

Completion Summary for City of Portland Outfall Basin 19

1 Summary

The City of Portland (City) has been addressing source control concerns related to the City conveyance systems for more than four decades, and a number of City programs have evolved to meet changing regulatory requirements and watershed health objectives. Following the 2000 listing of Portland Harbor on the National Priorities List, the City initiated a new partnership with the Oregon Department of Environmental Quality (DEQ) Cleanup Program to identify specific sources of contaminants to City stormwater conveyance systems in the harbor that were not being adequately controlled. This report summarizes the results of this collaborative effort in Outfall Basin 19.

This Completion Summary includes a weight-of-evidence evaluation to demonstrate that source identification is complete and a summary of source controls (implemented or planned) that will control future contaminant discharges to the Willamette River.

Basin 19 is located on the west side of the Willamette River in the Guilds Lake Industrial Area. Most of the basin is drainage from Forest Park, with about 30 percent of the basin developed for industrial use. Development in the industrialized portion of Basin 19 includes a variety of industrial operations (e.g., bulk oil transferring, manufacturing, recycling, and transportation-related activities) as well as some commercial businesses. In addition, Oregon Department of Transportation (ODOT) Highway 30 (NW St. Helens Road) and a railroad corridor cross through the basin.

Evaluation of inriver sediment data near the outfall indicated the presence of sediment contamination adjacent to and upstream of the outfall, prompting the City to evaluate whether there may be major sources in the basin. Source evaluations were focused on the developed portion of the basin. The City conducted source tracing within the basin for a broad array of contaminants and subsequently narrowed the source tracing focus to polychlorinated biphenyls (PCB) based on source tracing results and on an evaluation of stormwater and storm solids samples from the downstream end of the basin.

The City identified multiple sources of PCBs and other contaminants within the basin. These sources, and the majority of the industrial sites within the basin, are conducting or have completed investigations under DEQ Cleanup Program authority, are implementing source control measures (SCM) under DEQ oversight, have been remediated, and/or have been redeveloped under the City's Stormwater Management Manual. Analysis of stormwater monitoring data collected from the basin indicates that contaminant concentrations are decreasing. Ongoing SCM implementation at these upland sites, together with current and future source control programs in the basin, are expected to provide necessary source control for Outfall 19 discharges.

Because the City has identified all major sources of contaminants to the basin and necessary controls are being implemented under DEQ and/or City authority, the City has met the remedial investigation (RI)/SCM objectives for Basin 19.

2 Introduction

This Completion Summary presents a weight-of-evidence evaluation of whether further source investigation is needed in Basin 19, and the rationale for concluding that future discharges from the basin are not likely to be significant sources of contaminants to river sediment. The purpose of this report is to demonstrate that, for Basin 19, the City has met the joint RI/SCM objectives of the August 13, 2003, intergovernmental agreement (IGA) between the City and DEQ. Together the City and DEQ identified all major sources of contamination to the basin and are using respective authorities to ensure that source controls are implemented where needed.

This report is included in Appendix A of the *Municipal Stormwater Source Control Report for Portland Harbor* (Municipal Report), which provides additional background and detail regarding the City's harborwide source control efforts, including regulatory and non-regulatory programs to address current and future sources and to minimize recontamination potential.

3 Outfall and Basin Setting

3.1 Basin Location and Configuration

Outfall 19 discharges to the west side of the Willamette River at approximately River Mile 8.4, in the Guilds Lake Industrial Area. The drainage area for this system (Basin 19) is approximately 486 acres. The majority of the conveyance system drains a portion of Forest Park. Remaining drainage is from industrial properties, adjacent roadways, and a section of the ODOT facility (Highway 30). Figure 1 shows the location of the outfall and drainage basin boundary and provides an overview of the associated stormwater conveyance system.

Additional detail on the Outfall 19 stormwater conveyance system and associated drainage basin is included in the *Source Investigation Update Report City of Portland Outfall Basin 19* (BES, 2010a).

3.2 Land Use and Potential Upland Sources

Approximately 70 percent of the land in Basin 19 is open space within Forest Park. The developed portion of the basin is zoned heavy industrial, with a small portion used for major transportation (i.e., state highway). A variety of industrial operations currently takes place in the developed portion of the basin; these operations include bulk oil transferring, pipe fabricating, wire fabricating, recycling, institutional cleaning, construction, transportation-related activities (e.g., warehousing and trucking), industrial coating, printing, and a railroad corridor. Although the developed portion is zoned industrial, current land use on some tax lots is commercial (e.g., office, hotel, grocery, equipment rental, retail).

Sites that were identified as potential upland sources include the 17 sites in the basin that are in the DEQ Cleanup Program, as listed in DEQ's Environmental Cleanup Site Information (ECSI) database. Table 1 lists these sites and indicates the associated contaminants of interest (COI) and the status of stormwater pathway evaluations. Of these 17 sites, 15 have completed site investigation and remediation or have pending stormwater pathway evaluations under DEQ oversight. DEQ determined that a stormwater pathway evaluation at the remaining two sites either was not needed or a low priority.

