

Public Participation Plan

Unocal Edmonds Bulk Fuel Terminal 0178 Cleanup Site 11720 Unoco Rd Edmonds, WA

Toxics Cleanup Program Washington State Department of Ecology Northwest Region Office Shoreline, Washington

Updated August 2024



Publication Information

This document is available on the Department of Ecology's <u>Unocal Edmonds Bulk Fuel Terminal</u> <u>0178 cleanup site page.</u>¹

Cover photo credit

• Image courtesy of Union Oil Company of California

Related Information

- Cleanup Site ID: 5180
- Facility Site ID: 2720

Contact Information

Toxics Cleanup Program

Northwest Region Office

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PO Box 330316 Shoreline, WA 98133-9716 Phone: 206-594-0000 **Website²:** <u>Washington State Department of Ecology</u>

ADA Accessibility

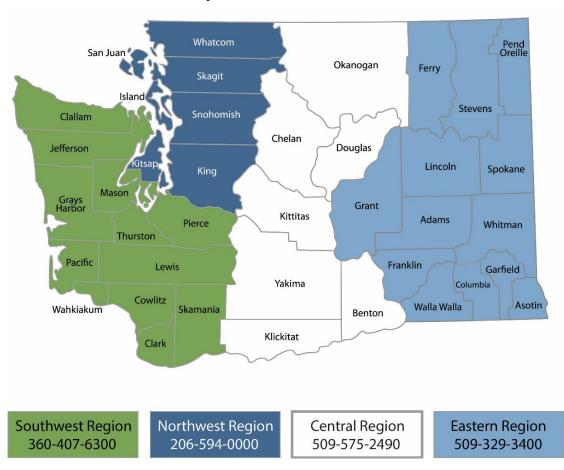
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To request an ADA accommodation, contact Ecology by phone at 360-407-6831 or email at <u>ecyadacoordinator@ecy.wa.gov</u>. For Washington Relay Service or TTY call 711 or 877-833-6341. Visit Ecology's website for more information.

¹ https://apps.ecology.wa.gov/cleanupsearch/site/5180

² https://ecology.wa.gov/About-us/Contact-us

Department of Ecology's Region Offices



Map of Counties Served

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

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Public Involvement in Contamination Cleanup

The Washington State Department of Ecology (Ecology) developed this public participation plan (plan) in cooperation with Union Oil Company of California (Unocal), the party responsible for the cleanup of the Unocal Edmonds Bulk Fuel Terminal 0178 Site (Site). Unocal is a wholly owned subsidiary of Chevron Environmental Management Company. The purpose of the plan is to promote meaningful community involvement during cleanup.

The plan describes ways Ecology will inform the public about contamination investigations and cleanup options throughout the cleanup process. Ecology encourages the public to learn about and get involved in decision-making opportunities. This plan identifies how and when the public can get involved during different stages of the investigation and cleanup of contamination.

Site contacts

To be included in the Site record, comments about the cleanup process must be submitted during comment periods. Questions and informal comments or information about the Site's history are welcome anytime.

Toxics Cleanup Program

Northwest Region Office 15700 Dayton Ave N Shoreline, WA 98133

Tanner Bushnell, Site Manager Tanner.Bushnell@ecy.wa.gov 425-691-0571

Kristen Forkeutis, Outreach Specialist <u>Kristen.Forkeutis@ecy.wa.gov</u> 425-240-4353

Potentially Liable Persons

Union Oil Company of California

Chevron Environmental Management Company Julia Bussey, Senior Public Affairs Advisor JBussey@chevron.com 650-302–2007

Public Participation Grants

Grants may be available to neighborhood committees, non-profits, and other groups interested in the Site. For contaminated sites, these funds can be used to:

- Hire an expert to help interpret technical information³
- Conduct activities that enhance the public's understanding of, and participation in, the cleanup process

For more information about public participation grants, please contact Laura Busby at 360-280-5088 or <u>laura.busby@ecy.wa.gov</u> and Jill Krumlauf at 360-790-5771 or <u>jill.krumlauf@ecy.wa.gov</u>. You may also visit the <u>Public Participation Grant website</u>.⁴

³ Ecology currently does not have a citizen technical advisor for providing technical assistance to citizens on issues related to the investigation and cleanup of the Site.

