

# Seattle Public Utilities Source Control Program for the Lower Duwamish Waterway

## *December 2010 Progress Report*



City of Seattle  
Seattle Public Utilities



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## INTRODUCTION

This report describes the status of source control activities completed by Seattle Public Utilities (SPU) from July 2005 through September 2010 as part of the Lower Duwamish Waterway (LDW) Superfund cleanup. SPU's source control program in the LDW consists of inspecting businesses in areas discharging to the waterway to enforce City codes regarding pollution prevention practices and pollution reduction; and collecting samples (sediment) in the storm drain and combined sewer systems to identify and control potential sources of contamination to City-owned infrastructure.

During previous reporting periods (January 2003 through June 2005), work focused on the Diagonal/Duwamish, Norfolk, Slip 4, Terminal 117, early action areas 1 (Duwamish/Diagonal), 3 (Slip 4), 5 (Terminal 117), and 6 (river mile 3.7 to 3.9 east). During this reporting period, work expanded to cover early action area 2 (Trotsky inlet) as well as many of the other source control areas that have been defined by the Washington State Department of Ecology (Ecology). Early action area 4 (river mile 2.8 to 3.7 east) covers areas that discharge directly to the waterway via private storm drain systems. As a result, SPU did not participate in source control efforts in this area. The seven early action areas were identified in the Remedial Investigation using a risk-based approach to identify high-priority areas for which remedial actions could be initiated prior to completion of the RI/FS process. Ecology divided up the rest of the waterway into 17 source control areas to organize source control activities. Early action areas and source control areas are shown in Map 1.

Source control activities conducted during this reporting period are summarized below:

- Conducted re- inspections at high-priority businesses in the Diagonal Ave S CSO/SD basin.
- Inspected businesses and conducted source tracing in the following areas:

### Early Action Areas

- Duwamish/Diagonal (river mile 0.1 to 0.9 east)
- Slip 4 (river mile 2.8 east)
- Norfolk (river mile 4.9 east)
- Trotsky Inlet (river mile 2.1 to 2.2 west)
- Terminal 117 (river mile 3.4 to 3.8 west)

### Source Control Areas

- Slip 1 (river mile 0.9 to 1.0 east)
- Saint Gobain to Glacier Northwest (river mile 1.2 to 1.7 east)
- Slip 2 to Slip 3 (river mile 1.7 to 2.0 east)
- Slip 3 to Seattle Boiler Works (river mile 2.0 to 2.3 east)
- Seattle Boiler Works to Slip 4 (river mile 2.3 to 2.8 east)
- Spokane St to Kellogg Island (river mile 0 to 0.1 west)
- Kellogg Island to Lafarge (river mile 0.1 to 1.3 west)
- West Glacier Bay (river mile 1.3 to 1.6 west)
- West Terminal 115 (river mile 1.6 to 2.1 west)
- Riverside Drive (river mile 2.2 to 3.4 west)

- Sea King Industrial Park (river mile 3.8 to 4.2 west).
- Participated in the Local Source Control Specialist program under a contract with Ecology.
- Cleaned 3,500 drainage structures (i.e., catch basins and slot drains located within the public right-of-way in the Diagonal Ave S CSO/SD drainage system (2007-2008).
- Jetted approximately 800 feet of pipe in the Diagonal Ave S CSO/SD drainage system on Airport Way S downstream of the Rainier Commons property to remove all residual PCB-contaminated sediment from the system. Approximately 3 cubic yards of sediment was removed from the Diagonal Ave S CSO/SD system. Property owner also jetted and cleaned approximately 200 feet of pipe in the private system (January 2008).
- Jetted the storm system (approximately 4,100 feet of pipes and approximately 30 catch basins/inlets) in the Brighton Ave S CSO/SD (separated storm drain west of E Marginal Way S), all of the S Myrtle St SD, and all of the S Garden St SD systems (December 2009-January 2010). Approximately 35 cubic yards of sediment was removed.
- Collected nine rounds of samples from the six sediment traps in the Diagonal Ave S CSO/SD and eight rounds from the three traps in the Slip 4 storm drains that SPU is responsible for maintaining. SPU also deployed five sediment traps in the Norfolk CSO/EOF/SD system in 2007. As of September 2010, four rounds of samples have been collected.
- Installed inline sediment traps at 20 locations in 10 other large municipal storm drain systems discharging to LDW with funding under an interagency agreement with Ecology. As of September 2010, one to two rounds of samples have been collected.
- Continued collecting sediment samples from storm drains to characterize pollutant contributions and identify potential sources to city-owned storm drains that discharge to the LDW. Collected 103 samples from onsite catch basins, 110 from catch basins located in the public right-of-way, and 130 inline grab samples
- Completed a solids loading analysis for storm drains and city-owned CSOs in the LDW using the source data collected as part of the City’s source control program to support the sediment transport model developed for the RI/FS (SPU 2008).
- SPU staff that worked on the project during the July 2005 through September 2010 reporting period are listed in below:
  - Tasha Bassett (inspections)
  - Mike Hinson (sampling)
  - Mike Jeffers (inspections and sampling)
  - Kevin McCracken (sampling)
  - Brian Robinson (inspections, sampling, and data management)
  - Beth Schmoyer (program lead)
  - Ellen Stewart (inspections and sampling)
  - Tanya Treat (inspections, sampling, and data management)
  - Ryeann-Marie Tuomisto (inspections)
  - Savina Uzunow (inspections and sampling)

This progress report is organized by geographic area. The first section provides an overall summary of work completed during the July 1, 2005 to September 30, 2010 reporting period and describes Lower Duwamish Waterway wide activities. Subsequent sections describe source control activities in each of the early action areas and the Ecology-defined source control areas where work occurred this reporting period.

## OVERVIEW OF LOWER DUWAMISH WATERWAY-WIDE SOURCE CONTROL ACTIVITIES

To support sediment remediation efforts in the LDW, Seattle Public Utilities (SPU) is working to reduce the amount of pollution discharged to public storm drains and sanitary/combined sewers that discharges to the waterway. The purpose of this source control program is to reduce the potential for waterway sediment to become recontaminated to levels of concern following cleanup. SPU is a key member of the Lower Duwamish Source Control Working Group because it manages a portion of the public stormwater and wastewater systems that discharge to the Lower Duwamish Waterway.

The City owns and operates a municipal stormwater collection/conveyance system, which serves an area of approximately 5,700 acres that discharges to the LDW. The City also owns and operates the local sanitary/combined sewer system in Seattle. This system collects stormwater runoff and sanitary sewage, and routes it to the large interceptor sewers that convey flow to the wastewater treatment plant at West Point. King County owns and operates the larger interceptor system and the treatment plant. The sanitary/combined sewer and storm drain service areas that discharge to the Lower Duwamish Waterway are shown in Map 2. The sanitary/combined sewer and storm drains serve an area of about 19,800 and 8,936 acres, respectively.

Land use in the LDW combined sewer service area and storm drain basins is summarized in Table 1 and shown in Map 3.

**Table 1: Land use in the LDW combined sewer service area and storm drain basin.**

	Combined Sewer Service Area		Storm Drain	
	(acres)	(percent)	(acres)	(percent)
Commercial	1,794	9	528	6
Industrial	3,317	17	2,575	29
Multi-family residential	1,160	6	255	3
Open space/park	580	3	1,322	15
Right-of-way	5,023	25	2,315	26
School	442	2	170	2
Single family residential	7,437	38	1,770	20
<b>Total</b>	<b>19,753</b>	<b>100</b>	<b>8,935</b>	<b>100</b>

The LDW drainage basin contains a relatively higher proportion of industrial land use than the combined sewer service area, and a low proportion of single family residential property.

As shown in Map 4, a number of both public and private outfalls discharge to the LDW. Outfalls can generally be divided into the following categories.

- Public storm drains. Public storm drain systems collect and convey stormwater runoff from roadways and upland properties to the waterway.
- Private storm drains. Waterfront properties are generally served by private onsite drainage systems that discharge directly to the waterway, although some of these



private systems are connected to the public storm drain system. These private systems are generally smaller than public storm drains and are owned and maintained by the private property owner.

- Combined sewer overflows (CSO). CSOs are located on the combined sewer system to release excess flows that occur during large storm events. Combined sewers collect both stormwater runoff and municipal/industrial wastewater. During large storm events, the capacity of the collection pipes can be exceeded due to the large amount of stormwater runoff entering the system. Overflow points are provided to prevent stormwater and wastewater from backing up and flooding roadways and adjacent properties. CSOs can discharge directly to the waterway via a dedicated outfall pipe (CSO) or via an outfall that is shared with a nearby storm drain system (CSO/SD).
- Emergency overflows. Like CSOs, emergency overflows are relief points in the sanitary/combined sewer system. However, emergency overflows are not related to storm events. Instead, these overflows function to relieve backups that occur as a result of a pump station failure or obstruction in the conveyance system.
- Unknown outfalls. Approximately 39 piped outfalls of unknown origin discharge to the LDW. These outfalls are most likely private storm drains that serve waterfront properties, but may also include other systems such as industrial discharges.

## **Business Inspections**

Inspections are being conducted under existing Seattle code authority. SPU has primary authority to regulate stormwater discharges to the municipal separated storm sewer system (MS4) within the City limits. King County regulates stormwater discharges in unincorporated areas of King County and on the King County International Airport. King County also has primary authority in the industrial waste and hazardous waste areas throughout King County, including within the City of Seattle. The City and the County share code authority to regulate stormwater discharges to the combined sewer. Because of overlapping and different authorities between the City and County regarding discharges to combined areas, project staff developed specific guidance for inspecting businesses in the combined areas. The goal for inspecting stormwater dischargers in combined areas is to minimize discharge of chemicals of concern to the combined sewer by preventing the accidental or deliberate discharge of concentrated products or wastes to the combined sewer. Inspection procedures are described in Appendix A.

Prior to 2006, both SPU and King County participated in a joint program to inspect businesses in areas that discharge to the LDW through either the City-owned storm drain system or the combined sanitary/storm sewer system. However, since 2006, SPU has taken the lead in the LDW business inspection program. King County continues to inspect businesses that are permitted under its Industrial Waste Program and provides technical assistance to SPU as needed on issues related to industrial waste and hazardous waste.

### ***Summary for the July 2005-September 2010 Reporting Period***

Businesses inspected from July 2005 through September 2010 are listed in Appendix B, Table B -1. During this reporting period, SPU completed 546 full inspections, 67 screening inspections, and 608 follow-up inspections at 374 sites in the LDW project area. Businesses

inspected during the reporting period and since the beginning of the source control program, are shown in Map 5. A list of businesses inspected prior to July 2005 is provided in Appendix B, Table B-2. Corrective actions were required at 263 (70 percent) of the sites that were inspected this reporting period.

Since the LDW source control program began in about March 2003, inspectors have completed 1,157 full inspections, 371 screening inspections, and 1,145 follow up inspections at 1,276 sites in the LDW. Corrective actions were required at 684 (54 percent) of the businesses inspected. Figure 1 provides a summary of corrective actions required to date for each of the four main regulatory program areas (e.g., hazardous waste, industrial waste, spill prevention, stormwater).

The SPU business inspection data base tracks 26 different corrective actions across four different regulatory program areas. A breakdown of corrective actions requested within each program area for each subbasin is provided in Appendix B, Table B-3. Corrective actions required at each business are listed in Appendix B, Table B-4.

The four most common corrective actions are listed below (as a percent of the total number of corrective actions):

Improve or create spill response procedures:	17%
Improve or purchase adequate spill response materials:	14%
Properly educate employees about spill response procedures:	13%
Storm drain facility needs to be cleaned:	12%

Highlights of some of the more significant problems found during this reporting period are provided below:

1. Manufacturer of industrial products (river mile 1.0 to 1.3 west.) 5430 W Marginal Way SW. In 2006, SPU inspectors found PCBs in an onsite catch basin (2.5 mg/kg dw). After extensive sampling, the PCBs were traced to a green solid material (7 mg/kg dw) found in the system. This material may have been residual paint that had been used on industrial skids and other equipment in the 1970s (Ledbetter 2007 personal communication). Runoff from this area discharges to the Duwamish Waterway at the southeast corner of the property. The company jetted their lines in 2007 to remove any residual material. The sump at the downstream end of the drainage system will be sampled to confirm that PCBs are no longer present in the system. SPU has requested that Ecology include PCB sampling as a requirement in the facility's NPDES industrial stormwater permit. In 2007, runoff from parking areas in the southwest portion of the property that used to discharge to the combined sewer on W Marginal Way SW, were rerouted to the onsite drainage system at the request of King County Industrial Waste.
2. Cement manufacturer (river mile 1.0 to 1.3 west). 5400 W Marginal Way SW. In 2006, SPU inspectors found an uncovered pile of spent sandblast grit stored along the fenceline on the south side of the property. Catch basin samples from the area contained elevated levels of copper (860-1,730 mg/kg). Inspectors had the company move the sandblast pile to another location on the site where stormwater can be collected and reused onsite.
3. Manufacturer of electrical products (river mile 3.8 to 4.2 west). 9131 10th Ave S. In 2008, SPU inspectors found a number of illicit connections and discharges to the City

storm drain system from hot tank, paint booth, and possible grinder machine coolant discharges. Sediment samples collected from onsite catch basins contained volatile organic compounds. Ecology fined the owner for the discharges and required them to map their onsite drainage system. SPU inspectors also worked with the property owner to implement appropriate corrective actions. The company has since applied for an NPDES permit. Follow-up actions may be needed to confirm the discharge location of one onsite catch basin. This site has been referred to Ecology to determine whether an NPDES industrial stormwater permit is required. Drainage basin mapping will be conducted to determine whether an NPDES permit is needed.

4. Cement manufacturer (river mile 0.0 to 0.1 east). 3801 E Marginal Way S. In 2008, SPU inspectors found that stormwater from this site is not pumped to the combined sewer system as reported by the property owner, but instead discharges to the City storm drain on E Marginal Way S, which discharges to the East Waterway via the Hinds CSO/SD outfall. The company has obtained an individual NPDES permit for the discharge.
5. Metal recycler (river mile 2.3 to 2.8 east). 601 S Myrtle St. In 2008, SPU received several complaints concerning a foamy discharge from the City's storm drain at S Garden St and tracked it back to the stormwater treatment system at the site. The business has an individual NPDES industrial stormwater permit and is currently investigating ways to improve the operation of their onsite treatment system. In 2008-2009, SPU collected sediment samples from catch basins in and around the property and found elevated concentrations of arsenic (58-1,420 mg/kg), copper (500-7,990 mg/kg), lead (472- 240 mg/kg), mercury (0.46-4.29 mg/kg), zinc (455-13,300 mg/kg), and PCBs (0.15- 25 mg/kg dw). In December 2009-January 2010, SPU jetted and cleaned all storm drain lines and associated structures in the vicinity of the property (all of the S Garden St and S Myrtle St storm drains and the portion of the S Brighton CSO/SD system located west of E Marginal Way S). The company is working with Ecology to comply with NPDES permit requirements and to implement corrective actions to reduce track out of material from the site.
6. Steel foundry (river mile 0.1 to 0.9 east). 3901 9<sup>th</sup> Ave S. SPU inspectors have been working with this property for a number of years. The company stored spent casting sand in the right-of-way (ROW) and had a quench tank in the ROW that occasionally overflowed onto the street. Runoff from this site discharges to the Diagonal Ave S CSO/SD system via both the separated storm and the sanitary sewer. In 2008, SPU issued a Notice of Violation for these activities. The company has removed the quench tank and has implemented improved waste management practices. They have also obtained an NPDES industrial stormwater discharge permit. The company has agreed to pave the portions of the right-of-way that have been damaged by heavy equipment so that this area can be swept to reduce trackout and is working with the Seattle Department of Transportation to obtain the necessary permits.
7. Barrel cleaning facility (river mile 0.1 to 0.9 east). 4716 Airport Way S. SPU has been working with this site for a number of years to reduce discharges to the city storm drain system on Airport Way S from barrel cleaning operations. Barrels are unloaded and pre-washed immediately adjacent to the roadway and operations often extend into the public ROW. The company has a permit with King County to discharge wastewater to the

sanitary sewer. However, because they often unload barrels in the ROW and pre-wash immediately adjacent to the ROW, they can also discharge to the storm drain system on Airport Way S. Elevated concentrations of mercury were found in a catch basin on Airport Way S (RCB36) just down gradient of the site (1.17 mg/kg) and in a manhole on S Snoqualmie St (MH18) downstream of the barrel storage area on 7<sup>th</sup> Ave S (1.02 mg/kg). A sample of sludge from the onsite wastewater treatment system at the Airport Way S site contained 21 mg/kg mercury. The company has modified barrel unloading area to prevent material from migrating into the right-of-way.

8. Marine cargo handling facility (river mile 0.1 to 0.9 east). 1 S Idaho St. Inspectors found a number of violations, including discharge of washwater to the storm drain from treatment system overflow and exterior maintenance/repair on lifts and chassis where oily sludge had accumulated on the pavement. In addition, elevated levels of copper (1,550 mg/kg) were found in catch basin CB138 in the area where copper coils for refrigeration units are maintained and cut. The treatment system overflow to the storm drain has been removed and a small cover has been installed over the maintenance area. The company has also relocated the copper coil cutting activities.
9. Transloading facility (river mile 0.1 to 0.9 east). 655 S Edmunds St. Inspectors worked with company to reduce the amount of materials (e.g., corn gluten, hay) entering the storm drain system. Company re-plumbed a small area to the sanitary sewer and designed a screen that could be put in place during unloading operations to control material from being blown into nearby catch basins.

### *Illicit Connections and Discharges*

During the reporting period, illicit connections and illicit discharges to the storm drain system were found at 15 and 49 sites, respectively. Illicit connections are listed below in Table 3. To date, a total of 139 illicit connections/discharges have been discovered during the business inspection program (see Appendix C).

### *Industrial Wastewater Discharge Authorizations*

All business inspections include a review of wastewater/process water production and disposal. Businesses discharging wastewater to the sanitary sewer without proper authorization from King County are referred to KCIW for additional review and issuance of a discharge authorization, as necessary. KCIW can issue four types of discharge authorizations depending on the type of business, the volume and characteristics of wastewater, and the potential risk to the wastewater collection and treatment system:

- Significant discharge: >25,000 gallons per day or federally regulated facility
- Major discharge: Generally 5,000 to 25,000 gallons per day and facility is not a federally regulated industry
- Minor discharge: Generally 1,000 to 5,000 gallons per day and facility is not a federally regulated industry
- Letter of authorization: Generally <1,000 gallons per day and facility is not a federally regulated industry.

A total of 31 sites were referred to KCIW for review and/or issuance of a discharge authorization. Sites referred to other agencies are listed in Appendix D.

**Table 3: Illicit connections discovered and eliminated during July 2005 to September 2010 reporting period.**

<b>Business</b>	<b>Address</b>	<b>Description</b>
All Metal Arts	7800 7 <sup>th</sup> Ave S	Internal sink connected to storm
Boom Boys Cranes LLC	7400 8 <sup>th</sup> Ave S	Floor drain connected to storm
Fog Tite, Inc.	4819 W Marginal Way SW	Process wastewater connected to storm
Heko Services, Inc.	7400 8 <sup>th</sup> Ave S	Floor drain connected to storm
MacMillan Piper Inc.	655 S Edmunds St	Sanitary connection to storm
McKinstry Company	5005 3rd Ave S	Sanitary connection to storm
Puget Sound Coatings	9220 8th Ave S	Sanitary connection to storm
Saint Gobain Containers LLC	5801 E Marginal Way S	Floor drains connected to storm
Starline, Inc.	9801 Martin Luther King Jr. Way S	Waste dump station, wash pad, and shop wastewater system connected to storm
Twinline Motorcycles LLC	2106 S Holgate St	Internal drain to storm
Union Pacific Railroad	402 S Dawson St	Maintenance shop floor drains connected to storm
King Electrical Manufacturing Co.	9131 10 <sup>th</sup> Ave S	Paint booth connected to storm
Dead Center Cycles	2226 Occidental Ave S	Sink and toilets connected to storm
ConGlobal Industries	1 S Idaho St	Overflow from pre-treatment system on sanitary sewer to storm
Veterans Administration Medical Center	1660 S Columbian Way	Trash compactor drained to storm

## Source Tracing and Identification

Source tracing and identification sampling activities are being performed to support the source control efforts. Source tracing sampling is designed to identify sources by strategically collecting samples at key locations within the drainage/combined sewer service areas. No single sampling methodology exists to effectively trace sources of contaminants to waterway sediment. Therefore, a variety of sampling techniques are used. Sediment rather than whole water samples are being collected, because sediment is expected to provide a more direct measure of potential chemical contributions to waterway sediment and is more cost effective than collecting stormwater samples. In addition, sediment that accumulates in the drainage system provides a measure of pollutant contributions over a longer time period (what has been deposited since the system was last cleaned), whereas water samples provide only a snapshot of a single storm event. Also, unlike whole water samples, sediment samples do not usually present detection limit problems for the analytical laboratory. Contaminants present in sediment can usually be quantified, which makes it easier to evaluate and interpret the sample results.

Sampling efforts utilize sediment samples collected from various locations within the storm drain system. Source sediment sampling enables SPU to maximize coverage of the LDW drainage basin and to gather information on the extent and location of contaminants within the drainage system. Each type of sample represents a different geographic scale and a different component of the sediment in the drainage system. The following three types of samples are used to track and identify pollutant sources in the LDW:

- Inline sediment traps
- Inline sediment grab samples
- Catch basin sediment.

Sample locations in the LDW are shown on Map 6. A list of sampling station locations is provided in Table DT-1.

There are no regulatory standards for catch basin sediment, inline sediment, and sediment trap samples. Results are compared to the state sediment management standards (SMS) and the Washington State Model Toxics Control Act (MTCA) Method A cleanup standards. Although these standards do not apply to storm drain sediments, they are used as benchmarks in this report to provide a rough indication of storm drain sediment quality. The SMS establish two levels:

- Sediment quality standards (SQS): Concentrations below the SQS are expected to have no adverse effects on biological resources and no significant human health risk.
- Cleanup screening level (CSL): Minor effects level used to identify areas of potential concern.

Comparison of storm drain sediment collected from catch basins, manholes, and sediment traps to SMS is considered conservative. If source sediment samples are below the SMS, there is little chance of sediment offshore of the outfalls becoming recontaminated to these levels. However, a concentration above the SMS does not necessarily indicate that the sediment offshore of the outfall will exceed standards, because sediment discharged from storm drain disperses in the receiving environment and mixes with sediment from other sources before depositing.

Total petroleum hydrocarbon (TPH) results from catch basin samples are compared to the MTCA cleanup levels to aid in assessing options for sediment disposal once it is removed from the catch basin.

### ***Sediment Trap Samples***

Sediment traps consist of a bracket mounted inside the stormwater conveyance system that contains a Teflon<sup>®</sup> bottle to passively collect suspended particulate material that passes by the sampling station (Figure 2). Sampling stations are selected to isolate specific drainage sub-basins or capture contributions from the entire drainage basin (generally greater than 50 ac). Sediment traps are typically installed first to identify potential problem areas within a drainage system and are followed up with more intensive sampling to identify specific contaminant sources (e.g., inline grabs and onsite catch basin samples).

Table 4 lists the numbers of sediment traps installed to date in LDW storm drains. See Map 7 for trap locations.

The 2008 trap installations were funded under an interagency agreement with Ecology. Most were installed in August-September 2008, although the traps in the S 96<sup>th</sup> St storm drain system were installed in December 2008. Sample results for traps retrieved through September 2010 are presented in data tables DT-2 through DT-5. To date, SPU has analyzed a total of 135 samples collected from 37 sediment traps (sample count does not include the samples Boeing collects in the North Boeing Field drainage system, see the Slip 4 early action section).

**Table 4: Numbers of sediment traps installed in LDW storm drains.**

<b>Drainage System</b>	<b>Number of Traps</b>	<b>Year Installed</b>
Diagonal Ave S CSO/SD	6	2003
King County Airport SD#3/PS 44 EOF	9	2005
I-5 SD at Slip 4	1	2005
Norfolk CSO/SD/PS 17 EOF	5	2007
King County Airport SD#1	1	2008
King County Airport SD#2/PS 45 EOF	1	2008
King County Airport SD at river mile 3.6 <sup>a</sup>	1	2008 and 2009
SW Idaho St SD	3	2008
1 <sup>st</sup> Ave S SD (west side of river)	4	2008
SW Kenny St SD/T115 CSO	1	2008
Highland Park Way SW SD	2	2008
7 <sup>th</sup> Ave S SD	3	2008
S 96 <sup>th</sup> St SD	3	2008
Hamm Creek	1	2008
<b>Total</b>	<b>41</b>	

- a. Storm drain that crosses between Boeing and Jorgensen properties. Existing trap moved in January 2010 after King County replumbed this drainage system.

### ***Inline Sediment Samples***

Inline sediment samples are grab samples collected from maintenance holes located on the storm drain mainline. Like sediment traps, inline grab samples also represent contributions on a basinwide or sub-basin scale. However, inline grabs typically represent the heavier material that accumulates and is transported in the bedload material that moves along the bottom of the pipe. These samples are collected using a long handled scoop from quiescent areas where there is sufficient sediment present for chemical analysis. Inline sediment samples are usually collected prior to installing a sediment trap or prior to cleaning the drain to characterize the chemical quality of sediment in the storm drain system and are useful in tracing sources in storm drain systems that are not large enough to install a sediment trap.

During this reporting period, SPU collected 130 inline sediment samples from various locations in the following storm drain systems:

#### **East Side of Waterway**

- S Nevada St SD
- Diagonal Ave S CSO/SD
- S River St SD
- S Brighton CSO/SD
- S Myrtle St SD
- S Garden St SD
- KCIA SD#3/PS44 EOF
- I-5 SD at Slip 4
- 16th Ave S SD
- KCIA SD#2/PS45 EOF
- KCIA-Jorgensen SD
- KCIA SD#1
- Norfolk CSO/SD/PS#17 EOF
- WSDOT SD- S Ryan St

#### **West Side of Waterway**

- SW Idaho St SD
- SW Kenny St SD/T115 CSO
- Highland Park Way SW SD
- 1st Ave S SD (west side)
- 2<sup>nd</sup> Ave S SD
- S 96th St SD
- Hamm Creek

To date, a total of 187 inline sediment samples have been collected. Sample locations are shown on Maps 8-16 and results are summarized in data table DT-6.

### **Catch Basin Samples**

Catch basin samples are grab samples of sediment that has accumulated in the catch basin. Catch basins are part of the stormwater collection system and collect runoff from a fairly small catchment area (<1 ac). These structures are equipped with a small sump to capture sediment and other large debris before it can enter the stormwater conveyance system. Because many pollutants present in urban stormwater runoff tend to adhere to sediment, catch basins can also trap pollutants. The sediment that accumulates in catch basins provides a qualitative measure of the quality of the stormwater runoff discharged from a specific location. Catch basin samples are collected either from a specific site or property (onsite) or from the public right-of-way (ROW).

Onsite catch basin samples are collected at sites of interest identified during the business inspections to check for potential contaminants or simply at sites where sufficient sediment was available for chemical analysis to characterize chemical contributions from private systems discharging to the city-owned storm drain system. Because public roadways make up a large portion of the land area that drains to the LDW, samples are also collected from catch basins in the ROW to characterize chemical contributions from roadways.

During this reporting period, sediment samples were collected from 103 onsite and 111 right-of-way catch basins. To date, a total of 153 onsite and 157 right-of-way catch basin samples have been collected in the Lower Duwamish Waterway study area. Sample locations are shown in Maps 8-16. Results for all samples collected to date are provided in data tables DT-7 and DT-8.

### **Source Characterization and Tracing Results**

This section provides comparison of sampling results for samples collected through June 2009. Data from SPU, King County (oil/water separators at King County International Airport), and The Boeing Company (sediment traps, inline grabs, and catch basin samples from North Boeing Field) were compiled and evaluated for the sediment transport/bed composition model. Data through 2009 are summarized in box plots presented in Figures 3-7. Maps showing the distribution of chemicals by specific ranges in concentrations are provided on Maps 17-21. The maps, referred to here as “dot maps” present the data from the three LDWG partners compiled through June 2009 plus SPU samples collected through September 2010. SPU data from the second half of 2009 and 2010 have just been validated and have not yet been evaluated in box plot format.

Source to source comparisons are complicated by possible biases introduced by the different sampling strategies employed for each source type. For example, onsite catch basin samples were collected primarily where problems were suspected either because of the kinds of activities conducted onsite or because of specific problems identified during business inspections. As a result, samples collected from onsite catch basins typically contain higher concentrations of chemicals than samples collected from right-of-way catch basins. Right-of-way catch basin and sediment trap samples which represent contributions from large drainage sub-basins are considered to be the most representative of typical urban runoff.



## *Arsenic*

Arsenic data are summarized on Map 17 and Figure 3. Arsenic was detected in 52 percent of the storm drain solids samples collected through June 2009, but concentrations were relatively low, with only 5 percent of the samples exceeding the sediment quality standard (SQS, 57 mg/kg dw) and only 3 percent exceeding the cleanup screening level (CSL, 93 mg/kg dw). Elevated levels of arsenic were found at the following locations:

- S River St storm drain (MH211, 220, and 235). Source tracing was unsuccessful. SPU jetted and cleaned the entire system in December 2010 and will resample in 2011-2012 to determine whether there are ongoing sources of arsenic in this area.
- S Brighton CSO/SD storm drain system (MH223, 227). Source tracing was unsuccessful. SPU jetted and cleaned the entire system between December 2009 and January 2010 and will resample in 2011-2012 to determine whether there are ongoing sources of arsenic in this area.
- S Garden St storm drain (CB157F). This sample was collected from a filter sock that was installed in a catch basin in a parking lot at a metal recycling facility. Runoff from this area discharges untreated to the City's S Garden St storm drain. SPU will request that Ecology include sediment sampling for arsenic in the upcoming revisions to this property's NPDES permit.
- 7<sup>th</sup> Ave S storm drain (CB137, RCB159). Arsenic was traced to a marine lumber storage yard. The company has worked with their supplier to obtain a drier product that is less susceptible to leaching, has moved most of the pressure-treated product to an adjacent site that is located in the combined sewer service area, and has covered most of the product remaining in the area that drains to the 7<sup>th</sup> Ave S storm drain. In addition, the company has swept and cleaned the affected yard area. However, contaminated soil remains in the right-of-way. In 2011-2012, SPU inspectors will work with Ecology and the property owner to removed arsenic-contaminated soil from the right-of-way.
- Diagonal Ave S CSO/SD (CB130 and CB58). Both catch basins are connected to the combined sewer system.
- KCIA SD #3/PS 44 EOF (SL4-T4). This sample is located on NBF, which is under an Ecology order to investigate and control sources in advance of the Slip 4 sediment cleanup. Although the order was issued primarily to control sources of PCBs, other chemicals are being investigated. Boeing has installed a stormwater treatment facility on this drainage system to remove PCBs, which should also be effective in removing arsenic.

## *Mercury*

Mercury data are summarized in Map 18 and Figure 4. Mercury was detected in 64 percent of the storm drain solids samples collected through June 2009. Approximately 16 percent of the samples exceeded the SQS value and 14 percent exceeded the CSL. Elevated levels of mercury appear to be related to industrial and some commercial activities. Isolated hotspots have been found at a number of locations throughout the LDW (service station; auto supply store; auto repair; plumbing, heating, and air conditioning supplier; barrel cleaning operation; commercial

laundry/dry cleaner; metals recycling facilities; industrial machine and equipment manufacturer; bulk petroleum storage/terminal; brewery; retail store, health care facility).

The largest clusters of mercury contamination occurred at the following locations:

- S Garden St, S Brighton St, and S Myrtle St storm drains. Mercury appears to be related to a large metal recycler in the area. In 2009-2010, SPU conducted extensive source tracing in these two drainage systems and found elevated levels of mercury in many of the catch basins in the right-of-way adjacent to the site (0.42-1.08 mg/kg), as well as in onsite catch basins (0.8-2.72 mg/kg) and roof drains on the facility (0.92-2.56 mg/kg). SPU issued a Notice of Violation to the company in 2010, requiring them to implement improved BMPs to reduce track out of material onto adjacent streets and to address roof runoff. EPA is also conducting a small air study in the area and Ecology plans to revise the NPDES industrial stormwater permit at this site in 2011. Between December 2009 and January 2010, SPU jetted and cleaned all the pipes and associated structures in the storm drains in the area. A right-of-way catch basin adjacent to the property was re-sampled in 2010 and elevated levels of mercury were found again (0.66 mg/kg). SPU required the company to clean this catch basin (cleaning was completed in November 2010). Ecology intends to revise the company's NPDES industrial stormwater permit to address roof runoff concerns.
- KCIA SD#3/PS44 EOF. As described in the Slip 4 early action area section below, a number of catch basin and inline sediment samples contained elevated levels of mercury. The NBF area is under an Ecology order to investigate and control sources in advance of the Slip 4 sediment cleanup.
- Diagonal Ave S CSO/SD near S Snoqualmie St and Airport Way S. Mercury was first found in MH18 on S Snoqualmie St west of Airport Way S in 2004. SPU conducted extensive source tracing in this system in 2009, but did not identify a specific source, although contributions from a combined sewer overflow which ties into the drain at S Snoqualmie St and Airport Way S (#111G) are considered a potential source. SPU records indicate that this CSO has only overflowed four times in the past 10 years, and has not overflowed since 2007. Total overflow volume during that period was approximately 1.4 million gallons. SPU jetted and cleaned this line in December 2010 and will work with King County Industrial Waste to investigate discharges to the combined sewer system from a nearby barrel cleaning facility.

### *PCBs*

PCB data are summarized on Map 19 and Figure 5. PCBs were detected in 84 percent of the storm drain solids samples collected through June 2009. Concentrations exceeded the lowest apparent effects threshold (LAET) value of 130 ug/kg dw in 67 percent of the samples and exceeded the second lowest apparent effects threshold (2LAET) value of 1,000 ug/kg dw in 41 percent of the samples. PCBs have been found in various building materials (e.g., paint, caulk, and other sealants) and there is also a continued global source from atmospheric deposition. Although PCBs are no longer manufactured, it is expected that the historical reservoir of PCB-containing materials will continue to act as a source to the LDW for many years.

Unlike other chemicals, PCBs exhibited a distinct geographic distribution, with hotspots identified at Terminal 117 (T117), Rainier Commons, North Boeing Field/Georgetown Steam Plant, and Boeing Plant 2/Jorgensen Forge (see Figure 5). The latter two areas have been sampled extensively and make up a significant portion of the overall source tracing data set. The Rainier Commons area does not have as large a dataset but it shows a distinctive hot spot when compared to other areas in the LDW.

With the exception of known problem areas (Rainier Commons, Terminal 117 and adjacent streets, and North Boeing Field), concentrations of PCBs in the different source samples (i.e., sediment traps, inline grabs, and catch basins) are fairly comparable, with average and median concentrations ranging from 20 to 927 ug/kg dw. PCB concentrations in the problem areas were higher, with average concentrations of 8,600-1,600,000 ug/kg dw and median concentrations of 757-758,000 ug/kg dw. A bar chart showing the distribution of PCBs in various source samples is provided in Figure 8. Excluding data from the known problem areas, approximately 50-60 percent of the source samples collected as of June 2009 contained less than 130 ug/kg dw total PCBs and 70-90 percent of the samples contained less than 400 ug/kg dw total PCBs.

### *HPAH*

HPAH data are summarized on Map 20 and Figure 6. HPAH were detected in all of the storm drain solids samples collected through June 2009. Concentrations exceeded the lowest apparent effects threshold (LAET) value of 12,000 ug/kg dw in 24 percent of the samples and exceeded the second lowest apparent effects threshold (2LAET) value of 17,000 ug/kg dw in 18 percent of the samples. Unlike PCBs, HPAHs have many ongoing sources, primarily associated with combustion sources such as vehicle emissions, home heating oil use, and wood burning. As a result, HPAHs will continue to be deposited on roadways and other land surfaces in the basin, and transported to the LDW in urban runoff.

HPAHs are present at concentrations >100,000 ug/kg dw at various locations throughout drainage basins tributary to the LDW, typically in onsite drainage structures (catch basins and oil/water separators) at sites engaged in transportation-related activities (e.g., bus and airport operations), maintenance facilities, service stations, foundries, and fast food facilities. The highest concentrations (>1,000,000 ug/kg dw) occurred in samples collected from an oil/water separator at an oil recycling facility (CB42) and in a catch basin at a marine terminal (CB91). Elevated levels of HPAH were also found in a trap sample collected near the downstream end of the SW Idaho St storm drain. Land use in this basin is primarily residential. SPU intends to conduct additional source tracing in this storm drain in 2011-2012.

### *BEHP*

BEHP data are summarized on Map 21 and Figure 7. BEHP was detected in 97 percent of the 616 source samples collected in the LDW drainage basin through September 2010 (includes samples collected by Boeing and King County through June 2009). BEHP concentrations in the source sediment samples varied over about three orders of magnitude (less than 100 to greater than 100,000 ug/kg dw). Average concentrations were higher in the onsite catch basin samples (32,900 ug/kg dw) and inline sediment from drains discharging to Slip 4 (31,500 ug/kg dw) than the other sources (1,500-8,500 ug/kg dw).

## **Miscellaneous Source Control Activities**

### ***Surface Water Quality Investigations***

Between July 2005 and September 2010 SPU inspectors responded to 294 surface water quality issues in the Lower Duwamish Waterway study area. Information about water quality investigations is provided in Appendix E. Water quality concerns are reported either from SPU's hotline number for citizens (206/684-7587), or from internal or external agencies. The most common water quality issue involved automobile-related fluids such as gasoline, diesel, oil, and antifreeze (30 percent). The remaining issues involved a variety of materials including wash water, sewage, sediment, chemicals (paint, solvent, acid), and general flooding. Locations of water quality issues investigated during this reporting period are displayed on Map 22.

### ***Spill Response***

SPU maintains a 24-hour spill response team to control spills that occur throughout the City. Spills are reported through the SPU Operations Response Center 24-hour number (206/386-1800). Since mid-2007 (when records available in electronic format), SPU has responded to 118 spills in the area draining to the LDW. Information about spill response activities is provided in Appendix E. The most common complaint involved automobile-related fluids such as gasoline, diesel, oil, and antifreeze (31 percent). The remaining complaints involved a variety of materials including wash water, sewage, sediment, and chemicals (paint and unnamed chemicals). Locations of spills reported in the LDW between mid 2007 and September 2010 are displayed on Map 22.

### ***Spill Kit Incentive Program***

In 2004, SPU began a program offering free spill kits to local businesses that manufacture, store, use, or transport liquids as an incentive to improve onsite spill prevention and cleanup practices. This program is ongoing and continued through this reporting period. The kits contain two absorbent booms, sorbent pads, and a drain cover, as well as personal protective equipment. The program is being administered by Resource Venture, an SPU-funded conservation program for businesses. Participating businesses fill out a standard spill response plan available online at <http://www.resourceventure.org/green-your-business/stormwater-pollution-prevention/spill-kits> and receive a standard spill kit. The spill plan contains information about business activities that have the potential to contaminate stormwater, contact names for staff responsible for responding to spills, and basic instructions about spill notification, response, cleanup, and disposal procedures. After the spill plan is completed, the Environmental Coalition of South Seattle (ECOSS) delivers a spill kit to the business, offers technical assistance, and provides a laminated copy of the spill plan, facility map showing where the spill kit is stored, and a diagram showing how to dispose of hazardous and non-hazardous materials. The incentive program is available to all qualifying businesses in the City. To date, Resource Venture has distributed 289 spill kits to businesses in the LDW. Businesses that have received spill kits are listed in Appendix F.

### ***Street Sweeping Pilot Study***

In 2006-2007, the City of Seattle implemented a pilot project to evaluate street sweeping as a tool to reduce the amount of pollutants discharged to area receiving water bodies (SPU and

Herrera 2009). The pilot test was conducted using regenerative air sweepers at two residential test sites in West Seattle and Southeast Seattle-Columbia City, and one industrial site in the Diagonal/Duwamish drainage basin (Map 23). Testing began in the residential areas in June 2006 and concluded in June 2007. In the industrial area, testing began in November 2006 and concluded in June 2007. At each site, a 10 to 25 block area was divided into a control area and test area. In the test area, each side of the street was swept on alternating weeks, but the control area was not swept. Catch basin sediment, sweeper waste, and street dirt accumulations were measured every month from the test and control areas to determine the quantity of material removed by the sweeping effort. Samples of each media type (e.g., catch basin sediment, sweeper waste, and street dirt) were also collected every month and composited each quarter for chemical analysis of metals, semi-volatile organic compounds, polychlorinated biphenyls, grain size, and organic carbon.

Test results showed that street sweeping was effective in removing about 2,200 to 3,100 pounds of material per acre of street swept each year (SPU and Herrera 2009). Sweeping also reduced the amount of dirt per unit area of street in all three study areas. The amount of dirt on the street was 48, 74, and 90 percent less than the control (unswept sites) at the Diagonal/Duwamish, West Seattle, Southeast Seattle sites, respectively.

Sweeping can also reduce the amount of pollutants discharged from City streets to area receiving water bodies. Contaminants found in street dirt, sweeper waste, and catch basin samples included metals, petroleum hydrocarbons, PCBs, and phthalates. Chemicals that were above the Washington state sediment/soil standards and guidelines in the 45-55 samples analyzed included motor oil (82 percent), carcinogenic PAHs (78 percent), di-n-octylphthalate (65 percent), bis(2-ethylhexyl)phthalate (60 percent), PCBs (44 percent), butylbenzylphthalate (35 percent), di-n-butylphthalate (29 percent), zinc (18 percent), and chromium (15 percent).

PCBs were detected in about 50 percent of the samples with concentrations ranging from 19-1,300 mg/kg dw. The highest PCB concentrations were measured in two sweeper waste samples (1,300 µg/kg dry weight at West Seattle, and 910 µg/kg dry weight at Duwamish Diagonal). With the exception of the one sweeper waste sample from West Seattle, PCB concentrations in the Duwamish Diagonal study area (34 to 910 µg/kg dry weight) were typically higher than the concentrations measured in the two residential study areas (<19 to 73 µg/kg dry weight). Aroclor 1254 and Aroclor 1260 were the most commonly detected PCBs.

In addition to measuring mass removal rates and quantities, the pilot test was also conducted to evaluate whether street sweeping reduces the rate of sediment accumulation in catch basins, and thereby reduces the frequency that catch basins need to be cleaned. The results indicate that catch basins are relatively ineffective in removing sediment. Over the course of the pilot test, the mass of sediment accumulated in the catch basins accounted for only about 5-15 percent of the total mass removed from the streets. Sweeping did not significantly affect the amount or rate of sediment accumulation in catch basins (SPU and Herrera 2009).

In November 2010, the Seattle City Council approved a drainage rate increase to fund the initial phase of street sweeping to reduce pollution from City streets. This initial phase to begin in 2011, will optimize the Seattle Transportation Department's (SDOT) existing sweeping efforts by using high-efficiency sweepers instead of mechanical broom sweepers in the separated storm

drain system (MS4). In 2012, SDOT's sweeping program will be expanded to sweep additional industrial and arterial roadways using high efficiency sweepers.

## **DIAGONAL/DUWAMISH EARLY ACTION AREA (EAA-1)**

The Diagonal Ave S CSO/SD is the largest outfall in the Diagonal/Duwamish Early Action Area. The combined sewer service area in the Diagonal Ave S CSO/SD system encompasses about 4,900 acres and the storm drain basin covers about 2,600 acres (see Map 8). Both systems share the same outfall. There are nine separate combined sewer overflow points in the Diagonal CSO system, Seattle operates eight overflow structures and King County operates one overflow structure. Overflow locations within the Diagonal system are shown on Map 24.

Locations on Map 8 where the combined sewer service and storm drain service systems overlap are known as partially separated areas. In these areas, stormwater runoff can discharge to either the separated storm drain system or the combined system, depending how the individual storm drain inlets are plumbed. In these areas, the roadways are usually plumbed to the separated storm drain system, but storm drains serving adjacent properties can be plumbed to either the combined or the separated storm system.

Land use in the Diagonal service area is a mix of residential, commercial, and industrial properties. As shown on Map 25, the western portion of the basin is predominately industrial and the eastern side is mostly residential. Commercial areas are generally located along the major transportation corridors, (e.g., Rainier Ave S and Beacon Ave S). Land use in the basin is summarized in Table 5.

**Table 5. Land use in the Diagonal Ave S CSO/SD storm drain basin.**

Land Use	Area (acres)	Percent
Single Family	500	19
Multi-family	106	4
Commercial	213	8
Industrial	498	19
Schools	21	1
Park/vacant	211	8
Open/forest	41	2
ROW	1,030	39
Subtotal	2,620	100

### **Business Inspections**

A total of 480 inspections (211 full inspections, 17 screening inspections, and 252 follow-up inspections) were conducted at 208 businesses in the Diagonal Ave S CSO/SD system between July 1, 2005 and September 30, 2010. Inspections focused on high priority sites identified during the previous round of inspections conducted in 2003-2004. Sites were prioritized based on the number of problems identified during the last inspection cycle. Businesses that had three or more hazardous waste or stormwater-related corrective actions were identified as high priority. Select businesses that had two or more hazardous waste or stormwater-related corrective actions were also re-inspected.

A list of sites inspected during this reporting period is provided in Appendix B, Table B-1. Corrective actions that were required at each business are listed in Appendix B, Table B-4.

Since the program began in March 2003, inspectors have completed 733 full inspections, 281 screening inspections, and 716 follow up inspections at 871 sites in the Diagonal CSO/SD system. Inspection sites are shown on Map 5. Corrective actions have been required at approximately 46 percent of the businesses inspected. Numbers of corrective actions broken down by program area are summarized in Figure 2 for the period of record. Counts for each of the 26 corrective actions tracked by SPU are provided in Table 2. The four most common corrective actions identified to date in the Diagonal Ave S CSO/SD are listed below (as a percent of the total number of corrective actions):

Improve or create spill response procedures:	15%
Improve or purchase adequate spill response materials:	13%
Properly educate employees about spill response procedures:	12%
Storm drain facility needs to be cleaned:	16%

## Illicit Connections and Discharges

Illicit connections discovered in the Diagonal Ave S CSO/SD system during this reporting period are summarized below in Table 6.

**Table 6. Illicit connections discovered and eliminated in the Diagonal Ave S CSO/SD system (July 2005 – September 2010).**

Business	Address	Date
Union Pacific Railroad	402 S Dawson St	06/27/07
McKinstry Company	5005 3rd Ave S	07/06/07
Veterans Administration Medical Center	1660 S Columbian Way	03/06/08
Twinline Motorcycles LLC	2106 S Holgate St	02/11/10
Davis Door Service, Inc.	2021 S Grand St	02/25/10
3512 Airport Way S	3512 Airport Way S	08/09/10

## Source Sampling and Identification

During this reporting period, source samples were collected in the Diagonal Ave S CSO/SD system and the S Nevada St storm drain in Early Action Area 1.

### *In-Line Sediment Traps*

Traps are installed at 6 sites in the Diagonal Ave CSO/SD system (see Map 8). Station locations were selected to isolate individual subbasins within the larger storm drain system. A total of 13 rounds of sediment trap samples have been collected to date:

- Round 1: February 2003 – August 2003
- Round 2: August 2003 – February 2004
- Round 3: February 2004 – August 2004
- Round 4: August 2004 – March 2005
- Round 5: March 2005 – August/November 2005

- Round 6: August/November 2005 – March 2006
- Round 7: March 2006 – September 2006
- Round 8: September 2006 – March 2007
- Round 9: March 2007 – August 2007
- Round 10: August 2007 – April 2008
- Round 11: April 2008 – September 2008
- Round 12: September 2008 – March 2009
- Round 13: March 2009 – April 2010

Results are tabulated in data tables DT-2 through DT-5 and select pollutants are summarized in box plot format in Figures 3-7. SPU removed the traps from the Diagonal system in April 2010, because contaminant levels in the traps have been fairly consistent over the past 5-6 years.

As summarized in Table 7, zinc, TPH-oil, PCBs, BEHP, LPAH, HPAH, 2-methylnaphthalene, butylbenzylphthalate, dimethylphthalate, 4-methylphenol, 2-methylphenol, benzoic acid, and benzyl alcohol concentrations were above the SMS/MTCA benchmarks in at least one onsite sediment trap sample collected during this reporting period.

PCB results for traps samples collected over the entire period of record are summarized on Figure 9. With the exception of samples collected in March 2006 from ST2 (3,250 ug/kg dw) and ST5 (1,107 ug/kg dw), total PCB concentrations are typically less than 1,000 ug/kg dw. The average of all sediment trap samples collected from the Diagonal Ave S CSO/SD is 262 ug/kg dw and the median value is 140 ug/kg dw.

PAH concentrations were highest at ST6 (16,400-127,580 ug/kg dw HPAH and 2,200-19,350 ug/kg dw LPAH). Nine of the 16 trap samples that were above the CSL for HPAH and five of the seven trap samples that were above the CSL for LPAH were collected from ST6. Station ST6 is located in a primarily residential area in the upper portion of the Diagonal Ave S CSO/SD drainage basin. Further source tracing will be conducted in this area in 2011.

## ***Catch Basin Samples***

### *Onsite Catch Basins*

A total of 46 onsite catch basin samples were collected in the Diagonal Ave S CSO/SD system during this reporting period. To date, 74 onsite catch basin samples have been collected in this system. Results are tabulated in data table DT-7 and select pollutants are summarized in box plot format in Figures 3-7.

As summarized in Table 7, arsenic, copper, lead, mercury, zinc, TPH, PAH, PCBs, BEHP, butylbenzylphthalate, dimethylphthalate, di-n-butylphthalate, di-n-octylphthalate, 2,4-dimethylphenol, 2-methylphenol, 4-methylphenol, pentachlorophenol, phenol, benzoic acid, and benzyl alcohol concentrations were above the SMS/MTCA benchmarks in at least one onsite catch basin sample collected during this reporting period. Arsenic was elevated in 2 samples, one collected from a catch basin at a local trucking company (70 mg/kg) and the other collected from a sump at barrel cleaning facility (480 mg/kg); the sump is plumbed to the combined sewer system.



Copper was elevated in 7 samples (437-1,550 mg/kg) collected from catch basins at a local trucking company, barrel cleaning facility, health care facility, pipe manufacturer, and a marine cargo facility. The health care facility is no longer in operation; SPU inspectors are working with the property owner to clean the catch basins on the site. SPU is conducting additional source tracing at the pipe manufacturing facility to identify the source of copper. The catch basin containing elevated copper at the marine cargo facility is located in an area where refrigeration units/coils are repaired. SPU has worked with the facility to move maintenance operations indoors.

All of the samples containing elevated concentrations of PCBs were collected from catch basins on the Rainier Commons property. As described below, this system was cleaned in 2008. Since the system was cleaned, total PCB concentrations in 2 samples collected from the catch basin located adjacent to the site on Airport Way S (RCB37) were 390 and 400 ug/kg dw.

BEHP was elevated in most samples, but was extremely high (570,000-1,400,000 ug/kg dw) in two samples collected from catch basins at a health care facility and a restaurant. As noted above, SPU inspectors are working with the owner of the property that was formerly occupied by the health care facility to clean onsite catch basins. Inspectors have worked with the restaurant to stop washing filters and floor mats outside and will have the restaurant clean the onsite catch basins and resample to determine whether BEHP concentrations decline.

### *Right-of-Way Catch Basins*

A total of 24 right-of-way catch basin samples were collected in the Diagonal Ave S CSO/SD system during this reporting period. To date, samples have been collected from 64 catch basins in the right-of-way. Results are tabulated in data table DT-8 and select pollutants are summarized in box plot format in Figures 3-7. As summarized in Table 7, arsenic, copper, lead, mercury, zinc, TPH, PAH, PCBs, BEHP, butylbenzylphthalate, dimethylphthalate, di-n-butylphthalate, 2,4-dimethylphenol, 4-methylphenol, and benzoic concentrations were above the SMS/MTCA benchmarks in at least one right-of-way catch basin sample collected during this reporting period:

Two of the samples collected during this reporting period were at RCB1 and RCB36 where previous samples found elevated levels of lead (1,370 mg/kg at RCB1) and mercury (0.87 mg/kg at RCB1 and 1.17 mg/kg at RCB36). These two catch basins were re-sampled in November 2008 following cleaning that occurred in 2007 (see cleaning discussion in following section). After cleaning, lead at RCB1 dropped to 220 mg/kg and mercury concentrations in both catch basins (0.2-0.26 mg/kg) were below SQS (0.41 mg/kg).

A potential source of mercury to the right-of-way along Airport Way S was identified by Ecology in 2008 (Jeffers 2009 personal communication), when 21 mg/kg mercury was found in sediment collected from an onsite sump at a barrel cleaning facility. This sump is not connected to the storm drain system. However, because barrels are pre-cleaned near or on the public right-of-way, there is potential for contaminants to enter the city storm drain on Airport Way S. The business has installed a berm and splash barriers to keep spray from washing operations onsite and out of the public drainage system.

### ***Inline Sediment Samples***

During this reporting period, SPU began re-sampling sections of the system that were jetted and cleaned in 2002-2004 to determine whether contaminant levels remained low after cleaning. Samples were collected from the S Dakota St line (T2A), the 1<sup>st</sup> Ave S line (MH17), and the mainline on S Snoqualmie St (MH18) where previous sampling found elevated levels of lead (538-4,910 mg/kg), mercury (1.02-3.3 mg/kg), zinc (460-718 mg/kg), and PCBs (940 mg/kg dw). Concentrations were below SQS in the two lateral lines, but lead (461 mg/kg), mercury (0.48 mg/kg), and zinc (534 mg/kg) were above the SQS in MH18 located on S Snoqualmie St. Source tracing did not identify a specific source of metals in the drainage system tributary to MH18. However, because MH18 is downstream of one of the combined sewer overflow structures (111G), contamination may be related to CSOs. CSO 111G does not frequently overflow, but an onsite catch basin located at a barrel cleaning facility in the combined sewer service area contained very high concentrations of mercury (21 mg/kg). SPU jetted and cleaned all the storm drain lines upstream of MH18 in December 2010. This area will be re-sampled later in 2011-2012 to determine whether metals continue to be a problem.

One inline sample (MH206) was also collected from the S Nevada St storm drain system. MH206 is the last maintenance hole before the outfall to the waterway. Zinc (489 mg/kg) exceeded the SQS benchmark. No other chemicals were above the SMS or MTCA benchmarks.

## **Source Control Actions**

### ***Diagonal Ave S CSO/SD catch basin cleaning***

In 2007, SPU hired Bravo Environmental to clean all the catch basins located in the public ROW within the separated storm drain portion of the Diagonal Ave S CSO/SD system. Approximately 3,500 structures (catch basins and slot drains) were cleaned between August 2007 and March 2008. Approximately 560 tons of sediment (wet weight) was removed from the catch basins during the cleaning project.

### ***Rainier Commons pipe cleaning***

In 2004, SPU detected elevated concentrations of PCBs (17.5 mg/kg dw) in sediment collected from a catch basin on Airport Way S in the Diagonal/Duwamish basin (RCB37). Subsequent sampling traced the PCBs to the Rainier Commons property formerly occupied by the Rainier Brewery. Catch basins located on the northern portion of the property contained 0.2 to 1,340 mg/kg dw PCBs. The source of PCBs was identified as the exterior building paint which contained approximately 2,300 mg/kg dw PCBs (Vernon 2006). The buildings were pressure washed and repainted in 2005 and the catch basin in the ROW was cleaned in 2006. RCB37 was resampled in January 2008 and PCB concentrations were again elevated (2.3 mg/kg dw). SPU worked with the property owner to conduct additional cleaning of the onsite drainage system. In January 2008, Rainier Commons jetted the lines and cleaned the catch basins in the onsite drainage system that discharges to the Diagonal Ave S CSO/SD drainage system. At the same time, SPU also jetted the lines on Airport Way S immediately downstream of the property to remove any residual PCB contamination (approximately 750 feet of pipe and 11 structures). Results from samples collected from catch basin RCB37 in February 2009 and 2010, indicate that PCB concentrations have remained relatively low (390 – 400 ug/kg dw).

### **2010 Line cleaning**

In December 2010, SPU hired Everson's Econo-Vac to jet and clean the Diagonal Ave S CSO/SD separated storm drain lines along Airport Way S and S Snoqualmie St to remove mercury-contaminated sediment. Approximately 8,400 feet of pipe and 55 structures were cleaned. As described earlier, source tracing has not identified a specific source, although combined sewer overflows that enter the storm drain system at S Snoqualmie St and Airport Way S could be contributing to the contamination. Elevated levels of mercury (21 mg/kg) were found in an onsite sump that discharges to the sanitary sewer at a barrel cleaning facility on Airport Way S. Following cleaning, this section of the Diagonal Ave S CSO/SD separated storm drain system will be monitored to determine whether sediments recontaminate with mercury.

## **TROTSKY INLET EARLY ACTION SITE (EAA-2)**

The Trotsky area is located on the west side of the LDW at approximately river mile 2.1. SPU conducted inspections and source tracing in the Trotsky early action area during this reporting period. Work focused in the 2<sup>nd</sup> Ave S SD basin, which discharges to the south side of the embayment. The 2<sup>nd</sup> Ave S SD, serves an area of about 38 acres located east of W Marginal Way SW and north of S Austin St (see Map 15). Other outfalls discharging to this early action site include one private storm drain and the overflow from the City's West Seattle drinking water reservoir.

### **Business Inspections**

SPU conducted 73 inspections (33 full inspections, 4 screening inspections, and 36 follow-up inspections) at 29 businesses in the Trotsky early action area between July 1, 2005 and September 30, 2010. A list of sites inspected during this reporting period is provided in Appendix B, Table B-1. Corrective actions that were required at each business are listed in Appendix B, Table B-4.

Since the program began in March 2003, inspectors have completed 34 full inspections, 4 screening inspections, and 39 follow up inspections at 30 sites in the Trotsky early action area. Inspection sites are shown in Map 5. Corrective actions were requested at approximately 73 percent of the businesses inspected. Corrective actions are summarized by program area in Figure 1. Counts for each of the 26 corrective actions tracked by SPU are provided in Table 2. The four most common corrective actions identified to date in the Trotsky early action area are listed below (as a percent of the total number of corrective actions):

Improve or create spill response procedures:	19%
Improve or purchase adequate spill response materials:	9%
Properly educate employees about spill response procedures:	11%
Properly store product/waste material	8%

### **Source Sampling and Identification**

During this reporting period, SPU collected 5 samples from 4 onsite catch basins (CB108, 116, 137, and 157), 2 inline sediment samples from the 2<sup>nd</sup> Ave S ditch (RCB110), and 11 right-of-way catch basin samples from the 2<sup>nd</sup> Ave S storm drain system. Sampling locations are shown on Map 15. Results are tabulated in data tables DT-2 through DT-8. As summarized in Table 8,

arsenic, copper, lead, mercury, zinc, TPH, LPAH, 2-methylnaphthalene, BEHP, dimethylphthalate, butylbenzylphthalate, and di-n-butylphthalate, 4-methylphenol, pentachlorophenol, and benzyl alcohol concentrations were above the SMS or MTCA Method A benchmarks in at least one of the samples collected during this reporting period. With the exception of right-of-way catch basin RCB109 (1,650 ug/kg dw), PCB concentrations were generally low, ranging from 20 to 359 ug/kg dw. SPU conducted extensive source tracing in this area, but did not find a specific source of PCBs.

In addition, 2,4-dinitrotoluene (29,000 ug/kg dw), 2,6-dinitrotoluene (490 ug/kg dw), and n-nitrosodiphenylamine (24,000 ug/kg dw) were detected in a sediment sample collected from the 2<sup>nd</sup> Ave S ditch (RCB44) during the previous reporting period. Dinitrotoluene is used to make flexible polyurethane foams used in bedding and furniture. It is also used to produce explosives, ammunition, and dyes, as well as in air bags for automobiles (ASTDR 1999). N-nitrosodiphenylamine was used as a vulcanization retarder in the production of rubber, but it has not been used in the U.S. since the 1980s when more efficient chemicals were found to replace it (ATSDR 1993). The ditch was resampled in May 2007 and June 2010 (RCB110). Sample RCB110 contained 2,4-dinitrotoluene (6,400–9,300 ug/kg dw), n-nitroso-di-n-propylamine (<700-780 ug/kg dw), and n-nitrosodiphenylamine (4,900-14,000 ug/kg dw).

SPU jetted and cleaned the storm drain lines in the 2<sup>nd</sup> Ave S drainage basin in December 2010 to remove contaminated sediment. Approximately 4,100 feet of pipe and 65 structures were cleaned. SPU also intends to explore options for cleaning the 2<sup>nd</sup> Ave S ditch, but because ownership of the ditch is uncertain, cleaning will be delayed. Prior to cleaning, additional source tracing will be conducted to identify the source of dinitrotoluene and n-nitrosodiphenylamine in this system.

### **SLIP 4 EARLY ACTION SITE (EAA-3)**

The combined sewer service area in the Slip 4 basin encompasses about 6,200 acres and the storm drain basin covers about 493 acres. There are no storm-related combined sewer overflow discharges to Slip 4. The City (pump station 44) and King County (East Marginal Way pump station) both maintain emergency overflows on pump stations that discharge to Slip 4, but these pump stations overflow infrequently. The City pump station has not overflowed in the past 10 years (when the City started maintaining pump station records) and the King County pump station has not overflowed in the last 25 years. Both pump stations are equipped with emergency generators. Because discharges from the combined sewer service area are infrequent, source control work in Slip 4 focused on the separated drainage system.

Drainage basin boundaries in areas draining to Slip 4 have been updated since the previous progress report. Revised basin boundaries are shown on Map 11 and drainage basin areas are summarized below in Table 9.

**Table 9: Slip 4 drainage basin area.**

<b>Storm drain</b>	<b>Area (acres)</b>
King County Airport SD#3/PS44 EOF	296
I-5 SD at Slip 4	150
North Boeing Field SD	0.8
Georgetown flume	6
Boeing SD	17.6
Other private/direct discharges	22.6
<b>Total</b>	<b>493</b>

Land use in the basin is primarily industrial/commercial. Four public storm drains (King County Airport SD#3/PS44 EOF [formerly known as the Slip 4 storm drain], North Boeing Field storm drain [formerly known as the Slip 4 CSO/SD], Georgetown flume, and the I-5 storm drain) and nine private storm drains discharge to Slip 4. The parcel at the southeast end of the waterway, owned by First South Properties (7343 E Marginal Way S) was redeveloped in 2006. At that time, most of the existing storm drain outfalls were abandoned and all site runoff was routed through a Stormfilter® system prior to discharge to Slip 4.

The King County Airport SD#3/PS44 EOF, which drains the northern portion of the King County Airport, encompasses a large portion of the Slip 4 drainage area (296 acres). Emergency overflows from City pump station 44 also now discharge to this drain. The drainage system at the airport has been modified numerous times. In about 1985, runoff from approximately 90 acres at the north end of the airport that used to discharge to the Slip 4 CSO/SD was diverted to the Slip 4 SD (Striplin 2004). This diversion also included the emergency overflow from City pump station 44. The North Boeing Field storm drain (formerly the Slip 4 SD) now drains only about 1.7 acres on the north end of the airport.

The Georgetown flume, constructed in the early 1900s, originally discharged cooling water from the Georgetown Steam Plant to the Duwamish Waterway. Cooling water discharges to the flume stopped in the 1960s when the steam plant was shut down (Striplin 2004). Prior to about 1985, numerous storm drains and pipes from adjacent properties were also plumbed to the flume. At one time, runoff from an estimated 90 acres on the north end of the airport (North Boeing Field) as well as industrial wastewater discharged to the flume. In 1985-1987, Seattle City Light plugged all pipes entering the flume, except one 15-inch pipe from a Boeing yard (Striplin 2004). The flume currently drains an estimated 6 acres. Boeing redirected industrial stormwater discharges from Boeing to the King County Airport storm drain system in 2007-2008 in preparation for the City's flume removal project.

The I-5 drain collects runoff from approximately 1.5 miles of I-5 (approximately 55 acres), 44 acres of single family residential property located east of I-5, about 1-2 acres on the north end of the King County airport, and 25 acres of industrial land along Airport Way S. The small private drains that discharge to Slip 4 also serve mostly industrial and commercial areas immediately adjacent to the slip (approximately 40 acres).

## Business Inspections

A total of 41 inspections (17 full inspections and 24 follow-up inspections) were conducted in the Slip 4 basin between July 1, 2005 and September 30, 2010. A list of sites inspected during this reporting period is provided in Appendix B, Table B-1. Corrective actions that were required at each business are listed in Appendix B, Table B-4.

Since the program began in March 2003, inspectors have completed 64 full inspections, 9 screening inspections, and 60 follow up inspections at 63 sites in the Slip 4 drainage basin. Businesses that have been inspected are shown in Map 5. Corrective actions were requested at approximately 71 percent of the businesses. Corrective actions are displayed by program area on Figure 1. Counts for each of the 26 corrective actions tracked by SPU are provided in Table 2. The four most common corrective actions identified to date in the Slip 4 early action area are listed below (as a percent of the total number of corrective actions):

Improve or create spill response procedures:	22%
Improve or purchase adequate spill response materials:	14%
Properly educate employees about spill response procedures:	20%
Storm drain facility needs to be cleaned	11%

## Source Sampling and Identification

### *Sediment Trap Samples*

In 2005, SPU installed sediment traps at the following 10 locations in the outfalls discharging to Slip 4 (see Map 11):

- **T1** (MH 422): Slip 4/King County airport drain, downstream end of the north and central laterals combined.
- **T2 and T2A**: (MH356 and MH 482): Slip 4/King County airport drain, south lateral (downstream and upstream of Boeing lease property)
- **T3 and T3A** (MH361 and MH19C): Slip 4/King County airport drain, north central lateral (downstream and upstream of Boeing lease property).
- **T4 and T4A** (MH221A and MH229A): Slip4/King County airport drain, south central lateral (downstream and upstream of Boeing lease property)
- **T5 and T5A** (MH363 and MH178): Slip 4/King County airport drain, north lateral (downstream and upstream of Boeing lease property)
- **T6**: I-5 storm drain located at the intersection of S Hardy St and Airport Way S.

Station locations were selected to isolate individual sub-basins within the larger storm drain system. SPU maintains traps T2A, T3A, and T6. The Boeing Company maintains the other traps, which are located on Boeing lease property. A total of 12 rounds of sediment trap samples have been collected as of September 2010 (Table 10).

**Table 10: Slip 4 sediment trap retrieval dates (2005-2010).**

Round	Collection Dates	SPU samples	Boeing samples
1	March 2005 – August 2005	✓	✓
2	August 2005 – March 2006	✓	✓
3	March 2006 – October 2006	✓	✓
4	October 2006 – January 2007	✓	✓
5	January 2007 – May 2007	✓	✓
6	May 2007 – October 2007		✓
7	October 2007 – March 2008	✓	✓
8	March 2008 – August 2008	✓	✓
9	August 2008 – December 2008		✓
10	December 2008 – April 2009	✓	✓
11	April 2009 – October 2009	✓	
12	October 2009 – April 2010	✓	✓

Sediment trap data are presented in data table DT-3. PCBs results in ug/kg dw for the period of record are summarized on Figure 10.

Although PCB concentrations have declined, the concentrations in samples collected from SL4-T1 and SL4-T5 are still above 1,000 ug/kg dw (3,950 and 2,100 ug/kg dw, respectively in the last samples collected in April 2010).

As shown below in Table 11, mercury concentrations were also above SQS in a number of the sediment trap samples. Concentrations above SQS (0.41 mg/kg) are shaded in gray and concentrations above CSL (0.59 mg/kg) are shaded in black.

**Table 11. Mercury results for Slip 4 sediment traps (2005 through 2010).**

Date	T1	T2	T4	T5A	T5
August 2005	<b>1.11</b>	NA	NA	<b>0.86</b>	<b>1.12J</b>
March 2006	<b>0.93J</b>	NA	0.4	0.27	<b>2.02</b>
October 2006	<b>8.3</b>	<b>0.6</b>	<b>0.6</b>	NA	<b>2.9</b>
January 2007	<b>3.65</b>	NA	0.4	0.15	<b>5.11</b>
May 2007	<b>2.66</b>	NA	NA	0.38	<b>1.8</b>
October 2007	<b>1.16J</b>	0.08W	<b>0.5</b>	0.4	<b>4.4</b>
March 2008	<b>0.43</b>	NA	0.21	0.14	<b>1.07</b>
August 2008	<b>2.64</b>	NA	NA	0.21	<b>0.6J</b>
December 2008	0.33	NA	NA	<b>0.58J</b>	<b>1</b>
April 2009	NA	NA	0.11W	<b>0.42</b>	<b>0.7</b>
April 2010	0.36	NA	0.37	0.31	0.34

- W = Sample results presented on a wet weight basis.
- J = Estimated value.

As shown in Table 12, concentrations of arsenic, copper, lead, mercury, zinc, TPH, dibenzofuran, PAH, BEHP, butylbenzylphthalate, di-n-butylphthalate, di-n-octylphthalate, 2,4-dimethylphenol, 2-methylphenol, 4-methylphenol, pentachlorophenol, phenol, benzoic acid, and benzyl alcohol were also above the SMS/MTCA benchmark levels in several of the trap samples. The highest concentrations of arsenic (50-70 mg/kg) were found in two samples

collected at T4, while the highest concentrations of lead were found in traps T3A and T5A. Three of the eight samples collected from T3A (740-1,070 mg/kg) were above the CSL for lead (530 mg/kg). However, lead concentrations in the last 3 samples (April 2009 through April 2010) have been below 100 mg/kg. In addition, two of the ten samples collected from T5A (687- 962 mg/kg) were above the CSL and one sample (486 mg/kg) was above the SQS for lead (450 mg/kg). The most recent samples collected in April 2009 and April 2010, contained less than 300 mg/kg lead.

PAHs were elevated in about 40 percent of the sediment trap samples. T6 is the only trap that did not exhibit elevated levels of PAHs.

Phthalates, particularly BEHP and butylbenzylphthalate were elevated in most of the trap samples. In addition, di-n-octylphthalate was above the SMS benchmark in nearly 20 percent of the samples. All traps except T1, T3A, and T6 exhibited at least one di-n-octylphthalate exceedance.

### ***Catch Basin Samples***

Seven (7) onsite catch basin samples and 10 right-of-way catch basin samples were collected within the Slip 4 drainage basin during this reporting period (see Map 11). As summarized in Table 12, copper, zinc, TPH, PCBs, PAH, dibenzofuran, BEHP, butylbenzylphthalate, dimethylphthalate, 2,4-dimethylphenol, 4-methylphenol, benzoic acid, and benzyl alcohol concentrations were above the SMS/MTCA benchmarks in at least one catch basin sample.

ROW catch basin samples collected along S Myrtle St as part of the Georgetown Flume demolition project (RCB102 through RCB108) were analyzed only for PCBs. PCB concentrations (33-570 ug/kg dw) in all samples were below 1,000 ug/kg).

In addition, five (5) samples (RCB111 through RCB115) were collected from catch basins in the Georgetown neighborhood, immediately west of King County Airport (in the combined sewer service area between Ellis Ave S and Corson Ave S) to evaluate whether the PCB contamination found on North Boeing Field, extended into adjacent neighborhood. PCBs in the samples were low, ranging from 115 to 278 ug/kg dw.

### ***Inline Samples***

Two inline grab samples were collected in the Slip 4 drainage basin during this reporting period (SL4-T2A and MH32). There were no exceedances of SMS/MTCA benchmarks.

### ***Source Tracing in the I-5 Storm Drain***

In 2006-2007, SPU collected 5 samples in the I-5 storm drain system to determine whether there are ongoing sources of PCBs in this drainage system. Sample locations are shown on Map 11. Source tracing was conducted because the initial sediment trap sample collected in August 2005 from the I-5 storm drain contained 7,800 ug/kg dw PCBs. As shown below in Table 13, PCB concentrations were relatively low in the source tracing samples. In addition, PCBs have been low in subsequent sediment trap samples collected from this location (<58 to 320 ug/kg dw). Based on this information, there does not appear to be an ongoing source of PCBs in the I-5 storm drain system.



**Table 13. PCB results from source tracing conducted in the I-5 storm drain in Slip 4.**

<b>Station No.</b>	<b>Date</b>	<b>Sample Type</b>	<b>Location</b>	<b>Total PCBs (ug/kg dw)</b>
D071-041	1/18/07	Inline grab	Mainline on Ellis Ave S	28
D071-039	1/18/07	Inline grab	Mainline on Ellis Ave S	19
RCB50	2/10/06	ROW catch basin	16 <sup>th</sup> Ave S at S Graham St	189
CB87	2/10/06	Inline grab	Ditch below Ultra Block	189
CB88	2/10/06	Inline grab	Ditch below Puget Sound Energy	310

## **Source Control Actions**

### ***Georgetown Flume***

In 2009, Seattle City Light and SPU removed the flume and replaced it with a piped storm drain system. The new system serves the Georgetown Steamplant property, adjacent public roadways (S Myrtle St and S Willow St), and private property outside of North Boeing Field (e.g., west of the flume corridor). The total area draining to the new system is estimated at about 6 acres. Runoff from areas within the Boeing leased property that formerly drained to the flume has been rerouted to the King County Airport storm drain system. Contaminated sediment within the flume and contaminated soil around the flume was removed and disposed as part of the project.

## **RIVER MILE 2.8 TO 3.7 EARLY ACTION SITE (EAA-4)**

Early Action Site 4 (Boeing Plant 2 to Jorgensen Forge) extends along the east side of the LDW from Slip 4 to the Jorgensen Forge property. SPU has not conducted inspections in this area because most of the area is occupied by The Boeing Company. However, in 2008, SPU installed a sediment trap (KCIAJ-ST1) in the storm drain that serves part of the central portion of the King County International Airport and discharges to the Duwamish Waterway via a 15-inch storm drain the runs between the Boeing and Jorgensen Forge properties. Funding for trap installation and sampling was provided by a grant from Ecology. Under the grant, SPU also collected six inline grab samples (MH201, 202, 203, 212, 213, and 214) and one right-of-way catch basin sample (RCB207) from the storm drain that runs along 16<sup>th</sup> Ave S. Sample locations are shown on Map 11.

The sediment trap installed at KCIAJ was sampled twice during this reporting period, in March 2009 and December 2009. Samples were analyzed only for PCBs, because there was a limited amount of sediment in the traps. Both samples contained elevated levels of PCBs (5,500 – 11,000 ug/kg dw total PCBs). This information has been provided to the King County International Airport for follow-up. This trap was relocated in January 2010 after King County modified drainage system to direct flow from this area to outfall KCIA SD#2/PS 78 EOF. The trap was moved approximately 50 feet east (downstream) to another maintenance hole in the system. SPU recently sampled the relocated trap as part of another grant with Ecology, but the results were not available at the time this report was prepared.

As summarized in Table 14, a number of chemicals were above the SMS or MTCA Method A benchmarks in the inline samples collected from the 16<sup>th</sup> Ave S storm drain system (mercury, zinc, TPH-oil, HPAH, PCBs, BEHP, butylbenzylphthalate, dimethylphthalate, phenol,

2-methylphenol, benzoic acid, and benzyl alcohol). SPU does not have access to areas outside the public right-of-way that drain to this system and will ask for Ecology support in completing the source tracing in this system.

## **TERMINAL 117 EARLY ACTION SITE (EAA-5)**

The Terminal 117 (T117) early action site is located in the South Park neighborhood on the west side of the Lower Duwamish Waterway just south of the 16<sup>th</sup> Ave S Bridge. The upland areas draining to T117 are located in an area of South Park that lacked a formal drainage system. Because the streets were in poor condition, stormwater runoff typically ponded in the right-of-way or ran off onto adjacent properties. The total area draining to the T117 early action site is estimated at about 5 acres (Map 26) and consists of the now vacant Terminal 117 property owned by the Port of Seattle (former Malarkey Asphalt site), three small residential properties, an oil recycling facility that has been removed and is now vacant (Basin Oil), a manufacturing facility (formerly occupied by Seattle Chocolates and now leased by Umbria Coffee), and about 3 blocks of roadway (S Donovan St, 17<sup>th</sup> Ave S, and Dallas Ave S). The South Park marina is located on the waterfront on the north side of the T117 early action site and the Boeing South Park facility is located on the south side of T117. Surface runoff from these two properties discharges directly to the Duwamish Waterway via private storm drains.

Until late 2004, most of the runoff from the approximately 1.8-acre upland area between Dallas Ave S, 17<sup>th</sup> Ave S, and S Donovan St either entered a catch basin at the south end of the Port's T117 property (Port CB6) or sheet flowed across T117 and entered the Port's drainage system that discharges to the Duwamish Waterway. As a result of an interim source control action completed by the City of Seattle in December 2004, runoff from most upland areas outside of the Port property is now collected and discharged to the City's combined sewer system (King County and SPU 2005). Runoff from a small portion of the hillside along the south side of S Donovan St continues to discharge to the Port's drainage system.

## **Source Control Actions**

### ***Dallas Ave S Interim PCBs Cleanup***

SPU continues to operate and maintain the temporary stormwater collection system installed as part of the interim cleanup conducted in 2004-2005. Stormwater is collected, stored in five 18,000 gallon tanks and released at a controlled rate to the combined sewer system via a maintenance hole located at S Donovan St and 17<sup>th</sup> Ave S. SPU has a discharge authorization with the King County Industrial Waste Program for this discharge and monitors stormwater quality each month, when discharging to the combined sewer. Data collected through October 2010 are summarized in Table 15. PCBs have only been detected in 6 of the 60 samples collected since the interim cleanup and have only been detected twice since February 2005 (0.12 ug/L in January 2008 and 0.073 ug/L in April 2010).

Stormwater from the storage tanks is normally discharged to the combined sewer but may be discharged to the Duwamish Waterway via the T117 onsite drainage system under the following conditions:

- Large storm events that exceed the capacity of the tanks (rainfall greater than about 2.5 inches)
- Continuous rainfall, when tanks cannot be drained between events.
- Freezing conditions when the tanks must be drained quickly to avoid damaging above ground piping.

Discharges to the river are infrequent and have occurred only about 16 times during the past 6 years.

### ***Dallas Roadway Final Cleanup***

The City intends to remove the PCB-contaminated soil in the public right-of-way and restore the streets. In 2007, EPA amended the T117 Administrative Order to include the streets along with the T117 upland and waterway sediment in the site cleanup project. In 2010, the Port of Seattle and the City completed a revised Engineering Analysis/Cost Analysis report (EE/CA) to incorporate the additional area and are currently developing a scope of work and schedule for design of the cleanup. The City intends to clean up the streets after the waterway sediment and T117 upland areas are remediated to avoid potential recontamination that could occur as contaminated soil/material from the T117 upland and waterway cleanups are transported offsite for disposal. After contaminated soil is removed, a permanent stormwater collection and treatment system will be installed and the roadway will be restored. Roadway cleanup is currently expected to occur in 2014-2015.

### ***T117 Adjacent Streets Utility Cleaning***

In March 2010, SPU re-sampled the combined sewer and temporary storm drain systems adjacent to T117. Sample results are provided in Table 16. Sample locations are shown on Map 27. With the exception of RCB183 (1,300 ug/kg dw PCBs), PCB concentrations were less than 1 mg/kg (280-670 ug/kg dw). Based on the results, EPA requested that SPU clean the catch basins and pipes, and sweep the streets in the area. The streets were swept in September 2010 and pipe cleaning (including the stormwater storage tanks) was completed in October 2010. SPU will continue to periodically sample sediment that accumulates in the drainage systems adjacent to T117 to monitor for PCBs.

## **BOEING ISAACSON/CENTRAL KCIA EARLY ACTION SITE (EAA-6)**

The middle portion of the King County Airport (237 acres) drains to the LDW at the location of the former Slip 5 (which has been filled) via a 48-inch diameter storm drain. This outfall (KCIA SD#2/PS45 EOF) also serves as the emergency overflow for City pump station 45 on the City's sanitary sewer system. Pump station 45 has overflowed two times in the past 3 years. Total overflow volume is estimated at about 72,000 gallons.

### **Business Inspections**

SPU inspected all the businesses on the King County International Airport during 2004-2005. One business was inspected in EAA-6 between July 1, 2005 and September 30, 2010 (a follow-up inspection at Western Metal Products, Inc. at 7696 Perimeter Rd S).

To date, a total of 48 inspections have been conducted at 31 businesses in EAA-6. Inspection locations are shown on Map 5. Corrective action(s) were required at 17 of the sites.

Corrective actions are summarized by program area on Figure 1. Counts for each of the 26 corrective actions tracked by SPU are provided in Table 2. The four most common corrective actions identified to date in EAA-6 are listed below (as a percent of the total number of corrective actions):

Improve or create spill response procedures:	34%
Improve or purchase adequate spill response materials:	20%
Properly educate employees about spill response procedures:	12%
Properly store product/waste material:	7%

## Source Sampling and Identification

In 2008, SPU installed a sediment trap near the downstream end of KCIA SD#2/PS45 EOF. Since then, three inline grabs and two traps samples have been collected. In addition, samples were collected at one onsite catch basin (CB40), the pump station vault(CB208), and one right-of-way catch basin (RCB56) during this reporting period. Chemicals that exceeded the SMS/MTCA benchmarks include TPH-oil, BEHP, butylbenzylphthalate, PCBs, LPAH, and HPAH. As shown on below on Table 17, chemical concentrations exceeded the SMS/MTCA benchmarks in only three locations (KCIA2-ST1, RCB56, and CB40).

**Table 17: Chemicals exceeding the SMS/MTCA benchmarks in samples collected from the KCIA SD#2/PS45 EOF.**

Chemical	Units	KCIA2-ST1 (Trap)	KCIA2-ST1 (Inline)	RCB56 <sup>a</sup> (5/31/06)	CB40 <sup>b</sup> (12/3/09)	CB208 <sup>c</sup> (6/3/09)
TPH-oil	mg/kg	<170	<120-1,500	<b>6,100</b>	<b>2,600</b>	<120
Total PCBs	ug/kg dw	<20	<19-92	<19	<b>3,400</b>	<20
BEHP	ug/kg dw	<b>190-210</b>	<b>32-88</b>	<13,000	<b>5,500</b>	<b>34</b>
Butylbenzylphthalate	ug/kg dw	<59	<20	<560	<b>500</b>	<20
Dimethylphthalate	ug/kg dw	<59	<20	<b>710</b>	<90	<20
LPAH	ug/kg dw	<b>696-1,793</b>	42-62	<b>1,900</b>	<b>32,400</b>	<b>106J</b>
HPAH	ug/kg dw	<b>7,370-15,280</b>	636-896	<b>18,360</b>	<b>283,500</b>	<b>1,125</b>
Dibenzofuran	ug/kg dw	<59-42	<20	<560	<b>1,100</b>	<20

Values shaded in gray exceed the LAET/MTCA benchmark. Values shaded in black exceed the CSL/2LAET benchmark.

- a. Right-of-way catch basin                      c. Inline grab  
b. Onsite catch basin

RCB56 is a catch basin located on the south side of Airport Way S near the main entrance to the King County International Airport. CB40 is located at an airplane loading equipment repair facility. CB40 was first sampled in August 2004 and contained elevated levels of PCBs (6,600 ug/kg dw total PCBs). The tenant cleaned the catch basin in 2008. SPU re-sampled CB40 in

December 2009 and PCBs (3,400 ug/kg dw) exceeded the 1,000 ug/kg dw benchmark. As shown in Table 17, the recent sample also contained elevated levels PAHs and phthalates. This information has been forwarded to King County for investigation.

## **NORFOLK EARLY ACTION SITE (EAA-7)**

The Norfolk early action site is located on the east side of the waterway, near the south end of the LDW Superfund site. Approximately 826 acres drain to the Norfolk site via the City's Norfolk outfall. This outfall also serves as a CSO for King County's interceptor system and functions as an emergency overflow for the City's sanitary sewer pump station #17. Pump station 17 overflowed once in 2010 (December 12) after the drainage system was repaired to prevent stormwater from backflowing into the sanitary sewer system. Total overflow volume on December 12 is estimated at approximately 2.3 million gallons.

SPU conducted inspections in the Norfolk basin in 2005-2008 and initiated source sampling in the basin in 2007. In addition to routine source control activities, SPU also began developing a capital improvement project (CIP) in 2005 to correct drainage problems in the Norfolk-Martin Luther King, Jr. Way S sub-basin (Norfolk-MLK Way). The Norfolk-MLK Way system serves approximately 224 acres of mixed residential, commercial, and industrial property on the southeast end of the Norfolk basin. An existing pipe located west of MLK Way collapsed and the ditch located along the east side of I-5 filled in with sediment which caused stormwater to back up and overflow into the sanitary sewer system. As reported during the previous progress report (King County and SPU 2005), accumulated sediment was removed from the piped section of the drainage system in advance of the CIP project and samples were collected to evaluate disposal options. Approximately 2,500 LF of pipe were jetted and cleaned in 2005. Zinc (90 to 1,200 mg/kg) and BEHP (5,600 to 28,000 ug/kg dw) were the only two chemicals that exceeded SQS/LAET. TPH-oil (200 to 7,600 mg/kg) also exceeded the MTCA Method A cleanup levels at most of the sampling stations.

The drainage system was repaired in 2009. Repairs including installing a new 64-inch diameter storm drain between MLK Way and the ditch on I-5. An oil control structure was installed at the downstream end of the pipe to capture oil prior to discharge to the ditch and a short section of the ditch was re-graded to restore the hydraulic grade line (see Appendix G). Proposed water quality improvements, which involve constructing a stormwater wet pond on City property located between I-5 and the railroad right-of-way near S Norfolk St has been delayed because of budget issues. Final design of the stormwater treatment facility was completed in 2010. Construction is currently scheduled to begin in 2011.

## **Business Inspections**

A total of 91 inspections (45 full inspections, 3 screening inspections, and 44 follow-up inspections) were conducted at 36 businesses in the Norfolk CSO/EOF/SD drainage basin between July 1, 2005 and September 30, 2010. A list of sites inspected during this reporting period is provided in Appendix B, Table B-1.

Since the program began in March 2003, inspectors have completed 55 full inspections, 3 screening inspections, and 58 follow up inspections at 46 sites in the Norfolk early action area. Inspection sites are shown in Map 5. Corrective actions were requested at approximately

73 percent of the businesses inspected. Corrective actions are summarized by program area on Figure 1. Counts for each of the 26 corrective actions tracked by SPU are provided in Table 2. The four most common corrective actions identified to date in the Norfolk early action area are listed below (as a percent of the total number of corrective actions):

Improve or create spill response procedures:	20%
Improve or purchase adequate spill response materials:	11%
Properly educate employees about spill response procedures:	13%
Storm drain facility needs to be cleaned:	11%

SPU also inspected businesses operating in the Norfolk drainage basin in 1996 and again in 2001. Inspections were conducted as part of SPU’s stormwater pollution prevention program and focused primarily on outdoor activities. No samples were collected to confirm the presence of contaminants found in the waterway. In 2001, 68 businesses were inspected (24 drive-by and 44 onsite inspections). Most of the problems identified were related to inadequate maintenance of onsite drainage systems and inadequate spill response programs. SPU inspectors worked with the business owners to improve their stormwater pollution prevention practices. In addition, SPU identified and corrected one illicit connection (wash pad connection) and one illicit discharge (overflow from equipment wash area) to the Norfolk-MLK Way system.

As shown in Table 18, in 2007-2008, SPU also inspected five businesses located in the Tukwila portion of the Norfolk CSO/EOF/SD drainage basin under an interagency agreement with the City of Tukwila.

**Table 18. Businesses inspected in Tukwila (2007-2008).**

<b>Business</b>	<b>Address</b>	<b>Inspection Date</b>
Northwest Autowrecking	10230 E Marginal Way S	May 23, 2007
Reliable Auto Parts	4345 S 104 <sup>th</sup> PI	December 10, 2007
Harrington Industrial Plastics	4322 S 104 <sup>th</sup> PI	November 28, 2007
Pacific Grip and Lighting	10401 E Marginal Way S	December 12, 2007
Unified Grocers	3301 S Norfolk St	March 19, 2008

## Source Sampling and Identification

In September 2007, SPU installed five sediment traps in the Norfolk storm drain system to support source tracing activities (see Map 12). Inline grabs were collected at four of the trap locations (NST1, NST2, NST3, and NST4) when the traps were installed and whenever the traps were retrieved (see data table DT-6). Sediment trap samples were retrieved in March 2008, September 2008, April 2009, and October 2009 (see data table DT-4).

As summarized in Table 19, mercury, zinc, TPH, PAH, dibenzofuran, PCBs, BEHP, butylbenzylphthalate, dimethylphthalate, 2-methylphenol, and 4-methylphenol concentrations were above the SMS or MTCA benchmarks in multiple samples collected from the Norfolk area. Mercury (0.7 mg/kg) was above the CSL in the March 2008 sediment trap sample from NST3, but was relatively low (<0.5-0.18 mg/kg) in the eight (8) other samples collected from this location (3 trap samples and 5 inline samples). SPU will continue to monitor this location, but does not intend to conduct any additional source tracing at this time.

LPAH (66,230 ug/kg dw) and HPAH (585,400 ug/kg dw) were elevated in CB78. CB78 is an onsite catch basin at a manufacturer of premade baking mixes. SPU inspected this facility in 2001 and 2005. Catch basins were cleaned after the 2001 inspection and no corrective actions were identified during the 2005 inspection. SPU will re-inspect and resample this catch basin in 2011.

PCB concentrations have generally been low, ranging from 26 to 530 ug/kg dw. Concentrations exceeded the LAET benchmark only at traps stations NST2 (37-288 ug/kg dw) and NST5 (190-530 ug/kg dw), inline grab NST1 (150 ug/kg dw), and onsite catch basin CB84 (320 ug/kg dw).

## **ECOLOGY SOURCE CONTROL AREAS**

In addition to the seven designated early action areas, Ecology has divided the remainder of the LDW into 17 source control areas to aid in organizing source investigations and evaluations (see Map 1). During the July 2005 through September 2010 reporting period, SPU inspectors worked in the following 13 source control areas to support Ecology's development of existing information/data gaps reports and source control action plans:

- King County lease parcels (river mile 1.0 to 1.2 east)
- Saint Gobain to Glacier Northwest (river mile 1.2 to 1.7 east)
- Slip 2 to Slip 3 (river mile 1.7 to 2.0 east)
- Slip 3 to Seattle Boiler Works (river mile 2.0 to 2.3 east)
- Seattle Boiler Works to Slip 4 (river mile 2.3 to 2.8 east)
- Boeing Plant 2 to Jorgensen Forge (river mile 2.8 to 3.7 east)
- Boeing Isaacson/Central King County International Airport (KCIA, river mile 3.7 to 3.9)
- Slip 6 (river mile 3.9 to 4.3 east)
- SW Spokane St to Kellogg Island (river mile 0 to 1.0 west)
- Kellogg Island to Lafarge (river mile 1.0 to 1.3 west)
- Glacier Bay (river mile 1.3-1.6 west)
- Terminal 115 (river mile 1.6 to 2.1 west)
- Riverside Drive (river mile 2.2 to 3.4 west)
- Sea King Industrial Park (river mile 3.8 to 4.2).

## **Business Inspections**

SPU completed 383 inspections at 176 businesses in 14 of Ecology's 17 source control areas during this reporting period. Inspection counts for each source control area are summarized below on Table 20.

**Table 20: Summary of inspections conducted in the source control areas (July 2005-September 2010).**

Source Control Area	River Mile	Initial Inspects	Screening Inspects	Follow-up Inspects	Total Inspects	Total Businesses
King County lease parcels	1.0 to 1.2 east	4	0	4	8	3
St Gobain to Glacier NW	1.2 to 1.7 east	2	0	3	5	2
Slip 2 to Slip 3	1.7 to 2.0 east	6	0	6	12	6
Slip 3 to Seattle Boiler Works	2.0 to 2.3 east	23	1	32	56	22
Seattle Boiler Works to Slip 4	2.3 to 2.8 east	10	0	11	21	8
Boeing Plant 2 to Jorgensen Forge	2.8 to 3.7 east	1	0	1	2	1
Boeing Isaacson/Central KCIA	3.7 to 3.9 east	1	0	3	5	1
Slip 6	3.9 to 4.3 east	0	0	1	1	1
SW Spokane St to Kellogg Island	0 to 0.1 west	25	3	37	65	26
Kellogg Island to Lafarge	0.1 to 1.3 west	2	0	2	4	2
Glacier Bay	1.3 to 1.6 west	25	1	26	52	17
Terminal 115	1.6 to 2.1 west	5	0	10	15	5
Riverside Drive	2.2 to 3.4 west	55	23	50	128	76
Sea King Industrial Park	3.8 to 4.2 west	6	0	4	10	6
<b>Total</b>		<b>165</b>	<b>28</b>	<b>190</b>	<b>383</b>	<b>176</b>

A list of sites inspected during this reporting period is provided in Appendix B, Table B-1. Inspection sites are shown in Map 5. Corrective actions were requested at approximately 86 percent of the businesses inspected. Corrective actions are summarized by program area on Figure 1. Counts for each of the 26 corrective actions tracked by SPU are provided in Table 2. The four most common corrective actions identified to date in the Ecology source control areas are listed below (as a percent of the total number of corrective actions):

Improve or create spill response procedures:	17%
Improve or purchase adequate spill response materials:	14%
Properly educate employees about spill response procedures:	13%
Storm drain facility needs to be cleaned:	7%

## Source Sampling and Identification

For discussion purposes, the results for source tracing samples that were collected during this reporting period in the Ecology-defined source control areas have been divided into east side and west side for drains discharging to the east and west sides of the Duwamish Waterway. Samples that exceeded SMS/MTCA benchmarks are summarized in Tables 21 and 22. Table 23 presents a compilation of chemicals exceeding the SMS/MTCA benchmarks in samples collected from



catch basins connected to the combined sewer system in the LDW study. Sampling locations are shown on Maps 8-16.

In 2009, SPU installed 21 sediment traps in 10 storm drains that discharge to the LDW outside of the early action areas. Traps were installed in 9 of the 17 Ecology source control areas. Funding was provided by a grant from Ecology to assist in source tracing. Most traps were retrieved once, during the March to May 2009 timeframe. Traps KCIA2-ST1 (King County International Airport storm drain #2 that discharges to the Duwamish Waterway at river mile 3.8) and KCIAJ-ST1 (King County International Airport storm drain that discharges to the Duwamish Waterway at river mile 3.6) have been sampled twice (in March and December 2009). The other traps were resampled in September-December 2010 under another grant from Ecology; however, sample results were not available at the time this report was prepared. Sediment trap locations and sampling dates are summarized in Table 24.

**Table 24. Retrieval dates for traps installed in storm drains discharging to Ecology-defined source control areas.**

Station ID	Date	Source Control Area	Outfall
<b>East Side</b>			
KCIA1-ST1	03/26/09	RM 3.9 to 4.3 east	KCIA SD#1
KCIA2-ST1	03/26/09	RM 3.7 to 3.9 east	KCIA SD#2
KCIA2-ST1	10/21/09	RM 3.7 to 3.9 east	KCIA SD#2
<b>West Side</b>			
ID-ST1	03/06/09	RM 0 to 1.0 west	SW Idaho St SD
ID-ST2	03/06/09	RM 0 to 1.0 west	SW Idaho St SD
ID-ST3	03/06/09	RM 0 to 1.0 west	SW Idaho St SD
KN-ST1	03/17/09	RM 1.3 to 1.6 west	S Kenny St SD/T115 CSO
HP-ST4	03/12/09	RM 1.6 to 2.1 west	Highland Park Way SW SD
HP-ST6	04/15/09	RM 1.6 to 2.1 west	Highland Park Way SW SD
1st-ST1	03/06/09	RM 3.4 to 3.8 west	1st Ave S SD (west)
1st-ST2	03/06/09	RM 3.4 to 3.8 west	1st Ave S SD (west)
1st-ST3	03/12/09	RM 3.4 to 3.8 west	1st Ave S SD (west)
1st-ST7	03/17/09	RM 3.4 to 3.8 west	1st Ave S SD (west)
7th-ST1	03/17/09	RM 2.1 to 2.2 west	7th Ave S SD
7th-ST2	03/17/09	RM 2.1 to 2.2 west	7th Ave S SD
7th-ST3	03/12/09	RM 2.1 to 2.2 west	7th Ave S SD
96-ST1	04/24/09	RM 3.8 to 4.2 west	S 96th St SD
96-ST2	04/24/09	RM 3.8 to 4.2 west	S 96th St SD
96-ST3	05/13/09	RM 3.8 to 4.2 west	S 96th St SD
HC-ST1	04/15/09	RM 4.2 to 4.8 west	Hamm Creek

### **East Side of the Waterway**

As summarized in Table 21 concentrations of arsenic, copper, zinc, PCBs, TPH, HPAH, BEHP, butylbenzylphthalate, and dimethylphthalate were above the SMS or MTCA benchmarks in at least one sample collected from storm drains discharging to Ecology source control areas located on the east side of the waterway. Source tracing activities are summarized below:

- **S River St SD.** Arsenic concentrations were high in two of the inline samples collected from the S River St SD (96 mg/kg at MH211 and 110 mg/kg at MH235). Sampling locations are shown on Map 10. Zinc concentrations (1,010 and 1,170

mg/kg) were also relatively high in these two samples compared to other inline grab samples. Except in areas affected by specific sources, zinc concentrations in inline grab samples have generally been less than 1,000 mg/kg. The S River St storm drain collects runoff from a small area (7.5 acres) west of E Marginal Way S. Businesses operating in the area include a distributor of flooring products, general contractor, concrete sink/countertop manufacturer, electrical contractor, heating equipment supplier, container transport, and a trucking company. This area is also used by transients that live out of their vehicles. No specific sources of arsenic or zinc were identified during business inspections conducted in this area. Contamination may be related to historical sources. SPU decided to jet and clean the entire S River St system and monitor sediment accumulations in the future to determine whether there are potential ongoing sources in this area. Approximately 1,400 feet of pipe and approximately 11 catch basins were cleaned in December 2010.

- ***S Garden St SD, S Myrtle St SD, and S Brighton CSO/SD.*** As described earlier, SPU conducted an extensive source tracing effort in the S Garden St, S Myrtle St, and S Brighton St CSO/SD (separated storm drain only) systems in 2008-2009 to identify potential sources of metals found in these drainage systems. These drains discharge to source control areas RM 2.0 to 2.3 east and RM 2.3 to 2.8 east and are located in the vicinity of a large metal recycling facility. Elevated levels of copper (975-7,990 mg/kg), lead, (1,260-2,240 mg/kg), mercury (0.8-2.72 mg/kg), zinc (4,940-13,300 mg/kg), and PCBs (1.9-18.3 mg/kg dw total PCBs) were found in sediment collected from catch basins and roof tops at the facility (see Table 25). Similar levels of contaminants were found in catch basins and inline grab samples collected from the storm drains adjacent to the facility (500-3,280 mg/kg copper, 467-1,710 mg/kg lead, 0.42-4.29 mg/kg mercury, 455-8,960 mg/kg zinc, and 0.1-25 mg/kg total PCBs). Sampling locations are shown on Map 28 and results are provided in Table 26. The metal recycling facility experiences track out problems that affect the S Myrtle St right-of-way. In addition, samples collected by a company located north of the facility indicate that fugitive dust emissions from shredding operations may also affect the surrounding area (Ly 2009). The company located directly north of the metal recycling facility recently collected a wipe sample from the windshield of a car that had been washed and then parked onsite for a day. The wipe sample contained elevated concentrations of chromium (150 mg/kg), copper (660 mg/kg), lead (1,100 mg/kg), and zinc (7,500 mg/kg).

In 2009, SPU hired Everson's Econo-Vac to jet and clean the separated storm drains west of E Marginal Way S, between S Garden St and S Brighton St. Cleaning was conducted in between December 2009 and January 2010. Approximately 4,300 feet of pipe and 41 structures were cleaned. SPU and EPA sampled the catch basin located immediately east of the driveway at the metal recycling facility in May 2010 and elevated levels of copper, lead, mercury, zinc, and PCBs were again found in the catch basin sediment.

- In 2009, SPU also investigated elevated PCB concentrations found in soil in the right-of-way along the east side of 8<sup>th</sup> Ave S in source control area RM 2.3 to 2.8 east. As part of a neighborhood grant project, the Seattle Transportation Department (SDOT) had planned to construct a small bioretention cell on the east side of the road in 2008,

but soil samples collected from the project area contained PCBs. SPU collected additional soil/dirt samples in the right-of-way and on adjacent properties. PCBs were found in samples collected from the former Sternoff Metals property at 7201 E Marginal Way S (Table 27). However, PCB concentrations the sample collected from the opposite side of 8<sup>th</sup> Ave S (CB149) were fairly low.

