Northwest Transformer
Everson, Washington
Region 10
WAD027315621

Site Exposure Potential

From 1958 to 1987, Northwest Transformer reclaimed, stored, and manufactured transformers in a single building in a commercial/residential area of Everson, Whatcom County, Washington (Figure 1) (WDOE 1986). These transformers contained dielectric fluids contaminated with PCBs. Oil storage tanks and drums were also stored on the site.

The ground at the 0.2-hectare site slopes slightly toward the Nooksack River, 300 meters to the southwest. Spills in outdoor storage areas entered storm drains, while spills inside the facility entered the sanitary sewers. Presently, the storm water and sewage treatment systems discharge into the Nooksack River through separate outfalls located near the sewage treatment plant. Before July 5, 1988, the two systems were connected at the site and water from the site could flow through either outfall on the Nooksack River (Raider 1988). No other surface water runoff to the river has been identified near the site.

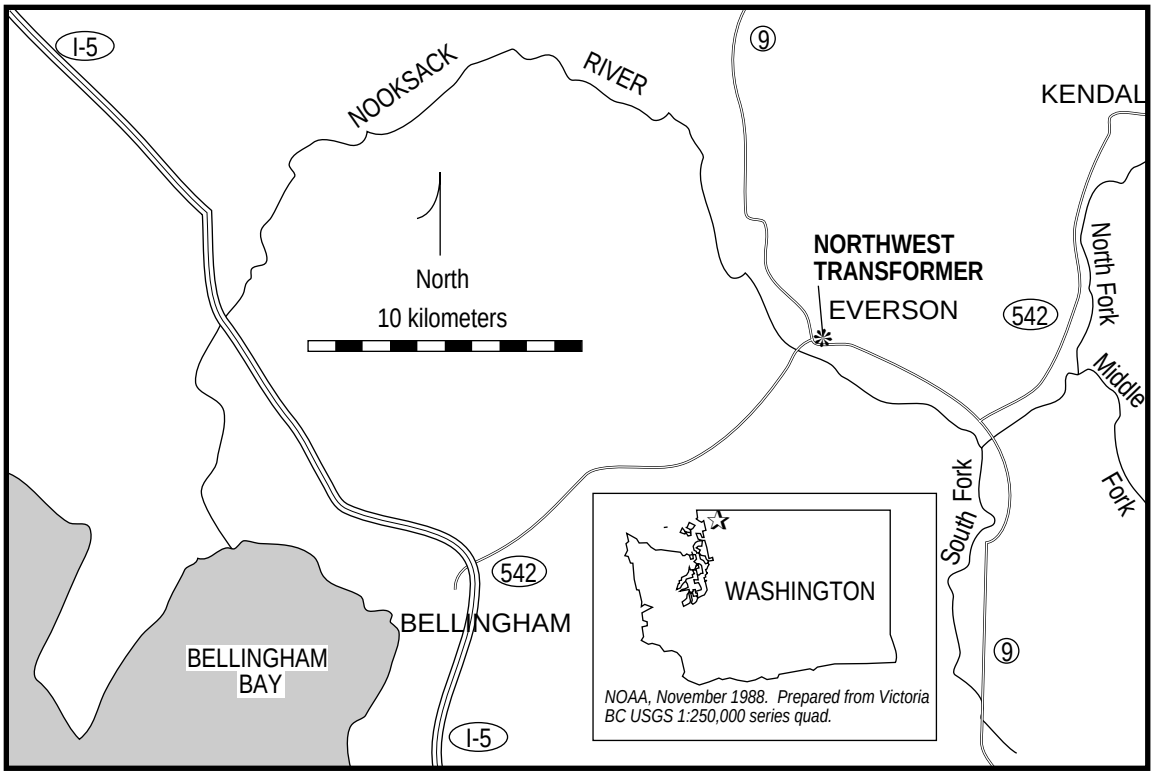

Figure 1. The Northwest Transformer site in Everson, Washington.

