

Marine Data Report (Volume II) Available for Public Review

The Department of Ecology (Ecology) has approved the draft Marine Data Summary Report for the Rayonier Mill site. The report (Volume II) summarizes data that Rayonier collected about contamination in the marine part of the Study Area (see map below). It includes data from earlier studies, such as Ecology's Port Angeles Harbor Sediments Study (completed in 2012).

The Study Area, which is a portion of the Rayonier Mill site, includes the 75-acre former mill property and about 1,300 acres of marine environment. Ecology's 2010 agreed order (legal agreement) with Rayonier calls for the company to develop a cleanup plan for the Study Area. Together with data about nearby upland areas, the marine results will help Rayonier plan for cleanup in the Study Area.

Is Ecology holding a comment period now?

No, we are not holding a public comment period on the marine report now. We will hold a comment period in 2015. The comment period will also include the upland report (Volume I) and Rayonier's analysis of cleanup options, called an interim action evaluation report (Volume III). We released the upland report for public review in early 2013.

We are making the marine report available early so that the public has more time to review it. You can review the report at locations shown in the box on the right. You can send questions to the staff listed there.



Rayonier Mill Cleanup Site Study Area

More Information

Cleanup questions:

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Public involvement questions:

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Public Involvement Coordinator
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DOCUMENT REVIEW LOCATIONS

Port Angeles Library

2210 South Peabody Street
Port Angeles, WA 98362
Phone: (360) 417-8500

WA Department of Ecology Southwest Regional Office

300 Desmond Drive SE
Lacey, WA 98503
By appointment only:
Contact Susie Baxter
Susan.Baxter@ecy.wa.gov or
(360) 407-6365

Ecology's Cleanup Website

http://www.ecy.wa.gov/programs/tcp/sites_brochure/rayonier/rayonier_hp.htm

SITE UPDATES

Ecology's blog

<http://ecologywa.blogspot.com/search/label/Rayonier%20Mill>

Facility Site ID #: 19

How did Rayonier sample?

Section 2.1 of the report describes how Rayonier sampled the Study Area. Rayonier looked at:

- Surface and subsurface sediment.
- Tissue from marine life like crab and clams.
- Bioassays, which exposed clam larva and small crustaceans to sediment samples. The percent that survive after being exposed gives us data about how toxic sediment is.

Based on former mill activities, sampling focused on the log pond, mill dock, and outfall areas (see map).

Contamination

The studies in the marine report show sediment and tissue samples are contaminated with:

- **Mercury and arsenic**
- **Dioxins and furans** (dioxins)
- **Polycyclic aromatic hydrocarbons** (PAHs)
- **Phthalates**
- **Phenols**
- **Semi-volatile organic compounds**
- **Polychlorinated biphenyls** (PCBs)

The highest levels of contamination are in the eastern part of the log pond area and near the mill dock. This is also the area where most bioassays failed.

Studies also show wood debris on the sea floor. As logs decompose, they can remove oxygen from the bottom of the harbor and produce ammonia and sulfides. This can be harmful to plants and animals.

Where to find more information

Section 2.3 of the report provides data and more details about contamination.

Section 2.4 and Appendix C describe how currents, waves, and other forces move sediments along the harbor bottom. The study includes the model from our Port Angeles Harbor Sediments Study, as well as a model Rayonier developed.

Section 3 compares surface sediment data with natural background contamination levels and tissue data with non-urban tissue contamination levels. Natural background is the concentration of pollutants when an area has not been influenced by local human activities. This is important because sediment cleanup levels will not be set lower than the background.

Mill activities and contamination

Rayonier ran a pulp mill on the former mill property from 1930 - 1997. They used sulfite and acid to break down wood to take out cellulose fibers. They sold pulp from the mill to companies that made photographic film, fabrics, and plastics.

Until the 1970s, when the mill began treating waste water, the mill discharged liquid wastes and other pulp-making byproducts directly into Port Angeles Harbor (see outfall area on maps).

The mill burned wood chips and sludge. This created air emissions and ash, which included dioxins and furans. Contamination also came from fuel, electrical equipment, and other mill operations.

Health Information for Port Angeles Harbor

Can I fish or collect shellfish from the harbor?

In 2007, Clallam County Health and Human Services issued a crab advisory for Dungeness and rock crab in the harbor due to PCBs and dioxins. There is also an ongoing bivalve closure across the whole harbor due to bacterial contamination. Visit http://www.clallam.net/hhs/documents/PA_Harbor_advisory-final_200705.pdf for more information.

