

# Environmental Fact Sheet



U.S. Environmental Protection Agency Region 10

November 2002

## Upper Columbia River Site Investigation Northeast Washington

*A recent sampling investigation by the U.S. Environmental Protection Agency (EPA) has confirmed the findings of previous studies documenting hazardous substance contamination of Upper Columbia River sediments. A summary of the investigation findings is presented in the draft expanded site inspection report for the Upper Columbia River site which is now available for review and comment. This fact sheet provides a summary of the investigation findings, preliminary conclusions, and next steps.*

### **EPA Invites Comments on Draft Expanded Site Inspection Report Through December 31, 2002**

EPA invites your review and comments on the draft expanded site inspection report for the Upper Columbia River. The report is available at five community information repositories, on EPA's Upper Columbia River web site, or by request from EPA.

EPA will host open house sessions in several communities to present the findings of the investigation and hear your questions and comments about the draft report. You may submit written comments on the draft report until December 31, 2002. Information on how to submit comments, repository sites, EPA's web site and contacts is located on the last page of this fact sheet.

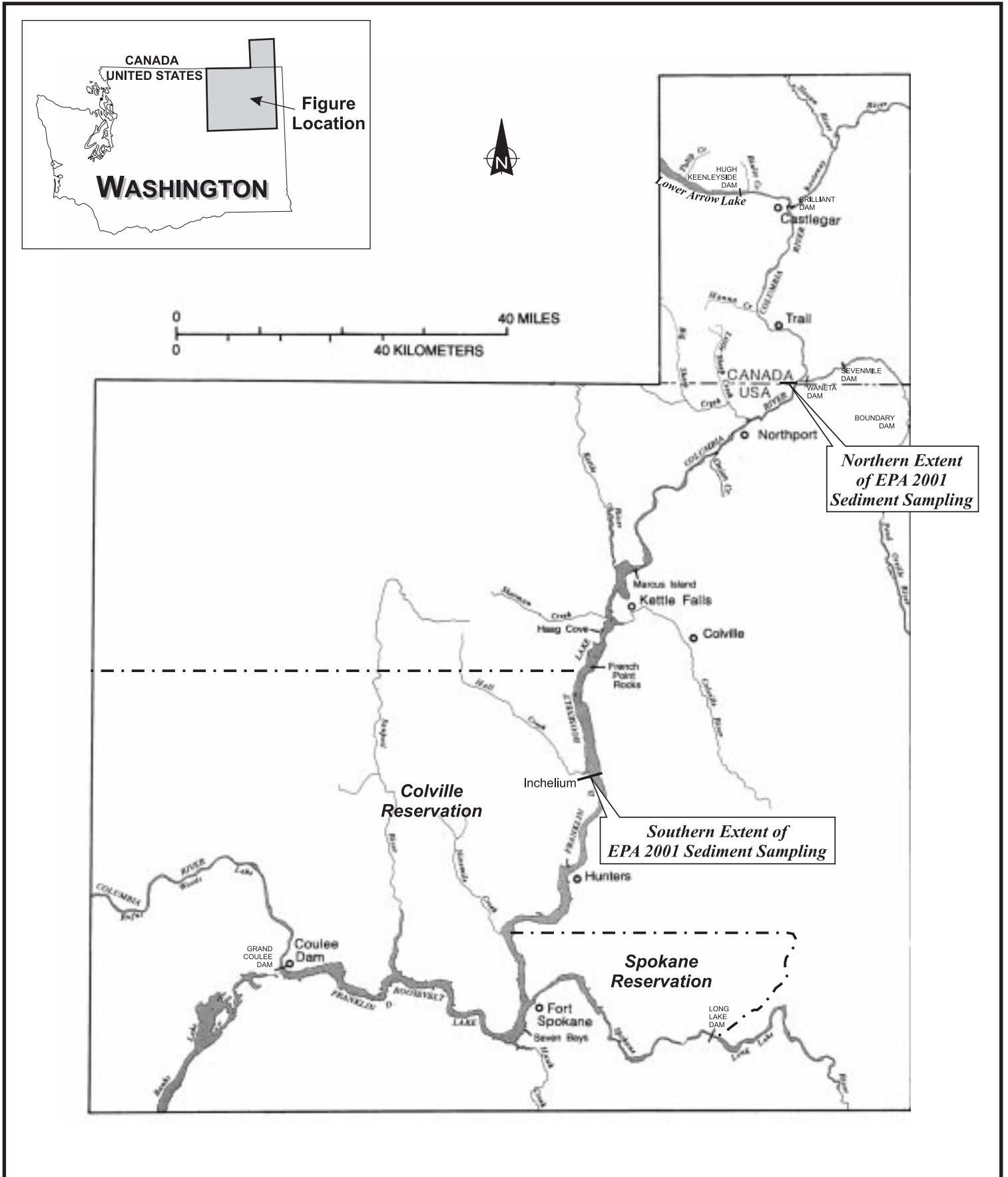
In May and June of 2001, sediment samples were collected from locations along the Upper Columbia River from Inchelium, Washington to the U.S.-Canadian border. Sediments are fragmented material such as soil, sand, silt and clay that are deposited on the river bottom and banks. Samples were analyzed in the laboratory, using EPA approved methods, primarily to detect metals, pesticides and polychlorinated biphenyls (PCBs).

