Completion Summary for City of Portland Outfall Basin 52A

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 52A.

This Completion Summary includes a weight-of-evidence evaluation to demonstrate that source identification is complete and that there are no current (or anticipated future) major sources of contaminants to the Willamette River via the Basin 52A conveyance system.

Outfall 52A discharges to the east side of the river at approximately River Mile (RM) 5.6, in the St. Johns district. Land use in Basin 52A is predominantly light industrial (warehouse operations), along with residential areas, a property recently acquired by the City's Parks & Recreation Bureau for extension of a natural area corridor, and a small segment of railroad right-of-way.

Evaluation of inriver sediment data collected in 2002 indicated slightly elevated concentrations of some contaminants in sediment near the outfall. However, because the outfall discharges adjacent to the Mar Com, Inc., site, which is being investigated under the DEQ Cleanup Program, the City concluded that detected contaminants may be related to this site and not to sources within the basin. To verify this conclusion, the City subsequently collected and analyzed catch basin solids from the Basin 52A conveyance system and stormwater samples representing discharges from the outfall. Results of these investigations did not indicate the presence of major contaminant sources in the basin. These findings indicate that no further source investigation is warranted in this basin and that the existing conveyance system and programmatic source control measures (SCM) are sufficient for ensuring discharges from Outfall 52A are protective of the river. Therefore, the City has met the remedial investigation (RI)/SCM objectives for Basin 52A.

2 Introduction

This Completion Summary presents a weight-of-evidence of whether further source investigation is needed in Basin 52A, 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 52A, 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 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 52A discharges to the east side of the river at approximately RM 5.6, at the Mar Com facility, within the St. Johns industrial area. The outfall and associated conveyance system were constructed in 1972 as part of new industrial development in the area; the system later was expanded to include residential streets and properties on the bluff above the industrial land. The current drainage area for the Basin 52A conveyance system is approximately 26 acres. Figure 1 shows the location of the outfall and drainage basin boundary and provides an overview of the associated stormwater conveyance system.

The system includes several water quality swales (as shown in Figure 1) that infiltrate stormwater runoff to reduce suspended solids loading to Outfall 52A.

- The City constructed two water quality swales in 2012, along N. Ivanhoe Street at N. New York Avenue. The construction was completed by the City's Bureau of Environmental Services and Bureau of Transportation as part of pedestrian improvements.
- Also in 2012, the City constructed a swale near the intersection of N. Edison Street and N. Baltimore Avenue as part of a project to extend stormwater and sanitary lines along N. Edison Street and associated right-of-way improvements. The swale treats runoff from N. Edison Street.

City programs that result in these types of stormwater improvements are described in detail in the Municipal Report. Additional information on the Outfall 52A stormwater conveyance system and associated drainage basin is included in the *Programmatic Source Control Remedial Investigation Work Plan for the City of Portland Outfalls Project* (CH2M HILL, 2004) and *City Outfall Basin 52A Catch Basin Solids Sampling Adjacent to Mar Com Inc., Technical Memorandum No. OF52A-1* (BES, 2006).

3.2 Land Use and Potential Upland Sources

Current land use in Basin 52A is predominantly light industrial, but also includes residential areas, a small portion of right-of-way in a commercial area, and open space (see Figure 1). Some of the former light industrial area is zoned as general employment (GE) and is expected to transition to less industrial land use.[1] The City's Bureau of Parks & Recreation recently purchased a piece of GE-zoned land for extension of the Baltimore Woods natural area corridor; this area is shown in Figure 1 as open space. In 2012, the City and other partners removed 1.2

[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.

acres of impervious parking lot from this property and restored the area with Willamette Valley prairie native plantings.[2] Land use in the industrial part of the basin includes warehouse facilities (for material including clothing, new vehicle parts, kitchen cabinets, and carbon paper), parking/storage, vacant land, a railroad corridor, and paved and unpaved rights-of-way. Portions of the basin are within the St. Johns Plan district, which provides a framework for strengthening St. Johns' role as the commercial and civic center of the North Portland peninsula.[3]

Though the Mar Com site does not have piped connections to the Basin 52A conveyance system, the City identified this adjacent property as a potential pollutant source to Basin 52A based on proximity of the site to Basin 52A inlets and the potential for contaminated erodible soils to migrate offsite and into the basin via overland runoff, vehicle dragout, and fugitive dusts. This site is divided into two parcels in the DEQ Environmental Cleanup Site Information (ECSI) database. Remediation completed on the north parcel included removal of sandblast grit and contaminated soil (DEQ, 2009). Contaminants of interest (COI) in soil and sandblast grit at the north parcel include metals, polycyclic aromatic compounds (PAH), and volatile organic compounds (VOC). For the north parcel, DEQ issued a source control decision in 2003 and a No Further Action (NFA) determination in 2009 (DEQ, 2009). COIs associated with the south parcel include PAHs, metals, phthalates, organotins, and others (DEQ, 2011). DEQ issued a source control decision in 2011 for that portion of the south parcel that is above ordinary high water. The portion of the south parcel below ordinary high water will be addressed as part of U.S. Environmental Protection Agency's (EPA) Portland Harbor in-water remedy (DEQ, 2011).

No sites in the basin currently hold, or historically held, National Pollutant Discharge Elimination System (NPDES) permits to discharge to the Basin 52A conveyance system.

