



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

PUBLIC PARTICIPATION PLAN  
**DUWAMISH MARINE CENTER**  
**SEATTLE, WASHINGTON**

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## **Introduction**

The Washington State Department of Ecology (Ecology) developed this public participation plan according to the Model Toxics Control Act (MTCA). This plan is designed to promote meaningful community involvement during the investigation and cleanup of the Duwamish Marine Center. The site is located in Seattle, Washington next to the Lower Duwamish Waterway (LDW). This plan describes the tools Ecology will use to inform the public about site cleanup activities, and the ways the community can become involved in this process.

Ecology and the potentially liable persons (PLPs), James and Jacqueline Gilmur, as Trustees of the James D. and Jacqueline H. Gilmur Living Trust, have negotiated a legal agreement called an Agreed Order that formally describes their working relationship. Under the Agreed Order the PLPs will conduct a Remedial Investigation (RI) and Feasibility Study (FS) and prepare a Draft Cleanup Action Plan (CAP) at the site. The Remedial Investigation/Feasibility Study (RI/FS) is required under WAC 173-340-350 and is part of the cleanup process for this site. The RI will determine the nature and extent of contamination in the upland area soil, groundwater, stormwater and stormwater solids, and seeps. The Feasibility Study will use the results of the RI to evaluate and select cleanup action alternatives for the site.

Cleanup actions might be identified during this RI or FS process that will eliminate or minimize current releases of contamination to the Lower Duwamish Waterway (LDW) or actions that are necessary to prevent an imminent threat to human health or the environment. Ecology will consider implementing such cleanup actions as interim actions under the existing Agreed Order.

## **Project Description**

### **Location**

This site is located at 6365 1<sup>st</sup> Avenue S in Seattle, Washington on the east bank of the Lower Duwamish Waterway (see figure on page seven). The site is bordered on the

north by Lone Star Investors Property, on the east by First Avenue S, and on the south and west by the Duwamish River, and by Slip 2 on the northwest. The final site boundaries will be defined by the extent of contamination determined during the RI.

### **Site Background**

Duwamish Marine Center leases portions of the property to other companies. Samson Tug and Barge operates in the northern portion of the Duwamish Marine Center, and Duwamish Metal Fabricators operates on the southern portion of the property. Burgess Enterprises formerly operated in the area now occupied by Samson.

There are three docks at the Duwamish Marine Center, which are known as the north, middle, and south docks. An approximately 80-foot-wide strip of land that runs between the docks and the parcel boundaries is owned by the Port of Seattle. A series of boathouses with moorage for 12 to 15 boats is located along the shoreline near the Duwamish Metal Fabricators facility.

Historically, the site has been the location of a marine shipyard, railyard, junk dealer, various construction services companies, and a barge shipping terminal. A marine railway was located adjacent to the southwestern shoreline from 1940 to the mid-1970s.

### **Contaminants of Concern**

Contamination at this site is due to historical use. The contaminants of concern in the soil are:

- Metals
- Polynuclear aromatic hydrocarbons (PAHs)
- Petroleum hydrocarbons
- Polychlorinated biphenyls (PCBs)

The contaminants of concern in the groundwater are:

- Metals
- PAHs
- Pentachlorophenol
- Tetrachloroethene
- Petroleum hydrocarbons

The contaminants of concern in the sediments adjacent to the site are:

- PCBs
- PAHs

### **Previous Cleanup Work**

Several environmental investigations have been conducted at the Duwamish Marine Center. In 2000, soil and groundwater samples were collected from the site. Petroleum hydrocarbons, metals, PCBs, and PAHs were detected above cleanup action levels in soil. Petroleum hydrocarbons were detected above cleanup action levels in groundwater.

A soil and groundwater investigation was performed at the property in 2002. The goal of the study was to determine the vertical and lateral extent of contaminants that had been identified in the previous investigation. Nineteen soil borings were placed at depths between 4 and 12 feet below ground surface and four groundwater monitoring wells were installed at the property. Petroleum hydrocarbons, metals, PCBs, and PAHs were above cleanup levels in soil and groundwater, and the groundwater also contained solvents.

