

Columbia River Basin Toxics Monitoring Project Tracking Matrix

Version 1.0 (2023-10-25) (QAPP links corrected from 9-21-2023 version)

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 better coordination and collaboration among toxics monitoring projects. As a result, the CRBRP Toxics Monitoring Subgroup (TMS) was formed in 2023 and the idea of a toxics monitoring project tracking matrix emerged. The TMS leadership, made up of EPA and USGS staff, identified the draft set of information to include, developed the data dictionary describing what each field should contain, and worked with CRBRP grantees to populate the Matrix.

Intended Audience: The primary audience for the Columbia River Basin Toxics Monitoring Project Tracking Matrix is the Columbia River Basin Restoration Program Toxics Monitoring Subgroup and other entities working to assess, reduce, and/or clean up toxics in the watershed.

Intended Use: The primary intended use for the Matrix is to advance the broad understanding of toxics monitoring efforts in the Columbia River Basin (who's doing what, where, when, and how), help facilitate coordination and collaboration among toxics monitoring projects, and assist with identifying information gaps.

Scope: The matrix is intended to be dynamic and is considered a "living document" that will be updated on a regular basis (e.g., annually). While Version 1.0 of the Matrix only contains information for CRBRP-funded projects that include a monitoring element, anyone conducting toxics monitoring in the Columbia River Basin is welcome and encouraged to submit their project for inclusion in the Matrix. If you're interested in adding your project to the Matrix, email the TMS core team at gs-crbtoxmon@usgs.gov.

Columbia River Basin Toxics Monitoring Project Tracking Matrix - Data Dictionary

Field Name	Field Description	Data type	Allowed values
Unique identifier	Unique name or number assigned by EPA or other funding agency	unique name or number	
Project title	Project title listed on funding agreement	text	
Project purpose	Short description of project purpose, goal(s), or objective(s), written in 150 words or less.	text	
Lead entity	Organization name of the primary grant recipient or project lead	text	
Entity conducting monitoring	Organization name(s) of the entity conducting the monitoring	text	
Monitoring type	Indicates the type of monitoring the project uses. Choose from three options, 1) Targeted monitoring (focused on an area of interest, and can be a form of Effectiveness monitoring (measuring response to an implemented mitigation strategy)), 2) Fixed-site (long-term, routine monitoring for trends), or 3) Statistical/probabilistic (randomly chosen to assess condition of a broad population). If more than one monitoring type, list each type separated by commas.	text	targeted, fixed-site, statistical/probabilistic
Geographic scope of monitoring	Indicates the rough geographic scope of where monitoring occurs. Choose from two options, 1) localized (single site/tributary), 2) broad (multiple tributaries or watersheds, large lengths of the mainstem Columbia).	look-up	localized, broad scale
Mainstem Columbia River or tributary	Indicates where monitoring occurs. Choose from three options, 1) mainstem (Columbia River), 2) tributary (tributary of the Columbia River), or 3) mainstem and tributary (monitoring is in both the Columbia River mainstem and its tributaries)	look-up	mainstem Columbia River, Columbia River tributary, Columbia River mainstem and tributary
Monitoring location description	Geographic location where monitoring is taking place as described by project proponents, typically includes name of rivers or watersheds and state(s).	text	
Monitoring location county and state	County and state that monitoring is taking place. If more than one county, list each county and state separated by commas.	text	
Are locations of monitoring sites available now?	Indicates whether monitoring site(s) GPS coordinates are documented as of the date the matrix was published. Choose from two options, 1) Yes, or 2) No.	look-up	yes, no
Number of sampling sites	Total number of unique sites the project will sample over the entirety of the project	numeric or text	
Sampling frequency	Number of samples per unit of time (e.g., year)	text	

Field Name	Field Description	Data type	Allowed values
Parameters monitored	Parameters the project or program monitors/measures. Parameters can include chemicals or chemical properties (e.g., contaminants, nutrients, pH, dissolved oxygen) and physical properties (e.g., temperature, turbidity). If more than one parameter is monitored, list each parameter separated by commas.	text	
Parameter type(s)	Indicates the parameter types being monitored. Choose from four options, 1) metal, 2) other inorganic, 3) organic, or 4) other. If more than one parameter type is being monitored, list each type separated by commas.	text	metal, other inorganic, organic, other
EPA Region 10 prioritization tiers for parameters monitored	Indicates the EPA Region 10 prioritization tiers that the chemicals being monitored fall under, if any. Refer to the EPA table linked here: https://www.epa.gov/columbiariver/prioritization-toxics-columbia-river. If more than one tier, list each tier separated by commas.	text	tier 1, tier 2, tier 3
Persistent organic pollutant	Indicates whether the parameters being monitored are persistent organic pollutants. Choose from three options, 1) yes, 2) no, 3) mixed (monitoring both POP and non-POP chemicals). Refer to table linked here to identify POPs: The New POPs	look-up	yes, no, mixed
Media being sampled	Indicates media being sampled for monitored parameters. E.g., water, sediment, air, sturgeon, salmon, crayfish, biofilm. If more than one media is being sampled, list each media separated by commas.	text	
Will chemical concentration data be compared to toxicity reference values? If yes, which reference values?	Indicates toxicity reference values that chemical concentration will be compared to (e.g., Tribal water quality standards, state water quality standards, other water quality standards). If more than one, list each separated by commas. Enter "no" to indicate you will not compare chemical concentrations to toxicity reference values, or NA if it is not applicable.	text	
Primary source pathway being investigated	At the project scale, indicates the primary source pathway being investigated. Choose from seven options, 1) agriculture, 2) forestry, 3) mining, 4) stormwater, 5) waste water treatment plant, 6) industrial, or 7) air deposition. If more than one pathway is being investigated, list each pathway separated by commas.	text	agriculture, forestry, mining, stormwater, waste water treatment plant, industrial, air deposition
Potential mitigation solution	If applicable, short description of mitigation solution, written in 150 words or less. Enter "no" to indicate that no potential mitigation solution have been identified, or NA if it is not applicable.	text	

Field Name	Field Description	Data type	Allowed values
Standard, Clean Water Act (CWA) approved, or novel analytical method	Indicates whether analytical method(s) are standard (ASTM, SM, EPA non-CWA, USGS, NEMI), Clean Water Act (CWA) approved, or novel analytical method(s). If more than one category applies, list categories separated by commas.	text	standard, CWA, novel
If standard or CWA approved method(s), what method(s)?	If standard or CWA approved method, method name/number. If more than one method, list methods separated by commas.	text	
QAPP link	Link to Quality Assurance Project Plan (QAPP) document	hyperlinked text	
Monitoring start date	Month and year monitoring first started	text	
Monitoring end date	Month and year monitoring is planned to end. If monitoring end date is unknown, enter unknown.	text	
Project principal investigator	First and last name of the principal investigator for the project	text	
Project principal investigator email address	Email address for the principal investigator for the project	email address	

Unique identifier	Project title	Project purpose	Lead entity	Entity conducting monitoring	Monitoring type
RB-02J16901	Urban Waters and Wildlife Partnership & Program Implementation (Phase II)		Cascade Pacific RC&D		
RB-02J17101	Lower Wenatchee River PCB Source Investigation	Conduct an investigation of documented ongoing inputs of legacy polychlorinated biphenyls (PCBs) at two locations in the Lower Wenatchee River, a tributary of the Columbia River. The goal for the investigation of the Confluence Reach is to determine whether sediment deposits at the confluence are contributing PCBs to the Lower Wenatchee food web. Ecology is currently working on the investigation of PCB sources in the Cashmere Reach, with the goal of determining if a historic landfill is contributing PCBs to the river. Additional samples are needed as part of the Cashmere study; under this proposal Ecology will collect additional water and biofilm samples at the Cashmere Reach to build a greater understanding of possible PCB sources from the former landfill. Both investigations have direct implications for follow-up source control actions as sources are identified.	Chelan County Natural Resource Department	Chelan County Natural Resource Department (CCNRD), Washington Department of Ecology (Ecology)	targeted
RB-02J12601	City of Vancouver Columbia Slope Water Quality Monitoring Phase 2	The City of Vancouver will collect an additional 18 months of water quality data at ten locations along the Columbia Slope to accurately establish current conditions, provide baseline data for future trend analysis, and determine the effectiveness of stormwater management practices. Water quality data will also be used to identify and prioritize outfall basins where future stormwater treatment retrofits would be effective in removing contaminants that are currently reaching the Columbia River.	City of Vancouver	Herrera Environmental Consultants, Inc.	targeted
RB-01J73401	City of Vancouver Columbia Slope Water Quality Monitoring	The City of Vancouver will work with a contractor to perform water quality monitoring at six locations along the Columbia Slope to identify and prioritize outfall basins where stormwater treatment retrofits would be effective in removing contaminants that are currently reaching the Columbia River.	City of Vancouver	Herrera Environmental Consultants, Inc.	targeted
RB-01J72601	Columbia River Mainstem Fish Tissue and Water Quality Monitoring Framework	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.	Confederated Tribes and Bands of the Yakama Nation	U.S. Geological Survey	TBD