**Table 27. PCBs in street dirt/catch basin samples collected along 8<sup>th</sup> Ave S.**

Station ID	Location	Total PCBs (ug/kg dw)
CB144 <sup>a</sup>	CB at driveway entrance (plumbed to SS on 8th Ave S)	3,600
CB145 <sup>a</sup>	Street dirt at driveway entrance on 8th Ave S	6,900
CB146 <sup>a</sup>	Dirt pile at southeast corner of property	182
CB147 <sup>a</sup>	Surface dirt from yard area on east side of building	1,340
CB148 <sup>a</sup>	Dirt pile on south-central side of property	530
CB149 <sup>b</sup>	Street dirt at driveway entrance 7135 8th Ave S	60

a. 7201 E Marginal Way S on east side of 8<sup>th</sup> Ave S

b. West side of 8<sup>th</sup> Ave S, across from Sternoff Metals property.

SPU has referred this site to Ecology for further investigation.

### **West Side of the Waterway**

As summarized in Table 22 concentrations of arsenic, copper, lead, mercury, zinc, PCBs, TPH, PAH, BEHP, butylbenzylphthalate, dimethylphthalate, di-n-butylphthalate, 2-methylphenol, 4-methylphenol, phenol, benzoic acid, benzyl alcohol, hexachlorobenzene, and n-nitrosodiphenylamine were above the SMS or MTCA benchmarks in at least one sample collected from storm drains discharging to Ecology source control areas located on the west side of the waterway. Source tracing activities are summarized below:

- PAHs were elevated at CB91 on Terminal 115 (1,253,000 ug/kg dw LPAH and 2,062,000 ug/kg dw HPAH) and ID-ST1 (108,800 ug/kg HPAH) located on the 36-inch drain that serves a residential area located east of 18<sup>th</sup> Ave SW and the South Seattle Community College property. The Port has been notified about the PAH levels in CB91. SPU intends to conduct additional source tracing in the SW Idaho St storm drain system in 2011.
- PCBs were elevated in the September 2008 inline grab collected near the downstream end of the 7<sup>th</sup> Ave S storm drain (2,400 ug/kg dw at 7<sup>th</sup>-ST1). However, PCB concentrations were much lower in two other inline grab samples collected in March 2009 and April 2010 (188-236 ug/kg dw), as well as the sediment trap from this same location (264 ug/kg dw). Additional source tracing samples were collected in the 7<sup>th</sup> Ave S drainage system in 2009, but PCBs were not elevated in any other samples collected from this system. Source tracing locations in the 7<sup>th</sup> Ave S storm drain are shown on Map 15. SPU currently plans to clean the 7<sup>th</sup> Ave S storm drain system prior to building the South Park pump station/water quality facility, which is currently scheduled for construction in 2011-2012. The South Park project involves construction of a pump station to reduce flooding in the 7<sup>th</sup> Ave S drainage basin and a 1,000-cartridge Stormfilter® treatment system. This regional treatment system will be constructed at the downstream end of the system and is designed to treat

approximately 80 percent of the average annual runoff from the 232-acre drainage basin. Stormfilter® systems are approved by Ecology and are considered to be effective in removing about 80 percent of the total suspended solids (TSS) present in stormwater.

### **Combined Sewer System Samples**

Exceedances of SMS/MTCA benchmarks in samples collected from catch basins (24 onsite catch basins and 19 right-of-way catch basins) that are plumbed to the combined sewer system are summarized in Table 23. Chemicals that exceed the established benchmarks include arsenic, copper, lead, mercury, zinc, TPH, PAH, dibenzofuran, BEHP, butylbenzylphthalate, dimethylphthalate, di-n-butylphthalate, 2,4-dimethylphenol, 2-methylphenol, 4-methylphenol, phenol, benzoic acid, and benzyl alcohol. Similar to the separated storm drain system, concentrations in onsite catch basins are generally higher than concentrations found in right-of-way catch basins.

## **NEXT STEPS**

SPU intends to continue the business inspection and source tracing efforts to support the Lower Duwamish Waterway Superfund investigation in 2011. In the past seven years, SPU has conducted an average of about 150 business inspections per year and has collected about 50-100 source tracing samples per year. Higher sample counts (130-180) occurred during 2008 and 2009 when Ecology funded SPU source tracing efforts.

### **Business Inspections**

The business inspection program has been successful in reaching businesses that discharge to the LDW via the publicly-owned storm drain or the combined sewer systems. In 2010, SPU completed the first sweep of the LDW, inspecting all businesses that engage in high risk pollution generating activities (e.g., manufacturing, chemical storage, equipment maintenance). Businesses were selected for inspection based on their reported standard industrial classification and/or visual observations made during field reconnaissance visits. A full site inspection was conducted at all sites that engaged in pollution generating activities. At sites where the onsite activities were unknown, inspectors conducted a brief screening visit to evaluate onsite activities and determine whether a full site investigation was necessary. The initial sweep utilized a systematic geographic-based approach to provide comprehensive coverage of the LDW area. Inspections started in the highest priority areas (i.e., early action areas) and then moved into the other source control areas defined by Ecology to support development of source control action plans for these areas.

SPU is currently developing a schedule for future inspections that uses a priority system based on pollution generating potential. Businesses have been assigned a priority ranking (high, medium, and low) based on information obtained during the initial round of inspections. Inspection frequency will be based on the priority ranking. The following sites were assigned a high ranking:

- Sites that exhibited significant problems during previous inspections. Since about 2008, SPU inspectors have been ranking sites based on observations made during site

visits. This ranking is maintained in the business inspection data base. For sites inspected prior to 2008, the initial ranking is based on an evaluation of the numbers of corrective actions required during the first round of inspections. Highest priority is assigned to those sites that required multiple corrective actions for stormwater and hazardous waste-related issues.

- Sites that were inspected during the first round by others (e.g., King County Industrial Waste, King County Hazardous Waste inspectors) that engage in high risk pollution generating activities. These sites are being addressed separately, because SPU inspectors have less understanding of these businesses. High priority sites have been selected based on SIC codes and numbers of corrective actions identified during the first round of inspections.
- New businesses that start up in the area and that engage in high risk pollution generating activities. These businesses will be selected based on the SIC code from the City's business license data base. This list will be downloaded once each year to select businesses to inspect during the following year.

There are currently about 1,300 businesses on the site list. Of these, about 70 are listed as high priority. The priority ranking will be updated each year.

With an average annual inspection count of about 150, it is anticipated that high risk businesses will be inspected every other year. Schedules for other rankings have yet to be determined. SPU intends to finalize the inspection schedule in January 2011 and will then meet with Ecology staff to coordinate inspections for 2011.

## **Source Sampling/Tracing**

Source tracing efforts will continue to focus on catch basin and in-line sediment sampling to track sources of contaminants to the waterway sediment. Because of staffing issues (several inspectors will be on extended leave), in-house source tracing will be limited in 2011. However, sampling will continue with consultant support funded by an Ecology grant that extends through June 30, 2011. Work planned for the next reporting period includes:

- Continue sampling the three SPU-monitored traps installed in the Slip 4 basin and the 5 traps in the Norfolk CSO/EOF/SD basin. Samples will be collected once in 2011.
- Re-sample the 21 traps installed in 2008-2009 under the previous Ecology grant. The first round of sampling was completed in December 2010. An additional round of sampling will be conducted in late April if sufficient sediment has accumulated in the traps.
- Collect additional samples in non-industrial areas of the LDW to provide broader geographic coverage and evaluate pollutants associated with residential streets and arterials. Up to 65 additional source tracing samples will be collected under the grant.
- Analyze additional samples for dioxins/furans. Samples will be selected from samples currently archived at the lab (SPU has been collecting and archiving an additional sample bottle from each sampling location for the past year and half), samples collected under the first three bullets above, and if possible, storm drain sampling will

be coordinated with Ecology's regional dioxin study that is scheduled to occur in 2011. Up to 30 additional samples will be analyzed for dioxins/furans.

- Co-sample with Ecology building material investigation. This work is also funded under the Ecology grant. SPU will sample catch basins adjacent to buildings where Ecology tests building material to determine whether pollutant present in building materials have migrated to the adjacent storm drain system.
- Continue to resample onsite catch basins following implementation of pollution prevention practices and catch basin cleaning. SPU has re-sampled limited number of catch basins following cleaning and source control. Further work is planned to aid in evaluating source control effectiveness.

## **Site-Specific Source Control Actions**

### ***Terminal 177 Adjacent Streets Cleanup***

The revised EE/CA was completed in 2010 and the Port and City are currently developing the scope of work/schedule for designing and constructing the final cleanup. The City's consultant is under contract to begin designing the roadway cleanup in 2011. Design of the stormwater collection and treatment system that will be installed after cleanup will also begin in 2011. SPU intends to construct a treatment system that meets the requirements of the City Stormwater, Code (SMC 22.800) and is compliant with City NPDES municipal stormwater permit. SPU is currently working with the Port to negotiate an easement across Terminal 117 property to construct the necessary drainage outfall to the waterway. Final cleanup in the right-of-way is currently scheduled to occur in approximately 2014.

### ***Line Cleaning***

SPU will continue to jet and clean storm drain systems to remove contaminated sediment. Cleaning is conducted after source tracing has been completed and the threat of recontamination from an ongoing source is considered low. Depending on available funding and the completion of source tracing activities, the following two sites may be cleaned in 2011:

- SW Idaho St storm drain. Sampling to identify the source(s) of elevated levels of HPAH found in sediment trap samples will be conducted in 2011. Contaminated sections of this line will be cleaned after source tracing is completed.
- 7<sup>th</sup> Ave S storm drain. Elevated levels of total PCBs (2,400 ug/kg dw) were found in one inline sediment sample from this system. No ongoing sources of PCBs have been identified in this system. Cleaning work will be coordinated with the 2011-2012 construction of the South Park pump station/water quality facility, which will be built at the downstream end of this storm drain system.

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Table 2. Corrective actions identified during initial inspections from 2003 through September 2010 (arranged by storm drain outfall/early action area).

	LDW All	Diagonal-Duwamish EAA	Norfolk EAA	Slip 4 EAA	Former Slip 5 EAA	Trotsky EAA	Glacier Bay	Slip 6	7th Ave S SD	1st Ave S SD (east)	S Brighton CSO/SD	S Myrtle St SD	SW Dakota St SD	SW Idaho St SD	1st Ave S SD (west)	Highland Park Wy SW SD	S 96th St SD
Total Number of Corrective Actions	3,002	1,844	132	140	41	119	89	4	160	5	54	20	3	5	53	22	25
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
<b>Hazardous Waste</b>																	
Properly document waste disposal	1.7%	2.2%	1.5%	0.7%	2.4%	0.8%	0.0%	0.0%	0.6%	0.0%	1.9%	0.0%	0.0%	0.0%	1.9%	0.0%	4.0%
Properly store Product/Waste	6.8%	7.4%	7.6%	6.4%	7.3%	8.4%	5.6%	0.0%	7.5%	0.0%	5.6%	0.0%	0.0%	0.0%	1.9%	4.5%	8.0%
Properly label Containers	4.2%	3.9%	5.3%	3.6%	2.4%	7.6%	4.5%	0.0%	6.3%	0.0%	5.6%	5.0%	0.0%	0.0%	3.8%	4.5%	4.0%
Repair or replace degraded open chemical containers	0.4%	0.3%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.6%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%
Properly dispose of Waste	5.1%	5.8%	1.5%	5.7%	2.4%	4.2%	3.4%	0.0%	8.1%	0.0%	1.9%	5.0%	0.0%	0.0%	5.7%	4.5%	4.0%
Properly designate waste	0.5%	0.3%	0.0%	1.4%	0.0%	0.8%	1.1%	0.0%	1.9%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%
<b>Hazardous Waste Total</b>	<b>18.8%</b>	<b>19.9%</b>	<b>15.9%</b>	<b>17.9%</b>	<b>14.6%</b>	<b>22.7%</b>	<b>14.6%</b>	<b>0.0%</b>	<b>25.0%</b>	<b>0.0%</b>	<b>24.1%</b>	<b>10.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>13.2%</b>	<b>13.6%</b>	<b>28.0%</b>
<b>Industrial Waste</b>																	
Obtain proper permit for facility discharge	0.7%	0.6%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	1.3%	0.0%	1.9%	5.0%	0.0%	20.0%	3.8%	0.0%	4.0%
Implement pretreatment for discharge	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%
Provide better/more maintenance for pretreatment system	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%
<b>Industrial Waste Total</b>	<b>1.4%</b>	<b>1.7%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>2.2%</b>	<b>0.0%</b>	<b>1.3%</b>	<b>0.0%</b>	<b>1.9%</b>	<b>5.0%</b>	<b>0.0%</b>	<b>20.0%</b>	<b>5.7%</b>	<b>0.0%</b>	<b>8.0%</b>
<b>Spill Response</b>																	
Improve or create spill response procedures	17.1%	15.3%	19.7%	22.1%	34.1%	19.3%	16.9%	25.0%	18.1%	20.0%	14.8%	15.0%	33.3%	20.0%	18.9%	13.6%	8.0%
Improve or purchase adequate spill response materials	13.7%	13.4%	11.4%	13.6%	19.5%	9.2%	14.6%	25.0%	14.4%	20.0%	11.1%	20.0%	33.3%	20.0%	17.0%	9.1%	8.0%
Properly educate employees	13.0%	11.8%	12.9%	20.0%	12.2%	10.9%	13.5%	25.0%	14.4%	20.0%	11.1%	15.0%	33.3%	20.0%	15.1%	13.6%	4.0%
<b>Spill Response Total</b>	<b>43.8%</b>	<b>40.5%</b>	<b>43.9%</b>	<b>55.7%</b>	<b>65.9%</b>	<b>39.5%</b>	<b>44.9%</b>	<b>75.0%</b>	<b>46.9%</b>	<b>60.0%</b>	<b>37.0%</b>	<b>50.0%</b>	<b>100.0%</b>	<b>60.0%</b>	<b>50.9%</b>	<b>36.4%</b>	<b>20.0%</b>
<b>Stormwater</b>																	
Storm drain facility needs to be cleaned	13.0%	15.6%	11.4%	11.4%	4.9%	7.6%	13.5%	0.0%	3.1%	20.0%	5.6%	5.0%	0.0%	0.0%	7.5%	13.6%	8.0%
Missing or damaged components to storm drain facility need replacement/repair	2.6%	2.6%	6.1%	2.1%	4.9%	2.5%	2.2%	25.0%	0.6%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%
Make storm drain facility parts accessible	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%
Correct illegal plumbing connection	0.5%	0.5%	0.0%	0.7%	2.4%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	4.0%
Implement proper housekeeping	5.3%	5.5%	5.3%	2.1%	2.4%	5.0%	7.9%	0.0%	3.8%	0.0%	7.4%	5.0%	0.0%	0.0%	7.5%	13.6%	8.0%
Don't discharge process wastewater to stormdrain	3.5%	4.1%	3.8%	1.4%	2.4%	3.4%	3.4%	0.0%	1.3%	0.0%	0.0%	5.0%	0.0%	0.0%	1.9%	0.0%	4.0%
Implement proper washing practices	2.3%	2.1%	3.0%	0.7%	2.4%	3.4%	1.1%	0.0%	3.8%	0.0%	1.9%	5.0%	0.0%	0.0%	5.7%	9.1%	4.0%
Properly store containerized materials	2.2%	2.1%	2.3%	1.4%	0.0%	5.0%	2.2%	0.0%	4.4%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Properly store non-containerized materials	2.1%	1.6%	1.5%	3.6%	0.0%	5.0%	3.4%	0.0%	3.1%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%
Implement proper fueling operations	0.4%	0.3%	1.5%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%
Properly perform maintenance of vehicles and equipment	0.9%	1.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	1.3%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Implement proper material transfer practices	0.5%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	3.7%	5.0%	0.0%	0.0%	3.8%	0.0%	0.0%
Clean and eliminate leaks and spills from storage areas	2.1%	1.7%	4.5%	2.9%	0.0%	2.5%	2.2%	0.0%	2.5%	0.0%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%
Obtain NPDES permit for discharge	0.5%	0.1%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	1.9%	20.0%	1.9%	10.0%	0.0%	0.0%	3.8%	0.0%	4.0%
<b>Stormwater Total</b>	<b>36.0%</b>	<b>37.9%</b>	<b>40.2%</b>	<b>26.4%</b>	<b>19.5%</b>	<b>37.8%</b>	<b>38.2%</b>	<b>25.0%</b>	<b>26.9%</b>	<b>40.0%</b>	<b>37.0%</b>	<b>35.0%</b>	<b>0.0%</b>	<b>20.0%</b>	<b>30.2%</b>	<b>50.0%</b>	<b>44.0%</b>
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Table 7: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging to Early Action Area 1 (Diagonal/Duwamish).**

Includes samples collected from S Nevada St SD and Diagonal Ave C CSO/SD

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Sediment traps</b>								
Zinc	mg/kg	410	960	46	19	2	428 - 1,930	All
TPH-oil	mg/kg	2,000	NA	46	34	NA	2,100 - 7,500	All
PCBs	ug/kg dw	130	1,000	46	27	2	139 - 2,250	All
BEHP	ug/kg dw	1,300	1,900	46	45	44	1,800 - 33,000	All
Butylbenzylphthalate	ug/kg dw	63	900	46	39	6	110 - 2,700	All
Dimethylphthalate	ug/kg dw	71	160	46	4	1	75 - 760	ST2, ST5, ST6
LPAH	ug/kg dw	5,200	5,200	45	4	4	5,560 - 19,350	ST3, ST6
HPAH	ug/kg dw	12,000	17,000	45	9	6	13,060 - 127,580	ST1, ST2, ST6
4-methylphenol	ug/kg dw	670	670	45	26	26	720 - 20,000	All
Benzoic acid	ug/kg dw	650	650	45	2	2	1,400 - 1,500	ST3, ST7
Benzyl alcohol	ug/kg dw	57	73	45	6	6	76 - 220	ST2, 5, 7
2-Methylnaphthalene	ug/kg dw	670	670	45	1	1	- 1,500	ST3
2-Methylphenol	ug/kg dw	63	63	45	1	1	- 370	ST5
<b>Onsite catch</b>								
Arsenic	mg/kg	57	93	39	2	2	70 - 480	CB127, 130
Copper	mg/kg	390	390	39	7	7	437 - 1,550	CB30, 81, 117, 127, 130, 138,
Lead	mg/kg	450	530	39	4	3	473 - 5,830	CB81, 83, 130
Mercury	mg/kg	0.41	0.59	39	7	6	0.46 - 21	CB30, 74, 83, 121, 130, and RCB224
Zinc	mg/kg	410	960	39	29	13	471 - 1,810	CB74, 81, 85, 92A, 205, 106, 107S, 107F, 121, 127, 128, 130, 136, 138,
TPH-diesel	mg/kg	2,000	NA	39	15	NA	2,500 - 46,000	CB81, 105, 107S, 111, 128, 130, 136, 138, 139, 140
TPH-oil	mg/kg	2,000	NA	39	31	NA	3,300 - 250,000	CB74, 81, 92A, 205, 106, 107S, 107F, 110, 111, 112, 117, 119, 121,
PCBs	ug/kg dw	130	1,000	46	28	11	138 - 2,200,000	CB10, 13, 19, 27B, 30, 73, 74, 75, 76, 81, 83, 85, 92, 105, 112, 117, 121, 136, 139, 158, RCB224, and TUL-CB1, CB2, CB3, CB4
LPAH	mg/kg	5,200	5,200	39	4	4	7,290 - 79,700	CB83, 112, 119, 130
HPAH	mg/kg	12,000	17,000	39	7	6	15,600 - 262,300	CB10, 27B, 106, 107S, 112, 119, 130
2-Methylnaphthalene	mg/kg	670	670	39	6	6	860 - 18,000	B81, 83, 105, 136, 140, RCB224
BEHP	ug/kg dw	1,300	1,900	39	36	34	1,600 - 1,400,000	All except CB124, 161,204
Butylbenzylphthalate	ug/kg dw	63	900	39	29	17	71 - 150,000	CB74, 81, 83, 92A, 106, 107F, 110, 112, 138, 139, 140
Dimethylphthalate	ug/kg dw	71	160	39	3	3	650 - 1,000	CB13, 74, 136
Di-n-butylphthalate	ug/kg dw	1,400	1,400	39	8	8	1,600 - 52,000	CB74, 83, 106, 121, 130, 136
Di-n-octylphthalate	ug/kg dw	6,200	NA	39	3	3	6,800 - 8,000	CB196, 136, 140]
2,4-dimethylphenol	ug/kg dw	29	29	39	1	1	- 530	CB120
4-Methylphenol	ug/kg dw	670	670	39	12	12	850 - 61,000	CB13, 19, 27A, 27B, 74, 81, 82, 106, 117, 21
2-Methylphenol	ug/kg dw	63	63	39	2	2	360 - 1,500	CB74, 127
Pentachlorophenol	ug/kg dw	360	690	39	1	0	- 620	CB138
Phenol	ug/kg dw	420	1,200	39	8	6	690 - 13,000	CB74, 92, 106, 107S, 120, 128, 130
Benzoic acid	ug/kg dw	650	650	39	8	8	660 - 33,000	CB13, 83, 106, 130, 136, 158
Benzyl alcohol	ug/kg dw	57	73	39	6	6	150 - 1,800	CB74, 106, 107F, 107S, 111, 112,

**Table 7: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging to Early Action Area 1 (Diagonal/Duwamish).**

Includes samples collected from S Nevada St SD and Diagonal Ave C CSO/SD

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Right-of-way catch basins</b>								
Arsenic	mg/kg	57	93	24	1	0	- 87	RCB206
Copper	mg/kg	390	390	24	1	1	- 447	RCB162
Lead	mg/kg	450	530	24	1	1	- 1,300	RCB217
Mercury	mg/kg	0.41	0.59	24	1	1	- 2.2	RCB217
Zinc	mg/kg	410	960	24	10	2	437 - 1,330	RCB1, 37, 51, 126, 144, 161, 215, 216, 217
TPH-diesel	mg/kg	2,000	NA	17	3	NA	2,300 - 4,600	RCB51, 100, 142
TPH-oil	mg/kg	2,000	NA	17	13	NA	2,100 - 20,000	RCB1, 36, 37, 51, 100, 141, 142, 144, 161, 215, 216, 217, 218
PCBs	ug/kg dw	130	1,000	22	12	2	152 - 9,750	RCB37 <sup>a</sup> , 51, 126, 127, 144, 161, 162, 217, 218
LPAH	ug/kg dw	5,200	5,200	21	1	1	- 5,702	RCB36
HPAH	ug/kg dw	12,000	17,000	21	2	2	17,320 - 27,910	RCB1, 51
BEHP	ug/kg dw	1,300	1,900	21	18	18	2,300 - 72,000	RCB1, 36, 37, 51, 100, 126, 127, 141, 142, 144, 160, 161, 162, 215, 216,
Butylbenzylphthalate	ug/kg dw	63	900	21	15	4	110 - 1,600	RCB1, 36, 37, 51, 126, 141, 143, 144, 145, 160, 161, 162, 215, 216,
Dimethylphthalate	ug/kg dw	71	160	21	4	2	120 - 730	RCB36, 141, 160, 217
Di-n-butylphthalate	ug/kg dw	1,400	1,400	21	3	3	3,600 - 11,000	RCB51, 217, 218
2,4-dimethylphenol	ug/kg dw	29	29	21	1	1	- 270	RCB142
4-methylphenol	ug/kg dw	670	670	21	7	7	810 - 4,300	RCB1, 36, 127, 144, 215, 216, 217
Phenol	ug/kg dw	420	1,200	21	2	0	440 - 1,000	RCB36, 142
Benzoic acid	ug/kg dw	650	650	21	2	2	670 - 780	RCB36, 217
Benzyl alcohol	ug/kg dw	57	73	21	4	3	58 - 1,100	RCB36, 127, 160, 162
<b>Inline sediment grabs</b>								
Lead	mg/kg	450	530	37	2	1	461 - 576	MH18, 213
Mercury	mg/kg	0.41	0.59	37	4	3	0.48 - 2.72	MH18, 208, 233, and ST1G
Zinc	mg/kg	410	960	37	10	0	423 - 858	RCB140, ST1G, ST2G, and MH18, 21A, 206, 231, 233, 236, T6BX
TPH-oil	mg/kg	2,000	NA	35	7	NA	2,100 - 6,800	ST1, ST7, and MHT6B, 18, 21A, 208, 231, 236
PCBs	ug/kg dw	130	1,000	34	9	1	170 - 13,300	ST1, and MHT6BX, 18, 206, 231, 232, 233, 236
BEHP	ug/kg dw	1,300	1,900	34	12	9	1,600 - 14,000	ST1, ST7, T2A, and MHT6Bx, 18, 21A, 207, 208, 209, 231, 236
Butylbenzylphthalate	ug/kg dw	63	900	34	11	1	78 - 1,200	ST1, ST7, RCB140, and MHT6Bx, 17, 21A, 210, 231, 233, 236, T2A
Dimethylphthalate	ug/kg dw	71	160	34	3	3	170 - 1,800	ST1, MH210
Benzyl alcohol	ug/kg dw	57	73	34	1	1	- 120	ST7
Hexachlorobenzene	ug/kg dw	22	70	34	1	0	47	MHT6BX

a. Sample collected on Airport Way S below the Rainier Commons property prior to the cleaning that occurred in January 2008. Catch basin was cleaned in 2006 and January 2008. Lines were also jetted in January 2008.

**Table 8: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging to Early Action Area 2 (Trotsky).**

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Onsite catch basins</b>								
Copper	mg/kg	390	390	3	1	1	- 2,110	CB116
Lead	mg/kg	450	530	3	2	2	1,180 - 1,540	CB116
Zinc	mg/kg	410	960	3	2	2	2,690 - 2,950	CB116
TPH-diesel	mg/kg	2,000	NA	3	2	2	2,600 - 4,200	CB116
TPH-oil	mg/kg	2,000	NA	3	2	2	14,000 - 16,000	CB116
PCBs	ug/kg dw	130	1,000	3	1	0	- 902	CB116
BEHP	ug/kg dw	1,300	1,900	3	3	3	22,600 - 39,000	CB108, 116
Butylbenzylphthalate	ug/kg dw	63	900	3	2	2	480 - 11,000	CB116
Dimethylphthalate	ug/kg dw	71	160	3	1	1	- 550	CB116
4-Methylphenol	ug/kg dw	670	670	3	1	1	- 2,200	CB116
<b>Right-of-way catch basins</b>								
Arsenic	mg/kg	57	93	10	1	0	- 50	RCB139
Lead	mg/kg	450	530	10	3	1	521 - 3,690	RCB109, 139, 203
Mercury	mg/kg	0.41	0.59	10	2	2	1.08 - 1.46	RCB109, 139
Zinc	mg/kg	410	960	10	7	0	457 - 663	RCB109,128, 139, 190, 202, 203
TPH-diesel	mg/kg	2,000	NA	10	2	NA	2,400 - 5,800	RCB109, 139
TPH-oil	mg/kg	2,000	NA	10	8	NA	2,200 - 18,000	RCB109, 128, 139, 175, 190, 202, 203
PCBs	ug/kg dw	130	1,000	10	2	2	147 - 3,190	RCB109,128, 139, 190, 202, 203
BEHP	ug/kg dw	1,300	1,900	10	9	9	1,900 - 21,000	RCB109, 110, 128, 139, 175, 190, 200b, 202, 203
Butylbenzylphthalate	ug/kg dw	63	900	10	7	2	70 - 3,400	RCB139, 175, 190, 200b, 201, 202, 203
Dimethylphthalate	ug/kg dw	71	160	10	2	1	120 - 1,000	RCB128, 203
LPAH	ug/kg dw	5,200	5,200	10	1	1	- 6,400	RCB128
2-Methylnaphthalene	ug/kg dw	670	670	10	2	2	1,200 - 1,300	RCB109, 128
Benzyl alcohol	ug/kg dw	57	73	10	2	2	500 - 550	RCB139, 203
<b>Inline grabs</b>								
Zinc	mg/kg	410	960	2	2	0	592 - 620	RCB110
TPH-oil	mg/kg	2,000	NA	2	1	NA	- 4,600	RCB110
BEHP	ug/kg dw	1,300	1,900	2	2	2	2,100 - 3,200	RCB110
Butylbenzylphthalate	ug/kg dw	63	900	2	2	2	95 - 250	RCB110
Di-n-butylphthalate	ug/kg dw	1,400	1,400	2	1	1	- 4,800	RCB110
Di-n-octylphthalate	ug/kg dw	6,200	NA	2	1	1	- 18,000	RCB110
PCBs	ug/kg dw	130	1,000	2	2	0	158 - 203	RCB110
Pentachlorophenol	ug/kg dw	360	690	2	1	1	- 780	RCB110
2,4-Dinitrotoluene	ug/kg dw	NA	NA	2	NA	NA	6,400 - 9,300	RCB110
n-Nitroso-di-n-propylamine <sup>a</sup>	ug/kg dw	NA	NA	2	NA	NA	700U - 780	RCB110
n-Nitrosodiphenylamine	ug/kg dw	28	40	2	NA	NA	4,900 - 14,000	RCB110

a. Benchmarks (SMS/MTCA) do not exist for these chemicals, but concentrations were higher than in any other samples.

**Table 12: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging to Early Action Area 3 (Slip 4).**

Includes samples collected from I-5 SD, Georgetown flume, and KCIA SD#3/PS44 EOF

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Sediment traps</b>								
Arsenic	mg/kg	57	93	72	2	0	50 - 70	T4
Copper	mg/kg	390	390	72	5	5	541 - 764	T5A, T5
Lead	mg/kg	450	530	72	6	5	486 - 1,070	T3A, T5A
Mercury	mg/kg	0.41	0.59	72	24	20	0.42 - 8.30	T1, T2, T3, T4, T5A, T5
Zinc	mg/kg	410	960	72	47	17	418 - 2,460	T1, T2A, T2, T3A, T3, T4A, T4, T5A, T5, T6
TPH-diesel	mg/kg	2,000	2,000	48	1	NA	- 3,900	T5
TPH-oil	mg/kg	2,000	2,000	48	15	NA	2,300 - 12,000	T3A, T4, T5A, T5, T6
PCBs	ug/kg dw	130	1,000	105	68	30	133 - 800,000	T1, T2A, T2, T3A, T3, T4A, T4, T5A, T5, T6
BEHP	ug/kg dw	1,300	1,900	75	67	61	1,400 - 48,000	T1, T2A, T2, T3A, T3, T4A, T4, T5A, T5, T6
Butylbenzylphthalate	ug/kg dw	63	900	75	44	5	76 - 1,600	T1, T2A, T2, T3A, T4A, T4, T5A, T5, T6
Dimethylphthalate	ug/kg dw	71	160	75	4	0	90 - 150	T6
Di-n-butylphthalate	ug/kg dw	1,400	1,400	75	2	2	1,600 - 6,900	T1, T2
Di-n-octylphthalate	ug/kg dw	6,200	NA	75	16	NA	6,900 - 27,000	T2, T3, T4A, T4, T5A, T5
LPAH	ug/kg dw	5,200	5,200	75	11	11	5,830 - 31,300	T1, T2A, T2, T3A, T4A, T4, T5A, T5
HPAH	ug/kg dw	12,000	17,000	75	52	40	12,390 - 362,900	T1, T2A, T2, T3A, T3, T4A, T4, T5A, T5
2-Methylnaphthalene	ug/kg dw	670	670	75	1	1	- 4,800	T2A
Dibenzofuran	ug/kg dw	540	540	75	3	3	600 - 1,300	T2A, T4, T5
2,4-Dimethylphenol	ug/kg dw	29	29	75	3	3	210 - 530	T1, T4A, T5
2-Methylphenol	ug/kg dw	63	63	75	1	1	- 240	T4
4-Methylphenol	ug/kg dw	670	670	75	16	16	760 - 12,000	T2A, T3A, T5A, T5, T6
Pentachlorophenol	ug/kg dw	360	690	75	1	1	- 2,600	T4A
Phenol	ug/kg dw	420	1,200	75	6	1	530 - 1,900	T2A, T4A, T5A, T5
Benzoic acid	ug/kg dw	650	650	75	4	4	2,600 - 5,300	T1, T4A, T4, T5
Benzyl alcohol	ug/kg dw	57	73	75	1	1	130 - 200	T1, T6
<b>Onsite catch basins</b>								
Zinc	mg/kg	410	960	7	5	1	448 - 1,950	CB79, 86, 87, 88, 123
TPH-diesel	mg/kg	2,000	NA	7	2	NA	4,900 - 6,000	CB79, 143
TPH-oil	mg/kg	2,000	NA	7	5	NA	2,300 - 13,000	CB79, 80, 86, 123, 143
PCBs	ug/kg dw	130	1,000	7	4	0	189 - 620	CB79, 86, 87, 88
BEHP	ug/kg dw	1,300	1,900	7	5	4	2,900 - 120,000	CB79, 86, 87, 143, S1
Butylbenzylphthalate	ug/kg dw	63	900	7	5	2	120 - 2,400	S1, CB86, 87, 123, 143
Dimethylphthalate	ug/kg dw	71	160	7	1	1	- 1,900	CB80
LPAH	ug/kg dw	5,200	5,200	7	2	2	9,560 - 18,160	CB79, 123
HPAH	ug/kg dw	12,000	17,000	7	2	1	13,990 - 24,850	CB79, 123
2-Methylnaphthalene	ug/kg dw	670	670	7	3	3	960 - 1,000	CB80, 86, 143
Dibenzofuran	ug/kg dw	540	540	7	1	1	- 1,300	CB123
4-Methylphenol	ug/kg dw	670	670	7	2	3	1,700 - 1,900	CB86, 143
Benzoic acid	ug/kg dw	650	650	7	1	1	- 3,500	CB86
Benzyl alcohol	ug/kg dw	57	73	7	2	2	770 - 820	CB86, 143

**Table 12: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging to Early Action Area 3 (Slip 4).**

Includes samples collected from I-5 SD, Georgetown flume, and KCIA SD#3/PS44 EOF  
 July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Right-of-way catch basins</b>								
Copper	mg/kg	390	390	3	1	1	- 720	RCB-D071039
PCBs	ug/kg dw	130	1,000	10	4	0	150 - 570	RCB50, 102, 106, 107
BEHP	ug/kg dw	1,300	1,900	3	8	7	1,400 - 25,000	RCB49, 50, 56, 111, 112, 113, 114, 115
Butylbenzylphthalate	ug/kg dw	63	900	3	7	2	150 - 3,800	RCB49, 50, 111, 113, 114, 115, RCB-D071041
Dimethylphthalate	ug/kg dw	71	160	3	3	0	100 - 1,900	RCB50, 56, 113
HPAH	ug/kg dw	12,000	17,000	3	1	0	- 13,000	RCB56
Benzyl alcohol	ug/kg dw	57	73	3	1	1	- 1,100	RCB111
2,4-Dimethylphenol	ug/kg dw	29	29	3	1	1	- 200	RCB50
<b>Inline grabs</b>								
No exceedances				2	0	0		

**Table 14: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging to Early Action Area 4 (Boeing Plant 2 to Jorgensen Forge).**

Includes samples collected from 16th Ave S SD and KCIA-Jorgensen SD

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Sediment traps<sup>a</sup></b>								
PCBs	ug/kg dw	130	1,000	2	2	2	5,500 - 11,000	KCIAJ-ST1
<b>Right-of-way catch basins</b>								
PCBs	ug/kg dw	130	1,000	1	1	1	- 159	RCB207
BEHP	ug/kg dw	1,300	1,900	1	1	1	- 2,725	RCB207
Butylbenzylphthalate	ug/kg dw	63	900	1	1	1	- 75	RCB207
<b>Inline grabs</b>								
Mercury	mg/kg	0.41	0.59	7	1	1	- 7.70	MH201
Zinc	mg/kg	410	960	7	5	2	562 - 1,640	MH201, 202, 203, 213, 214
TPH-oil	mg/kg	2,000	NA	7	3	NA	2,200 - 4,000	MH203, 212, 213
PCBs	ug/kg dw	130	1,000	7	7	1	136 - 8,000	MH201, 202, 203, 212, 213, 214, KCIAJ-ST1
HPAH	ug/kg dw	12,000	17,000	7	1	0	- 15,400	KCIAJ-ST1
BEHP	ug/kg dw	1,300	1,900	7	6	4	1,800 - 44,000	MH201, 202, 203, 212, 213, 214
Butylbenzylphthalate	ug/kg dw	63	900	7	6	1	150 - 2,600	MH201, 202, 203, 212, 213, 214
Dimethylphthalate	ug/kg dw	71	160	7	2	0	120 - 130	MH201, 202
Benzoic acid	ug/kg dw	650	650	7	2	2	1,700 - 13,000	MH201, 202
Benzyl alcohol	ug/kg dw	57	73	7	2	2	300 - 31,000	MH201, 202, 203
Phenol	ug/kg dw	420	1,200	7	1	1	- 3,500	MH202
2-Methylphenol	ug/kg dw	63	63	7	1	1	750 - 5,700	MH201, 202

a. Sediment traps analyzed only for PCBs due to insufficient sample volume.

**Table 15: Dallas stormwater PCB data post interim cleanup.**

Stormwater stored in (5) 18,000 gallon tanks at S Donovan St and 17th Ave S and discharged to combined sewer system on S Donovan St. Discharge to Duwamish Waterway occurs only during large or long duration storms when tank capacity is exceeded.

Date	Location	PCB Aroclors (ug/L)							T PCB	To River?
		1016	1221	1232	1242	1248	1254	1260		
10/25/10	Sewer MH	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	N
09/21/10	Sewer MH	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	N
08/09/10	Sewer MH	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	N
06/03/10	Sewer MH	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	N
05/20/10	Sewer MH	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	N
04/23/10	Sewer MH	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	<b>0.073</b>	<b>0.073</b>	N
03/16/10	Sewer MH	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	N
02/18/10	Sewer MH	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	N
01/13/10	Sewer MH	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	N
12/23/09	Sewer MH	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	N
11/19/09	Sewer MH	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	N
10/19/09	Discharge to Port CB	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	Y
05/01/09	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
03/03/09	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
01/08/09	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
Dec-08	No sample									Y
11/13/08	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
09/11/08	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
06/02/08	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
04/02/08	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
02/14/08	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
01/09/08	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	<b>0.12</b>	<b>0.12</b>	Y
12/03/07	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	Y
11/12/07	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
10/04/07	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
07/20/07	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
05/24/07	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
04/30/07	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
02/20/07	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
01/03/07	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	Y
Dec-06	No sample									Y
11/02/06	Sewer MH	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	Y
09/19/06	Tanks 2 and 3	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
06/01/06	Tank 1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
05/17/06	Tank 3	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
04/12/06	Tank 1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
03/27/06	Tank 3	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
03/01/06	Tank 1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
01/06/06	Discharge to Port CB	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	Y
12/21/05	Tank 1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	Y
11/14/05	Tank	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	Y
10/25/05	Tank 5	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
09/12/05	Tank 3	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
06/23/05	Tank effluent	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
05/20/05	Tank effluent	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
04/19/05	Tank effluent	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
03/27/05	Tank effluent	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
02/06/05	Prior to treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
02/04/05	Prior to treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
02/04/05	After treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
02/04/05	Basin Oil runoff	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
01/24/05	Prior to treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	<b>0.167</b>	<b>0.167</b>	N
01/22/05	Prior to treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	<b>0.152</b>	<b>0.152</b>	N
01/22/05	Basin Oil runoff	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
01/20/05	After treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
01/19/05	After treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N
01/17/05	Prior to treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	<b>0.142</b>	<b>0.142</b>	N
01/17/05	Basin Oil runoff	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	<b>0.383</b>	<b>0.383</b>	N
01/10/05	Prior to treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	<b>2.34</b>	<b>2.34</b>	N
12/20/05	After treatment	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	N

No entries = no discharge that month





Table 16: Results from source tracing samples collected from the streets adjacent to Terminal 117.

Sample ID Lab Ref Type Date	Temporary Storm Drain System								Combined Sewer System									
	CB1-DAL <sup>c</sup>	CB2-DAL <sup>c</sup>	CB2-DAL	CB3-DAL <sup>c</sup>	RCB101 <sup>e</sup>	CB4-DAL	SW1/Tanks	SW1/Tanks	SD10	SD11	SD12	SD14	SD14	SD16	SD17	SD18	SD22	SD30a
	HW34	HW34	QN25	HW34	KR27	QN25	MK15	QN25	HD09	HD09	HD09	HD09	QN25	HD09	HD09	HD09	HG76/77	IQ73
	CB	CB	CS	CB	CB	CS	Tank	CS	Inlet	Dirt	Dirt	Inlet	CS	CB	CB	CB	Dirt	Dirt
	03/22/05	03/22/05	3/10/10	03/22/05	03/14/07	3/10/10	02/25/08	3/10/10	09/23/04	09/23/04	09/23/04	09/23/04	3/10/10	09/23/04	09/23/04	09/23/04	10/27/04	10/19/05
2-Methylnaphthalene	NA	NA	490	NA	220 U	41 U	280 U	120 J	NA	NA	NA	NA	240 J	NA	NA	NA	NA	NA
2-Methylphenol <sup>a</sup>	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	2,300 UJ	NA	1,100 U	210 U	280 U	1,200 UJ	NA	NA	NA	NA	1,600 UJ	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	2,300 U	NA	1,100 U	210 U	280 U	1,200 U	NA	NA	NA	NA	1,600 U	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	2,300 U	NA	1,100 U	210 UR	56 U	1,200 U	NA	NA	NA	NA	1,600 U	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	2,300 U	NA	1,100 U	210 UR	280 U	1,200 U	NA	NA	NA	NA	1,600 U	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	4,600 U	NA	2,200 U	410 U	560 U	2,400 U	NA	NA	NA	NA	3,300 U	NA	NA	NA	NA	NA
4-Bromophenyl-phenylethe	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	2,300 U	NA	1,100 U	210 U	56 U	1,200 U	NA	NA	NA	NA	1,600 U	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	2,300 U	NA	1,100 U	41 U	56 U	1,200 U	NA	NA	NA	NA	1,600 U	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylethe	NA	NA	460 U	NA	220 U	210 UR	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
4-Methylphenol <sup>a</sup>	NA	NA	370 J	NA	690	630	62	240 U	NA	NA	NA	NA	300 J	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	2,300 U	NA	1,100 U	210 UR	280 U	1,200 U	NA	NA	NA	NA	1,600 U	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	2,300 U	NA	1,100 U	210 U	280 U	1,200 U	NA	NA	NA	NA	1,600 U	NA	NA	NA	NA	NA
Benzoic acid <sup>a</sup>	NA	NA	4,600 U	NA	2,200 U	270 J	56 U	2,400 U	NA	NA	NA	NA	3,300 U	NA	NA	NA	NA	NA
Benzyl alcohol <sup>a</sup>	NA	NA	400 J	NA	480	56	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) metha	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
Bis-(2-chloroethyl) ether	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
Carbazole	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	280 J	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	240 J	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	220 J	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	460 U	NA	220 U	41 U	280 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	2,300 UJ	NA	1,100 U	210 UJ	56 U	1,200 UJ	NA	NA	NA	NA	1,600 UJ	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
Isophorone	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	2,300 U	NA	1,100 U	210 U	280 U	1,200 U	NA	NA	NA	NA	1,600 U	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	460 U	NA	220 U	41 U	56 U	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA
Pentachlorophenol <sup>a</sup>	NA	NA	2,300 UJ	NA	1,100 U	210 UJ	280 U	1,200 UJ	NA	NA	NA	NA	1,600 UJ	NA	NA	NA	NA	NA
Phenol <sup>a</sup>	NA	NA	460 U	NA	220 U	110	57	240 U	NA	NA	NA	NA	330 U	NA	NA	NA	NA	NA

- a. SMS based on dry weight
- b. MTCA Method A soil cleanup level for unrestricted use.
- c. Catch basins cleaned after sampling
- d. Streets and catch basins pressure washed after sampling (December 2005).
- e. Same as CB4-DAL

J = Concentration is less than the reporting limit.  
 U = Chemical not detected at concentration shown  
 UJ = Chemical was not detected at concentration shown and the concentration was an estimated value  
 Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.  
 NJ = Aroclor 1254 was detected and the reported concentration is biased high. Higher or equivalent level of Aroclor 1260 was present in this sample, which significantly affected the accuracy of the identification and quantitation of Aroclor 1254 due to common congeners between Aroclor 1254 and Aroclor 1260.



 Concentration exceeds the SQS/LAET/MTCA  
 Concentration exceeds the CSL/2LAET

Table 16: Results from source tracing samples collected from the streets adjacent to Terminal 117.

Sample ID Lab Ref Type Date	Combined Sewer System								
	SD31	SD32	SD33	SD34	SD53	RCB181	RCB182	RCB183	RCB184
	IQ73	IQ73	IQ73	IQ73	HV82	QN25	QN25	QN25	QN25
	Dirt	Dirt	Dirt	Dirt	CB	Inlet	CB	Inlet	CB
	10/19/05	10/19/05	10/19/05	10/19/05	03/16/05	3/10/10	3/10/10	3/10/10	3/10/10
Total solids (%)	65.6	68.7	81.2	85.1	34.5	61.9	23	43.1	46.9
TOC (%)	NA	NA	NA	NA	NA	NA	12.3	7.5	7.09
<b>Metals (mg/kg DW)</b>									
Arsenic	NA	NA	NA	NA	NA	9	20 U	10	10
Copper	NA	NA	NA	NA	NA	105	116	85.5	103
Lead	NA	NA	NA	NA	NA	83 J	101 J	719 J	61 J
Mercury	NA	NA	NA	NA	NA	0.04	0.1 U	0.87	0.08
Zinc	NA	NA	NA	NA	NA	278	813	592	430
<b>Total petroleum hydrocar</b>									
TPH -diesel	NA	NA	NA	NA	NA	NA	860	1,000	530
TPH-oil	NA	NA	NA	NA	NA	NA	3,100	2,200	1,700
<b>LPAH (ug/kg DW)</b>									
Acenaphthene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Acenaphthylene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Anthracene	NA	NA	NA	NA	NA	170 U	160 J	100 U	230 U
Fluorene	NA	NA	NA	NA	NA	170 U	210	100 U	140 J
Naphthalene	NA	NA	NA	NA	NA	170 U	100 J	100 U	230 U
Phenanthrene	NA	NA	NA	NA	NA	360	1,300	100 U	750
Total LPAH						360	1,770 J	100	890 J
<b>HPAH (ug/kg DW)</b>									
Benzo(a)anthracene	NA	NA	NA	NA	NA	300	340	100 U	390
Benzo(a)pyrene	NA	NA	NA	NA	NA	420	580	110	450
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	450	650	140	550
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	180	440	110	330
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	450	650	140	550
Chrysene	NA	NA	NA	NA	NA	600	1,500	280	870
Dibenzo(a,h)anthracene	NA	NA	NA	NA	NA	170 U	58 J	100 U	230 U
Fluoranthene	NA	NA	NA	NA	NA	850	1,700	280	920
Indeno(1,2,3-c,d)pyrene	NA	NA	NA	NA	NA	140 J	200	53 J	190 J
Pyrene	NA	NA	NA	NA	NA	780	2,500	560	1,200
Total HPAH	NA	NA	NA	NA	NA	4,170 J	8,618 J	1,673 J	5,450 J
<b>Phthalates (ug/kg DW)</b>									
Bis(2-ethylhexyl)phthalate	NA	NA	NA	NA	NA	5,200	27,000	7,300	12,000
Butylbenzylphthalate	NA	NA	NA	NA	NA	430	190 U	100 U	73,000
Diethylphthalate	NA	NA	NA	NA	NA	170 U	650	200	230 U
Dimethylphthalate	NA	NA	NA	NA	NA	170 U	1,200	100 U	230 U
Di-n-butylphthalate	NA	NA	NA	NA	NA	170 J	330	100 U	230 U
Di-n-octyl phthalate	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
<b>PCBs (ug/kg DW)</b>									
1016	300 U	140 U	120 U	230 U	580 U	53 U	62 U	75 U	38 U
1221	300 U	140 U	120 U	230 U	580 U	53 U	62 U	75 U	38 U
1232	300 U	140 U	120 U	230 U	580 U	53 U	62 U	75 U	38 U
1242	300 U	140 U	120 U	230 U	580 U	53 U	62 U	75 U	38 U
1248	300 U	140 U	120 U	230 U	580 U	53 U	93 Y	75 U	38 U
1254	300 U	140 U	120 U	230 U	2,400	140 NJ	180 NJ	300 NJ	280 U
1260	2,300	290	260	2,900	3,900	530	310	1,000	340
Total PCBs	2,300	290	260	2,900	6,300	670 NJ	490 NJ	1,300 NJ	340
<b>Other organic compound</b>									
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
2,2'-Oxybis(1-chloropropan	NA	NA	NA	NA	NA	170 UJ	190 UJ	100 UJ	230 UJ
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
2,4-Dichlorophenol	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
2,4-Dimethylphenol <sup>18</sup>	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
2,4-Dinitrophenol	NA	NA	NA	NA	NA	1,700 U	1,900 U	1,000 U	2,300 U
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
2-Chloronaphthalene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
2-Chlorophenol	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U

Table 16: Results from source tracing samples collected from the streets adjacent to Terminal 117.

Sample ID Lab Ref Type Date	Combined Sewer System								
	SD31	SD32	SD33	SD34	SD53	RCB181	RCB182	RCB183	RCB184
	IQ73	IQ73	IQ73	IQ73	HV82	QN25	QN25	QN25	QN25
	Dirt	Dirt	Dirt	Dirt	CB	Inlet	CB	Inlet	CB
	10/19/05	10/19/05	10/19/05	10/19/05	03/16/05	3/10/10	3/10/10	3/10/10	3/10/10
2-Methylnaphthalene	NA	NA	NA	NA	NA	170 U	<b>320</b>	100 U	250
<b>2-Methylphenol<sup>a</sup></b>	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
2-Nitroaniline	NA	NA	NA	NA	NA	860 UJ	970 UJ	510 UJ	1,200 UJ
2-Nitrophenol	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
3-Nitroaniline	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	1,700 U	1,900 U	1,000 U	2,300 U
4-Bromophenyl-phenylethe	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
4-Chloroaniline	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
4-Chlorophenyl-phenylethe	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
<b>4-Methylphenol<sup>a</sup></b>	NA	NA	NA	NA	NA	<b>2,000</b>	<b>1,900</b>	<b>140</b>	<b>230</b>
4-Nitroaniline	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
4-Nitrophenol	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
<b>Benzoic acid<sup>a</sup></b>	NA	NA	NA	NA	NA	1,700 U	<b>800 J</b>	<b>320 J</b>	2,300 U
<b>Benzyl alcohol<sup>a</sup></b>	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
bis(2-Chloroethoxy) metha	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Bis-(2-chloroethyl) ether	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Carbazole	NA	NA	NA	NA	NA	<b>89 J</b>	<b>120 J</b>	100 U	230 U
Dibenzofuran	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Hexachlorobenzene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Hexachlorobutadiene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	860 UJ	970 UJ	510 UJ	1,200 UJ
Hexachloroethane	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Isophorone	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
Nitrobenzene	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	860 U	970 U	510 U	1,200 U
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U
<b>Pentachlorophenol<sup>a</sup></b>	NA	NA	NA	NA	NA	860 UJ	970 UJ	510 UJ	1,200 UJ
<b>Phenol<sup>a</sup></b>	NA	NA	NA	NA	NA	170 U	190 U	100 U	230 U

**Table 19: Exceedances of SMS/MTCA benchmarks in samples collected from Norfolk CSO/SD/PS17 EOF.**

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Sediment traps</b>								
Mercury	mg/kg	0.41	0.59	13	1	1	- 0.70	NST3
Zinc	mg/kg	410	960	13	9	1	484 - 1,230	NST1, NST2, NST3, NST4, NST5
TPH-diesel	mg/kg	2,000	NA	5	1	NA	- 2,300	NST2
TPH-oil	mg/kg	2,000	NA	5	4	NA	4,400 - 8,200	NST2, NST3
PCBs	ug/kg dw	130	1,000	19	5	0	136 - 530	NST2, NST5
BEHP	ug/kg dw	1,300	1,900	8	7	7	6,100 - 16,000	NST1, NST2, NST3
Butylbenzylphthalate	ug/kg dw	63	900	8	4	4	260 - 1,500	NST1, NST2, NST3
Dimethylphthalate	ug/kg dw	71	160	8	3	3	290 - 660	NST1, NST2
2-Methylphenol	ug/kg dw	63	63	8	1	1	- 83	NST3
<b>Onsite catch basins</b>								
Zinc	mg/kg	410	960	6	3	1	565 - 1,980	CB72, 77, 78
TPH-diesel	mg/kg	2,000	NA	5	2	NA	2,600 - 3,100	CB77, 84
TPH-oil	mg/kg	2,000	NA	5	4	NA	5,600 - 15,000	CB77, 78, 84
PCBs	ug/kg dw	130	1,000	6	1	0	- 320	CB84
BEHP	ug/kg dw	1,300	1,900	6	6	6	4,100 - 45,000	CB72, 77, 78, 82, 84
Butylbenzylphthalate	ug/kg dw	63	900	6	4	2	450 - 4,600	CB77, 78, 82, 84
Dimethylphthalate	ug/kg dw	71	160	6	1	1	- 560	CB78
LPAH	ug/kg dw	5,200	5,200	6	2	2	22,900 - 66,230	CB78, 84
HPAH	ug/kg dw	12,000	17,000	6	3	3	19,190 - 585,400	CB78, 82, 84
2-Methylnaphthalene	ug/kg dw	670	670	6	3	3	680 - 3,900	CB72, 84
Dibenzofuran	ug/kg dw	540	540	6	2	2	1,700 - 3,900	CB78, 84
4-Methylphenol	ug/kg dw	670	670	6	1	1	- 1,200	CB77
<b>Right-of-way catch basins</b>								
Zinc	mg/kg	410	960	9	1	0	- 530	RCB124
BEHP	ug/kg dw	1,300	1,900	9	2	1	1,500 - 2,150	RCB116, 121
Butylbenzylphthalate	ug/kg dw	63	900	9	4	2	110 - 4,400	RCB116, 121, 123, 130
<b>Inline sediment grabs</b>								
Zinc	mg/kg	410	960	18	7	0	540 - 766	NST1, NST3
TPH-oil	mg/kg	2,000	NA	16	8	NA	2,400 - 8,100	NST1, NST2, NST3
BEHP	ug/kg dw	1,300	1,900	18	11	9	1,500 - 14,000	NST1, NST2, NST3
Butylbenzylphthalate	ug/kg dw	63	900	18	7	0	110 - 400	NST1, NST3
PCBs	ug/kg dw	130	1,000	18	1	0	- 150	NST1
4-Methylphenol	ug/kg dw	670	670	18	2	2	1,000 - 4,400	NST3
Phenol	ug/kg dw	420	1,200	18	1	0	- 470	NST3

**Table 21: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging along the east side of the Duwamish Waterway.**

Includes samples collected from S River St SD, KCIA SD#1, I-5 SD at S Ryan St

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Sediment traps</b>								
Zinc	mg/kg	410	960	1	1	0	- 559	KCIA1-ST1
BEHP	ug/kg dw	1,300	1,900	1	1	1	- 3,700	KCIA1-ST1
HPAH	ug/kg dw	12,000	17,000	1	1	1	- 32,700	KCIA1-ST1
<b>Inline grabs</b>								
Arsenic	mg/kg	57	93	6	2	2	96 - 110	MH211, 235
Copper	mg/kg	390	390	6	2	2	442 - 470	MH211, 235
Zinc	mg/kg	410	960	6	5	3	552 - 1,640	KCIA1-ST, MH211, 220, 221, 235
TPH-diesel	mg/kg	2,000	NA	6	3	NA	2,100 - 5,100	MH211, 215, 235
TPH-oil	mg/kg	2,000	NA	6	5	NA	2,500 - 9,300	MH211, 215, 220, 221, 235
PCBs	ug/kg dw	130	1,000	6	4	0	201 - 450	MH215, 220, 221, 235
BEHP	ug/kg dw	1,300	1,900	6	5	4	1,600 - 5,800	MH211, 215, 220, 221, 235
Butylbenzylphthalate	ug/kg dw	63	900	6	4	1	140 - 1,300	MH215, 220, 221, 235
Dimethylphthalate	ug/kg dw	71	160	6	1	0	- 76	MH221
<b>Right-of-way catch basins</b>								
Zinc	mg/kg	410	960	2	1	0	- 413	CB202
TPH-oil	mg/kg	2,000	NA	2	2	NA	2,800 - 4,700	CB202, 205
BEHP	ug/kg dw	1,300	1,900	2	2	2	2,800 - 7,400	CB202, 205
Butylbenzylphthalate	ug/kg dw	63	900	2	2	0	150 - 170	CB202, 205
Dimethylphthalate	ug/kg dw	71	160	2	2	1	120 - 160	CB202, 205

**Table 22: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging along the west side of the Duwamish Waterway.**

Includes samples collected from SW Dakota St SD, SW Idaho St SD, SW Kenny St SD/T115 CSO, Highland Park Wy SW SD, 1st Ave S SD (west), 7th Ave S SD, S 96th St SD, Hamm Creek, and private storm drains.

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Sediment traps</b>								
Zinc	mg/kg	410	960	17	8	0	458 - 918	96-ST2, KN-ST1, 1st-ST1, 1st-ST2, ID-ST1, 7th-ST1, 7th-ST3, HP-ST6
TPH-diesel	mg/kg	2,000	NA	14	1	NA	- 2,400	1st-ST1
TPH-oil	mg/kg	2,000	NA	14	5	NA	2,600 - 11,000	1st-ST1, 1st-ST7, ID-ST1, HP-ST6, KN-ST1
PCBs	ug/kg dw	130	1,000	17	2	0	264 - 279	7th-ST1, ID-ST1
BEHP	ug/kg dw	1,300	1,900	15	9	8	1,500 - 20,000	1st-ST1, 1st-ST7, 7th-ST3, 96-ST1, 96-ST2, HP-ST4, HP-ST6, ID-ST1, KN-ST
Butylbenzylphthalate	ug/kg dw	63	900	15	8	1	110 - 1,200	1st-St1, 7th-ST3, 96-ST2, HP-ST4, HP-ST6, ID-ST1, KN-ST1
4-Methylphenol	ug/kg dw	670	670	15	5	5	1,400 - 3,400	1st-ST3, 1st-ST7, 96-ST1, HP-ST4, ID-ST1
HPAH	ug/kg dw	12,000	17,000	15	2	1	13,900 - 108,800	ID-ST1, 96-ST1
<b>Onsite catch basins</b>								
Arsenic	mg/kg	57	93	14	1	1	- 710	CB137
Copper	mg/kg	390	390	14	6	6	590 - 4,930	CB91, 102, 103, 104, 137, 206
Lead	mg/kg	450	530	14	1	1	- 1,280	CB 206
Mercury	mg/kg	0	1	14	1	1	- 3	CB206
Zinc	mg/kg	410	960	14	12	7	504 - 5,830	CB41C, 91, 114, 129, 137, 150, 206, Port CB6
TPH-diesel	mg/kg	2,000	NA	14	3	NA	4,600 - 9,000	CB91, 129, 206
TPH-oil	mg/kg	2,000	NA	14	8	NA	2,100 - 28,000	CB91, 129, 137, 142, 150, 206, PortCB6
PCBs	ug/kg dw	130	1,000	14	8	3	135 - 5,930	CB41C, 103, 104, 142, 150, 154, 206, PortCB6
LPAH	ug/kg dw	5,200	5,200	14	2	2	26,870 - 1,253,000	CB91, 206
HPAH	ug/kg dw	12,000	17,000	14	3	3	13,500 - 2,062,000	CB91, 102, 206
2-Methylnaphthalene	ug/kg dw	670	670	14	4	4	790 - 34,000	CB91, 94, 95, 97, CH-E
Dibenzofuran	ug/kg dw	540	540	14	2	2	1,000 - 53,000	CB91, 206
BEHP	ug/kg dw	1,300	1,900	14	11	11	1,900 - 99,000	CB41C, 102, 103, 104, 129, 137, 142, 150, 154, 206, PortCB6
Butylbenzylphthalate	ug/kg dw	63	900	14	11	11	95 - 25,000	CB41C, 102, 103, 104, 129, 137, 142, 150, 154, 206, Port CB6
Dimethylphthalate	ug/kg dw	71	160	14	6	4	73 - 600	CB41C, 102, 103, 150, 154, 206
Di-n-butylphthalate	ug/kg dw	1,400	1,400	14	2	2	2,800 - 5,800	CB150, 206
2-Methylphenol	ug/kg dw	63	63	14	3	3	110 - 750	CB97, 150, 154
4-Methylphenol	ug/kg dw	670	670	14	3	3	960 - 13,000	CB129, 150, 206
Phenol	ug/kg dw	420	1,200	14	3	1	640 - 1,400	CB103, 150, 206
Benzoic acid	ug/kg dw	650	650	14	2	2	1,000 - 1,500	CB137, 150
Benzy alcohol	ug/kg dw	57	73	14	8	8	120 - 5,050	CB90, 101, 102, 103, 104, 154, CH-E, CH-N

**Table 22: Exceedances of SMS/MTCA benchmarks in samples collected from storm drains discharging along the west side of the Duwamish Waterway.**

Includes samples collected from SW Dakota St SD, SW Idaho St SD, SW Kenny St SD/T115 CSO, Highland Park Wy SW SD, 1st Ave S SD (west), 7th Ave S SD, S 96th St SD, Hamm Creek, and private storm drains.

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Right-of-way catch basins</b>								
Arsenic	mg/kg	57	93	25	1	1	- 750	RCB159
Copper	mg/kg	390	390	25	1	1	- 4,520	RCB159
Lead	mg/kg	450	530	25	1	1	- 548	RCB131
Zinc	mg/kg	410	960	25	9	3	424 - 3,650	RCB53, 129, 131, 132, 312, 154, 159, 165, 200a
TPH-oil	mg/kg	2,000	NA	25	10	NA	2,200 - 6,300	RCB129, 131, 132, 154, 159, 165, 170, 210, 213, 214
PCBs	ug/kg dw	130	1,000	25	8	0	133 - 610	RCB131, 159, 170, 185, 200a, 210, 213, 214
HPAH	ug/kg dw	12,000	17,000	25	2	1	16,440 36,520	RCB53, 131
BEHP	ug/kg dw	1,300	1,900	25	12	10	1,400 - 5,100	RCB53, 129, 132, 137, 154, 158, 165, 170, 185, 210, 213, 214
Butylbenzylphthalate	ug/kg dw	63	900	25	16	4	74 - 19,000	RCB52, 53, 54, 129, 131, 132, 137, 154, 157, 158, 165, 185, 210, 213, 214, 223
Diethylphthalate	ug/kg dw	200	NA	25	1	NA	- 460	RCB53
Dimethylphthalate	ug/kg dw	71	160	25	4	3	180 - 400	RCB170, 210, 213, 214
Di-n-butylphthalate	ug/kg dw	1,400	1,400	25	1	1	- 1,700	RCB185
4-Methylphenol	ug/kg dw	670	670	25	3	3	1,400 - 1,700	RCB152, 219, 220
Benzoic acid	ug/kg dw	650	650	25	1	1	- 1,900	RCB185
Benzyl alcohol	ug/kg dw	57	73	25	5	5	250 3,700	RCB101, 129, 185, 210, CB2-DAL
Hexachlorobenzene	ug/kg dw	22	70	41	2	2	220 - 4,300	RCB158, SD14
<b>Inline grabs</b>								
Arsenic	mg/kg	57	93	41	1	0	- 70	KN-ST1
Lead	mg/kg	450	530	41	1	0	- 470	KN-ST1
Mercury	mg/kg	0	1	41	4	1	0.42 - 0.60	1st-ST5, KN-ST1
Zinc	mg/kg	410	960	41	19	2	426 - 2,530	1st-ST1, 1st-ST5, 7th-ST1, 7th-ST3, HP-ST6, KN-ST1, MH218, 228, 229, 239
TPH-oil	mg/kg	2,000	NA	41	13	NA	2,100 - 4,800	1st-ST1, 1st-ST5, 7th-ST1, 7th-ST3, HP-ST6, KN-ST1, MH218, 228, 230, 239
PCBs	ug/kg dw	130	1,000	41	7	1	167 - 2,400	7th-St1, KN-ST1, 229, 239
LPAH	ug/kg dw	5,200	5,200	41	1	1	- 5,240	KN-ST1
HPAH	ug/kg dw	12,000	17,000	41	1	0	- 19,030	KN-ST1
BEHP	ug/kg dw	1,300	1,900	41	19	17	1,500 - 44,000	1st-ST1, 1st-ST2, 1st-ST5, 7th-ST1, 7th-ST3, HP-ST6, KN-ST1, MH218, 228, 229, 239
Butylbenzylphthalate	ug/kg dw	63	900	41	18	1	64 - 1,200	1st-ST1, 1st-ST2, 7th-ST1, 7th-ST3, 96-ST1, HP-St6, KN-St1, MH216, 229, 239
Dimethylphthalate	ug/kg dw	71	160	41	4	0	72 - 120	1st-ST1, 7th-ST3, HP-ST6
4-Methylphenol	ug/kg dw	670	670	41	1	1	- 2,800	MH239
n-Nitrosodiphenylamine	ug/kg dw	28	40	41	1	1	- 89	KN-ST1

**Table 23: Exceedances of SMS/MTCA benchmarks in samples collected from catch basins discharging to the combined sewer system.**

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Onsite catch basins</b>								
Arsenic	mg/kg	57	93	24	3	2	60 - 480	CB94, 95, 130
Copper	mg/kg	390	390	24	2	2	557 - 1,820	CB30, 90, 93, 94, 95, 96, 130, 144, CH-E, CH-N
Lead	mg/kg	450	530	24	3	3	1,180 - 1,760	CB97, 144, 145
Mercury	mg/kg	0.41	0.59	24	6	6	0.58 - 21	CB30, 93, 97, 130, 144, CH-E
Zinc	mg/kg	410	960	24	14	8	415 - 3,290	CB13, 19, 27A, 27B, 30, 85, 90, 93, 94, 95, 96, 97, CH-E, CH-N
TPH-diesel	mg/kg	2,000	NA	23	7	NA	3,700 - 67,000	CB94, 95, 27A, 27B, 113, 130, 144
TPH-oil	mg/kg	2,000	NA	23	15	NA	2,100 - 390,000	CB19, 27A, 27B, 30, 80, 85, 93, 94, 95, 96, 113, 119, 130, 144, 147, CH-N
PCBs	ug/kg dw	130	1,000	24	17	9	182 - 7,000	CB13, 19, 27B, 30, 85, 90, 93, 95, 96, 97, 98, 144, 146, 147, 148, CH-E, CH-N
LPAH	ug/kg dw	5,200	5,200	24	3	3	9,810 - 79,700	CB90, 119, 130
HPAH	ug/kg dw	12,000	17,000	24	5	4	13,500 - 262,300	CB27B, 90, 95, 119, 130
2-Methylnaphthalene	ug/kg dw	670	670	24	7	7	710 - 39,000	CB80, 94, 95, 97, 119, 130, CH-E
Dibenzofuran	ug/kg dw	540	540	24	2	2	4,100 - 6,400	CB119, 130
BEHP	ug/kg dw	1,300	1,900	24	19	18	1,600 - 1,400,000	CB13, 19, 27A, 27B, 30, 80, 85, 90, 93, 94, 95, 96, 113, 119, 130, 144, 147, CH-E, CH-N
Butylbenzylphthalate	ug/kg dw	63	900	24	16	10	220 - 97,000	CB13, 19, 80, 90, 93, 94, 95, 96, 98, 130, 144, 147, CH-E, CH-N
Dimethylphthalate	ug/kg dw	71	160	24	6	6	220 - 1,900	CB13, 80, 94, 96, CH-E, CH-N
Di-n-butylphthalate	ug/kg dw	1,400	1,400	24	1	1	- 11,000	CB1300
2,4-Dimethylphenol	ug/kg dw	29	29	24	1	1	- 9,200	CB97
2-Methylphenol	ug/kg dw	63	63	24	1	1	- 680	CB120
4-Methylphenol	ug/kg dw	670	670	24	9	9	880 - 67,000	CB13, 19, 27A, 27B, 80, 93, 94, 95, 97, 144
Phenol	ug/kg dw	420	1,200	24	5	4	870 - 13,000	CB93, 94, 95, 120, 130
Benzoic acid	ug/kg dw	650	650	24	3	3	660 - 19,000	CB13, 94, 130
Benzyl alcohol	ug/kg dw	57	73	24	3	3	500 - 1,600	CB80, 130, CH-E
<b>Right-of-way catch basins</b>								
Lead	mg/kg	450	530	19	1	1	- 719	RCB183
Mercury	mg/kg	0.41	0.59	19	1	1	- 0.87	RCB183
Zinc	mg/kg	410	960	19	10	1	430 - 1,040	CB2-DAL, CB4-DAL, RCB111, RCB112, RCB113, RCB183, RCB184, SD14, SW1
TPH-diesel	mg/kg	2,000	NA	18	1	NA	- 4,600	RCB142
TPH-oil	mg/kg	2,000	NA	18	11	NA	2,200 - 20,000	RCB101, 112, 113, 114, 115, 142, 182, 183 and SD14, SW1, CB2-DAL
PCBs	ug/kg dw	130	1,000	16	12	1	151 - 1,300	RCB101, 113, 114, 115, 181, 182, 183, 184, and CB2-DAL, CB4-DAL, SD14, SW1
BEHP	ug/kg dw	1,300	1,900	19	17	15	1,400 - 27,000	RCB49, 101, 111, 112, 113, 114, 115, 142, 156, 181, 182, 183, 184, and CB2-DAL, CB4-DAL, SD14, SW1
Butylbenzylphthalate	ug/kg dw	63	900	19	12	5	110 - 73,000	RCB49, 101, 111, 113, 114, 115, 156, 181, 184, and SD14, SW1
Diethylphthalate	ug/kg dw	200	NA	19	2	NA	630 - 650	CB2-DAL, RCB182
Dimethylphthalate	ug/kg dw	71	160	19	3	2	80 - 1,200	CB4-DAL, RCB113, RCB182
2,4-Dimethylphenol	ug/kg dw	29	29	19	1	0	- 840	RCB142
4-Methylphenol	ug/kg dw	670	670	19	3	3	690 - 2,000	RCB101, 181, 182
Phenol	ug/kg dw	420	1,200	19	1	0	- 1,000	RCB142
Benzoic acid	ug/kg dw	650	650	19	1	1	- 800	RCB182
Benzyl alcohol	ug/kg dw	57	73	19	2	2	400 - 1,100	RCB111, CB2-DAL



**Table 25: Exceedances of SMS/MTCA benchmarks in samples collected from S Brighton St, S Myrtle St, S Garden St storm drains.**

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Inline grabs</b>								
Arsenic	mg/kg	57	93	13	5	4	58 - 1,420	MH111, 205, 223, 226, 227
Copper	mg/kg	390	390	13	5	5	500 - 2,200	MH100b, 111, 223, 227, 240
Lead	mg/kg	450	530	13	7	6	473 - 1,710	MH110b, 111, 223, 225, 227, 226, 240
Mercury	mg/kg	0.41	0.59	13	6	5	0.46 - 4.29	MH100b, 204, 224, 225, 226, 240
Zinc	mg/kg	410	960	13	12	5	455 - 8,960	MH100b, 101, 110, 111, 204, 205, 223, 224, 225, 226, 227, 240
TPH-diesel	mg/kg	2,000	NA	13	2	NA	17,000 - 21,000	MH240, 225
TPH-oil	mg/kg	2,000	NA	13	4	NA	4,900 - 60,000	MH100b, 225, 226, 240
PCBs	ug/kg dw	130	1,000	13	8	2	148 - 25,000	MH100b, 101, 111, 204, 205, 225, 226, 240
BEHP	ug/kg dw	1,300	1,900	13	8	8	2,200 - 210,000	MH100b, 101, 110, 111, 204, 205, 225, 240
Butylbenzylphthalate	ug/kg dw	63	900	13	9	2	110 - 12,000	MH100b, 101, 110, 111, 204, 205, 224, 226, 240
Dimethylphthalate	ug/kg dw	71	160	13	3	2	79 - 4,200	MH100b, 204, 240
Di-n-butylphthalate	ug/kg dw	1,400	1,400	13	1	1	- 2,600	MH240
Di-n-octylphthalate	ug/kg dw	6,200	NA	13	1	1	- 23,000	MH240
LPAH	ug/kg dw	5,200	5,200	13	2	2	13,645 - 29,700	MH110, 240
HPAH	ug/kg dw	12,000	17,000	13	3	2	13,465 - 110,200	MH110, 111, 240
2-Methylnaphthalene	ug/kg dw	670	670	13	1	1	- 13,000	MH240
Benzyl alcohol	ug/kg dw	57	73	13	1	1	- 110	MH205
<b>Onsite catch basins</b>								
Arsenic	mg/kg	57	93	6	2	1	60 - 208	CB207, 157F
Copper	mg/kg	390	390	6	5	5	975 - 7,990	CB157F, CB157S, CB207, RD1, RD2
Lead	mg/kg	450	530	6	5	5	1,260 - 2,240	CB157F, CB157S, CB207, RD1, RD2
Mercury	mg/kg	0.41	0.59	6	5	5	0.80 - 2.72	CB157F, CB157S, CB207, RD1, RD2
Zinc	mg/kg	410	960	6	6	5	810 - 13,300	CB157F, CB157S, CB163, CB207, RD1, RD2
TPH-diesel	mg/kg	2,000	NA	6	1	NA	- 5,200	CB207
TPH-oil	mg/kg	2,000	NA	6	5	NA	2,400 - 15,000	CB157F, CB157S, CB163, CB207, RD1
PCBs	ug/kg dw	130	1,000	6	6	5	311 - 18,300	CB157F, CB157S, CB163, CB207, RD1, RD2
BEHP	ug/kg dw	1,300	1,900	6	6	6	10,000 - 62,000	CB157F, CB157S, CB163, CB207, RD1, RD2
Butylbenzylphthalate	ug/kg dw	63	900	6	5	5	2,200 - 6,000	CB157F, CB157S, CB207, RD1, RD2
Dimethylphthalate	ug/kg dw	71	160	6	6	6	510 - 2,500	CB157F, 157S, 163, 207, RD1, RD2
Di-n-butylphthalate	ug/kg dw	1,400	1,400	6	3	3	1,500 - 2,300	CB157F, 207, RD2
HPAH	ug/kg dw	12,000	17,000	6	1	1	- 13,240	CB207
4-Methylphenol	ug/kg dw	670	670	6	2	2	1,400 - 7,800	CB163, 157S
Benzoic acid	ug/kg dw	650	650	6	2	2	870 - 1,100	CB157F, 157S
Phenol	ug/kg dw	420	1,200	6	1	1	- 1,300	CB157S

**Table 25: Exceedances of SMS/MTCA benchmarks in samples collected from S Brighton St, S Myrtle St, S Garden St storm drains.**

July 2005 - September 2010

	Units	SQS LAET	CSL 2LAET	n	No. above SQS/LAET/ MTCA	No. above CSL/2LAET	Range	Stations
<b>Right-of-way catch basins</b>								
Copper	mg/kg	390	390	11	3	3	1,020 - 3,280	RCB146, 180, 189F
Lead	mg/kg	450	530	11	4	2	467 - 904	RCB146, 147, 148, 189F
Mercury	mg/kg	0.41	0.59	11	6	4	0.42 - 1.08	RCB146, 147, 148, 176, 177, 189F
Zinc	mg/kg	410	960	11	11	11	938 - 3,890	RCB146, 147, 148, 176, 177, 178, 179, 180, 189F, 211, 212
TPH-diesel	mg/kg	2,000	NA	12	6	NA	2,500 - 6,800	RCB147, 148, 169, 179, 211, 212
TPH-oil	mg/kg	2,000	NA	12	11	NA	2,900 - 20,000	RCB147, 148, 169, 176, 177, 178, 179, 180, 189F, 211, 212
PCBs	ug/kg dw	130	1,000	12	12	9	470 - 3,700	RCB146, 147, 148, 169, 176, 177, 178, 179, 180, 189F, 211, 212
HPAH	ug/kg dw	12,000	17,000	11	2	2	12,690 - 13,184	RCB148, 179
BEHP	ug/kg dw	1,300	1,900	11	11	11	6,800 - 84,000	RCB146, 147, 148, 176, 177, 178, 179, 180, 189F, 211, 212
Butylbenzylphthalate	ug/kg dw	63	900	11	11	11	1,400 - 6,200	RCB146, 147, 148, 176, 177, 178, 179, 180, 189F, 211, 212
Diethylphthalate	ug/kg dw	200	NA	11	1	0	- 340	RCB148
Dimethylphthalate	ug/kg dw	71	160	11	8	8	360 - 1,400	RCB146, 148, 176, 177, 178, 179, 180, 189F
Di-n-butylphthalate	ug/kg dw	1,400	1,400	11	1	1	- 3,200	RCB189F
4-Methylphenol	ug/kg dw	670	670	11	3	3	2,300 - 15,000	RCB147, 148, 178
Benzyl alcohol	ug/kg dw	57	73	11	2	2	440 - 690	RCB177, 189F

Table 26. Results for source tracing samples collected from S Myrtle St, S Garden St, and S Brighton St area (dry weight).

Sample ID	SQS/ LAET <sup>b</sup>	CSL/ 2LAET <sup>c</sup>	MH100B	RCB146	RCB147	RCB148	MH240	CB207	MH205	MH224	MH225	MH226	CB144	CB145	CB146	CB147	CB148
Lab Ref			NO90	NO90	NO90	NO90	PB20	PB20	OI27	OZ99	OZ99	OZ99	PA34	PA34	PA34	PA34	PA34
Sample Type			Inline	RCB	RCB	RCB	Inline	CB	Inline	Inline	Inline	Inline	CB	CB	Dirt	Dirt	Dirt
Outfall			S Myrtle St SD	S Garden St SD	S Myrtle St SD	S Myrtle St SD	S Garden St SD	S Garden St SD	S Brighton CSO/SD	S Brighton CSO/SD	S Brighton CSO/SD	S Brighton CSO/SD	8th Ave S (no SD)	CSS	CSS	CSS	CSS
Date			09/12/08	09/12/08	09/12/08	09/12/08	06/03/09	06/03/09	01/15/09	05/21/09	05/21/09	05/26/09	05/27/09	05/27/09	05/27/09	05/27/09	05/27/09
Total solids (%)			67.7	52.4	48.4	62.1	42.9	82	73.2	46.5	43.2	69.9	40.6	85.3	93.3	98.6	94.7
TOC (%)			6.89	6.85	5.25	9.40	18.70	11.00	3.56	6.75	5.50	5.29	7.06	2.22	1.42	3.59	1.70
<b>Metals (mg/kg)</b>																	
Arsenic	57	93	20 U	20 U	12	20 U	40 J	60 J	125	30 J	40 J	58 J	20 J	20 J	8 J	10 J	6 J
Copper	390	390	500	1,020	365	386	2,200 J	7,990 J	209	227 J	335 J	273 J	668 J	876 J	48.7 J	224 J	83.2 J
Lead	450	530	675	670	428	467	1,710 J	2,240 J	121	222 J	473 J	757 J	1,180 J	1,480 J	71 J	400 J	155 J
Mercury	0.41	0.59	1.88	1.08	0.97	0.74	4.29 J	2.72 J	0.15	0.46 J	1.15 J	3.41 J	0.98 J	1.13 J	0.15 J	0.41 J	0.23 J
Zinc	410	960	2,420	2,900	1,540	1,950	8,960 J	13,300 J	710	959 J	709 J	905 J	948 J	900 J	97 J	391 J	130 J
<b>Total petroleum hydrocarbons (mg/kg)</b>																	
TPH-diesel			1,100	130	4,300	2,800	17,000	5,200	220	570	21,000	1,100	3,700	760	190	530	400
TPH-oil			5,100	760	11,000	10,000	60,000	15,000	920	1,400	30,000	4,900	4,500	2,100	600	2,200	940
<b>LPAH (ug/kg DW)</b>																	
Acenaphthene	500	500	190 U	140 U	590 U	280	1,800 J	740 U	66	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Acenaphthylene	1,300	1,300	190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Anthracene	960	960	190 U	130 J	590 U	450	3,200	740 U	180	33 J	170 U	170 J	260 U	120 U	58 U	110 U	57 U
Fluorene	540	540	190 U	100 J	590 U	490	4,600	740 U	70	58 U	170 U	190 U	160 J	120 U	58 U	110 U	57 U
Naphthalene	2,100	2,100	190 U	110 J	1,000	970	4,100	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Phenanthrene	1,500	1,500	320	800	570 J	2,600	16,000	2,100	440	180	170 U	1,200	430	190	160	81 J	94
Total LPAH	5,200	5,200	320	1,140 J	1,570 J	4,790	29,700 J	2,100	756	213 J	170 U	1,370 J	590 J	190	160	81 J	94
<b>HPAH (ug/kg DW)</b>																	
Benzo(a)anthracene	1,300	1,600	290	450	330 J	950	5,100	1,200	260	130	160 J	960	200 J	180	100	76 J	58
Benzo(a)pyrene	1,600	1,600	580	490	590 U	670	4,000	940	330	130	220	1,200	190 J	190 J	140 J	93 J	81 J
Benzo(b)fluoranthene	3,200	3,600	680	820	490 J	900	4,100	1,200	440	180	320	1,000	200 J	200 J	150 J	92 J	66 J
Benzo(g,h,i)perylene	670	720	410	280	590 U	250 J	2,700 U	740 U	180	65	160 J	860	160 J	140 J	73 J	55 J	36 J
Benzo(k)fluoranthene	3,200	3,600	660	1,000	540 J	870	4,100	1,200	310	180	190	1,100	200 J	200 J	95 J	92 J	66 J
Chrysene	1,400	2,800	490	1,200	620	1,500	7,300	1,800	390	200	540	1,500	520	400	160	230	96
Dibenz(a,h)anthracene	230	230	95 J	92 J	590 U	260 U	2,700 U	740 U	25 J	58 U	170 U	130 J	260 U	120 U	58 U	110 U	57 U
Fluoranthene	1,700	2,500	770	1,800	1,100	3,000	16,000	3,700	780	350	430	2,200	560	450	300	200	140
Indeno(1,2,3-cd)pyrene	600	690	290	220	590 U	170 J	2,700 U	740 U	170	50 J	100 J	620	260 U	110 J	67 J	110 U	57 U
Pyrene	2,600	3,300	660	1,800	1,100	3,400	15,000	3,200	790	290	1,700	1,700	750	340	170	140	110
Total HPAH	12,000	17,000	4,925 J	8,152 J	4,180 J	11,710 J	55,600	13,240	3,675 J	1,575 J	3,820 J	11,270 J	2,780 J	2,210 J	1,255 J	978 J	653
<b>Phthalates (ug/kg DW)</b>																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	3,000	47,000	35,000	36,000	210,000	62,000	2,300	1,100	5,000	1,300	14,000 B	3,400 B	63 U	2,000 B	290 U
Butylbenzylphthalate	63	900	1,500	2,100	1,900	4,400	12,000	6,000	110	220	170 U	340	2,100	360	58 U	420	57 U
Diethylphthalate	200		190 U	140 U	590 U	360	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Dimethylphthalate	71	160	200	360	590 U	230 J	4,200	1,400	39 U	35 J	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Di-n-butylphthalate	1,400	1,400	400	750	1,100	670	2,600 J	2,300	36 J	49 J	170 U	130 J	420	220	58 U	100 J	57 U
Di-n-octyl phthalate	6,200		190	1,100	1,500	2,900	23,000	6,000	200	41 J	130 J	190 U	850	170	58 U	98 J	57 U
<b>PCBs (ug/kg DW)</b>																	
Aroclor 1016			200 U	200 U	58 U	400 U	420 U	470 U	18 U	20 U	20 U	97 U	760 U	1,400 U	19 U	290 U	19 U
Aroclor 1221			200 U	200 U	58 U	400 U	420 U	470 U	18 U	20 U	20 U	97 U	760 U	1,400 U	19 U	290 U	19 U
Aroclor 1232			200 U	200 U	58 U	400 U	420 U	470 U	18 U	20 U	20 U	97 U	760 U	1,400 U	19 U	290 U	19 U
Aroclor 1242			200 U	200 U	58 U	400 U	17,000	470 U	18 U	20 U	20 U	97 U	760 U	1,400 U	19 U	290 U	19 U
Aroclor 1248			390 Y	860	240	1,600	420 U	7,100	30	20 U	99 Y	97 U	760 U	1,400 U	19 U	290 U	19 U
Aroclor 1254			1,200	1,200	360	2,100	6,400	8,600	61	34	370	97 U	1,800	3,800	52	590	130
Aroclor 1260			350	500	94	400 U	1,600 J	2,600 J	57	39 J	410	350	1,800	3,100	130 J	750	400
Total PCBs	130	1,000	1,550	2,560	694	3,700	25,000 J	18,300 J	148	73 J	780	350	3,600	6,900	182 J	1,340	530
<b>Other organic compounds (ug/kg DW)</b>																	
1,2,4-Trichlorobenzene	31	51	190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
1,2-Dichlorobenzene	35	50	190 U	140 U	590 U	260 U	2,700 U	740 U	33 J	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
1,3-Dichlorobenzene			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U

Table 26. Results for source tracing samples collected from S Myrtle St, S Garden St, and S Brighton St area (dry weight).

Sample ID	SQS/ LAET <sup>b</sup>	CSL/ 2LAET <sup>c</sup>	MH100B	RCB146	RCB147	RCB148	MH240	CB207	MH205	MH224	MH225	MH226	CB144	CB145	CB146	CB147	CB148
Lab Ref			NO90	NO90	NO90	NO90	PB20	PB20	OI27	OZ99	OZ99	OZ99	PA34	PA34	PA34	PA34	PA34
Sample Type			Inline	RCB	RCB	RCB	Inline	CB	Inline	Inline	Inline	Inline	CB	CB	Dirt	Dirt	Dirt
Outfall			S Myrtle St SD	S Garden St SD	S Myrtle St SD	S Myrtle St SD	S Garden St SD	S Garden St SD	S Brighton CSO/SD	S Brighton CSO/SD	S Brighton CSO/SD	S Brighton CSO/SD	8th Ave S (no SD)	CSS	CSS	CSS	CSS
Date			09/12/08	09/12/08	09/12/08	09/12/08	06/03/09	06/03/09	01/15/09	05/21/09	05/21/09	05/26/09	05/27/09	05/27/09	05/27/09	05/27/09	05/27/09
1,4-Dichlorobenzene	110	110	190 U	140 U	590 U	260 U	2,700 U	740 U	29 J	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
1-Methylnaphthalene																	
2,2'-Oxybis(1-chloropropane)			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
2,4,5-Trichlorophenol			940 U	720 U	2,900 U	<b>780 J</b>	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
2,4,6-Trichlorophenol			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
2,4-Dichlorophenol			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
2,4-Dimethylphenol <sup>a</sup>	29	29	190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
2,4-Dinitrophenol			1,900 U	1,400 U	5,900 U	2,600 U	27,000 U	7,400 U	390 U	580 U	1,700 U	1,900 U	2,600 U	1,200 U	580 U	1,100 U	570 U
2,4-Dinitrotoluene			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
2,6-Dinitrotoluene			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
2-Chloronaphthalene			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
2-Chlorophenol			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
2-Methylnaphthalene	670	670	190 U	<b>130 J</b>	<b>3,600</b>	<b>1,900</b>	<b>13,000</b>	740 U	<b>20 J</b>	58 U	170 U	190 U	<b>180 J</b>	120 U	<b>58 J</b>	110 U	<b>47 J</b>
2-Methylphenol <sup>a</sup>	63	63	190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
2-Nitroaniline			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
2-Nitrophenol			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
3,3'-Dichlorobenzidine			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
3-Nitroaniline			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
4,6-Dinitro-2-methylphenol			1,900 U	1,400 U	5,900 U	2,600 U	27,000 U	7,400 U	390 U	580 U	1,700 U	1,900 U	2,600 U	1,200 U	580 U	1,100 U	570 U
4-Bromophenyl-phenylether			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
4-Chloro-3-methylphenol			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
4-Chloroaniline			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
4-Chlorophenyl-phenylether			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
4-Methylphenol <sup>a</sup>	670	670	190 U	140 U	<b>18,000</b>	<b>2,600</b>	2,700 U	740 U	39 U	58 U	170 U	190 U	<b>2,300</b>	<b>92 J</b>	58 U	110 U	57 U
4-Nitroaniline			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
4-Nitrophenol			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
Benzoic acid <sup>a</sup>	650	650	1,900 U	1,400 U	5,900 U	2,600 U	27,000 U	7,400 U	390 U	580 U	1,700 U	1,900 U	2,600 U	1,200 U	580 U	1,100 U	570 U
Benzyl alcohol <sup>a</sup>	57	73	190 U	140 U	590 U	260 U	2,700 U	740 U	<b>110</b>	58 U	170 U	190 U	<b>510</b>	120 U	58 U	110 U	57 U
bis(2-Chloroethoxy) methane			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Bis-(2-chloroethyl) ether			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Carbazole			190 U	<b>140</b>	590 U	<b>310</b>	<b>1,500 J</b>	740 U	<b>85</b>	58 U	170 U	<b>110 J</b>	260 U	120 U	58 U	110 U	57 U
Dibenzofuran	540	540	190 U	140 U	590 U	260 U	2,700 U	740 U	<b>36 J</b>	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Hexachlorobenzene	22	70	190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Hexachlorobutadiene	11	120	190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Hexachlorocyclopentadiene			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
Hexachloroethane			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Isophorone			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
Nitrobenzene			190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	170 U	190 U	260 U	120 U	58 U	110 U	57 U
n-Nitroso-di-n-propylamine			940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
N-Nitrosodiphenylamine	28	40	190 U	140 U	590 U	260 U	2,700 U	740 U	39 U	58 U	660 Y	190 U	260 U	120 U	58 U	110 U	57 U
Pentachlorophenol <sup>a</sup>	360	690	940 U	720 U	2,900 U	1,300 U	13,000 U	3,700 U	200 U	290 U	830 U	970 U	1,300 U	620 U	290 U	530 U	280 U
Phenol <sup>a</sup>	420	1,200	190 U	180 U	850 U	890 U	2,700 U	740 U	<b>28 J</b>	58 U	170 U	190 U	<b>210 J</b>	120 U	58 U	110 U	57 U

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

Bold = Compound detected in sample.

J Value is an estimate

U Target analyte not detected at the reported concentration

R Analytical result is rejected and cannot be used.

Y Analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. Y flag is equivalent to U flag with a raised reporting limit.

RCB = Right-of-way catch basin

CB = Onsite catch basin

CSS = Combined sewer system

Inline = Inline grab sample

Dirt = Street dirt sample



Exceeds SQS/LAET



Exceeds CSL/2LAET

Table 26. Results for source tracing samples collected from S Myrtle St, S Garden St, and S Brighton St area (dry weight).

Sample ID	SQS/ LAET <sup>b</sup>	CSL/ 2LAET <sup>c</sup>	CB149	RCB176	RCB177	RCB178	RCB179	RCB180	MH110	MH111	RD1	RD2	RCB189F	CB157-F	CB157S
Lab Ref			PA34	PZ96	PZ96	PZ96	PZ96	PZ96	PZ96	PZ96	QW05	QW05	QW05	QW05	QW05
Sample Type			Dirt	SD	SD	SD	SD	SD	Inline	Inline	Roof drain	Roof drain	SD	CB	CB
Outfall			8th Ave S (no SD)	S Myrtle St SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Myrtle St SD	S Brighton CSO/SD	S Brighton CSO/SD	S Myrtle St SD	S Myrtle St SD	S Myrtle St SD	S Myrtle St SD	S Myrtle St SD
Date			05/27/09	12/03/09	12/03/09	12/03/09	12/03/09	12/03/09	12/03/09	12/03/09	05/11/10	05/11/10	05/11/10	05/11/10	05/11/10
Total solids (%)			99.7	83.1	56.6	52.3	43.1	66	65.00	74.70	49.2	29.6	65.9	67.3	46.2
TOC (%)			1.74	1.55	5.95	5.82	13.80	3.58	3.62	1.81	10.10	8.37	4.85	4.59	6.70
<b>Metals (mg/kg)</b>															
Arsenic	57	93	10 UJ	6.8 J	17 J	18 J	20 J	6.5 J	18 J	960 J	20 U	40 U	20 U	40 U	30 U
Copper	390	390	67.8 J	291 J	242 J	327 J	238 J	1,110 J	227 J	998 J	1,090	975	3,280	1,890	2,240
Lead	450	530	52 J	230	290	275	284	192	84 J	878 J	1,410	1,700	904	1,260	1,380
Mercury	0.41	0.59	0.03 J	0.42	0.45	0.39	0.36	0.33	0.13 J	0.40 J	0.92	2.56	0.66	0.8	1.55
Zinc	410	960	201 J	985	1,100	1,340	1,400	1,500	455 J	2,630 J	5,370	8,310	3,890	4,940	5,880
<b>Total petroleum hydrocarbons (mg/kg)</b>															
TPH-diesel			84	1,300	1,000	1,200	4,700	500	400	620	210	190	1,800	840	970
TPH-oil			760	6,300	4,200	6,600	13,000	2,900	930	1,700	2,400	1,700	8,600	6,200	8,200
<b>LPAH (ug/kg DW)</b>															
Acenaphthene	500	500	58 U	250	170 U	220 U	260 U	200	130	700	88 U	150 U	330 U	220 U	250 U
Acenaphthylene	1,300	1,300	58 U	230 U	170 U	220 U	260 U	100 U	34 J	96 U	88 U	150 U	330 U	220 U	250 U
Anthracene	960	960	58 U	300	180	220 U	210 J	460	7,300	1,300	88 U	190	200 J	130 J	200 J
Fluorene	540	540	58 U	320	120 J	220 U	190 J	360	140	610	88 U	86 J	240 J	220 U	250 U
Naphthalene	2,100	2,100	58 U	200 J	110 J	220 U	140 J	120	41 J	96 U	66 J	130 J	470	150 J	210 J
Phenanthrene	1,500	1,500	58 U	1,900	710	450	1,200	2,500	6,000	1,500	640	1,100	1,600	900	880
Total LPAH	5,200	5,200	58 U	2,970 J	1,120 J	450	1,740 J	3,640	13,645	4,110	706 J	1,506 J	2,510 J	1,180 J	1,290 J
<b>HPAH (ug/kg DW)</b>															
Benzo(a)anthracene	1,300	1,600	58 U	820	540	370	750	790	13,000	1,000	440	720	610 J	550 J	800 J
Benzo(a)pyrene	1,600	1,600	58 U	720	650	470	800	720	8,400	1,000	670	1,000	520	440	580
Benzo(b)fluoranthene	3,200	3,600	58 U	770	850	660	1,100	790	8,700	1,100	700	1,500	610	590	890
Benzo(g,h,i)perylene	670	720	58 U	530	460	350	560	200	1,500	240	290	440	220 J	180 J	270
Benzo(k)fluoranthene	3,200	3,600	58 U	770	850	660	1,100	790	8,700	1,100	700	1,500	610	590	890
Chrysene	1,400	2,800	83	1,400	1,200	990	1,900	1,200	15,000	1,600	1,400	1,300	1,300	990	1,600
Dibenz(a,h)anthracene	230	230	58 U	210 J	140 J	220 U	200 J	66 J	1,100	75 J	70 J	120 J	330 U	55 J	250 U
Fluoranthene	1,700	2,500	29 J	2,500	1,600	890	2,800	2,400	27,000	4,100	1,400	2,600	2,200	1,700	2,400
Indeno(1,2,3-cd)pyrene	600	690	58 U	350	400	220	380	180	1,800	250	170	360	330 U	130 J	200 J
Pyrene	2,600	3,300	58 U	2,300	1,600	1,100	3,100	1,600	25,000	3,000	910	1,400	1,700	1,100	1,500
Total HPAH	12,000	17,000	112 J	10,370	8,290	5,710	12,690	8,736	110,200	13,465	6,750 J	10,940 J	7,770 J	6,325 J	9,130 J
<b>Phthalates (ug/kg DW)</b>															
Bis(2-ethylhexyl)phthalate	1,300	1,900	360 U	23,000	21,000	15,000	28,000	6,800	7,500	4,700	11,000	12,000	84,000	33,000	41,000
Butylbenzylphthalate	63	900	58 U	2,100	1,400	2,100	1,800	1,500	250	150	2,200	4,600	6,200	5,000	4,300
Diethylphthalate	200		58 U	130 J	170 U	220 U	140 J	63 J	66 U	50 J	88 U	150 U	330 U	220 U	250 U
Dimethylphthalate	71	160	35 J	780	420	1,400	510	360	66 U	49 J	510	1,100	870	2,500	620
Di-n-butylphthalate	1,400	1,400	58 U	680	400	470	860	270	41 J	140	670	2,200	3,200	1,500	1,200
Di-n-octyl phthalate	6,200		38 J	3,400	860	740	2,600	770	190	530	920	970	3,500	2,200	3,400
<b>PCBs (ug/kg DW)</b>															
Aroclor 1016			19 U	58 U	92 U	91 U	67 U	45 U	20 U	26 U	40 U	66 U	34 U	48 U	60 U
Aroclor 1221			19 U	58 U	92 U	91 U	67 U	45 U	20 U	26 U	40 U	66 U	34 U	48 U	60 U
Aroclor 1232			19 U	58 U	92 U	91 U	67 U	45 U	20 U	26 U	40 U	66 U	34 U	48 U	60 U
Aroclor 1242			19 U	58 U	92 U	91 U	67 U	45 U	20 U	26 U	40 U	66 U	34 U	48 U	60 U
Aroclor 1248			19 U	980	1,300	700	660	300	39	52	570	1,800	1,300	1,300	1,400
Aroclor 1254			26	1,100	1,500	910	770	390	61 J	87	1,100	2,200	1,400	1,400	2,200
Aroclor 1260			34	280	660	390 J	310	150	43	51	260	570	250	260	420
Total PCBs	130	1,000	60	2,360	3,460	2,000	1,740	840	143 J	190	1,930	4,570	1,650	2,960	4,020
<b>Other organic compounds (ug/kg DW)</b>															
1,2,4-Trichlorobenzene	31	51	58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
1,2-Dichlorobenzene	35	50	58 U	230 U	170 U	220 U	260 U	100 U	56 J	54 J	88 U	150 U	330 U	220 U	250 U
1,3-Dichlorobenzene			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U

Table 26. Results for source tracing samples collected from S Myrtle St, S Garden St, and S Brighton St area (dry weight).

