

COLUMBIA RIVER BASIN RESTORATION PROGRAM (CRBRP) TOXICS MONITORING SUBGROUP
MEETING SUMMARY
December 3, 2025
1:30–3:30 PST

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ATTENDEES

- Jakub Bednarek, WA State Department of Ecology
- Bradley Blackwell, WA State Department of Ecology
- Negonne (Stephanie) Blair, Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
- Peter Brumm, USEPA Region 8
- Richard Bussanich, Okanagan Nation Alliance
- Catherine Corbett, Lower Columbia Estuary Partnership
- Margret Drennan, WA State Department of Agriculture
- Sherrie Duncan, Yakama Nation Fisheries
- Meghan Dunn, EPA Region 10
- Sarah Dunn, USGS – WA Water Science Center
- Mary Engels, University of Idaho
- Cindy Fields, EPA Region 10
- Bryson Finch, WA State Department of Ecology
- Tara Galuska, WA State Recreation and Conservation Office
- Manuel Garcia-Jaramillo, Oregon State University
- Catherine Gockel, EPA Region 10
- Dylan Harp, The Freshwater Trust
- Abby Hendrickson, Chelan County Natural Resources
- Edyth Hermosillo, USGS – WA Water Science Center
- William Hobbs, WA State Department of Ecology
- Gina Hoff - Bureau of Reclamation
- Stan Hoffman, WA Department of Health
- JoAnn Holloway, USGS Mineral Resources Program, Denver
- Deborah Iwanowicz, USGS – Eastern Ecological Science Center
- Latonya Jackson, Oregon Department of Environmental Quality

- Mark Jankowski, EPA Region 10
- Caroline Keever, Upper Columbia United Tribes
- Lisa Kusnierz, EPA Region 10
- Casey Lewis, Western Montana Conservation Commission
- Pablo Martos, Oregon Department of Environmental Quality
- Kevin Masterson, Stony Creek Consulting, representing the Oregon Association of Clean Water Agencies
- Patrick Moran- USGS - WA Water Science Center
- Robin Parker, EPA Region 10
- Sean Payne, USGS – OR Water Science Center
- Mark Peterschmidt, Washington Department of Ecology, Central Region
- Scott Schlieff, EPA Region 10
- Laura Shira, Yakama Nation Fisheries
- Julann Spromberg, NOAA NW Fisheries Science Center
- Brooke Stowell, Nez Perce Tribe Water Resources Division
- Dorie Sutton, City of Vancouver WA
- Jerry White, Upper Columbia United Tribes
- Emily Van Houweling, Oregon Health and Sciences University
- Ashley Zanolli, EPA Region 10

MATERIALS

Meeting slide deck: <https://gaftp.epa.gov/columbiariver/TMS/2025-12-03/>

WELCOME & INTRODUCTION

Mark Jankowski (EPA Region 10) opened the meeting by reiterating the purpose of the Toxics Monitoring Subgroup (TMS), which is to develop a community of practice that shares monitoring information and leverages activities within and beyond the Columbia River Basin Restoration Program and EPA-funded grants. He emphasized that the TMS supports the coordination of a basin-wide network of toxics monitoring projects and assists participants in collecting, publishing, and synthesizing data.

COLUMBIA RIVER BASIN RESTORATION: WORKING GROUP UPDATE

The Working Group meeting originally scheduled for October 30 has been rescheduled for December 15, 2025. The agenda will include updates from EPA and other partners on toxics reduction projects across the basin; a panel discussion with recently awarded Transboundary Watershed Grant recipients working along the Canadian border with Idaho, Montana and Washington; and presentations from newly awarded Columbia River Basin (CRB) Science and Monitoring grantees. The meeting will also feature several TMS updates, including Screening Values and Monitoring Dashboard updates and a draft CRB Monitoring Strategy vision update. Yakama Nation will also share an update on their basin-wide implementation plan for a monitoring program. Participants who do not see the December 15 Working Group invitation on their calendars and want to be added to the mailing list may contact . The meeting is open to all, and the invitation may be shared broadly.

Additional opportunities to stay engaged with the TMS and broader Working Group were also highlighted. Staff are starting to plan and seek approvals for an in-person meeting on April 21-22, 2026, pending approval. Day 1 would start in the afternoon with participants choosing between a site tour or a TMS workshop, and Day 2 will include the CRBRP Working Group meeting.

TMS TOOLS DISCUSSION

Screening Values Updates

Mark Jankowski (EPA Region 10) provided an update on the ongoing development of screening values. These values originate from the need for consensus-based screening values to support consistent interpretation of monitoring data across the basin, particularly for prioritization and adaptive management. The effort began with ecological screening values but may extend to human health considerations as the work progresses.