Unique identifier	Project title	Project purpose	Lead entity	Entity conducting monitoring	Monitoring type
44-02J21301	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program - Grant A: Planning, Outreach, and QAPP development	The primary purpose of Phase 2 Grant A is to provide the necessary planning and documentation to begin to conduct aquatic monitoring in a large river like the Columbia, that is also home to several Threatened and Endangered Species. Our goal is to further develop a Monitoring Program through planning, formulating monitoring designs, developing QAPPs, gaining permits for field sampling, and conducting outreach. This work will directly inform the development of the Monitoring Program by resulting in media specific QAPPs/SOPs/HASP/ISSPP, monitoring designs for sampling various media, laboratory contracting, performance plan and data review and other plans and permits required for implementing the Monitoring Program (Phase 3) to assess the status and trends of contamination in fish, water, sediment, and invertebrates and other potential media in the Columbia River mainstem, from Bonneville Dam to the Canadian Border.	Confederated Tribes and Bands of the Yakama Nation	Yakama Nation, U.S. Geological Survey, Columbia River Intertribal Fisheries Commission, Washington Department of Ecology, and the Oregon Department of Environmental Quality	statistical/probabilistic
44-02J21401	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program – Grant B: Field Data Collection, Analytical, and Reporting	The primary purpose of Phase 2 Grant B is to implement the products produced during Phase 2 Grant A to collect, process, and analyze fish and sediment samples from Bonneville Reservoir, a 50-mile reach of the Columbia River. Phase 2 Grant B Pilot Study will provide information needed to conduct aquatic monitoring in a large river like the Columbia. Our goal is to further develop a Monitoring Program through this field sampling, analytical, and reporting effort. This work will directly inform the development of the Monitoring Program by providing on the ground information to refine media specific QAPPs, SOPs, Health and Safety Plans (HASPs), Invasive Species Spread and Prevention Plan (ISSPP), laboratory contracting, performance plan and data review, and other plans and permits required to fully implement the Monitoring Program (i.e., Phase 3).	Confederated Tribes and Bands of the Yakama Nation	Yakama Nation, U.S. Geological Survey, Columbia River Intertribal Fisheries Commission, Washington Department of Ecology, and the Oregon Department of Environmental Quality	statistical/probabilistic
44-02J22501	Upper Columbia River Toxics Monitoring; Caring for Šn̓x̓ ^w ntk ^w itk ^w : <i>Increase monitoring and access to data from monitoring in the UCR Basin with impact to human health and fish and wildlife</i>	Undertake planning and piloting of an innovative environmental monitoring and risk communication program that centers the needs of Confederated Tribes of the Colville Reservation members while being expansive enough to have relevance for all local residents and users of the Upper Columbia River and Lake Rufus Woods. The ultimate goal is to reduce uncertainty around what activities and resources are safe for Confederated Tribes of the Colville Reservation members and other local residents to do and use, and to initiate a program that will track future trends in contaminant levels.	Confederated Tribes of the Colville Reservation	Confederated Tribes of the Colville Reservation	targeted
44-02J19701	Monitor Contaminants Trends, Transport, Uptake and Transfer through the Kootenai River Ecosystem		Kootenai Tribe of Idaho		
RB-02J13601	TLC: Tracking Toxics in the Lower Columbia (Phase I)	LCEP's goal for our toxic contaminant monitoring program is to track the status and trends of toxic contaminants in the lower Columbia River to support the identification of sources and management actions to reduce risk from contaminants to fish, wildlife, and human health. Phase 1 of this program will kickstart our monitoring program, add more recent information to our understanding of the problem, and allow us to update our overall monitoring design based on this additional information.	Lower Columbia Estuary Partnership	U.S. Geological Survey	targeted

Unique identifier	Project title	Project purpose	Lead entity	Entity conducting monitoring	Monitoring type
RB-96886201	Quantifying Toxins in Fish Consumption and Identifying Sources of Pollutants in the Upper Columbia	This project will provide a much-needed analysis of the geographic expanse, severity and likely sources of toxins posing risk to human health and the aquatic resources of the upper Columbia River Basin in Montana. It will do so by greatly expanding initial research and engaging in broad, planned public education and outreach. Expanded fish sampling and analysis, alongside water sampling will lead to updated fish consumption advisories for the entire upper Columbia River system in Montana, which will better protect public health, better inform the public about Columbia Basin toxicity concerns, and identify opportunities for future toxin reduction efforts throughout the project's geographic scope. Information attained from the project and public engagement on the issue will promote future cleanup activities.	Montana Trout Unlimited, Inc.	Montana Fish, Wildlife and Parks; Montana Trout Unlimited; Clark Fork Coalition	targeted
44-02J19901	Clearwater River Toxics Assessment and Monitoring Project	Goal 1: Increase monitoring throughout the Clearwater River watershed to collect baseline data and increase toxics monitoring efforts through sampling for PFAS, PBDEs and PPCPs in the Clearwater River watershed and total and methyl mercury in Dwoshak Reservoir. Goal 2: Increase public education about the toxics problems and resource needs.	Nez Perce Tribe	Nez Perce Tribe Water Resources Division, Idaho Fish and Game	targeted
RB-01J72901	Clearwater River (Idaho) Watershed Baseline Monitoring and Toxics Assessment	Collaborate with partners to increase monitoring throughout the Clearwater River watershed to collect baseline data and increase toxics monitoring.	Nez Perce Tribe	Nez Perce Tribe - Water Resources Division, US FWS, angler volunteers	fixed-site, targeted
44-02J21001	Nez Perce Methylmercury Monitoring and Abatement: Salmon and Lower Snake Rivers		Nez Perce Tribe		

