

**Elliott Bay/Duwamish Restoration Program  
1999 Annual Report**

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**Panel Publication 24  
April 2000**

# **Elliott Bay/Duwamish Restoration Program 1999 Annual Report**

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Individuals and organizations needing further information about the Elliott Bay/Duwamish Restoration Program should contact the Administrative Director at the following address and telephone number:

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The Panel of Managers holds regularly scheduled meetings that are open to the public. Technical Working Group and committee meetings are scheduled on an as-needed basis, and are also open to the public. Meetings are generally held at the National Oceanic and Atmospheric Administration, National Marine Fisheries Service - Regional Directorate Conference Room, Building #1, 7600 Sand Point Way NE, Seattle. The Panel recommends that you contact the Administrative Director at the above phone number to confirm meeting schedules and locations. The Panel also holds periodic special evening and weekend public information meetings and workshops.

#### General Schedule for Panel and Committee Meeting Dates

Panel: quarterly - first Thursday of January, April, July, October from 9:30 A.M. - 12:30 P.M.  
Habitat Development Technical Working Group: scheduled as needed.  
Sediment Remediation Technical Working Group: scheduled as needed.  
Public Participation Committee: scheduled as needed.  
Budget Committee: scheduled as needed.

#### Environmental Review of Specific Projects

Formal hearings and comment periods on appropriate environmental documents for proposed sediment remediation and habitat development projects will be observed. Please contact the Administrative Director for more information.

<p>This information is available in accessible formats on request at (206) 296-0600 (voice) and 1-800-833-6388 (TTY/TDD users only).</p>
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## Introduction

On March 19, 1990, the United States filed a complaint for the National Oceanic and Atmospheric Administration (NOAA) acting on behalf of the public as a trustee for natural resources. The complaint was filed under Section 107 of CERCLA, 42 U.S.C. § 9607 (a), to assess and recover damages for alleged injuries to United States' trust resources in Elliott Bay and the Duwamish River. The other natural resource trustees who were parties to the Consent Decree were: the U.S. Fish and Wildlife Service (USFWS), Washington State Department of Ecology (Ecology), The Suquamish Tribe, and the Muckleshoot Indian Tribe. The defendants named in the lawsuit were the Municipality of Metropolitan Seattle (King County) and the City of Seattle (City).

The lawsuit was settled by consent decree on December 23, 1991. The settlement stipulates that King County and the City will provide a combination of cash payments, real estate, and in-kind services with a total value up to \$24 million. Within the \$24-million budget, \$12 million is set aside for sediment remediation projects, \$5 million for habitat development projects, up to \$5 million for acquisition of real estate for habitat development, and up to \$2 million for source control measures in addition to those planned and implemented by the City and County. The Consent Decree and a detailed summary of the settlement appears in the *Elliott Bay/Duwamish Restoration Program 1992 Annual Report*, available from the Administrative Director.

From its inception through the present, the Panel of Managers (Panel) has selected sites for sediment remediation and habitat development activities and engaged in source control activities following substantial public review and comment. The Program's goals, organization, site selection process, public comments, and responses are presented in the *Elliott Bay/Duwamish Restoration Program Concept Document* (Panel Publication 7), published in June, 1994. Descriptions of sediment remediation and habitat development sites are provided in the *Concept Document* and addenda issued in 1996 and 1997.

This annual report (1999) summarizes implementation of the settlement during the eighth year of the Elliott Bay/Duwamish Restoration Program (Program). The report is divided

into five major parts. The introduction provides a discussion of program organization and the geographic area covered by the settlement. An executive summary highlighting 1999 activities in all program areas is presented in the second section. The third section, 1999 Program Chronology, provides highlights taken from minutes of Panel and technical working group meetings. In the fourth section, working group and committee reports describe specific project activities and program developments. The final section provides text of resolutions passed by the Panel during 1999, as well as a report on cash disbursements from the Court Registry account. Appendix A, which includes an organizational chart and listing of Panel participants, is provided for readers who are interested in the Panel organization plan. Appendix B lists the Panel publications issued to date.

### **Elliott Bay/Duwamish Restoration Program Organization**

The Panel was established by the Consent Decree to manage the implementation of the settlement reached between the natural resource trustees and King County and the City of Seattle. The Panel consists of designated voting representatives and alternates from all parties to the Consent Decree. In 1992, the Panel established a Sediment Remediation Technical Working Group (SRTWG), and a Habitat Development Technical Working Group (HDTWG) to advise the Panel. Also established were the Public Participation Committee and the Budget Committee.

NOAA, through its National Marine Fisheries Service - Restoration Center Northwest, General Counsel Natural Resources, and Damage Assessment Center representatives has been delegated by the Panel the duties and responsibilities of "Administrative Director" (Director). The Director manages and maintains the Administrative Record, is responsible for logistics and planning of Panel and Technical Work Group meetings, and for the dissemination of Panel documents and information requests. The Director is also responsible for tracking Panel resolutions and court registry account activity.

The Panel, Habitat Development and Sediment Remediation Technical Working Groups, Public Participation Committee, Budget Committee, and the Administrative Director comprise the managerial, technical, outreach, and administrative components of the Elliott Bay/Duwamish Restoration Program.

The Panel, through the independent actions of individual representatives, works cooperatively and monitors the process of others initiating restoration projects and other developments or policies affecting the Elliott Bay/Duwamish River ecosystem. The Panel has sponsored public meetings and outreach presentations.

### **Geographic Boundaries**

The area encompassed by the settlement includes Elliott Bay eastward of a line between Alki Point and West Point including the shoreline ten meters upland from the mean high water line within Elliott Bay, and the Duwamish River from the river mouth to the head of navigation (see Figure 1). For purposes of habitat development, the covered area includes tributaries to the Duwamish River.

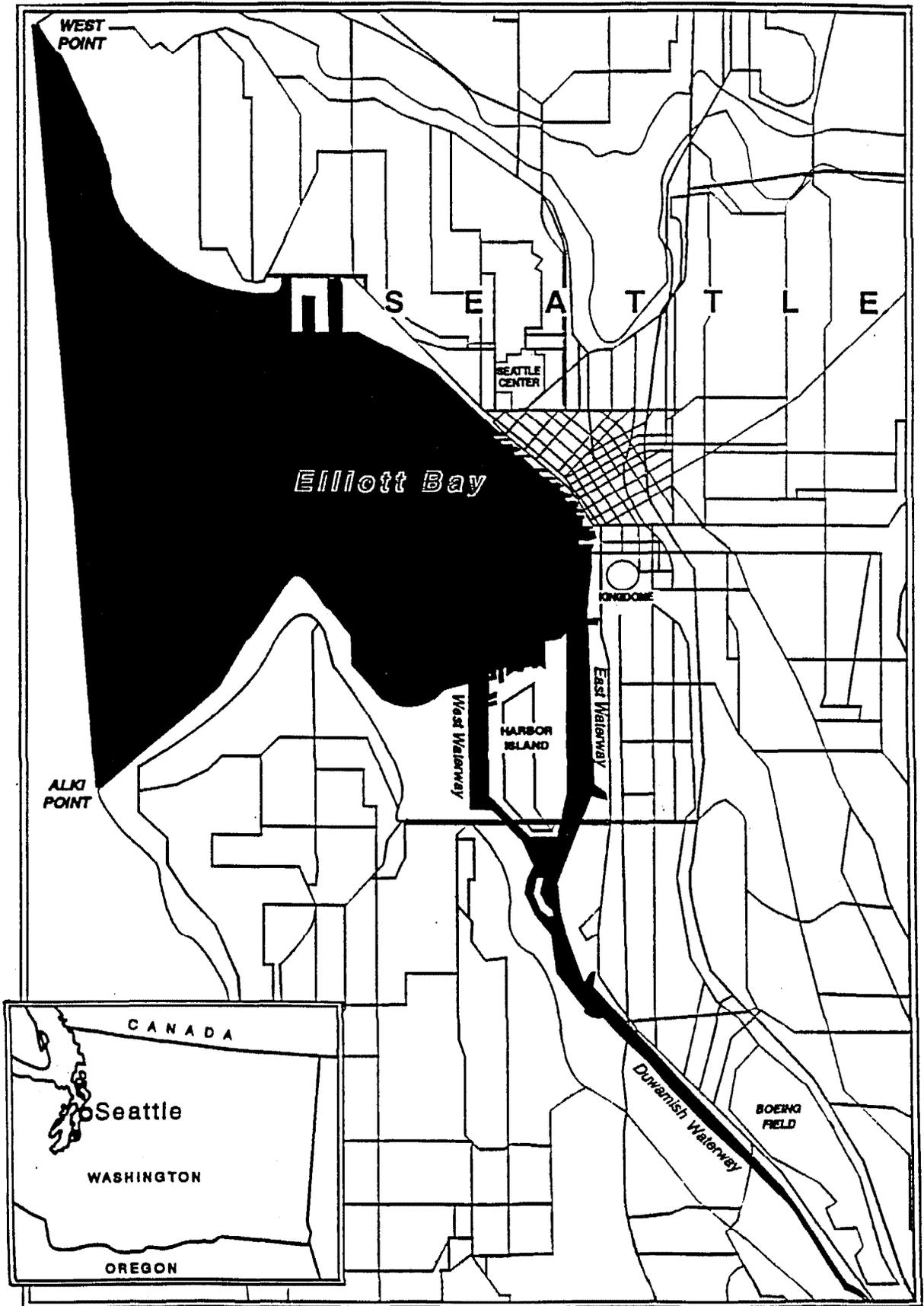


Figure 1. ■ Area Covered by Settlement

## **Executive Summary**

### **1999 Activities**

Project activities in 1999 included additional site selection activities, environmental investigations, cultural resource assessments, acquisition negotiations, design, permit planning, and bidding and construction. Figure 2 provides the location of Panel projects in the area encompassed by the settlement, with the exception of the Porter Levee habitat acquisition site which is located at River Mile 34.5, King County.

#### **Habitat Development**

During 1999, the Habitat Development Technical Working Group, chaired by Curtis Tanner of the U.S. Fish and Wildlife Service (USFWS), continued to guide the Panel concerning habitat projects and acquisition of real property for the purpose of habitat restoration.

Monitoring results of the completed Elliott Bay Nearshore Substrate Enhancement Project indicated that the shell, gravel, cobble, and spall subtidal plots are providing habitat to a variety of marine organisms. Restoration project construction at the former Seaboard Lumber site began in the early months of 1999 and connection to the Duwamish Waterway was achieved in the Fall.

Acquisition efforts for a conservation easement for the Hamm Creek project were successfully completed in May, and the Corps of Engineers initiated construction began in August. The intertidal basin was connected to the Duwamish Waterway in early September. Planning for enhanced intertidal wetland areas at the former Kenco Marine site continued, and King County personnel continued planning and permitting efforts for the construction of an intertidal basin at North Wind's Weir, at the Cecil B. Moses Memorial Park.

The Corps of Engineers completed the reconnection of a remnant slough to the river at the Porter Levee site, which was purchased with Panel funds. The working group also

engaged in discussions with People for Puget Sound and partners concerning long term stewardship of the Panel's habitat restoration projects.

### **Sediment Remediation**

During 1999, members of the Sediment Remediation Technical Working Group chaired by Pat Romberg, King County Department of Natural Resources, discussed the Norfolk sediment remediation project and the proposed Duwamish/Diagonal sediment remediation project. The Norfolk remediation was completed in 1999, and entailed dredging up to 9 feet in polychlorinated biphenyl (PCB) "hot spots" and from 3 feet to 6 feet in other less contaminated areas of the site. Results of the first sampling event of a five-year monitoring program were presented in the *April 1999 Project Closure Report* (Panel Publication No. 22).

Working group members discussed bis(2-ethylhexyl)phthalate (phthalates), a seemingly ubiquitous chemical of concern, mercury, and PCBs and evaluated a report concerning potential recontamination of the proposed Duwamish/Diagonal site by phthalates. Phthalates are found in undercoatings of automobiles and plastic coatings. State sediment standards identify phthalates as a suite of chemicals of concern and point of discussion concerning sediment remediation. Discussions with the Department of Ecology in November resulted in preliminary agreement that a clean-up could proceed at the project site on the basis of mercury and PCB removal, given that the proposed project focuses on the improvement of the site even though recontamination by phthalates could occur.

### **Source Control**

Source Control activities are discussed by the Panel pursuant to recommendations made by the City of Seattle and King County Department of Natural Resources in concert with members of the Sediment Remediation Technical Working Group. During 1999, Source Control funds were approved for the evaluation of recontamination potential and completion of the site assessment report for the proposed Duwamish/Diagonal remediation project. Study results were presented and discussed by members of the Sediment Remediation Technical Working Group in September. The evaluation, contained in a report entitled Technical Memorandum: Mass Balance Model, indicated that phthalates would require significant load reduction to meet SQS levels (up to 95% in

one estimate) and that background deposition alone could be high enough to cause exceedences.

### **Budget Committee**

The Budget Committee, chaired by Margaret Duncan of the Suquamish Tribe, was established to assist the Panel and technical working group members in budget development and review of habitat and sediment remediation project scopes, schedules and budgets. The committee also tracks credits to the City of Seattle and King County for real property acquisitions and source control activities. The Consent Decree obligated King County and the City of Seattle to each pay the sum of \$6 million dollars, or a sum of funds that in combination with in-kind services have a total value of \$6 million, into the Court registry account for sediment remediation (Consent Decree, ¶19[a]) and \$2.5 million for habitat development activities (Consent Decree, ¶27) into the registry account from 1992 through 1997. Of the total \$17 million, up to \$2 million could be spent on expenses of Panel functions support (Consent Decree, ¶10[a]), and up to \$3 million could be spent on expenses of planning and design and design support (Consent Decree, ¶10[b]). The Panel reviewed all cost documentation and in-kind service credits for the period 1992-1997 and approved final reconciliation amounts in January 1999.

Through its cash payment of \$6,717,082.00 and in-kind services credits for panel functions support, planning and design, and project implementation totaling \$1,782,918.00, King County fulfilled its \$8.5 million obligation in accordance with the consent decree (Resolutions 1999-01 and 1999-03).

The City satisfied its \$8.5 million obligation through a combination of cash payment of \$8,363,335.83 and in-kind services credits for planning and design totaling \$136,664.17 (Resolutions 1999-02 and 1999-03).

The Consent Decree also provided that King County and the City each make available in-kind services with a value of up to \$1 million dollars to cover the costs of additional actions or changes needed to achieve the Panel's goals and to monitor the effectiveness of such source control efforts (¶14). In January, the Panel approved King County's request for in-kind service credits of \$12,994.00 and the City's request for \$90,242.51.