Table 1. DEQ Cleanup Program Sites in Basin 19

DEQ Cleanup Program Site	Site COIs ⁽¹⁾	Site Stormwater Pathway Evaluations ⁽²⁾
Anderson Brothers Property (ECSI #970)	VOCs, PAHs, TPH, PCBs, metals, pesticides, phthalates	Source Control Decision/No Further Action Issued
Anderson Portland Properties – Tax Lot 200 (ECSI #5529)	PCBs ⁽³⁾	Source Control Evaluation In Progress
Brazil & Co. (ECSI #1026)	PCBs	Source Control Evaluation In Progress
Calbag Metals (ECSI #2454)	PCBs, metals, phthalates	Source Control Evaluation In Progress
Chapel Steel (ECSI #4920)	PAHs, PCBs, metals, phthalates	Source Control Evaluation Not Needed
Dura Industries (ECSI #111)	Metals	Source Control Evaluation Needed
Front LP Properties (ECSI #1239) : Tube Forgings parcel	VOCs, SVOCs, PAHs, TPH, PCBs, metals, phthalates	Source Control Evaluation In Progress
Greenway Recycling (ECSI #4655)	VOCs, TPH, PCBs, metals ⁽⁴⁾	Source Control Decision / No Further Action Issued
Mt. Hood Chemical Corp. (ECSI #81)	VOCs	Source Control Evaluation In Progress
Mt. Hood Chemical Property (ECSI #1328)	Not listed ⁽⁵⁾	Need for Source Control Evaluation to be Determined/ Low Priority
ODOT - Portland Harbor Source Control Evaluation (ECSI #5437)	Not listed ⁽⁵⁾	Source Control Evaluation In Progress
Chevron USA Asphalt Refinery (ECSI #1281)	PAHs, TPH, metals	Source Control Decision/No Further Action Issued
Penske Truck Leasing – NW Yeon (ECSI #5055)	None	Source Control Decision/No Further Action Issued
PGE - Forest Park Property (ECSI #2406)	PCBs ⁽⁴⁾	Source Control Decision/No Further Action Issued
Kittridge Distribution Center (ECSI #2442)	None	Source Control Decision/No Further Action Issued
Unocal - Willbridge Terminal (ECSI #1549/177)	VOCs, TPH, metals	Source Control Evaluation In Progress
Willbridge Yard (BNSF) (ECSI #3395)	Metals	Source Control Evaluation In Progress

Notes:

PAHs = polycyclic aromatic hydrocarbons; SVOCs = semivolatile organic compounds; TPH = total petroleum hydrocarbons; VOCs = volatile organic compounds; COIs = contaminants of interest; ECSI = Environmental Cleanup Site Information; PCBs = polychlorinated biphenyls; BNSF = Burlington Northern Santa Fe

- (1) Unless otherwise noted, site COIs are those identified in Appendix Q (Source Control Inventory Tables) of the Portland Harbor RI/FS Draft Feasibility Study (FS) (Anchor et al., 2012).
- (2) Source: DEQ Milestone Report, Figure 1b, "Status of Stormwater Source Control Evaluations, January 2013" (DEQ, 2013).
- (3) Site joined Cleanup Program in September 2011 and is not listed in Appendix Q of the draft FS. ECSI database (DEQ, 2012) lists PCBs in soil as site contaminants.
- (4) Source: Table 4.2-2 in the Portland Harbor RI/FS Draft Final Remedial Investigation Report (Integral et al., 2011).
- (5) Site is not listed in Appendix Q of the draft FS or Table 4.2-2 of the Draft Final RI, and site COIs are not listed in the ECSI database.

Industrial sites covered or historically covered by National Pollutant Discharge Elimination System (NPDES) stormwater regulations also were considered as potential sources of pollutants to the City conveyance system. Sites within the basin that currently hold, or historically had, NPDES permits to discharge to the Basin 19 conveyance system are listed in Table 2. Sites with current NPDES permits are shown in Figure 1. Note that the City and ODOT both have NPDES Municipal Separate Storm Sewer System (MS4) stormwater permits that cover basin drainage areas.

