

Lower Duwamish Waterway South Park Marina

Summary of Existing Information and Identification of Data Gaps

Prepared for



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List of Acronyms

BMP	best management practice
CSL	Contaminant Screening Level
DMR	discharge monitoring report
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
LDW	Lower Duwamish Waterway
LDWG	Lower Duwamish Waterway Group
NPDES	National Pollutant Discharge Elimination System
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
RI/FS	Remedial Investigation/Feasibility Study
SAIC	Science Applications International Corporation
SIC	Standard Industrial Classification
SQS	Sediment Quality Standard
SVOC	semivolatile organic compound
TPH	total petroleum hydrocarbons
TSS	total suspended solids
UST	underground storage tank

1.0 Introduction

1.1 Background and Purpose

The Lower Duwamish Waterway (LDW) in Seattle, WA, was added to the U.S. Environmental Protection Agency (EPA) National Priorities List in September 2001 due to chemical contaminants in sediment. The key parties involved in the LDW Superfund site are the Lower Duwamish Waterway Group (LDWG; comprised of the City of Seattle, King County, the Port of Seattle, and The Boeing Company), EPA, and the Washington State Department of Ecology (Ecology). LDWG is conducting a Remedial Investigation/Feasibility Study (RI/FS) for the LDW Superfund site.

Data collected during the Phase I Remedial Investigation (RI) were used to identify locations that could be candidates for early cleanup action. Seven candidate early action sites (or “Tier 1” sites) were identified. Terminal 117, located on the west side of the LDW at approximately 3.5 to 3.7 miles south of the tip of Harbor Island, was identified as one of these Early Action Areas (Figure 1). Detailed background information on Terminal 117 is provided in *Summary of Existing Information and Data Gaps Analysis Report* (Port of Seattle 2003).

Remediation plans are currently being developed for Terminal 117 to control potential sources of sediment contamination. However, these remedial actions as currently proposed will be limited to areas within the Terminal 117 property boundary. South Park Marina is located adjacent to the northern boundary of the Terminal 117 site. Historical information and sampling results suggest that soil and groundwater contamination may be present at the South Park Marina site.

Ecology is the lead agency for source control for the LDW Superfund site. Source control is the process of finding and eliminating or reducing releases of pollutants to waterway sediments, to the extent practicable. The goal of source control is to prevent sediments from being recontaminated after cleanup has been undertaken.

In 2005, Ecology prepared a *Source Control Action Plan for the Terminal 117 Early Action Area* (Action Plan; Ecology 2005a). The Action Plan identified several source control actions related to South Park Marina:

- Review waste management practices, compliance with permit
- Investigate sewer connections and discharge locations of storm drains and catch basins
- Investigate location and fate of A&B Barrel waste lagoon
- Sample soils adjacent to fence between Terminal 117 and South Park Marina due to contamination observed in borings at Terminal 117
- Sample catch basins for metals and phthalates

As part of source control efforts for Terminal 117, Ecology requested Science Applications International Corporation (SAIC) to prepare this *Summary of Existing Information and Identification of Data Gaps* for the South Park Marina site. The purpose of this report is to document available existing information specific to the potential for sediment recontamination associated with the South Park Marina site, and to identify remaining critical data gaps that need to be addressed in order to implement source control actions for Terminal 117.

1.2 Chemicals of Concern in Sediment

According to the Action Plan for Terminal 117, the most prevalent chemicals exceeding the cleanup screening level (CSL) in sediments are polychlorinated biphenyls (PCBs). In addition, phenol, polynuclear aromatic hydrocarbons (PAHs), butyl benzyl phthalate, bis(2-ethylhexyl)phthalate, and total DDT exceeded the sediment quality standards (SQS) in sediments near Terminal 117. Inspections and site investigations conducted by King County, Ecology, EPA, and the Port of Seattle since 1984 have identified upland soils and catch basin sediments contaminated with PCBs, PAHs, pentachlorophenol, phenol, benzoic acid, benzyl alcohol, lead, arsenic, zinc, cadmium, and silver. Although PCBs are considered the primary chemicals of concern in sediment at Terminal 117, source control efforts will look for ongoing sources of other chemicals as listed above that could result in sediment recontamination.

2.0 South Park Marina

2.1 Site Description

South Park Marina is located at 8604 Dallas Ave. S., Seattle, WA 98108, just north of Terminal 117 (Figure 2). It is a small boat marina and do-it-yourself boat maintenance and repair facility. Since 1970, marina activities have included offices, boat repair, cleaning facilities, upland boat storage, boat haul-out services, a boat-launch ramp, and moorage slips in the LDW (Figure 3). Its standard industrial code (SIC) is 3732, Boat Building and Repairing. The facility is identified in EPA and Ecology records as either “South Park Marina” or as “Guy M. Crow.”

Currently, the site is covered with buildings, boats, and equipment, with very little clearance between boat supports and equipment. The riverbank along the shoreline is steep and there does not appear to be any access to the riverbank except from the LDW.

2.1.1 Property Ownership

South Park Marina consists of four parcels owned by South Park Marina Ltd. Partnership. Along the Duwamish Waterway, from west to east, are parcels 2185600070, 2185600025, and 0001600001¹. These parcels comprise the main portion of the marina. An additional parcel, 7884100490, located on the southeast corner of Dallas Ave. S. and 16th Ave. S., is used for boat storage. Parcel information is listed in Table 1.

Guy M. Crow is the registered agent for South Park Marina Ltd. Partnership. The Partnership was incorporated on April 1, 1982².

2.1.2 Permits

South Park Marina is covered under the National Pollutant Discharge Elimination System (NPDES) Boatyard General Permit (WAG030045), for discharges to the Lower Duwamish Waterway. This permit covers a commercial business engaged in the construction, repair, and maintenance of small vessels, 85 percent of which are 65 feet or less in length, or revenues which constitute more than 85 percent of gross receipts. The Boatyard General Permit requires monitoring for copper, oils, and total suspended solids (TSS). The permit was originally issued on February 5, 1993; the current permit expires on November 2, 2010.

