

Swinomish Brownfields Tribal Response Program

Inventory of Potentially Contaminated Sites on the Swinomish Reservation

(Location Coordinates NAD 83 Washington N.)

Update Jul 2014

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1. Tribal Economic Zone (TEZ) Area 1 (Tribal Economic Zone north of SR 20)

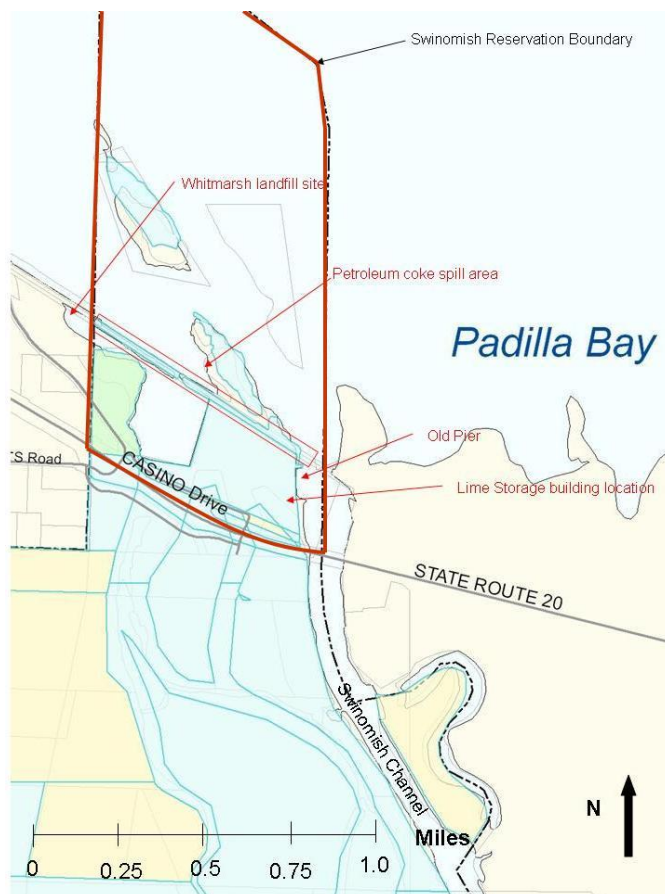


Figure 1. Map to the TEZ Area 1

Site Description:

Located at the north end of the Swinomish Reservation, TEZ Area 1 consists of filled tidelands and tidelands west of the Swinomish Channel and north of SR 20. Area 1 is almost entirely Tribal Trust land. It contains the Tribal casino (Swinomish Northern Lights Casino), RV park and gas station, as well as tidelands to the north of the casino in Padilla Bay. Because of its location adjacent to the highway and because it already contains the casino and gas station, it is the most desirable location for further tribal economic development. Development and future development plans for this area include a hotel complex, a refurbished dock and a small marina. A 105 room hotel connected to the current casino complex opened in April 2012.

Potential areas of contamination investigated in Area 1 ([see Phase I ESA TEZ Area 1](#)):

A. Lime Storage Building Site

Lime storage building site (N48.45785 W122.51633). Adjacent to the Swinomish Channel there was a 180 ft. X 60 ft. concrete slab and some debris remaining from a storage building reportedly used to store lime and other agricultural amendments. An EPA Brownfields

cleanup grant allowed the Tribe to begin cleanup of this site in June 2011. The upland soils cleanup of the site was completed in Aug 2011. In January 2013 148 derelict creosote treated wood piling were removed from intertidal areas of the site and disposed of at an approved regional landfill. This completed the original fieldwork in the cleanup workplan. Fieldwork was completed under budget by almost \$57,000. Because of this the Tribe requested and received a 1-year extension of the grant and submitted a work plan modification that was excepted by EPA. This work plan modification included additional remediation work on contaminant sources not addressed on the work plan but which remain at the site. The cleanup of this site is fully discussed in another section of this Public Record (Lime Storage Site Cleanup).