Unique identifier	Project title	Project purpose	Lead entity	Entity conducting monitoring	Monitoring type
RB-02J15901	River TALC: Toxics Assessment of the Lower Columbia	Through a two-tiered approach—addressing data gaps through monitoring and educational gaps through community outreach—the NCWA aims to identify emerging issues related to toxic roadway runoff substances in the Columbia River basin at its lowest reaches, to enhance the community’s understanding of these issues, and to begin to target projects to help mitigate river contamination. Educational programming will highlight well known chemicals of concern, including PCBs, PBDEs, and heavy metals like copper, as well as those specific to roadway runoff like 6 p-phenylenediamine quinones (6PPDQs).	North Coast Watershed Association	The North Coast Watershed Association (NCWA) staff and volunteers	targeted
RB-02J14501	Reducing PFAS and Phthalates in Local Clean Water Systems within the Columbia Basin, Oregon	The seven elements of ACWA’s PFAS and phthalate reduction and assessment project are 1) Develop an outreach guidance document for engaging and communicating with the public and specific audiences on PFAS and phthalate reduction, 2) Produce public education resources on reducing use of products containing PFAS and phthalates and communicating risks, 3) Develop low toxicity institutional purchasing guidelines for local governments, 4) Synthesize available information on potential industrial sources of PFAS and phthalates, 5) Conduct selective wastewater and stormwater related monitoring of PFAS and phthalates, 6) Develop industrial toxics pollution prevention information and resources, and 7) Summarize how grant project work products will inform future efforts.	Oregon Association of Clean Water Agencies	Participating local wastewater and stormwater agencies will collect samples. Members of the Oregon Association of Clean Water Agencies (ACWA) Water Quality, Stormwater, and Biosolids and Recycled Water committees will assist with the monitoring strategy and data evaluation.	targeted
RB-02J14201	Engaging Communities to Monitor Mercury Risk in the Columbia River Basin: Intensive Application of a National Biosentinel Network at a Regional Scale	We will implement a fine-scale, community-based mercury monitoring network in the Willamette River Valley to document trends in biotic mercury contamination at a fine scale across various environmental and demographic gradients, identifying pollution drivers, and informing safer fishing practices. Using established curricula, we will engage and educate community scientists to sample dragonfly larvae as mercury bioindicators, connecting people to the freshwater systems on which they depend, and increasing public knowledge of mercury risks to ecosystem and human health.	Oregon State University	Oregon State University (OSU), U.S. Geological Survey, citizen scientists	targeted, statistical/probabilistic
44-02J19601	Crayfish as indicators of 6PPD-quinone contamination	The two priorities of this project are: 1) to demonstrate the applicability of native and non-native crayfish as monitoring organisms for 6PPD-quinone (6PPD-q) contamination across a variety of environmental conditions, and 2) to promote citizen engagement and knowledge of aquatic contamination by tire wear particulates and 6PPD-q.	Regents of the University of Idaho	Salish School of Spokane; Clark Fork Coalition; University of Idaho; Montana Fish, Wildlife, and Parks	targeted
44-01J15801	The Crayfish Mercury Project 2023-2024	The goals of this project are to facilitate community engagement while encouraging citizens to become involved in an environmentally relevant monitoring program. Specifically, the project will monitor mercury, a priority compound in the CRB, in the tissues of crayfish captured by participants from community organizations and Native American tribes from across the CRB.	Regents of the University of Idaho	citizen scientists	targeted
RB-01J73101	Using crowdsourced crayfish in education, engagement and bio-monitoring relative to mercury pollution in the Spokane and Boise River Basins	This monitoring project will engage community members in field collection of crayfish, a sentinel species for mercury contamination, to incentivize the local community members and enhance communication regarding mercury fish advisories. By sampling water quality parameters, measuring mercury levels in crayfish and overlaying that data with existing fin fish contamination maps, our project aims to expand monitoring programs already underway, while also increasing community awareness relative to the problem.	Regents of the University of Idaho	University of Idaho, citizen volunteers affiliated with the Spokane Riverkeeper, IdaH2O, and The River Mile Network’s Columbia River (SRB) & Boise River Enhancement Network (BRB)	targeted

Unique identifier	Project title	Project purpose	Lead entity	Entity conducting monitoring	Monitoring type
44-02J20001	Upper Columbia Basin Contaminant Status, Movement and Remedial Pilot Study	The primary goals of the study are to: 1) identify areas where contaminant concentrations are elevated or exceed water quality and sediment quality standards set by the Spokane Tribe and EPA, EPA Aquatic Water Quality Criteria (AWQC), 2) evaluate movement of contaminants transported through the river across media, 3) identify which contaminants are entering the food web via biofilm that are available to bioaccumulate up the food chain, and 4) test the feasibility of a sediment particle trap methodology that could be scaled up for large-scale restoration actions in the future.	Spokane Tribe of the Spokane Reservation	Spokane Tribe's Limnology Program, contractor	targeted
44-02J22301	Eliminating Erosion of Legacy Mine Tailings from the Bodie Mine into Toroda Creek, Kettle Creek Watershed, WA	By halting the active erosion of Toroda Creek into the mine tailings along the proposed project reach, this project will eliminate pollution from added siltation as well as toxics including arsenic, cadmium, lead, mercury, selenium, copper, and zinc currently found in the tailings on the site. The project will not only improve water quality in Toroda Creek by reducing toxic sediment inputs to the stream, but it will also benefit the overall ecosystem health of the Kettle River watershed and the Columbia Basin.	Trout Unlimited	Trout Unlimited; Herrera Environmental Consultants, Inc.	targeted
RB-96886101	Reconstructing 40 years of selenium exposure from fish otoliths: Archival tissue applications for contaminant biomonitoring in Lake Koocanusa	Use archival tissue (fish otoliths) biomonitoring for the reconstruction of 46 years of population-level selenium exposure trends for the Burbot (<i>Lota lota</i>) population in Lake Koocanusa (MT), a reservoir impaired by selenium contamination as a result of coal mining activity in upstream British Columbia watersheds. Aim 1. Characterize temporal patterns in individual and population-level Burbot exposure to selenium. Aim 2. Relate otolith-based time series of Burbot selenium exposure to water column selenium concentration and Burbot population monitoring data. Aim 3. Hindcast historic selenium tissue concentrations using tissue-otolith relationships.	University of Connecticut	NA	NA
RB-96847301	Fish consumption and advisory awareness among food pantry patrons receiving products of lake trout suppression on Flathead Lake, Montana	Goal 1 – Evaluate the potential for beneficial health outcomes, with respect to MeHg exposure in fish, as a result of the local food pantries default food distribution policy in conjunction with advisory awareness. Goal 2 – Establish a baseline for trophic magnification of MeHg in the Flathead Lake food web and fill critical data gaps relating to MeHg in Flathead Lake lake whitefish and bull trout. Goal 3 – Fill a critical data gap on MeHg concentrations in whitefish and bull trout. Goal 4 – Initiate community education and engagement through the exploration of CSKT's potential uses of newly acquired MeHg data and information on food bank patrons fish consumption activity and advisory awareness.	University of Montana	Flathead Lake Biological Station (FLBS), Confederated Salish and Kootenai Tribes (CSKT)	targeted
RB-01J73201	Evaluating and Prioritizing Contaminants of Emerging Concern in the Lower Columbia River	The primary objectives of this work are to: 1) characterize the occurrence of priority chemicals in the Columbia River through a focused monitoring program, 2) evaluate the occurrence based on their potential to cause harm to important species, and 3) communicate the results to stakeholders.	University of Washington Tacoma at the Center for Urban Waters	University of Washington Tacoma	targeted
RB-01J72301	Monitoring, Reduction, and Collection of Agricultural Pesticides in the Columbia River Basin	A pilot Pesticide Stewardship Partnership (PSP) project in the Yakima River watershed (YRW) and Palouse River watershed (PRW) that expands on preceding WSDA efforts. This project's three main components are 1) Conduct and expand surface water monitoring in key agricultural regions of Washington, 2) Create and conduct targeted outreach in the PRW and YRW, and 3) Waste pesticide collection in the PRW and YRW.	Washington State Department of Agriculture	Washington State Department of Agriculture Natural Resources Assessment Section and the Palouse Conservation District (PCD)	fixed-site

Unique identifier	Project title	Project purpose	Lead entity	Entity conducting monitoring	Monitoring type
RB-02J14101	Next steps in pesticide stewardship partnerships at the Washington State Department of Agriculture	This project continues the surface water monitoring work of WSDA's previously funded Columbia River Basin Funding Assistance Program award for a third year, in keeping with WSDA's Surface Water Monitoring Program guidelines of monitoring Tier 1 sites biweekly for three consecutive years for an initial evaluation of water quality. It will also incorporate targeted outreach (including data collected during monitoring in 2021 and 2022). In addition, this project incorporates the next step in the development of WSDA's pesticide stewardship program, which will involve planning for activities that would support Washington's agricultural producers in meeting new pesticide labeling requirements.	Washington State Department of Agriculture	Washington State Department of Agriculture and Palouse Conservation District	targeted

Unique identifier	Project title	Geographic scope of monitoring	Mainstem Columbia River or tributary	Monitoring location description	Monitoring location county and state	Are locations of monitoring sites available now?
RB-02J16901	Urban Waters and Wildlife Partnership & Program Implementation (Phase II)					
RB-02J17101	Lower Wenatchee River PCB Source Investigation	localized	Columbia River tributary	Wenatchee Watershed	Chelan County, Washington	yes
RB-02J12601	City of Vancouver Columbia Slope Water Quality Monitoring Phase 2	localized	Columbia River tributary	Columbia Slope sub-watershed within Vancouver city limits. The project will focus specifically on drainage basins primarily south of Mill Plain Blvd. between the Blandford subbasin (Devine Road) and the eastern city limits.	Clark County, WA	yes
RB-01J73401	City of Vancouver Columbia Slope Water Quality Monitoring	localized	Columbia River tributary	Columbia Slope sub-watershed within Vancouver city limits	Clark County, WA	yes
RB-01J72601	Columbia River Mainstem Fish Tissue and Water Quality Monitoring Framework	broad scale	mainstem Columbia River	Columbia River mainstem from Bonneville Dam to the Canadian border	Not Applicable. Planning document only.	yes, from Master Sample list, but details on site selection not yet finalized.