Sample ID	SQS/ LAET <sup>b</sup>	CSL/ 2LAET <sup>c</sup>	CB149	RCB176	RCB177	RCB178	RCB179	RCB180	MH110	MH111	RD1	RD2	RCB189F	CB157-F	CB157S
Lab Ref			PA34	PZ96	PZ96	PZ96	PZ96	PZ96	PZ96	PZ96	QW05	QW05	QW05	QW05	QW05
Sample Type			Dirt	SD	SD	SD	SD	SD	Inline	Inline	Roof drain	Roof drain	SD	CB	CB
Outfall			8th Ave S (no SD)	S Myrtle St SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Myrtle St SD	S Brighton CSO/SD	S Brighton CSO/SD	S Myrtle St SD	S Myrtle St SD	S Myrtle St SD	S Myrtle St SD	S Myrtle St SD
Date			05/27/09	12/03/09	12/03/09	12/03/09	12/03/09	12/03/09	12/03/09	12/03/09	05/11/10	05/11/10	05/11/10	05/11/10	05/11/10
1,4-Dichlorobenzene	110	110	58 U	230 U	170 U	220 U	260 U	100 U	<b>260</b>	<b>110</b>	88 U	150 U	330 U	220 U	250 U
1-Methylnaphthalene				<b>150 J</b>	170 U	220 U	<b>140 J</b>	<b>100 J</b>	<b>35 J</b>	<b>98</b>					
2,2'-Oxybis(1-chloropropane)			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
2,4,5-Trichlorophenol			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
2,4,6-Trichlorophenol			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
2,4-Dichlorophenol			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
2,4-Dimethylphenol <sup>a</sup>	29	29	58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
2,4-Dinitrophenol			580 U	2,300 U	1,700 U	2,200 U	2,600 U	1,000 U	660 UJ	960 U	880 U	1,500 U	3,300 U	2,200 U	2,500 U
2,4-Dinitrotoluene			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
2,6-Dinitrotoluene			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
2-Chloronaphthalene			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
2-Chlorophenol			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
2-Methylnaphthalene	670	670	58 U	<b>280</b>	<b>140 J</b>	<b>120 J</b>	<b>210 J</b>	<b>130</b>	<b>46 J</b>	<b>60 J</b>	<b>64 J</b>	<b>170</b>	<b>980</b>	<b>150 J</b>	<b>250</b>
2-Methylphenol <sup>a</sup>	63	63	58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
2-Nitroaniline			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
2-Nitrophenol			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	88 U	150 U	330 U	220 U	250 U
3,3'-Dichlorobenzidine			290 R	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
3-Nitroaniline			290 R	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
4,6-Dinitro-2-methylphenol			580 R	2,300 U	1,700 U	2,200 U	2,600 U	1,000 U	660 U	960 U	880 U	1,500 U	3,300 U	2,200 U	2,500 U
4-Bromophenyl-phenylether			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
4-Chloro-3-methylphenol			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
4-Chloroaniline			290 R	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
4-Chlorophenyl-phenylether			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
4-Methylphenol <sup>a</sup>	670	670	58 U	<b>460</b>	<b>290</b>	<b>15,000</b>	<b>630</b>	<b>160</b>	66 U	96 U	88 U	150 U	330 U	<b>330</b>	<b>7,800</b>
4-Nitroaniline			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
4-Nitrophenol			290 R	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
Benzoic acid <sup>a</sup>	650	650	580 R	2,300 U	1,700 U	<b>3,000</b>	<b>640 J</b>	1,000 U	660 U	960 U	<b>590 J</b>	1,500 U	3,300 U	<b>870 J</b>	<b>1,100 J</b>
Benzyl alcohol <sup>a</sup>	57	73	58 U	230 U	<b>690</b>	220 U	260 U	100 U	66 U	96 U	88 U	150 U	<b>440</b>	220 U	250 U
bis(2-Chloroethoxy) methane			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
Bis-(2-chloroethyl) ether			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
Carbazole			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	<b>120</b>	<b>200</b>	<b>190 J</b>	220 U	250 U
Dibenzofuran	540	540	58 U	<b>180 J</b>	170 U	220 U	260 U	<b>190</b>	<b>62 J</b>	<b>250</b>	88 U	150 U	330 U	220 U	250 U
Hexachlorobenzene	22	70	58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
Hexachlorobutadiene	11	120	58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
Hexachlorocyclopentadiene			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 UJ	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
Hexachloroethane			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
Isophorone			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
Nitrobenzene			58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
n-Nitroso-di-n-propylamine			290 U	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
N-Nitrosodiphenylamine	28	40	58 U	230 U	170 U	220 U	260 U	100 U	66 U	96 U	88 U	150 U	330 U	220 U	250 U
Pentachlorophenol <sup>a</sup>	360	690	<b>290 R</b>	1,100 U	870 U	1,100 U	1,300 U	530 U	330 U	480 U	440 U	730 U	1,600 U	1,100 U	1,200 U
Phenol <sup>a</sup>	420	1,200	58 U	230 U	170 U	<b>180 J</b>	260 U	<b>55 J</b>	66 U	96 U	240	320	330 U	420	<b>1,300</b>

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

Bold = Compound detected in sample.

J Value is an estimate

U Target analyte not detected at the reported concentration

R Analytical result is rejected and cannot be used.

Y Analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. Y flag is equivalent to U flag with a raised reporting limit.

RCB = Right-of-way catch basin

CB = Onsite catch basin

CSS = Combined sewer system

Inline = Inline grab sample

Dirt = Street dirt sample



Exceeds SQS/LAET



Exceeds CSL/2LAET

## Figures

**Figure 1: Summary of Corrective Actions by Type and Location (March 2003 - September 2010)**

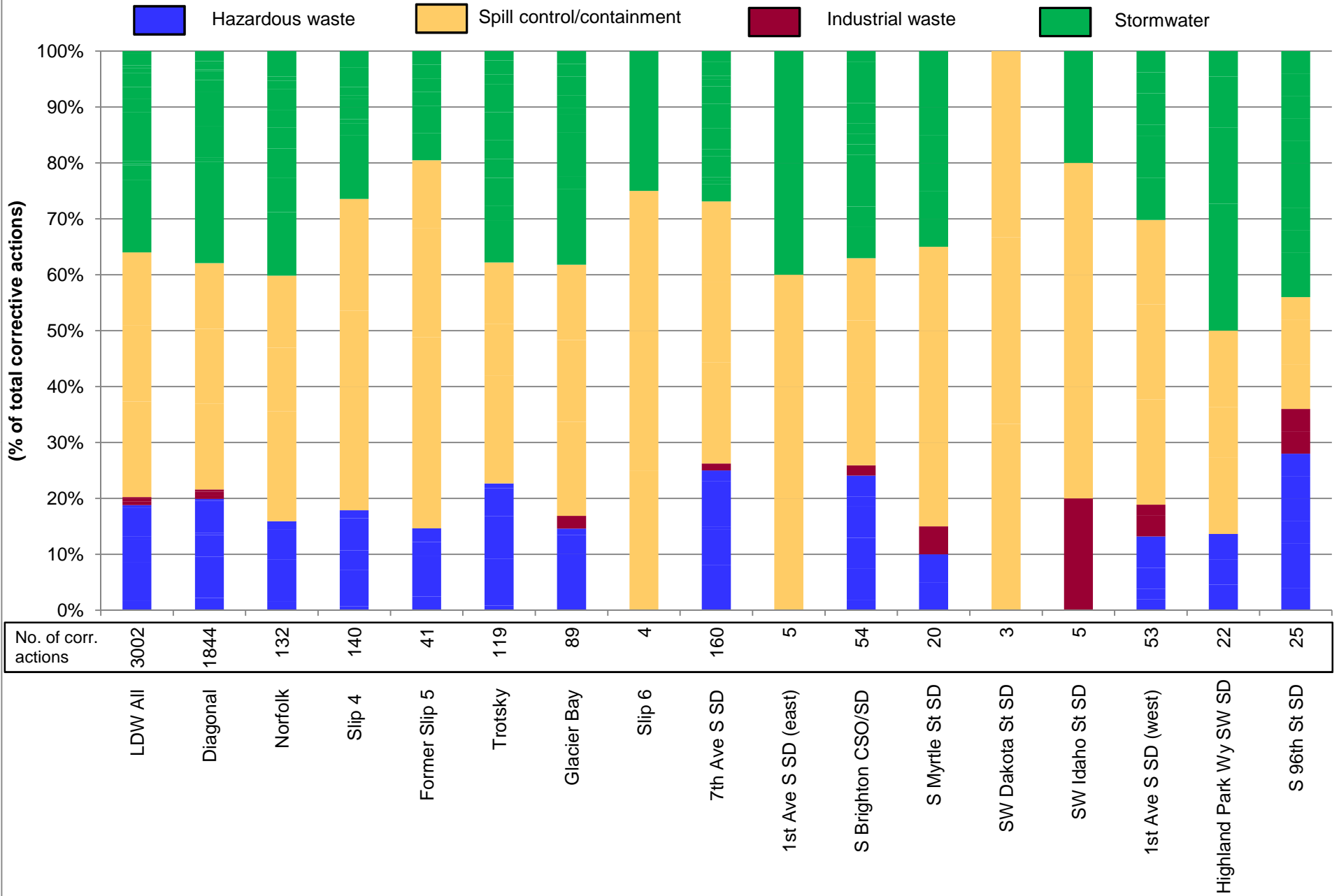


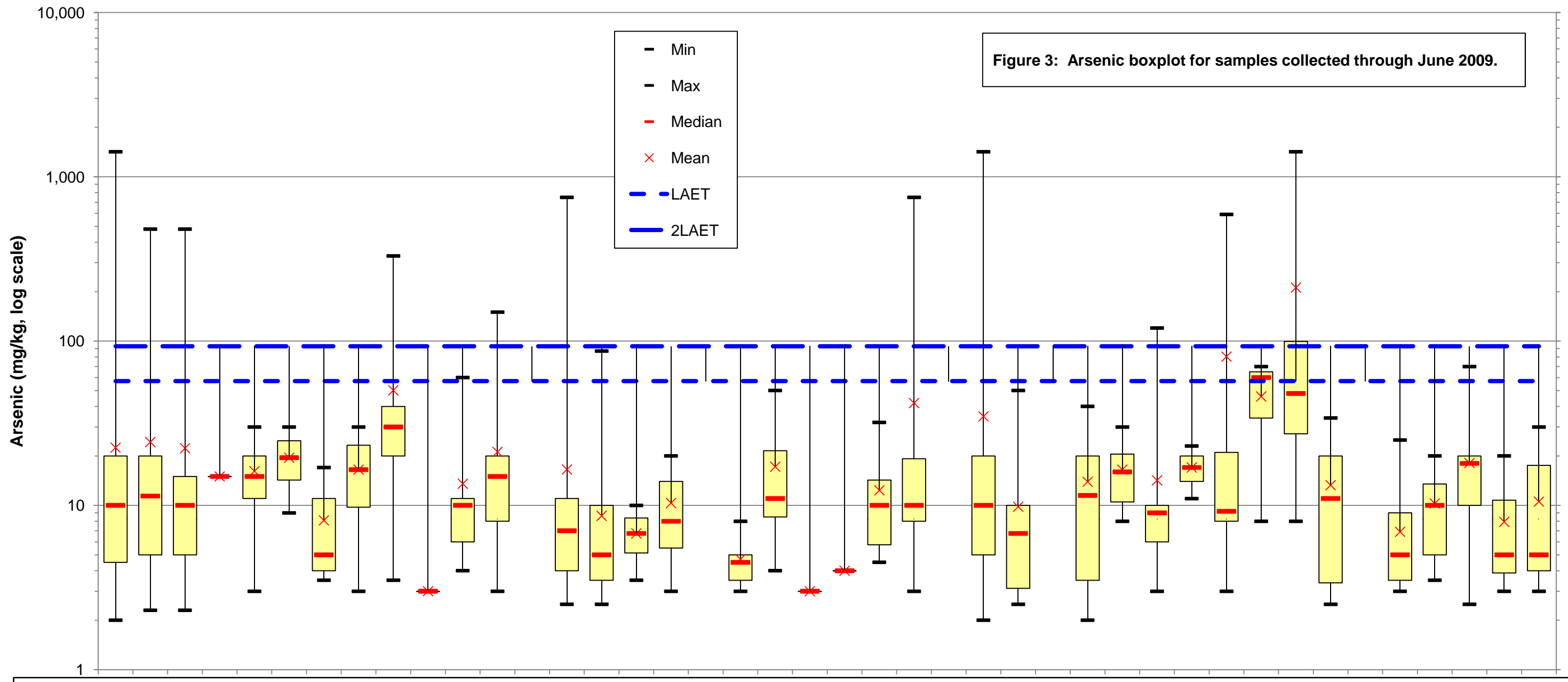




Figure 2: Sediment traps.

Figure 3: Arsenic boxplot for samples collected through June 2009.

- Min
- Max
- Median
- × Mean
- LAET
- 2LAET



Sample No.	576	137	49	1	13	2	5	2	22	1	13	29	123	53	2	3	10	11	1	1	16	26	175	50	28	8	19	2	9	3	16	40	57	26	31	8	19
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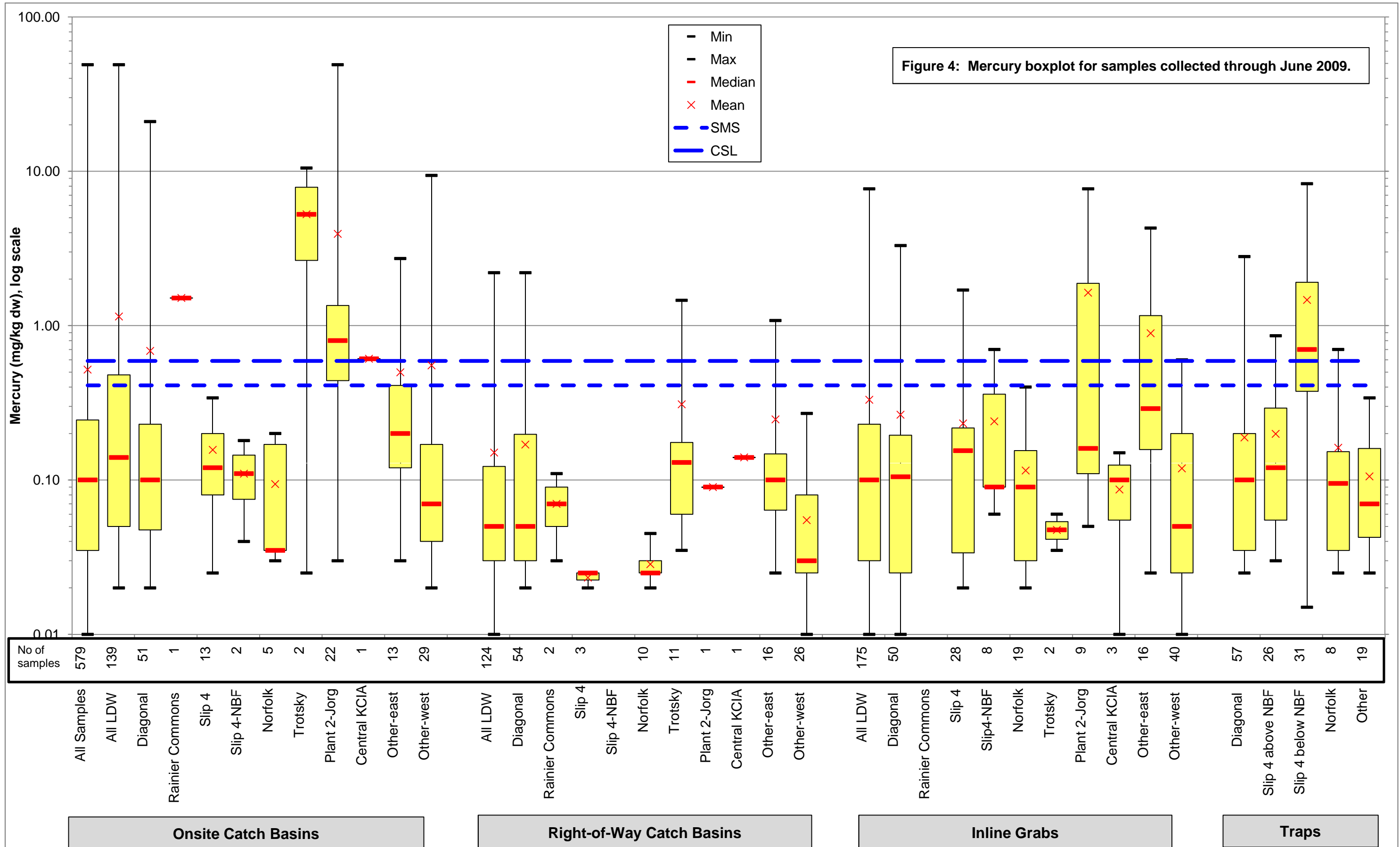
All Samples	All LDW	Diagonal	Rainier Commons	Slip 4	Slip 4-NBF	Norfolk	Trotsky	Plant 2-Jorg	Central KCIA	Other-east	Other-west	All LDW	Diagonal	Rainier Commons	Slip 4	Slip 4-NBF	Norfolk	Trotsky	Plant 2-Jorg	Central KCIA	Other-east	Other-west	All LDW	Diagonal	Rainier Commons	Slip 4	Slip4-NBF	Norfolk	Trotsky	Plant 2-Jorg	Central KCIA	Other-east	Other-west	Diagonal	Slip 4 above NBF	Slip 4 below NBF	Norfolk	Other
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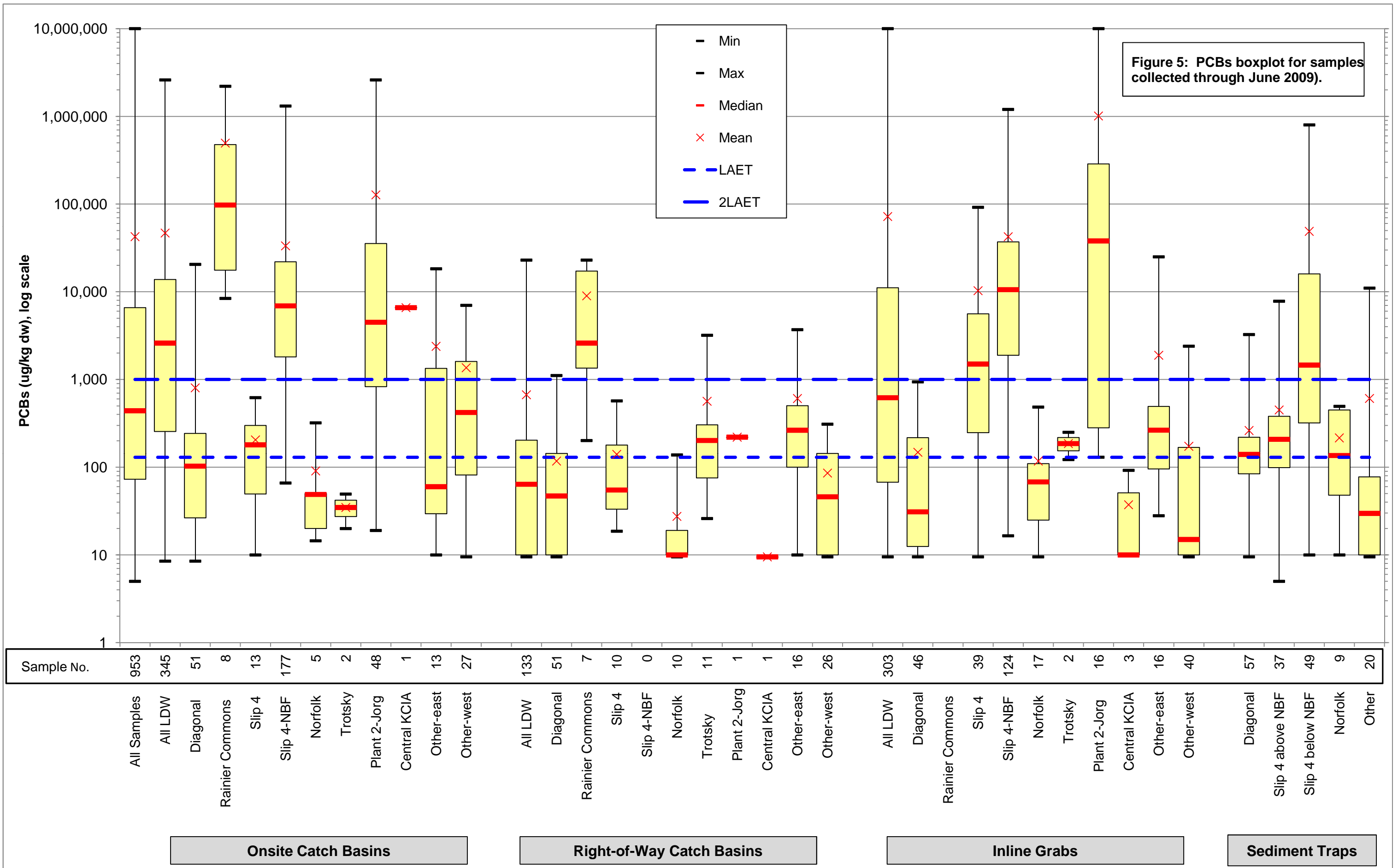
Onsite Catch Basins

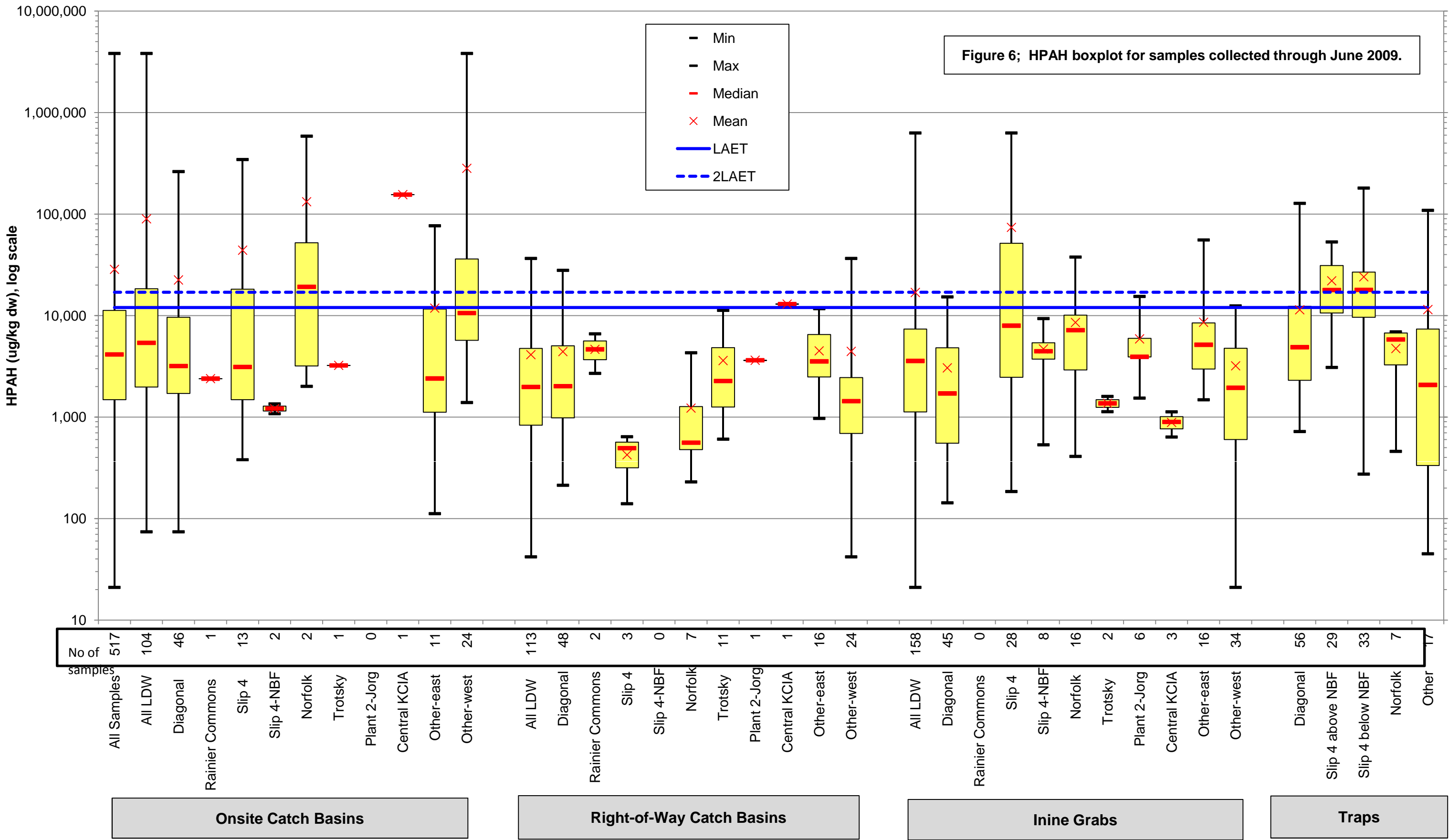
Right-of-Way Catch Basins

Inline Grabs

Traps







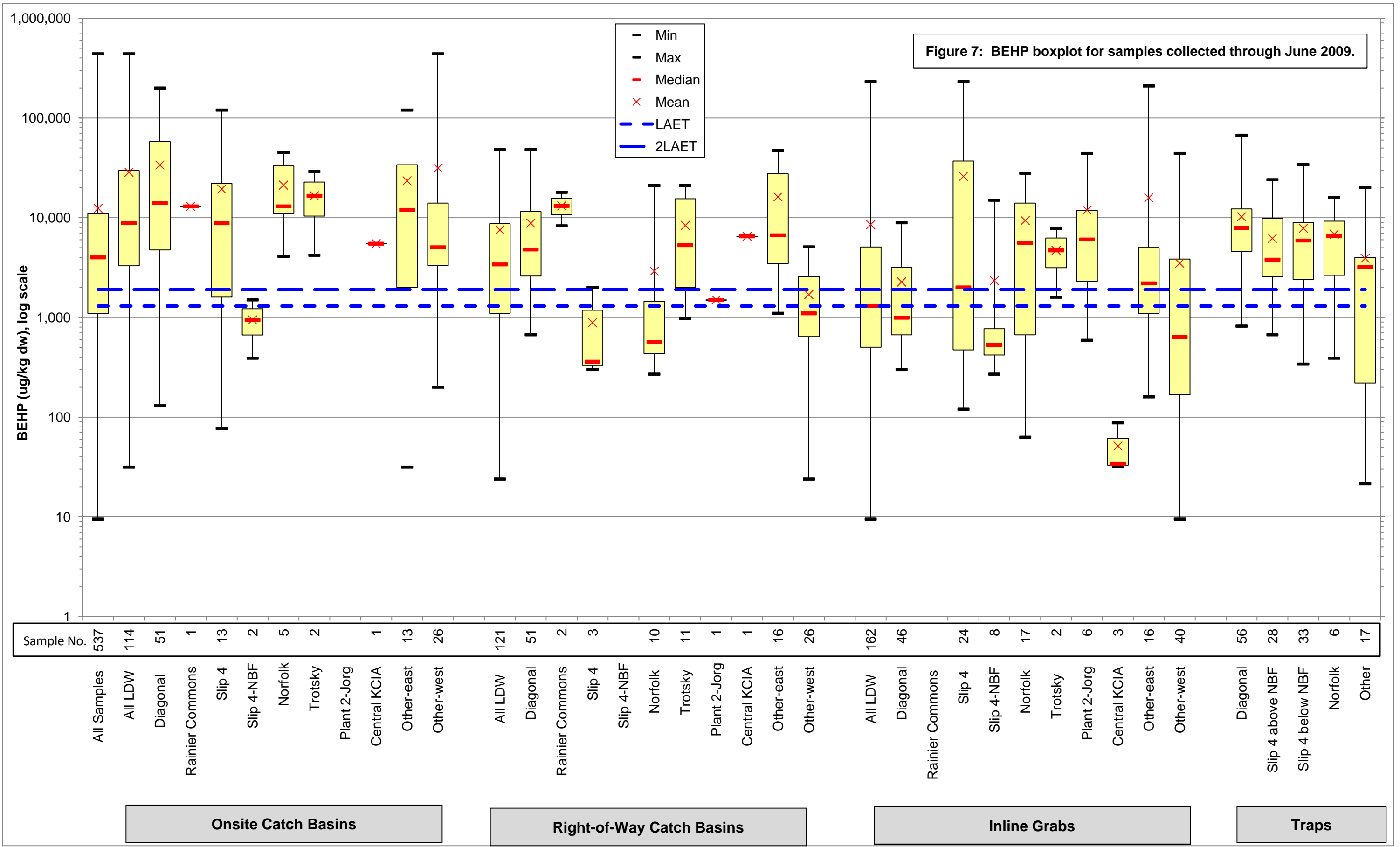
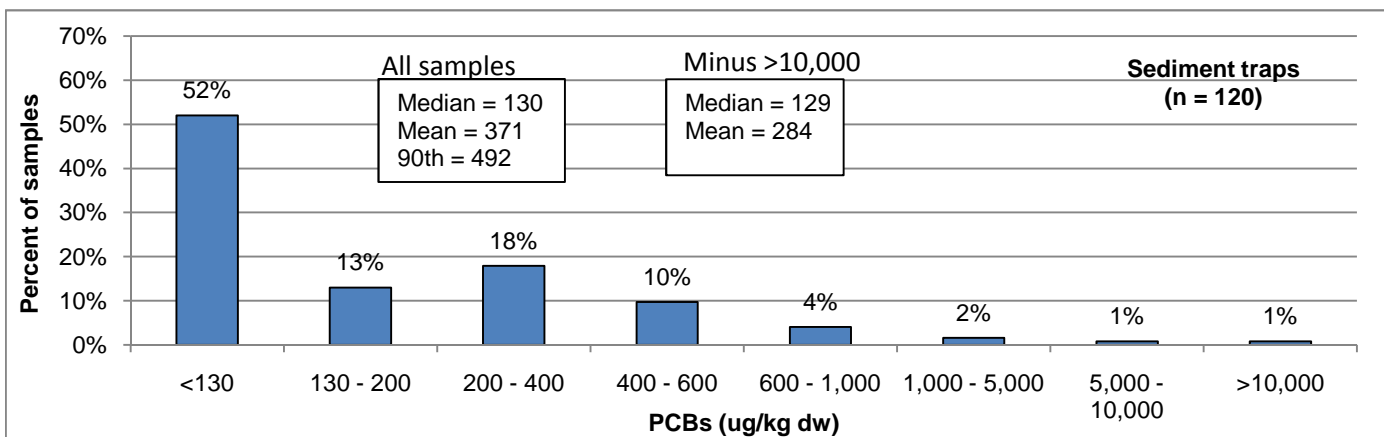
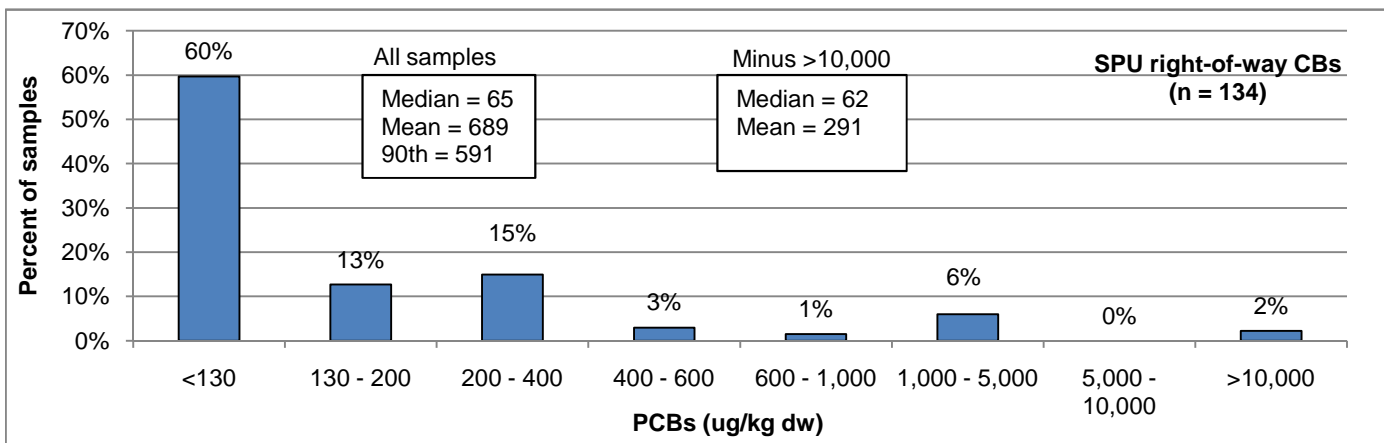
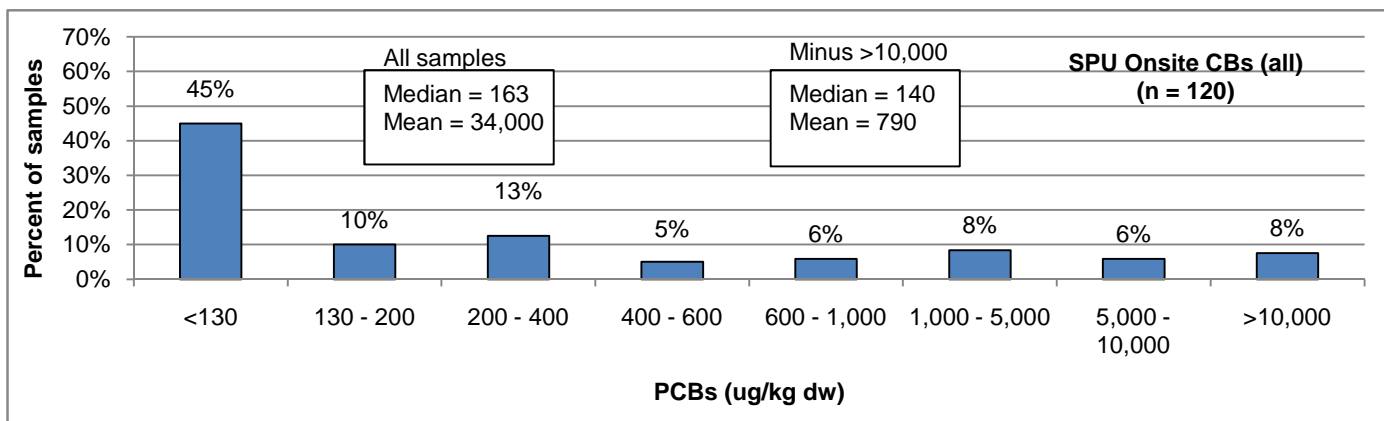
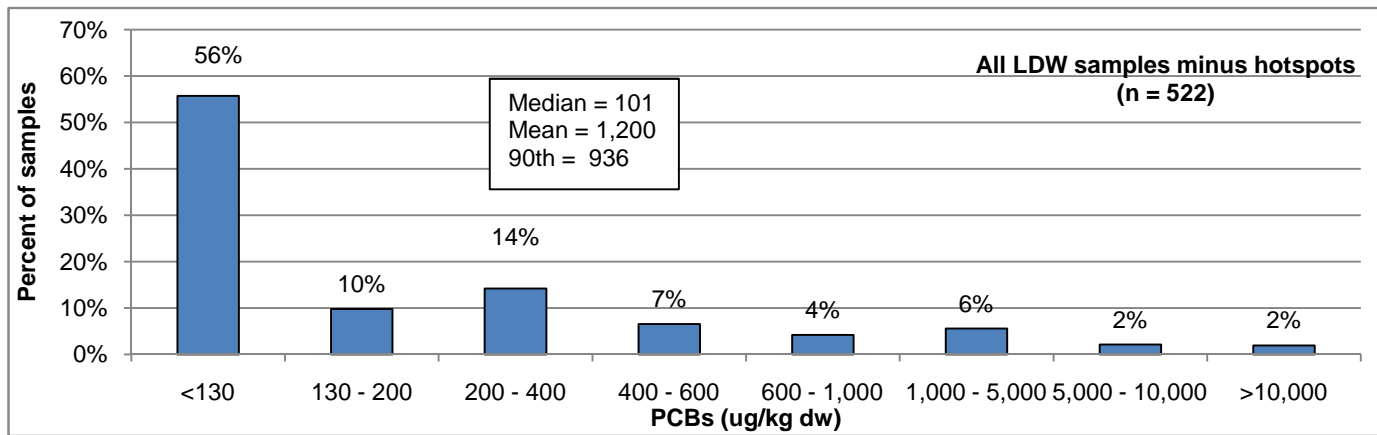
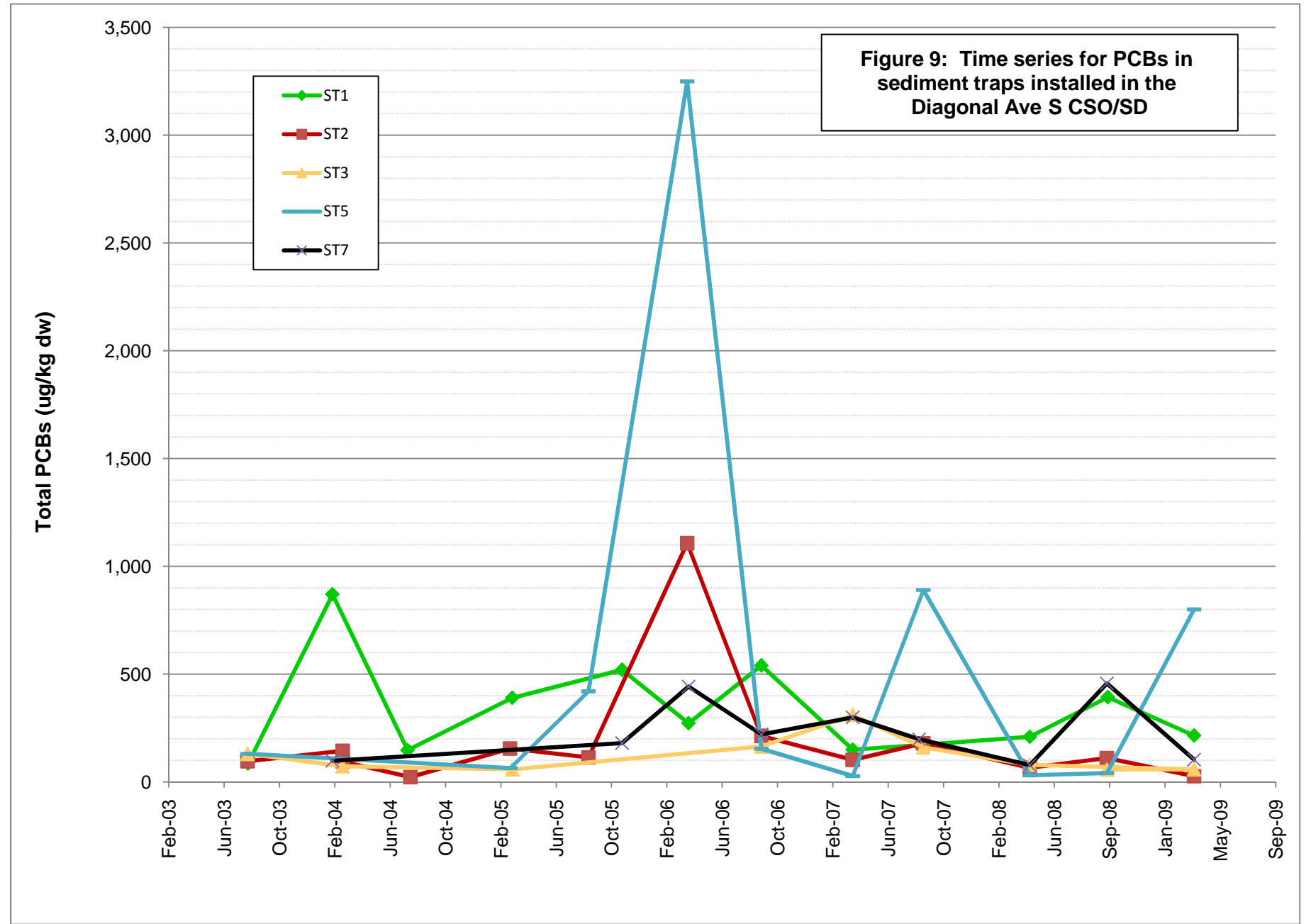


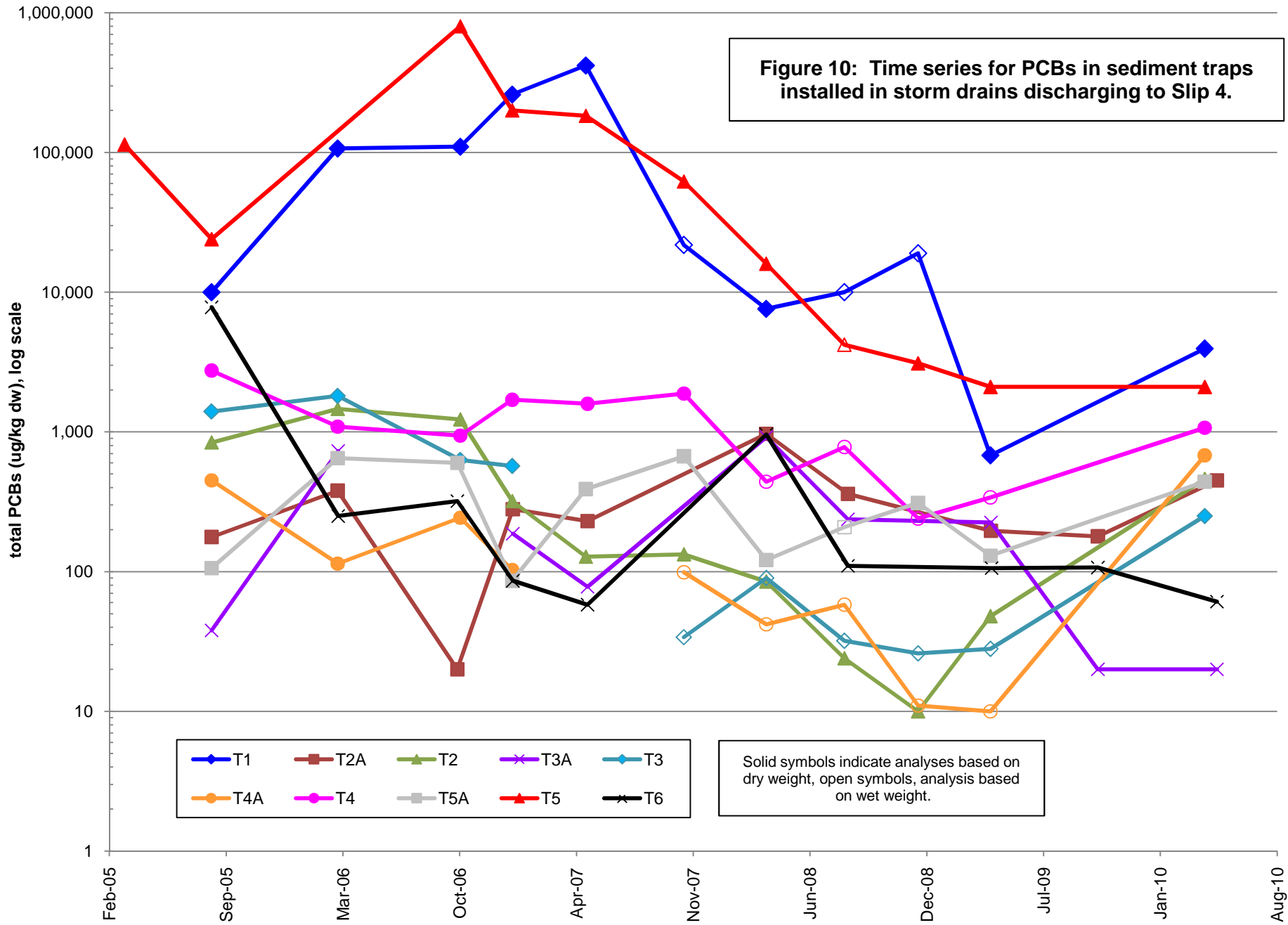
Figure 8: Comparison of PCB concentrations by sample type.







**Figure 10: Time series for PCBs in sediment traps installed in storm drains discharging to Slip 4.**



Solid symbols indicate analyses based on dry weight, open symbols, analysis based on wet weight.

## Data Tables







## DT2: Diagonal sediment traps (dry weight).

Station ID	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST2	ST2A	ST2B	ST2
Lab Ref	FT96	GI77	GY11, GY49	HV92	IS42	JF27	JV42	KS67	LL01	MR44	NR10	OT18	FT96	GK59	GK59	GY11, GY49		
Round	1	2	3	4	5	6	7	8	9	10	11	12	1	2	2	RCB		
Date removed	SQS	CSL	08/19/03	02/18/04	07/30/04	03/14/05	11/07/05	03/31/06	09/05/06	03/22/07	08/13/07	04/09/08	09/25/08	03/31/09	08/18/03	03/11/04	03/11/04	08/05/04
Total solids (%)	18.0	39.0	26.1	54.1	26.6	53.2	37.2	65.4	66.0	52.6	37.2	44	33.7	36.6	66.2	26.5		
Total organic carbon (%)	17	9.6	7.81	8.17	12.3	10.03	6.97	5.84	15.5	8.53	9.83	8.64	4.50	4.60	3.50	7.46		
<b>Metals (mg/kg)</b>																		
Arsenic	57	93	10 U	10 U	20 UJ	10	12	12	20	7 U	10	10	20	10 J	7 U	50 U	8 U	10 UJ
Copper	390	390	298	120	215 J	144	181	116	196	89.8	160	160	218	201 J	89.9	146	34.1	136 J
Lead	450	530	244	121	160 J	126	164	97	154	72	124	137	142	117 J	76	210	39	41 J
Mercury	0.41	0.59	0.3	0.2	0.2 J	0.27	0.24	0.17	0.3	0.11	0.28	0.23	0.40	0.3 J	0.06 U	0.4 U	0.07 U	0.1 UJ
Zinc	410	960	1,050	445	638 J	435	682	400	683	282	620	647	845	669 J	282	735	162	184 J
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>	620	NA	840	94	1,500	1,300	1,100	560	1,300	790	1,300	1,900	88	370	87 U	32	
TPH-oil	2,000 <sup>b</sup>	1,100	NA	3,200	380	5,700	5,400	5,300	2,100	7,000	4,100	5,100	6,700	230	2,400	570	120	
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	1,800 U	55 J	200 U	61 U	190	220	450 U	92 UJ	150 U	19 J	97 U	370 U	79 U	220 U	89 U	68 U
Acenaphthylene	1,300	1,300	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
Anthracene	960	960	1,800 U	75 J	220	61 U	230	500	450	87 J	150 U	69	190	210 J	290	220 U	89 U	180
Fluorene	540	540	1,800 U	77 J	200 U	61 U	150	340	450 U	92 UJ	150 U	30	97 U	370 U	96	220 U	89 U	68 U
Naphthalene	2,100	2,100	1,800 U	98 U	200 U	61 U	82 J	160 J	450 U	92 UJ	150 U	37	360	940	79 U	220 U	89 U	68 U
Phenanthrene	1,500	1,500	3,200	590	1,700	90	1,400	2,300	1,000	390 J	440	280	570	1,000	1,600	1,000	410	1,300
Total LPAH	5,200	5,200	3,200	797 J	1,920	90	2,052 J	3,520 J	1,450	477 J	440	435 J	1,120	2,150 J	1,986	1,000	410	1,480
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	1,800 U	340	830	59 J	1,000	930	590	250 J	270	320	200	670	1,100	850	290	730
Benzo(a)pyrene	1,600	1,600	1,900	370	1,000	60 J	1,200	880	790	230 J	310	250	470	750	1,100	940	320	720
Benzo(b)fluoranthene	3,200	3,600	2,400	630	1,200	44 J	2,100	630	890	260 J	500	380	770	820	1,800	1,100	330	790
Benzo(g,h,i)perylene	670	720	1,800 U	160	710	62	310	560	720	110 J	170	190 J	240	400	150	460	180	360
Benzo(k)fluoranthene	3,200	3,600	2,300	340	1,200	85	1,700	950	820	260 J	430	340	620	1,500	1,800	1,100	300	790
Chrysene	1,400	2,800	3,100	610	1,800	100	1,500	1,300	1,200	390 J	550	320	1,000	1,300	1,400	430	1,100	
Dibenz(a,h)anthracene	230	230	1,800 U	98 U	220	61 U	90 J	120 J	450 U	92 UJ	150 U	60 J	97 U	370 U	79 U	220 U	89 U	68 U
Fluoranthene	1,700	2,500	5,900	1,100	2,300	190	2,900	2,900	2,000	740	900	660	1,400	2,200	2,700	3,000	890	2,000
Indeno(1,2,3-cd)pyrene	600	690	1,800 U	170	660	50 J	260	440	450 U	79 J	150 U	130 J	150	250 J	230	440	210	410
Pyrene	2,600	3,300	5,500	950	2,400	150	2,000	2,000	1,600	430 J	860	1,200	920	2,100	2,400	1,400	450	1,600
Total HPAH	12,000	17,000	21,100	4,670	12,320	800 J	13,060 J	10,710 J	8,610	2,749 J	3,990	3,850 J	5,770	9,990 J	12,580	10,690	3,400	8,500
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	67,000	8,700	23,000	1,000 B	33,000	9,400 B	22,000 B	4,900 J	12,000	7,200	13,000	22,000	18,000 J	13,000	1,400	8,400
Butylbenzylphthalate	63	900	2,900	390	1,800	61 U	440	350	450 U	130 J	370	390	97 U	770	1,200	480	140	68 U
Diethylphthalate	200	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U	
Dimethylphthalate	71	160	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	18 J	97 U	370 U	79 U	220 U	89 U	68 U
Di-n-butylphthalate	1,400	1,400	1,800 U	130	380	61 U	210 U	100 J	1,200	92 UJ	150 U	84	150	370 U	81	220 U	89 U	68 U
Di-n-octyl phthalate	6,200	3,500	710	1,700	80	1,400	850	1,400	540 J	980	860	1,900	3,500	380	870	140	84	
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016	20 U	20 U	20 U	20 U	99 U	20 U	120 Y	20 U	20 U	20 U	20 U	58 U	44 U	24 U	20 U	20 U	20 U	
Aroclor 1221	40 U	20 U	20 U	20 U	99 U	20 U	39 Y	20 U	20 U	20 U	20 U	58 U	44 U	49 U	20 U	20 U	20 U	
Aroclor 1232	20 U	20 U	20 U	20 U	99 U	20 U	160 Y	20 U	20 U	20 U	20 U	58 U	44 U	24 U	20 U	20 U	20 U	
Aroclor 1242	20 U	20 U	20 U	20 U	99 U	20 U	120 Y	20 U	20 U	20 U	20 U	58 U	44 U	24 U	20 U	20 U	20 U	
Aroclor 1248	20 U	20 U	20 U	72 Y	99 Y	20 U	120 Y	53 Y	64 U	56	150	88 Y	24 U	68 J	60 J	20 U		
Aroclor 1254	85	240	66	200	370	140	310	83	92	95	160	140	96	45	21 J	22		
Aroclor 1260	20 U	630	81	190	150	69	230	66 J	79	58	83	75	24 U	31	14 J	20 U		
Total PCBs	130	1,000	85	870	147	390	520	272	540	149	171	209	393	215	96	144 J	95 J	22
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
1,2-Dichlorobenzene	35	50	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
1,3-Dichlorobenzene	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U		
1,4-Dichlorobenzene	110	110	1,800 U	270	200 U	61 U	83 J	200 U	450 U	92 UJ	150 U	14 J	97 U	370 U	79 U	220 U	89 U	68 U
1-Methylnaphthalene	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U		
2,2'-Oxybis(1-chloropropane)	8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U		
2,4,5-Trichlorophenol	8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U		
2,4,6-Trichlorophenol	5,400 U	290 U	610 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	240 U	650 U	270 U	200 U		
2,4-Dichlorophenol	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U		
2,4-Dimethylphenol <sup>a</sup>	29	29	18,000 U	980 U	2,000 U	610 U	1,200 U	2,000 U	4,500 U	920 UJ	1,500 U	200 U	970 U	3,700 U	790 U	2,200 U	890 U	680 U

DT2: Diagonal sediment traps (dry weight).

Station ID	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST2	ST2A	ST2B	ST2
Lab Ref	FT96	GI77	GY11, GY49	HV92	IS42	JF27	JV42	KS67	LL01	MR44	NR10	OT18	FT96	GK59	GK59	GY11, GY49	RCB	
Round	1	2	3	4	5	6	7	8	9	10	11	12	1	2	2			
Date removed	SQS	CSL	08/19/03	02/18/04	07/30/04	03/14/05	11/07/05	03/31/06	09/05/06	03/22/07	08/13/07	04/09/08	09/25/08	03/31/09	08/18/03	03/11/04	03/11/04	08/05/04
2,4-Dinitrophenol			8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
2,4-Dinitrotoluene			8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
2,6-Dinitrotoluene			1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
2-Chloronaphthalene			1,800 U	98 U	200 U	61 U	68 J	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
2-Chlorophenol			1,800 U	88 NJ	200 U	61 U	73 J	200 U	450 U	92 UJ	150 U	24	97 U	370 U	79 U	220 U	89 U	68 U
2-Methylnaphthalene	670	670	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	88	220 U	89 U	230
2-Methylphenol <sup>a</sup>	63	63	8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
2-Nitrophenol			8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
3,3'-Dichlorobenzidine			8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 J	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
3-Nitroaniline			11,000 U	590 U	1,200 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	470 U	1,300 U	530 U	410 U
4,6-Dinitro-2-methylphenol			18,000 U	980 U	2,000 U	610 U	1,200 U	2,000 U	4,500 U	920 UJ	1,500 U	200 U	970 U	3,700 U	790 U	2,200 U	890 U	680 U
4-Bromophenyl-phenylether			1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
4-Chloro-3-methylphenol			3,600 U	200 U	410 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	160 U	430 U	180 U	140 U
4-Chloroaniline			5,400 U	290 U	610 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	240 U	650 U	270 U	200 U
4-Chlorophenyl-phenylether			1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
4-Methylphenol <sup>a</sup>	670	670	15,000	8,700	200 U	61 U	430	630	820	1,200 J	200	52	440	370 U	940	4,600	360	11,000
4-Nitroaniline			8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
4-Nitrophenol			8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
Benzoic acid <sup>a</sup>	650	650	18,000 U	980 U	2,000 U	610 U	1,200 U	2,000 U	4,500 U	920 UJ	1,500 U	200 U	970 U	3,700 U	790 U	2,200 U	890 U	680 U
Benzyl alcohol <sup>a</sup>	57	73	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	26	97 U	370 U	79 U	220 U	89 U	68 U
bis(2-Chloroethoxy) methane			1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
Bis-(2-chloroethyl) ether			3,600 U	200 U	410 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	160 U	430 U	180 U	140 U
Carbazole			1,800 U	84 J	270	61 U	320	300	450	70 J	150 U	60	97 U	220 J	300	220 U	89 U	220
Dibenzofuran	540	540	1,800 U	98 U	200 U	61 U	120 U	230	450 U	92 UJ	150 U	18 J	97 U	370 U	79 U	220 U	89 U	68 U
Hexachlorobenzene	22	70	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
Hexachlorobutadiene	11	120	1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
Hexachlorocyclopentadiene			8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
Hexachloroethane			1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
Isophorone			1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
Nitrobenzene			1,800 U	98 U	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
n-Nitroso-di-n-propylamine			3,600 U	200 U	410 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	160 U	430 U	180 U	140 U
N-Nitrosodiphenylamine	28	40	1,800 U	100 Y	200 U	61 U	120 U	200 U	450 U	92 UJ	150 U	20 U	97 U	370 U	79 U	220 U	89 U	68 U
Pentachlorophenol <sup>a</sup>	360	690	8,900 U	490 U	1,000 U	300 U	610 U	1,000 U	2,200 U	460 UJ	770 U	99 U	490 U	1,900 U	390 U	1,100 U	450 U	340 U
Phenol <sup>a</sup>	420	1,200	1,800 U	290	200 U	91 B	180	200 U	450 U	140 UJ	1,100	36 U	100	370 U	79 U	220 U	89 U	240

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.


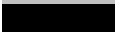
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET

DT2: Diagonal sediment traps (dry weight).

Station ID	ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST3	ST3	ST3	ST3	ST3	ST3	ST3	
Lab Ref	HV92	IL86	JE98	JV42	KS87	LM54	MR44	NQ66	OT18	FT96	GK59	HV92	JV42	KS87	LM54	MR44		
Round	4	5	6	7	8	9	10	11	12	1	2	4	7	8	9	10		
Date removed	SQS	CSL	03/09/05	08/26/05	03/28/06	09/05/06	03/22/07	08/22/07	04/09/08	09/23/08	03/31/09	08/18/03	03/11/04	03/14/05	09/05/06	03/22/07	08/22/07	04/09/08
Total solids (%)	56.1	59.3	54.8	59.1	68.7	62.2	69	52.7	74.3	66.1	68.7	41.0	79.5	71.9	69.9	77.4		
Total organic carbon (%)	8.42	7.13	9.45	6.64	3.16	4.95	6.69	7.5	3.0	6.7	1.8	8.28	3.02	3.86	2.87	4.1		
<b>Metals (mg/kg)</b>																		
Arsenic	57	93	9 U	10 U	11 J	8 U	8 U	8 U	7 U	10	7 UJ	9 U	7 U	10 U	7 U	7 U	7 U	7 U
Copper	390	390	93.2	597	100 J	99.4	61.4	120	59.5	136	28.3 J	138	68.8	164	214	95.8	80.5	180
Lead	450	530	111	123	92 J	130	195	59	78	107	35 J	128	102	156	74	73	86	74
Mercury	0.41	0.59	0.08 U	0.1 U	0.07 J	0.07 U	0.06 U	0.07 U	0.07 U	0.37	0.06 UJ	0.07	0.07 U	0.2	0.05 U	0.07 U	0.06	0.16
Zinc	410	960	465	874	428 J	357	275	277	241	459	282 J	653	433	662	408	394	392	354
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>		52	760	600	440	300	460	360	960	280	560	380	140	250	240	330	270
TPH-oil	2,000 <sup>b</sup>		290	3,100	3,300	2,900	1,400	2,100	2,200	4,200	1,600	1,400	1,200	640	1,600	1,200	1,900	1,800
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	800	60 U	84 U	360 U	91 UJ	90 U	41 J	64 J	58 J	140 U	76 U	470 U	240 U	65 J	88 U	68 U
Acenaphthylene	1,300	1,300	180 U	60 U	84 U	360 U	91 UJ	90 U	65 J	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Anthracene	960	960	1,900	64	100	360 U	91 UJ	110	260	330	240	200	76 U	470 U	240 U	72 J	88 U	64 J
Fluorene	540	540	730	60 U	55 J	360 U	91 UJ	90 U	90	92 J	71 J	140 U	76 U	470 U	240 U	66 J	88 U	45 J
Naphthalene	2,100	2,100	170 U	60 U	84 U	360 U	91 UJ	90 U	660	100	71 J	580	76 U	470 U	240 U	180 J	88 U	250
Phenanthrene	1,500	1,500	7,000	370	590	520	200 J	590	1,200	1,500	1,200	1,100	200	2,600	270	560 J	410	380
Total LPAH	5,200	5,200	10,430	434	745 J	520	200 J	700	2,316 J	2,086 J	1,640 J	1,880	200	2,600	270	943 J	410	739 J
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	4,700	290	490	370	170 J	400	1,100	760	1,100	730	110	690	240 U	190 J	260	190
Benzo(a)pyrene	1,600	1,600	3,800	290	450	360 U	160 J	410	1,100	1,400	1,000	140 U	110	840	240 U	160 J	270	200
Benzo(b)fluoranthene	3,200	3,600	4,100	390	390	360 U	180 J	450	1,000	1,900	1,300	420	120	860	240 U	210 J	330	190
Benzo(g,h,i)perylene	670	720	1,900	76	250	360 U	78 J	160	390	460	370	140 U	83	640	240 U	74 J	130	98
Benzo(k)fluoranthene	3,200	3,600	2,700	390	590	400	180 J	520	1,000	1,600	1,000	350	120	950	240 U	240 J	280	190
Chrysene	1,400	2,800	5,600	400	760	560	260 J	570	1,400	2,600	1,300	1,000	200	1,500	280	300 J	400	310
Dibenz(a,h)anthracene	230	230	440	60 U	84 U	360 U	91 UJ	90 U	170	210	94 J	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Fluoranthene	1,700	2,500	12,000	980	1,700	1,000	530 J	1,400	3,000	3,700	2,800	1,600	390	3,900	570	680 J	910	660
Indeno(1,2,3-cd)pyrene	600	690	2,000	74	200	360 U	57 J	140	380	440	390	140 U	74 J	600	240 U	51 J	100	74
Pyrene	2,600	3,300	8,500	640	800	800	260 J	790	2,000	2,700	1,900	1,600	190	2,400	410	380 J	520	520
Total HPAH	12,000	17,000	45,740	3,530	5,630	3,130	1,875 J	4,840	11,540	15,770	11,254 J	5,700	1,397 J	12,380	1,260	2,285 J	3,200	2,432
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	9,900	4,000	7,500	8,900 B	6,200 J	4,300	6,600	12,000	4,000	15,000	4,600	16,000	4,700 B	4,600 J	4,300	7,000
Butylbenzylphthalate	63	900	660	120	250	1,400	250 J	150	260	220	60 J	2,000	120	1,000	840	500 J	1,800	160
Diethylphthalate	200		180 U	60 U	160	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Dimethylphthalate	71	160	180 U	60 U	44 J	360 U	91 UJ	90 U	78 U	63 J	760	140 U	270	470 U	240 U	88 UJ	410	68 U
Di-n-butylphthalate	1,400	1,400	180 U	60 U	270	360 U	87 J	90 U	93 Y	890	100 U	140 U	76 U	470 U	240 U	67 J	150	68 U
Di-n-octyl phthalate	6,200		290	110	470	560	290 J	620	3,400	2,700	1,100	3,900 NJ	410	1,300	540	410 J	1,500	5,000
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			20 U	19 U	20 U	19 U	20 U	20 U	20 U	20	20 U	20 U	20 U	20 U	20 U	39 U	97 U	20 U
Aroclor 1221			20 U	19 U	20 U	19 U	20 U	20 U	20 U	20	20 U	39 U	20 U	20 U	50 Y	39 U	97 U	20 U
Aroclor 1232			20 U	19 U	20 U	19 U	20 U	20 U	20 U	20	20 U	20 U	20 U	20 U	20 U	39 U	97 U	20 U
Aroclor 1242			20 U	19 U	20 U	76	20 U	110	65	80	26	20 U	20 U	20 U	20 U	39 U	97 U	20 U
Aroclor 1248			75	35	750	19 U	68	20 U	20 U	20	20 U	20 U	20 U	58 Y	20 U	58 Y	97 U	20 U
Aroclor 1254			80	79	260	51	34	49	21	30	20 U	130	50	20 U	110	200	160	59
Aroclor 1260			93 Y	37 Y	97	86	20 UJ	20	20 U	20	20 U	20 U	23 J	20 U	54	110 J	200 Y	20
Total PCBs	130	1,000	155	114	1,107	213	102	179	65	110	26	130	73 J	58 Y	164	310	160	79
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
1,2-Dichlorobenzene	35	50	180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
1,3-Dichlorobenzene			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
1,4-Dichlorobenzene	110	110	180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
1-Methylnaphthalene			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
2,2'-Oxybis(1-chloropropane)			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
2,4,5-Trichlorophenol			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
2,4,6-Trichlorophenol			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	430 U	230 U	2,400 U	1,200 U	440 UJ	440 U	340 U
2,4-Dichlorophenol			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
2,4-Dimethylphenol <sup>a</sup>	29	29	1,800 U	600 U	840 U	3,600 U	910 UJ	900 U	780 U	940 U	1,000 U	1,400 U	760 U	4,700 U	2,400 U	880 UJ	80 U	680 U

DT2: Diagonal sediment traps (dry weight).

Station ID			ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST3	ST3	ST3	ST3	ST3	ST3	
Lab Ref			HV92	IL86	JE98	JV42	KS87	LM54	MR44	NQ66	OT18	FT96	GK59	HV92	JV42	KS87	LM54	MR44
Round			4	5	6	7	8	9	10	11	12	1	2	4	7	8	9	10
Date removed	SQS	CSL	03/09/05	08/26/05	03/28/06	09/05/06	03/22/07	08/22/07	04/09/08	09/23/08	03/31/09	08/18/03	03/11/04	03/14/05	09/05/06	03/22/07	08/22/07	04/09/08
2,4-Dinitrophenol			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
2,4-Dinitrotoluene			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
2,6-Dinitrotoluene			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
2-Chloronaphthalene			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
2-Chlorophenol			180	60 U	84 U	360 U	91 UJ	90 U	41 J	94 U	100 U	1,400	100	470 U	240 U	1,500 J	100	57 J
2-Methylnaphthalene	670	670	180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
2-Methylphenol <sup>a</sup>	63	63	880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
2-Nitrophenol			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
3,3'-Dichlorobenzidine			880 U	300 U	R	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 J	440 U	340 U
3-Nitroaniline			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	860 U	460 U	2,400 U	1,200 U	440 UJ	440 U	340 U
4,6-Dinitro-2-methylphenol			1,800 U	600 U	840 U	3,600 U	910 UJ	900 U	780 U	940 U	1,000 U	1,400 U	760 U	4,700 U	2,400 U	880 UJ	880 U	680 U
4-Bromophenyl-phenylether			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
4-Chloro-3-methylphenol			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	290 U	150 U	2,400 U	1,200 U	440 UJ	440 U	340 U
4-Chloroaniline			880 U	300 U	R	1,800 U	450 UJ	450 U	390 U	470 U	500 U	430 U	230 U	2,400 U	1,200 U	440 UJ	440 U	340 U
4-Chlorophenyl-phenylether			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
4-Methylphenol <sup>a</sup>	670	670	2,000	830	1,300	910	630 J	1,400	1,000	920	510	1,900	76 U	240 J	240 U	720 J	460	400
4-Nitroaniline			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
4-Nitrophenol			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
Benzoic acid <sup>a</sup>	650	650	1,800 U	600 U	430 J	3,600 U	910 UJ	900 UJ	780 U	940 U	1,000 U	1,400 U	760 U	4,700 U	2,400 U	880 UJ	880 UJ	440 J
Benzyl alcohol <sup>a</sup>	57	73	180 U	60 U	84 U	360 U	91 UJ	150	78 U	76 J	100 U	140 U	83	470 U	240 U	88 UJ	88 U	68 U
bis(2-Chloroethoxy) methane			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Bis-(2-chloroethyl) ether			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	290 U	150 U	470 U	240 U	88 UJ	88 U	68 U
Carbazole			1,100	83	110	360 U	91 UJ	130	270	520	390	170	76 U	470 U	240 U	52 J	88 U	62 J
Dibenzofuran	540	540	350	60 U	84 U	360 U	91 UJ	90 U	40 J	66 J	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Hexachlorobenzene	22	70	180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Hexachlorobutadiene	11	120	180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Hexachlorocyclopentadiene			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
Hexachloroethane			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Isophorone			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Nitrobenzene			180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
n-Nitroso-di-n-propylamine			880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	290 U	150 U	2,400 U	1,200 U	440 UJ	440 U	340 U
N-Nitrosodiphenylamine	28	40	180 U	60 U	84 U	360 U	91 UJ	90 U	78 U	94 U	100 U	140 U	76 U	470 U	240 U	88 UJ	88 U	68 U
Pentachlorophenol <sup>a</sup>	360	690	880 U	300 U	420 U	1,800 U	450 UJ	450 U	390 U	470 U	500 U	720 U	380 U	2,400 U	1,200 U	440 UJ	440 U	340 U
Phenol <sup>a</sup>	420	1,200	180 U	88	99	360 U	91 UJ	93	94 U	70 J	100 U	150	76 U	470 U	240 U	88 UJ	88 U	68 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.


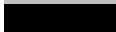
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT2: Diagonal sediment traps (dry weight).

Station ID			ST3	ST3	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST6	ST6	ST6	ST6
Lab Ref			OT18	NQ66	FT96	HV92	IL86	JE98	JV42	KS87	LM54	MR44	NQ66	OT18	FT96	HV92	IL86	JE98
Round			11	12	1	4	5	6	7	8	9	10	11	12	1	4	5	6
Date removed	SQS	CSL	03/31/09	09/23/08	08/18/03	03/10/05	08/26/05	03/28/06	09/05/06	03/22/07	08/22/07	04/09/08	09/23/08	03/31/09	08/21/03	03/11/05	08/26/05	3/28/2006
Total solids (%)			71.9	77.7	38.5	74.8	19.3	57.2	34.1	62.3	41	59.5	44.7	54.2	29.3	35.8	37.1	63.1
Total organic carbon (%)			3.46	5.35	13	1.97	16.6	2.79	18.1	7.82	9.55	7.66	14.2	7.41	12	11.3	12.4	10.7
<b>Metals (mg/kg)</b>																		
Arsenic	57	93	7 UJ	6 U	6 U	14	50 U	9 J	10 U	8 U	10 U	9 U	10 U	9 UJ	8 U	10 U	20 U	7 UJ
Copper	390	390	72.3 J	110	136	32.5	532	66.4 J	146	42.9	110	50.4	112	83 J	231	100	182	64.5 J
Lead	450	530	51 J	182	175	29	360	71 J	112	37	111	55	111	74 J	200	122	248	79 J
Mercury	0.41	0.59	0.05 UJ	0.05 U	0.1	0.05 U	2.8	0.07 J	0.2	0.07 U	0.12	0.07 U	0.1	0.12 J	0.25	0.13	0.2	0.06 J
Zinc	410	960	300 J	268	479	164	1,930	341 J	650	194	466	259	530	464 J	944	399	1,090	284 J
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>		520	290	600	140	1,800	520	510	540	1,200	410	1,000	590	NA	140	1,200	970
TPH-oil	2,000 <sup>b</sup>		2,900	1,500	1,200	750	7,300	2,600	2,800	1,600	4,800	2,600	3,300	2,400	NA	680	4,000	3,900
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	200 J	490	170
Acenaphthylene	1,300	1,300	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Anthracene	960	960	95 J	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	43 J	260 U	290 U	1,100 U	720	1,900	590
Fluorene	540	540	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	30 J	260 U	290 U	1,100 U	320	960	190
Naphthalene	2,100	2,100	5,100	290	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	1,400
Phenanthrene	1,500	1,500	520	450	520	180	NA	210	490 U	180 J	740	300	240 J	270 J	5,900	4,800	16,000	5,600
Total LPAH	5,200	5,200	5,715 J	740	520	180	NA	210	490	180 J	740	373 J	240 J	270 J	5,900	6,040 J	19,350	7,950
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	180	330	350	100	NA	120	490 U	91 J	300 U	150	170 J	170 J	3,200	2,900	10,000	2,400
Benzo(a)pyrene	1,600	1,600	170	300	470	110	NA	170	490 U	99 J	300 U	170	210 J	180 J	3,400	3,100	10,000	2,000
Benzo(b)fluoranthene	3,200	3,600	180	290	730	100	NA	170	490 U	140 J	420	200	300	280 J	4,700	4,300	17,000	2,600
Benzo(g,h,i)perylene	670	720	100 J	110 J	290	54 J	NA	120 J	490 U	95 UJ	300 U	82	260 U	290 U	1,700	1,100	2,600	740
Benzo(k)fluoranthene	3,200	3,600	230	390	500	140	NA	120 J	490 U	130 J	300 U	200	340	340	4,700	3,000	15,000	1,800
Chrysene	1,400	2,800	320	460	580	170	NA	220	490 U	170 J	480	280	400	340	5,000	4,000	15,000	3,200
Dibenz(a,h)anthracene	230	230	170 U	210 U	160 U	60	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	310	780	340
Fluoranthene	1,700	2,500	570	830	990	350	NA	310	780	300 J	900	550	510	480	9,100	10,000	30,000	6,300
Indeno(1,2,3-cd)pyrene	600	690	170 U	210 U	460	52 J	NA	78 J	490 U	95 UJ	300 U	68	260 U	290 U	1,900	1,400	3,200	770
Pyrene	2,600	3,300	550	730	870	220	NA	180	530	180 J	620	460	430	400	8,200	6,300	24,000	3,900
Total HPAH	12,000	17,000	2,300 J	3,440 J	5,240	1,356 J	NA	1,488 J	1,310	1,110 J	2,420	2,160	2,360 J	2,190 J	41,900	36,410	127,580	24,050
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	12,000	5,100	8,900	1,100	NA	3,000	13,000 B	6,900 J	8,300	3,200	8,400	9,700	42,000	13,000	14,000	5,300
Butylbenzylphthalate	63	900	210	270	410	200	NA	110 J	650	360 J	300 U	190	710	2,000	3,400	1,000	520	180
Diethylphthalate	200		170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Dimethylphthalate	71	160	170 U	210 U	300	60 U	NA	68 J	490 U	91 J	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Di-n-butylphthalate	1,400	1,400	170 U	210 U	720	60 U	NA	180	490 U	95 UJ	300 U	120	300	290 U	1,100 U	370	400 U	120 J
Di-n-octyl phthalate	6,200		5,800	3,200	330	60 U	NA	220	490 U	390 J	390	240	280	800	3,700	730	430	350
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			20 U	19 U	20 U	20 U	20 U	100 U	20 U	20 U	20 U	20 U	18 U	260 U	19 U	20 U	19 U	20 U
Aroclor 1221			20 U	19 U	39 U	20 U	20 U	100 U	20 U	20 U	20 U	20 U	18 U	260 U	38 U	20 Y	19 U	20 U
Aroclor 1232			20 U	19 U	20 U	20 U	59 Y	100 U	20 U	20 U	20 U	20 U	18 U	260 U	19 U	20 Y	38 Y	20 U
Aroclor 1242			20 U	19 U	20 U	20 U	40 Y	100 U	20 U	20 U	20 U	20 U	18 U	260 U	19 U	20 U	19 U	20 U
Aroclor 1248			20 U	19 U	20 U	64	59 Y	100 U	20 U	20 U	660	20 U	30 Y	260 U	19 U	20 U	38 Y	20 U
Aroclor 1254			58	57	130	20 U	420	2,900	120	27	230	30	41 Y	800	84	54 Y	94 J	45
Aroclor 1260			20 U	19 U	20 U	20 U	40 Y	350	34	20 UJ	20 U	20 U	18 U	260 U	19 U	160 Y	28 Y	20 U
Total PCBs	130	1,000	58	57	130	64	420	3,250	154	27	890	30	41 Y	800	84	160 Y	94 J	45
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
1,2-Dichlorobenzene	35	50	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
1,3-Dichlorobenzene			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
1,4-Dichlorobenzene	110	110	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
1-Methylnaphthalene			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
2,2'-Oxybis(1-chloropropane)			850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
2,4,5-Trichlorophenol			850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
2,4,6-Trichlorophenol			850 U	1,000 U	470 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	3,300 U	1,100 U	2,000 U	630 U
2,4-Dichlorophenol			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
2,4-Dimethylphenol <sup>a</sup>	29	29	1,700 U	2,100 U	1,600 U	600 U	NA	1,200 U	4,900 U	950 UJ	3,000 U	590 U	2,600 U	2,900 U	11,000 U	2,200 U	4,000 U	1,300 U

DT2: Diagonal sediment traps (dry weight).

Station ID			ST3	ST3	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST6	ST6	ST6	ST6
Lab Ref			OT18	NQ66	FT96	HV92	IL86	JE98	JV42	KS87	LM54	MR44	NQ66	OT18	FT96	HV92	IL86	JE98
Round			11	12	1	4	5	6	7	8	9	10	11	12	1	4	5	6
Date removed	SQS	CSL	03/31/09	09/23/08	08/18/03	03/10/05	08/26/05	03/28/06	09/05/06	03/22/07	08/22/07	04/09/08	09/23/08	03/31/09	08/21/03	03/11/05	08/26/05	3/28/2006
2,4-Dinitrophenol			850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
2,4-Dinitrotoluene			850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
2,6-Dinitrotoluene			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
2-Chloronaphthalene			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
2-Chlorophenol			300	210 U	160 U	60 U	NA	120 U	490 U	120 J	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
2-Methylnaphthalene	670	670	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	370	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
2-Methylphenol <sup>a</sup>	63	63	850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
2-Nitrophenol			850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
3,3'-Dichlorobenzidine			850 U	1,000 U	780 U	300 U	NA	R	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	
3-Nitroaniline			850 U	1,000 U	940 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	6,700 U	1,100 U	2,000 U	630 U
4,6-Dinitro-2-methylphenol			1,700 U	2,100 U	1,600 U	600 U	NA	1,200 U	4,900 U	950 UJ	3,000 U	590 U	2,600 U	2,900 U	11,000 U	2,200 U	4,000 U	1,300 U
4-Bromophenyl-phenylether			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
4-Chloro-3-methylphenol			850 U	1,000 U	310 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	2,200 U	1,100 U	2,000 U	630 U
4-Chloroaniline			850 U	1,000 U	470 U	300 U	NA	R	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	3,300 U	1,100 U	2,000 U	
4-Chlorophenyl-phenylether			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
4-Methylphenol <sup>a</sup>	670	670	2,400	390	980	100	NA	1,700	2,500	1,000 J	3,200	1,400	2,400	2,600	5,100	480	900	1,800
4-Nitroaniline			850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
4-Nitrophenol			850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
Benzoic acid <sup>a</sup>	650	650	1,500 J	2,100 U	1,900	600 U	NA	1,200 U	4,900 U	950 UJ	3,000 UJ	590 U	2,600 U	2,900 U	11,000 U	2,200 U	4,000 U	1,300 U
Benzyl alcohol <sup>a</sup>	57	73	170 U	210 U	160 U	60 U	NA	150	490 U	95 UJ	300 U		260 U	290 U	1,100 U	220 U	400 U	130 U
bis(2-Chloroethoxy) methane			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Bis-(2-chloroethyl) ether			170 U	210 U	310 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	2,200 U	220 U	400 U	130 U
Carbazole			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	42 J	260 U	290 U	1,200	1,000	3,500	740
Dibenzofuran	540	540	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	170	490	110 J
Hexachlorobenzene	22	70	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Hexachlorobutadiene	11	120	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Hexachlorocyclopentadiene			850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
Hexachloroethane			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Isophorone			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Nitrobenzene			170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
n-Nitroso-di-n-propylamine			850 U	1,000 U	310 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	300 U	1,300 U	1,400 U	2,200 U	1,100 U	2,000 U	630 U
N-Nitrosodiphenylamine	28	40	170 U	210 U	160 U	60 U	NA	120 U	490 U	95 UJ	300 U	59 U	260 U	290 U	1,100 U	220 U	400 U	130 U
Pentachlorophenol <sup>a</sup>	360	690	850 U	1,000 U	780 U	300 U	NA	610 U	2,400 U	480 UJ	1,500 U	360	1,300 U	1,400 U	5,600 U	1,100 U	2,000 U	630 U
Phenol <sup>a</sup>	420	1,200	140 J	210 U	160 U	60 U	NA	160	490 U	95 UJ	300 U	94 U	260 U	220 J	1,100 U	220 U	400 U	190

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.



U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS Exceeds CSL/2LAET  
 Concentration exceeds the CSL/2LAET

DT2: Diagonal sediment traps (dry weight).

Station ID			ST6	ST6	ST6	ST6	ST6	ST6	ST7	ST7	ST7	ST7	ST7	ST7	ST7	ST7	ST7
Lab Ref			JV42	KS87	LM54	MR44	NQ66	OT18	GI77	IS42	JF27	JV42	KS87	LL01	MR44	NQ66	OT18
Round			7	8	9	10	11	12	2	5	6	7	8	9	10	11	12
Date removed	SQS	CSL	09/05/06	03/22/07	08/22/07	04/09/08	09/23/08	03/31/09	02/18/04	11/07/05	03/31/06	09/05/06	03/22/07	08/13/07	04/09/08	09/23/08	03/31/09
Total solids (%)			36.6	61	45.5	74.4	61.7	47.9	74.4	14.1	73.8	60.2	63	93.3	58.3	66.4	68.3
Total organic carbon (%)			11.4	7.08	8.12	7.8	6.58	9.68	6.9	15.1	6.59	6.89	3.57	2.62	8.58	8.28	6.17
<b>Metals (mg/kg)</b>																	
Arsenic	57	93	10 U	8 U	10 U	7 U	7 U	10 UJ	9	8 U	7	8 U	7 U	9 U	7 U	9	7 UJ
Copper	390	390	155	57.6	120	35.6	63.9	105 J	62.6	89.9	91.2	102	74.6	104	104	111	74.2 J
Lead	450	530	123	71	92	145	66	79 J	61	99	35	82	60	98	72	92	52 J
Mercury	0.41	0.59	0.2	0.06 U	0.11	0.05 U	0.12	0.14 J	0.06 U	0.1	0.05 U	0.09	1.28	0.13	0.08	0.12	0.07 J
Zinc	410	960	881	237	591	214	335	523 J	262	400	255	387	283	401	337	554	322 J
<b>Total petroleum hydrocarbons (mg/kg)</b>																	
TPH-diesel	2,000 <sup>b</sup>		1,100	460	1,100	290	460	1,200	NA	1,900	450	480	540	1,200	620	1,100	910
TPH-oil	2,000 <sup>b</sup>		6,000	2,000	5,000	1,600	1,800	5,500	NA	7,500	1,900	2,800	2,100	6,000	3,600	4,000	3,200
<b>LPAH (ug/kg DW)</b>																	
Acenaphthene	500	500	440 U	110 UJ	430 U	82	210	400 U	42 J	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Acenaphthylene	1,300	1,300	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Anthracene	960	960	580	160 J	430 U	440	690	380 J	78 U	76 J	180 U	360 U	110 J	170 U	65 J	72 U	240 U
Fluorene	540	540	440 U	110 UJ	430 U	140	260	400 U	65 J	62 J	180 U	360 U	120 UJ	170 U	46 J	72 U	240 U
Naphthalene	2,100	2,100	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89	72 U	240 U
Phenanthrene	1,500	1,500	4,400	1,200 J	2,200	2,600	4,400	2,700	270	590	180	640	470 J	310	510	190	350
Total LPAH	5,200	5,200	4,980	1,360 J	2,200	3,262	5,560	3,080 J	377 J	728 J	180	640	580 J	310	710 J	190	350
<b>HPAH (ug/kg DW)</b>																	
Benzo(a)anthracene	1,300	1,600	2,900	840 J	1,400	1,800	2,900	1,600	120	350	160 J	410	400 J	180	300	160	180 J
Benzo(a)pyrene	1,600	1,600	3,500	760 J	1,400	1,600	2,500	1,700	120	450	140 J	360	350 J	210	250 J	140	200 J
Benzo(b)fluoranthene	3,200	3,600	3,400	1,100 J	1,500	2,600	3,300	2,300	150	820	160 J	450	670 J	290	470	190	290
Benzo(g,h,i)perylene	670	720	1,200	170 J	680	460	610	570	71 J	150	140 J	360 U	100 J	170 U	250 J	62 J	240 U
Benzo(k)fluoranthene	3,200	3,600	3,400	960 J	1,500	1,400	3,200	2,300	140	800	110 J	410	500 J	230	540	190	370
Chrysene	1,400	2,800	4,200	1,200 J	2,000	2,100	3,500	2,400	190	600	270	650	700 J	340	660	260	380
Dibenz(a,h)anthracene	230	230	470	110 UJ	430 U	260	360	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	57 J	72 U	240 U
Fluoranthene	1,700	2,500	11,000	3,400 J	4,600	5,100	8,700	5,000	400	1,300	320	1,600	1,400 J	630	1,100	450	580
Indeno(1,2,3-cd)pyrene	600	690	1,200	150 J	620	540	720	520	68 J	100	180 U	360 U	87 J	170 U	190 J	47 J	240 U
Pyrene	2,600	3,300	5,500	1,400 J	2,700	3,600	5,700	3,700	290	970	380	940	860 J	430	1,300	320	590
Total HPAH	12,000	17,000	36,770	9,980 J	16,400	19,460	31,490	20,090	1,549 J	5,540	1,680 J	4,820	5,067 J	2,310	5,117 J	1,819 J	2,590 J
<b>Phthalates (ug/kg dw)</b>																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	11,000 B	5,700 J	9,900	4,300	2,700	16,000	2,400	11,000	1,800 B	13,000 B	8,800 J	5,900	7,500	2,200	9,100
Butylbenzylphthalate	63	900	540	180 J	430 U	250	320	2,700	240	430	1,300	460	1,100 J	180	350	44 J	200 J
Diethylphthalate	200		440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Dimethylphthalate	71	160	440 U	75 J	430 U	70 U	110 J	400 U	78 U	88 U	180 U	360 U	1,200 UJ	170 U	89 U	72 U	240 U
Di-n-butylphthalate	1,400	1,400	440 U	280 J	430 U	120 Y	160 U	400 U	78 U	210 U	180 U	360 U	130 J	170 U	89 U	72 U	240 U
Di-n-octyl phthalate	6,200		590	620 J	710	380	270	1,500	190	88 U	150 J	530	740 J	540	1,600	280	5,400
<b>PCBs (ug/kg dw)</b>																	
Aroclor 1016			20 U	20 U	20 U	19 U	57 U	16 U	19 U	97 U	20 U	48 Y	20 U	20 U	20 U	59 U	20 U
Aroclor 1221			20 U	20 U	20 U	19 U	57 U	16 U	19 U	97 U	20 U	19 U	20 U	20 U	20 U	59 U	20 U
Aroclor 1232			20 U	20 U	20 U	19 U	57 U	16 U	19 U	97 U	20 U	77 Y	20 U	20 U	20 U	59 U	20 U
Aroclor 1242			20 U	20 U	20 U	19 U	57 U	16 U	19 U	97 U	22 J	58 Y	20 U	20 U	20 U	59 U	20 U
Aroclor 1248			20 U	66	20 U	19 U	57 U	16 U	19 U	97 U	20 U	58 Y	95	58	30 Y	87	29 Y
Aroclor 1254			79	73	64	19 U	140	26	98	180	190	140	120	88	51	240	48
Aroclor 1260			48	20 UJ	37	19 U	86 Y	16 U	19 U	97 U	230	80	84 J	52	27	130 J	26
Total PCBs	130	1,000	127	139	101	19 U	140	26	98	180	442	220	299	198	78	457	103
<b>Other organic compounds (ug/kg dw)</b>																	
1,2,4-Trichlorobenzene	31	51	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
1,2-Dichlorobenzene	35	50	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
1,3-Dichlorobenzene			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
1,4-Dichlorobenzene	110	110	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
1-Methylnaphthalene			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
2,2'-Oxybis(1-chloropropane)			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
2,4,5-Trichlorophenol			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
2,4,6-Trichlorophenol			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	240 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
2,4-Dichlorophenol			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
2,4-Dimethylphenol <sup>a</sup>	29	29	4,400 U	1,100 UJ	4,300 U	700 U	1,600 U	4,000 U	780 U	880 U	1,800 U	3,600 U	1,200 UJ	1,700 U	890 U	720 U	2,400 U

DT2: Diagonal sediment traps (dry weight).

Station ID			ST6	ST6	ST6	ST6	ST6	ST6	ST7	ST7	ST7	ST7	ST7	ST7	ST7	ST7	
Lab Ref			JV42	KS87	LM54	MR44	NQ66	OT18	GI77	IS42	JF27	JV42	KS87	LL01	MR44	NQ66	OT18
Round			7	8	9	10	11	12	2	5	6	7	8	9	10	11	12
Date removed	SQS	CSL	09/05/06	03/22/07	08/22/07	04/09/08	09/23/08	03/31/09	02/18/04	11/07/05	03/31/06	09/05/06	03/22/07	08/13/07	04/09/08	09/23/08	03/31/09
2,4-Dinitrophenol			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
2,4-Dinitrotoluene			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
2,6-Dinitrotoluene			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
2-Chloronaphthalene			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
2-Chlorophenol			440 U	110 UJ	430 U	70 U	160 U	400 U	71 J	51 J	180 U	360 U	120 UJ	180	89 U	72 U	240 U
2-Methylnaphthalene	670	670	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
2-Methylphenol <sup>a</sup>	63	63	2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
2-Nitrophenol			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
3,3'-Dichlorobenzidine			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
3-Nitroaniline			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	470 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
4,6-Dinitro-2-methylphenol			4,400 U	1,100 UJ	4,300 U	700 U	1,600 U	4,000 U	780 U	880 U	1,800 U	3,600 U	1,200 UJ	1,700 U	890 U	720 U	2,400 U
4-Bromophenyl-phenylether			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
4-Chloro-3-methylphenol			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	160 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
4-Chloroaniline			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	240 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
4-Chlorophenyl-phenylether			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
4-Methylphenol <sup>a</sup>	670	670	1,400	2,200 J	2,600	530	1,100	2,700	870	460	24,000	530	8,400 J	170 U	240	69 J	240 U
4-Nitroaniline			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
4-Nitrophenol			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
Benzoic acid <sup>a</sup>	650	650	4,400 U	1,100 UJ	4,300 UJ	700 U	1,600 U	4,000 U	780 U	880 U	1,400 J	3,600 U	1,200 UJ	1,700 U	890 U	720 U	2,400 U
Benzyl alcohol <sup>a</sup>	57	73	440 U	110 UJ	430 U	70 U	160 U	400 U	470	220	180 U	360 U	140 J	170 U	89 U	72 U	240 U
bis(2-Chloroethoxy) methane			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Bis-(2-chloroethyl) ether			440 U	110 UJ	430 U	70 U	160 U	400 U	160 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Carbazole			1,000	230 J	490	650	1,000	560	78 U	100	180 U	360 U	110 J	170 U	94	72 U	240 U
Dibenzofuran	540	540	440 U	110 UJ	430 U	71	150 J	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Hexachlorobenzene	22	70	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Hexachlorobutadiene	11	120	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Hexachlorocyclopentadiene			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
Hexachloroethane			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Isophorone			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Nitrobenzene			440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
n-Nitroso-di-n-propylamine			2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	160 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
N-Nitrosodiphenylamine	28	40	440 U	110 UJ	430 U	70 U	160 U	400 U	78 U	88 U	180 U	360 U	120 UJ	170 U	89 U	72 U	240 U
Pentachlorophenol <sup>a</sup>	360	690	2,200 U	550 UJ	2,200 U	350 U	780 U	2,000 U	390 U	440 U	880 U	1,800 U	600 UJ	850 U	450 U	360 U	1,200 U
Phenol <sup>a</sup>	420	1,200	440 U	160 UJ	430 U	72 U	160 U	330 J	60 J	99	1,100	360 U	810 UJ	170 U	89 U	72 U	240 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value







DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/ LAET	CSL/ 2LAET	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T1	SL4-T2A	SL4-T2A	SL4-T2A	SL4-T2A	SL4-T2A
Boeing Structure #			MH422	MH422	MH422	MH422	MH422	MH422	MH422	MH422	MH422	MH422	MH422	MH422	MH492	MH492	MH492	MH492	MH492
Round			1	2	3	4	5a	5b	6	7A	7B	8	9	1	2	3	4	5	
Lab Ref														IJ98	JD97	KA06	KL30	LA29	
Date removed			08/11/05	03/15/06	10/11/06	01/08/07	05/14/07	10/29/07	03/18/08	07/30/08	12/03/08	04/06/09	04/08/10	08/11/05	03/15/06	10/06/06	01/09/07	05/17/07	
Sampled by			Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	SPU	SPU	SPU	SPU	SPU	
2,4-Dimethylphenol <sup>a</sup>	29	29	100 U	340 U	240 U	<b>210</b>	480 U	87 UJW	160 U	200 UW	82 UW	330 UW	200 U	NA	NA	180 U	NA	NA	
2,4-Dinitrophenol			1,000 U	3,400 U	NA	NA	NA	870 UJW	NA	NA	820 UW	NA	NA	NA	NA	1,800 U	NA	NA	
2,4-Dinitrotoluene			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
2,6-Dinitrotoluene			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
2-Chloronaphthalene			100 U	340 U	NA	NA	NA	87 UJW	NA	NA	82 UW	NA	NA	NA	NA	180 U	NA	NA	
2-Chlorophenol			100 U	340 U	NA	NA	NA	87 UJW	NA	NA	82 UW	NA	NA	NA	NA	180 U	NA	NA	
2-Methylnaphthalene	670	670	<b>120</b>	340 U	240 U	79 U	480 U	87 UJW	160 U	200 UW	82 UW	330 UW	200 U	NA	NA	<b>360</b>	NA	NA	
2-Methylphenol <sup>a</sup>	63	63	100 U	340 U	240 U	79 U	480 U	87 UJW	160 U	200 UW	82 UW	330 UW	200 U	NA	NA	180 U	NA	NA	
2-Nitroaniline			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
2-Nitrophenol			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
3,3'-Dichlorobenzidine			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
3-Nitroaniline			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
4,6-Dinitro-2-methylphenol			1,000 U	3,400 U	NA	NA	NA	870 UJW	NA	NA	820 UW	NA	NA	NA	NA	1,800 U	NA	NA	
4-Bromophenyl-phenylether			100 U	340 U	NA	NA	NA	87 UJW	NA	NA	82 UW	NA	NA	NA	NA	180 U	NA	NA	
4-Chloro-3-methylphenol			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
4-Chloroaniline			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
4-Chlorophenyl-phenylether			100 U	340 U	NA	NA	NA	87 UJW	NA	NA	82 UW	NA	NA	NA	NA	180 U	NA	NA	
4-Methylphenol <sup>a</sup>	670	670	100 U	340 U	<b>420</b>	<b>170</b>	480 U	87 UJW	160 U	200 UW	82 UW	330 UW	200 U	NA	NA	<b>820</b>	NA	NA	
4-Nitroaniline			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
4-Nitrophenol			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
Benzoic acid <sup>a</sup>	650	650	1,000 U	3,400 U	2,400 U	790 U	4,800 U	870 UJW	1,600 U	2,000 UW	<b>2,600 W</b>	3,300 UW	2,000 U	NA	NA	1,800 U	NA	NA	
Benzyl alcohol <sup>a</sup>	57	73	100 U	340 U	240 U	79 U	480 U	87 UJW	160 U	200 UW	<b>200 W</b>	330 UW	200 U	NA	NA	180 U	NA	NA	
bis(2-Chloroethoxy) methane			100 U	340 U	NA	NA	NA	87 UJW	NA	NA	82 UW	NA	NA	NA	NA	180 U	NA	NA	
Bis-(2-chloroethyl) ether			100 U	340 U	NA	NA	NA	87 UJW	NA	NA	82 UW	NA	NA	NA	NA	180 U	NA	NA	
Carbazole			<b>390</b>	<b>480</b>	NA	NA	NA	<b>240 JW</b>	NA	NA	<b>210 W</b>	NA	NA	NA	NA	<b>1,300</b>	NA	NA	
Dibenzofuran	540	540	<b>150</b>	340 U	240 U	79 U	480 U	87 UJW	<b>260</b>	200 UW	82 UW	330 UW	240	NA	NA	<b>490</b>	NA	NA	
Hexachlorobenzene	22	70	100 U	340 U	240 U	79 U	480 U	87 UJW	160 U	200 UW	82 UW	330 UW	200 U	NA	NA	180 U	NA	NA	
Hexachlorobutadiene	11	120	100 U	340 U	240 U	79 U	480 U	87 UJW	160 U	200 U	82 UW	330 UW	200 U	NA	NA	180 U	NA	NA	
Hexachlorocyclopentadiene			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
Hexachloroethane			100 U	340 U	240 U	79 U	480 U	87 UJW	160 U	200 UW	82 UW	330 UW	200 U	NA	NA	180 U	NA	NA	
Isophorone			100 U	340 U	NA	NA	NA	87 UJW	NA	NA	82 UW	NA	NA	NA	NA	180 U	NA	NA	
Nitrobenzene			100 U	340 U	NA	NA	NA	87 UJW	NA	NA	82 UW	NA	NA	NA	NA	180 U	NA	NA	
n-Nitroso-di-n-propylamine			510 U	1,700 U	NA	NA	NA	430 UJW	NA	NA	410 UW	NA	NA	NA	NA	910 U	NA	NA	
N-Nitrosodiphenylamine	28	40	100 U	340 U	240 U	79 U	480 U	87 UJW	160 U	200 UW	82 UW	330 UW	200 U	NA	NA	180 U	NA	NA	
Pentachlorophenol <sup>a</sup>	360	690	510 U	1,700 U	1,200 U	400 U	2,400 U	430 UJW	770 U	1,000 UW	410 UW	1,700 UW	1,000 U	NA	NA	910 U	NA	NA	
Phenol <sup>a</sup>	420	1,200	100 U	340 U	<b>260</b>	79 U	480 U	87 UJW	160 U	200 UW	82 UW	330 UW	200 U	NA	NA	670 U	NA	NA	

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

W = Results presented as wet weight.



Concentration exceeds SQS/LAET/MTCA

Concentration exceeds CSL/2LAET

DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/ LAET	CSL/ 2LAET	SL4-T2A	SL4-T2A	SL4-T2A	SL4-T2A	SL4-T2A	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2
<b>Boeing Structure #</b>			MH492	MH492	MH492	MH492	MH492	MH356	MH356	MH356	MH356	MH356	MH356	MH356	MH356	MH356	MH356	MH356
<b>Round</b>			6	7	8	9	10	1	2	3	4	5a	5b	6	7A	7B	8	9
<b>Lab Ref</b>			MN86	NJ12	OU68	PR80	QU69											
<b>Date removed</b>			03/18/08	08/05/08	04/07/09	10/07/09	04/29/10	08/11/05	03/15/06	10/11/06	01/08/07	05/14/07	10/29/07	03/18/08	07/30/08	12/03/08	04/06/09	04/08/10
<b>Sampled by</b>			SPU	SPU	SPU	SPU	SPU	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing
Total solids			30.6	NA	30.2	39.5	NA	NA	NA	8.93	NA	NA	NA	NA	NA	NA	NA	25.00
TOC (%)			16.10	NA	NA	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals (mg/kg dw)</b>																		
Arsenic	57	93	8.7	NA	20 UJ	10 UJ	20 U	NA	NA	50 U	NA	NA	5 UW	NA	NA	NA	NA	NA
Copper	390	390	263	NA	211 J	216 J	190	NA	NA	276	NA	NA	40.9 W	NA	NA	NA	NA	NA
Lead	450	530	424	NA	275 J	311 J	246	NA	NA	300	NA	NA	43 W	NA	NA	NA	NA	NA
Mercury	0.41	0.59	0.30	NA	0.20 J	0.25 J	0.24	NA	NA	0.6	NA	NA	0.08 W	NA	NA	NA	NA	NA
Zinc	410	960	1,280	NA	1,140 J	1,200 J	1,070	NA	NA	1,560	NA	NA	222 W	NA	NA	NA	NA	NA
<b>Total petroleum hydrocarbons (mg/kg dw)</b>																		
TPH-diesel	2,000 <sup>b</sup>		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH-oil	2,000 <sup>b</sup>		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	380 W	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	430 J
Acenaphthylene	1,300	1,300	120 JW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
Anthracene	960	960	1,100 W	NA	NA	NA	2,700	NA	1,700	NA	NA	NA	NA	NA	NA	88 UW	NA	1,300
Fluorene	540	540	470 W	NA	NA	NA	1,600	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	570
Naphthalene	2,100	2,100	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
Phenanthrene	1,500	1,500	9,200 W	NA	NA	NA	27,000	NA	15,000	NA	NA	NA	NA	NA	NA	390 W	NA	11,000
Total LPAH	5,200	5,200	11,500 W	NA	NA	NA	31,300	NA	16,700	NA	NA	NA	NA	NA	NA	830 W	NA	13,300
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	6,100 RW	NA	NA	NA	20,000	NA	11,000	NA	NA	NA	NA	NA	NA	330 W	NA	7,200
Benzo(a)pyrene	1,600	1,600	8,300 W	NA	NA	NA	29,000	NA	15,000	NA	NA	NA	NA	NA	NA	520 W	NA	12,000
Benzo(b)fluoranthene	3,200	3,200	15,000 W	NA	NA	NA	38,000	NA	26,000	NA	NA	NA	NA	NA	NA	820 W	NA	13,000
Benzo(g,h,i)perylene	670	720	3,800 W	NA	NA	NA	24,000	NA	9,000	NA	NA	NA	NA	NA	NA	600 W	NA	9,400
Benzo(k)fluoranthene	3,200	3,200	8,500 W	NA	NA	NA	38,000 J	NA	17,000	NA	NA	NA	NA	NA	NA	860 W	NA	13,000
Chrysene	1,400	2,800	13,000 RW	NA	NA	NA	45,000	NA	23,000	NA	NA	NA	NA	NA	NA	850 W	NA	16,000
Dibenz(a,h)anthracene	230	230	1,100 W	NA	NA	NA	9,900	NA	2,100	NA	NA	NA	NA	NA	NA	88 UW	NA	3,500
Fluoranthene	1,700	2,500	20,000 RW	NA	NA	NA	100,000	NA	45,000	NA	NA	NA	NA	NA	NA	1,100 W	NA	28,000
Indeno(1,2,3-cd)pyrene	600	690	4,100 W	NA	NA	NA	26,000	NA	9,200	NA	NA	NA	NA	NA	NA	530 W	NA	8,500
Pyrene	2,600	3,300	12,000 RW	NA	NA	NA	33,000	NA	23,000	NA	NA	NA	NA	NA	NA	810 W	NA	15,000
Total HPAH	12,000	17,000	91,900 W	NA	NA	NA	362,900	NA	180,300	NA	NA	NA	NA	NA	NA	6,508 W	NA	125,600
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	11,000 W	NA	NA	NA	48,000	NA	34,000	NA	NA	NA	NA	NA	NA	1,500 W	NA	19,000
Butylbenzylphthalate	63	900	450 RW	NA	NA	NA	1,100	NA	1,600	NA	NA	NA	NA	NA	NA	88 UW	NA	530
Diethylphthalate	200		230 UW	NA	NA	NA	930 UJ	NA	1,300 U	NA	NA	NA	NA	NA	NA	100 UW	NA	470 U
Dimethylphthalate	71	160	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
Di-n-butylphthalate	1,400	1,400	230 W	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	1,600
Di-n-octyl phthalate	6,200		500 W	NA	NA	NA	930 U	NA	9,800	NA	NA	NA	NA	NA	NA	280 W	NA	27,000
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			970 UW	75 U	82 U	25 U	43 U	21 U	210 U	300 U	67 U	19 U	35 UW	13 UW	24 UW	9.9 UW	34 UW	79 U
Aroclor 1221			970 UW	75 U	82 U	25 U	43 U	21 U	210 U	75 U	67 U	19 U	35 UW	13 UW	24 UW	9.9 UW	34 UW	79 U
Aroclor 1232			970 UW	75 U	82 U	25 U	43 U	21 U	210 U	380 U	67 U	19 U	35 UW	13 UW	24 UW	9.9 UW	34 UW	79 U
Aroclor 1242			970 UW	75 U	82 U	25 U	43 U	21 U	210 U	230 U	67 U	19 U	35 UW	13 UW	24 UW	9.9 UW	48 W	79 U
Aroclor 1248			970 UW	75 U	82 U	26	110 Y	21 U	210 U	300 U	67 U	19 U	35 UW	19 UW	24 UW	9.9 UW	34 UW	120 U
Aroclor 1254			970 UW	170 J	110	65	320	500 P	890	760	180	70	90 W	47 W	24 W	10 W	34 UW	260
Aroclor 1260			970 UW	190 J	86	88	130	340	570	470	140	58	43 W	38 W	24 UW	9.9 UW	34 UW	200
Total PCBs	130	1,000	970 UW	360 J	196	179	450	840 P	1,460	1,230	320	128	133 W	85 W	24 W	10 W	48 W	460
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
1,2-Dichlorobenzene	35	50	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
1,3-Dichlorobenzene			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
1,4-Dichlorobenzene	110	110	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
1-Methylnaphthalene							4,200 NJ											470 U
2,2'-Oxybis(1-chloropropane)			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
2,4,5-Trichlorophenol			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
2,4,6-Trichlorophenol			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
2,4-Dichlorophenol			1,100 UW	NA	NA	NA	4,600 UJ	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA

DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/LAET	CSL/2LAET	SL4-T2A	SL4-T2A	SL4-T2A	SL4-T2A	SL4-T2A	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2	SL4-T2
Boeing Structure #			MH492	MH492	MH492	MH492	MH492	MH356	MH356	MH356	MH356	MH356	MH356	MH356	MH356	MH356	MH356	MH356
Round			6	7	8	9	10	1	2	3	4	5a	5b	6	7A	7B	8	9
Lab Ref			MN86	NJ12	OU68	PR80	QU69											
Date removed			03/18/08	08/05/08	04/07/09	10/07/09	04/29/10	08/11/05	03/15/06	10/11/06	01/08/07	05/14/07	10/29/07	03/18/08	07/30/08	12/03/08	04/06/09	04/08/10
Sampled by			SPU	SPU	SPU	SPU	SPU	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing
2,4-Dimethylphenol <sup>a</sup>	29	29	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
2,4-Dinitrophenol			2,300 UW	NA	NA	NA	9,300 U	NA	13,000 U	NA	NA	NA	NA	NA	NA	880 UW	NA	NA
2,4-Dinitrotoluene			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
2,6-Dinitrotoluene			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
2-Chloronaphthalene			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
2-Chlorophenol			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
2-Methylnaphthalene	670	670	230 UW	NA	NA	NA	4,800	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
2-Methylphenol <sup>a</sup>	63	63	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
2-Nitroaniline			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
2-Nitrophenol			1,100 UW	NA	NA	NA	930 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
3,3'-Dichlorobenzidine			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
3-Nitroaniline			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
4,6-Dinitro-2-methylphenol			2,300 UW	NA	NA	NA	9,300 U	NA	13,000 U	NA	NA	NA	NA	NA	NA	880 UW	NA	NA
4-Bromophenyl-phenylether			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
4-Chloro-3-methylphenol			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
4-Chloroaniline			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
4-Chlorophenyl-phenylether			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
4-Methylphenol <sup>a</sup>	670	670	400 W	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
4-Nitroaniline			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
4-Nitrophenol			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
Benzoic acid <sup>a</sup>	650	650	2,300 UW	NA	NA	NA	9,300 U	NA	13,000 U	NA	NA	NA	NA	NA	NA	880 UW	NA	4,700 U
Benzyl alcohol <sup>a</sup>	57	73	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
bis(2-Chloroethoxy) methane			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
Bis-(2-chloroethyl) ether			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
Carbazole			2,800 W	NA	NA	NA	8,200	NA	3,600	NA	NA	NA	NA	NA	NA	100 W	NA	NA
Dibenzofuran	540	540	390 W	NA	NA	NA	1,300	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	430 J
Hexachlorobenzene	22	70	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
Hexachlorobutadiene	11	120	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
Hexachlorocyclopentadiene			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
Hexachloroethane			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
Isophorone			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
Nitrobenzene			230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	NA
n-Nitroso-di-n-propylamine			1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	NA
N-Nitrosodiphenylamine	28	40	230 UW	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U
Pentachlorophenol <sup>a</sup>	360	690	1,100 UW	NA	NA	NA	4,600 U	NA	6,600 U	NA	NA	NA	NA	NA	NA	440 UW	NA	2,300 U
Phenol <sup>a</sup>	420	1,200	540 W	NA	NA	NA	930 U	NA	1,300 U	NA	NA	NA	NA	NA	NA	88 UW	NA	470 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

W = Results presented as wet weight.



