



Responsiveness Summary 2015 Interim Action Work Plan Unocal Edmonds Bulk Fuel Terminal



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Unocal Edmonds Site Cleanup Website
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**Responsiveness Summary 2015 Interim
Action Work Plan
Unocal Edmonds Bulk Fuel Terminal**

Public Comment Period: July 31 – August 31, 2015

*Toxics Cleanup Program – Northwest Regional Office
Washington State Department of Ecology
Bellevue, Washington*

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Introduction

The Department of Ecology (Ecology) held a public comment period from July 31 to August 31, 2015, on the Interim Action Work Plan to continue cleanup of the Unocal Edmonds Bulk Fuel Terminal Site. A public meeting was held on August 20, 2015, at the Edmonds Library Plaza Room, 650 Main Street, Edmonds, Washington.

Details on the Site and Site documents are available at the Washington State Department of Ecology (Ecology) website: <https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=5180>

Ecology received comments from twelve people in response to the public notice of the proposed interim action at the Site. Some commenters had several comments, and different commenters made comments on the same topics.

How Ecology Organized Comments

Ecology read all of the comments and identified individual comments on various aspects of the interim actions selected for the Site. The comments were then grouped into topics and a summary comment was prepared. Ecology responded to the individual comments by preparing a response to the summary comment.

The topics were:

Cleanup Approach	Future Site Use
Construction	Sampling
Citizens Group	SEPA Checklist
Dual-Phase Extraction System	Timing
Editorial	Unrelated to Proposed Cleanup Actions
Edmonds Marsh Sampling	

The individual comments are included in Appendix A. One commenter had a specific question about benzene in the well closest to Marina Beach Park. Ecology responded directly to this comment. Ecology's response to that comment is included in Appendix A.

Site Background

The Unocal Edmonds Bulk Fuel Terminal Site is located at 11720 Unoco Road in Edmonds, Washington (see map). 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. Petroleum products were pumped from marine vessels moored at the dock to storage tanks in the Upper Yard, which was 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.

A number of interim actions have been conducted over the years to clean up oil floating on groundwater, remove arsenic-contaminated soil, and remove petroleum-contaminated soil. Removal of petroleum-contaminated soil resulted in cleanup of groundwater. Most of the Site is

now clean. Ecology certified the Upper Yard was suitable for residential use in 2003 and the Point Edwards Condominiums were subsequently constructed.

The Interim Action will clean up two remaining areas of contamination. One is the stormwater Detention Basin 2 Area and the other is the vicinity of a Washington State Department of Transportation (WSDOT) storm drain crossing the Site. The Interim Action Work Plan describes how these two areas will be cleaned up.

The Lower Yard's planned future use may be part of a multimodal transportation terminal. A new ferry terminal would be constructed to replace the current Edmonds Ferry Terminal. This is part of the Edmonds Crossing Project. Information on the Edmonds Crossing Project is available on the City of Edmonds web page.

Response to Comments by Topic

Cleanup Approach

Several comments regarded the cleanup approach. One commenter sought to clarify whether dilution is being proposed as a cleanup approach from reading the discussion on current and future exposures in the Interim Action Work Plan, Sections 4.5.1.1 and 4.5.1.2. The discussion did note that contaminated groundwater would be diluted as it flowed into surface water. However, this is not the cleanup approach. The cleanup approach is to perform cleanup actions so that hazardous substance concentrations measured on the Site are below the lowest applicable State standard to protect human health and the environment. More simply put, when groundwater reaches surface water, hazardous substance concentrations will be less than all applicable regulatory standards.

One commenter questioned whether marine life was considered in setting cleanup levels. Marine life was considered in setting the cleanup levels. The National Recommended Water Quality Criteria were used to set standards for those indicator hazardous substances listed in the Criteria. Petroleum hydrocarbons are not listed in the Criteria.

Under the Washington State cleanup regulation, the Model Toxics Control Act Cleanup Regulation (MTCA)¹, there are two pathways to consider in setting groundwater cleanup levels to protect marine surface water: (1) Protection of fish and other aquatic life, and (2) Protection of human health for consumption of organisms. MTCA provides that whole effluent toxicity testing² may be used to assess the cleanup level protective of fish and aquatic life. The cleanup level for protection of human health is set by considering fish consumption rates. For petroleum mixtures, protection of human health is achieved by setting the cleanup levels to those for groundwater whose beneficial use is drinking water (See WAC 173-340-730(3)).

At Unocal Edmonds the selected cleanup levels for groundwater used as drinking water were the lowest cleanup levels for petroleum constituents. The groundwater cleanup level for drinking water was set as the cleanup level protective of surface water. This protects both marine life and human health for fish consumption.

¹ Chapter 173-340 of the Washington State Administrative Code, Model Toxics Control Act Cleanup Regulation.

² Whole effluent toxicity testing assesses the toxicity of contaminated water to organisms. At Unocal Edmonds, water contaminated with petroleum collected from groundwater monitoring wells at various concentrations was tested to determine the concentration that did not affect the test organisms.

MTCA provides that an empirical demonstration, that is a demonstration based on data collected at the site, may be used to demonstrate that soil concentrations at a site will not cause groundwater contamination above cleanup levels. The groundwater is monitored to assess whether hazardous substance concentrations are below protective levels. This was the approach taken at the Unocal Edmonds Site. Groundwater monitoring has demonstrated that groundwater indicator hazardous substance concentrations meet the groundwater cleanup level that is protective of surface water except in areas known to have remaining soil impacts. These areas will be addressed in the upcoming Interim Action. Cleanup of soil at the Unocal Edmonds Site will be to the soil cleanup level that is protective of groundwater and hence also protective of surface water in Willow Creek.

Soil cleanup levels at the Site are also protective of human health for children ingesting soil. This was the exposure pathway with the lowest cleanup level. Hence, this cleanup level is also protective of wildlife.

One commenter asked whether daylighting Willow Creek, and potential increase in tidal flows would have an impact on contaminant concentrations and exposure levels, and consequent level of risk. Because cleanup actions will achieve cleanup levels, risk levels to human health and the environment will remain below regulatory standards after daylighting Willow Creek.

Construction

Questions were received on various aspects of construction. There were several topics:

- **Air Quality:** An air monitoring plan will be developed for the project, and will be reviewed and approved by Ecology. Air quality will be monitored during construction to ensure safety of workers and the public. If air monitoring shows it is necessary, engineering measures will be implemented to keep emissions at safe levels.
- **Traffic:** A traffic control plan will be developed which meets City of Edmonds requirements. Trucks will not be traveling on Pine Street between 3rd and 5th Streets.
- **Truck Wheel Wash:** A wheel wash station will be set up to prevent tracking soil onto city streets. Wash water will be contained on site, treated, and discharged under a National Pollutant Discharge Elimination System permit.
- **Backfill:** Contaminated soil will be excavated and hauled off-site for safe disposal. The excavations will be backfilled with clean soil. Backfill sources are determined by the construction contractor, and are subject to approval by Ecology.

Citizens Group

Comments indicated citizens are interested in reinstating a citizens group to monitor the cleanup process.

Since the early 1990's, a citizens committee, the Edmonds Citizens Awareness Committee, monitored the cleanup for many years before recently disbanding in August 2015. Ecology provided funding for a technical advisor to the committee through a Public Participation Grant. At the end of the 2013-2015 biennium, the head of the committee advised Ecology that there was no longer sufficient interest for the committee to continue because of the commitment needed from a citizen to monitor expenditures under the Public Participation Grant.

Ecology agrees that a new citizens committee would be a benefit to the citizens interested in the cleanup. While Ecology is ready to work with a new citizens committee, assembling such a committee is more appropriately done by the interested citizens themselves, as they have local knowledge and contacts that Ecology does not have.

With regard to funding through a new Public Participation Grant, a new citizens group could apply for grant funding. See <http://www.ecy.wa.gov/programs/swfa/grants/ppg.html>.

Dual-Phase Extraction System

Comments asked about the effect of groundwater pumping by the dual-phase extraction system on Edmonds Marsh and how the dual-phase extraction system would be monitored.

A pilot test was conducted to provide information to design the dual-phase extraction system. Operation of the system is not anticipated to have any effect on water levels in Edmonds Marsh. Water levels in a network of groundwater wells will be monitored during operation of the dual-phase extraction system and adjustments to the operation will be made if necessary to maintain the needed hydraulic gradients.

One comment questioned whether monthly site visits to monitor the dual-phase extraction system would be sufficient, and noted there was no description of minimal staff qualifications and training requirements. The system will have safety features which shut down the system automatically if necessary. System operation will be monitored remotely so that its status can be checked. An operation manual will be developed as part of system design that specifies staff qualifications and training requirements.

Editorial

One comment noted that Figures 9-3 and 9-4 were not referenced in the text. These figures are referenced in Section 9.1, “Cross-sections of the DPE System area are presented on Figures 9-2 through 9-4.”

Edmonds Marsh Sampling

Several commenters requested sampling be conducted in Edmonds Marsh to assess sediment quality.

