

Swinomish Lime Storage Site Cleanup

In 2010 the Swinomish Tribe received a brownfields cleanup grant from the U.S. Environmental Protection Agency for the cleanup of a contaminated site on the Swinomish Reservation. Brownfields cleanup grants assist in cleaning up contaminated areas to minimize the threat to the public and the environment, and to facilitate a site's productive re-use.

The planned cleanup project is associated with an approximately one acre site located on Tribal trust land in the northern Tribal economic zone of the Swinomish Indian Reservation. This site, referred to as the Swinomish Lime Storage Site, is directly adjacent to the Swinomish Channel near the Tribe's Chevron gas station. The site was contaminated during several decades of use as a private agricultural chemical storage and processing site operating on land leased from the Tribe (Fig. 1). A concrete slab and several debris piles remain on the site from a building demolished in 2003. The slab is sometimes used as a skateboarding area. The cleanup project involves the excavation and disposal of approximately 160 cubic yards of contaminated upland soil, as well as the removal and disposal of approximately 100 non-functional creosote-treated wood pilings and some associated structures from a barge pier in the site's tidelands.

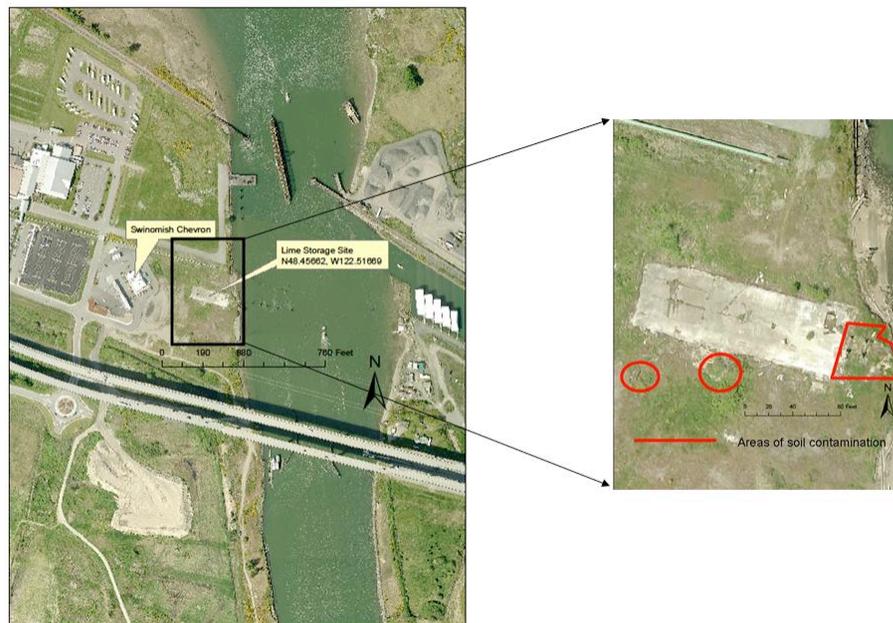


Fig. 1 Swinomish Lime Storage Cleanup site

The environmental concerns associated with this site are the presence of contamination resulting from its use as an agricultural chemical storage area. A Phase II environmental site assessment in 2009 confirmed contamination of the site. Several contaminants exceeded the soil contamination levels accepted by the Tribe as “Applicable or Relevant and Appropriate Requirements” (ARARs) for unrestricted land use. These contaminants were cadmium, lead, and arsenic. No petroleum or pesticide contamination was detected at the site.

Samples from a burn pile southwest of the slab contained cadmium above ARARs cleanup levels and also dioxin/furans above the risk-based carcinogen criteria accepted by the Tribe. Dioxins/furans are a complex

combination of compounds that are highly poisonous, even in extremely small quantities, and are considered carcinogenic. Dioxin/furan contamination is frequently found where wood debris previously soaked in salt water has been burned. The combustion of chlorine compounds with organic material is believed to be the mechanism for dioxin/furan production.

In addition to the soil contamination in the uplands, a substantial amount of creosote-treated wood debris is located within the tidelands of the site. Non-functional creosote-treated wood debris in marine waters is considered to be a contaminant. The Lime Storage Site has approximately 100 nonfunctional creosote-treated pilings within its intertidal area. This project does not involve the larger pier structure to the north of the site.

Project objectives:

- 1) Reduce the threat to human health and the environment caused by contaminants at the site or leaving the site.
- 2) Facilitate economic development of the area by the Tribe by removing contamination that may interfere with development of the area.
- 3) Restore greenspace in the vicinity of currently operating Tribal economic activities currently blighted by the Lime Storage Site debris.

Project goals:

- 1) Clean up the site by removing and disposing of contaminated soils until priority contaminants are below ARARs (priority metals) or risk-based criteria (dioxin/furans).
- 2) Clean up intertidal area adjacent to the site by removing and disposing of unused creosote treated-pilings and associated structure.

Project timeline:

The Tribe intends to conduct the cleanup in two phases. In the first phase a contractor will be solicited to remove and dispose of contaminated upland soils. This phase is projected to be completed by the spring of 2011. After the soil cleanup phase is complete, another contractor will be solicited to remove the intertidal creosote pilings and debris associated with the site. The piling removal phase is expected to be completed by the fall of 2011.

Public participation:

In October 12, 2009, a public information meeting on the proposed cleanup was held in the Swinomish Senate conference room. Since then the proposal was accepted by the EPA and a grant awarded. For further information or to comment on the project, interested parties are encouraged to contact the Swinomish Environmental Management Program at 360-466-2631, 7299.

Safety and Health Warnings:

Certain areas of the site where soil samples indicated contamination was present have been posted with warning signs. The primary hazard to humans at these locations is from ingestion resulting from dermal contact. The

material remaining on site is not leachable and there is no indication significant contaminated soil is leaving the site, either by runoff, wasting or as wind-blown debris. If the material at the posted locations is inadvertently handled, hands should be washed thoroughly.

Detailed Lime Storage Site Cleanup Information Sheet [→ learn more](#)

Analysis of Brownfields Cleanup Alternatives (Lime Storage Site) [→ learn more](#)

Information on the Lime Storage Site Cleanup and Swinomish Points of Contact:

In addition to information on the Swinomish website, an information repository connected with this ongoing project will be maintained at the Swinomish Planning Office, 11430 Moorage Way in La Conner. For information about the project, interested parties should contact the Swinomish Environmental Management program at 360-466-2631, 7299.