Lower Duwamish Waterway Site
Seattle, Washington

January 2003

This fact sheet responds to questions from the public about the contamination study at the Lower Duwamish Waterway site. It also announces the completed Community Involvement Plan and Hispanic Community Involvement Supplement and a new community location for documents about the site.

Draft Reports Being Revised After Public Comment

Three draft reports about the contamination study at the Lower Duwamish Waterway site are now being revised to respond to comments from the public and environmental agencies. These reports, based on historical information, focused on three topics:

- Risks to people and wildlife.
- Areas with the highest levels of sediment contamination that should be cleaned up before the entire waterway study is completed.
- Additional studies needed to further evaluate risks to people and wildlife and decide what other cleanup is needed.

The reports were prepared for the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) by King County, the City of Seattle, the Port of Seattle, and The Boeing Company. For this site, these four parties are called the Lower Duwamish Waterway Group.

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Public's Concerns Focus on Health Risks

The public made thoughtful comments on the draft reports, including many about health risks. The questions and answers below respond to some of those comments.

What are the human health risks from contaminants in the Lower Duwamish Waterway?

Fish and shellfish from the Duwamish Waterway may contain contaminants or disease-causing organisms. Eating large amounts of fish and shellfish from the waterway may increase a person's risk for cancer and other diseases. EPA and Ecology agree with the following recommendations from the Washington State Department of Health:

- Eat no more than one meal a month of English sole, flounder or perch from the waterway.
- Do not eat clams and mussels from the waterway.
- Do not eat the gooey insides (the hepatopancreas) of crabs from the waterway.

Preliminary studies show very little risk to swimmers or waders from chemical contamination in the Duwamish. However, there is an advisory against swimming near combined sewer overflows, where raw sewage may be released during major storms.

These recommendations are based on a small amount of historical information. There will be more sampling of sediments, fish and shellfish to fully evaluate health risks from the waterway.

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Public's Concerns Focus on Health Risks *(continued from page 1)*

What are the most harmful chemicals in the Lower Duwamish Waterway?

There are many chemicals in Duwamish sediments, fish and shellfish. Much of the health risk comes from the four discussed below.

Polychlorinated biphenyls (PCBs) are manmade chemicals that were banned in the late 1970s. They stay in the environment for a long time and can build up in fish. PCBs may cause learning problems in children whose mothers ate PCB-contaminated fish during pregnancy. PCBs may also cause cancer.

Arsenic is found in fish in the Duwamish and throughout Puget Sound. Long-term contact with toxic forms of arsenic may cause skin, bladder, and other cancers.

Arsenic occurs naturally in Puget Sound area rock. Also, industrial activities have spread arsenic over a wide area around Puget Sound. It is uncertain how much arsenic in Duwamish fish comes from the waterway and how much comes from other sources.

Fish change much of the arsenic in their bodies to a less toxic form. More research will tell us how much toxic arsenic is in Duwamish fish.

Almost 200 people attended a community meeting last August to learn about the draft reports.

Polycyclic aromatic hydrocarbons (PAHs) are formed during the burning of substances such as coal, oil, gas, wood, garbage and tobacco and during the charbroiling of meat. Long periods of exposure to high levels of PAHs may increase a person's risk of cancer.

Mercury is a metal that occurs naturally in Puget Sound area rock. Industrial activities can add mercury to the environment. Methylmercury is a form that can build up in fish and harm people who eat large amounts of fish. The effects can include shaking, loss of memory, and changes in sight, hearing, and behavior. Methylmercury can harm the developing nervous system of unborn or young children.

Have risks to children, pregnant women, and their unborn children been considered?

Yes. The study used EPA's methods to assess health risks. These methods consider health effects for sensitive people, such as pregnant women and their unborn children. The study also considered risks to children who play on Duwamish beaches or eat fish from the waterway.

Do the reports consider risks to people who eat a lot of fish from the waterway?

Yes, the reports focused on Native Americans, who eat the

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largest amount of fish and shellfish from the Puget Sound area and are therefore at the greatest risk from eating them. The final report will also analyze risks to Asians and Pacific Islanders, who also eat large amounts of fish and shellfish.

Why was the risk from eating salmon not evaluated?

Adult salmon that return to the Duwamish Waterway spend most of their lives in the ocean. That is where they pick up most of the chemicals in their bodies.