The facility has a hazardous waste identification number (WAD988513248) as a conditionally exempt small quantity generator; this number is currently listed in Ecology’s Facility Site Database as inactive. EPA’s Envirofacts database indicates that a spill at this site resulted in a formal enforcement action, however this could not be confirmed. One underground storage tank

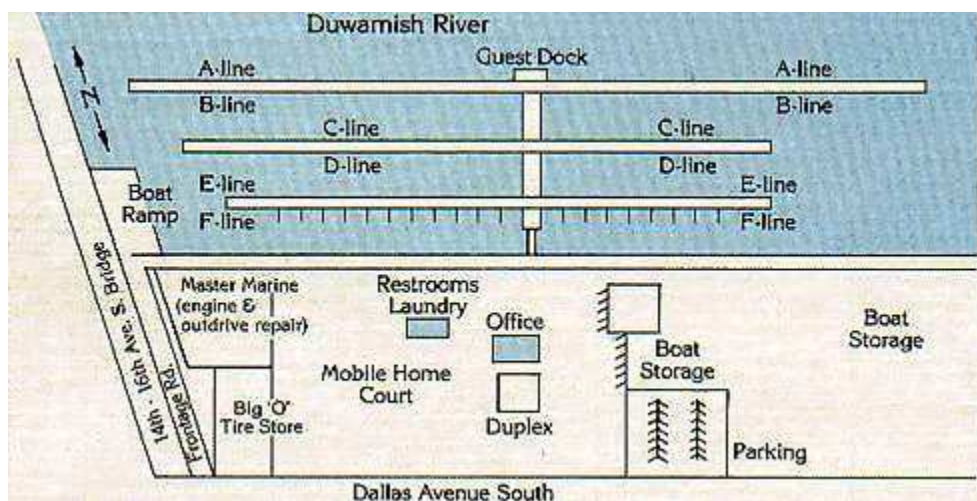
¹ King County Parcel Viewer: [http://www5.metrokc.gov/parcelviewer/Viewer/King County](http://www5.metrokc.gov/parcelviewer/Viewer/King%20County)

² Washington Secretary of State, Corporations Division – Registration Data Search: http://www.secstate.wa.gov/corps/search_detail.aspx?ubi=601576345

was registered with Ecology's Underground Storage Tanks (UST) Program. This tank is listed in Ecology's database as "removed."³ No information on tank capacity or contents was available.

2.2 Current Operations

South Park Marina and Boatyard has provided moorage at the current location since 1970. According to the facility's web site (www.southparkmarina.com), South Park Marina provides restrooms, showers, laundry facilities, secured docks, parking, dry storage, and a boat launch ramp in addition to small craft moorage. Electricity, water, and small garbage disposal are provided at each moorage location. Power and sailboats up to 50 feet in length can be accessed from the facility's boat ramp. The facility also provides hull cleaning services, a towboat service, and a crane to lift out boats, engines, and step masts. A facility layout is shown below.



Source: www.southparkmarina.com

The facility layout shows a Big O Tire Store and Master Marine (engine & outdrive repair) located on the north side of the South Park Marina property, and a "mobile home court" in the center of the property. The Big O Tire Store is now the location of Tire Factory (8510 Dallas Ave. S.), a retailer of automobile tires and wheels. Rick's Master Marine has been present at the location shown in the facility layout (1411 S. Thistle St.) since approximately 1979. Rick's Master Marine sells boat engines and parts, and repairs and rebuilds engines. The mobile home court area is now used for boat storage.

South Park Marina operates a closed loop pressure boat wash system in the southeast portion of the facility (Port of Seattle 2003). No abrasive blasting is allowed. Boats are cleaned with a high pressure or low pressure water wash. The wash water runs to a catch basin where it is pumped to a water treatment system to remove particles (Ecology 2005a). The water passes through a series of weirs and filters and is reused for the pressure washers. The sludge generated by the process is dried, bagged and disposed as solid waste.

³ Washington Department of Ecology Underground Storage Tank (UST) List: <http://www.ecy.wa.gov/programs/tcp/ust-lust/ust-lst2.html>

The wash system is located in the vicinity of a catch basin that flows to a 3,000-gallon oil/water separator (Figure 4). The catch basin is covered with a metal plate when boat washing is conducted. Stormwater is collected in two catch basins, passed through the oil/water separator, then is discharged to the Lower Duwamish Waterway through an outfall near the boat haul-out crane. The marina is required to and has been sampling and analyzing the discharge for oil & grease, total recoverable copper, and TSS as required under its NPDES permit.

According to the Terminal 117 *Summary of Existing Information and Data Gaps Analysis Report* (Windward 2003), there are four additional catch basins located throughout the boatyard (Figure 4). During a site visit conducted by SAIC on June 6, 2007, an attempt was made to locate these catch basins; additional information was obtained by the property owner:

- The catch basin nearest the marina gangplank drains directly to the Lower Duwamish Waterway; a pipe enters this catch basin from the southwest, however the property owner did not know what this pipe connects to.
- The catch basin to the southwest of the unit described above does not exist.
- The catch basin located northeast of the Tire Factory (large white building in southwest corner of site) drains toward the Lower Duwamish Waterway, however the outfall could not be located. The structure is located under a garbage bin, and reportedly collects water from roof drains on the Tire Factory as well as drainage from a catch basin on the southwest corner of this building (not shown in Figure 4).
- The catch basin northeast of Rick's Master Marine (northwest corner of the site) drains surface water in that area of the site and is then piped southeast along the roadway to join the Tire Factory pipe heading toward the Lower Duwamish Waterway.

Two boarded-over catch basins or sumps were also observed about 30 feet west of the catch basin near the marina gangplank. The property owner had no information about these units.

The marina enforces stormwater Best Management Practices (BMPs), including the use of vacuum sanders, tarps to catch debris, and routine sweeping of boat maintenance areas.

A water quality compliance inspection was conducted by Ecology on March 9, 1993. No information on the results of this inspection was available, however no permit violations were identified.

An unannounced stormwater compliance inspection was conducted on June 7, 2005 (Ecology 2005b). The following issues and recommendations were identified:

- No tarps were being used with upland boatyard activities; all upland boatyard activities require use of tarps to contain solids and prevent releases to surface waters.
- The inspector was concerned about the close proximity of the catch basin to the wash pad sump and to surface water; the catch basin is reportedly covered when the wash pad is in use. At the time of the inspection, paint residuals were observed around the edge of the catch basin, and the potential for discharge of paint residuals to surface water was judged to be "great."

- There were visible oil spills under the crane used to lift boats out of the water; the spills were on bare ground and should have been cleaned up immediately. The crane should be repaired and proper containment provided under the crane to limit any future spill.
- Paints and solvents were not properly stored; they should be stored in a covered area and on a durable impervious bermed surface.

No follow-up inspection has been conducted.

A review of South Park Marina's Discharge Monitoring Report (DMR) data for 2006/2007 indicated that on January 1, 2007, the total recoverable copper concentration of 331 ug/L exceeded the benchmark value of 229 ug/L⁴. In addition, violations of the oil & grease parameter were noted on 4/1/2006 and 5/1/2006. No DMRs were submitted for February, March, June, August, November, or December 2006.

2.2.1 Site Drainage

The north end of the South Park Marina property is connected to the city of Seattle sewer system; the south end is believed to be on a septic system.

A surface ditch and corrugated pipe are located along the property line with Terminal 117 (southeast of South Park Marina); this ditch discharges to the LDW (Figure 4) and reportedly drains building downspouts from upland areas (Port of Seattle 2003, Figure 5-9).

A catch basin and oil/water separator are located near the boat wash area (Figure 4); these drain to an outfall near the southeastern portion of the property which discharges to the LDW. Four additional catch basins are located on the site; it is not known where these ultimately discharge to.

The dry boat storage parcel located to the south of the main South Park Marina property drains to the city of Seattle combined sewer system.