Edmonds Marsh is a 23-acre parcel of land on the west side of State Route 104 (SR-104). It is owned by the City of Edmonds (the City). Edmonds Marsh receives urban stormwater runoff from Willow and Shellabarger Creeks. Figure 1 (follows text) shows the Willow Creek and Shellabarger Creek watersheds. Willow Creek drains approximately 390 acres of residential property in Edmonds and the Town of Woodway. Shellabarger Creek drains approximately 378 acres of Edmonds, predominantly residential with some light commercial (downtown Edmonds). Shellabarger Creek flows through twin culverts under SR-104 prior to entering Edmonds Marsh.

Edmonds Marsh also receives stormwater from Harbor Square, which is owned by the Port of Edmonds. Harbor Square borders Edmonds Marsh on the north and its stormwater system, which drains into the Marsh, receives stormwater from a portion of West Dayton Street and part of the light commercial center north of West Dayton Street.

SR-104 between Pine Street and Main Street also drains to Edmonds Marsh, and runoff from the portion of the BNSF Railway right-of-way adjacent to Edmonds Marsh on the northwest may also drain into Edmonds Marsh.

Stormwater from the Unocal Edmonds Terminal does not drain to Edmonds Marsh. It is collected by an on-site stormwater system and conveyed through Detention Basin 2 to Detention Basin 1. Detention Basin 1 discharges to Willow Creek from an outfall downstream of Edmonds Marsh under National Pollutant Discharge Elimination System Permit SO3-002953C. Samples are collected monthly, or during discharge events, and results are reported quarterly. Discharge monitoring reports have shown compliance with discharge limits since, at least, the Edmonds Terminal ceased operations in the early 1990's.

Union Oil Company of California (Union Oil) donated Edmonds Marsh to the City in 1981 by quit claim deed. The quit claim deed provides, among other things, that the City releases Union Oil:

“ ... from all manner of actions, cause or causes of actions, suits, debts, sums of money, promises, trespasses, damages, judgments, claims and demands whatsoever, in law or in equity, which the City may have against Union Oil, arising out of any present or future petroleum products spillage which affects or in any way or manner damages Parcel IV [Edmonds Marsh]; provided that in the event that as a result of any future petroleum products spillage, any damage shall occur to any portion of Parcel IV, Union Oil shall collect and remove said petroleum products and restore said portion of Parcel IV as nearly as possible to its former condition using all practical methods available to reasonably restore Parcel IV and, if it is not feasible to collect or remove said petroleum products, Union Oil shall take all practical actions to contain, treat and disburse the same. The City further agrees not to sue or be part of any suit against Union Oil for any such damage except damages caused by Union Oils own gross negligence or willful misconduct.”

To Ecology's knowledge, the City has never contacted Unocal about performing any cleanup in Edmonds Marsh.

Ecology began addressing contamination at Unocal Edmonds Bulk Fuel Terminal No. 0178 in 1993 under Agreed Order No. DE 92TC-N328. The *Edmonds Background History Report*³ (February 15, 1994) was prepared as part of that work. The background history review was conducted to research historic operations at and adjacent to the Terminal. The properties reviewed included the Upper and Lower Yards of the Terminal, the commercial development known as Harbor Square, offshore and tideland areas (including the facility pier/dock and the city park), and the wetland area now known as Edmonds Marsh. The background report was compiled through review of previous hydrogeologic investigation reports, agency files (including Ecology's Northwest Regional Office, Ecology archive, and US. Environmental Protection Agency Region 10), facility files (environmental, maintenance, and process), and historic aerial photographs⁴ (covering the period 1947 to 1992). The review did not identify sediment in Edmonds Marsh beyond Willow Creek as needing testing for contamination related to the Site.

³ Available at Ecology's [Unocal Edmonds web site](#). Click View Electronic Documents and see Group: Technical Reports. Date is 2/15/1994.

⁴ Available at Ecology's [Unocal Edmonds web site](#). Click View Electronic Documents and see Group: Technical Reports. Date is 1/26/2012.

Bioassay tests were performed on sediment samples collected from Willow Creek in 1996 and 2003. Bioassay tests evaluate the effect of the sediment on growth and mortality of test organisms. If the effect is great enough, the sediment is considered to be contaminated. The bioassay tests, in combination with chemical data collected in 2003, identified a portion of Willow Creek downstream of Edmonds Marsh needing cleanup. This cleanup work was completed in 2008. The portion of Willow Creek adjacent to Edmonds Marsh did not need cleanup.

In summary, the review of historical records, including aerial photographs, the fact that the City of Edmonds has never seen it necessary to ask Unocal to clean up any releases in Edmonds Marsh, and no off-site migration of petroleum contamination was detected in the considerable sediment testing completed in Willow Creek indicate that testing Edmonds Marsh for contamination related to the Unocal Edmonds Bulk Fuel Terminal Cleanup Site is not necessary.

Moreover, it should be borne in mind that Edmonds Marsh receives urban stormwater runoff from several different inputs as described above. It is likely that these inputs contain petroleum and other contaminants common in urban areas, including polychlorinated biphenyls (PCBs) and dioxins/furans. The City of Edmonds is the owner of Edmonds Marsh. Ecology suggests that if the citizens of Edmonds are interested in sediment quality on City property that the citizens ask the City to conduct an investigation of sediment quality using a qualified environmental consultant.

Alternatively, any citizen can file an environmental report regarding concerns that the sediment in Edmonds Marsh is contaminated. This will result in an Initial Investigation by Ecology (through the Snohomish Health District) to assess the potential that the sediments are contaminated. A report may be filed by calling Ecology's Northwest Regional Office at 425-649-7000 and stating you want to file an environmental report. A report also may be filed by email at NWROERTS@ecy.wa.gov or by an online form at http://www.ecy.wa.gov/programs/spills/forms/nerts_online/SWRO_nerts_online.html.

If contamination is found or suspected, Edmonds Marsh will be placed on the Confirmed or Suspected Contaminated Sites List for follow-up work. The City of Edmonds, as the current property owner, would be strictly liable for cleanup, jointly and severally with any other Potentially Liable Persons identified.

If contamination can be linked to the Unocal Edmonds Bulk Fuel Terminal, the City may invoke the terms of the quit claim deed to have Unocal clean it up. If the City demonstrates that contamination is linked to the Unocal Edmonds Bulk Fuel Terminal, Ecology can consider this new information and engage Unocal in a new cleanup with respect to their responsibility at Edmonds Marsh. In such a case the City of Edmonds, as the current owner, and Unocal, as the generator of contamination, would be jointly and severally liable for cleaning up Edmonds Marsh. To the extent that there is contamination resulting from both Unocal operations and operations/inputs not related to Unocal, the City and Unocal may have cost allocation discussions separate from actions Ecology may take.

The Port of Edmonds, the City of Woodway, WSDOT, and BNSF Railway all contribute stormwater to Edmonds Marsh. Their relative contributions would also be of interest should contaminated sediment be found in Edmonds Marsh.

Future Site Use

One commenter said, “Let Mother Nature reclaim the area by incorporating the property into Edmonds Marsh.”

The property is private property that is in escrow to be sold to the Washington State Department of Transportation (WSDOT). WSDOT entered a Purchase and Sale Agreement with Unocal with the intent of moving the Edmonds Ferry Dock to this location to relieve traffic congestion and eliminate an at-grade rail crossing at the current Edmonds Ferry Dock. In addition, the site is zoned Master Plan Hillside Mixed Use 2. Any future land use that involved creating a natural area would have to be developed in concert with WSDOT or a future land owner.

Sampling

There were several comments regarding the sampling that will be done as part of monitoring to see that the cleanup achieves its goals.

Comments indicated that independent public monitoring (not funded by Chevron/Unocal) is needed and that an oversight committee should be established with professionals to scrutinize any and all tests done in relation to the cleanup. Ecology is the state regulatory agency responsible for overseeing cleanups and is independent of Chevron. The protocols for sampling and analysis at cleanup sites are specified in regulation, well developed, and have been applied at thousands of cleanup sites statewide. Sampling is done by environmental professionals and analysis is done by accredited laboratories. At this Site, the WSDOT representatives also are overseeing the work because WSDOT will be purchasing the Site.

All sampling data will be public information and can be obtained by members of the public or a citizens oversight committee to assess.

A great deal of the data collected to date (but not some of the earlier data) can be downloaded from Ecology’s Environmental Information Management System (EIM). Persons interested in obtaining this data can download it from EIM: <http://www.ecy.wa.gov/eim/index.htm> Click on Search >> All. The Study IDs are UNOCAL01 and UNOCAL02.

If you have questions on downloading EIM data, contact the Unocal Edmonds Site Manager, David L. South at david.south@ecy.wa.gov, or at 425-649-7200.

One comment asked if Ecology could assist in gaining access to the Site to periodically collect water quality data and samples. Chevron/Unocal does not allow general access to their property, particularly to cleanup sites. The Site is a hazardous waste site with strict health and safety protocol and training requirements.

