Completion Summary for City of Portland Outfall Basin 11

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 several 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 11.

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. River sediment in the vicinity of Outfall 11 does not contain elevated concentrations of any contaminants (i.e., the U.S. Environmental Protection Agency [EPA] has not identified the potential need for sediment remediation), and water quality sampling within the basin indicates contaminant concentrations are very low in discharges from this outfall.

Outfall 11 is located on the west side of the river near River Mile (RM) 11.4, approximately a quarter mile downstream of the Broadway Bridge, within the Pearl District. The associated drainage basin includes an upper subbasin composed of open space, residential, and major transportation (i.e., state highway) land uses in the West Hills, and a lower subbasin of mixed land use (light industrial, general employment, commercial, and residential) located in the heart of the Pearl District. Historically a manufacturing and transportation hub, facilities in this district came into increasing disuse as industrial operations largely shifted to other parts of the City starting in the 1950s. In the early 1980s, the Pearl District became the focus of planning efforts to convert industrial properties into the district's current mixed-use, high-density urban neighborhood. The Hoyt Street Railyard historically covered most of the lower subbasin. Almost all of the former industrial tax lots within Basin 11 entered the DEQ Cleanup Program to address releases associated with historical site operations and many of these properties have since been redeveloped.

Most of this redevelopment occurred after City stormwater management requirements were instituted, which required stormwater quality and quantity controls. Many redeveloped properties in the lower subbasin satisfied some of these requirements by constructing stormwater treatment structures (e.g., sedimentation manholes, etc.) offsite in the City's Basin 11 conveyance system. As a result, the stormwater pathway from these sites has been controlled and much of the stormwater generated in the lower subbasin is subjected to treatment before discharging to the river. In the upper subbasin, a series of water quality swales treat runoff from Oregon Department of Transportation (ODOT) rights-of-way. Basin stormwater controls in the upper subbasin also include stormwater management facilities constructed in areas converted from open space to residential or commercial use. Future

stormwater quality is expected to improve as additional areas redevelop and City and state programs continue to be implemented in the basin.

As a result of deeper elevations of some parts of the Basin 11 conveyance system, the lower portion of the basin also represents a potential preferential groundwater pathway to the river. The DEQ Cleanup Program has been working with sites in the lower basin to evaluate and control this pathway.

The City has identified all potential major sources of contaminants to the basin and necessary source controls are being implemented under DEQ and/or City authority; therefore, the City has met the remedial investigation (RI)/Source Control Measures (SCM) objectives for Basin 11.

2 Introduction

This Completion Summary presents a weight-of-evidence evaluation of whether further source investigation is needed in Basin 11, and the rationale for concluding that current and 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 11, the City has met the joint RI/SCM objectives of the August 13, 2003, intergovernmental agreement (IGA) between the City and DEQ.

This report is included in Appendix A of the *Municipal Programmatic 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 11 (also referred to as the Tanner Creek outfall) discharges to the west side of the Willamette River at approximately RM 11.4. As the population expanded in the late 19th century, Tanner Creek was rerouted underground through a system of pipes to the river. The basin currently drains approximately 949 acres within geographically separate subbasins. The upper subbasin (about 874 acres) is located in the West Hills, and the lower subbasin (about 75 acres) is located close to the river, in the Pearl District. Figure 1 shows the location of the outfall and drainage basin boundary and provides an overview of the associated stormwater conveyance system.

As shown in Figure 2, the conveyance system includes numerous water quality treatment facilities designed to reduce total suspended solids loading to Outfall 11. In the upper subbasin, the system includes four water quality swales constructed along Highway 26 to treat runoff from the ODOT right-of-way: the Meadows Area Swale, the South Swales (two swales), and the Jefferson Swale. These swale systems consist of grassy open channels and associated sedimentation removal structures. The lower subbasin includes numerous sediment removal structures installed during redevelopment of the area from industrial to residential and commercial; because of limited area for installing onsite stormwater treatment, many of the properties installed treatment in the City stormwater conveyance system to help meet

stormwater quantity and quality objectives under the City's Stormwater Management Manual (SWMM). Stormwater treatment also was constructed as part of rebuilding the NW Lovejoy Street ramp and as part of the Portland Streetcar expansion to this area. City programs that result in these types of stormwater improvements are described in the Municipal Report.

