



Wyckoff/Eagle Harbor Site Bainbridge Island, Washington

EPA Proposes Cleanup Plan for Soil and Groundwater at the Former Wood-Treatment Facility

You are invited to comment on EPA's Proposed Plan and other cleanup alternatives considered for contaminated soils and groundwater at the former Wyckoff wood-treatment facility. This fact sheet summarizes EPA's Proposed Plan for cleanup at the Wyckoff Site. Copies of the entire Proposed Plan can be obtained at the Bainbridge Island Public Library, the Bainbridge Island Planning Department, or by calling **Nancy Wilson**, EPA Community Relations Coordinator, toll-free at **1-800- 424-4EPA**. The Proposed Plan is also available on the Internet on the new Wyckoff/Eagle Harbor web page.

EPA is proposing the following cleanup plan for soils and groundwater at Wyckoff:

- ✓ Capping contaminated soil on the flat portion of the Wyckoff property.
- ✓ Excavating soil from a small area on the hillside and placing it beneath the cap.
- ✓ Identifying any additional hillside contamination.
- ✓ Regulating land-use activities that could weaken the cap.
- ✓ Monitoring groundwater in the future to confirm that contaminants will not cause risks and determine whether future action is needed.
- ✓ Incorporating groundwater cleanup decisions from the Interim Record of Decision.

Next Steps

After considering all public comments on the Proposed Plan, EPA will select a cleanup alternative. EPA will then issue a Record of Decision (ROD) that documents the cleanup decision. As a part of the ROD package, EPA develops a Responsiveness Summary, summarizing and responding to the public's comments. Both the ROD and the Responsiveness Summary will be available to the public at the Bainbridge Island Library and the EPA Seattle office.

EPA Public Meeting!

When: Wednesday,
December 3, 1997
7:00 to 9:00 p.m.

Where: The Bainbridge
Island Commons
402 B June Drive

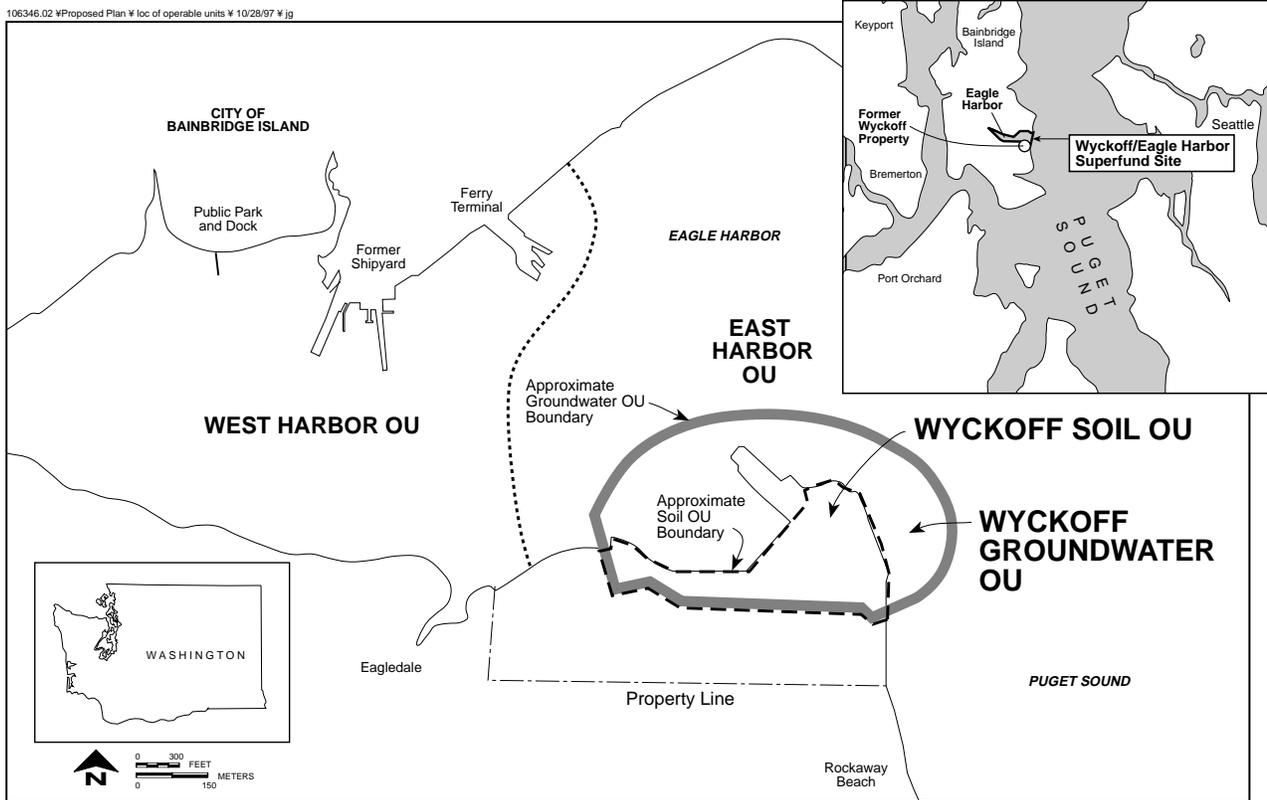
Please Keep in Mind...
EPA's 30-Day Comment
Period Begins November
20 and Ends on
December 20!