Concentration exceeds SQS/LAET/MTCA

Concentration exceeds CSL/2LAET



DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/LAET	CSL/2LAET	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T3
Boeing Structure #			MH477	MH477	MH477	MH477	MH477	MH477	MH477	MH477	MH477	MH477	CB364	CB364	CB364	CB364	CB364	CB364
Round			1	2	3	4	5	6	7	8	9	10	1	2	3	4	5a	5b
Lab Ref			IJ98	JD97	KA06	KL30	LA29	MN86	NJ12	OU68	PR80	QU69						
Date removed			08/11/05	03/16/06	10/06/06	01/09/07	05/17/07	03/18/08	08/05/08	04/07/09	10/07/09	04/29/10	08/11/05	03/15/06	10/11/06	01/08/07	05/14/07	10/29/07
Sampled by			SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing
Total solids			NA	49.7	NA	50.6	35.4	NA	74.7	NA	NA	NA	NA	13.4 J	4.93	40.8	NA	NA
TOC (%)			NA	11.80	NA	4.84	6.77	NA	5.92	NA	NA	NA	NA	5.80	NA	2.38	NA	NA
<b>Metals (mg/kg dw)</b>																		
Arsenic	57	93	NA	12	20 U	NA	20 U	10 U	30 U	20 J	30 UJ	10 U	NA	30 U	100 U	10 U	NA	5 UW
Copper	390	390	NA	142	282	NA	121	117	86	63 J	56 J	48	NA	99	106	72.2	NA	4.3 W
Lead	450	530	NA	740	1,070	NA	787	405	250	64 J	60 J	31	NA	120	100	97	NA	4 W
Mercury	0.41	0.59	NA	0.16	0.2 U	NA	0.10 U	0.10	0.09 U	0.20 UJ	0.06 UJ	0.05 U	NA	0.3	0.7 U	0.09 U	NA	0.03 UW
Zinc	410	960	NA	276	418	NA	289	241	179	162 J	163 J	91	NA	448	660	293	NA	30 W
<b>Total petroleum hydrocarbons (mg/kg dw)</b>																		
TPH-diesel	2,000 <sup>b</sup>		NA	410	NA	NA	NA	NA	420	NA	NA	NA	NA	320	NA	NA	NA	NA
TPH-oil	2,000 <sup>b</sup>		NA	2,700	NA	NA	NA	NA	5,300	NA	NA	NA	NA	1,200	NA	NA	NA	NA
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	NA	370 J	83	76 J	NA	100 J	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Acenaphthylene	1,300	1,300	NA	660 U	34	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Anthracene	960	960	NA	690	230	220	NA	320	270 U	NA	NA	130	NA	530 U	NA	480 U	NA	NA
Fluorene	540	540	NA	420 J	100	110 J	NA	150 J	270 U	NA	NA	60 J	NA	530 U	NA	480 U	NA	NA
Naphthalene	2,100	2,100	NA	660 U	37	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Phenanthrene	1,500	1,500	NA	6,000	1,800	1,700	NA	2,700	1,300	NA	NA	1,500	NA	1,800	NA	2,000	NA	NA
Total LPAH	5,200	5,200	NA	7,480 J	2,284	2,106 J	NA	3,270 J	1,300	NA	NA	1,690	NA	1,800	NA	2,000	NA	NA
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	NA	3,600	1,100	1,100	NA	1,800	820	NA	NA	1,000	NA	1,200	NA	1,300	NA	NA
Benzo(a)pyrene	1,600	1,600	NA	4,600	1,500	1,600	NA	2,600	1,300	NA	NA	1,700	NA	1,500	NA	1,900	NA	NA
Benzo(b)fluoranthene	3,200	3,200	NA	7,400	2,100	3,400	NA	5,000	1,800	NA	NA	2,300	NA	2,600	NA	3,000	NA	NA
Benzo(g,h,i)perylene	670	720	NA	2,200 J	510	880	NA	1,000	880	NA	NA	1,800	NA	950	NA	1,500	NA	NA
Benzo(k)fluoranthene	3,200	3,200	NA	5,100	1,200	1,100	NA	3,300	2,000	NA	NA	2,300 J	NA	1,700	NA	1,700	NA	NA
Chrysene	1,400	2,800	NA	6,800	2,100	2,100	NA	4,200	2,200	NA	NA	2,400	NA	2,600	NA	2,600	NA	NA
Dibenz(a,h)anthracene	230	230	NA	600	250	170	NA	320	270 U	NA	NA	600	NA	530 U	NA	480 U	NA	NA
Fluoranthene	1,700	2,500	NA	12,000	3,700	4,000	NA	7,400	2,700	NA	NA	3,800	NA	4,800	NA	4,700	NA	NA
Indeno(1,2,3-cd)pyrene	600	690	NA	2,500	580	1,100	NA	1,300	840	NA	NA	1,700	NA	930	NA	1,400	NA	NA
Pyrene	2,600	3,300	NA	8,400	2,600	2,400	NA	4,200	2,200	NA	NA	2,000	NA	2,700	NA	2,900	NA	NA
Total HPAH	12,000	17,000	NA	53,200 J	15,640	17,850	NA	31,120	14,740	NA	NA	19,600	NA	18,980	NA	21,000	NA	NA
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	NA	3,800	670	800	NA	2,900	3,800	NA	NA	1,600	NA	4,800	NA	3,600	NA	NA
Butylbenzylphthalate	63	900	NA	540 J	62	140	NA	170 J	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Diethylphthalate	200		NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 UJ	NA	530 U	NA	480 U	NA	NA
Dimethylphthalate	71	160	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Di-n-butylphthalate	1,400	1,400	NA	660 U	110 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Di-n-octyl phthalate	6,200		NA	660 U	44	130 U	NA	100 J	270 U	NA	NA	110 U	NA	23,000	NA	11,000	NA	NA
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			34 U	20 U	NA	32 U	59 U	920 U	50 U	66 U	20 U	20 U	20 U	160 U	78 U	49 U	NA	34 UW
Aroclor 1221			34 U	20 U	NA	32 U	59 U	920 U	50 U	66 U	20 U	20 U	20 U	160 U	39 U	49 U	NA	34 UW
Aroclor 1232			34 U	20 U	NA	32 U	59 U	920 U	50 U	66 U	20 U	20 U	20 U	310 U	160 U	49 U	NA	34 UW
Aroclor 1242			34 U	20 U	NA	32 U	59 U	920 U	50 U	66 U	20 U	20 U	20 U	160 U	78 U	49 U	NA	34 UW
Aroclor 1248			34 U	20 U	NA	32 U	59 U	920 U	50 U	66 U	20 U	20 U	20 U	270 U	160 U	120 Y	NA	34 UW
Aroclor 1254			38 J	550	NA	100	78	920 U	140 J	140	20 U	20 U	1,400	1,300	480	430	NA	34 UW
Aroclor 1260			34 U	180	NA	87	59 U	920 U	97 J	85	20 U	20 U	380 U	510	150	140	NA	34 UW
Total PCBs	130	1,000	38 J	730	NA	187	78	920 U	237 J	225	20 U	20 U	1,400	1,810	630	570	NA	34 UW
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
1,2-Dichlorobenzene	35	50	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
1,3-Dichlorobenzene			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
1,4-Dichlorobenzene	110	110	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
1-Methylnaphthalene										NA	NA	110 U						
2,2'-Oxybis(1-chloropropane)			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
2,4,5-Trichlorophenol			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
2,4,6-Trichlorophenol			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
2,4-Dichlorophenol			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 UJ	NA	2,700 U	NA	NA	NA	NA

DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/ LAET	CSL/ 2LAET	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3A	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T3
Boeing Structure #			MH477	MH477	MH477	MH477	MH477	MH477	MH477	MH477	MH477	MH477	CB364	CB364	CB364	CB364	CB364	CB364
Round			1	2	3	4	5	6	7	8	9	10	1	2	3	4	5a	5b
Lab Ref			IJ98	JD97	KA06	KL30	LA29	MN86	NJ12	OU68	PR80	QU69						
Date removed			08/11/05	03/16/06	10/06/06	01/09/07	05/17/07	03/18/08	08/05/08	04/07/09	10/07/09	04/29/10	08/11/05	03/15/06	10/11/06	01/08/07	05/14/07	10/29/07
Sampled by			SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing
2,4-Dimethylphenol <sup>a</sup>	29	29	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
2,4-Dinitrophenol			NA	6,600 U	200 U	1,300 U	NA	2,000 U	2,700 U	NA	NA	1,100 U	NA	5,300 U	NA	NA	NA	NA
2,4-Dinitrotoluene			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
2,6-Dinitrotoluene			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
2-Chloronaphthalene			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
2-Chlorophenol			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
2-Methylnaphthalene	670	670	NA	660 U	42	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
2-Methylphenol <sup>a</sup>	63	63	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
2-Nitroaniline			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
2-Nitrophenol			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	110 U	NA	2,700 U	NA	NA	NA	NA
3,3'-Dichlorobenzidine			NA	3,300 R	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
3-Nitroaniline			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol			NA	6,600 U	200 U	1,300 U	NA	2,000 U	2,700 U	NA	NA	1,100 U	NA	5,300 U	NA	NA	NA	NA
4-Bromophenyl-phenylether			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
4-Chloro-3-methylphenol			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
4-Chloroaniline			NA	3,300 R	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
4-Chlorophenyl-phenylether			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
4-Methylphenol <sup>a</sup>	670	670	NA	3,000	10 J	310	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
4-Nitroaniline			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
4-Nitrophenol			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
Benzoic acid <sup>a</sup>	650	650	NA	6,600 U	200 U	1,300 U	NA	2,000 U	2,700 U	NA	NA	280 J	NA	5,300 U	NA	4,800 U	NA	NA
Benzyl alcohol <sup>a</sup>	57	73	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
bis(2-Chloroethoxy) methane			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
Bis-(2-chloroethyl) ether			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
Carbazole			NA	1,400	340	540	NA	830	350	NA	NA	460	NA	530 U	NA	NA	NA	NA
Dibenzofuran	540	540	NA	660 U	76	130 U	NA	130 J	270 U	NA	NA	64 J	NA	530 U	NA	480 U	NA	NA
Hexachlorobenzene	22	70	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Hexachlorobutadiene	11	120	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Hexachlorocyclopentadiene			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
Hexachloroethane			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Isophorone			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
Nitrobenzene			NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	NA	NA	NA
n-Nitroso-di-n-propylamine			NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	NA	NA	NA
N-Nitrosodiphenylamine	28	40	NA	660 U	20 U	130 U	NA	200 U	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA
Pentachlorophenol <sup>a</sup>	360	690	NA	3,300 U	99 U	670 U	NA	990 U	1,300 U	NA	NA	560 U	NA	2,700 U	NA	2,400 U	NA	NA
Phenol <sup>a</sup>	420	1,200	NA	660 U	40 B	130 U	NA	210	270 U	NA	NA	110 U	NA	530 U	NA	480 U	NA	NA

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

W = Results presented as wet weight.



Concentration exceeds SQS/LAET/MTCA

Concentration exceeds CSL/2LAET

DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/LAET	CSL/2LAET	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A
Boeing Structure #			CB364	CB364	CB364	CB364	CB364	CB364	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A
Round			6	7A	7B	8	9	1	2	3	4	5a	5b	6	7A	7B	8	9
Lab Ref																		
Date removed			03/18/08	07/30/08	12/03/08	04/06/09	04/08/10	08/11/05	03/15/06	10/11/06	01/08/07	05/14/07	10/29/07	03/18/08	07/30/08	12/03/08	04/06/09	04/08/10
Sampled by			Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing
Total solids			NA	NA	NA	NA	17.50	47.3 J	NA	27.8	50.5	NA	NA	NA	NA	NA	NA	62.10
TOC (%)			NA	NA	NA	NA	NA	5.35	NA	NA	4.06	NA	NA	NA	NA	NA	NA	9.17
<b>Metals (mg/kg dw)</b>																		
Arsenic	57	93	NA	NA	NA	NA	NA	16	NA	20	12	NA	6 W	NA	NA	NA	NA	14
Copper	390	390	NA	NA	NA	NA	NA	94.3	NA	262	76	NA	61.0 W	NA	NA	NA	NA	248 J
Lead	450	530	NA	NA	NA	NA	NA	144	NA	414	121	NA	77 W	NA	NA	NA	NA	376 J
Mercury	0.41	0.59	NA	NA	NA	NA	NA	0.19	NA	0.3	0.09	NA	0.07 W	NA	NA	NA	NA	0.23
Zinc	410	960	NA	NA	NA	NA	NA	460	NA	1,220	433	NA	309 W	NA	NA	NA	NA	551
<b>Total petroleum hydrocarbons (mg/kg dw)</b>																		
TPH-diesel	2,000 <sup>b</sup>		NA	NA	NA	NA	NA	100	180	NA	140	NA	NA	NA	NA	NA	NA	210
TPH-oil	2,000 <sup>b</sup>		NA	NA	NA	NA	NA	410	1,100	NA	600	NA	NA	NA	NA	NA	NA	1,400
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	170 J
Acenaphthylene	1,300	1,300	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U
Anthracene	960	960	63 W	NA	82 UW	NA	180 U	180	600 U	NA	210	NA	NA	120 W	530 UW	NA	500 UW	680
Fluorene	540	540	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	260
Naphthalene	2,100	2,100	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U
Phenanthrene	1,500	1,500	300 W	NA	82 UW	NA	760	1,700	1,600	NA	1,400	NA	NA	800 W	1,000 W	NA	2,300 W	4,900
Total LPAH	5,200	5,200	599 W	NA	492 UW	NA	760	1,880	1,600	NA	1,610	NA	NA	1,164 W	3,650 W	NA	4,800 W	6,010
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	210 W	NA	82 UW	NA	440	860	1,000	NA	920	NA	NA	460 W	630 W	NA	1,100 W	3,900
Benzo(a)pyrene	1,600	1,600	310 W	NA	82 UW	NA	670	1,400	1,600	NA	1,500	NA	NA	730 W	1,200 W	NA	2,100 W	5,700
Benzo(b)fluoranthene	3,200	3,200	500 W	NA	82 UW	NA	810	2,100	2,500	NA	2,300	NA	NA	1,200 W	2,000 W	NA	2,600 W	5,500
Benzo(g,h,i)perylene	670	720	220 W	NA	82 UW	NA	550	710	900	NA	690	NA	NA	590 W	1,200 W	NA	2,300 W	2,900
Benzo(k)fluoranthene	3,200	3,200	240 W	NA	82 UW	NA	810	1,300	1,900	NA	2,500	NA	NA	1,000 W	1,400 W	NA	3,500 W	5,500
Chrysene	1,400	2,800	390 W	NA	84 W	NA	1,100	1,700	2,500	NA	2,000	NA	NA	1,100 W	1,600 W	NA	3,300 W	6,500
Dibenz(a,h)anthracene	230	230	60 W	NA	82 UW	NA	180 J	160 U	600 U	NA	160 U	NA	NA	220 W	530 UW	NA	320 JW	1,200
Fluoranthene	1,700	2,500	690 W	NA	100 W	NA	1,800	3,100	4,200	NA	3,200	NA	NA	1,800 W	2,500 W	NA	4,800 W	13,000
Indeno(1,2,3-cd)pyrene	600	690	220 W	NA	82 UW	NA	480	780	960	NA	670	NA	NA	560 W	1,200 W	NA	2,100 W	2,800
Pyrene	2,600	3,300	480 W	NA	90 W	NA	1,100	2,100	2,400	NA	2,300	NA	NA	1,200 W	2,000 W	NA	3,900 W	7,100
Total HPAH	12,000	17,000	3,320 W	NA	848 W	NA	7,940	14,050	17,960	NA	16,080	NA	NA	8,860 W	14,260 W	NA	26,020 JW	54,100
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	490 W	NA	340 W	NA	4,000	2,600	2,600	NA	3,700	NA	NA	1,400 W	1,700 W	NA	2,500 W	6,000
Butylbenzylphthalate	63	900	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	220	NA	NA	76 W	530 UW	NA	500 UW	630
Diethylphthalate	200		59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U
Dimethylphthalate	71	160	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U
Di-n-butylphthalate	1,400	1,400	59 UW	NA	82 UW	NA	660	350	600 U	NA	240	NA	NA	130 W	530 UW	NA	420 JW	320
Di-n-octyl phthalate	6,200		1,600 W	NA	2,000 W	NA	20,000	4,300	9,600	NA	7,200	NA	NA	2,600 W	5,900 W	NA	16,000 W	1,200
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			10 UW	13 UW	10 UW	21 UW	110 U	10 U	10 U	81 U	10 U	NA	11 UW	10 UW	15 UW	11 UW	10 UW	53 U
Aroclor 1221			10 UW	13 UW	10 UW	21 UW	110 U	10 U	10 U	81 U	10 U	NA	11 UW	10 UW	15 UW	11 UW	10 UW	53 U
Aroclor 1232			10 UW	13 UW	10 UW	21 UW	110 U	10 U	10 U	81 U	10 U	NA	11 UW	10 UW	15 UW	11 UW	10 UW	53 U
Aroclor 1242			10 UW	13 UW	10 UW	21 UW	110 U	10 U	10 U	81 U	10 U	NA	11 UW	10 UW	15 UW	11 UW	10 UW	53 U
Aroclor 1248			20 UW	13 UW	10 UW	21 UW	110 U	10 U	10 U	81 U	10 U	NA	22 W	10 UW	15 UW	11 UW	10 UW	270 U
Aroclor 1254			65 W	32 W	26 W	28 W	250	290 P	39	83	41	NA	49 W	16 W	28 W	11 UW	10 UW	510
Aroclor 1260			25 W	13 UW	10 UW	21 UW	110 U	160	75	160	62	NA	28 W	26 W	30 W	11 UW	10 UW	170
Total PCBs	130	1,000	90 W	32 W	26 W	28 W	250	450 P	114	243	103	NA	99 W	42 W	58 W	11 UW	10 UW	680
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U
1,2-Dichlorobenzene	35	50	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U
1,3-Dichlorobenzene			59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U
1,4-Dichlorobenzene	110	110	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U
1-Methylnaphthalene			UW				180 U											250 U
2,2'-Oxybis(1-chloropropane)			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/ LAET	CSL/ 2LAET	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T3	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	SL4-T4A	
Boeing Structure #			CB364	CB364	CB364	CB364	CB364	CB364	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	CB229A	
Round			6	7A	7B	8	9		1	2	3	4	5a	5b	6	7A	7B	8	9
Lab Ref																			
Date removed			03/18/08	07/30/08	12/03/08	04/06/09	04/08/10	08/11/05	03/15/06	10/11/06	01/08/07	05/14/07	10/29/07	03/18/08	07/30/08	12/03/08	04/06/09	04/08/10	
Sampled by			Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	
2,4-Dimethylphenol <sup>a</sup>	29	29	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	
2,4-Dinitrophenol			NA	NA	820 UW	NA	NA	1,600 U	6,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4-Dinitrotoluene			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,6-Dinitrotoluene			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Chloronaphthalene			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Chlorophenol			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Methylnaphthalene	670	670	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	
2-Methylphenol <sup>a</sup>	63	63	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	
2-Nitroaniline			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Nitrophenol			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3,3'-Dichlorobenzidine			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3-Nitroaniline			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4,6-Dinitro-2-methylphenol			NA	NA	820 UW	NA	NA	1,600 U	6,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4-Bromophenyl-phenylether			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4-Chloro-3-methylphenol			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4-Chloroaniline			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4-Chlorophenyl-phenylether			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4-Methylphenol <sup>a</sup>	670	670	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	380 JW	270	
4-Nitroaniline			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4-Nitrophenol			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzoic acid <sup>a</sup>	650	650	59 UW	NA	820 UW	NA	1,800 U	1,600 U	6,000 U	NA	1,600 U	NA	NA	610 UW	5,300 UW	NA	5,000 UW	2,500 U	
Benzyl alcohol <sup>a</sup>	57	73	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	
bis(2-Chloroethoxy) methane			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bis-(2-chloroethyl) ether			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Carbazole			NA	NA	82 UW	NA	NA	370	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dibenzofuran	540	540	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	200 J	
Hexachlorobenzene	22	70	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	
Hexachlorobutadiene	11	120	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	
Hexachlorocyclopentadiene			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Hexachloroethane			59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	
Isophorone			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Nitrobenzene			NA	NA	82 UW	NA	NA	160 U	600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
n-Nitroso-di-n-propylamine			NA	NA	410 UW	NA	NA	790 U	3,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
N-Nitrosodiphenylamine	28	40	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	
Pentachlorophenol <sup>a</sup>	360	690	300 UW	NA	410 UW	NA	910 U	790 U	3,000 U	NA	810 U	NA	NA	300 UW	2,600 UW	NA	2,500 UW	1,300 U	
Phenol <sup>a</sup>	420	1,200	59 UW	NA	82 UW	NA	180 U	160 U	600 U	NA	160 U	NA	NA	61 UW	530 UW	NA	500 UW	250 U	

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

W = Results presented as wet weight.



Concentration exceeds SQS/LAET/MTCA

Concentration exceeds CSL/2LAET





DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/ LAET	CSL/ 2LAET	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T4	SL4-T5A	SL4-T5A	SL4-T5A	SL4-T5A	SL4-T5A
Boeing Structure #			MH221A	MH221A	MH221A	MH221A	MH221A	MH221A	MH221A	MH221A	MH221A	MH221A	MH221A	MH221A	MH178	MH178	MH178	MH178	MH178
Round			1	2	3	4	5a	5b	6	7A	7B	8	9	1	2	3	4	5a	
Lab Ref																			
Date removed			08/11/05	03/15/06	10/11/06	01/08/07	05/17/07	10/29/07	03/18/08	07/30/08	12/03/08	04/06/09	04/08/10	08/11/05	03/15/06	10/06/06	01/08/07	05/14/07	
Sampled by			Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	
2,4-Dimethylphenol <sup>a</sup>	29	29	210 U	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
2,4-Dinitrophenol			2,100 U	5,500 U	NA	NA	NA	NA	NA	NA	2,600 UW	NA	NA	1,100 U	6,800 U	NA	NA	NA	
2,4-Dinitrotoluene			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
2,6-Dinitrotoluene			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
2-Chloronaphthalene			210 U	550 U	NA	NA	NA	NA	NA	NA	260 UW	NA	NA	110 U	680 U	NA	NA	NA	
2-Chlorophenol			210 U	550 U	NA	NA	NA	NA	NA	NA	260 UW	NA	NA	110 U	680 U	NA	NA	NA	
2-Methylnaphthalene	670	670	4,000	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
2-Methylphenol <sup>a</sup>	63	63	240	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
2-Nitroaniline			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
2-Nitrophenol			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
3,3'-Dichlorobenzidine			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
3-Nitroaniline			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	370 U	
4,6-Dinitro-2-methylphenol			2,100 U	5,500 U	NA	NA	NA	NA	NA	NA	2,600 UW	NA	NA	1,100 U	6,800 U	NA	NA	NA	
4-Bromophenyl-phenylether			210 U	550 U	NA	NA	NA	NA	NA	NA	260 UW	NA	NA	110 U	680 U	NA	NA	NA	
4-Chloro-3-methylphenol			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
4-Chloroaniline			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
4-Chlorophenyl-phenylether			210 U	550 U	NA	NA	NA	NA	NA	NA	260 UW	NA	NA	110 U	680 U	NA	NA	NA	
4-Methylphenol <sup>a</sup>	670	670	210 U	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	520 W	390 U	410	830	530	2,000	9,400	
4-Nitroaniline			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
4-Nitrophenol			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
Benzoic acid <sup>a</sup>	650	650	2,100 U	5,500 U	NA	2,800 U	NA	NA	980 UW	4,700 UW	2,600 UW	3,400 JW	3,900 U	1,100 U	6,800 U	3,800 U	1,700 U	3,700 U	
Benzyl alcohol <sup>a</sup>	57	73	210 U	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
bis(2-Chloroethoxy) methane			210 U	550 U	NA	NA	NA	NA	NA	NA	260 UW	NA	NA	110 U	680 U	NA	NA	NA	
Bis-(2-chloroethyl) ether			210 U	550 U	NA	NA	NA	NA	NA	NA	260 UW	NA	NA	110 U	680 U	NA	NA	NA	
Carbazole			1,000	570	NA	NA	NA	NA	NA	NA	390	NA	NA	260	1,400	NA	NA	NA	
Dibenzofuran	540	540	740	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
Hexachlorobenzene	22	70	210 U	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
Hexachlorobutadiene	11	120	210 U	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
Hexachlorocyclopentadiene			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
Hexachloroethane			210 U	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
Isophorone			210 U	550 U	NA	NA	NA	NA	NA	NA	260 UW	NA	NA	110 U	680 U	NA	NA	NA	
Nitrobenzene			210 U	550 U	NA	NA	NA	NA	NA	NA	260 UW	NA	NA	110 U	680 U	NA	NA	NA	
n-Nitroso-di-n-propylamine			1,000 U	2,800 U	NA	NA	NA	NA	NA	NA	1,300 UW	NA	NA	560 U	3,400 U	NA	NA	NA	
N-Nitrosodiphenylamine	28	40	210 U	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	370 UW	390 U	110 U	680 U	380 U	170 U	370 U	
Pentachlorophenol <sup>a</sup>	360	690	1,000 U	2,800 U	NA	1,400 U	NA	NA	490 UW	2,300 UW	1,300 UW	1,900 UW	2,000 U	560 U	3,400 U	1,900 U	840 U	1,800 U	
Phenol <sup>a</sup>	420	1,200	220	550 U	NA	280 U	NA	NA	98 UW	470 UW	260 UW	390 W	390 U	110 U	680 U	380 U	180	1,100	

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.



UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

W = Results presented as wet weight.

 Concentration exceeds SQS/LAET/MTCA  
 Concentration exceeds CSL/2LAET



DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/ LAET	CSL/ 2LAET	SL4-T5A	SL4-T5A	SL4-T5A	SL4-T5A	SL4-T5A	SL4-T5A	SL4-T5	SL4-T5	SL4-T5	SL4-T5	SL4-T5	SL4-T5	SL4-T5	SL4-T5	SL4-T5	SL4-T5
Boeing Structure #			MH178	MH178	MH178	MH178	MH178	MH178	CB363	CB363	CB363	CB363	CB363	CB363	CB363	CB363	CB363	CB363
Round			5b	6	7A	7B	8	9	1	2	3	4	5a	5b	6	7A	7B	8
Lab Ref																		
Date removed			10/29/07	03/18/08	07/30/08	12/03/08	04/06/09	04/08/10	08/11/05	03/15/05	10/11/06	01/08/07	05/14/07	10/29/07	03/18/08	07/30/08	12/03/08	04/06/09
Sampled by			Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing	Boeing
2,4-Dimethylphenol <sup>a</sup>	29	29	560 UJ	160 U	290 <b>UW</b>	230 U	250 U	360 U	130 U	1,200 U	260 U	<b>440</b>	420 U	120 UJ	450 U	270 <b>UW</b>	230 U	470 U
2,4-Dinitrophenol			5,600 UJ	NA	NA	2,300 U	NA	NA	1,300 U	12,000 U	NA	NA	NA	1,200 UJ	NA	NA	2,300 U	NA
2,4-Dinitrotoluene			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
2,6-Dinitrotoluene			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
2-Chloronaphthalene			560 UJ	NA	NA	230 U	NA	NA	130 U	1,200 U	NA	NA	NA	120 UJ	NA	NA	230 U	NA
2-Chlorophenol			560 UJ	NA	NA	230 U	NA	NA	130 U	1,200 U	NA	NA	NA	120 UJ	NA	NA	230 U	NA
2-Methylnaphthalene	670	670	560 UJ	160 U	290 <b>UW</b>	230 U	<b>160 J</b>	360 U	130 U	1,200 U	260 U	220 U	420 U	120 UJ	650	270 <b>UW</b>	230 U	<b>270 J</b>
2-Methylphenol <sup>a</sup>	63	63	560 UJ	160 U	290 <b>UW</b>	230 U	250 U	360 U	130 U	1,200 U	260 U	220 U	420 U	120 UJ	450 U	270 <b>UW</b>	230 U	470 U
2-Nitroaniline			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
2-Nitrophenol			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
3,3'-Dichlorobenzidine			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
3-Nitroaniline			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	420 U	600 UJ	NA	NA	1,200 U	NA
4,6-Dinitro-2-methylphenol			5,600 UJ	NA	NA	2,300 U	NA	NA	1,300 U	12,000 U	NA	NA	NA	1,200 UJ	NA	NA	2,300 U	NA
4-Bromophenyl-phenylether			560 UJ	NA	NA	230 U	NA	NA	130 U	1,200 U	NA	NA	NA	120 UJ	NA	NA	230 U	NA
4-Chloro-3-methylphenol			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
4-Chloroaniline			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
4-Chlorophenyl-phenylether			560 UJ	NA	NA	230 U	NA	NA	130 U	1,200 U	NA	NA	NA	120 UJ	NA	NA	230 U	NA
4-Methylphenol <sup>a</sup>	670	670	<b>1,600 J</b>	160 U	<b>310</b>	<b>1,300</b>	<b>12,000</b>	360 U	<b>360</b>	1,200 U	<b>590</b>	<b>4,600</b>	<b>8,100</b>	<b>280 J</b>	<b>760</b>	<b>2,400 W</b>	<b>340</b>	<b>11,000</b>
4-Nitroaniline			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
4-Nitrophenol			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
Benzoic acid <sup>a</sup>	650	650	5,600 UJ	1,600 U	2,900 <b>UW</b>	2,300 U	2,500 U	3,600 U	1,300 U	12,000 U	2,600 U	2,200 U	4,200 U	1,200 UJ	4,500 U	2,700 <b>UW</b>	2,300 U	<b>3,500 J</b>
Benzyl alcohol <sup>a</sup>	57	73	560 UJ	160 U	290 <b>UW</b>	230 U	250 U	360 U	130 U	1,200 U	260 U	220 U	420 U	120 UJ	450 U	270 <b>UW</b>	230 U	470 U
bis(2-Chloroethoxy) methane			560 UJ	NA	NA	230 U	NA	NA	130 U	1,200 U	NA	NA	NA	120 UJ	NA	NA	230 U	NA
Bis-(2-chloroethyl) ether			560 UJ	NA	NA	230 U	NA	NA	130 U	1,200 U	NA	NA	NA	120 UJ	NA	NA	230 U	NA
Carbazole			570 J	NA	NA	<b>1,100</b>	NA	NA	<b>310</b>	1,200 U	NA	NA	NA	<b>180 J</b>	NA	NA	<b>410</b>	NA
Dibenzofuran	540	540	560 UJ	160 U	290 <b>UW</b>	230 U	<b>200 J</b>	<b>280 J</b>	130 U	1,200 U	260 U	220 U	420 U	120 UJ	600	270 <b>UW</b>	230 U	470 U
Hexachlorobenzene	22	70	560 UJ	160 U	290 <b>UW</b>	230 U	250 U	360 U	130 U	1,200 U	260 U	220 U	420 U	120 UJ	450 U	270 <b>UW</b>	230 U	470 U
Hexachlorobutadiene	11	120	560 UJ	160 U	290 <b>UW</b>	230 U	250 U	360 U	130 U	1,200 U	260 U	220 U	420 U	120 UJ	450 U	270 <b>UW</b>	230 U	470 U
Hexachlorocyclopentadiene			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
Hexachloroethane			560 UJ	160 U	290 <b>UW</b>	230 U	250 U	360 U	130 U	1,200 U	260 U	220 U	420 U	120 UJ	450 U	270 <b>UW</b>	230 U	470 U
Isophorone			560 UJ	NA	NA	230 U	NA	NA	130 U	1,200 U	NA	NA	NA	120 UJ	NA	NA	230 U	NA
Nitrobenzene			560 UJ	NA	NA	230 U	NA	NA	130 U	1,200 U	NA	NA	NA	120 UJ	NA	NA	230 U	NA
n-Nitroso-di-n-propylamine			2,800 UJ	NA	NA	1,200 U	NA	NA	660 U	5,800 U	NA	NA	NA	600 UJ	NA	NA	1,200 U	NA
N-Nitrosodiphenylamine	28	40	560 UJ	160 U	290 <b>UW</b>	230 U	250 U	360 U	130 U	1,200 U	260 U	220 U	420 U	120 UJ	450 U	270 <b>UW</b>	230 U	470 U
Pentachlorophenol <sup>a</sup>	360	690	2,800 UJ	820 U	1,400 <b>UW</b>	1,200 U	1,300 U	1,800 U	660 U	5,800 U	1,300 U	1,100 U	2,100 U	600 UJ	2,200 U	1,400 <b>UW</b>	1,200 U	2,400 U
Phenol <sup>a</sup>	420	1,200	560 UJ	160 U	290 <b>UW</b>	230 U	<b>640</b>	360 U	130 U	1,200 U	<b>300</b>	<b>330</b>	<b>860</b>	120 UJ	450 U	270 <b>UW</b>	230 U	<b>1,900</b>

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

W = Results presented as wet weight.



Concentration exceeds SQS/LAET/MTCA

Concentration exceeds CSL/2LAET



DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/ LAET	CSL/ 2LAET	SL4-T5	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6
Boeing Structure #			CB363	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Round			9	1	2	3	4	5	6	7	8	9	10
Lab Ref				IJ98	JD97	KA06	KL30	LA29	MN86	NJ12	OU68	PR80	QU69
Date removed			04/08/10	08/11/05	03/16/06	10/06/06	01/09/07	05/17/07	03/18/08	08/05/08	04/08/09	10/07/09	04/29/10
Sampled by			Boeing	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU
Total solids			52.9	82.9	66.4	47.7	70.0	54.5	75.6	NA	62.3	67.0	65.8
TOC (%)			9.84	3.17	4.02	4.74	4.91	2.01	1.97	NA	4.80	3.46	5.90
<b>Metals (mg/kg dw)</b>													
Arsenic	57	93	15	11 J	9	10 U	8 U	10 U	7 U	NA	8 UJ	7 UJ	7 U
Copper	390	390	287	84.5 J	93.3	156	75.6	83.2	77.6	NA	142 J	112 J	89.9
Lead	450	530	277	110 J	91	137	131	87	261	NA	101 J	130 J	91
Mercury	0.41	0.59	0.34	0.1 J	0.07	0.2	0.06 U	0.07 U	0.06 U	NA	0.03 J	0.04 J	0.07
Zinc	410	960	705	422 J	697	801	405	510	376	NA	442 J	496 J	390
<b>Total petroleum hydrocarbons (mg/kg dw)</b>													
TPH-diesel	2,000 <sup>b</sup>		340	310	530	NA	280	NA	NA	NA	660	320	170
TPH-oil	2,000 <sup>b</sup>		1,800	800	3,000	NA	1,500	NA	NA	NA	3,900	1,700	1,000
<b>LPAH (ug/kg DW)</b>													
Acenaphthene	500	500	140 J	79 U	210 U	99 J	59	NA	220 J	100 U	46	430 U	110 U
Acenaphthylene	1,300	1,300	250 U	79 U	210 U	170 U	45 U	NA	150 J	100 U	33 U	430 U	110 U
Anthracene	960	960	540	98	130 J	160 J	100	NA	550	230	130	270 J	100 J
Fluorene	540	540	250	79 U	210 U	140 J	62	NA	630	100 U	60	430 U	58 J
Naphthalene	2,100	2,100	250 U	79 U	210 U	140 J	45 U	NA	450	100 U	110	430 U	72 J
Phenanthrene	1,500	1,500	4,200	570	740	1,100	450	NA	2,500	850	480	1,000	630
Total LPAH	5,200	5,200	5,130	668	870 J	1,639 J	671	NA	4,500 J	1,080	826	1,270 J	860 J
<b>HPAH (ug/kg DW)</b>													
Benzo(a)anthracene	1,300	1,600	2,800	270	370	500	280	NA	680	510	140	420 J	420
Benzo(a)pyrene	1,600	1,600	4,500	250	340	690	270	NA	680	500	270	400 J	420
Benzo(b)fluoranthene	3,200	3,200	4,400	380	480	750	520	NA	700	560	280	310 J	440
Benzo(g,h,i)perylene	670	720	3,000	79 U	150 J	280	96	NA	200 J	300	190	290 J	220
Benzo(k)fluoranthene	3,200	3,200	4,400	220	430	770	190	NA	680	600	380	310 J	440 J
Chrysene	1,400	2,800	5,500	370	580	970	330	NA	950	780	540	540 NJ	640
Dibenz(a,h)anthracene	230	230	1,100	79 U	210 U	170 U	45 U	NA	260 U	100 U	38	430 U	74 J
Fluoranthene	1,700	2,500	10,000	880	1,100	2,000	810	NA	2,600	1,400	750	1,300	1,500
Indeno(1,2,3-cd)pyrene	600	690	2,700	84	140 J	200	95	NA	180 J	230	130	250 J	190
Pyrene	2,600	3,300	5,500	630	820	1,200	620	NA	1,600	1,300	1,000	780	700
Total HPAH	12,000	17,000	43,900	3,084	4,410 J	7,360	3,211	NA	8,270 J	6,180	3,718	4,600 J	5,044 J
<b>Phthalates (ug/kg dw)</b>													
Bis(2-ethylhexyl)phthalate	1,300	1,900	10,000	6,000	7,500	16,000	2,600	NA	12,000	7,400	6,200	5,200	4,300
Butylbenzylphthalate	63	900	280 J	420	330	800	240	NA	500	270	370	520	440
Diethylphthalate	200		250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	49	430 U	110 UJ
Dimethylphthalate	71	160	250 U	79 U	210 U	90 J	40 J	NA	260 U	150	120	430 U	110 J
Di-n-butylphthalate	1,400	1,400	1,200	460	210 U	990 B	51	NA	260 U	100 U	46	430 U	110 U
Di-n-octyl phthalate	6,200		2,500	430	1,200	1,500	190	NA	2,500	610	1,700	1,200	110 U
<b>PCBs (ug/kg dw)</b>													
Aroclor 1016			94 U	1,800 U	20 U	39 U	32 U	58 U	960 U	55 U	29 U	20 U	20 U
Aroclor 1221			94 U	1,800 U	20 U	39 U	32 U	58 U	960 U	55 U	29 U	20 U	20 U
Aroclor 1232			94 U	1,800 U	20 U	39 U	32 U	58 U	960 U	55 U	29 U	20 U	20 U
Aroclor 1242			94 U	1,800 U	20 U	39 U	32 U	58 U	960 U	55 U	29 U	20 U	20 U
Aroclor 1248			940 U	1,800 U	39 Y	39 U	32 U	58 U	960 U	55 U	29 U	41	25
Aroclor 1254			2,200	1,800 U	100	110	48	58 U	960 U	58 J	63	76	40
Aroclor 1260			350	7,800	150	210	38	58 U	960 U	52 J	43	31	21
Total PCBs	130	1,000	2,100	7,800	250	320	86	58 U	960 U	110 J	106	107	61
<b>Other organic compounds (ug/kg dw)</b>													
1,2,4-Trichlorobenzene	31	51	250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
1,2-Dichlorobenzene	35	50	250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
1,3-Dichlorobenzene			250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
1,4-Dichlorobenzene	110	110	250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
1-Methylnaphthalene			250 U										110 U
2,2'-Oxybis(1-chloropropane)			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
2,4,5-Trichlorophenol			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
2,4,6-Trichlorophenol			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
2,4-Dichlorophenol			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 UJ

DT3: Slip 4 sediment trap sampling results (dry weight).

Sed Trap#	SQS/ LAET	CSL/ 2LAET	SL4-T5	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6	SL4-T6
Boeing Structure #			CB363	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Round			9	1	2	3	4	5	6	7	8	9	10
Lab Ref				IJ98	JD97	KA06	KL30	LA29	MN86	NJ12	OU68	PR80	QU69
Date removed			04/08/10	08/11/05	03/16/06	10/06/06	01/09/07	05/17/07	03/18/08	08/05/08	04/08/09	10/07/09	04/29/10
Sampled by			Boeing	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU	SPU
2,4-Dimethylphenol <sup>a</sup>	29	29	250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
2,4-Dinitrophenol			NA	790 U	2,100 U	1,700 U	450 U	NA	2,600 U	1,000 U	330 U	4,300 U	1,100 U
2,4-Dinitrotoluene			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
2,6-Dinitrotoluene			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
2-Chloronaphthalene			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
2-Chlorophenol			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
2-Methylnaphthalene	670	670	250 U	<b>88</b>	210 U	<b>440</b>	45 U	NA	<b>250 J</b>	100 U	<b>48</b>	430 U	110 U
2-Methylphenol <sup>a</sup>	63	63	250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
2-Nitroaniline			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
2-Nitrophenol			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	110 U
3,3'-Dichlorobenzidine			NA	390 U	1,000 <b>R</b>	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
3-Nitroaniline			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
4,6-Dinitro-2-methylphenol			NA	790 U	2,100 U	1,700 U	450 U	NA	2,600 U	1,000 U	330 U	4,300 U	1,100 U
4-Bromophenyl-phenylether			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
4-Chloro-3-methylphenol			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
4-Chloroaniline			NA	390 U	1,000 <b>R</b>	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
4-Chlorophenyl-phenylether			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
4-Methylphenol <sup>a</sup>	670	670	660	<b>170</b>	<b>770</b>	<b>940</b>	<b>810</b>	NA	260 U	<b>130</b>	<b>640</b>	430 U	<b>270</b>
4-Nitroaniline			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
4-Nitrophenol			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
Benzoic acid <sup>a</sup>	650	650	2,500 U	790 U	2,100 U	1,700 U	450 U	NA	2,600 U	1,000 U	330 U	4,300 U	1,100 U
Benzyl alcohol <sup>a</sup>	57	73	250 U	<b>130</b>	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
bis(2-Chloroethoxy) methane			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
Bis-(2-chloroethyl) ether			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
Carbazole			NA	<b>81</b>	<b>140 J</b>	<b>150 J</b>	<b>78</b>	NA	<b>350</b>	<b>160</b>	<b>80</b>	430 U	<b>110</b>
Dibenzofuran	540	540	<b>200 J</b>	79 U	210 U	170 U	45 U	NA	<b>300</b>	100 U	<b>31 J</b>	430 U	110 U
Hexachlorobenzene	22	70	250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
Hexachlorobutadiene	11	120	250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
Hexachlorocyclopentadiene			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
Hexachloroethane			250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
Isophorone			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
Nitrobenzene			NA	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
n-Nitroso-di-n-propylamine			NA	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
N-Nitrosodiphenylamine	28	40	250 U	79 U	210 U	170 U	45 U	NA	260 U	100 U	33 U	430 U	110 U
Pentachlorophenol <sup>a</sup>	360	690	1,200 U	390 U	1,000 U	850 U	220 U	NA	1,300 U	510 U	170 U	2,200 U	540 U
Phenol <sup>a</sup>	420	1,200	250 U	79 U	210 U	<b>400 B</b>	<b>100</b>	NA	260 U	100 U	<b>78 J</b>	430 U	110 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

W = Results presented as wet weight.



Concentration exceeds SQS/LAET/MTCA

Concentration exceeds CSL/2LAET

DT-4: Norfolk sediment trap results (dry weight).

Station ID			NST1	NST2	NST3	NST4	NST5	NST1	NST2	NST3	NST4	NST5	NST1	NST2	NST3	NST4	NST5	NST1
Round			1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4
Lab ref			MN88	MR44	MN88	MN88	MN88	NS67	NQ67	NS67	NS67	NS67	OU68	OT13	OU44	OU44	OU68	PR79
Date removed	SQS/ LAET	CSL/ 2LAET	03/18/08	04/09/08	03/18/08	03/18/08	03/18/08	10/02/08	09/23/08	10/02/08	10/08/08	10/02/08	04/08/09	03/31/09	04/08/09	04/07/09	04/08/09	10/07/09
Total solids (%)			74.3	52.4	50.3	55.9	NA	NA	36.1	42.5	NA	NA	39.2	22.0	43.3	19.6	41.3	NA
Total organic carbon (%)			3.03	5.83	8.18	4.48	NA	NA	17.9	13.3	NA	NA	NA	NA	6.86	NA	NA	NA
<b>Metals (mg/kg)</b>																		
Arsenic	57	93	7 U	13	10 U	11	8 U	NA	NA	10 U	40 U	NA	10 UJ	NA	10 UJ	30 UJ	10 UJ	NA
Copper	390	390	39	100	105	55	38	NA	NA	113	103	NA	97.8 J	NA	107 J	79 J	54.2 J	NA
Lead	450	530	65	141	75	87	40	NA	NA	92	130	NA	62 J	NA	79 J	110 J	85 J	NA
Mercury	0.41	0.59	0.07 U	0.16	0.70	0.07 U	0.09	NA	NA	0.10	0.3 U	NA	0.1 J	NA	0.09 J	0.2 UJ	0.13 J	NA
Zinc	410	960	221	632	705	274	245	NA	NA	823	484	NA	731 J	NA	836 J	309 J	574 J	NA
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>		NA	1,400	NA	NA	NA	NA	NA	840	NA	NA	NA	NA	1,400	NA	NA	NA
TPH-oil	2,000 <sup>b</sup>		NA	4,400	NA	NA	NA	NA	NA	5,200	NA	NA	NA	NA	8,200	NA	NA	NA
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	260 U	70 J	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Acenaphthylene	1,300	1,300	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Anthracene	960	960	160 J	120	380 U	230 U	210 UW	NA	NA	52 J	NA	NA	NA	NA	68	NA	NA	NA
Fluorene	540	540	260 U	140	380 U	230 U	210 UW	NA	NA	32 J	NA	NA	NA	NA	50 U	NA	NA	NA
Naphthalene	2,100	2,100	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Phenanthrene	1,500	1,500	730	590	580	180 J	120 JW	NA	NA	530	NA	NA	NA	NA	420	NA	NA	NA
Total LPAH	5,200	5,200	890 J	920 J	580	180 J	120 JW	NA	NA	614	NA	NA	NA	NA	488	NA	NA	NA
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	480	380	350 J	230 U	210 UW	NA	NA	360	NA	NA	NA	NA	210	NA	NA	NA
Benzo(a)pyrene	1,600	1,600	580	490 J	540	180 J	110 JW	NA	NA	500	NA	NA	NA	NA	410	NA	NA	NA
Benzo(b)fluoranthene	3,200	3,600	790	660 J	1,100	410	230 W	NA	NA	780	NA	NA	NA	NA	630	NA	NA	NA
Benzo(g,h,i)perylene	670	720	170 J	310 J	240 J	230 U	210 UW	NA	NA	450	NA	NA	NA	NA	330	NA	NA	NA
Benzo(k)fluoranthene	3,200	3,600	660	660 J	750	200 J	150 JW	NA	NA	560	NA	NA	NA	NA	620	NA	NA	NA
Chrysene	1,400	2,800	800	780	930	320	200 JW	NA	NA	730	NA	NA	NA	NA	660	NA	NA	NA
Dibenz(a,h)anthracene	230	230	260 U	68 J	380 U	230 U	210 UW	NA	NA	71	NA	NA	NA	NA	65	NA	NA	NA
Fluoranthene	1,700	2,500	1,700	1,200	1,700	550	300 W	NA	NA	1,100	NA	NA	NA	NA	940	NA	NA	NA
Indeno(1,2,3-cd)pyrene	600	690	180 J	260 J	200 J	230 U	210 UW	NA	NA	360	NA	NA	NA	NA	240	NA	NA	NA
Pyrene	2,600	3,300	1,200	2,100	1,100	330	230 W	NA	NA	910	NA	NA	NA	NA	1,500	NA	NA	NA
Total HPAH	12,000	17,000	6,560	6,908	6,910	1,990	1,220 JW	NA	NA	5,821	NA	NA	NA	NA	5,605	NA	NA	NA
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	10,000	7,000	16,000	390	1,000 W	NA	NA	6,100	NA	NA	NA	NA	7,000	NA	NA	NA
Butylbenzylphthalate	63	900	280	260	380 U	230 U	210 UW	NA	NA	1,500	NA	NA	NA	NA	300	NA	NA	NA
Diethylphthalate	200		260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Dimethylphthalate	71	160	610	290 NJ	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Di-n-butylphthalate	1,400	1,400	260 U	78 J	380 U	230 U	210 UW	NA	NA	47 J	NA	NA	NA	NA	50 U	NA	NA	NA
Di-n-octyl phthalate	6,200		670	220	1,100	230 U	210 UW	NA	NA	620	NA	NA	NA	NA	470	NA	NA	NA
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			910 U	20 U	990 U	900 U	960 UW	20 U	NA	20 U	96 U	22 U	38 U	27 U	20 U	37 U	150 U	20 U
Aroclor 1221			910 U	20 U	990 U	900 U	960 UW	20 U	NA	20 U	96 U	22 U	38 U	27 U	20 U	37 U	150 U	20 U
Aroclor 1232			910 U	20 U	990 U	900 U	960 UW	20 U	NA	20 U	96 U	22 U	38 U	27 U	20 U	37 U	150 U	20 U
Aroclor 1242			910 U	20 U	990 U	900 U	960 UW	20 U	NA	20 U	96 U	22 U	38 U	27 U	20 U	37 U	150 U	20 U
Aroclor 1248			910 U	64	990 U	900 U	960 UW	20 U	NA	20 U	96 U	22 U	38 U	27 U	20 U	37 U	150 U	20 U
Aroclor 1254			910 U	150	990 U	900 U	960 UW	31	NA	20 U	96 U	100	40	37	26	37 U	190	51
Aroclor 1260			910 U	74	990 U	900 U	960 UW	20	NA	20 U	96 U	36	38 U	27 U	20 U	37 U	150 U	35
Total PCBs	130	1,000	910 U	288	990 U	900 U	960 UW	51	NA	20 U	96 U	136	40	37	26	37 U	190	86
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
1,2-Dichlorobenzene	35	50	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
1,3-Dichlorobenzene			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
1,4-Dichlorobenzene	110	110	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
<b>1-Methylnaphthalene</b>																		
2,2'-Oxybis(1-chloropropane)			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
2,4,5-Trichlorophenol			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
2,4,6-Trichlorophenol			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
2,4-Dichlorophenol			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA

DT-4: Norfolk sediment trap results (dry weight).

Station ID			NST1	NST2	NST3	NST4	NST5	NST1	NST2	NST3	NST4	NST5	NST1	NST2	NST3	NST4	NST5	NST1
Round			1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4
Lab ref			MN88	MR44	MN88	MN88	MN88	NS67	NQ67	NS67	NS67	NS67	OU68	OT13	OU44	OU44	OU68	PR79
Date removed	SQS/ LAET	CSL/ 2LAET	03/18/08	04/09/08	03/18/08	03/18/08	03/18/08	10/02/08	09/23/08	10/02/08	10/08/08	10/02/08	04/08/09	03/31/09	04/08/09	04/07/09	04/08/09	10/07/09
2,4-Dimethylphenol <sup>a</sup>	29	29	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
2,4-Dinitrophenol			2,600 U	890 U	3,800 U	2,300 U	2,100 UW	NA	NA	590 U	NA	NA	NA	NA	500 U	NA	NA	NA
2,4-Dinitrotoluene			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
2,6-Dinitrotoluene			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
2-Chloronaphthalene			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
2-Chlorophenol			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
2-Methylnaphthalene	670	670	310	73 J	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
2-Methylphenol <sup>a</sup>	63	63	260 U	89 U	380 U	230 U	210 UW	NA	NA	83	NA	NA	NA	NA	50 U	NA	NA	NA
2-Nitroaniline			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
2-Nitrophenol			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
3,3'-Dichlorobenzidine			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
3-Nitroaniline			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
4,6-Dinitro-2-methylphenol			2,600 U	890 U	3,800 U	2,300 U	2,100 UW	NA	NA	590 U	NA	NA	NA	NA	500 U	NA	NA	NA
4-Bromophenyl-phenylether			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
4-Chloro-3-methylphenol			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
4-Chloroaniline			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
4-Chlorophenyl-phenylether			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
4-Methylphenol <sup>a</sup>	670	670	260 U	120	1,500	230 U	210 UW	NA	NA	610	NA	NA	NA	NA	720	NA	NA	NA
4-Nitroaniline			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
4-Nitrophenol			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
Benzoic acid <sup>a</sup>	650	650	2,600 U	890 U	3,800 U	2,300 U	2,100 UW	NA	NA	590 U	NA	NA	NA	NA	500 U	NA	NA	NA
Benzyl alcohol <sup>a</sup>	57	73	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
bis(2-Chloroethoxy) methane			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Bis-(2-chloroethyl) ether			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Carbazole			260 U	82 J	380 U	230 U	210 UW	NA	NA	130	NA	NA	NA	NA	97	NA	NA	NA
Dibenzofuran	540	540	260 U	54 J	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Hexachlorobenzene	22	70	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Hexachlorobutadiene	11	120	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Hexachlorocyclopentadiene			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
Hexachloroethane			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Isophorone			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Nitrobenzene			260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
n-Nitroso-di-n-propylamine			1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
N-Nitrosodiphenylamine	28	40	260 U	89 U	380 U	230 U	210 UW	NA	NA	59 U	NA	NA	NA	NA	50 U	NA	NA	NA
Pentachlorophenol <sup>a</sup>	360	690	1,300 U	450 U	1,900 U	1,200 U	1,100 UW	NA	NA	300 U	NA	NA	NA	NA	250 U	NA	NA	NA
Phenol <sup>a</sup>	420	1,200	260 U	120 U	380 U	230 U	210 UW	NA	NA	70	NA	NA	NA	NA	75 J	NA	NA	NA

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET

DT-4: Norfolk sediment trap results (dry weight).

Station ID			NST2	NST3	NST4	NST5
Round			4	4	4	4
Lab ref			PR79	PR79	PR79	PR79
Date removed	SQS/ LAET	CSL/ 2LAET	10/07/09	10/07/09	10/07/09	10/07/09
Total solids (%)			37.4	44.6	NA	NA
Total organic carbon (%)			7.7	10.2	NA	NA
<b>Metals (mg/kg)</b>						
Arsenic	57	93	10 J	10 UJ	NA	NA
Copper	390	390	156 J	112 J	NA	NA
Lead	450	530	165 J	73 J	NA	NA
Mercury	0.41	0.59	0.17 J	0.09 J	NA	NA
Zinc	410	960	1,230 J	870 J	NA	NA
<b>Total petroleum hydrocarbons (mg/kg)</b>						
TPH-diesel	2,000 <sup>b</sup>		2,300	330	NA	NA
TPH-oil	2,000 <sup>b</sup>		7,900	1,900	NA	NA
<b>LPAH (ug/kg DW)</b>						
Acenaphthene	500	500	1,000 U	1,000 U	NA	NA
Acenaphthylene	1,300	1,300	1,000 U	1,000 U	NA	NA
Anthracene	960	960	1,000 U	1,000 U	NA	NA
Fluorene	540	540	1,000 U	1,000 U	NA	NA
Naphthalene	2,100	2,100	1,000 U	1,000 U	NA	NA
Phenanthrene	1,500	1,500	900 J	750 J	NA	NA
Total LPAH	5,200	5,200	900	750	NA	NA
<b>HPAH (ug/kg DW)</b>						
Benzo(a)anthracene	1,300	1,600	1,000 U	620 J	NA	NA
Benzo(a)pyrene	1,600	1,600	640 J	750 J	NA	NA
Benzo(b)fluoranthene	3,200	3,600	500 J	730 J	NA	NA
Benzo(g,h,i)perylene	670	720	770 J	820 J	NA	NA
Benzo(k)fluoranthene	3,200	3,600	500 J	730 J	NA	NA
Chrysene	1,400	2,800	1,200 NJ	1,100 NJ	NA	NA
Dibenz(a,h)anthracene	230	230	1,000 U	1,000 U	NA	NA
Fluoranthene	1,700	2,500	1,800	1,700	NA	NA
Indeno(1,2,3-cd)pyrene	600	690	500 J	660 J	NA	NA
Pyrene	2,600	3,300	1,300	1,100	NA	NA
Total HPAH	12,000	17,000	7,210 J	8,210 J	NA	NA
<b>Phthalates (ug/kg dw)</b>						
Bis(2-ethylhexyl)phthalate	1,300	1,900	12,000	7,800	NA	NA
Butylbenzylphthalate	63	900	1,000 U	1,000 U	NA	NA
Diethylphthalate	200		1,000 U	1,000 U	NA	NA
Dimethylphthalate	71	160	660 J	1,000 U	NA	NA
Di-n-butylphthalate	1,400	1,400	1,000 U	1,000 U	NA	NA
Di-n-octyl phthalate	6,200		1,000 U	1,000 U	NA	NA
<b>PCBs (ug/kg dw)</b>						
Aroclor 1016			19 U	19 U	14 U	110 U
Aroclor 1221			19 U	19 U	41 Y	110 U
Aroclor 1232			19 U	19 U	14 U	110 U
Aroclor 1242			19 U	19 U	14 U	110 U
Aroclor 1248			49	19 U	14 U	110 U
Aroclor 1254			94	28	23	310
Aroclor 1260			70	26	27	220
Total PCBs	130	1,000	213	54	50	530
<b>Other organic compounds (ug/kg dw)</b>						
1,2,4-Trichlorobenzene	31	51	1,000 U	1,000 U	NA	NA
1,2-Dichlorobenzene	35	50	1,000 U	1,000 U	NA	NA
1,3-Dichlorobenzene			1,000 U	1,000 U	NA	NA
1,4-Dichlorobenzene	110	110	1,000 U	1,000 U	NA	NA
1-Methylnaphthalene			1,000 U	1,000 U		
2,2'-Oxybis(1-chloropropane)			1,100 U	1,000 U	NA	NA
2,4,5-Trichlorophenol			5,500 U	5,100 U	NA	NA
2,4,6-Trichlorophenol			5,500 U	5,100 U	NA	NA
2,4-Dichlorophenol			5,500 U	5,100 U	NA	NA

DT-4: Norfolk sediment trap results (dry weight).

Station ID			NST2	NST3	NST4	NST5
Round			4	4	4	4
Lab ref			PR79	PR79	PR79	PR79
Date removed	SQS/ LAET	CSL/ 2LAET	10/07/09	10/07/09	10/07/09	10/07/09
2,4-Dimethylphenol <sup>a</sup>	29	29	1,100 U	1,000 U	NA	NA
2,4-Dinitrophenol			11,000 U	10,000 U	NA	NA
2,4-Dinitrotoluene			5,500 U	5,100 U	NA	NA
2,6-Dinitrotoluene			5,500 U	5,100 U	NA	NA
2-Chloronaphthalene			1,100 U	1,000 U	NA	NA
2-Chlorophenol			1,100 U	1,000 U	NA	NA
2-Methylnaphthalene	670	670	1,100 U	1,000 U	NA	NA
2-Methylphenol <sup>a</sup>	63	63	1,100 U	1,000 U	NA	NA
2-Nitroaniline			5,500 U	5,100 U	NA	NA
2-Nitrophenol			5,500 U	5,100 U	NA	NA
3,3'-Dichlorobenzidine			5,500 U	5,100 U	NA	NA
3-Nitroaniline			5,500 U	5,100 U	NA	NA
4,6-Dinitro-2-methylphenol			11,000 U	10,000 U	NA	NA
4-Bromophenyl-phenylether			1,100 U	1,000 U	NA	NA
4-Chloro-3-methylphenol			5,500 U	5,100 U	NA	NA
4-Chloroaniline			5,500 U	5,100 U	NA	NA
4-Chlorophenyl-phenylether			1,100 U	1,000 U	NA	NA
4-Methylphenol <sup>a</sup>	670	670	1,100 U	1,000 U	NA	NA
4-Nitroaniline			5,500 U	5,100 U	NA	NA
4-Nitrophenol			5,500 U	5,100 U	NA	NA
Benzoic acid <sup>a</sup>	650	650	11,000 U	10,000 U	NA	NA
Benzyl alcohol <sup>a</sup>	57	73	1,100 U	1,000 U	NA	NA
bis(2-Chloroethoxy) methane			1,100 U	1,000 U	NA	NA
Bis-(2-chloroethyl) ether			1,100 U	1,000 U	NA	NA
Carbazole			1,100 U	1,000 U	NA	NA
Dibenzofuran	540	540	1,100 U	1,000 U	NA	NA
Hexachlorobenzene	22	70	1,100 U	1,000 U	NA	NA
Hexachlorobutadiene	11	120	1,100 U	1,000 U	NA	NA
Hexachlorocyclopentadiene			5,500 U	5,100 U	NA	NA
Hexachloroethane			1,100 U	1,000 U	NA	NA
Isophorone			1,100 U	1,000 U	NA	NA
Nitrobenzene			1,100 U	1,000 U	NA	NA
n-Nitroso-di-n-propylamine			5,500 U	5,100 U	NA	NA
N-Nitrosodiphenylamine	28	40	1,100 U	1,000 U	NA	NA
Pentachlorophenol <sup>a</sup>	360	690	5,500 U	5,100 U	NA	NA
Phenol <sup>a</sup>	420	1,200	1,100 U	1,000 U	NA	NA

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET



DT-5: Other sediment trap sample results (dry weight).

Station ID	1st-ST1	1st-ST2	1st-ST3	DK-ST1	ID-ST1	ID-ST2	7th-ST1	7th-ST2	7th-ST3	HP-ST4	HP-ST6	HP-ST7	KN-ST1	96-ST1	96-ST2		
Lab Ref	OP80	OP80	OQ56	OP80	OP80	OP80	OR05	OR05	OQ56	OQ56	OV62	OR05	OR05	OW77	OW77		
Sewer Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD		
Outfall	1st Ave S	1st Ave S	1st Ave S	SW Idaho	SW Idaho	SW Idaho	7th Ave S	7th Ave S	7th Ave S	Highland Park Wy SD	Highland Park Wy SD	1st Ave S	SW Kenny SD	S 96th St SD	S 96th St SD		
Date																	
	SQS/LAET	CSL/2LAET	03/06/09	03/06/09	03/12/09	03/06/09	03/06/09	03/06/09	03/17/09	03/17/09	03/12/09	03/12/09	04/15/09	03/17/09	03/17/09	04/24/09	04/24/09
2,4,5-Trichlorophenol			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
2,4,6-Trichlorophenol			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
2,4-Dichlorophenol			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
2,4-Dimethylphenol <sup>a</sup>	29	29	200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
2,4-Dinitrophenol			2,000 U	NA	880 U	590 U	5,100 U	590 U	NA	200 U	1,700 U	930 U	1,600 U	1,100 U	1,500 U	690 U	580 U
2,4-Dinitrotoluene			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
2,6-Dinitrotoluene			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
2-Chloronaphthalene			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
2-Chlorophenol			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
2-Methylnaphthalene	670	670	160 J	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	150 U	58 U
2-Methylphenol <sup>a</sup>	63	63	200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
2-Nitroaniline			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
2-Nitrophenol			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
3,3'-Dichlorobenzidine			1,000 U	NA	440 U	300 UJ	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
3-Nitroaniline			1,000 U	NA	440 U	300 UJ	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
4,6-Dinitro-2-methylphenol			2,000 U	NA	880 U	590 U	5,100 U	590 U	NA	200 U	1,700 U	930 U	1,600 U	1,100 U	1,500 U	690 U	580 U
4-Bromophenyl-phenylether			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
4-Chloro-3-methylphenol			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
4-Chloroaniline			1,000 U	NA	440 U	300 UJ	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
4-Chlorophenyl-phenylether			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
4-Methylphenol <sup>a</sup>	670	670	640	NA	1,500	200	1,400	59 U	NA	20 U	170 U	3,400	160 U	1,400	150 U	2,500	480
4-Nitroaniline			1,000 U	NA	440 U	300 UJ	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
4-Nitrophenol			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
Benzoic acid <sup>a</sup>	650	650	2,000 U	NA	880 U	590 U	5,100 U	590 U	NA	810	1,700 U	930 U	1,600 U	1,100 U	1,500 U	690 U	580 U
Benzyl alcohol <sup>a</sup>	57	73	200 U	NA	88 U	59 U	510 U	59 U	NA	250	170 U	93 U	160 U	110 U	150 U	69 U	92
bis(2-Chloroethoxy) methane			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
Bis-(2-chloroethyl) ether			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
Carbazole			200 U	NA	88 U	59 U	990	47 J	NA	20 U	170 U	93 U	160 U	110 U	150	310	58 U
Dibenzofuran	540	540	200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	110	58 U
Hexachlorobenzene	22	70	200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
Hexachlorobutadiene	11	120	200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
Hexachlorocyclopentadiene			1,000 U	NA	440 U	300 UJ	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
Hexachloroethane			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
Isophorone			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
Nitrobenzene			200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
n-Nitroso-di-n-propylamine			1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
N-Nitrosodiphenylamine	28	40	200 U	NA	88 U	59 U	510 U	59 U	NA	20 U	170 U	93 U	160 U	110 U	150 U	69 U	58 U
Pentachlorophenol <sup>a</sup>	360	690	1,000 U	NA	440 U	300 U	2,500 U	300 U	NA	99 U	850 U	460 U	790 U	550 U	760 U	350 U	290 U
Phenol <sup>a</sup>	420	1,200	200 U	NA	65 J	59 U	510 U	59 U	NA	130	170 U	190	160 U	140	150 U	210 B	58 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET



DT-5: Other sediment trap sample results (dry weight).

Station ID			96-ST3	HC-ST1	KC1-ST1	KC2-ST1	KC2-ST1	KCJ-ST1	KCJ-ST1
Lab Ref			OY94	OV62	OS39	OS39	PT62/PU09	OS39	QA78
Sewer Type <sup>c</sup>			SD	SD	SD	SD	SD	SD	SD
Outfall			S 96th St SD	Hamm Creek	KCIA SD#2	KCIA SD#1	KCIA SD#1	KCIA-Jorgensen SD	KCIA-Jorgensen SD
Date	SQS/LAET	CSL/2LAET	05/13/09	04/15/09	03/26/09	03/26/09	10/21/09	03/26/09	12/10/09
Total solids (%)			71.7	74.1	55.2	36	56.6	NA	NA
Total organic carbon (%)			1.36	1.35	0.805	6.52	1.2	NA	NA
<b>Metals (mg/kg)</b>									
Arsenic	57	93	6 UJ	6 J	8 UJ	30 UJ	20 UJ	NA	NA
Copper	390	390	15.8 J	15.8 J	16.9 J	102 J	16 J	NA	NA
Lead	450	530	10 J	12 J	14 J	110 J	18 J	NA	NA
Mercury	0.41	0.59	0.06 J	0.03 J	0.06 UJ	0.20 J	0.03 UJ	NA	NA
Zinc	410	960	53 J	72 J	51 J	559 J	79 J	NA	NA
<b>Total petroleum hydrocarbons (mg/kg)</b>									
TPH-diesel	2,000 <sup>b</sup>		68 U	68 U	NA	NA	87 U	NA	NA
TPH-oil	2,000 <sup>b</sup>		140 U	140 U	NA	NA	170 U	NA	NA
<b>LPAH (ug/kg DW)</b>									
Acenaphthene	500	500	19 U	20 U	59 U	160 J	48	NA	NA
Acenaphthylene	1,300	1,300	19 U	20 U	59 U	180 U	12 J	NA	NA
Anthracene	960	960	19 U	20 U	66	310	260	NA	NA
Fluorene	540	540	19 U	20 U	59 U	170 J	73	NA	NA
Naphthalene	2,100	2,100	19 U	20 U	59 U	180 U	20 U	NA	NA
Phenanthrene	1,500	1,500	19 U	21	630	3,200	1,400	NA	NA
Total LPAH	5,200	5,200	19 U	21	696	3,840 J	1,793 J	NA	NA
<b>HPAH (ug/kg DW)</b>									
Benzo(a)anthracene	1,300	1,600	19 U	20 U	500	2,100	1,300	NA	NA
Benzo(a)pyrene	1,600	1,600	19 U	20 U	550	2,600	1,300	NA	NA
Benzo(b)fluoranthene	3,200	3,600	19 U	20 U	820	3,900	1,300	NA	NA
Benzo(g,h,i)perylene	670	720	19 U	20 U	530	2,100	620	NA	NA
Benzo(k)fluoranthene	3,200	3,600	19 U	20 U	750	2,700	1,300	NA	NA
Chrysene	1,400	2,800	11 J	20 U	850	3,800	1,300	NA	NA
Dibenz(a,h)anthracene	230	230	19 U	20 U	170	800	330	NA	NA
Fluoranthene	1,700	2,500	18 J	31	1,500	7,300	4,400 B	NA	NA
Indeno(1,2,3-cd)pyrene	600	690	19 U	20 U	500	2,100	730	NA	NA
Pyrene	2,600	3,300	16 J	36	1,200	5,300	2,700	NA	NA
Total HPAH	12,000	17,000	45 J	67	7,370	32,700	15,280 B	NA	NA
<b>Phthalates (ug/kg dw)</b>									
Bis(2-ethylhexyl)phthalate	1,300	1,900	43 U	82	190	3,700	210	NA	NA
Butylbenzylphthalate	63	900	19 U	20 U	59 U	180 U	20 U	NA	NA
Diethylphthalate	200		33 U	20 U	59 U	180 U	20 U	NA	NA
Dimethylphthalate	71	160	19 U	20 U	59 U	180 U	20 U	NA	NA
Di-n-butylphthalate	1,400	1,400	25	20 U	59 U	180 U	20 U	NA	NA
Di-n-octyl phthalate	6,200		19 U	20 U	40 J	110 J	20 U	NA	NA
<b>PCBs (ug/kg dw)</b>									
Aroclor 1016			20 U	20 U	20 U	20 U	18 U	1,800 U	160 U
Aroclor 1221			20 U	20 U	20 U	20 U	18 U	1,800 U	160 U
Aroclor 1232			20 U	20 U	20 U	20 U	18 U	1,800 U	160 U
Aroclor 1242			20 U	20 U	20 U	20 U	18 U	1,800 U	160 U
Aroclor 1248			20 U	20 U	20 U	20 U	18 U	1,800 U	2,300 Y
Aroclor 1254			20 U	20 U	20 U	32	18 U	11,000	4,300
Aroclor 1260			20 U	20 U	20 U	25	18 U	1,800 U	1,200
Total PCBs	130	1,000	20 U	20 U	20 U	57	18 U	11,000	5,500
<b>Other organic compounds (ug/kg dw)</b>									
1,2,4-Trichlorobenzene	31	51	19 U	20 U	59 U	180 U	20 U	NA	NA
1,2-Dichlorobenzene	35	50	19 U	20 U	59 U	180 U	20 U	NA	NA
1,3-Dichlorobenzene			19 U	20 U	59 U	180 U	20 U	NA	NA
1,4-Dichlorobenzene	110	110	19 U	20 U	59 U	180 U	20 U	NA	NA
1-Methylnaphthalene							20 U	NA	NA
2,2'-Oxybis(1-chloropropane)			19 U	20 U	59 U	180 U	20 U	NA	NA

DT-5: Other sediment trap sample results (dry weight).

Station ID			96-ST3	HC-ST1	KC1-ST1	KC2-ST1	KC2-ST1	KCJ-ST1	KCJ-ST1
Lab Ref			OY94	OV62	OS39	OS39	PT62/PU09	OS39	QA78
Sewer Type <sup>c</sup>			SD	SD	SD	SD	SD	SD	SD
Outfall			S 96th St SD	Hamm Creek	KCIA SD#2	KCIA SD#1	KCIA SD#1	KCIA-Jorgensen SD	KCIA-Jorgensen SD
Date	SQS/LAET	CSL/2LAET	05/13/09	04/15/09	03/26/09	03/26/09	10/21/09	03/26/09	12/10/09
2,4,5-Trichlorophenol			97 U	100 U	300 U	920 U	97 U	NA	NA
2,4,6-Trichlorophenol			97 U	100 U	300 U	920 U	97 U	NA	NA
2,4-Dichlorophenol			97 U	100 U	300 U	920 U	97 U	NA	NA
2,4-Dimethylphenol <sup>a</sup>	29	29	19 U	20 U	59 U	180 U	20 U	NA	NA
2,4-Dinitrophenol			190 U	200 U	590 U	1,800 U	200 U	NA	NA
2,4-Dinitrotoluene			97 U	100 U	300 U	920 U	97 U	NA	NA
2,6-Dinitrotoluene			97 U	100 U	300 U	920 U	97 U	NA	NA
2-Chloronaphthalene			19 U	20 U	59 U	180 U	20 U	NA	NA
2-Chlorophenol			19 U	20 U	59 U	180 U	20 U	NA	NA
2-Methylnaphthalene	670	670	19 U	20 U	59 U	180 U	20 U	NA	NA
2-Methylphenol <sup>a</sup>	63	63	19 U	20 U	59 U	180 U	20 U	NA	NA
2-Nitroaniline			97 U	100 U	300 U	920 U	97 U	NA	NA
2-Nitrophenol			97 U	100 U	300 U	920 U	97 U	NA	NA
3,3'-Dichlorobenzidine			97 U	100 U	300 U	920 U	97 U	NA	NA
3-Nitroaniline			97 U	100 U	300 U	920 U	97 U	NA	NA
4,6-Dinitro-2-methylphenol			190 U	200 U	590 U	1,800 U	200 U	NA	NA
4-Bromophenyl-phenylether			19 U	20 U	59 U	180 U	20 U	NA	NA
4-Chloro-3-methylphenol			97 U	100 U	300 U	920 U	97 U	NA	NA
4-Chloroaniline			97 U	100 U	300 U	920 U	97 U	NA	NA
4-Chlorophenyl-phenylether			19 U	20 U	59 U	180 U	20 U	NA	NA
4-Methylphenol <sup>a</sup>	670	670	19 U	20 U	59 U	180 U	20 U	NA	NA
4-Nitroaniline			97 U	100 U	300 U	920 U	97 U	NA	NA
4-Nitrophenol			97 U	100 U	300 U	920 U	97 U	NA	NA
Benzoic acid <sup>a</sup>	650	650	190 U	200 U	590 U	1,800 U	48 J	NA	NA
Benzyl alcohol <sup>a</sup>	57	73	19 U	20 U	59 U	180 U	20 U	NA	NA
bis(2-Chloroethoxy) methane			19 U	20 U	59 U	180 U	20 U	NA	NA
Bis-(2-chloroethyl) ether			19 U	20 U	59 U	180 U	20 U	NA	NA
Carbazole			19 U	20 U	160	610	510	NA	NA
Dibenzofuran	540	540	19 U	20 U	59 U	110 J	42	NA	NA
Hexachlorobenzene	22	70	19 U	20 U	59 U	180 U	20 U	NA	NA
Hexachlorobutadiene	11	120	19 U	20 U	59 U	180 U	20 U	NA	NA
Hexachlorocyclopentadiene			97 U	100 U	300 U	920 U	97 U	NA	NA
Hexachloroethane			19 U	20 U	59 U	180 U	20 U	NA	NA
Isophorone			19 U	20 U	59 U	180 U	20 U	NA	NA
Nitrobenzene			19 U	20 U	59 U	180 U	20 U	NA	NA
n-Nitroso-di-n-propylamine			97 U	100 U	300 U	920 U	97 U	NA	NA
N-Nitrosodiphenylamine	28	40	19 U	20 U	59 U	180 U	20 U	NA	NA
Pentachlorophenol <sup>a</sup>	360	690	97 U	100 U	300 U	920 U	97 U	NA	NA
Phenol <sup>a</sup>	420	1,200	19 U	20 U	59 U	140 J	20 U	NA	NA

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET



DT-6: Inline sediment sample results (dry weight).

Station ID	MH1	MH1D	MH3	MH3b	MH4	MH4b	MH5	MH5-N3	MH6	MH7	MH7b	Norfolk20	Norfolk21	NST1	NST2	NST3	NST4		
Lab Ref	FX12	FX12	FX12	HV81	FX12	HV81	FX12	FX12	FX12	FX12	HV81	HD88	HD88	LQ16	LQ16	LQ16	LQ16		
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD		
Outfall	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk		
	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17	CSO/SD/PS17		
	EOF	EOF	EOF	EOF	EOF	EOF	EOF	EOF	EOF	EOF	EOF	7 EOF	7 EOF	EOF	EOF	EOF	EOF		
Date	LAET	2LAET	10/01/03	10/01/03	10/01/03	03/16/05	10/01/03	03/16/05	10/01/03	10/01/03	10/01/03	03/16/05	09/30/04	09/30/04	09/19/07	09/19/07	09/18/07	09/18/07	
Total solids (%)			43.3	36.0	42.80	47.8	62.20	55.2	73.40	64.4	78.10	77.1	63.7	70.8	68.7	75.9	56.0	67.7	
2,4-Dichlorophenol			2,800 U	1,800 U	1,400 U	3,200 U	350 U	1,500 U	520 U	NA	NA	230 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
2,4-Dimethylphenol <sup>a</sup>	29	29	930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
2,4-Dinitrophenol			9,300 U	6,000 U	4,800 U	6,400 U	1,200 U	3,000 U	1,700 U	NA	NA	760 U	1,200 U	200 U	200 U	1,500 U	900 U	2,500 U	200 U
2,4-Dinitrotoluene			4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	2,100	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
2,6-Dinitrotoluene			4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	870 U	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
2-Chloronaphthalene			930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
2-Chlorophenol			930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
2-Methylnaphthalene	670	670	930 U	600 U	1,400	2,300	1,200	1,100	690	NA	NA	76 U	120 U	23	20 U	450	90 U	250 U	20 U
2-Methylphenol <sup>a</sup>	63	63	930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
2-Nitroaniline			4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	870 U	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
2-Nitrophenol			4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	870 U	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
3,3'-Dichlorobenzidine			4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	870 U	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
3-Nitroaniline			5,600 U	3,600 U	2,900 U	3,200 U	700 U	1,500 U	1,000 U	NA	NA	460 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
4,6-Dinitro-2-methylphenol			9,300 U	6,000 U	4,800 U	6,400 U	1,200 U	3,000 U	1,700 U	NA	NA	760 U	1,200 U	200 U	200 U	1,500 U	900 U	2,500 U	200 U
4-Bromophenyl-phenylether			930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
4-Chloro-3-methylphenol			1,900 U	1,200 U	960 U	3,200 U	230 U	1,500 U	350 U	NA	NA	150 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
4-Chloroaniline			2,800 U	1,800 U	1,400 U	3,200 U	350 U	1,500 U	520 U	NA	NA	230 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
4-Chlorophenyl-phenylether			930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
4-Methylphenol <sup>a</sup>	670	670	930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
4-Nitroaniline			4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	870 U	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
4-Nitrophenol			4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	870 U	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
Benzoic acid <sup>a</sup>	650	650	9,300 U	6,000 U	4,800 U	6,400 U	1,200 U	3,000 U	1,700 U	NA	NA	760 U	1,200 U	200 U	200 U	1,500 U	900 U	2,500 U	200 U
Benzyl alcohol <sup>a</sup>	57	73	930 U	600 U	480 U	3,900 U	120 U	380 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
bis(2-Chloroethoxy) methane			930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
Bis-(2-chloroethyl) ether			1,900 U	1,200 U	960 U	640 U	230 U	300 U	350 U	NA	NA	150 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
Carbazole			930 U	600 U	480 U	640 U	160	350	170 U	NA	NA	110	120 U	46	20 U	150 U	90 U	250 U	21
Dibenzofuran	540	540	930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
Hexachlorobenzene	22	70	930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
Hexachlorobutadiene	11	120	930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
Hexachlorocyclopentadiene			4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	870 U	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
Hexachloroethane			930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
Isophorone			930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
Nitrobenzene			930 U	600 U	480 U	640 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
n-Nitroso-di-n-propylamine			1,900 U	1,200 U	960 U	3,200 U	230 U	1,500 U	350 U	NA	NA	150 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
N-Nitrosodiphenylamine	28	40	930 U	600 U	480 U	640 U	120 U	300 U	910	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U
Pentachlorophenol <sup>a</sup>	360	690	4,600 U	3,000 U	2,400 U	3,200 U	580 U	1,500 U	870 U	NA	NA	380 U	580 U	98 U	99 U	730 U	450 U	1,200 U	99 U
Phenol <sup>a</sup>	420	1,200	930 U	600 U	480 U	660 U	120 U	300 U	170 U	NA	NA	76 U	120 U	20 U	20 U	150 U	90 U	250 U	20 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

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B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

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Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET



DT-6: Inline sediment sample results (dry weight).

Station ID	NST1	NST3	NST1	NST2	NST3	NST4	NST1	NST2	NST3	NST4	NST1	NST2	NST3	NST4	RCB44	RCB45			
Lab Ref	MN88	MN88	NS67	NQ67	NS67	NT39	OU68	OT13	OU68	OU44	PR79	PR79	PR79	PR79	HY59	HY59			
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	Inline	Inline	Inline	Inline	SD	SD			
Outfall	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	Norfolk	2nd Ave S	2nd Ave S			
	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	CSO/SD/EOF	SD	SD			
Date	LAET	2LAET	03/18/08	03/18/08	10/02/08	09/23/08	10/02/08	10/08/08	04/08/09	03/31/09	04/08/09	04/07/09	10/07/09	10/07/09	10/07/09	10/07/09	04/13/05	04/13/05	
Total solids (%)			46.5	44.9	56.0	81.0	79.2	74.6	55.4	87.5	39.0	70.9	44.2	82.4	60.8	78.9	69.1	65.6	
2,4-Dichlorophenol			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
2,4-Dimethylphenol <sup>a</sup>	29	29	530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
2,4-Dinitrophenol			5,300 U	4,600 U	580 U	190 U	590 U	200 U	430 U	240 U	480 U	200 U	11,000 U	890 U	590 U	590 U	1,300 U	2,100 U	
2,4-Dinitrotoluene			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	<b>29,000</b>	1,000 U	
2,6-Dinitrotoluene			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	<b>490 J</b>	1,000 U	
2-Chloronaphthalene			530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
2-Chlorophenol			530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
2-Methylnaphthalene	670	670	530 U	460 U	<b>52 J</b>	<b>10 J</b>	59 U	20 U	<b>42 J</b>	24 U	48 U	20 U	1,100 U	<b>62 J</b>	59 U	59 U	37 J	130 U	210 U
2-Methylphenol <sup>a</sup>	63	63	530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
2-Nitroaniline			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
2-Nitrophenol			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
3,3'-Dichlorobenzidine			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
3-Nitroaniline			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
4,6-Dinitro-2-methylphenol			5,300 U	4,600 U	580 U	190 U	590 U	200 U	430 U	240 U	480 U	200 U	11,000 U	890 U	590 U	590 U	1,300 U	2,100 U	
4-Bromophenyl-phenylether			530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
4-Chloro-3-methylphenol			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
4-Chloroaniline			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
4-Chlorophenyl-phenylether			530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
4-Methylphenol <sup>a</sup>	670	670	530 U	<b>4,400</b>	58 U	<b>54</b>	59 U	20 U	43 U	24 U	<b>1,000</b>	20 U	1,100 U	89 U	<b>620</b>	59 U	130 U	210 U	
4-Nitroaniline			2,600 U	2,300 U	290 U	<b>96 U</b>	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
4-Nitrophenol			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
Benzoic acid <sup>a</sup>	650	650	5,300 U	4,600 U	580 U	190 U	590 U	200 U	430 U	240 U	<b>390 J</b>	200 U	11,000 U	890 U	590 U	590 U	1,300 U	2,100 U	
Benzyl alcohol <sup>a</sup>	57	73	530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
bis(2-Chloroethoxy) methane			530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
Bis-(2-chloroethyl) ether			530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
Carbazole			530 U	460 U	<b>110</b>	19 U	<b>81</b>	<b>15 J</b>	<b>130</b>	24 U	<b>96</b>	<b>10 J</b>	1,100 U	89 U	<b>98</b>	59 U	130 U	210 U	
Dibenzofuran	540	540	530 U	460 U	<b>34 J</b>	19 U	59 U	20 U	<b>26 J</b>	<b>24</b>	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
Hexachlorobenzene	22	70	530 U	460 U	<b>58 U</b>	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
Hexachlorobutadiene	11	120	530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
Hexachlorocyclopentadiene			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
Hexachloroethane			530 U	460 U	58 U	19 U	59 U	20 U	43 U	<b>24</b>	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
Isophorone			530 U	460 U	58 U	19 U	59 U	20 U	43 U	<b>24 J</b>	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
Nitrobenzene			530 U	460 U	58 U	19 U	59 U	20 U	43 U	24 U	48 U	20 U	1,100 U	89 U	59 U	59 U	130 U	210 U	
n-Nitroso-di-n-propylamine			2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	120 U	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
N-Nitrosodiphenylamine	28	40	530 U	460 U	58 U	19 U	59 U	20 U	43 U	<b>24</b>	48 U	20 U	1,100 U	89 U	59 U	59 U	<b>24,000</b>	210 U	
Pentachlorophenol <sup>a</sup>	360	690	2,600 U	2,300 U	290 U	96 U	300 U	97 U	220 U	<b>120</b>	240 U	98 U	5,500 U	440 U	300 U	300 U	650 U	1,000 U	
Phenol <sup>a</sup>	420	1,200	530 U	<b>470</b>	58 U	19 U	59 U	20 U	<b>37 J</b>	<b>24</b>	<b>140 J</b>	20 U	1,100 U	89 U	59 U	59 U	<b>130</b>	210 U	

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.


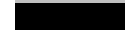
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET

DT-6: Inline sediment sample results (dry weight).

Station ID	MH20	MH21B	MH22	MH100-S	MH100-B	MH221A-S	MH221A-B	MH363-S	MH363-B	CB229A-S	CB229A-B	SL4-T2A	MH32	T1	T2		
Lab Ref	HY59	HY59	HY59	HS95	Boeing	HS95	Boeing	HS95	Boeing	HS95	Boeing	OU44	IJ98	HEC	HEC		
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	#N/A	#N/A	SD	SD	SD	SD		
Outfall	7th Ave S SD	7th Ave S SD	7th Ave S SD	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/P S44 EOF	WSDOT I5 SD	Flume	Flume		
Date	LAET	2LAET	04/13/05	04/13/05	04/13/05	02/16/05	02/16/05	02/16/05	02/16/05	02/16/05	02/16/05	02/16/05	02/16/05	04/07/09	08/11/05	03/24/05	03/24/05
Total solids (%)			40.4	47.6	40.1	39.3	38.8	78.9	75.7	79.0	79.9	69.1	66.6	32.3	81.7	54.1	72
TOC (%)			7.74	8.90	6.27	6.67	6.60	1.09	1.00	1.11	0.76	4.34	3.88	1.34	0.74	3.92	1.43
<b>Metals (mg/kg DW)</b>																	
Arsenic	57	93	20	30	20	20 J	20	40 J	12	9 J	8	30 J	30	10 UJ	10 UJ	11	7 U
Copper	390	390	175	148	129	88.9 J	102.0	126 J	38.5	64.1 J	45.1	69.7 J	85.5	58.9 J	61.2 J	63.2	18.5
Lead	450	530	151	130	119	134 J	142	94 J	50	51 J	110	120 J	155	34 J	207 J	99	14
Mercury	0.41	0.59	0.17	0.2	0.2	0.2 J	0.2	0.09 J	0.09	0.48 J	0.7	0.07 J	0.07	0.1 UJ	0.05 UJ	0.1	0.05 U
Zinc	410	960	547	515	575	377 J	411	572 J	332	208 J	272	699 J	1,130	202	186 J	218	54
<b>Total petroleum hydrocarbons (mg/kg DW)</b>																	
TPH-diesel	2,000 <sup>b</sup>		720	560	380	88	190	120	210	120	190	110	1,000	250	120 U	36	21
TPH-oil	2,000 <sup>b</sup>		2,900	3,100	1,900	380	1,980	270	1,490	680	7,000	380	5,600	1,100	290	140	99
<b>LPAH (ug/kg DW)</b>																	
Acenaphthene	500	500	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	800	930	20 U	20 U	270	20 U
Acenaphthylene	1,300	1,300	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	86	220 U	20 U	20 U	150	20 U
Anthracene	960	960	350 U	290 U	240 U	100 U	140	180 U	71	65	59 U	770	1,200	21	20 U	640	53
Fluorene	540	540	350 U	290 U	240 U	100 U	59 U	180 U	73	59 U	59 U	810	1,100	20 U	20 U	240	20 U
Naphthalene	2,100	2,100	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	76	220 U	20 U	20 U	310	20 U
Phenanthrene	1,500	1,500	350 U	290 U	590	500	250	440	300	400	260	6,100	8,900	190	22	4,500	44
Total LPAH	5,200	5,200	350	290	590	500	390	440	444	465	260	8,642	12,130	211	22	6,110	97
<b>HPAH (ug/kg DW)</b>																	
Benzo(a)anthracene	1,300	1,600	390	290 U	560	320	380	330	280	340	280	1,900	3,000	140	20 U	1,300	100
Benzo(a)pyrene	1,600	1,600	500	310	760	290	480	470	400	330	300	2,000	3,400	150	26	1,300	240
Benzo(b)fluoranthene	3,200	3,600	870	460	1,100	500	760	740	710	520	450	3,300	5,400	220	34	1,600	240
Benzo(g,h,i)perylene	670	720	350 U	290 U	290	210	200	310	230	170	170	840	1,300	66	20 U	570	92
Benzo(k)fluoranthene	3,200	3,600	580	380	890	280	460	370	400	280	310	2,000	3,600	300	20 U	1,600	270
Chrysene	1,400	2,800	720	380	940	570	620	600	490	500	400	2,600	4,200	270	31	2,300	160
Dibenz(a,h)anthracene	230	230	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	370	220 U	25	20 U	230	34
Fluoranthene	1,700	2,500	1,400	570	1,900	980	880	1,100	920	840	750	6,700	11,000	540	44	6,300	200
Indeno(1,2,3-cd)pyrene	600	690	350 U	290 U	240	240	180	380	260	190	180	980	1,500	73	20 U	660	91
Pyrene	2,600	3,300	1,000	430	1,200	750	810	800	870	630	660	4,900	7,600	300	50	3,200	130
Total HPAH	12,000	17,000	5,460	2,530	7,880	4,140	4,770	5,100	4,560	3,800	3,500	25,590	41,000	2,084	185	19,060	1,557
<b>Phthalates (ug/kg dw)</b>																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	6,400	3,800	6,100	1,500	2,000	800	760	430	500	1,200	2,200	160	180	2,000	140
Butylbenzylphthalate	63	900	350 U	290 U	680	140	86	180 U	58 U	59 U	59 U	62	220 U	20 U	20 U	110	20 U
Diethylphthalate	200		350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	60 U	20 U
Dimethylphthalate	71	160	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	60 U	20 U
Di-n-butylphthalate	1,400	1,400	350 U	290 U	280 U	100 U	59 U	180 U	58 U	59 U	59 U	110	220 U	20 U	20 U	87	20 U
Di-n-octyl phthalate	6,200		350 U	290 U	240 U	100 U	71	180 U	120	59	69	130	240	20 U	20 U	60 U	20 U
<b>PCBs (ug/kg dw)</b>																	
Aroclor 1016			270 U	42 U	20 U	220 U	95 U	120 U	120 U	1,200 Y	950 U	19 U	140 U	20 U	19 U	59 U	8 U
Aroclor 1221			270 U	42 U	20 U	220 U	95 U	120 U	120 U	470 U	480 U	19 U	140 U	20 U	19 U	59 U	8 U
Aroclor 1232			270 U	42 U	20 U	220 U	95 U	120 U	120 U	1,400 Y	1,400 U	19 U	140 U	20 U	19 U	59 U	8 U
Aroclor 1242			270 U	42 U	20 U	220 U	95 U	120 U	120 U	940 Y	950 U	19 U	140 U	20 U	19 U	59 U	8 U
Aroclor 1248			270 U	42 U	20 U	220 U	95 U	120 U	120 U	2,400 Y	950 U	19 U	140 U	20 U	19 U	59 U	12
Aroclor 1254			270 U	84 J	55 P	1,000	1,600	590	960	31,000	7,000	150	3,700	20 U	19 U	190	26 J
Aroclor 1260			440	190	64	820 J	380 P	410	530	3,800 Y	950 U	160 J	1,900	27	19 U	140	28
Total PCBs	130	1,000	440	274 J	119 P	1,820 J	1,980 P	1,000	1,490	31,000	7,000	310 J	5,600	27	19 U	330	66 J
<b>Other organic compounds (ug/kg dw)</b>																	
1,2,4-Trichlorobenzene	31	51	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
1,2-Dichlorobenzene	35	50	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
1,3-Dichlorobenzene			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
1,4-Dichlorobenzene	110	110	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
1-Methylnaphthalene																	
2,2'-Oxybis(1-chloropropane)			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
2,4,5-Trichlorophenol			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
2,4,6-Trichlorophenol			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA



DT-6: Inline sediment sample results (dry weight).

Station ID	MH20	MH21B	MH22	MH100-S	MH100-B	MH221A-S	MH221A-B	MH363-S	MH363-B	CB229A-S	CB229A-B	SL4-T2A	MH32	T1	T2		
Lab Ref	HY59	HY59	HY59	HS95	Boeing	HS95	Boeing	HS95	Boeing	HS95	Boeing	OU44	IJ98	HEC	HEC		
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	#N/A	#N/A	SD	SD	SD	SD		
Outfall	7th Ave S SD	7th Ave S SD	7th Ave S SD	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/PS 44 EOF	KCSD#3/P S44 EOF	WSDOT I5 SD	Flume	Flume		
Date	LAET	2LAET	04/13/05	04/13/05	04/13/05	02/16/05	02/16/05	02/16/05	02/16/05	02/16/05	02/16/05	02/16/05	02/16/05	04/07/09	08/11/05	03/24/05	03/24/05
Total solids (%)			40.4	47.6	40.1	39.3	38.8	78.9	75.7	79.0	79.9	69.1	66.6	32.3	81.7	54.1	72
2,4-Dichlorophenol			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
2,4-Dimethylphenol <sup>a</sup>	29	29	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	60 U	20 U
2,4-Dinitrophenol			3,500 U	2,900 U	2,400 U	1,000 U	590 U	1,800 U	580 U	590 U	290 U	610 U	2,200 U	200 U	200 U	NA	NA
2,4-Dinitrotoluene			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
2,6-Dinitrotoluene			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
2-Chloronaphthalene			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
2-Chlorophenol			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
2-Methylnaphthalene	670	670	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	620	660 U	20 U	20 U	NA	NA
2-Methylphenol <sup>a</sup>	63	63	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	60 U	20 U
2-Nitroaniline			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
2-Nitrophenol			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
3,3'-Dichlorobenzidine			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
3-Nitroaniline			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
4,6-Dinitro-2-methylphenol			3,500 U	2,900 U	2,400 U	1,000 U	590 U	1,800 U	580 U	590 U	590 U	610 U	2,200 U	200 U	200 U	NA	NA
4-Bromophenyl-phenylether			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
4-Chloro-3-methylphenol			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
4-Chloroaniline			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
4-Chlorophenyl-phenylether			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
4-Methylphenol <sup>a</sup>	670	670	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	94	20 U	34 J	20 U
4-Nitroaniline			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
4-Nitrophenol			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
Benzoic acid <sup>a</sup>	650	650	3,500 U	2,900 U	2,400 U	1,000 U	590 U	1,800 U	580 U	590 U	590 U	610 U	2,200 U	200 U	200 U	600 U	200 U
Benzyl alcohol <sup>a</sup>	57	73	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	170	20 U
bis(2-Chloroethoxy) methane			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
Bis-(2-chloroethyl) ether			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
Carbazole			350 U	290 U	240 U	100 U	110	180 U	58 U	69	68	890	1,500	49	20 U	NA	NA
Dibenzofuran	540	540	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	490	560	20 U	20 U	270	20 U
Hexachlorobenzene	22	70	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
Hexachlorobutadiene	11	120	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	60 U	20 U
Hexachlorocyclopentadiene			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
Hexachloroethane			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
Isophorone			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
Nitrobenzene			350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	NA	NA
n-Nitroso-di-n-propylamine			1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100 U	99 U	99 U	NA	NA
N-Nitrosodiphenylamine	28	40	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	20 U	20 U	60 U	20 U
Pentachlorophenol <sup>a</sup>	360	690	1,700 U	1,400 U	1,200 U	520 U	300 U	870 U	290 U	290 U	290 U	310 U	1,100	99 U	99 U	300 U	98 U
Phenol <sup>a</sup>	420	1,200	350 U	290 U	240 U	100 U	59 U	180 U	58 U	59 U	59 U	61 U	220 U	94	20 U	60 U	20 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET



DT-6: Inline sediment sample results (dry weight).