B. Old Pier

Old pier (N48.45785 W122.51633). Creosote treated wood in or adjacent to marine or freshwater environments has been getting an increasing amount of scrutiny as a source of pollutants through the leaching process. Washington State now treats this material as a hazardous material and is no longer using it in state projects, although its presence is still pervasive in marine waters. Just north of the lime storage building slab is a dock supported by approximately 150 creosote treated wood pilings. Along the channel adjacent to the pier there is a bulkhead made of creosote treated timbers. The in-water portion of the dock is sound; however, the horizontal surface does not appear to be made of treated wood, and is very deteriorated. A chain link fence blocks access to the pier. Just north of the pier in the railroad right of way, and blocking access to the channel west of the railroad bridge, 17 derelict creosote treated pilings were removed as part of the lime storage site cleanup grant. Remediation work involving this pier and the derelict pilings in the railroad right of way are now addressed in the lime storage site modified work plan.

In the uplands near the dock, two piles of creosote treated timber were removed and disposed of in 2013 using TRP funds in. Previous testing of soils below piles of creosote treated debris on the Reservation indicated carcinogenic PAH (cPAH) levels that exceeded Washington State Model Toxic Control Act (MTCA) cleanup levels, likely due to leachate from the creosote. We continue to remove and dispose of this debris as often as possible to prevent further contamination and to allow contaminated soils to remediate naturally.



Figure 2. Old Pier



Figure 3. Creosote timber bulkhead



Figure 4. One of two piles of creosote treated debris removed from the vicinity of the Swinomish dock (TEZ Area 1) in 2015

C. Whitmarsh Landfill Site

Whitmarsh landfill site (N48.46422 W122.53266). The Whitmarsh landfill site is a former landfill of about 15 acres. It lies just off the Reservation adjacent to the northwest corner of TEZ Area 1. Intertidal mudflats owned by Washington DNR and within a lagoon formed by the Burlington Northern railroad spur were used here as a dump for domestic, commercial and industrial waste from the 1950's until the landfill was closed and covered with several feet of soil in the mid 1970's. In the 1990s a cedar sawmill operation occupied much of the landfill area, and significant amounts of wood waste are now accumulated on top of the closed landfill. The sawmill operation is now in bankruptcy, and most of the machinery and buildings formerly on the site have been removed. Methane produced by the wood waste and possibly other buried landfill material has been reported to be a substantial issue at the site. The Whitmarsh landfill site is ranked as a 2 on the Washington Department of Ecology's Confirmed and Suspected Contaminated Sites List (sites are ranked 1 through 5 with one being the highest priority for cleanup), and it is also a Puget Sound Initiative cleanup site. Close by this location, another CSCSL site (Whitmarsh Siding Site) is ranked number 1. The Whitmarsh siding site was apparently the location of a chemical spill and cleanup action in the early 1990s. Tribal interests concern contaminants that have or could leach from these locations into waters and tidelands in Padilla Bay, including tidelands of the immediately adjacent TEZ Area 1. The Whitmarsh site was the subject of an EPA Targeted Brownfields Assessment coordinated by the Tribe in 2008 and 2009.



Figure 5. Whitmarsh Landfill

D. Petroleum Coke Spill Areas

Petroleum coke spill areas (N48.46073 W122.521145). Railroad tracks though the northern part of TEZ Area 1 are used to transport raw petroleum coke (a petroleum refining end product from a refinery located on March Point) in open rail cars. This material, which is not regulated for transportation and is generally considered to be inert, is about 85 % carbon by weight. However, the other 15 % of the material contains hydrocarbons, metals and other substances known to be toxic. Tribal interests involve investigating the ecologic fate of the considerable amount of material that has been deposited along the tracks over the years and whether it could be a source of contamination in SITC tidelands.