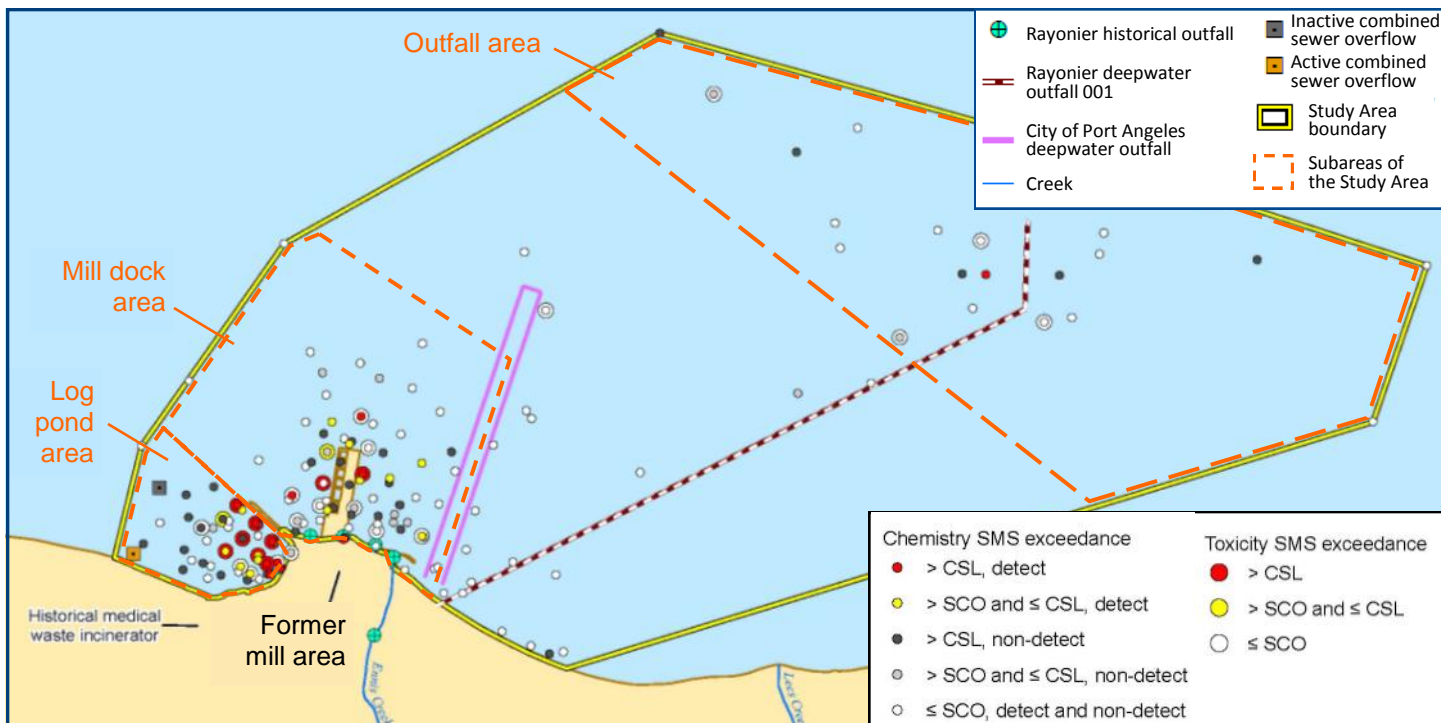
Clallam County Health and Human Services: (360) 417-2258

WA Department of Health: Len O'Garro, Lenford.O'Garro@doh.wa.gov or (360) 236-3376

Is it safe to play on beaches or swim?