3.2 Land Use and Potential Upland Sources

Land use within Basin 11 is varied, and the two major subbasins have distinct land use characteristics (see Figure 2).

- The upper subbasin, in the West Hills, is primarily open space and single-family residences. This subbasin also includes ODOT drainage from Highway 26 and a small commercial area near the western boundary.
- The lower subbasin, in the Pearl District, is highly developed. During the last 10 to 15 years, much of the lower subbasin has transitioned from a historically industrial area to a mixed-use residential/commercial/general employment[1] area. Current land use is dominated by condominiums, office buildings, and parks. The U.S. Postal Service operates a processing and distribution center in this area. Union Station is also in this subbasin. There are several tax lots that have been remediated and are currently vacant until redevelopment occurs.

Sites that were identified as potential sources include the 14 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 source control evaluations (SCE). As shown in Figure 3, almost every property within the lower subbasin has been or is being evaluated under the DEQ Cleanup Program. There are a few tax lots that have not entered the DEQ Cleanup Program, including Amtrak rail lines, which generally are pervious (gravel) and have little stormwater runoff.

Table 1. DEQ Cleanup Program Sites in Basin 11

DEQ Cleanup Site	Site COIs(1)	Site Pathway Evaluations	
		Stormwater Pathway(2)	Preferential Groundwater Pathway(3)
Upper Subbasin			
ODOT-US 26: Jefferson Rockfall (ECSI #5752)	TPH, lead, PAHs, VOCs	Need for source control evaluation to be determined (4)	Not listed (4)
ODOT – Portland Harbor Source Control Evaluation (ECSI #5437)	Not listed	Source Control Evaluation In Progress (4)	Not listed (4)
Sylvan Cleaners (#1897)	VOCs in groundwater	NA	No Further Action issued (4)
Lower Subbasin			
Abandoned Tanner Creek Sewer (#5328)	Petroleum hydrocarbons, VOCs, PAHs	NA	Site Investigation recommended(5)

[1] General employment is a Portland zoning category that allows a range of employment opportunities but emphasizes industrial and industrial-support uses. The zones can allow for the transition to a less industrial overall nature.

DEQ Cleanup Site	Site COIs[1]	Site Pathway Evaluations	
		Stormwater Pathway[2]	Preferential Groundwater Pathway[3]
Centennial Mills (#5136)	TPH in soil and groundwater; lead in soil	Source Control Evaluation In Progress	Source Control Evaluation Completed - Source Control Determination Pending
Hoyt St. Railyard – The Fields (#5443)	PAHs in soil	Investigations and removal actions completed [6]	Not shown
Hoyt Street Railyard (Former) (#1080)	TPH, PAHs, VOCs, metals, and limited PCBs in soil; TPH and PAHs in groundwater	Source Control Evaluation Not Needed	Source Control Decision Equivalent
Hoyt St. Railyard – Pearl Court (#1624)	TPH and PAHs in soil and groundwater	Source Control Evaluation Not Needed	Source Control Decision Equivalent
Pearl Block (#4960)	Petroleum hydrocarbons and PAHs in soils and groundwater; lead in soils	Source Control Evaluation Not Needed	Source Control Decision Equivalent
Union Station Horse Barn (#2407)	*Stormwater*: PAHs, TPH, metals [5] *Groundwater*: VOCs, PAHs, TPH [5]	Source Control Decision / No Further Action Issued	Source Control Decision Equivalent
Union Station Parcel A North (#1962)	*Stormwater*: PAHs, TPH, metals [5]	Need for Source Control Evaluation to be Determined / Low Priority	Source Control Decision Equivalent
Union Station – Parcel B South (#1885)	*Stormwater*: PAHs, TPH, metals [5]	Source Control Evaluation Not Needed	Source Control Decision Equivalent
Union Station - Track #5 (#1414)	*Stormwater*: PAHs, TPH [5]	Source Control Evaluation Not Needed	Source Control Decision Equivalent
US Postal Service Processing & Distribution Center (#2183)	VOCs, PAHs, TPH, metals	Source Control Decision / No Further Action Issued	Source Control Decision Equivalent