Table 2. Current⁽¹⁾ and Historical NPDES Permit Coverage in Basin 19

Address	Company	Permit Type	Time Period
4025 NW Express	Western Wire Works	Stormwater (1200-Z)	1998 – Present
3865 NW St Helens	Christenson Oil	Stormwater (1200-Z)	1997 – Present
4000 NW St Helens	Consolidated Sawmill Machinery International Inc.	Stormwater (1200-L)	1995 – 1996
4015 NW St Helens	American Transport Inc.	Stormwater (1200-Z)	2001 – 2002
	Portland Truck and Diesel ⁽²⁾	Stormwater (1200-Z)	2003 – 2004
4135 NW St Helens	Greenway Recycling	Stormwater (1200-Z)	2006 – Present
4285 NW Yeon	ABF Freight Systems Inc.	Stormwater (1200-T & 1200-Z)	1993 – 2001
	FTL Inc. ⁽³⁾	Stormwater (1200-Z)	2001 – 2005
4444 NW Yeon	Mount Hood Chemical	Stormwater (1200-H & 1200-Z))	1992 – 2009
4927 NW Front	Acme Trading & Supply Co. ⁽⁴⁾	Stormwater (1200R & 1200-Z)	1992 – 2003
4959 NW Front	Asset Recovery Inc.	Stormwater (1200-R)	1992 – 1996
5200 NW Front	Tube Forgings of America Inc.	Stormwater (1200-L & 1200-Z)	1992 – Present
5501 NW Front	Chevron Willbridge Asphalt	Cooling Water (100-J)	1985 – 1995
		Stormwater (1200-H & 1200-Z)	1992 – 2005
	Paramount of Oregon	Stormwater (1200-Z)	2005 – 2009
	Paramount Petroleum Corporation	Stormwater (1200-Z)	2009 – Present
5814 NW Doane	BNSF Willbridge Yard	Stormwater (1200-Z)	1999 – 2005
5528 NW Doane	Unocal Terminal	Stormwater (Individual & 1200-Z)	1984 – 1996
	Tosco Corporation	Stormwater (1300-J)	1997 – 2003
	Conoco Phillips	Stormwater (1300-J & 1200-Z)	2004 – 2012
	Phillips 66 Company	Stormwater (1200-Z)	2012 – Present

Notes:

NPDES = National Pollutant Discharge Elimination System; BNSF = Burlington Northern Santa Fe

(1) Current permits are indicated in bold.

(2) Permit also covered Northwest Fleet Products, and Baker Transport as tenants.

(3) S and H Trucking Co. also covered under permit as a tenant.

(4) Calbag Metals assumed operations at the site under Acme's stormwater permit in 1995.

3.3 Outfall Setting

Outfall 19 discharges to an area of potential concern (AOPC 18) identified by the U.S. Environmental Protection Agency (EPA) based on elevated concentrations of PCBs, pesticides, and other contaminants in river sediment (EPA, 2010). In addition to Outfall 19, one other City outfall (Outfall 19A) and nine non-City outfalls discharge to AOPC 18; Outfall 19 is also immediately downstream of AOPC 19 and the affiliated outfalls.

Outfall 19 is located in an embayment where tugboats and barges are docked and several overwater structures are present (see Figure 1). Redeposition of contaminated sediment may occur as propwash disturbs and resuspends material into the water column. This setting makes it difficult to identify specific contaminant pathways to the river based on the nearby inriver sediment data alone.

4 Basin Screening and Source Investigations

The City identified Basin 19 as a Priority 1 for source tracing based on the elevated contaminant concentrations in the vicinity of Outfall 19 (CH2M HILL, 2004). Priority 1 basins are considered the highest priority for identifying sources. The subsequent *Phase I Report for City of Portland Priority 1 Basins* identified PCBs, polycyclic aromatic hydrocarbons (PAH); phthalates, and metals (chromium, copper, lead, nickel, and zinc) for source tracing based on further evaluation of the inriver sediment data (GSI, 2006).

The City conducted comprehensive source investigations throughout the system to trace major upland sources and pathways to the City stormwater conveyance system and to identify the need for SCMs. The City applied a conservative source-tracing approach in the basin and investigated a broad array of contaminants. Results of the majority of City source tracing activities are presented in the *Source Investigation Update Report City of Portland Outfall Basin 19* (BES, 2010a).

In 2010, the City also collected stormwater and stormwater solids data from the downstream end of the basin (i.e., representing all collective discharges to the system) as part of the City's stormwater screening evaluation (BES, 2010b). Based on this evaluation and using a conservative screening approach, PCBs were identified as potentially warranting further source tracing in Basin 19 because concentrations indicated the presence of a source(s) to the basin (BES, 2010b). Other potential COIs previously identified for this basin had low concentrations in the whole-basin stormwater and/or sediment trap samples. Subsequent review of upland site status as part of the stormwater screening evaluation indicated no immediate need for further City source tracing in Basin 19 because stormwater pathway evaluations were underway at several identified sources of PCBs (BES, 2010b) and three additional PCB sources identified by the City were likely to enter into DEQ Cleanup Program agreements for investigation.¹

¹ City source investigations in Basin 19 included targeted investigations of discharges from the following three sites that subsequently entered into Cleanup Program agreements with DEQ to investigate onsite sources of PCBs and other contaminants to Basin 19: Brazil & Co. (ECSI #1026), O'Neill Transfer & Storage Co. (former Calbag Metals – ECSI #2454), and Anderson Portland Properties (ECSI #5529).

The City also identified additional stormwater screening for pesticides as a follow-up step, based on detections in one stormwater sample (BES, 2010b). Additional whole-basin stormwater sampling was conducted and results confirmed that major sources of pesticides were not present in Basin 19 and source tracing was not necessary (BES, 2012).