In addition to contributions for habitat development, sediment remediation and source control, King County and the City each agreed to make permanently available real property with a value of up to \$2.5 million dollars for use as sites for habitat development projects selected by the Panel (Consent Decree, ¶30). Both King County and the City indicated that they anticipated presenting requests for in-kind service credits for Panel approval in the year 2000.

Members discussed the allocation of interest accrued in the Court Registry account between sediment remediation and habitat development activities. In October, the Panel approved the committee's recommendation that the amount of interest accrued as of December 31, 2000 be allocated between the two programs based on percentages used in calculating panel function support contributions (70.6% for sediment remediation, and 26.4% for habitat projects), and that all interest accrued after that date be allocated to the sediment remediation program. Discussion of further means to relieve the sediment remediation planning and design cost pressures were postponed pending the outcome of the Consent Decree amendment process.

### **Public Participation Committee**

The Public Participation Committee, chaired by Margaret Duncan of the Suquamish Tribe, advises the Panel on opportunities for public involvement and education in all Program activities. The committee implements the *Public Participation Plan* (1994), assists with the Administrative Record, annual report, mailing list, and general community outreach activities. Three Panel publications were prepared and distributed in 1999, and presentations at professional meetings and workshops were delivered concerning the Elliott Bay nearshore substrate enhancement project, investigations of resuspension and transport of contaminated sediments along the Seattle waterfront, and other sediment remediation and habitat development activities.

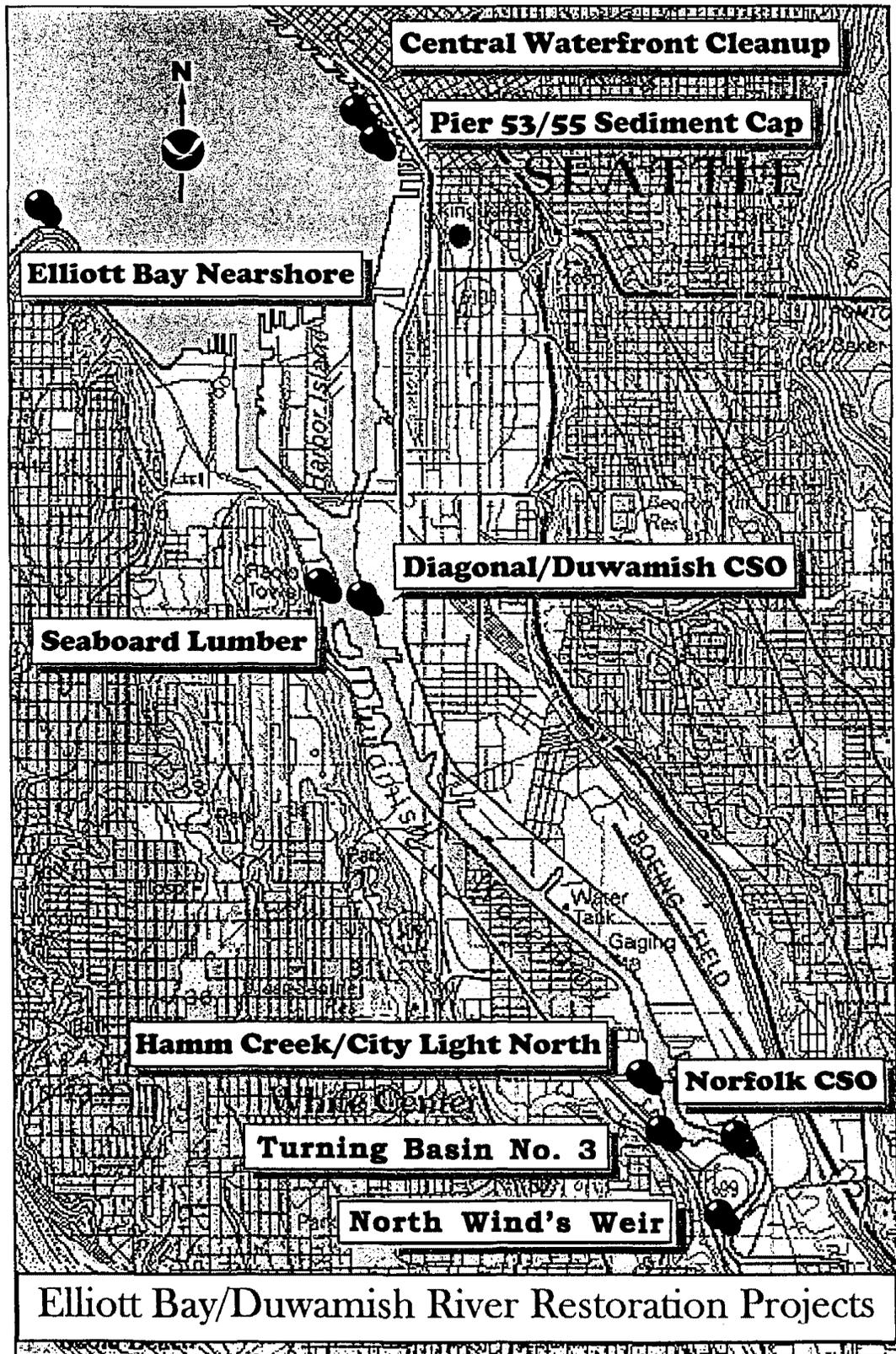


Figure 2.

## **1999 Program Chronology**

### **January**

- Construction of the Seaboard Lumber habitat restoration project continues.
- Conservation easement negotiations continue with Seattle City Light to implement the Hamm Creek restoration project.
- King County continues efforts to acquire real estate for habitat restoration in the upper Green River.
- Bids are received for the implementation of the Norfolk Combined Sewer Overflow (CSO) sediment remediation project.
- Panel Resolutions 1999-01 through 1999-03 are passed. These resolutions finalize accounting of in-kind services and continue the process to amend the Consent Decree.
- EB/DRP members participate in a tour of restoration sites along the Duwamish River hosted by King County.

### **February**

- King County awards the Norfolk CSO sediment remediation project to the General Construction Company, dredging begins on February 3, 1999.
- Easement negotiations with Seattle City Light continue, major progress is made.
- A draft outline for the Intertidal Habitat Projects Monitoring Program is prepared.
- People for Puget Sound presents a project stewardship proposal to the Habitat Development Technical Work Group.

### **March**

- The Seaboard Lumber project demolition and shoreline armoring milestones are met prior to the March 15, 1999 “fish window” deadline.
- An easement agreement with Seattle City Light is signed on March 26, 1999 allowing the implementation of the Hamm Creek aquatic restoration project.
- Norfolk CSO sediment remediation project dredging is completed on March 30, 1999.
- Permit applications for the North Wind’s Weir aquatic habitat restoration project are submitted to the City of Tukwila.

### **April**

- Phase I of the Elliott Bay Nearshore habitat enhancement project is completed. Project monitoring plans are developed.
- King County reports the North Wind’s Weir project will be constructed in the year 2000.

- The Muckleshoot Indian Tribe identifies a design contractor for the Turning Basin No. 3 habitat restoration project.
- The Panel is asked to investigate partnering with the Trust for Public Land, City of Seattle, and the Seattle Art Museum to restore the UNOCAL and Dunn properties as part of a public open-space development project.
- Resolutions 1999-04 and 1999-05 for calendar year 1998 Trustee and Administrative Director reimbursements are approved.
- Discussions are held with the Corps of Engineers regarding possible restoration options at the Loans Levee site.

### May

- The Panel declines to participate in the Trust For Public Land proposal after ranking and rating the UNOCAL site.
- King County continues efforts to acquire Green River property for habitat development.
- Appraisals for three acquisition alternatives for the Loans Levee property are completed.
- Panel Publication 20, *1998 Annual Report* is released.
- An easement signing and project kick-off celebration is held on May 18th at the Hamm Creek site.

### June

- A draft Norfolk CSO - Sediment Remediation Project "closure report" is distributed
- Hamm Creek project environmental documentation and permit actions are completed.
- The Sediment Remediation Technical Work Group meets to discuss the Duwamish/Diagonal CSO project and source control issues.

### July

- Construction of the Seaboard Lumber project continues with contaminated sediment containment and removal activities, and intertidal basin excavation.
- The Consent Decree amendment request is filed with the U.S. Department of Justice at Washington, D.C.
- Resolutions 1999-06 and 1999-07 are approved at a Special Panel Meeting for the Hamm Creek project.
- The Budget Committee is requested to examine the allocation of interest earned in the Court Registry account.

### August

- Construction of the Hamm Creek project starts on August 9, 1999.
- A contractor completes the Environmental Assessment document for the Turning Basin

No. 3 aquatic habitat restoration project.

- King County submits an offer for a conservation easement for the Loans Levee property.
- A draft Intertidal Habitat Projects Monitoring Program document is submitted to the Panel for review.
- Resolution 1999-08 is approved at a Special Panel Meeting for the Hamm Creek project.
- Construction of the Porter Levee habitat restoration project starts.
- Panel Publication 21, *Norfolk CSO Sediment Remediation Project Closure Report* and Panel Publication 22, *Norfolk CSO Sediment Remediation Project Five-Year Monitoring Program - April 1999 Monitoring Report* are distributed.

### **September**

- The Porter Levee project is completed by King County and the Corps of Engineers.
- Efforts to acquire a conservation easement for the Loans Levee property continues, a verbal acceptance offer is received by King County.

### **October**

- Resolution 1999-09 in-kind service credit for Source Control is approved at a Special Panel Meeting.
- Seaboard Lumber project construction continues on schedule, intertidal basin excavation is completed.
- The King County 2000 budget does not include funds for the construction of the Cecil Moses Memorial Park. The decision is made to construct the North Wind's Weir restoration project independently of the park.
- Technical Memorandum - Mass Balance Model: Duwamish/Diagonal CSO Sediment Remediation Project is released. Efforts continue to complete the Site Assessment Report.

### **November**

- Project monitoring goals, objectives, performance standards and success criteria for Panel intertidal habitat projects are discussed. The EB/DRP Intertidal Habitat Project Monitoring Program document (version 2) is distributed for comments.
- The Consent Decree amendment request undergoes a 30 day public notice period in the Federal Register.

### **December**

- Construction continues at the Seaboard Lumber and Hamm Creek restoration sites.
- The Consent Decree amendment request public notice and comment period closes, no comments are received.

## **Public Participation Committee 1999 Summary**

Chair: Margaret Duncan, The Suquamish Tribe  
Telephone: (360) 394-5254

The Public Participation Committee was established by the Panel in accordance with the settlement agreement to assist in the development and implementation of the Panel's Public Participation Plan. The Plan, published in June 1994, provides for public comment, education and involvement in all aspects of the Panel's activities, including project selection and planning, implementation and where appropriate, long-term stewardship. The following objectives were adopted:

- Inform the public about the Panel's Program and its goals, plans and activities;
- Encourage public comment about proposed goals, plans and activities as they are being developed; and
- Involve the public in the Program to the extent possible.

The Public Participation Plan focuses on five areas: meetings; public outreach and education; encouraging environmental review and comment on specific projects; program evaluation; and an administrative record.

### **1999 Activities**

#### Administrative Record and Annual Report

The 1998 Annual Report was prepared and distributed through the joint efforts of representatives of NOAA and the Suquamish Tribe. Throughout the year, committee members continued to work with NOAA concerning the maintenance of the Administrative Record.

The committee also continued discussions with the Habitat Development Technical Working Group members about the development of interpretive signage and displays concerning habitat functions and values for restoration projects undertaken in the Lower Duwamish.

Public outreach and education efforts included participation in the January 1999 Duwamish River Field Trip for the WRIA 9 Green/Duwamish Steering Committee. The field trip was co-sponsored by the Green/Duwamish Watershed and King County Water and Land Resources Division. Panel members from NOAA, The Suquamish Tribe, and the Muckleshoot Indian Tribe provided background information on the Panel's sediment remediation and habitat restoration projects along the Lower Duwamish River.

### Permit, Public Meetings, and Groundbreaking Celebrations

Permit Hearing: North Wind's Weir Project - City of Tukwila Planning Commission.

Groundbreaking: Hamm Creek Estuary, May 18, 1999 at Delta Marine Industries.

M.C. Curtis Tanner, USFWS; speakers: Colonel Conti, U.S. Army Corps of Engineers; NOAA; King County Executive Ron Sims, John Beal, I'M A PAL and the Green/Duwamish Watershed Alliance; Pathfinders School; Concord Elementary School; Cleveland High School.

### Presentations

Representatives of Panel members presented aspects of the Panel's projects at professional meetings and workshops as reported below:

Michelsen, T.C., C.D. Boatman, D. Norton et al. 1999. "Resuspension and Transport of Contaminated Sediments along the Seattle Waterfront, Part 1: Field Investigations and Conceptual Model." J. Marine Env. Engg. Vol. 5, pp. 35-36.

Shuman, Randy. Video of Elliott Bay/West Seattle Nearshore Habitat Enhancement Project at a workshop entitled "The Nearshore Environment of King County: The Neglected Link," Dumas Bay Center, Federal Way, sponsored by the Central Puget Sound Watershed Forum, January 1999.

Stark, Kimberle. 1999. "Duwamish Head Habitat Enhancement Project in Elliott Bay, Washington" Estuarine Research Federation '99 Conference, September 25-30, 1999, New Orleans, Louisiana.

Tanner, C.D. and R. C. Clark, Jr. 1999. "Restoration of Habitat Functions in an Urban Estuary: Progress and Lessons from Elliott Bay," Session 5E, Oceans '99 MTS/IEEE Conference, September 13-16, 1999, Seattle, Washington.

Tanner, C.D. 1999. "Restoration of Habitat Functions in an Urban Estuary: Progress and Lessons from Elliott Bay," Society of Ecological Restoration, 11th Annual International Conference, September 23-25, 1999, San Francisco, California.

### Publications

During the year, three Panel publications were prepared and distributed:

Publication No 20: *Elliott Bay/Duwamish Restoration Program 1998 Annual Report.*

Publication No. 21: *Norfolk Sediment Remediation Project Closure Report, August 1999.*

Publication No. 22: *Norfolk CSO Sediment Remediation Project Five-Year Monitoring Program - April 1999 Monitoring Report.*

Please refer to Appendix B for a full listing of Panel publications.

## **Budget Committee 1999 Summary**

Chair: Margaret Duncan, The Suquamish Tribe  
Telephone: (360) 394-5254

The Budget Committee was established by the Panel to assist with annual budget development and status reporting, and the exploration of alternatives and solutions to the limitations posed by the \$3 million planning and design budget (Consent Decree, ¶10[b]). The Committee was also tasked with the development and review of project scopes, schedules and budgets, and summary worksheets for source control and real estate acquisition credits to King County and the City of Seattle in fulfillment of Consent Decree obligations.