⁴ https://ecology.wa.gov/about-us/payments-contracts-grants/grants-loans/find-a-grant-or-loan/publicparticipation-grants

Washington's Cleanup Laws

Ecology uses the Model Toxics Control Act (MTCA) and accompanying regulations for cleanup activities.

This plan is required under MTCA, a law that passed in 1989. MTCA provides guidelines for contaminated Site cleanup in Washington State and sets standards to ensure the cleanup protects human health and the environment.

Model Toxics Control Act

MTCA began as a grassroots citizen's initiative in 1988 and started the process of systematically cleaning up contaminated sites in Washington. Under MTCA, a current or past property owner or operator may be held responsible for cleaning up contamination on, or coming from, their property to standards that are safe for human health and the environment.

Ecology enacts <u>MTCA</u>⁵ and oversees cleanups in the state and issues regulations and guidance governing those cleanups. The regulations are found in <u>Chapter 173-340 Washington</u> <u>Administrative Code (WAC)</u>.⁶ Ecology investigates reports of property contamination, and if the contamination is seen as a significant threat to human health or the environment, the contaminated property is placed on the Confirmed and Suspected Contaminated Sites List, and the cleanup process begins.

Public participation is an important part of cleanup under the MTCA process. Participation needs are assessed at each cleanup Site according to the level of public interest and the degree of risk posed by the contamination. Individuals who live near the Site, community groups, businesses, government, other organizations, and interested parties have the opportunity to get involved by commenting on the cleanup process.

Under MTCA, <u>Washington's cleanup process</u>⁷ includes multiple steps (see Figure 1 and Appendix A), with opportunities for the public to review and comment on cleanup documents. A partial cleanup (called an interim action) can occur at any time during the cleanup process. The public is provided an opportunity to review and comment on planned interim action work as well.

State Environmental Policy Act

MTCA cleanups also require evaluation under the State Environmental Policy Act (SEPA; <u>Chapter 197-11 WAC</u>⁸). Under SEPA, the potential for significant adverse environmental impacts from a project or action must be evaluated by state and local agencies when making decisions. This evaluation is subject to public review and comment in parallel with cleanup documents.

⁵ https://www.ecology.wa.gov/mtca

⁶ https://apps.ecology.wa.gov/publications/publications/9406.pdf

⁷ https://ecology.wa.gov/MTCA-process

⁸ https://apps.leg.wa.gov/wac/default.aspx?cite=197-11

Washington's Cleanup Process

Public participation plans and comment periods are only required for cleanups under a legal agreement with Ecology. Otherwise, all cleanups follow the same steps. The steps are defined by Washington's cleanup law, the Model Toxics Control Act.







Site Information

Site background

The Site is located at 11720 Unoco Road in Edmonds, WA. The terminal operated from 1923 to 1991. It was used for storing, blending, and distributing petroleum products including gasoline, diesel, and bunker fuel. An asphalt plant operated on the Site between 1953 and the late 1970s.

The terminal consisted of a dock and an Upper and a Lower Yard (see map). Petroleum products were pumped from marine vessels moored at the dock to storage tanks in the Upper Yard, located on a hill above the Lower Yard. Products were gravity-fed and pumped to loading racks in the Lower Yard for transport by truck and train to customers.



Figure 2: Historic view of fuel terminal



Figure 3: Aerial view of Unocal Edmonds cleanup Site

Cleanup plans

The Washington Department of Ecology (Ecology) entered into an Agreed Order with Unocal to conduct remedial activities at the Unocal **Edmonds Bulk Fuel** Terminal 0178 Site¹ (the "Site") under the Model Toxics Control Act (MTCA),⁹ Washington's environmental cleanup law. **MTCA** provides requirements for contaminated Site cleanup and sets standards that protect human health and



Figure 4: View of cleanup Site from upper area

the environment. Ecology enacts MTCA and oversees cleanups. The <u>MTCA site cleanup</u> <u>process</u>¹⁰ is completed in steps over a variable timeline.