One comment asked if Ecology or another agency would be on-site to conduct soil/water testing when Willow Creek is daylighted. Daylighting Willow Creek is not part of this cleanup. At the conclusion of cleanup activities under Ecology’s oversight, the cleanup will meet regulatory standards.

SEPA Checklist

One commenter had several comments regarding the State Environmental Policy Act (SEPA) Checklist. These comments and Ecology’s response are given in Table 1: SEPA Checklist Comments and Responses.

Table 1: SEPA Checklist Comments and Responses.

Comment	Ecology Response
Can the lack of surface indications or history of unstable soils in the immediate vicinity be verified?	Unstable soils in the immediate vicinity of the Interim Action Work Plan areas were not observed during previous interim actions done onsite. Adequate engineering controls will be implemented to maintain soil stability in the immediate vicinity of this proposed interim action.
3.a Surface water 1) The SEPA checklist says Willow Creek runs in a man-made drainage ditch and an underground piped culver between Edmonds Marsh and Puget Sound. This will not be the case in the next few years with daylighting of Willow Creek. Should this statement be reconsidered?	The interim action will excavate soil along the currently daylighted portion of Willow Creek. Work is not being proposed in the area proposed for future daylighting of Willow Creek.
3.c Water runoff – points out that the flow of Willow Creek is into a tidal basin and then in an underground pipe to Puget Sound. Commenter notes this won't be for long.	The interim action will excavate soil along the currently daylighted portion of Willow Creek. Work is not being proposed in the area proposed for future daylighting of Willow Creek.
5c Is the site part of a migration route? Answer is no. Commenter says to check with Pilchuck Audubon.	The site is not known to be a stopping or resting location for migratory wildlife. Interim Action Work Plan implementation planning will include oversight by the Washington State Department of Fish and Wildlife.
8f What is the current comprehensive plan designation of the site? – Please refer to the Comprehensive Plan Update just completed 2015.	The current comprehensive plan designation is Master Plan Hillside Mixed-Use Zone MP2.
9. Land and Shoreline Use. What is the current shoreline master program designation of the Site? No designation? <i>Need to verify.</i>	The Site does not currently have a Shoreline Master Program designation. Proposed updates to the Shoreline Master Program have not yet been adopted. See links below to go to the City of Edmonds web site regarding proposed updates to the Shoreline Master Program.
12. Recreation a) What designated and informal opportunities are in the immediate vicinity? None? Need to indicate Marsh viewing sites from boardwalk.	The former Unocal Edmonds Bulk Terminal Facility is not a recreational area. The Edmonds Marsh boardwalk is located approximately 500 feet from the site's property line.
5D. Proposed measures to preserve or enhance wildlife, no. (Urge to consider this response.)	Interim Action Work Plan implementation planning will include oversight by the Washington State Department of Fish and Wildlife to minimize impacts to wildlife. There is little wildlife on the Site. In the past work has been arranged to accommodate nesting herons, but it is understood the rookery is no longer used. This will be verified with the Department of Fish and Wildlife. The interim action is a short-term project to clean up contamination.

Links to City of Edmonds web site on proposed updates to the Shoreline Master Plan:

- <http://www.edmondswa.gov/shoreline-master-program.html>. See particularly Shoreline Jurisdiction South.
- http://www.edmondswa.gov/images/COE/Government/Departments/Development_Services/Planning_Division/Plans/SMP/SMP_Plate_Maps.pdf

Timing

One commenter asked about the timeframe for the cleanup. Environmental investigations and cleanup actions have been ongoing at the Site since 1986. The first Agreed Order between Ecology and Unocal was signed in 1993. Investigations into the nature and extent of contamination occupied the remainder of the 1990s. Since 2000 a number of interim actions interspersed with periods of groundwater monitoring have been conducted. Contaminated soil in the area of Detention Basin 2 is to be excavated in 2016. Contamination in the vicinity of the WSDOT storm drain will be addressed by dual-phase extraction beginning in 2016. It is expected to take up to 6 years to achieve cleanup levels in the vicinity of the storm drain. Groundwater monitoring will be done after cleanup levels have been initially met for a sufficient period of time to assess whether cleanup is complete.

Unrelated to Proposed Cleanup Actions

One commenter asked whether consideration has been given to the economic benefit or lack thereof in moving foot traffic a mile from downtown Edmonds and to lowering of the railroad tracks to diminish the train horn industrial feeling.

These concerns are about future site use and are unrelated to the cleanup actions proposed for the Site.

Next Steps

Project design documents will be prepared over the coming months and necessary permits obtained. The project design documents will include an Engineering Design Report, Plans and Specifications, and a Compliance Monitoring Plan for the work. Cleanup activities are scheduled to begin in June 2016.

In accordance with the public participation plan for the Site, project information will be made available in several ways, including: posted on the informational sign at the Site entrance (on Pine Street), on Ecology's website, on Chevron's website (www.unocaledmonds.info), and the fact sheet/flyers in boxes at the Site entrance and near Marina Beach Park. Chevron/Unocal will prepare and deliver flyers to the Site's neighbors to keep them informed about the work schedule and progress, including a notification before cleanup activities begin.

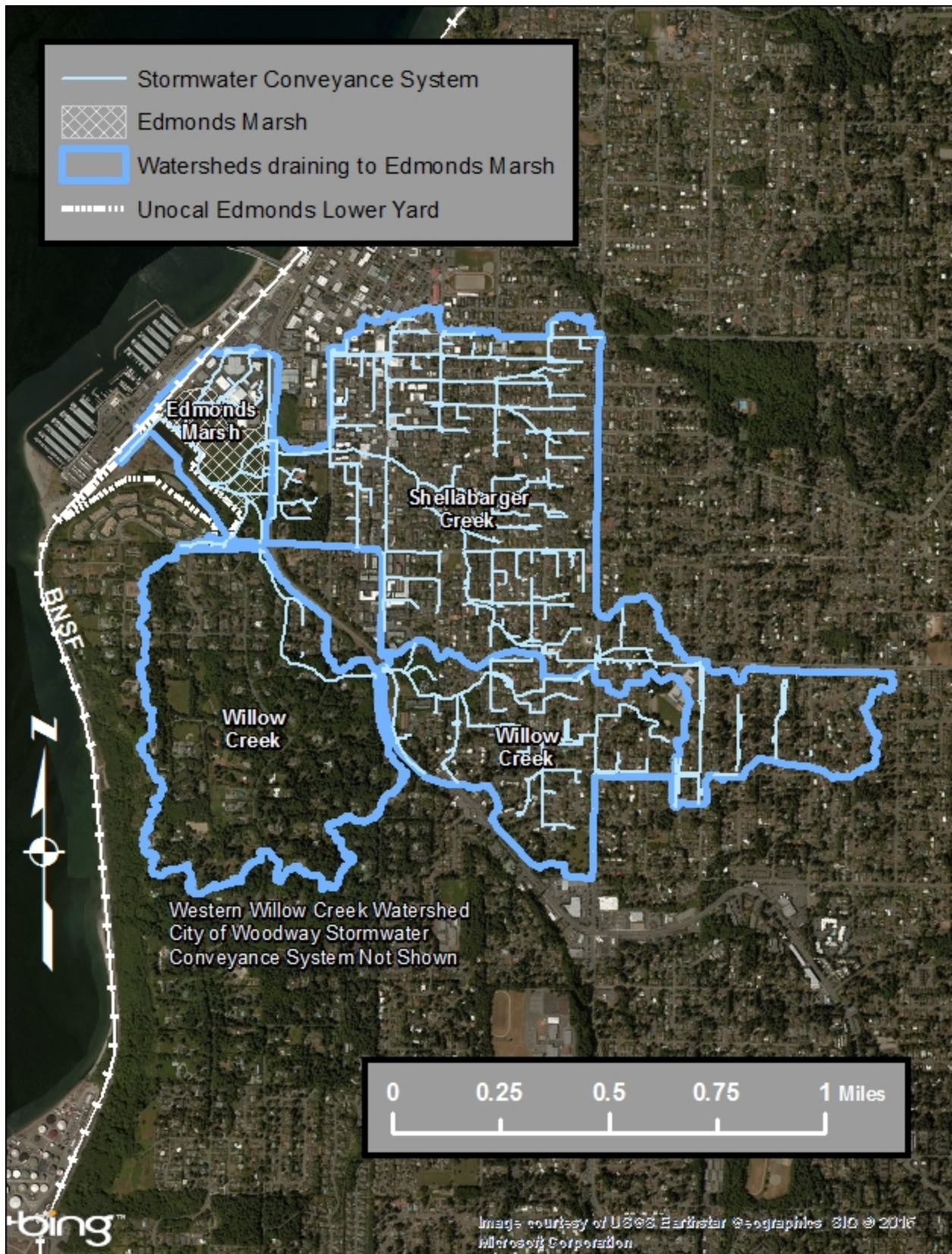


Figure 1: Watersheds draining to Edmonds Marsh.

