Yakama Nation)
  - Goals, conversations to date, progress with FY20 Yakama Nation monitoring grant
- Discussion
  - Priorities, existing monitoring activities, data sharing
- Closing and Next Steps
  - Future meetings, other potential attendees

# Introduction to Microsoft Teams



## Welcome & Introductions

- When called on, please introduce yourselves. Specifically...
  - Who do you represent?
  - What is your area of geographic interest?
  - What are key contaminants of concern for you?

## Background – Mary Lou Soscia (EPA)



## Summary of Current Columbia River Basin Restoration Program Grantee Monitoring Work

Nez Perce Tribe in partnership with the University of Idaho and U.S. Fish and Wildlife Service	Monitor current Clearwater River (Idaho) watershed conditions for toxics/pollutants, including several Columbia River Basin priority Tier I and II toxics in biota (i.e., fish, mussel, lamprey ammocoetes), water, and sediment.
Regents of the University of Idaho	Monitor mercury in crayfish, in two sub-water sheds, the Spokane River and Boise River basins. Local citizens affiliated community group members will collect the organisms. Communicate results to local communities.
University of Washington Tacoma at the Center for Urban Waters	Characterize endocrine disrupting chemicals in Columbia River waters using non-targeted analysis based on liquid chromatography and high-resolution mass spectrometry. Where chemicals are identified and adverse toxicity thresholds are available, compare water concentrations of identified chemicals with threshold levels causing adverse effects.
City of Vancouver	Conduct water quality monitoring in the Columbia Slope sub-watershed within Vancouver city limits.
Washington State Department of Agriculture	Expand existing pesticide surface water and sediment monitoring program into dryland areas in Eastern WA. Continue surface water monitoring in the Yakima valley. Educate individuals using pesticides about safety and use procedures that will protect the environment. Collect unused pesticides that are no longer appropriate for application.
Confederated Tribes and Bands of the Yakama Nation in partnership with the Washington State Department of Ecology, U.S. Geological Survey, Columbia River Intertribal Fish Commission	Develop a Monitoring Framework and Community Engagement and Outreach Plan to establish a long-term Monitoring Program aimed a tracking the status and trends of toxics in fish, water, sediments, and invertebrates in the Middle and Upper Columbia River mainstem.
University of Montana, Confederated Salish Kootenai Tribes, and Salish Kootenai College	Determine baseline bioaccumulation of mercury in the Flathead Lake food web and evaluate impacts of culling 75% of adult trout on mercury bioaccumulation. Specifically, characterize mercury levels in mountain whitefish. Evaluate current Flathead Lake trout consumption for fish obtained from local food pantries as well as awareness of relevant fish consumption advice. Utilize information from mercury bioaccumulation studies to inform CSKT natural resource managers who may decide to re-evaluate their current mountain whitefish consumption advice, engage with community to discuss results and develop a community engagement plan.

## Ad Hoc Toxics Monitoring Committee Goals

1. Providing a forum to exchange toxics monitoring information, discuss challenges, and coordinate monitoring activities to complement existing CRBRP working group meetings.
2. Developing a strategy for coordinated monitoring activities across tributaries, compatible with emerging mainstem monitoring and existing estuary monitoring efforts.
3. Working to develop a shared data management system.
4. Identifying priority contaminants for future monitoring efforts.
5. Holding an annual meeting to discuss and identify research needs.

Don't:

1. Repeat CRBRP Work Group
2. Be prescriptive

## FY20 Yakama Mainstem Toxics Monitoring Framework

**Purpose of the Columbia River toxics monitoring program** To initiate the process of formulating the framework for a Columbia River toxics monitoring program (monitoring program), the project team that consists of representatives from the Yakama Nation, Columbia River Inter-Tribal Fish Commission (CRITFC), Oregon Department of Environmental Quality (OR DEQ), U.S. Geological Society (USGS), and Washington Department of Ecology (WA DOE), developed a vision statement, mission statement, goals, and objectives for the program. This program is intended to provide data sufficient for experts in various specialties to evaluate human and aquatic health.

**Vision Statement** *A clean, healthy Columbia River that supports natural resources, sustains cultural practices and provides healthful foods.*

**Mission Statement** *Monitor toxic substances in the Columbia River to guide ecosystem recovery resulting in clean, healthy fish for current and future generations.*

**Goals and Objectives** The project team identified three programmatic goals. For each of the program goals the project team then identified objectives:

**Goal 1.** Conduct long-term monitoring to assess the spatial and temporal status and trends of toxics in fish\*, water, sediment, and other potential media in the Columbia River mainstem, from Bonneville Dam to the Canadian Border in perpetuity.

