

Ross Island Update March 2011

This fact sheet updates ongoing environmental work at Ross Island and assumes a certain level of familiarity with the project. For background on the project, please see the May 23, 2001 fact sheet and subsequent updates.

Fact sheets and additional information about the Ross Island investigation are available at: <http://www.deq.state.or.us/lq/cu/nwr/RossIsland/index.htm>

Cleanup completed

The cleanup selected in the December 20, 2005 DEQ Record of Decision reached the final stage of construction in 2010. During the intervening years Ross Island Sand and Gravel completed the selected cleanup actions at the seven areas identified as potentially posing unacceptable risk to human health and the environment as described below and shown in the figure.

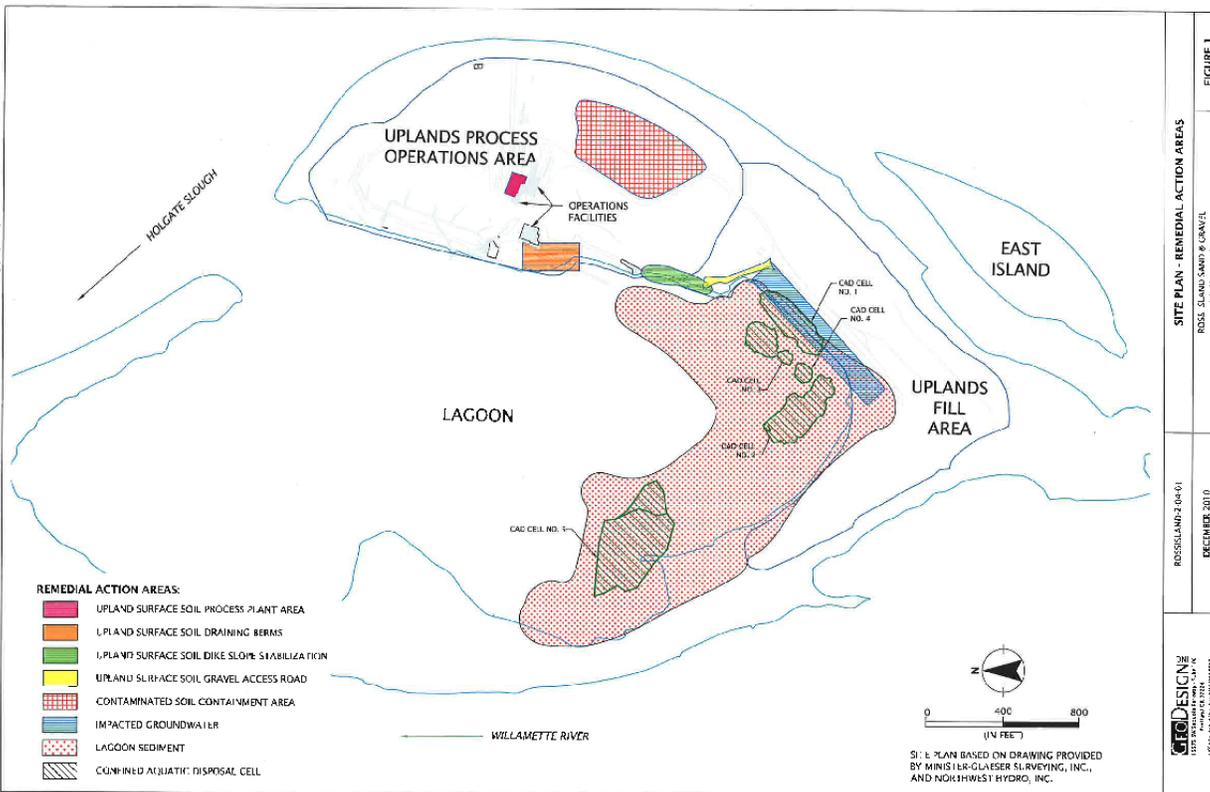
1. Upland surface soil – process plant area

In June and July 2007, approximately 900 cubic yards of metals-impacted soil was removed from the Ross Island Sand and Gravel material processing plant area to a minimum depth of 3 feet below ground surface. The impacted soil was transported to a prepared area located within the capped former settling pond for disposal. The containment area was created by excavating an area adjacent to the former settling pond. Impacted soils were placed in the containment area, compacted, and covered with a permeable geotextile fabric. Approximately 640 cubic yards of clean fill was then placed on top of the area to achieve a 3-foot-thick soil cap. The excavation area was backfilled with clean fill.



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ROSS ISLAND-204-61
DECEMBER 2010
SITE PLAN - REMEDIAL ACTION AREAS
ROSS ISLAND SAND & GRAVEL
PORTLAND, OR
FIGURE 1

Cleanup areas

...last Update:
3/10/11
J. Sutter
06-NWR-024



Upland surface soil excavation

2. Upland surface soil – adjacent to lagoon

Contaminated soil adjacent to the lagoon was stabilized to prevent erosion. Three approaches were implemented:

(1) Drainage berms were constructed in the area east of the access road that slopes from the processing plant toward a ramp leading to a floating dock. The berms were designed to slow and redirect stormwater runoff to an existing vegetated swale area. Along the west side of the road, existing ecology blocks were realigned to create a more uniform barrier. In July 2007, a shallow trench was excavated to a depth of approximately 6 inches adjacent to the row of ecology blocks. Two rows of bark-chip filled, biofilter bags were placed in the trench to filter out solids from stormwater runoff prior to it discharging into the lagoon.

