

**Columbia River Toxics Reduction Working Group
Summary of September 30, 2008 Meeting
Hosted by Yakama Indian Nation
Toppenish, WA**

Participants

Kristie Baptiste, Nez Perce	Clyde Lay, USBR
Carolyn Boaz, Columbia Riverkeeper	Agnes Lut, ODEQ
Jeremy Buck, USFWS	Alec Maule, USGS
Laura Buelow, USEPA	Jim Milton, Yakama Nation
Brad Carter, USEPA	Jennifer Morace, USGS
Gwen Carter, Nez Perce Tribe	Tracie Nadeau, USEPA
Clifford Casseseka, Yakama Nation	John Piccininni, BPA
Catherine Corbett, LCREP	John Price, WA Ecology
Max Corpuz, Jr., Yakama Nation	Phil Rigdon, Yakama Nation
Mike Cox, USEPA	Helen Rueda, USEPA
Jay Davis, USFWS	Callie Ridolfi, Ridolfi, Inc.
Aja DeCoteau, Yakama Nation	Joe Rinella, USGS
Lorraine Edmond, USEPA	Beth Rochette, WA Ecology
Lonna Frans, USGS	Ralph Sampson, Jr., Yakama Nation
Brent Foster, Columbia Riverkeeper	Anne Schwartz, DN
Greg Fuhrer, USGS	Mark Siipola, USACE
Larry Gadbois, USEPA	Suzanne Skadowski, USEPA
Rosemarie Lewis George, Yakama Nation	Mary Lou Soscia, USEPA
Lauren Goldberg, Columbia Riverkeeper	Moses Squeochs, Yakama Nation
Marla Harrison, Port of Portland	Kristen Stiegler, USEPA
Rebecca Hawk, Yakama Nation	Barbara Stifel, OR DHS
Gina Hoff, USBR	James Thomas, Yakama Nation
Ruth Jim, Yakama Nation	Rachael Pecore, Columbia Riverkeeper
Kim Johnson, USEPA	Sean Quigley, USGS
Krista Jones, LCREP	Gary Turney, USGS
Steve Juul, USACE	Jeffery Ullman, WSU
Ashley Kaiser, URS	Ann Williamson, USEPA
Andrew Kolosseus, WA Ecology	Jeremy Wolf, CTUIR
Joanne LaBaw, USEPA	Jamie Zeisloft, DOE Hanford

Official Meeting Opening

Moses Squeochs, General Council Chairman of the Yakama Indian Nation gave the opening remarks followed with the invocation by Ralph Sampson, Jr., the Yakama Indian Nation Tribal Council Chairman. A special thank you to James Thomas and the Yakama Indian Nation for hosting the meeting.

Introductions and Welcome

Mike Cox reviewed the meeting purpose, agenda, and logistics and led the individual introductions.

Updates

USGS – Small grant to do an emerging contaminant study.

Portland Harbor – emerging contaminant study

EPA at Hanford - started collecting data on October 1, 2008 to fill in data gaps. The work plan will be available on the web.

Brent Foster, Columbia Riverkeeper announced that they were a part of the environmental groups who had filed a lawsuit against the PGE for mercury and smog emissions at the Boardman coal-fired power plant.

FWS & USGS – large amount of eagle and osprey nest failures this year, resulting in more eggs available for analysis.

Preliminary data from the river nose monitoring may be available at the end of October.

EPA, Region 10 successfully sampled 19 locations in the Washington portion of the mid-Columbia this summer. Sampling included mercury in water (with low-level detection limits) and fish tissue. Whole fish were collected from species that represent ecological impacts and fillets were collected from species that people are more likely to eat. The sampling is part of a 2-year EMAP effort (Ecological Monitoring and Assessment Project), and the sampling of the Oregon portion of the mid-Columbia will be completed next summer by ODEQ.

Presentations (Will be available on the EPA Columbia River Website)

<http://www.epa.gov/region10/columbia>

Helen Rueda, EPA, presented an overview of her data collection efforts associated with the Columbia River Basin. Fish tissue data is fairly complete and there is sediment data available for a couple of contaminants. PCB loading has been analyzed in municipal stormwater outfalls in Spokane and Pullman, 80% of the PCB load was from one outfall. Puget Sound (PSAMP) and EPA have spent money on monitoring high load areas.

