

Kayak Point County Park

Snohomish County, Washington

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Wyatt S. Leighton
Washington State Department of Natural Resources
Orca Straits District



Washington State Department of Natural Resources
Snohomish County Parks and Recreation



Creosote Debris Removal: Kayak Point County Park

This project was completed as part of a regional cleanup effort by the Department of Natural Resources in partnership with Northwest Straits Foundation, local county Marine Resources Committees and others. The DNR and its partners began a program to catalog and remove creosote treated debris from the shorelines of Puget Sound. This regional cleanup is part of the DNR's commitment to restore critical habitats throughout Puget Sound.

Creosote was widely used as a wood preservative in marine applications during the past century. Creosote is a mixture of several hundred different chemicals derived from coal tar. Ninety percent of this mixture may consist of polycyclic aromatic hydrocarbons (PAH's). PAH's are a known human carcinogen and can also impact marine organisms, such as herring, in larval and embryonic forms. Because of this the Puget Sound Action team identified creosote as a contaminant of concern in their 2004 "State of the Sound" report.

Kayak Point County Park was identified as a potential removal site through creosote inventory surveys completed by volunteers from the Snohomish and Island County Beach Watchers Association. The high volume of public use of the park made it an ideal site for removal. Removing the creosote from the park will limit the human exposure to this carcinogen, and was a deciding factor when selecting the site. There is also forage fish habitat in the area that can be enhanced by removing the creosote. The grain sizes of the sediments at this beach are in the range used by species such as surf smelt and sand lance for spawning. Forage fish spawning grounds have been documented by Washington Department of Fish and Wildlife in the park. Partnering with Snohomish County Parks and Recreation allowed access to the beach and an area to stage the logs and debris.

The removal was contracted to Frantz Construction, and was completed with the use of a small tracked crane and two ground personnel. The logs were identified and then removed using the crane. The logs were then moved to the staging area where they were cut to size and loaded into containers for transport to the Roosevelt Landfill. Creosote logs were also removed from a portion of beach north of the park that was inaccessible using the machinery. This was completed by workers rolling the logs into the water and rafting them to the Park's boat launch for extraction.

The easy access to the debris allowed removal to be completed on the first day. The removed material was cut to length and loaded into containers for transport on the following day. In total 15.62 tons of creosote treated material was removed from the shoreline during this removal project.

Table 1: Kayak Point creosote removal expenditures.

Item	Unit Cost	Units	Total Cost \$
Crane and Operator	\$115/hr	13hr	1495.00
Supervisor	\$30/hr	3hr	90.00
Laborer	\$25/hr	16hr	400.00
Powersaw Rental	\$10/hr	4hr	40.00
Crane transport to and from site			873.21
Saw chains and sharpening			87.00
Sales Tax (8.2%)			247.77
Ferry Tolls			19.95
Container Delivery			24.93
35 yard container	\$87.59	2	175.18
Container use fee	\$4.72/day	2days	9.44
Disposal		15.62tons	1390.00
Refuse Tax (3.6%)			57.58
DNR Employee Time (weighted salary)	\$24.41	24	585.84
Total			\$5,495.90
Cost per ton			\$351.85



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