Notes:

NA = not applicable; PAHs = polycyclic aromatic hydrocarbons; PCBs = polychlorinated biphenyls; TPH = total petroleum hydrocarbons; VOCs = volatile organic compounds; COIs = contaminants of interest; ODOT = Oregon Department of Transportation; DEQ = Oregon Department of Environmental Quality; ECSI = Environmental Cleanup Site Information.

(1) Unless otherwise noted, site COIs are based on information on DEQ ECSI database (DEQ, 1996, 2004, 2008, 2009, 2010, 2011, 2012a, 2012b, 2012c, 2012d).

(2) Unless otherwise noted, source is DEQ Milestone Report, Figure 1b, "Status of Stormwater Source Control Evaluations, January 2013") (DEQ, 2013).

(3) Source: DEQ Milestone Report, Figure 3, "Groundwater Source Control Evaluation Status, January 2013" (DEQ, 2013).

(4) Site is not tracked in DEQ Milestone Report (DEQ, 2013). Site status listed is based on information on DEQ ECSI database.

(5) Source: Table 4.2-2 in the Portland Harbor RI/FS Draft Final Remedial Investigation Report (Integral et al., 2011).

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 11 conveyance system are listed in Table 2. Sites with current NPDES permits are shown in Figure 2. Note that the City and ODOT both have NPDES

Municipal Separate Storm Sewer System (MS4) stormwater permits that also cover basin drainage areas.

Table 2. Current(1) and Historical NPDES Permit Coverage in Basin 11

Address	Company	Permit Type	Time Period
800 NW 6th	**National Railroad Passenger Corporation (Amtrak)**	Stormwater (1200-Z)	1998 – Present
1105 NW 9th	Burlington Northern Railroad	Groundwater (1500A)	1995 – 2000
1255 NW 9th	Pinnacle Building	Groundwater (Individual NPDES)	2006 – 2011
707 NW Front	GSL Properties Inc.	Groundwater (Individual NPDES)	1999 – 2013
1001 NW Lovejoy	Metropolitan Building	Groundwater (Individual NPDES)	2006 – 2009
918 NW Park	**U.S. Postal Service**	Stormwater (1200-T)	1993 – 1996
		Stormwater (1200-Z)	1998 – Present

Notes:

NPDES = National Pollutant Discharge Elimination System

(1) Current permits are indicated in bold.

3.3 Outfall Setting

Outfall 11 discharges near the upstream end of the Portland Harbor Superfund Site. The outfall is not located within or adjacent to any reach identified by the EPA as an area of potential concern (AOPC) for contaminant concentrations in river sediment.

4 Basin Screening and Source Investigations

Based on the lack of elevated contaminant concentrations in river sediment near the outfall, the fact that almost all of the industrial properties in the basin had completed investigation and remediation under DEQ Cleanup Program oversight, and the extensive redevelopment of the former industrialized portion of the basin, the City did not conduct targeted source investigations in Basin 11. However, the City's Willamette Watershed group conducted a study to evaluate whether basin water quality is suitable for discharge to a potential restoration site for off-channel fish habitat at the confluence of Tanner Creek (i.e., Outfall 11) and the Willamette River (BES, 2011).

The Tanner Creek Water Quality Characterization study included water quality monitoring at several sites, including just upstream of the outfall, between July 2008 and June 2010. Samples were collected during dry-weather conditions as well as during storm events. Results indicated that although dry-weather flows from the basin may be a potential preferential pathway for polycyclic aromatic hydrocarbons (PAH),[2] overall water quality of discharges from this basin is good. Specifically, none of the pollutants analyzed from dry and wet weather flows was detected at concentrations that would pose serious risks to aquatic life (BES, 2011).