Investigations and evaluations completed by the City and others in the Basin 19 conveyance system are listed in Table 3.

Table 3. Investigations in the Basin 19 Stormwater Conveyance System

Data Collection Period	Party	Purpose	Documentation
2000	City	Compile basin background information to identify potential sources.	Preliminary Evaluation of City Outfalls (Westshore) (BES, 2000)
2002	City	Evaluate inriver sediment data near City outfalls to prioritize basins for source tracing.	Programmatic Source Control Remedial Investigation Work Plan (CH2M HILL, 2004)
2003	City	Collect solids data from the Basin 19 conveyance system to identify subbasins that may need further source investigation	Source Investigation Update Report, City of Portland Outfall Basin 19 (BES, 2010a)
2005	Calbag Metals	Collect solids data from the Basin 19 conveyance system during cleaning of line segment receiving Calbag discharges, concurrent with data collection from onsite system, as part of the site source control evaluation.	Environmental Assessment Report, Storm Water Discharge System, Former ACME Supply & Trading Facility (Creekside, 2005)
2006	City	Compile existing information to focus source tracing activities based on evaluation of observed contaminants and identified sources.	Phase I Report for City of Portland Priority 1 Basins (GSI, 2006)
2006	City	Fulfill Prospective Purchase Agreement requirement to evaluate Basin 19 for potential offsite migration of contaminants from PGE Forest Park site (ECSI #2406).	Technical Memorandum, PGE - Forest Park Stormwater System Investigation (BES, 2007)
2007	Lower Willamette Group	Collect harborwide stormwater and sediment trap data to develop land use stormwater loading estimates for input to the inriver fate and transport model.	Portland Harbor RI/FS Round 3A and 3B Stormwater Data Report. Prepare for the Lower Willamette Group (Anchor and Integral, 2008)
2007	City	Investigate offsite migration of contaminants in storm system solids from the Calbag Metals site (ECSI #2454).	City Outfall Basin 19 Inline Solids Sampling at the Former Calbag Metals Site (BES, 2008)
2007-2008	City	Investigate offsite migration of contaminants in storm system solids from the Calbag Metals site (ECSI #2454).	City Outfall Basin 19 Inline Solids Sampling at the Former Calbag Metals Site (BES, 2009)
2006-2008	City	Evaluate status of basin source identification and control.	Source Investigation Update Report, City of Portland Outfall Basin 19 (BES, 2010a)
2006-2009	City	Evaluate stormwater data from City	Stormwater Evaluation Report,

Data Collection Period	Party	Purpose	Documentation
		outfalls to identify additional source tracing needs.	City of Portland Outfall Project (BES, 2010b)
1999-2010	City	Evaluate effectiveness of City stormwater management programs within Basin 19 via stormwater trend analyses.	Basin 19 Stormwater Quality Trend Analyses, Effectiveness of City Stormwater Source Control Efforts TM (BES, 2011a)
2010	City	Investigate offsite migration of contaminants from the Anderson Portland Properties site (ECSI #5529).	Basin 19 Source Investigation of Lateral Connection in the Vicinity of NW St. Helens and NW Yeon Avenues (BES, 2011b)
2009-2011	City	Determine whether investigation was needed to identify pesticides sources.	Outfall Basin 19 Stormwater Investigation (BES, 2012)

Notes:

ECSI = Environmental Cleanup Site Information

The City's source investigation work was used by DEQ to focus upland site investigations and to identify sites for DEQ Cleanup Program consideration. Joint investigation by the City and DEQ resulted in the identification of one or more sources of PCBs and other contaminants in Basin 19.

5 Completion of Source Identification

The lines of evidence evaluated to verify that source tracing is complete and all major sources have been identified include (1) source tracing activities conducted in the basin (and upland site information), (2) stormwater data at the end of the outfall, and (3) land use at remaining upland areas not undergoing DEQ Cleanup Program investigation or redevelopment. Findings from this evaluation are summarized below.

- Source Tracing Results:** Upland sources of all contaminants selected for source tracing have been identified. Following a preliminary review of LWG stormwater and sediment trap data collected to represent the basin, the City focused its source tracing efforts on PCBs. Investigation and collaboration with DEQ confirmed that three upland sites discharging to Basin 19 (Anderson Portland Properties, Brazil & Co., and Calbag Metals/O'Neill Transfer) detected PCBs in site soils at considerably higher concentrations than those detected in the Basin 19 conveyance system. PCB sources also may be discharging to two private multiparty lines in the east branch of the basin based on data collected by the City from lateral connections to Basin 19 (BES, 2010a) and stormwater data collected at the Tube Forgings parcel of the Front Avenue LP site confirm that PCBs are being discharged to the storm line along NW Front Avenue (Bridgewater, 2012). Source tracing activities at other upland sites in the basin also identified PCBs onsite, although concentrations do not indicate that these sites are major sources to the basin. All upland sites that identified PCBs in site soil and/or stormwater are being or have been evaluated under the DEQ Cleanup Program and/or have been redeveloped under the City Stormwater Management Manual.