### **1999 Activities**

#### **Consent Decree Amendment**

At the close of 1997, Panel members agreed unanimously to seek specific amendments to the Consent Decree which would allow the Panel to supplement planning and design funds (capped at \$3 million) with unspent Panel function support funds (capped at \$2 million) and interest earned on monies deposited in the Court Registry account. During 1998, the Panel developed a management plan and project-specific scopes, schedules, and budgets in conjunction with the technical working groups and budget committee. In January 1999, following discussions, deliberations, and resolution of in-kind-service credits and cash payments due under the terms of the Consent Decree, the Panel requested that counsel to the parties to the Consent Decree request that the Department of Justice proceed with the Consent Decree amendment process (Resolutions 1999-03). It was anticipated that the Court would approve the amendments to the Consent Decree by January 2000.

#### **Allocation of Earned Interest**

The Consent Decree specifies that interest earned on monies paid into the registry account for habitat development must be spent on habitat project implementation, and that interest earned on monies paid into the registry account for sediment remediation must be used for sediment remediation project implementation (Consent Decree, ¶4[c]). Separate accounts are not maintained for the programs; accordingly, the Panel requested the Budget Committee to provide a recommendation concerning the allocation of interest earned between the two programs.

The amount of interest that had accrued to the Panel's account as of October 1999 was estimated at \$1.2 million. Committee members agreed in October to recommend that the Panel base the allocation on a formula adopted by the sediment and habitat technical working groups in the past

concerning percentage contributions to Panel Function support and technical FTE support, viz., 70.6% for the sediment program and 29.4% for the habitat program. The recommendation prepared for the January 2000 Panel meeting included applying the formula to the total amount of all interest earned and in the court registry account on December 31, 2000. The amount calculated for habitat would thereafter be reserved for habitat projects only, and the amount calculated for sediment remediation would be used for sediment remediation projects only. The method for insuring the availability of the separate allocations, whether by separate account or by tracking by NOAA, would occur in accordance with the advice of the Administrative Director and assigned NOAA staff. It was further agreed that all interest accrued after December 31, 2000 would be allocated and used for sediment remediation projects.

Reconciliation of accounting for King County and the City of Seattle

Under the terms of the consent decree, King County (then Metro) and the City of Seattle each agreed to pay \$6 million dollars in funds and services for the remediation of sediments, and \$2.5 million dollars in funds and services to be applied to the costs of habitat development (Consent Decree, ¶19 and ¶27). Amounts to be paid into the court registry account for years 1992 through 1996 were identified, and in 1997, balances of the required total contribution were due. Required amounts were duly paid into the account, and in January 1999, the Panel confirmed cost documentation and in-kind service credits for the period 1992 through 1997.

A reconciliation of accounting for King County was presented in Panel Resolution 1999-01 concerning in-kind services, credits, source control, real property, and cash payments for the period 1992-1997, as required by the Consent Decree. In-kind service credits totaled \$1,782,918.00, as follows:

Panel Function Support	\$ 63,073.00
Planning and Design	\$1,309,982.00
Habitat and Sediment Remediation project implementation	\$ 409,863.00

King County made a cash payment of \$6,717,082.00 to the court registry account.

A reconciliation of accounting for the City of Seattle was presented in Panel Resolution 1999-02 concerning in-kind services, credits, source control, real property, and cash payments for the period 1992-1997, as required by the Consent Decree. In-kind service credits totaled \$136,664.17, as follows:

Panel Function Support (no request)	\$ 0
Planning and Design (Pier 53/55 and Central Waterfront)	\$ 136,664.17
Habitat and Sediment Remediation project implementation (no request)	\$ 0

The City of Seattle made a cash payment of \$8,363,335.83 to the court registry account.

#### Source Control: In-kind service credits

As part of the settlement agreement, King County (then Metro) and the City of Seattle each agreed to make available in-kind services with a value of up to \$1 million to engage in any activities needed to preserve natural resources and prevent recontamination of sites selected for sediment remediation or habitat development in the Panel's covered area (Consent Decree, ¶34). The Panel approved requests for source control in-kind service credits as follows: King County: \$12,994.00 (Resolutions 1999-01 and 1999-03), and the City of Seattle: \$90,242.51 (Resolutions 1999-02 and 1999-03).

#### Credit for the Acquisition of Real Property Interests

Under the terms of the settlement agreement, King County (then Metro) and the City of Seattle each agreed to make real property with a value of up to \$2.5 million permanently available for habitat projects selected by the Panel. Panel members anticipated receiving a formal request for full credit, including appropriate documentation, early in the year 2000. The City anticipated submitting a full request for its \$2.5 million contribution with the purchase of the Seaboard Lumber site for habitat development. King County anticipated submitting a request for full credit towards its \$2.5 million contribution with the purchase of real property interest in sites along the Lower Duwamish River and the Green River (Please see Habitat Development Technical Working Group Summary).

#### Program Budget Summary Worksheets

Throughout the year, the committee continued the process of ensuring that budget summary worksheets for each program element were updated. Readers are referred to the Habitat Development section for the real estate acquisition budget summary and to the Source Control section for the source control budget summary.

#### Cash Disbursements from the Court Registry Account

During 1999, the Panel approved \$57,309.90 (Resolutions 1999-04 and 1999-05) for Panel Function support costs associated with Trustee personnel participating in Panel activities; salary and expenses for an Administrative Director; and costs associated with administering the Court Registry Account (see page 51).

## **Habitat Development Technical Working Group 1999 Summary**

Chair: Curtis Tanner, U.S. Fish and Wildlife Service  
Telephone: (360) 753-4326

During 1999, the Habitat Development Technical Working Group (HDTWG) continued to work on real property acquisition, project implementation and follow through for habitat sites and projects within three Geographic Focus Areas (GFA) chosen for habitat development projects as described in the *Concept Document* (June 1994): the vicinity of Turning Basin No. 3 at the upper end of the Duwamish Waterway; the vicinity of Kellogg Island in the lower portion of the estuary; and along the shoreline of Elliott Bay in the nearshore environment of the marine system. In addition to project work within the GFAs identified in the Concept Document, Panel supported habitat development is occurring in the middle portion of the Green River watershed.

Throughout the year, working group members discussed monitoring approaches for Panel habitat projects and anticipated the adoption of an overall monitoring plan no later than the first quarter of the year 2000. The Chair of the working group guided members in identifying physical and biological success criteria that will assist the Panel in determining project success.

### **Elliott Bay GFA**

#### Elliott Bay Nearshore Habitat Enhancement (Figure 3)

Project Manager: Randy Shuman, King County Water and Land Resources Division (WLR).

Panel Project Coordinator: Margaret Duncan, The Suquamish Tribe.

Project Team Members: King County WLR, Corps of Engineers Environmental Program, Dinnel Marine Research, Explorer Scouts.

The habitat enhancement project, completed in February 1998, entailed placement of oyster shell, quarry spalls, and pea gravel in the intertidal and subtidal areas seaward of Seacrest Marina, and approximately five cubic yards of rocks at four plots northwest of Duwamish Head on state owned aquatic lands administered by Washington Department of Natural Resources. Although no Dungeness crab were found in the subtidal oyster shell, the constructed shell plot was found to provide complex habitat that served the need of other crab species and fish and invertebrate fauna (see monitoring report noted below). During 1999, underwater epibenthic monitoring and dives revealed that the quarry spalls, pea gravel, and rock are providing habitat to a variety of marine organisms. In particular, divers observed numerous shrimp occupying the spaces between the rock and cobble substrate. King County anticipated further monitoring events during the year, and incorporating the findings into a report that would be available by the end of the year or in the first quarter of the year 2000.



Elliott Bay Nearshore Habitat Enhancement Project Location

(Related report: *Construction of an Oyster Shell Habitat Plot in Elliott Bay: Evaluation of Crab Settlement and Habitat Utilization in 1998*. Prepared for the Elliott Bay/Duwamish Restoration Program Panel by Paul A. Dinnel, Dinnel Marine Research and Brett A. Hora, November 1998. Panel Publication 19).

### **Kellogg Island GFA**

#### Seaboard Lumber Project Site (Figure 4)

Project Managers: Linda Hammons, Seattle Public Utilities and Kevin Stoops, Seattle Parks and Recreation Department.

Panel Project Coordinator: Curtis Tanner, U.S. Fish and Wildlife Service.

Project Design and Construction Team: Lead Consultants - Brennan Associates, Seattle, Washington.

The habitat project is located on the site of the former Seaboard Lumber Mill, on the west shore of the Duwamish Waterway at river mile 2, across from Kellogg Island and adjacent to the Terminal 107 restoration and passive-use park area. The Panel tentatively authorized credit of up to \$2.5 million for the City of Seattle to purchase the project site, consisting of 5.7 acres of upland and 11 acres of intertidal and subtidal areas.

Habitat restoration goals identified by the working group for this project include the following: maximizing intertidal habitat, creating a low wave energy environment, providing a perimeter buffer of upland vegetation, and remediation. Secondary project objectives include opportunities for passive park use and environmental education. The design incorporates two viewpoints and a kiosk for interpretive signs with educational information about the natural processes, restored environment, archeological interpretation, and historical aspect of the site area.

Project construction began in the early part of the year. All marine demolition (pier and piling removal) and shoreline armoring activities were completed prior to the March 15, 1999 deadline. Remediation was completed in the summer of 1999, and connection to the Duwamish Waterway occurred in late autumn. The project team anticipates that construction, including site planting, will be completed no later than April 2000.

(Related report: *Seaboard Aquatic Habitat Restoration Project*, August 1999, prepared for the Panel and the City of Seattle by Brennan Associates. The report is on file as part of the Administrative Record.)

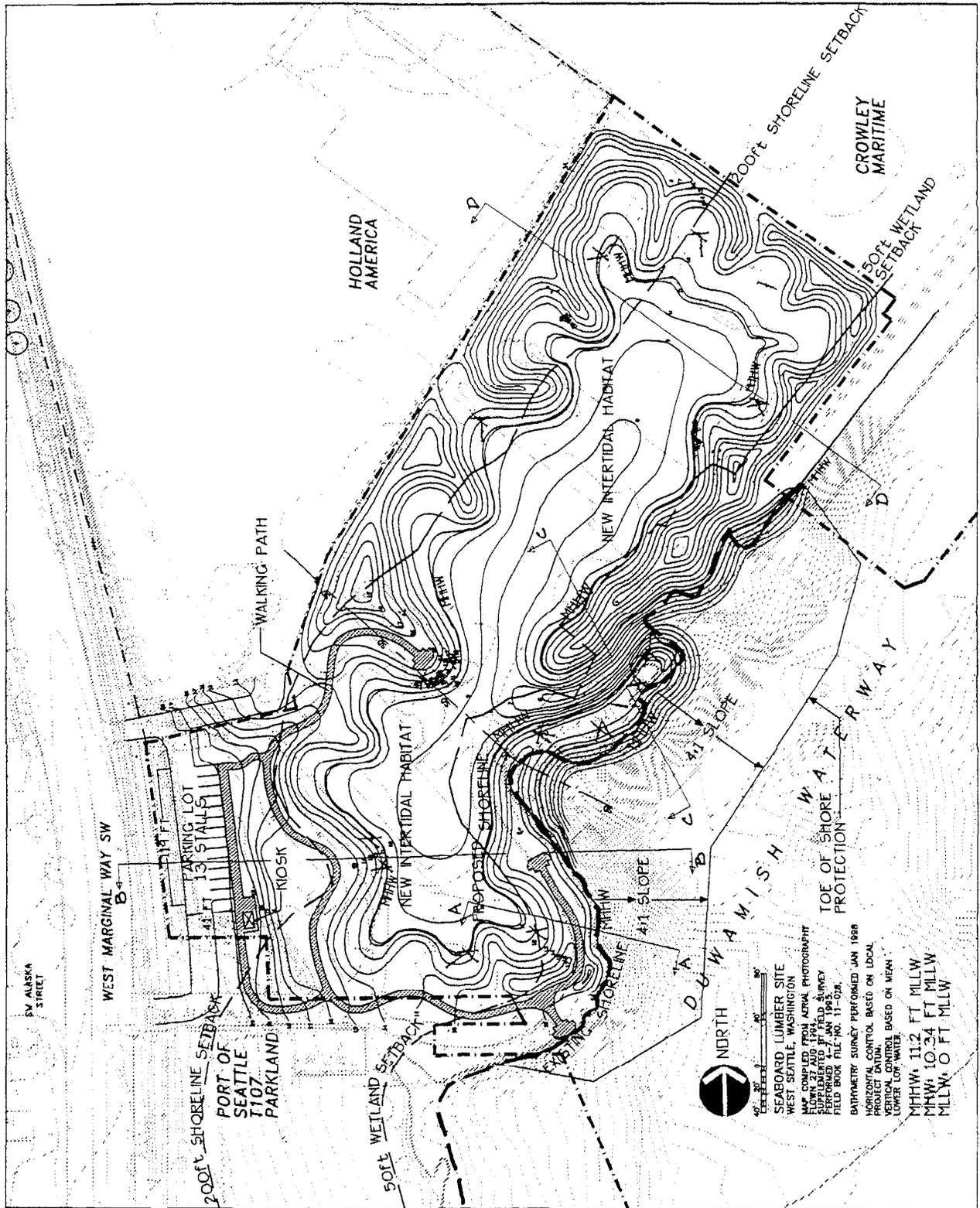
### **Turning Basin GFA**

#### Hamm Creek (City Light North) (Figure 5)

Property Acquisition Lead: King County WLR.

Project Manager: Mike O'Neil, King County DNR.

Panel Project Coordinator: Dr. Robert C. Clark, Jr., NOAA.