Figure 6. BN Railroad crossing Tribal Lands



Figure 7. Spilled petroleum coke along railroad



Figure 8. Oysters growing on north side of railroad

2. Tribal Economic Zone Area 2 (south of SR20)

Site Description:

TEZ Area 2 consists of Tribal trust agricultural lands, filled lands, and wetlands along the Swinomish Channel south of SR 20. The area is bounded to the west by a 120 - 180 foot high bluff. Additional Tribal trust agricultural land and wetlands lie to the south. Potential planned use of Area 2 includes development for retail establishments and estuarine wetland restoration projects. Since development in this area will require wetland mitigation, plans are being developed that involve the restoration of diked and drained lands directly south of Area 2. On the top of the bluff directly to the west of Area 2 a major hazardous waste site, the P.M. Northwest Dump Site, was cleaned up and remediated under U.S. EPA supervision in 2001-2002. Area 2 is an environmentally sensitive area, due to its location next to the Swinomish Channel, its high water table and the large amount of remaining wetlands it contains.

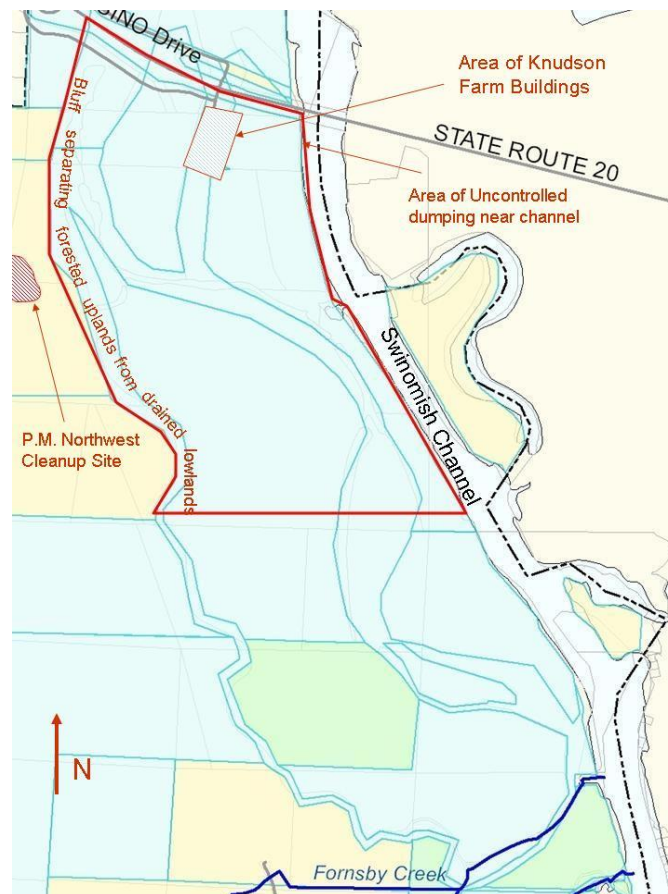


Figure 9. Map of TEZ Area 2



Figure 10. Aerial photo of TEZ (2007)

Potential areas of contamination in Area 2:

A. Dumping sites along the Swinomish Channel, near SR20 Bridge

Dumping sites along the Swinomish Channel near SR20 bridge (N48.45441 W122.51611). Debris has been dumped along the Channel near the bridge. At least one of these areas was physically cleaned up just prior to the establishment of the Swinomish TRP. An area containing creosote treated wood debris that was previously determined to have soil contamination present was partially cleaned up under the TRP in 2010, by removing and disposing of the creosote treated wood debris. The soil at this site was retested in 2012 and found to still be above unrestricted cleanup levels for cPAH. The Tribe intends to continue to monitor this site to determine how rapidly natural biological remediation reduces the level of cPAH in soils that were affected by creosote leachate.



Figure 11. Creosote debris pile along channel in TEZ Area 2 (now removed)



Figure 12. Former dumping site at SR20 bridge

B. Farm Building Debris

Farm building debris (N48.45375 W122.51971). Most of Area 2 consist of previous fee simple reservation lands purchased by the Tribe less than 10 years ago and put into tribal trust. The agricultural lands in this area are mainly classified as previously converted wetlands. They were diked and drained over 100 years ago and have been farmed nearly continuously since that time. Prior to diking and draining, these lands were highly productive and ecologically important salt marshes. Before December 2003, 7-8 farm buildings were present at the north end, and some debris remains from these structures. The Tribe's interest concerns contamination that may have resulted from farming operations in this area, including petroleum products, pesticides, and persistent pesticide residues. This area was assessed under a brownfields assessment grant in 2008, and is not believed to be contaminated. As the area is developed, the buried debris, now covered with soils and vegetation, may require some additional analysis.