Community participation is important in developing a cleanup plan for Wyckoff. Your comments and participation are encouraged. Please mail your comments by December 20, to:

Peter Rubenstein
Project Manager
US EPA, (ECL-115)
1200 Sixth Avenue
Seattle, Washington 98101

Oral comments can be provided at the public meeting.

Figure 1



LOCATIONS OF OPERABLE UNITS AT WYCKOFF/EAGLE HARBOR SUPERFUND SITE

Site History

The former Wyckoff wood-treating facility, located at the mouth of Eagle Harbor on Bainbridge Island, forms part of the Wyckoff/Eagle Harbor Superfund site. The facility treated wood from 1903 until 1988. As a result of these operations, surface and subsurface soils at the facility and groundwater beneath the facility have been severely contaminated with creosote* and pentachlorophenol*.

Bottom sediments in much of Eagle Harbor are contaminated with chemicals from wood-treating and shipyard operations. These sediments are toxic to marine organisms. A public health advisory is currently in effect

recommending against eating fish and shellfish harvested from the Harbor. Currently, there are four Operable Units (OU) at different areas of the site:

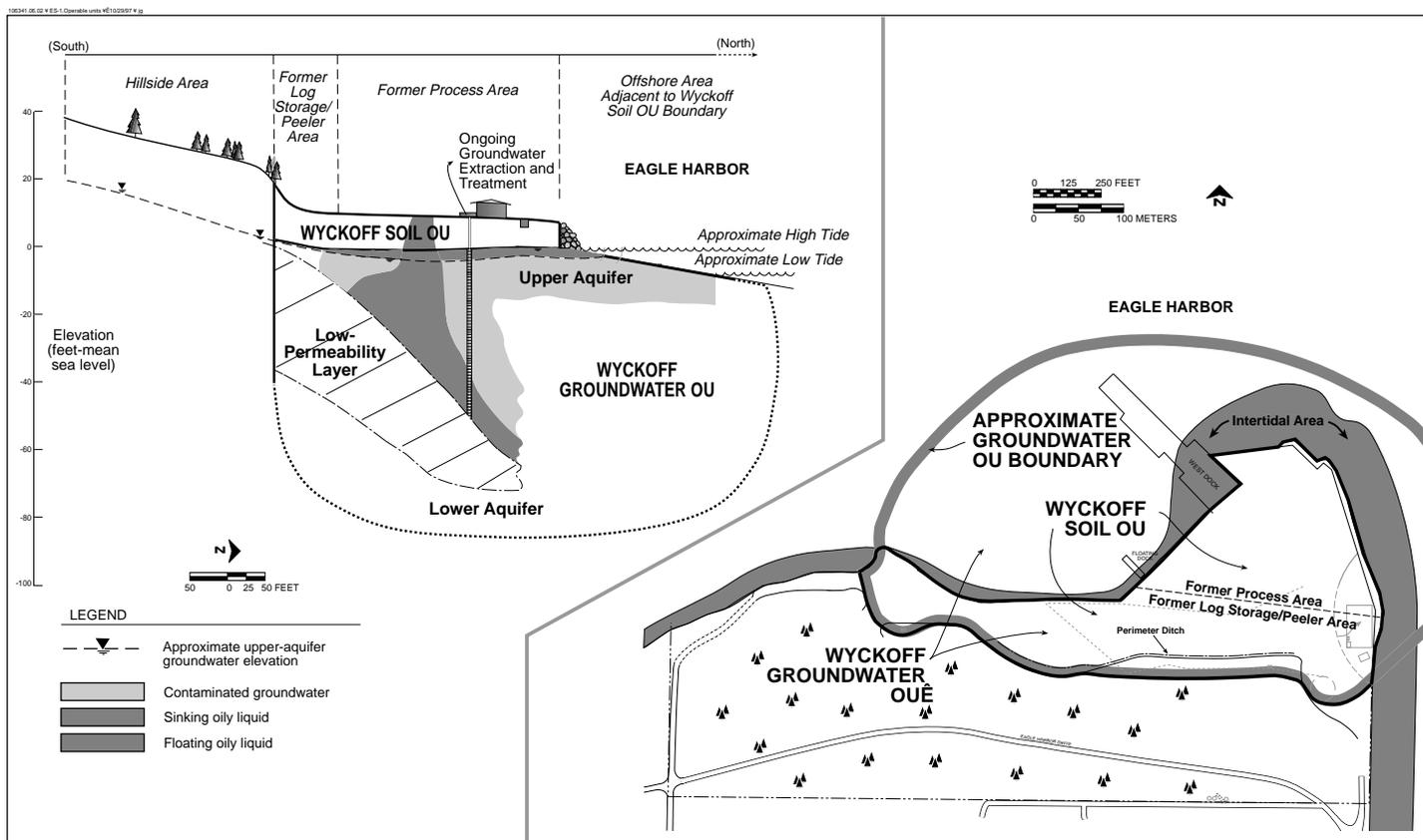
- Groundwater - former Wyckoff facility
- Soil - former Wyckoff facility
- West Harbor sediments
- East Harbor sediments

This Proposed Plan applies to the groundwater and soil OUs. Cleanup in the West and East Harbor is on-going under separate cleanup plans.

* Human Health Risks of Pentachlorophenol: Pentachlorophenol (Penta) is used during the wood treatment and preservation process and contains about 85 to 95 percent penta; the remainder is a mix of other chemicals and about .01 percent dioxin and furans. High-level exposure can cause harmful effects to the liver, kidneys, skin, blood, lungs, and nervous system. Long-term exposure to low levels of Penta can also cause damage to the liver, kidneys, blood and nervous system. EPA has classified Penta as a probable cancer-causing agent in humans. Penta can enter the body through lungs as an air pollutant, through the digestive tract or skin.

* Human Health Risks of Creosote: Creosote is a blend of various coal-tar distillates that may contain up to 90 percent Polycyclic Aromatic Hydrocarbons (PAHs). PAHs are chemicals that are created during incomplete burning of coal, gas, or other organic substances. PAH's can enter the body through the air, attached to dust particles, or through soil in both solid and liquid form. Studies in animals have shown that PAHs can cause harmful effects to skin (tumors), as well as to the immune system and reproduction. Although these effects have not been reported in humans, long-term inhalation and skin exposure to mixtures containing PAHs have been associated with cancer in humans.