Station ID	T2-D		T3	T4	T6	P1	P2	P3	P4	P5	M1	M2	M3	M4	M5	T2	T2b		
Lab Ref	HEC		HEC	HEC	HEC	HEC	HEC	HEC	HEC	HEC	Tt	Tt	Tt	Tt	Tt	Tt	Tt		
Utility Type <sup>c</sup>	SD		SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD		
Outfall	Flume		Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD		
Date	LAET	2LAET	03/24/05	03/25/05	03/24/05	03/25/05	03/25/05	03/25/05	03/25/05	03/25/05	03/24/05	03/24/05	01/25/02	01/25/02	01/28/02	01/25/02	01/28/02	01/25/02	02/28/02
Total solids (%)			71.6	68.3	45	65.5	72.4	46.8	32.1	70.6	86.7	81	80	83	85	89	84	73	
TOC (%)			8.71	1.17	2.25	2.68	0.71	2.47	5.27	0.77	6.86	0.38	0.54	0.54	0.38	0.63	0.54	2.64	
<b>Metals (mg/kg DW)</b>																			
Arsenic	57	93	7 U	7 U	40	7 U	7 U	13	20	6 U	10 U	12 U	13 U	12 U	12 U	12 U	11 U	12	
Copper	390	390	20.2	54.6	314 J	79.6	18	56.6	133	12.8	95.1	39	43	33	34	24	160	30	
Lead	450	530	15	263	590 J	61	16	69	501	10	73	37	140	33	18	47	23	16	
Mercury	0.41	0.59	0.05 U	0.41	1.7	0.08	0.05 U	0.18	1.0	0.06 U	0.08	0.31 U	0.31 U	0.3 U	0.3 U	0.29 U	0.28 U	0.3 U	
Zinc	410	960	61	180	1,130	240	61	238	766	53	195	250	240	200	170	280	130	85	
<b>Total petroleum hydrocarbons (mg/kg DW)</b>																			
TPH-diesel	2,000 <sup>b</sup>		19	84	2,300	120	14	63	250	9	1,600	77	63	82	37	28 U	30 U	680	
TPH-oil	2,000 <sup>b</sup>		70	460	9,700	670	66	360	1,100	61	3,000	420	560	420	360	470	150	2,700	
<b>LPAH (ug/kg DW)</b>																			
Acenaphthene	500	500	24	380	660	67	20 U	58 U	120 U	19 U	1,600 U	91	78 U	79 U	78 U	77 U	20 U	110 U	
Acenaphthylene	1,300	1,300	21	230	2,700	34 J	28	92	120 U	19	1,600 U	78 U	78 U	79 U	78 U	77 U	20 U	110 U	
Anthracene	960	960	91	590	2,500	220	97	270	130	69	1,600 U	150	89	79 U	78 U	77 U	20 U	110 U	
Fluorene	540	540	20 U	530	1,900	66	20 U	42 J	120 U	19 U	1,600 U	92	78 U	79 U	78 U	77 U	20 U	110 U	
Naphthalene	2,100	2,100	20 U	97	2,400	59 U	20 U	58 U	120 U	19 U	1,600 U	78 U	78 U	79 U	78 U	77 U	20 U	110 U	
Phenanthrene	1,500	1,500	67	6,200	11,000	740	96	250	510	140	1,600 U	660	360	79 U	78 U	77 U	54	470	
Total LPAH	5,200	5,200	203	8,027	21,160	1,127 J	221	654 J	640	228	1,600	993	449	79	78	77	54	470	
<b>HPAH (ug/kg DW)</b>																			
Benzo(a)anthracene	1,300	1,600	150	1,400	7,900	520	150	370	370	73	1,600 U	340	770	79 U	78 U	77 U	31	300	
Benzo(a)pyrene	1,600	1,600	310	490	8,600	560	130	290	450	83	1,600 U	330	1,700	79 U	78 U	77 U	37	410	
Benzo(b)fluoranthene	3,200	3,600	350	850	11,000	640	140	520	640	100	1,600 U	300	1,500	82	78 U	110	41	630	
Benzo(g,h,i)perylene	670	720	130	200	2,500	210	52	120	190	33	1,600 U	140	900	79 U	78 U	77 U	21	190	
Benzo(k)fluoranthene	3,200	3,600	290	1,000	9,400	790	230	540	500	140	1,600 U	360	1,300	86	78 U	85	56	410	
Chrysene	1,400	2,800	210	1,500	8,400	750	230	650	540	160	810 J	380	1,100	100	78 U	94	54	590	
Dibenz(a,h)anthracene	230	230	41	45 J	1,000	54 J	20 U	33 J	120 U	19 U	1,600 U	78 U	210	79 U	78 U	77 U	20 U	110 U	
Fluoranthene	1,700	2,500	260	6,100	18,000	1,600	530	1,200	1,100	490	1,000	820	900	150	78 U	130	74	1,300	
Indeno(1,2,3-cd)pyrene	600	690	120	220	3,000	210	57	120	210	32	1,600 U	160	1,000	79 U	78 U	77 U	23	170	
Pyrene	2,600	3,300	180	3,300	14,000	1,200	300	850	960	230	1,200	630	810	160	78 U	130	71	810	
Total HPAH	12,000	17,000	2,041	15,105 J	83,800	6,534 J	1,819	4,693 J	4,960	1,341	3,010 J	3,460	10,190	578	78 U	549	408	4,810	
<b>Phthalates (ug/kg dw)</b>																			
Bis(2-ethylhexyl)phthalate	1,300	1,900	140	580	210	2,000	120	560	2,100	140	3,800	1,000	5,100	670	330	710	230	3,800	
Butylbenzylphthalate	63	900	20 U	59 U	200 U	100	20 U	58 U	160	19 U	1,600 U	78 U	78 U	79 U	78 U	77 U	23	110 U	
Diethylphthalate	200		20 U	59 U	200 U	59 U	20 U	58 U	120 U	19 U	1,600 U	78 U	78 U	79 U	78 U	77 U	20 U	110 U	
Dimethylphthalate	71	160	20 U	59 U	200 U	59 U	20 U	58 U	120 U	19 U	1,600 U	78 U	78 U	79 U	78 U	77 U	140	110 U	
Di-n-butylphthalate	1,400	1,400	20 U	60	200 U	59 U	24	69	140	19 U	1,600 U	78 U	78 U	79 U	78 U	77 U	20 U	110 U	
Di-n-octyl phthalate	6,200		20 U	59 U	200 U	64	20 U	230	140	19 U	1,600 U	78 U	120	130	78 U	77 U	20 U	230	
<b>PCBs (ug/kg dw)</b>																			
Aroclor 1016			4 U	2,800 U	240 U	40 U	12 U	79 U	26,000 U	4 U	240 U	62 U	63 U	60 U	59 U	56 U	60 U	79 U	
Aroclor 1221			4 U	2,800 U	240 U	40 U	12 U	79 U	26,000 U	8 U	240 U	62 U	63 U	60 U	59 U	56 U	60 U	79 U	
Aroclor 1232			4 U	2,800 U	240 U	40 U	12 U	79 U	26,000 U	8 U	240 U	62 U	63 U	60 U	59 U	56 U	60 U	79 U	
Aroclor 1242			4 U	2,800 U	240 U	40 U	12 U	79 U	26,000 U	4 U	240 U	62 U	63 U	60 U	59 U	56 U	60 U	79 U	
Aroclor 1248			12	2,800 U	1,500 J	79 U	28	210	26,000 U	6	240 U	62 U	63 U	60 U	59 U	56 U	60 U	79 U	
Aroclor 1254			29 J	3,900	1,700	240	56 J	450	92,000	14	470 U	62 U	63 U	60 U	59 U	56 U	60 U	620	
Aroclor 1260			24	2,800 U	540	160	36	120	26,000 U	18	1,500	62 U	63 U	60 U	59 U	56 U	60 U	320	
Total PCBs	130	1,000	65 J	3,900	3,740 J	400	120 J	780	92,000	38	1,500	62 U	63 U	60 U	59 U	56 U	60 U	940	
<b>Other organic compounds (ug/kg dw)</b>																			
1,2,4-Trichlorobenzene	31	51	NA	NA	NA	NA	NA	NA	NA	NA	NA	780 U	79 U	79 U	78 U	77 U	20 U	110 U	
1,2-Dichlorobenzene	35	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	78 U	79 U	79 U	78 U	77 U	20 U	110 U	
1,3-Dichlorobenzene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	110	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	78 U	79 U	79 U	78 U	77 U	20 U	110 U	
1-Methylnaphthalene																			
2,2'-Oxybis(1-chloropropane)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,5-Trichlorophenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,6-Trichlorophenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

DT-6: Inline sediment sample results (dry weight).

Station ID	T2-D	T3	T4	T6	P1	P2	P3	P4	P5	M1	M2	M3	M4	M5	T2	T2b		
Lab Ref	HEC	HEC	HEC	HEC	HEC	HEC	HEC	HEC	HEC	Tt	Tt	Tt	Tt	Tt	Tt	Tt		
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD		
Outfall	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD		
Date	LAET	2LAET	03/24/05	03/25/05	03/24/05	03/25/05	03/25/05	03/25/05	03/25/05	03/24/05	03/24/05	01/25/02	01/25/02	01/28/02	01/25/02	01/28/02	01/25/02	02/28/02
Total solids (%)			71.6	68.3	45	65.5	72.4	46.8	32.1	70.6	86.7	81	80	83	85	89	84	73
2,4-Dichlorophenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol <sup>a</sup>	29	29	20 U	59 U	<b>190 J</b>	59 U	20 U	58 U	120 U	19 U	1,600 U	78 U	240 U	240 U	230 U	230 U	59 U	340 U
2,4-Dinitrophenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	670	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	160 U	79 U	79 U	78 U	77 U	20 U	20 U
2-Methylphenol <sup>a</sup>	63	63	20 U	59 U	<b>180 J</b>	59 U	20 U	58 U	120 U	19 U	1,600 U	78 U	79 U	79 U	78 U	77 U	20 U	230 U
2-Nitroaniline			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol <sup>a</sup>	670	670	20 U	<b>30 J</b>	<b>510</b>	59 U	20 U	58 U	120 U	19 U	1,600 U	78 U	<b>180</b>	79 U	78 U	77 U	20 U	230 U
4-Nitroaniline			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid <sup>a</sup>	650	650	20 U	590 U	2,000 U	590 U	200 U	<b>750 J</b>	1,200 U	190 U	16,000 U	780 U	790 U	790 U	780 U	770 U	200 U	570 U
Benzyl alcohol <sup>a</sup>	57	73	20 U	59 U	200 U	59 U	20 U	<b>320</b>	120 U	19 U	1,600 U	390 U	400 U	390 U	390 U	390 U	98 U	570 U
bis(2-Chloroethoxy) methane			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis-(2-chloroethyl) ether			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	540	540	20 U	<b>430</b>	<b>980</b>	<b>31 J</b>	20 U	58 U	120 U	19 U	1,600 U	78 U	79 U	79 U	78 U	77 U	20 U	110 U
Hexachlorobenzene	22	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	78 U	79 U	79 U	78 U	77 U	20 U	20 U
Hexachlorobutadiene	11	120	20 U	59 U	200 U	59 U	20 U	58 U	120 U	19 U	1,600 U	160 U	160 U	160 U	160 U	150 U	39 U	39 U
Hexachlorocyclopentadiene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitroso-di-n-propylamine			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	28	40	20 U	59 U	200 U	59 U	20 U	58 U	120 U	19 U	1,600 U	78 U	79 U	79 U	78 U	77 U	20 U	20 U
Pentachlorophenol <sup>a</sup>	360	690	99 U	300 U	980 U	300 U	98 U	290 U	590 U	97 U	7,800 U	78 U	400 U	390 U	390 U	390 U	98 U	98 U
Phenol <sup>a</sup>	420	1,200	20 U	59 U	<b>270</b>	59 U	20 U	58 U	120 U	19 U	1,600 U	160 U	160 U	160 U	160 U	150 U	39 U	230 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.


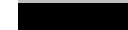
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-6: Inline sediment sample results (dry weight).

Station ID	T3a	T6b	T8b	MH8	MH9	MH10	MH11	MH12	MH12D	MH14	MH15	MH15-D	MH17	MH18	MH19	MH21A			
Lab Ref	Tt	Tt	Tt	FX91	FX91	FX91	FX91	FZ55	FZ55	G179	G179	G179	G179	G179	GX22	HH16			
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD			
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD			
Date	LAET	2LAET	02/28/02	02/28/02	02/28/02	10/13/03	10/13/03	10/13/03	10/13/03	10/27/03	10/27/03	02/18/04	02/18/04	02/18/04	02/20/04	02/20/04	07/30/04	10/29/04	
Total solids (%)			43	69	75	79.8	84.2	32.7	63.6	80.7	79.3	76.5	80.9	81.2	78.6	60.1	41.1	56.2	
2,4-Dichlorophenol			NA	NA	NA	59 U	58 U	2,000 U	120 U	120 U	120 U	230 U	240 U	240 U	240 U	240 U	410 U	NA	
2,4-Dimethylphenol <sup>a</sup>	29	29	860 U	700 U	290 U	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
2,4-Dinitrophenol			NA	NA	NA	200 U	190 U	6,800 U	390 U	390 U	390 U	780 U	790 U	790 U	790 U	790 U	1,400 U	NA	
2,4-Dinitrotoluene			NA	NA	NA	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	680 U	NA	
2,6-Dinitrotoluene			NA	NA	NA	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	680 U	NA	
2-Chloronaphthalene			NA	NA	NA	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	450	NA	
2-Chlorophenol			NA	NA	NA	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
2-Methylnaphthalene	670	670	290 U	230 U	98 U	20 U	19 U	<b>2,800</b>	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	40 J	140 U	NA
2-Methylphenol <sup>a</sup>	63	63	290 U	230 U	98 U	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
2-Nitroaniline			NA	NA	NA	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	680 U	NA	
2-Nitrophenol			NA	NA	NA	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	680 U	NA	
3,3'-Dichlorobenzidine			NA	NA	NA	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	680 U	NA	
3-Nitroaniline			NA	NA	NA	120 U	120 U	4,100 U	240 U	230 U	230 U	470 U	480 U	470 U	470 U	470 U	820 U	NA	
4,6-Dinitro-2-methylphenol			NA	NA	NA	200 U	190 U	6,800 U	390 U	390 U	390 U	780 U	790 U	790 U	790 U	790 U	1,400 U	NA	
4-Bromophenyl-phenylether			NA	NA	NA	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
4-Chloro-3-methylphenol			NA	NA	NA	39 U	39 U	1,400 U	79 U	78 U	78 U	160 U	160 U	160 U	160 U	160 U	270 U	NA	
4-Chloroaniline			NA	NA	NA	59 U	58 U	2,000 U	120 U	120 U	120 U	230 U	240 U	240 U	240 U	240 U	410 U	NA	
4-Chlorophenyl-phenylether			NA	NA	NA	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
4-Methylphenol <sup>a</sup>	670	670	290 U	230 U	98 U	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	<b>7,500</b>	140 U	NA
4-Nitroaniline			NA	NA	NA	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	680 U	NA	
4-Nitrophenol			NA	NA	NA	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	790 U	680 U	NA
Benzoic acid <sup>a</sup>	650	650	2,900 U	2,300 U	980 U	200 U	190 U	6,800 U	390 U	390 U	390 U	780 U	790 U	790 U	790 U	790 U	1,400 U	NA	
Benzyl alcohol <sup>a</sup>	57	73	1,400 U	1,200 U	490 U	20 U	19 U	680 U	39 U	39 U	<b>950</b>	78 U	79 U	79 U	79 U	79 U	140 U	NA	
bis(2-Chloroethoxy) methane			NA	NA	NA	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
Bis-(2-chloroethyl) ether			NA	NA	NA	39 U	39 U	1,400 U	79 U	78 U	78 U	160 U	160 U	160 U	160 U	160 U	270 U	NA	
Carbazole			NA	NA	NA	20 U	26	680 U	39 U	<b>49</b>	<b>43</b>	78 U	<b>83</b>	<b>45 J</b>	79 U	<b>150</b>	140 U	NA	
Dibenzofuran	540	540	290 U	230 U	98 U	20 U	19 U	770	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	<b>52 J</b>	140 U	NA
Hexachlorobenzene	22	70	290 U	230 U	98 U	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
Hexachlorobutadiene	11	120	290 U	470 U	200 U	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
Hexachlorocyclopentadiene			NA	NA	NA	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	680 U	NA	
Hexachloroethane			NA	NA	NA	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
Isophorone			NA	NA	NA	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
Nitrobenzene			NA	NA	NA	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
n-Nitroso-di-n-propylamine			NA	NA	NA	39 U	39 U	1,400 U	79 U	78 U	78 U	160 U	160 U	160 U	160 U	160 U	270 U	NA	
N-Nitrosodiphenylamine	28	40	290 U	230 U	98 U	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	79 U	140 U	NA	
Pentachlorophenol <sup>a</sup>	360	690	1,400 U	1,200 U	490 U	98 U	97 U	3,400 U	200 U	190 U	190 U	390 U	400 U	390 U	390 U	390 U	680 U	NA	
Phenol <sup>a</sup>	420	1,200	570 U	470 U	200 U	20 U	19 U	680 U	39 U	39 U	39 U	78 U	79 U	79 U	79 U	170 U	140 U	NA	

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.


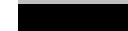
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-6: Inline sediment sample results (dry weight).

Station ID	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST1	ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST2	ST2	
Lab Ref	JF27	JV42	KS67	LL01	MR44	OT18	QU85	FT96	IL86	JE98	JV42	KS67	LM54	MR44	NQ66	OT18		
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	Inline	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	
Date	LAET	2LAET	03/31/06	09/06/06	03/22/07	08/13/07	04/09/08	03/31/09	04/30/10	08/21/03	08/26/05	03/28/06	09/05/06	03/22/07	08/22/07	04/09/08	09/23/08	03/31/09
Total solids (%)			87.5	84.2	81.7	81.1	77.6	67.8	40.1	66.9	71.5	83.5	82.0	82.6	80.7	75.5	82.0	87.5
2,4-Dichlorophenol			600 U	170 U	100 U	510 U	97 U	370 U	390 U	120 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
2,4-Dimethylphenol <sup>a</sup>	29	29	120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
2,4-Dinitrophenol			1,200 U	330 U	200 U	1,000 U	190 U	740 U	780 UJ	390 U	590 U	590 U	330 U	200 U	600 U	200 U	580 U	190 U
2,4-Dinitrotoluene			600 U	170 U	100 U	510 U	97 U	370 U	390 U	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
2,6-Dinitrotoluene			600 U	170 U	100 U	510 U	97 U	370 U	390 U	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
2-Chloronaphthalene			120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
2-Chlorophenol			120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
2-Methylnaphthalene	670	670	120 U	33 U	20 U	100 U	19 U	74 U	120	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
2-Methylphenol <sup>a</sup>	63	63	120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
2-Nitroaniline			600 U	170 U	100 U	510 U	97 U	370 U	390 U	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
2-Nitrophenol			600 U	170 U	100 U	510 U	97 U	370 U	78 U	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
3,3'-Dichlorobenzidine			600 U	170 U	100 U	510 U	97 U	370 U	390 U	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	
3-Nitroaniline			600 U	170 U	100 U	510 U	97 U	370 U	390 U	230 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	
4,6-Dinitro-2-methylphenol			1,200 U	330 U	200 U	1,000 U	190 U	740 U	780 U	390 U	590 U	590 U	330 U	200 U	600 U	200 U	580 U	190 U
4-Bromophenyl-phenylether			120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
4-Chloro-3-methylphenol			600 U	170 U	100 U	510 U	97 U	370 U	390 U	77 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
4-Chloroaniline			600 U	170 U	100 U	510 U	97 U	370 U	390 U	120 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	
4-Chlorophenyl-phenylether			120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
4-Methylphenol <sup>a</sup>	670	670	120 U	33 U	20 U	100 U	69	57 J	78 U	790	440	59 U	33 U	20 U	60 U	20 U	58 U	19 U
4-Nitroaniline			600 U	170 U	100 U	510 U	97 U	370 U	390 U	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
4-Nitrophenol			600 U	170 U	100 U	510 U	97 U	370 U	390 UJ	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
Benzoic acid <sup>a</sup>	650	650	1,200 U	330 U	200 U	1,000 U	190 U	740 U	780 UJ	390 U	590 U	590 U	330 U	200 U	600 UJ	200 U	580 U	190 U
Benzyl alcohol <sup>a</sup>	57	73	120 U	33 U	20	100 U	15 J	74 U	78 U	200	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
bis(2-Chloroethoxy) methane			120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Bis-(2-chloroethyl) ether			120 U	33 U	20 U	100 U	19 U	74 U	78 U	77 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Carbazole			120 U	77	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Dibenzofuran	540	540	120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Hexachlorobenzene	22	70	120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Hexachlorobutadiene	11	120	120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Hexachlorocyclopentadiene			600 U	170 U	100 U	510 U	97 U	370 U	390 U	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
Hexachloroethane			120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Isophorone			120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Nitrobenzene			120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
n-Nitroso-di-n-propylamine			600 U	170 U	100 U	510 U	97 U	370 U	390 U	77 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
N-Nitrosodiphenylamine	28	40	120 U	33 U	20 U	100 U	19 U	74 U	78 U	39 U	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U
Pentachlorophenol <sup>a</sup>	360	690	600 U	170 U	100 U	510 U	97 J	370 U	390 U	190 U	300 U	300 U	170 U	98 U	300 U	98 U	290 U	96 U
Phenol <sup>a</sup>	420	1,200	120 U	33 U	20 U	100 U	34 U	74 U	78 U	160	59 U	59 U	33 U	20 U	60 U	20 U	58 U	19 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

Concentration exceeds the SQS/LAET, MTCA  
Concentration exceeds the CSL/2LAET

DT-6: Inline sediment sample results (dry weight).

Station ID	ST2	ST7	ST7	ST7	ST7	ST7	ST7	RCB140	MH100B	MH101	MH110	MH111	
Lab Ref	QU85	JV42	LL01	NQ66	OT18	QU85	QU85	MW66	NO90	NO90	PZ96	PZ96	
Utility Type <sup>c</sup>	Inline	SD	SD	SD	SD	Inline	Inline	SD	SD	SD	Inline	Inline	
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	S Myrtle St SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	
Date	LAET	2LAET	04/30/10	09/05/06	08/13/07	09/23/08	03/31/09	04/30/10	05/14/08	09/12/08	09/12/08	12/03/09	12/03/09
Total solids (%)			91.0	84.0	77.8	80.4	75.9	82.4	81.2	67.7	48.3	65.0	74.7
TOC (%)			0.43	0.82	3.22	4.89	2.25	1.37	1.37	6.89	3.09	3.6	1.8
<b>Metals (mg/kg DW)</b>													
Arsenic	57	93	10 U	20 U	6 U	7	6 UJ	6	6 U	13.9	50	18 J	960 J
Copper	390	390	40.4	77.5	40	58.7	47.5 J	39.9	129	500	220	227 J	998 J
Lead	450	530	16	32	28	61	51 J	59	18	675	178	84 J	878 J
Mercury	0.41	0.59	0.02 U	0.05 U	0.05 U	0.06	0.08 J	0.02 U	0.04 U	1.88	0.28	0.13 J	0.40 J
Zinc	410	960	105	271	163	271	152 J	161	423	2,420	829	455 J	2,630 J
<b>Total petroleum hydrocarbons (mg/kg DW)</b>													
TPH-diesel	2,000 <sup>b</sup>		55 U	94	250	470	190	110	150	1,100	470	400	620
TPH-oil	2,000 <sup>b</sup>		220	620	1,200	2,100	1,000	470	920	5,100	1,100	930	1,700
<b>LPAH (ug/kg DW)</b>													
Acenaphthene	500	500	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	130	700
Acenaphthylene	1,300	1,300	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	34 J	96 U
Anthracene	960	960	19 U	40 U	110 U	170 U	58 J	12 J	59 U	190 U	130	7,300	1,300
Fluorene	540	540	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	140	610
Naphthalene	2,100	2,100	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	41 J	96 U
Phenanthrene	1,500	1,500	19 U	97	250	240	440	100	73	320	310	6,000	1,500
Total LPAH	5,200	5,200	19 U	97	250	240	498 J	112 J	73	320	440	13,645	4,110
<b>HPAH (ug/kg DW)</b>													
Benzo(a)anthracene	1,300	1,600	19 U	53	140	160 J	110	81	44 J	290	400	13,000	1,000
Benzo(a)pyrene	1,600	1,600	19 U	65	150	180	110	100	43 J	580	550	8,400	1,000
Benzo(b)fluoranthene	3,200	3,600	7 J	76	230	200	150	110	58 J	680	1,100	8,700	1,100
Benzo(g,h,i)perylene	670	720	19 U	47	110 U	170 U	46 J	40 J	59 U	410	240	1,500	240
Benzo(k)fluoranthene	3,200	3,600	7 J	51	130	270	180	110	46 J	660	890	8,700	1,100
Chrysene	1,400	2,800	15 J	99	240	290	180	180	81	490	850	15,000	1,600
Dibenz(a,h)anthracene	230	230	19 U	40 U	110 U	170 U	81 U	18 J	59 U	95 J	110 U	1,100	75 J
Fluoranthene	1,700	2,500	12 J	190	500	430	480	240	130	770	1,600	27,000	4,100
Indeno(1,2,3-cd)pyrene	600	690	19 U	40 U	110 U	170 U	81 U	31	59 U	290	210	1,800	250
Pyrene	2,600	3,300	13 J	140	320	340	450	180 J	130	660	1,800	25,000	3,000
Total HPAH	12,000	17,000	53 J	721	1,710	1,870 J	1,706 J	1,090 J	532 J	4,925 J	7,640	110,200	13,465
<b>Phthalates (ug/kg dw)</b>													
Bis(2-ethylhexyl)phthalate	1,300	1,900	180	1,200 B	2,500	3,000	1,600	950	990	3,000	12,000	7,500	4,700
Butylbenzylphthalate	63	900	19 U	40 U	1,200	170 U	81 U	95	260	1,500	310	250	150
Diethylphthalate	200		19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	50 J
Dimethylphthalate	71	160	19 U	41	110 U	170 U	81 U	20 U	39 J	200	110 U	66 U	49 J
Di-n-butylphthalate	1,400	1,400	19 U	410	110 U	170 U	81 U	54	59 U	400	110 U	41 J	140
Di-n-octyl phthalate	6,200		19 U	61	190	180	120	160	210	190	140	190	530
<b>PCBs (ug/kg dw)</b>													
Aroclor 1016			19 U	20 U	19 U	20 U	96 U	19 U	20 U	200 U	59 U	20 U	26 U
Aroclor 1221			19 U	20 U	19 U	20 U	96 U	19 U	20 U	200 U	59 U	20 U	26 U
Aroclor 1232			19 U	20 U	19 U	20 U	96 U	19 U	20 U	200 U	59 U	20 U	26 U
Aroclor 1242			19 U	48	19 U	20 U	96 U	19 U	20 U	200 U	59 U	20 U	26 U
Aroclor 1248			19 U	20 U	19 U	38	96 U	19 U	31	390 Y	78	39	52
Aroclor 1254			19 U	19 J	25	46	120	19 U	20 U	1,200	130	61 J	87
Aroclor 1260			19 U	20 U	29 Y	31	96 U	19 U	20 U	350	120 J	43	51
Total PCBs	130	1,000	19 U	67 J	25	115	120	19 U	31	1,550	328	143 J	190
<b>Other organic compounds (ug/kg dw)</b>													
1,2,4-Trichlorobenzene	31	51	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
1,2-Dichlorobenzene	35	50	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	56 J	54 J
1,3-Dichlorobenzene			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
1,4-Dichlorobenzene	110	110	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	82 J	260	110
1-Methylnaphthalene			19 U					20 U				35 J	98
2,2'-Oxybis(1-chloropropane)			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
2,4,5-Trichlorophenol			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
2,4,6-Trichlorophenol			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U



DT-6: Inline sediment sample results (dry weight).

Station ID	ST2	ST7	ST7	ST7	ST7	ST7	RCB140	MH100B	MH101	MH110	MH111		
Lab Ref	QU85	JV42	LL01	NQ66	OT18	QU85	MW66	NO90	NO90	PZ96	PZ96		
Utility Type <sup>c</sup>	Inline	SD	SD	SD	SD	Inline	SD	SD	SD	Inline	Inline		
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	S Myrtle St SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD		
Date	LAET	2LAET	04/30/10	09/05/06	08/13/07	09/23/08	03/31/09	04/30/10	05/14/08	09/12/08	09/12/08	12/03/09	12/03/09
Total solids (%)			91.0	84.0	77.8	80.4	75.9	82.4	81.2	67.7	48.3	65.0	74.7
2,4-Dichlorophenol			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
2,4-Dimethylphenol <sup>a</sup>	29	29	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
2,4-Dinitrophenol			190 UJ	400 U	1,100 U	1,700 U	810 U	200 UJ	590 U	1,900 U	1,100 U	660 UJ	960 U
2,4-Dinitrotoluene			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
2,6-Dinitrotoluene			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
2-Chloronaphthalene			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
2-Chlorophenol			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
2-Methylnaphthalene	670	670	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	46 J	60 J
2-Methylphenol <sup>a</sup>	63	63	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
2-Nitroaniline			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
2-Nitrophenol			19 U	200 U	540 U	870 U	400 U	20 U	300 U	940 U	540 U	330 U	480 U
3,3'-Dichlorobenzidine			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
3-Nitroaniline			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
4,6-Dinitro-2-methylphenol			190 U	400 U	1,100 U	1,700 U	810 U	200 U	590 U	1,900 U	1,100 U	660 U	960 U
4-Bromophenyl-phenylether			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
4-Chloro-3-methylphenol			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
4-Chloroaniline			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
4-Chlorophenyl-phenylether			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
4-Methylphenol <sup>a</sup>	670	670	19 U	490	110 U	170 U	81 U	20 U	57 J	190 U	110 U	66 U	96 U
4-Nitroaniline			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
4-Nitrophenol			97 UJ	200 U	540 U	870 U	400 U	98 UJ	300 U	940 U	540 U	330 U	480 U
Benzoic acid <sup>a</sup>	650	650	190 UJ	400 U	1,200	1,700 U	810 U	200 UJ	590 U	1,900 U	1,100 U	660 U	960 U
Benzyl alcohol <sup>a</sup>	57	73	19 U	40 U	120	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
bis(2-Chloroethoxy) methane			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
Bis-(2-chloroethyl) ether			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
Carbazole			19 U	40 U	110 U	170 U	81 U	18 J	59 U	190 U	86 J	66 U	96 U
Dibenzofuran	540	540	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	62 J	250
Hexachlorobenzene	22	70	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
Hexachlorobutadiene	11	120	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
Hexachlorocyclopentadiene			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 UJ	480 U
Hexachloroethane			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
Isophorone			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
Nitrobenzene			19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
n-Nitroso-di-n-propylamine			97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
N-Nitrosodiphenylamine	28	40	19 U	40 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U
Pentachlorophenol <sup>a</sup>	360	690	97 U	200 U	540 U	870 U	400 U	98 U	300 U	940 U	540 U	330 U	480 U
Phenol <sup>a</sup>	420	1,200	19 U	45 U	110 U	170 U	81 U	20 U	59 U	190 U	110 U	66 U	96 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.


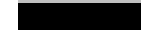
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/L  
 Concentration exceeds the CSL/2L



DT-6: Inline sediment grab sample results (dry weight).

Station ID	ID-ST2	DK-ST1	DK-ST1	1st-ST1	1st-ST1	1st-ST2	1st-ST2	1st-ST3	1st-ST3	1st-ST5	1st-ST5	1st-ST5	HP-ST4	HP-ST6	HP-ST6		
Lab Ref	NN61	NO62	OP80	NN61	OP80	NN61	OP80	NO62	OQ56	NP28	RG85	RG85	NO62	NR14	OV62		
Type <sup>c</sup>	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline		
Outfall	SW Idaho St SD	SW Idaho St SD	SW Idaho St SD	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	Highland Park Wy SW SD	Highland Park Wy SW SD	Highland Park Wy SW SD		
Date	SQS/LAET	CSL/2LAET	09/05/08	09/10/08	03/06/09	09/05/08	03/06/09	09/05/08	03/06/09	09/10/08	03/12/09	09/16/08	08/02/10	08/02/10	09/10/08	09/25/08	04/15/09
Total solids (%)			75	91.3	77.9	59.0	70	83	73.7	84.4	76.7	21.6	24.6	35	86.6	20.3	42.6
Total organic carbon (%)			0	3.63	3.6	8.37	5.98	0.89	2.14	2.02	3.82	11.2	12.8	9.88	0.708	6.64 J	6.9
<b>Metals (mg/kg)</b>																	
Arsenic	57	93	6 U	10	6 U	7	7 U	6 U	7	5 U	6 U	30	20	20	7	30	30
Copper	390	390	17.4	26.3	18	110	89.5	21	23.6	29.6	35.6	246	171	153	36.3	144	160
Lead	450	530	10	33	34	63	46	180	32	10	11	301	254	262	19	150	162
Mercury	0.41	0.59	0.06 U	0.08	0.05	0.07 U	0.07	0.05 U	0.05 U	0.04 U	0.06 U	0.6	0.42	0.49	0.04 U	0.26	0.31
Zinc	410	960	74	170	122	502	396	134	143	162	192	1,480	924	852	184	876	882
<b>Total petroleum hydrocarbons (mg/kg)</b>																	
TPH-diesel	2,000 <sup>b</sup>		65 U	56 U	65 U	180	650	61 U	170	61 U	61 U	1,100	1,000	980	89	230 U	790
TPH-oil	2,000 <sup>b</sup>		130 U	270	280	1,000	3,300	320	910	410	470	3,800	3,600	3,300	540	470 U	3,800
<b>LPAH (ug/kg DW)</b>																	
Acenaphthene	500	500	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	54 J	580	550 J	350 J	39 U	59 U	140 U
Acenaphthylene	1,300	1,300	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Anthracene	960	960	20 U	19 U	20 U	31 J	91 J	20 U	59 U	20 U	160	430 U	700 U	570 U	39 U	59 U	140 U
Fluorene	540	540	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	75	490	530 J	380 J	39 U	59 U	140 U
Naphthalene	2,100	2,100	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Phenanthrene	1,500	1,500	67	19 U	20 U	140	400	13 J	35 J	41	960	980	1,400	1,000	34 J	190	160
Total LPAH	5,200	5,200	67	19 U	20 U	171	491	13 J	35 J	41	1,249 J	2,050	2,480 J	1,730 J	34 J	190	160
<b>HPAH (ug/kg DW)</b>																	
Benzo(a)anthracene	1,300	1,600	69	19 U	20 U	130	250	20 U	59 U	42	580	430 U	540 J	510 J	34 J	130	140
Benzo(a)pyrene	1,600	1,600	110	19 U	20 U	140	230	20 U	59 U	54	600	560	550 J	490 J	37 J	150	190
Benzo(b)fluoranthene	3,200	3,600	180	19 U	10 J	180	370	12 J	31 J	66	610	750	650 J	560 J	66	240	270
Benzo(g,h,i)perylene	670	720	120	19 U	20 U	90	120 J	20 U	59 U	20	250	430 U	380 J	300 J	39 U	140	140 U
Benzo(k)fluoranthene	3,200	3,600	310	21	20 U	220	250	14 J	59 U	74	580	1,200	650 J	560 J	45	180	240
Chrysene	1,400	2,800	190	19 U	11 J	240	720	19 J	54 J	64	720	1,200	980	850	55	290	310
Dibenz(a,h)anthracene	230	230	20	19 U	20 U	58 U	130 U	20 U	59 U	20 U	78	430 U	700 U	570 U	39 U	59 U	140 U
Fluoranthene	1,700	2,500	200	19 U	20 U	310	600	26	53 J	130	1,500	2,200	1,700	1,600	110	380	400
Indeno(1,2,3-cd)pyrene	600	690	120	19 U	20 U	53 J	80 J	20 U	59 U	16 J	260	430 U	700 U	570 U	39 U	98	140 U
Pyrene	2,600	3,300	170	19 U	20 U	520	730	27	72	110	1,300	2,300	1,900	1,600	81	400	390
Total HPAH	12,000	17,000	1,489	21	21 J	1,883 J	3,350 J	98 J	210 J	576 J	6,478	8,210	7,350	6,470	428 J	2,008	1,940
<b>Phthalates (ug/kg dw)</b>																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	130	63	59	2,400	8,100	190	3,200	160	180	44,000	26,000	24,000	290	4,500	5,100
Butylbenzylphthalate	63	900	13 J	19 U	20 U	210	300	64	77	20 U	57 U	430 U	700 U	570 U	39 U	570	600
Diethylphthalate	200		18 J	19 U	19 J	58 U	130 U	20 U	59 U	28	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Dimethylphthalate	71	160	20 U	19 U	20 U	97	120 J	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	72	140 U
Di-n-butylphthalate	1,400	1,400	20 U	19 U	35	93	130 U	20 U	59 U	20 U	57 U	570	700 U	570 U	39 U	69	140 U
Di-n-octyl phthalate	6,200		20 U	19 U	20 U	83	1,200	20 U	49 J	20 U	57 U	1,900	700 U	570 U	310	220	190
<b>PCBs (ug/kg dw)</b>																	
Aroclor 1016			20 U	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	60 U	20 U	20 U	19 U	20 U	20 U
Aroclor 1221			20 U	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	60 U	20 U	20 U	19 U	20 U	20 U
Aroclor 1232			20 U	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	60 U	20 U	20 U	19 U	20 U	20 U
Aroclor 1242			20 U	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	60 U	20 U	20 U	19 U	20 U	20 U
Aroclor 1248			20	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	160	68	87	19 U	20 U	26
Aroclor 1254			20 U	19 U	20 U	30	20	20 U	20 U	20 U	20 U	220	81 J	120 J	19 U	20 U	34
Aroclor 1260			20 U	19 U	20 U	31	20 U	20 U	20 U	20 U	20 U	120	44 J	67 J	19 U	20 U	23
Total PCBs	130	1,000	20	19 U	20 U	61	20	20 U	20 U	20 U	20 U	500	193 J	274 J	19 U	20 U	83
<b>Other organic compounds (ug/kg dw)</b>																	
1,2,4-Trichlorobenzene	31	51	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
1,2-Dichlorobenzene	35	50	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
1,3-Dichlorobenzene			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
1,4-Dichlorobenzene	110	110	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
1-Methylnaphthalene													380 J	570 U			
2,2'-Oxybis(1-chloropropane)			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
2,4,5-Trichlorophenol			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
2,4,6-Trichlorophenol			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
2,4-Dichlorophenol			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U

DT-6: Inline sediment grab sample results (dry weight).

Station ID	ID-ST2	DK-ST1	DK-ST1	1st-ST1	1st-ST1	1st-ST2	1st-ST2	1st-ST3	1st-ST3	1st-ST5	1st-ST5	1st-ST5	HP-ST4	HP-ST6	HP-ST6		
Lab Ref	NN61	NO62	OP80	NN61	OP80	NN61	OP80	NO62	OQ56	NP28	RG85	RG85	NO62	NR14	OV62		
Type <sup>c</sup>	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline		
Outfall	SW Idaho St SD	SW Idaho St SD	SW Idaho St SD	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	1st Ave S SD (west)	Highland Park Wy SW SD	Highland Park Wy SW SD	Highland Park Wy SW SD		
Date	SQS/LAET	CSL/2LAET	09/05/08	09/10/08	03/06/09	09/05/08	03/06/09	09/05/08	03/06/09	09/10/08	03/12/09	09/16/08	08/02/10	08/02/10	09/10/08	09/25/08	04/15/09
2,4-Dimethylphenol <sup>a</sup>	29	29	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
2,4-Dinitrophenol			200 U	190 U	200 U	580 U	1,300 U	200 U	590 U	200 U	570 U	4,300 U	7,000 U	5,700 U	390 U	590 U	1,400 U
2,4-Dinitrotoluene			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
2,6-Dinitrotoluene			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
2-Chloronaphthalene			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
2-Chlorophenol			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
2-Methylnaphthalene	670	670	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	<b>530 J</b>	<b>330 J</b>	39 U	59 U	140 U
2-Methylphenol <sup>a</sup>	63	63	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
2-Nitroaniline			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
2-Nitrophenol			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	700 U	570 U	200 U	300 U	680 U
3,3'-Dichlorobenzidine			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
3-Nitroaniline			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
4,6-Dinitro-2-methylphenol			200 U	190 U	200 U	580 U	1,300 U	200 U	590 U	200 U	570 U	4,300 U	7,000 U	5,700 U	390 U	590 U	1,400 U
4-Bromophenyl-phenylether			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
4-Chloro-3-methylphenol			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
4-Chloroaniline			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
4-Chlorophenyl-phenylether			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
4-Methylphenol <sup>a</sup>	670	670	20 U	19 U	20 U	58 U	130 U	20 U	<b>70</b>	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
4-Nitroaniline			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
4-Nitrophenol			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
Benzoic acid <sup>a</sup>	650	650	200 U	190 U	200 U	580 U	1,300 U	200 U	590 U	200 U	570 U	4,300 U	7,000 U	5,700 U	390 U	590 U	1,400 U
Benzyl alcohol <sup>a</sup>	57	73	20 U	19 U	<b>18 J</b>	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	<b>430</b>	140 U
bis(2-Chloroethoxy) methane			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Bis-(2-chloroethyl) ether			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Carbazole			<b>16 J</b>	19 U	20 U	58 U	<b>65 J</b>	20 U	59 U	20 U	<b>120</b>	430 U	700 U	570 U	39 U	59 U	140 U
Dibenzofuran	540	540	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Hexachlorobenzene	22	70	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Hexachlorobutadiene	11	120	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Hexachlorocyclopentadiene			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
Hexachloroethane			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Isophorone			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Nitrobenzene			20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
N-Nitroso-di-n-propylamine			98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
N-Nitrosodiphenylamine	28	40	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	59 U	140 U
Pentachlorophenol <sup>a</sup>	360	690	98 U	96 U	98 U	290 U	640 U	98 U	290 U	99 U	290 U	2,200 U	3,500 U	2,800 U	200 U	300 U	680 U
Phenol <sup>a</sup>	420	1,200	20 U	19 U	20 U	58 U	130 U	20 U	59 U	20 U	57 U	430 U	700 U	570 U	39 U	<b>72</b>	140 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET

DT-6: Inline sediment grab sample results (dry weight).

Station ID	KN-ST1	KN-ST1	KN-ST1	7th-ST1	7th-ST1	7th-ST1	7th-ST2	7th-ST3	7th-ST3	7th-ST3	96-ST1	96-ST1	96-ST2	96-ST2	96-ST3		
Lab Ref	NO62	OR05	QV61	NO62	OR05	QU72	NP28	NM74	QU72	OQ56	OD79	OW77	OD79	OW77	OC78		
Type <sup>c</sup>	Inline	Inline	Inline	Inline	Inline	Trap	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline		
Outfall	SW Kenny St SD/T115 CSO	SW Kenny St SD/T115 CSO	#N/A	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD		
Date	SQS/LAET	CSL/2LAET	09/10/08	03/17/09	05/06/10	09/10/08	03/17/09	04/29/10	09/16/08	08/28/08	04/29/10	03/12/09	12/11/08	04/24/09	12/11/08	04/24/09	12/03/08
Total solids (%)			45.6	51.5	50.8	45.8	43.1	43.4	95.1	46.7	43.9	24.6	68.5	73.9	78.7	70.1	77.5
Total organic carbon (%)			4.48	5.03	4.03	6.46	5.59	7.46	0.417	5.29	6.66	13.9	1.3	2.84	0.836	3.39	0.277
<b>Metals (mg/kg)</b>																	
Arsenic	57	93	30	34	70	20	20	20	6 U	20	20	18	7	7	6 U	7 U	6 U
Copper	390	390	147	156	193	251	223	208	19.2	159	154	176	28.9	25.3	18.8	23.2	8.1
Lead	450	530	223	184	470	188	189	157	3	173	160	190	38	36	31	63	5
Mercury	0.41	0.59	0.40	0.19	0.42	0.26	0.20	0.19	0.05 U	0.26	0.23	0.28	0.06 U	0.03	0.05 U	0.04	0.05 U
Zinc	410	960	707	771	879	735	674	678	84	654	775	738	228	249	396	410	34
<b>Total petroleum hydrocarbons (mg/kg)</b>																	
TPH-diesel	2,000 <sup>b</sup>		130	870	660	240	930	330	59 U	110 U	260	1,000	77	100	33 U	62 U	64 U
TPH-oil	2,000 <sup>b</sup>		660	4,600	2,300	1,300	4,800	1,300	120 U	220	1,300	3,700	470	570	190	330	130 U
<b>LPAH (ug/kg DW)</b>																	
Acenaphthene	500	500	75 U	120 U	140	140 U	200 U	170 U	19 U	20 U	21 J	150 U	22	86	19 U	60 U	20 U
Acenaphthylene	1,300	1,300	75 U	120 U	88	140 U	200 U	170 U	19 U	20 U	20 J	150 U	20 U	59 U	19 U	60 U	20 U
Anthracene	960	960	75 U	160	1,400	140 U	200 U	130 J	19 U	20 U	57	150 U	54	280	32	60 U	20 U
Fluorene	540	540	75 U	120 U	270	140 U	200 U	170 U	19 U	20 U	21 J	150 U	25	120	19 U	60 U	20 U
Naphthalene	2,100	2,100	75 U	120 U	42 J	140 U	200 U	170 U	19 U	20 U	24 J	150 U	20 U	59 U	19 U	60 U	20 U
Phenanthrene	1,500	1,500	85	310	3,300	240	420	590	19 U	110	290	280	260	1,400	150	200	20 U
Total LPAH	5,200	5,200	85	470	5,240 J	240	420	720	19 U	110	433	280	361	1,886	182	200 U	20 U
<b>HPAH (ug/kg DW)</b>																	
Benzo(a)anthracene	1,300	1,600	91	400	990 J	240	360	680	19 U	89	220	270	160	710	120	140	20 U
Benzo(a)pyrene	1,600	1,600	150	620	1,100	420	460	780	19 U	140	410	440	160	750	110	160	20 U
Benzo(b)fluoranthene	3,200	3,600	310	760	1,700	410	420	890	19 U	220	410	420	180	970	120	190	20 U
Benzo(g,h,i)perylene	670	720	93	640 J	560	270	330	400	19 U	59	270	380	54	270	35	69	20 U
Benzo(k)fluoranthene	3,200	3,600	300	960 J	1,700 J	770	640	890	19 U	190	410	610	140	730	100	220	20 U
Chrysene	1,400	2,800	210	710	2,400 J	520	560	1,200	19 U	140	450	450	200	820	130	190	20 U
Dibenz(a,h)anthracene	230	230	75 U	160	190	140 U	200 U	170 J	19 U	20 U	86	150 U	20 U	93	19 U	60 U	20 U
Fluoranthene	1,700	2,500	420	1,100	6,900	800	850	1,900	19 U	250	900	660	370	2,000	260	350	20 U
Indeno(1,2,3-cd)pyrene	600	690	83	560 J	590	190	280	360	19 U	47	210	270	53	260	35	60	20 U
Pyrene	2,600	3,300	290	940	2,900 J	1,000	920	1,200	19 U	210	540	640	420	1,800	260	350	20 U
Total HPAH	12,000	17,000	1,947	6,850 J	19,030 J	4,620	4,820	8,470	19 U	1,345	3,906	4,140	1,737	8,403	1,170	1,729	20 U
<b>Phthalates (ug/kg dw)</b>																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	830	2,100 B	2,900 J	3,400	1,500 B	7,300	19 U	510	2,100	1,500	920	620	170	640	20 U
Butylbenzylphthalate	63	900	75 U	140	150 J	270	220	400 J	19 U	100	320	200	28	140	37	60 U	20 U
Diethylphthalate	200		75 U	120 U	77 UJ	140 U	200 U	170 UJ	19 U	20 U	34 UJ	150 U	20 U	59 U	19 U	60 U	20 U
Dimethylphthalate	71	160	75 U	120 U	77 U	140 U	200 U	170 U	19 U	32	56	91 J	24	59 U	19 U	60 U	20 U
Di-n-butylphthalate	1,400	1,400	87	230	230	140 U	200 U	130 J	19 U	44	110	120 J	20 U	59 U	19 U	60 U	20 U
Di-n-octyl phthalate	6,200		75 U	120 U	77 U	140 U	200 U	210	19 U	20 U	46	150 U	20 U	59 U	19 U	60 U	20 U
<b>PCBs (ug/kg dw)</b>																	
Aroclor 1016			20 U	20 U	20 U	270 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U
Aroclor 1221			20 U	20 U	20 U	270 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U
Aroclor 1232			20 U	20 U	20 U	270 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U
Aroclor 1242			20 U	20 U	20 U	270 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U
Aroclor 1248			68	26	100 Y	270 U	20 U	39	20 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U
Aroclor 1254			130	69	200	540 Y	68	77	20 U	59	44	31	39	19 U	19 U	19 U	20 U
Aroclor 1260			100	72	200	2,400	120	120	20 U	55	38	29	50	19 U	19 U	19 U	20 U
Total PCBs	130	1,000	298	167	500	2,400	188	236	20 U	114	82	60	89	19 U	19 U	19 U	20 U
<b>Other organic compounds (ug/kg dw)</b>																	
1,2,4-Trichlorobenzene	31	51	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
1,2-Dichlorobenzene	35	50	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
1,3-Dichlorobenzene			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
1,4-Dichlorobenzene	110	110	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
1-Methylnaphthalene					77 U			170 U			34 U						
2,2'-Oxybis(1-chloropropane)			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
2,4,5-Trichlorophenol			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
2,4,6-Trichlorophenol			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
2,4-Dichlorophenol			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U

DT-6: Inline sediment grab sample results (dry weight).

Station ID	KN-ST1		KN-ST1	KN-ST1	7th-ST1	7th-ST1	7th-ST1	7th-ST2	7th-ST3	7th-ST3	7th-ST3	96-ST1	96-ST1	96-ST2	96-ST2	96-ST3	
Lab Ref	NO62		OR05	QV61	NO62	OR05	QU72	NP28	NM74	QU72	OQ56	OD79	OW77	OD79	OW77	OC78	
Type <sup>c</sup>	Inline		Inline	Inline	Inline	Inline	Trap	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	
Outfall	SW Kenny St SD/T115 CSO		SW Kenny St SD/T115 CSO	#N/A	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD	
Date	SQS/LAET	CSL/2LAET	09/10/08	03/17/09	05/06/10	09/10/08	03/17/09	04/29/10	09/16/08	08/28/08	04/29/10	03/12/09	12/11/08	04/24/09	12/11/08	04/24/09	12/03/08
2,4-Dimethylphenol <sup>a</sup>	29	29	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
2,4-Dinitrophenol			750 U	1,200 U	770 UJ	1,400 U	2,000 U	1,700 UJ	190 U	200 U	340 UJ	1,500 U	200 U	590 U	190 U	600 U	200 U
2,4-Dinitrotoluene			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
2,6-Dinitrotoluene			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
2-Chloronaphthalene			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
2-Chlorophenol			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
2-Methylnaphthalene	670	670	75 U	120 U	45 J	140 U	200 U	170 U	19 U	20 U	23 J	150 U	38	59 U	19 U	60 U	20 U
2-Methylphenol <sup>a</sup>	63	63	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
2-Nitroaniline			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
2-Nitrophenol			370 U	610 U	77 U	700 U	990 U	170 U	96 U	98 U	34 U	760 U	98 U	300 U	96 U	300 U	98 U
3,3'-Dichlorobenzidine			370 U	610 R	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
3-Nitroaniline			370 U	610 R	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
4,6-Dinitro-2-methylphenol			750 U	1,200 U	770 U	1,400 U	2,000 U	1,700 U	190 U	200 U	340 U	1,500 U	200 U	590 U	190 U	600 U	200 U
4-Bromophenyl-phenylether			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
4-Chloro-3-methylphenol			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
4-Chloroaniline			370 U	610 R	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
4-Chlorophenyl-phenylether			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
4-Methylphenol <sup>a</sup>	670	670	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
4-Nitroaniline			370 U	610 R	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
4-Nitrophenol			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
Benzoic acid <sup>a</sup>	650	650	750 U	1,200 U	770 U	1,400 U	2,000 U	1,700 U	190 U	200 U	120 J	1,500 U	200 U	590 U	190 U	600 U	200 U
Benzyl alcohol <sup>a</sup>	57	73	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	41	150 U	20 U	59 U	19 U	94	20 U
bis(2-Chloroethoxy) methane			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
Bis-(2-chloroethyl) ether			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
Carbazole			75 U	120 U	420	140 U	200 U	100 J	19 U	20 U	53	150 U	34	190	21	60 U	20 U
Dibenzofuran	540	540	75 U	120 U	99	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
Hexachlorobenzene	22	70	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
Hexachlorobutadiene	11	120	75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
Hexachlorocyclopentadiene			370 U	610 UJ	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
Hexachloroethane			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
Isophorone			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
Nitrobenzene			75 U	120 U	77 U	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
N-Nitroso-di-n-propylamine			370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
N-Nitrosodiphenylamine	28	40	75 U	120 U	89 NJ	140 U	200 U	170 U	19 U	20 U	34 U	150 U	20 U	59 U	19 U	60 U	20 U
Pentachlorophenol <sup>a</sup>	360	690	370 U	610 U	380 U	700 U	990 U	850 U	96 U	98 U	170 U	760 U	98 U	300 U	96 U	300 U	98 U
Phenol <sup>a</sup>	420	1,200	75 U	120 U	52 J	140 U	200 U	170 U	19 U	20 U	69 B	150 U	20 U	59 U	19 U	60 U	20 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET

## DT-6: Inline sediment grab sample results (dry weight).

Station ID			96-ST3	HC-ST1	HC-ST1	KCIA2-ST1	KCIA2-ST1	KCIA2-ST1	KCIA1-ST1	KCIAJ-ST1	T2A	MHT6BX	MH17	MH18	MH21A	MH201	MH202
Lab Ref			OY94	OB36	OV62	NR14	OS39	PT62	OS39	OS39	OB72	OI27	OB72	OB72	OQ59	OA35	OA35
Type <sup>c</sup>			Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline
Outfall			S 96th St SD	Hamm Creek	Hamm Creek	KCIA SD#2/PS45 EOF	KCIA SD#2/PS45 EOF	#N/A	KCIA SD#1	KCIA-Jorgensen SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	16th Ave S SD	16th Ave S SD
Date	SQS/LAET	CSL/2LAET	05/13/09	11/21/08	04/15/09	09/25/08	03/26/09	10/21/09	03/26/09	03/26/09	11/25/08	01/15/09	11/25/08	11/25/08	03/12/09	11/17/08	11/17/08
Total solids (%)			79.7	87.7	86.8	38.8	19.1	79.5	84.8	84.2	53.2	49.9	78	54.8	43.7	72	65.7
Total organic carbon (%)			0.91	0.283	0.354	12.3	4.81	0.6455	0.999	1.88	5.27	9.45	2.4	3.43	5.68	5.82	9.79
<b>Metals (mg/kg)</b>																	
Arsenic	57	93	6 UJ	5 U	6	40	120 UJ	6 UJ	10 J	21 J	10	10	6 U	34	10	10	9.2
Copper	390	390	9.4 J	12.6	18.7	16	18 J	13.4 J	23 J	116 J	158	148	109	387	176	158	158
Lead	450	530	6 J	8	7	50 U	50 UJ	10 J	26 J	134 J	83	179	51	461	110	281	260
Mercury	0.41	0.59	0.02 UJ	0.06 U	0.02 U	0.3 U	0.2 UJ	0.03 UJ	0.05 UJ	0.07 J	0.15	0.24	0.06	0.48	0.30	7.7	0.12
Zinc	410	960	38 UJ	72	62	330	370 J	43 J	1,170 J	357 J	337	858	183	534	448	1,020	1,640
<b>Total petroleum hydrocarbons (mg/kg)</b>																	
TPH-diesel	2,000 <sup>b</sup>		61 U	57 U	58 U	320	250 U	62 U	74	260	390	1,200	97	800	880	220	330
TPH-oil	2,000 <sup>b</sup>		120 U	110 U	120 U	1,500	500 U	120 U	370	1,500	1,900	6,800	560	2,300	4,500	1,400	1,600
<b>LPAH (ug/kg DW)</b>																	
Acenaphthene	500	500	19 U	20 U	19 U	20 U	20 U	19 U	55 U	94	34 U	79 U	13 J	54	140 U	100 U	120 U
Acenaphthylene	1,300	1,300	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	41 J	19 U	32 U	140 U	100 U	120 U
Anthracene	960	960	19 U	20 U	19 U	20 U	20 U	11 J	55 U	320	34 U	110	18 J	290	140 U	100 U	120 U
Fluorene	540	540	19 U	20 U	19 U	20 U	20 U	19 U	55 U	140	34 U	79 U	19 U	53	140 U	100 U	120 U
Naphthalene	2,100	2,100	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	55 J	19 U	27 J	140 U	100 U	120 U
Phenanthrene	1,500	1,500	19 U	20 U	19 U	61	42	51	200	2,000	77	330	100	520	120 J	350	470
Total LPAH	5,200	5,200	19 U	20 U	19 U	61	42	62	200	2,554	77	536 J	131 J	944 J	120 J	350	470
<b>HPAH (ug/kg DW)</b>																	
Benzo(a)anthracene	1,300	1,600	19 U	20 U	19 U	35	27	61	180	1,400	52	310	73	840	130 J	320	300
Benzo(a)pyrene	1,600	1,600	19 U	20 U	19 U	60	43	68	200	1,400	86	640	77	860	160	390	360
Benzo(b)fluoranthene	3,200	3,600	19 U	20 U	19 U	140	82	73	290	1,500	94	1,000	87	950	190	330	430
Benzo(g,h,i)perylene	670	720	19 U	20 U	19 U	98	64	29	120 J	640	77	450	37	270	210	290	240
Benzo(k)fluoranthene	3,200	3,600	19 U	20 U	19 U	85	84	73	290	1,500	130	550	82	820	240	480	410
Chrysene	1,400	2,800	19 U	20 U	19 U	94	72	78	280	1,700	160	570	110	880	310	450	510
Dibenz(a,h)anthracene	230	230	19 U	20 U	19 U	32	14 J	13 J	160 U	300	34 U	62 J	19 U	100	140 U	100 U	120 U
Fluoranthene	1,700	2,500	19 U	20 U	19 U	140	110	170 B	560	3,500	190	800	200	1,800	390	810	800
Indeno(1,2,3-cd)pyrene	600	690	19 U	20 U	19 U	92	56	34	120 J	700	45	320	29	280	100 J	210	170
Pyrene	2,600	3,300	19 U	20 U	19 U	120	84	120	490	2,800	200	1,100	170	1,500	510	650	700
Total HPAH	12,000	17,000	19 U	20 U	19 U	896	636 J	719 JB	2,530 J	15,440	1,034	5,802 J	865	8,300	2,240 J	3,930	3,920
<b>Phthalates (ug/kg dw)</b>																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	38 U	51 U	72	88	32	58	360	590	6,500	5,300	670	3,200	5,100	13,000	44,000
Butylbenzylphthalate	63	900	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	95	310	100	32 U	240	480	370
Diethylphthalate	200		23 U	20 U	19 U	20 U	16 J	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
Dimethylphthalate	71	160	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	26 J	50 J	47	45	140 U	120	130
Di-n-butylphthalate	1,400	1,400	25	20 U	19 U	20 U	20 U	19 U	55 U	66	34 U	98	19 U	31 J	1,400	100 U	240
Di-n-octyl phthalate	6,200		19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	91	320	28	32 U	190	250	3,900
<b>PCBs (ug/kg dw)</b>																	
Aroclor 1016			20 U	20 U	19 U	20 U	20 U	19 U	20 U	2,500 U	20 U	18 U	20 U	60 U	20 U	20 U	19 U
Aroclor 1221			20 U	20 U	19 U	20 U	20 U	19 U	20 U	2,500 U	20 U	18 U	20 U	60 U	20 U	20 U	19 U
Aroclor 1232			20 U	20 U	19 U	20 U	20 U	19 U	20 U	2,500 U	20 U	18 U	20 U	60 U	20 U	20 U	19 U
Aroclor 1242			20 U	20 U	19 U	20 U	20 U	19 U	20 U	2,500 U	20 U	18 U	20 U	60 U	20 U	20 U	19 U
Aroclor 1248			20 U	20 U	19 U	31	20 U	19 U	20 U	2,500 U	20 U	320	20 U	150	44 Y	20 U	75
Aroclor 1254			20 U	20 U	19 U	40	20 U	19 U	98 Y	8,000	34	360	20 U	200	53	71	100
Aroclor 1260			20 U	20 U	19 U	21	20 U	19 U	20 U	2,500 U	20 U	220	20 U	110	49 Y	170	120
Total PCBs	130	1,000	20 U	20 U	19 U	92	20 U	19 U	98 Y	8,000	34	900	20 U	460	53	241	295
<b>Other organic compounds (ug/kg dw)</b>																	
1,2,4-Trichlorobenzene	31	51	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
1,2-Dichlorobenzene	35	50	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
1,3-Dichlorobenzene			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
1,4-Dichlorobenzene	110	110	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
1-Methylnaphthalene								19 U									
2,2'-Oxybis(1-chloropropane)			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
2,4,5-Trichlorophenol			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
2,4,6-Trichlorophenol			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
2,4-Dichlorophenol			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U

DT-6: Inline sediment grab sample results (dry weight).

Station ID	96-ST3	HC-ST1	HC-ST1	KCIA2-ST1	KCIA2-ST1	KCIA2-ST1	KCIA1-ST1	KCIAJ-ST1	T2A	MHT6BX	MH17	MH18	MH21A	MH201	MH202		
Lab Ref	OY94	OB36	OV62	NR14	OS39	PT62	OS39	OS39	OB72	OI27	OB72	OB72	OQ59	OA35	OA35		
Type <sup>c</sup>	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline		
Outfall	S 96th St SD	Hamm Creek	Hamm Creek	KCIA SD#2/PS45 EOF	KCIA SD#2/PS45 EOF	#N/A	KCIA SD#1	KCIA-Jorgensen SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	16th Ave S SD	16th Ave S SD		
Date	05/13/09	11/21/08	04/15/09	09/25/08	03/26/09	10/21/09	03/26/09	03/26/09	11/25/08	01/15/09	11/25/08	11/25/08	03/12/09	11/17/08	11/17/08		
	SQS/LAET	CSL/2LAET															
2,4-Dimethylphenol <sup>a</sup>	29	29	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
2,4-Dinitrophenol			190 U	200 U	190 U	200 U	200 U	190 U	550 U	580 U	340 U	790 U	190 U	320 U	1,400 U	1,000 U	1,200 U
2,4-Dinitrotoluene			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
2,6-Dinitrotoluene			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
2-Chloronaphthalene			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
2-Chlorophenol			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
2-Methylnaphthalene	670	670	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	58 J	19 U	40	140 U	100 U	120 U
2-Methylphenol <sup>a</sup>	63	63	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	720	5,700
2-Nitroaniline			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
2-Nitrophenol			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
3,3'-Dichlorobenzidine			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
3-Nitroaniline			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
4,6-Dinitro-2-methylphenol			190 U	200 U	190 U	200 U	200 U	190 U	550 U	580 U	340 U	790 U	190 U	320 U	1,400 U	1,000 U	1,200 U
4-Bromophenyl-phenylether			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
4-Chloro-3-methylphenol			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
4-Chloroaniline			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
4-Chlorophenyl-phenylether			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
4-Methylphenol <sup>a</sup>	670	670	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	79	140 U	100 U	120 U
4-Nitroaniline			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
4-Nitrophenol			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
Benzoic acid <sup>a</sup>	650	650	190 U	200 U	190 U	200 U	200 U	190 U	550 U	580 U	340 U	790 U	190 U	320 U	1,400 U	1,700	13,000
Benzyl alcohol <sup>a</sup>	57	73	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	2,400	31,000
bis(2-Chloroethoxy) methane			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
Bis-(2-chloroethyl) ether			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
Carbazole			19 U	20 U	19 U	20 U	11 J	13 J	36 J	270	34 U	77 J	14 J	93	140 U	100 U	120 U
Dibenzofuran	540	540	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	34	140 U	100 U	120 U
Hexachlorobenzene	22	70	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	47 J	19 U	32 U	140 U	100 U	120 U
Hexachlorobutadiene	11	120	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
Hexachlorocyclopentadiene			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
Hexachloroethane			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
Isophorone			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	270
Nitrobenzene			19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	32 U	140 U	100 U	120 U
N-Nitroso-di-n-propylamine			96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
N-Nitrosodiphenylamine	28	40	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	79 U	19 U	59 Y	140 U	100 U	120 U
Pentachlorophenol <sup>a</sup>	360	690	96 U	98 U	96 U	99 U	100 U	96 U	270 U	290 U	170 U	400 U	96 U	160 U	720 U	510 U	600 U
Phenol <sup>a</sup>	420	1,200	19 U	20 U	19 U	20 U	20 U	19 U	55 U	58 U	34 U	70 J	19 U	22 J	140 U	410	3,500

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET

**DT-6: Inline sediment grab sample results (dry weight).**

Station ID	MH203	MH204	MH205	MH206	MH207	MH208	MH209	MH210	MH211	MH212	MH213	MH214	MH215	MH216	MH217		
Lab Ref	OA35	OI27	OI27	OI27	OL20	OL20	OL20	OL20	OQ56	OS39	OW77	OW77	OY94	OZ57	OZ57		
Type <sup>c</sup>	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline		
Outfall	16th Ave S SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Nevada St SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	S River St SD	16th Ave S SD	16th Ave S SD	16th Ave S SD	WSDOT SD- S Ryan St	1st Ave S SD (west)	1st Ave S SD (west)		
Date	SQS/ LAET	CSL/ 2LAET	11/17/08	01/15/09	01/15/09	01/15/09	02/04/09	02/04/09	02/04/09	02/04/09	03/12/09	03/26/09	04/24/09	04/24/09	05/13/09	05/19/09	05/19/09
Total solids (%)			65.3	61.9	73.2	67	NA	NA	NA	87.2	60	79.9	61.1	57	64.9	83.5	82.2
Total organic carbon (%)			7.81	6.58	3.56	2.72	NA	NA	NA	0.703	7.04	2.37	7.73	8.51	3.57	1.4	1.84
<b>Metals (mg/kg)</b>																	
Arsenic	57	93	8 U	8	125	9	12	8	15	5 U	96	6 UJ	9	9	10 J	12 J	13 J
Copper	390	390	111	200	209	98.6	254	110	185	28.1	470	76 J	145	146	87.6 J	39.1 J	55.6 J
Lead	450	530	116	361	121	301	197	193	333	12	408	64 J	169	195	357 J	20 J	31 J
Mercury	0.41	0.59	0.11	1.19	0.15	0.35	0.40	0.76	0.13	0.09	0.30	0.05 J	0.15	0.16	0.07 J	0.03 UJ	0.02 J
Zinc	410	960	562	586	710	489	259	196	302	97	1,010	219 J	573	611	315 J	102 J	164 J
<b>Total petroleum hydrocarbons (mg/kg)</b>																	
TPH-diesel	2,000 <sup>b</sup>		780	410	220	120	NA	NA	NA	68	5,100	340	780	320	3,200	150	160
TPH-oil	2,000 <sup>b</sup>		3,900	2,000	920	630	NA	NA	NA	380	9,300	2,200	4,000	1,700	7,800	950	950
<b>LPAH (ug/kg DW)</b>																	
Acenaphthene	500	500	170 U	39 J	66	100	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Acenaphthylene	1,300	1,300	170 U	27 J	39 U	20 J	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Anthracene	960	960	170 U	290	180	180	NA	NA	NA	20 U	180	100 U	68 U	65 U	44 J	58 U	140 U
Fluorene	540	540	170 U	54	70	120	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Naphthalene	2,100	2,100	170 U	25 J	39 U	66	NA	NA	NA	20 U	160 U	100 U	68 U	110	61 U	58 U	140 U
Phenanthrene	1,500	1,500	640	540	440	1,300	NA	NA	NA	80	580	190	240	310	140	39 J	140 U
Total LPAH	5,200	5,200	640	975 J	756	1,786 J	NA	NA	NA	80	760	190	240	420	184 J	39 J	140 U
<b>HPAH (ug/kg DW)</b>																	
Benzo(a)anthracene	1,300	1,600	500	410	260	500	NA	NA	NA	41	810	100 J	190	140	140	32 J	140 U
Benzo(a)pyrene	1,600	1,600	560	680	330	650	NA	NA	NA	46	1,100	100	350	370	120 J	58 U	140 U
Benzo(b)fluoranthene	3,200	3,600	650	920	440	700	NA	NA	NA	55	970	120	470	380	210	28 J	140 U
Benzo(g,h,i)perylene	670	720	350	440	180	270	NA	NA	NA	22	580	110	330	300	170	58 U	140 U
Benzo(k)fluoranthene	3,200	3,600	760	570	310	590	NA	NA	NA	48	1,300	170	510	480	210	28 J	140 U
Chrysene	1,400	2,800	770	570	390	600	NA	NA	NA	57	1,300	220	490	530	350 J	61	140 U
Dibenz(a,h)anthracene	230	230	170 U	88 J	25 J	60 J	NA	NA	NA	20 U	87 J	100 U	68 U	73 J	61 U	58 U	140 U
Fluoranthene	1,700	2,500	1,500	1,100	780	1,800	NA	NA	NA	150	2,000	310	540	580	570	74	140 U
Indeno(1,2,3-cd)pyrene	600	690	260	400	170	280	NA	NA	NA	23	520	58 J	240 J	200 J	99	58 U	140 U
Pyrene	2,600	3,300	1,300	950	790	1,300	NA	NA	NA	110	2,300	350	910	850	380 J	72	140 U
Total HPAH	12,000	17,000	6,650	6,128 J	3,675 J	6,750 J	NA	NA	NA	552	10,967 J	1,538 J	4,030 J	3,903 J	2,249 J	295 J	140 U
<b>Phthalates (ug/kg dw)</b>																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	8,300	2,200	2,300	1,300	NA	NA	NA	300	5,800	3,800	1,800	1,800	5,600 B	460	580
Butylbenzylphthalate	63	900	2,600	400	110	84	NA	NA	NA	120	160 U	790	240	150	380	71	270
Diethylphthalate	200		170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Dimethylphthalate	71	160	170 U	79	39 U	39 U	NA	NA	NA	680	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Di-n-butylphthalate	1,400	1,400	1,000	160	36 J	60	NA	NA	NA	20 U	160 U	100 U	72	65 U	61 U	58 U	140 U
Di-n-octyl phthalate	6,200		660	130	200	39 U	NA	NA	NA	20 U	160 U	390	68 U	65 U	61 U	30 J	140 U
<b>PCBs (ug/kg dw)</b>																	
Aroclor 1016			20 U	400 U	18 U	18 U	NA	NA	NA	19 U	20 U	20 U	98 U	59 U	20 U	20 U	20 U
Aroclor 1221			20 U	400 U	18 U	18 U	NA	NA	NA	19 U	20 U	20 U	98 U	59 U	20 U	20 U	20 U
Aroclor 1232			20 U	400 U	18 U	18 U	NA	NA	NA	19 U	20 U	20 U	98 U	59 U	20 U	20 U	20 U
Aroclor 1242			20 U	400 U	18 U	18 U	NA	NA	NA	19 U	20 U	20 U	98 U	59 U	20 U	20 U	20 U
Aroclor 1248			41	400 U	30	25	NA	NA	NA	19 U	20 U	27	98 U	59 U	73	20 U	20 U
Aroclor 1254			82	400 U	61	97	NA	NA	NA	46	57	64	98 U	59 U	94	20 U	20 U
Aroclor 1260			59	620	57	79	NA	NA	NA	19 U	51	45	300	300	65	20 U	20 U
Total PCBs	130	1,000	182	620	148	201	NA	NA	NA	46	108	136	300	300	232	20 U	20 U
<b>Other organic compounds (ug/kg dw)</b>																	
1,2,4-Trichlorobenzene	31	51	170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
1,2-Dichlorobenzene	35	50	170 U	40 U	33 J	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
1,3-Dichlorobenzene			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
1,4-Dichlorobenzene	110	110	170 U	40 U	29 J	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
1-Methylnaphthalene																	
2,2'-Oxybis(1-chloropropane)			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
2,4,5-Trichlorophenol			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
2,4,6-Trichlorophenol			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
2,4-Dichlorophenol			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U

DT-6: Inline sediment grab sample results (dry weight).

Station ID	MH203	MH204	MH205	MH206	MH207	MH208	MH209	MH210	MH211	MH212	MH213	MH214	MH215	MH216	MH217		
Lab Ref	OA35	OI27	OI27	OI27	OL20	OL20	OL20	OL20	OQ56	OS39	OW77	OW77	OY94	OZ57	OZ57		
Type <sup>c</sup>	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline		
Outfall	16th Ave S SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Nevada St SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	S River St SD	16th Ave S SD	16th Ave S SD	16th Ave S SD	WSDOT SD- S Ryan St	1st Ave S SD (west)	1st Ave S SD (west)		
Date	SQS/ LAET	CSL/ 2LAET	11/17/08	01/15/09	01/15/09	01/15/09	02/04/09	02/04/09	02/04/09	02/04/09	03/12/09	03/26/09	04/24/09	04/24/09	05/13/09	05/19/09	05/19/09
2,4-Dimethylphenol <sup>a</sup>	29	29	170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
2,4-Dinitrophenol			1,700 U	400 U	390 U	390 U	NA	NA	NA	200 U	1,600 U	1,000 U	680 U	650 U	610 U	580 U	1,400 U
2,4-Dinitrotoluene			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
2,6-Dinitrotoluene			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
2-Chloronaphthalene			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
2-Chlorophenol			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
2-Methylnaphthalene	670	670	170 U	28 J	20 J	55	NA	NA	NA	20 U	160 U	100 U	68 U	76	61 U	58 U	140 U
2-Methylphenol <sup>a</sup>	63	63	170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
2-Nitroaniline			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
2-Nitrophenol			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
3,3'-Dichlorobenzidine			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
3-Nitroaniline			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
4,6-Dinitro-2-methylphenol			1,700 U	400 U	390 U	390 U	NA	NA	NA	200 U	1,600 U	1,000 U	680 U	650 U	610 U	580 U	1,400 U
4-Bromophenyl-phenylether			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
4-Chloro-3-methylphenol			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
4-Chloroaniline			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
4-Chlorophenyl-phenylether			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
4-Methylphenol <sup>a</sup>	670	670	170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
4-Nitroaniline			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
4-Nitrophenol			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
Benzoic acid <sup>a</sup>	650	650	1,700 U	400 U	390 U	390 U	NA	NA	NA	200 U	1,600 U	1,000 U	680 U	650 U	610 U	580 U	1,400 U
Benzyl alcohol <sup>a</sup>	57	73	300	40 U	110	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
bis(2-Chloroethoxy) methane			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Bis-(2-chloroethyl) ether			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Carbazole			170 U	160	85	140	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Dibenzofuran	540	540	170 U	34 J	36 J	60	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Hexachlorobenzene	22	70	170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Hexachlorobutadiene	11	120	170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Hexachlorocyclopentadiene			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
Hexachloroethane			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Isophorone			170 U	20 J	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Nitrobenzene			170 U	40 U	39 U	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
N-Nitroso-di-n-propylamine			840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
N-Nitrosodiphenylamine	28	40	170 U	40 U	39 U	28 J	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U
Pentachlorophenol <sup>a</sup>	360	690	840 U	200 U	200 U	200 U	NA	NA	NA	97 U	810 U	520 U	340 U	330 U	300 U	290 U	710 U
Phenol <sup>a</sup>	420	1,200	360	41	28 J	39 U	NA	NA	NA	20 U	160 U	100 U	68 U	65 U	61 U	58 U	140 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



**DT-6: Inline sediment grab sample results (dry weight).**

Station ID			MH218	MH219	MH220	MH221	MH222	MH223	MH224	MH225	MH226	MH227	MH228	MH229	MH230	MH231
Lab Ref			OZ57	OZ57	OZ76	OZ76	OZ99	OZ99	OZ99	OZ99	PA21	PA21	PA21	PA21	PA42	PA42
Type <sup>c</sup>			Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline
Outfall			1st Ave S SD (west)	1st Ave S SD (west)	S River St SD	S River St SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	Diagonal Ave S CSO/SD
Date	SQS/ LAET	CSL/ 2LAET	05/19/09	05/19/09	05/20/09	05/20/09	05/21/09	05/21/09	05/21/09	05/21/09	05/26/09	05/26/09	05/26/09	05/26/09	05/27/09	05/27/09
Total solids (%)			54.4	58.1	58.2	68.1	84	84.2	46.5	43.2	69.9	81.3	50.6	55.6	71.4	65.6
Total organic carbon (%)			1.81	1.72	7.3	4.42	0.424	0.897	6.75	5.5	5.29	0.726	5.65	3.82	3.2	5.26
<b>Metals (mg/kg)</b>																
Arsenic	57	93	24 J	23 J	51 J	19 J	46 J	1,420 J	30 J	40 J	58 J	1,270 J	20 J	20 J	13 J	50 J
Copper	390	390	62.2 J	63.1 J	251 J	133 J	85.7 J	831 J	227 J	335 J	273 J	848 J	135 J	137 J	59.4 J	387 J
Lead	450	530	130 J	111 J	245 J	225 J	90 J	977 J	222 J	473 J	757 J	957 J	121 J	124 J	30 J	374 J
Mercury	0.41	0.59	0.15 J	0.10 J	0.20 J	0.16 J	0.06 J	0.13 J	0.46 J	1.15 J	3.41 J	0.24 J	0.22 J	0.19 J	0.03 UJ	0.10 J
Zinc	410	960	601 J	636 J	790 J	552 J	247 J	4,000 J	959 J	709 J	905 J	3,600 J	477 J	426 J	147 J	650 J
<b>Total petroleum hydrocarbons (mg/kg)</b>																
TPH-diesel	2,000 <sup>b</sup>		1,500	1,600	1,100	940	98	370	570	21,000	1,100	360	680	350	380	660
TPH-oil	2,000 <sup>b</sup>		3,600	3,500	2,800	2,500	200	760	1,400	30,000	4,900	910	2,600	1,300	2,100	3,300
<b>LPAH (ug/kg DW)</b>																
Acenaphthene	500	500	250	330	120 U	120 U	63	87	58 U	170 U	190 U	120	380 U	340 U	130 U	160 U
Acenaphthylene	1,300	1,300	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Anthracene	960	960	430	350	94 J	120 U	1,400	290	33 J	170 U	170 J	570	380 U	340 U	130 U	100 J
Fluorene	540	540	310	340	120 U	120 U	120	75	58 U	170 U	190 U	110	380 U	340 U	130 U	160 U
Naphthalene	2,100	2,100	220 U	260 U	120 U	120 U	25	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Phenanthrene	1,500	1,500	1,900	1,800	370	180	300	320	180	170 U	1,200	620	210 J	340 U	130 U	430
Total LPAH	5,200	5,200	2,890	2,820	464 J	180	1,908	772	213 J	170	1,370 J	1,420	210 J	340	130	530 J
<b>HPAH (ug/kg DW)</b>																
Benzo(a)anthracene	1,300	1,600	1,200	1,000	440	210	120	180	130	160 J	960	460	250 J	220 J	130 U	460
Benzo(a)pyrene	1,600	1,600	1,200	970	570	340	73	140	130	220	1,200	370	380	320 J	76 J	550
Benzo(b)fluoranthene	3,200	3,600	1,300	1,300	510	360	70	140	180	320	1,000	340	420	360	70 J	600
Benzo(g,h,i)perylene	670	720	250	220 J	430	240	19 J	34 J	65	160 J	860	150	340 J	280 J	70 J	340
Benzo(k)fluoranthene	3,200	3,600	1,300	1,100	510	360	72	180	180	190	1,100	370	420	360	70 J	600
Chrysene	1,400	2,800	1,400	1,300	640	460	160	300	200	540	1,500	630	530	430	130	970
Dibenz(a,h)anthracene	230	230	220 U	260 U	61 J	120 U	20 U	58 U	58 U	170 U	130 J	68 U	380 U	340 U	130 U	160 U
Fluoranthene	1,700	2,500	3,300	3,100	1,000	460	590	880	350	430	2,200	1,800	650	560	100 J	1,400
Indeno(1,2,3-cd)pyrene	600	690	300	250 J	320	160	19 J	36 J	50 J	100 J	620	140	240 J	190 J	130 U	220
Pyrene	2,600	3,300	2,200	2,000	920	530	360	630	290	1,700	1,700	1,200	600	520	100 J	1,100
Total HPAH	12,000	17,000	12,450	11,240 J	5,401 J	3,120	1,483 J	2,520 J	1,575 J	3,820 J	11,270 J	5,460	3,830 J	3,240 J	616 J	6,240
<b>Phthalates (ug/kg dw)</b>																
Bis(2-ethylhexyl)phthalate	1,300	1,900	12,000	16,000	1,600	2,200	160	820	1,100	5,000	1,300	1,100	4,900	4,000	630	6,200
Butylbenzylphthalate	63	900	220 U	320	1,300	140	20 U	58 U	220	170 U	340	68 U	380 U	440	130 U	150 J
Diethylphthalate	200		220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Dimethylphthalate	71	160	220 U	260 U	120 U	76 J	20 U	58 U	35 J	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Di-n-butylphthalate	1,400	1,400	220 U	260 U	78 J	130	20 U	58 U	49 J	170 U	130 J	68 U	380 U	340 U	130 U	160 U
Di-n-octyl phthalate	6,200		410	480	120 U	120 U	42	580	41 J	130 J	190 U	550	310 J	340 U	80 J	280
<b>PCBs (ug/kg dw)</b>																
Aroclor 1016			160 U	170 U	18 U	17 U	20 U	20 U	20 U	20 U	97 U	19 U	98 U	98 U	100 U	98 U
Aroclor 1221			160 U	170 U	18 U	17 U	20 U	20 U	20 U	20 U	97 U	19 U	98 U	98 U	100 U	98 U
Aroclor 1232			160 U	170 U	18 U	17 U	20 U	20 U	20 U	20 U	97 U	19 U	98 U	98 U	100 U	98 U
Aroclor 1242			160 U	170 U	18 U	17 U	20 U	20 U	20 U	20 U	97 U	19 U	98 U	98 U	100 U	98 U
Aroclor 1248			190	220	20	23	20 U	20 U	20 U	99 Y	97 U	20	98 U	98 U	100 U	98 U
Aroclor 1254			530	610	160 J	78	20 U	40	34	370	97 U	34	140	150	100 U	110
Aroclor 1260			160 U	170 U	190	100	28	39	39 J	410	350	47 J	310	290	110	190
Total PCBs	130	1,000	720	830	370 J	201	28	79	73 J	780	350	101 J	450	440	110	300
<b>Other organic compounds (ug/kg dw)</b>																
1,2,4-Trichlorobenzene	31	51	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
1,2-Dichlorobenzene	35	50	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
1,3-Dichlorobenzene			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
1,4-Dichlorobenzene	110	110	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
1-Methylnaphthalene																
2,2'-Oxybis(1-chloropropane)			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
2,4,5-Trichlorophenol			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
2,4,6-Trichlorophenol			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
2,4-Dichlorophenol			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U

DT-6: Inline sediment grab sample results (dry weight).

Station ID	MH218	MH219	MH220	MH221	MH222	MH223	MH224	MH225	MH226	MH227	MH228	MH229	MH230	MH231		
Lab Ref	OZ57	OZ57	OZ76	OZ76	OZ99	OZ99	OZ99	OZ99	PA21	PA21	PA21	PA21	PA42	PA42		
Type <sup>c</sup>	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline		
Outfall	1st Ave S SD (west)	1st Ave S SD (west)	S River St SD	S River St SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	Diagonal Ave S CSO/SD		
Date	SQS/ LAET	CSL/ 2LAET	05/19/09	05/19/09	05/20/09	05/20/09	05/21/09	05/21/09	05/21/09	05/21/09	05/26/09	05/26/09	05/26/09	05/27/09		
2,4-Dimethylphenol <sup>a</sup>	29	29	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
2,4-Dinitrophenol			2,200 U	2,600 U	1,200 U	1,200 U	200 U	580 U	580 U	1,700 U	1,900 U	680 U	3,800 U	3,400 U	1,300 U	1,600 U
2,4-Dinitrotoluene			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
2,6-Dinitrotoluene			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
2-Chloronaphthalene			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
2-Chlorophenol			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
2-Methylnaphthalene	670	670	220 U	260 U	120 U	120 U	41	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
2-Methylphenol <sup>a</sup>	63	63	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
2-Nitroaniline			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
2-Nitrophenol			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
3,3'-Dichlorobenzidine			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
3-Nitroaniline			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
4,6-Dinitro-2-methylphenol			2,200 U	2,600 U	1,200 U	1,200 U	200 U	580 U	580 U	1,700 U	1,900 U	680 U	3,800 U	3,400 U	1,300 U	1,600 U
4-Bromophenyl-phenylether			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
4-Chloro-3-methylphenol			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
4-Chloroaniline			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
4-Chlorophenyl-phenylether			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
4-Methylphenol <sup>a</sup>	670	670	450	510	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	380
4-Nitroaniline			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
4-Nitrophenol			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
Benzoic acid <sup>a</sup>	650	650	2,200 U	2,600 U	1,200 U	1,200 U	200 U	580 U	580 U	1,700 U	1,900 U	680 U	3,800 U	3,400 U	1,300 U	1,600 U
Benzyl alcohol <sup>a</sup>	57	73	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
bis(2-Chloroethoxy) methane			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Bis-(2-chloroethyl) ether			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Carbazole			170 J	210 J	120 U	120 U	350	93	58 U	170 U	110 J	150	380 U	340 U	130 U	81 J
Dibenzofuran	540	540	220 U	260 U	120 U	120 U	53	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Hexachlorobenzene	22	70	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Hexachlorobutadiene	11	120	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Hexachlorocyclopentadiene			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
Hexachloroethane			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Isophorone			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
Nitrobenzene			220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U
N-Nitroso-di-n-propylamine			1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
N-Nitrosodiphenylamine	28	40	220 U	260 U	120 U	120 U	20 U	36 J	58 U	660 Y	190 U	68 U	380 U	340 U	130 U	160 U
Pentachlorophenol <sup>a</sup>	360	690	1,100 U	1,300 U	580 U	580 U	99 U	290 U	290 U	830 U	970 U	340 U	1,900 U	1,700 U	650 U	790 U
Phenol <sup>a</sup>	420	1,200	220 U	260 U	120 U	120 U	20 U	58 U	58 U	170 U	190 U	68 U	380 U	340 U	130 U	160 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET

DT-6: Inline sediment grab sample results (dry weight).

Station ID			MH232	MH233	MH234	MH235	MH236	MH237	MH238	MH239	MH240	CB208
Lab Ref			PA42	PA42	PA42	PA42	PA57	PB04	PB04	PB20	PB20	PB20
Type <sup>c</sup>			Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline
Outfall			Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	S River St SD	Diagonal Ave S CSO/SD	SW Idaho St SD	SW Idaho St SD	S 96th St SD	S Garden St SD	KCIA SD#2/PS45 EOF
Date	SQS/LAET	CSL/2LAET	05/27/09	05/27/09	05/27/09	05/27/09	05/28/09	06/02/09	06/02/09	06/03/09	06/03/09	06/03/09
Total solids (%)			84.6	63	88.2	60.8	70	80.4	81.2	40.1	42.9	80.7
Total organic carbon (%)			0.534	3.52	1.15	7.06	3.35	3.09	2.92	6.74	18.7	0.562
<b>Metals (mg/kg)</b>												
Arsenic	57	93	9 J	30 J	10 J	110 J	32 J	30 UJ	30 UJ	10 J	40 J	8 J
Copper	390	390	34.9 J	233 J	28 J	442 J	328 J	109 J	109 J	297 J	2,200 J	11.5 J
Lead	450	530	19 J	576 J	9 J	432 J	369 J	70 J	50 J	150 J	1,710 J	5 J
Mercury	0.41	0.59	0.03 UJ	1.34 J	0.02 UJ	0.36 J	0.11 J	0.05 J	0.06 J	0.10 J	4.29 J	0.02 UJ
Zinc	410	960	130 J	682 J	112 J	1,170 J	487 J	222 J	243 J	2,530 J	8,960 J	32 J
<b>Total petroleum hydrocarbons (mg/kg)</b>												
TPH-diesel	2,000 <sup>b</sup>		58 U	330	60	2,100	670	520	61 U	830	17,000	60 U
TPH-oil	2,000 <sup>b</sup>		390	1,300	370	4,900	3,100	380	340	2,400	60,000	120 U
<b>LPAH (ug/kg DW)</b>												
Acenaphthene	500	500	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	1,800 J	20 U
Acenaphthylene	1,300	1,300	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
Anthracene	960	960	44 U	170 U	40 U	160 J	240 U	58 U	58 U	290 U	3,200	11 J
Fluorene	540	540	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	4,600	20 U
Naphthalene	2,100	2,100	110	170 U	40 U	180 U	240 U	58 U	58 U	290 U	4,100	20 U
Phenanthrene	1,500	1,500	44	260	61	590	300	34 J	36 J	650	16,000	95
Total LPAH	5,200	5,200	154	260	61	750 J	300	34 J	36 J	650	29,700	106 J
<b>HPAH (ug/kg DW)</b>												
Benzo(a)anthracene	1,300	1,600	27 J	260	44	720	310	40 J	39 J	480	5,100	88
Benzo(a)pyrene	1,600	1,600	24 J	370	44	1,000	300	51 J	56 J	620	4,000	89
Benzo(b)fluoranthene	3,200	3,600	45	510	51	1,300	440	55 J	81 J	980	4,100	160
Benzo(g,h,i)perylene	670	720	44 U	350	40 U	610	160 J	110 J	94 J	380	2,700 U	27
Benzo(k)fluoranthene	3,200	3,600	39 J	350	40	890	490	55 J	42 J	980	4,100	130
Chrysene	1,400	2,800	55	430	66	1,400	590	76 J	70 J	1,200	7,300	120
Dibenz(a,h)anthracene	230	230	44 U	170 U	40 U	110 J	240 U	58 U	58 U	290 U	2,700 U	20 U
Fluoranthene	1,700	2,500	89	640	120	2,800	850	94 J	97 J	1,600	16,000	300
Indeno(1,2,3-cd)pyrene	600	690	44 U	220	40 U	460	240 U	46 J	48 J	300	2,700 U	31
Pyrene	2,600	3,300	71	530	95	2,200	1,000	68 J	61 J	1,200	15,000	180
Total HPAH	12,000	17,000	350 J	3,660	460	11,490 J	4,140 J	595 J	588 J	7,740	55,600	1,125
<b>Phthalates (ug/kg dw)</b>												
Bis(2-ethylhexyl)phthalate	1,300	1,900	530	920	300	5,100	6,700	170 J	120 J	20,000	210,000	34
Butylbenzylphthalate	63	900	44 U	230	40 U	600	240 U	47 J	36 J	1,200	12,000	20 U
Diethylphthalate	200		44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 B
Dimethylphthalate	71	160	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	4,200	20 U
Di-n-butylphthalate	1,400	1,400	44 U	170 U	40 U	180 U	240 U	58 U	58 U	210 J	2,600 J	20 U
Di-n-octyl phthalate	6,200		100	170 U	40 U	180 U	240 U	58 U	58 U	5,700	23,000	20 U
<b>PCBs (ug/kg dw)</b>												
Aroclor 1016			96 U	99 U	19 U	97 U	97 U	20 U	19 U	39 U	420 U	20 U
Aroclor 1221			96 U	99 U	19 U	97 U	97 U	20 U	19 U	39 U	420 U	20 U
Aroclor 1232			96 U	99 U	19 U	97 U	97 U	20 U	19 U	39 U	420 U	20 U
Aroclor 1242			96 U	99 U	19 U	97 U	97 U	20 U	19 U	39 U	17,000	20 U
Aroclor 1248			96 U	99 U	19 U	97 U	97 U	20 U	19 U	39 U	420 U	20 U
Aroclor 1254			210 Y	190	19 U	200 J	130	20 U	19 U	53	6,400	20 U
Aroclor 1260			620	150	19 U	250	140	20 U	19 U	120	1,600 J	20 U
Total PCBs	130	1,000	620	340	19 U	450 J	270	20 U	19 U	173	25,000 J	20 U
<b>Other organic compounds (ug/kg dw)</b>												
1,2,4-Trichlorobenzene	31	51	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
1,2-Dichlorobenzene	35	50	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
1,3-Dichlorobenzene			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
1,4-Dichlorobenzene	110	110	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
1-Methylnaphthalene												
2,2'-Oxybis(1-chloropropane)			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
2,4,5-Trichlorophenol			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
2,4,6-Trichlorophenol			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
2,4-Dichlorophenol			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U

DT-6: Inline sediment grab sample results (dry weight).