EPA's sampling gathered information about contamination in river sediments to help determine whether the site is eligible for inclusion on the National Priorities List (NPL), commonly called the "Superfund" list. The NPL is EPA's list of the nation's most contaminated hazardous waste sites which qualify to receive additional funding for investigation and cleanup. EPA also considers whether immediate action needs to be taken or whether additional investigations are needed.

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# Upper Columbia River Expanded Site Inspection Extent of EPA 2001 Sediment Sampling



## **SOME BACKGROUND ON THE UPPER COLUMBIA RIVER SITE**

Elevated levels of contaminants in Upper Columbia River sediments have been documented by previous studies conducted by federal and state agencies. Some of the contaminants found during those studies are heavy metals such as cadmium, copper, lead, mercury and zinc, dioxins and furans.

The Upper Columbia River flows from British Columbia, Canada, south through eastern Washington. The stretch of the river behind the Grand Coulee Dam is known as Lake Roosevelt.

Lake Roosevelt is a popular area for recreation, including fishing, boating, swimming and camping. Lake Roosevelt supports a varied fish community of approximately 28 native and 12 nonnative species of fish. The Colville Indian Reservation borders Lake Roosevelt for about 93 river miles. The Spokane Indian Reservation borders the lake for roughly eight miles.

In August, 1999, the Colville Confederated Tribes petitioned EPA to conduct an assessment at the Upper Columbia River. The petition expressed concerns about risks to people's health and to the health of the environment from contamination in the river.

In December, 2000, the EPA completed a preliminary assessment of the Upper Columbia River site and determined that a sampling investigation was necessary. Some of the findings of that investigation are discussed in this fact sheet.

## **INVESTIGATION FINDINGS SUPPORT PREVIOUS STUDIES**

The 2001 sampling results support previous studies that documented contamination of river sediments. Sample data compared to background levels, showed elevated levels of heavy metals such as arsenic, cadmium, copper, lead, mercury and zinc. Background levels were determined using a sediment sample collected by the Washington State Department of Ecology at Lower Arrow Lake in Canada. Lower Arrow Lake is upstream of potential sources of contamination to the site and areas of known contamination south and north of the U.S.-Canadian border.

Elevated levels of contaminants were found throughout the portion of the river that was sampled. The highest concentrations of copper and zinc were found near the U.S.-Canadian border with levels approximately twice as high as samples located further downstream. Several sediment samples collected at the Upper Columbia River site consisted primarily of a visibly dark glassy sandy mixture characterized by EPA field personnel as slag, a by-product of smelting furnaces, containing glassy particulate and metals.

## **POTENTIAL SOURCES OF CONTAMINATION**

Potential sources of contamination to the Upper Columbia River site include industries such as mining, milling, smelting, pulp, and others that have discharged hazardous substances into the river. Some of the larger current and historical operations are the former Le Roi/Northport Smelter in Northport, Washington, the Cominco Smelter in Trail, B.C., and the Celgar Pulp Mill in Castlegar, B.C. A discussion of the operations and processes at these facilities is included in the draft expanded site inspection report for the Upper Columbia River site.

Other potential sources of contamination to the river include seepage from an old landfill site and an old arsenic storage site located upstream of the Cominco Smelter.

## SUMMARY OF PRELIMINARY CONCLUSIONS

Sampling investigation results suggest that further investigation of sediment contamination in the Upper Columbia River is warranted.

The draft expanded site inspection report identifies certain ways that people could come into contact with the contaminants that may present a concern. Some of the contact routes that may present a concern are:

- 1) exposure to slag on beaches through inhalation, skin contact, and direct ingestion of slag material, and
- 2) exposure to contaminated sediments during periods of low lake level through skin contact, ingestion of sediments, or from inhalation of airborne sediment particles.

A wealth of information about contaminants and their effects on people is available at the web site for the Agency for Toxic Substances and Disease Registry at [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov).

Earlier studies describe some of the chemical and physical effects of slag discharge to the river environment. The chemical effects include increased loads of heavy metals which may accumulate in fish or be toxic to river organisms. Physical effects include scouring of plant life and animal life from the river bottom, damage to gills and soft tissues of aquatic insects and fish, and smothering of habitat and food sources.