PROPOSED:  
 INTERTIDAL MARSH CREATION  
 WITH VIEWPOINTS  
 IN: CITY OF SEATTLE  
 AT: SEABOARD LUMBER SITE  
 COUNTY OF KING STATE WA  
 APPL. BY: SEATTLE PARKS +  
 RECREATION  
 DATE: JANUARY 30, 1998  
 FIGURE: 4 OF 12

CITY OF SEATTLE  
 DEPARTMENT OF PARKS  
 AND RECREATION  
 2811 SECOND AVE. 4TH FLOOR (684-7031)

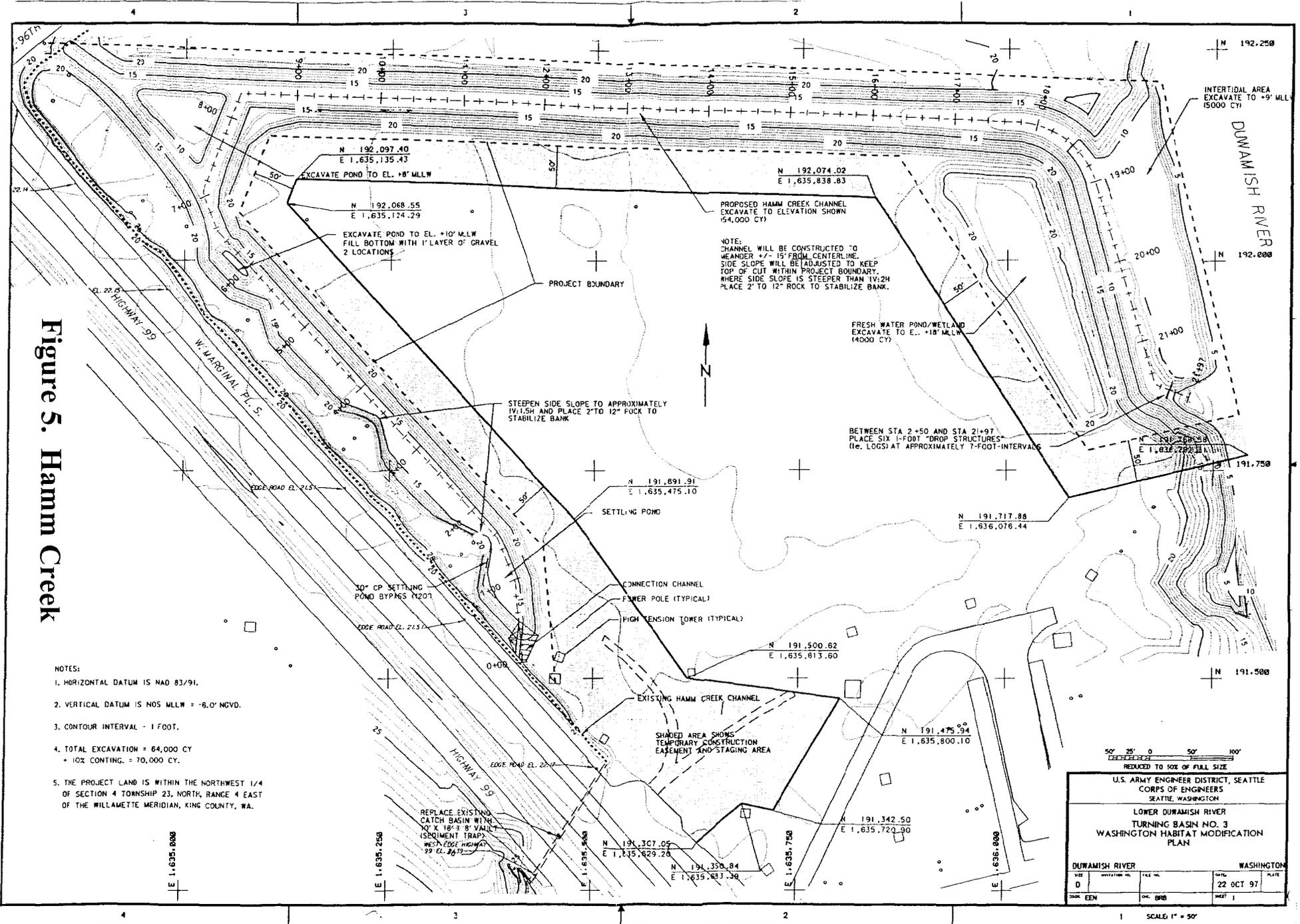
FACILITY TITLE  
**SEABOARD LUMBER**  
 AQUATIC HABITAT RESTORATION

PURPOSE:  
 FISHERIES HABITAT ENHANCEMENT,  
 PUBLIC VIEWING + EDUCATION  
 DATUM: MLLW=0.0 (N.O.S.)  
 ADJ. WATERFRONT PROPERTY OWNERS:  
 HOLLAND AMERICA, PORT OF SEATTLE,  
 + CROWLEY MARITIME

PREPARED BY:  
**Lee/Brennan Associates**  
**E C G International Inc.**

Figure 4.

Figure 5. Hamm Creek



- NOTES:
1. HORIZONTAL DATUM IS NAD 83/91.
  2. VERTICAL DATUM IS NOS MLLW = -6.0' NGVD.
  3. CONTOUR INTERVAL - 1 FOOT.
  4. TOTAL EXCAVATION = 64,000 CY  
+ 10% CONTING. = 70,000 CY.
  5. THE PROJECT LAND IS WITHIN THE NORTHWEST 1/4 OF SECTION 4 TOWNSHIP 23, NORTH, RANGE 4 EAST OF THE WILLAMETTE MERIDIAN, KING COUNTY, WA.

50' 25' 0 50' 100'  
REDUCED TO SIZE OF FULL SIZE  
U.S. ARMY ENGINEER DISTRICT, SEATTLE  
CORPS OF ENGINEERS  
SEATTLE, WASHINGTON  
LOWER DUWAMISH RIVER  
TURNING BASIN NO. 3  
WASHINGTON HABITAT MODIFICATION  
PLAN

DUWAMISH RIVER		WASHINGTON	
DATE	22 OCT 97	PLATE	
DRAWN BY	ENR	CHECKED BY	ENR

SCALE 1" = 50'

Project Design and Construction Team Members: King County, DNR and the U.S. Army Corps of Engineers.

The Panel approved a credit to King County of up to \$750,000 for the acquisition of real property at the City Light North site for habitat purposes. The 6.2 acre aquatic habitat restoration site occupies a portion of a 15 acre parcel of undeveloped property owned by Seattle City Light at river mile 6, in the Turning Basin area of the Duwamish River. The project site is bounded by Seattle City Light's Duwamish Substation to the south and by Delta Marine Industries facilities to the north.

Habitat project goals include a combination of freshwater and tidal wetland restoration as well as stream and riparian corridor improvements for the lower reach of Hamm Creek.

During the first quarter, considerable attention was devoted to discussing easement issues. Due to Corps of Engineers Section 1135 contributions, the project management expected construction cost reductions. By May, a conservation easement had been negotiated between all parties, and an informal gathering to celebrate the approval of the easement purchase and cooperative agreement to daylight Hamm Creek was held on May 18th.

Project construction started on August 9th. Working group members discussed King County's request to release the construction contingency funds for actions such as emergency erosion control. Members subsequently recommended that the Panel approve the request (Resolution 1999-08) and, at the same time, emphasized that erosion control should be part of the project construction budget rather than a contingency item. In November, King County reported on survey coordinate errors that resulted in limited stream channel excavation outside of the approved project boundaries on property being held by Seattle City Light for future development activities. The Corps of Engineers indicated they would update the survey coordinates and make necessary excavation changes to construct the project within the easement boundaries. The intertidal basin was connected to the Duwamish River in early September.

Turning Basin No. 3 (formerly Kenco Marine) (Figure 6)

Project Manger: Roderick Malcom, Muckleshoot Indian Tribe.

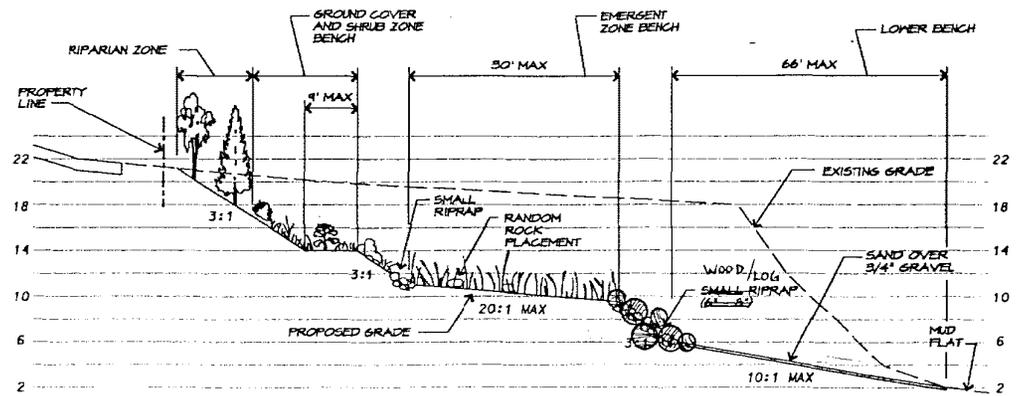
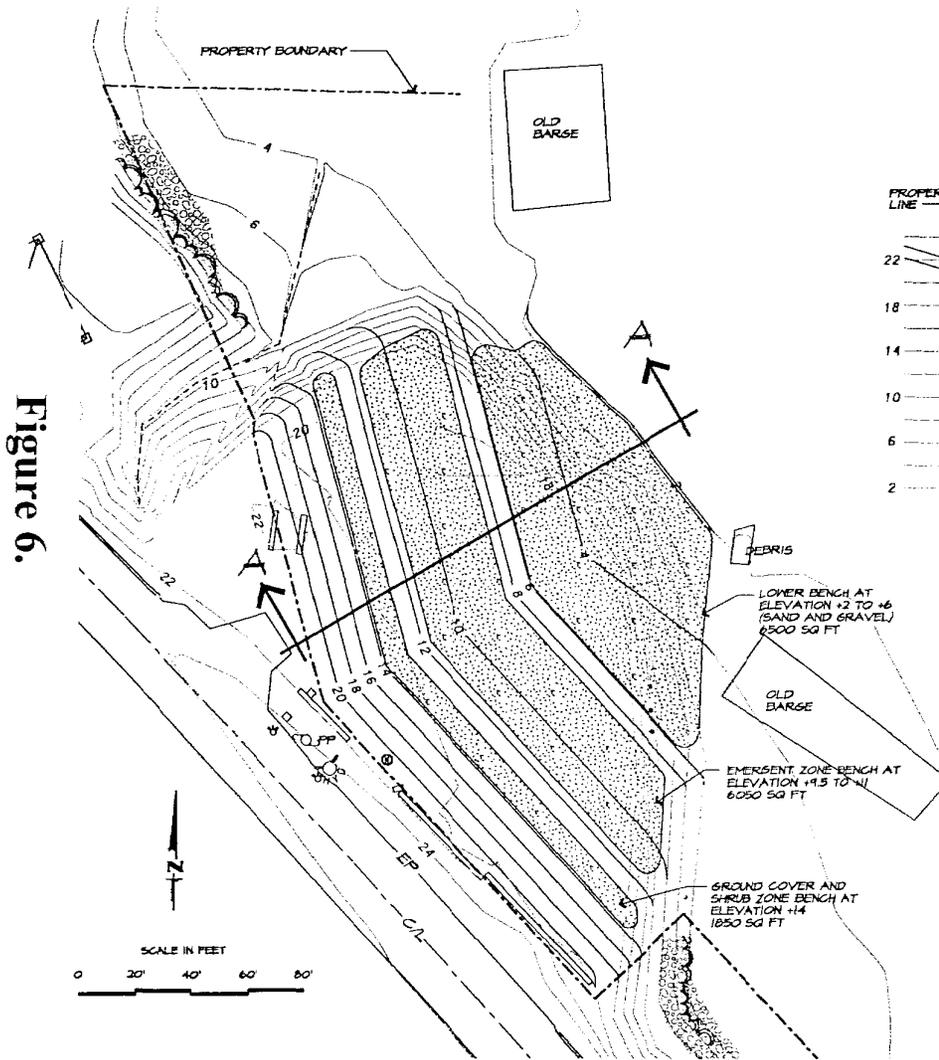
Panel Project Coordinator: Joanne Polayes, Ecology.

Project Design Consultants: Fishpro, Seattle, Washington.

The 0.82 acre habitat project site is located at the western upstream boundary of the maintained navigation channel at Turning Basin No. 3 of the Duwamish River, bordered on the western edge by West Marginal Way South, by Seattle City Light-Duwamish Substation property to the north, and Coastal America and Port of Seattle habitat project sites to the south.

Habitat objectives for the site include significant gains in intertidal and subtidal mudflats through prohibitions of moorage. The project design entails the removal of existing commercial structures

# TURNING BASIN #3 RESTORATION SITE PLAN - OPTION 1



SECTION AA

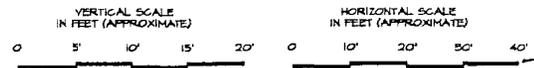


Figure 6.

and recontouring and revegetating the area to provide an enhanced intertidal estuarine wetland area with the creation of intertidal “benches” at various elevations.

The Project Manager informed the working group that construction, estimated to require three months, might begin during 2000 depending upon the permit process with the City of Tukwila. Permit applications for the project were submitted in April of 1999. The Muckleshoot Tribal Cultural Committee continued to consider a name for the habitat project.

North Wind’s Weir (Figure 7)

Project Manager: Michael Lazano, King County Department of Construction and Facility Management.

Panel Project Coordinator: not yet assigned.

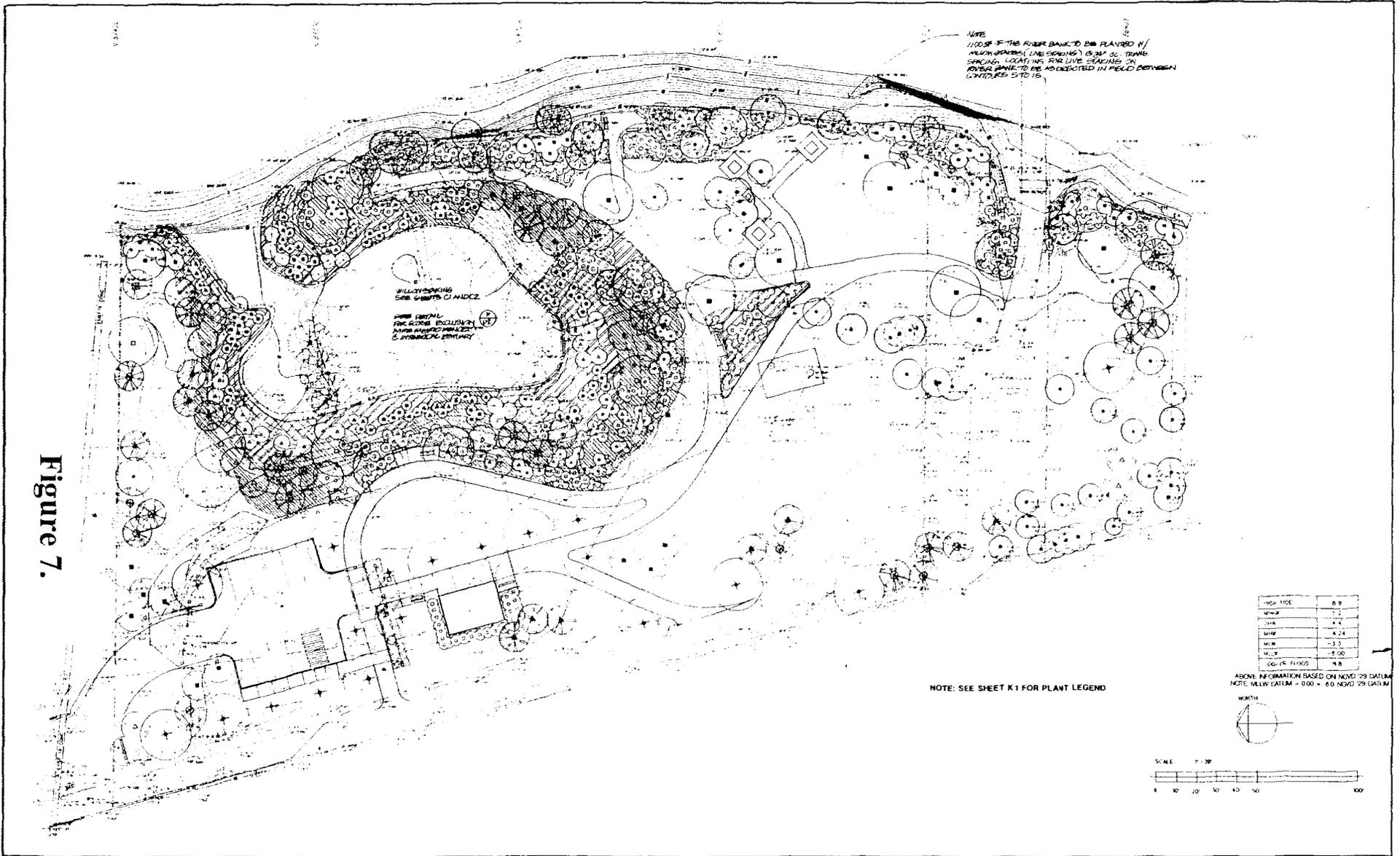
Project Design and Construction Team Lead: MacLeod Reckord Landscape Architects, Seattle, Washington.