Figure 2



GENERALIZED OVERVIEW OF THE WYCKOFF PROPERTY AND THE SOIL AND GROUNDWATER OPERABLE UNITS

What’s the Environmental Problem at the Former Wyckoff Property?

From 1904 to 1988, a succession of companies treated wood at what is now called the former Wyckoff property. This property housed one of the largest wood processing plants in the nation. Wood-treatment operations included the use and storage of creosote, pentachlorophenol, solvents, gasoline, antifreeze, fuel and waste oil. These contaminants are found in both the soil and groundwater at Wyckoff. EPA began investigating the site in 1971 and it became a Superfund site in 1987. Since 1990, EPA has conducted such cleanup actions as: operating an on-site groundwater extraction system and treatment plant, demolishing old buildings, and removing storage tanks, sludge and asbestos-covered piping from the property.

The Proposed Plan addresses the two Operable Units (OU) on the property: **Soils** and **Groundwater**.

Soil: The soils at Wyckoff are contaminated by creosote, pentachlorophenol, and dioxins. Soils in the former "process area," where the logs were treated with creosote, are most contaminated.

In general, humans and animals can be exposed to contaminated soils in a variety of ways - through the lungs (as an air pollutant), through the digestive tract, or through the skin. As mentioned on page 2 of this fact sheet, the contaminants found at Wyckoff are toxic and considered to be probable cancer causing agents. The primary risk posed to human health by soil contamination at Wyckoff is through ingestion.

Groundwater: The groundwater at Wyckoff is also contaminated with creosote and pentachlorophenol, particularly in the first groundwater component or upper aquifer (see Figures 2 and 3), and poses potential risk to humans if ingested.

Much of the contamination is in the form of a nonaqueous phase liquid called NAPL. NAPL is an oily liquid that floats or sinks in water. NAPL can move through the ground and is seeping on the beaches at the facility. EPA estimates that there are over one-half million gallons of NAPL in the upper aquifer below the process area.

Environmental Problem at the Former Wyckoff Property? cont...

The Groundwater Operable Unit is segmented into three components (see Figure 3). The most contaminated area, the first component, is currently being addressed in a separate cleanup decision, the 1994 Interim Record of Decision (ROD) for Groundwater.

The Interim ROD outlines EPA's decision to build and replace the groundwater treatment plant and create a barrier around the perimeter of the site to control NAPL from going into the harbor.

Under the Interim ROD, EPA also sealed on-site water supply wells so groundwater beneath the property is not being used as drinking water. However, contaminated groundwater could potentially affect drinking water supplies for Bainbridge Island.