Figure 13. 1998 photo showing farm buildings



Figure 14. Debris pile from demolished farm buildings

E. Wetlands

Wetlands (many locations in Area 2). Wetland sediments in Area 2, and the area south of Area 2 where additional mitigation/restoration efforts would likely occur concurrent with economic zone development, are a potential contamination issue. Wetland sediments tend to accumulate persistent contaminants like organochlorine and arsenic-based pesticides that may have resulted from the long-term agricultural use of Area 2 lands. Tidegate replacement is being completed at the northern tidegates connecting these wetlands to the Swinomish Channel. A large amount of derelict creosote treated debris remaining from the 50-year-old tide gates will be removed and disposed of at an approved landfill in the summer months of 2014.



Figure 15. Large wetland in TEZ Area 2

F. Moorage under SR-20 Bridges

A 70 ft wood hulled purse seiner (the Gemini) sunk in 2012 at a moorage under the south SR-20 span over the Swinomish Channel. This moorage was the subject of a life estate

agreement negotiated with the previous owner of the moorage, prior to it becoming Tribal trust land. The Gemini, which in earlier in its life featured prominently in several books by John Steinbeck (as the Western Flyer) was sold and was going to be relocated to Northern California. A spill response from Washington State was required when it sank in September 2012 and began leaking fuel. The boat was re-floated but sank again 2 months later at its same location. In 2013 the boat was refloated a second time and shortly after removed from Reservation waters. No substantial contamination resulted from either of the sinkings or the re-floating/removal efforts.



Figure 16. Gemini (aka Western Flyer) at its moorage after being refloated after its Sept 2012 sinking.

