

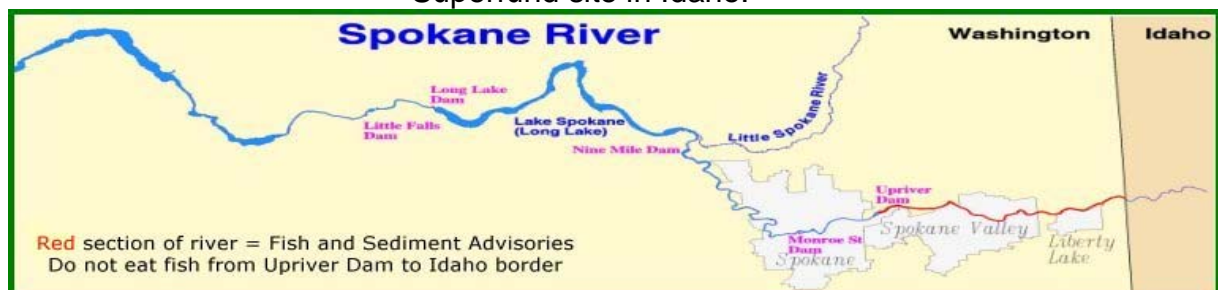
Spokane River, toxic chemicals and Human Health

The Spokane River is contaminated with a range of toxic chemicals. A total maximum daily load (TMDL) limit for PCBs is currently under development by the Washington State Department of Ecology. Mining in Coeur d'Alene Idaho has spread heavy metals throughout the river, damaging human health and the environment. Washington Department of Ecology has indicated concern regarding PBDEs- flame retardants used in a variety of household items that have recently been shown to be building up in our bodies.

| Toxin | Source | Mode of Exposure | Primary Effects on Human Health |
|---------|---|---|--|
| PCBs | Paper Mills, Stormwater, Historical Contamination | Consumption of fish | Cancer, developmental problems in children, liver damage, reproductive effects |
| PBDEs | Publicly Owned Treatment Works | Consumption of fish, drinking water | Cancer, thyroid problems, reduced sperm count, liver damage, altered brain development |
| Dioxins | Industry, paper mills | Fish consumption | Cancer, reproductive and development, liver, brain development |
| Mercury | Coeur d'Alene Mines | Consumption of fish | Affects nervous system function; particularly in children |
| Lead | Coeur d'Alene Mines | Contaminated water and fish consumption | Affects nervous system, heart disease, kidney disease; particularly in children |
| Cadmium | Coeur d'Alene Mines | Contaminated water | Cancer, kidney disease, liver disease, nervous system problems |
| Zinc | Coeur d'Alene Mines | Contaminated water | Anemia, sterility, skin irritation |

Sources of Contamination in the Spokane

Contamination enters the Spokane in a number of different ways. Stormwater from water treatment plants is the main source of PBDEs, and a substantial source for PCBs as well. Other PCB sources include paper mills up and down the river as well as historical contamination from PCBs trapped in river sediment. Most of the contamination related to heavy metals is from the Coeur d'Alene Superfund site in Idaho.



http://www.ecy.wa.gov/geographic/spokane/spokane_river_basin.htm

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