



PUBLIC PARTICIPATION PLAN
GAS WORKS SEDIMENT AREA
SEATTLE, WASHINGTON

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TABLE OF CONTENTS

INTRODUCTION	3
LOCATION AND SITE BACKGROUND	3
Location	3
Site Background.....	3
Overview of Previous Sediment Investigations.....	4
Contaminants of Concern	5
Current Activity	6
COMMUNITY PROFILE	8
Wallingford Community Description	8
KEY COMMUNITY CONCERNS AND ISSUES	8
Community Awareness and Involvement.....	9
PUBLIC PARTICIPATION ACTIVITIES AND RESPONSIBILITIES	10
Public Involvement Activities.....	10
Information Repositories	11
Points of Contact.....	12
GLOSSARY	13
FIGURE	
Site Location: Gas Works Sediment Area	7

INTRODUCTION

The Washington State Department of Ecology (Ecology) has developed this public participation plan in cooperation with the City of Seattle (City) and Puget Sound Energy (PSE), pursuant to the Model Toxics Control Act (MTCA) and Agreed Order No.2008, to promote meaningful community involvement during the investigation and cleanup of sediments adjacent to Gas Works Park in Lake Union, Seattle, Washington. This plan outlines and describes the tools that Ecology uses to inform the public about site activities and identifies opportunities for the community to become involved.

Ecology, the City, and PSE have negotiated a legal agreement called an Agreed Order that formally describes their working relationship, outlines the scope of work and sets a schedule for choosing a cleanup remedy for sediments in Lake Union adjacent to Gas Works Park. The agreed order requires that the City and PSE complete a *remedial investigation (RI)* to determine the nature and extent of contamination in this area. It also requires that a *feasibility study (FS)* be completed to evaluate cleanup alternatives

LOCATION AND SITE BACKGROUND

The Gas Works Area of investigation, covered under this Agreed Order, is adjacent to Gas Works Park in Lake Union (See figure on page 7). This area has no defined site boundary at this time. It includes the underwater sediments that contain hazardous substances, including polycyclic aromatic hydrocarbons (PAHs) that are at least in part associated with releases from the manufactured gas plant, tar refining and other historical activities on the uplands area of Gas Works Park.

The proposed work under the current agreed order will be managed as two side-by-side study areas, the Eastern and Western Study Areas. The Eastern Study Area *remedial investigation/feasibility study (RI/FS)* will be completed by Puget Sound Energy. The City of Seattle will complete the RI/FS for the Western Study Area. The City and PSE will coordinate investigation work and jointly review documents prior to submittal to Ecology.

Site Background

Gas Works Park is a 20-acre park located at 2101 North Northlake Way. The park juts into Lake Union (the lake lies to the east, west and south of the park). The Park's north end is bounded by Northlake Way.

From the early 1900s until 1956, gas companies operated a plant at the site that converted coal and oil into manufactured gas. The American Tar Company operated nearby, refining coal tar obtained as a by-product of the gas manufacturing process, and producing coal tar-based products.

After the gas plant closed in 1956, the site was used for equipment storage by Puget Sound Energy. In 1962, the City of Seattle purchased the property under contract that transferred the property to the City in 1973. By the mid-1970s, most of the old

equipment was removed, park landforms were created, and by-products of the original gas plant were covered with soil. In 1976, the park was opened to the public.

Subsequent remedial investigative work on the upland and offshore sediments conducted under the supervision of Washington State Department of Ecology demonstrated that by-products from the gas works and tar refinery contaminated the soil and groundwater of the park, as well as adjacent sediments in Lake Union.

In 1984, investigations at the uplands area of Gas Works Park identified several contaminants including petroleum compounds, polycyclic aromatic hydrocarbons (PAHs) and benzene. The Park was temporarily closed during an investigation into risks to park visitors. The Park was later re-opened after it was determined that no significant health risks existed as long as park visitors did not come into contact with soil in the park or wade, swim or fish in adjacent Lake Union. Cleanup activities for the upland focused on reducing soil and groundwater contamination in the park and contamination seeping into the lake.

Lake Union has been strongly influenced by human activity. In 1912 the Cedar River was diverted from its natural course into Lake Washington. In 1916, the natural outlet of Lake Washington into the Black River was blocked and the Lake Union/ Lake Washington ship canal and Hiram M Chittenden locks were constructed to allow boats to navigate between Puget Sound and Lake Washington. These changes had major impacts on Lake Union. The Cedar River and Lake Washington now flows through the ship canal into Lake Union. The water levels in both Lake Washington and Lake Union are now heavily influenced by the operations of the locks.

These historic actions have largely reduced the size of Lake Union from over 900 acres to current area of approximately 600 acres.