North Wind’s Weir is south of the Duwamish Waterway Turning Basin No. 3, upstream of the navigable waterway, on the west bank of the Duwamish River at approximately river mile 7. The Panel authorized credit to King County for making available a portion of the 3.1 acre site for habitat development purposes.

Project implementation activities will include the construction of a 1.03 acre intertidal basin, excavated from an elevation of +6 to +15 feet Mean Lower Low Water (MLLW), with connection to the Duwamish River at the northeast end of the property. Project goals include the improvement of riparian conditions, shoreline stabilization, and providing new off-river intertidal habitat to assist migrating salmonids to acclimate on their downstream passage.

Working group members devoted a considerable amount of time to discussing permit process issues concerning the construction of the habitat development portion of the site along with the construction of the adjacent King County Park. The project manager envisioned a concurrent construction schedule in order to realize significant construction management cost savings. Construction was scheduled for the year 2000, pending King County Executive Council budget approval. By June, it was determined that the intertidal habitat project should proceed independently of the park, since the park was not funded for construction in the King County FY 2000 budget. The Project Manager estimated that construction would begin in October 2000. Late in the year, it was announced that King County would agree to a request from the Muckleshoot Indian Tribe to name the park after tribal leader Cecil B. Moses. The Panel will continue to reference the habitat development portion of the park as “North Wind’s Weir.”

Figure 7.



NOTE: SEE SHEET K1 FOR PLANT LEGEND

HIGH TIDE	8.9
MEAN	7.2
LOW	4.9
MEAN	4.24
MEAN	-3.3
MEAN	-6.00
MEAN	9.8

ABOVE INFORMATION BASED ON NOV 29 DATUM  
NOTE: MLLW DATUM = 0.00 = 6.0 NOV 29 DATUM



<p>CLIENT AGENCY: KING COUNTY DEPARTMENT OF PARKS, CULTURAL AND NATURAL RESOURCES 1100 SMITH TOWER 300 2ND AVENUE SEATTLE, WA 98104</p>	<p>KING COUNTY FACILITIES MANAGEMENT DIVISION-PARKS CIP 320 King County Administration Building Seattle, Washington 98104 Telephone (206) 296-0548 Fax (206) 296-0186</p>	<p>STATE OF WASHINGTON DEPARTMENT OF ECOLOGY LANDSCAPE ARCHITECT 1000 4TH AVENUE SEATTLE, WA 98101</p>	<p>MacLeod Parks &amp; Recreation Landscape Architects 1000 4TH AVENUE SEATTLE, WA 98101</p>	<p>NORTH WIND WEIR PARK</p>	
				<p>SCALE: 1" = 20'-0"</p> <p>DATE: 1/8/98</p> <p>DRAWN BY: JH</p> <p>CHECKED BY: JH</p> <p>DATE:</p>	<p>PLANTING PLAN</p> <p>HEET L5</p>

## **Collaborative Activities**

The Corps of Engineers reported that construction at the Porter Levee site (Figure 8), which was purchased with Panel funds, was complete. Vegetation was cleared, a notch was made in the dike, and a remnant slough was reconnected to the river. Working group members agreed that the completed project demonstrates successful partnering efforts highlighting the Panel's acquisition and King County and Corps of Engineers construction roles.

People for Puget Sound representatives Jacques White and Tom Dean met with HDTWG members to discuss long-term stewardship of Panel habitat projects along the Duwamish River.

## **Real Property Acquisitions for Habitat Development Purposes**

During the first quarter of the year, working group members agreed to devote attention to review acquisition issues given the funds remaining, program goals, and the desire of the Panel to "sunset" in the near future.

In April, Chris Rogers, of the Trust for Public Land (TPL), requested consideration of a proposal for the Panel to assist in acquisition of the UNOCAL property in downtown Seattle, consisting of three acres that abut Myrtle Edwards Park and extends to Broad Street and Western Avenue.

Following review of the information provided by TPL on the habitat nomination form and information provided by Ecology concerning the status of the project site clean-up, the site was ranked according to site assessment criteria defined in the *Concept Document*. Ecology reported that the largest area of contamination is immediately behind the bulkhead, public utilities are located along the shoreline, and that basically the shoreline configuration must remain unless fill is introduced. This contributed significantly to the low ranking which the project site received.

During the year, working group members received updated information from King County representatives concerning progress on Green River acquisitions, for which the Panel has set aside \$700,000 (Resolution 1997-18). Linda Hanson and Rick Cardoza explained that multiple ownership and the County's Farmlands Preservation covenant posed limitations and constraints, such that a conservation easement was being pursued as an alternative to fee simple acquisition.

Working group member and COE representative Pat Cagney urged the HDTWG to continue to consider the possibility of purchasing or helping to purchase Site #1, across the Duwamish from Cecil B. Moses Park/North Wind's Weir, saying that even though the Panel may not have the full amount required, it might consider matching funds provided by other entities.

# Porter (Slaughterhouse) Levee: Phase 1

**Location:** King County

**Cost- Recommended Contribution:**  
\$390,000 (COE Section 1135, Elliot Bay/Duwamish Restoration Panel)  
**Other Funds:** \$30,000 (Trout Unlimited, Mid-Sound Fisheries Enhancement Group, Muckleshoot Indian Tribe)

**Lead Agency:** Corps of Engineers

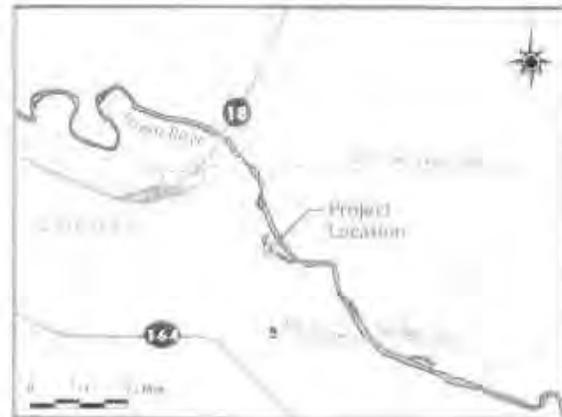
Schedule:	1997	1998	1999	2000
Scoping	Complete			
Acquisition				
Design				
Construction			Or	

This project involves purchasing a 30-acre parcel adjacent to the Green River on the left bank just upstream of Highway 18, and restoring the river's connection to an isolated side channel. The side channel would be connected by excavating a notch in the Porter Levee at the downstream end of the project site, and excavating a channel connection with a possible control weir and log and rock fishway. An upstream connection through a culvert or permeable rock weir may be necessary to provide flow-through. The side channel would then be enhanced through the addition of snags and other habitat features, and the entire site would be replanted in native riparian and wetland vegetation. This reconnection would establish fish access to an 8-acre side channel, and would enhance 13 additional acres of riparian wetland.

Side channel habitat, allowing for salmon refuge from high flows and overwintering habitat for juveniles, is currently extremely limited along the middle Green River. This project would demonstrate an approach to restoring these functions.

The property is currently for sale, and preliminary negotiations are underway. The Elliot Bay/Duwamish Restoration Panel has indicated their interest in purchasing this site. Restoration here has a high level of public support from Trout Unlimited, the Mid-Sound Fisheries Enhancement Group, and is also supported by Muckleshoot Indian Tribal staff. Each of these groups has indicated a possible interest in cost-sharing and/or contributing volunteers or equipment.

For further information, contact Noel Gilbrough at (206) 764-3652.



Phase I of the Porter Levee project would excavate a channel opening at the downstream end of the levee (bottom center), linking this side channel with the Green River. Purchase of the entire 30-acre parcel would allow for wetland restoration as well.

Figure 8.

**Elliott Bay/Duwamish Restoration Program Panel  
Real Property Acquisition Budget Worksheet**

Real Estate/ Habitat Project Site	In-kind Credit		Comments
	Authorized	Apprv'd	
<b>Elliott Bay Geographic Focus Area (GFA)</b>			
Seaboard Lumber	\$2.5 million (City of Seattle)		Res. 1998-05. Sampling and site analysis, appraisal, project management and purchase of 16.7 acre parcel across from Kellogg Island, adjacent to Terminal 107 restoration project. Purchase represents full satisfaction of the City's real property acquisition obligation of (up to) \$2.5 million.
<b>Turning Basin GFA</b>			
KenCo Marine	\$479,200 (King Co.)		Res. 1996-16, 1997-05, 1997-2, 1997-19. The .82 acre parcel includes upland sand intertidal mudflats. Bordered by West Marginal Way South, City Light Duwamish Substation to the North, and Coastal America and Port of Seattle habitat mitigation projects to the South.
Duwamish/Hamm Creek (City Light North)	\$770,000 (King Co.)		Res. 1996-28, 1998-01, 1998-09 (\$750,000) for conservation easement. Res. 1999-06: \$20,000 for costs associated with culvert crossings required for access and condition of purchase of easement.
North Wind's Weir	\$416,000 (King Co.)		Res. 1997-20. Purchase of 1.03 acre of larger parcel for intertidal habitat restoration project.
Site #1 (unnamed)	Funds not yet authorized.  Consensus to contribute funds for purchase (amt. to be determined).		4.6 acre site under consideration. Adjacent to the Boeing office complex; shoreline restoration could provide expanded area and enhanced value of nearshore subtidal, unvegetated flats, emergent marsh and riparian habitat types.
<b>Elliott Bay GFA</b>			
Elliott Bay Nearshore	None requested		Washington DNR lease fee for subtidal areas off-shore of Seacrest Park and Duwamish Head waived.
<b>Duwamish River Tributaries (Properties upriver of North Wind's Weir)</b>			
Porter Levee	\$700,000 (King Co.)		Res. 1997-18. Adjacent to Green River, parcel includes riparian and upland forest, river side channels and wetlands.
Burns Creek/ Loans' Levee			Res. 1997-18. Relic side channel habitat, riparian and upland forest, upland agricultural lands.
<b>Total Credits</b>	\$4,865,200		Requests for in-kind credit not yet received
<b>Total real property credits available</b>	\$5 million		Consent Decree ¶30 (amount), ¶27(b) (locations)

**Table 1.**

## **Sediment Remediation Technical Working Group 1999 Summary**

Chair: Pat Romberg, King County Water and Land Resources Division  
Telephone: (206) 296-8251

The sediment remediation technical working group assists the Panel in planning and designing sediment remediation projects and in recommending goals and activities regarding King County's (formerly METRO) and the City of Seattle's source control programs.

### **1999 Activities**

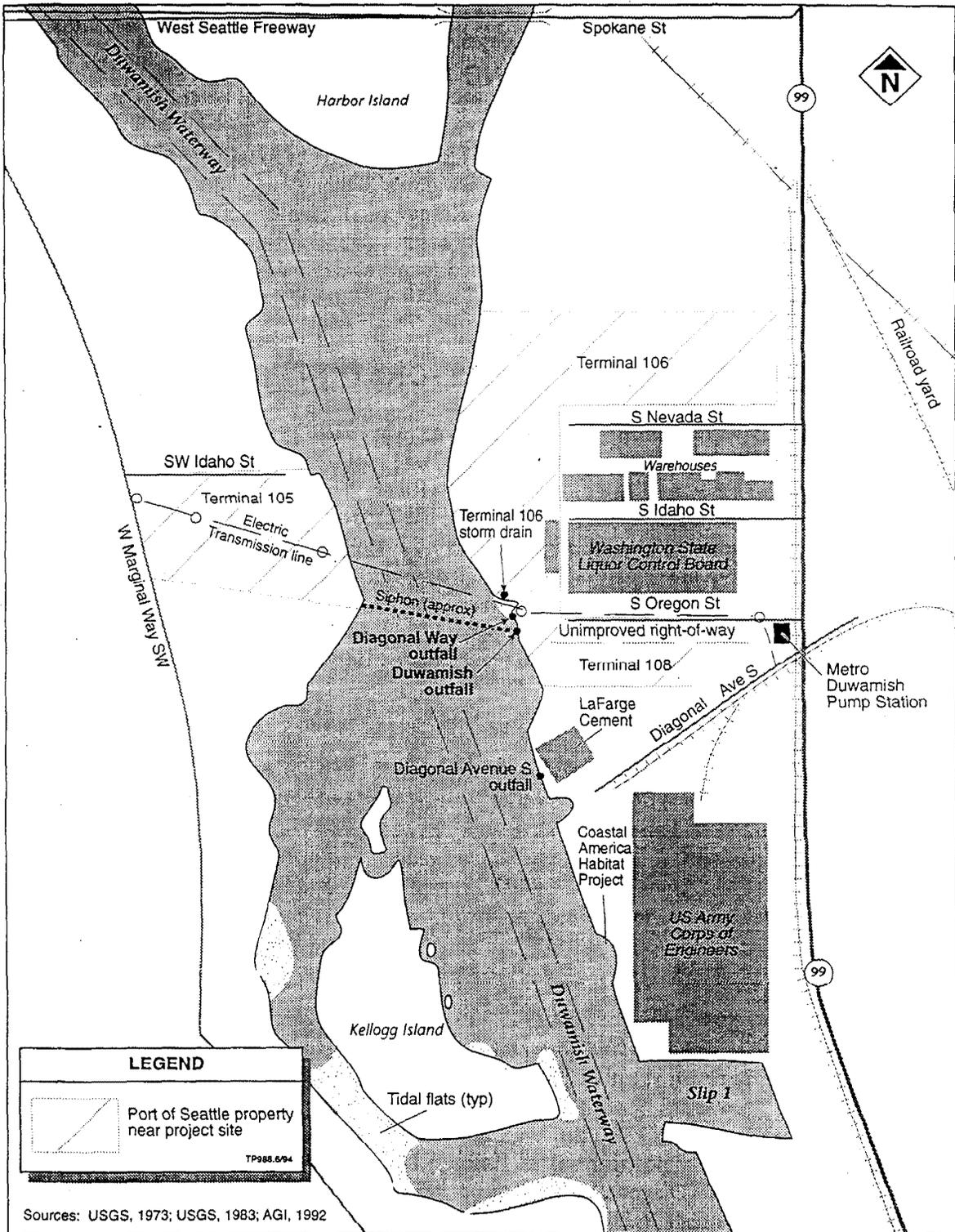
#### Duwamish/Diagonal CSO and Storm Drain Sediment Remediation Project (Figure 9)

Project Manager: Priscilla Hackney, King County DNR.