Station ID			MH232	MH233	MH234	MH235	MH236	MH237	MH238	MH239	MH240	CB208
Lab Ref			PA42	PA42	PA42	PA42	PA57	PB04	PB04	PB20	PB20	PB20
Type <sup>c</sup>			Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline	Inline
Outfall			Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	S River St SD	Diagonal Ave S CSO/SD	SW Idaho St SD	SW Idaho St SD	S 96th St SD	S Garden St SD	KCIA SD#2/PS45 EOF
Date	SQS/LAET	CSL/2LAET	05/27/09	05/27/09	05/27/09	05/27/09	05/28/09	06/02/09	06/02/09	06/03/09	06/03/09	06/03/09
2,4-Dimethylphenol <sup>a</sup>	29	29	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
2,4-Dinitrophenol			440 U	1,700 U	400 U	1,800 U	2,400 U	580 U	580 U	2,900 U	27,000 U	200 U
2,4-Dinitrotoluene			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
2,6-Dinitrotoluene			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
2-Chloronaphthalene			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
2-Chlorophenol			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
2-Methylnaphthalene	670	670	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	<b>13,000</b>	20 U
2-Methylphenol <sup>a</sup>	63	63	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
2-Nitroaniline			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
2-Nitrophenol			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
3,3'-Dichlorobenzidine			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
3-Nitroaniline			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
4,6-Dinitro-2-methylphenol			440 U	1,700 U	400 U	1,800 U	2,400 U	580 U	580 U	2,900 U	27,000 U	200 U
4-Bromophenyl-phenylether			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
4-Chloro-3-methylphenol			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
4-Chloroaniline			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
4-Chlorophenyl-phenylether			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
4-Methylphenol <sup>a</sup>	670	670	44 U	170 U	<b>34 J</b>	180 U	240 U	58 U	58 U	<b>2,800</b>	2,700 U	20 U
4-Nitroaniline			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
4-Nitrophenol			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
Benzoic acid <sup>a</sup>	650	650	440 U	1,700 U	400 U	1,800 U	2,400 U	580 U	580 U	2,900 U	27,000 U	200 U
Benzyl alcohol <sup>a</sup>	57	73	44 U	170 U	40 U	180 U	240 U	58 U	58 U	<b>410</b>	2,700 U	20 U
bis(2-Chloroethoxy) methane			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
Bis-(2-chloroethyl) ether			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
Carbazole			44 U	170 U	40 U	<b>110 J</b>	240 U	58 U	58 U	290 U	<b>1,500 J</b>	<b>25</b>
Dibenzofuran	540	540	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
Hexachlorobenzene	22	70	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
Hexachlorobutadiene	11	120	44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
Hexachlorocyclopentadiene			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
Hexachloroethane			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
Isophorone			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
Nitrobenzene			44 U	170 U	40 U	180 U	240 U	58 U	58 U	290 U	2,700 U	20 U
N-Nitroso-di-n-propylamine			220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
N-Nitrosodiphenylamine	28	40	44 U	170 U	40 U	240 Y	240 U	58 U	58 U	290 U	2,700 U	20 U
Pentachlorophenol <sup>a</sup>	360	690	220 U	840 U	200 U	880 U	1,200 U	290 U	290 U	1,400 U	13,000 U	98 U
Phenol <sup>a</sup>	420	1,200	44 U	170 U	40 U	180 U	<b>220 J</b>	58 U	58 U	<b>420</b>	2,700 U	20 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB1	CB2	CB3	CB4	CB5	CB7	CB8	CB9	CB10	CB10	CB11	CB12	CB13	CB13	CB15	CB16		
Lab Ref	FT97	FT97	FV26	FV26	FV26	FY40	GA19	GG14	GG14	RD69/RE85	GG14	GG14	GG14	RK00	GH92, GK99	GH92, GK99		
Utility Type <sup>c</sup>	CS	SD	SD	SD	SD	SD	CS	CS	SD	SD	CS	SD	CS	CB	SD	CS		
Outfall	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S		
Date	SQS/LAET	CSL/2LAET	08/21/03	08/21/03	09/05/03	09/08/03	09/10/03	10/15/03	11/04/03	01/22/04	01/22/04	07/09/10	01/23/04	01/23/04	01/23/04	08/23/10	02/09/04	02/09/04
Total solids (%)			36.7	48.5	82.1	61.6	34.4	31.3	58.3	73.5	58.0	18.4	53.7	53.5	64.7	56.3	78.8	77.8
TOC (%)			7.8	26.0	0.5	3.4	15.0	17.0	9.2	2.7	15.0	20.8	6.2	6.7	3.3	5.5	4.0	4.8
<b>Metals (mg/kg)</b>																		
Arsenic	57	93	10 U	40 U	6 U	20 U	20 U	10 U	13	20	8 U	20 U	40	10 U	12	12	9	12
Copper	390	390	161	1,520	29.6	135	147	647	275	177	86.6	279	325	181	95.7	131	142 J	39.1
Lead	450	530	125	1,110	10	47	51	1,220	205	105	96	168	445	97	127 J	90	476 J	253
Mercury	0.41	0.59	0.3	0.5	0.05 U	0.08 U	0.2 U	0.1 U	0.1	0.06 U	0.07	0.1	0.68	0.1	0.09	0.1	0.06 U	0.08
Zinc	410	960	1,100 J	2,720	55	360	412	1,150	603	294	250	1,130	3,940	603	432	521	98.3	161
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>	NA	34,000	15	1,800	2,600	9,900	2,000	50 U	930	1,100	370 J	41	51 J	99	380	1,400	
TPH-oil	2,000 <sup>b</sup>	NA	71,000	52	6,300	9,200	13,000	4,500	300	2,000	7,500	2,100 J	270	300	580	3,900	6,800	
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	1,400	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Acenaphthylene	1,300	1,300	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	300	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Anthracene	960	960	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	39 J	6,300	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Fluorene	540	540	620 U	2,300	19 U	410	1,900 J	1,100 U	710	40 U	1,800	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Naphthalene	2,100	2,100	620 U	9,500	19 U	95 U	2,800 U	3,100	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Phenanthrene	1,500	1,500	1,100	7,600	19 U	990	3,500 J	2,300	2,300	140	9,500	1,300 J	310	95	260	480	82 U	500
Total LPAH	5,200	5,200	1,100	19,400	19 U	1,400	5,400 J	5,400	3,010	179 J	19,300	1,300 J	310	95	300	480	82 U	500
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	140	27,000	2,000 U	200	120	160	160 J	82 U	240
Benzo(a)pyrene	1,600	1,600	620 U	2,200 Y	19 U	95 U	2,800 U	1,100 U	250 U	180	30,000	1,400 J	250	130	210	260	82 U	210
Benzo(b)fluoranthene	3,200	3,600	1,900	6,800 Y	19 U	95 U	2,800 U	1,100 U	250 U	410	40,000	3,000	360	200	320	160 U	82 U	320
Benzo(g,h,i)perylene	670	720	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	66	12,000	1,400 J	160	84	120 J	340	82 U	160 U
Benzo(k)fluoranthene	3,200	3,600	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	240	17,000	3,000	360	200	260	160 U	82 U	260
Chrysene	1,400	2,800	710	2,800	19 U	140	320 J	1,100 U	250 U	270	26,000	2,200	480	240	330	550	150	420
Dibenz(a,h)anthracene	230	230	630	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	6,800	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Fluoranthene	1,700	2,500	1,600	5,000	19 U	250	710 J	1,100 U	770	360	50,000	2,200	610	270	530	620	82 U	690
Indeno(1,2,3-cd)pyrene	600	690	1,100	3,900 Y	19 U	95 U	2,800 U	1,100 U	250 U	86	16,000	2,000 U	140	69	120	190	82 U	160 U
Pyrene	2,600	3,300	1,200	6,100	19 U	450	2,200 J	4,800	1,600 J	200	32,000	2,400	580	340	500	600	170	670
Total HPAH	12,000	17,000	7,140	13,900	19 U	840	3,230 J	4,800	2,370 J	1,952	256,800	15,600 J	3,140	1,653	2,550 J	2,720 J	320	2,810
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	19,000 B	200,000 B	130	32,000	67,000	140,000	71,000	2,200	1,500	90,000	6,200	6,600	4,500	9,200 B	380	11,000
Butylbenzylphthalate	63	900	1,900 J	7,800	20	1,000	10,000 J	1,100 U	9,900	410	240 U	2,000 U	360	240	130	560	82 U	310
Diethylphthalate	200	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U	
Dimethylphthalate	71	160	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	1,200	66	650	82 U	160 U
Di-n-butylphthalate	1,400	1,400	5,400 J	5,400	19 U	95 U	2,800 U	1,100 U	1,400	40 U	240 U	2,000 U	180	88	680	160 U	82 U	180
Di-n-octyl phthalate	6,200	16,000 J	5,500 Y	19 U	650	2,600 J	3,300 J	4,400	40 U	240 U	2,000 U	530	280	53	160 U	82 U	490	
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016	20 U	19 U	19 U	19 U	20 U	20 U	99 U	18 U	17 U	20 U	17 U	18 U	35 U	41 U	19 U	20 U		
Aroclor 1221	39 U	38 U	39 U	38 U	40 U	40 U	200 U	18 U	17 U	20 U	17 U	18 U	35 U	41 U	19 U	20 U		
Aroclor 1232	20 U	19 U	19 U	19 U	20 U	20 U	99 U	18 U	17 U	20 U	17 U	18 U	35 U	41 U	19 U	20 U		
Aroclor 1242	20 U	19 U	19 U	19 U	20 U	20 U	99 U	18 U	17 U	20 U	17 U	18 U	35 U	41 U	19 U	20 U		
Aroclor 1248	20 U	19 UJ	19 U	19 U	20 UJ	20 U	99 U	18 U	17 U	40	30	18 U	46 Y	62 Y	19 U	20 U		
Aroclor 1254	160	210 UJ	19 U	19 U	20 UJ	22	1,000	52	17 U	66	130	23	530	260	19 U	51		
Aroclor 1260	20 U	19 UJ	19 U	19 U	20 UJ	26	99 U	45	17 U	38 J	95 J	18 J	160 J	66	19 U	20 U		
Total PCBs	130	1,000	160	210 UJ	39 U	38 U	40 UJ	48	1,000	97	17 U	255 J	255 J	41 J	690 J	326	19 U	51
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
1,2-Dichlorobenzene	35	50	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
1,3-Dichlorobenzene			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
1,4-Dichlorobenzene	110	110	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	120	49 U	40 U	160 U	82 U	160 U
1-Methylnaphthalene											2,000 U				80 J			
2,2'-Oxybis(1-chloropropane)			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
2,4,5-Trichlorophenol			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
2,4,6-Trichlorophenol			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
2,4-Dichlorophenol			1,900 U	6,200 U	57 U	290 U	8,400 U	3,400 U	740 U	120 U	710 U	10,000 U	210 U	150 U	120 U	800 U	250 U	490 U

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB1	CB2	CB3	CB4	CB5	CB7	CB8	CB9	CB10	CB10	CB11	CB12	CB13	CB13	CB15	CB16		
Lab Ref	FT97	FT97	FV26	FV26	FV26	FY40	GA19	GG14	GG14	RD69/RE85	GG14	GG14	GG14	RK00	GH92, GK99	GH92, GK99		
Utility Type <sup>c</sup>	CS	SD	SD	SD	SD	SD	CS	CS	SD	SD	CS	SD	CS	CB	SD	CS		
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD		
Date																		
	SQS/LAET	CSL/2LAET	08/21/03	08/21/03	09/05/03	09/08/03	09/10/03	10/15/03	11/04/03	01/22/04	01/22/04	07/09/10	01/23/04	01/23/04	01/23/04	08/23/10	02/09/04	02/09/04
2,4-Dimethylphenol <sup>a</sup>	29	29	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
2,4-Dinitrophenol			6,200 U	21,000 U	190 U	950 U	28,000 U	11,000 U	2,500 U	400 U	2,400 U	20,000 U	710 U	490 U	400 U	1,600 U	820 U	1,600 U
2,4-Dinitrotoluene			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
2,6-Dinitrotoluene			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
2-Chloronaphthalene			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
2-Chlorophenol			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
2-Methylnaphthalene	670	670	620 U	26,000	19 U	470	1,900 J	12,000	700	40 U	240 U	2,000 U	71 U	49 U	40 U	120 J	82 U	160 U
2-Methylphenol <sup>a</sup>	63	63	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
2-Nitroaniline			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
2-Nitrophenol			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	2,000 U	350 U	240 U	200 U	160 U	410 U	820 U
3,3'-Dichlorobenzidine			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
3-Nitroaniline			3,700 U	12,000 U	110 U	570 U	17,000 U	6,800 U	1,500 U	240 U	1,400 U	10,000 U	430 U	290 U	240 U	800 U	490 U	980 U
4,6-Dinitro-2-methylphenol			6,200 U	21,000 U	190 U	950 U	28,000 U	11,000 U	2,500	400 U	2,400 U	20,000 U	710 U	490 U	400 U	1,600 U	820 U	1,600 U
4-Bromophenyl-phenylether			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
4-Chloro-3-methylphenol			1,200 U	4,200 U	38 U	190 U	5,600 U	2,300 U	490 U	79 U	470 U	10,000 U	140 U	97 U	79 UJ	800 U	160 U	330 U
4-Chloroaniline			1,900 U	6,200 U	57 U	290 U	8,400 U	3,400 U	740 U	120 U	710 U	10,000 U	210 U	150 U	120 U	800 U	250 U	490 U
4-Chlorophenyl-phenylether			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
4-Methylphenol <sup>a</sup>	670	670	620 U	14,000	19 U	95 U	2,800 U	2,100	5,100	40 U	240 U	2,000 U	71 U	58	67	880	82 U	210
4-Nitroaniline			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
4-Nitrophenol			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
Benzoic acid <sup>a</sup>	650	650	6,200 U	21,000 U	190 U	950 U	28,000 U	11,000 U	2,500 U	400 U	2,400 U	20,000 U	710 U	610	400 U	660 J	820 U	1,600 U
Benzyl alcohol <sup>a</sup>	57	73	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
bis(2-Chloroethoxy) methane			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Bis-(2-chloroethyl) ether			1,200 U	4,200 U	38 U	190 U	5,600 U	2,300 U	490 U	79 U	470 U	2,000 U	140 U	97 U	79 U	160 U	160 U	330 U
Carbazole			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	2,300	2,000 U	71 U	49 U	53	160 U	82 U	160 U
Dibenzofuran	540	540	620 U	2,100 U	19 U	210	890 J	1,100 U	340	40 U	1,100	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Hexachlorobenzene	22	70	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Hexachlorobutadiene	11	120	620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Hexachlorocyclopentadiene			3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200 U	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 UJ	410 U	820 U
Hexachloroethane			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Isophorone			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Nitrobenzene			620 U	2,100 U	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
n-Nitroso-di-n-propylamine			1,200 U	4,200 U	38 U	190 U	5,600 U	2,300 U	490 U	79 U	470 U	10,000 U	140 U	97 U	79 U	800 U	160 U	330 U
N-Nitrosodiphenylamine	28	40	620 U	4,200 Y	19 U	95 U	2,800 U	1,100 U	250 U	40 U	240 U	2,000 U	71 U	49 U	40 U	160 U	82 U	160 U
Pentachlorophenol <sup>a</sup>	360	690	3,100 U	10,000 U	96 U	480 U	14,000 U	5,700 U	1,200	200 U	1,200 U	10,000 U	350 U	240 U	200 U	800 U	410 U	820 U
Phenol <sup>a</sup>	420	1,200	650	5,700	19 U	1,200	620 J	1,100 U	1,100 U	89 U	240 U	2,000 U	71 U	80 U	91 U	160 U	82 U	160 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB17		CB18		CB19		CB20		CB21		CB22		CB23		CB24		CB25		CB26		CB27A		CB27A		CB27B		CB27B		CB28	
Lab Ref	GH92, GK99		GH92, GK99		GH92, GK99		RD69		GH92, GK99		GJ76		GJ76		GK68		GK68		GK68		GK68		R155/RK47		GL98		R155/RK47		GL98	
Utility Type <sup>c</sup>	CS		CS		CS		CS		CS		CS		SD		SD		SD		CS		CS		CB		CS		CB		CS	
Outfall	Diagonal Ave S		Diagonal Ave S		Diagonal Ave S		Diagonal Ave S		Diagonal Ave S		Diagonal Ave S		Diagonal Ave S		S Charleston St SD		S Charleston St SD		S Charleston St SD		Diagonal Ave S		Diagonal Ave S		Diagonal Ave S		Diagonal Ave S		Diagonal Ave S	
Date	SQS/ LAET	CSL/ 2LAET	02/09/04	02/12/04	02/12/04	07/09/10	02/12/04	03/02/04	03/02/04	03/02/04	03/02/04	03/02/04	03/02/04	03/15/04	03/15/04	03/15/04	03/15/04	03/15/04	03/15/04	03/15/04	03/15/04	03/15/04	08/12/10	03/26/04	03/26/04	08/12/10	03/26/04	08/12/10	03/26/04	
Total solids (%)			75.5	76.7	54.5	34.5	41.8	70.1	60.7	73.2	64.1	36.2	33.4	49.5	28.3	31.4	16.9	34.4												
TOC (%)			3.1	8.9	11.0	22.0	10.0	4.8	1.2	8.4	7.7	16.0	26.0	8.5	17.3	23.5	26.2	13.6												
<b>Metals (mg/kg)</b>																														
Arsenic	57	93	10	7 U	25	10 U	10 U	8	20 U	7	11	10 U	20	10 U	3.3	20 U	5	10 U												
Copper	390	390	53.5	79.9	405	120	184	194	520	86.6	172	187	184	92.1	102	137	134	254												
Lead	450	530	75	55	1,530	163	277	97	151	73	299	152	699	109	77	88	70	327												
Mercury	0.41	0.59	1.49	0.22	1.82	0.31	1.16	0.06 U	0.16	0.07 U	0.2	0.2	1.7	0.1	0.1	0.1 U	0.1 U	0.2												
Zinc	410	960	256	359	1,170	629	754	305	433	501	699	912	1,470	396	613	537	594	677												
<b>Total petroleum hydrocarbons (mg/kg)</b>																														
TPH-diesel	2,000 <sup>b</sup>		1,800	970	3,500	910	2,100	1,900	190	800	730	2,900	8,700	5,200	2,100	6,600	4,300	440												
TPH-oil	2,000 <sup>b</sup>		8,000	6,100	13,000	6,000	7,800	4,900	920	3,900	5,700	15,000	29,000	22,000	13,000	9,400	30,000	3,100												
<b>LPAH (ug/kg DW)</b>																														
Acenaphthene	500	500	170 U	190 U	1,200 U	160 U	270 U	400	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	66												
Acenaphthylene	1,300	1,300	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
Anthracene	960	960	170 U	190 U	1,200 U	160 U	270 U	270	39 U	60 U	350 U	500 U	1,000	2,100 U	2,000 U	2,800 U	2,100 U	180												
Fluorene	540	540	170 U	190 U	1,200 U	160 U	270 U	630	39 U	60 U	350 U	500 U	900	2,100 U	2,000 U	2,800 U	2,100 U	80												
Naphthalene	2,100	2,100	170 U	190 U	1,200	85 J	520	560	39 U	240	350 U	500 U	4,100	9,400	2,000 U	2,800 U	2,100 U	59 U												
Phenanthrene	1,500	1,500	270	190 U	2,000	220	420	1,900	39 U	60 U	810	610	8,900	2,100 U	2,000 U	2,800 U	2,400	990												
Total LPAH	5,200	5,200	270	190 U	3,200	305 J	940	3,760	39 U	240	810	610	14,900	9,400	2,000 U	2,800 U	2,400	1,316												
<b>HPAH (ug/kg DW)</b>																														
Benzo(a)anthracene	1,300	1,600	170 U	190 U	920 J	160 U	270 U	570	39 U	60 U	930	500 U	3,900 J	2,100 U	2,000 U	2,800 U	1,200 J	450												
Benzo(a)pyrene	1,600	1,600	170 U	190 U	1,200 U	110 J	270 U	500	39 U	93	1,500 J	500 U	4,900 J	2,100 U	2,000 U	2,800 U	1,400 J	510												
Benzo(b)fluoranthene	3,200	3,600	190	190 U	1,100 J	180	310	650	39 U	140 J	1,800 J	610 J	7,700 J	2,100 U	1,300 J	3,400	2,400	710												
Benzo(g,h,i)perylene	670	720	170 U	190 U	1,200 U	200	270 U	140	39 U	60 U	1,000 J	500 U	2,300 J	2,100 U	1,000 J	2,800 U	2,100 U	240												
Benzo(k)fluoranthene	3,200	3,600	190	190 U	900 J	180	350	650	39 U	140 J	1,500 J	610 J	6,100 J	2,100 U	1,300 J	2,800 U	2,400	570												
Chrysene	1,400	2,800	340	200	1,700	460	380	700	39 U	140 J	1,600	1,000	9,200 J	2,100 U	1,500 J	4,000	3,000	710												
Dibenz(a,h)anthracene	230	230	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	740 J	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
Fluoranthene	1,700	2,500	360	190 U	2,400	390	670	1,400	39 U	120	2,500	2,100	47,000	2,800	2,300	6,400	6,700	1,400												
Indeno(1,2,3-cd)pyrene	600	690	170 U	190 U	1,200 U	85 J	270 U	130	39 U	60 U	960 J	500 U	2,800 J	2,100 U	2,000 U	2,800 U	2,100 U	220												
Pyrene	2,600	3,300	460	290	2,600	680	600	1,300	39 U	320 J	1,100	1,300	9,300 J	2,600	1,200 J	5,100	3,800	1,300												
Total HPAH	12,000	17,000	1,540	490	9,620 J	2,285 J	2,310	6,040	39 U	953 J	12,890	5,620	93,940	5,400	7,600 J	18,900	20,900 J	6,110												
<b>Phthalates (ug/kg dw)</b>																														
Bis(2-ethylhexyl)phthalate	1,300	1,900	17,000	20,000	53,000	30,000	99,000	17,000	410	4,600	12,000 J	120,000	64,000 J	33,000	20,000 B	140,000	1,400,000 B	14,000												
Butylbenzylphthalate	63	900	480	290	12,000	910	1,800	860	39 U	60 U	430	6,500	11,000 J	2,100 U	1,400 J	9,000	3,600	360												
Diethylphthalate	200		170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
Dimethylphthalate	71	160	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
Di-n-butylphthalate	1,400	1,400	170 U	190 U	1,200 U	440	470	130	43	60 U	350 U	680	720 U	2,100 U	2,000 U	2,800 U	2,100 U	660												
Di-n-octyl phthalate	6,200		850	280	1,400	760 J	1,800	1,800	39 U	99 U	350 U	4,000	1,100 J	2,100 U	2,000 U	2,900	2,100 U	260												
<b>PCBs (ug/kg dw)</b>																														
Aroclor 1016			20 U	19 U	20 U	20 U	20 U	19 U	75 U	20 U	20 U	20 U	98 U	20 U	48 U	110 U	82 U	20 U												
Aroclor 1221			20 U	19 U	20 U	20 U	20 U	19 U	75 U	20 U	20 U	20 U	98 U	20 U	48 U	110 U	82 U	20 U												
Aroclor 1232			20 U	19 U	20 U	20 U	20 U	19 U	75 U	20 U	20 U	20 U	98 U	20 U	48 U	110 U	82 U	20 U												
Aroclor 1242			20 U	19 U	20 U	20 U	20 U	19 U	75 U	20 U	20 U	20 U	98 U	20 U	48 U	110 U	82 U	20 U												
Aroclor 1248			20 U	19 U	84	76	67	19 U	75 U	20 U	20 U	20 U	540 J	55	48 U	110 U	120 Y	20 U												
Aroclor 1254			58	19 U	120	84	79	24	75 U	20 U	32 Y	39 J	280 J	52	48 U	68 J	150	18 J												
Aroclor 1260			20 U	19 U	85	50 J	48	19 U	3,200	20 U	71 Y	41 U	120 J	34	48 U	110 U	180	20 U												
Total PCBs	130	1,000	58	19 U	289	194 J	194	24	3,200	20 U	71 Y	39 J	940 J	141	48 U	68 J	330	18 J												
<b>Other organic compounds (ug/kg dw)</b>																														
1,2,4-Trichlorobenzene	31	51	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
1,2-Dichlorobenzene	35	50	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
1,3-Dichlorobenzene			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
1,4-Dichlorobenzene	110	110	170 U	190 U	1,200 U	160 U	270 U	310	520,000	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
1-Methylnaphthalene						91 J										2,000 U	2,100 U													
2,2'-Oxybis(1-chloropropane)			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U												
2,4,5-Trichlorophenol			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 U	14,000 U	10,000 U	300 U												
2,4,6-Trichlorophenol			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 U	14,000 U	10,000 U	300 U												
2,4-Dichlorophenol			520 U	560 U	3,600 U	800 U	820 U	310 U	140	180 U	1,100 U	1,500 U	2,200 U	6,200 U	10,000 U	8,300 U	10,000 U	180 U												



DT-7: Onsite catch basin sample results (dry weight).

Sample ID			CB17	CB18	CB19	CB19	CB20	CB21	CB22	CB23	CB24	CB25	CB26	CB27A	CB27A	CB27B	CB27B	CB28
Lab Ref			GH92, GK99	GH92, GK99	GH92, GK99	RD69	GH92, GK99	GJ76	GJ76	GK68	GK68	GK68	GK68	GK68	RI55/RK47	GL98	RI55/RK47	GL98
Utility Type <sup>c</sup>			CS	CS	CS	CS	CS	CS	CS	SD	SD	SD	CS	CS	CB	CS	CB	CS
Outfall			Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	S	S	S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S
Date			CSO/SD	CSO/SD	CSO/SD	CSO/SD	CSO/SD	CSO/SD	CSO/SD	St SD	St SD	St SD	CSO/SD	CSO/SD	CSO/SD	CSO/SD	CSO/SD	CSO/SD
	SQS/LAET	CSL/2LAET	02/09/04	02/12/04	02/12/04	07/09/10	02/12/04	03/02/04	03/02/04	03/15/04	03/15/04	03/15/04	03/15/04	03/15/04	08/12/10	03/26/04	08/12/10	03/26/04
2,4-Dimethylphenol <sup>a</sup>	29	29	170 U	190 U	1,200 U	160 U	270 U	520 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
2,4-Dinitrophenol			1,700 U	1,900 U	12,000 U	1,600 U	2,700 U	1,000 U	390 U	600 U	3,500 U	5,000 U	7,200 U	21,000 U	20,000 U	28,000 U	21,000 U	590 U
2,4-Dinitrotoluene			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 U	14,000 U	10,000 U	300 U
2,6-Dinitrotoluene			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 U	14,000 U	10,000 U	300 U
2-Chloronaphthalene			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
2-Chlorophenol			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
2-Methylnaphthalene	670	670	170 U	190 U	<b>2,900</b>	<b>130 J</b>	<b>420</b>	<b>2,800</b>	39 U	<b>370</b>	350 U	500 U	<b>8,600</b>	<b>17,000</b>	2,000 U	2,800 U	2,100 U	59 U
2-Methylphenol <sup>a</sup>	63	63	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
2-Nitroaniline			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 U	14,000 U	10,000 U	300 U
2-Nitrophenol			860 U	930 U	6,000 U	160 U	1,400 U	100 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	2,000 U	14,000 U	2,100 U	300 U
3,3'-Dichlorobenzidine			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 U	14,000 U	10,000 U	300 U
3-Nitroaniline			1,000 U	1,100 U	7,200 U	800 U	1,600 U	620 U	240 U	360 U	2,100 U	3,000 U	4,300 U	12,000 U	10,000 U	17,000 U	10,000 U	360 U
4,6-Dinitro-2-methylphenol			1,700 U	1,900 U	12,000 U	1,600 U	2,700 U	1,000 U	390 U	600 U	3,500 U	5,000 U	7,200 U	21,000 U	20,000 U	28,000 U	21,000 U	590 U
4-Bromophenyl-phenylether			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
4-Chloro-3-methylphenol			350 U	370 U	2,400 U	800 U	550 U	<b>5,700 B<sup>1</sup></b>	<b>780 U</b>	120 U	710 U	1,000 U	1,400 U	4,100 U	10,000 U	5,600 U	10,000 U	120 U
4-Chloroaniline			520 U	560 U	3,600 U	800 U	820 U	310 U	120 U	180 U	1,100 U	1,500 U	2,200 U	6,200 U	10,000 U	8,300 U	10,000 U	180 U
4-Chlorophenyl-phenylether			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
4-Methylphenol <sup>a</sup>	670	670	<b>250</b>	190 U	<b>1,400</b>	<b>2,300</b>	<b>1,400</b>	100 U	39 U	60 U	350 U	<b>3,100</b>	<b>8,600</b>	2,100 U	<b>6,900</b>	<b>89,000</b>	<b>61,000</b>	<b>500</b>
4-Nitroaniline			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 U	14,000 U	10,000 U	300 U
4-Nitrophenol			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 U	14,000 U	10,000 U	300 U
Benzoic acid <sup>a</sup>	650	650	1,700 U	1,900 U	12,000 U	<b>560 J</b>	2,700 U	100 U	390 U	600 U	3,500 U	5,000 U	7,200 U	21,000 U	20,000 U	28,000 U	21,000 U	590 U
Benzyl alcohol <sup>a</sup>	57	73	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
bis(2-Chloroethoxy) methane			170 U	190 U	1,200 U	160 U	270 U	1,000 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
Bis-(2-chloroethyl) ether			350 U	370 U	2,400 U	160 U	550 U	210 U	79 U	120 U	710 U	1,000 U	1,400 U	4,100 U	2,000 U	5,600 U	2,100 U	120 U
Carbazole			170 U	190 U	1,200 U	160 U	270 U	<b>170</b>	39 U	60 U	350 U	500 U	<b>1,800</b>	2,100 U	2,000 U	2,800 U	2,100 U	<b>170</b>
Dibenzofuran	540	540	170 U	190 U	1,200 U	160 U	270 U	<b>180</b>	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
Hexachlorobenzene	22	70	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
Hexachlorobutadiene	11	120	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
Hexachlorocyclopentadiene			860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 UJ	14,000 U	10,000 UJ	300 U
Hexachloroethane			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
Isophorone			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
Nitrobenzene			170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
n-Nitroso-di-n-propylamine			350 U	370 U	2,400 U	800 U	550 U	210 U	79 U	120 U	710 U	1,000 U	1,400 U	4,100 U	10,000 U	5,600 U	10,000 U	120 U
N-Nitrosodiphenylamine	28	40	170 U	190 U	1,200 U	160 U	270 U	100 U	39 U	60 U	350 U	500 U	720 U	2,100 U	2,000 U	2,800 U	2,100 U	59 U
Pentachlorophenol <sup>a</sup>	360	690	860 U	930 U	6,000 U	800 U	1,400 U	520 U	200 U	300 U	1,800 U	2,500 U	3,600 U	10,000 U	10,000 UJ	14,000 U	10,000 UJ	300 U
Phenol <sup>a</sup>	420	1,200	170 U	190 U	1,200 U	<b>170</b>	270 U	100 U	<b>52</b>	60 U	350 U	500 U	720 U	2,100 U	2,000 U	<b>3,700</b>	2,100 U	<b>170</b>

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.


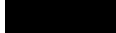
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



## DT-7: Onsite catch basin sample results (dry weight).

Sample ID		CB29	CB30	CB30	CB31	CB32	CB33	CB34	CB35	CB36	CB37	CB38	CB39	CB40	CB40	CB41a	CB41b	
Lab Ref		GN05	GP10	RN27/RP58	GP60	GQ68	GQ68	GQ68	GQ68	GQ68	GU05	GU05	GU05	GX63	PZ97	GZ01	HB46	
Utility Type <sup>c</sup>		CS	CS	CB	SD	SD	SD	SD	SD	SD	Direct	SD	SD	SD	RCB	SD	SD	
Outfall		Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	S Charleston St SD	Diagonal Ave S CSO/SD	LDW	LDW	LDW	Private SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	KCIA SD#2/PS4 5 EOF	KCIA SD#2/PS4 5 EOF	CS	KCIA SD#1	
Date	SQS/LAET	CSL/2LAET	04/07/04	04/30/04	09/16/10	05/06/04	05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	06/22/04	06/25/04	06/25/04	08/04/04	12/03/09	08/19/04	09/10/04
Total solids (%)			40.6	66.4	10.9	55.1	22.2	51.2	60.1	67.0	64.7	48.4	72.1	68.7	75.9	72.1	58.7	53.5
TOC (%)			11.3	8.2	27.8	3.7	20.7	11.4	9.3	9.0	10.6	4.7	6.4	6.2	3.0	4.46	13.5	10.1
<b>Metals (mg/kg)</b>																		
Arsenic	57	93	10 U	11	16	20 U	20 U	20	8 U	8 U	8 U	20 U	7 U	7 U	6 U	7 UJ	20 U	8 U
Copper	390	390	261	79.4	854	186	194	118	98.7	78.6	201	173	66.2	346	92.4	41 J	134	92
Lead	450	530	164	2,010	320	231	131	82	110	87	152	250	54	46	90	63 J	428	232
Mercury	0.41	0.59	0.09 U	0.84	1.1	0.12	0.2 U	0.09	0.07 U	0.1	0.07 U	0.08	0.08	0.08	0.61	0.03 UJ	0.11	0.17
Zinc	410	960	668	257	900	590	874	924	833	382	420	1,220	209	218	271	228 J	711	740
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>		5,000	620	390	200	770 J	900	430	4,000	5,300	180	960	640	600	800	72,000	3,900
TPH-oil	2,000 <sup>b</sup>		21,000	2,800	4,200	670	3,000 J	3,100	2,400	2,700	14,000	650	3,300	2,400	2,300	2,600	77,000	17,000
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	880 U	210 U	92 J	59 U	520 U	320 U	310 U	940	9,700	170	2,600	3,200	850	1,300	14,000 U	1,400 J
Acenaphthylene	1,300	1,300	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850	260	14,000 U	1,400 U
Anthracene	960	960	880 U	250	210	59 U	520 U	320 U	440	750	15,000	820	6,400	9,700	2,200	3,000	14,000 U	1,400 U
Fluorene	540	540	880 U	210 U	160	59 U	520 U	320 U	310 U	1,500	8,400	350	3,400	4,700	1,000	1,600	14,000 U	1,400 U
Naphthalene	2,100	2,100	3,100	210 U	99 J	59 U	520 U	320 U	310 U	150	1,300	140 U	460	400	850 U	240	160,000	1,400 U
Phenanthrene	1,500	1,500	2,100	1,200	1,500 J	67	930	660	2,500	5,200	63,000	3,000	32,000	52,000	19,000	26,000	23,000	1,400 U
Total LPAH	5,200	5,200	5,200	1,450	2,061 J	67	930	660	2,940	8,540	97,400	4,340	44,860	70,000	23,900	32,400	183,000	1,400
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	890	660	520	59 U	520 U	320 U	2,300	3,300	40,000	610	13,000	21,000	12,000	20,000	14,000 U	1,400 U
Benzo(a)pyrene	1,600	1,600	880 U	680	890 J	59 U	560	320 U	3,400	4,100	45,000	200	11,000	18,000	14,000	27,000	14,000 U	1,400 U
Benzo(b)fluoranthene	3,200	3,600	1,000	830	1,100 J	74	920	570	4,200	5,400	62,000	480	16,000	18,000	25,000	36,000	14,000 U	1,400 U
Benzo(g,h,i)perylene	670	720	880 U	320	420 J	59 U	1,400	400	2,200 J	2,600	17,000	140 U	3,800	5,700	7,200	8,200	14,000 U	1,400 U
Benzo(k)fluoranthene	3,200	3,600	1,000	830	1,100 J	59 U	520 U	320 U	2,700	4,500	82,000	320	5,400	6,400	8,800	36,000	14,000 U	1,400 U
Chrysene	1,400	2,800	1,700	1,500	1,500 J	80	1,500	430	3,600	5,700	55,000	1,000	14,000	24,000	21,000	34,000	14,000 U	1,400 U
Dibenz(a,h)anthracene	230	230	880 U	210 U	92 J	59 U	520 U	320 U	390	780	5,100	140 U	1,700	2,600	1,400	5,600	14,000 U	1,400 U
Fluoranthene	1,700	2,500	2,900	2,300	2,200 J	150	1,600	820	5,100	9,300	86,000	3,600	43,000	70,000	33,000	64,000	14,000 U	1,400 U
Indeno(1,2,3-cd)pyrene	600	690	880 U	320	320 J	59 U	540	320 U	2,000	3,100	23,000	140 U	4,900	7,500	9,200	8,700	14,000 U	1,400 U
Pyrene	2,600	3,300	1,900	2,200	2,500 J	160	2,300	610	6,000	10,000	94,000	2,600 J	32,000	51,000	24,000	44,000	14,000 U	1,400 U
Total HPAH	12,000	17,000	9,390	9,640	10,642 J	464	8,820	2,830	31,890 J	48,780	509,100	8,810 J	144,800	224,200	155,600	283,500	14,000 U	1,400 U
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	63,000	11,000	570,000 B	460	34,000	9,900	4,200	11,000	24,000	1,600 J	5,000	4,700	5,500	5,500	74,000	41,000
Butylbenzylphthalate	63	900	930	520	110 U	59 U	520 U	320 U	310 U	100 U	580	1,300	240	230 U	5,100 J	500	14,000 U	2,600
Diethylphthalate	200		880 U	210 U	110 U	59 U	680	330	310 U	100 U	570 U	140 U	210 U	230 U	850 U	45 J	14,000 U	1,400 U
Dimethylphthalate	71	160	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	170	210 U	230 U	850 U	90 U	14,000 U	1,400 U
Di-n-butylphthalate	1,400	1,400	1,300	210 U	110 U	59 U	3,200	320 U	310 U	100 U	570 U	280	210 U	230 U	850 U	100	14,000 U	1,400 U
Di-n-octyl phthalate	6,200		4,600	210 U	1,600 J	59 U	1,100	930	1,100	420	960	140 U	210 U	230 U	850 U	4,400	14,000 U	1,400 U
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			20 U	19 U	130 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U	98 U	98 U	51 U
Aroclor 1221			20 U	19 U	130 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U	98 U	98 U	51 U
Aroclor 1232			20 U	19 U	130 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	58 Y	98 U	98 U	51 U
Aroclor 1242			20 U	39 Y	130 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	39 Y	98 U	98 U	51 U
Aroclor 1248			20 U	58 Y	130 U	55	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	200 Y	490 Y	98 U	51 U
Aroclor 1254			29 J	170	290	47	20 U	30	16 J	20 U	20 U	20 U	19 U	20 U	3,000	1,500	98 U	51 U
Aroclor 1260			20 U	89	150	26	20 U	28	20 U	20 U	20 U	20 U	220	400	3,600	1,900	350	51 U
Total PCBs	130	1,000	29 J	259	259	128	20 U	58	16 J	20 U	20 U	20 U	220	400	6,600	3,400	350	51 U
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
1,2-Dichlorobenzene	35	50	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
1,3-Dichlorobenzene			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
1,4-Dichlorobenzene	110	110	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
1-Methylnaphthalene					99 J													210
2,2'-Oxybis(1-chloropropane)			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
2,4,5-Trichlorophenol			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
2,4,6-Trichlorophenol			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
2,4-Dichlorophenol			2,600 U	620 U	550 U	180 U	1,600 U	970 U	920 U	310 U	1,700 U	410 U	630 U	690 U	2,600 U	450 U	43,000 U	4,200 U

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB29	CB30	CB30	CB31	CB32	CB33	CB34	CB35	CB36	CB37	CB38	CB39	CB40	CB40	CB41a	CB41b		
Lab Ref	GN05	GP10	RN27/RP58	GP60	GQ68	GQ68	GQ68	GQ68	GQ68	GU05	GU05	GU05	GX63	PZ97	GZ01	HB46		
Utility Type <sup>c</sup>	CS	CS	CB	SD	SD	SD	SD	SD	SD	Direct	SD	SD	SD	RCB	SD	SD		
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	S Charleston St SD	Diagonal Ave S CSO/SD	LDW	LDW	LDW	Private SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	KCIA SD#2/PS4 5 EOF	KCIA SD#2/PS4 5 EOF	CS	KCIA SD#1		
Date			04/07/04	04/30/04	09/16/10	05/06/04	05/24/04	05/24/04	05/24/04	05/24/04	05/24/04	06/22/04	06/25/04	06/25/04	08/04/04	12/03/09	08/19/04	09/10/04
	SQS/LAET	CSL/2LAET																
2,4-Dimethylphenol <sup>a</sup>	29	29	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
2,4-Dinitrophenol			8,800 U	2,100 U	1,100 U	590 U	5,200 U	3,200 U	3,100 U	1,000 U	5,700 U	1,400 U	2,100 U	2,300 U	8,500 U	90 U	140,000 U	14,000 U
2,4-Dinitrotoluene			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
2,6-Dinitrotoluene			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
2-Chloronaphthalene			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
2-Chlorophenol			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
2-Methylnaphthalene	670	670	<b>7,800</b>	210 U	<b>140</b>	59 U	520 U	<b>480</b>	310 U	<b>1,100</b>	<b>1,100</b>	140 U	<b>360</b>	<b>340</b>	850 U	<b>230</b>	<b>350,000</b>	1,400 U
2-Methylphenol <sup>a</sup>	63	63	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
2-Nitroaniline			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
2-Nitrophenol			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
3,3'-Dichlorobenzidine			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
3-Nitroaniline			5,300 U	1,200 U	550 U	350 U	3,100 U	1,900 U	1,800 U	620 U	3,400 U	820 U	1,300 U	1,400 U	5,100 U	450 U	86,000 U	8,400 U
4,6-Dinitro-2-methylphenol			8,800 U	2,100 U	1,100 U	590 U	5,200 U	3,200 U	3,100 U	1,000 U	5,700 U	1,400 U	2,100 U	2,300 U	8,500 U	90 U	140,000 U	14,000 U
4-Bromophenyl-phenylether			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
4-Chloro-3-methylphenol			1,800 U	410 U	550 U	120 U	1,000 U	650 U	610 U	210 U	1,100 U	270 U	420 U	460 U	1,700 U	450 U	29,000 U	2,800 U
4-Chloroaniline			2,600 U	620 U	550 U	180 U	1,600 U	970 U	920 U	310 U	1,700 U	410 U	630 U	690 U	2,600 U	450 U	43,000 U	4,200 U
4-Chlorophenyl-phenylether			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
4-Methylphenol <sup>a</sup>	670	670	<b>2,400</b>	<b>3,500</b>	<b>210</b>	59 U	520 U	<b>1,300</b>	310 U	100 U	<b>2,100</b>	<b>2,900</b>	<b>1,200</b>	<b>840</b>	850 U	<b>70</b> J	14,000 U	<b>2,400</b>
4-Nitroaniline			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
4-Nitrophenol			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
Benzoic acid <sup>a</sup>	650	650	8,800 U	2,100 U	2,000 Q	590 U	5,200 U	3,200 U	3,100 U	1,000 U	5,700 U	<b>1,800</b>	2,100 U	2,300 U	8,500 U	260 J	140,000 U	14,000 U
Benzyl alcohol <sup>a</sup>	57	73	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
bis(2-Chloroethoxy) methane			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
Bis-(2-chloroethyl) ether			1,800 U	410 U	110 U	120 U	1,000 U	650 U	610 U	210 U	1,100 U	270 U	420 U	460 U	1,700 U	90 U	29,000 U	2,800 U
Carbazole			880 U	<b>220</b>	<b>270</b>	59 U	520 U	320 U	310 U	<b>540</b>	<b>15,000</b>	<b>170</b>	<b>3,900</b>	<b>5,100</b>	<b>4,400</b>	90 U	14,000 U	1,400 U
Dibenzofuran	540	540	880 U	210 U	<b>61</b> J	59 U	520 U	320 U	310 U	<b>420</b>	<b>3,400</b>	<b>150</b>	<b>1,200</b>	<b>1,500</b>	<b>850</b>	<b>1,100</b>	14,000 U	1,400 U
Hexachlorobenzene	22	70	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
Hexachlorobutadiene	11	120	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
Hexachlorocyclopentadiene			4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
Hexachloroethane			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
Isophorone			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	<b>210</b>	210 U	230 U	850 U	90 U	14,000 Y	1,400 U
Nitrobenzene			880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
n-Nitroso-di-n-propylamine			1,800 U	410 U	550 U	120 U	1,000 U	650 U	610 U	210 U	1,100 U	270 U	420 U	460 U	1,700 U	450 U	29,000 U	2,800 U
N-Nitrosodiphenylamine	28	40	880 U	210 U	110 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	90 U	14,000 U	1,400 U
Pentachlorophenol <sup>a</sup>	360	690	4,400 U	1,000 U	550 U	290 U	2,600 U	1,600 U	1,500 U	520 U	2,800 U	680 U	1,000 U	1,200 U	4,300 U	450 U	71,000 U	7,000 U
Phenol <sup>a</sup>	420	1,200	880 U	210 U	290 U	59 U	520 U	320 U	310 U	100 U	570 U	140 U	210 U	230 U	850 U	<b>67</b> J	14,000 U	1,400 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB42	CB44	CB45	CB46	CB48	CB49	CB50	CB51	CB52	CB53b	CB58	CB72	CB73	CB74	CB75	CB76		
Lab Ref	GZ01	HL78	HN38	HN38	HR76	HR76	HR76	HR76	HR76	HV82	HU45	IQ73,IQ74	IQ73,IQ74	IQ73,IQ74	IQ73,IQ74	IQ73,IQ74		
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	CS	CS	SD	SD	SD	SD	SD		
Outfall	CS	Georgetow n flume	I-5 SD at Slip 4	KCIA SD#3/PS4 4 EOF	Georgetow n flume	SW Dakota St SD/ditch	SW Dakota St SD/ditch	SW Dakota St SD/ditch	SW Dakota St SD/ditch	CS	Diagonal Ave S CSO/SD	Norfolk CSO/SD/P S#17 EOF	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD		
Date	SQS/ LAET	CSL/ 2LAET	08/19/04	12/08/04	12/22/04	12/22/04	02/02/05	02/04/05	02/04/05	02/04/05	02/04/05	03/16/05	03/03/05	10/18/05	10/19/05	10/19/05	10/19/05	
Total solids (%)			60.7	52.8	38.6	45.9	78.1	73.2	46.5	76.6	55.6	NA	49.1	53.6	NA	43.5	NA	NA
TOC (%)			5.8	26.1	9.7	10.4	1.6	3.6	9.3	4.8	5.1	NA	6.7	7.6	NA	12.0	NA	NA
<b>Metals (mg/kg)</b>																		
Arsenic	57	93	20 U	12 J	20	20	12	7 U	10 U	10	11	NA	100 U	11	NA	30 U	NA	NA
Copper	390	390	173 J	142 J	6,320	5,660	51.5	NA	NA	NA	NA	NA	3,260	164	NA	362	NA	NA
Lead	450	530	98	123 J	481	396	343	36	47	99	127	NA	280	49	NA	430	NA	NA
Mercury	0.41	0.59	0.08 U	0.12 J	0.3	0.2	0.32	0.06 U	0.09 U	0.12	0.13	NA	0.34	0.07 U	NA	1.51	NA	NA
Zinc	410	960	830	524 J	3,420	3,530	657	NA	NA	NA	NA	NA	660	1,980	NA	1,810	NA	NA
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>		8,000	85	950	1,900	98	NA	NA	NA	250	NA	2,200	NA	NA	740	NA	NA
TPH-oil	2,000 <sup>b</sup>		19,000	790	4,700	4,600	210	NA	NA	NA	1,700	NA	6,100	NA	NA	3,400	NA	NA
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	25,000	140 U	760	1,600 U	82	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Acenaphthylene	1,300	1,300	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Anthracene	960	960	51,000	140 U	2,100	5,000	160	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Fluorene	540	540	30,000	140 U	1,300	3,000	58 U	NA	NA	NA	120 U	NA	460	600	NA	81	NA	NA
Naphthalene	2,100	2,100	2,300 U	140 U	390 U	1,600 U	290	NA	NA	NA	120 U	NA	1,000	460	NA	2,500	NA	NA
Phenanthrene	1,500	1,500	450,000	220	17,000	35,000	2,200	NA	NA	NA	680	NA	640	1,400	NA	870	NA	NA
Total LPAH	5,200	5,200	556,000	220	21,160	43,000	2,732	NA	NA	NA	680	NA	2,100	2,460	NA	3,451	NA	NA
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	310,000	140 U	13,000	27,000	1,400	NA	NA	NA	270	NA	370 U	180	NA	190	NA	NA
Benzo(a)pyrene	1,600	1,600	320,000	140 U	15,000	32,000	1,500	NA	NA	NA	310	NA	370 U	250	NA	98	NA	NA
Benzo(b)fluoranthene	3,200	3,600	450,000	180	15,000	34,000	3,300	NA	NA	NA	530	NA	370 U	250	NA	200	NA	NA
Benzo(g,h,i)perylene	670	720	240,000	140 U	7,300	16,000	530	NA	NA	NA	160	NA	370 U	170	NA	44 UJ	NA	NA
Benzo(k)fluoranthene	3,200	3,600	230,000	180	15,000	34,000	1,400	NA	NA	NA	440	NA	370 U	300	NA	170	NA	NA
Chrysene	1,400	2,800	400,000	290	20,000	43,000	1,800	NA	NA	NA	650	NA	480	450	NA	280	NA	NA
Dibenz(a,h)anthracene	230	230	100,000	140 U	2,700	5,400	85	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Fluoranthene	1,700	2,500	860,000	410	31,000	85,000	4,700	NA	NA	NA	1,200	NA	820	700	NA	920	NA	NA
Indeno(1,2,3-cd)pyrene	600	690	290,000	140 U	8,600	19,000	710	NA	NA	NA	120 U	NA	370 U	130 U	NA	44	NA	NA
Pyrene	2,600	3,300	630,000	290	23,000	49,000	2,800	NA	NA	NA	750	NA	790	890	NA	490	NA	NA
Total HPAH	12,000	17,000	3,830,000	1,350	150,600	344,400	18,225	NA	NA	NA	4,310	NA	2,090	3,190	NA	2,392	NA	NA
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	3,300	10,000	8,800	30,000	77	NA	NA	NA	7,300	NA	16,000	33,000	NA	13,000	NA	NA
Butylbenzylphthalate	63	900	2,300 U	430	490	1,600 U	58 U	NA	NA	NA	1,300	NA	2,200	130 U	NA	1,000	NA	NA
Diethylphthalate	200		2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	480	NA	370 U	130 U	NA	44 U	NA	NA
Dimethylphthalate	71	160	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	1,000	NA	NA
Di-n-butylphthalate	1,400	1,400	2,300 U	850	620	1,600 U	58 U	NA	NA	NA	290	NA	1,700	680 U	NA	52,000	NA	NA
Di-n-octyl phthalate	6,200		2,300 U	140 U	1,200	1,600 U	58 U	NA	NA	NA	670	NA	710	130 U	NA	2,400	NA	NA
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			19 U	20 U	58 U	120 Y	19 U	NA	NA	NA	19 U	580 U	20 U	20 U	150,000 U	180 U	31,000 U	26,000 U
Aroclor 1221			19 U	20 U	58 U	120 Y	19 U	NA	NA	NA	19 U	580 U	20 U	20 U	150,000 U	180 U	31,000 U	26,000 U
Aroclor 1232			19 U	20 U	58 U	290 Y	19 U	NA	NA	NA	19 U	580 U	40 Y	20 U	150,000 U	180 U	31,000 U	260,000 U
Aroclor 1242			19 U	20 U	58 U	180 Y	19 U	NA	NA	NA	19 U	580 U	20 U	20 U	150,000 U	180 U	31,000 U	26,000 U
Aroclor 1248			19 U	20 U	58 U	240 Y	19 U	NA	NA	NA	70	580 U	40 Y	20 U	150,000 U	2,900	31,000 U	26,000 U
Aroclor 1254			19 U	49 Y	170	240 Y	250	NA	NA	NA	89	2,400	200	59 Y	800,000	8,800	96,000	1,200,000
Aroclor 1260			140	180	300	180 Y	77 Y	NA	NA	NA	64	3,900	99 Y	40 Y	540,000	8,100	79,000	1,000,000
Total PCBs	130	1,000	140	180	470	240 Y	250	NA	NA	NA	223	6,300	200	40 Y	1,340,000	19,800	175,000	2,200,000
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
1,2-Dichlorobenzene	35	50	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
1,3-Dichlorobenzene			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
1,4-Dichlorobenzene	110	110	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
1-Methylnaphthalene																		
2,2'-Oxybis(1-chloropropane)			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
2,4,5-Trichlorophenol			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
2,4,6-Trichlorophenol			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
2,4-Dichlorophenol			6,800 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB42	CB44	CB45	CB46	CB48	CB49	CB50	CB51	CB52	CB53b	CB58	CB72	CB73	CB74	CB75	CB76		
Lab Ref	GZ01	HL78	HN38	HN38	HR76	HR76	HR76	HR76	HR76	HV82	HU45	IQ73,IQ74	IQ73,IQ74	IQ73,IQ74	IQ73,IQ74	IQ73,IQ74		
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	CS	CS	SD	SD	SD	SD	SD		
Outfall	CS	Georgetow n flume	I-5 SD at Slip 4	KCIA SD#3/PS4 4 EOF	Georgetow n flume	SW Dakota St SD/ditch	SW Dakota St SD/ditch	SW Dakota St SD/ditch	SW Dakota St SD/ditch	CS	Diagonal Ave S CSO/SD	Norfolk CSO/SD/P S#17 EOF	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD		
Date	SQS/ LAET	CSL/ 2LAET	08/19/04	12/08/04	12/22/04	12/22/04	02/02/05	02/04/05	02/04/05	02/04/05	02/04/05	03/16/05	03/03/05	10/18/05	10/19/05	10/19/05	10/19/05	
2,4-Dimethylphenol <sup>a</sup>	29	29	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
2,4-Dinitrophenol			23,000 U	1,400 U	3,900 U	16,000 U	580 U	NA	NA	NA	1,200 U	NA	3,700 U	1,300 U	NA	440 U	NA	NA
2,4-Dinitrotoluene			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
2,6-Dinitrotoluene			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
2-Chloronaphthalene			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
2-Chlorophenol			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
2-Methylnaphthalene	670	670	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
2-Methylphenol <sup>a</sup>	63	63	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
2-Nitroaniline			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
2-Nitrophenol			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
3,3'-Dichlorobenzidine			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
3-Nitroaniline			14,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
4,6-Dinitro-2-methylphenol			23,000 U	1,400 U	3,900 U	16,000 U	580 U	NA	NA	NA	1,200 U	NA	3,700 U	1,300 U	NA	440 U	NA	NA
4-Bromophenyl-phenylether			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
4-Chloro-3-methylphenol			4,500 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
4-Chloroaniline			6,800 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
4-Chlorophenyl-phenylether			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
4-Methylphenol <sup>a</sup>	670	670	2,300 U	870	390 U	1,600 U	58 U	NA	NA	NA	160	NA	370 U	400	NA	17,000	NA	NA
4-Nitroaniline			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
4-Nitrophenol			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
Benzoic acid <sup>a</sup>	650	650	23,000 U	1,400 U	3,900 U	16,000 U	580 U	NA	NA	NA	1,200 U	NA	3,700 U	1,300 U	NA	440 U	NA	NA
Benzyl alcohol <sup>a</sup>	57	73	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	150	NA	NA
bis(2-Chloroethoxy) methane			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Bis-(2-chloroethyl) ether			4,500 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Carbazole			81,000	140 U	4,200	9,100	310	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Dibenzofuran	540	540	16,000	140 U	660	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	160	NA	57	NA	NA
Hexachlorobenzene	22	70	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Hexachlorobutadiene	11	120	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Hexachlorocyclopentadiene			11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
Hexachloroethane			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Isophorone			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
Nitrobenzene			2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	44 U	NA	NA
n-Nitroso-di-n-propylamine			4,500 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 U	NA	NA
N-Nitrosodiphenylamine	28	40	2,300 U	140 U	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	130 U	NA	100 Y	NA	NA
Pentachlorophenol <sup>a</sup>	360	690	11,000 U	710 U	2,000 U	8,000 U	290 U	NA	NA	NA	620 U	NA	1,900 U	650 U	NA	220 UJ	NA	NA
Phenol <sup>a</sup>	420	1,200	2,300 U	260	390 U	1,600 U	58 U	NA	NA	NA	120 U	NA	370 U	220	NA	1,900	NA	NA

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET





DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB77	CB78	CB79	CB80	CB81	S1	CB82	CB83	CB83	CB84	CB84	CB85	CB86	CB87	CB88	CB89		
Lab Ref	IS72	IS72	IS72	IS72	IU18	IS72	IU18	IV03	RI13/RN40	IV03	RI57	IV03	IY80	JB06	JB06	JB06		
Utility Type <sup>c</sup>	SD	SD	SD	CS	SD	SD	SD	SD	CB	SD	CB	CS	SD	SD	SD	SD		
Outfall	Norfolk CSO/SD/P S#17 EOF	Norfolk CSO/SD/P S#17 EOF	Private SD	CS	Diagonal Ave S CSO/SD	Private SD	Norfolk CSO/SD/P S#17 EOF	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Norfolk CSO/SD/P S#17 EOF	Norfolk CSO/SD/PS #17 EOF	Diagonal Ave S CSO/SD	Private SD	I-5 SD at Slip 4	I-5 SD at Slip 4	I-5 SD at Slip 4		
Date	SQS/LAET	CSL/2LAET	11/08/05	11/08/05	09/11/05	09/11/05	11/22/05	11/09/05	11/23/05	12/05/05	08/30/10	12/06/05	09/02/10	12/05/05	01/18/06	02/10/06	02/10/06	02/10/06
2,4-Dimethylphenol <sup>a</sup>	29	29	95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
2,4-Dinitrophenol			950 U	1,200 U	900 U	420 U	12,000 U	350 U	1,600 U	3,400 U	5,200 U	39,000 U	9,600 U	17,000 U	570 U	2,000 U	2,000 U	2,000 U
2,4-Dinitrotoluene			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
2,6-Dinitrotoluene			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
2-Chloronaphthalene			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
2-Chlorophenol			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
2-Methylnaphthalene	670	670	<b>220</b>	<b>92 J</b>	<b>230</b>	<b>710</b>	<b>1,000 J</b>	35 U	<b>380</b>	<b>18,000</b>	520 U	<b>3,900</b>	<b>680 J</b>	1,700 U	<b>960</b>	200 U	200 U	200 U
2-Methylphenol <sup>a</sup>	63	63	95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
2-Nitroaniline			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
2-Nitrophenol			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
3,3'-Dichlorobenzidine			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
3-Nitroaniline			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	1,600 U	980 U	980 U	980 U
4,6-Dinitro-2-methylphenol			950 U	1,200 U	900 U	420 U	12,000 U	350 U	1,600 U	3,400 U	5,200 U	39,000 U	9,600 U	17,000 U	570 U	2,000 U	2,000 U	2,000 U
4-Bromophenyl-phenylether			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
4-Chloro-3-methylphenol			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
4-Chloroaniline			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
4-Chlorophenyl-phenylether			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
4-Methylphenol <sup>a</sup>	670	670	<b>1,200</b>	380 U	90 U	<b>1,600</b>	<b>8,100</b>	610 U	<b>180</b>	340 U	520 U	3,900 U	960 U	1,700 U	<b>1,900</b>	200 U	200 U	200 U
4-Nitroaniline			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
4-Nitrophenol			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
Benzoic acid <sup>a</sup>	650	650	950 U	1,200 U	900 U	<b>610 J</b>	12,000 U	<b>69 J</b>	1,600 U	<b>2,700 J</b>	5,200 U	39,000 U	9,600 U	17,000 U	<b>3,500</b>	2,000 U	2,000 U	2,000 U
Benzyl alcohol <sup>a</sup>	57	73	24,000 Y	120 U	90 U	<b>890 J</b>	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	<b>770</b>	200 U	200 U	200 U
bis(2-Chloroethoxy) methane			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
Bis-(2-chloroethyl) ether			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
Carbazole			95 U	<b>17,000</b>	<b>2,200</b>	<b>97</b>	1,200 U	<b>19 J</b>	<b>330</b>	<b>190 J</b>	520 U	3,900 U	960 U	1,700 U	<b>34 J</b>	200 U	200 U	200 U
Dibenzofuran	540	540	95 U	<b>1,700</b>	<b>410</b>	<b>86</b>	1,200 U	35 U	<b>130 J</b>	340 U	520 U	<b>3,900</b>	960 U	1,700 U	57 U	200 U	200 U	200 U
Hexachlorobenzene	22	70	95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
Hexachlorobutadiene	11	120	95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
Hexachlorocyclopentadiene			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
Hexachloroethane			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
Isophorone			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
Nitrobenzene			95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
n-Nitroso-di-n-propylamine			480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
N-Nitrosodiphenylamine	28	40	95 U	120 U	90 U	42 U	1,200 U	35 U	160 U	340 U	520 U	3,900 U	960 U	1,700 U	57 U	200 U	200 U	200 U
Pentachlorophenol <sup>a</sup>	360	690	480 U	590 U	450 U	210 U	6,000 U	180 U	790 U	1,700 U	2,600 U	20,000 U	4,800 U	8,500 U	290 U	980 U	980 U	980 U
Phenol <sup>a</sup>	420	1,200	<b>280</b>	<b>120</b>	90 U	<b>280</b>	1,200 U	<b>78</b>	160 U	<b>350</b>	520 U	3,900 U	960 U	1,700 U	<b>280</b>	200 U	200 U	200 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.


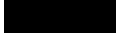
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB90	CB91	CB92A	CB92A	CB93	CB94	CB95	CH-N	CH-E	CB92B	CB96	CB97	CB98	CB100	CB100	CB101		
Lab Ref	JI31	JK52	JO98	JO98	KA77	KA77	KA77	KF45	KF45	LM69	KN66	KN66	KN66	KO62	RR61/RU50	KP15		
Utility Type <sup>c</sup>	CS	SD	SD	SD	CS	CS	CS	CS	CS	SD	CS	CS	CS	SD	CB	SD		
Outfall	Private SD	Highland Park Wy SW SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Private SD	Private SD	Private SD	Private SD	Private SD	Diagonal Ave S CSO/SD	Private SD	Private SD	Private SD	S Grattan St SD	S Grattan St SD	Private SD		
Date	SQS/LAET	CSL/2LAET	05/05/06	05/31/06	07/10/06	07/10/06	10/12/06	10/12/06	10/12/06	11/14/06	11/14/06	08/23/07	02/06/07	02/06/07	02/06/07	02/15/07	10/15/10	02/21/07
2,4-Dimethylphenol <sup>a</sup>	29	29	310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	<b>9,200</b>	29 U	1,200 U	3,200 U	60
2,4-Dinitrophenol			3,100 U	150,000 U	1,800 U	1,400 U	1,200 U	3,900 U	5,200 U	1,100 U	1,100 U	5,000 U	1,200 U	2,400 U	290 U	12,000 U	32,000 U	600
2,4-Dinitrotoluene			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
2,6-Dinitrotoluene			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
2-Chloronaphthalene			310 U	15,000 U	180 U	140 U	<b>120</b>	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
2-Chlorophenol			310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
2-Methylnaphthalene	670	670	<b>310</b>	<b>16,000</b>	<b>200</b>	<b>210</b>	<b>160</b>	<b>1,700</b>	<b>790</b>	<b>100 J</b>	<b>900</b>	<b>660</b>	<b>140</b>	<b>34,000</b>	<b>37</b>	<b>9,500</b>	3,200 U	<b>330</b>
2-Methylphenol <sup>a</sup>	63	63	310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	<b>750</b>	29 U	1,200 U	3,200 U	60
2-Nitroaniline			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
2-Nitrophenol			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
3,3'-Dichlorobenzidine			1,600 R	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
3-Nitroaniline			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
4,6-Dinitro-2-methylphenol			3,100 U	150,000 U	1,800 U	1,400 U	1,200 U	3,900 U	5,200 U	1,100 U	1,100 U	5,000 U	1,200 U	2,400 U	290 U	12,000 U	32,000 U	600
4-Bromophenyl-phenylether			310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
4-Chloro-3-methylphenol			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
4-Chloroaniline			1,600 R	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
4-Chlorophenyl-phenylether			310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
4-Methylphenol <sup>a</sup>	670	670	310 U	15,000 U	<b>1,200</b>	<b>1,300</b>	<b>1,700</b>	390 U	<b>2,200</b>	<b>120</b>	<b>120</b>	500 U	120 U	<b>1,200</b>	<b>150</b>	1,200 U	<b>1,900 J</b>	41
4-Nitroaniline			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
4-Nitrophenol			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
Benzoic acid <sup>a</sup>	650	650	3,100 U	150,000 U	1,800 U	1,400 U	1,200 U	<b>4,400</b>	5,200 U	1,100 U	1,100 U	5,000 UJ	1,200 U	2,400 U	290 U	12,000 U	32,000 U	600
Benzyl alcohol <sup>a</sup>	57	73	<b>440</b>	15,000 U	180 U	<b>230 M</b>	120 U	390 U	520 U	<b>120</b>	<b>500</b>	500 U	120 U	1,200 U	29 U	1,200 U	3,200 U	<b>160</b>
bis(2-Chloroethoxy) methane			310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
Bis-(2-chloroethyl) ether			310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
Carbazole			<b>780</b>	<b>27,000</b>	180 U	140 U	<b>280</b>	390 U	520 U	<b>57 J</b>	<b>120</b>	500 U	<b>360</b>	240 U	29 U	<b>2,400</b>	3,200 U	<b>49</b>
Dibenzofuran	540	540	310 U	<b>53,000</b>	180 U	140 U	<b>130</b>	390 U	520 U	110 U	<b>120</b>	500 U	120 U	240 U	29 U	1,200 U	3,200 U	<b>64</b>
Hexachlorobenzene	22	70	310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
Hexachlorobutadiene	11	120	310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
Hexachlorocyclopentadiene			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
Hexachloroethane			310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
Isophorone			310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
Nitrobenzene			310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	3,200 U	60
n-Nitroso-di-n-propylamine			1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
N-Nitrosodiphenylamine	28	40	310 U	15,000 U	180 U	140 U	120 U	390 U	520 U	110 U	110 U	500 U	120 U	240 U	29 U	1,200 U	16,000 U	60
Pentachlorophenol <sup>a</sup>	360	690	1,600 U	74,000 U	920 U	730 U	590 U	2,000 U	2,600 U	550 U	570 U	2,500 U	620 U	1,200 U	140 U	6,200 U	16,000 U	300
Phenol <sup>a</sup>	420	1,200	<b>350 B</b>	15,000 U	<b>3,200</b>	<b>3,100</b>	<b>870</b>	<b>1,500</b>	<b>1,500</b>	240 U	380 U	500 U	120 U	<b>360</b>	<b>41</b>	1,200 U	3,200 U	<b>100</b>

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.



U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-7: Onsite catch basin sample results (dry weight).

Sample ID		CB102	CB103	CB104	CB105	CB106	CB106	CB107S	CB107F	CB108	CB108D	CB110	CB111	CB112	CB112	CB113	TUL-CB1	
Lab Ref		KP15	KP15	KP15	LL00	LU21	QY29	LU21	LU21	LU21	LU21	MA85	MA85	MA85	RP65	MA85	ME86	
Utility Type <sup>c</sup>		SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	CB	CS	SD	
Outfall		Private SD	Private SD	Private SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	2nd Ave S SD	2nd Ave S SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	CS	Diagonal Ave S CSO/SD	
Date	SQS/ LAET	CSL/ 2LAET	02/21/07	02/21/07	02/21/07	08/13/07	10/18/07	05/27/10	10/18/07	10/18/07	10/18/07	12/05/07	12/05/07	12/05/07	10/04/10	12/05/07	01/09/08	
Total solids (%)			84.1	79.9	88.7	42.8	37.4	34.6	34.1	68.1	85.3	84.0	75.0	83.1	65.8	52.0	100.0	67.3
TOC (%)			0.973	1.36	0.977	6	12	14.2 J	5	1	2	3.17	4	2	4.57	12.2	42.3	NA
<b>Metals (mg/kg)</b>																		
Arsenic	57	93 U	30 U	20	30	13	10 U	10 U	5.1	7 U	6 U	6	6 UJ	10 UJ	8 UJ	8 U	6 UJ	NA
Copper	390	390	1,730	860	987	358	107	129	177	360	146	123	46 J	241 J	303 J	229	285 J	NA
Lead	450	530 U	120	61	70	341	29	28	106	15	25 J	83 J	20 J	97 J	117 J	100	40 J	NA
Mercury	0.41	0.59 U	0.07	0.04	0.04 U	0.24	0.08 U	0.06	0.20	0.05 U	0.05 U	0.05 U	0.05 UJ	0.04 UJ	0.06 UJ	0.13	0.05 UJ	NA
Zinc	410	960	1,360	745	794	787	790	981	628	108	111	136	200 J	190 J	465 J	575	392 J	NA
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>		150	330	120	12,000	1,900	710	2,500	1,400	1,600	1,500	480	46,000	2,000	180	67,000	NA
TPH-oil	2,000 <sup>b</sup>		410	2,100	530	42,000	11,000	8,500	4,600	1,600	4,600	4,000	3,300	250,000	5,800	2,100	390,000	NA
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500 U	320	120	160 J	1,200 U	430	240 U	330 U	130 U	190 U	200 U	99 U	98 U	420	390 U	1,700 U	NA
Acenaphthylene	1,300	1,300 U	65	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Anthracene	960	960	350	210	260	1,200 U	450	240 U	370	130 U	190 U	200 U	99 U	98 U	1,300	380 J	1,700 U	NA
Fluorene	540	540 J	280	140	160 J	1,200 U	350	240 U	330 U	130 U	260	380	99 U	98 U	690	300 J	1,700 U	NA
Naphthalene	2,100	2,100	300	730	480	1,700	280 U	240 U	330 U	130 U	190 U	250	99 U	98 U	180	390 U	1,700 U	NA
Phenanthrene	1,500	1,500	1,700	1,200	1,300	1,500	2,800	390	3,400	550	390	520	100	300	4,700	3,400	1,900	NA
Total LPAH	5,200	5,200 J	3,015	2,400	2,360 J	3,200	4,030	390	3,770	550	650	1,150	100	300	7,290	4,080 J	1,900	NA
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	1,400	650	970	1,200 U	1,800	200 J	1,600	360	190 U	200 U	99 U	160	2,400	1,700	1,700 U	NA
Benzo(a)pyrene	1,600	1,600	1,300	480	760	1,200 U	3,000	200 J	3,100	530	190 U	200 U	99 U	160	2,400	1,600	1,700 U	NA
Benzo(b)fluoranthene	3,200	3,600	1,800	530	860	1,200 U	3,100	270	4,100	540	190 U	200 U	99 U	210	2,500	2,700	1,700 U	NA
Benzo(g,h,i)perylene	670	720	560	240	440	1,200 U	540	320	880	160	190 U	200 U	99 U	98 U	1,200	740	1,700 U	NA
Benzo(k)fluoranthene	3,200	3,600	910	520	850	1,200 U	3,300	270	3,000	720	190 U	200 U	99 U	180	3,300	2,700	1,700 U	NA
Chrysene	1,400	2,800	1,600	760	1,000	1,200 U	3,600	500	4,100	660	190 U	200 U	110	240	3,200	3,600	1,700 U	NA
Dibenz(a,h)anthracene	230	230 U	180	58 J	110 J	1,200 U	280 U	240 U	360	130 U	190 U	200 U	99 U	98 U	250	390 U	1,700 U	NA
Fluoranthene	1,700	2,500	3,100	1,800	2,300	1,300	4,800	580	6,600	1,200	190 U	200 U	120	480	5,500	6,400	1,700 U	NA
Indeno(1,2,3-cd)pyrene	600	690 J	650	230	430	1,200 U	780	150 J	1,300	240	190 U	200 U	99 U	98 U	1,100	670	1,700 U	NA
Pyrene	2,600	3,300	2,000	1,300	2,000	1,400	4,600	680 J	5,100	960	190 U	200	180	560	9,900	4,700	2,700 Y	NA
Total HPAH	12,000	17,000 J	13,500	6,568 J	9,720 J	2,700	25,520	3,170 J	30,140	5,370	190 U	200	410	1,990	31,750	24,810	2,700 Y	NA
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	3,400	3,600	3,300	68,000	67,000 B	64,000	17,000 B	6,000 B	4,200 J	41,000 J	6,700	1,900	64,000	12,000 B	440,000	NA
Butylbenzylphthalate	63	900	510	500	460	16,000	17,000	150,000	330 U	150	190 U	200 U	150	98 U	430	260 J	1,700 U	NA
Diethylphthalate	200	U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Dimethylphthalate	71	160 U	93	73 J	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Di-n-butylphthalate	1,400	1,400	1,200	1,100	680	1,200 U	2,000	3,200	350 Y	130 U	190 U	200 U	99 U	98 U	230	530	1,700 U	NA
Di-n-octyl phthalate	6,200	J	340	220	220	2,800	5,800	7,700	670	300	190 U	200	280	98 U	520	390 U	4,900 NJ	NA
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016		U	19 U	19 U	20 U	200 U	20 U	40 U	20 U	20 U	20 U	20 U	20 U	20 U	39 U	20 U	810 U	580
Aroclor 1221		U	19 U	19 U	20 U	200 U	20 U	40 U	20 U	20 U	20 U	20 U	20 U	20 U	39 U	20 U	810 U	580
Aroclor 1232		U	19 U	19 U	20 U	200 U	20 U	40 U	20 U	20 U	20 U	20 U	20 U	20 U	39 U	20 U	810 U	580
Aroclor 1242		U	19 U	19 U	20 U	200 U	30 Y	40 U	20 U	20 U	20 U	20 U	20 U	20 U	39 U	20 U	810 U	580
Aroclor 1248		U	19 U	77 Y	58 Y	200 U	20 U	40 U	40 Y	29 Y	20 U	20 U	20 U	20 U	58 Y	78 Y	810 U	580
Aroclor 1254			55	350	810	210	35	49	40 Y	29 Y	20 U	20 U	47	130	150	810 U	10,000	
Aroclor 1260		U	21 J	71	120 Y	200 U	40 Y	40 U	200 Y	39 Y	20 J	50 J	20	20 U	120	68	810 U	7,100
Total PCBs	130	1,000	76 J	421	810	210	35	49	200 Y	39 Y	20 J	50 J	20	47	250	218	810 U	17,100
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51 U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
1,2-Dichlorobenzene	35	50 U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
1,3-Dichlorobenzene		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
1,4-Dichlorobenzene	110	110 U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
1-Methylnaphthalene								240 U								390 U		
2,2'-Oxybis(1-chloropropane)		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
2,4,5-Trichlorophenol		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
2,4,6-Trichlorophenol		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
2,4-Dichlorophenol		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA

DT-7: Onsite catch basin sample results (dry weight).

Sample ID		CB102	CB103	CB104	CB105	CB106	CB106	CB107S	CB107F	CB108	CB108D	CB110	CB111	CB112	CB112	CB113	TUL-CB1	
Lab Ref		KP15	KP15	KP15	LL00	LU21	QY29	LU21	LU21	LU21	LU21	MA85	MA85	MA85	RP65	MA85	ME86	
Utility Type <sup>c</sup>		SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	CB	CS	SD	
Outfall		Private SD	Private SD	Private SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	2nd Ave S SD	2nd Ave S SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	CS	Diagonal Ave S CSO/SD	
Date	SQS/ LAET	CSL/ 2LAET	02/21/07	02/21/07	02/21/07	08/13/07	10/18/07	05/27/10	10/18/07	10/18/07	10/18/07	10/18/07	12/05/07	12/05/07	12/05/07	10/04/10	12/05/07	01/09/08
2,4-Dimethylphenol <sup>a</sup>	29	29 U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
2,4-Dinitrophenol		U	590 U	940 U	2,000 U	12,000 U	2,800 U	2,400 U	3,300 U	1,300 U	1,900 U	2,000 U	990 U	980 U	990 U	3,900 UJ	17,000 U	NA
2,4-Dinitrotoluene		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
2,6-Dinitrotoluene		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
2-Chloronaphthalene		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
2-Chlorophenol		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
2-Methylnaphthalene	670	670	<b>200</b>	<b>290</b>	<b>210</b>	<b>6,800</b>	<b>290</b>	240 U	330 U	130 U	<b>650</b>	<b>1,000</b>	99 U	98 U	<b>110</b>	390 U	1,700 U	NA
2-Methylphenol <sup>a</sup>	63	63 U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
2-Nitroaniline		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
2-Nitrophenol		U	300 U	470 U	990 U	5,800 U	1,400 U	240 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	390 U	8,400 U	NA
3,3'-Dichlorobenzidine		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
3-Nitroaniline		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
4,6-Dinitro-2-methylphenol		U	590 U	940 U	2,000 U	12,000 U	2,800 U	2,400 U	3,300 U	1,300 U	1,900 U	2,000 U	990 U	980 U	990 U	3,900 U	17,000 U	NA
4-Bromophenyl-phenylether		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
4-Chloro-3-methylphenol		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
4-Chloroaniline		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
4-Chlorophenyl-phenylether		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
4-Methylphenol <sup>a</sup>	670	670 J	59 U	<b>110</b>	<b>200</b>	1,200 U	<b>9,900</b>	6,300	330 U	<b>670</b>	190 U	200 U	99 U	98 U	<b>390</b>	390 U	1,700 U	NA
4-Nitroaniline		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
4-Nitrophenol		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
Benzoic acid <sup>a</sup>	650	650 U	590 U	940 U	2,000 U	12,000 U	<b>6,700</b>	<b>33,000</b>	3,300 U	1,300 U	1,900 U	2,000 U	990 U	980 U	990 U	3,900 U	17,000 U	NA
Benzyl alcohol <sup>a</sup>	57	73	<b>580</b>	<b>1,600</b>	<b>580</b>	1,200 U	280 U	<b>520</b>	<b>540</b>	<b>460</b>	190 U	200 U	99 U	<b>210</b>	<b>1,800</b>	390 U	1,700 U	NA
bis(2-Chloroethoxy) methane		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Bis-(2-chloroethyl) ether		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Carbazole		J	<b>240</b>	<b>140</b>	<b>180</b>	1,200 U	300	240 U	580	130 U	190 U	200 U	99 U	98 U	<b>1,200</b>	<b>430</b>	1,700 U	NA
Dibenzofuran	540	540	<b>150</b>	<b>97</b>	<b>200</b>	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	<b>300</b>	390 U	1,700 U	NA
Hexachlorobenzene	22	70 U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Hexachlorobutadiene	11	120 U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Hexachlorocyclopentadiene		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 UJ	8,400 U	NA
Hexachloroethane		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Isophorone		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
Nitrobenzene		U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 U	130 U	190 U	200 U	99 U	98 U	99 U	390 U	1,700 U	NA
n-Nitroso-di-n-propylamine		U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	390 U	8,400 U	NA
N-Nitrosodiphenylamine	28	40 U	59 U	94 U	200 U	1,200 U	280 U	240 U	330 Y	130 U	190 U	200 U	99 U	98 U	99 U	2,000 U	1,700 U	NA
Pentachlorophenol <sup>a</sup>	360	690 U	300 U	470 U	990 U	5,800 U	1,400 U	1,200 U	1,600 U	670 U	950 U	990 U	500 U	490 U	490 U	2,000 U	8,400 U	NA
Phenol <sup>a</sup>	420	1,200	<b>280</b>	<b>640</b>	<b>320</b>	1,200 U	<b>820</b>	<b>1,400</b>	<b>690</b>	<b>160</b>	190 U	200 U	99 U	98 U	<b>200</b>	<b>280</b>	1,700 U	NA

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.



U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET

DT-7: Onsite catch basin sample results (dry weight).

Sample ID			TUL-CB2	TUL-CB3	TUL-CB4	CB114	CB116	CB116
Lab Ref			ME86	ME86	ME86	MP02	MU58	QZ56
Utility Type <sup>c</sup>			SD	SD	SD	SD	SD	CB
Outfall			Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Hamm Creek	2nd Ave S SD	2nd Ave S SD
Date	SQS/ LAET	CSL/ 2LAET	01/09/08	01/09/08	01/09/08	03/25/08	05/01/08	06/07/10
Total solids (%)			46.7	61.0	43.0	53.6	48.4	34.7
TOC (%)			NA	NA	NA	0.36	7.41	10.7
<b>Metals (mg/kg)</b>								
Arsenic	57	93	NA	NA	NA	20.5	30	50
Copper	390	390	NA	NA	NA	44	2,110	806
Lead	450	530	NA	NA	NA	30	1,180	1,540
Mercury	0.41	0.59	NA	NA	NA	0.08 U	10.50	48
Zinc	410	960	NA	NA	NA	504	2,690	2,950
<b>Total petroleum hydrocarbons (mg/kg)</b>								
TPH-diesel	2,000 <sup>b</sup>		NA	NA	NA	13	4,200	2,600
TPH-oil	2,000 <sup>b</sup>		NA	NA	NA	72	16,000	14,000
<b>LPAH (ug/kg DW)</b>								
Acenaphthene	500	500	NA	NA	NA	20 U	390 U	850 U
Acenaphthylene	1,300	1,300	NA	NA	NA	20 U	390 U	850 U
Anthracene	960	960	NA	NA	NA	20 U	390 U	730 J
Fluorene	540	540	NA	NA	NA	20 U	390 U	850 U
Naphthalene	2,100	2,100	NA	NA	NA	20 U	390 U	850 U
Phenanthrene	1,500	1,500	NA	NA	NA	20 U	1,000	1,300
Total LPAH	5,200	5,200	NA	NA	NA	20 U	1,000	2,030 J
<b>HPAH (ug/kg DW)</b>								
Benzo(a)anthracene	1,300	1,600	NA	NA	NA	20 U	390 U	470 J
Benzo(a)pyrene	1,600	1,600	NA	NA	NA	20 U	390	540 J
Benzo(b)fluoranthene	3,200	3,600	NA	NA	NA	20 U	390 U	500 J
Benzo(g,h,i)perylene	670	720	NA	NA	NA	20 U	390 U	580 J
Benzo(k)fluoranthene	3,200	3,600	NA	NA	NA	20 U	540	500 J
Chrysene	1,400	2,800	NA	NA	NA	20 U	1,100	1,400
Dibenz(a,h)anthracene	230	230	NA	NA	NA	20 U	390 U	850 U
Fluoranthene	1,700	2,500	NA	NA	NA	20 U	1,200	1,200
Indeno(1,2,3-cd)pyrene	600	690	NA	NA	NA	20 U	390 U	850 U
Pyrene	2,600	3,300	NA	NA	NA	20 U	1,100 U	1,100
Total HPAH	12,000	17,000	NA	NA	NA	20 U	3,230	6,290 J
<b>Phthalates (ug/kg dw)</b>								
Bis(2-ethylhexyl)phthalate	1,300	1,900	NA	NA	NA	200	29,000	39,000 B
Butylbenzylphthalate	63	900	NA	NA	NA	91	480	11,000
Diethylphthalate	200		NA	NA	NA	20 U	390 U	850 U
Dimethylphthalate	71	160	NA	NA	NA	20 U	550	850 U
Di-n-butylphthalate	1,400	1,400	NA	NA	NA	20 U	450	1,400
Di-n-octyl phthalate	6,200		NA	NA	NA	20 U	1,000	2,100
<b>PCBs (ug/kg dw)</b>								
Aroclor 1016		U	110 U	24,000 U	460 U	20 U	99 U	20 U
Aroclor 1221		U	110 U	24,000 U	460 U	20 U	99 U	20 U
Aroclor 1232		U	110 U	24,000 U	460 U	20 U	99 U	20 U
Aroclor 1242		U	110 U	24,000 U	460 U	20 U	99 U	72
Aroclor 1248		U	110 U	24,000 U	460 U	20 U	99 U	20 U
Aroclor 1254			4,800	110,000	9,500	20 U	99 U	340
Aroclor 1260			3,600	79,000	8,300	20 U	99 U	490
Total PCBs	130	1,000	8,400	189,000	17,800	20 U	99 U	902
<b>Other organic compounds (ug/kg dw)</b>								
1,2,4-Trichlorobenzene	31	51	NA	NA	NA	20 U	390 U	850 U
1,2-Dichlorobenzene	35	50	NA	NA	NA	20 U	390 U	850 U
1,3-Dichlorobenzene			NA	NA	NA	20 U	390 U	850 U
1,4-Dichlorobenzene	110	110	NA	NA	NA	20 U	390 U	850 U
1-Methylnaphthalene								1,200
2,2'-Oxybis(1-chloropropane)			NA	NA	NA	20 U	390 U	850 U
2,4,5-Trichlorophenol			NA	NA	NA	98 U	2,000 U	4,300 U
2,4,6-Trichlorophenol			NA	NA	NA	98 U	2,000 U	4,300 U
2,4-Dichlorophenol			NA	NA	NA	98 U	2,000 U	4,300 U

DT-7: Onsite catch basin sample results (dry weight).

Sample ID			TUL-CB2	TUL-CB3	TUL-CB4	CB114	CB116	CB116
Lab Ref			ME86	ME86	ME86	MP02	MU58	QZ56
Utility Type <sup>c</sup>			SD	SD	SD	SD	SD	CB
Outfall			Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Hamm Creek	2nd Ave S SD	2nd Ave S SD
Date	SQS/ LAET	CSL/ 2LAET	01/09/08	01/09/08	01/09/08	03/25/08	05/01/08	06/07/10
2,4-Dimethylphenol <sup>a</sup>	29	29	NA	NA	NA	20 U	390 U	850 U
2,4-Dinitrophenol			NA	NA	NA	200 U	3,900 U	8,500 U
2,4-Dinitrotoluene			NA	NA	NA	98 U	2,000 U	4,300 U
2,6-Dinitrotoluene			NA	NA	NA	98 U	2,000 U	4,300 U
2-Chloronaphthalene			NA	NA	NA	20 U	390 U	850 U
2-Chlorophenol			NA	NA	NA	20 U	390 U	850 U
2-Methylnaphthalene	670	670	NA	NA	NA	20 U	390 U	<b>1,700</b>
2-Methylphenol <sup>a</sup>	63	63	NA	NA	NA	20 U	390 U	850 U
2-Nitroaniline			NA	NA	NA	98 U	2,000 U	4,300 U
2-Nitrophenol			NA	NA	NA	98 U	2,000 U	850 U
3,3'-Dichlorobenzidine			NA	NA	NA	98 U	2,000 U	4,300 U
3-Nitroaniline			NA	NA	NA	98 U	2,000 U	4,300 U
4,6-Dinitro-2-methylphenol			NA	NA	NA	200 U	3,900 U	8,500 U
4-Bromophenyl-phenylether			NA	NA	NA	20 U	390 U	850 U
4-Chloro-3-methylphenol			NA	NA	NA	98 U	2,000 U	4,300 U
4-Chloroaniline			NA	NA	NA	98 U	2,000 U	4,300 U
4-Chlorophenyl-phenylether			NA	NA	NA	20 U	390 U	850 U
4-Methylphenol <sup>a</sup>	670	670	NA	NA	NA	20 U	<b>410</b>	<b>2,200</b>
4-Nitroaniline			NA	NA	NA	98 U	2,000 U	4,300 U
4-Nitrophenol			NA	NA	NA	98 U	2,000 U	4,300 U
Benzoic acid <sup>a</sup>	650	650	NA	NA	NA	200 U	3,900 U	8,500 U
Benzyl alcohol <sup>a</sup>	57	73	NA	NA	NA	<b>36</b>	390 U	850 U
bis(2-Chloroethoxy) methane			NA	NA	NA	20 U	390 U	850 U
Bis-(2-chloroethyl) ether			NA	NA	NA	20 U	390 U	850 U
Carbazole			NA	NA	NA	20 U	390 U	850 U
Dibenzofuran	540	540	NA	NA	NA	20 U	390 U	850 U
Hexachlorobenzene	22	70	NA	NA	NA	20 U	390 U	850 U
Hexachlorobutadiene	11	120	NA	NA	NA	20 U	390 U	850 U
Hexachlorocyclopentadiene			NA	NA	NA	98 U	2,000 U	4,300 U
Hexachloroethane			NA	NA	NA	20 U	390 U	850 U
Isophorone			NA	NA	NA	20 U	390 U	850 U
Nitrobenzene			NA	NA	NA	20 U	390 U	850 U
n-Nitroso-di-n-propylamine			NA	NA	NA	98 U	2,000 U	4,300 U
N-Nitrosodiphenylamine	28	40	NA	NA	NA	20 U	390 U	850 U
Pentachlorophenol <sup>a</sup>	360	690	NA	NA	NA	98 U	2,000 U	4,300 U
Phenol <sup>a</sup>	420	1,200	NA	NA	NA	20 U	<b>390</b>	850 U

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB117		CB117	CB119	CB120	CB121	CB121	CB123	CB127	CB128	CB129	CB130	CB136	CB137	CB138	CB139	CB140	
Lab Ref	MW66		RG11/RH95	MX98	MX98	MX98	RI55	NG32	NT73	NT73	NT73	NW26	OS71	OS71	OU95	OU95	OU95	
Utility Type <sup>c</sup>	SD		CB	CS	CS	SD	CB	SD	SD	SD	SD	CS	SD	SD	SD	SD	SD	
Outfall	Diagonal Ave S CSO/SD		Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Private SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Hamm Creek	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	7th Ave S SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	
Date	SQS/LAET	CSL/2LAET	05/14/08	07/28/10	05/23/08	05/23/08	05/23/08	08/12/10	07/18/08	10/10/08	10/10/08	10/10/08	10/23/08	03/27/09	03/27/09	04/09/09	04/09/09	04/09/09
Total solids (%)			30.9	73.0	74.8	96.8	54.7	28.8	46.9	22.2	30.2	65.3	52.9	71.4	75.6	64.5	70.0	63.6
TOC (%)			10.4	3.8	4.03	1.44	6.14	14.0	7.53	16	18.9	4.58	17.0	5.88	4.03	9.02	2.66	10.1
<b>Metals (mg/kg)</b>																		
Arsenic	57	93	4.5	7.4	3.5	10 U	9 U	10 U	20	70	2.3	8	480	5.5 J	710 J	6.4 J	7.3 J	8.9 J
Copper	390	390	1,120	1,370	101	62.2	194	167	175	437	72.2	199	707	227 J	4,930 J	1,550 J	190 J	191 J
Lead	450	530	223	41	76	9	89	102	99	131	24	40	1,230	407 J	118 J	106 J	197 J	166 J
Mercury	0.41	0.59	0.1 U	0.04	0.05 U	0.04 U	0.86	0.66	0.07 U	0.2 U	0.2 U	0.07	21	0.34 J	0.22 J	0.11 J	0.08 J	0.06 J
Zinc	410	960	542	291	283	40	1,360	1,720	1,950	1,530	424	1,760	1,460	2,920 J	1,950 J	1,730 J	1,950 J	1,380 J
<b>Total petroleum hydrocarbons (mg/kg)</b>																		
TPH-diesel	2,000 <sup>b</sup>		7,100	620	1,200	91	910	320	930	1,400	5,800	4,600	36,000	4,500	640	6,100	4,700	20,000
TPH-oil	2,000 <sup>b</sup>		44,000	5,700	5,300	230	4,900	12,000	5,600	6,100	6,800	4,400	91,000	14,000	4,900	22,000	16,000	55,000
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	1,400 U	520 U	8,100	20 U	260 U	880 U	1,300	280 U	200 U	1,400 U	7,400	260 U	140 U	230 U	65 U	330 U
Acenaphthylene	1,300	1,300	1,400 U	520 U	1,600 U	25	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U
Anthracene	960	960	1,400 U	520 U	11,000	67	260 U	880 U	2,800	210 J	200 U	1,400 U	4,300	260 U	140 U	230 U	82	330 U
Fluorene	540	540	1,400 U	520 U	6,400	40	260 U	880 U	2,700	280 U	200 U	1,400 U	12,000	150 J	140 U	230 U	100	330 U
Naphthalene	2,100	2,100	1,400 U	520 U	3,800	180	260 U	880 U	360 J	280 U	200 U	1,400 U	19,000	760	140 U	230 U	80	260 J
Phenanthrene	1,500	1,500	1,400 U	520 U	48,000	99	290	880 U	11,000	830	650	830 J	37,000	750	130 J	260	480	480
Total LPAH	5,200	5,200	1,400	520 U	77,300	411	290	880 U	18,160 J	1,040 J	650	830 J	79,700	1,660 J	130 J	260	742	740 J
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	1,400 U	520 U	26,000	20 U	260 U	880 U	1,600	640	200 U	1,400 U	2,700	280	140 U	230 U	150	330 U
Benzo(a)pyrene	1,600	1,600	1,400 U	520 U	26,000	20 U	260 U	880 U	830	310	200 U	1,400 U	1,300	260	140 U	230 U	65	330 U
Benzo(b)fluoranthene	3,200	3,600	1,400 U	520 U	26,000	20 U	280	880 U	1,100	660	200 U	1,400 U	1,200 U	320	120 J	130 J	140	330 U
Benzo(g,h,i)perylene	670	720	1,400 U	520 U	12,000	20 U	260 U	880 U	290 J	190 J	200 U	1,400 U	1,200 U	260	110 J	230 U	100	330 U
Benzo(k)fluoranthene	3,200	3,600	1,400 U	520 U	17,000	20 U	300	880 U	1,400	980	200 U	1,400 U	1,900	470	160	130 J	160	280 J
Chrysene	1,400	2,800	1,400 U	520 U	30,000	13 J	420 NJ	750 J	2,800	2,200	230	1,400 U	4,000	630	220	370	380	380
Dibenz(a,h)anthracene	230	230	1,400 U	520 U	3,300	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U
Fluoranthene	1,700	2,500	1,400 U	520 U	54,000	33	430	600 J	11,000	3,600	650	1,700	17,000	800	280	400	380	460
Indeno(1,2,3-cd)pyrene	600	690	1,400 U	520 U	13,000	20 U	260 U	880 U	230 J	180 J	200 U	1,400 U	1,200 U	260 U	140 U	230 U	33 J	330 U
Pyrene	2,600	3,300	1,400 U	520 U	55,000	28	450	500 J	5,600	2,200	390	780 J	11,000	940	250	660	700	780
Total HPAH	12,000	17,000	1,400 U	520 U	262,300	74 J	1,880 NJ	1,850 J	24,850 J	10,960 J	1,270	2,480 J	37,900	3,960	1,140	1,690 JJ	2,108 J	1,900 J
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	18,000	6,800	1,600	170	15,000	16,000 B	1,700 U	6,900	2,200	8,700	180,000	45,000	1,900	18,000 B	19,000 B	40,000 B
Butylbenzylphthalate	63	900	1,400 U	320 J	1,600 U	20 U	12,000	25,000	2,400	280 U	200 U	25,000	97,000	45,000	140	2,400	12,000	5,900
Diethylphthalate	200		1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U
Dimethylphthalate	71	160	1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	770	140 U	230 U	65 U	330 U
Di-n-butylphthalate	1,400	1,400	850 J	520 U	1,600 U	55	3,300	4,100	420 U	280 U	200 U	1,400 U	11,000	19,000	140 U	510	620	570
Di-n-octyl phthalate	6,200	930 J	520 U	1,600 U	20 U	2,900	1,800 J	420 U	250 J	250	1,400 U	1,200 U	8,000	130 J	950	3,500	6,800	
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			20 U	19 U	20 U	20 U	240 U	130 U	20 U	20 U	20 U	18 U	41,000 Y	20 U	20 U	20 U	98 U	20 U
Aroclor 1221			20 U	19 U	20 U	20 U	240 U	130 U	20 U	20 U	20 U	18 U	4,100 U	20 U	20 U	20 U	98 U	20 U
Aroclor 1232			20 U	19 U	20 U	20 U	240 U	130 U	20 U	20 U	20 U	18 U	4,100 U	20 U	20 U	20 U	98 U	20 U
Aroclor 1242			20 U	19 U	20 U	20 U	240 U	130 U	20 U	20 U	20 U	18 U	4,100 U	20 U	20 U	20 U	98 U	20 U
Aroclor 1248			120	60	26	20 U	240 U	330 Y	20 U	20 U	20 U	18 U	4,100 U	30 Y	20 U	20 U	200	20 U
Aroclor 1254			77	50 J	39	20 U	8,300	3,700	30 Y	20 U	20 U	53	27,000 Y	57	32	31	280	34
Aroclor 1260			38	28	38	20 U	240 U	660 Y	79 Y	20 U	20 U	34	4,100 U	82	20 U	31	98 U	38
Total PCBs	130	1,000	235	138 J	103	20 U	8,300	3,700	79 Y	20 U	20 U	87	41,000 Y	139	32	62	480	72
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U
1,2-Dichlorobenzene	35	50	1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U
1,3-Dichlorobenzene			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U
1,4-Dichlorobenzene	110	110	1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U
1-Methylnaphthalene				520 U				880 U										
2,2'-Oxybis(1-chloropropane)			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U
2,4,5-Trichlorophenol			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB117	CB117	CB119	CB120	CB121	CB121	CB123	CB127	CB128	CB129	CB130	CB136	CB137	CB138	CB139	CB140						
Lab Ref	MW66	RG11/RH95	MX98	MX98	MX98	RI55	NG32	NT73	NT73	NT73	NW26	OS71	OS71	OU95	OU95	OU95						
Utility Type <sup>c</sup>	SD	CB	CS	CS	SD	CB	SD	SD	SD	SD	CS	SD	SD	SD	SD	SD						
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Private SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Hamm Creek	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	7th Ave S SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD						
Date			05/14/08	07/28/10	05/23/08	05/23/08	05/23/08	08/12/10	07/18/08	10/10/08	10/10/08	10/10/08	10/23/08	03/27/09	03/27/09	04/09/09	04/09/09	04/09/09				
	SQS/LAET	CSL/2LAET																				
2,4,6-Trichlorophenol			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
2,4-Dichlorophenol			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
2,4-Dimethylphenol <sup>a</sup>	29	29	1,400 U	520 U	1,600 U	530	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
2,4-Dinitrophenol			14,000 U	5,200 U	16,000 U	200 U	2,600 U	8,800 U	4,200 U	2,800 U	2,000 U	14,000 U	12,000 U	2,600 U	1,400 U	2,300 U	650 U	3,300 U				
2,4-Dinitrotoluene			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
2,6-Dinitrotoluene			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
2-Chloronaphthalene			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
2-Chlorophenol			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
2-Methylnaphthalene	670	670	1,400 U	520 U	1,800	97	260 U	880 U	570	280 U	200 U	1,400 U	39,000	1,200	140 U	230 U	100	860				
2-Methylphenol <sup>a</sup>	63	63	1,400 U	520 U	1,600 U	680	260 U	880 U	420 U	1,500	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
2-Nitroaniline			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
2-Nitrophenol			6,800 U	520 U	7,800 U	99 U	1,300 U	880 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
3,3'-Dichlorobenzidine			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
3-Nitroaniline			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
4,6-Dinitro-2-methylphenol			14,000 U	5,200 U	16,000 U	200 U	2,600 U	8,800 U	4,200 U	2,800 U	2,000 U	14,000 U	12,000 U	2,600 U	1,400 U	2,300 U	650 U	3,300 U				
4-Bromophenyl-phenylether			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
4-Chloro-3-methylphenol			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
4-Chloroaniline			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
4-Chlorophenyl-phenylether			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
4-Methylphenol <sup>a</sup>	670	670	4,000	850	1,600 U	660	650	6,700	610	400	200 U	960	J	1,200 U	230	J	140 U	230 U	65 U	330 U		
4-Nitroaniline			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
4-Nitrophenol			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
Benzoic acid <sup>a</sup>	650	650	14,000 U	5,200 U	16,000 U	200 U	2,600 U	3,500	J	4,200 U	2,800 U	2,000 U	14,000 U	19,000	NJ	1,600	J	1,000	J	2,300 U	650 U	3,300 U
Benzyl alcohol <sup>a</sup>	57	73	1,400 U	520 U	1,600 U	20 U	260 U	880 U	J	420 U	280 U	200 U	1,400 U	1,600		260 U	140 U	230 U	240 U	330 U		
bis(2-Chloroethoxy) methane			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
Bis-(2-chloroethyl) ether			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
Carbazole			1,400 U	520 U	7,100	20 U	260 U	880 U	1,500	160	J	200 U	1,400 U	2,300	260 U	140 U	230 U	65 U	330 U			
Dibenzofuran	540	540	1,400 U	520 U	4,100	73	260 U	880 U	1,300	280 U	200 U	1,400 U	6,400	260 U	140 U	230 U	65 U	330 U				
Hexachlorobenzene	22	70	1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
Hexachlorobutadiene	11	120	1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
Hexachlorocyclopentadiene			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	J	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U			
Hexachloroethane			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
Isophorone			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	75	330 U				
Nitrobenzene			1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
n-Nitroso-di-n-propylamine			6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	1,200 U	320 U	1,700 U				
N-Nitrosodiphenylamine	28	40	1,400 U	520 U	1,600 U	20 U	260 U	880 U	420 U	280 U	200 U	1,400 U	1,200 U	260 U	140 U	230 U	65 U	330 U				
Pentachlorophenol <sup>a</sup>	360	690	6,800 U	2,600 U	7,800 U	99 U	1,300 U	4,400 U	J	2,100 U	1,400 U	1,000 U	7,000 U	6,200 U	1,300 U	700 U	620	J	320 U	1,700 U		
Phenol <sup>a</sup>	420	1,200	1,400 U	520 U	1,600 U	4,000	260 U	880 U	420 U	280 U	7,000	1,400 U	13,000	290	270	230 U	140	400				

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.



c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET

DT-7: Onsite catch basin sample results (dry weight).