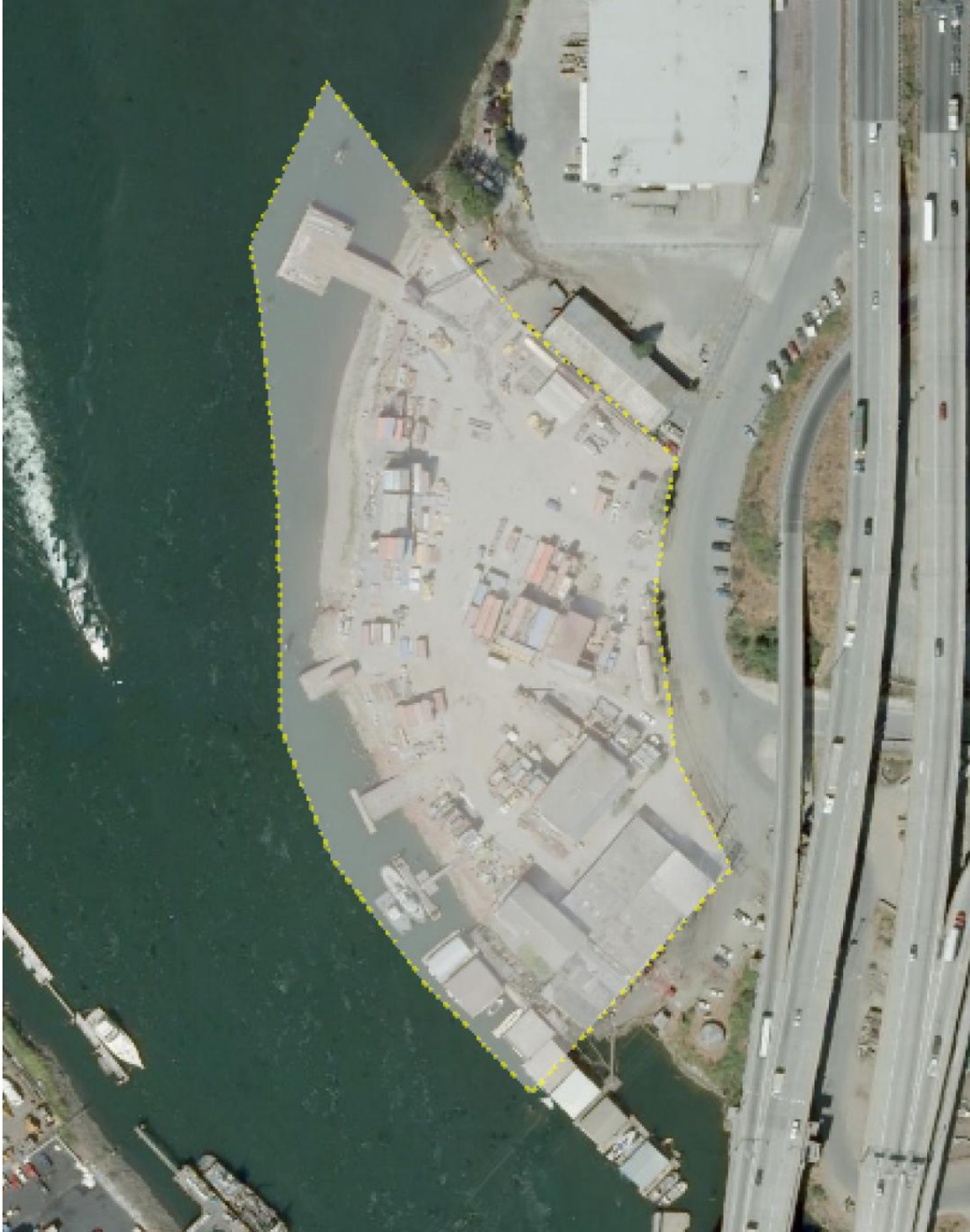
Approximately 50 cubic yards of soil containing lead above hazardous waste levels was excavated and removed from the central area of the site. Confirmation samples collected from the bottom and sidewalls of the excavation indicated that all soil containing lead above the hazardous waste levels was removed from the property.

Groundwater was sampled at one of the wells at the Duwamish Marine Center in November 2003 and February, May, and August 2004. Total mercury and petroleum hydrocarbons were detected in groundwater above levels of concern.

### **Current Activity**

The Agreed Order requires that Duwamish Marine Center complete a

- Work Plan
- Remedial Investigation (RI)
- Feasibility Study (FS), and
- A draft Cleanup Action Plan (CAP).