Panel Project Coordinator: not yet assigned.

In September, technical working group members received and discussed the Technical Memorandum: Mass Balance Model report prepared pursuant to Panel Resolution 1998-15 for the evaluation of potential recontamination of the proposed project site by phthalates and the completion of the draft Site Assessment Report. The modeling results showed that the site would recontaminate with both of the phthalates, bis(2-ethylhexyl) and butyl benzyl, evaluated in the mass balance model. Results also showed that the required reduction in the discharge from the storm drain (the reduction required for the site not to recontaminate) is dependent upon the background concentration of the constituents. In some cases, even complete source elimination would not be sufficient to achieve compliance with SQS criteria because the background deposition alone would cause exceedences. At the October meeting, Panel members agreed with the working group that the results were sufficient to enable the project team to complete the Site Assessment Report. It was agreed that completion of the Site Assessment Report would be a priority. A resolution approving additional funds to complete the Site Assessment Report was passed at the Panel's October meeting (Resolution 1999-09).

In addition to bis(2-ethylhexyl) phthalate (BIS), a seemingly ubiquitous chemical of concern, mercury and polychlorinated biphenyl (PCB) also exceed sediment criteria at the Duwamish/Diagonal site. Discussions with the Department of Ecology in November resulted in preliminary agreement that a clean-up could proceed on the basis of mercury and PCB removal because the project would focus on "improvement" of the Duwamish/Diagonal site even though recontamination by BIS could occur. The King County project team indicated that actual project implementation could occur in winter of 2001-2002, but that additional planning and design funds may be required to complete the Alternatives Evaluation Report.



**Figure 9. Duwamish/Diagonal CSO/SD**

Norfolk Sediment Remediation Project (Figure 10)

Project Manager: Priscilla Hackney, King County DNR.

Panel Project Coordinator: Glen St. Amant, Muckleshoot Indian Tribe.

The Norfolk sediment remediation project was undertaken to remove the contaminated sediment associated with past discharges from the Norfolk Combined Sewer Overflow (CSO). Following an evaluation of bids for the construction phase of the remediation project, a contract was awarded. Project details authorized by permits were reported in the 1998 Annual Report.

The remediation occurred as scheduled and entailed dredging up to 9 feet in PCB “hot spots” and from 3 feet to 6 feet in other less contaminated areas of the site. Comparisons between pre-dredge and post-dredge surveys showed that 1,900 cubic yards of sediment represented by samples with PCB concentrations greater than 45 ppm DW (dry weight) were dredged and disposed of at a TSCA (Toxic Control Substances Act) Subtitle C landfill in Arlington, Oregon, and 3,290 cubic yards of sediment represented by samples with PCB concentrations less than 45 ppm DW were dredged and disposed of at a Subtitle D landfill (Olympic View) in Kitsap County, Washington. Comparisons between post-dredge and post-backfill surveys showed that 6,700 cubic yards of clean sandy backfill were placed, bringing the cleanup area back to its pre-dredge elevations. The Norfolk Sediment Remediation Project Closure Report (Panel Publication 21) documents the work performed and describes dredging, transport and disposal methods that occurred between February and April 1999 (Figure 11).

In August, results of the first sampling event of a five-year monitoring program were presented in the April 1999 Monitoring Report (Panel Publication 22). Four sediment samples were collected within a month of project completion from the surface of backfill material and analyzed to establish a baseline chemical characterization of the material. Station locations were established based on the location of the CSO and storm drain flow channels that existed prior to remediation. Based on sample analytical results, the study characterized baseline conditions of the backfill material as follows:

A fairly even-grained, medium to coarse sand with high percent solids and low organic carbon content;

Metals concentrations that are well below the SQS sediment criteria; and

A lack of organic chemicals with the exception of trace amounts of hexachlorobenzene (one site) and benzo(g,h,i)perylene (two sites), that were well below the LAET sediment criteria (dry-weight normalized) (refer to the April 1999 Monitoring Report, Panel Publication 22).

In July, King County issued a work directive to the EcoChem consultant team to evaluate phthalate source control in the Norfolk CSO drainage basin, pursuant to Resolution 1999-14.

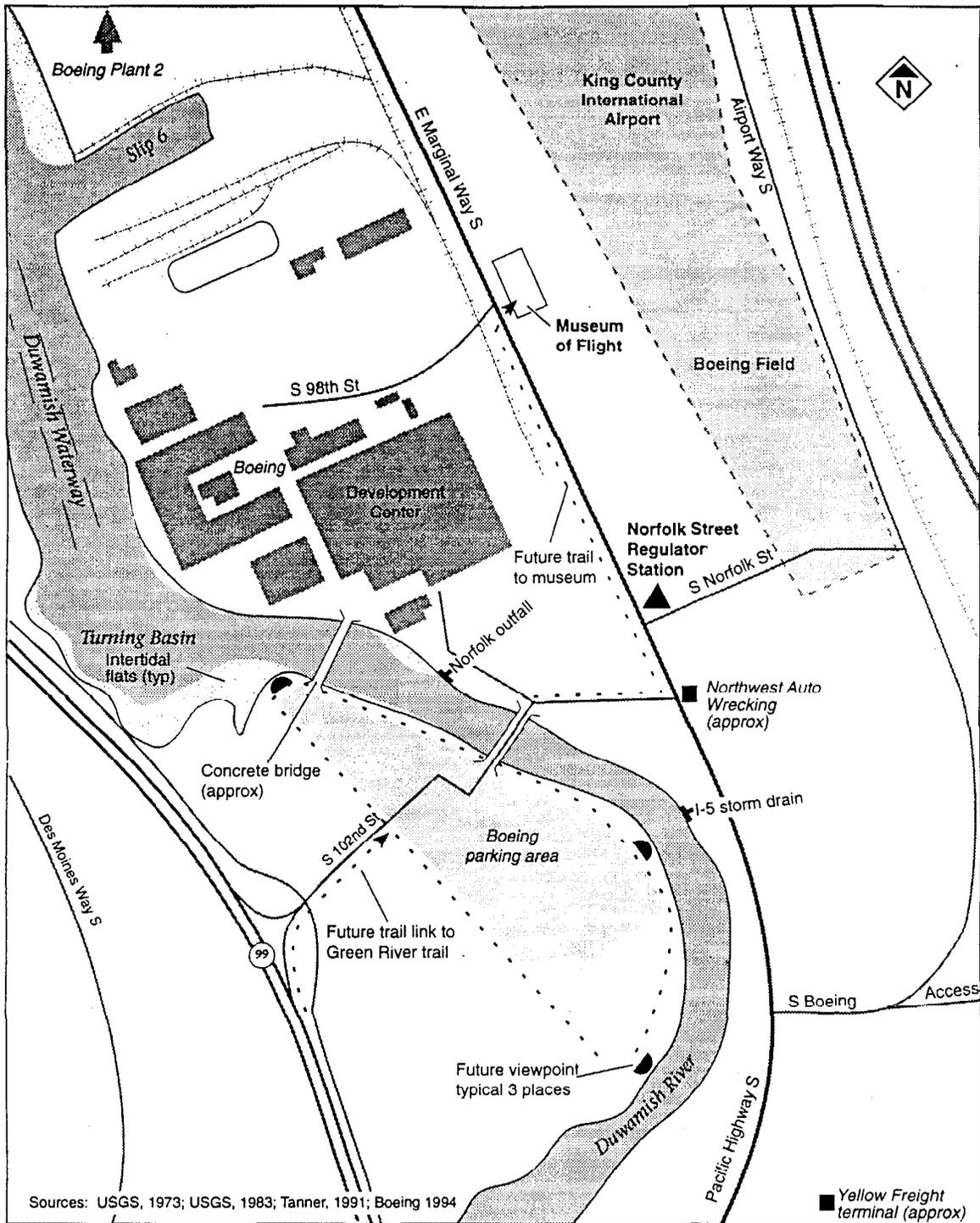


Figure 10. Norfolk CSO

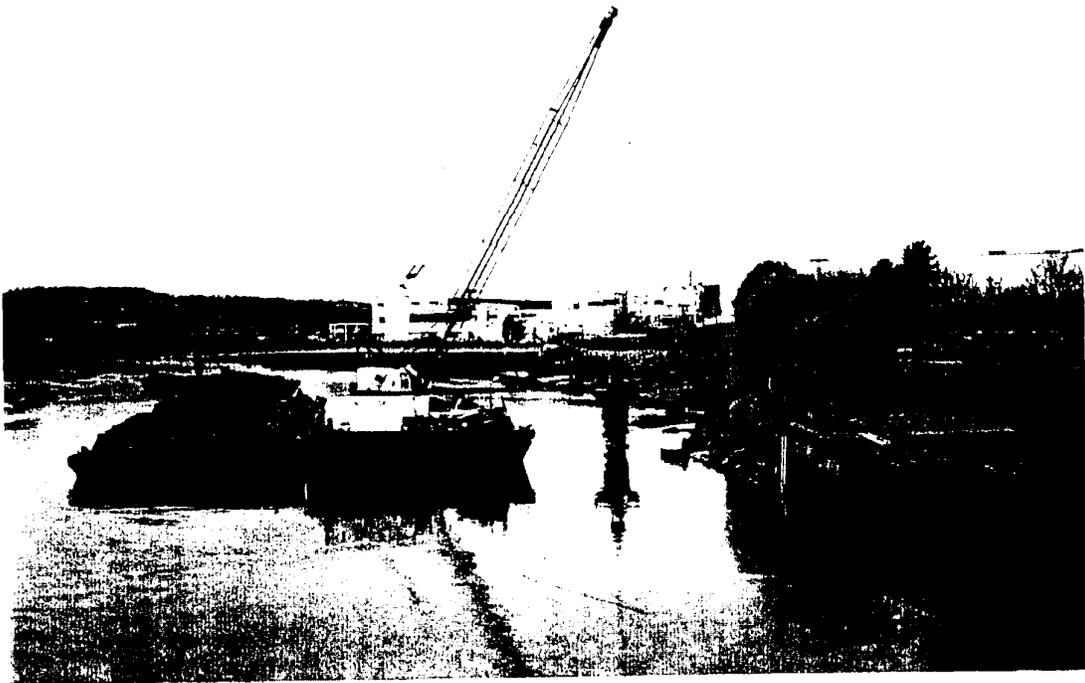


Photo 13 Backfill From Barge Placed With Dredging Crane.



Photo 15 Intertidal Backfill Area Shown At Minus 3-Foot Tide.

**Figure 11.**

The study was proposed in order to fulfill a commitment of the State of Washington DNR Aquatic Lands Right of Entry Agreement signed by King County. The Aquatic Lands Right of Entry Agreement was effective during the spring of 1999 when the project site was remediated. The Panel anticipated a report of findings by May of 2000.

Pier 53-55 Sediment Cap and Enhanced Natural Recovery Area Remediation Project (Figure 12)

Project Manager: Cheryl Paston, City of Seattle Public Utilities.

Panel Project Coordinator: none assigned.

The Pier 53-55 Sediment Cap and Enhanced Natural Recovery Area sediment remediation project was completed in March 1992. The project entailed clean-up of a 4.5 acre area located offshore of Piers 53, 54, and 55 in downtown Seattle near Colman Dock. The Pier 53 site is on property owned by the Washington State Department of Natural Resources and is at the location of a former deep water sewer outfall which has been abandoned. There is presently a combined sewer overflow adjacent to the site which has been controlled to a maximum of one event per year. There is also a storm water outfall at the same location, at the end of Madison Street.

Monitoring results for 1996 were released in the December 1997 *Pier 53/55 Sediment Cap Monitoring Report*, (Panel Publication 17).

During 1998 the project manager submitted and discussed results of a sampling activities report prepared pursuant to Resolution 1998-08. No phenol or 4-methylphenol contamination was detected.

The next sampling activities and monitoring report for the Pier 53-55 sediment remediation project cap and natural recovery area are scheduled to occur in 2003.

Elliott Bay Central Waterfront Clean-up Study (Figure 13)

Project Manager: Cheryl Paston, City of Seattle Public Utilities.

Panel Project Coordinator: not yet assigned.

In 1993, the Panel initiated and funded the Elliott Bay Waterfront Recontamination Study and selected Teresa Michelsen, then with the Washington State Department of Ecology, as the project manager. The study was designed to evaluate the feasibility of undertaking sediment remediation projects within the central Seattle Waterfront area by 1997. The study encompassed the portion of Elliott Bay along the central waterfront from Pier 45 on the south to Pier 59 on the north. The final report of the two phased study was released in July 1995. Based on results of the field investigation, the Panel was encouraged to separate the study area into two distinct units for remedial design purposes.