As part of this effort, the subgroup is drawing on a 2025 Great Lakes Restoration Initiative (GLRI) paper ([Maloney et al. 2025 ET&C 44:2029-2047](#)) that provides screening values for 334 organic compounds. Approaches used in that report range from established water quality guidelines to quantitative structure activity relationship (QSAR) based estimates, depending on data availability. Some of the TMS screening values will be adapted from this work.

For metals, ecological screening values will generally align with existing water quality guidelines, such as Clean Water Act Section 304(a) criteria, since metals are already well characterized as priority pollutants. Sediment and tissue benchmarks for chemicals remain to be determined, as these are more challenging to establish, though existing sediment benchmarks may be leveraged. Work on ecological screening value selection has resumed, and development of human health screening values will occur in coordination with partners. As was mentioned during the meeting, existing state, tribal, or federal criteria values may be preferentially used when available.

QAPP Template Development

Meghan Dunn (EPA Region 10) and Lisa Kusnierz (EPA Region 10) provided an update on the Quality Assurance (QA) Framework, a component of the TMS proposed monitoring strategy to be developed in response to participant feedback. Participants have previously requested support reducing the time required to prepare Quality Assurance Project Plans (QAPPs) and promoting consistency across projects. In response, the TMS Core Team is developing a framework that includes QAPP templates and standardized protocols but also allows flexibility to accommodate different pollutants and media while still maintaining data consistency for comparability. Meghan shared some tables from a QAPP from the 2023 Implementation of the Columbia River Mainstem Fish Tissue and Sediment Quality Monitoring Program developed by the Yakama Nation to provide examples of the type of information that will be in the template.

The update also highlighted that the EPA has released a new QAPP Standard, (https://www.epa.gov/system/files/documents/2024-04/quality_assurance_project_plan_standard.pdf) which replaces the former EPA Region 5 Quality Guidance. Grant Terms and Conditions will begin referencing this new standard when specifying QAPP requirements. The TMS QAPP template will be

aligned with this updated standard. While many components remain similar to previous guidance, the new standard will serve as the foundation for future template development.

The TMS intends to create a QAPP template that can be adapted as needed for individual projects. The goal is to streamline development and avoid recreating similar materials for each new effort. Reach out to Lisa or Meghan if you have questions or feedback.

Q&A Discussion

- **Question:** Does the QAPP support the use of SPMDs, POCIS, and SPATTS (passive samplers)?
 - **Answer:** The template could be modified to incorporate passive samplers if needed, with project-specific considerations determining applicability. We have been thinking more about that, particularly after conversations with LCEP and knowing how much passive sampling is used in the lower Columbia Basin, because it would be nice to apply some of the same sampling procedures throughout more of the watershed.
 - **Comment:** Catherine Corbett (Lower Columbia Estuary Partnership) noted that many partners use passive samplers in the lower river, making this an important issue.
- **Question:** How will the data validation section of the QAPP be addressed? Will guidance be provided, or will grantees be expected to conduct validation independently?
 - **Answer:** Good question – it's something for us to think about. This component is still under development and will depend on project-specific goals and intended uses of the data.

Partner Updates

- **Jakub Bednarek:** Jakub Bednarek (WA State Department of Ecology) reported on recent fish collection efforts conducted by his team in the lower Columbia River between Bonneville Dam and McNary Dam. Sampling occurred at six sites, with 30–40 fish collected per site. The team successfully obtained a broad range of species and will submit samples for analysis of PCBs, pesticides, PFAS, and metals. He also noted that data from the 2024 Tidewater section collection is being received, and a report on those results is expected during the winter/spring period.
- **William Hobbs:** William Hobbs (WA State Department of Ecology) shared information about ongoing collaboration using otoliths to evaluate life-history patterns in resident species and identify tributary migration pathways, with the aim of understanding where toxics are accumulating in tissues. Another component of this broader, 40-year project involves assessing toxic loading from major tributaries in the mid and upper Columbia River, funded through recently awarded science and monitoring grants. He also highlighted targeted investigations in the Wenatchee Basin, where efforts are underway to identify PCB sources (<https://apps.ecology.wa.gov/publications/summarypages/2503015.html>). Additional work with Chelan County is examining PCB concentrations in sediment deposits and the potential for diffusion from sediment. An announcement will be shared once these results are published.
 - Will noted that the Pacific Northwest Society of Environmental Toxicology and Chemistry (SETAC) regional meeting will take place in Leavenworth from April 15–17, 2026. In the future, maybe the TMS group could overlap with this meeting, in order to coordinate/take of potential synergies and similar audiences.