Overview of Previous Sediment Investigations

The sediments in Lake Union have been investigated numerous times over the last several decades. From the early 1980s to 2002, many public and private entities carried out investigations offshore of Gas Works Park in Lake Union. Some of these studies are strictly related to water quality and others include both water quality and sediment sampling. Sediment investigations since 1980s are summarized below:

- In 1984 and 1994, US Environmental Protection Agency (USEPA) conducted extensive studies to examine the surface sediments offshore of Gas Works Park. Sediment samples were analyzed for metals and organics, with limited concurrent water sampling.
- In 1986, Ecology carried out a study on the triad approach to freshwater sediments assessment. They analyzed sediment samples collected from the lake for organics, metals, conventional analytes, benthic infauna, and sediment bioassays.

- In 1991, an investigation was conducted at Northlake Shipyard, located west of Gas Works Park. This study focused on characterizing the chemical characteristics and toxicity of bottom sediments due to the presence of sandblasting materials.
- In 1996, 1997, and 2000, benthic macro invertebrate and sediment sampling was conducted to evaluate the effects of the University Regulator stormwater outfall, which began discharging into the lake in 1995.
- Puget Sound Energy carried out a sediment investigation in 1999. This investigation involved collecting surface sediment grab samples and subsurface sediment cores. Sediment samples were analyzed for conventional analytes, metals, semi-volatile organics, and grain-size distribution. In addition, an underwater video survey was performed to assess the general condition of the bottom sediments in North Lake Union.
- In 2002, Ecology and Texas A&M University conducted chemical analysis and biological toxicity testing on surface sediment grab samples collected from the lake.
- Finally, Puget Sound Energy again analyzed sediment samples for conventional analytes, metals, TBT, *polychlorinated biphenyls (PCBs)*, and semi-volatile organics in 2002. They also investigated the chemical and physical properties of the sediments and conducted studies to determine net sedimentation rates in Lake Union.

Results of previous sampling indicate high levels of heavy metals and polycyclic aromatic hydrocarbons (PAHs) in Lake Union sediments and sediments immediately offshore of Gas Works Park.

Contaminants of Concern

Contamination in Lake Union is attributed to a variety of sources due to the historical urban uses of the lake and its shores. They include the following:

- industrial and commercial activities on the uplands,
- in-water and over-water operations that have caused or resulted in spills and leaks,
- shoreline extension,
- storm water discharges,
- wastewater disposal, and
- other discharges to the lake.

As a result of these activities, sediment investigations to date have indicated high levels of the following contaminants:

- polycyclic aromatic hydrocarbons (PAHs),
- polychlorinated biphenyls (PCBs),
- arsenic,

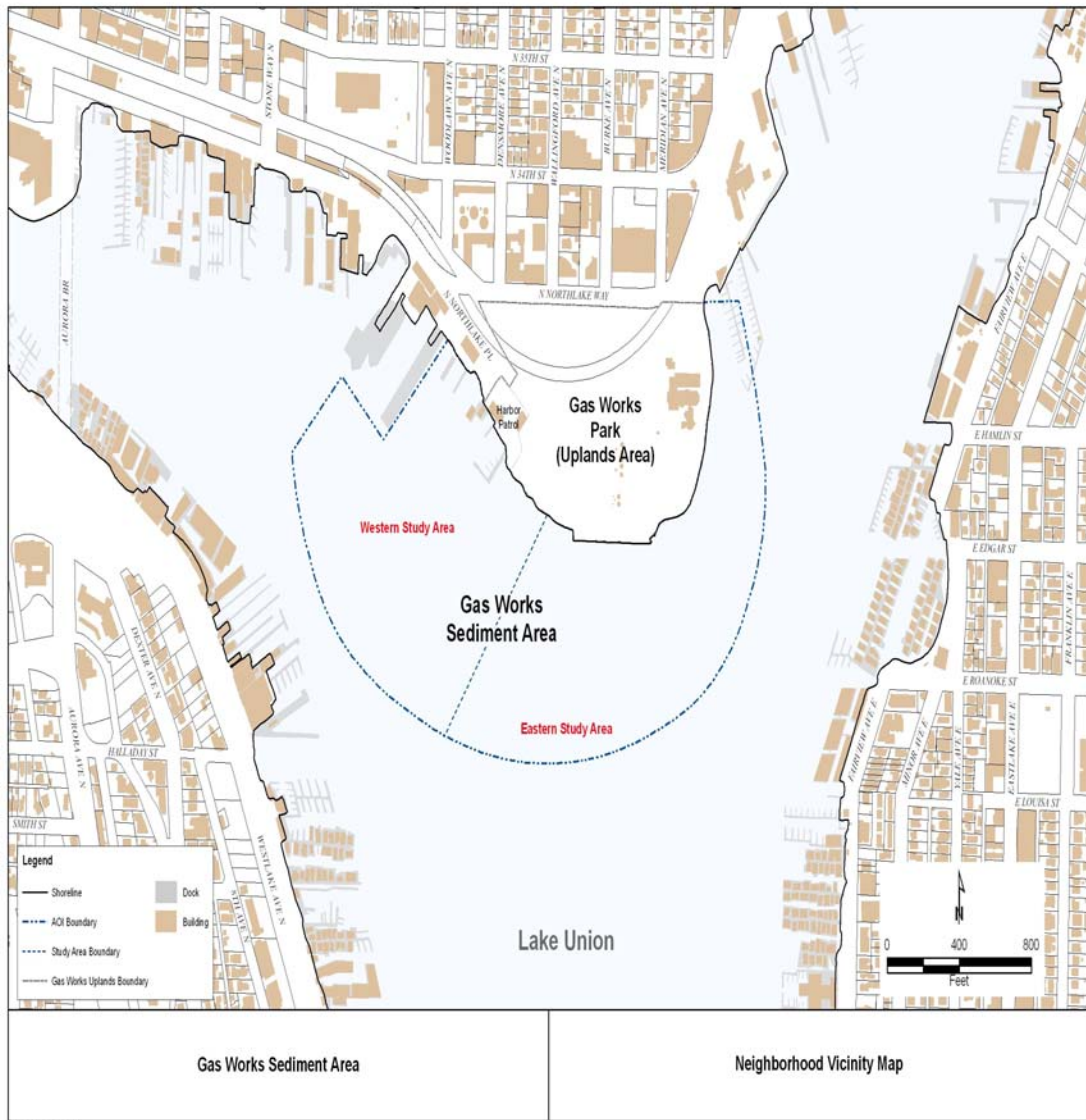
- lead,
- charcoal,
- coal-tar pitch,
- mercury and other metals.