2.2.2 Potential Contaminant Sources

Wastes typically generated by boatyard activities (though not necessarily present at the South Park Marina) include spent abrasive grits, spent solvent, spent oils, pressure wash wastewater, paint overspray, paint drips, various cleaners and anti-corrosive compounds, paint chips, scrap metal, welding rods, wood, plastic, resins, glass fibers, and miscellaneous trash (Ecology 2005c). If not adequately controlled, these pollutants can enter the wastewater stream through the application and preparation of paints; the handling, storage, and accidental spill of chemicals, leaks or drips of paint, solvents, and thinners; the fracturing and breakdown of abrasive grits; and the repair and maintenance of mechanical equipment. Hull preparation for painting is commonly done by sanding, grinding or scraping and some abrasive blasting.

⁴ Summary of DMR data reports from Washington Department of Ecology Water Quality web site: <http://www.ecy.wa.gov/programs/wq/permits/boatyard/>

The two main wastewater streams at boatyards are pressure wash wastewater and stormwater runoff. Other potential sources are cooling water, pump testing, gray water, sanitary waste, washdown of the work area, and engine bilge water. Engine room bilge water and oily wastes are typically collected and disposed of through a licensed contracted disposal company (Ecology 2005c). The general boatyard permit prohibits direct discharge of pressure wash wastewaters and calls for closed loop systems or other modes of discharge than to surface waters.

Ecology's Environmental Assessment Program recently completed a study of boatyard stormwater runoff from three Puget Sound boatyards that are covered under the Boatyard General Permit (Ecology 2006). While stormwater from these types of facilities has been well characterized for copper, other toxic pollutants had not previously been analyzed. The study included sampling of stormwater runoff from one to three storm events at each of the three boatyards during April and May 2006. A total of six sets of samples were obtained. One composite sediment sample was also collected in the receiving waters adjacent to each stormwater outfall during February 2006. Chemicals analyzed included total petroleum hydrocarbons (TPH), priority pollutant metals, organotins, semivolatile organic compounds (SVOCs), and PCBs, in addition to general water and sediment quality parameters.

Results of the study show that boatyard-related chemicals with the greatest potential for adverse effects in receiving waters are copper, zinc, lead, tributyltin, PAHs, and phthalates (Ecology 2006). These contaminants were detected in both stormwater runoff and stormwater outfall sediments at all three of the boatyards in the study. Based on estimates of the dissolved fraction, copper, zinc, and lead concentrations in the stormwater were likely to exceed Washington State acute water quality criteria for protection of aquatic life, substantially so for copper and zinc. Lead potentially exceeded the freshwater acute criteria, but not the less restrictive marine acute criteria. Detected concentrations of the antifouling agent tributyltin exceeded EPA acute water quality criteria in stormwater runoff from one of the boatyards.

The sediment sample collected near the stormwater outfall at one of the facilities contained levels of copper, zinc, tributyltin, PAHs, and phthalates that could be toxic to sediment-dwelling organisms (Ecology 2006). The outfall sediments at a second yard exceeded a Puget Sound Dredge Disposal Analysis program screening level for tributyltin.

2.3 Past Site Use

There is little information regarding historical activities on the South Park Marina site. A report titled *An Investigation of Pollution in the Green-Duwamish River* (WSPCC 1955) indicates that the A&B Barrel Company was reconditioning and repainting used barrels and drums on the site in the early to mid-1950s. The report states that A&B Barrel used about one ton per month of sodium hydroxide as a cleaning agent. Liquid waste, including oils, grease and sodium hydroxide, were discharged to a small pond on the site (Figure 5), and the pond discharged to the LDW (Harper-Owes 1983, as cited in Windward 2003).

An analysis of the waste in the pond indicated a concentration of 940 ppm sodium hydroxide (WSPCC 1955). Aerial photographs of the site in the 1950s show the location of the company building and pond near the southern property boundary. The location of the pond has been geo-referenced and superimposed on a current aerial photograph (Figures 3 and 6).

A mobile home park (South Park Mobile Homes) occupied the northern half of the present-day marina site from approximately 1985 to 1999, although mobile homes are apparent in aerial photos as early as 1946 (Port of Seattle 2003). Former occupants of the central portion of the site reportedly include North Star Trading Company (1980 to 1981), Evergreen Boat Transport (1985 to 1999), R.P. Boatbuilding (dates unknown), and Dekker Engineering (1995 to 1999) (Figure 7).

2.4 Review of Aerial Photos

Aerial and oblique photographs of the site were obtained from Aerometrics, Inc. for the following years: 1946, 1947, 1954, 1956, 1960, 1961, 1969, 1974, 1977, 1980, 1982, and 1985. These photographs are provided as Appendix A; a review of the photographs is provided below.

1946: In this photograph, the feature of interest (the pond area) is not visible. Between February (oblique photograph) and the time the aerial photograph was taken, a new building appears adjacent and just west of where the pond is located in later photographs. It is assumed this building later became the A&B Barrel facility.

1947: In this oblique photograph, the building first seen in the 1946 photo is visible and a dirt or gravel road is visible along the east side of the building in the vicinity of the future pond locations. There do not appear to be any drums or barrels surrounding the building in this photograph.

1954: This is an oblique photograph in which the A&B Barrel facility can be seen, along with an empty flatbed truck on the west side of the building, and what appear to be drums or barrels stacked around the perimeter of what presumably was the property line at that time. The pond area is not clearly visible, but there does appear to be a depression immediately east of the building.

1956: In this aerial photograph, the pond area appears as a dark somewhat circular area with a later colored circular area within it. There are unidentifiable objects along the northern end of the property (same location as what appeared to be drums/barrels in the 1954 photograph). The photograph is quite “grainy” which makes an interpretation difficult.

1960: Sometime between 1956 and 1960, the area of operation footprint for A&B Barrel changed shape somewhat along the north perimeter. The quantity of drums/barrels visible appears to have increased two to three fold, and they form a straight edge along a new driveway that has appeared since the 1956 photograph. The pond area appears as a distinct dark circle with an arm of some kind extending from the building outward towards the center of the pond. The marina and shoreline have undergone redevelopment since the 1956 photograph. There are two more finger piers and the docks extend both north and south from the center cross tie dock. It appears the shoreline may have been dredged to accommodate the new docks.

1961: Between 1960 and 1961, the A&B Barrel facility disappeared. In this photograph, the property is clear of all buildings and pond, except for a couple of small structures adjacent to the dock ramp. Faintly visible are blade lines or wheel tracks, which are probably a result of leveling earth or gravel across the property.

1969: Boats and small buildings occupy the property. This likely represents the beginning of the South Park Marina, which has been operating since 1970.

1974: More boats and two larger buildings have been erected on the property.

1977: Little change is observed from the 1974 photograph.

1980: Little change is observed from the 1977 photograph.

1982: The marina has been redeveloped and expanded. A ramp to the docks has been moved downstream. The shoreline has been reconfigured and appears to have been dredged.

1985: One new building appears since the 1982 photograph. The boatyard is more organized in appearance. A house on the SW corner of Dallas and 16th Ave has disappeared.