Appendix A – Individual Comments

South, David (ECY)

From: Joan Bloom <joanbloom@vigeo.us>
Sent: Monday, August 31, 2015 3:33 PM
To: South, David (ECY)
Subject: Unocal clean-up comments, 8-31-15

Dear Mr. South,

I am a citizen of Edmonds, and also an Edmonds City Council member. My comments are in reference to the Unocal site clean-up, due by 5 PM today.

I reference Diane Buckshnis' comments, below in italics, in a letter to you, and have the same concerns.

"The current testing wells indicate this area is now "clean", meaning it meets Dept of Ecology's standards for a light industrial use BUT NOT necessarily for a habitat of fish use."

As you know, Edmonds is embarking on a significant project to daylight Willow Creek, and restore the Edmonds Marsh, to support the return of spawning salmon to one of Washington's few remaining salt water marshes. It is essential that the standards that are met will support fish habitat.

'it is imperative that DOE ensure that the Chevron/Unocal cleanup is done (and signed-off by the State) after sufficient testing has been done in the Marsh to ensure that contaminants that can affect the salmon recovery are gone so that this project can and will be successful and benefit salmon recovery in the Edmonds Marsh, as well as the restoration of the wildlife estuary."

I agree with Council member Buckshnis, and support the request that sufficient testing be done of the Edmonds Marsh to verify that the contaminant level is low enough that it will support the return of salmon, and support the recovery of this extremely valuable salt water marsh.

Please make sure that the Unocal clean-up is not signed off on by the state until the current and future health of the Marsh are verified and provided for. Many citizens and officials have done a significant amount of work in the planning of Willow Creek daylighting and marsh restoration. Please support their hard work by holding Unocal to the highest standards of clean up possible.

Regards,
Joan Bloom

JoanBloom@vigeo.us
EdmondsForum.com
[@JoanBloomARC](#)

South, David (ECY)

From: Brian Borofka <bbborofka@gmail.com>
Sent: Monday, August 31, 2015 4:43 PM
To: South, David (ECY)
Subject: Unocal Edmonds Site - Comments on Interim Action Work Plan
Attachments: 2015-08-30 Unocal Comments to Ecology.pdf

Mr. South,

My comments on the Unocal Edmonds Site Work Plan are contained in the attached .pdf document.

Thank you.

Brian Borofka
Edmonds, WA

816 Puget Way
Edmonds, WA 98020
August 31, 2015

David L. South
Site Manager
Washington State Department of Ecology –
Toxics Cleanup Program
3190 160th Avenue SE
Bellevue, WA 98008

SENT VIA EMAIL

**SUBJECT: Unocal Edmonds Site
Comments on Interim Action Work Plan**

Dear Mr. South:

The following are my specific comments and suggestions for improving the *Interim Action Work Plan* for the Unocal Edmonds Site.

Section 4.5.1.1 Current Exposures

In the second paragraph on page 77 the Plan indicates that any contaminants discharged to Willow Creek from the groundwater will be quickly mixed with other water in the creek, thereby reducing the concentration, and that this will be further reduced by stormwater and tidal waters. In effect, the Work Plan is stating that dilution is the solution, thereby ignoring the long-term exposure and assessment of risk to Willow Creek biota or the receiving waters of Puget Sound. This section should be updated with a more quantitative risk assessment.

Section 4.5.1.2 Potential Future Exposures

The City of Edmonds and others are exploring opportunities for the daylighting of Willow Creek, thereby increasing the tidal flows in the remedial action area of the Work Plan. Such physical changes will increase the tidal response of Willow Creek and the Edmonds March, and provide a potential spawning and rearing area for salmon and other species. This section fails to address this change in tidal regimes and its potential impact on contaminant concentrations and exposure levels, and potential consequent level of risk. This section also makes the same statement as Section 4.5.1.1 (see comment above) in that any groundwater contaminant discharge will be diluted. Again, this should be a quantitative assessment. Finally, given the potential long-term plans of the Washington Department of Transportation to relocate a ferry terminal near the Work Plan area, consideration should also be given what future exposures may occur.

Section 4.5.2 Exposures to Ecological Receptors

The Work Plan repeats the 'dilution is the solution' approach to addressing groundwater contaminant flow to surface water.

Section 8.1.2 Proposed Excavation Boundary

In the fourth paragraph of page 103 it is stated that LNAPL will be removed from contaminated soil using vacuum dewatering trucks. No description of the air monitoring system for these trucks is provided, including the frequency of monitoring, emission threshold levels, and recordkeeping and reporting. This should be included.

This same paragraph states that not all LNAPL contaminated soil will be immediately removed from the site, and may be stockpiled onsite for subsequent loading and removal from the site. A description of physical means to provide a vapor barrier over this stockpile should be provided (e.g. plastic sheeting, foam, etc.) to eliminate offsite release of volatile compounds. An air monitoring program should also be described to provide assurance that there are no offsite pathways and/or exposure to users of the nearby marina and park.

Section 8.1.5 Site Preparation

The traffic control plan and the stormwater management plan should be included as part of this Work Plan and subject to public review. A description of the truck wash (i.e. wash pad, treatment system, etc.) should be included in the Work Plan, including handling, testing and disposal of wash materials.

Section 8.2.1 System Design

While the Work Plan indicates that a 6 feet potentiometric groundwater drawdown is planned for the target treatment zone, no indication is provided wherein the level of groundwater drawdown may impact the Edmonds Marsh. Long-term operation of the groundwater system over the proposed remedial action timeframe may have potentially significant changes in the groundwater levels and flow regime in the Marsh, and this impact may offset activities by the City of Edmonds and others in restoring the Edmonds Marsh. This needs to be addressed.

Section 8.2.3 System Optimization and Operation

This section indicates that site visits to monitor the treatment system may be reduced to a monthly schedule. Monthly visits may not be sufficient to provide the necessary level of QA/QC and to minimize potential exposures in the event of a system component failure. Criteria should be established wherein this schedule is allowed, including mass of contaminants removed, system efficiency, compliance monitoring results, GAC break through potential, and other operational parameters. There is no description of minimal staff qualifications and training requirements for performing routine operation and maintenance.

11.1.1 Stockpile Characterization Sampling

No description of sampling for airborne contaminant movement from the stockpile is provided. (See comment for Section 8.1.2 above.)

Thank you for your consideration of my comments. Please do not hesitate to contact me at the above address if you want to discuss my comments in detail.

Sincerely,

Brian Borofka

South, David (ECY)

From: Buckshnis, Diane <Diane.Buckshnis@edmondswa.gov>
Sent: Friday, August 28, 2015 7:07 PM
To: South, David (ECY)
Cc: Keeley O'Connell; Shuster, Jerry; Hite, Carrie; Earling, Dave; Jason Mulvihill-Kuntz; Larry Phillips; Passey, Scott
Subject: Unocal Clean-up comment period ending August 31

Hello Mr. South.

At the Unocal open house last week, you discussed where the extensive contamination testing and cleanup has been conducted over the many years of cleanup on the Unocal site. Unfortunately, much testing was done in the "marsh proper" causing concern that contamination could be present in the marsh and we wouldn't know since no one has tested it. The concern becomes the persistence of petroleum and arsenic contamination and the historic way contamination was managed (eg. not very well and without much thought for marsh health) and that it is possible that, historically, contamination could have gotten into the marsh.

As we know, in terms of the preliminary drawings from the daylighting of the creek channel, the channel will extend south from the existing ditch directly onto the Unocal property for about 750 feet before turning west to come out under the BNSF tracks and across Marina Beach.

The current testing wells indicate this area is now "clean", meaning it meets Dept of Ecology's standards for a light industrial use BUT NOT necessarily for a habitat and fish use. For this reason, the final feasibility study on daylighting the creek is recommending that 750 feet of new creek is lined with a high density liner to ensure a new creek channel would not become contaminated with old, remnant contamination. However, having this system in place, does NOT negate the need to collect sediment samples in the Marsh to 'certify' that past Unocal operations had no effect on the Marsh as we all know that contaminants do not respect boundaries.

Because this project is being reviewed and studied by many environmentalist and members of WRIA8, it would seem shortsighted on the part of DOE to NOT require Chevron/Unocal to collect offsite sediment samples in the Marsh to confirm there are no residual contaminants.

In summary, it is imperative that that DOE ensure that the Chevron/Unocal cleanup is done (and signed-off by the State) after sufficient testing has been done in the Marsh to ensure that contaminants that can affect the salmon are gone so that this project can and will be successful and benefit salmon recovery in the Edmonds Marsh, as well as the restoration of the wildlife estuary.

Sincerely,
Diane Buckshnis
Edmonds City Council Representative for WRIA8 Salmon Recovery Council

Diane Buckshnis

City Council Position #4
206-228-3462

South, David (ECY)

From: Sandra <sandra.butterfield@comcast.net>
Sent: Tuesday, August 18, 2015 8:34 AM
To: South, David (ECY)
Subject: Unocol property at Point Edwards

I am writing to you regarding the Unocol cleanup site at Point Edwards, specifically the public meeting this coming Thursday. My suggestion; after cleanup, let mother nature reclaim the Unocol acreage (and help clean it up) by incorporating the property into the Edmonds Marsh. Any chance this can be done? I will be out of town this Thursday so please pass this suggestion along to the appropriate person.