Unique identifier	Project title	Geographic scope of monitoring	Mainstem Columbia River or tributary	Monitoring location description	Monitoring location county and state	Are locations of monitoring sites available now?
44-02J21301	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program - Grant A: Planning, Outreach, and QAPP development	broad scale	mainstem Columbia River	Columbia River mainstem from Bonneville Dam to the Canadian border	Skamania, WA; Klickitat, WA; Multnomah, OR; Hood River, OR; Wasco, OR	no
44-02J21401	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program – Grant B: Field Data Collection, Analytical, and Reporting	broad scale	mainstem Columbia River	Bonneville Reservoir, a 50-mile reach of the Columbia River	Skamania, WA; Klickitat, WA; Multnomah, OR; Hood River, OR; Wasco, OR	no
44-02J22501	Upper Columbia River Toxics Monitoring; Caring for Šn̓x̓ ^w ntk ^w itk ^w : Increase monitoring and access to data from monitoring in the UCR Basin with impact to human health and fish and wildlife	broad scale	Columbia River mainstem and tributary	Upper Columbia River, Lake Roosevelt, and Lake Rufus Woods	Stevens, Ferry, Lincoln, Okanogan, Douglas - all in WA	no
44-02J19701	Monitor Contaminants Trends, Transport, Uptake and Transfer through the Kootenai River Ecosystem					
RB-02J13601	TLC: Tracking Toxics in the Lower Columbia (Phase I)	broad scale	mainstem Columbia River	Columbia River, lower 146 miles from Bonneville Dam to the Pacific Ocean	Mainstem Columbia River in WA and OR	yes

Unique identifier	Project title	Geographic scope of monitoring	Mainstem Columbia River or tributary	Monitoring location description	Monitoring location county and state	Are locations of monitoring sites available now?
RB-96886201	Quantifying Toxins in Fish Consumption and Identifying Sources of Pollutants in the Upper Columbia	localized	Columbia River tributary	Clark Fork River system in Montana from its headwaters downstream, including at the confluence of, or within, major tributaries such as Rock Creek, the Blackfoot River, Bitterroot River and Flathead River within the reservation of the Confederated Salish and Kootenai Tribes.	Butte-Silverbow County, Powell County, Missoula County, Mineral County, and Sanders County, Montana	yes
44-02J19901	Clearwater River Toxics Assessment and Monitoring Project	localized	Columbia River tributary	Clearwater River Watershed (ID)	Nez Perce County ID, Clearwater County ID, Lewis County ID, Idaho County ID	yes
RB-01J72901	Clearwater River (Idaho) Watershed Baseline Monitoring and Toxics Assessment	localized	Columbia River tributary	Clearwater River watershed (ID)	Nez Perce, Clearwater, Lewis and Idaho Counties, Idaho	yes
44-02J21001	Nez Perce Methylmercury Monitoring and Abatement: Salmon and Lower Snake Rivers					

Unique identifier	Project title	Geographic scope of monitoring	Mainstem Columbia River or tributary	Monitoring location description	Monitoring location county and state	Are locations of monitoring sites available now?
RB-02J15901	River TALC: Toxics Assessment of the Lower Columbia	broad scale	Columbia River mainstem and tributaries	Northwest Clatsop County, encompassing Young's Bay, Nicolai-Wikiup, and Skipanon watersheds	Clatsop County, Oregon	yes
RB-02J14501	Reducing PFAS and Phthalates in Local Clean Water Systems within the Columbia Basin, Oregon	broad scale	Columbia River mainstem and tributary	Oregon municipalities within multiple Columbia River Basin watersheds (in both the Lower and Middle Basin)	Specific monitoring locations are still being assessed; determination should be made by July 2023	no
RB-02J14201	Engaging Communities to Monitor Mercury Risk in the Columbia River Basin: Intensive Application of a National Biosentinel Network at a Regional Scale	broad	Columbia River tributary	Willamette River Watershed	Lane, Benton, Linn, Marion, Polk, Yamhill, Clackamas, Washington, Multnomah	no
44-02J19601	Crayfish as indicators of 6PPD-quinone contamination	broad scale	Columbia River tributary	Spokane River, Middle Snake River, Clark Fork, Upper Snake River, and Pend Oreille River watersheds	Grant County OR, Missoula County MT, Ravalli County MT, Mineral County MT, Sanders County MT, Spokane County WA, Whitman County WA, Asotin County WA, Nez Perce County ID, Latah County ID, Benewah County ID, Kootenai County ID	no
44-01J15801	The Crayfish Mercury Project 2023-2024	broad scale	Columbia River tributary	Spokane River (ID, WA) and the Boise River (ID) basins	Various counties within MT, ID, WA, and OR	yes
RB-01J73101	Using crowdsourced crayfish in education, engagement and bio-monitoring relative to mercury pollution in the Spokane and Boise River Basins	broad scale	Columbia River tributary	Spokane River Basin and Boise River Basin	Multiple counties within MT, ID, WA, and OR	yes

Unique identifier	Project title	Geographic scope of monitoring	Mainstem Columbia River or tributary	Monitoring location description	Monitoring location county and state	Are locations of monitoring sites available now?
44-02J20001	Upper Columbia Basin Contaminant Status, Movement and Remedial Pilot Study	broad scale	mainstem and tributary (Columbia River and Spokane River)	upper Columbia River basin	Ferry, Stevens, Lincoln, Grant - all in WA	no
44-02J22301	Eliminating Erosion of Legacy Mine Tailings from the Bodie Mine into Toroda Creek, Kettle Creek Watershed, WA	localized	Columbia River tributary	Toroda Creek (NE WA)	Okanogan, WA	no
RB-96886101	Reconstructing 40 years of selenium exposure from fish otoliths: Archival tissue applications for contaminant biomonitoring in Lake Koocanusa	localized	Columbia River tributary	Lake Koocanusa, MT	NA	NA
RB-96847301	Fish consumption and advisory awareness among food pantry patrons receiving products of lake trout suppression on Flathead Lake, Montana	localized	Columbia River tributary	Flathead Lake	Lake County & Flathead County, Montana	no
RB-01J73201	Evaluating and Prioritizing Contaminants of Emerging Concern in the Lower Columbia River	broad scale	Columbia River mainstem and tributary	lower Columbia River ranging from upstream of the Portland metropolitan area to Wauna, OR; Willamette River	Oregon - Multnomah, Columbia Washington - Clark, Cowlitz	yes
RB-01J72301	Monitoring, Reduction, and Collection of Agricultural Pesticides in the Columbia River Basin	broad scale	Columbia River tributary	Palouse River watershed and Yakima River watershed	Whitman County WA, Yakima County WA, Benton County WA	yes

Unique identifier	Project title	Geographic scope of monitoring	Mainstem Columbia River or tributary	Monitoring location description	Monitoring location county and state	Are locations of monitoring sites available now?
RB-02J14101	Next steps in pesticide stewardship partnerships at the Washington State Department of Agriculture	broad scale	Columbia River tributary	Palouse River and Yakima River watersheds	Whitman County WA, Yakima County WA, Benton County WA	yes

Unique identifier	Project title	Number of sampling sites	Sampling frequency	Parameters monitored	Parameter type(s)	EPA Region 10 prioritization tiers for parameters monitored
RB-02J16901	Urban Waters and Wildlife Partnership & Program Implementation (Phase II)					
RB-02J17101	Lower Wenatchee River PCB Source Investigation	Confluence Reach: 15 sampling locations for sediment and sediment dwelling invertebrates. Cashmere Reach: 10 sampling locations for water and 11 sampling locations for biofilm.	TBD	PCB congeners	organic	tier 1
RB-02J12601	City of Vancouver Columbia Slope Water Quality Monitoring Phase 2	10	18 sampling events, 18 months (30 total sampling events with two grants)	Semivolatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons; (PAHs), phthalates, chlorinated hydrocarbons, and other organic compounds; Total metals (copper, lead, zinc); Organochlorine pesticides	metal, organic	tier 2, tier 3
RB-01J73401	City of Vancouver Columbia Slope Water Quality Monitoring	6	12 sampling events, 1 year	Semivolatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons; (PAHs), phthalates, chlorinated hydrocarbons, and other organic compounds; Total metals (copper, lead, zinc); Organochlorine pesticides	metal, organic	tier 2, tier 3
RB-01J72601	Columbia River Mainstem Fish Tissue and Water Quality Monitoring Framework	NA	NA	The core analytes to be addressed will include, but are not limited to, mercury, dichlorodiphenyltrichloroethane and metabolites (DDD, DDE, and DDT), polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), and potentially polycyclic aromatic hydrocarbons (PAHs). The Columbia River Toxics Reduction Working Group (Working Group) list of priority pollutants (https://www.epa.gov/columbiariver/prioritization-toxics-columbia-river) and the toxic pollutants listed by reference in Section 307(a)(1) of the Clean Water Act (see 40 CFR 401.15) will also be reviewed and incorporated as feasible.	metal and organic	tier 1, tier 2, tier 3