The majority of the Site has been cleaned up through Interim Actions (early partial cleanups), including several excavations and a groundwater treatment system. Cleanup work at the Site continues as an Interim Action.

Although the Lower Yard is zoned for mixed use/commercial, the City of Edmonds and community groups have expressed interest in changing the zoning of the Lower Yard to open space. Ecology recognizes these potential future land use interests and has therefore revised the <u>Terrestrial Ecological Evaluation (TEE)</u>¹¹ to match this.

⁹ https://ecology.wa.gov/MTCA

¹⁰ https://ecology.wa.gov/MTCA-process

¹¹ https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation

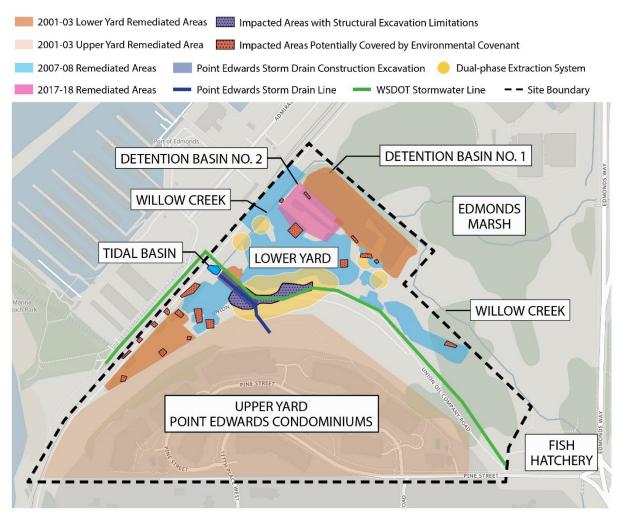


Figure 5: Site map and locations of interim actions (remediated areas). Site map is a graphical representation of current Site conditions for illustrative purposes only.

Previous and ongoing cleanup

Several Interim Actions (see map above) have been conducted over the years to clean up petroleum floating on groundwater and remove arsenic- and petroleum-contaminated soil. Removal of contaminated soil resulted in cleanup of groundwater, and most of the Site is now clean.

In 2003, cleanup of the Site's Upper Yard was completed. Twenty-three fuel storage tanks were removed and approximately 100,000 tons of metal- and petroleum-contaminated soil was excavated. Ecology then certified that it was suitable for residential use, and the Point Edwards Condominiums were constructed. Additionally in 2003, approximately 40,000 tons of metals and petroleum-contaminated soil was removed from the Lower Yard.

During a 2007-2008 Interim Action at the Lower Yard, 130,000 tons of petroleum-contaminated soil and sediment were removed. Also, 9,000 gallons of light non-aqueous phase liquid (LNAPL

or petroleum products that float on top of groundwater) was removed along with sand blast grit containing arsenic and lead.

Ecology began another Interim Action in 2017-2018 to clean up two remaining areas of contamination in the Lower Yard. One was the stormwater Detention Basin 2 area, and the other is in the vicinity of a Washington State Department of Transportation (WSDOT) storm drain crossing the Site (see map on page eleven).

The stormwater Detention Basin 2 was excavated to remove petroleum-contaminated soils, and a dual-phase extraction (DPE) system (that removes and treats petroleum from soil, groundwater, and soil gas) was installed to remediate the WSDOT storm drain area with an expected run time of 6 years. In 2019, the DPE system was expanded to the north and northeast of the WSDOT storm drain treatment area.

Area community

Edmonds

Edmonds "is a city in Snohomish County, Washington, United States. It is located in the southwest corner of the county, facing Puget Sound and the Olympic Mountains to the west. The city is part of the Seattle metropolitan area and is located 15 miles (24 km) north of Seattle and 18 miles (29 km) southwest of Everett. With a population of 42,853 residents in the 2020 U.S. census, Edmonds is the third most populous city in the county.