- **Mary Engels:** Mary Engels (University of Idaho) provided an update on ongoing 6PPD-Q research in Idaho. Her team is using crayfish as bioindicators of 6PPD-Q across multiple systems and has detected the compound in crayfish and sediment samples from various basins, although not in any water samples collected to date. Crayfish appear to excrete or metabolize 6PPD-Q rapidly, so the application of this tool across the Basin is unclear. The team is also testing the tissue method on several fish species, with preliminary results indicating strong applicability, but again, rapid metabolism and excretion parameters will impact broad applicability. The sediment method used for this work was developed in-house based on published methods. Sampling locations included both urban and rural areas, with some of the highest 6PPD-Q concentrations observed in more rural settings. Mary reported that she is conducting studies to better understand uptake and clearance rates of 6PPD-Q in crayfish to better evaluate the tool's suitability for monitoring.

DRAFT MONITORING STRATEGY AND RELATED UPDATES

Columbia Basin Toxics Monitoring Vision Update

Ashley Zanolli (EPA Region 10) presented that the TMS, in partnership with USGS, is developing a comprehensive toxics monitoring strategy to assess water quality trends and support pollution reduction across the Basin. The draft strategy's vision is to coordinate monitoring efforts among federal, state, tribal, and local partners to track toxic pollutants that threaten human health and aquatic life. The TMS Core Team is currently refining the strategy based on extensive partner input. Engagement efforts have included listening sessions with 21 organizations and feedback gathered during the June TMS Workshop and Working Group Meeting. Thank you to everyone who provided feedback. An updated draft Monitoring Strategy will be shared at the Spring TMS Workshop and Working Group meetings.

Ashley reviewed the Toxics Monitoring Strategy Vision and Draft Strategic Goals which are: (1) sustaining and expanding the partnership to monitor toxic pollution; (2) identifying and prioritizing pollutants based on risks to humans and aquatic life; (3) assessing the status, trends, and locations of priority pollutants in water, sediment, and fish; and (4) applying new tools and approaches for evaluating legacy contaminants, emerging chemicals, and chemical mixtures). She then summarized key themes from partner feedback:

- **Responsibilities Beyond the Monitoring Strategy:** Partners noted several important topics that fall outside the scope of the draft Monitoring Strategy, including linking monitoring results directly to toxics-reduction actions; communication of results to public audiences; integration of BMP effectiveness monitoring with program evaluation; governance structures for strategy implementation; and long-term funding sustainability. These issues are being addressed through other components of the CRBRP, Working Group efforts, or partner-led initiatives.
- **Tribal Considerations:** Feedback emphasized that tribal values, sovereign rights, and culturally significant species must be central to the strategy. The updated approach will reflect tribal sovereignty and cultural priorities by focusing on species of particular significance (such as salmon, lamprey, and sturgeon), and strengthening partnerships and ongoing tribal engagement.
- **Community Engagement and Public Communication:** Partners highlighted the need for accessible information, transparency regarding monitoring locations and parameters, and support in interpreting results. In response, the TMS plans to develop periodic status and trends reports, enhance the monitoring dashboard, and build structures to support data interpretation.

- **Emerging Contaminants and Historical Resources:** Partners requested prioritization of contaminants identified in the 2020 contaminants of concern framework and incorporation of historical studies. The updated strategy will reference this framework and work to integrate additional datasets, including Canada’s National Pollutant Release Inventory (NPRI), to better address transboundary contamination.
- **Pathway and Source Monitoring:** Interest was expressed in strengthening monitoring of intermediate discharge pathways and linking monitoring results to potential sources. The TMS will work with USGS on hydrologic modeling and GIS tools incorporating factors like population and road density to better understand contaminant pathways. However, connecting monitoring results to specific sources is beyond this strategy's scope.
- **Monitoring Protocols and Quality Assurance:** Partners supported the development of standardized but flexible monitoring protocols and Quality Assurance approaches that can accommodate local environmental conditions and project-specific needs. The TMS Core Team will Proceed as planned with development of QAPP template and compilation of Standard Operating Procedures (SOPs). Sampling and analysis protocols depend on which compounds and media are being monitored. The strategy provides a way to identify the highest priority media and compounds.
- **Governance and Coordination:** Feedback included questions regarding roles and responsibilities, particularly related to governance, federal responsibilities in interstate waters, and coordination among diverse partners. Responsibility for mainstem interstate boundary waters needs to be clarified and requires additional discussion. The Core Team will continue to work closely with state partners through Toxics Reduction Lead calls and TMS participation to ensure coordination, and the Yakama Nation Implementation Plan addresses potential governance structures and proposed partner-level responsibilities.
- **Adaptive Management:** Participants raised the need for adaptive management, which the team plans to address by considering findings from CRBRP Tribal Reduction Lead, Tribal Lead, and Science and Monitoring grants, collaborating with the Yakama Nation on the mainstem monitoring plan and exploring expansion into tributaries and the lower basin with the Lower Columbia Estuary Partnership and WA Ecology, seeking partner input through TMS and Working Group, and using monitoring data and status and trends reports to identify areas needing further investigation.