**Duwamish Marine Center**

## **Lower Duwamish Waterway (LDW) Site Cleanup**

The Duwamish Marine Center is located adjacent to the LDW site and within the LDW source control study area. The LDW site is a Superfund site that consists of the 5.5 mile stretch of the Duwamish River that flows north into Elliot Bay at the south end of Harbor Island. The LDW site is designated as a contaminated site under both state and federal law due to contaminants in the river and intertidal sediments. The site is one of several sites near the LDW that will be cleaned up to reduce the threat to human health and the environment from releases of hazardous substances, and to assist in preventing recontamination of the sediments after the LDW site cleanup is complete.

The sediments in the LDW site contain a wide range of contaminants due to years of industrial activity and runoff from urban areas. Ecology and EPA are working together to clean up contaminated sediments in the LDW site and to control sources of recontamination from nearby areas.

In 2000, EPA and Ecology entered into an Administrative Order on Consent with King County, the Port of Seattle, the City of Seattle, and The Boeing Company. This legal agreement requires these four parties perform a Remedial Investigation (RI) and Feasibility Study (FS) of sediment contamination in the waterway. Information about the RI/FS for the LDW site is located at

<http://yosemite.epa.gov/r10/cleanup.nsf/sites/lduwamish>.

EPA is leading the RI/FS work, and Ecology is leading source control efforts. The source control efforts will prevent recontamination of the waterway after cleanup. Source control is the process of finding and then stopping or reducing releases of pollution to the river from various sources such as direct discharges via piped outfalls, bank erosion from adjacent properties, surface runoff from adjacent properties, groundwater discharge, air deposition, and spills. It includes identifying and managing sources of contamination to waterway sediments in coordination with sediment cleanups.



Ecology is coordinating these source control efforts with the City of Seattle, King County, the Port of Seattle, the City of Tukwila, and EPA. Ecology partners with these other agencies through the Source Control Work Group. Their work includes a business inspection program; monitoring sediments from storm drain systems; permitting to prevent direct discharges to the waterway; contaminated site cleanups; and testing various household products/materials to determine if they contain chemicals found in waterway sediments.

As part of these source control efforts, Ecology is developing Source Control Action Plans (SCAPs) for the 24 subbasins (or source control areas) that drain to the LDW site. The SCAPS identify potential contamination sources and the actions needed to keep sediments from being contaminated again after cleanup occurs. In addition, the SCAPS describe source control actions that are planned or currently underway, and sampling and monitoring activities that will be conducted to identify additional sources.

A SCAP has been completed for the source control area where the Duwamish Marine Center is located and is known as the River Mile (RM) 1.7-2.0 East (Slip 2 to Slip 3). The SCAP was based on a thorough review of information pertinent to sediment recontamination in this source control area. This SCAP is located on Ecology's website: <http://www.ecy.wa.gov/pubs/0909085.pdf>

### **The Duwamish River Cleanup Coalition**

The Duwamish River Cleanup Coalition (DRCC) is an advisory group to EPA and Ecology and works with the South Park and Georgetown neighborhoods and other stakeholders to ensure a Duwamish River cleanup that is accepted by and benefits the community and is also protective of aquatic life, wildlife and human health.

DRCC was formed by an alliance of community, environmental, tribal, and small business groups affected by ongoing pollution and cleanup plans for the LDW. The coalition members include: Community Coalition for Environmental Justice, the Duwamish Tribe, I'M A PAL Foundation, Environmental Coalition of South Seattle,

Georgetown Community Council, People for Puget Sound, Puget Soundkeeper Alliance, South Park Neighborhood Association, Washington Toxics Coalition, and Waste Action Project.

DRCC is a formal "community advisory group" recognized by EPA and representing the interests of the community toward the cleanup work along the LDW. DRCC receives public participation grant funding from Ecology. They also receive technical assistance grants from EPA for technical advisors to review all LDW Superfund cleanup related studies and plans. They are involved in many aspects of the proposed Superfund cleanup and related MTCA cleanups. DRCC is working with Ecology to ensure that the cleanup and source control measures meet community standards.

### **Enhanced Public Participation**

Ecology will work with EPA and stakeholders according to the enhanced public participation efforts that occur for the LDW Superfund site. Ecology site managers and community involvement coordinators may participate in community meetings and events as needed. Ecology will coordinate with the DRCC throughout the public involvement process. This may include such activities as coordination for public meetings and sharing drafts of documents with DRCC for review, as appropriate.