Risk Analysis

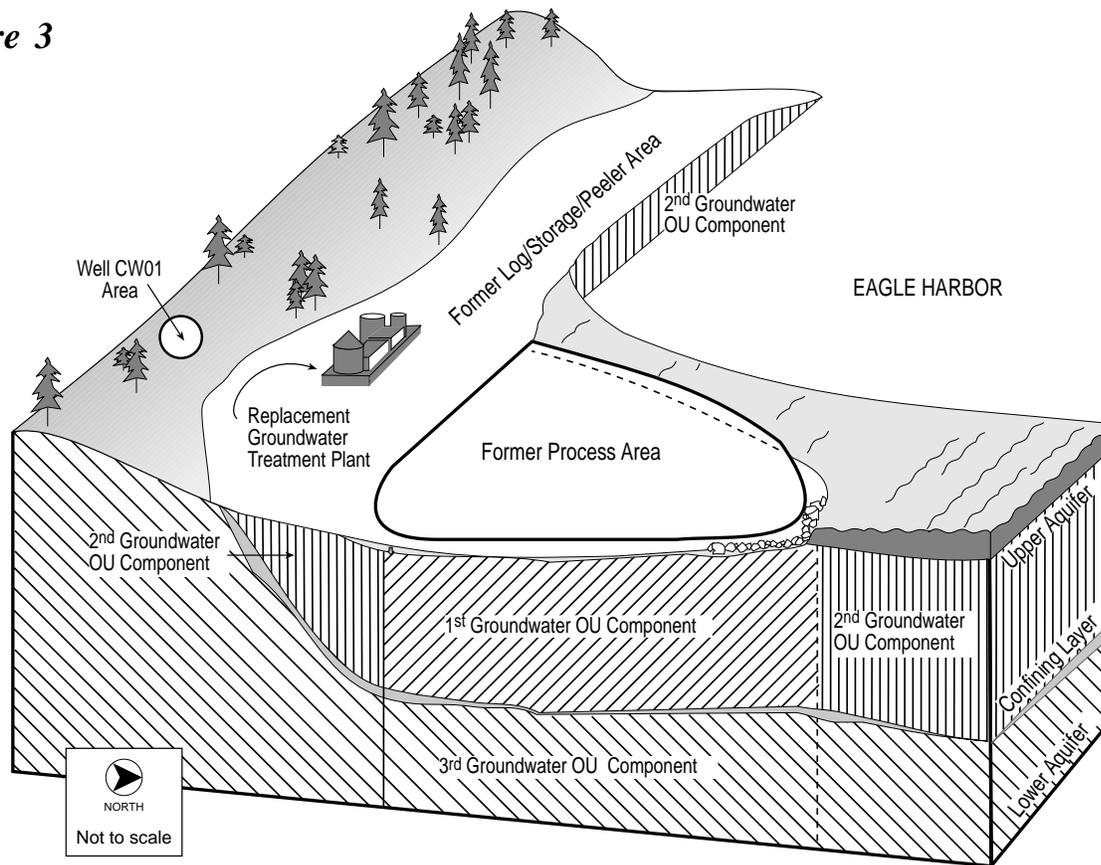
Before developing a Proposed Plan, EPA prepares a technical report called the Remedial Investigation and Feasibility Study (RI/FS). The RI/FS contains extensive data and analysis of the risks posed by contaminants and a description possible cleanup alternatives. The RI/FS is a major document used by EPA to develop the Proposed Plan.

The following pages summarize EPA's preferred cleanup alternatives that are outlined in the Proposed Plan for Soils and Groundwater at Wyckoff.

EPA evaluated a broad range of cleanup proposals for soils including: off-site or on-site incineration, off-site or on-site chemical treatment, off-site disposal in a landfill, and on-site containment and capping.

For a full discussion of these alternatives, see the EPA's Proposed Plan and the RI/FS, both of which are available at the Bainbridge Island Library and EPA's Seattle Office.

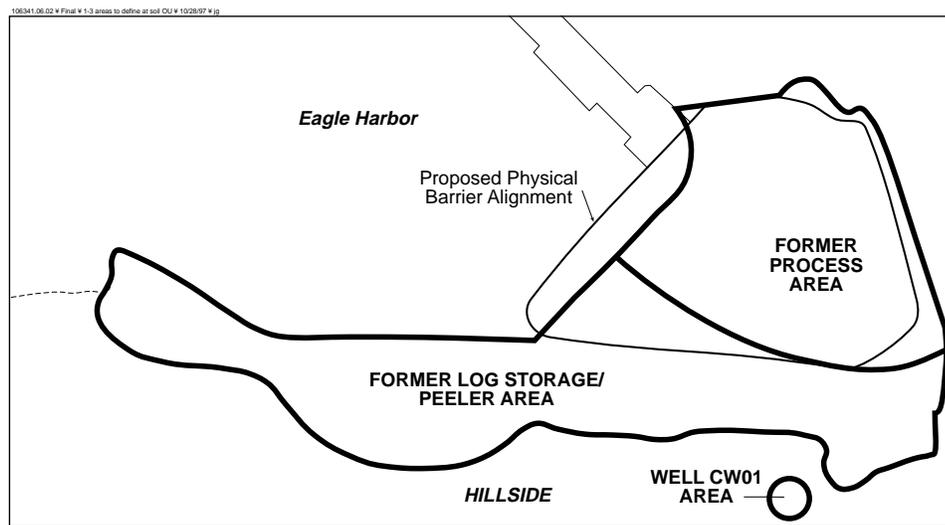
Figure 3



THIS FIGURE SHOWS THE RELATIONSHIP BETWEEN THE UPPER AND LOWER AQUIFERS AND THE 1ST, 2ND, AND 3RD GROUNDWATER OPERABLE UNIT COMPONENTS