EPA believes that the exposure routes warrant further evaluation. EPA would like your comments on the conclusions contained in the draft report.

## MINE AND MILL SITES VISITED IN NORTHEAST WASHINGTON

As part of EPA's effort to identify potential sources of contamination to the Upper Columbia River, EPA visited 61 mine and mill sites located near tributaries that discharge into the upper watershed of the Columbia River. The findings of these visits are summarized in three reports available from EPA:

- "Lower Pend Oreille River Mines and Mills Report" documents the findings for 21 sites visited in Pend Oreille County, Washington
- "Upper Columbia River Mines and Mills Report" documents the findings for 39 sites visited in Stevens County, Washington
- "Bonanza Mill Site Inspection Report" documents the findings for the former mill located near Colville, Washington.

All three reports are available on EPA's web site and in the information repositories.

Based on the findings of these visits, EPA has started immediate clean-up actions at two sites, the Bonanza Mill site located adjacent to the Colville River approximately three miles northwest of Colville, and the Anderson Calhoun Mine/Mill site located near Leadpoint, Washington.

At the Bonanza Mill site, EPA identified approximately 39,000 cubic yards of mine-waste-contaminated materials exposed throughout the site. Soil samples contained arsenic, cadmium, lead and mercury at concentrations exceeding Washington State clean-up levels for Unrestricted Land Uses and Industrial Properties, which means these contaminants and the contaminant levels detected may be harmful to people, fish and other wildlife exposed to contamination at the site. Two families living at the mill site have moved as a result. EPA is taking action at the site to prevent erosion of contaminated sediments into the Colville River. Actions are also being taken to limit possible exposure by people to contaminated material.

At the Anderson-Calhoun Mine/Mill site, approximately 100 55-gallon drums of liquid and solid substances, electrical transformers containing PCB-contaminated dielectric fluid and other hazardous materials were found on the property. Many of the 55-gallon drums were punctured, causing spillage. Between October 27 and November 2, 2002, EPA removed thousands of gallons and thousands of pounds of hazardous substances to keep people from being exposed to contamination. Hazardous substances removed from the site included acids, corrosives, flammable liquids and PCBs.

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## WHAT HAPPENS NEXT?

EPA is evaluating the findings presented in the draft Upper Columbia River expanded site inspection report. You are invited to review and comment on the draft report. During November and December, EPA is hosting open houses in several communities to present the findings of the sampling investigation, discuss next steps in the Superfund process, and hear your comments and questions.

Written comments will be shared with the EPA Region 10 Management Review Team and will be maintained in the site file. EPA will not prepare a formal response document, but will summarize comments received in a future fact sheet. In the Spring of 2003, the EPA Region 10 Management Review Team will convene to consider the findings of the expanded site inspection and public comment. The Management Review Team will consider appropriate next steps for the Upper Columbia River site, including listing the site on the National Priorities List and other site management options.

## FOR MORE INFORMATION

EPA wants to make sure that you have access to useful information about the Upper Columbia River site. Please contact Judy Smith at EPA to let us know how we can provide information that suits your needs.

The draft expanded site inspection report for the Upper Columbia River site, and other documents about the site are available for review at the following locations:

### **Northport**

Northport Town Hall, 315 Summit St.

### **Colville**

Colville Public Library, 195 S. Oak St.

### **Inchelium**

Inchelium Tribal Resource Center  
12 Community Loop

### **Nespelem**

Office of Environmental Trust  
Colville Confederated Tribes  
1 Colville

### **Republic**

Republic Library, 794 S. Clark Ave.

The documents are also available on the EPA Region 10 web site:  
<http://www.epa.gov/r10earth/>  
Click on "Index," then "U," and then "Upper Columbia River Site."

For a copy of the draft Upper Columbia River Expanded Site Inspection Report, please contact Monica Tonel, Site Assessment Manager for the site. Written comments on the draft report should be sent to Monica Tonel.

### **Monica Tonel**

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### ***For general information:***

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### **Dave Croxton**

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***EPA invites you to attend an open house and meeting  
about the Upper Columbia River site:***

**December 3, 2002, 6-8 p.m.**  
Kettle Falls High School  
Kettle Falls, WA

**December 4, 2002, 1-4 p.m.**  
Colville Public Library  
Colville, WA

**December 4, 2002, 6-8 p.m.**  
Northport Town Hall  
Northport, WA

Davenport, WA  
*(date and time to be announced)*

*For people with disabilities: Please contact Judy Smith if you have any requests for reasonable accommodations. For TTY users: Please call the Federal Relay Service at 1-800-877-8339. Please provide one week advance notice for your request.*