- *Outfall19 Stormwater Data:* The City MS4 program performed long-term stormwater monitoring at Outfall 19 between 1995 and 2011. Although PCBs were not included in the analytical scope until 2006, a trends analysis of City and site-specific data indicates reductions in other contaminant concentrations (i.e., metals) over time (BES, 2011a). The trends analysis report concludes that City stormwater management programs have been effective in reducing pollutant discharges to the Basin 19 conveyance system. Given the hydrophobic nature of PCBs and the tendency for PCBs to bind with the suspended solids fraction in stormwater, implementation of stormwater controls that reduced industrial exposures and solids loading to stormwater also likely reduced loading of PCBs to Basin 19. In addition, evaluation of City and LWG stormwater data from the basin determined that further City source tracing in the basin was not warranted (BES, 2010b and 2012).
- *Upland Investigation Coverage and Land Use:* Approximately 70 percent of the land use in Basin 19 is open space (see Figure 1). Figure 2 displays the spatial extent of upland site investigation and other programmatic controls (see key to figures provided at the beginning of this Appendix). As shown in Figure 2, the majority of developed area has been or is being investigated, or likely does not need investigation because of land use and existing controls. Sites in the developed area are:
 - Investigating the stormwater pathway and implementing SCMs under DEQ Cleanup Program authority;
 - Have completed investigation and remediation activities under DEQ oversight;
 - Have redeveloped under City stormwater code; and/or
 - Are covered under NPDES stormwater regulations.

Land use at sites not covered by DEQ Cleanup or Water Quality Programs or not recently redeveloped consists of residential, commercial, or warehouse uses. Industrial activities exposed to stormwater are being addressed by the DEQ Water Quality NPDES Program and non-industrial activities are not a known or suspected major source of contaminants to the City stormwater conveyance system.

Based on these lines of evidence, the City concludes that Basin 19 source tracing is complete and all major sources have been identified.

6 Basin Source Controls

The City and DEQ collaborated under their respective authorities to identify control mechanisms for all major sources identified in the basin. Source control for major and minor sources in Basin 19 includes SCMs completed (or planned) at contaminated sites under DEQ Cleanup Program agreements and ongoing City and DEQ programs that are described in the Municipal Report. Source controls implemented in Basin 19 are displayed in Figure 2 and summarized in this section.

One type of programmatic source control is the elimination of stormwater exposures to industrial activities. Table 4 lists sites that hold (or historically held) an NPDES No Exposure Certification (NEC).

Table 4. Sites with No Exposure Certification (NEC) in Basin 19 ⁽¹⁾

Address	Company	NEC Time Period
4015 NW St Helens	Portland Truck and Diesel ⁽²⁾	2004 – 2009
4309 NW St Helens	Western Fluid Power	2000 – 2005
	Western Integrated Technologies	2005 – 2010
4250 NW Yeon	Pronto Distribution	2013 – Present
4322 NW Yeon	Tomra Company	2013 – Present
4330 NW Yeon	Flatline Fabrication	2013 – Present
4338 NW Yeon	Pacific Courier	2002 – 2012
4444 NW Yeon	Benson Industries, LLC	2012 – Present
4466 NW Yeon	Dura Industries	2001 – Present
4468 NW Yeon	Photocraft Inc.	2004 – Present
4488 NW Yeon	Color Magic Inc.	2000 – Present
4600/4650 NW St Helens	Electrical Distributing⁽³⁾	2003 – Present
4827 NW Front	Fast Fabricators	2008 – Present
4927 NW Front	O'Neill Transfer & Storage	2003 – 2010
	PPV Inc.	2010 – Present
5041 NW Front	Applied Industrial Technology	2007 – Present
5315 NW St Helens	Goby Walnut & Western Hardwoods	2009 – Present

Notes:

(1) Current NECs are indicated in bold.

(2) NEC also covered PTD, Northwest Fleet Products, and Baker Transport as tenants.

(3) Basco is a tenant of Electrical Distributing and is covered under its permit.

Additional site-specific, programmatic, and conveyance system source controls completed to date for Basin 19 are summarized in Table 5.

Table 5. Basin 19 Source Controls

Site/Area	Source Controls	Implementation Timeframe
Source Control Measures (SCM) at DEQ Cleanup Sites ⁽¹⁾		
Anderson Brothers (ECSI #970)	Contaminated soil removal, cleanout of the onsite stormwater lines, new asphalt surfacing, and additional erosion control BMPs.	2007-2008
Anderson Portland Properties (ECSI #5529)	Contaminated soil removal, capping, and revegetation. Erosion control measures to minimize offsite migration during construction and revegetation process.	2011
Brazil & Co. (ECSI #1026)	SCMs to address offsite migration of contaminated erodible soils on site.	To be determined; SCM planning is in progress.
Calbag Metals (ECSI #2454)	Site storm system cleanout, repaving, and installation of catch basin filters.	2005
	Additional SCMs to be determined.	To be determined.

