

Willamette River Upriver Reach Dioxin and Furan Sediment Investigation

Region 10

July 2022

This fact sheet provides an overview and the main outcomes of the Willamette River Upriver Reach dioxin and furan sediment sampling the U.S. Environmental Protection Agency and the Oregon Department of Environmental Quality conducted in Summer 2021. Dioxins and furans are contaminants of concern at the Portland Harbor Superfund Site.

What are Dioxins and Furans?

A group of chemicals formed during processes such as fuel burning, power generation, waste incineration, and metal production as well as from other industrial activities such as paper manufacturing.

What is the Portland Harbor Superfund Site?

The Portland Harbor Superfund Site spans about 10 miles of the Lower Willamette River in Portland, Oregon, with the contamination in the riverbed sediment. This area has served as Portland's major industrial corridor since the late 1800s. Portland Harbor sediments (river bottom), surface water, and riverbanks were contaminated with toxic chemicals from over a century of industrial activity. As a result, in December 2000, Portland Harbor was named a Superfund site and the EPA (federal regulator) and DEQ (state regulator) began planning for the cleanup.

What is Superfund?

A law that allows EPA to clean up contaminated sites. It also forces the parties responsible for the contamination to either perform cleanups or reimburse the government for EPA-led cleanup work.

What is the Upriver Reach?

The Upriver Reach of Portland Harbor encompasses the area of the Willamette River from the Sellwood Bridge (river mile 16.6) to the confluence of the Tualatin and Willamette rivers in West Linn, OR (river mile 28.4).

In contrast to the Portland Harbor Superfund Site and the Downtown Reach, the Upriver Reach is less developed and flows under largely natural conditions through suburban areas of Portland.

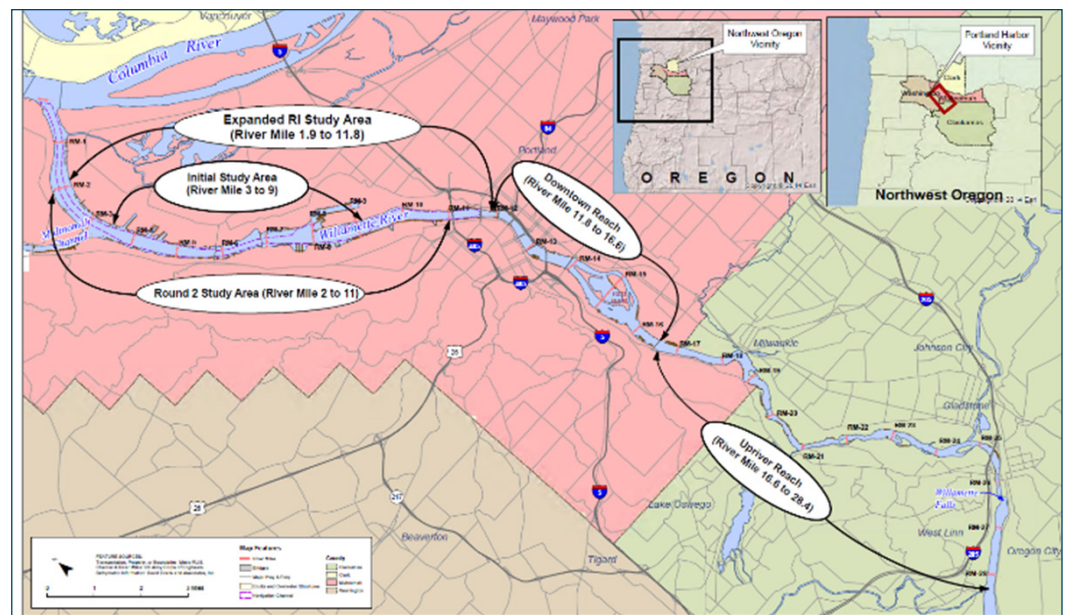


Figure 1. Area of the Upriver Reach in relation to Lower Willamette River
(Source: EPA Portland Harbor Record of Decision)

Why did EPA and DEQ sample the Upriver Reach for dioxins and furans?

EPA and DEQ performed the 2021 Upriver Reach investigation to measure the concentrations of dioxins and furans upstream of the Portland Harbor Superfund Site. Since these sediments will move downstream over time, the upriver concentrations help us understand how achievable cleanup goals are for dioxins and furans in Portland Harbor.

Multiple investigations in the past have characterized suspected or known contaminant sources in Portland Harbor and upstream (including dioxins and furans). However, this more recent sampling data was needed to understand the potential for dioxin and furan contributions from the Upriver Reach.

Main Outcomes

The laboratory results for the 2021 Upriver Reach data found very low or did not detect concentrations of dioxins and furans in the Upriver Reach sediment, indicating the area is generally free of dioxin and furan contamination that could affect the Portland Harbor cleanup. There are two main outcomes of this investigation:

1. EPA does not anticipate any significant changes to the Portland Harbor Superfund Site long-term cleanup goals for dioxins and furans. Dioxin and furan concentrations in the Upriver Reach are very close to long-term cleanup goals and it is anticipated that Portland Harbor will achieve those same low concentrations after cleanup actions are completed.

2. Concentrations of dioxins and furans were low throughout the Upriver Reach and do not indicate this area is a significant source of dioxin/furans. As a result, this greatly reduces the concern of sediment recontamination in the Portland Harbor Superfund Site from the Upriver Reach as the sediment moves downstream.

EPA will continue to provide updates on any dioxin and furan information that could affect the Portland Harbor Superfund Site cleanup.



Figure 2. The power grab sampling device is guided to the edge of the research vessel to collect the next surface sediment sample for the 2021 Upriver Reach investigation. (Source: DEQ)

For more information:

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EPA Portland Harbor website:
www.epa.gov/superfund/portland-harbor

DEQ Website on Willamette River Sediment Study:
www.oregon.gov/deq/Hazards-and-Cleanup/CleanupSites/Pages/Willamette-River.aspx

*If you need materials in another language or an alternative format,
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