Sandra Butterfield

Resident of Point Edwards Condos
206-902-0842
sandra.butterfield@comcast.net

South, David (ECY)

From: Charles Ellingson <pony@PGWG.COM>
Sent: Thursday, August 27, 2015 1:56 PM
To: South, David (ECY)
Cc: Duane Uusitalo
Subject: brief comment on Public Review IAWP

Hi Dave,

This email provides a brief comment on the Public Review Draft of Chevron's Interim Action Workplan for the former UNOCAL site in Edmonds.

It is not clear if this public review draft has been updated to reflect results from the DPE pilot testing work conducted early in 2015. The document acknowledges that the pilot work preceded the submittal of the IAWP but the plan does not indicate whether or not it reflects findings of the pilot work. This is confusing to me and likely the public.

This draft responds to some (all?) of your direct requests from review of the November 2014 Ecology review draft, including two extra DPE wells and two DPE cross sections; however, refinements based on pilot testing are not apparent. Figures 9-3 and 9-4 (DPE design cross sections) were added for this draft - but are not referenced in the text.

Certainly Chevron, and possibly Ecology, knew the take-home findings of the pilot work at the time of submittal of the public review IAWP production. Thus the feasibility and design of DPE may be advanced relative to the information provided to the public for review. Without knowledge of those findings, I cannot judge whether this is technically significant or not.

Pony

South, David (ECY)

From: Kelly Harvill <sail4homer@gmail.com>
Sent: Saturday, August 29, 2015 4:39 PM
To: South, David (ECY)
Subject: Edmonds construction project

I am writing to request that large trucks hauling materials to and from the site do not use Pine Street, particularly between 3rd and 5th. The intersection of 5th and Pine is exceptionally dangerous, as vehicles heading west on Pine can not see cars/bikes or motorcycles heading east until they have crested the steep hill on Pine Street. Also, idling trucks heading east on Pine, and stopped at 5th cause significant noise pollution and emissions for residents in this area.

Thank you

Sent from my iPhone

South, David (ECY)

From: Lui, Nancy (ECY)
Sent: Wednesday, August 12, 2015 6:57 AM
To: South, David (ECY); 'MJBoortz@chevron.com'; jerry.shuster@edmondswa.gov;
'FordjoK@wsdot.wa.gov'; 'Cruz, Cindi'
Subject: First comment: UNOCAL EDMONDS BULK FUEL TERM 0178, Site 5180

Good Morning Team,

Here is the first comment that I have received for this project.

-----Original Message-----

From: pamela lemcke [mailto:plemcke@msn.com]
Sent: Tuesday, August 11, 2015 9:25 PM
To: Lui, Nancy (ECY)
Subject: UNOCAL EDMONDS BULK FUEL TERM 0178, Site 5180

Hi Nancy,

I would like to know what the level of benzene and hydrocarbons was/is for the lower yard and Marina Beach area.

Where was the plume indicated in the reports?

From beginning to end of testing.

What does LNPLN stand for?

Thanks

Pam Lemcke
2826 202nd ST SE
Bothell, WA 98012

425-770-3021

South, David (ECY)

From: Lui, Nancy (ECY)
Sent: Friday, August 14, 2015 9:30 AM
To: South, David (ECY); MJBoortz@chevron.com; Cruz, Cindi
Subject: FW: UNOCAL EDMONDS BULK FUEL TERM 0178, Site 5180

-----Original Message-----

From: pamela lemcke [mailto:plemcke@msn.com]
Sent: Thursday, August 13, 2015 5:51 PM
To: Lui, Nancy (ECY)
Subject: Re: UNOCAL EDMONDS BULK FUEL TERM 0178, Site 5180

This is now an official public records request.

Thanks. Pam

> On Aug 12, 2015, at 6:37 AM, Lui, Nancy (ECY) <nlui461@ECY.WA.GOV> wrote:

>

> Good Morning Ms. Lemcke,

>

> Thank you for your comment. I will forward your question to the project manager. Please let me know if you have any other questions about the cleanup project.

>

> Thank you

>

> Nancy

>

> -----Original Message-----

> **From:** pamela lemcke [mailto:plemcke@msn.com]

> **Sent:** Tuesday, August 11, 2015 9:25 PM

> **To:** Lui, Nancy (ECY)

> **Subject:** UNOCAL EDMONDS BULK FUEL TERM 0178, Site 5180

>

> Hi Nancy,

> I would like to know what the level of benzene and hydrocarbons was/is for the lower yard and Marina Beach area.

> Where was the plume indicated in the reports?

> From beginning to end of testing.

> What does LNPLN stand for?

>

> Thanks

>

> Pam Lemcke

> 2826 202nd ST SE

> Bothell, WA 98012

>

> 425-770-3021

>

>

South, David (ECY)

From: South, David (ECY)
Sent: Friday, August 14, 2015 11:19 AM
To: plemcke@msn.com
Cc: Lui, Nancy (ECY); Perkins, Sally (ECY)
Subject: Unocal Edmonds Cleanup Site

I have received your Public Disclosure Request. It is a broad request. You may make an appointment with Sally Perkins (425-649-7190) to come in and review the Unocal Edmonds file. It is voluminous, and if you want information from beginning to end you will need to review it. There also is data on our Environmental Information Management System that you can download under the site name Unocal Edmonds. I can assist you with how to do this if you call me.

That said, I have downloaded the data for EIM and attached it as Excel tables to this email. Of course, you are free to do this yourself if you do not want to use tables that I have downloaded. There are two Excel files:

- EIMResults_UNOCAL01.xlsx contains 82 records from June 1995.
- EIMResults_UNOCAL02.xlsx contains 29,081 records from collected from October 2008 to March 2015, and included the most recent groundwater data.

These files respond to your request for benzene and hydrocarbon levels for the Lower yard from the beginning to the end of testing with what we have electronically. There may be earlier data that was collected prior to the development of our Environmental Management System in paper reports in Central Files.

You asked what LNPLN stands for. I do not recognize this acronym, and would need to know the document it comes from, with page number, to ascertain what it means. However, you may mean LNAPL instead of LNPLN. If so, LNAPL stands for Light NonAqueous Phase Liquid. This is a general term for a variety of liquid chemicals that are lighter than water and would float on the water table. It is part of the jargon of the environmental field. In the case of the Unocal Edmonds site it means liquid petroleum product floating on the water table as seen in this excavation. The person with the hose is skimming the oil into a truck for disposal. This is from earlier cleanup.



With regard to plumes, I recommend you access the Draft Interim Action Work Plan from [Ecology's Unocal Edmonds web page](#) (link is at the bottom of the first section) and look at Figures 3-1 and 3-2 to see the Pre-Remediation and 2014 hydrocarbon concentrations. These are on Pages 162/497 and 163/497 of the Adobe Acrobat page numbering system. A review of the figures in this document may provide you with an overview of the project.

Other key site documents may be accessed from the web page by clicking View Electronic Documents in the sidebar. The 2007 Interim Action Work Plan is attached to the 07/05/2007 Agreed Order under Group: Legal.

If this does not provide you with the information you need, please either call me or make an appointment with Sally Perkins to review the file.



EIMResults_UNO...



EIMResults_UNO...

David L. South
Senior Engineer
Washington State Dept. of Ecology

Toxics Cleanup Program, NWRO
3190 160th Avenue SE
Bellevue, WA 98008-5452
425-649-7200

South, David (ECY)

From: South, David (ECY)
Sent: Friday, August 14, 2015 11:22 AM
To: plemcke@msn.com
Subject: Unocal Edmonds

I forgot to add to the previous email. This project has been on the Unocal Edmonds Bulk Fuel Terminal. Data was not collected at Marina Beach Park under the Agreed Orders for this project. The City of Edmonds collected data at Marina Beach Park. I have the report and am having it scanned. I will send it to you when I have the pdf file.

David L. South
Senior Engineer
Washington State Dept. of Ecology
Toxics Cleanup Program, NWRO
3190 160th Avenue SE
Bellevue, WA 98008-5452
425-649-7200

South, David (ECY)

From: pamela lemcke <plemcke@msn.com>
Sent: Friday, August 14, 2015 5:17 PM
To: South, David (ECY)
Cc: Lui, Nancy (ECY); Perkins, Sally (ECY)
Subject: Re: Unocal Edmonds Cleanup Site

Hi David,

Maybe I worded it wrong. I apologize. I didn't mean to have this be a big thing and I hope to hec I didn't waste your time. It's not a huge thing I'm after, just a general number.

Let me amend it to simplify things.

The testing well, closest to Marina Beach, wherever that is, you pick, the well, what's the benzene level at that well. I would like the 1st test level and then the last test level only on that well if that piece of paper is easy to pull. I don't need the data in between. If hydrocarbons are with it awesome. If not, don't go digging. It's the benzene numbers I'm really after.

Thank you for the other answers.

I really appreciate the time you all have taken.