Two possible migratory pathways of contaminants to the Nooksack River are storm drains and the sanitary sewage system. Contaminants may also reach the river through the groundwater. The groundwater is six to 23 meters below the site and reportedly flows northeast, away from the Nooksack River (WDOE 1986). However, flow near the site has not been characterized.

Site-Related Contamination

The contaminants of concern at the Northwest Transformer site are PCBs from the transformer dielectric fluids. While little information is available regarding the volume of PCBs handled or disposal practices at the facility, it is known that PCB-contaminated oils were stored north of the building in an open area; PCB-contaminated oils were spilled both inside and outside of the building; and waste transformer oil was burned for space heating in a furnace at the facility (WDOE 1985). In 1981, EPA cited and fined the company for violations of record keeping, marking, storage, dating, and disposal requirements. Preliminary investigations found high levels of PCBs in sludge samples from drains at the facility and moderate levels in surface soils on the site. These investigations also detected PCBs in a sediment sample collected in one of the outfall pipes at the Nooksack River (Table 1) (WDOE 1986).

Table 1. PCB analyses conducted during preliminary investigations of the Northwest Transformer site (WDOE 1986); concentrations in μg/kg.

PCB Type	Sediment Nooksack River Outfall*	Sludge Floor Drain	Soil Storage Area Concrete Pad	Soil Outdoor Storage Tank	Soil Alley Way Across Street
Aroclor 1254	40	<1000	<200	<100	390
Aroclor 1260	120	154000	19000	6700	130
Total PCBs	160	154000	19000	6700	520

* It is not certain whether this sample was collected at the storm water runoff outfall or the sewage treatment outfall

NOAA Trust Habitats and Species in Site Vicinity

The Nooksack River drains an area measuring 1,513 km^2 and flows west 35 km below the site before discharging into Bellingham Bay on Puget Sound. The river is a low-gradient system characterized by an unconsolidated bottom of sand, gravel, and cobble. The river is leeved at various locations along the river with the riparian zone consisting of willows, cottonwoods, and forbs.

The Nooksack River supports a number of NOAA trust species, including coho, chinook, chum, pink, and sockeye salmon (Beccasio et al. 1981; Ward 1988). Adult salmonids use the area near and below the site primarily as a migratory corridor and as nursery habitat. The primary spawning grounds for salmonids are upstream of the site in the north, south, and middle forks of the Nooksack River and in small tributary streams (Hendricks 1988). Large recreational and commercial tribal fisheries are present throughout the mainstem of the Nooksack River, including areas near the site (Table 2) (Ward 1988).

A Washington State Department of Fisheries hatchery and two tribal hatcheries (Nooksack and Lummi Tribes) are located on the North Fork of the Nooksack River near Kendall, Washington. From 1983 to 1986, over 15,000,000 juvenile salmon per year were stocked into the watershed above the site (Fuss 1988).

Table 2. Commercial and recreational fishery harvests on the mainstem Nooksack River from 1982 to 1986 (Ward 1988).

	Chinook		Chum		Pink		Coho		Sockeye*	Jacks*†
Year	Comm.	Rec.	Comm.	Rec.	Comm.	Rec.	Comm.	Rec.	Comm.	Rec.
1982	869	36	5,006	27	1	0	4,001	644	28	932
1983	1,106	58	3,854	30	81	3	4,102	831	1	1,322
1984	2,849	435	6,467	58	40	0	10,170	1,766	38	1,090
1985	1,559	159	5,240	68	458	98	9,122	1,482	37	593
1986	968	101	1,636	31	45	0	4,850	1,477	6	610

Comm.: Commercial Fishery
Rec.: Recreational Fishery
* Recreational catch of sockeye salmon and commercial catch of jacks not available
† Jacks are early-returning chinook or coho salmon that are smaller in size.

Response Category: Federal Enforcement Lead

Current Stage of Site Action: Initial RI/FS activities are scheduled to begin during the second quarter of FY89.

EPA Site Manager

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References

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