Sean Quigley, Pacific Northwest Aquatic Monitoring Partnership (PNAMP) Data Steward (USGS) gave a presentation on his efforts for PNAMP, including:

- Library of sampling protocols
- Documenting what has been done in the pacific northwest
- How to develop inventories and identify data gaps – improve agency guidelines
- Endorse a guidance document for data collecting, sharing and management
 - o Data management plan – get the big picture, common vocabulary, piggy back on other efforts
- NED – Stream NET – no toxics data at this time
 - o Technology transfer in small areas (trinity river)
 - o Estuary – invasive species, fish population
- Looking at portal or repository (ICENEP)
- Data Executive Summary, Thursday, October 9, 2008 – Portland, OR

Rebecca Hawk, Yakama Nation presented her work on identifying the impact of air pollution/toxics in the Columbia River Basin and her work locally and internationally to bring recognition of this issue and the need for including air issues in our the toxic reduction efforts.

Subgroup Work Efforts

Participants divided into subgroups to discuss and agree on problem, goals, and rationale; discuss and agree on subgoals; develop list of possible actions to meet goals; and prioritize actions (if time allowed) At the end of this work effort each group presented their progress. See attached summaries. The subgroups and respective leaders are:

- A) Sources/Loadings (Lorraine Edmond – EPA)
- B) Research/Monitoring (Greg Fuhrer – USGS)
- C) Reduction Activities (Mary Lou Soscia – EPA)
- D) Communication/Resources/Partnerships (Ann Williamson – EPA)

Next Steps

- EPA will put the summary of the meeting and presentations on the EPA website.
- Next meeting:

9:00 AM to 3:30 PM
Wednesday, February 18, 2009
Columbia River Inter-Tribal Fish Commission
729 NE Oregon, Suite 200
Portland, OR 97232

- The 2nd Draft State of the River Report should be available to Working Group partners in early November. The final State of the River Report will be available to the public on the EPA website <http://www.epa.gov/region10/columbia> in early 2009.

Sources/Loading Subgroup Breakout 30 September 2008 Meeting Notes

Group Members: Mike Cox, Lorraine Edmond, Joanne LaBaw, Gary Turney, Catherine Corbett, Mark Siipola, Callie Ridolfi, Jennifer Morace, Brent Foster, Laura Buelow, Larry Gadbois, John Price, Rosemarie Lewis George, Brad Carter, Clyde Lay, Lonna Frans, Agnes Lut, Sean Quigley.

Introduction

Lorraine Edmond provided background on the history of the sources subgroup. She described the work that was completed in support of the State of the River Report for Toxics and proposed that this should be used as information for moving this group ahead. She also emphasized the need to coordinate efforts with the other subgroups, especially as related to data gaps that would require monitoring to fill. Mike Cox discussed the overall work plan process.

Problem Statement: Lack of information on where and how toxics are entering Basin

The group started with this problem statement and had several suggestions for modifying including:

- Need to acknowledge that the lack of information makes it very difficult to draw conclusions.
- Need to note where toxics reside such as soil and sediment as well as the sources from which they originate
- Need to address the effects of the contaminants on the ecosystem.
- Need to differentiate between concentrations and loads from various sources and strive to determine loads from toxics
- Need to include fate and transport in problem statement
- Need to acknowledge breakdown products.

Modified Problem Statement: There is currently a lack of information on: 1) what toxics are reaching the Columbia River and its tributaries; 2) where the toxics are coming from both within and outside the Basin; 3) the absolute and relative quantities of toxics reaching the Columbia and its tributaries by point sources, nonpoint sources, and in-place sources, 4) the fate and transport of toxics and their breakdown products from air and soil into the River and its tributaries; and 5) the role of sediments as a source of toxics.

Goal: Contribute to the overall goal of reducing toxics in the Basin by identifying and characterizing the sources of toxics in Basin

- Need to include the relative contribution of sources & quantify, identify and prioritize the sources
- Need to recognize existing work & eliminate redundancies, and to reduce sources of toxics in the Basin

Modified Goal: Contribute to the overall goal of reducing toxics in the Basin by doing the following: 1) identify, inventory, and map all the potential sources (point, nonpoint, and in-place) of toxics both within and outside the Basin; 2) determine the toxic contaminants of concern from those sources; 3) collect information on the concentrations of the toxic contaminants of concern where available; 4) determine the quantities of toxics reaching the Columbia River and its tributaries where possible; 5) evaluate the fate and transport of toxics and their breakdown products from air and soil into the Columbia River and its tributaries; 6) determine the role of

sediments as a source of toxics; and 7) using our knowledge of the relative contribution of sources, prioritize those where the greatest reduction efforts are needed and possible.