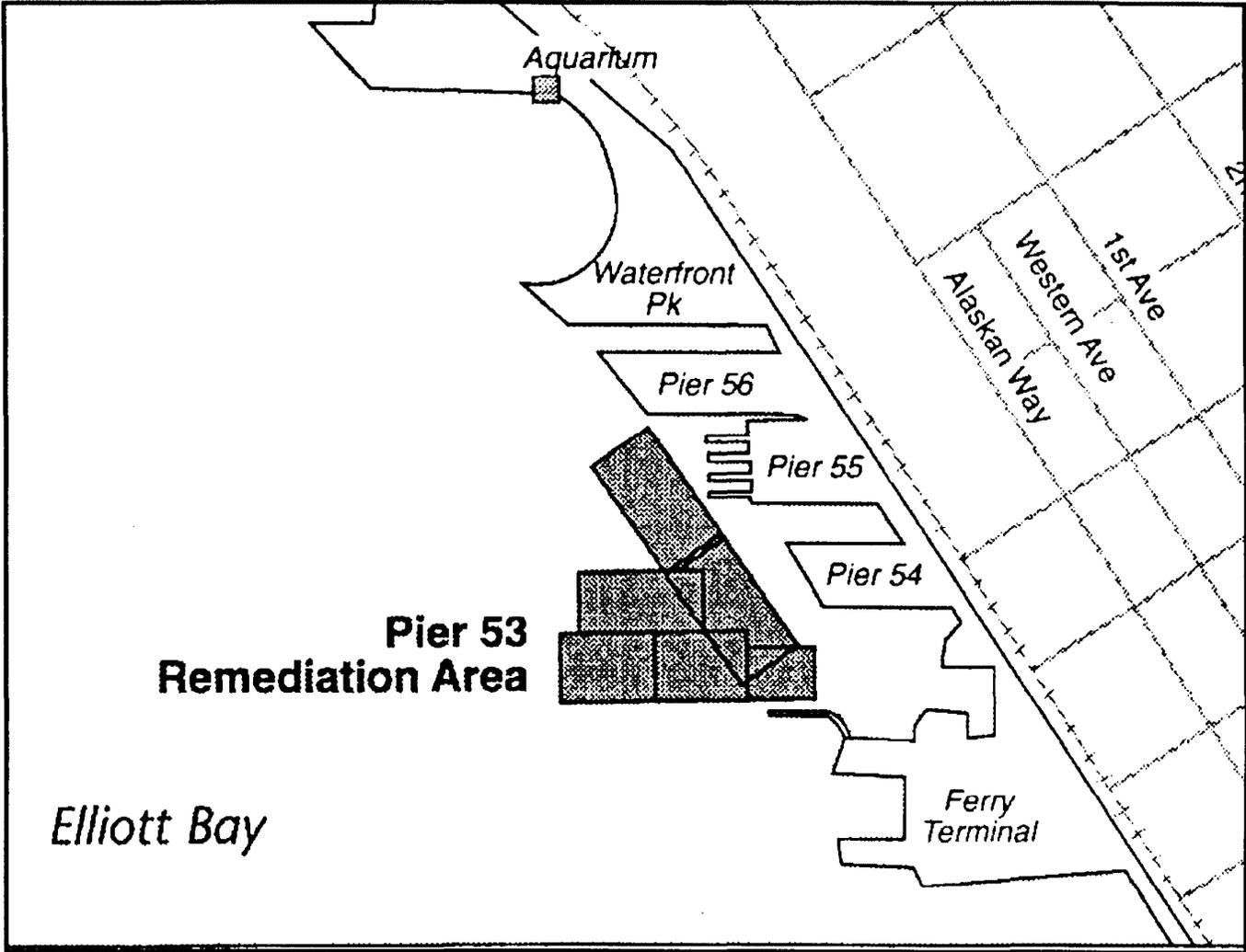


Figure 12. Pier 53/55 Sediment Cap

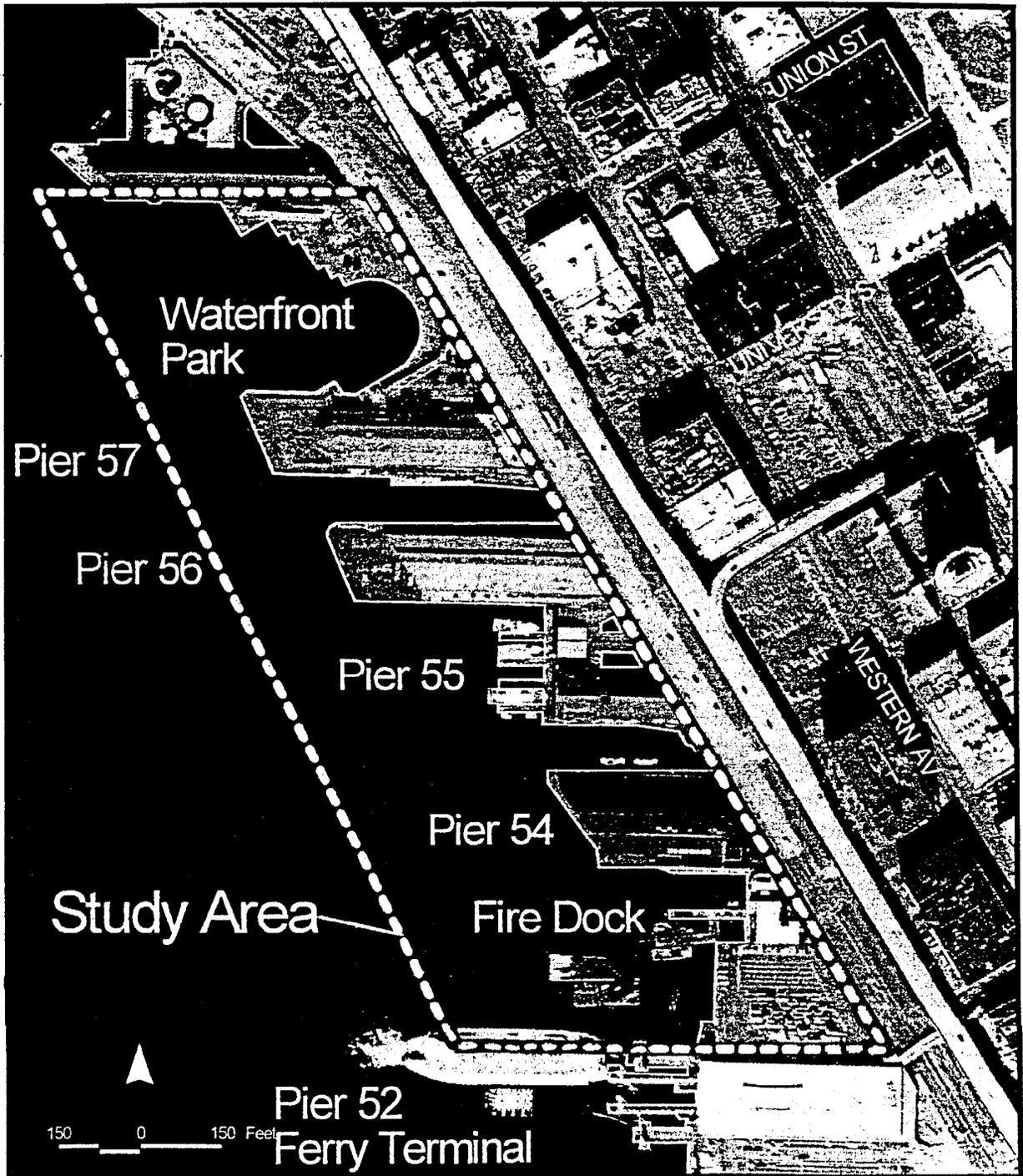


Figure 13. Central Waterfront Cleanup

Following the release of the Waterfront Recontamination Study, the Panel selected the City of Seattle as project manager for a potential remediation project from Colman Dock on the south to Pier 59 on the north. A draft Clean-up Study Work Plan and other draft documents were prepared and released for consideration and public comment in 1996. Additional sediment sampling activities were conducted in 1996 to obtain sediment chemistry data at twenty stations and bioassay testing data at ten of these stations that extended from the south side of Pier 54 to the north side of Pier 57.

Although interest in waterfront sediment remediation possibilities continues, further work on the project was suspended in January 1997 pending the availability of additional planning and design funds (see Budget Committee report).

## **Source Control 1999 Summary**

Project Manager: Cheryl Paston, City of Seattle Public Utilities  
Telephone: (206) 684-4609

The Consent Decree establishing the Elliott Bay/Duwamish Restoration Program provides for the development of Source Control Goals to protect natural resources and prevent recontamination of sites selected for sediment remediation and habitat development in the covered area.

In accordance with the settlement agreement, King County Department of Natural Resources and the City of Seattle, through Seattle Public Utilities (SPU), are charged with determining what changes and new activities, if any, are needed in addition to their ongoing source control programs to protect natural resources and prevent recontamination of Panel projects. The two agencies are then responsible for presenting recommendations for changes and actions to the Sediment Remediation Technical Working Group and the Panel for review and comment, and taking actions approved by the Panel. Table 2 lists source control activities authorized by the Panel from 1992 through 1999, along with amounts and resolutions authorizing credits to the City of Seattle and King County.

In 1998, King County presented data which suggested that phthalates from four separated storm drains could potentially recontaminate the Norfolk CSO sediment remediation project. The Panel subsequently passed Resolution 1998-14, which authorized up to \$21,710 in source control in-kind service credits to initiate a phased study of the evaluation of sources and related activities. King County also presented data suggesting that the volume of separated storm water discharged from the Duwamish Pump Station CSO and Diagonal CSO/Storm Drain was nearly double the volume originally reported by the City of Seattle, and cautioned that the larger volume significantly increased the potential for recontamination of the site by phthalates. The Panel subsequently passed Resolution 1998-15 authorizing source control in-kind service credits for additional recontamination modeling.

### **1999 Activities**

#### Norfolk CSO

Deliberations and source control recommendations concerning potential recontamination of the Norfolk sediment remediation project were postponed pending completion of the work authorized under Resolution 1998-14.

### Duwamish Pump Station/Diagonal CSO/SD

In July, the Panel was informed that King County was completing work required to award a contract for the evaluation of recontamination potential and completion of the Site Assessment Report for the Duwamish/Diagonal project site (Resolution 1998-15). Study results were presented to the Sediment Remediation Technical Working Group members in September in a report entitled Technical Memorandum: Mass Balance Model. The study attempted to perform a mass balance between chemicals observed in the site "footprint" and the various sources, including background and discharges from the storm drain and CSO by using direct field observations supplemented by analytical and numerical modeling. The results indicated that phthalates would require significant load reductions to meet SQS levels (up to 95% in one estimate) and that background deposition alone could be high enough to cause exceedences. In October, the Panel discussed the report and agreed with the working group's recommendation that the information was sufficient to incorporate model results and complete the Diagonal/Duwamish Site Assessment Report. The Panel accordingly approved Resolution 1999-09, authorizing up to \$15,000 of source control in-kind service credits for the updating and completion of the Site Assessment Report.

**ELLIOTT BAY/DUWAMISH RESTORATION PROGRAM PANEL  
SOURCE CONTROL BUDGET WORKSHEET 1992 – 2000+**

Year	In-Kind Credit		Source Control Activities (S=City of Seattle; KC=King Co.)
	Authorized	Credit Approved	
1992	-	-	No activity
1993			No activity
1994	\$ 31,697	KC \$ 4,994 (1/28/99)	Res. 1994-8: authorizes King Co. to collect and analyze five storm water samples from two locations in the Diagonal Way storm drain
	24,320	S 28,065.64 (1/28/99)	Res. 1994-16: authorizes City (\$18,000) and King Co. (\$6,320) to undertake mathematical modeling to determine whether source control activities at Norfolk and Duwamish/Diagonal are sufficient to prevent recontamination
	13,500	S 1,800.20 (1/28/99)	Res. 1994-17: authorizes the development of source control goals (goals adopted 7/6/95, Res. 1995-14)
1995	20,220		Res. 1995-3: authorizes King Co. to sample, analyze and determine total volume of sediment from Diagonal outfall pipe
	8,000	KC 8,000 (1/28/99)	Res. 1995-15: authorizes King Co. to conduct phthalates literature review
	94,480	S 60,376.67 (1/28/99)	Res. 1995-21: authorizes the City to conduct source control activities, Diagonal and Norfolk storm drain basins
1996			No activity
1997			No activity
1998	5,000		Res. 1998-8 authorizes the City to conduct a literature survey concerning the occurrence of phenols in the marine environment and possible sources and business uses of phenols
	21,720		Res. 1998-14: authorizes King Co. to investigate phthalate sources to separated storm drains connected to the Norfolk CSO
	14,658		Res. 1998-15: authorizes additional recontamination modeling due to larger volume of storm water and potential recontamination by phthalates
1999	15,000		Res. 1999-09: authorizes King Co. to expend up to \$15,000 of source control in-kind service credits for additional contractor and project management support to complete the Duwamish/Diagonal Site Assessment Report by incorporating recontamination potential modeling results
Total	\$ 248,595	S \$ 90,242.51 KC 12,994.00	Reconciliation of Accounting – In-kind Service Credits Res. 1999-02 Res. 1999-01
Total Alloc.	\$2,000,000	\$103,236.51	Per Consent Decree, paragraphs 33 and 34

**Table 2.**



**Panel Resolution 1999-02**

Reconciliation of accounting for the City of Seattle: In-kind services credits, Source Control, Real Property, and cash payments for the period 1991-1997 as required by the Consent Decree.

Adopted: 28 January 1999  
 Consent Decree: ¶ 10 (b), planning and design support  
 ¶ 12 expenditure tracking  
 ¶ 13 in-kind services  
 ¶ 34 source control

References: Attachment 1. 1998-05 In-kind services credit to the City of Seattle.  
 Attachment 2: City of Seattle Memorandum dated July 1, 1998  
 Requesting additional In-kind services credits per  
 Resolution 1995-21.  
 Attachment 3: Statement of Accounts, Registry of the Court.

The purpose of this Resolution is to approve all in-kind services credits for the period 1991 through 1997 based on the Panel's review and approval of the documentation provided by the City of Seattle, and to provide a full accounting of City of Seattle in-kind services credits, Source Control, Real Property, and cash payments as required by the Consent Decree.

This resolution supersedes Reconciliation Resolutions 1998-05 that granted in-kind services credits to the City of Seattle, as well as any other previously-adopted resolutions which may have granted in-kind services credits.

