

Columbia River Mainstem Fish Tissue and Water Quality Monitoring Program

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Abstract:

Several federally listed and tribally important species and their designated critical habitat (and essential fish habitat) are supported by the Columbia River (chinook, coho, chum, and sockeye salmon; steelhead trout and bull trout, eulachon, sturgeon, and Pacific lamprey). Exposure of fish, wildlife, and people to contaminants within the Columbia River Basin has caused concern (USEPA, 2009). Key contaminants measured in Columbia River fish included PCBs, dioxins, furans, arsenic, mercury, and DDE, a toxic breakdown product of the pesticide DDT (USEPA, 2009). The Columbia River mainstem from the Bonneville Dam to the Canadian border is affected by 40 site- and species- specific Fish Consumption Advisories issued by the Washington Department of Health covering 100% of the Project Area (WDOH, 2019). The advisories result in a reduction of access to healthy food and treaty reserved resources. Many reaches of the Columbia River do not meet Washington and Oregon's water quality standards. Washington's Department of Ecology has 26 Clean Water Act 303(d) listings for PCBs and pesticides, (Ecology, 2016) on the Columbia mainstem.

Despite concerns regarding the effects of contaminants on fish and wildlife and human health; efforts to address the pollution by toxic chemicals in the Columbia River have been limited. While some work has been done in major sub-basins, there are no clear cleanup goals or benchmarks of progress for the mainstem Columbia River. The lack of a dedicated contaminant monitoring program in the Columbia River mainstem impedes evaluation and decision making regarding the health of the river.

Our goal is to develop a program to monitor toxic substances in the Columbia River mainstem in perpetuity to establish trends and guide ecosystem recovery resulting in clean, healthy fish that are safe to eat. Our collaborative team is working to establish a trusted source for unbiased scientific data that supports decision makers and communities in improving and protecting the Columbia River Basin ecosystem and human health.