Current Activity

The proposed actions to be conducted under the Agreed Order include the following:

- Completion of a remedial investigation (a study of the extent and nature of contamination) for the lakebed sediments
- Development of a feasibility study (cleanup alternatives) that will remove or control identified risks associated with impacted sediments.

This study will also investigate the possibility of recontamination after cleanup work.



Site Location Map: Gas Works Sediment Area

COMMUNITY PROFILE

Lake Union and the Lake Washington ship canal have been a center of commercial, industrial and recreational use. The Gas Works Park site on the shore of Lake Union is located in the Wallingford neighborhood, and residents of the community are well known for their commitment to neighborhood issues. A description of the community is provided below.

Wallingford Community Description

Early development in the Wallingford community was as a result of the emergence of Lake Union as a hub for transportation and industry. The area experienced rapid residential growth in the early 1900s, with settlers drawn by the industries along the lake. The construction of the Lake Washington ship canal by 1916 further spurred industrial growth and transportation in this neighborhood. In the 1950s, the national trend was for families to move to the suburbs. This led to a slow growth rate in the Wallingford community. The manufactured gas plant was closed in 1956, and the community continued to decrease in size until the beginning of the 1970s. The manufactured gas plant site was purchased by the City of Seattle, and opened as a public park in 1976.

The Wallingford Community council was formed in the late 1960s to provide a voice for neighbor's concerns about neighborhood improvement. For more than two decades, the Wallingford community has grown as a residential neighborhood and the Council continues to effectively represent community interests today.

KEY COMMUNITY CONCERNS AND ISSUES

Interviews with community members, environmental and community organizations were conducted by Ecology in January 2005. There is definite interest in this cleanup process. The following is representative of significant concerns and issues expressed during the interviews.

Most of the community members interviewed, expressed concerns about the cleanup. A few did not realize that there is any contamination in Lake Union sediments, but were aware of contamination in the uplands area of Gas Works Park.

Two individuals had no concerns about this particular site but were concerned about air pollution in the neighborhood. They did not think it was necessary to spend time and money on cleanup of sediments as they believe that any contamination in sediments will eventually disappear naturally. They suggested that a justification for the cleanup is needed.

Health risks: Some people expressed concern about the impacts of contaminants on people and the environment. They expressed concerns about potential health risks present at the site, including risks at the public park.

Community awareness and involvement: Most people interviewed were aware of contamination at the site while a few were not. Several groups expressed concern that the community needs to be made aware of the site and why it needs to be cleaned up. Most of those interviewed expressed a desire to receive information promptly and suggested that the cleanup process, especially public involvement, be open and accessible. Some concern was expressed that public involvement activities occur early in the process. Some individuals expressed concern that the general public was not generally knowledgeable about the cleanup process and that technical data is too difficult to understand.

Lake environment: Most people expressed concern for the health of the lake. There are also concerns about impacts to salmon habitat. Some individuals wondered if there will be a habitat restoration plan at the end of the cleanup.