[2] PAH concentrations in dry-weather flow samples were slightly higher than wet-weather concentrations (BES, 2011).

The City's subsequent evaluation of these data for source tracing did not indicate that major current sources of contaminants were present in Basin 11.

5 Completion of Source Identification

The lines of evidence evaluated to confirm that source evaluation objectives have been met with regard to Basin 11 include (1) inriver sediment concentrations near the outfall, (2) water quality monitoring results for discharges from the outfall, (3) upland site information, and (4) land use in the basin. Findings from this evaluation are summarized below:

- *Inriver Sediment Concentrations:* River sediment in the vicinity of Outfall 11 does not contain elevated concentrations of any contaminants (i.e., the outfall does not discharge to an AOPC).
- *Water Quality*: Results of the Tanner Creek Water Quality Characterization study (BES, 2011) indicate all analyte concentrations are very low (i.e., no significant risk is posed to aquatic life).
- *Upland Investigation Coverage:* Figure 3 displays the spatial extent of upland site investigations and other programmatic controls (see key to figures provided at beginning of this Appendix). As shown in Figure 3, almost all of the former industrial properties in the basin are in the DEQ Cleanup Program and:
    - Have implemented or are implementing SCEs;
    - Have been designated by DEQ as not needing an SCE or as a low priority for an SCE; and/or
    - Are covered under NPDES industrial stormwater regulations.

  The only tax lots in the lower subbasin not covered by DEQ Cleanup or Water Quality programs are graveled rail lines that are not expected to generate stormwater runoff.
- *Land Use:* Land use in the former industrial area has shifted to mixed-use residential, commercial, and open space with remediation and redevelopment of the former industrial properties. Most of this redevelopment has occurred after City stormwater requirements were instituted under the City's SWMM, which required both water quality and quantity controls. Future redevelopment activities in this area also will trigger the City's requirements for additional stormwater controls, which should further improve stormwater quality in this basin.

The weight-of-evidence summarized above indicates that the Basin 11 source evaluation is complete and no additional source tracing is warranted.

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 11 includes SCMs completed (or planned) at contaminated sites under DEQ Cleanup Program agreements, specific controls implemented within the City's shared stormwater conveyance system (e.g., water quality swales and sedimentation manholes), and

ongoing City and DEQ programs that are described in the Municipal Report. Source controls implemented in Basin 11 are displayed in Figure 3 and summarized in Table 3.

As shown in Figure 3, a significant number of properties within the upper and lower subbasins has implemented stormwater controls as part of site redevelopment. These controls include: construction of sedimentation structures (e.g., manholes, canister filters, etc.) in the City's stormwater conveyance system; installation of onsite stormwater filters, swales, and flow-through planter boxes; and installation of ecoroofs. In the lower subbasin, most required stormwater controls were installed in the City system (versus on private property) to accommodate high-density residential developments. Many of these redevelopment projects were completed on former DEQ Cleanup Program sites.

Table 3. Basin 11 Source Controls

Site/Area	Source Control Measures (SCM)	Implementation Timeframe (1)
SCMs at DEQ Cleanup Program Sites (2)		
Upper Subbasin		
ODOT-US 26: Jefferson Rockfall (ECSI #5752)	To be determined	To be determined
ODOT – Portland Harbor Source Control Evaluation (ECSI #5437)	Water quality swales installed by City (see description below under "City Conveyance System")	2007
Sylvan Cleaners (#1897)	None needed (DEQ determined subsurface contamination at the site poses low risk)	NA
Lower Subbasin		
Abandoned Tanner Creek Sewer (#5328)	To be determined (Site investigation recommended)	To be determined
Centennial Mills (#5136)	To be determined	To be determined
Hoyt St. Railyard – The Fields (#5443)	Contaminated soil was removed and site has been redeveloped.	2009 – 2013
Hoyt St. Railyard (Former) (#1080)	Contaminated soil was removed and site has been capped.	2000 – 2005
Hoyt St. Railyard – Pearl Court (#1624)	Contaminated soil was removed and site has been capped.	2000 – 2005
Pearl Block (#4960)	Contaminated soil was removed and site has been capped.	2000 – 2003
Union Station Horse Barn (#2407)	Contamination "hot spots" in soil were removed. Site is either temporarily capped (Lots 4, 5) pending site development or has been permanently capped by completed development (Lots 1, 2, 3, and 5)	2002 – 2008
Union Station – Parcel A North (#1962)	A portion of the site has been capped and redeveloped.	1998 – 1999