Edmonds was established in 1876 by logger George Brackett, who bought the land claim of an earlier settler. It was incorporated as a city in 1890, shortly before the arrival of the Great Northern Railway. Early residents of the city were employed by the shingle mills and logging companies that operated in the area until the 1950s. The hills surrounding Edmonds were developed into suburban bedroom communities in the mid-to-late 20th century and subsequently annexed into the city. Edmonds is a regional hub for the arts, with museums, specialized facilities, and major annual festivals within the city's downtown area.

The city is connected to nearby areas by two state highways and the state ferry system, which operates a ferry route to Kingston on the Kitsap Peninsula. Public transit service in Edmonds is centered around the downtown train station, served by Amtrak and Sounder commuter trains, and includes several Community Transit bus routes that travel through outlying neighborhoods."¹²

¹² https://en.wikipedia.org/wiki/Edmonds,_Washington

Tribal engagement

Ecology invites the Muckleshoot Indian Tribe, Sauk-Suiattle Indian Tribe, Snoqualmie Indian Tribe, Suquamish Tribe, Stillaguamish Tribe of Indians, Swinomish Indian Tribal Community, and Tulalip Tribes to engage with the cleanup process for this Site. Ecology will ensure these Tribes have ample opportunity to be involved throughout the process on a government-togovernment basis. We will also engage with the Duwamish Tribe and Port Gambel S'Klallam Tribe.

Environmental Justice

Ecology utilizes multiple resources to better understand the environmental and demographic information of the communities impacted by cleanup sites. The following environmental justice tools provide information that help our team plan for public outreach.

Washington Environmental Health Disparity Map

The <u>Washington Environmental Health Disparity Map</u>¹³ evaluates environmental health risk factors in communities.

Ecology does not interpret rankings as absolute values, and we do not use them to diagnose a community health issue or to label a community. Environmental health disparity is ranked on a scale of 1-10 (low to high). The two census tracts encompassing the Site both rank 1 for environmental health risk. (See Figures 6 and 7).

The Washington State Department of Health mapping tool model was "specifically adapted from CalEnviroScreen – a cumulative environmental impacts assessment mapping tool developed by CalEPA and used in California. – It estimates a cumulative environmental health impact score for each census tract reflecting pollutant exposures and factors that affect people's vulnerability to environmental pollution.

The model is based on a conceptual formula of Risk = Threat * Vulnerability, where threat and vulnerability are based on several indicators.

The threat is represented by indicators that account for pollution burden, which is a combination of environmental effects and environmental exposures in communities. Environmental effects include indicators that account for adverse environmental quality generally, even when population contact with an environmental hazard is unknown or uncertain. Environmental exposures include the levels of certain pollutants that populations come into contact with.

Vulnerability is represented by indicators of socioeconomic factors and sensitive populations for which there is clear evidence that they may affect susceptibility or vulnerability to an increased pollution burden. Indicators in socioeconomic factors measure population

¹³ https://fortress.wa.gov/doh/wtnibl/WTNIBL/

characteristics that modify the pollution burden itself. Sensitive populations refer to those who are at greater risk due to intrinsic biological vulnerability to environmental stressors.

In the model, threat is multiplied by vulnerability in order to reflect the scientific literature that indicates population characteristics often modify and amplify the impact of pollution exposures on certain vulnerable populations. The rankings help to compare health and social factors that may contribute to disparities in a community."

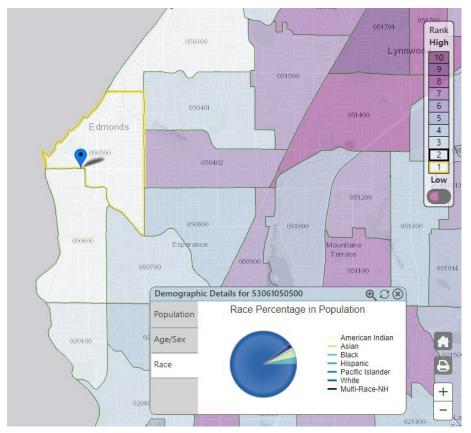
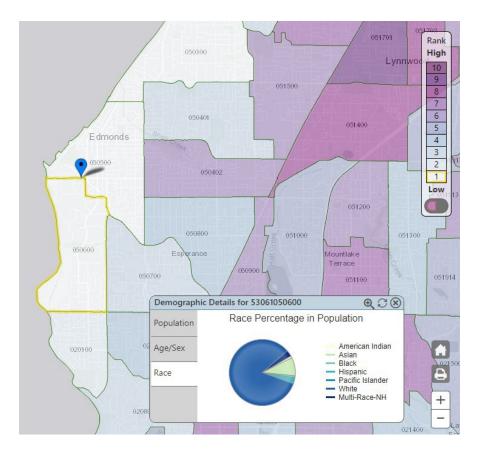
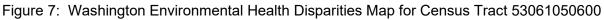


