

# EPA Issues Cleanup Plan for Upland Soil and Groundwater at Wyckoff Site

Wyckoff/Eagle Harbor Superfund Site

June 2019

On May 10, the U.S. Environmental Protection Agency issued a cleanup plan, called a Record of Decision Amendment (RODA), to address upland soil and groundwater contamination (Operable Units 2 and 4) at the former wood treating facility at the Wyckoff/Eagle Harbor Superfund Site. The site is on Bainbridge Island, Washington, on the south side of Eagle Harbor.

## Why a New Cleanup Plan?

The cleanup plan modifies an earlier cleanup decision for the site, issued in 2000. This earlier cleanup decision called for steam-enhanced extraction, with containment as the contingent remedy if steam enhanced extraction did not meet cleanup goals. Pilot tests showed that steam-enhanced extraction could not meet project cleanup goals.

The containment remedy implemented following the pilot test includes a steel sheetpile wall around three sides of the site and continuous groundwater extraction and treatment. While containment has prevented large-scale releases of contaminants to Eagle Harbor, it is expensive to operate and has not entirely stopped the movement of contaminants outward to Eagle Harbor or downward to the lower aquifer beneath the site. The RODA addresses these concerns.

This cleanup plan addresses contamination in the upper aquifer. Contamination in the lower aquifer will be addressed in a future decision document.



*Site location and operable units. The 2019 cleanup decision addresses upland soil and groundwater contamination (Operable Units 2 and 4) at the former wood treating facility.*

## What's in the Cleanup Plan?

The RODA selects a new remedy that will treat Non-Aqueous Phase Liquid (NAPL) present in surface and subsurface soils and in groundwater. Cleanup actions include:

- Demolishing and removing/reusing remaining concrete building foundations and debris, including the steam extraction pilot test equipment that remains onsite from the previous cleanup.
- Installing an underground slurry “cutoff” wall along the south side of the former wood treating area to reroute upgradient groundwater around contaminated soil and groundwater.
- Treating about 267,000 cubic yards of contaminated soil and groundwater through in situ soil solidification/stabilization (ISS). The ISS technology involves mixing a cement slurry into the soil, turning it into a concrete monolith.
- Placing a low-permeability cap over treated and untreated soil.
- Building a new outfall to drain stormwater from the capped area.
- Installing passive discharge drains, with treatment as needed, to manage groundwater levels in the area enclosed by the perimeter wall and slurry wall, and areas south of the slurry wall following ISS treatment.
- Putting institutional controls in place to prohibit activity that could disturb the cap or result in exposure to contaminated materials that remain below the cap.

## What's the Timeline?

After a final remedial design has been developed and a construction contract awarded, it will take 8 to 10 years to build the selected remedy. The work will happen in two phases. The current schedule is for all cleanup construction to be completed by 2032.

Last May, EPA issued another cleanup plan amendment for the Wyckoff site. That decision included replacement of the perimeter steel sheetpile wall, access road improvements, and dredging and capping parts of the beaches north and east of the facility. Design is underway, and construction of the access road upgrades is scheduled to begin in late 2019. The newly selected cleanup actions cannot be completed until the perimeter wall replacement project is complete.

## Public Comments Helped Shape Cleanup Plan

EPA held a public comment period on our proposed cleanup plan from April 25 through June 30, 2016. We held a public meeting on Bainbridge Island on April 27, 2016 to record comments on the proposed cleanup plan. EPA carefully considered all comments received during the public comment period before choosing the cleanup alternatives documented in the Record of Decision Amendment. We responded to these comments in the Responsiveness Summary, included in the cleanup plan.

### About the Site

The Wyckoff Eagle Harbor Superfund Site is on Bainbridge Island, Washington. EPA added the site to the Superfund National Priorities List in 1987, when studies revealed extensive contamination in soils, groundwater, and sediment on the bottom of Eagle Harbor. EPA divided the site into cleanup areas, called Operable Units (OUs):

- **Eagle Harbor sediment (OU1)** – About 100 acres of sediment on the bottom of Eagle Harbor became contaminated with creosote and other chemicals from the former Wyckoff wood treating facility.
- **Wyckoff wood treating facility soil and groundwater (OU2 and OU4)** – on the south side of Eagle Harbor, this area includes soil and groundwater that became contaminated during decades of wood treating operations.
- **West Harbor soil and sediment (OU3)** – the site of a former shipyard, this area became contaminated with mercury and other metals.