Supporting Documentation	Panel Function	Planning and Design	Implementation	Source Control	Real Property	Cash Payments
Attachment 1: Resolution 1998-05	0	136,664.17	0	87,071.55	0	0
Attachment 2: July 1, 1998 memo	0	0	0	3,170.96	0	0
Attachment 3: Statement of Accounts	0	0	0	0	0	8,363,335.83
<b>Total</b>	0	136,664.17	0	90,242.51	0	8,363,335.83

Total In-kind services (Habitat Development and Sediment Remediation) = \$136,664.17

**Panel Resolution 1999-03**

Adopted: 28 January 1999

In order to determine the final cash payments required of King County and the City of Seattle under the sediment remediation and habitat development categories established by the Consent Decree, the Elliott Bay/Duwamish Restoration Program Panel reviewed all cost documentation and in-kind service credits for the period 1992-1997. In conjunction with that review, a management plan and project-specific scopes, schedules, and budgets were developed by the Panel and its Technical Working Groups. Resolutions 1999-01 and 1999-02 provide the final reconciliation amounts approved by the Panel. Through these reviews, the Panel has determined that:

**KING COUNTY and CITY OF SEATTLE OBLIGATIONS UNDER CONSENT DECREE**

Habitat Development and Sediment Remediation Categories

1. King County and the City of Seattle have each made cash payments under the Consent Decree as follows:  
King County: \$ 6,717,082.00                      City of Seattle: \$ 8,363,335.83
2. The Panel has approved certain in-kind services credits to King County and the City of Seattle as follows:  
King County: \$ 1,782,918.00                      City of Seattle: \$ 136,664.17

Total In-kind services credits and cash payments:

King County: \$ 8,500,000.00                      City of Seattle: \$ 8,500,000.00

Source Control Category

The Panel has approved the following Source Control obligations (1992-1997):

King County: \$ 12,994.00                      City of Seattle: \$ 90,242.51

Real Property Category

The Panel has approved the following Real Property obligations (1992-1997):

King County: \$ 0                                      City of Seattle: \$ 0

**REQUEST FOR CONSENT DECREE AMENDMENT**

Based on an evaluation of the project-specific budgets for the proposed sediment remediation and habitat development projects, the Panel has determined that the limitations placed on the Planning and Design (\$3 million limitation) and the Panel Function Support (\$2 million

limitation) categories in the Consent Decree will not enable the Panel to discharge its responsibilities unless the categories are combined into a single fund category (\$5 million).

Counsel for the parties have concurred previously in two additional changes:

- (1) Substituting "Municipality of Metropolitan Seattle" with "King County Department of Natural Resources" to reflect METRO's consolidation into King County; and
- (2) In paragraph 4(c), substituting the word "activities" with the word "implementation."

**NOW, THEREFORE,** the Panel herein requests that counsel to the parties to the Consent Decree formally request that the U.S. Department of Justice proceed with an Amendment to the Consent Decree in the particulars noted above. The Administrative Director is directed to forward copies of the signed resolution as adopted to each of the trustee representatives to the Panel for transmission to their attorneys.

#### **Panel Resolution 1999-04**

Adopted: 01 April 1999  
Consent Decree: ¶ 10(a) Trustee Reimbursements  
Resolution: 1996-23

In accordance with Consent Decree paragraph 10(a) and Panel Resolution 1996-23, the Elliott Bay/Duwamish Restoration Program Panel hereby authorizes disbursement from the Registry Account to the payees specified below for the purpose of reimbursement for calendar year 1998 Trustee costs. Supporting invoices and memoranda are attached.

<u>Payees</u>	<u>Amount of disbursement</u>
Washington State Department of Ecology Post Office Box 5128 Lacey, Washington 98509-5128 Attention: Cashiering Section Account Number: 001T000019-AA	\$ 4,541.64
Muckleshoot Indian Tribe 39015 172 Avenue S.E. Auburn, Washington 98092 Attention: Gerald Hecke, Comptroller	\$ 1,878.73
The Suquamish Tribe P.O. Box 498 Suquamish, Washington 98392 Attention: Randy Hatch	\$11,200.90

National Oceanic and Atmospheric Admin.                    \$16,107.94  
NOAA Financial Services Division  
SSMC4, Room 9331  
1305 East-West Highway.  
Silver Spring, MD 20910-3281  
Attention: Kathy Salter, DARRF Manager

U.S. Department of the Interior                                    \$ 7,006.00  
NBC/Division of Financial Management Services  
Branch of Accounting Operations  
Mail Stop 1313  
Washington, D.C. 20240

**Panel Resolution 1999-05**

Adopted:                    01 April, 1999  
Consent Decree:        ¶ 10(a) Trustee Reimbursements  
Resolution:                1996-23

In accordance with Consent Decree paragraph 10(a) and Panel Resolution 1996-23, the Elliott Bay/Duwamish Restoration Program Panel hereby authorizes disbursement from the Registry Account to the payee specified below for the purpose of reimbursement for calendar year 1998 Administrative Director costs. Supporting invoices and memoranda are attached.

<u>Payee</u>	<u>Amount of disbursement</u>
National Oceanic and Atmospheric Administration NOAA Financial Services Division SSMC4, Room 9331 1305 East-West Highway Silver Spring, MD 20910-3281 Attention: Kathy Salter, DARRF Manager	\$16,574.69

**Panel Resolution 1999-06**

Authorizes additional real estate acquisition credit (up to \$20,000) to King County for costs associated with the acquisition of a conservation easement for the Hamm Creek (City Light North) habitat development project.

Adopted: 15 July 1999  
 Consent Decree: ¶ 27 Habitat Development and Real Estate Acquisition  
 References: 1994-13 First Appraisal  
 1995-18 Scope of Work and Acquisition Planning  
 1995-27 Acquisition  
 1996-02 Seattle City Light discussions  
 1996-29 Property Negotiations  
 1997-14 Transition Management Plan:  
 Scope, schedule and budget  
 1998-01 Property Acquisition Credit  
 1998-09 Additional Property Acquisition Credit  
 Attached King County Supporting Documentation

The Elliott Bay/Duwamish Restoration Program Panel authorizes King County Department of Natural Resources additional real estate acquisition credit up to \$20,000.00 for construction items required by Seattle City Light for the negotiated acquisition of a conservation easement for the Duwamish/Hamm Creek Habitat Restoration Project.

Item: Storm Drainage	\$20,000.00
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Additional funds are necessary to supply materials to construct culvert crossings required for access to the Seattle City Light parcel. The installation of culvert crossings was a mandatory acquisition condition of the conservation easement.

Credit will be granted upon the approval of submitted cost documentation. The estimated acquisition credit for the Hamm Creek site is now at approximately \$770,000.00. This credit is in partial fulfillment of King County's Consent Decree obligation of up to \$2,500,000 in "permanently available real property... for any habitat development project under this Decree" (¶30).

#### **Panel Resolution 1999-07**

Authorizes funding (up to \$75,200) to King County for project management of the Hamm Creek (City Light North) habitat development project.

Adopted: 15 July 1999  
 Consent Decree: ¶ 27 Habitat Development and Real Estate Acquisition  
 References: 1997-14 Transition Management Plan:  
 Scope, schedule and budget  
 1998-01 Property Acquisition Credit  
 Attached King County Supporting Documentation



**Panel Resolution 1999-09**

Authorizes expenditure of up to \$15,000 under Source Control in-kind services to King County for additional contractor and project management support to complete the Duwamish/Diagonal Site Assessment Report by incorporating the recontamination potential modeling results.

Adopted: 21 October 1999  
Consent Decree: ¶ 33 Source Control  
References: 1998-15 Contractor Evaluation of Potential Recontamination  
1997-14 Transition Management Plan:  
Scope, schedule and budget  
1995-20 EcoChem Scope of Work Accepted

The Elliott Bay/Duwamish Restoration Program Panel authorizes King County, Department of Natural Resources, up to \$15,000.00 of Source Control in-kind service credits for additional contractor and project management support to complete the Duwamish/Diagonal (D/D) Site Assessment (SA) Report by incorporating the results of recontamination potential modeling.

Resolution 1998-15 included the subtask of incorporating the modeling results into the SA Report. However, on June 17, 1998 the Sediment Remediation Technical Working Group recommended the Panel defer that subtask until after the modeling was completed and the data reviewed by the Panel to better determine the level of effort required to complete the SA report.

## 1999 Cash Disbursements from the Court Registry Account

<u>Resolution</u>	<u>Recipient</u>	<u>Amount \$</u>	<u>Reason</u>
1999-04	Ecology	4,541.64	TE: CY98
1999-04	Muckleshoot	1,878.73	TE:CY98
1999-04	Suquamish	11,200.90	TE:CY98
1999-04	NOAA	16,107.94	TE:CY98
1999-04	USFWS	7,006.00	TE:CY98
1999-05	NOAA	16,574.69	AD:CY98
<b>Total</b>		<b>\$57,309.90</b>	

AD: Administrative Director

TE: Trustee Expense reimbursement

**Elliott Bay/Duwamish Restoration Program  
1999 Annual Report**

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**Appendix A  
Panel Organization Plan**

# Panel Organization Plan

## Contents

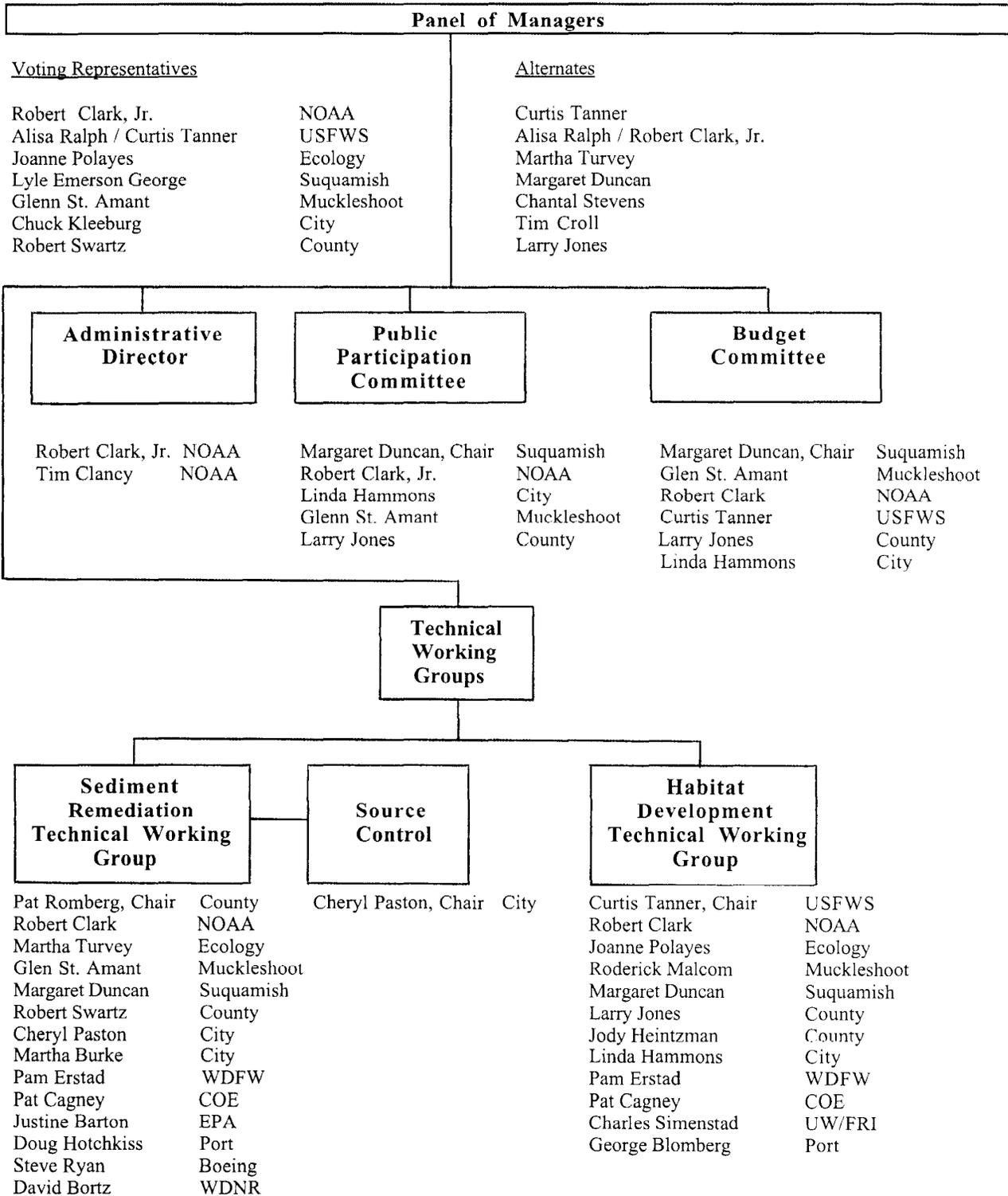
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B.	Organization chart.....	A-2
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D.	Additional technical working group members.....	A-6

### A. Acronyms and Abbreviations

Boeing	The Boeing Company
City	The City of Seattle
COE	U.S. Army Corps of Engineers
DOI	U.S. Department of the Interior
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
King County	King County Department of Natural Resources (formerly METRO)
Muckleshoot	Muckleshoot Indian Tribe
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
Port	Port of Seattle
Suquamish	Suquamish Tribe
USFWS	U.S. Fish and Wildlife Service
UW/FRI	University of Washington/Fisheries Research Institute
WDNR	Washington State Department of Natural Resources
WDFW	Washington State Department of Fish and Wildlife

**B. Organization Chart**

**Organization Structure**



## C. Panel Participants

P = Panel of Managers Representatives  
S = Sediment Remediation Technical Working Group  
H = Habitat Development Technical Working Group

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**Elliott Bay/Duwamish Restoration Program  
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**Appendix B  
Panel Publications**

## Panel Publications

1. *Draft Public Participation Plan*, February 1992.
2. *Summary of Stakeholder Interviews*, December 1992.
3. *Draft Concept Document*, August 1993.
4. *1992 Annual Report*, May 1993.
5. *1993 Annual Report*, April 1994.
6. *Public Participation Plan*, June 1994.
7. *Final Concept Document*, June 1994.
8. *1994 Annual Report*, June 1995.
9. *Waterfront Recontamination Study - Volume I*, July 1995.
10. *Waterfront Recontamination Study - Volume II*, August 1995.
11. *Pier 53/55 Sediment Cap Monitoring Report*, January 1996.
12. *1995 Annual Report*, June 1996.
13. *Norfolk CSO Sediment Cleanup Study*, July 1996.
14. *Concept Document Addendum No. 1*, November 1996.
15. *1996 Annual Report*, June 1997.
16. *Concept Document Addendum No. 2*, December 1997.
17. *Pier 53/55 Sediment Cap Monitoring Report*, December 1997.
18. *1997 Annual Report*, May 1998.
19. *Construction of Oyster Shell Habitat Plots in Elliott Bay: Evaluation of Crab Settlement and Habitat Utilization* (Dinnel Marine Research), November 1998.
20. *1998 Annual Report*, May 1999.
21. *Norfolk CSO Sediment Remediation Project Closure Report*, August 1999.
22. *Norfolk CSO Sediment Remediation Project Five-Year Monitoring Program: April 1999 Monitoring Report*, August 1999.
23. *Intertidal Habitat Projects Monitoring Program, Elliott Bay/Duwamish Restoration Program*, November 1999.
24. *1999 Annual Report*, April 2000.