Figure 6: Washington Environmental Health Disparities Map for Census Tract 53061050500





EJScreen

The Environmental Justice Screening and Mapping Tool (EJScreen)¹⁴ has been developed by the Environmental Protection Agency (EPA). It is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports. Ecology uses this information to tailor its communications to the needs of communities through various means. These include developing language translations and identifying the need for interpreters. Ecology translates materials like fact sheets into languages that are spoken by 5% or more of the local community and considers accommodations when socio-economic indicators are above the EPA 80th percentile in-state threshold.

For this Site, there was one socio-economic indicators above the EPA 80th percentile for Washington State: population over age 64 (98th percentile).

There are no, non-English languages above the 5% threshold for translation or interpretation.

The data below was generated for a half-mile area around the Site using the EJScreen. See Appendix A for the "EPA EJScreen Community Report" and Figure 8 for the screened area.

¹⁴ https://ejscreen.epa.gov/mapper/index.html

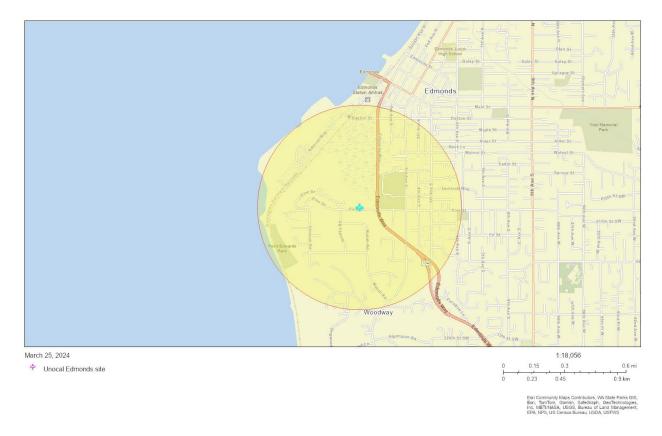


Figure 8: EPA EJScreen generated map of the outreach impact for the Unocal Edmonds Site

Ecology will plan our public outreach to consider this community's needs. Ecology will reach out to cultural and community organizations as part of our outreach and provide information in other languages as appropriate following federal guidance.¹⁵

We strive to make our public participation efforts as inclusive as possible and welcome your input about how to best reach the nearby community.

¹⁵ Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons, 69 Fed. Reg. § 35602 (June 15, 2004).

Public Participation Activities

Members of the public may ask questions, submit informal comments, or share Site information at any time. Interested parties do not need to wait for a formal public comment period to contact Ecology.

However, to be included in the formal Site record, comments about the Site investigation, cleanup alternatives, or cleanups must be submitted during formal comment periods. In addition, the public is invited to review Site documents before they become final. This is the most direct and influential way to learn more about the Site and be involved in the cleanup's decision-making.

How we share information with the community

During specific stages of the cleanup, Ecology will mail notices about public comment periods to addresses surrounding the Site. The mailing list area will include addresses within at least a half-mile radius of the Site and other interested organizations and individuals. These notices will provide general information about the Site, contact information for submitting comments, and times and locations of public meetings or hearings or how to request one if not yet scheduled.

Ecology may also develop documents outside of comment periods to keep the community updated on the Site's status. These informational documents will be available online and at document repositories. Print copies may be mailed to the nearby community if we feel the message warrants the associated cost and resources.

Comment period notices and other Site announcements may also be posted in various locations throughout the community (for example, local businesses, schools, libraries).