Sample ID			CB154	CB155	CB157-F	CB157S	RD1	RD2	CB41C	CB158	CB159	CB160	CB161	CB163	PortCB6
Lab Ref			PY32	PY32	QW05	QW05	QW05	QW05	QT06	QW47	RD69	RD69	RF96	RJ82	RH70
Utility Type <sup>c</sup>			SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
Outfall			7th Ave S SD	7th Ave S SD	S Garden St SD	S Garden St SD	S Garden St SD	S Myrtle St SD	SW Dakota St SD/ditch	Diagonal Ave S CSO/SD	Lake Washington	Lake Washington	Diagonal Ave S CSO/SD	S Brighton St CSO/SD	Terminal 117
Date	SQS/ LAET	CSL/ 2LAET	11/18/09	11/18/09	05/11/10	05/11/10	05/11/10	05/11/10	04/16/10	05/14/10	07/09/10	07/09/10	07/27/10	08/18/10	08/09/10
Total solids (%)			63.7	64.5	67.3	46.2	49.2	29.6	29.6	38.3	65.1	32.7	87.1	62.5	45.6
TOC (%)			1.89	1.26	4.59	6.7	8.84	8.37	8.4	13.1	10.0	18.5	3.7	6.7	9.3
<b>Metals (mg/kg)</b>															
Arsenic	57	93	7 UJ	8 UJ	208	17.2	17.6	20.8	10 U	20	7 U	10 U	10 U	7 U	10
Copper	390	390	281 J	267 J	1,890	2,240	1,090	975	350	160	31.8	3,620	175	91.9	248
Lead	450	530	17 J	17 J	1,260	1,380	1,410	1,700	203	249	13	107	31	114	187
Mercury	0.41	0.59	0.03 UJ	0.03 UJ	0.8	1.55	0.92	2.56	0.22	0.26	0.03 U	0.09	0.02 U	0.19	0.31
Zinc	410	960	177 J	175 J	4,940	5,880	5,370	8,310	3,740	3,770	194	512	126	810	882
<b>Total petroleum hydrocarbons (mg/kg)</b>															
TPH-diesel	2,000 <sup>b</sup>		860	980	840	970	210	190	370	680	110	720	73	1,200	1,200
TPH-oil	2,000 <sup>b</sup>		960	980	6,200	8,200	2,400	1,700	2,000	4,400	860	5,400	780	6,200	6,500
<b>LPAH (ug/kg DW)</b>															
Acenaphthene	500	500	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Acenaphthylene	1,300	1,300	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Anthracene	960	960	82 U	89 U	130 J	200 J	88 U	190	180 J	150 U	200 U	520 U	190 U	550 U	620
Fluorene	540	540	82 U	89 U	220 U	250 U	88 U	86 J	160 J	150 U	200 U	520 U	190 U	550 U	200 J
Naphthalene	2,100	2,100	82 U	89 U	150 J	210 J	66 J	130 J	260	150 U	200 U	520 U	190 U	550 U	270 U
Phenanthrene	1,500	1,500	68 J	89 U	900	880	640	1,100	1,000	280	200 U	590	190 U	340 J	860
Total LPAH	5,200	5,200	68 J	89 U	1,180	1,290	706	1,506	1,600 J	280	200 U	590	190 U	340 J	1,680 J
<b>HPAH (ug/kg DW)</b>															
Benzo(a)anthracene	1,300	1,600	82 U	89 U	550 J	800 J	440	720	370	140 J	200 U	280 NJ	190 U	550 U	400
Benzo(a)pyrene	1,600	1,600	82 U	89 U	440	580	670	1,000	620	540	200 U	800	190 U	550 U	540
Benzo(b)fluoranthene	3,200	3,600	37 J	89 U	590	890	700	1,500	790	430	200 U	620	190 U	550 U	630
Benzo(g,h,i)perylene	670	720	82 U	89 U	180 J	270	290	440	320 J	440	200 U	480 J	190 U	440 J	480
Benzo(k)fluoranthene	3,200	3,600	37 J	89 U	590	890	700	1,500	790	430	200 U	620	190 U	550 U	630
Chrysene	1,400	2,800	71 J	65 J	990	1,600	1,400	1,300	1,600	930	200 U	1,000	99 J	550 U	980
Dibenz(a,h)anthracene	230	230	82 U	89 U	55 J	250 U	70 J	120 J	230 U	150 U	200 U	520 U	190 U	550 U	140 J
Fluoranthene	1,700	2,500	200	180	1,700	2,400	1,400	2,600	1,600	580	200 U	1,100	190 U	550	1,400
Indeno(1,2,3-cd)pyrene	600	690	82 U	89 U	130 J	200 J	170	360	260	140 J	200 U	290 J	190 U	550 U	300
Pyrene	2,600	3,300	160	120	1,100	1,500	910	1,400	1,200 J	600	200 U	1,400	190 U	500 J	1,900
Total HPAH	12,000	17,000	505 J	365 J	6,325 J	9,130 J	6,750 J	10,940 J	7,550 J	4,230 J	200 U	6,590 J	99 J	1,490 J	7,400 J
<b>Phthalates (ug/kg dw)</b>															
Bis(2-ethylhexyl)phthalate	1,300	1,900	30,000	36,000	33,000	41,000	11,000	12,000	37,000	13,000	4,200	33,000	770	10,000	57,000 B
Butylbenzylphthalate	63	900	69 J	120	5,000	4,300	2,200	4,600	1,800	610	250	960	320	550 U	7,400
Diethylphthalate	200		82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Dimethylphthalate	71	160	290	300	2,500	620	510	1,100	220 J	150 U	200 U	520 U	190 U	520 J	270 U
Di-n-butylphthalate	1,400	1,400	260	230	1,500	1,200	670	2,200	200 J	230	200 U	520 U	190 U	550 U	270 U
Di-n-octyl phthalate	6,200		1,000	910	2,200	3,400	920	970	3,700	1,200	200 U	2,900 J	190 U	550 U	4,800 J
<b>PCBs (ug/kg dw)</b>															
Aroclor 1016			19 U	19 U	48 U	60 U	40 U	66 U	34 U	50 U	19 U	20 U	19 U	20 U	19 U
Aroclor 1221			19 U	19 U	48 U	60 U	40 U	66 U	34 U	50 U	19 U	20 U	19 U	20 U	19 U
Aroclor 1232			19 U	19 U	48 U	60 U	40 U	66 U	34 U	50 U	19 U	20 U	19 U	20 U	19 U
Aroclor 1242			19 U	19 U	48 U	60 U	40 U	66 U	34 U	50 U	19 U	20 U	19 U	160	19 U
Aroclor 1248			88	83	1,300	1,400	570	1,800	100	75 Y	19 U	32	19 U	20 U	58 Y
Aroclor 1254			91	89	1,400	2,200	1,100	2,200	140	120	19 U	53	19 UJ	100	560
Aroclor 1260			54 J	54 J	260	420	260	570	77	60	19 U	38 J	19 U	51	460
Total PCBs	130	1,000	233 J	226 J	2,960	4,020	1,930	4,570	317	180	19 U	123 J	19 U	311	1,020
<b>Other organic compounds (ug/kg dw)</b>															
1,2,4-Trichlorobenzene	31	51	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
1,2-Dichlorobenzene	35	50	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
1,3-Dichlorobenzene			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
1,4-Dichlorobenzene	110	110	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
1-Methylnaphthalene			82 U	89 U					180 J	150 U	200 U	520 U	190 U	550 U	270 U
2,2'-Oxybis(1-chloropropane)			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
2,4,5-Trichlorophenol			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB154	CB155	CB157-F	CB157S	RD1	RD2	CB41C	CB158	CB159	CB160	CB161	CB163	PortCB6		
Lab Ref	PY32	PY32	QW05	QW05	QW05	QW05	QT06	QW47	RD69	RD69	RF96	RJ82	RH70		
Utility Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD		
Outfall	7th Ave S SD	7th Ave S SD	S Garden St SD	S Garden St SD	S Garden St SD	S Myrtle St SD	SW Dakota St SD/ditch	Diagonal Ave S CSO/SD	Lake Washington	Lake Washington	Diagonal Ave S CSO/SD	S Brighton St CSO/SD	Terminal 117		
Date	11/18/09	11/18/09	05/11/10	05/11/10	05/11/10	05/11/10	04/16/10	05/14/10	07/09/10	07/09/10	07/27/10	08/18/10	08/09/10		
	SQS/ LAET	CSL/ 2LAET													
2,4,6-Trichlorophenol			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
2,4-Dichlorophenol			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
2,4-Dimethylphenol <sup>a</sup>	29	29	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
2,4-Dinitrophenol			820 U	890 U	2,200 U	2,500 U	880 U	1,500 U	2,300 U	1,500 U	2,000 U	5,200 U	1,900 U	5,500 U	2,700 UJ
2,4-Dinitrotoluene			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
2,6-Dinitrotoluene			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
2-Chloronaphthalene			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
2-Chlorophenol			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
2-Methylnaphthalene	670	670	82 U	89 U	150 J	250 J	64 J	170	290	150 U	200 U	520 U	190 U	550 U	170 J
2-Methylphenol <sup>a</sup>	63	63	140	140	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
2-Nitroaniline			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
2-Nitrophenol			410 U	440 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
3,3'-Dichlorobenzidine			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
3-Nitroaniline			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
4,6-Dinitro-2-methylphenol			820 U	890 U	2,200 U	2,500 U	880 U	1,500 U	2,300 U	1,500 U	2,000 U	5,200 U	1,900 U	5,500 U	2,700 U
4-Bromophenyl-phenylether			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
4-Chloro-3-methylphenol			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
4-Chloroaniline			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
4-Chlorophenyl-phenylether			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
4-Methylphenol <sup>a</sup>	670	670	96	100	330	7,800	88 U	150 U	390	150 U	9,100	290 J	190 U	1,400	270 U
4-Nitroaniline			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
4-Nitrophenol			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
Benzoic acid <sup>a</sup>	650	650	320 J	360 J	870 J	1,100 J	590 J	1,500 U	2,300 U	710 J	2,000 U	5,200 U	1,900 U	5,500 U	2,700 U
Benzyl alcohol <sup>a</sup>	57	73	4,600	5,500	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 UJ
bis(2-Chloroethoxy) methane			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Bis-(2-chloroethyl) ether			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Carbazole			82 U	89 U	220 U	250 U	120	200	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Dibenzofuran	540	540	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Hexachlorobenzene	22	70	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Hexachlorobutadiene	11	120	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Hexachlorocyclopentadiene			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 UJ	1,300 UJ
Hexachloroethane			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Isophorone			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Nitrobenzene			82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
n-Nitroso-di-n-propylamine			410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 U
N-Nitrosodiphenylamine	28	40	82 U	89 U	220 U	250 U	88 U	150 U	230 U	150 U	200 U	520 U	190 U	550 U	270 U
Pentachlorophenol <sup>a</sup>	360	690	410 U	440 U	1,100 U	1,200 U	440 U	730 U	1,200 U	770 U	1,000 U	2,600 U	940 U	2,800 U	1,300 UJ
Phenol <sup>a</sup>	420	1,200	250	240	420	1,300	240	320	230 U	150 U	1,200	520 U	190 U	550 U	270 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.



c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB142	CB143	CB144	CB145	CB146	CB147	CB148	CB149	CB150	CB203	CB204	CB206	CB207	RCB224			
Lab Ref	PA02	PA19	PA34	PA34	PA34	PA34	PA34	PA34	PA69	OZ99	OZ99	PB20	PB20	PB20			
Sample Type <sup>c</sup>	CB	CB	CB	Dirt	Dirt	Dirt	Dirt	Dirt	CB	CB	Dirt	CB	CB	CB			
Outfall	Private storm drain	Private storm drain	8th Ave S (no SD)	8th Ave S (no SD)	8th Ave S (no SD)	8th Ave S (no SD)	8th Ave S (no SD)	8th Ave S (no SD)	1st Ave S (west side)	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Direct discharge	S Garden St SD	Diagonal Ave S CSO/SD			
Date	<b>SQS</b>	<b>CSL</b>	05/21/09	05/26/09	05/27/09	05/27/09	05/27/09	05/27/09	05/27/09	05/27/09	05/27/09	05/28/09	05/21/09	05/21/09	06/03/09	06/03/09	06/03/09
Total solids (%)			62.6	69.8	40.6	85.3	93.3	98.6	94.7	99.7	60.3	64.3	78.9	48.2	82	84.1	
TOC (%)			4.86	6.29	7.06	2.22	1.42	3.59	1.7	1.74	6.32	7.62	2.53	12.1	11	2.85	
<b>Metals (mg/kg)</b>																	
Arsenic	57	93	11.4 J	7 J	20 J	20 J	8 J	10 J	6 J	10 UJ	30 J	9 J	6 UJ	18.1 J	60 J	15 J	
Copper	390	390	288 J	133 J	668 J	876 J	48.7 J	224 J	83.2 J	67.8 J	181 J	63.3 J	56.3 J	590 J	7,990 J	116 J	
Lead	450	530	235 J	52 J	1,180 J	1,480 J	71 J	400 J	155 J	52 J	110 J	56 J	39 J	1,280 J	2,240 J	73 J	
Mercury	0.41	0.59	0.05 J	0.07 J	0.98 J	1.13 J	0.15 J	0.41 J	0.23 J	0.03 J	0.17 J	0.10 J	0.09 J	2.96 J	2.72 J	0.46 J	
Zinc	410	960	882 J	255 J	948 J	900 J	97 J	391 J	130 J	201 J	2,140 J	322 J	161 J	5,830 J	13,300 J	184 J	
<b>Total petroleum hydrocarbons (mg/kg)</b>																	
TPH-diesel	2,000 <sup>b</sup>		680	4,900	3,700	760	190	530	400	84	1,300	170	65 U	9,000	5,200	970	
TPH-oil	2,000 <sup>b</sup>		3,400	12,000	4,500	2,100	600	2,200	940	760	8,200	1,200	300	28,000	15,000	1,000	
<b>LPAH (ug/kg DW)</b>																	
Acenaphthene	500	500	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,500	740 U	400	
Acenaphthylene	1,300	1,300	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U	
Anthracene	960	960	37 J	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	12 J	3,800	740 U	230	
Fluorene	540	540	58 U	250 J	160 J	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,900	740 U	980	
Naphthalene	2,100	2,100	32 J	260 J	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	670 J	740 U	470	
Phenanthrene	1,500	1,500	330	780	430	190	160	81 J	94	58 U	340	42 J	45	19,000	2,100	2,300	
Total LPAH	5,200	5,200	399 J	1,290 J	590 J	190	160	81 J	94	58	340	42 J	57 J	26,870 J	2,100	4,380	
<b>HPAH (ug/kg DW)</b>																	
Benzo(a)anthracene	1,300	1,600	200	260 J	200 J	180	100	76 J	58	58 U	270	59	100	8,300	1,200	110 J	
Benzo(a)pyrene	1,600	1,600	180	220 J	190 J	190 J	140 J	93 J	81 J	58 U	280 J	87	140	7,300	940	150 U	
Benzo(b)fluoranthene	3,200	3,600	280	230 J	200 J	200 J	150 J	92 J	66 J	58 U	310 J	140	160	9,600	1,200	94 J	
Benzo(g,h,i)perylene	670	720	68	180 J	160 J	140 J	73 J	55 J	36 J	58 U	310 J	50 J	63	1,900	740 U	150 U	
Benzo(k)fluoranthene	3,200	3,600	210	230 J	200 J	200 J	95 J	92 J	66 J	58 U	310 J	93	130	9,600	1,200	94 J	
Chrysene	1,400	2,800	350	610	520	400	160	230	96	83	540	160	180	16,000	1,800	190	
Dibenz(a,h)anthracene	230	230	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	21	1,200 U	740 U	150 U	
Fluoranthene	1,700	2,500	1,100	700	560	450	300	200	140	29 J	1,000	99	140	32,000	3,700	360	
Indeno(1,2,3-cd)pyrene	600	690	63	270 U	260 U	110 J	67 J	110 U	57 U	58 U	220 J	32 J	63	2,100	740 U	150 U	
Pyrene	2,600	3,300	620	690	750	340	170	140	110	58 U	540	130	100	22,000	3,200	510	
Total HPAH	12,000	17,000	3,071	3,120 J	2,780 J	2,210 J	1,255	978 J	653 J	112 J	3,780 J	850 J	1,097	108,800	13,240	1,358 J	
<b>Phthalates (ug/kg dw)</b>																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	4,100	22,000	14,000 B	3,400 B	63 U	2,000 B	290 U	360 U	16,000 B	2,100	220	99,000	62,000	6,000	
Butylbenzylphthalate	63	900	170	480	2,100	360	58 U	420	57 U	58 U	6,500	490	71	5,200	6,000	110 J	
Diethylphthalate	200		58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U	
Dimethylphthalate	71	160	32 J	270 U	260 U	120 U	58 U	110 U	57 U	35 J	540	31 J	20 U	600 J	1,400	150 U	
Di-n-butylphthalate	1,400	1,400	230	530	420	220	58 U	100 J	57 U	58 U	2,800	59 U	20 U	5,800	2,300	150 U	
Di-n-octyl phthalate	6,200		58 U	1,200	850	170	58 U	98 J	57 U	38 J	1,800	59 U	20 U	3,900	6,000	260	
<b>PCBs (ug/kg dw)</b>																	
Aroclor 1016			41 U	20 U	760 U	1,400 U	19 U	290 U	19 U	19 U	39 U	19 U	19 U	120 U	470 U	38 U	
Aroclor 1221			41 U	20 U	760 U	1,400 U	19 U	290 U	19 U	19 U	39 U	19 U	19 U	120 U	470 U	38 U	
Aroclor 1232			41 U	20 U	760 U	1,400 U	19 U	290 U	19 U	19 U	39 U	19 U	19 U	120 U	470 U	38 U	
Aroclor 1242			41 U	20 U	760 U	1,400 U	19 U	290 U	19 U	19 U	39 U	19 U	19 U	3,500	470 U	38 U	
Aroclor 1248			210 Y	20	760 U	1,400 U	19 U	290 U	19 U	19 U	39 U	19 U	19 U	120 U	7,100	61	
Aroclor 1254			850	30	1,800	3,800	52	590	130	26	78	45	29	1,600	8,600	57	
Aroclor 1260			700	25 Y	1,800	3,100	130 J	750	400	34	57	37	44	830	2,600 J	48	
Total PCBs	130	1,000	1,550	50	3,600	6,900	182 J	1,340	530	60	135	82	73	5,930	18,300 J	166	
<b>Other organic compounds (ug/kg dw)</b>																	
1,2,4-Trichlorobenzene	31	51	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U	
1,2-Dichlorobenzene	35	50	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U	
1,3-Dichlorobenzene			58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U	
1,4-Dichlorobenzene	110	110	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U	
<b>1-Methylnaphthalene</b>																	
2,2'-Oxybis(1-chloropropane)			58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U	
2,4,5-Trichlorophenol			290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U	
2,4,6-Trichlorophenol			290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U	
2,4-Dichlorophenol			290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U	
2,4-Dimethylphenol <sup>a</sup>	29	29	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U	

DT-7: Onsite catch basin sample results (dry weight).

Sample ID	CB142	CB143	CB144	CB145	CB146	CB147	CB148	CB149	CB150	CB203	CB204	CB206	CB207	RCB224		
Lab Ref	PA02	PA19	PA34	PA34	PA34	PA34	PA34	PA34	PA69	OZ99	OZ99	PB20	PB20	PB20		
2,4-Dinitrophenol	580 U	2,700 U	2,600 U	1,200 U	580 U	1,100 U	570 U	580 U	1,500 U	590 U	200 U	12,000 U	7,400 U	1,500 U		
2,4-Dinitrotoluene	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
2,6-Dinitrotoluene	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
2-Chloronaphthalene	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U		
2-Chlorophenol	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U		
2-Methylnaphthalene	670	670	58 U	1,000	180 J	120 U	58 J	110 U	47 J	58 U	86 J	59 U	20 U	1,000 J	740 U	3,600
2-Methylphenol <sup>a</sup>	63	63	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	110 J	59 U	20 U	1,200 U	740 U	150 U
2-Nitroaniline	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
2-Nitrophenol	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
3,3'-Dichlorobenzidine	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 R	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
3-Nitroaniline	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 R	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
4,6-Dinitro-2-methylphenol	580 U	2,700 U	2,600 U	1,200 U	580 U	1,100 U	570 U	580 R	1,500 U	590 U	200 U	12,000 U	7,400 U	1,500 U		
4-Bromophenyl-phenylether	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U		
4-Chloro-3-methylphenol	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
4-Chloroaniline	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 R	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
4-Chlorophenyl-phenylether	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U		
4-Methylphenol <sup>a</sup>	670	670	570	1,700	2,300	92 J	58 U	110 U	57 U	58 U	13,000	59 U	20 U	1,800	740 U	150 U
4-Nitroaniline	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
4-Nitrophenol	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 R	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
Benzoic acid <sup>a</sup>	650	650	580 U	2,700 U	2,600 U	1,200 U	580 U	1,100 U	570 U	580 R	1,900	590 U	200 U	12,000 U	7,400 U	1,500 U
Benzyl alcohol <sup>a</sup>	57	73	58 U	820	510	120 U	58 U	110 U	57 U	58 U	5,100 Y	59 U	20 U	1,200 U	740 U	150 U
bis(2-Chloroethoxy) methane	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U		
Bis-(2-chloroethyl) ether	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U		
Carbazole	61	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	2,400	740 U	110 J		
Dibenzofuran	540	540	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,000 J	740 U	340
Hexachlorobenzene	22	70	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U
Hexachlorobutadiene	11	120	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U
Hexachlorocyclopentadiene	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
Hexachloroethane	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U		
Isophorone	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	150 U		
Nitrobenzene	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	1,300 Y	59 U	20 U	1,200 U	740 U	150 U		
n-Nitroso-di-n-propylamine	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 U	740 U	300 U	98 U	5,900 U	3,700 U	770 U		
N-Nitrosodiphenylamine	28	40	58 U	270 U	260 U	120 U	58 U	110 U	57 U	58 U	150 U	59 U	20 U	1,200 U	740 U	940 Y
Pentachlorophenol <sup>a</sup>	360	690	290 U	1,400 U	1,300 U	620 U	290 U	530 U	280 U	290 R	740 U	300 U	98 U	5,900 U	3,700 U	770 U
Phenol <sup>a</sup>	420	1,200	57 J	270 U	210 J	120 U	58 U	110 U	57 U	58 U	1,000	59 U	20 U	1,400	740 U	150 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. CB = catch basin sediment; dirt = street dirt

J = Concentration is less than the reporting limit.



U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB1	RCB2	RCB3	RCB4	RCB5	RCB6	RCB7	RCB8	RCB9	RCB10	RCB11	RCB12	RCB13	RCB15	RCB16	RCB17	RCB18		
Lab Ref	G179	G179	G179	G179	G179	GJ76	GJ76	GJ76	GJ76	GK68	GK68	GN05	GN05	GN05	GN05	GN96	GN96		
Sewer Type <sup>c</sup>	SD	CS	CS	CS	CS	CS	SD	SD	SD	SD	CS	SD	SD	CS	SD	SD	SD		
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	CS	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD		
Date	<b>SQS</b>	<b>CSL</b>	02/02/04	02/02/04	02/02/04	02/02/04	02/02/04	03/03/04	03/03/04	03/03/04	03/03/04	03/15/04	03/15/04	04/07/04	04/07/04	04/07/04	04/16/04	04/16/04	
Total solids (%)	48.7	68.1	70	27.6	50.3	69.3	77.8	56.8	86.1	51.5	48.3	50.4	40.6	51.2	58.1	52	52.9		
2,4-Dinitrotoluene	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	700 U	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U		
2,6-Dinitrotoluene	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	700 U	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U		
2-Chloronaphthalene	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U		
2-Chlorophenol	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U		
2-Methylnaphthalene	670	670	<b>4,000</b>	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	<b>200 J</b>	240 U	260 U
2-Methylphenol <sup>a</sup>	63	63	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U
2-Nitroaniline	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	700 U	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U		
2-Nitrophenol	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	700 U	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U		
3,3'-Dichlorobenzidine	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	700 U	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U		
3-Nitroaniline	2,900 U	470 U	470 U	2,900 U	480 U	250 U	240 U	410 U	230 U	6,900 U	840 U	960 U	2,100 U	2,100 U	1,200 U	1,400 U	1,600 U		
4,6-Dinitro-2-methylphenol	4,900 U	790 U	790 U	4,800 U	790 U	420 U	390 U	680 U	390 U	12,000 U	1,400 U	1,600 U	3,500 U	3,400 U	2,100 U	2,400 U	2,600 U		
4-Bromophenyl-phenylether	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U		
4-Chloro-3-methylphenol	970 U	160 U	160 U	950 U	160 U	<b>780 U</b>	<b>920 U</b>	<b>1,400 U</b>	<b>350 U</b>	<b>2,300 U</b>	280 U	320 U	690 U	690 U	410 U	480 U	520 U		
4-Chloroaniline	1,500 U	240 U	240 U	1,400 U	240 U	120 U	120 U	200 U	120 U	3,500 U	420 U	480 U	1,000 U	1,000 U	620 U	720 U	780 U		
4-Chlorophenyl-phenylether	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U		
4-Methylphenol <sup>a</sup>	670	670	<b>4,700</b>	<b>2,000</b>	<b>350</b>	<b>4,600</b>	79 U	<b>780</b>	<b>320</b>	68 U	39 U	1,200 U	<b>1,600</b>	<b>30,000</b>	<b>2,500</b>	<b>450</b>	<b>5,400</b>	<b>510</b>	<b>660</b>
4-Nitroaniline	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	700 U	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U		
4-Nitrophenol	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	700 U	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U		
Benzoic acid <sup>a</sup>	650	650	4,900 U	790 U	790 U	4,800 U	790 U	420 U	390 U	680 U	390 U	12,000 U	1,400 U	<b>3,000</b>	3,500 U	3,400 U	2,100 U	2,400 U	2,600 U
Benzyl alcohol <sup>a</sup>	57	73	<b>880</b>	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U
bis(2-Chloroethoxy) methane	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U		
Bis-(2-chloroethyl) ether	970 U	160 U	160 U	950 U	160 U	83 U	78 U	140 U	78 U	2,300 U	280 U	320 U	690 U	690 U	410 U	480 U	520 U		
Carbazole	<b>420 J</b>	<b>59 J</b>	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	<b>480</b>	340 U	210 U	<b>510</b>	<b>510</b>		
Dibenzofuran	540	540	<b>540</b>	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U
Hexachlorobenzene	22	70	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U
Hexachlorobutadiene	11	120	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U
Hexachlorocyclopentadiene	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	700 U	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U		
Hexachloroethane	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U		
Isophorone	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U		
Nitrobenzene	490 U	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U		
n-Nitroso-di-n-propylamine	970 U	160 U	160 U	950 U	160 U	83 U	78 U	140 U	78 U	2,300 U	280 U	<b>320 UJ</b>	690 U	690 U	410 U	480 U	520 U		
N-Nitrosodiphenylamine	28	40	1,200 Y	79 U	79 U	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	160 U	350 U	340 U	210 U	240 U	260 U
Pentachlorophenol <sup>a</sup>	360	690	2,400 U	390 U	390 U	2,400 U	400 U	210 U	200 U	340 U	200 U	5,800 U	<b>1,400</b>	800 U	1,700 U	1,700 U	1,000 U	1,200 U	1,300 U
Phenol <sup>a</sup>	420	1,200	490 U	<b>160</b>	<b>58 J</b>	480 U	79 U	42 U	39 U	68 U	39 U	1,200 U	140 U	2,000	<b>390</b>	340 U	210 U	240 U	260 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.



U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET





DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB19	RCB20	RCB21	RCB22	RCB23	RCB24	RCB25	RCB26	RCB27	RCB28	RCB29	RCB30	RCB31	RCB32	RCB33	RCB34	RCB35		
Lab Ref	GN96	GN96	GN96	GN96	GO21	GO21	GO21	GO21	GO21	GO21	GP60	GQ96	GQ96	GQ96	GU49	GU49	GU49		
Sewer Type <sup>c</sup>	SD	SD	CS	SD	SD	SD	SD	CS	CS	CS	CS	SD	CS	SD	SD	SD	SD		
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	CS	Norfolk CSO/SD/P S17 EOF	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD		
Date	<b>SQS</b>	<b>CSL</b>	04/16/04	04/16/04	04/16/04	04/16/04	04/21/04	04/21/04	04/21/04	04/21/04	04/21/04	04/21/04	05/07/04	05/26/04	05/26/04	05/26/04	06/30/04	06/30/04	06/30/04
Total solids (%)	69.6	35.5	68	77.7	50	63.3	71	78.2	70.1	37.1	55.6	80.7	74.0	47.0	88.9	61.2	59.5		
2,4-Dinitrotoluene	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	270 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U		
2,6-Dinitrotoluene	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	1,400 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U		
2-Chloronaphthalene	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U		
2-Chlorophenol	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U		
2-Methylnaphthalene	670	670	120 U	420 U	120 U	78 U	250 U	130 U	82 U	520	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U
2-Methylphenol <sup>a</sup>	63	63	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U
2-Nitroaniline	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	1,400 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U		
2-Nitrophenol	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	1,400 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U		
3,3'-Dichlorobenzidine	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	1,400 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U		
3-Nitroaniline	710 U	2,500 U	710 U	470 U	1,500 U	760 U	490 U	1,500 U	1,600 U	1,100 U	360 U	480 U	440 U	640 U	170 U	910 U	580 U		
4,6-Dinitro-2-methylphenol	1,200 U	4,200 U	1,200 U	780 U	2,500 U	1,300 U	820 U	2,400 U	2,700 U	1,900 U	600 U	800 U	730 U	1,100 U	290 U	1,500 U	970 U		
4-Bromophenyl-phenylether	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U		
4-Chloro-3-methylphenol	240 U	840 U	240 U	160 U	510 U	250 U	160 U	490 U	540 U	370 U	120 U	160 U	150 U	210 U	58 U	300 U	190 U		
4-Chloroaniline	350 U	1,300 U	350 U	230 U	760 U	380 U	250 U	730 U	820 U	560 U	180 U	240 U	220 U	320 U	87 U	460 U	290 U		
4-Chlorophenyl-phenylether	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U		
4-Methylphenol <sup>a</sup>	670	670	380	420 U	1,400	78 U	250 U	170	450	240 U	3,700	190 U	60 U	320	73 U	17,000	29 U	390	650
4-Nitroaniline	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	1,400 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U		
4-Nitrophenol	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	1,400 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U		
Benzoic acid <sup>a</sup>	650	650	1,200 U	4,200 U	1,200 U	780 U	2,500 U	1,300 U	820 U	2,400 U	2,700 U	1,900 U	600 U	800 U	730 U	1,100 U	290 U	1,500 U	970 U
Benzyl alcohol <sup>a</sup>	57	73	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	300
bis(2-Chloroethoxy) methane	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U		
Bis-(2-chloroethyl) ether	240 U	840 U	240 U	160 U	510 U	250 U	160 U	490 U	540 U	370 U	120 U	160 U	150 U	210 U	58 U	300 U	190 U		
Carbazole	120 U	420 U	120 U	78 U	250 U	220	82 U	240 U	270 U	190 U	60 U	80 U	73 U	150	29 U	150 U	300		
Dibenzofuran	540	540	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	1,400 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U
Hexachlorobenzene	22	70	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U
Hexachlorobutadiene	11	120	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U
Hexachlorocyclopentadiene	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	1,400 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U		
Hexachloroethane	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U		
Isophorone	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U		
Nitrobenzene	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U		
n-Nitroso-di-n-propylamine	240 U	840 U	240 U	160 U	510 U	250 U	160 U	490 U	540 U	370 U	120 U	160 U	150 U	210 U	58 U	300 U	190 U		
N-Nitrosodiphenylamine	28	40	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	110 U	29 U	150 U	97 U
Pentachlorophenol <sup>a</sup>	360	690	590 U	2,100 U	590 U	390 U	1,300 U	630 U	410 U	1,200 U	1,400 U	930 U	300 U	400 U	360 U	530 U	140 U	760 U	480 U
Phenol <sup>a</sup>	420	1,200	120 U	420 U	120 U	78 U	250 U	130 U	82 U	240 U	270 U	190 U	60 U	80 U	73 U	1,100	29 U	150 U	120

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB36	RCB37	RCB37	RCB37	RCB37	RCB38	RCB39	RCB40	RCB41	ROW24	RCB43	RCB44	RCB45	RCB49	RCB50	RCB51	RCB52		
Lab Ref	GU49	GU49	ME86	OL20	QL09	GU49	GU49	GU49	GU49	HP36	HR76	HY59	HY59	IS72	JB06	JC82	JE72		
Sewer Type <sup>c</sup>	SD	SD	SD	RCB	SD	SD	SD	SD	SD	SD	SD	SD	SD	CS	SD	SD	SD		
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Dakota St SD/ditch	2nd Ave S SD	2nd Ave S SD	CS	I-5 SD at Slip 4	Diagonal Ave S CSO/SD	SW Kenny St SD/T115 CSO	
Date	SQS	CSL	06/30/04	06/30/04	01/10/08	02/04/09	02/23/10	06/30/04	06/30/04	06/30/04	06/30/04	01/14/05	02/04/05	04/13/05	04/13/05	11/08/05	02/10/06	03/02/06	03/26/06
Total solids (%)	58.7	70.3	52	NA	68.5	73.0	73.2	90.9	55.5	75.8	69.0	69.1	65.6	75.2	80.5	45.5	83		
2,4-Dinitrotoluene	780 U	280 U	4,700 U	NA	480 U	270 U	310 U	180 U	270 U	10,000 U	380 U	<b>29,000</b>	1,000 U	980 U	980 U	7,800 U	590 U		
2,6-Dinitrotoluene	780 U	280 U	4,700 U	NA	480 U	270 U	310 U	180 U	270 U	10,000 U	380 U	<b>490 J</b>	1,000 U	980 U	980 U	7,800 U	590 U		
2-Chloronaphthalene	160 U	56 U	950 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
2-Chlorophenol	160 U	56 U	950 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
2-Methylnaphthalene	670	670	<b>300</b>	NA	96 U	<b>360</b>	61 U	36 U	<b>180</b>	<b>4,200</b>	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
2-Methylphenol <sup>a</sup>	63	63	160 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
2-Nitroaniline	780 U	280 U	4,700 U	NA	480 U	270 U	310 U	180 U	270 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
2-Nitrophenol	780 U	280 U	4,700 U	NA	480 U	270 U	310 U	180 U	270 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
3,3'-Dichlorobenzidine	780 U	280 U	4,700 U	NA	480 U	270 U	310 U	180 U	270 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
3-Nitroaniline	940 U	330 U	4,700 U	NA	480 U	320 U	370 U	220 U	320 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
4,6-Dinitro-2-methylphenol	1,600 U	560 U	9,500 U	NA	960 U	540 U	610 U	360 U	540 U	20,000 U	750 U	1,300 U	2,100 U	2,000 U	2,000 U	16,000 U	1,200 U		
4-Bromophenyl-phenylether	160 U	56 U	950 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
4-Chloro-3-methylphenol	310 U	110 U	4,700 U	NA	480 U	110 U	120 U	72 U	110 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
4-Chloroaniline	470 U	170 U	4,700 U	NA	480 U	160 U	180 U	110 U	160 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
4-Chlorophenyl-phenylether	160 U	56 U	950 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
4-Methylphenol <sup>a</sup>	670	670	<b>5,500</b>	NA	60 J	<b>250</b>	61 U	36 U	<b>72</b>	2,000 U	75 U	130 U	210 U	200 U	<b>200</b>	1,600 U	120 U		
4-Nitroaniline	780 U	280 U	4,700 U	NA	480 U	270 U	310 U	180 U	270 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
4-Nitrophenol	780 U	280 U	4,700 U	NA	480 U	270 U	310 U	180 U	270 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
Benzoic acid <sup>a</sup>	650	650	<b>3,300</b>	NA	960 UJ	540 U	610 U	360 U	540 U	20,000 U	750 U	1,300 U	2,100 U	2,000 U	2,000 U	16,000 U	1,200 U		
Benzyl alcohol <sup>a</sup>	57	73	<b>750</b>	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
bis(2-Chloroethoxy) methane	160 U	56 U	950 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
Bis-(2-chloroethyl) ether	310 U	110 U	950 U	NA	96 U	110 U	120 U	72 U	110 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
Carbazole	160 U	<b>110</b>	950 U	NA	96 U	<b>1,400</b>	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
Dibenzofuran	540	540	160 U	NA	96 U	<b>830</b>	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
Hexachlorobenzene	22	70	<b>170</b>	NA	96 U	54 U	61 U	36 U	<b>460</b>	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
Hexachlorobutadiene	11	120	160 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
Hexachlorocyclopentadiene	780 U	280 U	4,700 U	NA	480 U	270 U	310 U	180 U	270 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
Hexachloroethane	160 U	56 U	950 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
Isophorone	<b>190</b>	56 U	950 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
Nitrobenzene	160 U	56 U	950 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	130 U	210 U	200 U	200 U	1,600 U	120 U		
n-Nitroso-di-n-propylamine	310 U	110 U	4,700 U	NA	480 U	110 U	120 U	72 U	110 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
N-Nitrosodiphenylamine	28	40	160 U	NA	96 U	54 U	61 U	36 U	54 U	2,000 U	75 U	<b>24,000</b>	210 U	200 U	200 U	1,600 U	120 U		
Pentachlorophenol <sup>a</sup>	360	690	780 U	NA	480 UJ	270 U	310 U	180 U	270 U	10,000 U	380 U	650 U	1,000 U	980 U	980 U	7,800 U	590 U		
Phenol <sup>a</sup>	420	1,200	<b>640</b>	NA	<b>61 J</b>	<b>100</b>	61 U	36 U	54 U	2,000 U	75 U	<b>130</b>	210 U	200 U	200 U	1,600 U	<b>110 J</b>		

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

UU = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET



DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB53	RCB54	RCB55	RCB56	RCBSTEV1	RCBSTEV2	RCBSTEV3	RCBSTEV4	RCB100	RCB-D071041	RCB-D071039	RCB101	RCB102	RCB103	RCB104	RCB105	RCB106	
Lab Ref	JE72	JE72	JE72	JK52	HA19	HA19	HA19	HA19	KF45	KL66	KL66	KR27	KT17/KT20	KT17/KT20	KT17/KT20	KT17/KT20	KT17/KT20	
Sewer Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	
Outfall	SW Kenny St SD/T115 CSO	SW Kenny St SD/T115 CSO	SW Kenny St SD/T115 CSO	KCIA SD#2/PS4 5 EOF	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	I-5 SD at Slip 4	I-5 SD at Slip 4	CS	Georgetow n flume	Georgetow n flume	Georgetow n flume	Georgetow n flume	
Date	SQS	CSL	03/26/06	03/26/06	03/26/06	05/31/06	08/31/04	08/31/04	08/31/04	08/31/04	08/31/04	11/14/06	01/18/07	01/18/07	03/14/07	03/30/07	03/30/07	03/30/07
Total solids (%)	66	70.6	82.2	51.3	NA	NA	NA	NA	72.7	84.7	86.9	63.7	65.7	89.9	81.9	93.5	78	
<b>Metals (mg/kg DW)</b>																		
Arsenic	57	93	11	10	7	8 U	NA	NA	NA	NA	7 U	20	8	7 U	NA	NA	NA	NA
Copper	390	390	99.0	55.4	35.9	84.7	NA	NA	NA	NA	66.9	59.4	720	50.6	NA	NA	NA	NA
Lead	450	530	402	24	11	70	NA	NA	NA	NA	28	80	118	22	NA	NA	NA	NA
Mercury	0.41	0.59	0.09	0.06 U	0.05 U	0.14	NA	NA	NA	NA	0.05 U	0.04 U	0.05 U	0.05 U	NA	NA	NA	NA
Zinc	410	960	635	260	77.8	329	NA	NA	NA	NA	174	276	242	237	NA	NA	NA	NA
<b>Total petroleum hydrocarbons (mg/kg DW)</b>																		
TPH -diesel	2,000 <sup>b</sup>	330	210	91	970	NA	NA	NA	NA	3,800	58	88	730 U	NA	NA	NA	NA	NA
TPH-oil	2,000 <sup>b</sup>	1,700	1,200	630	6,100	NA	NA	NA	NA	9,500	400	720	4,100	NA	NA	NA	NA	NA
<b>LPAH (ug/kg DW)</b>																		
Acenaphthene	500	500	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
Acenaphthylene	1,300	1,300	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
Anthracene	960	960	530	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
Fluorene	540	540	290 J	430 U	120 U	560 U	NA	NA	NA	NA	420	43 U	37 U	220 U	NA	NA	NA	NA
Naphthalene	2,100	2,100	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
Phenanthrene	1,500	1,500	2,500	400 J	120 U	1,900	NA	NA	NA	NA	680	48	19 J	180 J	NA	NA	NA	NA
Total LPAH	5,200	5,200	3,320 J	400 J	120	1,900	NA	NA	NA	NA	1,100	48	19 J	180 J	NA	NA	NA	NA
<b>HPAH (ug/kg DW)</b>																		
Benzo(a)anthracene	1,300	1,600	2,400	430 U	120 U	1,600	NA	NA	NA	NA	300 U	36 J	37 U	220 U	NA	NA	NA	NA
Benzo(a)pyrene	1,600	1,600	2,900	430 U	120 U	1,500	NA	NA	NA	NA	300 U	38 J	37 U	220 U	NA	NA	NA	NA
Benzo(b)fluoranthene	3,200	3,600	5,700	430 U	120 U	1,900	NA	NA	NA	NA	300 U	62	32 J	220 U	NA	NA	NA	NA
Benzo(g,h,i)perylene	670	720	3,500	430 U	120 U	1,100	NA	NA	NA	NA	300 U	32 J	37 U	220 U	NA	NA	NA	NA
Benzo(k)fluoranthene	3,200	3,600	3,300	430 U	120 U	1,500	NA	NA	NA	NA	300 U	23 J	37 U	220 U	NA	NA	NA	NA
Chrysene	1,400	2,800	4,900	270 J	120 U	2,100	NA	NA	NA	NA	300 U	49	28 J	310	NA	NA	NA	NA
Dibenz(a,h)anthracene	230	230	620	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
Fluoranthene	1,700	2,500	5,700	460	120 U	4,500	NA	NA	NA	NA	300 U	110	44	470	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	600	690	3,300	430 U	120 U	760	NA	NA	NA	NA	300 U	24 J	37 U	220 U	NA	NA	NA	NA
Pyrene	2,600	3,300	4,200	370 J	120 U	3,400	NA	NA	NA	NA	350	120	36 J	380	NA	NA	NA	NA
Total HPAH	12,000	17,000	36,520	1,100 J	120 U	18,360	NA	NA	NA	NA	350 U	494 J	140 J	1,160	NA	NA	NA	NA
<b>Phthalates (ug/kg dw)</b>																		
Bis(2-ethylhexyl)phthalate	1,300	1,900	3,800	1,100	190	13,000 U	NA	NA	NA	NA	6,200	360	300	2,500	NA	NA	NA	NA
Butylbenzylphthalate	63	900	510	1,100	120 U	560 U	NA	NA	NA	NA	300 U	250	37 U	920	NA	NA	NA	NA
Diethylphthalate	200		460	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
Dimethylphthalate	71	160	460 U	430 U	120 U	710	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
Di-n-butylphthalate	1,400	1,400	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
Di-n-octyl phthalate	6,200		460	430 U	120 U	1,300	NA	NA	NA	NA	240	28 J	23 J	120 J	NA	NA	NA	NA
<b>PCBs (ug/kg dw)</b>																		
Aroclor 1016			20 U	20 U	20 U	19 U	1,600 U	420 U	19 U	1,100 U	20 U	9 U	4 U	98 U	98 U	20 U	19 U	20 U
Aroclor 1221			20 U	20 U	20 U	19 U	1,600 U	420 U	19 U	1,100 U	20 U	9 U	4 U	98 U	98 U	20 U	19 U	20 U
Aroclor 1232			20 U	20 U	20 U	19 U	1,600 U	420 U	19 U	1,100 U	39 Y	9 U	4 U	98 U	98 U	20 U	19 U	20 U
Aroclor 1242			20 U	20 U	20 U	19 U	1,600 U	420 U	19 U	1,100 U	20 U	9 U	4 U	98 U	98 U	20 U	19 U	20 U
Aroclor 1248			39 Y	20 U	20 U	19 U	1,600 U	420 U	19 U	1,100 U	20 U	9 U	4 U	98 U	98 U	20 U	19 U	20 U
Aroclor 1254			58	20 U	20 U	19 U	9,000	1,500	130	12,000	23	16	9	98 U	140 Y	20 U	19 U	20 U
Aroclor 1260			39 Y	20 U	20 U	19 U	8,000	1,100	71	11,000	20 U	12	9	310	270	45	33	34
Total PCBs	130	1,000	58	20 U	20 U	19 U	17,000	2,600	201	23,000	23	28	19	310	270	45	33	34
<b>Other organic compounds (ug/kg dw)</b>																		
1,2,4-Trichlorobenzene	31	51	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
1,2-Dichlorobenzene	35	50	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
1,3-Dichlorobenzene			460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
1,4-Dichlorobenzene	110	110	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
1-Methylnaphthalene																		
2,2'-Oxybis(1-chloropropane)			460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
2,4,5-Trichlorophenol			2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA
2,4,6-Trichlorophenol			2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA
2,4-Dichlorophenol			2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA
2,4-Dimethylphenol <sup>g</sup>	29	29	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA
2,4-Dinitrophenol			4,600 U	4,300 U	1,200 U	5,600 U	NA	NA	NA	NA	3,000 U	430 U	370 U	2,200 U	NA	NA	NA	NA

DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB53	RCB54	RCB55	RCB56	RCBSTEV1	RCBSTEV2	RCBSTEV3	RCBSTEV4	RCB100	RCB-D071041	RCB-D071039	RCB101	RCB102	RCB103	RCB104	RCB105	RCB106	
Lab Ref	JE72	JE72	JE72	JK52	HA19	HA19	HA19	HA19	KF45	KL66	KL66	KR27	KT17/KT20	KT17/KT20	KT17/KT20	KT17/KT20	KT17/KT20	
Sewer Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	
Outfall	SW Kenny St	SW Kenny St	SW Kenny St	KCIA SD#2/PS4	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	Diagonal Ave S	I-5 SD at Slip 4	I-5 SD at Slip 4	CS	Georgetow n flume	Georgetow n flume	Georgetow n flume	Georgetow n flume	Georgetow n flume	
Date	SQS	CSL	03/26/06	03/26/06	03/26/06	05/31/06	08/31/04	08/31/04	08/31/04	08/31/04	08/31/04	11/14/06	01/18/07	01/18/07	03/14/07	03/30/07	03/30/07	03/30/07
Total solids (%)	66	70.6	82.2	51.3	NA	NA	NA	NA	72.7	84.7	86.9	63.7	65.7	89.9	81.9	93.5	78	
2,4-Dinitrotoluene	2,300	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
2,6-Dinitrotoluene	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
2-Chloronaphthalene	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
2-Chlorophenol	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
2-Methylnaphthalene	670	670	460 U	430 U	120 U	560 U	NA	NA	290 J	43 U	370 U	220 U	NA	NA	NA	NA	NA	
2-Methylphenol <sup>a</sup>	63	63	460 U	430 U	120 U	560 U	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
2-Nitroaniline	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
2-Nitrophenol	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
3,3'-Dichlorobenzidine	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
3-Nitroaniline	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
4,6-Dinitro-2-methylphenol	4,600 U	4,300 U	1,200 U	5,600 U	NA	NA	NA	NA	3,000 U	430 U	370 U	2,200 U	NA	NA	NA	NA	NA	
4-Bromophenyl-phenylether	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
4-Chloro-3-methylphenol	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
4-Chloroaniline	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
4-Chlorophenyl-phenylether	460	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
4-Methylphenol <sup>a</sup>	670	670	240 J	320 J	120 U	560 U	NA	NA	180 J	43 U	37 U	690	NA	NA	NA	NA	NA	
4-Nitroaniline	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
4-Nitrophenol	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
Benzoic acid <sup>a</sup>	650	650	4,600 U	4,300 U	1,200 U	5,600 U	NA	NA	3,000 U	430 U	370 U	2,200 U	NA	NA	NA	NA	NA	
Benzyl alcohol <sup>a</sup>	57	73	460 U	430 U	120 U	560 U	NA	NA	300 U	43 U	37 U	480	NA	NA	NA	NA	NA	
bis(2-Chloroethoxy) methane	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Bis-(2-chloroethyl) ether	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Carbazole	580	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Dibenzofuran	540	540	460 U	430 U	120 U	560 U	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Hexachlorobenzene	22	70	460 U	430 U	120 U	560 U	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Hexachlorobutadiene	11	120	460 U	430 U	120 U	560 U	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Hexachlorocyclopentadiene	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
Hexachloroethane	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Isophorone	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Nitrobenzene	460 U	430 U	120 U	560 U	NA	NA	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
n-Nitroso-di-n-propylamine	2,300 U	2,100 U	600 U	2,800 U	NA	NA	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
N-Nitrosodiphenylamine	28	40	460 U	430 U	120 U	560 U	NA	NA	340 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	
Pentachlorophenol <sup>a</sup>	360	690	2,300 U	2,100 U	600 U	2,800 U	NA	NA	1,500 U	220 U	190 U	1,100 U	NA	NA	NA	NA	NA	
Phenol <sup>a</sup>	420	1,200	460 U	430 U	120 U	640 U	NA	NA	300 U	43 U	37 U	220 U	NA	NA	NA	NA	NA	

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown



Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

UU = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID			RCB107	RCB108	RCB109	RCB109	RCB110	RCB110	RCB111	RCB112	RCB113	RCB114	RCB115	RCB116	RCB117	RCB118	RCB119	RCB120	RCB121	
Lab Ref			KT17/KT20	KT17/KT20	LB02/LA95	RH70	LB02/LA95	QZ56	LG49	LG49	LG49	LG49	LG49	LY60	LY60	LY60	LY60	LY60	ME25	
Sewer Type <sup>c</sup>			SD	SD	SD	SD	SD	SD	CS	CS	CS	CS	CS	SD	SD	SD	CS	CS	SD	
Outfall			Georgetown flume	Georgetown flume	2nd Ave S SD	2nd Ave S SD	2nd Ave S SD	2nd Ave S SD	CS	CS	CS	CS	CS	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	
Date	SQS	CSL	03/30/07	03/30/07	05/25/07	08/09/10	05/25/07	06/07/10	07/09/07	07/09/07	07/09/07	07/09/07	07/09/07	11/16/07	11/16/07	11/16/07	11/16/07	11/16/07	01/04/08	
Total solids (%)			76.2	84.4	52.1	56.1	72.1	59.8	42.0	58.1	90.2	91.2	93.2	54.3	56.7	70.7	70.4	68.5	81.5	
2,4-Dinitrotoluene			NA	NA	4,100 U	950 U	<b>6,400</b>	<b>9,300</b>	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300	
2,6-Dinitrotoluene			NA	NA	4,100 U	950 U	700 U	<b>310 J</b>	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300	
2-Chloronaphthalene			NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
2-Chlorophenol			NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
2-Methylnaphthalene	670	670	NA	NA	<b>1,300</b>	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
2-Methylphenol <sup>a</sup>	63	63	NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
2-Nitroaniline			NA	NA	4,100 U	950 U	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
2-Nitrophenol			NA	NA	4,100 U	190 U	700 U	160 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
3,3'-Dichlorobenzidine			NA	NA	4,100 U	950 U	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
3-Nitroaniline			NA	NA	4,100 U	950 U	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
4,6-Dinitro-2-methylphenol			NA	NA	8,200 U	1,900 U	1,400 U	1,600 U	720 U	3,100 U	1,100 U	1,100 U	1,000 U	600 U	590 U	600 U	600 U	600 U	590 U	600
4-Bromophenyl-phenylether			NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
4-Chloro-3-methylphenol			NA	NA	4,100 U	950 U	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
4-Chloroaniline			NA	NA	4,100 U	950 U	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
4-Chlorophenyl-phenylether			NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
4-Methylphenol <sup>a</sup>	670	670	NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	<b>68</b>	<b>520</b>	<b>230</b>	<b>160</b>	59 U	<b>75</b>	
4-Nitroaniline			NA	NA	4,100 U	950 U	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
4-Nitrophenol			NA	NA	4,100 U	950 U	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	<b>300 U</b>	<b>300 U</b>	<b>300 U</b>	<b>300 U</b>	<b>300 U</b>	300 U	300
Benzoic acid <sup>a</sup>	650	650	NA	NA	8,200 U	1,900 U	1,400 U	1,600 U	720 U	3,100 U	1,100 U	1,100 U	1,000 U	600 U	730	600 U	600 U	600 U	590 U	600
Benzyl alcohol <sup>a</sup>	57	73	NA	NA	820 U	190 UJ	140 U	160 U	<b>1,100</b>	310 U	110 U	110 U	100 U	60 U	110	60 U	60 U	60 U	59 U	60
bis(2-Chloroethoxy) methane			NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Bis-(2-chloroethyl) ether			NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Carbazole			NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Dibenzofuran	540	540	NA	NA	<b>450 J</b>	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Hexachlorobenzene	22	70	NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Hexachlorobutadiene	11	120	NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Hexachlorocyclopentadiene			NA	NA	4,100 U	950 UJ	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
Hexachloroethane			NA	NA	820 U	190 U	140 U	<b>160</b>	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Isophorone			NA	NA	820 U	190 U	140 U	<b>160</b>	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Nitrobenzene			NA	NA	820 U	190 U	140 U	160 U	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
n-Nitroso-di-n-propylamine			NA	NA	4,100 U	950 U	700 U	780 U	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
N-Nitrosodiphenylamine	28	40	NA	NA	1,300 Y	190 U	<b>4,900</b>	<b>14,000</b>	72 U	310 U	110 U	110 U	100 U	60 U	59 U	60 U	60 U	60 U	59 U	60
Pentachlorophenol <sup>a</sup>	360	690	NA	NA	4,100 U	950 UJ	700 U	<b>780</b>	360 U	1,500 U	570 U	540 U	520 U	300 U	300 U	300 U	300 U	300 U	300 U	300
Phenol <sup>a</sup>	420	1,200	NA	NA	820 U	190 U	140 U	<b>160</b>	<b>91</b>	310 U	110 U	110 U	100 U	60 U	<b>100</b>	60 U	60 U	60 U	59 U	60

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. TCLP analysis

J = Concentration is less than the reporting limit.



U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID			RCB122	RCB123	RCB124	RCB125D	RCB126	RCB127	RCB128	RCB129	RCB130	RCB131	RCB132	RCB136	RCB137	RCB139	RCB141	RCB142	RCB143	
Lab Ref			ME25	ME25	ME33	ME86	ME86	ME86	MF62	MF62	MF62	MJ15	MM72	MP02	MP02	MU58	MW66	MX98	MX98	
Sewer Type <sup>c</sup>			SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	CS	CS	SD
Outfall			Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	2nd Ave S SD	7th Ave S SD	Norfolk CSO/SD/P S17 EOF	7th Ave S SD	7th Ave S SD	Hamm Cr	7th Ave S SD	2nd Ave S SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	
Date	SQS	CSL	01/04/08	01/04/08	01/07/08	01/10/08	01/10/08	01/10/08	01/18/08	01/18/08	01/18/08	02/15/08	03/12/08	03/25/08	03/25/08	05/01/08	05/14/08	05/23/08	05/23/08	
Total solids (%)			85.7	76.0	48.3	50.6	30.7	21.9	52.1	74.2	76.6	61.1	76.3	52.4	80.0	50.4	73.3	68.3	80.0	
2,4-Dinitrotoluene			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
2,6-Dinitrotoluene			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
2-Chloronaphthalene			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
2-Chlorophenol			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
2-Methylnaphthalene	670	670	U 60	U 59	U 90	U 910	U 650	U 660	U 1,200	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 440	U 30	
2-Methylphenol <sup>a</sup>	63	63	U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 840	U 42	
2-Nitroaniline			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
2-Nitrophenol			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
3,3'-Dichlorobenzidine			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
3-Nitroaniline			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
4,6-Dinitro-2-methylphenol			U 600	U 590	U 900	U 9,100	U 6,500	U 6,600	U 3,700	U 2,500	U 590	U 600	U 3,500	U 200	U 340	U 2,200	U 590	U 1,400	U 390	
4-Bromophenyl-phenylether			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
4-Chloro-3-methylphenol			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
4-Chloroaniline			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
4-Chlorophenyl-phenylether			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
4-Methylphenol <sup>a</sup>	670	670	U 60	U 59	U 90	U 910	U 650	U 2,500	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 530	U 640	U 610	U 280	
4-Nitroaniline			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
4-Nitrophenol			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
Benzoic acid <sup>a</sup>	650	650	U 600	U 590	U 900	U 9,100	U 6,500	U 6,600	U 3,700	U 2,500	U 590	U 600	U 3,500	U 200	U 340	U 2,200	U 410	U 1,400	U 390	
Benzyl alcohol <sup>a</sup>	57	73	U 60	U 59	U 90	U 910	U 650	U 1,100	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 500	U 59	U 140	U 39	
bis(2-Chloroethoxy) methane			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
Bis-(2-chloroethyl) ether			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
Carbazole			U 60	U 59	U 90	U 910	U 650	U 660	U 900	U 250	U 59	U 130	U 350	U 20	U 34	U 220	U 43	U 140	U 39	
Dibenzofuran	540	540	U 60	U 59	U 90	U 910	U 650	U 660	U 450	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 170	U 39	
Hexachlorobenzene	22	70	U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
Hexachlorobutadiene	11	120	U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
Hexachlorocyclopentadiene			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
Hexachloroethane			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
Isophorone			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
Nitrobenzene			U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 59	U 140	U 39	
n-Nitroso-di-n-propylamine			U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
N-Nitrosodiphenylamine	28	40	U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 250	U 59	U 210	U 39	
Pentachlorophenol <sup>a</sup>	360	690	U 300	U 300	U 450	U 4,600	U 3,200	U 3,300	U 1,800	U 1,200	U 300	U 300	U 1,800	U 98	U 170	U 1,100	U 300	U 720	U 200	
Phenol <sup>a</sup>	420	1,200	U 60	U 59	U 90	U 910	U 650	U 660	U 370	U 250	U 59	U 60	U 350	U 20	U 34	U 220	U 93	U 1,000	U 86	

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. TCLP analysis

J = Concentration is less than the reporting limit.



U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/LAET



DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB144	RCB146	RCB147	RCB148	RCB149	RCB152	RCB153	RCB154	RCB155	RCB156	RCB157	RCB158	RCB159	RCB160	RCB161	RCB162	RCB165		
Lab Ref	MX98	NO90	NO90	NO90	NO90	NP85	NT73	NT73	NW34	NW34	NW34	NW34	OD13	OQ44	OQ44	OQ45	OS71		
Sewer Type <sup>c</sup>	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD		
Outfall	Diagonal Ave S CSO/SD	S Garden St SD	S Myrtle St SD	S Myrtle St SD	S Myrtle St SD	Highland Park Wy SW SD	Diagonal Ave S CSO/SD	Hamm Cr	Diagonal Ave S CSO/SD	CS	7th Ave S SD	SW Idaho St SD	7th Ave S SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	7th Ave S SD		
Date	SQS	CSL	05/23/08	09/12/08	09/12/08	09/12/08	09/12/08	09/17/08	10/10/08	10/10/08	10/24/08	10/24/08	10/24/08	10/24/08	12/05/08	03/12/09	03/12/09	03/12/09	03/27/09
Total solids (%)			61.6	52.4	48.4	62.1	68.2	53.2	65.4	72.7	32.9	57.1	66.5	78.5	61.2	63.6	55.9	81.0	72.9
2,4-Dinitrotoluene			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
2,6-Dinitrotoluene			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
2-Chloronaphthalene			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
2-Chlorophenol			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
2-Methylnaphthalene	670	670	220 U	130 J	3,600	1,900	960	230 U	58 U	99 J	60 U	59 U	72	58 U	190 U	200	69 J	95 U	59 U
2-Methylphenol <sup>a</sup>	63	63	220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
2-Nitroaniline			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
2-Nitrophenol			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
3,3'-Dichlorobenzidine			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
3-Nitroaniline			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
4,6-Dinitro-2-methylphenol			2,200 U	1,400 U	5,900 U	2,600 U	3,200 U	2,300 U	580 U	1,200 U	600 U	590 U	580 U	580 U	1,900 U	370 U	1,400 U	950 U	590 U
4-Bromophenyl-phenylether			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
4-Chloro-3-methylphenol			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
4-Chloroaniline			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
4-Chlorophenyl-phenylether			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
4-Methylphenol <sup>a</sup>	670	670	810	140 U	18,000	2,600	2,000	1,700	58 U	120 U	650	39 J	230	53 J	190 U	330	230	95 U	59 U
4-Nitroaniline			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
4-Nitrophenol			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
Benzoic acid <sup>a</sup>	650	650	2,200 U	1,400 U	5,900 U	2,600 U	3,200 U	2,300 U	580 U	1,200 U	600 U	590 U	580 U	580 U	1,900 U	350 J	1,400 U	570 J	590 U
Benzyl alcohol <sup>a</sup>	57	73	220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	58	140 U	280	59 U
bis(2-Chloroethoxy) methane			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
Bis-(2-chloroethyl) ether			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
Carbazole			220 U	140	590 U	310	300 J	480	58 U	94 J	60 U	59 U	200	58 U	190 U	59	140 U	54 J	59 U
Dibenzofuran	540	540	220 U	140 U	590 U	260 U	320 U	160 J	58 U	120 U	60 U	59 U	220	58 U	190 U	63	140 U	95 U	59 U
Hexachlorobenzene	22	70	220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	4,300	190 U	37 U	140 U	95 U	59 U
Hexachlorobutadiene	11	120	220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
Hexachlorocyclopentadiene			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
Hexachloroethane			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
Isophorone			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	38	140 U	95 U	59 U
Nitrobenzene			220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
n-Nitroso-di-n-propylamine			1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
N-Nitrosodiphenylamine	28	40	220 U	140 U	590 U	260 U	320 U	230 U	58 U	120 U	60 U	59 U	58 U	58 U	190 U	37 U	140 U	95 U	59 U
Pentachlorophenol <sup>a</sup>	360	690	1,100 U	720 U	2,900 U	1,300 U	1,600 U	1,200 U	290 U	590 U	300 U	290 U	290 U	290 U	970 U	190 U	680 U	480 U	300 U
Phenol <sup>a</sup>	420	1,200	220 U	180 U	850 U	890 U	1000 U	230 U	58 U	120 U	51 J	59 U	69	58 U	190 U	99	260	120	59 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. TCLP analysis

J = Concentration is less than the reporting limit.



U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB169		
Lab Ref	OX05		
Sewer Type <sup>c</sup>	SD		
Outfall	S Brighton St CSO/SD		
Date	SQS	CSL	04/29/09
Total solids (%)	NA		
<b>Metals (mg/kg DW)</b>			
Arsenic	57	93	0.2 <sup>d</sup> U
Copper	390	390	NA
Lead	450	530	0.4 <sup>d</sup>
Mercury	0.41	0.59	0.0001 <sup>d</sup> U
Zinc	410	960	NA
<b>Total petroleum hydrocarbons (mg/kg DW)</b>			
TPH -diesel	2,000 <sup>b</sup>		6,800
TPH-oil	2,000 <sup>b</sup>		12,000
<b>LPAH (ug/kg DW)</b>			
Acenaphthene	500	500	NA
Acenaphthylene	1,300	1,300	NA
Anthracene	960	960	NA
Fluorene	540	540	NA
Naphthalene	2,100	2,100	NA
Phenanthrene	1,500	1,500	NA
Total LPAH	5,200	5,200	NA
<b>HPAH (ug/kg DW)</b>			
Benzo(a)anthracene	1,300	1,600	NA
Benzo(a)pyrene	1,600	1,600	NA
Benzo(b)fluoranthene	3,200	3,600	NA
Benzo(g,h,i)perylene	670	720	NA
Benzo(k)fluoranthene	3,200	3,600	NA
Chrysene	1,400	2,800	NA
Dibenz(a,h)anthracene	230	230	NA
Fluoranthene	1,700	2,500	NA
Indeno(1,2,3-cd)pyrene	600	690	NA
Pyrene	2,600	3,300	NA
Total HPAH	12,000	17,000	NA
<b>Phthalates (ug/kg dw)</b>			
Bis(2-ethylhexyl)phthalate	1,300	1,900	NA
Butylbenzylphthalate	63	900	NA
Diethylphthalate	200		NA
Dimethylphthalate	71	160	NA
Di-n-butylphthalate	1,400	1,400	NA
Di-n-octyl phthalate	6,200		NA
<b>PCBs (ug/kg dw)</b>			
Aroclor 1016			99 U
Aroclor 1221			99 U
Aroclor 1232			99 U
Aroclor 1242			99 U
Aroclor 1248			600 J
Aroclor 1254			1,400
Aroclor 1260			910
Total PCBs	130	1,000	2,910 J
<b>Other organic compounds (ug/kg dw)</b>			
1,2,4-Trichlorobenzene	31	51	NA
1,2-Dichlorobenzene	35	50	NA
1,3-Dichlorobenzene			NA
1,4-Dichlorobenzene	110	110	NA
1-Methylnaphthalene			
2,2'-Oxybis(1-chloropropane)			NA
2,4,5-Trichlorophenol			NA
2,4,6-Trichlorophenol			NA
2,4-Dichlorophenol			NA
2,4-Dimethylphenol <sup>a</sup>	29	29	NA
2,4-Dinitrophenol			NA

DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB169		
Lab Ref	OX05		
Sewer Type <sup>c</sup>	SD		
Outfall	S Brighton St CSO/SD		
Date	SQS	CSL	04/29/09
Total solids (%)			NA
2,4-Dinitrotoluene			NA
2,6-Dinitrotoluene			NA
2-Chloronaphthalene			NA
2-Chlorophenol			NA
2-Methylnaphthalene	670	670	NA
2-Methylphenol <sup>a</sup>	63	63	NA
2-Nitroaniline			NA
2-Nitrophenol			NA
3,3'-Dichlorobenzidine			NA
3-Nitroaniline			NA
4,6-Dinitro-2-methylphenol			NA
4-Bromophenyl-phenylether			NA
4-Chloro-3-methylphenol			NA
4-Chloroaniline			NA
4-Chlorophenyl-phenylether			NA
4-Methylphenol <sup>a</sup>	670	670	NA
4-Nitroaniline			NA
4-Nitrophenol			NA
Benzoic acid <sup>a</sup>	650	650	NA
Benzyl alcohol <sup>a</sup>	57	73	NA
bis(2-Chloroethoxy) methane			NA
Bis-(2-chloroethyl) ether			NA
Carbazole			NA
Dibenzofuran	540	540	NA
Hexachlorobenzene	22	70	NA
Hexachlorobutadiene	11	120	NA
Hexachlorocyclopentadiene			NA
Hexachloroethane			NA
Isophorone			NA
Nitrobenzene			NA
n-Nitroso-di-n-propylamine			NA
N-Nitrosodiphenylamine	28	40	NA
Pentachlorophenol <sup>a</sup>	360	690	NA
Phenol <sup>a</sup>	420	1,200	NA



DT-8: Right-of-way catch basin sample results (dry weight).

Sample ID	CB2-DAL	CB4-DAL	RCB176	RCB177	RCB178	RCB179	RCB180	RCB181	RCB182	RCB183	RCB184	SD14	SW1	RCB189F	RCB185	RCB190		
Lab Ref	QN25	QN25	PZ96	PZ96	PZ96	PZ96	PZ96	QN25	QN25	QN25	QN25	QN25	QN25	QW05	QT06	RH70		
Sewer Type <sup>c</sup>	CS	CS	SD	SD	SD	SD	SD	CS	CS	CS	CS	CS	CS	SD	SD	SD		
Outfall	CS	CS	S Myrtle St SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Brighton St CSO/SD	S Myrtle St SD	CS	CS	CS	CS	CS	CS	S Myrtle St SD	SW Dakota St SD/ditch	2nd Ave S SD		
Date	SQS	CSL	3/10/10	3/10/10	12/3/09	12/3/09	12/3/09	12/3/09	12/3/09	3/10/10	3/10/10	3/10/10	3/10/10	3/10/10	5/11/10	4/16/10	8/9/10	
Total solids (%)			42.3	61.3	83.1	56.6	52.3	43.1	66	NA	23	43.1	46.9	55.6	45	65.9	81.3	51.1
2,6-Dinitrotoluene			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	1,600 U	370 U	1,800 U
2-Chloronaphthalene			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
2-Chlorophenol			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
2-Methylnaphthalene	670	670	490	41 U	280	140 J	120 J	210 J	130	170 U	320	100 U	250	240 J	120 J	980	91	360 U
2-Methylphenol <sup>a</sup>	63	63	460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
2-Nitroaniline			2,300 UJ	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 UJ	970 UJ	510 UJ	1,200 UJ	1,600 UJ	1,200 UJ	1,600 U	370 U	1,800 U
2-Nitrophenol			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	330 U	74 U	360 U
3,3'-Dichlorobenzidine			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	1,600 U	370 U	1,800 U
3-Nitroaniline			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	1,600 U	370 U	1,800 U
4,6-Dinitro-2-methylphenol			4,600 U	410 U	2,300 U	1,700 U	2,200 U	2,600 U	1,000 U	1,700 U	1,900 U	1,000 U	2,300 U	3,300 U	2,400 U	3,300 U	740 U	3,600 U
4-Bromophenyl-phenylether			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
4-Chloro-3-methylphenol			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	1,600 U	370 U	1,800 U
4-Chloroaniline			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	1,600 U	370 U	1,800 U
4-Chlorophenyl-phenylether			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
4-Methylphenol <sup>a</sup>	670	670	370 J	630	460	290	15,000	630	160	2,000	1,900	140	230	300 J	240 U	330 U	74 U	360 U
4-Nitroaniline			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	1,600 U	370 U	1,800 U
4-Nitrophenol			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	1,600 U	370 U	1,800 U
Benzoic acid <sup>a</sup>	650	650	4,600 U	270 J	2,300 U	1,700 U	3,000	640 J	1,000 U	1,700 U	800 J	320 J	2,300 U	3,300 U	2,400 U	3,300 U	1,900	3,600 U
Benzyl alcohol <sup>a</sup>	57	73	400 J	56	230 U	690	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	440	3,700	360 UJ
bis(2-Chloroethoxy) methane			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
Bis-(2-chloroethyl) ether			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
Carbazole			460 U	41 U	230 U	170 U	220 U	260 U	100 U	89 J	120 J	100 U	230 U	280 J	240 U	190 J	74 U	360 U
Dibenzofuran	540	540	460 U	41 U	180 J	170 U	220 U	260 U	190	170 U	190 U	100 U	230 U	240 J	240 U	330 U	74 U	360 U
Hexachlorobenzene	22	70	460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	220 J	240 U	330 U	74 U	360 U
Hexachlorobutadiene	11	120	460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
Hexachlorocyclopentadiene			2,300 UJ	210 UJ	1,100 U	870 U	1,100 U	1,300 U	530 U	860 UJ	970 UJ	510 UJ	1,200 UJ	1,600 UJ	1,200 UJ	1,600 U	370 U	1,800 UJ
Hexachloroethane			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
Isophorone			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
Nitrobenzene			460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
n-Nitroso-di-n-propylamine			2,300 U	210 U	1,100 U	870 U	1,100 U	1,300 U	530 U	860 U	970 U	510 U	1,200 U	1,600 U	1,200 U	1,600 U	370 U	1,800 U
N-Nitrosodiphenylamine	28	40	460 U	41 U	230 U	170 U	220 U	260 U	100 U	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U
Pentachlorophenol <sup>a</sup>	360	690	2,300 UJ	210 UJ	1,100 U	870 U	1,100 U	1,300 U	530 U	860 UJ	970 UJ	510 UJ	1,200 UJ	1,600 UJ	1,200 UJ	1,600 U	370 U	1,800 UJ
Phenol <sup>a</sup>	420	1,200	460 U	110	230 U	170 U	180 J	260 U	55 J	170 U	190 U	100 U	230 U	330 U	240 U	330 U	74 U	360 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. SD = discharges to separated storm drain; CS = discharges to combined sewer system.

J = Concentration is less than the reporting limit.


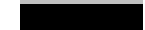
U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

 Concentration exceeds the SQS/LAET, MTCA  
 Concentration exceeds the CSL/2LAET



DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB1	RCB36	RCB170	RCB175	RCB200a	RCB200b	RCB201	RCB202	RCB203	RCB204	RCB205	RCB206	RCB207	RCB208	RCB209		
Lab Ref	OB72	OB72	PA69	PB25	NM74	OR05	OW77	OR05	OR05	OS39	OS39	OV62	OW77	OW77	OW77		
Sample Type <sup>c</sup>	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	Dirt	CB	CB	CB		
Outfall	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	7th Ave S SD	2nd Ave S SD	SW Dakota SD/ditch	2nd Ave S SD	2nd Ave S SD	2nd Ave S SD	2nd Ave S SD	2nd Ave S SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	16th Ave S SD	16th Ave S SD	2nd Ave S SD	
Date	SQS	CSL	11/25/08	11/25/08	05/28/09	06/04/09	08/28/08	03/17/09	04/24/09	03/17/09	03/17/09	03/26/09	03/26/09	04/15/09	04/24/09	04/24/09	04/24/09
Total solids (%)			17.3	79	42.2	87.7	77.7	69	88.6	63	64.3	NA	NA	NA	77.6	76.9	89.5
2,4-Dinitrophenol			960 U	380 U	2,300 U	1,100 U	190 U	870 U	590 U	2,000 U	1,200 U	NA	NA	NA	580 U	600 U	600 U
2,4-Dinitrotoluene			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
2,6-Dinitrotoluene			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
2-Chloronaphthalene			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
2-Chlorophenol			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
2-Methylnaphthalene	670	670	96 U	100	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
2-Methylphenol <sup>a</sup>	63	63	96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
2-Nitroaniline			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
2-Nitrophenol			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
3,3'-Dichlorobenzidine			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
3-Nitroaniline			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
4,6-Dinitro-2-methylphenol			960 U	380 U	2,300 U	1,100 U	190 U	870 U	590 U	2,000 U	1,200 U	NA	NA	NA	580 U	600 U	600 U
4-Bromophenyl-phenylether			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
4-Chloro-3-methylphenol			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
4-Chloroaniline			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
4-Chlorophenyl-phenylether			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
4-Methylphenol <sup>a</sup>	670	670	1,800	1,200	230 U	110 U	19 U	87 U	430	120 U	120 U	NA	NA	NA	58 U	60 U	60 U
4-Nitroaniline			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
4-Nitrophenol			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
Benzoic acid <sup>a</sup>	650	650	960 U	670	2,300 U	1,100 U	190 U	870 U	590 U	2,000 U	1,200 U	NA	NA	NA	580 U	600 U	600 U
Benzyl alcohol <sup>a</sup>	57	73	96 U	84	230 U	110 U	19 U	87 U	59 U	200 U	550	NA	NA	NA	58 U	60 U	210
bis(2-Chloroethoxy) methane			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Bis-(2-chloroethyl) ether			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Carbazole			520	1,500	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Dibenzofuran	540	540	53 J	160	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Hexachlorobenzene	22	70	96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Hexachlorobutadiene	11	120	96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Hexachlorocyclopentadiene			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
Hexachloroethane			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Isophorone			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Nitrobenzene			96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
n-Nitroso-di-n-propylamine			480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
N-Nitrosodiphenylamine	28	40	96 U	38 U	230 U	110 U	19 U	87 U	59 U	200 U	120 U	NA	NA	NA	58 U	60 U	60 U
Pentachlorophenol <sup>a</sup>	360	690	480 U	190 U	1,200 U	550 U	96 U	440 U	300 U	980 U	580 U	NA	NA	NA	290 U	300 U	300 U
Phenol <sup>a</sup>	420	1,200	96 U	440	230 U	110 U	19 U	87 U	59 U	200 U	130	NA	NA	NA	58 U	60 U	60 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value



Concentration exceeds the SQS/LAET, MTCA  
Concentration exceeds the CSL/2LAET





DT-8: Right-of-way catch basin sample results: Dry weight.

Sample ID	RCB210	RCB211	RCB212	RCB213	RCB214	RCB215	RCB216	RCB217	RCB218	RCB219	RCB220	RCB221	RCB222	RCB223	CB202	CB205
Lab Ref	OZ57	PA21	PA21	PA42	PA42	PA57	PA57	PA98	PA98	PB04	PB04	PB20	PB20	PB20	OZ76	PA42
Sample Type <sup>c</sup>	CB	CB	CB	CB	CB	CB	CB	CB	Dirt	CB	CB	CB	CB	CB	CB	CB
Outfall	16th Ave S bridge (west)	S Brighton CSO/SD	S Brighton SD	7th Ave S SD	7th Ave S SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	Diagonal Ave S CSO/SD	SW Idaho St SD	SW Idaho St SD	S96th St SD	S 96th St SD	7th Ave S SD	S River St SD	S River St SD
Date	05/19/09	05/26/09	05/26/09	05/27/09	05/27/09	05/28/09	05/28/09	06/02/09	06/02/09	06/02/09	06/02/09	06/03/09	06/03/09	06/03/09	05/20/09	05/27/09
Total solids (%)	49.2	59.3	59.2	74.1	74.2	78.1	78.4	44.2	97.9	72.2	73.5	85.6	76.3	63.1	60.9	62.6
2,4-Dinitrophenol	2,300 U	3,100 U	3,800 U	1,600 U	1,400 U	2,100 U	2,200 U	890 U	590 U	660 U	580 U	190 U	190 U	390 U	1,200 U	1,800 U
2,4-Dinitrotoluene	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
2,6-Dinitrotoluene	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
2-Chloronaphthalene	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
2-Chlorophenol	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
2-Methylnaphthalene	230 U	<b>220 J</b>	<b>500</b>	160 U	140 U	<b>140 J</b>	<b>120 J</b>	<b>65 J</b>	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
2-Methylphenol <sup>a</sup>	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
2-Nitroaniline	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
2-Nitrophenol	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
3,3'-Dichlorobenzidine	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
3-Nitroaniline	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
4,6-Dinitro-2-methylphenol	2,300 U	3,100 U	3,800 U	1,600 U	1,400 U	2,100 U	2,200 U	890 U	590 U	660 U	580 U	190 U	190 U	390 U	1,200 U	1,800 U
4-Bromophenyl-phenylether	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
4-Chloro-3-methylphenol	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
4-Chloroaniline	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
4-Chlorophenyl-phenylether	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
4-Methylphenol <sup>a</sup>	<b>530</b>	310 U	<b>540</b>	160 U	100 J	<b>1,800</b>	<b>1,600</b>	<b>4,300</b>	59 U	<b>1,400 J</b>	<b>1,700 J</b>	19 U	19 U	39 U	<b>620</b>	<b>240</b>
4-Nitroaniline	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
4-Nitrophenol	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
Benzoic acid <sup>a</sup>	2,300 U	3,100 U	3,800 U	1,600 U	1,400 U	2,100 U	2,200 U	<b>780 J</b>	590 U	660 U	580 U	190 U	190 U	390 U	1,200 U	1,800 U
Benzyl alcohol <sup>a</sup>	<b>620</b>	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	22 NJ	39 U	120 U	180 U
bis(2-Chloroethoxy) methane	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
Bis-(2-chloroethyl) ether	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
Carbazole	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	74 J	180 U
Dibenzofuran	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
Hexachlorobenzene	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
Hexachlorobutadiene	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
Hexachlorocyclopentadiene	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
Hexachloroethane	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
Isophorone	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
Nitrobenzene	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
n-Nitroso-di-n-propylamine	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
N-Nitrosodiphenylamine	230 U	310 U	380 U	160 U	140 U	210 U	220 U	89 U	59 U	66 U	58 U	19 U	19 U	39 U	120 U	180 U
Pentachlorophenol <sup>a</sup>	1,200 U	1,500 U	1,900 U	790 U	700 U	1,000 U	1,100 U	440 U	300 U	330 U	290 U	95 U	95 U	200 U	590 U	910 U
Phenol <sup>a</sup>	230 U	310 U	380 U	160 U	140 U	210 U	220 U	<b>120</b>	<b>56 J</b>	<b>45 J</b>	<b>64 J</b>	19 U	19 U	39 U	120 U	180 U

a. SMS based on dry weight concentration.

b. MTCA Method A soil cleanup level for unrestricted use.

c. CB = catch basin sediment; dirt = street dirt

J = Concentration is less than the reporting limit.

U = Chemical not detected at concentration shown

Y = Chemical not detected at concentration shown. Reporting limit raised due to background interference.

B = Analyte detected in associated method blank at concentration >5% of 1) the reporting limit, 2) the regulatory limit, or 3) the analyte concentration in the sample

NJ = Detection of the analyte is not confirmed and the reported value is an estimate.

UJ = Analyte is not detected at the reporting limit and the reporting limit is an estimated value

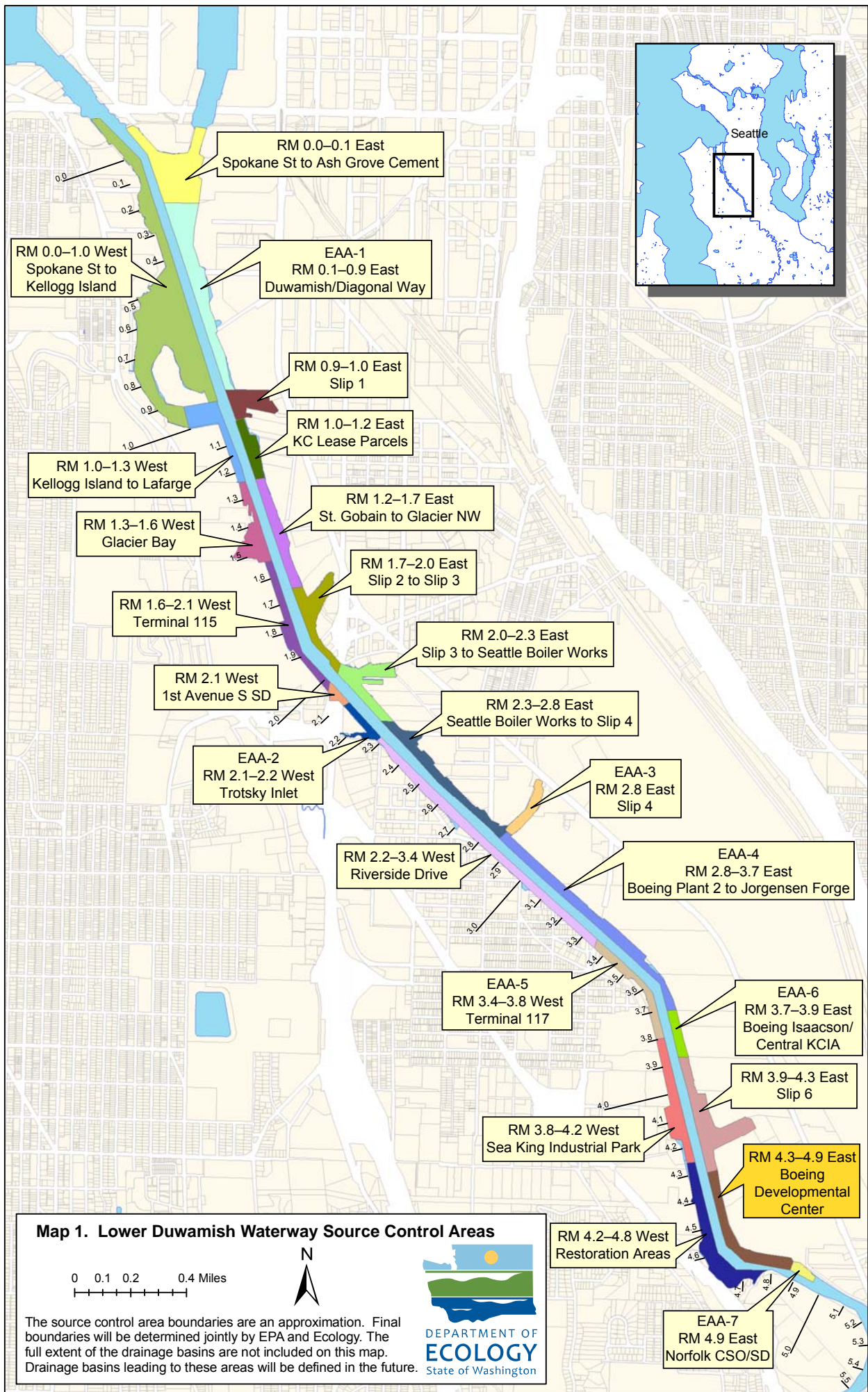


Concentration exceeds the SQS/LAET, MTCA

Concentration exceeds the CSL/2LAET



## Maps



**Map 1. Lower Duwamish Waterway Source Control Areas**

0 0.1 0.2 0.4 Miles



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

The source control area boundaries are an approximation. Final boundaries will be determined jointly by EPA and Ecology. The full extent of the drainage basins are not included on this map. Drainage basins leading to these areas will be defined in the future.

# Lower Duwamish Waterway

## Map 2

### Lower Duwamish Study Area

#### Legend

- Streets**
- Arterials
  - State Highway
  - Interstate Freeway
- Lower Duwamish surface drainage basin**
- Combined sewer service area**

- Streams**
- Culvert
  - Open Channel
- Early action sites**



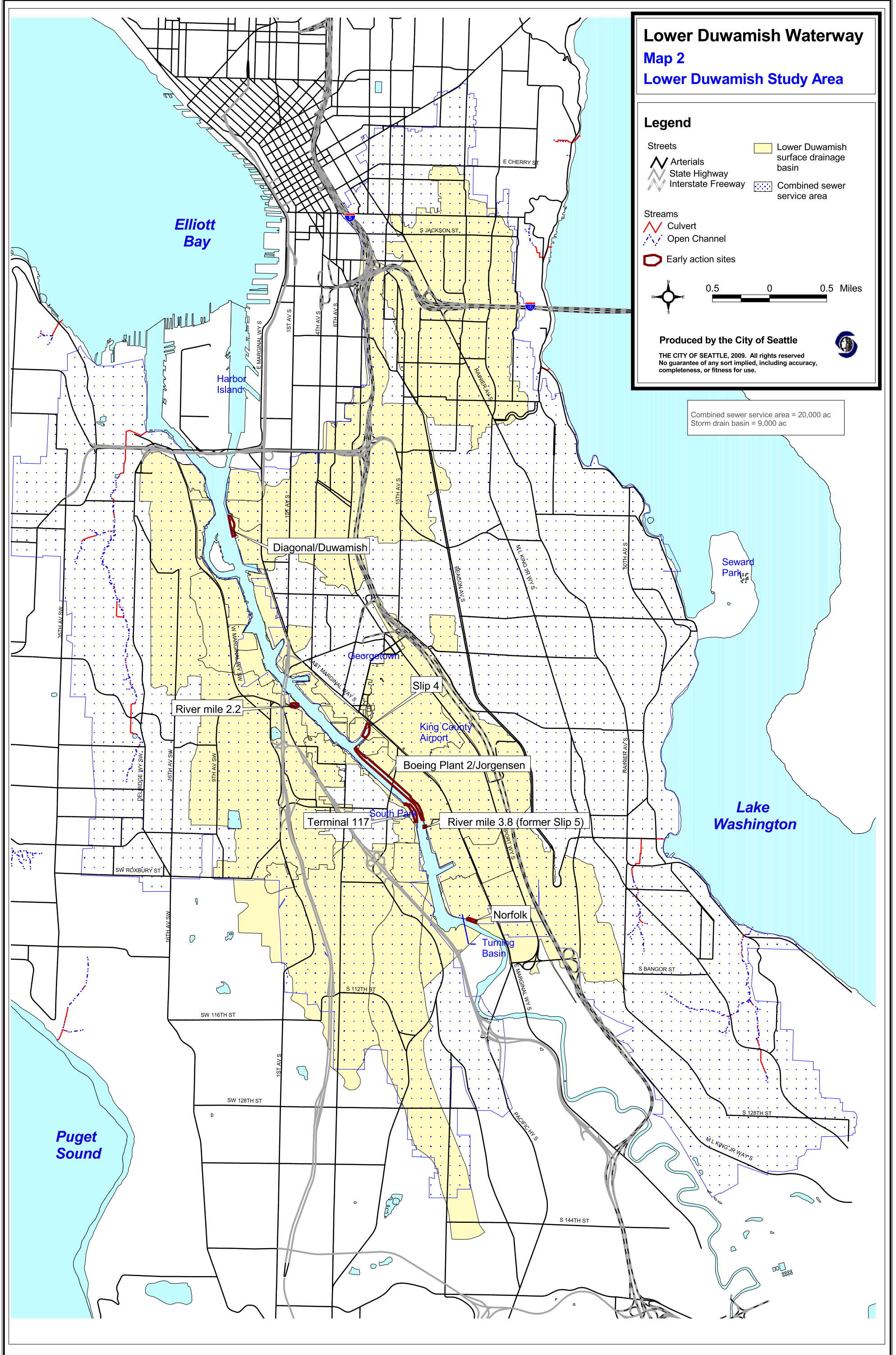
0.5 0 0.5 Miles

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Combined sewer service area = 20,000 ac  
Storm drain basin = 9,000 ac





# Lower Duwamish Waterway

## Map 3 Land Use

### Legend

- City limits
- Commercial
- Industrial
- Single family residential
- Multi-family residential
- Schools
- Vacant
- Park/open space
- Government service

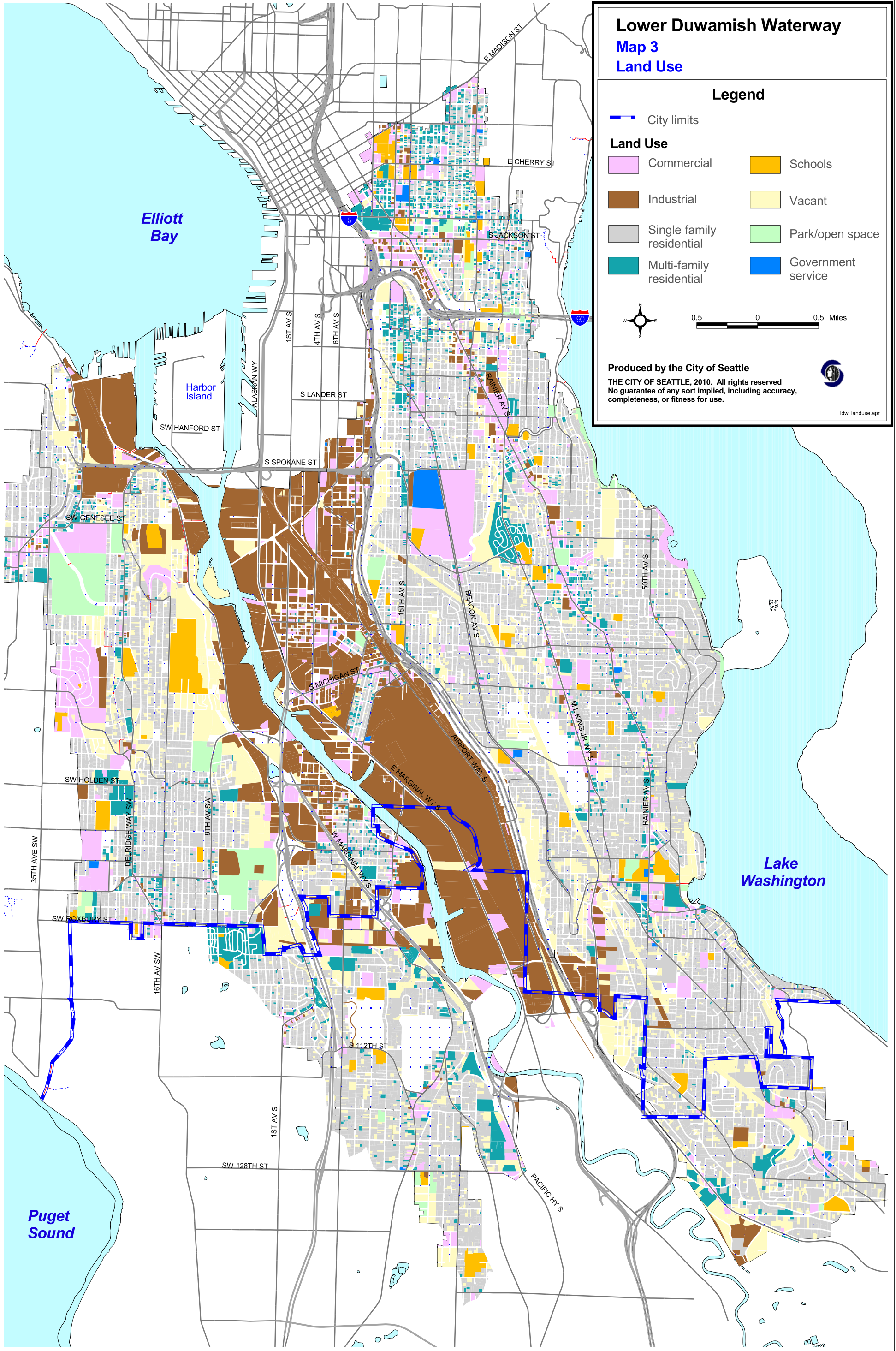


0.5 0 0.5 Miles

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# Lower Duwamish Waterway

## Map 4

### Outfalls in the Lower Duwamish Waterway

#### Legend

- |                         |                       |
|-------------------------|-----------------------|
| <b>Streets</b>          | <b>Outfalls</b>       |
| Arterial                | King County CSO/EOF   |
| State Highway           | City CSO/SD           |
| Interstate Freeway      | City/County CSO/SD    |
| <b>Utilities</b>        | CSO/EOF/SD-SPU/KC     |
| Storm drain             | County storm drain    |
| Sanitary sewer          | City storm drain      |
| Combined sewer          | Private storm drain   |
| King County interceptor | Unknown piped outfall |
| City limits             | WSDOT storm drain     |
|                         | Port storm drain      |
|                         | Seep                  |
|                         | Channel/ditch         |

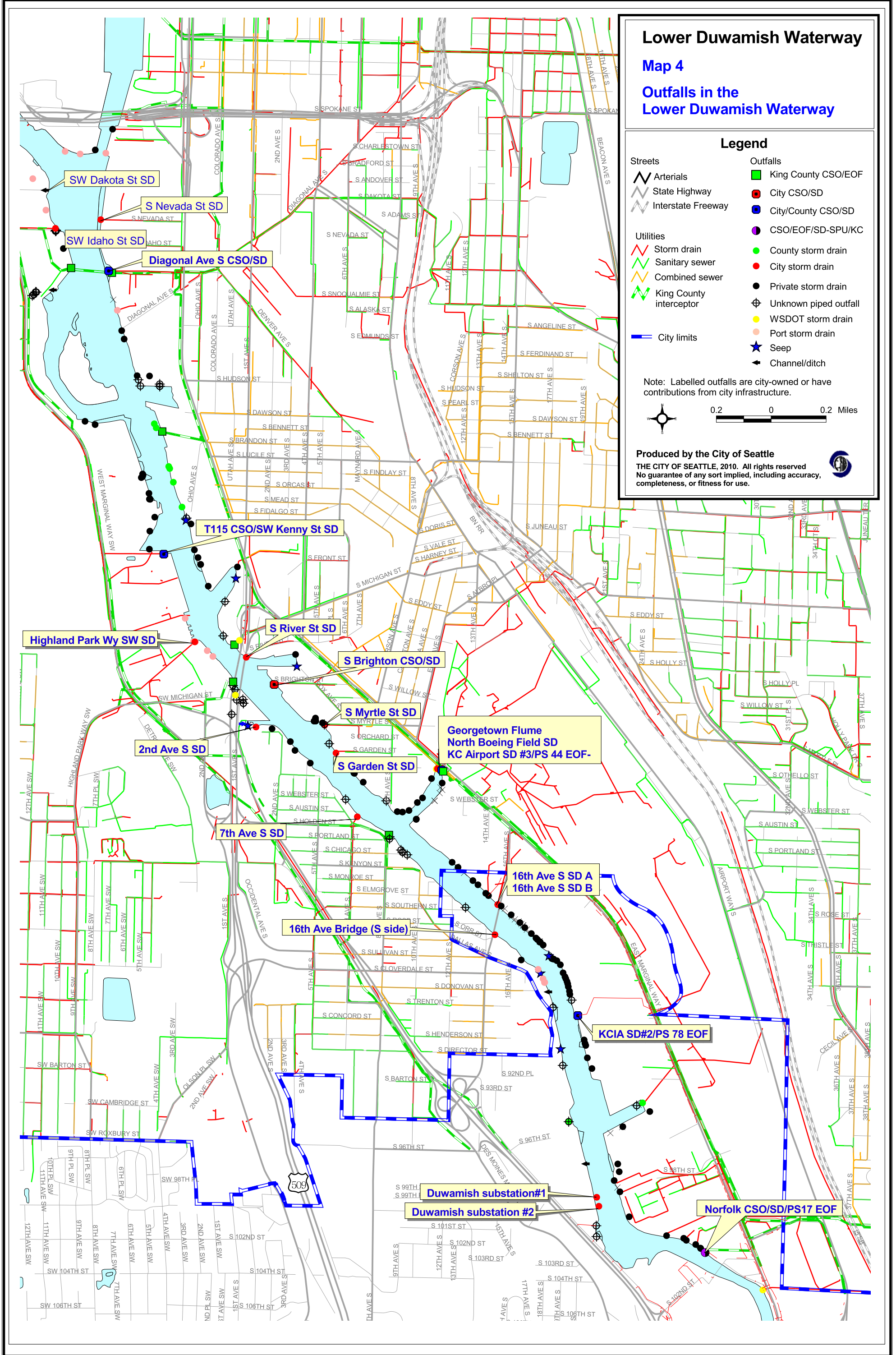
Note: Labelled outfalls are city-owned or have contributions from city infrastructure.