Pam

> On Aug 14, 2015, at 11:19 AM, South, David (ECY) <DSOU461@ECY.WA.GOV> wrote:

>

> This message cannot be displayed because of the way it is formatted. Ask the sender to send it again using a different format or email program. message/rfc822

South, David (ECY)

From: pamela lemcke <plemcke@msn.com>
Sent: Monday, August 17, 2015 1:00 AM
To: South, David (ECY)
Subject: Re: Unocal Edmonds

Thanks David. I would like the City report when you get a chance.

I appreciate all the information.

Will ECY or another agency be on site, conduct soil/water testing when Willow Creek is daylighted and will benzene/hydrocarbons testing be part of that?

Would it be better for me to call you?

I don't want to waste your time or have you do more than you need to because I wasn't clear.

My number is 425-770-3021

Pam

On Aug 14, 2015, at 11:21 AM, South, David (ECY) <DSOU461@ECY.WA.GOV> wrote:

I forgot to add to the previous email. This project has been on the Unocal Edmonds Bulk Fuel Terminal. Data was not collected at Marina Beach Park under the Agreed Orders for this project. The City of Edmonds collected data at Marina Beach Park. I have the report and am having it scanned. I will send it to you when I have the pdf file.

David L. South
Senior Engineer
Washington State Dept. of Ecology
Toxics Cleanup Program, NWRO
3190 160th Avenue SE
Bellevue, WA 98008-5452
425-649-7200

South, David (ECY)

From: South, David (ECY)
Sent: Monday, August 17, 2015 10:14 AM
To: pamela lemcke
Subject: RE: Unocal Edmonds
Attachments: Boring Locations, Marina Beach Park.pdf

I forwarded the most recent progress report to you last Friday. You may reference it with regard to your questions on benzene and petroleum concentrations in the well nearest Marina Beach Park. With regard to benzene and petroleum concentrations in the well closest to Marina Beach Park:

- The well closest to Marina Beach Park is MW-150. Its location is shown on Figure 2 of the August progress report. This is on page 4/69 in the Adobe Acrobat numbering system. Note that on this figure UU indicates the three petroleum constituents (gasoline, diesel, and heavy oil) were not detected. The value is the sum of $\frac{1}{2}$ the detection limit for the three constituents.
- Table 2 of the progress report summarize the groundwater analytical data. Data for MW-150 start at the bottom of page 55/69 and continue on page 56/60. Data were collected between October 21, 2008 and June 23, 2015.
 - Benzene has never been detected in this well. This is indicated by the data qualifier of U. The highest detection limit of 0.5 $\mu\text{g/L}$. The groundwater cleanup level for benzene is 51 $\mu\text{g/L}$. The cleanup level is based on protection of human health for the consumption of organisms (fish from the creek). Willow Creek is not considered a drinking water source because it is tidally influenced. The cleanup level of 51 $\mu\text{g/L}$ is from the Clean Water Act Section 304, National Recommended Water Quality Criteria.
 - Gasoline has never been detected in this well. The Total Petroleum Hydrocarbon (TPH) concentrations given in the table are the sum of diesel, gasoline, and heavy oil, with U-flagged date (i.e., nondetects) given a value of $\frac{1}{2}$ the detection limit. TPH concentrations ranged from 92 to 715 $\mu\text{g/L}$ between October 21, 2008 and June 17, 2011. Thirteen values are reported. Two exceed the cleanup level of 500 $\mu\text{g/L}$, also based on protection of human health for the consumption of organisms (fish from the creek). One of the two is simply due to elevated detection limits, as none of the constituents were detected. The high value of 715 $\mu\text{g/L}$ is from a sample collected October 26, 2009. Petroleum constituents have not been detected in this well since September 27, 2011.

With regard to the Willow Creek daylighting proposal: Ecology is focused on cleanup up Unocal Edmonds. Daylighting of Willow Creek is not part of this project. Ecology has not received any information on the daylighting of Willow Creek other than desire. As far as I know, there are no construction plans and no schedule for this work. If the organization daylighting Willow Creek decide they want more data beyond what has already been collected, it would likely fall to that organization to perform the sampling and analysis. However, as I said, Ecology has no proposal before it, so I cannot say anything definitively about what might or might not be done.

With regard to Marina Beach Park, thirteen soil samples were collected from six soil borings (see attached map). Of the thirteen, one had a detected concentration of gasoline, one had a detected concentration of diesel, and five had detected concentrations of heavy oil. No sample exceeds current soil TPH cleanup levels of 100 mg/kg for gasoline and 2000 mg/kg for the sum of diesel and heavy oil.

Soil data reported are as follows.

Concentrations in mg/kg

Depth (ft)	Constituent	S1	S2	S3	S4	S5a	S6
0-1.5 ft	Gasoline	ND	ND	ND	9	ND	ND
	Diesel	ND	ND	ND	ND	ND	ND
	Heavy Oil	ND	ND	ND	590	68	380
7.5 – 9.5	Gasoline	ND	ND		ND	ND	ND
	Diesel	120	ND		ND	ND	ND
	Heavy Oil	720	ND		84	ND	ND
10.5 – 12.5	Gasoline			ND			ND
	Diesel			ND			ND
	Heavy Oil			ND			ND

From: *Phase II environmental Site Investigation, Edmonds Marina Beach Park, Edmonds Washington*. Prepared by Ch2MHill for City of Edmonds. January 2001.

Groundwater was encountered between 9 and 12 ft. below ground surface. Boring S-3 did not encounter groundwater. Total petroleum hydrocarbons as gasoline, diesel, and heavy oil were not detecting in any of the groundwater samples. Benzene was not detected in any of the samples.

Please let me know if you have further questions.

From: pamelalemmcke [mailto:plemcke@msn.com]
Sent: Monday, August 17, 2015 1:00 AM
To: South, David (ECY)
Subject: Re: Unocal Edmonds

Thanks David. I would like the City report when you get a chance.

I appreciate all the information.

Will ECY or another agency be on site, conduct soil/water testing when Willow Creek is daylighted and will benzene/hydrocarbons testing be part of that?

Would it be better for me to call you?

I don't want to waste your time or have you do more than you need to because I wasn't clear.

My number is 425-770-3021

Pam

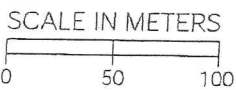
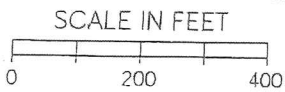
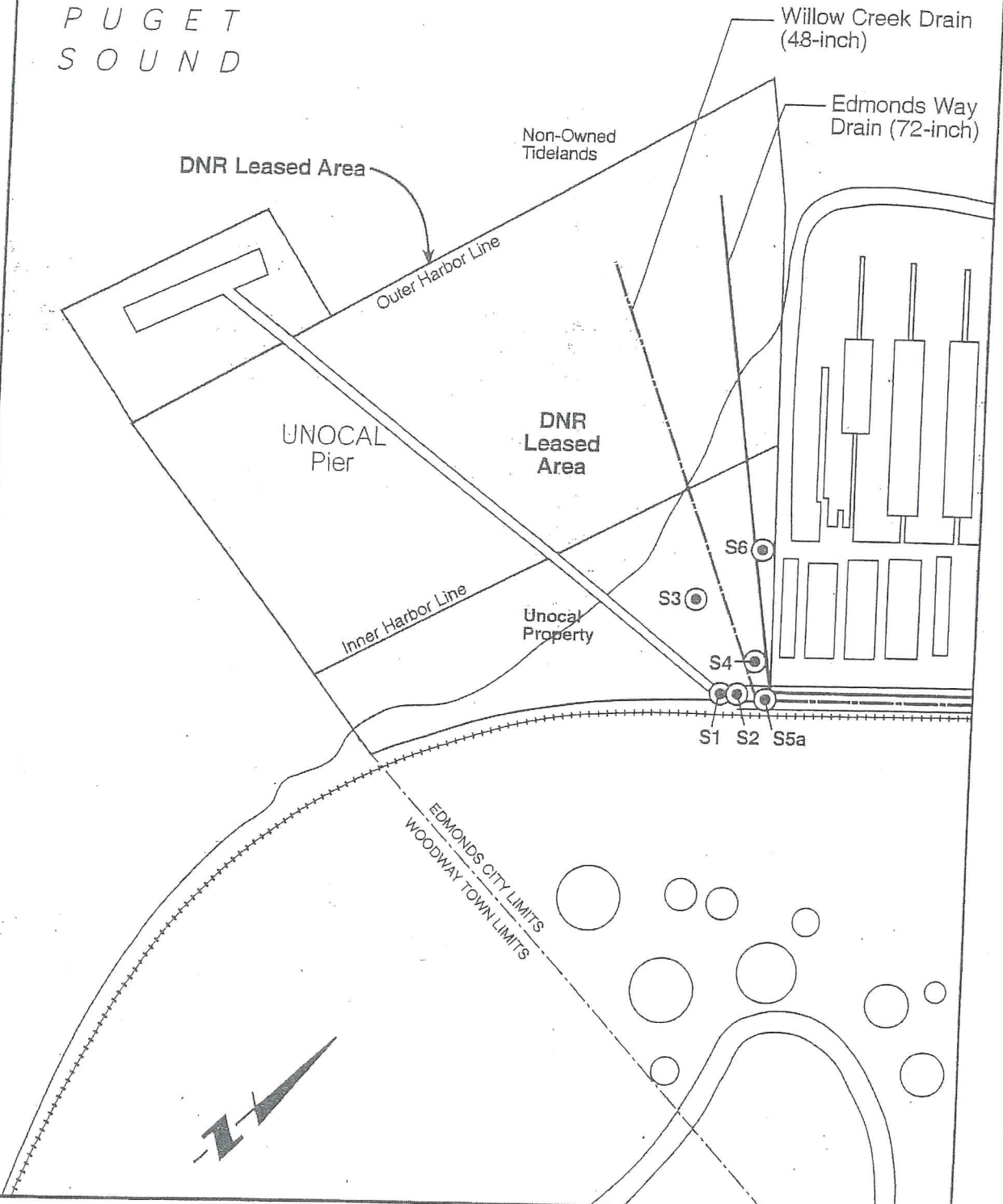
On Aug 14, 2015, at 11:21 AM, South, David (ECY) <DSOU461@ECY.WA.GOV> wrote:

I forgot to add to the previous email. This project has been on the Unocal Edmonds Bulk Fuel Terminal. Data was not collected at Marina Beach Park under the Agreed Orders for this project. The City of Edmonds collected data at Marina Beach Park. I have the report and am having it scanned. I will send it to you when I have the pdf file.

David L. South
Senior Engineer

Washington State Dept. of Ecology
Toxics Cleanup Program, NWRO
3190 160th Avenue SE
Bellevue, WA 98008-5452
425-649-7200

PUGET
SOUND



Legend

- Proposed Boring Locations (direct push)

Figure 2
Boring Locations,
Marina Beach Park

1540890.G1.06_E052000017SEA - Edmonds Sed. Investigation - Boring Locations - 10/30/00 - LW

South, David (ECY)

From: Petso, Lora <Lora.Petso@edmondswa.gov>
Sent: Saturday, August 29, 2015 11:10 AM
To: South, David (ECY)
Cc: Valerie Stewart; Buckshnis, Diane
Subject: Edmonds Unocal Bulk Terminal

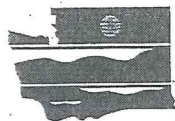
Mr. South-

I was the only elected official from Edmonds to attend the recent public meeting regarding the planned clean up efforts. I would like to submit the following comments:

- 1) Please extend sediment contaminant sampling (and clean up if necessary) to the Edmonds Marsh.
- 2) Please help reactivate the citizens group to monitor the clean up process.

Thank you for your work.

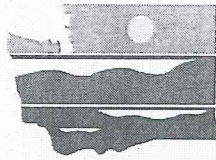
Lora Petso
Edmonds City Council



DEPARTMENT OF
ECOLOGY
State of Washington

Please use this form to submit questions during the
public meeting.

- ① WHEN DID YOU FIRST BECOME AWARE OF THIS
AREA BEING HAZARDOUS + TOXIC? WHAT YEAR?
 - ② TIMEFRAME FOR CLEAN-UP? HOW MANY
TOTAL YEARS? I HEARD AN "OFF-THE-RECORD"
COMMENT - 30+ YEARS?
 - ③ WHY SHOULD THE CITIZENRY OF EDMONDS
BELIEVE ANYTHING COMING FROM AN OIL
CONGLOMERATE?
- THANK YOU. (255)



Comment Form

Unocal Edmonds

Public Comment Period: July 31- August 31, 2015

Thank you for participating in today's meeting. If you wish to submit a written comment on the proposed cleanup actions at the Unocal Edmonds Site, you may use this form. **Please place your comment form in the Comment Box before you leave.** You may also mail this form to: Department of Ecology, attention David L. South, 3190 160th Ave SE, Bellevue, WA 98008 or email your comments to David South at david.south@ecy.wa.gov. Please indicate Unocal Edmonds in your subject line.

Please print clearly

Name: Dennis Pappas
Organization/Neighborhood: _____
Mailing Address: 41 Pine St # 305
City: Edmonds State: WA Zip: 98020
Email: dppapp39@yahoo.com
Phone Number: _____

Comments (if you need more space, please use the backside.):

Has any consideration been given to:

1. The economic benefit or lack there
of in moving foot traffic a mile
from downtown Edmonds?

2. The lowering of the railroad
tracks to diminish the train
horn industrial feeling?

South, David (ECY)

From: Charles Schaaf <charlesschaaf@outlook.com>
Sent: Wednesday, August 26, 2015 11:30 AM
To: South, David (ECY)
Cc: Reid Schoenfeld ; Gail Schaaf ; Lee Shobe
Subject: Unocal Cleanup Schedule

We certainly agree with Unocal final cleanup of Lower Yard – 24 years after closure.

We have two questions:

1. 15 to 30 trucks making 3 round trips daily adds up to between 90 and 180 trucks hauling away contaminated dirt. Since this is scheduled for June to September 2016 – it will very likely coincide with other trucks hauling away dirt from new construction at 50 Pine Street scheduled to start at the latest spring 2016. Won't this double truck hauling cause safety and congestion problems for this stretch of Pine Street and access to and from highway 104?
2. What will replace large amounts of contaminated dirt removed from this lower yard site?

Thanks for your response.

Charles Schaaf
Owner at Point Edwards
Bldg 45 – 203
425-5 82-2421

South, David (ECY)

From: joe scordino <joe.scordino@yahoo.com>
Sent: Monday, August 31, 2015 5:05 PM
To: South, David (ECY)
Subject: Comments on cleanup of the former Unocal Site in Edmonds
Attachments: Scordino Comments on Unocal Cleanup.docx

Attached are my comments on the Interim Action Work Plan.

Please let me know if you have any questions on my comments.

August 31, 2015

David L. South, Site Manager
Washington Department of Ecology - Toxics Cleanup Program
3190 160th Ave. SE
Bellevue, WA 98008

Dear Mr. South,

This is in response to the WA Dept. of Ecology request for public comments on the Interim Action Work Plan for cleanup of the former Unocal Edmonds Bulk Fuel Terminal Site.

I am providing comments on two aspects of the Chevron/Unocal cleanup: 1) the need to conduct sediment sampling in the Marsh to provide actual data on the levels of contaminants from the past Unocal operations in the Marsh to determine whether cleanup operations in some areas of the Marsh may be necessary or not; and, 2) the need for independent public monitoring (not funded by Chevron/Unocal) of the cleanup operation. I do not have expertise in oil cleanup operations, but I am a retired fisheries biologist with over thirty years experience with NOAA Fisheries. In the latter ten years of my career, I was the Deputy Regional Administrator for the Northwest Region overseeing fisheries and habitat issues in Washington, Oregon and Idaho so I am very familiar with salmon habitat issues and dealing with environmental issues that may affect salmonids. I attended the August 20 public meeting in Edmonds and have skimmed through a number of the Unocal site cleanup documents on the WA Dept. Ecology website.

The Edmonds Marsh (formally known as the Union Oil Marsh) is a unique urban wildlife area that is designated as a Category 1 wetland (highest quality) and designated as Wildlife Habitat and a Natural Resource Sanctuary. It is also classified by the State as a priority habitat. The Edmonds Marsh is one of the few remaining intact barrier estuaries in Puget Sound, a once common type of salt marsh habitat that is now very rare. The recovery of salmon in Puget Sound, which is a huge statewide effort, is contingent upon restoring and preserving estuary habitat. The City of Edmonds is currently in the design phase of a Marsh restoration project (the "Willow Creek Daylighting Project") that will replace the underground pipe outlet to Puget Sound with an open tidal channel through Marina Beach to allow juvenile salmon (including ESA-listed Chinook salmon) to enter the Marsh to feed and rear. Thus, it is very important to the public to have the Edmonds Marsh preserved as pristine as possible and for the WA Dept. of Ecology to ensure there are no potential water quality issues (i.e., contaminants from the former Unocal site) that may adversely affect the wildlife that may use the Marsh.

The Edmonds Marsh receives water from Willow and Shellabarger Creeks, as well as runoff from surrounding properties. During high tide conditions, much of the Marsh is inundated with salt water. Adjacent property on the former Unocal site includes two stormwater detention ponds that may drain into the terminal area of the Marsh (Willow Creek). During past storm conditions, stormwater from the site and overflows from the ponds may have discharged into Willow Creek and the Marsh, and if such conditions occurred during higher tides, then stormwater effluents would have permeated large portions of the Marsh. Also, with each tidal cycle, the flow of the lower portion of Willow Creek and the tidal basin is reversed to flow back into the Marsh, and thus may carry any contaminants from the former Unocal site groundwater in the Creek into other areas of the Marsh. Thus, it is very possible that contaminants from the former Unocal site do exist in the Marsh beyond the margins of the Willow Creek and the tidal basin on the edge of the former Unocal site. The question then is to what extent have the former Unocal site contaminants permeated the sediments of the Marsh and are those contaminants at great enough levels to affect waterfowl and fish (especially salmon). The only way to definitely determine the extent of the contamination is to collect and analyze sediment samples at various locations in the Marsh. Past sediment sampling of Willow Creek and the tidal basin is not adequate for making determinations on the potential levels of contaminants in the overall Marsh given the flow directions of Willow Creek and the uncertainties with past conditions that may have affected contaminant discharges and distribution offsite.

