

Port Angeles Rayonier Mill: Upland and Marine Data Summary Reports and Cleanup Alternatives Evaluation Report—Available for Public Review and Comment

INFORMATION & CONTACT

Comments accepted

August 29 – October 28, 2019

Submit comments

Online

<http://cs.ecology.commentinpu.com/?id=dH5jU>

By mail

Marian Abbett, PE
Cleanup Project Manager
Southwest Regional Office WA
Department of Ecology
PO Box 47775
Olympia, WA 98504-7775

Document review locations

Port Angeles Library
2210 South Peabody Street
Port Angeles, WA 98362
360-417-8500

WA Department of Ecology
Southwest Regional Office
300 Desmond Drive SE
Lacey, WA 98503
By appointment, call
360-407-6365

Rayonier Mill webpage

<http://www.ecology.wa.gov/Rayonier>

Facility Site ID: 19

Site Cleanup ID: 2270

Why you received this information

The former Rayonier Mill is generally located at 700 N. Ennis Street. A comment period opens August 29 to give you a chance to comment on three technical reports.

- **Upland Data Summary Report (Volume I)** is a remedial study of the upland portion of the Study Area. The report describes what the contaminants are and where they are located in soil and groundwater.
- **Marine Data Summary Report (Volume II)** is a remedial study of the marine portion of the Study Area. The report describes what the contaminants are and where they are located in sediments.
- **Cleanup Alternatives Evaluation Report (Volume III)** is a feasibility study. The report describes and evaluates options for cleanup of soil and groundwater and marine sediments in the Study Area.

You received this information in the mail because you may live or own property near the former mill.

Public comment invited

The Department of Ecology (Ecology) approved the drafts of Volumes I, II, and III for public comment. The reports are available at Ecology's Rayonier Mill webpage (see blue box on the left).

Ecology invites your comments on the draft reports during the comment period from **August 29 to October 28, 2019**.

Ecology will consider your comments before finalizing the reports. Ecology will respond to comments after the comment period in a responsiveness summary. The summary will be available on the Rayonier Mill webpage.

Rayonier Mill Study Area

In 2010, Ecology signed a legal agreement (agreed order DE6815) with Rayonier AM Properties LLC (RayonierAM). The agreement calls for RayonierAM to study the extent of contamination and assess cleanup options for the upland and marine portions of the Study Area (see Figure 1). The extent of contamination across the site is unknown, so Ecology and RayonierAM decided to focus on contamination in the Study Area.

The Upland Study Area is the 75-acre former mill property. The Marine Study Area is about 1,300 acres of marine environment adjacent to the mill property on the southern shore of Port Angeles Harbor.

Ennis Creek flows through the Upland Study Area into the harbor and divides the upland into the west mill and east mill areas. There are known cultural sites on the RayonierAM property, which was once home to the Klallam l'e'nis village and the Puget Sound Cooperative Colony.

In 2011, RayonierAM sold a portion of the property to the City of Port Angeles for a combined sewer overflow tank. A pedestrian pathway was constructed along a former railroad right of way. Places along Ennis Creek may be restored in the future to provide habitat for wildlife.

RayonierAM leased the northern portion of the property from the Washington State Department of Natural Resources (DNR) which includes a dock and jetty.



Figure 1: The Rayonier Mill Study Area is located along the shoreline and in the eastern portion of Port Angeles Harbor.

Soil and groundwater contamination and options for cleanup in the Upland Study Area

The amount and type of contamination vary across the Upland Study Area. RayonierAM removed most of the contaminated hot spots with partial cleanups in the 1990s and 2000s. Remaining contamination is spotty and found across much of the upland study area with higher concentrations in the area west of Ennis Creek. There are limited areas of low and high pH (acidity or alkalinity) in groundwater. This can cause some metals to move out of soil and into groundwater. Contaminants found in soils and groundwater in the Study Area include polycyclic aromatic hydrocarbons (PAHs), metals (such as arsenic and lead), dioxins, total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), and ammonia (see Figure 2).

Exposure to contaminated soil is a pathway of concern. Physical contact or ingesting soil is a pathway of exposure for people and wildlife when they visit the upland.

Cleanup options protect against exposure pathways. Options for cleaning up contaminated soil include excavating soil and either hauling it away or consolidating it on-site. Options vary in the size of the area to be excavated. If soil is consolidated on site, then a cap will cover the contaminated soil.

Groundwater is not a source of drinking water because it is so close to the salt water of the harbor. Contaminants in the groundwater can migrate to the marine waters and sediment.

Groundwater cleanup options protect against migration of contaminated groundwater to the marine environment. Options vary from treating groundwater at the shoreline to treating it throughout the upland. Groundwater treatments include injecting air into the groundwater to increase the rate soil microbes breakdown contaminants. Another option is using a permeable reactive barrier that treats groundwater as it moves through the barrier. Chemical treatment is another option requiring placement of chemicals in the soil to degrade the contamination.