Site/Area	Source Controls	Implementation Timeframe
Chapel Steel (ECSI #4920)	Not needed. (2)	Not applicable.
Dura Industries (ECSI #111)	To be determined.	To be determined.
Front Avenue LP (ECSI #1239): Tube Forgings parcel	Storm system redevelopment and treatment installation pending.	To be determined.
Greenway Recycling (ECSI #4655)	Soil removal and installation of stormwater treatment.	2007
Mt. Hood Chemical Corp. (ECSI #81)	Soil vapor extraction and groundwater remediation. Abandonment of inactive storm system. Catch basin replacement. Storm system cleaning.	2009 – 2011
	Additional SCMs to be determined.	To be determined.
Mt. Hood Chemical Property (ECSI #1328)	Not needed.(2)	Not applicable
ODOT - Portland Harbor Source Control Evaluation (ECSI #5437)	To be determined.	To be determined.
Paramount Petroleum (Chevron Asphalt) (ECSI #1281)	Oil-water separator already in operation. Cleanout of the onsite stormwater lines.	2006-2009
Penske Truck Leasing (ECSI #5055)	Soil removal, capping, and installation of stormwater treatment.	2007-2008
PGE-Forest Park	Soil removal, capping, removal of site storm system, plugging of former connection to Basin 19.	2000
	Erosion control measures in place and redevelopment pending. Prospective Purchaser Agreement in place for future redevelopment of site by City as Forest Park trailhead.	Ongoing
Schnitzer Kittridge Distribution Center (ECSI #2442)	Site redevelopment included removing former buildings and infrastructure and paving the site.	2004-2007
	DEQ Record of Decision includes engineering and institutional controls, such as cap maintenance and site-specific contaminated soil and groundwater management plans.	Ongoing
Willbridge Terminal – Unocal/ Conoco Philips (ECSI #1549/177)	Oil water separator already in operation. Additional SCMs to be determined.	To be determined.
Willbridge Rail Yard (ECSI #395)	To be determined.	To be determined.
City Conveyance System		
NW Kittridge Avenue	Calbag Metals cleaned the lower portion of the NW Kittridge line to address offsite migration of site-related contaminants.	2005
NW St. Helens Road	Following investigation of City storm lines adjacent to the PGE Forest Park site, the City abandoned lines with residual sediment in the vicinity of NW St. Helens and NW Yeon (BES, 2007).	2006

Site/Area	Source Controls	Implementation Timeframe
Other (Programmatic Source Controls)⁽³⁾		
Greenway Recycling, Penske Truck Leasing	Stormwater Management Manual Requirements.	Ongoing
See site listing in Table 2	NPDES 1200-Z Stormwater Permit Requirements.	Ongoing
See site listing in Table 4	NPDES No Exposure Certifications.	Ongoing

Notes:

ECSI = Environmental Cleanup Site Information; BMP = best management practices; NPDES = National Pollutant Discharge Elimination System; DEQ = Oregon Department of Environmental Quality

- (1) For upland sites, description of SCMs are based on information in DEQ Milestone Report (DEQ, 2013), DEQ source control decisions, and/or reports on file with DEQ.
- (2) DEQ has determined that a source control evaluation is not needed or is a low priority at this site (DEQ, 2013).
- (3) Programmatic source controls are described in detail in the Municipal Report.

All major contaminant sources have been controlled or will be controlled after implementation of SCMs has been completed under the programs identified above.

Other municipal programs (e.g., periodic inspection of and technical assistance to non-NPDES sites, illicit discharge monitoring, street sweeping, etc.) likely provide additional source control benefits in the basin and will help to address minor sources for which specific control measures have not been required. City programs that control current and future contaminant discharges to the conveyance system are described in the Municipal Report.

7 Conclusion

The City completed source tracing in Basin 19 and identified the major sources of contaminants to the City conveyance system. Because necessary SCMs at identified sources have been implemented or are being determined under appropriate DEQ and City regulatory authorities, future discharges from Outfall 19 are unlikely to represent a significant source of contaminants to the river. The City concludes that it has met the RI/SCM objectives of the IGA and requests a source control decision from DEQ for Basin 19.