Ecology's goal is to be transparent to the community and all other stakeholders. This will be done by posting electronic documents on Ecology's website for stakeholder review at key points in the Duwamish Marine Center cleanup process. The stakeholders will be able to see the planned schedule for the next phase of work at the site by reviewing the Agreed Order for the site.

### **Community Profile**

For decades much of the land along to the LDW has been industrialized. Current commercial and industrial operations include cargo handling and storage, marine

construction, boat manufacturing, marina operations, concrete manufacturing, paper and metals fabrication, food processing, and airplane parts manufacturing.

Although the LDW is viewed primarily as an industrial corridor, two residential neighborhoods border the banks of the river: South Park and Georgetown. The South Park neighborhood is on the western shore of the LDW, and the Georgetown neighborhood is on the eastern side of the Duwamish Waterway. The residents of the community are well known for their commitment to neighborhood issues particularly related to the ongoing site cleanups along the LDW. A description of these communities is provided below.

### **South Park Community Description**

The South Park neighborhood is located in South Seattle, on the west bank of the LDW. Native Americans of the Duwamish Tribe were the first residents of South Park who lived on the shores of the Duwamish River for thousands of years. This area was once a small farming town composed of Italian and Japanese farmers who supplied fresh produce to Seattle's Pike Place Market. South Park became part of the City of Seattle in 1907. By 1920 the Duwamish River was straightened out into a straight, deep channel that would accept ocean-going ships and barges. This change in the Duwamish greatly impacted South Park. The curving meanders had been straightened, which made it easier for industry to develop along the banks of the waterway.

In the mid 1960s, South Park was rezoned as industrial. Over 4,000 people complained and the City of Seattle changed the zoning to low-density residential. The City of Seattle built the South Park Community Center in 1989 which remains a vital resource within the community. The South Park Community Center offers a wide variety of free and low cost programs and special events. Special events include free breakfasts and family events. The community center provides before and after-school programs and school break camps for students. They also offer adult classes ranging from yoga to technology to English classes. South Park is also served by the City-owned neighborhood center, managed by the South Park Neighborhood Association. The neighborhood center houses

several non-profit and city services including the South Park Food Bank, City-sponsored South Park Action Agenda, and the Environmental Coalition of South Seattle.

The Seattle Public Library opened the new South Park branch at 8604 Eighth Avenue South (at Cloverdale Street) in September 2006. This new branch is 5,019 square feet and has the capacity to hold 18,700 books and materials (about one-third of the collection is Spanish-language, including bilingual children's materials and Spanish Language fiction and non-fiction). The library also has bilingual staff on hand to answer questions and to help patrons.

The South Park neighborhood is comprised of about 3,717 people of various ethnicities: 37% Hispanic, 34% white, 14% Asian, 7 % Black, 5% multiracial, 2% American Indian, 1% Native Hawaiian/Pacific Islander. The average age is 31 years old and the average income is \$20,917 (based on records from 2005). A variety of retail and service businesses are located along 14th Avenue South. Data from the Seattle Office of Economic Development lists the primary categories of employment in South Park as wholesale trade, transportation and utilities; construction/resources; manufacturing; and services.

### **Georgetown Community Description**

The Georgetown neighborhood is located in South Seattle, on the east side of the LDW across the river from South Park. Georgetown is Seattle's oldest neighborhood, settled by Luther Collins in 1851. It was incorporated as the City of Georgetown from 1904-1910, and later annexed by the City of Seattle.

According to records from 2005, just over 1,100 people live in Georgetown. The largest local employers in Georgetown are in the arts, entertainment, and recreation industries. The Georgetown neighborhood is home to large employers such as The Boeing Company and King County International Airport.

The community is host to local events such as art walks, an annual Arts and Garden Tour. The neighborhood is home to historic buildings such as the Old Georgetown City Hall, and the Georgetown Steam Plant. The South Seattle Community College has recently revitalized its Georgetown Campus and is home to the Puget Sound Industrial Excellence Center Apprenticeship and Education Center. The campus offers more than 25 apprenticeship programs including masonry, meat cutters, electricians, iron workers, and cosmetology. The neighborhood is also home to The Georgetown Community Council which meets once a month and is very active in the community.