The remedy in OU3 is functioning as designed; no additional actions are needed. EPA's new cleanup plan includes additional actions in OU2/OU4.

## EPA's Selected Cleanup Alternative Was Compared to Other Alternatives

EPA selected a cleanup alternative for the upland soils and groundwater, called Modified Alternative 7. In response to public comments, we modified Alternative 7, the Preferred Alternative in the Proposed Plan. In brief, the modifications increased the area and volume of contamination to be treated with ISS, which will accelerate the pace of cleanup. Modified Alternative 7 is described in detail in the cleanup plan, available at [www.epa.gov/superfund/wyckoff-eagle-harbor](http://www.epa.gov/superfund/wyckoff-eagle-harbor). Find the original Alternative 7 in the April 2016 Proposed Plan at <https://go.usa.gov/xmvzU>. Both documents are online: [www.epa.gov/superfund/wyckoff-eagle-harbor](http://www.epa.gov/superfund/wyckoff-eagle-harbor) and at the information repository noted at the bottom of this page. We compared it with seven other possible alternatives, including taking no action. EPA first evaluated each alternative against seven of the nine established criteria identified below (#1 through #7). Criteria #8 and #9 were evaluated after we received comments on the Proposed Plan. We believe the selected alternative protects people's health and the environment, complies with cleanup requirements, and achieves the best balance in meeting the remaining criteria. Public comment supported the selected alternative, and the State and the Suquamish Tribe supported it as well.

### Criteria for Evaluating Cleanup Alternatives

1. Overall protection of human health and the environment
2. Compliance with state and federal laws known as "Applicable or Relevant and Appropriate Requirements (ARARs)"
3. Short-term effectiveness
4. Long-term effectiveness
5. Reduction of mobility, toxicity, and volume of contaminants through treatment
6. Implementability, or ability to carry out, the alternative
7. Cost
8. State acceptance
9. Community acceptance



### Reminder: Beaches remain contaminated with creosote



The beaches north and east of the former wood treating facility are contaminated with creosote, a chemical used to treat wooden rail road ties, utility poles, and pier pilings. Creosote is an oily petroleum-based product with a distinctive odor. On bare skin, creosote can cause chemical burns. It contains polycyclic aromatic hydrocarbons (PAHs), which are chemicals found in oil, coal, and tar. Some of the PAHs found in creosote can cause cancer. Community members are encouraged to avoid contaminated areas of the beaches until cleanup actions have been implemented. For a map and more information: <https://go.usa.gov/xmvHJ>.

### Find the Cleanup Plan

Find the Record of Decision Amendment, the Responsiveness Summary, and the Administrative Record (documents that support the cleanup decision) at:

#### Bainbridge Island Public Library

1270 Madison Avenue N.  
Bainbridge Island, WA 98110  
(206) 842-4162  
*Call for hours*

#### EPA Region 10

Superfund Records Center  
1200 Sixth Avenue  
Seattle, WA 98101-3188  
(206) 553-4494  
*Call for an appointment*

#### Online

Find site documents, including the Record of Decision, on EPA's Wyckoff/Eagle Harbor web page: [www.epa.gov/superfund/wyckoff-eagle-harbor](http://www.epa.gov/superfund/wyckoff-eagle-harbor)

## For More Information


### **General Information**

Debra Sherbina  
Community Involvement Coordinator  
(206) 553-0247 or toll free: (800) 424-4372  
[sherbina.debra@epa.gov](mailto:sherbina.debra@epa.gov)

### **Technical Information**

Helen Bottcher  
Remedial Project Manager  
Project Manager  
(206) 553-6069 or toll free: (800) 424-4372  
[bottcher.helen@epa.gov](mailto:bottcher.helen@epa.gov)

*If you need materials in an alternative format, please contact Debra Sherbina at 800-424-4372, ext.0247.*

 *TDD or TTY users, please call 800-877-8339 and give the operator Debra Sherbina's phone number.*



1200 Sixth Avenue, Suite 155, 12-D12  
Seattle, Washington 98101-3188  
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