3. McGlinn Island and Causeway (North)

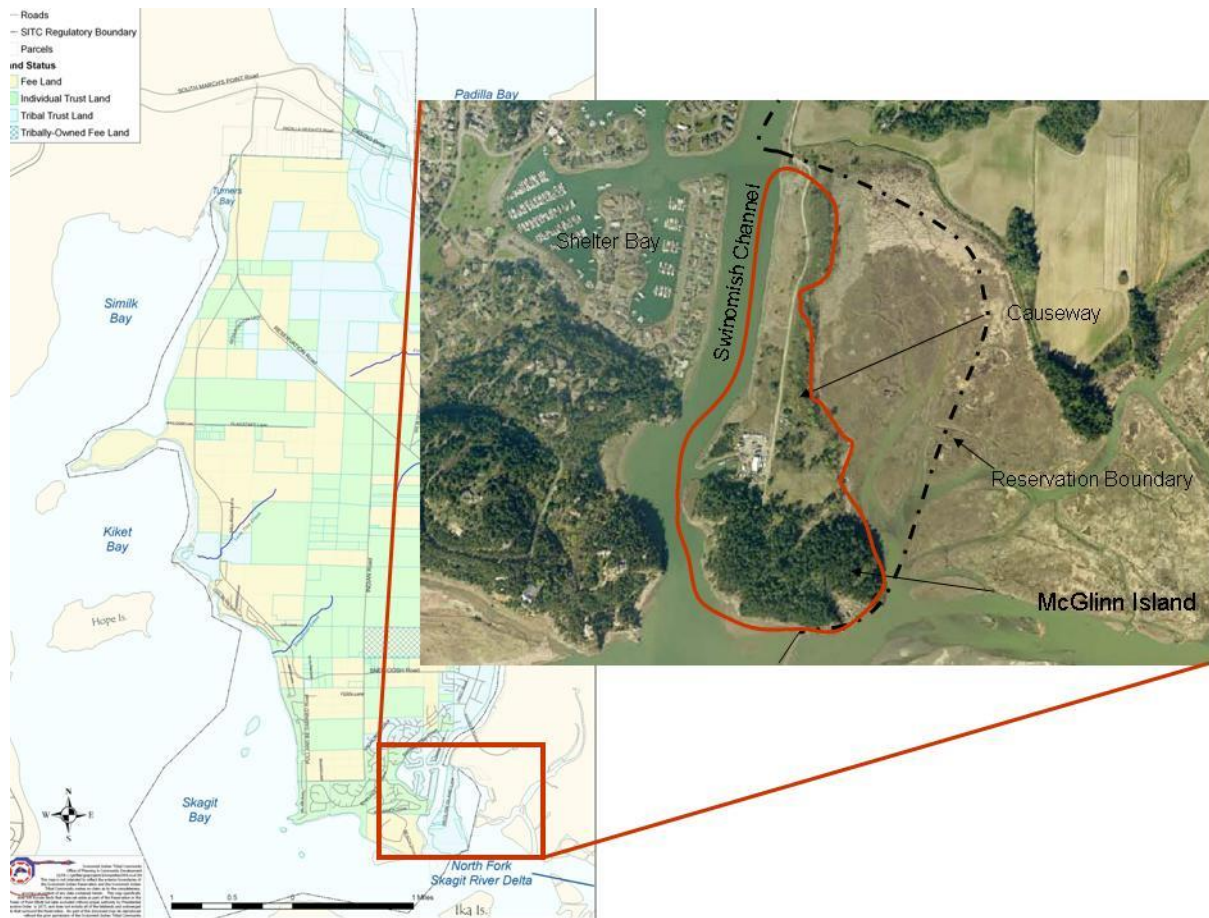


Figure 17. Map of McGlinn Island and Causeway

Description:

McGlinn Island North consists of Tribal trust lands located at the northern end of the causeway leading to McGlinn Island. This causeway was constructed of dredge spoils from Swinomish Channel dredging. This area is zoned as open space. Potential future uses include natural area restoration, additional salmon habitat restoration, and/or development as green space.



Figure 18. Location of potential contamination sites at McGlinn Island

Potential areas of contamination for investigation in McGlinn Island North:

A. Skagit Plastics Factory Site

Skagit Plastics factory site (N48.38179 W122.50589). From the mid-1950s to around 1975 a fiberglass boat factory (initially known as Skagit Plastics) was located at the northern end of the McGlinn Island causeway. The location of this factory was on the Reservation at the north end of the McGlinn Island causeway, directly adjacent to current Tribal trust land. Several thousand molded fiberglass boats were built here before the factory burned down in the 1970s. The Tribe's concern regards contaminants (from both manufacturing operations and the fire) that may still be present in the area.



Figure 19. Skagit Plastics factory in 1960



Figure 20. Skagit Plastics factory foundation

B. Creosote Treated Wood Debris

Creosoted treated wood debris (various locations on causeway). Significant amounts of creosote-treated wood debris is present on or along the causeway as both debris and installed, deteriorating structures. The Tribe considers this waste debris an environmental contaminant, and has found soils beneath creosote treated material to be contaminated by cPAHs above cleanup levels. As funds become available the TRP removes and disposes of this material. Several thousand pounds of this debris was removed from the causeway in 2011, 2012 and again in 2013 under the TRP.



Figure 21. Creosote treated wood debris (since removed)



Figure 22. Deteriorated creosote treated bulkhead

4. McGlinn Island and Causeway (South)

Description:

McGlinn Island South consists of Tribal trust lands located on the southern portion of the causeway near Latitude Marine, as well as McGlinn Island itself (a natural rock outcrop island)(Fig 17 and 18). Potential future uses may include expansion of the current commercial facilities of Latitude Marine and natural area restoration. In 2011 dredge spoils were dug out of a portion of this area to create a “pocket estuary” for juvenile salmon habitat and noxious weed control was conducted to remove a large infestation of invasive blackberries.