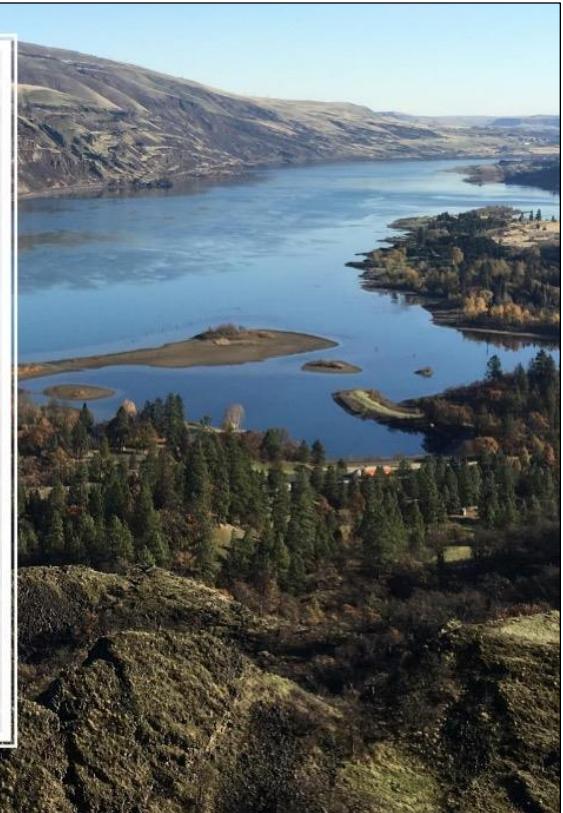
**Goal 2.** Stimulate conversion of science to action by promoting an understanding of issues and inform future decision making over the long-term to improve natural systems and reduce toxics at all levels of the food chain.

**Goal 3.** Update the program as data indicate problems areas or raise important questions, with new and emerging science, and as community needs are identified (adaptive management).

## Discussion Questions

### Question 1:

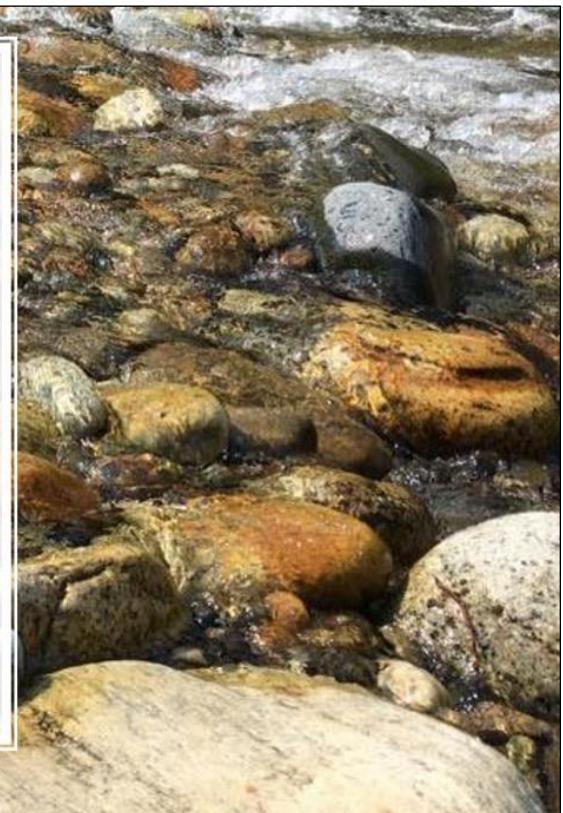
Should there be a document describing agreed upon sampling and analytical methods and concerns for Columbia River toxics monitoring? Who would prepare it?



## Discussion Questions

### Question 2:

What are the monitoring gaps of greatest concern?

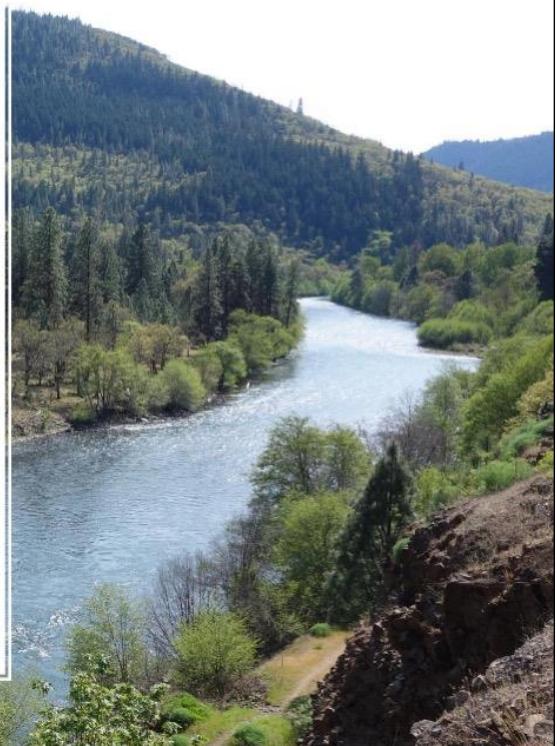


# Discussion Questions

We propose that toxics monitoring data be published to the EPA Exchange Network's WQX data system and that we create a new dashboard to access CRB data from the WQX.

## Questions:

- Do you currently publish any data to WQX (water quality, toxics, other data types?)
- Do you currently have capacity in your agency or Tribe to publish toxics data to the WQX?
- Do you have reservations about using WQX for publishing these data?



# Next Steps

- Actions from today
- Future meetings
- Are there other attendees that should be invited?