### **Key Community Concerns and Issues**

Ecology and EPA conducted interviews with community members, environmental organizations, and community organizations in October 2002 for the LDW site Community Involvement Plan. The Duwamish Marine Center is located within the larger LDW site. Ecology conducted an abbreviated version of community interviews in 2006 and determined that the concerns raised in 2002 were still pertinent. In 2008 stakeholder groups provided comments to EPA and Ecology on the LDW Remedial Investigation Draft Report developed for the LDW Superfund site. Although these comments are directed to the entire Superfund site, they are relevant for the Duwamish Marine Center because it is part of the larger Superfund site. The stakeholder comments indicated that their concerns have remained constant with the concerns outlined below.

There is clear interest in this cleanup process along the LDW. The following is representative of significant concerns and issues expressed during the community interviews. Ecology will work to respond to community concerns through the cleanup process and through coordination with EPA, other organizations, such as state and local health agencies, and the community advisory group that has been established for the site.

- **Health:** Stakeholders are concerned that living close to the LDW could affect their health. They expressed concern about consumption of all bottom fish and parts of other fish, as well as contamination from chemicals, bacteria and viruses. There is concern about exposure to contaminated sediments through contact at public access

parks, employment at industries on the waterway, restoration work, and other cleanup work. Some said that there should be limited access to the river if there is a health risk.

- **Wildlife:** Stakeholders expressed concern for fish and wildlife. Sea lions, salmon, bottom fish, crabs, mussels, clams, shrimp, opossums, squirrels, ducks and other birds were mentioned, as well as concern about the disappearance of herons and for herons on Kellogg Island in the Duwamish Waterway.
- **Domestic animals:** There is concern about dogs eating garbage from the river and horses being on a greenbelt above the river.
- **River and groundwater contamination:** There is concern that the river is dying and that it contains contaminants, including PCBs and mercury. There is concern about the effect of septic systems near the river; sewer overflows; surface water runoff, including oil, antifreeze and fertilizers; unreported spills and illegal dumping; and pumping of waste into the river or groundwater. There is concern that permits for discharges to the river are not being enforced or will be revised to be less strict. There is concern that sources of PCBs are not being addressed and that calculated cleanup levels for many contaminants will not be strict enough. There is also concern that the current efforts to control ongoing sources of pollution will not be enough to actually control the sources.
- **Economics:** Some people interviewed are concerned about contamination lowering property values. Others are concerned that businesses will leave the area due to the designation of the LDW as a Superfund site.
- **Cleanup:** Some people are concerned that South Park and the businesses on the water will be affected by cleanup activities, such as increased truck or barge traffic and potential accidents. There are concerns about the costs of damages to natural resources and the possibility that parties responsible for contamination will do some

early cleanup activities but nothing more.

- **Information:** Several people expressed concern about a lack of warning signs for fishermen and recreational users and suggested that such signs should be installed. People are concerned about whether adequate information reaches the Spanish-speaking and other non-English-speaking communities and whether the average person and immigrants understand the risks.
- **Image:** While some people described the LDW neighborhood as an industrial area, others are concerned that it is perceived as a dumping ground.
- **Tribal Rights:** Some community members are concerned that the tribal rights to harvest fish and shellfish in the LDW are not being honored at a level protective of these treaty rights.

Other public concerns may be identified over the course of the cleanup through: public comment periods; further community interviews; surveys; meetings; and other contacts with individuals, community groups, or organizations.

Ecology will work to respond to community concerns through the cleanup process and coordination with other regulatory agencies and property owners as necessary.

## **Public Participation Activities and Responsibilities**

The purpose of this Public Participation Plan is to promote public understanding and participation in the MTCA activities planned for this site. This section of the plan addresses how Ecology will share information and receive public comments and community input on the site activities.

### **Public Participation Activities**

Ecology uses a variety of activities to facilitate public participation in the investigation and cleanup of MTCA sites. Ecology will integrate this input into its decisions as much as is feasible.

The following is a list of the public involvement activities that Ecology will use, their purposes, and descriptions of when and how they will be used during this site's investigation and cleanup.

### ***Formal Public Comment Periods***

Comment periods are the primary method Ecology uses to get feedback from the public on proposed investigation and cleanup decisions. Comment periods usually last 30 days and are required at key points during the investigation and cleanup process before final decisions are made.