A Summary of EPA's Preferred Cleanup Alternatives

Figure 4



Soils: For purposes of evaluating cleanup, the soils operable unit is segmented into three areas: the former log storage/log peeler area, the former process area and the Well CW01 area. Figure 4 shows the three areas for soil cleanup.

Former Log Storage/Log Peeler Area:

Six cleanup alternatives were evaluated for this area. EPA's preferred cleanup plan calls for containment of contaminated soils by capping the entire area with a multilayer capping system (see Figure 5). This would allow for residential and mixed use development, under institutional controls. Institutional controls are non-engineered measures, such as deed restrictions or construction limitations, that are designed to prevent exposure to contaminants.

Former Process Area:

The former wood processing area is the most contaminated area on the site. EPA evaluated five proposed cleanup alternatives for this area. EPA's preferred cleanup plan calls for containment of soils under a cap with a multilayered capping system (see Figure 5). The multilayer capping system proposed for this area would be integrated with the cap in the log/storage area and would result in a smooth, flat surface.

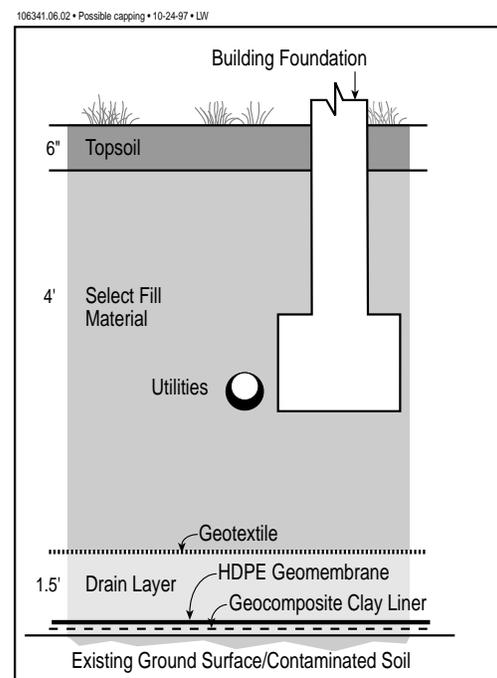
THIS FIGURE IDENTIFIES AREAS AT THE WYCKOFF SOIL OPERABLE UNIT THAT WERE USED TO FOCUS INVESTIGATION AND CLEANUP EFFORTS.

Well Area CW01:

The Feasibility Study identified five possible cleanup alternatives for soils near Well CW01. This area, located at the south end of the site, is thought to have been used as a landfill. EPA's preferred cleanup alternative calls for excavating contaminated soil from this area and moving it to the process area for containment under the cap.

Hillsides Testing: EPA is proposing to conduct further sampling on the hillsides to determine if there is soil contamination in this area. If soil samples show areas of contamination on the hillsides, EPA would excavate contaminated soils and move them to the flat areas to be capped.

Figure 5



THIS FIGURE SHOWS THE CONFIGURATION OF A POSSIBLE CAPPING DESIGN THAT COULD BE IMPLEMENTED AS PART OF THE PREFERRED ALTERNATIVE

Preferred Cleanup Alternative for Groundwater

For purposes of evaluating cleanup alternatives, EPA has divided the Groundwater operable unit into three components (see Figure 3).