Upland Contamination

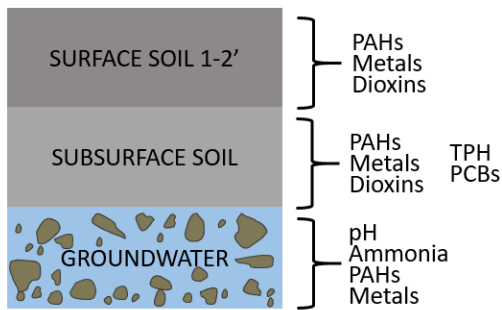


Figure 2. Soil and groundwater contaminants.

Marine Contamination

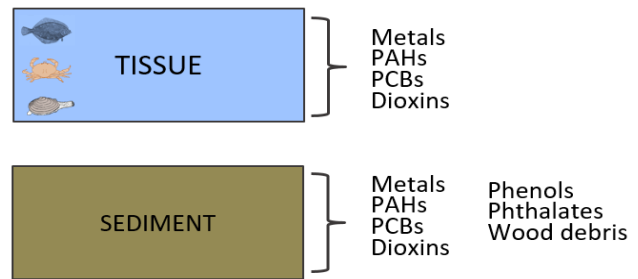


Figure 3. Sediment and animal tissue (crabs and clams) contaminants.

Sediment contamination and options for cleanup in the Marine Study Area

The highest levels of sediment contamination are in the eastern part of the log pond and near the mill dock. Wood debris is present on the sea floor. As logs decompose, they remove oxygen from the bottom of the harbor and produce ammonia and sulfides that is harmful to sea life. Many of the same contaminants found in soil are also present in sediment (see Figure 3).

People can be exposed to contaminated sediment by direct skin contact or by consuming it. Eating fish and clams that have accumulated contaminants in their tissues may be a source of contaminant exposure to people. Marine animals, plants, and birds can be exposed by direct contact or eating contaminated organisms.

Options for sediment cleanup eliminate contaminant exposure pathways leading to people and marine life. Cleanup options include enhanced natural recovery, dredging, fill, and capping. Enhanced natural recovery consists of placing a thin layer of clean sand on top of the sediment. Biological activity of animals living on the sediment surface mixes the sand with the contaminated material.

Intertidal contaminated sediment is dug-up and removed using earth moving equipment along the shoreline. A barge is used to excavate subtidal contaminated sediment. Previously dredged depressions in the harbor bottom could be filled with clean material and covered with a layer of clean sand. A cap is a mixture of sand, gravel, and other materials that isolates the contaminated sediment underneath the cap.

Background

Rayonier ran a pulp mill on the property from 1930 to 1997 when the mill closed. During mill operations, sulfite and acid would break down wood chips into cellulose fibers. From 1997 to 1999, Rayonier dismantled the mill.

The mill burned wood chips and sludge that created air emissions and ash, which included dioxins. Until the 1970s, the mill discharged liquid wastes at shoreline outfalls. After 1972, wastewater was treated and discharged from a deep water outfall. Fuel spills, releases from electrical equipment, and wood waste caused contamination of the property and nearby marine environment.

From 1989 to 2006, Rayonier cleaned up some contaminated hot spots. Over 30,000 tons of contaminated soil was removed from the Upland Study Area. Sampling indicated these actions were successful in removing a substantial volume of contaminated soil.

Next steps

After Volumes I to III are finalized, RayonierAM will prepare a draft action plan (Volume IV) that describes cleanup for the Study Area. Volume IV will be available for public comment before it is finalized.

In a separate project, RayonierAM will be removing the dock and jetty in the area leased by RayonierAM from DNR. As part of removing the dock and jetty, Ecology will draft a cleanup plan for the sediments. RayonierAM will implement cleanup of the contaminated sediments. The cleanup plan and implementing order will be available for public review and comment before they are finalized.



DEPARTMENT OF

ECOLOGY

State of Washington

Toxics Cleanup Program
PO Box 47775
Olympia, WA 98504-7775

Public comment period and open house for Port Angeles Rayonier Mill

Public Comments Accepted

August 29 to October 28, 2019

<http://cs.ecology.commentinput.com/?id=dH5jU>

Facility Site ID: 19
Site Cleanup ID: 2270

Ecology seeks public comment on the following technical documents:

- Upland Data Summary Report (Volume I)
- Marine Data Summary Report (Volume II)
- Cleanup Alternatives Evaluation Report (Volume III)

Accommodation Requests

To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6831 or visit <https://ecology.wa.gov/accessibility>.

People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

Public Open House

September 25, 2019

6:30 to 8:30 p.m.

Olympic Medical Center, Linkletter Hall
939 Caroline Street
Port Angeles

Ecology invites you to an open house to answer your questions about the technical reports and the Rayonier Mill cleanup. Staff will be available to talk one-on-one during the open house sessions. At 7:00 p.m. there will be presentation, followed by a question and answer session.

Agenda:

6:30-7:00 p.m.	Open House
7:00-7:40 p.m.	Presentation
7:40-8:00 p.m.	Question and Answer
8:00-8:30 p.m.	Open House

¿Habla Español?

Si necesita esta información en español—contáctenos a preguntas@ecy.wa.gov.