During a comment period, the public can submit comments in writing, orally, and via e-mail. After formal comment periods, Ecology reviews all comments received and may respond in a document called a Responsiveness Summary.

Ecology will consider the need for changes or revisions based on input from the public. If significant changes are made, then a second comment period may be held. If no significant changes are made, then the draft document(s) will be accepted and finalized.

Future public comment periods will be held for other documents and legal agreements that are developed for the site.

### ***Public Meetings and Hearings***

Public meetings may be held at key points during the investigation and cleanup process. Public comment is accepted during public meetings. Ecology also may offer public meetings for actions expected to be of particular interest to the community. These meetings will be held at locations convenient to the community.



### ***Information Repositories***

Information repositories are places where the public may read and review site information, including documents that are the subject of public comment.

Ecology has established two repositories for the Duwamish Marine Center site.

- Washington State Department of Ecology, 3190 160th Avenue SE, Bellevue, WA 98008, (425) 649-7190. Please call for an appointment.
- Seattle Public Library, South Park Branch, 8604 Eight Ave S. at Cloverdale St. Seattle, WA

Site information also will be posted on Ecology's web site at:

<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=4146>

### ***Site Register***

Ecology's Toxics Cleanup Program uses its bimonthly *Site Register* to announce all of its public meetings and comment periods, as well as many other activities. To receive the *Site Register* in electronic or hard copy format, contact Seth Preston at (360) 407-6848 or by e-mail at [seth.preston@ecy.wa.gov](mailto:seth.preston@ecy.wa.gov). It is also available on Ecology's web site at:

[http://www.ecy.wa.gov/programs/tcp/pub\\_inv/pub\\_inv2.html](http://www.ecy.wa.gov/programs/tcp/pub_inv/pub_inv2.html)

### ***Mailing List***

Ecology has compiled a mailing list for the site. The list includes individuals, groups, public agencies, elected officials, private businesses, potentially affected parties, and other known interested parties. The list will be maintained at Ecology's Northwest Regional Office and will be updated as needed.

To have your address added or deleted from this mailing list, please contact the Ecology Victoria Sutton at (425) 649-7219 or [vsut461@ecy.wa.gov](mailto:vsut461@ecy.wa.gov).

### ***Fact Sheets***

Ecology will mail fact sheets to persons and organizations interested in the Duwamish Marine Center to inform them of public meetings and comment opportunities and important site activities. Ecology also may mail fact sheets about the progress of site activities.

### ***Newspaper Display Ads***

Ecology may place ads in the *Seattle Times* and other appropriate newspapers to announce public comment periods and public meetings or hearings for the site.

### ***Ecology Press Releases***

Ecology may release information to the *Seattle Times* and other appropriate press to announce public comment periods, public meetings, hearings, or other information for the site.

### **Public Participation Plan Update**

This public participation plan may be updated as the project proceeds. If a substantial is necessary, the revised plan will be submitted to the public for comment.

### **Points of Contact**

If you have questions or need more information about this plan or the Duwamish Marine Center site, please contact:

Victoria Sutton, Site Manager  
Washington State Department of Ecology  
3190 160th Avenue SE  
Bellevue, WA 98008  
Tel: (425) 649-7219  
Email: vsut461@ecy.wa.gov

## Glossary

**Agreed Order:** A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for the actions needed at a site. An agreed order is subject to public comment. If an order is substantially changed, an additional comment period is provided.

**Carcinogen:** Any substance or agent that produces or tends to produce cancer in humans.

**Cleanup Action:** Any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

**Cleanup Action Plan:** A document which identifies the cleanup action and specifies cleanup standards and other requirements for a particular site. After completion of a comment period on a Draft Cleanup Action Plan, Ecology will issue a final Cleanup Action Plan.

**Cleanup Level:** The concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

**Comment Period:** A time period during which the public can review and comment on various documents and proposed actions. For example, a comment period may be provided to allow community members to review and comment on proposed cleanup action alternatives and proposed plans.

**Cleanup Process:** The process for identifying, investigating, and cleaning up hazardous waste sites.

**Contaminant:** Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

**Exposure:** Subjection of an organism to the action, influence or effect of a hazardous substance (chemical agent) or physical agent.

**Facility:** Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed or, placed, or otherwise come to be located.

**Feasibility Study (FS):** A study to evaluate alternative cleanup actions for a site. A comment period on the draft report is required. Ecology selects the preferred alternative after reviewing those documents.