2.5 Environmental Investigations and Cleanups

In March 2004, soil samples were collected near the Terminal 117/South Park Marina property line. Sample SB-13, located on the property line, contained total PCBs at 5.0 mg/kg at a depth of 0 to 1.5 feet; sample SB-14, located just above the intertidal zone on the Terminal 117 side of the property line, contained 31 mg/kg PCBs at a depth of 0 to 1.5 feet (Figure 8)

In 2006, the Port of Seattle sampled and tested soils in the southeastern corner of the site, on the property boundary and adjacent to the Terminal 117 site. Test results indicated that the soils contained PCBs at concentrations ranging from 0.082 to 3.2 mg/kg at 0 to 1 foot below ground surface (bgs) and at a concentration of 0.59 mg/kg at 2.5 to 4 feet bgs (Port of Seattle 2006) (Figure 8).

3.0 Potential for Sediment Recontamination

3.1 Historic Land Uses

Little is known about the operations of former site occupants, particularly the A&B Barrel Company, which reconditioned and repainted used barrels and drums. Liquid waste was discharged to a pond at the site in the 1950s; oils, grease, and sodium hydroxide were reportedly placed in the pond, however other chemicals associated with residual barrel contents likely were placed in the pond as well. Due to the site's proximity to the Lower Duwamish Waterway, contaminants in soil and groundwater associated with the historic operations of the A&B Barrel Company (including discharge of liquid wastes into the pond), if present, would represent a potential source of sediment recontamination for the Terminal 117 Early Action Area.

3.2 Current Land Use

Stormwater runoff from boatyard operations at South Park Marina could contain pollutants including copper, zinc, lead, tributyltin, PAHs, and phthalates. PCBs are not associated with marina operations. The implementation of stormwater BMPs including the use of vacuum sanders, tarps to catch debris, and routine sweeping of maintenance areas as well as the presence of a closed-loop wash system serve to minimize the potential for transport of contaminants to the LDW.

No significant compliance issues have been identified at this facility, however results of a June 2005 stormwater compliance inspection identified several issues of concern related to potentially inadequate containment of pollutants, the potential discharge of paint residuals to a catch basin located near the wash pad, and observed petroleum spills (Ecology 2005b). If corrections were implemented as recommended, the potential for sediment recontamination associated with current operations at South Park Marina is believed to be low. No follow-up inspection has been conducted.

4.0 Data Gaps

Data gaps associated with historic and current operations at the South Park Marina property make it difficult to assess whether the property poses a risk of recontaminating Terminal 117 Early Action Area sediments following cleanup.

The following data gaps associated with historic operations at the South Park Marina property have been identified:

- The presence and concentration of contaminants in soil and groundwater near the former location of the A&B Barrel Company, particularly the pond used for liquid waste disposal in the 1950s, is unknown. Depending on the contents of the barrels and drums that were reconditioned at the facility, a wide variety of contaminants could be present in soil at this location. Surface and subsurface soil sampling to characterize this location should be conducted.
- If contaminants are present in soil at this location, they may be transported to the Lower Duwamish Waterway via groundwater, seeps, surface runoff, or bank erosion. A sampling plan should be developed that will provide data needed to evaluate potential pathways for transport of contaminants to the waterway.

The following data gaps associated with current operations at the South Park Marina property have been identified:

- The sources and discharge locations for the onsite catch basins described in Section 2.2 should be verified.
- The presence and concentration of contaminants in the catch basin(s) and oil/water separator are unknown. A catch basin grab sample should be collected from each unit that drains to the Lower Duwamish Waterway, and analyzed for Sediment Management Standards (SMS) chemicals. Alternatively, water and sediment samples could be collected from the outfall pipe(s) to the Duwamish.
- A follow-up inspection to verify that recommendations from the June 2005 stormwater compliance inspection were implemented should be conducted.
- Reportedly, the southern portion of the site is on a septic system; the condition and maintenance practices are unknown and should be evaluated.

5.0 Documents Reviewed

Ecology. 2005a. Lower Duwamish Waterway, Source Control Action Plan for the Terminal 117 Early Action Area. Washington Department of Ecology. Publication No. 05-09-093. July 2005.

Ecology. 2005b. Stormwater Compliance Inspection Report. South Park Marina, NPDES Permit No. WAG30045B. Prepared by Cynthia J. Callahan, Washington Department of Ecology. June 7, 2005.

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Port of Seattle. 2006. T-117 Upland Soil Investigation, Draft Field Sampling and Data Report: Map Folio. Prepared by Windward Environmental LLC and Dalton, Olmstead & Fuglevand, Inc. March 22, 2006.

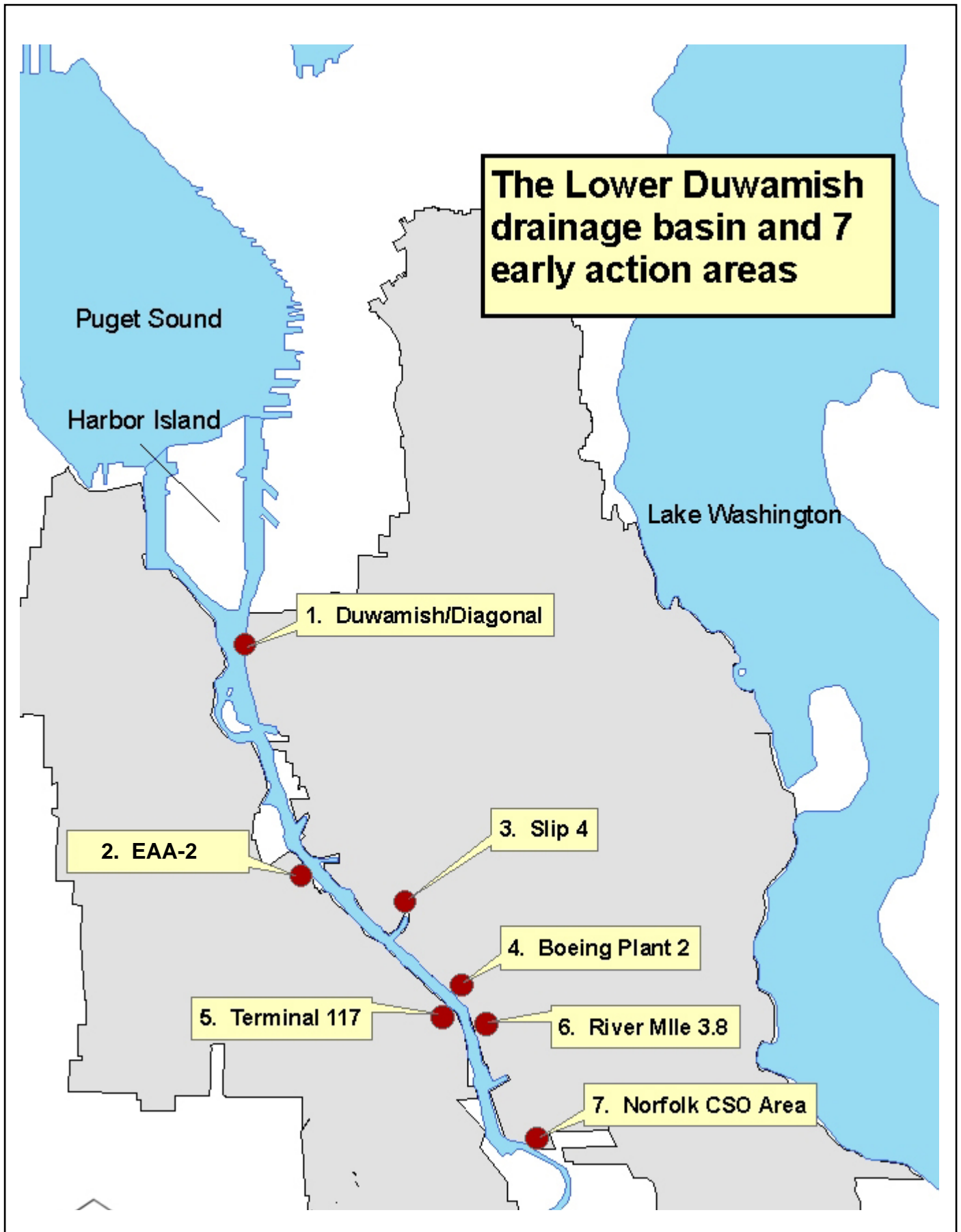
RETEC. 2006. T-117 Upland – Draft Removal Action Plan. Terminal 117, Seattle, Washington. Prepared by The RETEC Group, Inc. May 15, 2006.

