West Olympia Landfill

SHARP Report — Part 1 of 2

Go to site contamination history

• SHARP first SHARP	v2024.04.29	Ecology Info	
• SHARP rating	High	ERTS	none
• SHARP date	07/16/2025	CSID	4807
• EJFlagged?	⃠ - No Override	FSID	1425
• LD confidence level	low	VCP	none
• Cleanup milestone	feasibility study	UST ID	none
• SHARPster	John Pearch	LUST ID	none

This section is blank if this is the first SHARP

SHARP Media	Scores	Confidence	Additional Factors	
Indoor air	B1	medium	multiple chemical types	✔
Groundwater	**A1**	medium	risk to off-site people	✔
Surface water	D4	low	climate change impacts	⃠
Sediment	B4	low	plant/animal tissue data	⃠
Soil	**A1**	high		

Location and land use info

Hwy 101 & Black Lake Blvd , Olympia, Thurston County, 98502

Primary parcel	12821240103
Land use	undeveloped
Responsible unit	SWRO

Sources reviewed

2025, PFAS Sampling results, Landau
2024, PFAS Samplig and Analysis Plan, Landau
2020, Feasiblity Study, Landau Associates
2019a, Revised Remedial Investigation, GeoEngineers
2019b RI Report Addendum w/ 2019 Groundwater Characterization Summary
and Soil Vapor Intrusion Analysis, GeoEngineers
2017, Fact Sheet, Ecology

West Olympia Landfill

Primary census tract	Associated census tracts
53067010510	53067012000

Local demographics comments

The Environmental Health Disparities score is 7. The Environment Justice (EJ) Flag criterion is not met. The trichloroethylene (TCE) plume has not been determined if it extends beyond the census tract that the property is in.

A zero was applied to all EJscreen parameters because the EJscreen website was not available at the time of rating.

Source/source area description

The Former West Olympia Landfill Site is generally located at 1305 Cooper Point Road SW in Olympia. The site was used as a municipal landfill by the city of Olympia from 1942 to about 1968. Refuse was burned and buried on the 12.33 acres property. Currently the site is vacant.

Soil comments

Based on the findings of the Remedial Investigation (RI), chromium and lead exceeded cleanup levels (CULs) in soil and arsenic, chromium, lead, PAHs, PCBs and diesel- and heavy oil-range petroleum hydrocarbons exceeded cleanup levels (CULs) in buried waste. High confidence level was selected for soil investigation within the landfill. However, there is limited data between surficial soils and waste in upper 5 feet. There is also uncertainty whether any physical barriers are present for blocking people from direct contact with soil contamination.

Groundwater comments

Based on the findings of the RI (2019a, 2019b and 2025, trichloroethene (TCE) along with per- and polyfluoroalkyl substances (PFAS) are the Chemicals of Concern (COCs) identified in the upper regional aquifer. The Site is within the well head protection 10-year time travel zone for the Group A water supply well (City of Olympia Allison Springs Well #19). Volatile Organic Compounds [VOCs- TCE] or PFAS have not been detected above the Maximum Contaminant Level (MCL) in any water supply wells and no wells have been taken out of service due to contamination. A medium confidence level was selected since monitoring is ongoing.

Surface water comments

Surface water is present in wetlands and a "maybe" was selected since wetland receives perched groundwater that is also landfill leachate. Surface water has not been sampled in wetlands and testing results are not available to rule out impacts to surface water. A low confidence level was selected since only general site conditions are available and site-specific information is needed to increase the confidence level.

Sediment comments

Sediment is present in wetlands and a "maybe" was selected since wetlands receives perched groundwater that is likely in contact with the landfill leachate. Sediment has not been sampled in wetlands and testing results are not available to rule out an impact. Low confidence level was selected since there is only general site conditions and site-specific information is needed to increase the confidence level.

Indoor air comments

TCE, PCE and other Volatile Organic Compounds (VOCs) have been detected above screening levels in soil vapor within the Site. RI Addendum 2019b also identified soil vapor probes on the north end of the landfill are not above the VOC screening levels and not migrating north to the residential neighborhood. VOCs are limited to the center of the landfill and southern portion of the landfill. Medium confidence level was selected since Site soil gas monitoring is ongoing.