0.2 0 0.2 Miles

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# Lower Duwamish Waterway

## Map 5

### Businesses Inspected (March 2003 through September 2010)

#### Legend

- |  |                                       |  |  |
|--|---------------------------------------|--|--|
|  | Culvert                               |  | SW Kenny St SD/T115 CSO drainage basin |
|  | Open channel                          |  | 2nd Ave S SD basin                     |
|  | Combined sewer service area           |  | T117 drainage basin                    |
|  | Lower Duwamish surface drainage basin |  | Highland Park Wy SW SD basin           |
|  | Diagonal Ave S CSO/SD drainage basin  |  | 1st Ave S SD (west) basin              |
|  | Slip 4 drainage basin                 |  | SW Dakota St SD basin                  |
|  | Slip 5 drainage basin                 |  | SW Idaho St SD basin                   |
|  | Slip 6 drainage basin                 |  | City limit                             |
|  | Norfolk CSO/EOF/SD drainage basin     | <b>July 2005 - September 2010 inspects</b> |  |
|  | S Nevada St SD basin                  |  | Screening visit                        |
|  | S Myrtle St SD basin                  |  | Full inspection                        |
|  | S Brighton CSO/SD basin               |  | Follow-up inspection                   |
|  | 7th Ave S SD basin                    | <b>March 2003 - June 2005 inspects</b>     |  |
|  |                                       |  | Screening visit                        |
|  |                                       |  | Full inspection                        |
|  |                                       |  | Follow-up inspection                   |

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



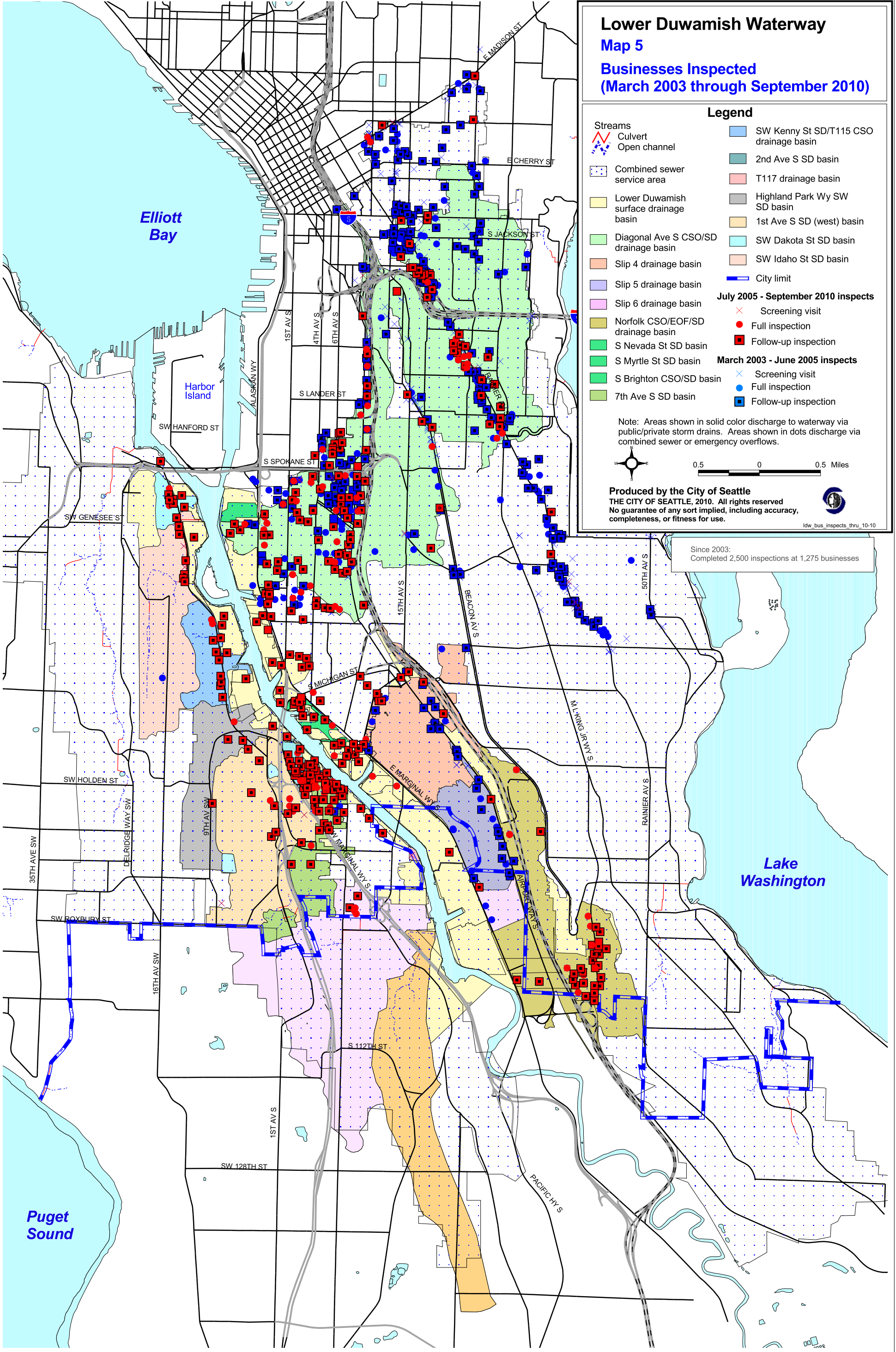
0.5 0 0.5 Miles

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ldw\_bus\_inspects\_thru\_10-10

Since 2003:  
Completed 2,500 inspections at 1,275 businesses





# Lower Duwamish Waterway Map 6 Source Tracing Samples Collected through September 2010

- Streams**
- Culvert
  - Open channel
- Legend**
- Combined sewer service area
  - Lower Duwamish surface drainage basin
  - Diagonal Ave S CSO/SD drainage basin
  - Slip 4 drainage basin
  - Slip 5 drainage basin
  - Slip 6 drainage basin
  - Norfolk CSO/EOF/SD drainage basin
  - S Nevada St SD basin
  - S Myrtle St SD basin
  - S Brighton CSO/SD basin
  - 7th Ave S SD basin
  - SW Kenny St SD/T115 CSO drainage basin
  - 2nd Ave S SD basin
  - T117 drainage basin
  - Highland Park Wy SW SD basin
  - 1st Ave S SD (west) basin
  - SW Dakota St SD basin
  - SW Idaho St SD basin
- Samples**
- Right-of-way catch basin
  - Onsite catch basin
  - Inline grab
  - Inline sediment trap

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

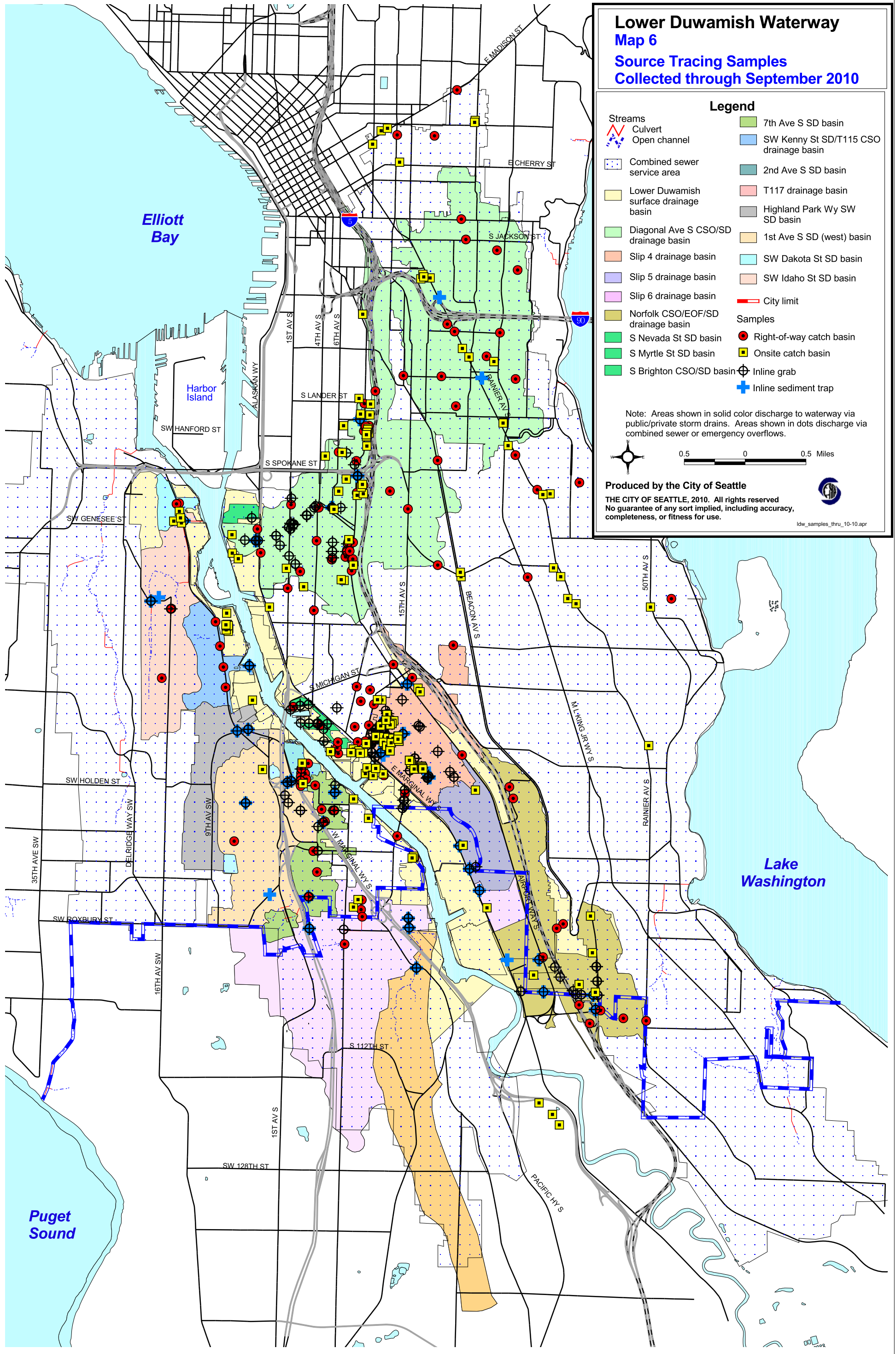


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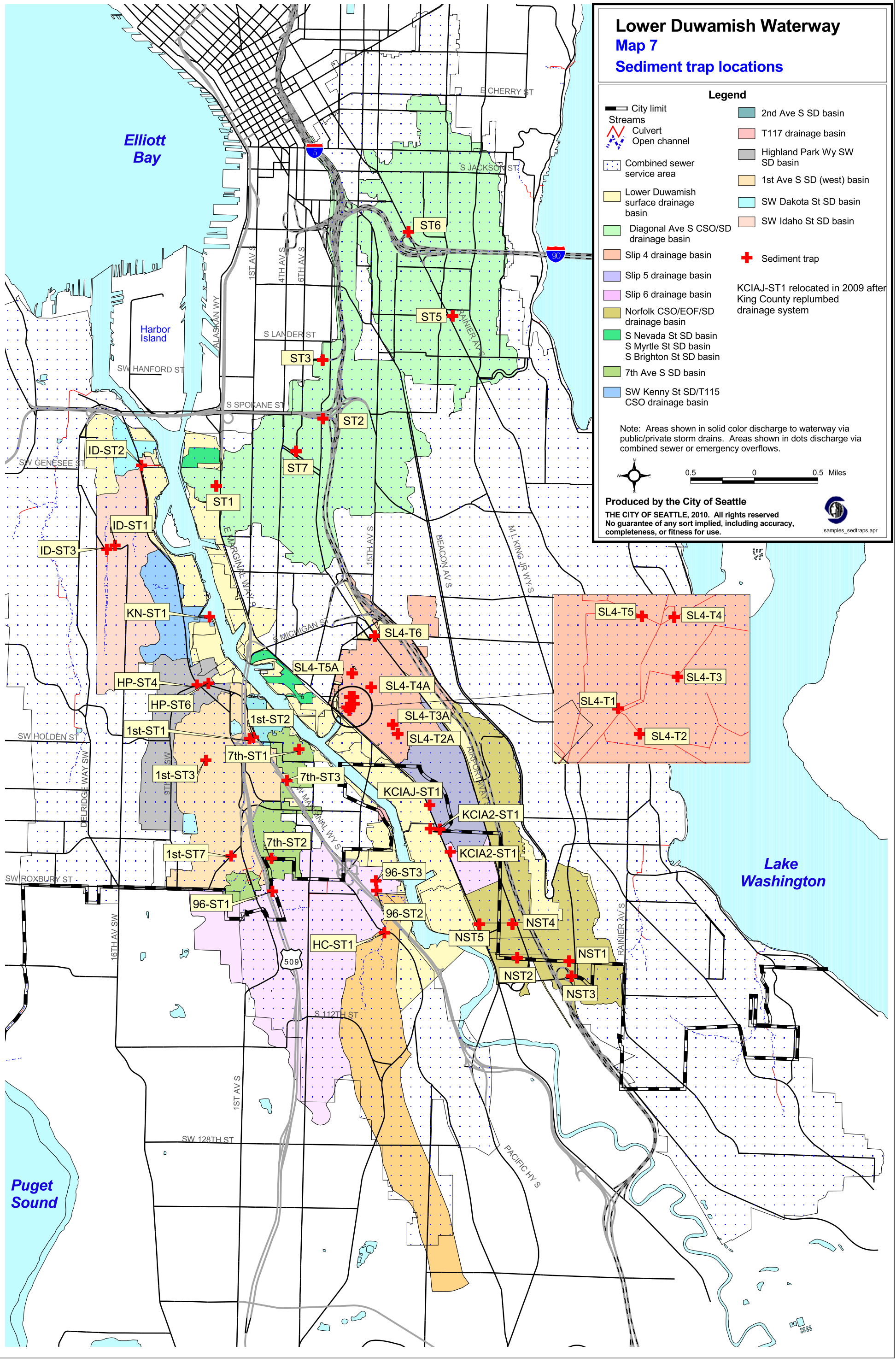
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# Lower Duwamish Waterway

## Map 7

### Sediment trap locations




**Legend**

City limit	2nd Ave S SD basin
Streams	T117 drainage basin
Culvert	Highland Park Wy SW SD basin
Open channel	1st Ave S SD (west) basin
Combined sewer service area	SW Dakota St SD basin
Lower Duwamish surface drainage basin	SW Idaho St SD basin
Diagonal Ave S CSO/SD drainage basin	Sediment trap
Slip 4 drainage basin	KCIAJ-ST1 relocated in 2009 after King County replumbed drainage system
Slip 5 drainage basin	
Slip 6 drainage basin	
Norfolk CSO/EOF/SD drainage basin	
S Nevada St SD basin	
S Myrtle St SD basin	
S Brighton St SD basin	
7th Ave S SD basin	
SW Kenny St SD/T115 CSO drainage basin	

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

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samples\_sedtraps.apr



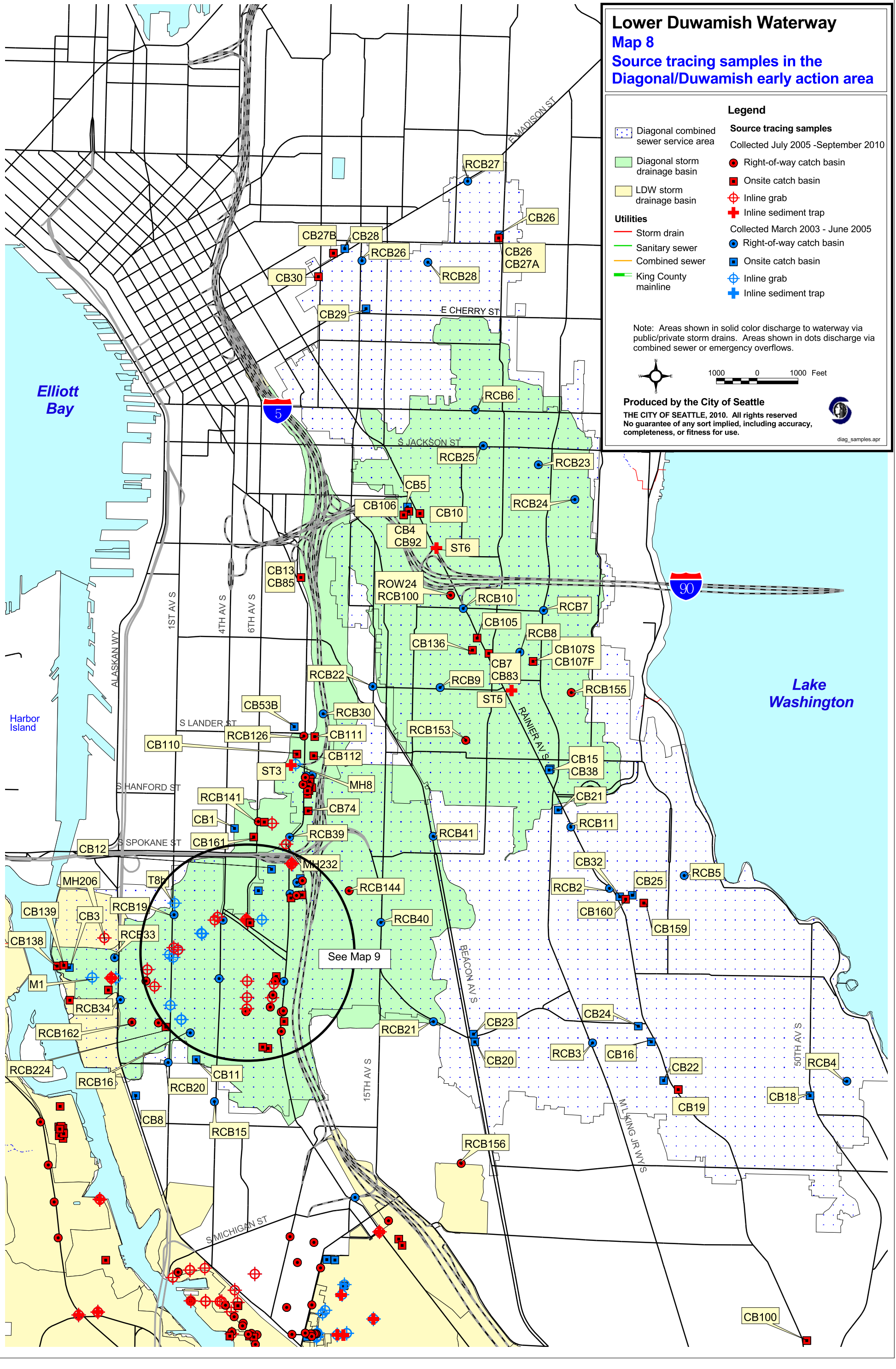
**Lower Duwamish Waterway  
Map 8  
Source tracing samples in the  
Diagonal/Duwamish early action area**

- Legend**
- Diagonal combined sewer service area
  - Diagonal storm drainage basin
  - LDW storm drainage basin
  - Utilities**
  - Storm drain
  - Sanitary sewer
  - Combined sewer
  - King County mainline
  - Source tracing samples**  
Collected July 2005 - September 2010
  - Right-of-way catch basin
  - Onsite catch basin
  - Inline grab
  - Inline sediment trap
  - Collected March 2003 - June 2005
  - Right-of-way catch basin
  - Onsite catch basin
  - Inline grab
  - Inline sediment trap

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



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See Map 9

# Lower Duwamish Waterway

## Map 9

### Source tracing samples in the Diagonal /Duwamish early action area (lower subbasin) and vicinity

#### Legend

- Diagonal combined sewer service area
- Diagonal storm drainage basin
- LDW storm drainage basin

#### Source tracing samples

Collected July 2005 - September 2010

- Right-of-way catch basin
- Onsite catch basin
- Inline grab
- Inline sediment trap

Collected March 2003 - June 2005

- Right-of-way catch basin
- Onsite catch basin
- Inline grab
- Inline sediment trap

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



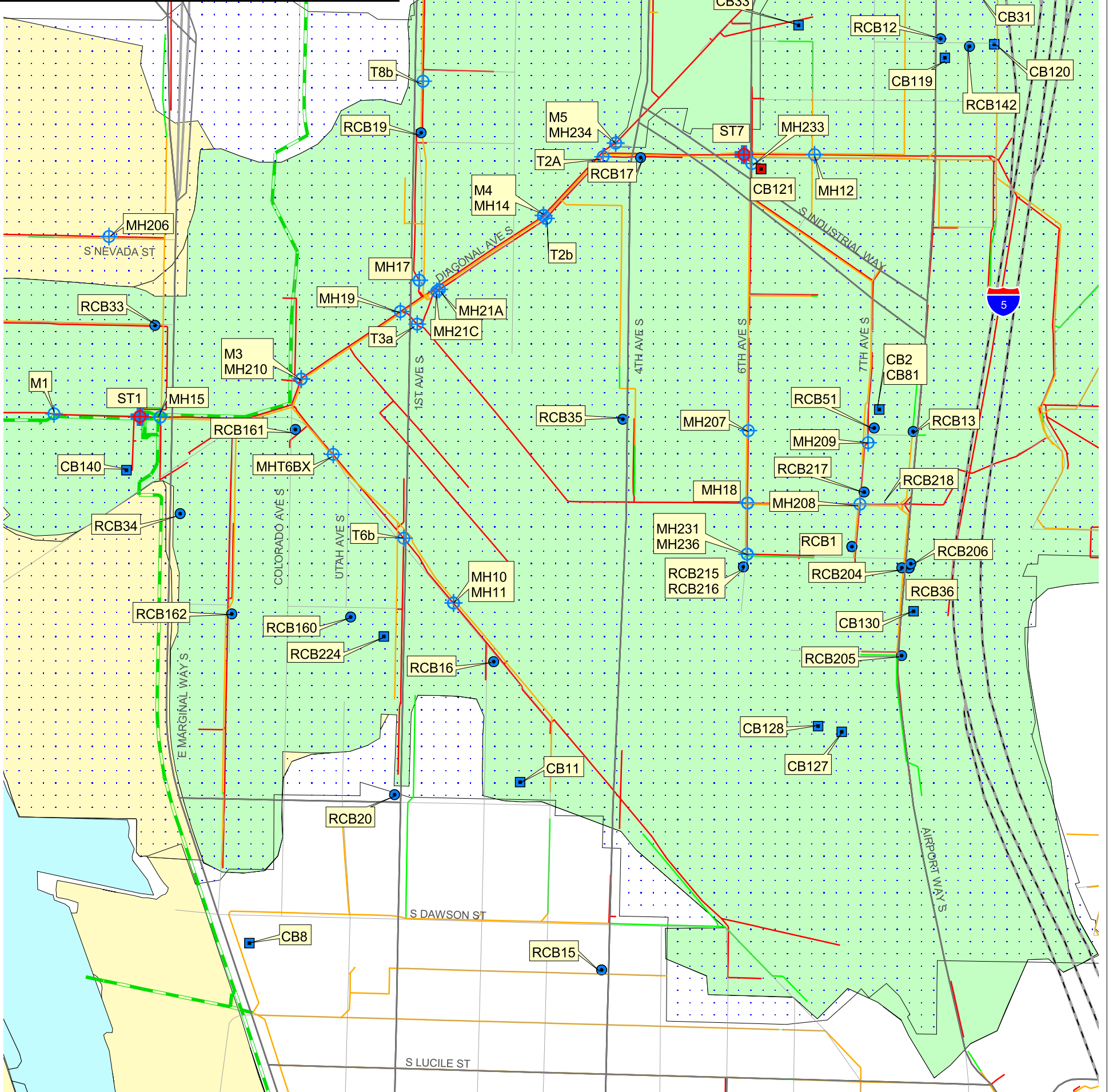
500 0 500 Feet

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diag\_samples2.apr

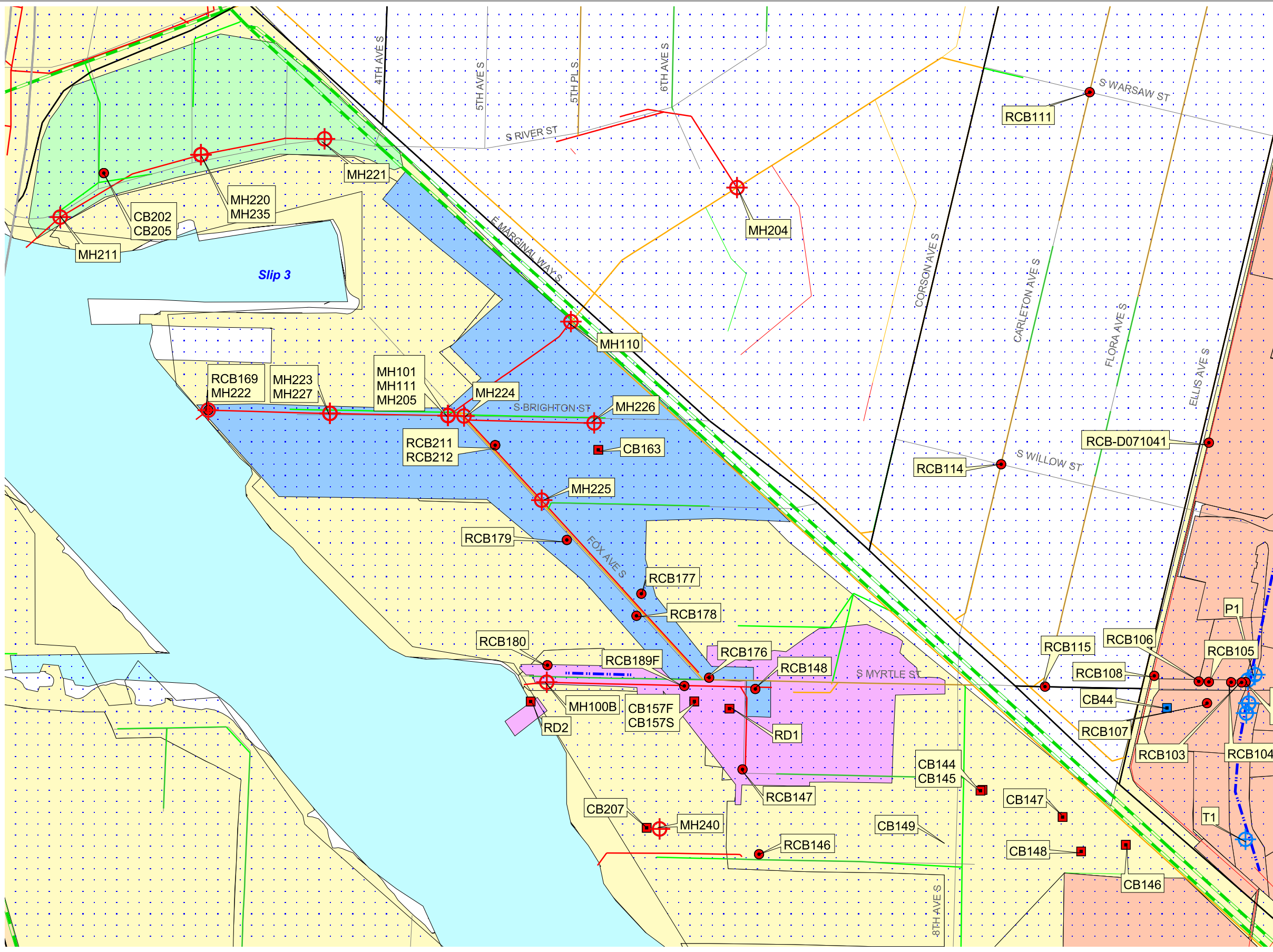




# Lower Duwamish Waterway

## Map 10

### Source tracing samples: Slip 3 and vicinity



**Legend**

Streams	City limits
Culvert	Lower Duwamish surface drainage basin
Open channel	Combined sewer service area
Slip 4 drainage basin	
S River St SD basin	
S Brighton CSO/SD drainage basin	
S Myrtle St SD basin	

Collected July 2005 - September 2010

● Right-of-way catch basin	Utilities
■ Onsite catch basin	— Storm drain
⊕ Inline grab	— Sanitary sewer
⊕ Inline sediment trap	— Combined sewer
● Right-of-way catch basin	— King County mainline
■ Onsite catch basin	
⊕ Inline grab	
⊕ Inline sediment trap	

Collected March 2003 - June 2005

● Right-of-way catch basin	
■ Onsite catch basin	
⊕ Inline grab	
⊕ Inline sediment trap	

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

500 0 500 Feet

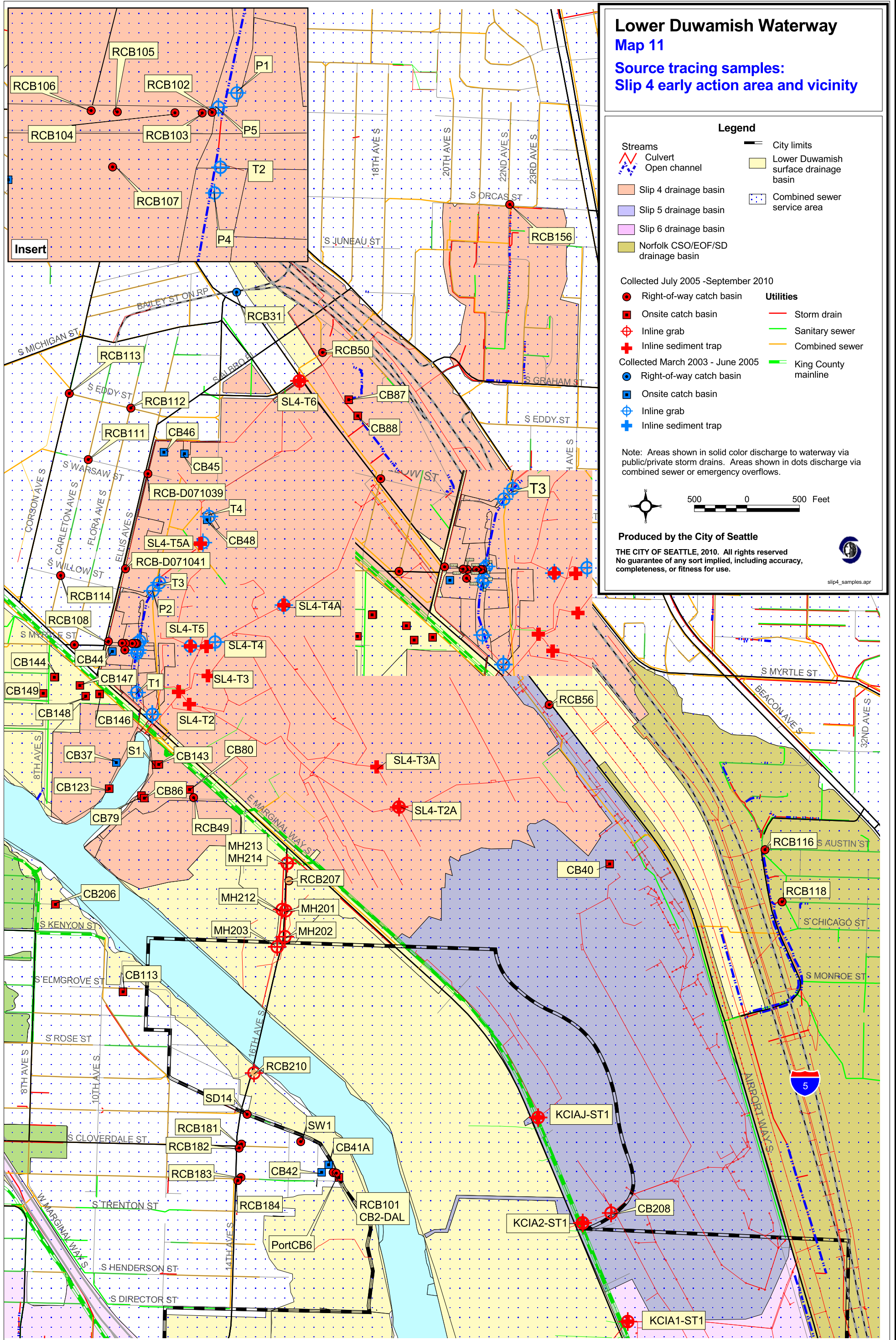
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samples\_slip3.apr

# Lower Duwamish Waterway Map 11

Source tracing samples:  
Slip 4 early action area and vicinity



### Legend

- |                                   |                                       |
|-----------------------------------|---------------------------------------|
| Streams                           | City limits                           |
| Culvert                           | Lower Duwamish surface drainage basin |
| Open channel                      | Combined sewer service area           |
| Slip 4 drainage basin             |                                       |
| Slip 5 drainage basin             |                                       |
| Slip 6 drainage basin             |                                       |
| Norfolk CSO/EOF/SD drainage basin |                                       |
- Collected July 2005 - September 2010
- |                            |                  |
|----------------------------|------------------|
| ● Right-of-way catch basin | ● Utilities      |
| ■ Onsite catch basin       | — Storm drain    |
| ⊕ Inline grab              | — Sanitary sewer |
| ⊕ Inline sediment trap     | — Combined sewer |
- Collected March 2003 - June 2005
- |                            |                        |
|----------------------------|------------------------|
| ● Right-of-way catch basin | — King County mainline |
| ■ Onsite catch basin       |                        |
| ⊕ Inline grab              |                        |
| ⊕ Inline sediment trap     |                        |

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



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# Lower Duwamish Waterway

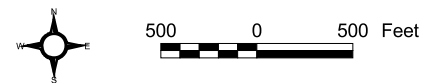
## Map 12

### Source tracing samples: Norfolk early action area and vicinity

#### Legend

- |                                       |                             |                       |                                   |
|---------------------------------------|-----------------------------|-----------------------|-----------------------------------|
| Streams                               | Culvert                     | Open channel          | City limits                       |
| Slip 4 drainage basin                 | Slip 5 drainage basin       | Slip 6 drainage basin | Norfolk CSO/EOF/SD drainage basin |
| Lower Duwamish surface drainage basin | Combined sewer service area |                       |                                   |
| Collected July 2005 - September 2010  |                             |                       |                                   |
| Right-of-way catch basin              | Onsite catch basin          | Inline grab           | Inline sediment trap              |
| Collected March 2003 - June 2005      |                             |                       |                                   |
| Right-of-way catch basin              | Onsite catch basin          | Inline grab           | Inline sediment trap              |
| Utilities                             |                             | Storm drain           | Sanitary sewer                    |
|                                       |                             | Combined sewer        | King County mainline              |

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

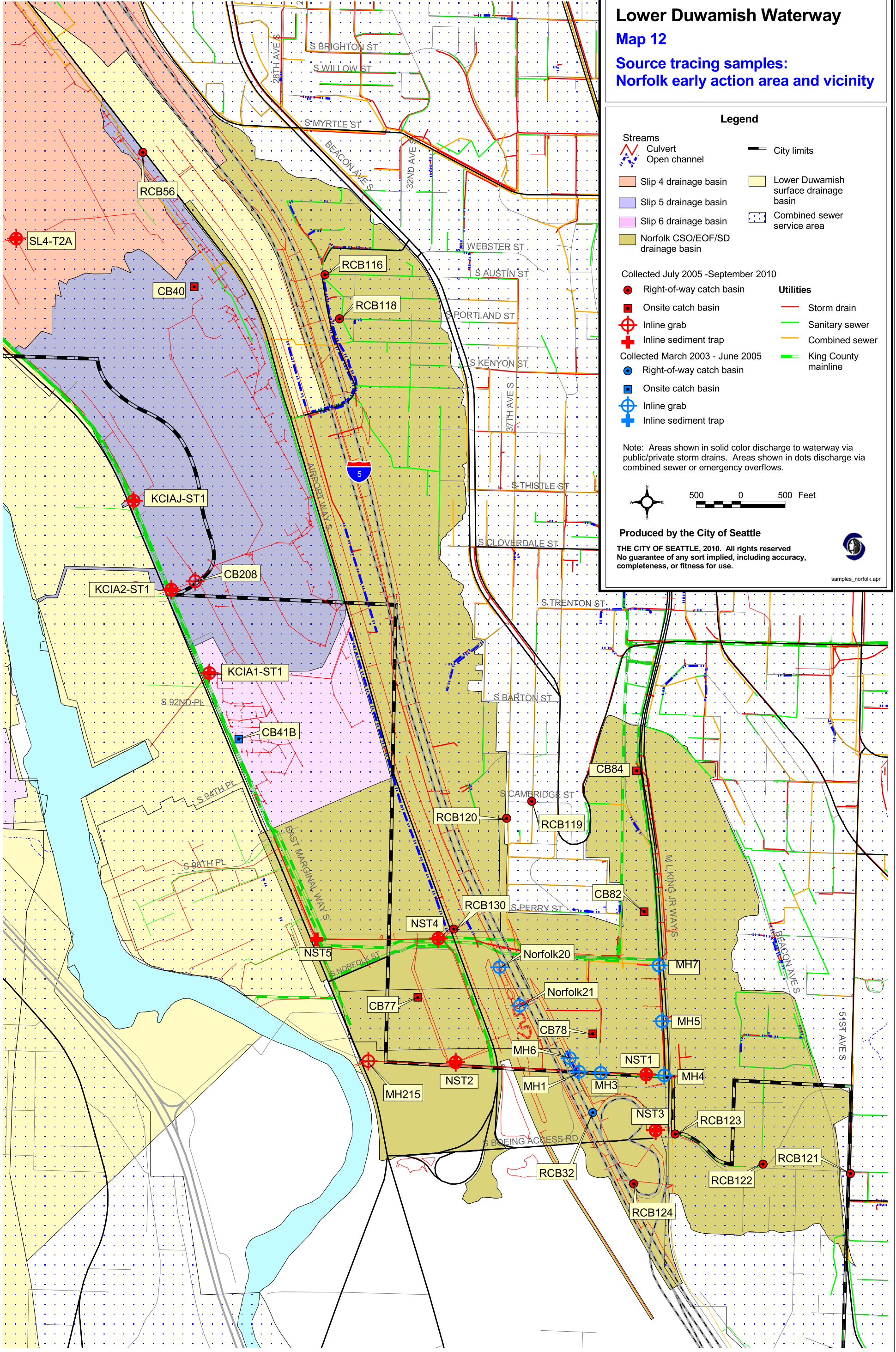


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# Lower Duwamish Waterway

## Map 13

Source tracing samples: SW Idaho St storm drain and vicinity

### Legend

- Streams**
- Culvert
  - Open channel
- Basins**
- 2nd Ave S SD basin
  - SW Idaho St SD basin
  - Highland Park Wy SW SD basin
  - Lower Duwamish surface drainage basin
  - SW Dakota St SD basin
  - SW Kenny St SD/T115 CSO drainage basin
- Other**
- Combined sewer service area

Collected July 2005 - September 2010

- Right-of-way catch basin
  - Onsite catch basin
  - Inline grab
  - Inline sediment trap
  - Right-of-way catch basin
  - Onsite catch basin
  - Inline grab
  - Inline sediment trap
- Utilities**
- Storm drain
  - Sanitary sewer
  - Combined sewer
  - King County mainline

Collected March 2003 - June 2005

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



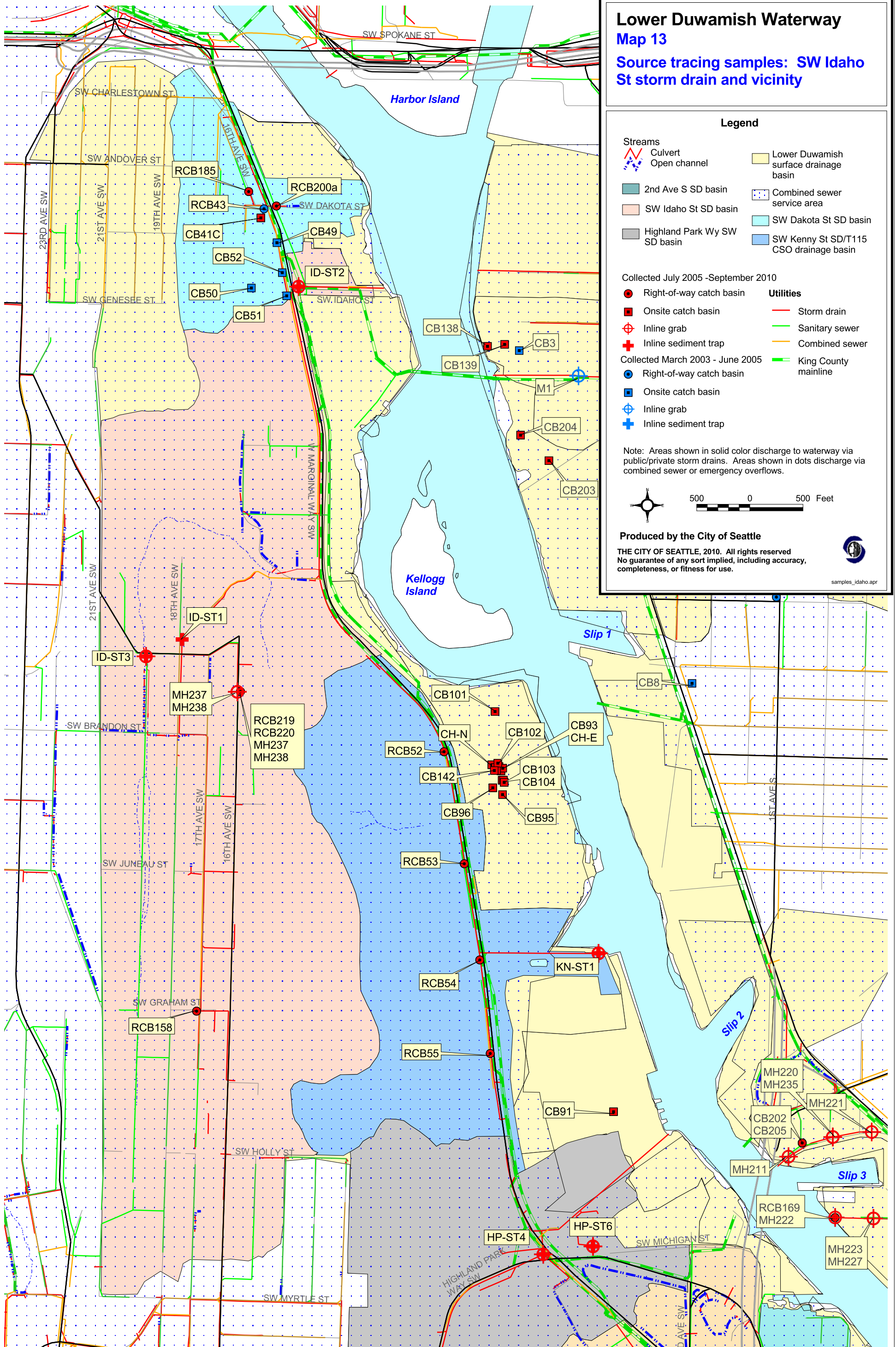
500 0 500 Feet

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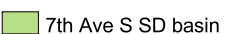
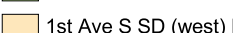
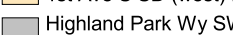


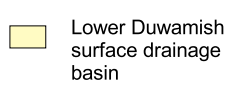
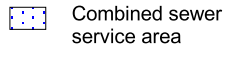

# Lower Duwamish Waterway Map 14









Source tracing samples:  
1st Ave S (west) and vicinity

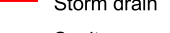
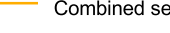
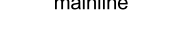

**Legend**

**Streams**  
 Culvert  
 Open channel


**Basins**  
 2nd Ave S SD basin  
 7th Ave S SD basin  
 1st Ave S SD (west) basin  
 Highland Park Wy SW SD basin

**Other Features**  
 Lower Duwamish surface drainage basin  
 Combined sewer service area  
 City limit


**Source tracing samples**  
 Collected July 2005 - September 2010  
 Right-of-way catch basin  
 Onsite catch basin  
 Inline grab  
 Inline sediment trap  
 Collected March 2003 - June 2005  
 Right-of-way catch basin  
 Onsite catch basin  
 Inline grab  
 Inline sediment trap

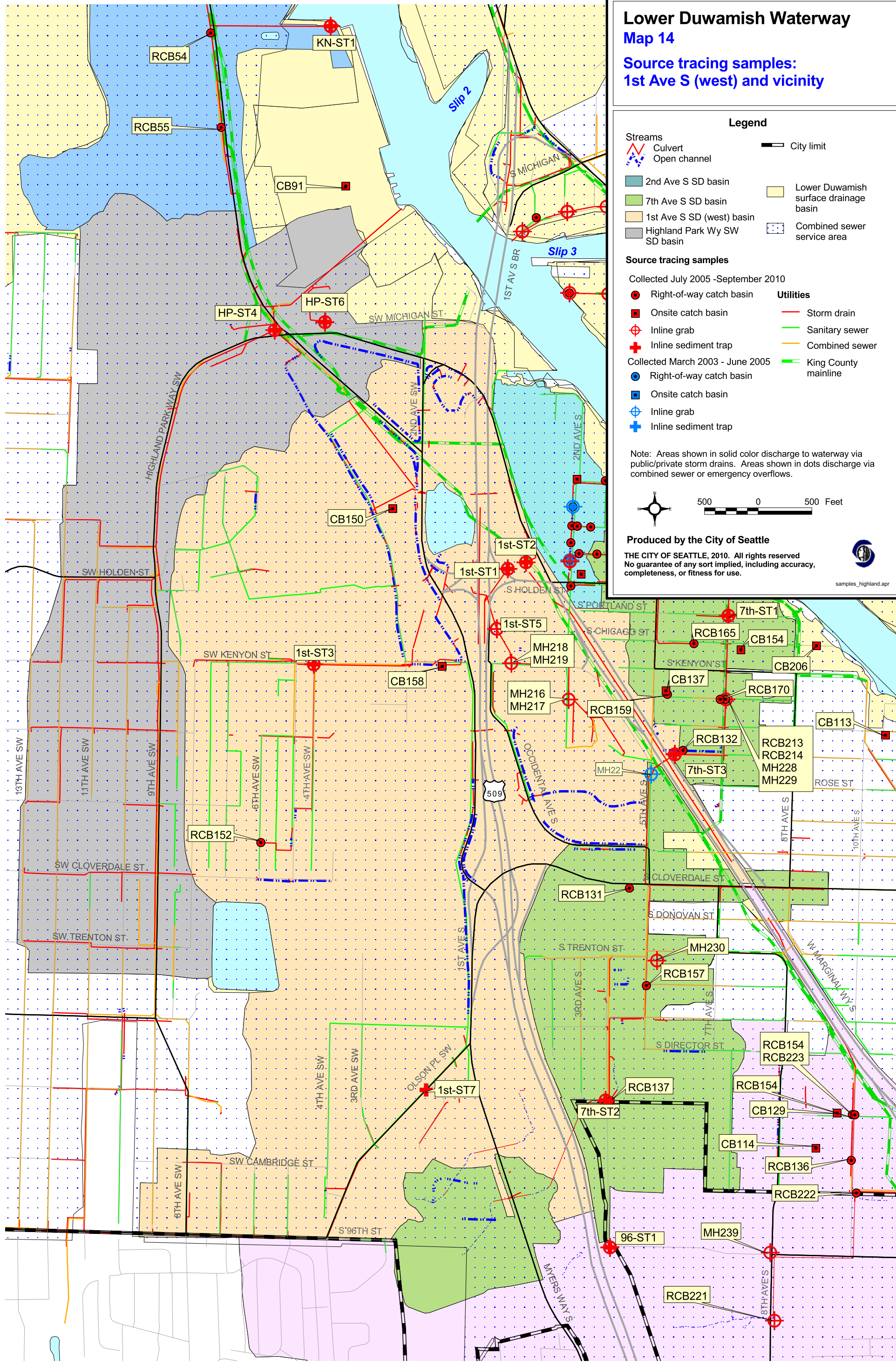
**Utilities**  
 Storm drain  
 Sanitary sewer  
 Combined sewer  
 King County mainline

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

 500 0 500 Feet

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# Lower Duwamish Waterway

## Map 15

### Source tracing samples: 2nd Ave S and 7th Ave S drainage basins and vicinity

#### Legend

- |                           |                                       |
|---------------------------|---------------------------------------|
| Streams                   | City limit                            |
| Culvert                   |                                       |
| Open channel              |                                       |
| 2nd Ave S SD basin        | Lower Duwamish surface drainage basin |
| 7th Ave S SD basin        | Combined sewer service area           |
| 1st Ave S SD (west) basin |                                       |

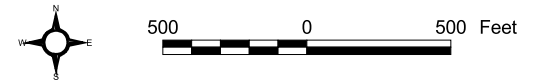
#### Source tracing samples

Collected July 2005 - September 2010

Collected March 2003 - June 2005

- |                            |                        |
|----------------------------|------------------------|
| ● Right-of-way catch basin | Utilities              |
| ■ Onsite catch basin       | — Storm drain          |
| ⊕ Inline grab              | — Sanitary sewer       |
| ⊕ Inline sediment trap     | — Combined sewer       |
| ● Right-of-way catch basin | — King County mainline |
| ■ Onsite catch basin       |                        |
| ⊕ Inline grab              |                        |
| ⊕ Inline sediment trap     |                        |

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

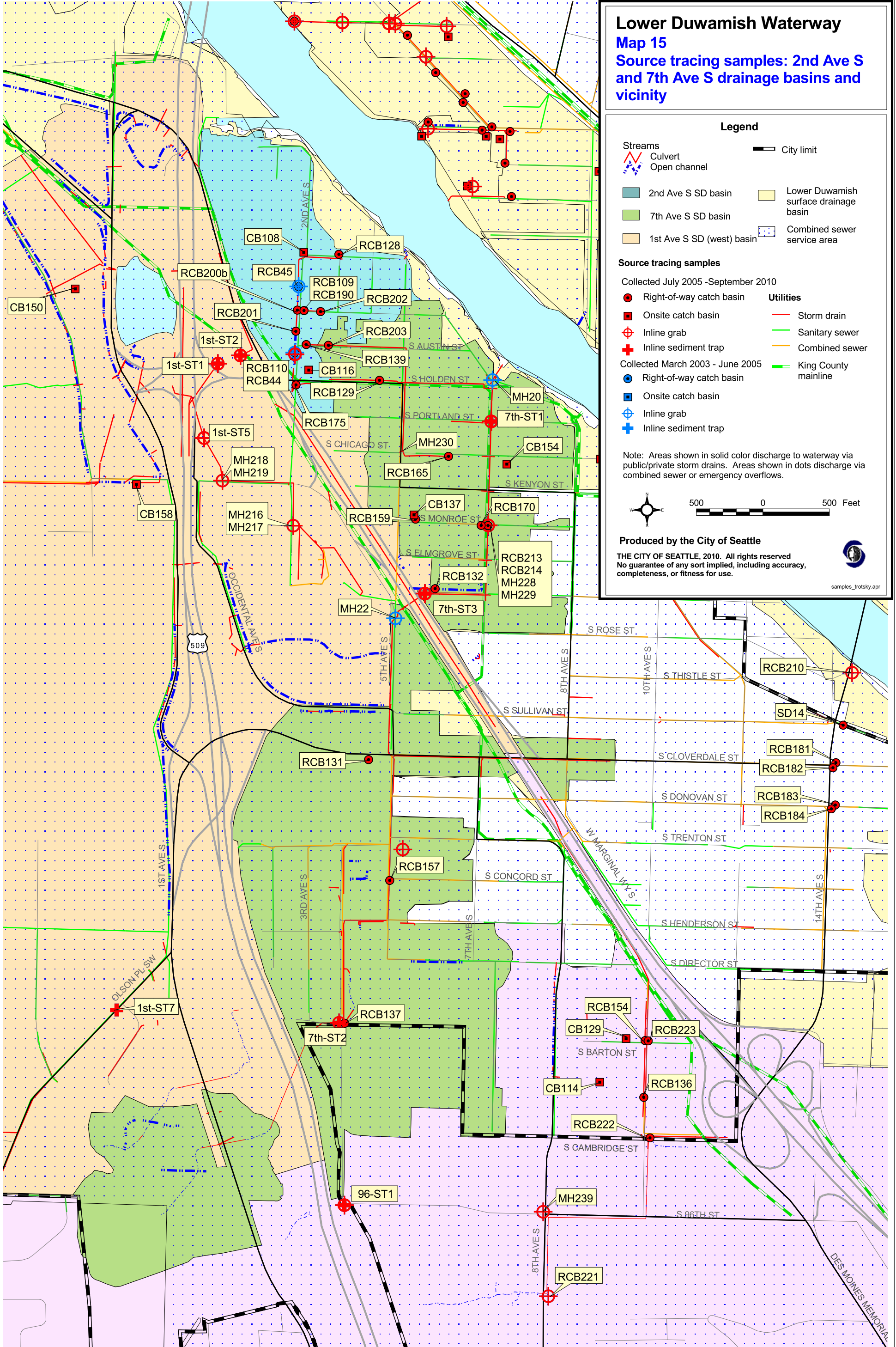


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# Lower Duwamish Waterway

## Map 16

### Source tracing samples: S 96th St SD and Hamm Creek drainage basins and vicinity

- Streams**
- Culvert
  - Open channel
- Legend**
- City limit
  - S96th St SD basin
  - 7th Ave S SD basin
  - Hamm Creek basin
  - Lower Duwamish surface drainage basin
  - Combined sewer service area

**Source tracing samples**

Collected July 2005 - September 2010

Collected March 2003 - June 2005

- Right-of-way catch basin
  - Onsite catch basin
  - Inline grab
  - Inline sediment trap
  - Right-of-way catch basin
  - Onsite catch basin
  - Inline grab
  - Inline sediment trap
- Utilities**
- Storm drain
  - Sanitary sewer
  - Combined sewer
  - King County mainline

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



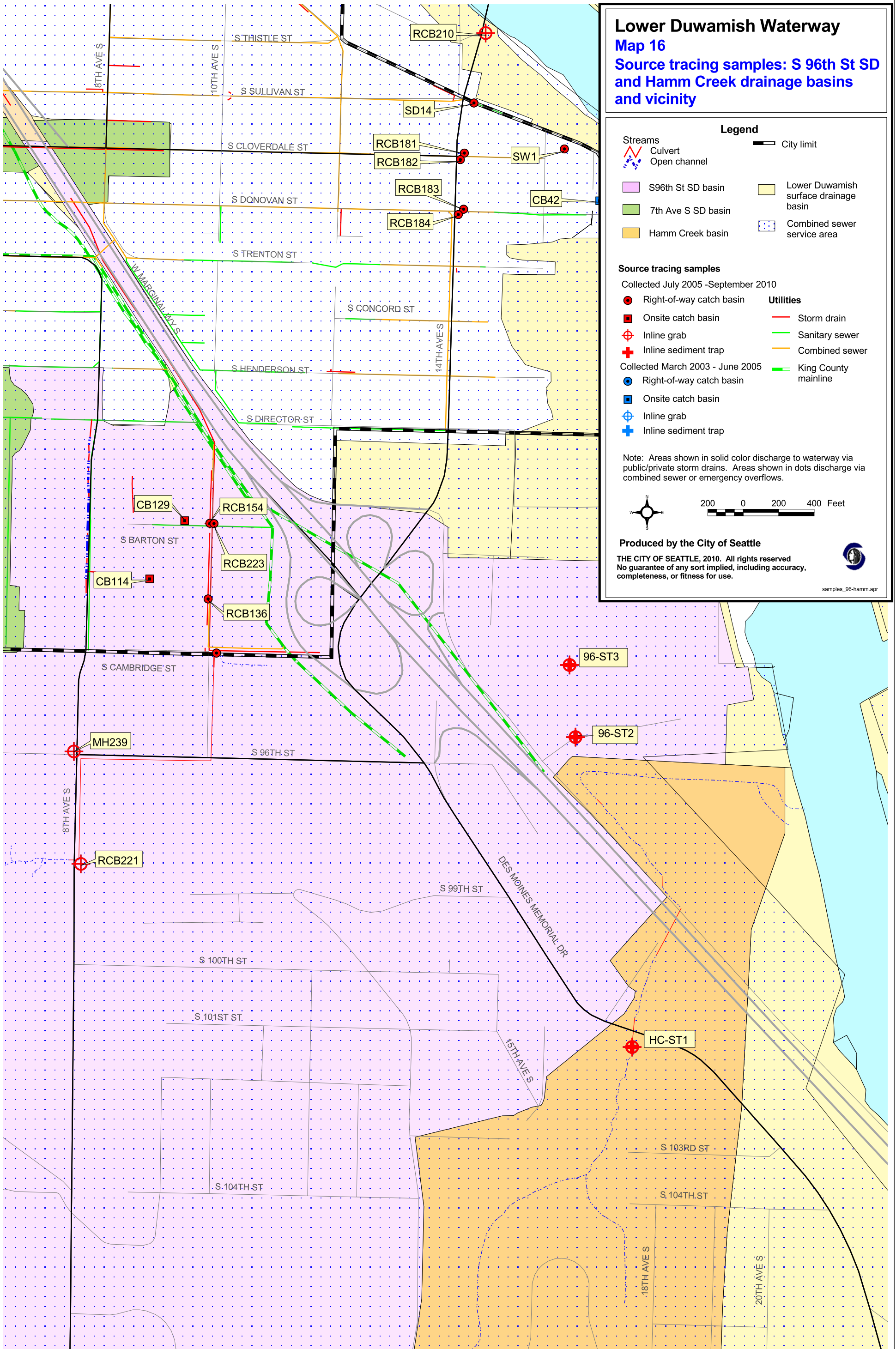
200 0 200 400 Feet

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samples\_96-hamm.apr





# Lower Duwamish Waterway

## Map 17

### Source tracing samples through September 2010: Arsenic

#### Legend

- |  |                              |
|--|------------------------------|
| City limit                             | 2nd Ave S SD basin           |
| Streams                                | T117 drainage basin          |
| Culvert                                | Highland Park Wy SW SD basin |
| Open channel                           | 1st Ave S SD (west) basin    |
| Combined sewer service area            | SW Dakota St SD basin        |
| Lower Duwamish surface drainage basin  | SW Idaho St SD basin         |
| Diagonal Ave S CSO/SD drainage basin   |                              |
| Slip 4 drainage basin                  | <b>Arsenic (mg/kg dw)</b>    |
| Slip 5 drainage basin                  | <57                          |
| Slip 6 drainage basin                  | 58 - 93                      |
| Norfolk CSO/EOF/SD drainage basin      | 94 - 186                     |
| S Nevada St SD basin                   | 187 - 500                    |
| S Myrtle St SD basin                   | >500                         |
| S Brighton St SD basin                 |                              |
| 7th Ave S SD basin                     |                              |
| SW Kenny St SD/T115 CSO drainage basin |                              |

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



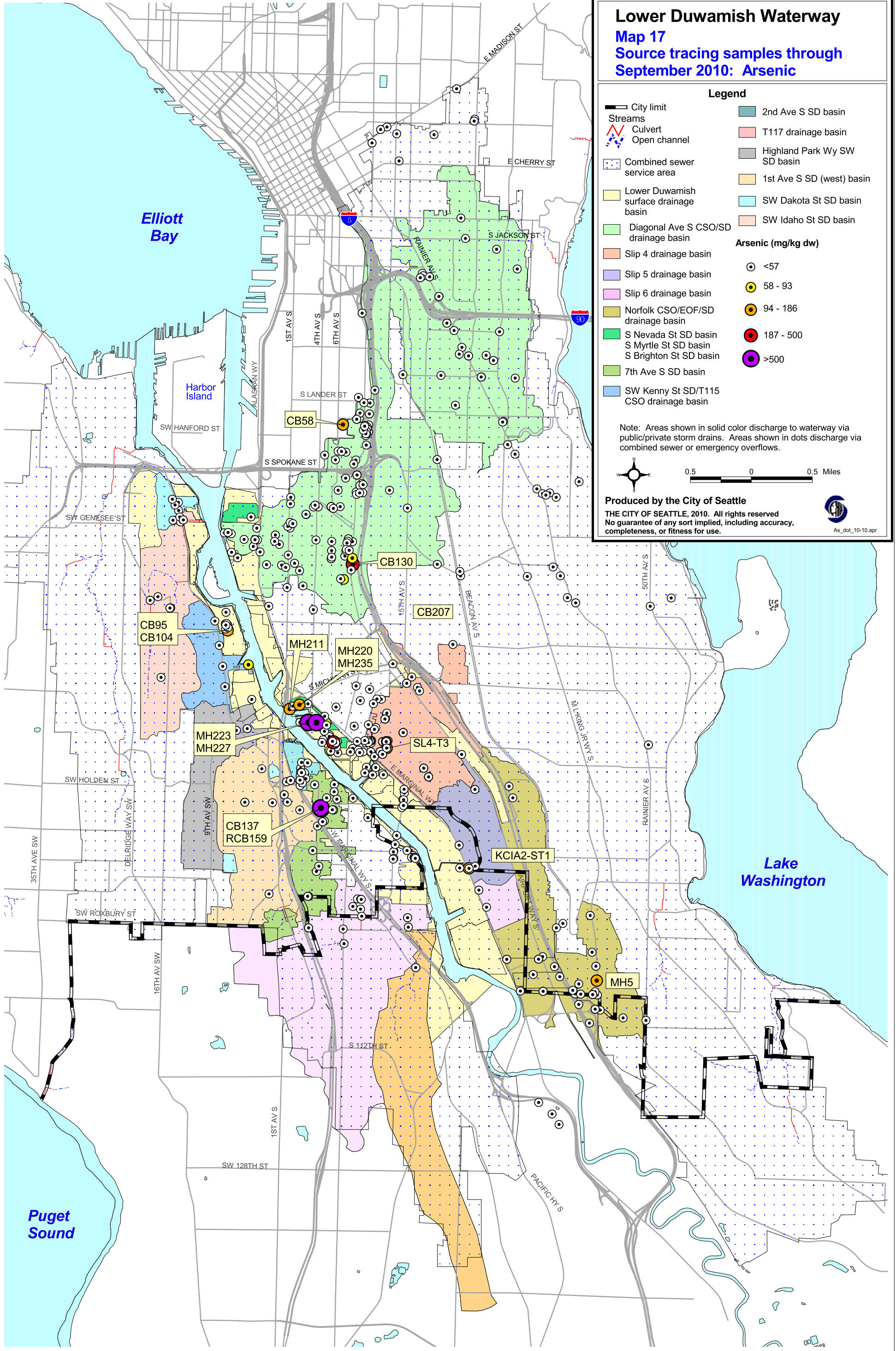
0.5 0 0.5 Miles

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As\_dot\_10-10.apr



# Lower Duwamish Waterway

## Map 18

### Source tracing samples through September 2010: Mercury

#### Legend

- |  |                              |
|--|------------------------------|
| City limit                             | 2nd Ave S SD basin           |
| <b>Streams</b>                         | T117 drainage basin          |
| Culvert                                | Highland Park Wy SW SD basin |
| Open channel                           | 1st Ave S SD (west) basin    |
| Combined sewer service area            | SW Dakota St SD basin        |
| Lower Duwamish surface drainage basin  | SW Idaho St SD basin         |
| Diagonal Ave S CSO/SD drainage basin   |                              |
| Slip 4 drainage basin                  |                              |
| Slip 5 drainage basin                  |                              |
| Slip 6 drainage basin                  |                              |
| Norfolk CSO/EOF/SD drainage basin      |                              |
| S Nevada St SD basin                   |                              |
| S Myrtle St SD basin                   |                              |
| S Brighton St SD basin                 |                              |
| 7th Ave S SD basin                     |                              |
| SW Kenny St SD/T115 CSO drainage basin |                              |

#### Mercury (mg/kg dw)

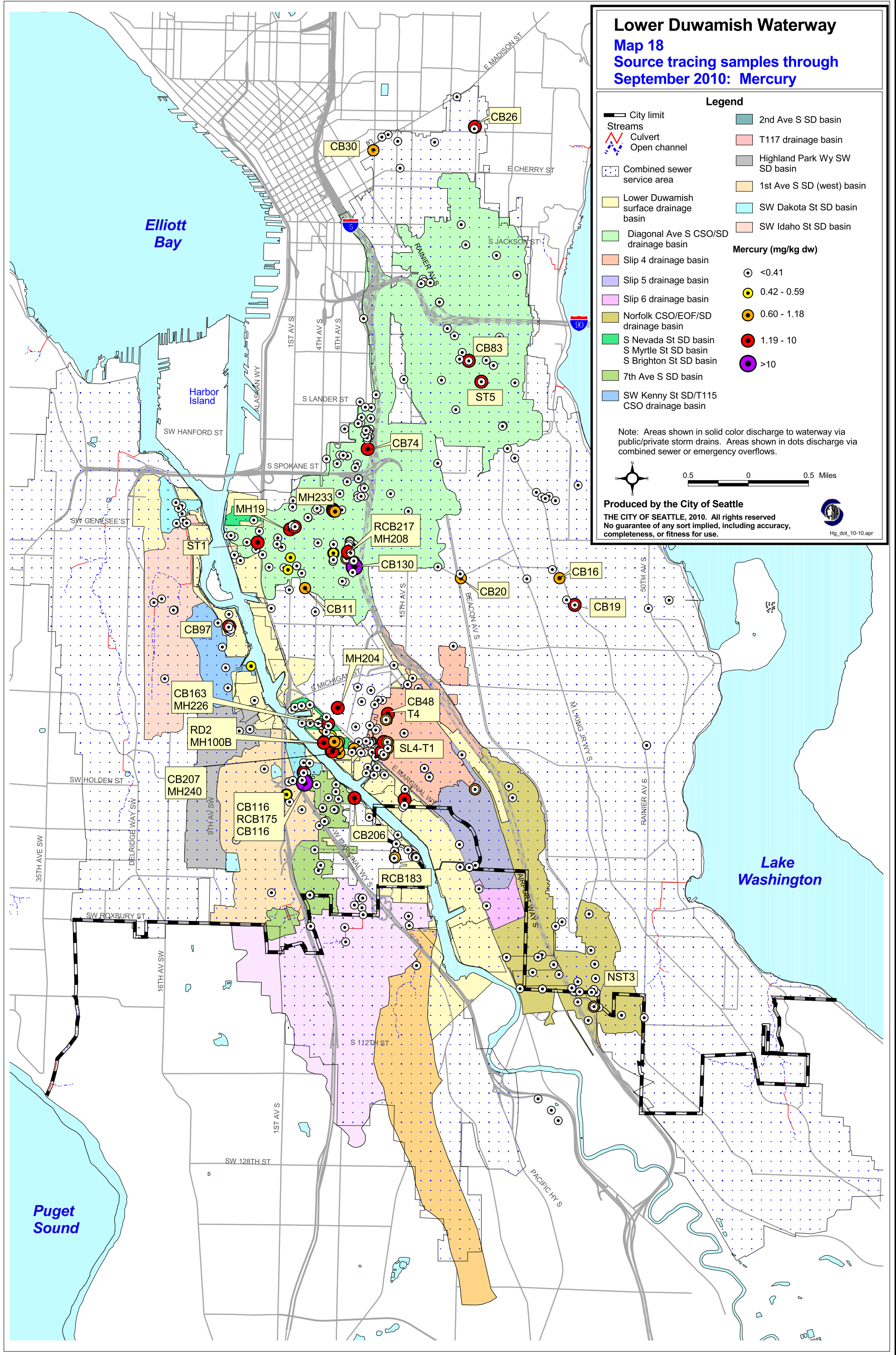
- |  |             |
|--|-------------|
|  | <0.41       |
|  | 0.42 - 0.59 |
|  | 0.60 - 1.18 |
|  | 1.19 - 10   |
|  | >10         |

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



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# Lower Duwamish Waterway

## Map 19

### Source tracing samples through September 2010: total PCBs

#### Legend

- City limit
- Streams
  - Culvert
  - Open channel
- Combined sewer service area
- Lower Duwamish surface drainage basin
- Diagonal Ave S CSO/SD drainage basin
- Slip 4 drainage basin
- Slip 5 drainage basin
- Slip 6 drainage basin
- Norfolk CSO/EOF/SD drainage basin
- S Nevada St SD basin
- S Myrtle St SD basin
- S Brighton St SD basin
- 7th Ave S SD basin
- SW Kenny St SD/T115 CSO drainage basin
- 2nd Ave S SD basin
- T117 drainage basin
- Highland Park Wy SW SD basin
- 1st Ave S SD (west) basin
- SW Dakota St SD basin
- SW Idaho St SD basin

#### PCBs (ug/kg dw)

- <130
- 131 - 1,000
- 1,001 - 2,000
- 2,001 - 10,000
- >10,000

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

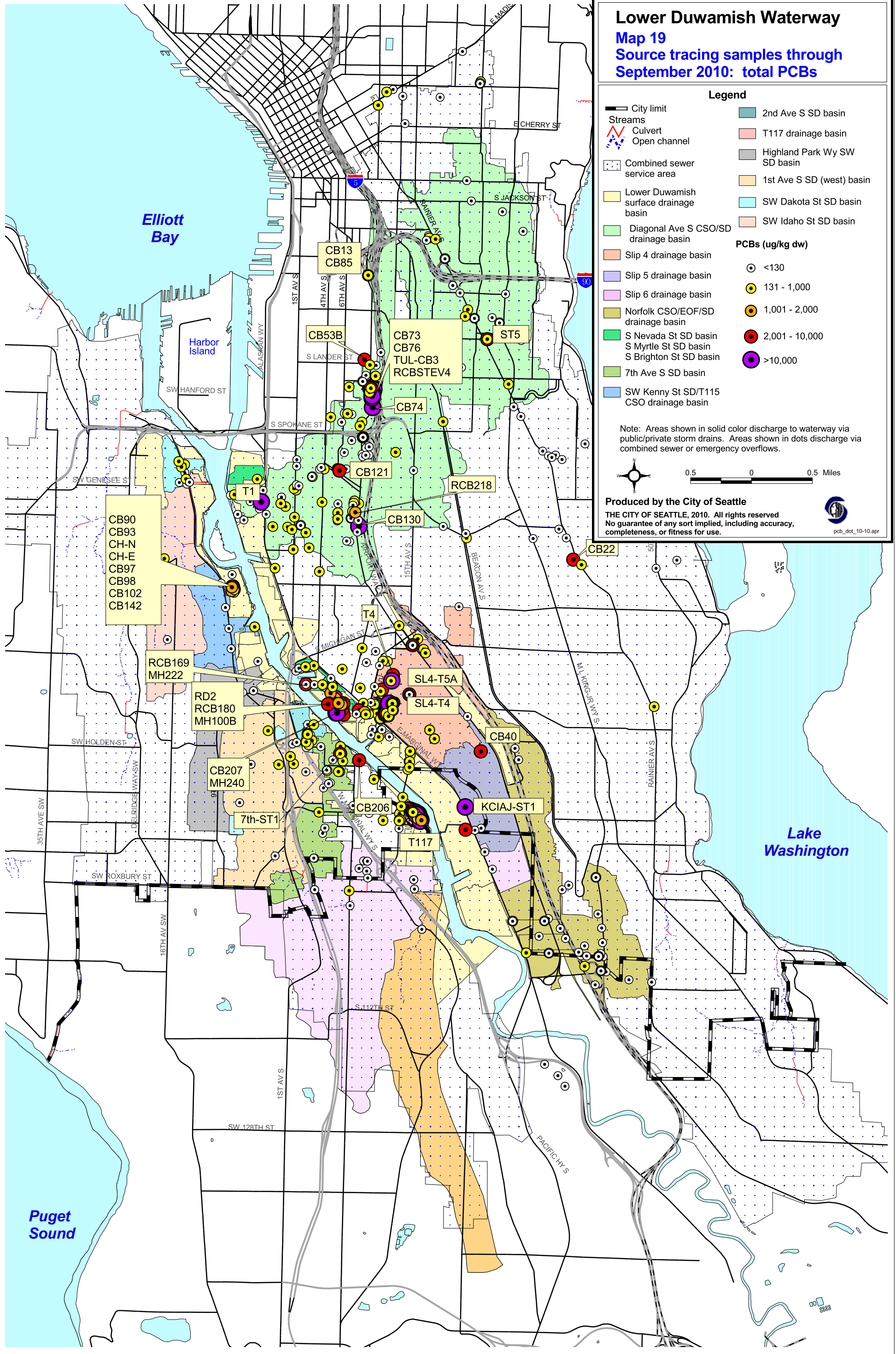


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pcb\_dot\_10-10.apr



# Lower Duwamish Waterway

## Map 20

### Source tracing samples through September 2010: HPAH

#### Legend

- City limit
- Streams
  - Culvert
  - Open channel
- Combined sewer service area
- Lower Duwamish surface drainage basin
- Diagonal Ave S CSO/SD drainage basin
- Slip 4 drainage basin
- Slip 5 drainage basin
- Slip 6 drainage basin
- Norfolk CSO/EOF/SD drainage basin
- S Nevada St SD basin
- S Myrtle St SD basin
- S Brighton St SD basin
- 7th Ave S SD basin
- SW Kenny St SD/T115 CSO drainage basin
- 2nd Ave S SD basin
- T117 drainage basin
- Highland Park Wy SW SD basin
- 1st Ave S SD (west) basin
- SW Dakota St SD basin
- SW Idaho St SD basin

#### HPAH (ug/kg dw)

- <12,000
- 12,001 - 17,000
- 17,001 - 34,000
- 34,001 - 200,000
- >200,000

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



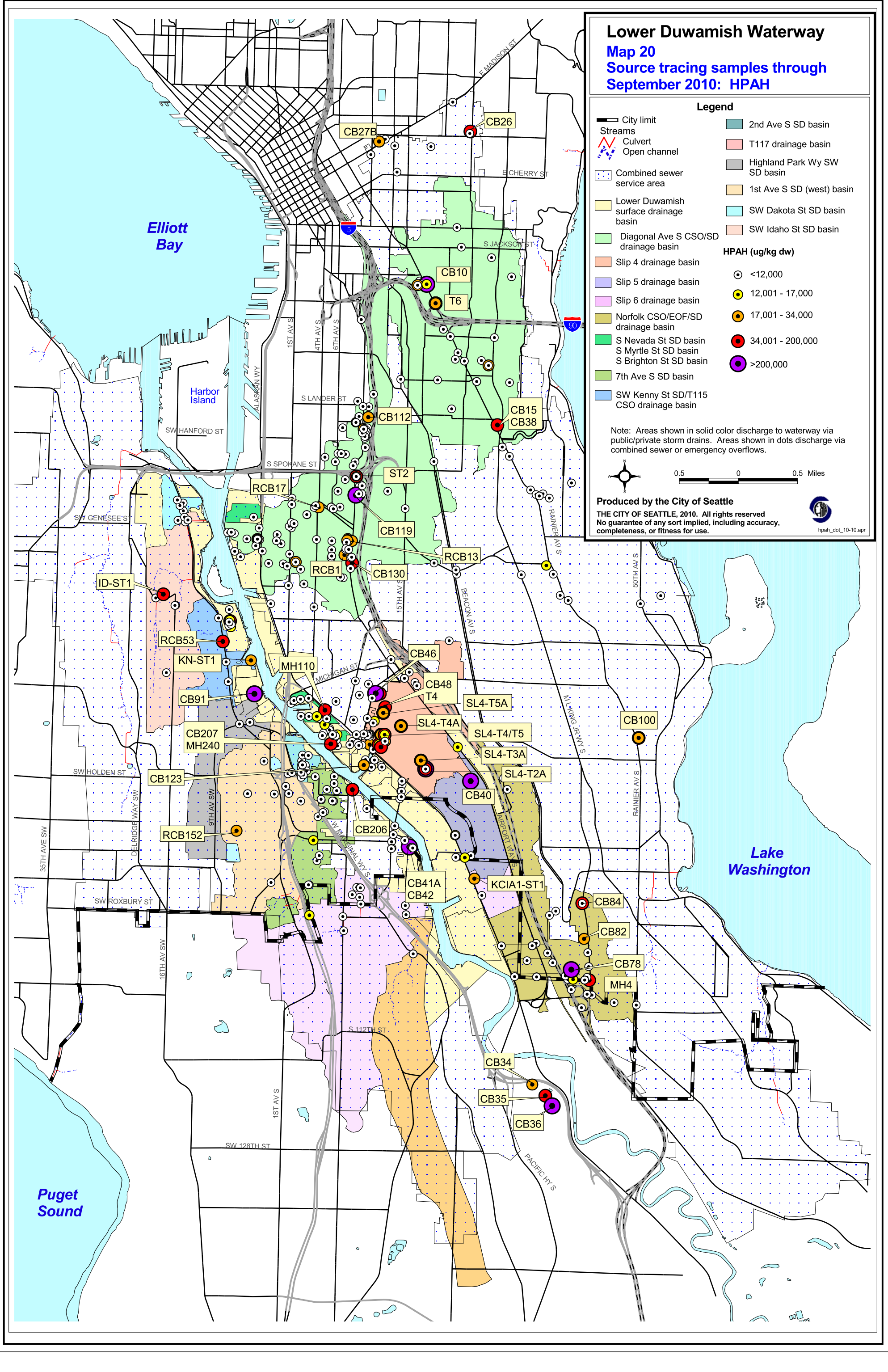
0.5 0 0.5 Miles

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hpah\_dot\_10-10.apr





# Lower Duwamish Waterway

## Map 21

Source tracing samples through September 2010: BEHP

### Legend

- City limit
- Streams
  - Culvert
  - Open channel
- Combined sewer service area
- Lower Duwamish surface drainage basin
- Diagonal Ave S CSO/SD drainage basin
- Slip 4 drainage basin
- Slip 5 drainage basin
- Slip 6 drainage basin
- Norfolk CSO/EOF/SD drainage basin
- S Nevada St SD basin
- S Myrtle St SD basin
- S Brighton St SD basin
- 7th Ave S SD basin
- SW Kenny St SD/T115 CSO drainage basin
- 2nd Ave S SD basin
- T117 drainage basin
- Highland Park Wy SW SD basin
- 1st Ave S SD (west) basin
- SW Dakota St SD basin
- SW Idaho St SD basin

### BEHP (ug/kg dw)

- <1,300
- 1,301 - 1,900
- 1,901 - 3,800
- 3,801 - 100,000
- >100,000

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.



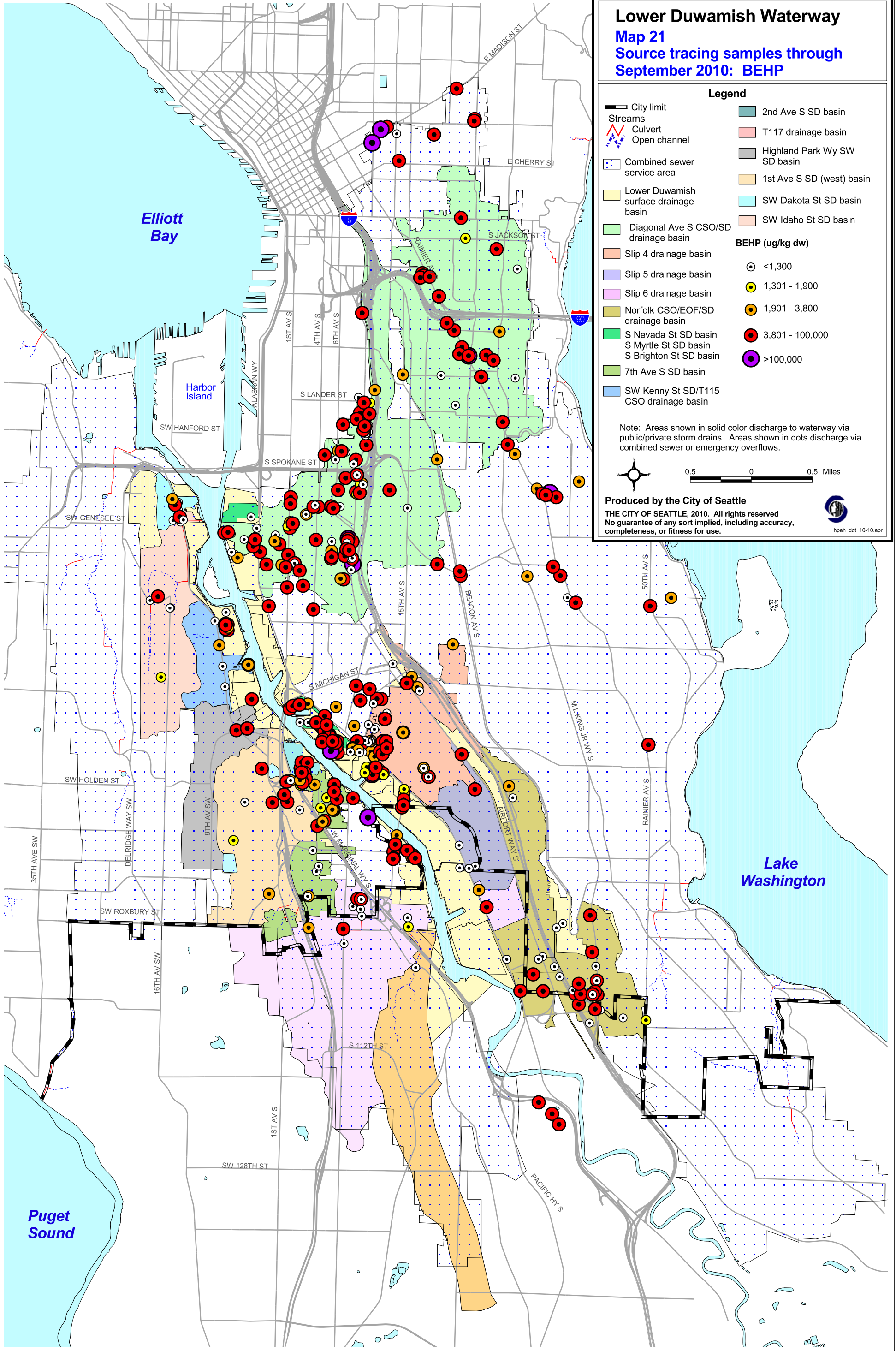
0.5 0 0.5 Miles

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





















# Lower Duwamish Waterway

## Map 22

### Water quality complaints and spills through September 2010

#### Legend

- Streams**
-  Culvert
  -  Open channel
- Service Areas**
-  Combined sewer service area
  -  Lower Duwamish surface drainage basin
  -  Diagonal Ave S CSO/SD drainage basin
  -  Slip 4 drainage basin
  -  Slip 5 drainage basin
  -  Slip 6 drainage basin
  -  Norfolk CSO/EOF/SD drainage basin
  -  S Nevada St SD basin
  -  S Myrtle St SD basin
  -  S Brighton CSO/SD basin
- Other Basins**
-  7th Ave S SD basin
  -  SW Kenny St SD/T115 CSO drainage basin
  -  2nd Ave S SD basin
  -  T117 drainage basin
  -  Highland Park Wy SW SD basin
  -  1st Ave S SD (west) basin
  -  SW Dakota St SD basin
  -  SW Idaho St SD basin
- Other Symbols**
-  City limit
  -  Water quality complaints (2005 through September 2010)
  -  Spills (September 2007 through September 2010)

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

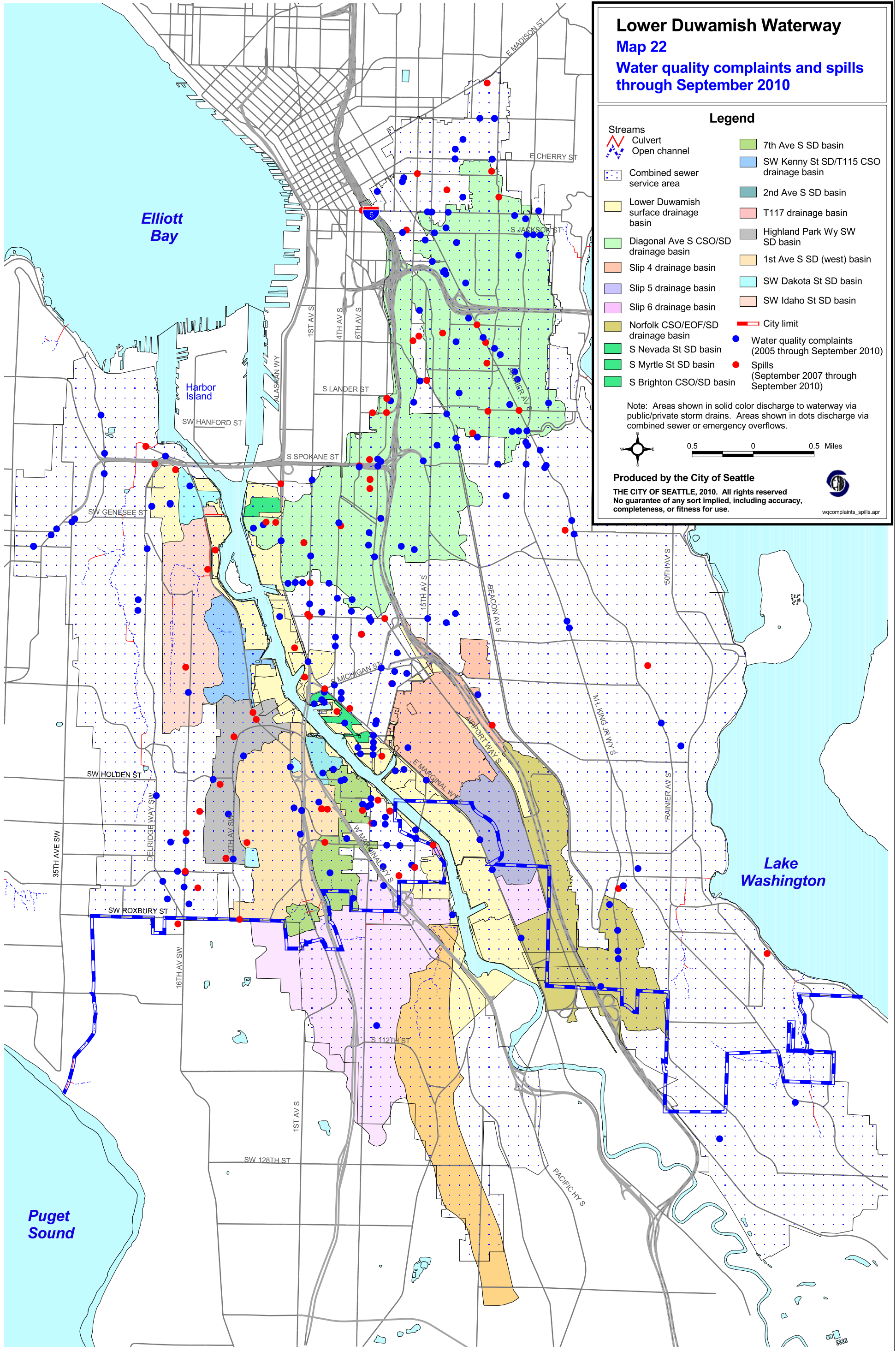


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wqcomplaints\_spills.apr



# Lower Duwamish Waterway

## Map 23

### Street sweeping pilot study test sites

#### Legend

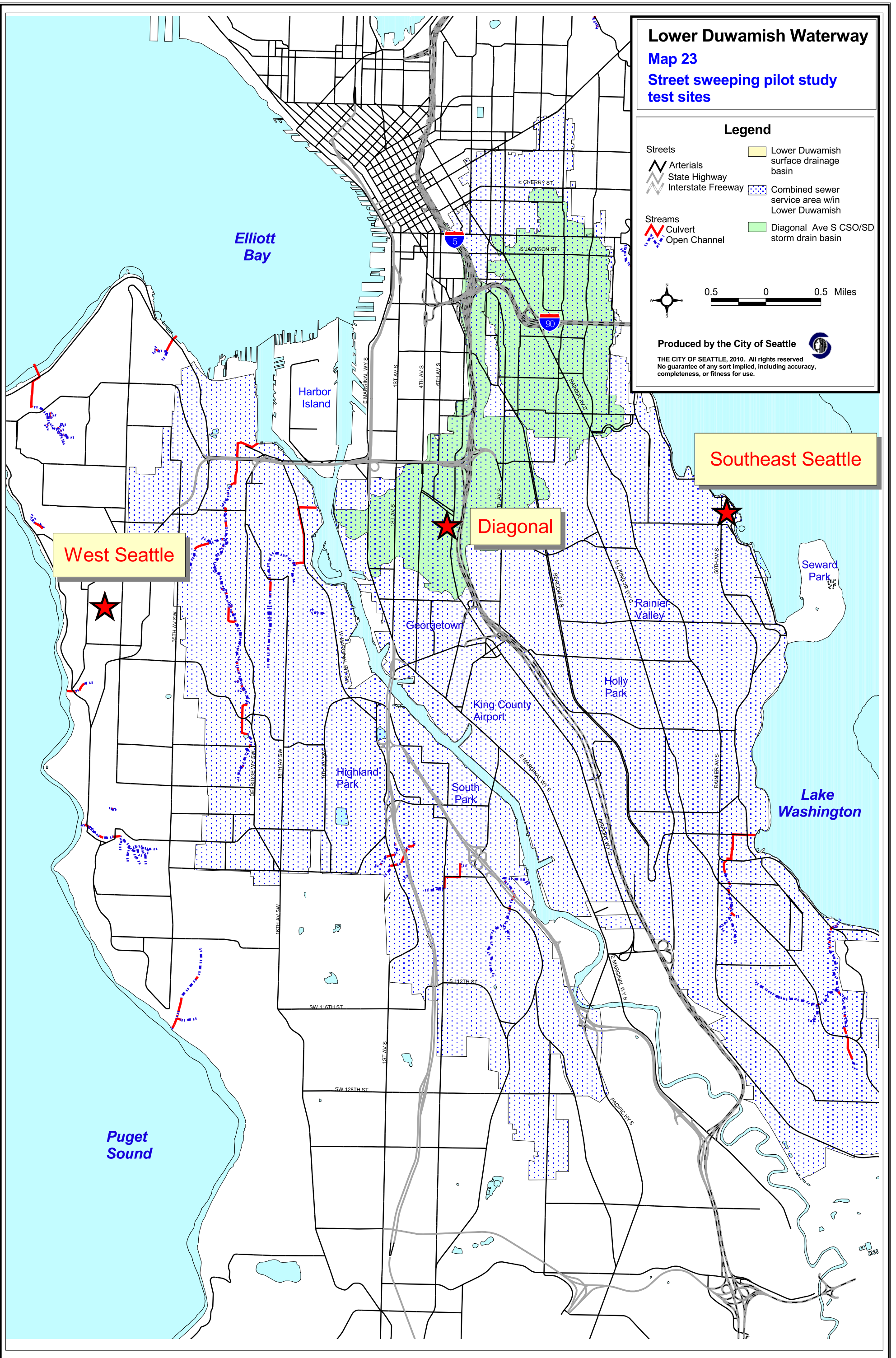
- Streets**
- Arterials
  - State Highway
  - Interstate Freeway
- Streams**
- Culvert
  - Open Channel
- Lower Duwamish surface drainage basin
- Combined sewer service area w/in Lower Duwamish
- Diagonal Ave S CSO/SD storm drain basin



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






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# Lower Duwamish Waterway Map 24 Combined sewer overflow locations in the Diagonal Ave S CSO/SD:

## Legend

-  Diagonal combined sewer service area
-  Diagonal storm drainage basin
-  LDW storm drainage basin
- Utilities**
-  Storm drain
-  Sanitary sewer
-  Combined sewer
-  King County mainline

- Combined sewer overflows**
-  King County CSO
-  Seattle CSO

Note: Areas shown in solid color discharge to waterway via public/private storm drains. Areas shown in dots discharge via combined sewer or emergency overflows.

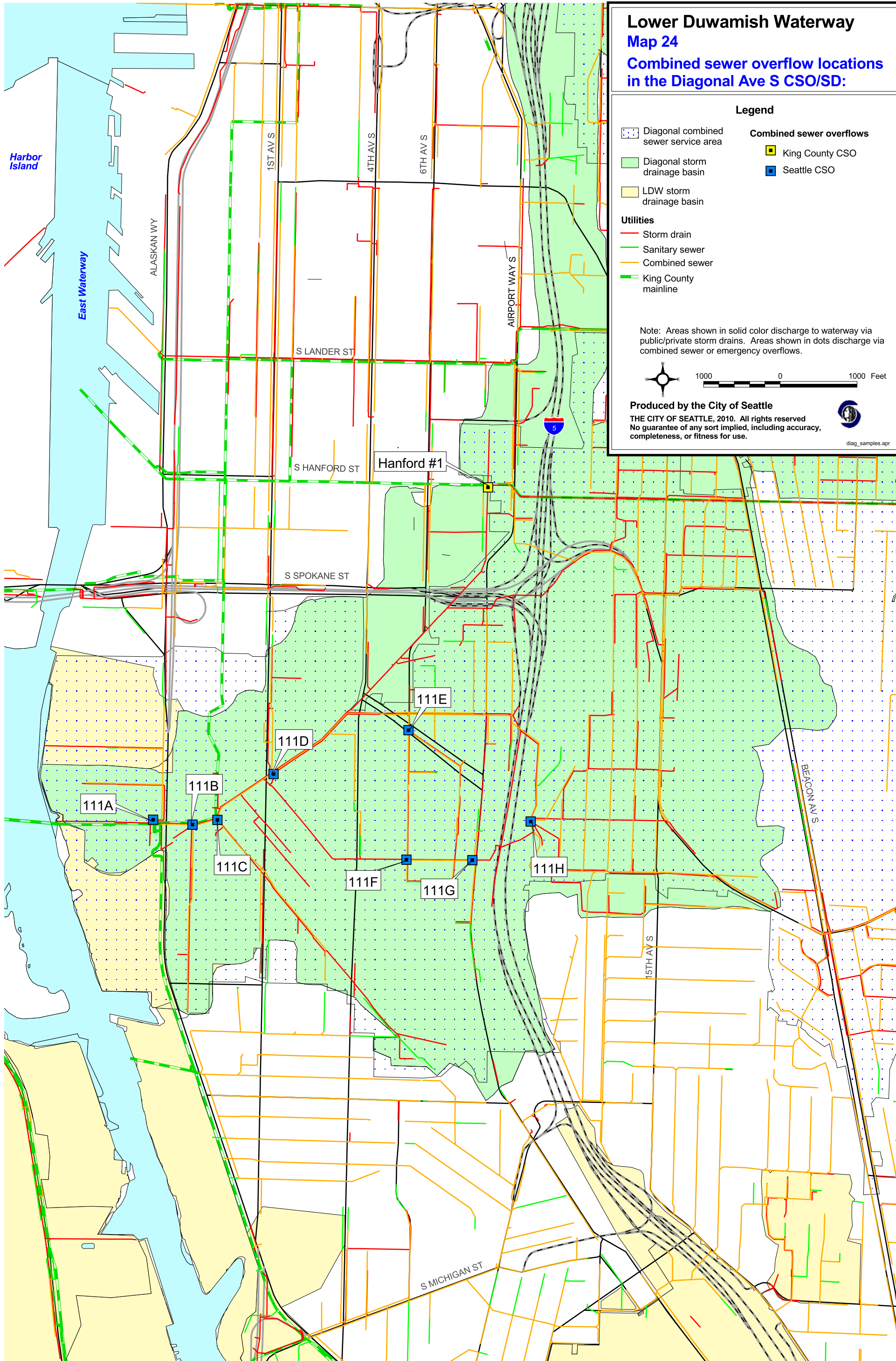


1000 0 1000 Feet

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diag\_samples.apr



**Lower Duwamish Waterway  
Map 25  
Land use in Diagonal Ave S CSO/SD  
storm drain basin**

**Legend**

 City limits

**Land Use**

 Commercial

 Schools

 Industrial

 Vacant

 Single family residential

 Park/open space

 Multi-family residential

 Government service



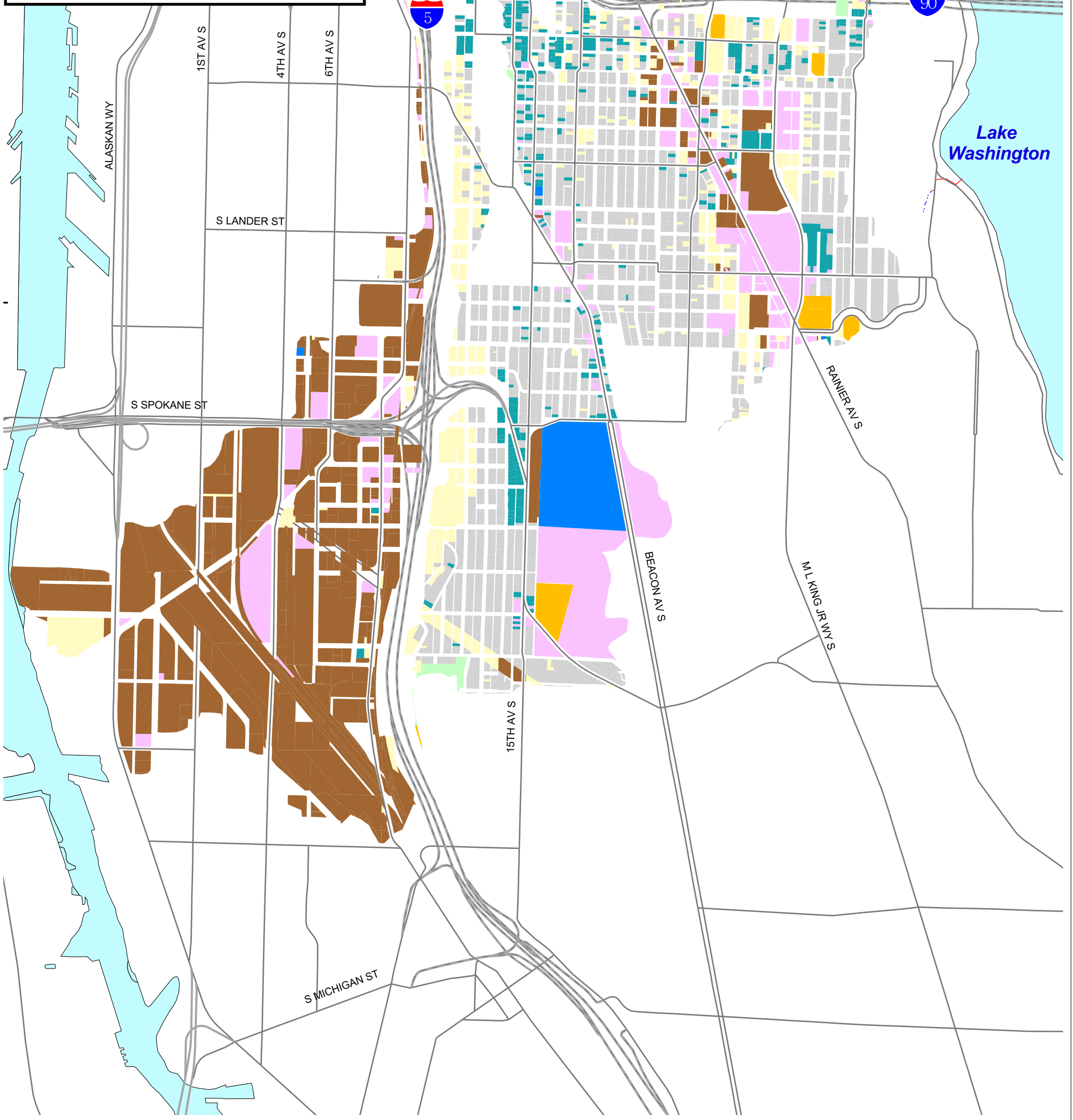
1000 0 1000 Feet

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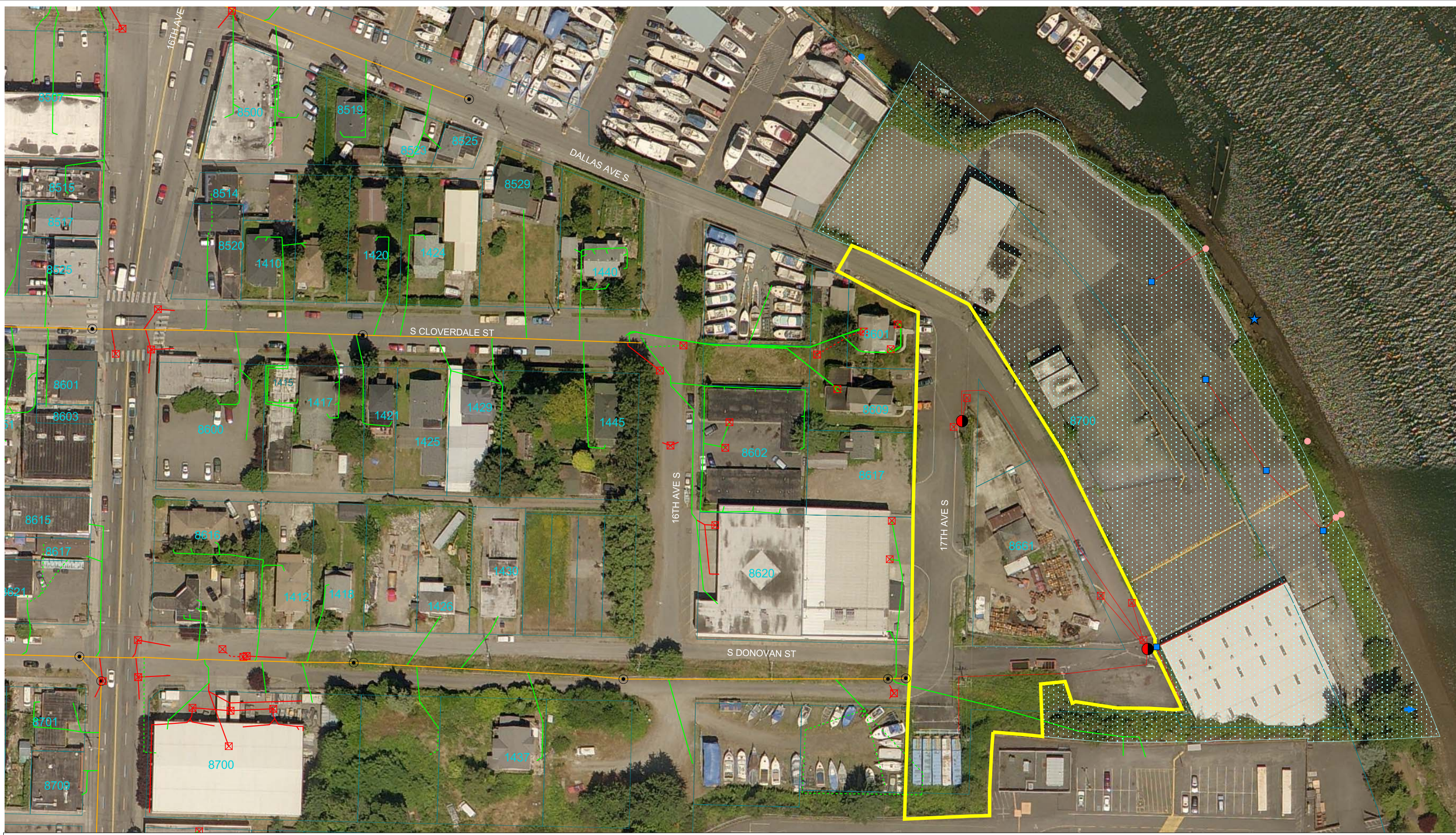
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diag\_landuse.apr





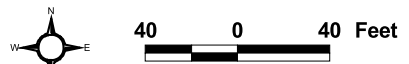


- Approximate boundaries street drainage basin
- Approximate boundaries T117 drainage basin

- Utilities**
- Storm drain
  - Sanitary sewer
  - Combined sewer

- Structures**
- Catch Basin
  - Catch Basin - Lg. Inlet
  - Inlet (Street Drain)
  - Sand Box
  - Port catch basin
  - Pump station

- Outfalls**
- Port storm drain
  - Private storm drain
  - ★ Seep
  - ▶ Ditch



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**Lower Duwamish Waterway**  
**Map 26**  
**Terminal 117 and adjacent streets**  
**Drainage basins**





**Utilities**

- Storm drain
- Sanitary sewer
- Combined sewer

**Structures**

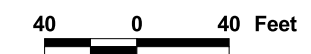
- ⊠ Catch Basin
- ⊠ Catch Basin - Lg. Inlet
- ⊠ Inlet (Street Drain)
- Sand Box
- Port catch basin
- Pump station

**Outfalls**

- Port storm drain
- Private storm drain
- ★ Seep
- ➔ Ditch

**Sampling locations**

- Previous sampling locations
  - March 2010 sampling locations
- 180 NJ 310 total PCBs (ug/kg dw)
- 280 NJ 340 SW1



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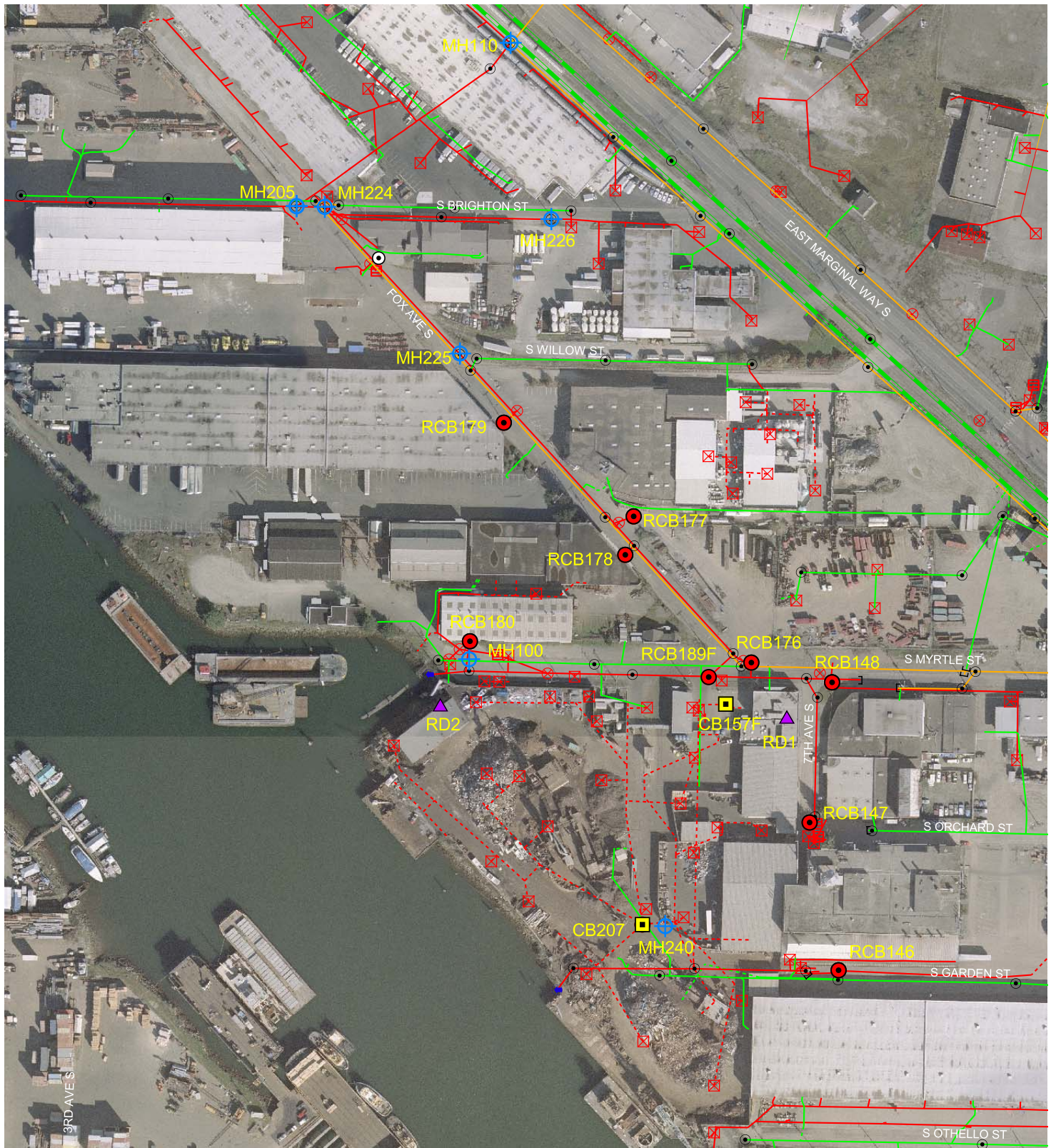
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T117\_drainage\_system\_pcb.sapr

**Lower Duwamish Waterway**  
**Map 27**  
**Terminal 117 adjacent streets**  
**March 2010 source tracing samples**





## Lower Duwamish Waterway

### Map 28

### Sample locations in S Myrtle St SD, S Garden St SD, and S Brighton St CSO/SD

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#### Utilities

- Storm drain
- Sanitary sewer
- Combined sewer
- - - King County interceptor

#### Structures

- Maintenance hole
- ⊠ Catch basin

#### Sample locations

- Onsite catch basin
- ROW catch basin
- ▲ Roof dirt
- + Sediment trap
- ⊕ Inline grab