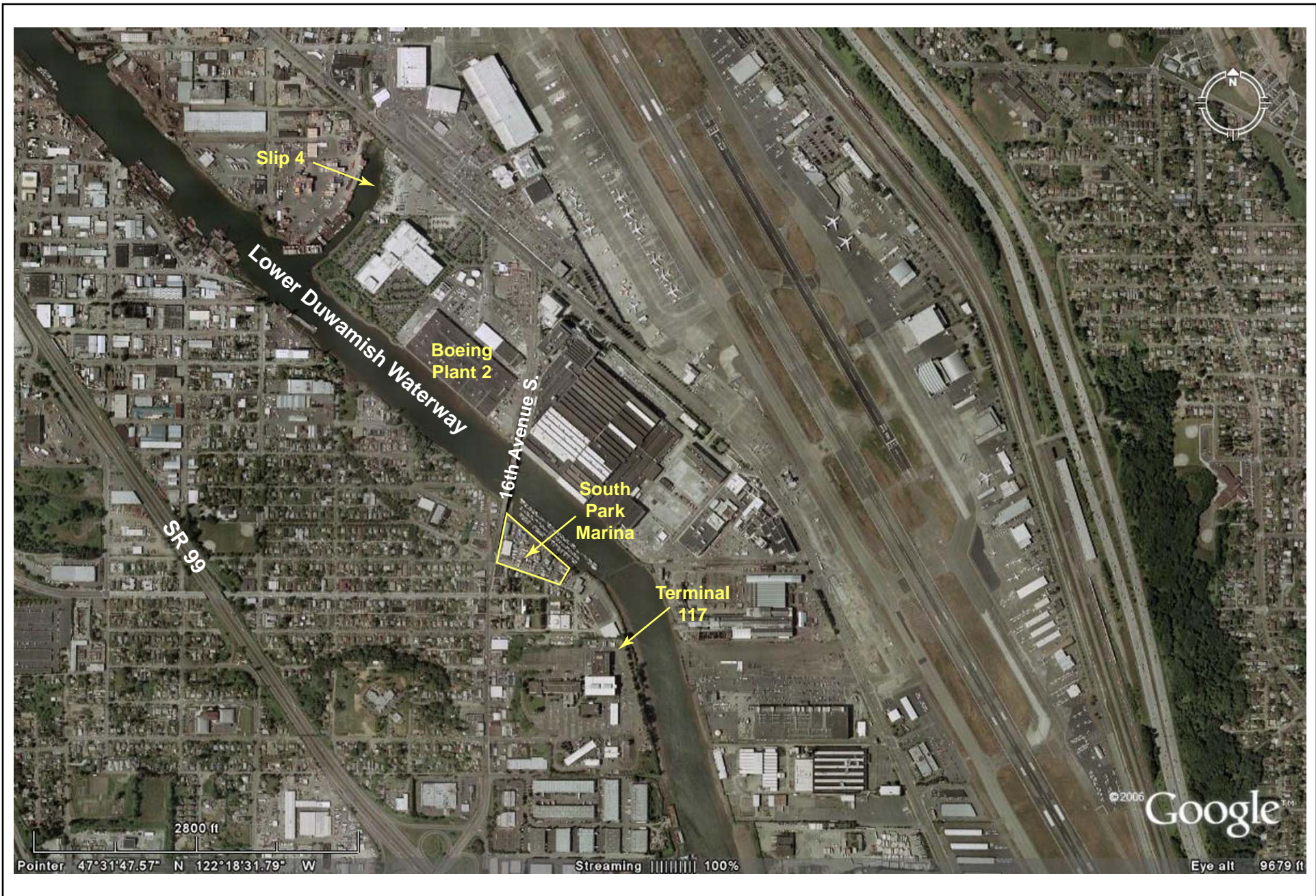
USEPA (U.S. Environmental Protection Agency). 2006. Action Memorandum from Ravi Sanga, Remedial Project Manager, USEPA, to Daniel D. Opalski, Director, Office of Environmental Cleanup, USEPA, Re: Action Memorandum for a Time-Critical Removal Action at the Terminal 117 Early Action Area, Lower Duwamish Waterway Superfund Site, Seattle, WA. June 2006.

Windward. 2003. Lower Duwamish Waterway Superfund Site, Terminal 117 Early Action Area. Task 1: Summary of Existing Information and Data Gaps Analysis Report. Final. Prepared by Windward Environmental LLC, Dalton, Olmstead & Fuglevand, Inc., and Onsite Enterprises, Inc. for U.S. Environmental Protection Agency, Region 10. September 26, 2003.

WSPCC (Washington State Pollution Control Commission). 1955. An Investigation of Pollution in the Green-Duwamish River. Technical Bulletin No. 20. Summer 1955.