The WA Dept. of Ecology should require that sediment sampling in the Marsh, and cleanup, if necessary (dependent on the levels and types of contaminants found), be a part of the Chevron/Unocal Action Work Plan. Not doing such would be counter to the salmon recovery efforts underway throughout Puget Sound and a tragedy for the wildlife that utilize the Marsh. The last thing the public would want to find out after the Chevron/Unocal cleanup is done (and signed-off by WA Dept. of Ecology) is that the Marsh has contaminants that can adversely affect the salmon intended to benefit from the "Willow Creek Daylighting" restoration project.

My second comment area pertains to independent public monitoring (not funded by Chevron/Unocal) of the cleanup operation. I am aware of the past work by the Edmonds Citizens Awareness Committee (ECAC) to monitor the former Unocal site cleanup and it is unfortunate that their effort will not continue. Although the WA Dept. of Ecology has developed a trust with the Chevron/Unocal representatives and consultants through the years of the cleanup operation, I'm not convinced that the public has faith that an oil company will always do the best things for our environment, especially if costs are involved. The Deepwater Horizon episode is testament to the public's view of an agency 'trust' of an oil company that resulted in a total reorganization in the federal government's Department of Energy. It is acknowledged that WA Dept. of Ecology will oversee Chevron/Unocal's monitoring of cleanup operations and that is important, but there will still be a public concern that the entity responsible for the cleanup is also the entity that will collect the data that demonstrates the cleanup is doing the best things that are needed to be done (not the least costly or time consuming). It is not uncommon in resource management situations to have independent monitoring to ascertain and confirm that a proponents actions are being undertaken in the best manner possible for the resource (in this case the 'resource' would be the land and the water on and off the former Unocal site).

The WA Dept. of Ecology should facilitate independent monitoring of the cleanup operation whether that be reinstating the Edmonds Citizens Awareness Committee (with a new director since Duane is moving to Bellingham) or fostering another group to assume the role of the ECAC. I understand that WA Dept. of Ecology provided grant funds for the ECAC operations including the hiring of a consultant with expertise in cleanup operations, and that approach should be continued to allow for independent monitoring of the cleanup operation. Also, I am currently involved in a Citizen Science project with the Edmonds-Woodway High School to monitor water quality in several Edmonds creeks and the Marsh, and we would appreciate WA Dept. of Ecology's assistance in gaining access to the former Unocal site to periodically collect water quality data and samples at the site's perimeter in Willow Creek and the tidal basin - this would provide another source of independent water quality data on the cleanup.

Thank you for consideration of these comments. Please feel free to contact me by E-Mail if you have any questions on my comments.

Sincerely,

Joe Scordino
681 13th Way
Edmonds, WA 98020
joe.scordino@yahoo.com

South, David (ECY)

From: Stewart, Valerie (Planning Board) <Valerie.Stewart@edmondswa.gov>
Sent: Monday, August 31, 2015 4:35 PM
To: South, David (ECY)
Cc: Tibbott, Neil (Planning Board)
Subject: comment regarding Unocal Interim Action Work Plan
Attachments: Val Stewart Unocal cleanup comment.pdf

David L. South, Site Manager

Washington Department of Ecology- Toxics Cleanup Program

3190 160th Ave. SE

Bellevue,

Wa. 98008

Dear Mr. South,

I am a member of the Edmonds Planning Board and an involved citizen. I attended the open house on August 20 regarding the Unocal Clean up efforts. I hereby submit my comment to WA Dept. of Ecology on the Interim Action Work Plan for cleanup of the former Unocal Edmonds Bulk Fuel Terminal Site.

My understanding is that the specific objective of this Interim Action is to remediate soil and groundwater in the Lower Yard in two discrete areas with remaining impacts: Detention Basin 2 and the WSDOT stormwater line. One of the goals stated is to

remove soil and groundwater with petroleum hydrocarbon impacts above remediation levels and clean up levels.

First of all, I would like to like to see sediment sampling done in the Edmonds Marsh since there are ongoing efforts to daylight Willow Creek in order to restore historical salmon runs to the area. The Marsh is a sensitive critical environment for salmon rearing and breeding. It is imperative that Citizens know the quality of that environment given that Unocal activities have occurred since 1923. Contaminants do not respect boundaries. Unocal would be viewed in the public eye as doing good for the environment and the Citizens of Edmonds if they took this extra step.

Second, I would like to see a Citizen oversight committee established with knowledgeable and skilled professionals to scrutinize any and all tests done by Unocal in relationship to this interim clean up. There once was such a committee funded by DOE called Edmonds Citizens Awareness Committee.

In reviewing the SEPA checklist, I have a few mentions and questions. I can also assist you with further information via my role as a Planning Board member.

Are there surface indications or history of **unstable soils in the immediate vicinity**? No? *Can you verify this?*

a. Surface Water 1) Willow Creek runs along the east, northeast, north, and northwest boundaries of the Lower Yard, and discharges into the Puget Sound. Edmonds Marsh is located to the northeast of the Lower Yard, and is connected to Willow Creek. Willow Creek **runs in a man-made drainage ditch and an underground piped culvert between Edmonds Marsh and Puget Sound.** *this will not be the case in the next few years with daylighting- do you need to consider this?* 2) **Will the project require any work over, in, or adjacent to the described waters?** - plans for berm to protect Willow Creek and coffer dams. Restored to original stream bed after excavation. *Ok- see prior comment .*

Water runoff (including stormwater)- 1) describe source of runoff and method of collection and disposal. Where will this water flow? Will this water flow into other waters? answer- Willow Creek flows into a tidal basin. **The flow is conveyed from the tidal basin to Puget Sound in an underground pipe.** *this won't be for long*

c. Is the site part of a **migration route**? **No?** *(please check with Pilchuck Audubon)*

Proposed measures to **preserve or enhance wildlife** if any: **None** - *would urge you to reconsider this response*

Land and Shoreline Use g. What is the current **comprehensive plan designation of the site**- *please refer to Comprehensive Plan Update just completed 2015.* h. What is the current **shoreline master program** designation of the site? **No?** *Need to verify.*

Recreation a. What **designated and informal recreation opportunities** are in the immediate vicinity? None? *Need to indicate Marsh viewing sites from boardwalk.* c) Proposed measures to **reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant,** if any: does not apply? *Could in fact enhance habitat for salmon by ensuring Marsh sediment is clean. Would be a great PR opportunity and the City would be grateful.*

My apologies for the late hour. Thank you kindly for considering my comments.

Sincerely,

Val Stewart

Edmonds Planning Board

David L. South, Site Manager
Washington Department of Ecology- Toxics Cleanup Program
3190 160th Ave. SE
Bellevue,
Wa. 98008

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In reviewing the SEPA checklist, I have a few mentions and questions. I can also assist you with further information via my role as a Planning Board member.

Are there surface indications or history of **unstable soils in the immediate vicinity?**
No? *Can you verify this?*

3. a. Surface Water 1) Willow Creek runs along the east, northeast, north, and northwest boundaries of the Lower Yard, and discharges into the Puget Sound. Edmonds Marsh is located to the northeast of the Lower Yard, and is connected to Willow Creek. Willow Creek runs in a man-made drainage ditch and an **underground piped culvert between Edmonds Marsh and Puget Sound.** *this will not be the case in the next few years with daylighting- do you need to consider this?*

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c. Water runoff (including stormwater)- 1) describe source of runoff and method of collection and disposal. Where will this water flow? Will this water flow into other waters? answer- Willow Creek flows into a tidal basin. **The flow is conveyed from the tidal basin to Puget Sound in an underground pipe.** *this won't be for long*

5. c. Is the site part of a **migration route?** **No?** *(please check with Pilchuck Audubon)*

d. Proposed measures to **preserve or enhance wildlife** if any: **None** - *would urge you to reconsider this response*

9. Land and Shoreline Use g. What is the current **comprehensive plan designation of the site-** *please refer to Comprehensive Plan Update just completed 2015.*

h. What is the current **shoreline master program** designation of the site? **No?** *Need to verify.*

13. **Recreation** a. What **designated and informal recreation opportunities** are in the immediate vicinity? *None? Need to indicate Marsh viewing sites from boardwalk.* c) Proposed measures to **reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant,** if any: *does not apply? Could in fact enhance habitat for salmon by ensuring Marsh sediment is clean. Would be a great PR opportunity and the City would be grateful.*

Thank you kindly for considering my comments.

Sincerely,

Val Stewart
Edmonds Planning Board