Contaminants of Concern: Need additional discussion

- Did not discuss in detail other than to agree that the effort needs to expand beyond the four chemicals of initial focus.

Geographic Scope: Include entire Columbia Basin but narrow focus to ensure our efforts are not redundant with other efforts

- Discussed need to limit (narrow) scope of efforts and to be realistic depending on whether efforts in other areas are sufficient (e.g., Portland Harbor, Upper Columbia).
- Do not want to be redundant with other work efforts such as those listed above
- Scope depends on questions we are trying to address
- Recognize that not all parties are represented in group

Source Categories:

- Agreed to divide sources into three broad categories: point source; nonpoint source, and in place source.
- Agreed to use the legal definitions of the three sources where they exist (need to find definitions for those that have them).
 - Point Source:
 - Nonpoint Source
 - In-place Source
- EPA will develop a matrix that places the different sources into the three general categories (An example is present below, more work is needed on the matrix).

Point Sources	Nonpoint Sources	In place Sources
Municipal wastewater plants	Agricultural runoff	Superfund sites
Industrial dischargers	General surface runoff	RCRA sites
Combined sewer overflow	Bio-vectors	Landfills
Aerial pesticide application		Septic Systems
Vessels		Marinas
		Moorage areas
		Contaminated sediments

Next Steps

- EPA will provide modified problem statement and goals to group for feedback
- EPA will develop matrix of potential sources under the three categories. The categories will be defined by the legal definition and send to group for feedback.
- EPA will develop general process for developing work plan for group with milestones and send to group for feedback.

Research/ Monitoring Subgroup Breakout
30 September 2008
Meeting Notes

Review Monitoring Goal/Subgoals

- *Solicit thoughts on Subgoals #2 and #4 (geographic scope, monitoring sites)*

Geographic Scope

- Entire Columbia River Basin
- Sensitivity to on-going geographically focused efforts (Upper CR-RIFS; Lake Roosevelt) and data gaps; especially where there are poor/no data
- Liaison to monitoring plans of large-on-going geographically focused efforts
 - Don't duplicate efforts, but pay attention to monitoring plans (augment if necessary) and results

Monitoring Sites

- Do not focus just on mainstem
- May not be enough to monitor just at mouths of tributaries
 - Identify major activities in tributaries, then prioritize which tributaries to monitor

Side discussion: Suggestion to add radiochemicals to COCs addressed by TRSWG, and to have a liaison to DOE(nergy) study.

Local/Regional Research Needs Brainstorming

Relevant to region, performed by regional scientists, supporting identified monitoring goals.

- Why is mercury increasing in osprey? What is the source?
- What tributaries are contributing what sources?
- Suspended sediment transport (load related) of COCs.
- COC transport through mainstem
- Identify land use/sources and activities on tributaries.
- Histopathology of Columbia River fish*
 - Gene expression
- Identifying fish health impacts*
- Identify appropriate biomarkers
- Exposure histories (life history phases)
 - e.g. metal speciation; physicochemical properties
- Methylation potential/rates (wetlands)
- Effects on special status species and sensitivity*
- Monitor effectiveness of sediment remediation practices/sites/technologies*
 - Toxics specific
- Proportion of salmon populations impacted by toxics
 - Different risks for different stocks
 - Population modeling
- Interactions of contaminants → impacts on species*
- Climate change/other stressors*
 - Synergistic/antagonistic
- Food web impacts/reverberations*
- Water quality/tissue criteria for emerging contaminants

* Also identified as a national research need

National Research Needs Brainstorm

Performed at national level with national-level resources

- Effects of emerging contaminants on fish and wildlife
- Impact of increased air deposition on global atmospheric transport
- Reference dose/water quality criteria and tissue criteria for emerging contaminants
- Sediment criteria for freshwater
- More efficient analytical methods for emerging contaminants
 - EPA “recognized” (such as in Superfund program)
- Toxics-relevant benchmarks for human and wildlife health