8 References

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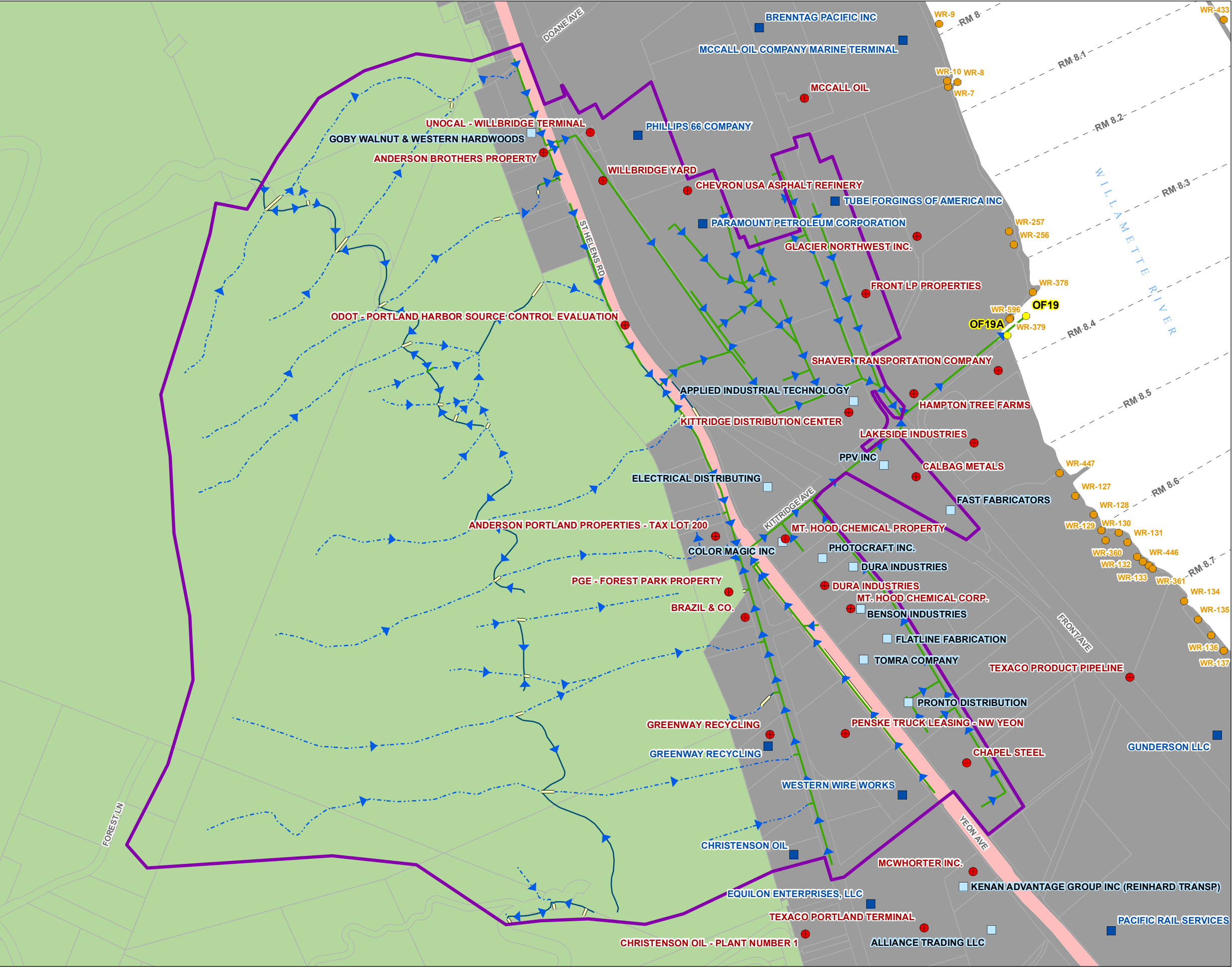
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List of Figures

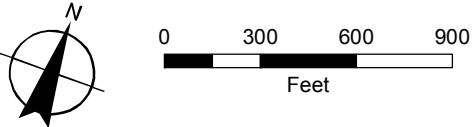
Figure 1: Basin 19 Overview

Figure 2: Basin 19 Upland Site Source Controls

FIGURE 1
Basin 19
Overview

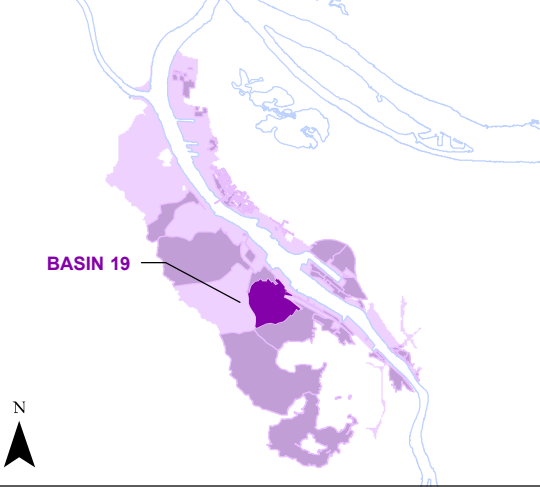


- Basin 19
- DEQ ECSI Site
- NPDES Stormwater Permit
- NPDES No Exposure Certification
- Conveyance System**
 - Storm Line
 - Culvert
 - Ditch
 - Channel
 - City Outfall
 - Non-City Outfall
- Land Use/Zoning**
 - Heavy Industrial
 - Parks and Open Space
 - Major Transportation
- All Other Data**
 - River Mile (RM)
 - Tax Lot
 - Discharges to City Outfall
 - Portland Harbor Hydroboundary