Other Duwamish fish, such as English sole, spend most of their lives in the waterway. They pick up more chemicals from Duwamish sediments than salmon do. For this reason, risks were based on eating fish such as English sole.

Are there risks to wildlife?

Yes, levels of many chemicals may be high enough in some areas to harm clams, worms and other creatures that live in the waterway mud. Levels of arsenic, copper, and PCBs may be high enough to harm fish. Levels of PCBs may be high enough to harm great blue herons. These conclusions are based on limited information, and there will be more study to confirm them.

Proposing Early Action Sites

Early action sites are the areas of the Lower Duwamish Waterway that have the highest levels of contamination and should be cleaned up first.

How are early action sites identified?

Early action sites are being proposed based on risks to people or wildlife. To protect human health, the most highly PCB-contaminated areas were considered for early action sites. Areas with chemical concentrations higher than Washington State's standards to protect clams, worms, and other creatures that live in the mud were also considered. In general, areas were considered possible early action sites where three or more sampling locations exceeded any of these criteria.

What Happens Next?

EPA and Ecology have asked the Lower Duwamish Waterway Group to revise their reports based on our comments and consideration of all the comments we received. In spring 2003, after EPA and Ecology approve the final reports, they will be available at the repositories listed at the end of this fact sheet.

After the reports are completed, we will mail another fact sheet about the sites proposed for early action and plans for their cleanup. We will also provide information about plans for sampling Duwamish sediments, fish and shellfish.

Community Involvement Plans and New Information Repository

Ecology and EPA developed the Lower Duwamish Waterway Site Community Involvement Plan and the Hispanic Community Involvement Supplement to promote meaningful community involvement during the investigation and cleanup of contaminated sediments at the site. The agencies based the plans on community interviews and revised the draft plans based on community comments. The Community Involvement Plan is being translated into Spanish, and the Hispanic Supplement is already available in both English and Spanish. They are being added to the site repositories and the site web page. (*See "How to Get More Information" on page 4.*)

Reports and other information about the Duwamish cleanup are now available at the Georgetown Gospel Chapel. The Chapel maintains information about other cleanups in the area and replaces the South Park Community Center as the site document repository in the community. Ecology and EPA encourage people to visit this repository. (*See address on page 4.*)

Site Description and Background

The Lower Duwamish Waterway has served as Seattle's major industrial corridor since it was created by a widening and straightening of the Lower Duwamish River in the early 1900s. Past and present discharges to the waterway include boat manufacturing and repair, marina operations, airplane parts manufacturing, and metals fabrication. In addition, twelve combined sewer overflows and over one hundred storm drains discharge to the waterway.

EPA added the Lower Duwamish Waterway site to the Superfund list on September 13, 2001. This is EPA's list of the nation's most contaminated hazardous waste sites that are targeted for investigation and cleanup.

In December 2000, EPA and Ecology signed an agreement with the Lower Duwamish Waterway Group. Under the agreement, the group is investigating the waterway contamination, assessing potential risks to human health and the environment, and evaluating cleanup alternatives. Separate agreements for the actual cleanup of the sediments and the control of contaminant sources may involve other parties.

How to Get More Information

Call one of our information repositories for an appointment to review documents:

Georgetown Gospel Chapel
6606 Carleton Avenue South, Seattle, WA, 206-767-3207

EPA Region 10 Records Center
1200 Sixth Avenue, Seattle, WA, 206-553-4494

Washington State Department of Ecology
3190 160th Avenue SE, Bellevue, WA, 425-649-7190

Visit EPA's web site: http://www.epa.gov/r10earth/ Click on Index, then "L," and then "Lower Duwamish Waterway Site."

Call or e-mail one of the contacts below.

General Information and Requests for Reasonable Accommodations for Disabilities:
Cindy Colgate Schuster, EPA Community Involvement Coordinator
206-553-1815 or toll-free at 1-800-424-4372
schuster.cindy@epa.gov

Sediment Study:
Allison Hiltner, EPA Project Manager
206-553-2140 or toll-free at 1-800-424-4372
hiltner.allison@epa.gov

Source Control:
Rick Huey, Ecology Project Manager
425-649-7256
rhue461@ecy.wa.gov

Si desea hablar con alguien que habla español, llame a Lilibeth Serrano Vélez, EPA, (206) 553-1388.

For TTY users: Please call the Federal Relay Service at 1-800-877-8339 and give the operator Cindy Schuster's phone number.