U.S. Geological Survey

EPA Long-Term Toxics Monitoring in the Columbia River Basin Discussion. June 10, 2021

Washington Water Science Center-Tacoma (Patrick Moran, Kathy Conn)

Western Fisheries Research Science Center-Seattle/ Cook (Tim Counihan)

Oregon Water Science Center- Portland (Ian Waite, Jennifer Morace, Elena Nielsen)

Forest and Rangeland Ecosystem Science Center-Corvallis (Collin Eagles-Smith)

Idaho Water Science Center- Boise (Austin Baldwin)

Northwest-Pacific Islands Regional Office- (formerly Seattle) Portland (Jen Bayer/Bill Labiosa)

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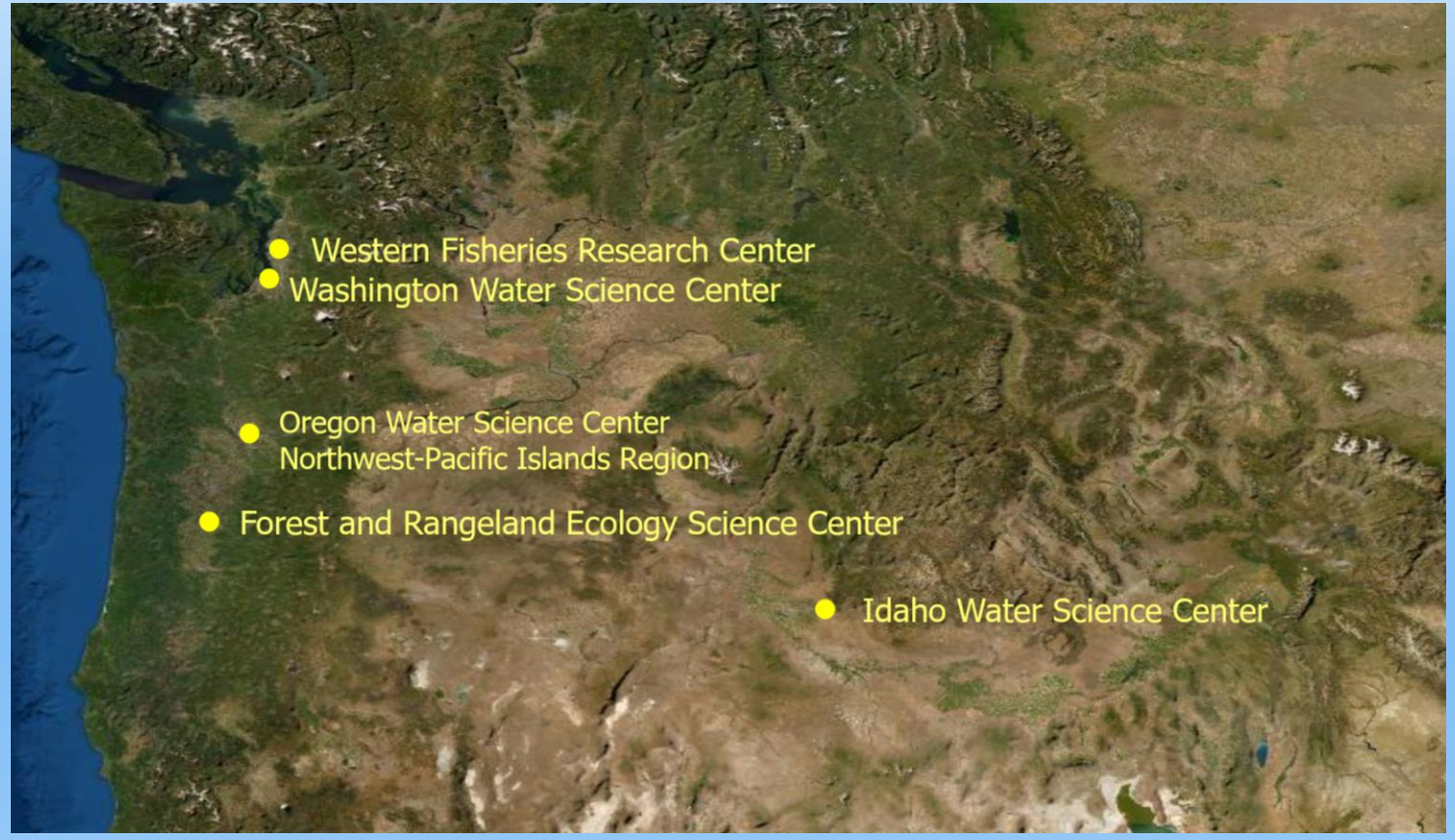
USGS Northwest-Pacific Islands Region