**Groundwater:** Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

**Hazardous Substance:** Certain categories of substances defined by law and regulation that pose a threat to human health and/or the environment. Typical hazardous substances are materials that are toxic, corrosive, ignitable, explosive, or chemically reactive.

**Hazardous Waste Site:** Any facility where there has been a confirmation of a release or threatened release of a hazardous substance that requires remedial action.

**Information Repository:** A file containing current information, technical reports, and reference documents available for public review. The information repository is usually located in a public building that is convenient for local residents such as a public school, city hall, or library.

**Interim Action:** Any remedial action that partially addresses the cleanup of a site.

**Model Toxics Control Act (MTCA):** Washington State's law that governs the investigation, evaluation and cleanup of hazardous waste sites. Refers to RCW 70.105D. It was approved by voters at the November 1988 general election and known as Initiative 97. The implementing regulation is WAC 173-340.

**Monitoring Wells:** Special wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to determine the direction of groundwater flow and the types and amounts of contaminants present.

**Natural Background:** The concentration of hazardous substance consistently present in the environment which has not been influenced by localized human activities.

**Owner or Operator:** Any person with any ownership interest in the facility or who exercises any control over the facility; or in the case of an abandoned facility, any person who had owned or operated or exercised control over the facility any time before its abandonment.

**Polycyclic Aromatic Hydrocarbon (PAH):** A class of organic compounds, some of which are long-lasting and carcinogenic. These compounds are formed from the combustion of organic material and are ubiquitous in the environment. PAHs are commonly formed by forest fires and by the combustion of fossil fuels.

**PCBs (polychlorinated biphenyls):** A group of toxic, persistent chemicals. Due to their non-flammability, chemical stability, high boiling point and electrical insulating

properties, PCBs were used in hundreds of industrial and commercial applications including transformers and capacitors for insulating purposes, and in gas pipeline systems as a lubricant. PCBs are a serious threat to public health because they have been proven to cause cancer in animals. In 1977 they were made illegal to produce, yet large amounts still remain in the environment.

**Potentially Liable Person (PLP):** Any person whom Ecology finds, based on credible evidence, to be liable under authority of RCW 70.105D.040.

**Public Participation Plan:** A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

**Release:** Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

**Remedial Action:** Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance and any health assessments or health effects studies.

**Remedial Investigation (RI):** A study to define the extent of problems at a site. When combined with a study to evaluate alternative cleanup actions it is referred to as a Remedial Investigation/Feasibility Study (RI/FS). In both cases, a comment period on the draft report is required.

**Remedial Investigation/Feasibility Study:** Two distinct but related studies. They are usually performed at the same time, and together referred to as the "RI/FS." They are intended to:

- Gather the data necessary to determine the type and extent of contamination;
- Establish criteria for cleaning up the site;
- Identify and screen cleanup alternatives for remedial action; and
- Analyze in detail the technology and costs of the alternatives.

**Responsiveness Summary:** A summary of oral and/or written public comments received by Ecology during a comment period on key documents, and Ecology's responses to those comments. The Responsiveness Summary is mailed, at a minimum, to those who provided comments and its availability is published in the Site Register.

**Site:** Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product

in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.

**Site Hazard Assessment (SHA):** An assessment to gather information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken.

**Site Register:** Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (360) 407-7200.

**Superfund: The federal government's program to clean up the nation's uncontrolled hazardous waste sites.**

**Surface Water:** Lakes, rivers, ponds, streams, inland waters, salt waters, and all other non-underground waters and courses within the state of Washington or under the jurisdiction of the state of Washington.

**Total Petroleum Hydrocarbons (TPH):** A scientific measure of the sum of all petroleum hydrocarbons in a sample (without distinguishing one hydrocarbon from another). The “petroleum hydrocarbons” include compounds of carbon and hydrogen that are derived from naturally occurring petroleum sources or from manufactured petroleum products (such as refined oil, coal, and asphalt).

**Underground Storage Tank (UST):** An underground storage tank and connected underground piping as defined in the rules adopted under Chapter 90.76 RCW.

**Zinc:** Zinc is a metallic chemical element; it has a white color with a bluish tinge. It has a high resistance to atmospheric corrosion. A major use is as a protective coating for iron and steel sheet and wire. Excess zinc in the body interferes with the metabolism of other minerals in the body.