Figures





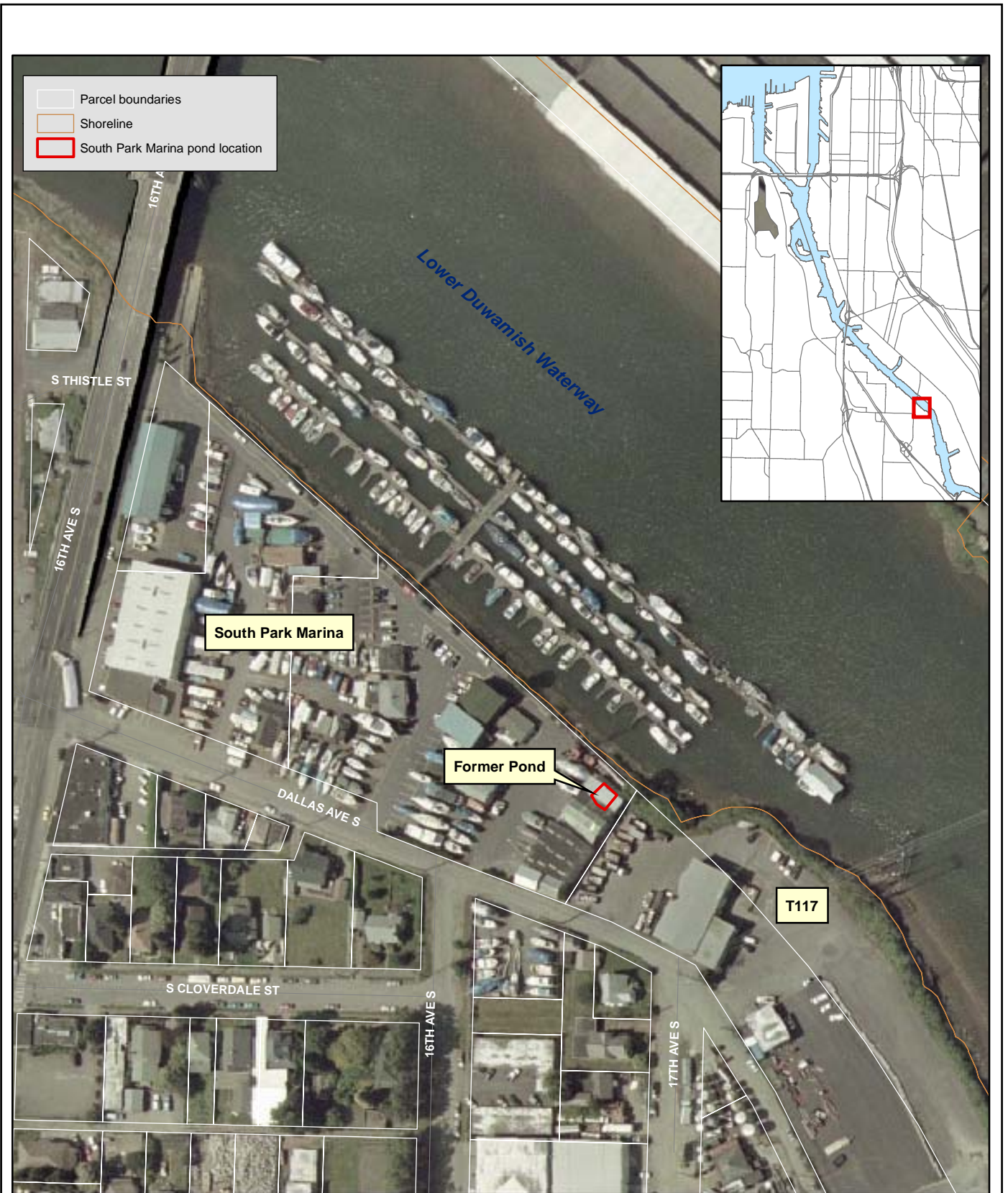
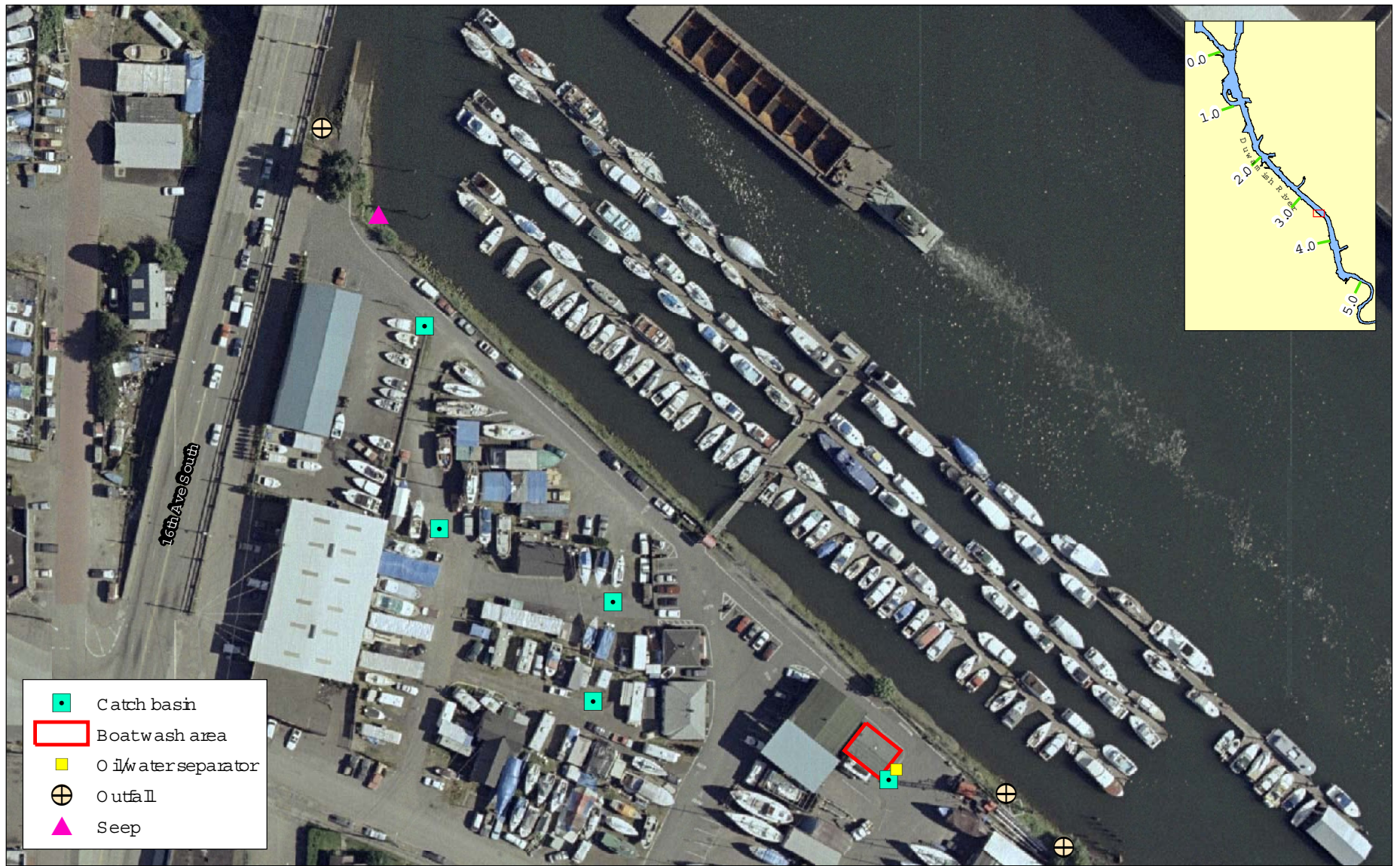
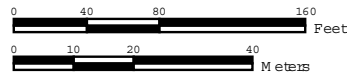


Figure 3. Current Site Photo Showing Location of Former Pond



Orthophoto source: King County 1999.