Site/Area	Source Control Measures (SCM)	Implementation Timeframe (1)
Union Station – Parcel B South (#1885)	Contaminated soil was excavated and treated. Site has been capped and redeveloped as residential property.	1997 – 1999
Union Station - Track #5 (#1414)	Contaminated soil was removed from the site.	1996
U.S. Postal Service Processing & Distribution Center (#2183)	Site paving and buildings under current ownership/operation are acting as a cap for contaminated soil.	Ongoing
City Conveyance System		
Storm lines along Highway 26 (upper subbasin)	As part of the Tanner Creek Stream Diversion Project, four water quality swale systems (grassy open channels and associated sedimentation structures) were constructed by the City to treat flows from drainage along Highway 26. The swales are flow-through facilities designed to reduce sediment loading to Basin 11.	2007
Lower subbasin	Numerous stormwater treatment facilities were constructed in the City system during redevelopment of this area from industrial to residential and commercial uses to meet site Stormwater Management Manual requirements. Facilities are designed to reduce sediment loading to the conveyance system (e.g., sedimentation manholes, canister storm filters, and other sedimentation structures).	2000 – 2010
Other (Programmatic Source Controls)		
Numerous commercial and residential properties in the upper and lower subbasins	Stormwater Management Manual Requirements	Ongoing
Pinnacle Building	City Discharge Authorization (3)	Ongoing
See site listing in Table 2	NPDES 1200-Z Stormwater Permit Requirements	Ongoing

Notes:

DEQ = Oregon Department of Environmental Quality; ODOT = Oregon Department of Transportation; ECSI = Environmental Cleanup Site Information; NPDES = National Pollutant Discharge Elimination System.

(1) Because of consolidation in the ECSI database of some sites in this area, some timeframes listed are approximate.

(2) Descriptions of upland site SCMs are based on information in the DEQ ECSI database (DEQ, 1996, 1998, 2004, 2007, 2008, 2010, 2011, 2012a, 2012b, 2012c, 2012d, 2012e, 2012f).

(3) Additional site-specific stormwater pollution controls required and implemented under City Code.

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

Based on the information summarized above, no current major sources exist in Basin 11, primarily because historical sources have been remediated under the DEQ Cleanup Program and stormwater treatment was installed during redevelopment of these properties. Because necessary SCMs at these sites have been or are being implemented under appropriate DEQ and City regulatory authorities, future discharges from Outfall 11 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 11.