Unique identifier	Project title	Number of sampling sites	Sampling frequency	Parameters monitored	Parameter type(s)	EPA Region 10 prioritization tiers for parameters monitored
44-02J21301	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program - Grant A: Planning, Outreach, and QAPP development	15 ish	Once	The core analytes to be addressed will be determined and prioritized by budget and may include, but are not limited to, mercury, PCB congeners, DDx, PBDE, PFAS, and potentially PAHs if sufficient budget is available. The Columbia River Toxics Reduction (a.k.a. Columbia River Basin Restoration Program) Working Group (Working Group) list of priority pollutants (https://www.epa.gov/columbiariver/prioritization-toxics-columbia-river) and the toxic pollutants listed by reference in Section 307(a)(1) of the Clean Water Act (see 40 CFR 401.15) will also be reviewed and incorporated as feasible.	Organics, Mercury	tier 1
44-02J21401	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program – Grant B: Field Data Collection, Analytical, and Reporting	20	three month window	Analytes include mercury, PCB congeners, DDx PBDE, PFAS, and potentially PAHs if sufficient budget is available	metal, organic	tier 1, tier 2
44-02J22501	Upper Columbia River Toxics Monitoring; Caring for Šn̓x̓ ^w ntk̓ ^w itk̓ ^w : Increase monitoring and access to data from monitoring in the UCR Basin with impact to human health and fish and wildlife	TBD	60-75 samples (20-25 per medium), March - July 2024, 1 year	mercury, arsenic, copper, and lead; methylmercury (fish tissue only); PCBs (congener analysis); and DDT and its metabolites	metal, organic	tier 1, tier 2
44-02J19701	Monitor Contaminants Trends, Transport, Uptake and Transfer through the Kootenai River Ecosystem					
RB-02J13601	TLC: Tracking Toxics in the Lower Columbia (Phase I)	10	3 seasonal periods (fall runoff, spring snowmelt, summer low flow)	PAHs, organochlorine compounds (DDTs), total PCBs, and halogenated flame retardants (PBDEs), polyfluoroalkyl substances (PFAS), waste-indicator chemicals, and 4 different cyanotoxins—anoatoxins, cylindrospermopsins, microcystins, and saxitoxins.	organic	tier 1, tier 2

Unique identifier	Project title	Number of sampling sites	Sampling frequency	Parameters monitored	Parameter type(s)	EPA Region 10 prioritization tiers for parameters monitored
RB-96886201	Quantifying Toxins in Fish Consumption and Identifying Sources of Pollutants in the Upper Columbia	19	1 year	contaminants relating to fish consumption advisory including mercury, dioxins and furans, and PCBs	metal, organic	tier 1, tier 2
44-02J19901	Clearwater River Toxics Assessment and Monitoring Project	12	72-96 (8 sites, 3 analyses each, 3-4 events over 2 years in late summer/early fall and spring), 64 (4 sites, 2 analyses each, 4 events over 2 years)	total mercury, methyl mercury, PPCPs, PBDEs, and PFAS/PFOS	metal, organic	tier 1, tier 3
RB-01J72901	Clearwater River (Idaho) Watershed Baseline Monitoring and Toxics Assessment	21	(14) 1 per month from April-September, 6 months; (1) during active mine dredging; (6) 3 times spring, summer, fall	DDT, total mercury (THg), methyl mercury (MeHg), metals (including CRB Tier II metals: arsenic, copper, and lead), nutrients, microplastics; PCBs, PBDEs, organochlorine pesticides	metal, other inorganic, organic	tier 1, tier 2
44-02J21001	Nez Perce Methylmercury Monitoring and Abatement: Salmon and Lower Snake Rivers					

Unique identifier	Project title	Number of sampling sites	Sampling frequency	Parameters monitored	Parameter type(s)	EPA Region 10 prioritization tiers for parameters monitored
RB-02J15901	River TALC: Toxics Assessment of the Lower Columbia	10	6 times (1 per month), rainy seasons (fall), 2 years	6PPDQs and certain other roadway runoff specific chemicals	organic	
RB-02J14501	Reducing PFAS and Phthalates in Local Clean Water Systems within the Columbia Basin, Oregon	TBD	TBD	PFAS, Adsorbable Organic Fluorine (AOF)	organic	tier 3
RB-02J14201	Engaging Communities to Monitor Mercury Risk in the Columbia River Basin: Intensive Application of a National Biosentinel Network at a Regional Scale	100	TBD	mercury, methylmercury	metal	tier 1
44-02J19601	Crayfish as indicators of 6PPD-quinone contamination	36	2 sampling events	6PPD-quinone, tire wear particulates	organic	
44-01J15801	The Crayfish Mercury Project 2023-2024	TBD	10 citizen outings per year for years 1 and 2 with the capture of 750 animals/year.	mercury	metal	tier 1
RB-01J73101	Using crowdsourced crayfish in education, engagement and bio-monitoring relative to mercury pollution in the Spokane and Boise River Basins	29	There will be three sampling events per year in the Boise River and six sampling events in the Spokane River over the course of the two years.	total mercury	metal	tier 1

Unique identifier	Project title	Number of sampling sites	Sampling frequency	Parameters monitored	Parameter type(s)	EPA Region 10 prioritization tiers for parameters monitored
44-02J20001	Upper Columbia Basin Contaminant Status, Movement and Remedial Pilot Study	15-30	2 sampling events, spring & fall, 1 year	Target Analyte List (TAL) metals (Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Iron, Lead, Manganese, Mercury (Hg), Nickel, Selenium, Silver, Thallium, Vanadium and Zinc), methylmercury, polychlorinated biphenyls (PCBs) Aroclors, PCB congeners, cations (Calcium, Magnesium, Potassium, Sodium), anions, total organic carbon (TOC), dissolved organic carbon (DOC), and particle size.	metal, other inorganic, organic, other	tier 1, tier 2, tier 3
44-02J22301	Eliminating Erosion of Legacy Mine Tailings from the Bodie Mine into Toroda Creek, Kettle Creek Watershed, WA	TBD	TBD	arsenic, cadmium, lead, mercury, selenium, copper, zinc	metal	tier 1, tier 2, tier 3
RB-96886101	Reconstructing 40 years of selenium exposure from fish otoliths: Archival tissue applications for contaminant biomonitoring in Lake Koocanusa	NA	NA (new samples are not being collected as part of this project)	selenium	other inorganic (metalloid)	tier 3
RB-96847301	Fish consumption and advisory awareness among food pantry patrons receiving products of lake trout suppression on Flathead Lake, Montana	1	12 sampling events, 1 year	methyl mercury	metal	tier 1
RB-01J73201	Evaluating and Prioritizing Contaminants of Emerging Concern in the Lower Columbia River	16	4 sampling events, dry & wet periods, 1 year	non-target and suspect screening for contaminants using High Resolution Mass Spectrometry	organic	tier 1, tier 2, tier 3
RB-01J72301	Monitoring, Reduction, and Collection of Agricultural Pesticides in the Columbia River Basin	5	(PRW) about 66 water samples and 12 sediment samples over 2 years, (YRW) about 144 water samples over 2 years	Samples will be analyzed for more than 150 legacy and currently used pesticides, including toxics from all 3 tiers of the Columbia River Toxics Reduction Working Group list of priority pollutants.	organic	tier 1, tier 2, tier 3

Unique identifier	Project title	Number of sampling sites	Sampling frequency	Parameters monitored	Parameter type(s)	EPA Region 10 prioritization tiers for parameters monitored
RB-02J14101	Next steps in pesticide stewardship partnerships at the Washington State Department of Agriculture	5	34 sampling events (PRW) & 72 sampling events (YRW), 1 year	agricultural pesticides	organic	tier 1, tier 2, and tier 3