Postal mailing list

Ecology maintains a mailing list that includes addresses within at least a half-mile radius of the Site and relevant local, state, and federal government contacts.

These people receive public comment notices when draft documents are available.

We will add additional individuals, organizations, and other interested parties to the mailing list as requested. If you would like to be added to the mailing list for this Site, please contact Kristen Forkeutis at 425-240-4353 or Kristen.Forkeutis@ecy.wa.gov.

Site Register

Public comment periods, events, and other cleanup notices are published in Ecology's <u>Contaminated Site Register</u>.¹⁶ To receive the Contaminated Site Register by email, please <u>subscribe online</u>,¹⁷ or contact Sarah Kellington at <u>sarah.kellington@ecy.wa.gov</u> or 360-280-3167.

Newspaper display ads or legal notices

We will announce public comment periods and events for this Site in ads or notices published in <u>The Seattle Times</u>.¹⁸ Additional ads or notices may be placed in the <u>Everett Herald</u>,¹⁹ the <u>Edmonds Beacon</u>,²⁰ and <u>My Edmonds News</u>.²¹

Email lists

Ecology maintains an email list to update interested persons about this Site. If you would like to be added to the email list for this Site, please contact Kristen Forkeutis, Outreach Specialist, by phone at 425-240-4353 or email at <u>Kristen.Forkeutis@ecy.wa.gov</u>.

Ecology's website and social media platforms

We maintain a website for the <u>Unocal Edmonds Bulk Fuel Terminal 0178 webpage</u>.²² The website provides Site information, and you may download cleanup documents.

We will also publish notice on our Public Input & Events Listing.²³

We may also share information about cleanup sites through <u>news releases</u>, <u>our ECOconnect</u> <u>blog</u>, <u>and social media</u>.²⁴

Places to see print documents

During public comment periods when review locations are accessible, you can find print documents at the following locations:

Edmonds Library 650 Main Street Edmonds, WA 98020 Phone: 425-771-1933

Washington Department of Ecology

Northwest Region Office 15700 Dayton Ave N Shoreline, WA 98133

¹⁶ https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Site-Register-lists-and-data

¹⁷ https://public.govdelivery.com/accounts/WAECY/subscriber/new?topic_id=WAECY_118

¹⁸ https://www.seattletimes.com/

¹⁹ https://www.heraldnet.com/

²⁰ https://www.edmondsbeacon.com/

²¹ https://myedmondsnews.com/

²² https://apps.ecology.wa.gov/cleanupsearch/site/5180

²³ https://ecology.wa.gov/Events/Search/Listing

²⁴ https://ecology.wa.gov/about-us/who-we-are/news

To schedule an appointment with Ecology, please contact the Northwest Region Office Central Records staff at (206) 594-0016 or nwro_public_request@ecy.wa.gov.

Signs around the cleanup Site

We may also install signs displaying information about project status, traffic impacts, and health risks around the cleanup Site.

How to share information with us

At minimum, MTCA requires 30-day public comment periods for draft cleanup documents and 14-day comment periods SEPA documents. SEPA documents are often made available for public review with other cleanup documents. In that case, we combine the comment periods, and they last at least 30 days. We may hold comment periods longer than 30 days.

We may also identify public concerns and cleanup goals by meeting with and soliciting information from interested community members and organizations. To collaborate with us about this Site, please contact Kristen Forkeutis, Outreach Specialist, at 425-240-4353 or <u>Kristen.Forkeutis@ecy.wa.gov</u>.

Public comment periods

Formal 30-day comment periods allow interested members of the public to comment on draft documents, legal agreements, and proposed cleanup actions. If there is significant interest, Ecology may extend the public comment period. When Ecology oversees SEPA determinations, we hold comment periods for at least two weeks and may extend to 30 days or more when other cleanup documents are concurrently available for review.

Following the comment period, we publish all the input we received and respond to significant comments and questions, as appropriate. If the comments result in significant changes to the cleanup documents, then the documents will be revised and re-issued for public review. If the comments do not result in significant changes, then they become final.

Public events

We hold in-person and online public meetings, workshops, open houses, and public hearings based on community interest. If we have not scheduled a meeting, we will hold one if 10 people request it, and this may cause us to extend a public comment period so the meeting occurs during it.