MAP NOTES:
Date: December 31, 2013
Data Sources: BES, METRO

 ENVIRONMENTAL SERVICES
CITY OF PORTLAND
1120 SW Fifth Avenue, Room 1000
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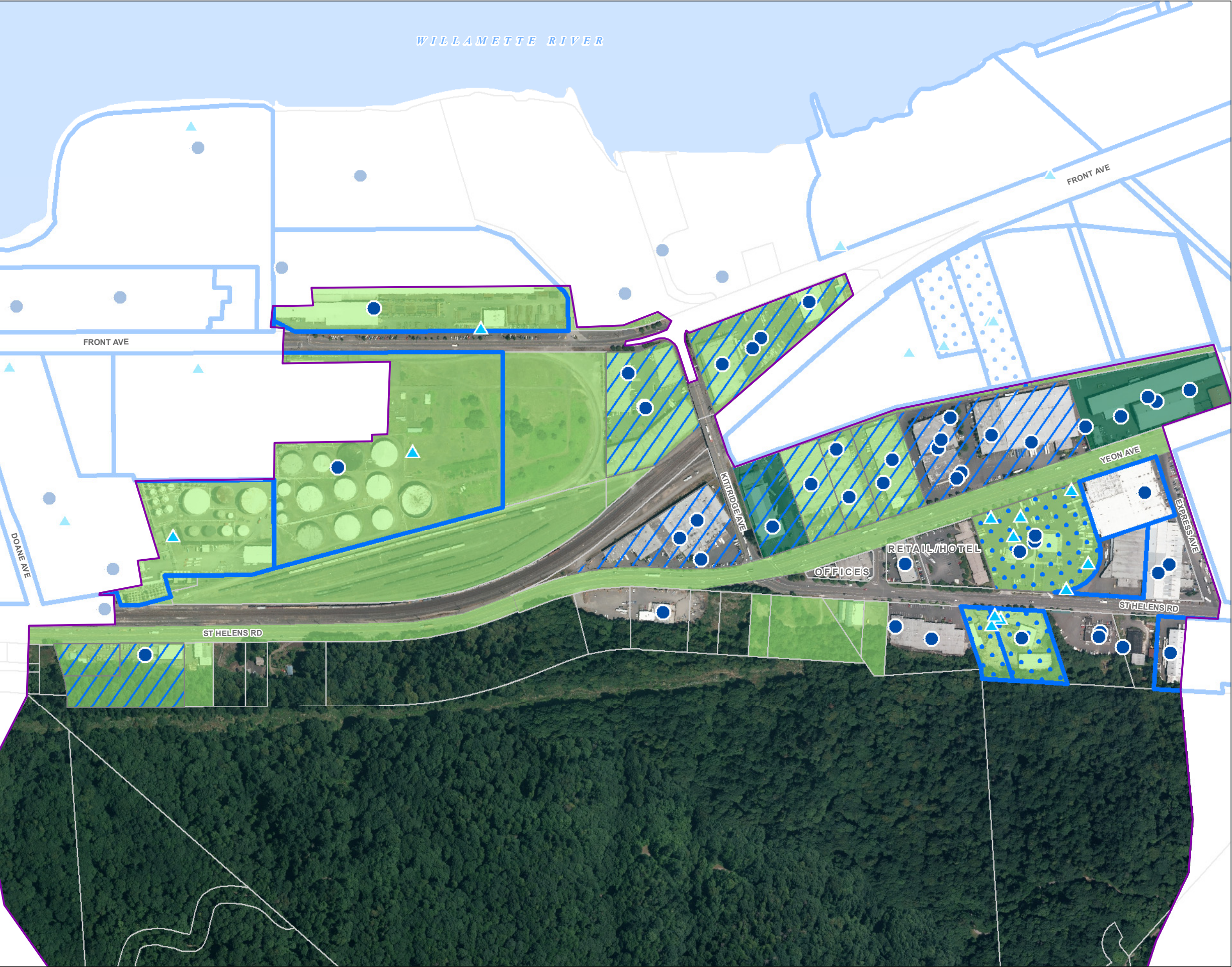


FIGURE 2
Basin 19
Upland Site Source Controls

- Basin 19
- Tax Lot
- DEQ Stormwater SCEs**
 - SCE implemented or pending
 - SCE not needed or low priority
- All Other Features**
 - NPDES Stormwater Discharge Permit
 - NPDES No Exposure Certification
 - >50% of Site Area Redeveloped Under City SWMM
 - Stormwater Treatment Facility
 - Site Inspection - BES Industrial Stormwater Program
 - Discharges to City Outfall
 - Portland Harbor Hydroboundary

NOTE:
The DEQ Milestone Report (DEQ, 2013) indicates an SCE is in progress for Tax Lot 300 of the Anderson Portland Properties Site. However, only Tax Lot 200 of this property is in the DEQ Cleanup Program (ECSI #5529). Therefore, SCE status for Tax Lot 300 is not shown in this figure.



MAP NOTES:
Date: December 31, 2013
Data Sources: BES, METRO, Aerial Photo Taken 2012

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