Unique identifier	Project title	Persistent organic pollutant	Media being sampled	Will chemical concentration data be compared to toxicity reference values? If yes, which reference values?	Primary source pathway being investigated	Potential mitigation solution
RB-02J16901	Urban Waters and Wildlife Partnership & Program Implementation (Phase II)					
RB-02J17101	Lower Wenatchee River PCB Source Investigation	yes	water, sediment, sediment dwelling invertebrates, biofilm	Bulk sediment PCB concentrations will be compared to the Washington Sediment Management Standards	agriculture	no
RB-02J12601	City of Vancouver Columbia Slope Water Quality Monitoring Phase 2	mixed	water	Yes, state water quality standards	stormwater	Water quality data will be used to identify and prioritize outfall basins where future stormwater treatment retrofits would be effective in removing contaminants that are currently reaching the Columbia River.
RB-01J73401	City of Vancouver Columbia Slope Water Quality Monitoring	mixed	water	Yes, state water quality standards	stormwater	The City intends to identify stormwater retrofit project locations based on the analysis of new monitoring data and subsequently implement best management activities and construct treatment facilities that include green infrastructure wherever feasible.
RB-01J72601	Columbia River Mainstem Fish Tissue and Water Quality Monitoring Framework	yes	water, sediment, fish (juvenile and adult salmon, resident fish), invertebrates	NA	Fish Tissue, sediment, water, algae, invertebrates	no

Unique identifier	Project title	Persistent organic pollutant	Media being sampled	Will chemical concentration data be compared to toxicity reference values? If yes, which reference values?	Primary source pathway being investigated	Potential mitigation solution
44-02J21301	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program - Grant A: Planning, Outreach, and QAPP development	mixed	water, sediment, fish (juvenile and adult salmon, resident fish), invertebrates	Yes, for Fish Tissue, the EPA Regional Screening Level Calculator will be used. For Sediments, in this order of availability- 1)WA MTCA Freshwater Sediment Screening Values, 2) EPA Freshwater Sediment Screening Benchmarks, 3) MacDonald & Ingersoll 2000 Consensus Sediment Screening Values,	See Part B for details, but- yes, fish tissue, sediment	no
44-02J21401	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program – Grant B: Field Data Collection, Analytical, and Reporting	mixed	water, sediment, fish (juvenile and adult salmon, resident fish), invertebrates	Yes, for Fish Tissue, the EPA Regional Screening Level Calculator will be used. For Sediments, in this order of availability- 1)WA MTCA Freshwater Sediment Screening Values, 2) EPA Freshwater Sediment Screening Benchmarks, 3) MacDonald & Ingersoll 2000 Consensus Sediment Screening Values,	Yes, fish tissue, sediment	no
44-02J22501	Upper Columbia River Toxics Monitoring; Caring for Šn̓x̓w̓ntk̓w̓itk̓w̓: Increase monitoring and access to data from monitoring in the UCR Basin with impact to human health and fish and wildlife	mixed	fish tissue composites, beach sediment composites, and surface water (dissolved and total analyses)	Final toxicity reference values have not yet been selected, but likely will include Tribal, state, and Federal standards	source pathways are not being investigated by this project, exposure pathways are	no
44-02J19701	Monitor Contaminants Trends, Transport, Uptake and Transfer through the Kootenai River Ecosystem					
RB-02J13601	TLC: Tracking Toxics in the Lower Columbia (Phase I)	mixed	water	Not sure yet, likely state at minimum	Not doing source tracking under this project	no

Unique identifier	Project title	Persistent organic pollutant	Media being sampled	Will chemical concentration data be compared to toxicity reference values? If yes, which reference values?	Primary source pathway being investigated	Potential mitigation solution
RB-96886201	Quantifying Toxins in Fish Consumption and Identifying Sources of Pollutants in the Upper Columbia	mixed	water, rainbow trout (where rainbow trout are not present, brown trout, brook trout or northern pike)	state water quality standards	mining, industrial	Engagement and education will be aimed at protecting human health and building knowledge about and support for future cleanup actions of contamination sites elucidated as a result of this project.
44-02J19901	Clearwater River Toxics Assessment and Monitoring Project	mixed	water	Aquatic Life and Human Health Creiteria for Surface Water for mercury & methyl mercury, EPA Chronic Oral Reference Doses (RfDs) for PBDE, EPA Screening Levels in Tap Water for PBDE, Draft EPA Recommended Freshwater Aquatic Life Water Qulity Criteria for PFOA & PFOS, EPA Draft Proposed MCLs for Six PFAS in Drinking Water	waste water treatment plant	no
RB-01J72901	Clearwater River (Idaho) Watershed Baseline Monitoring and Toxics Assessment	mixed	surface water, sediment, fish, mussel, and lamprey ammocoete tissue samples	Surface water: Aquatic Life and Human Health Criteria fo Surface Water; Sediment - Ecological Sediment quality Guidelines; biotic tissue - FD Action Levels and Tolerances with EPA Screening Values, Human Health Screening Values, Ecological Endpoint Screening Values	agriculture, mining	no
44-02J21001	Nez Perce Methylmercury Monitoring and Abatement: Salmon and Lower Snake Rivers					

Unique identifier	Project title	Persistent organic pollutant	Media being sampled	Will chemical concentration data be compared to toxicity reference values? If yes, which reference values?	Primary source pathway being investigated	Potential mitigation solution
RB-02J15901	River TALC: Toxics Assessment of the Lower Columbia	no	water	State water quality standards will be used when available; novel chemical 6ppd-q does not yet have quality standards in place.	stormwater	Will use monitoring information to target projects to mitigate toxic runoff through partnerships with the City of Astoria, Clatsop County, and Lewis and Clark National Historical Park.
RB-02J14501	Reducing PFAS and Phthalates in Local Clean Water Systems within the Columbia Basin, Oregon	yes	wastewater, biosolids	No. Reference values for PFAS in wastewater have not been established. Comparisons will be made with other wastewater monitoring data findings.	wastewater treatment plant, industrial	Development of fact sheets that will address uses of the chemicals in industries and pollutant streams, chemical substitution opportunities, industrial process changes, and installation of discharge controls for wastewater containing PFAS and phthalates. ACWA will develop summary information on incorporating industrial pollution prevention information into existing municipal wastewater pre-treatment programs and business technical assistance programs.
RB-02J14201	Engaging Communities to Monitor Mercury Risk in the Columbia River Basin: Intensive Application of a National Biosentinel Network at a Regional Scale	mixed	water, dragonfly larvae, fish	Eagles-Smith et al. 2020 Integrated Impairment Index	All, but process more than pathway. Source is somewhat irrelevant for mercury. The ecological and biogeochemical factors that control methylmercury production and trophic transfer are the primary drivers of risk. Those processes are controlled by actions associated with each of the seven pathways listed	no
44-02J19601	Crayfish as indicators of 6PPD-quinone contamination	no	crayfish, fish, sediment, and water	NA	stormwater	no
44-01J15801	The Crayfish Mercury Project 2023-2024	no	crayfish	NA	Air deposition	no
RB-01J73101	Using crowdsourced crayfish in education, engagement and bio-monitoring relative to mercury pollution in the Spokane and Boise River Basins	no	water, crayfish	NA	Air deposition	no

Unique identifier	Project title	Persistent organic pollutant	Media being sampled	Will chemical concentration data be compared to toxicity reference values? If yes, which reference values?	Primary source pathway being investigated	Potential mitigation solution
44-02J20001	Upper Columbia Basin Contaminant Status, Movement and Remedial Pilot Study	mixed	surface water, bottom sediments, suspended sediments, and biofilm	Spokane Tribal Water Quality Standards, federal federal water quality standards, federal sediment guidelines	mining, industrial	no
44-02J22301	Eliminating Erosion of Legacy Mine Tailings from the Bodie Mine into Toroda Creek, Kettle Creek Watershed, WA	no	sediment	NA	mining	removing tailings material from adjacent to the stream, stabilizing the streambank and restoring native riparian vegetation
RB-96886101	Reconstructing 40 years of selenium exposure from fish otoliths: Archival tissue applications for contaminant biomonitoring in Lake Koocanusa	no	otoliths, burbot	U.S. EPA Aquatic Life Criteria	mining	no
RB-96847301	Fish consumption and advisory awareness among food pantry patrons receiving products of lake trout suppression on Flathead Lake, Montana	yes	Daphnia, Mysis diluviana, lake whitefish, bull trout, lake trout	EPA maximum allowable intake of mercury for pregnant women		no
RB-01J73201	Evaluating and Prioritizing Contaminants of Emerging Concern in the Lower Columbia River	mixed	water	Predicted No Effects Concentrations (PNEC)	stormwater, waste water treatment plant	no
RB-01J72301	Monitoring, Reduction, and Collection of Agricultural Pesticides in the Columbia River Basin	mixed	surface water, sediment	EPA Office of Pesticide Programs Aquatic Life Benchmarks, EPA National Recommended Water Quality Criteria, Washington State water quality standards (WAC 173-201A: Water Quality Standards for Surface Waters of the State of Washington)	agriculture	Targeted outreach in two watersheds will cover specific management practices growers in those regions can implement to reduce pesticide transport to surface water