Events are held at locations close to the Site that meet Americans with Disabilities Act standards. Public meetings, workshops, open houses, and hearings are always announced in advance using a variety of methods.

Americans with Disabilities Act

To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, contact the Ecology ADA Coordinator at 360-407-6831 or <u>ecyadacoordinator@ecy.wa.gov</u>, or visit our <u>ADA website</u>.²⁵ People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

Plan Amendments

Ecology developed this plan following MTCA regulations (WAC 173-340-600). We review it as the cleanup progresses and amend it as necessary. You may suggest amendments to Kristen Forkeutis, Outreach Specialist, at 425-240-4353 or <u>Kristen.Forkeutis@ecy.wa.gov</u>.

This plan includes information for the public regarding opportunities for public involvement and comment. The outreach activities discussed in this section reflect Ecology's current plans for keeping the public informed and providing ways for those interested in the Site to communicate their concerns and questions to us.

If you feel the planned outreach activities and mechanisms described in this plan are insufficient, or should otherwise be modified, we will work to find solutions. New outreach activities or outreach tools established as a result can be implemented right away, with or without amending this plan.

²⁵ https://ecology.wa.gov/About-us/Accessibility-equity/Accessibility

Appendices

Appendix A. MTCA Cleanup Process

The cleanup process is defined in the Model Toxics Control Act (MTCA), Washington's cleanup law. See the attached, accessible PDF for details.

Appendix B. EPA EJScreen Community Report

EPA's EJSCREEN report for a half-mile radius of the Unocal Edmonds Bulk Fuel Terminal 0178.

Washington's Cleanup Process

Public participation plans and comment periods are only required for cleanups under a legal agreement with Ecology. Otherwise, all cleanups follow the same steps. The steps are defined by Washington's cleanup law, the Model Toxics Control Act.



Initial investigation

Find out if there's contamination needing cleanup.

Assess the site

Evaluate potential threat to humans and the environment.

Study the site (remedial investigation) 💬

- Find out what and where the contamination is.
- Determine how contamination might impact living things.

Consider options (feasibility study) 💬

- Compare ways to keep the contamination from harming people or the environment.
- Weigh benefits versus costs of each cleanup option.

Plan the cleanup (cleanup action plan) 💬

- Describe Ecology's selected cleanup option.
- Set cleanup standards that will protect living things.
- Schedule next steps.
- Set requirements for monitoring and maintenance.

Design the cleanup

Make detailed construction plans for the cleanup action.

Clean up the site!

Complete the cleanup action. For example:

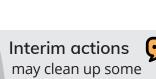
- Constructing a multi-layered capping system.
- Installing a treatment system.
- Removing contamination to a special landfill.

Monitor, maintain, and review 💬

- Operate treatment systems and monitor progress.
- Prevent activities that could disturb the cleanup.
- Review regularly to ensure cleanup still protects living things.

Remove from Contaminated Sites List 💬

Move to No Further Action list if site meets all standards and requirements.



Public input opportunity

may clean up some contamination before the final cleanup.

Legal orders or agreements define required tasks and schedules.

Public participation plans explain how Ecology will ask for input from the local community.

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Edmonds, WA

0.5 miles Ring Centered at 47.803441,-122.385163 Population: 2,434 Area in square miles: 0.79

<section-header><figure>

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	95%
Russian, Polish, or Other Slavic	1%
Other Indo-European	1%
Korean	1%
Tagalog (including Filipino)	1%
Total Non-English	5%

COMMUNITY INFORMATION

€PA



LIMITED ENGLISH SPEAKING BREAKDOWN

From Ages 65 and up

Speak Spanish	45%
Speak Other Indo-European Languages	0%
Speak Asian-Pacific Island Languages	55%
Speak Other Languages	0%

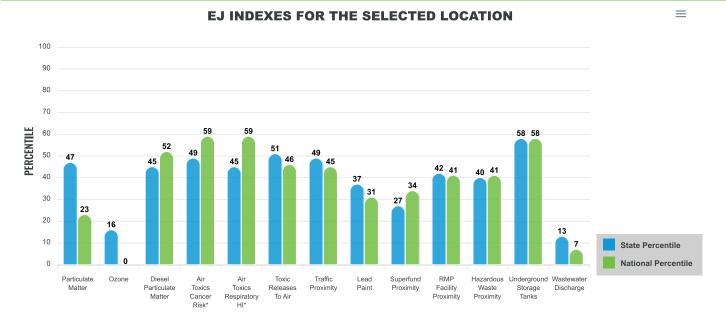
Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017 -2021. Life expectancy data comes from the Centers for Disease Control.