Certain feedback items will not be incorporated into the draft Monitoring Strategy at this time, including the addition of cyanotoxins and expansion of the PFAS geodatabase or inclusion of microplastics. A draft flow chart to guide selection of chemical monitoring priorities was also shared. Identification of potential “indicator species” and “indicator pollutants” to sample will be proposed in the future for TMS discussion and refinement.

In response to this update, participants expressed overwhelmingly positive feedback on the planned updates to the draft monitoring strategy for toxics and no concerns were raised during the meeting. Participants are encouraged to reach out to the TMS Core Team if they have additional feedback to share before the Spring TMS Workshop.

Lower River Monitoring Strategy and Results

Catherine Corbett (Lower Columbia Estuary Partnership) provided an overview of the design and background of the Lower River Monitoring Strategy. She began with a summary of toxics research

conducted in the Lower Columbia River (LCR) from 1989 through 2010. One key development during this period was the shift in Bonneville Power Administration (BPA) funding priorities beginning in 2007, moving from toxic contaminant studies toward the Ecosystem Monitoring Program (EMP), which includes fish tissue collection and related monitoring.

Catherine then described a 2009 USGS study that evaluated contaminant bioaccumulation in the LCR food web using passive samplers, sediments, invertebrates, largescale suckers, and osprey eggs. When combined with a 2010 compilation of available toxics data for the LCR, this work enabled the development of maps showing contaminant distribution and informed an updated list of recommended monitoring sites for future studies.

These earlier efforts helped guide development of the current Toxics Tracking in the Lower Columbia River (TLC) project, which aims to establish a consistent, long-term toxics monitoring program for the LCR. Project objectives include providing up-to-date information on contaminant conditions, refining the sampling design, and involving key regional partners. Ten sampling locations were selected, drawing from established EMP and ConHab monitoring sites.

Sean Payne (USGS – ORWSC) then presented early results from the project. A full USGS data release will provide additional detail. In addition to monitoring traditional contaminants such as PCBs, PBDEs, and pesticides, the project incorporated new data points, including cyanotoxins and PFAS. Samples were collected across multiple time periods and using a range of methods.

Preliminary findings indicate the following:

- Wastewater indicator compounds showed strong seasonal variation in contamination levels.
- PFAS concentrations did not exhibit the same degree of seasonal fluctuation.
- Cyanotoxins displayed chemical-specific seasonal patterns, with some compounds showing clear seasonal trends and others remaining relatively consistent.

Yakama Nation Implementation Plan for a Basin-Wide Monitoring Program

Laura Shira (Yakama Nation Fisheries) and Sherrie Duncan (Yakama Nation Fisheries) informed the group that the Yakama Nation team has finalized a draft implementation plan for a basin-wide monitoring program. The plan is intended to be adaptive, recognizing that monitoring needs may shift over time based on funding availability, regional priorities, and broader political or environmental changes. Since 2015, the team has collaborated with multiple partners to develop the current implementation framework.

The plan outlines a governance structure designed to remain fluid and responsive. At the highest level, an executive board would provide oversight and ensure regular engagement with subject-matter experts and relevant partners. The plan also addresses strategies for securing funding, outlines an anticipated development timeline, and describes other essential components needed to support long-term basin-wide monitoring.

ONLINE RESOURCES

- Derivation and characterization of environmental hazard concentrations for chemical prioritization: a case study in the Great Lakes tributaries: <https://academic.oup.com/etc/article-abstract/44/7/2029/7942710?redirectedFrom=fulltext&login=false>
- New EPA Quality Assurance Project Plan Standard: https://www.epa.gov/system/files/documents/2024-04/quality_assurance_project_plan_standard.pdf
- Wenatchee River PCB Source Assessment: Cashmere Reach Source Identification: <https://apps.ecology.wa.gov/publications/summarypages/2503015.html>
- 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>
- USGS Data Release: <https://www.usgs.gov/data/and-polyfluoroalkyl-substances-pfas-and-wastewater-indicator-compounds-measured-polar-organic>