The **USGS** serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

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We do many small things and several

BIG THINGS

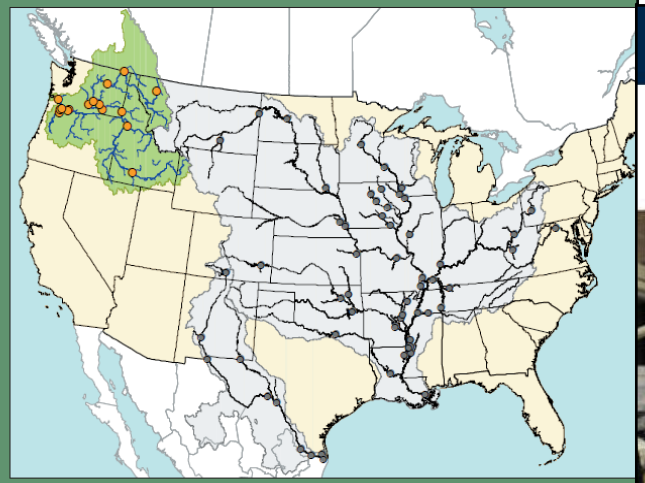
National Water Quality Program

San Francisco Bay

Upper Mississippi River LTRM

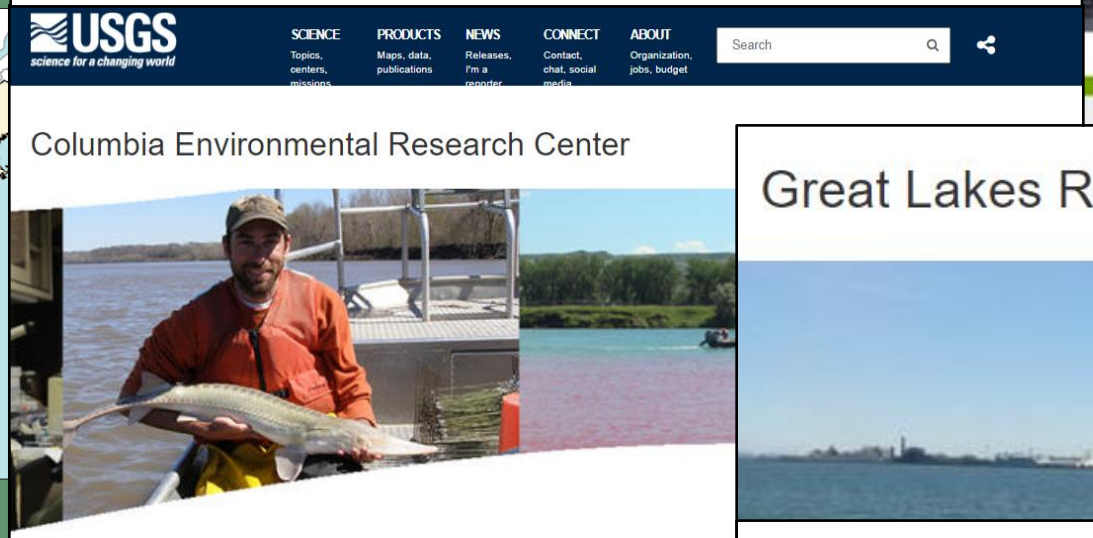
USGS
science for a changing world

Biomonitoring of Environmental Status and Trends (BEST) Program: Environmental Contaminants and their Effects on Fish in the Columbia River Basin



Scientific Investigations Report 2004—5154

Missouri and Illinois Rivers



Great Lakes Restoration Initiative

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- Not regulatory
- Interdisciplinary Science
- Interjurisdictional Science

Lead in

- -Data Archiving, Distribution, Dissemination
- -Facilitating Interjurisdictional Science
- -pnamp.org

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Objectives of a long-term monitoring program

Yakama-USGS-Ecology-DEQ-CRITFC Mission statement-

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

Quantify the spatial and temporal variation in contaminants across the basin such that changes in spatial or temporal patterns can be attributed to identifiable sources and/or causes

Scalable, nested strategies that are inclusive of a variety of factors and objectives, of listed/non listed species, of resident/anadromous species, their habitats.