Windward
environmental LLC

Prepared by RAC 08/27/03 Map 981

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Figure 4. South Park Marina Catch Basins and Outfalls
Source: Windward 2003

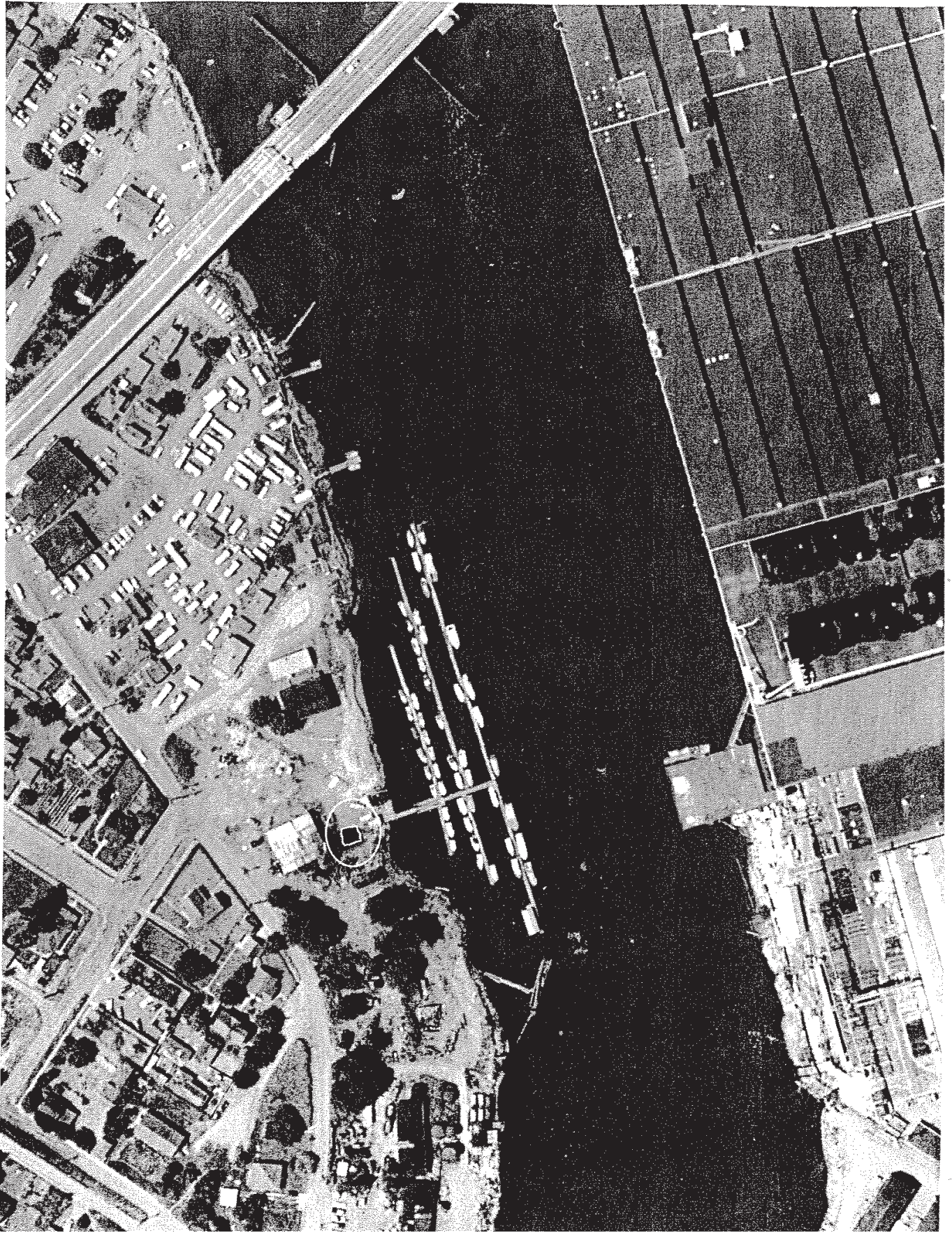
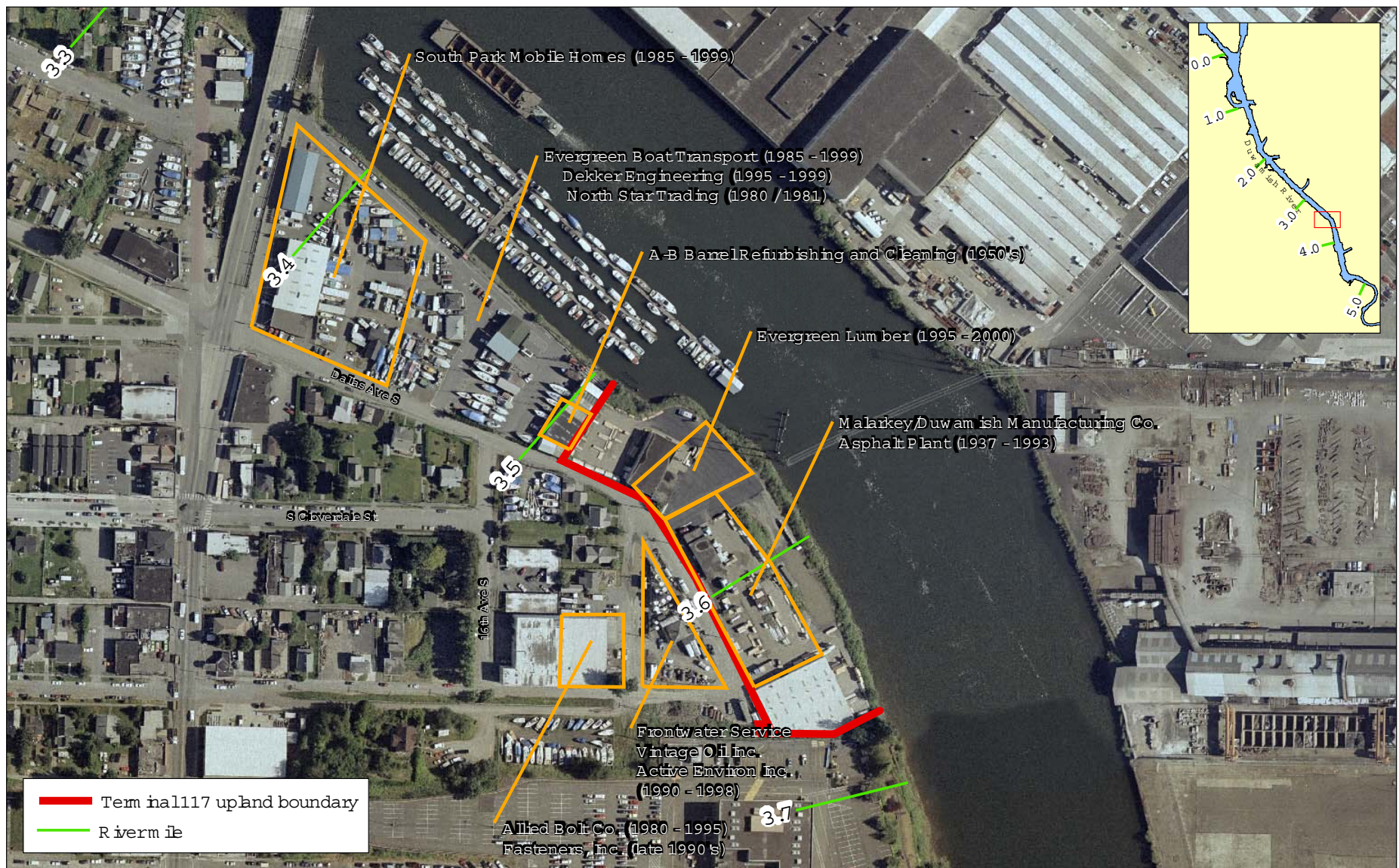