**Reduction Activities Subgroup Breakout
30 September 2008
Meeting Notes**

Toxic Reduction Subgroup Members

Don Essig
Kevin Masterson
Andrew Kolesseus
Kristen Stiegler
Kim Johnson

Marla Harrison
Barbara Stifel
Gwen Carter
Lauren Goldberg

Moderate List of Identified Activities

Increase Successful/Collaborative Efforts

1. TMDLs – EX. Yakima DDT
 - sediment reduction / Ag partnerships
 - BMPs, education/outreach
 - Water conservation – Bureau
2. Mercury Collection
 - increasing WA/OR/ID efforts, ex: dental
3. Promote Low Impact Development (LIDs)
 - Bioswales
 - Green roofs
 - Stormwater technology
4. Increase Pesticide Stewardship Partnerships in Columbia River Basin
 - OR DEQ
5. Stormwater Sources Tracking (PCBs)
 - Portland Harbor

New Legislation

6. Product Bans – WA PBDEs
 - Mercury?
 - Some types of plastics

New Actions

7. Collaborative Priority Permit Process
8. Encourage/Increase Green Chemistry

Criteria for Priorities

- Columbia Basin-wide
 - Snake River Basin
- Actions should focus on 4 priorities (not limiting)
 - PCBs, DDT, Mercury, PBDEs
- Short term/ measurable
- Short list & Do-able
- Regulatory & Non-regulatory
 - Work within existing structure
- “We” – actions we can do

Toxics Reduction Workgroup Brainstorm Session

- High priority toxic reduction actions for '09 Action Plan
- Loadings – Point Source and non-point source, cumulative effects of point sources
- State/Tribal/Other collaboration on successful efforts
- Non-point sources
- Copper – aquatic life (Port of Portland) enhances impacts of other pollutants
- Promoting LID to reduce toxics, bio-swales, green roofs, etc.
- Permits –stormwater /NPDES key is local buy-in,
 - i. Monitoring – increase toxics
 - ii. Education
- Permits – need adaptive management to address toxics – emerging
 - i. Need better collaborative process
- Prioritize permits in OR/WA/ID
 - i. Collaborative process – focus on adaptive management
 - ii. Local involvement/buy in
 - iii. Focus on education
 - iv. Increase toxics monitoring
- Alternative technology
- Suction dredgers – 404 permit
- Recreational Boaters
 - i. State marine board – need more information (sources)
- PBDEs – flame/fire retardants
 - i. Wildfire fighting – need more information on types of flame retardants (sources)
- Product Bans – WA PBDEs phased. Other states? Feds?
- PCBs – stormwater tracking – Portland Harbor monitoring (sources)
- Use of Charcoal (Yakama Indian Nation)
- Green Chemistry
- Hanford Clean-up Technologies
 - i. Elevate types of technologies
 - ii. Stop leaking underground storage tanks
- Pesticides
 - i. PSPs/Agricultural
 - ii. Reduce use/change types
 - iii. BMPs
 - iv. Residential Use/Education
- Legacy/Non-point
 - i. Erosion reduction – Yakima River/DDT
 - ii. Water Conservation – Bureau
 - iii. Yakima Water Enhancement Project – \$ Bureau/Yakima Indian Nation – increase water in Yakima River
- Regional Sediment Evaluation – Columbia/Snake

**Communication/Resources/Partnerships Subgroup Breakout
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Meeting Notes**

Overarching Concepts:

- (1) Initial attention needs to focus on the State of the River Report,
- (2) Followed by the expansion, and full development, of an interagency/inter-entity (to capture non-agency type organizations) communications strategy.

From there, we talked about how to, and who to, engage in these efforts.

Rachel P. (Columbia Riverkeeper) talked about an "Al Gore-like" program that he's employed to advance his climate change initiative. You educate volunteers to go out and interact with the public. It's the "Climate Change Institute" only we'd call it the Improving the Health of the Columbia River Basin By Reducing Toxics Institute or something....!!!

We identified some groups to target and engage in our communication strategy beyond the recommendations in our white paper: they included Regional Watershed Councils and Watershed Planning Units; Citizens for a Healthy Columbia; the Canadians (government and others); local City Councils; the Washington Salmon Recovery Office, etc.

We want to explore opportunities as a result of the newly-formed Washington Department of Ecology "Columbia River" office in Wenatchee.

We need to focus more attention on Tribes who are not currently involved but have a vested interest in this work: Sho-Bans, Snake River Alliance, Affiliated Tribes of Northwest Washington, were some of the contacts mentioned.