This Proposed Plan would officially incorporate cleanup actions of the Interim ROD. The Interim ROD addresses cleanup in the first component of groundwater, which is contaminated the most. The Interim ROD calls for the following :

- ✓ Sealing and abandoning on-site water wells
- ✓ Evaluating, maintaining, and upgrading extraction system
- ✓ Replacing the existing groundwater treatment plant
- ✓ installing barrier wall

As noted on page 4, the first two actions above have been completed. Construction of the barrier wall and new treatment plant is anticipated to begin in 1999.

For the less-contaminated second and third groundwater components, EPA proposes restrictions on the use of on-site groundwater, and long-term monitoring to confirm that contaminants will not cause unacceptable risks. Monitoring will determine whether further action is needed for these components.

EPA's Preferred Alternatives

EPA believes that the preferred alternatives for each Operable Unit provide the best balance of trade-offs among the cleanup alternatives outlined in the Feasibility Study. The Preferred Alternatives satisfy the following criteria:

- ✓ Protect human health and the environment
- ✓ Comply with state and federal laws and standards
- ✓ Achieve cost effectiveness
- ✓ Use permanent solutions to the maximum extent practicable.

EPA's Preferred Alternative would contain contaminants on site and would not destroy or reduce the volume of contaminants.

Where can I get more information?

The **Administrative Record** is a file that contains **all** information used by EPA to make its decisions on cleanup actions from the beginning of the site's history. The Administrative Record is available for public review and should be housed in a location near the site, known as the **Information Repository**.

For many years, the Bainbridge Island Library was the Information Repository for the site; however, due to limited space at the library, EPA can only keep the most current *documents and plans at the library, not the entire Site File. These documents can be reviewed by anyone at the Bainbridge Island Public Library, located at 1270 Madison Avenue North. If the library does not have the document you need, feel free to call **Nancy Wilson, EPA Community Relations Coordinator, at 1-206-553-1237**.

*** Please Note: Copies of the Proposed Plan are available at the Bainbridge Island Public Library and the City of Bainbridge Island Planning Department.**

The Administrative Record can still be reviewed at the EPA Records Center in Seattle. The **Administrative Record** files for Wyckoff/ Eagle Harbor are kept at the **EPA Records Center, 7th floor, 1200 6th Avenue, Seattle**. To make an appointment to review the Administrative Record, call **1-206-553-4494** or **Nancy Wilson, EPA Community Relations Coordinator, at 1-206-553-1237**.

Land Use Issues at Wyckoff

For over a year, EPA has been working with the Bainbridge Island Planning Department and the citizen's Wyckoff Zoning Advisory Committee to coordinate cleanup efforts with local land-use zoning plans. EPA believes that contamination at Wyckoff can be remediated to protect human health and the environment **and** allow for future development of the property.

The Bainbridge Island City Council is currently undergoing evaluation of the Wyckoff Zoning Advisory Committee's recommendations and will ultimately decide how to zone the site. When the City Council makes a determination about how the site will be zoned, they will offer EPA their recommendation as an official comment on EPA's Proposed Plan.

If you have questions about the city's planning process, please call **Libby Hudson** at the Planning Department at **206-842-2552**.

Additional Information?

Contact:

Peter Rubenstein, EPA Project Manager (206) 553-1067
Nancy Wilson, EPA Community Relations Coordinator (206) 553-1237

Toll free telephone line:

Call EPA toll free 1-800-424-4372

For Those With Impaired Hearing or Speech Contact:

EPA's telecommunications device for the hearing impaired (TDD)* (206) 553-1215

EPA Region 10 Internet Homepage:

For information and news about Superfund, watershed protection, endangered species protection, pesticides and toxics information and much more: <http://www.epa.gov/r10earth/>

New Wyckoff/Eagle Harbor

Homepage: <http://epainotes1.rtpnc.epa.gov.7777/r10/cleanup.nsf/webpage/wyckoff-Eagle+Harbor>



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* Additional services can be made available to persons with disabilities by contacting one of the EPA staff listed on the last page or call toll free at **1-800-424-4372**.