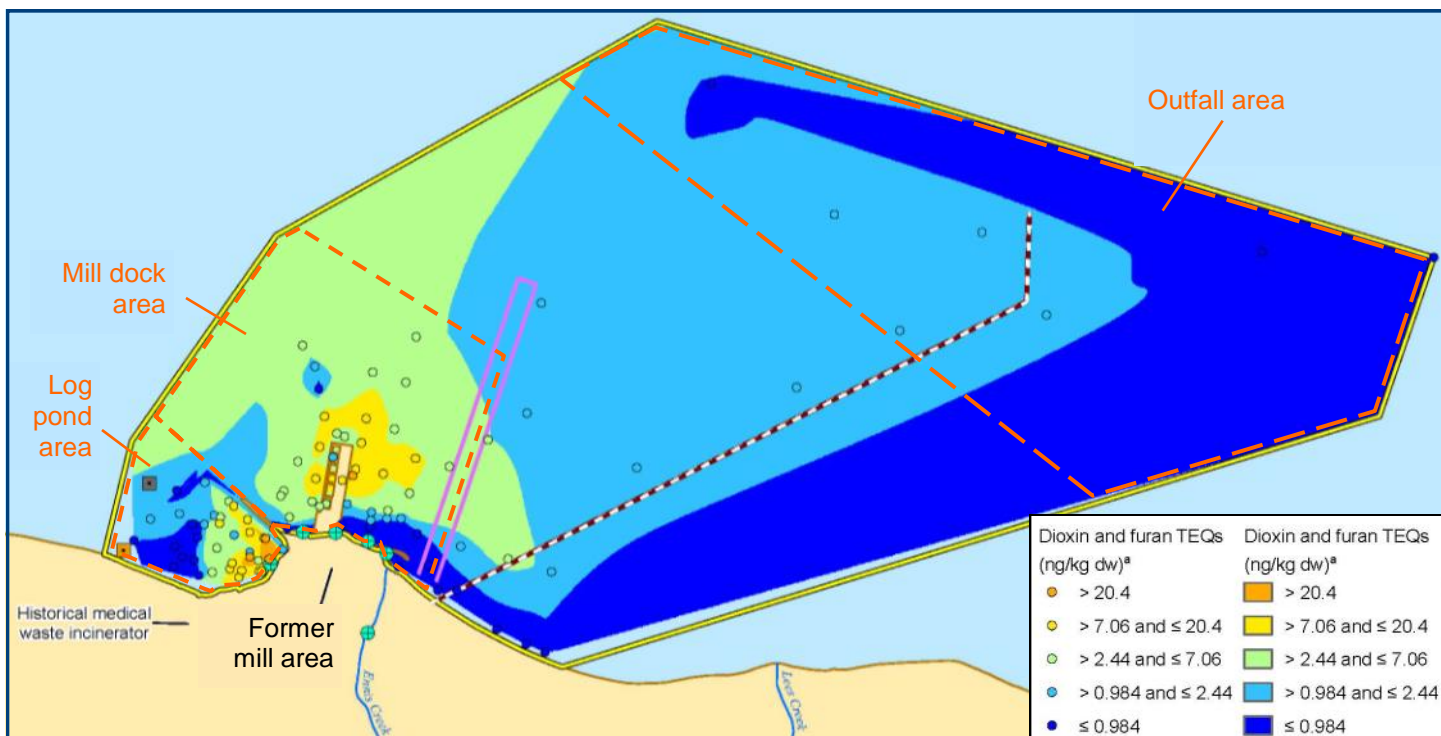
Health officials and local volunteers collect water samples for bacteria from popular Clallam County saltwater swimming beaches during the summer. To check the status of bacteria levels in the water at saltwater swimming beaches, visit: www.ecy.wa.gov/programs/eap/beach/advice.html

Port Angeles Rayonier Mill



Surface sediment contamination levels: This map, which is taken from **Map 2-7** of the marine report, shows samples where Rayonier found chemicals above state standards (called “chemistry SMS exceedances”), and where bioassays showed that sediments were toxic to organisms (called “toxicity SMS exceedances”).

A cleanup level is set between the **SCO** (sediment cleanup objective) and the **CSL** (cleanup screening level). You can learn more at www.ecy.wa.gov/programs/tcp/sites_brochure/portAngelesHarborSed/screening.html.



Dioxin and furan levels: This map, which is taken from **Map 2-8** of the marine report, shows estimated levels of dioxins in the marine study area using the values of nearby data points.



DEPARTMENT OF
ECOLOGY
State of Washington

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Port Angeles Rayonier Mill Clallam County, WA

Marine Data Summary Report
Released

Facility Site ID #: 19

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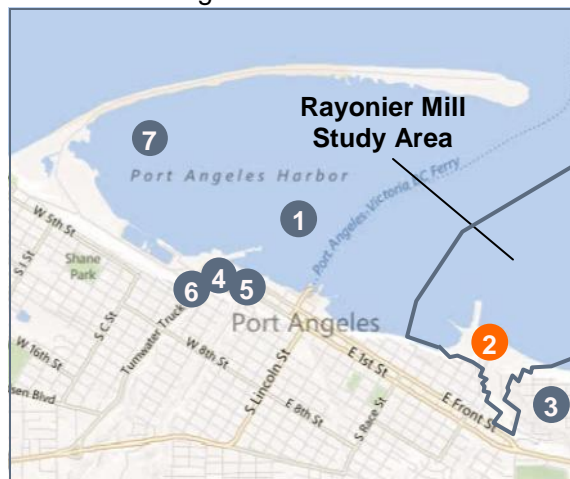
Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

Why Does Cleanup Matter?

Wood pulping at the former Rayonier Mill contaminated soil, groundwater, and sediments on and around the property. This contamination poses a threat to human health and the environment. Contaminants in sediments can harm marine life—such as fish and shellfish—and the people who depend on them for food.

Port Angeles Cleanup Sites

Ecology is working to investigate and clean up contaminated sites around Port Angeles Harbor.



1. Port Angeles Sediments Investigation
2. Rayonier Mill Study Area
3. Rayonier Mill Off-Property Soil Dioxin Study
4. Marine Trades Area & Pettit Oil
5. K Ply
6. Unocal Bulk Plant #0601
7. Western Port Angeles Harbor Site