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Highest priority objectives of a long-term monitoring program

"TBD"…from a USGS perspective, the highest priority objectives should be set by stakeholders

- USGS priority objectives are to provide the sound scientific basis for addressing stakeholder objectives, which includes:
  - *Assistance in refining research and monitoring objectives*
  - *Technical expertise in design (spatial and temporal) and analysis (interpretation) that will yield defensible results*
  - *Data documentation and delivery of information to decision makers*

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What support is needed to attain objectives (i.e. funding, staffing, other resources)?

Depending on the nature of support requested (e.g., analytical, lab, field, facilitation, etc.) significant staff support would be needed

- Phased approach would allow appropriate staff to engage at the right time
- Skill sets include statistical design and analysis, field data collection, lab analyses, data management, publishing, project management, communication
- Funding would be important to ensure continuity of engagement; funding could be direct or in-kind (if in-kind, needs confirmed/committed)

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What resources would each entity contribute if there were no limitations?

- USGS has many scientific and technical capabilities to conduct monitoring and/or manage and coordinate monitoring, assess trends, and identify potential biological effects
    - Which secondary or new contaminants and why?
    - Cutting edge lab methods (if desired)
    - Fish health expertise
- Data and information management; peer-review, archiving and public dissemination of data a daily activity for us
- Facilitation and coordination; project management

What resources does each entity have to offer currently?

- EPA funded project to assist the Yakama Nation develop a long-term toxics monitoring program in the Columbia River
- **Methods developed** by USGS for the Great Lakes Restoration
  (chemical prioritization by biological toxicity pathways)
- **Existing long-term monitoring sites** in the Columbia River Basin
  NASQAN, NAWQA, BEST
- USGS **can provide** a 'Design to Phased Implementation' leadership that parallels the monitoring dollars available
  (1- long history of local leadership and dedicated time, OR WSC)
  (2- long history of large-scale USGS Program investment in the Columbia River)

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Columbia River Mainstem Fish Tissue and Water Quality Monitoring Framework

Yakama Nation - Columbia River Basin Restoration
Funding Assistance Program

USGS providing technical support; and matching and in-kind funds

Project Team: Columbia Inter-tribal Fish Commission, Oregon DEQ, Washington DOE, EPA

- Reaching out to existing long-term monitoring programs for lessons learned
- Developing long-term monitoring vision, goals and objectives
- Compiling historical data to aid in survey design
- Stakeholder engagement and feedback
- Enlisting expert opinion on design considerations

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Short term approach to supporting long term monitoring strategy development

- Yes, a steering committee is a great idea
- USGS is open to suggestions about leading a steering committee
  - We recommend using facilitation support
- Timeline:
  - July – August: identify entities to participate, invite each entity to provide 1-2 representatives to the steering committee, which would structure the process (agree on goals, invitees, timeline, etc.) and set up a ‘kick off meeting’ in fall for broader participation
  - September: hold kick off meeting to clarify goals and commitment to participate, plan timeline based on scope and goals identified

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Need for a road map and long-term cohesiveness

At least 3 Options-

1- Administer current CWA Funds differently ??
2- Work with politicals towards 2nd dedicated funding source
3- Redirect/realign current resources to this shared, long-term plan

Topic areas for near term meetings

Stakeholder engagement to identify and confirm management questions and monitoring objectives

Identification of existing (and planned) monitoring and related research activities

Design and methods: comparisons, identify tradeoffs, plan for nested designs and ability to scale to meet available funding

Data management and sharing: how, where, agreements

Sustainability: plan for long term program management and funding