(2) Slopes on the dike between the settling pond and the lagoon were stabilized by creating a bench at the base of the slope using ecology blocks for stability. Approximately 15,000 tons of clean fill material were then placed behind and over this bench reducing the near-vertical slope to an approximately 4-to-1 rise.

(3) In July 2007, approximately 6 inches of 3-inch pit run material were placed on the access



Bench at the base of dike to settling pond

road located south of the settling pond and graded. In addition, a trench approximately 18 inches wide and 6 inches deep lined with straw was constructed on the south side of the access road to collect and filter runoff.

3. Capped breach material – Area B

Contaminants consistent with the material from confined aquatic disposal cell 5 (tributyl tin, the PCB arochlor 1254, and several semi-volatile organic compounds) were detected in the eastern portion of the settling pond. This material was assumed to be present as a result of Ross Island Sand and Gravel breaching the containment cell and processing the material. In the summer of 2000, the company dredged clean sediments from the western half of the settling pond and used this material to establish a 10 foot cap over the breach material. Since placement of the clean cap material, the area has become covered with a dense population of black cottonwood trees.

4. Impacted groundwater adjacent to the lagoon

In May 2007, the company installed four temporary monitoring wells along the lagoon shoreline in this area. Low levels of several (polycyclic aromatic hydrocarbons, also called PAHs), were detected, but groundwater concentrations did not exceed risk-based screening levels for aquatic life or human health exposure scenarios pertinent to this site (construction worker and volatilization to outdoor air). Based on these results DEQ concluded that no action is needed to address contaminants in groundwater.



Monitoring well installation

5 - 7. Lagoon sediment

The three lagoon sediment contamination areas : contaminated material historically placed in confined aquatic disposal cells, residual sediment contamination associated with the breach, and elevated pH along the lagoon shoreline, were remediated as a single area. Ross Island Sand and Gravel placed a three foot cap of clean sediment over the southern portion of the lagoon, covering an area of approximately 1.6-million

square feet which required an estimated 173,000 cubic yards of material. Slopes adjacent to the submerged capped areas currently have a slope of approximately 2 to 1. A minimum 3 to 1 slope will be achieved in this area at the completion of reclamation activities. The elevation of the cap surface was evaluated periodically throughout the cap placement process. Fill placement was timed to ensure that a stable foundation was created prior to cap placement, to prevent sloughing of material along the edge of the containment zone.

Between 2001 and 2010, over 4.5 million cubic yards of clean fill were placed in Ross Island lagoon to meet remedial action and reclamation objectives. Fill material largely consisted of excavated material generated from the City of Portland's Westside and Eastside Combined Sewer Overflow projects, but also included dredged material from other projects in the Willamette and Columbia Rivers, other City sewer projects, and material generated during Ross Island Sand and Gravel material processing. DEQ reviewed data for all material to ensure it met environmentally-protective criteria established for placement in the lagoon without any controls.

In June 2010, the company collected surface samples of the sediment cap to confirm that the new surface reflects the clean fill and that lateral movement of contaminated material had not occurred. Sample results indicate essentially no detections of contaminants at levels that exceed the in-water clean fill criteria. DEQ concludes that the sediment cap has been implemented properly and is performing as designed.

Areas of sediment along the southern shoreline have historically had high pH (up to 11.8). RISG conducted pH monitoring between 1999 and 2009 throughout the southern shoreline which showed that in most areas surface sediment has a pH of less than 8.5, which DEQ has determined to have no effect on aquatic species within the lagoon. As areas with historically elevated pH have been covered the surface pH has been reduced. Final data collected as part of the confirmation sampling for the cap indicate that this trend has continued. Long-term monitoring of pH is planned to ensure that these levels are stable.

Long-term monitoring/maintenance

Ross Island Sand and Gravel prepared a *Long-Term Monitoring/ Maintenance and Contingency Plan* for the site addressing each aspect of the cleanup. In addition to the regular monitoring and maintenance specified, inspections of caps and stormwater controls will be conducted after

any extreme events including: seismic events of magnitude 6 or greater, rainfall exceeding 3.4 inches or greater in a 24-hour period, and Willamette River levels at 18 ft or higher. Documentation of cleanup areas has been attached to the property deed and filed with Multnomah County.

Next steps

DEQ is proposing a conditional no further action decision for the Ross Island site. The company has implemented the remedy described in the record of decision and future actions will consist of long-term monitoring and maintenance to ensure that the remedy continues to perform as intended and continues to be protective of human health and the environment. Reclamation will continue until the goals specified in the *2002 Reclamation Plan* are achieved. The Division of State Lands oversees this work under Ross Island Sand and Gravel's removal/fill permit. DEQ provides input regarding fill quality.

Opportunities for public participation

The proposed no further action determination memorandum is available for public review through April 30, 2011. These and other site documents are available on DEQ's web page. The project file is available at the DEQ Northwest Region Office, 2020 SW 4th Ave., Portland. To set up a review appointment, please call (503) 229-6729. Information repositories have been created at two Multnomah County Library locations: Central, 801 SW 10th Ave. and Sellwood, 7904 SE Milwaukie Ave.

Direct comments or questions on the project to DEQ Project Manager Jennifer Sutter, at DEQ's Northwest Region office at the address above, email to: sutter.jennifer@deq.state.or.us, or phone 503-229-6148.