Unique identifier	Project title	Persistent organic pollutant	Media being sampled	Will chemical concentration data be compared to toxicity reference values? If yes, which reference values?	Primary source pathway being investigated	Potential mitigation solution
RB-02J14101	Next steps in pesticide stewardship partnerships at the Washington State Department of Agriculture	mixed	water, sediment	EPA Office of Pesticide Programs Aquatic Life Benchmarks, EPA National Recommended Water Quality Criteria, Washington State water quality standards (WAC 173-201A: Water Quality Standards for Surface Waters of the State of Washington)	agriculture	targeted outreach in two watersheds will cover specific management practices growers in those regions can implement to reduce pesticide transport to surface water; waste pesticide collection

Unique identifier	Project title	Standard, Clean Water Act (CWA) approved, or novel analytical method	If standard or CWA approved method(s), what method(s)?	QAPP link	Monitoring start date	Monitoring end date
RB-02J16901	Urban Waters and Wildlife Partnership & Program Implementation (Phase II)					
RB-02J17101	Lower Wenatchee River PCB Source Investigation	standard	(sediment & biota) PCB Congeners EPA 1668C; (sed) TOC PSEP-TOC; (sed) Grain size PSEP; (biota) C:N Stable isotopes	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/Chelan%20County_Lower%20Wenatchee%20River%20PCB_May%202023.pdf	6/1/2023	11/1/2023
RB-02J12601	City of Vancouver Columbia Slope Water Quality Monitoring Phase 2	standard, CWA	EPA 180.1 turbidity; SM 2540D TSS; EPA 365.3 Total P; EPA 351.4 N; SM 4500-NH3 G LL N; NO2 + NO3 as N EPA 353.2 and SM 4500; hardness SM 2340C; chloride EPA 300.0; total metals 200.8; SVOC EPA 8270D-LL; organochlorine pesticides EPA 8081B; E. coli SM 9223 B Q-tray	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/City%20of%20Vancouver_Columbia%20Slope%202022-2024%20Addendum_Dec%202022.pdf	12/1/2022	3/1/2024
RB-01J73401	City of Vancouver Columbia Slope Water Quality Monitoring	standard, CWA	EPA 180.1 turbidity; SM 2540D TSS; EPA 365.3 Total P; EPA 351.4 N; SM 4500-NH3 G LL N; NO2 + NO3 as N EPA 353.2 and SM 4500; hardness SM 2340C; chloride EPA 300.0; total metals 200.8; SVOC EPA 8270D-LL; organochlorine pesticides EPA 8081B; E. coli SM 9223 B Q-tray		6/1/2021	3/1/2022
RB-01J72601	Columbia River Mainstem Fish Tissue and Water Quality Monitoring Framework	CWA or better DL when available, novel for selected compounds of "new" interest	NA Planning Document Only	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/Yakama_Columbia%20River%20Mainstem%20Fish%20Tissue%20and%20WQM_Dec2020.pdf	N/A Planning Document Only	N/A Planning Document Only

Unique identifier	Project title	Standard, Clean Water Act (CWA) approved, or novel analytical method	If standard or CWA approved method(s), what method(s)?	QAPP link	Monitoring start date	Monitoring end date
44-02J21301	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program - Grant A: Planning, Outreach, and QAPP development	CWA or lower detection levels sought	See Part B for details, but- Tissues and Solids as- PCB Congeners via EPA method 1668A; PBDEs via 1614A; Mercur via Cold Vapor AA with ng/g DL; Organochlorines via EPA 1699/ AXYS method MLA-007		7/1/2023	12/1/2023
44-02J21401	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program – Grant B: Field Data Collection, Analytical, and Reporting	standard	See Part B for details, but- Tissues and Solids as- PCB Congeners via EPA method 1668A; PBDEs via 1614A; Mercur via Cold Vapor AA with ng/g DL; Organochlorines via EPA 1699/ AXYS method MLA-007	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/Yakama%20Nation_Columbia%20River%20Mainstem%20Fish%20and%20WQM_Apr%202023.pdf	7/1/2023	12/1/2023
44-02J22501	Upper Columbia River Toxics Monitoring; Caring for Šn̓x̓ ^w ntk ^w itk ^w : Increase monitoring and access to data from monitoring in the UCR Basin with impact to human health and fish and wildlife	standard	will be defined in the QAPP that has not yet been completed	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/Colville_Upper%20Columbia%20River%20Monitoring_Apr%202023.pdf	not yet started	unknown
44-02J19701	Monitor Contaminants Trends, Transport, Uptake and Transfer through the Kootenai River Ecosystem					
RB-02J13601	TLC: Tracking Toxics in the Lower Columbia (Phase I)	standard			Jun-23	Dec-23

Unique identifier	Project title	Standard, Clean Water Act (CWA) approved, or novel analytical method	If standard or CWA approved method(s), what method(s)?	QAPP link	Monitoring start date	Monitoring end date
RB-96886201	Quantifying Toxins in Fish Consumption and Identifying Sources of Pollutants in the Upper Columbia	standard, CWA and novel, depending on toxin	Polychlorinated dibenzodioxins and polychlorinated dibenzofurans will be analyzed by HRGC/HRMS method 1613B; Method associated with CWA, RCRA, CERCLA, and SDWA EPA CWA approved, and Standard, EPA non-CWA. Polychlorinated biphenyl (PCB) congeners by GC/ECD method 8082A; RCRA (EPA-RCA) Standard, EPA non-CWA. Total mercury in fish tissue by oxidation, purge and trap, and cold vapor atomic fluorescence Spectrometry 1631e(app) and metals by inductively coupled plasma/mass spectrometry method 6020A; 6020A – RCRA Standard, EPA non-CWA but not sure why this is included (metals analysis); 1631e (app) - 1631E is an approved CWA method. EPA CWA approved, and Standard, EPA non-CWA.		2023 April	2023 October
44-02J19901	Clearwater River Toxics Assessment and Monitoring Project	standard, novel	PPCPs - EPA 1694, PFAS/PFOS - EPA 537 mod., PBDEs - EPA 1614, total mercury - EPA 1631 mod., methyl mercury - EPA 1630-mod.	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/Nez%20Perce_02J19901-Clearwater%20River%20Toxics%20Assessment%20Monitoring_May%202023.pdf	late summer/early fall 2023	spring 2025
RB-01J72901	Clearwater River (Idaho) Watershed Baseline Monitoring and Toxics Assessment	standard, CWA	Organochlorine pesticides & PCBs (DDT) - EPA 8081, total mercury - EPA 1631e & 1631 app., methyl mercury - EPA 1630 mod., metals - EPA 200.8 & 200.7 & 6020 & 6020A & 6010, NO3+NO2 - SM4500 NO3-F & ASTM D1426-08B, TKN - SM4500 Norg-C, NH3-N - SM4500 NH3-G & EPA 350.1 & 350.3 & 365.3, total phosphorous - SM4500-PF, ortho phosphorous - EPA 300.0 & 365.3, nutrients - EPA 353.2 & 352.3 mod., PCBs - EPA 1668C-HRGC/HRMS, PBDEs - EPA 1614, organochlorine pesticides - EPA 1699 HRGC/HRMS	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/Nez%20Perce_RB-01J72901-Clearwater%20River%20Toxics%20Assessment%20Monitoring_Apr%202022.pdf	5/1/2021	unknown
44-02J21001	Nez Perce Methylmercury Monitoring and Abatement: Salmon and Lower Snake Rivers					