Figure 6. Close-up View of Former Pond Location



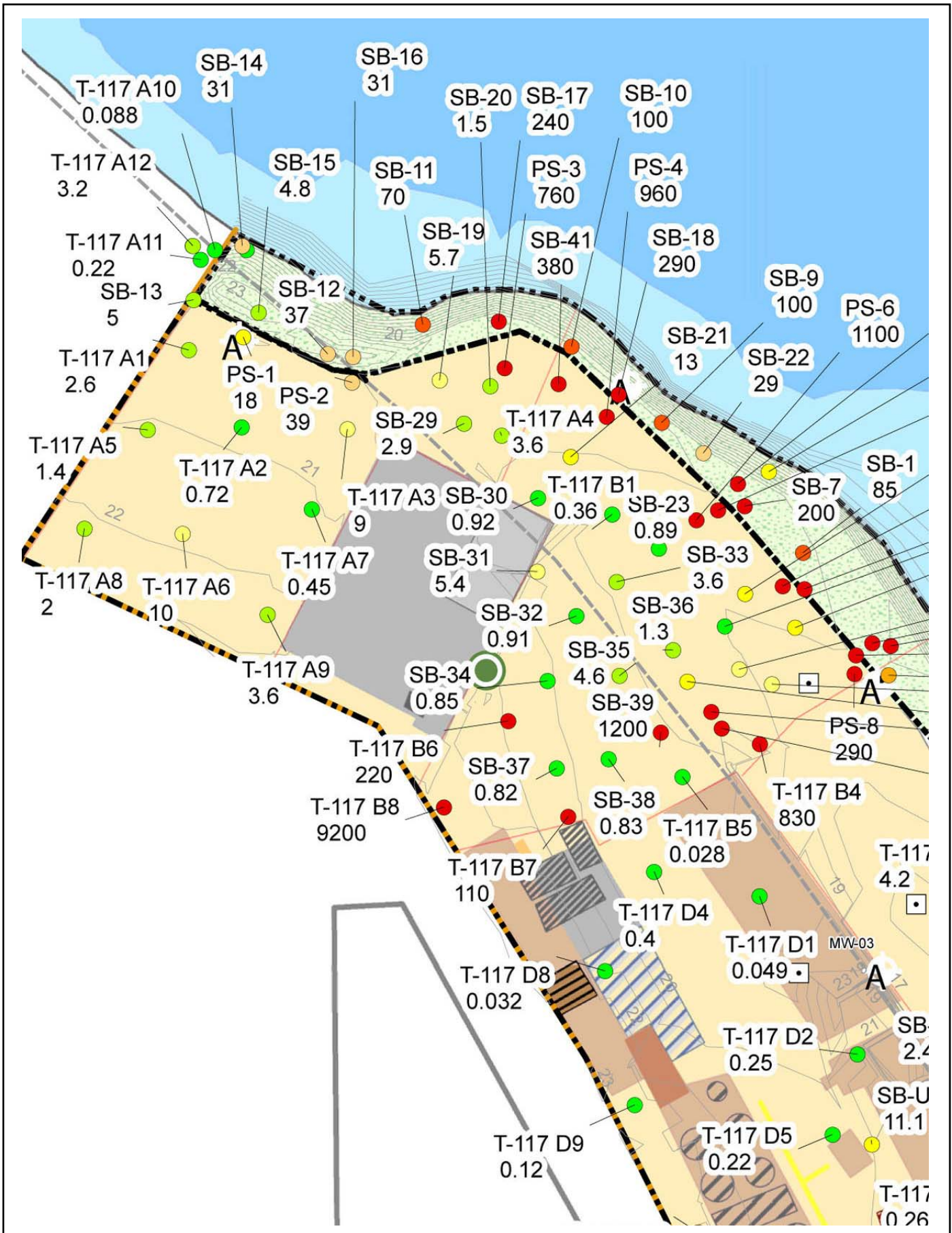
Orthophoto source: King County 1999.

Early Action Remediation boundary to be determined based on the results of this investigation.

Windward
 environmental LLC

Prepared by RAC 08/27/03 Map 980

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Tables

**Table 1
South Park Marina Parcel Information**

Parcel Number	2185600070	2185600025	0001600001	7884100490
Address	1415 S. Thistle St.	8510 Dallas Ave. S.	8544 Dallas Ave. S.	None Listed
Taxpayer	South Park Marina Ltd. Partnership	South Park Marina Ltd. Partnership	South Park Marina Ltd. Partnership	South Park Marina Ltd. Partnership
Property Name	Ricks Master Marine	Tire Factory	South Park Marina	South Park Marina
Property Type	Commercial	Commercial	Commercial	Commercial
Present Use	Industry (Heavy)	Retail Store	Marina	Parking
Lot Area	16,700 sq.ft.	60,746 sq.ft.	85,404 sq.ft.	9,200 sq.ft.
Sales History	2/9/93 - Sold by Willard S. & Rose Marie Crow to South Park Marina Ltd. Partners	2/9/93 - Sold by Willard S. & Rose Marie Crow to South Park Marina Ltd. Partners	2/9/93 - Sold by Willard S. & Rose Marie Crow to South Park Marina Ltd. Partners	2/9/93 - Sold by Willard S. & Rose Marie Crow to South Park Marina Ltd. Partners
Building Number	1	1	None	None
Building Description	Boat Services	Retail/Warehouse		
Year Built	1987	1974		
Size	4,200 sq.ft.	8,400 sq.ft.		
Building Construction	Wood Frame	Prefab Steel		
Predominant Use	Industrial Light Manufacturing	Garage, Service Repair		
Building Number		2		
Building Description		Service Garage		
Year Built		1974		
Size		1,940 sq.ft.		
Building Construction		Masonry		
Predominant Use		Garage, Service Repair		
Building Number		3		
Building Description		Single Family Residence		
Year Built		1910		
Size		1,020 sq.ft.		
Building Construction		Wood Frame		
Predominant Use		Garage, Service Repair		

Appendix A

Aerial Photos