

Prioritization of Toxics in the Columbia River¹

July 17, 2007

The “contaminant and media subgroup” was tasked with identifying the toxics of highest priority for the Columbia River Toxics Reduction Workgroup. The subgroup developed the following tiered list of contaminants of concern, which is meant to serve as a living list with updates made on a yearly basis. For sampling purposes, many of the specific contaminants listed as Tier 1 or II would be analyzed as a part of a larger suite of compounds, which are usually listed in Tier III. For data analysis, however, the specific compounds listed in Tier 1 or Tier II were considered of higher importance for focusing purposes. DDT will most likely be analyzed as a part of Organochlorines; Mercury, Arsenic, Lead, and Copper will be analyzed as a part of Trace elements, and estrogenic compounds will be analyzed as a part of Pharmaceuticals and Personal Care Products and Hormones listed in Tier III. These specific toxics were considered highest priority based on the rationale described below in the Factors Considered in Ranking Toxics.

Tier I

DDT (and metabolites)

PCBs

Mercury (including methylmercury)

PBDEs

Tier II

PAHs

Arsenic

Dioxins/furans

Lead

Organophosphate Insecticides (azinphos methyl, chlorpyrifos, diazinon)

Copper

Estrogenic compounds (Bisphenol A, AHTN, natural and synthetic estrogens, Nonylphenol)

Tier III

Organochlorines (examples include alpha BHC, aldrin, dieldrin, chlordane)

Trace elements

Current use pesticides (examples include carbamates, triazine herbicides, fipronil)

Pharmaceuticals and Personal Care Products

Other wastewater compounds (plasticizers, detergents, surfactants)

Hormones

Synthetic pyrethroids

Phthalates

Factors Considered in Ranking Toxics

1. Is it recognized as an existing problem?
(See “Evidence of the Problem” column in accompanying Excel spreadsheet)
 - a. Is it listed on the 303 (d) list?
 - b. Does a TMDL exist for this contaminant?
 - c. Is a Persistent, Bioaccumulative and Toxic Chemical Action Plan being developed for this contaminant?
 - d. Have concentrations of concern (even if there is not an established "criteria" for the analyte) been detected in the Columbia River Basin?
 - e. Is emerging science identifying this contaminant as a “new” concern?
2. Is it an ecological threat, a human health threat, or both?
(See “Biological Effects” column in accompanying Excel spreadsheet)
 - a. Are there fish advisories associated with this contaminant?

¹This prioritization was written by the Columbia River Toxics Workgroup. It does not necessarily represent the priorities of individual agencies.

- b. Is there evidence of this contaminant in fish and wildlife?
 - c. Is it identified as persistent, bioaccumulative and toxic?
 - d. Is the contaminant a suspected or known carcinogen?
 - e. Is the contaminant identified as a suspected or known endocrine disrupter?
 - f. Are noncancer effects associated with this contaminant?
3. Is there an implementation plan/reduction strategy in place?
(See “Reduction Strategies” column in accompanying Excel spreadsheet)
- a. Does a TMDL exist for this contaminant?
 - b. Is a Persistent, Bioaccumulative and Toxic Chemical Action Plan being developed for it?
 - c. Is there a Pesticide Stewardship Program developed to address it?
 - d. Has the contaminant been addressed under EPA's Toxic Substances Control Act (TSCA)?
 - e. Is this contaminant included in EPA's National Strategic Plan for the Columbia River?
 - f. Are there other implementation/reduction strategies taking place for this contaminant?

What would these Tiers mean for the Columbia River Toxics Reduction Workgroup?

Tier One – The three or four highest priority toxics (does not include suites of contaminants)

Monitoring:	Anything that the “Columbia River Toxics Reduction” monitoring subgroup does (or funds) as a group would need to include all of these toxics. For monitoring work done by individual agencies, we would encourage the monitoring of Tier One toxics.
Toxics Reduction Efforts:	Toxics reduction efforts items funded or done by the “Columbia River Toxics Reduction” group (such as ‘early action items’) would focus first on these toxics. We would encourage individual agencies to include Tier One toxics in their toxics reduction efforts.
Written Status Reports:	Any documents (i.e. State of the River Report) that we write would focus first on Tier One toxics

Tier Two – The next priority toxics includes contaminants that would not be measured every time

Monitoring:	Any monitoring that we do or fund would include Tier Two toxics if funds allow. We would encourage others to monitor Tier Two toxics if all of the Tier One toxics have already been included.
Toxics Reduction Efforts:	We would encourage toxic reduction efforts for Tier Two toxics after encouraging Tier One toxics.
Written Status Reports:	Any documents that we write could include Tier Two toxics as time/money/space allows. They are a lesser priority than Tier One toxics.

Tier Three – The third priority toxics includes suites, schedules of contaminants

Monitoring:	Lower priority for monitoring efforts, but can be encouraged as budgets allow.
Toxics Reduction Efforts:	Lower priority for toxics reduction efforts, but can be encouraged as budgets allow.
Written Status Reports:	Lower priority for status reports, but can be encouraged as budgets allow.