Public access: One person was concerned about the impact of the cleanup on the normal rowing course and wondered whether the use of large equipment for cleanup will result in limited access. Others expressed concerns about further restriction on the use of the shoreline. They made reference to current signage at the edge of the park that restricts wading and swimming in Lake Union.

Future development: Many people expressed concerns about the length of time it will take to get the site cleaned up and back to productive use without any further restrictions. They expressed the desire to see a reasonable timeframe for the cleanup.

Cleanup: There was interest in how the extent of contamination will be determined, what remedial actions will be taken to clean up the site, and how future contaminated materials will be disposed of. Some people interviewed were concerned about the types of contaminants, how clean the site will be at the end of the process, and what follow-up will be done to ensure that the cleanup was effective. Others expressed concern about ongoing sources of pollution (e.g., stormwater and combined sewer outfalls) and source control plans for the site. Some groups expressed concern that cleaning up existing contamination in the lake does not make sense without parallel effort to prevent future contamination from occurring.

Additional 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 the City, PSE, 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 Involvement Activities

Ecology uses a variety of activities to facilitate public participation in the investigation and cleanup of MTCA sites. Ecology will implement input provided by the community whenever possible.

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 cleanup.

Formal Public Comment Periods

Comment periods are the primary method Ecology uses to get feedback from the public on proposed 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 comment in writing. Verbal comments are taken if a public hearing is held. 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 finalized.

Additional public comment periods will be held for draft remedial investigation/feasibility studies, for any draft cleanup action plans that are developed for the site, and for any future legal agreements regarding this site.

Public Meetings and Hearings

Public meetings may be held at key points during the investigation and cleanup process. 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 four repositories for the Gas Works Sediment Area cleanup project.

- Seattle Public Library – Wallingford, 1501 North 45th Street, Seattle.
- Seattle Public Library – Central 1000 4th Avenue 5th Floor, Seattle.
- Seattle Public Library- Fremont 731 North 35th Street, Seattle.
- Fremont Neighborhood Services Center, 908 North 34th Street, Seattle
- Washington State Department of Ecology, 3190 160th Avenue SE, Bellevue, WA 98008, (425) 649-7190. Please call for an appointment.

Some site information also will be posted on Ecology's web site at <http://www.ecy.wa.gov/programs/tcp/sites/gaswkspk/gaswks.htm>

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 Linda Thompson at (360) 407-6069 or by e-mail at Ltho461@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

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.

Please contact **Justine Asohmbom at (425) 649-7135 or juas461@ecy.wa.gov** if you would like to be involved or have your address added to or deleted from this mailing list.

Fact Sheets

Ecology will mail fact sheets to persons and organizations interested in the Gas Works Sediment Area cleanup project 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*, *Seattle Post Intelligencer*, *North Seattle Herald Outlook*, and *Ballard News Tribune* to announce public comment periods and public meetings or hearings for the site.

Plan Update

This public participation plan may be updated as the project proceeds. If an update 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 Gas Works Sediment Area cleanup project, please contact the following:

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GLOSSARY

Agreed Order: A legal agreement between Ecology and a potentially liable person to conduct work toward a cleanup.

Cleanup: Actions taken to deal with a release, or threatened release of hazardous substances that could affect public health and/or the environment. The term "cleanup" is often used broadly to describe various response actions or phases of remedial responses such as the remedial investigation/feasibility study.

Cleanup Action Plan (CAP): A document that explains which cleanup alternative(s) will be used at sites for the cleanup. The cleanup action plan is based on information and technical analysis generated during the remedial investigation/feasibility study and consideration of public comments and community concerns.

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.

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

Feasibility Study: This study develops and evaluates cleanup options for a given site.

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

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.

Model Toxics Control Act (MTCA): Legislation passed by citizens of the State of Washington through an initiative in 1988. Its purpose is to identify, investigate, and clean up facilities where hazardous substances have been released. It defines the role of Ecology and encourages public involvement in the decision making process. MTCA regulations are administered by the Washington State Department of Ecology.

Potentially Liable Person: Any individual(s) or company(s) potentially responsible for, or contributing to, the contamination problems at a site. Whenever possible, Ecology requires these PLPs, through administrative and legal actions, to clean up sites.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city and

county) newspaper of largest circulation; and the opportunity for the interested persons to comment.

Public Participation Plan: A plan prepared to encourage coordinated and effective public involvement designed to the public's needs at a particular site.

Remedial Investigation: This study characterizes the site and defines the extent of contamination.

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 especially valuable during the Cleanup Action Plan phase at a site when it highlights community concerns.

Risk: The probability that a hazardous substance, when released into the environment, will cause an adverse effect in the exposed humans or living organisms.

Sediments: Settled particles located at the bottom of a lake, river or in wetlands. Sediment(s) also includes settled particulate matter exposed by human activity (e.g., dredging) to the biologically active aquatic zone or to the water column.

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.

Toxicity: The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants and animals.