8 References

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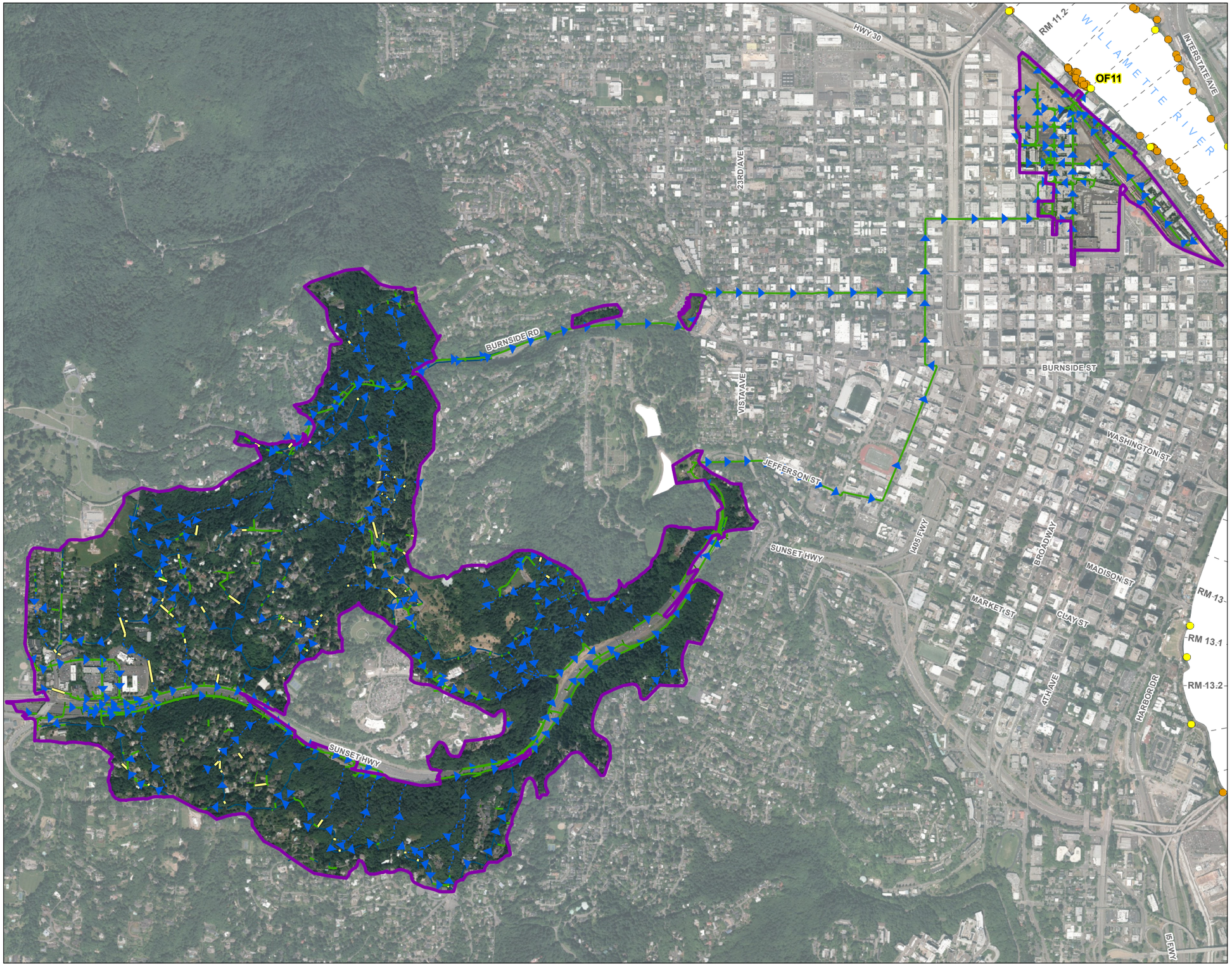
Figure 3: Basin 11 Upland Site Source Controls

FIGURE 1

Basin 11
Drainage Basin Overview



Basin 11

Conveyance System

- Storm Line
- Culvert
- Ditch
- Channel
- City Outfall
- Non-City Outfall

All Other Data

- River Mile (RM)
- Discharges to City Outfall
- Portland Harbor Hydroboundary

N

0 675 1,350 2,025

Feet

MAP NOTES:

Date: December 31, 2013
Data Sources: BES, METRO,
Air Photo Taken 2012

ENVIRONMENTAL SERVICES
CITY OF PORTLAND
1120 SW Fifth Avenue, Room 1000
Portland Oregon, 97204-1912