Additional factors comments

no comments

Site history

Go to top

Historic activities on the property caused groundwater contamination. According to the Remedial Investigation reports (2019a and 2025), TCE and PFAS were detected above the MTCA cleanup level in groundwater. However, the extent or boundary of contamination has not been found. Constituents that were detected in the various media at concentrations greater than the MTCA Method A or B cleanup levels for unrestricted land uses were:

- Soil: chromium, lead and arsenic. RI, 2019a had proposed Soil Indicator Hazardous Substances (IHS) for chromium and lead.
- Waste: arsenic, chromium, lead, carcinogenic polycyclic aromatic hydrocarbon (cPAH), polychlorinated biphenyls (PCBs), and diesel- and heavy oil-range petroleum hydrocarbons;

and

- Groundwater: arsenic, manganese, iron, TCE and PFAS (from 2025 sampling). 2019a RI report proposed TCE as the Indicator Hazardous Substances for groundwater. 2019b RI report suggest that metals (dissolved iron, manganese and arsenic) in Site wells are currently not strong indicators of landfill contamination for this Site.

Depth to groundwater is approximately 40 to 70 feet below ground surface (bgs) in the wells screened in the upper regional aquifer (Qga aquifer) and 50 to 60 feet bgs in one well (LAI-5d) screened in the deeper regional aquifer (Qpg aquifer). Qpg aquifer is what the City's Allison Springs well is completed in. This site is also within the City of Olympia's Wellhead Protection Area (10-year Time of Travel Zone).

PFAS was sampled in groundwater in three monitoring wells with an Ecology approved SAP in February 2025. PFAS sampling analytical results indicate exceedances Method B CULs of 4 parts per trillion (ppt) for Perfluorooctane Sulfonic Acid (PFOS) in 2 downgradient wells, LAI-MW-2 and LAI-1. Perfluorooctanoic Acid (PFOA) exceeded Method B CULs of 4 ppt in one monitoring well, LAI-MW-2. Perfluorohexane Sulfonic Acid (PFHxS) exceeded Method B CULs in the southern monitoring well LAI-MW-1 and LAI-1. PFHxS was originally 10 ppt for Method B CULs (July 2024), but due to recent changes in toxicity values in January 2025, it is now 0.0064 ppt. Therefore, the CUL for PFHxS is the method reporting limit (MRL) of 1.46 ppt. PFAS contamination is identified with limited groundwater monitoring and further characterization is needed.

- Soil Gas VOCs that were previously detected above Method B screening levels for soil gas (less than 15 feet bgs) included: 1,3-butadiene; 1,4-dichlorobenzene [1,4-DCB]; 1,1,1,2-tetrachloroethane; benzene; carbon tetrachloride; hexane; tetrachloroethene (PCE); and TCE.

The 2019a RI determined 3 VOCs as the soil gas indicator hazardous chemicals include: 1,4-4-dichlorobenzene (DCB), PCE, TCE. Methane was also retained as a soil gas indicator hazardous chemical because it has been detected historically at the Site at concentrations up to 10 percent by volume in soil gas probes, greater than the LEL of 5 percent.

Overflow - Site contamination and cleanup history

The RI amendment in 2019b conducted a vapor intrusion assessment identified that TCE and PCE concentrations in soil gas at the northern landfill boundary are non-detect demonstrating VOCs in soil gas are limited to the interior of the landfill and not migrating towards the northern residential properties.

Additional soil gas monitoring for TCE and PCE and perched groundwater monitoring for TCE, PCE and PFAS are also needed surrounding the landfill.

The Feasibility Study (FS) determined the best cleanup alternatives to be "Containment via capping and monitored natural attenuation (MNA) of groundwater." This alternative minimizes the risk of human and ecological direct contact with contaminated soil and to limit stormwater infiltration and contaminant leaching to groundwater and MNA.

A draft Cleanup Action Plan (dCAP) is currently being drafted that includes the preferred alternative chosen in the FS. Additional investigation for PFAS in the upper regional (Qga) aquifer and VOCs in perched groundwater and soil gas probes should be included in an amended FS and dCAP. Two additional monitoring wells in the Qga aquifer are proposed off-site downgradient of the landfill.

West Olympia Landfill

4807 West Olympia Landfill 20250716

First SHARP

SHARP rating — High

SHARP Report — Part 2 of 2

Conceptual site model

07/16/2025

SHARP