Potential areas of contamination for investigation in McGlinn Island South:

A. Boat/Debris Dump Site near Latitude Marine

Boat/debris dump site near Latitude Marine (N48.37638 W122.50599). Many derelict boats, vehicles, and other types of debris have accumulated at this site, mostly in the last ten years, due to uncontrolled dumping. A tribal boat maintenance facility constructed in the area in late 2010 may be a potential source of contaminated waste material that requires monitoring. Additionally, an accumulation of boats in temporary storage at this location creates the potential for contamination from leaking bilges and fuel tanks. Several cleanup efforts under the TRP have been conducted in this area, including one in 2013. Additionally, a hazardous material collection point was established at the boat maintenance facility in 2013, to attempt to reduce the accumulation of potentially hazardous material at the site. This site will continue to be monitored to keep it from becoming an uncontrolled dump site, (to a greater extent than it is) already. Periodically the property is inspected for fuel spills and other contamination, and small cleanups are conducted as required.



Figure 23. McGlinn Island boat dump



Figure 24. Dumped vehicles and electrical parts



Figure 25. Uncontrolled dumping



Figure 26. Dumping south of Latitude Marine



Figure 27. Oil spill on soil

5. Kukutali Preserve (Kiket Island) (N48.4177, W 122.00)

Description:

Kukutali Preserve is an area of the Reservation that is jointly managed by the Swinomish Tribe and Washington State Parks (as part of Deception Pass State Park). The Tribe is currently in the process of putting this property in Tribal trust status. During the Phase I ESA required for that procedure, several underground fuel storage tanks were discovered, associated with a large 1 story house on the west end of the island. Three abandoned 550-gal heating oil tanks were subsequently unearthed. All these tanks had fuel remaining in them and all had leaked substantially. Using Tribal funding, the Tribe pumped out and disposed of approximately 600 gallons of fuel and contaminated water and removed and disposed of the tanks. Approximately 200 cubic yards of contaminated soil was removed and disposed of at a regional disposal facility in Everett. The cleanup was completed in the winter of 2013-14, when the house was demolished. Several hundred more yards of oil-contaminated soil were removed until the soils tested below unrestricted cleanup limit. The site was then backfilled and eventually restored as an open space. The soils removed from the site are being land-farmed in a separate area of the Swinomish Reservation.

Although these tanks were located within 100 ft of the shoreline, slightly above the sea level, far the contaminated soils were limited to the disturbed soils and backfill of the site. The contamination appears to have been contained by hard clay undisturbed soils under and around the house site.

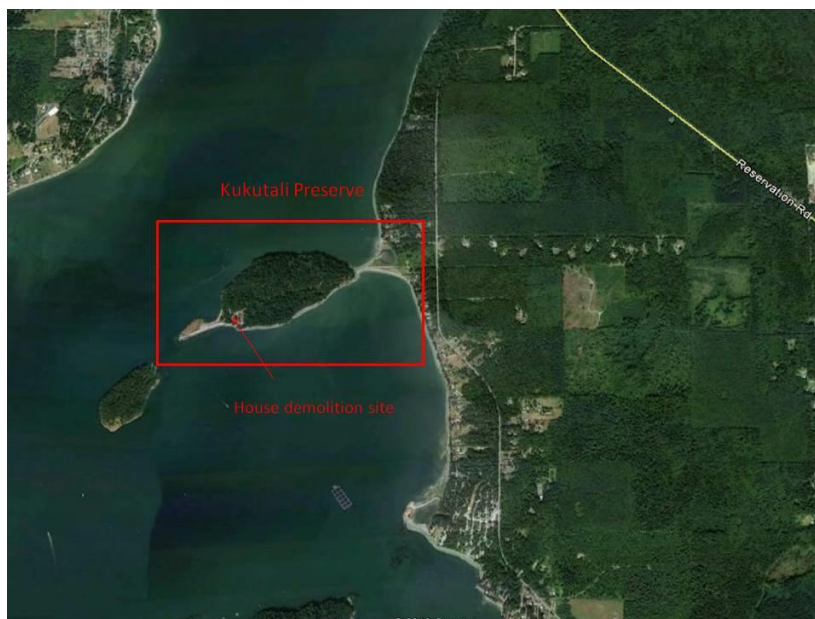


Figure 28. Map of Kukutali Preserve and the location of the residence with leaking fuel tanks



Figure 29. Abandoned heating oil tank remediation (Kukutali residence)



Figure 30. One of three leaking heating oil tanks removed from Kukutali residence site