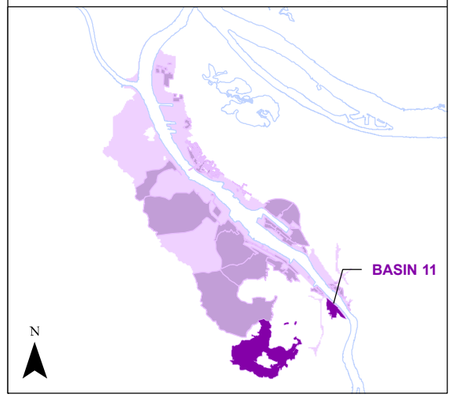


FIGURE 2

Basin 11
Overview and Conveyance System Source Controls

LOWER SUBBASIN

UPPER SUBBASIN

RM 11.3
RM 11.4
RM 11.7
RM 11.8
RM 11.9
RM 12

NAITO PKWY
BURNSIDE RD
VISTA AVE
PATTON RD
STATE AVE
LOVEJOY ST
BROADWAY
STEEL BRG
WILLAMETTE RIVER

WR-333 WR-590 WR-591 WR-592 WR-330 WR-332 WR-331 WR-594 WR-593 WR-518 WR-337 WR-339

OF11

CENTENNIAL MILLS

WATERFRONT PEARL CONDOMINIUMS CONSTRUCTION SITE

HOYT ST. RAILYARD - THE FIELDS

GENDER MACHINE WORKS, INC.

WR-325

UNION STATION PARCEL A NORTH

OF10A

WR-453 WR-455 WR-452 WR-454

ALBERS MILL PROPERTY

WR-405 WR-404 WR-403

WR-305 WR-304 WR-303

WR-292 WR-293 WR-294 WR-295 WR-402

WR-296 WR-298 WR-297 WR-299

WR-300 WR-301 WR-302

OF41

OF42

LOVEJOY BLOCK 2 DEVELOPMENT

HOYT ST. RAILYARD (FORMER)

UNION STATION HORSE BARN

RIVERTEC PROPERTY

PEARL BLOCK

UNITED STATES POSTAL SERVICE

NATIONAL RAILROAD PASSENGER CORPORATION (AMTRAK)

ABANDONED TANNER CREEK SEWER

US POSTAL SERVICE PROCESSING & DISTRIBUTION CENTER

UNION STATION - TRACK #5

HOYT ST. RAILYARD - PEARL COURT (SEE ECSI #1080)

UNION STATION - PARCEL B SOUTH

RIVER DISTRICT BLOCK U

← UPPER BASIN

Jefferson Swale

ODOT-US26: JEFFERSON ROCKFALL

South Swales

Meadows Swale

SYLVAN CLEANERS

ODOT - SYLVAN MAINTENANCE YARD

ODOT - PORTLAND HARBOR SOURCE CONTROL EVALUATION

- Basin 11
- DEQ ECSI Site
- NPDES Stormwater Permit

Conveyance System

- Storm Line
- Sediment Removal Structure
- Water Quality Swale System
- City Outfall
- Non-City Outfall

Land Use/Zoning

- Heavy Industrial
- General Employment
- Commercial
- Residential
- Parks and Open Space
- Major Transportation

All Other Data

- River Mile (RM)
- Tax Lot
- Discharges to City Outfall
- Portland Harbor Hydroboundary

N

0 155 310 465
Feet

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

ENVIRONMENTAL SERVICES
CITY OF PORTLAND
1120 SW Fifth Avenue, Room 1000
Portland Oregon, 97204 - 1912