Unique identifier	Project title	Standard, Clean Water Act (CWA) approved, or novel analytical method	If standard or CWA approved method(s), what method(s)?	QAPP link	Monitoring start date	Monitoring end date
RB-02J15901	River TALC: Toxics Assessment of the Lower Columbia	novel; LC/MS/MS		Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/U%20Washington%20and%20CUW%20River%20Toxics%20Assessment%20Lower%20Columbia%20Nov%202022.pdf	Nov-22	Nov-24
RB-02J14501	Reducing PFAS and Phthalates in Local Clean Water Systems within the Columbia Basin, Oregon	standard	Draft EPA Method 1633, Draft EPA Method 1621		TBD	TBD
RB-02J14201	Engaging Communities to Monitor Mercury Risk in the Columbia River Basin: Intensive Application of a National Biosentinel Network at a Regional Scale	standard	Biota Hg: EPA 7473; MeHg EPA 1630; Water EPA 415.1 DOC; SM 4110B SO4		3/1/2023	11/1/2023
44-02J19601	Crayfish as indicators of 6PPD-quinone contamination	novel	NA	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/U%20of%20Idaho%20Columbia%20River%20Crayfish%206PPDq_Mar%202023.pdf	6/1/2023	12/31/2024
44-01J15801	The Crayfish Mercury Project 2023-2024	standard	EPA 6020B		5/1/2023	10/24/2023
RB-01J73101	Using crowdsourced crayfish in education, engagement and bio-monitoring relative to mercury pollution in the Spokane and Boise River Basins	standard	EPA 6020B	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/Idaho_01J81501_Crayfish%20Mercury%20Project_Jun%202021.pdf	5/1/2021	10/22/2022

Unique identifier	Project title	Standard, Clean Water Act (CWA) approved, or novel analytical method	If standard or CWA approved method(s), what method(s)?	QAPP link	Monitoring start date	Monitoring end date
44-02J20001	Upper Columbia Basin Contaminant Status, Movement and Remedial Pilot Study	standard			8/1/2023	unknown
44-02J22301	Eliminating Erosion of Legacy Mine Tailings from the Bodie Mine into Toroda Creek, Kettle Creek Watershed, WA	novel	NA		n/a	unknown
RB-96886101	Reconstructing 40 years of selenium exposure from fish otoliths: Archival tissue applications for contaminant biomonitoring in Lake Koocanusa	novel	NA		NA	NA
RB-96847301	Fish consumption and advisory awareness among food pantry patrons receiving products of lake trout suppression on Flathead Lake, Montana	standard	EPA 1630 (MeHg), EPA 7473 (THg)		9/1/2020	10/1/2021
RB-01J73201	Evaluating and Prioritizing Contaminants of Emerging Concern in the Lower Columbia River	novel	NA	Link to QAPP: https://gaftp.epa.gov/columbiariver/TMS/QAPPs/UW%20Tacoma_Eval%20and%20Prioritization%20CoCs%20Lower%20Columbia_Jan%202021.pdf	2/1/2021	8/1/2021
RB-01J72301	Monitoring, Reduction, and Collection of Agricultural Pesticides in the Columbia River Basin	standard	Extraction: EPA Method 3535A (SW 846) for extraction, EPA Method 8270E (SW 846) for analysis, EPA Method 8321B (SW 846) for analysis		Varies by site: 2003, 2016, 2021	unknown

Unique identifier	Project title	Standard, Clean Water Act (CWA) approved, or novel analytical method	If standard or CWA approved method(s), what method(s)?	QAPP link	Monitoring start date	Monitoring end date
RB-02J14101	Next steps in pesticide stewardship partnerships at the Washington State Department of Agriculture	standard	Extraction: EPA Method 3535A (SW 846) for extraction, EPA Method 8270E (SW 846) for analysis, EPA Method 8321B (SW 846) for analysis		Varies by site: 2003, 2016, 2021	unknown

Unique identifier	Project title	Project principal investigator	Project principal investigator email address
RB-02J16901	Urban Waters and Wildlife Partnership & Program Implementation (Phase II)	Kirk Shimeall	kirk@cadepacific.org
RB-02J17101	Lower Wenatchee River PCB Source Investigation	Abby Hendrickson	Abby.Hendrickson@CO.CHELAN.WA.US
RB-02J12601	City of Vancouver Columbia Slope Water Quality Monitoring Phase 2	Kris Olinger	kris.olinger@cityofvancouver.us
RB-01J73401	City of Vancouver Columbia Slope Water Quality Monitoring	Kris Olinger	kris.olinger@cityofvancouver.us
RB-01J72601	Columbia River Mainstem Fish Tissue and Water Quality Monitoring Framework	Laura Shira	shil@yakamafish-nsn.gov

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44-02J21301	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program - Grant A: Planning, Outreach, and QAPP development	Laura Shira	shil@yakamafish-nsn.gov
44-02J21401	Phase 2 Pilot Implementation of the Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program – Grant B: Field Data Collection, Analytical, and Reporting	Laura Shira	shil@yakamafish-nsn.gov
44-02J22501	Upper Columbia River Toxics Monitoring; Caring for Šn̓x̓ ^w ntk ^w itk ^w : <i>Increase monitoring and access to data from monitoring in the UCR Basin with impact to human health and fish and wildlife</i>	Rodney Cawston	Rodney.cawston.env@colvilletribes.com
44-02J19701	Monitor Contaminants Trends, Transport, Uptake and Transfer through the Kootenai River Ecosystem	Shawn Young	young@kootenai.org
RB-02J13601	TLC: Tracking Toxics in the Lower Columbia (Phase I)	Catherine Corbett	ccorbett@estuarypartnership.org

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RB-96886201	Quantifying Toxins in Fish Consumption and Identifying Sources of Pollutants in the Upper Columbia	David Brooks	david@montanatu.org
44-02J19901	Clearwater River Toxics Assessment and Monitoring Project	Ken Clark	kenc@nezperce.org
RB-01J72901	Clearwater River (Idaho) Watershed Baseline Monitoring and Toxics Assessment	Ken Clark	kenc@nezperce.org
44-02J21001	Nez Perce Methylmercury Monitoring and Abatement: Salmon and Lower Snake Rivers	Jay Hesse	jayh@nezperce.org

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RB-02J15901	River TALC: Toxics Assessment of the Lower Columbia	Kelli Daffron	ncwaprograms@gmail.com
RB-02J14501	Reducing PFAS and Phthalates in Local Clean Water Systems within the Columbia Basin, Oregon	Susan Smith	smith@oracwa.org
RB-02J14201	Engaging Communities to Monitor Mercury Risk in the Columbia River Basin: Intensive Application of a National Biosentinel Network at a Regional Scale	Tiffany Garcia	tiffany.garcia@oregonstate.edu
44-02J19601	Crayfish as indicators of 6PPD-quinone contamination	Mary Engels	engels@uidaho.edu
44-01J15801	The Crayfish Mercury Project 2023-2024	Alan Kolok	akolok@uidaho.edu
RB-01J73101	Using crowdsourced crayfish in education, engagement and bio-monitoring relative to mercury pollution in the Spokane and Boise River Basins	Alan Kolok	akolok@uidaho.edu

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44-02J20001	Upper Columbia Basin Contaminant Status, Movement and Remedial Pilot Study	Tamara Knudson	tamarak@spokanetribe.com
44-02J22301	Eliminating Erosion of Legacy Mine Tailings from the Bodie Mine into Toroda Creek, Kettle Creek Watershed, WA	Crystal Elliot-Perez	celliot@tu.org
RB-96886101	Reconstructing 40 years of selenium exposure from fish otoliths: Archival tissue applications for contaminant biomonitoring in Lake Koocanusa	Jessica Brandt	jessica.brandt@uconn.edu
RB-96847301	Fish consumption and advisory awareness among food pantry patrons receiving products of lake trout suppression on Flathead Lake, Montana	Nanette Nelson	nanette.nelson@flbs.umt.edu
RB-01J73201	Evaluating and Prioritizing Contaminants of Emerging Concern in the Lower Columbia River	C. Andy James	jamesca@uw.edu
RB-01J72301	Monitoring, Reduction, and Collection of Agricultural Pesticides in the Columbia River Basin	Margaret Drennan	mdrennan@agr.wa.gov

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RB-02J14101	Next steps in pesticide stewardship partnerships at the Washington State Department of Agriculture	Margaret Drennan	mdrennan@agr.wa.gov