47%

Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the EJScreen website.

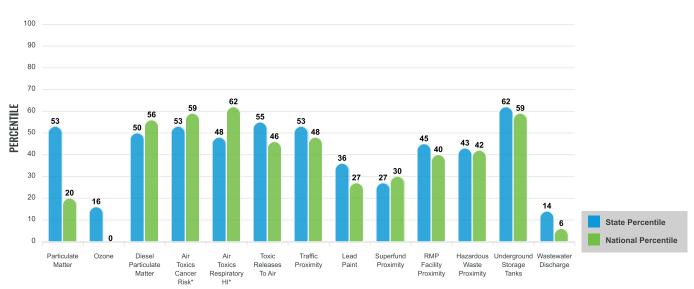
EJ INDEXES



The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.



SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION

These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 0.5 miles Ring Centered at 47.803441,-122.385163

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EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m ³)	7.25	7.02	64	8.08	26
Ozone (ppb)	46	49.8	19	61.6	0
Diesel Particulate Matter (µg/m ³)	0.364	0.355	58	0.261	79
Air Toxics Cancer Risk* (lifetime risk per million)	30	27	37	25	52
Air Toxics Respiratory HI*	0.4	0.39	39	0.31	70
Toxic Releases to Air	1,300	1,800	66	4,600	64
Traffic Proximity (daily traffic count/distance to road)	150	190	68	210	68
Lead Paint (% Pre-1960 Housing)	0.15	0.23	52	0.3	42
Superfund Proximity (site count/km distance)	0.046	0 <u>.</u> 18	30	0.13	40
RMP Facility Proximity (facility count/km distance)	0.18	0.4	51	0.43	52
Hazardous Waste Proximity (facility count/km distance)	0.73	1.6	53	1.9	55
Underground Storage Tanks (count/km ²)	15	6.3	87	3.9	93
Wastewater Discharge (toxicity-weighted concentration/m distance)		0.024	15	22	7
SOCIOECONOMIC INDICATORS					
Demographic Index	17%	28%	25	35%	24
Supplemental Demographic Index	8%	12%	26	14%	20
People of Color	17%	32%	27	39%	33
Low Income	17%	24%	41	31%	31
Unemployment Rate	2%	5%	32	6%	34
Limited English Speaking Households	2%	4%	58	5%	62
Less Than High School Education	2%	8%	25	12%	19
Under Age 5	2%	6%	20	6%	24
Over Age 64	47%	16%	98	17%	97
Low Life Expectancy	16%	18%	25	20%	18

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	
Air Pollution	1
Brownfields	0
Toxic Release Inventory	0

Other community features within defined area:

Schools 0
Hospitals 0
Places of Worship 1

Other environmental data:

Air Non-attainment	No
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	No
Selected location contains an EPA IRA disadvantaged community	No

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EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS						
INDICATOR VALUE STATE AVERAGE STATE PERCENTILE US AVERAGE US PERCENTILE						
Low Life Expectancy	16%	18%	25	20%	18	
Heart Disease	7.3	5.3	88	6.1	72	
Asthma	9.9	10.5	25	10	49	
Cancer	11.3	6.3	99	6.1	99	
Persons with Disabilities	14.9%	13.1%	65	13.4%	65	

CLIMATE INDICATORS							
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE		
Flood Risk	7%	11%	58	12%	53		
Wildfire Risk	0%	12%	0	14%	0		

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	9%	9%	64	14%	44
Lack of Health Insurance	1%	6%	4	9%	4
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	No	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

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