Lower Subbasin

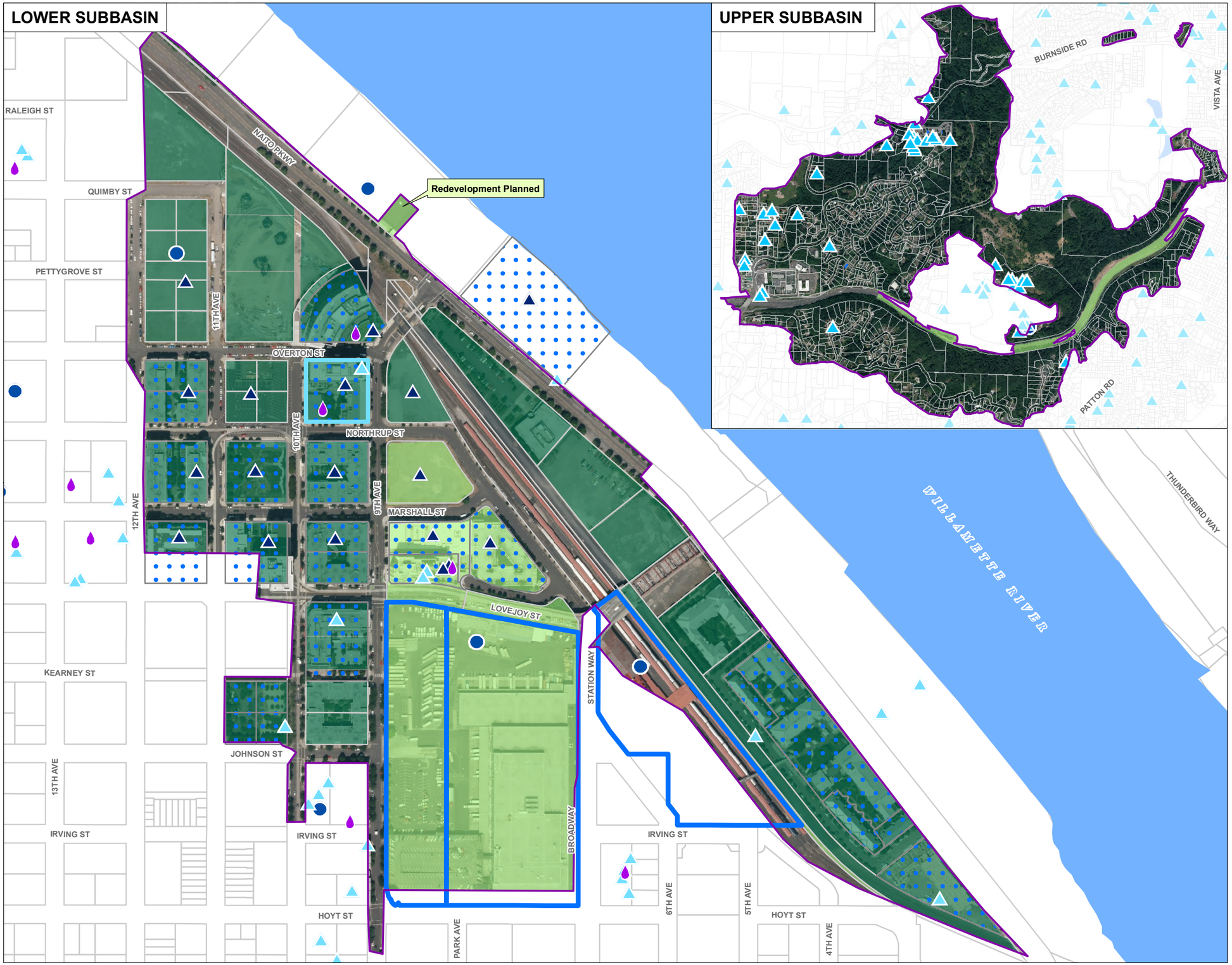
BASIN 11

Upper Subbasin

N

FIGURE 3

Basin 11
Upland Site Source Controls



- Basin 11
- Tax Lot

DEQ Stormwater SCEs

- SCE implemented or pending
- SCE not needed or low priority

All Other Features

- NPDES Stormwater Discharge Permit
- City Discharge Authorization
- >50% of Site Area Redeveloped Under City SWMM
- Stormwater Treatment Facility
- Met stormwater treatment requirements with offsite treatment
- Ecoroof
- Site Inspection - BES Industrial Stormwater Program
- Discharges to City Outfall
- Portland Harbor Hydroboundary

N

0 155 310 465

Feet

MAP NOTES:

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

ENVIRONMENTAL SERVICES
CITY OF PORTLAND
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