3.3 Outfall Setting

Outfall 52A discharges to an area of potential concern (AOPC 11) identified by EPA based on elevated concentrations of metals, PAHs, and other contaminants in river sediment (EPA, 2010). In addition to Outfall 52A, one other City outfall (Outfall 52) and four non-City outfalls also discharge to AOPC 11.

The outfall is located on the Mar Com North Parcel (ECSI #4797) downstream of former shipways and adjacent to a former dry dock. At low river stages, the outfall is above the high tide water line, and the outfall discharges to the ground surface where a plunge pool and erosional channel have formed. Overwater work and possible releases of contaminants may be associated with the former shipways and dry docks.

4 Basin Screening and Source Investigations

The City identified Basin 52A as a Priority 3 for source tracing, based on slightly elevated concentrations of PAHs, metals, and phthalates in the surface sediment samples collected by the City near Outfall 52A in 2002 (CH2M HILL, 2004). Priority 3 designations were assigned to basins where contaminants have been detected in sediment near the outfall but the

[2] More information at: http://www.portlandoregon.gov/BES/index.cfm?&a=430932
[3] The St. Johns Plan district describes the mixed-use development goals in this area (see http://www.portlandoregon.gov/bps/index.cfm?&a=53424).

contaminants likely are attributable to other sources outside of the basin. In the case of Outfall 52A, the adjacent Mar Com site was identified as a likely source of the contaminants detected in the inriver sediment based on known site COIs and that no potential sources within Basin 52A were identified (CH2M HILL, 2004). Generally, concentrations in sediment were lowest near the outfall and increased toward the beach adjacent to the Mar Com site (BES, 2006).

To verify that offsite migration of contaminated erodible soil from the Mar Com north parcel and the adjacent railroad right-of-way was not a major source to the basin, the City collected and analyzed catch basin solids in 2005 (BES, 2006). Analytical results indicated concentrations of all constituents were relatively low, with the exception of total PAHs in the sample from the catch basin adjacent to the Mar Com site. This issue was referred to DEQ for consideration during development of the NFA determination for the Mar Com north parcel.

In 2007, the City collected stormwater samples 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. Based on the evaluation of these data and using a conservative screening approach, no analytes were identified as potentially warranting further source tracing in Basin 52A (BES, 2010).

Table 1 lists investigations and evaluations completed by the City in the Basin 52A conveyance system.

Table 1. City Investigations in the Basin 52A Stormwater Conveyance System

Data Collection Period	Purpose	Documentation
2000	Compile basin background information to identify potential sources.	Preliminary Evaluation of City Outfalls (Eastshore) (BES, 2000)
2002	Evaluate inriver sediment data near City outfalls to prioritize basins for source tracing.	Programmatic Source Control Remedial Investigation Work Plan (CH2M HILL, 2004)
2005	Collect catch basin solids samples to evaluate whether solids originating from the Mar Com north parcel or the adjacent railroad corridor were sources of contaminants to the system.	City Outfall Basin 52A Catch Basin Solids Sampling Adjacent to Mar Com Inc. Technical Memorandum No. OF52A-1 (BES, 2006)
2007	Evaluate stormwater data from City outfalls to identify additional source tracing needs.	Stormwater Evaluation Report, City of Portland Outfall Project (BES, 2010)

The City's investigation and data evaluation did not identify any current major sources of contaminants in Basin 52A.

5 Completion of Source Identification

The lines of evidence evaluated to confirm that source tracing is complete include (1) results of source investigation activities conducted in the basin and (2) land use. Findings from this evaluation are summarized below.

- *Source Investigation Results*. Results of a targeted catch basin solids investigation adjacent to potential source areas indicated contaminant concentrations in erodible soils being

captured by catch basins adjacent to the railroad corridor and Mar Com site were generally low (BES, 2006). PAHs were elevated in the sample closest to the Mar Com north parcel; this issue was referred to DEQ for consideration during development of the site NFA determination. In addition, the City's stormwater screening evaluation of stormwater samples representing the entire drainage basin did not identify any analytes for further source tracing in Basin 52A (BES, 2010).

- *Land Use:* The majority of the land use in Basin 52A is light industrial, residential, and open space (see Figure 1). Figure 2 displays the spatial extent of programmatic controls that have been implemented at the industrial facilities in the basin (see key to figures provided at beginning of this Appendix). As shown in Figure 2, almost all light industrial sites in the basin have been inspected by the City's Industrial Stormwater Program to evaluate whether site coverage under a DEQ NPDES stormwater permit is warranted and to provide technical assistance on any industrial exposures to stormwater. The remainder of the sites do not have outdoor industrial operations. Land use at sites not inspected or covered by DEQ Water Quality programs consists of residences, vacant parcels, and paved parking. Current and future industrial activities that are exposed to stormwater are being or will be addressed by the DEQ NPDES Program; 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 52A source investigation is complete and there are no major contaminant sources in the basin.

6 Basin Source Controls

Source control for minor sources in Basin 52A includes specific controls implemented within the City's shared stormwater conveyance system and ongoing City and DEQ programs that are described in the Municipal Report. Note that the City has an NPDES Municipal Separate Storm Sewer System (MS4) stormwater permit that covers basin drainage areas. Source controls implemented within the basin are displayed in Figures 1 and 2 and summarized in this section.

One type of programmatic source control is the elimination of stormwater exposures to industrial activities. Table 2 lists sites that hold (or historically held) an NPDES No Exposure Certification (NEC).

Table 2. Sites with No Exposure Certification (NEC) in Basin 52A (1)

Address	Company	Time Period
6600 N St Louis	**Stenno Carbon Company**	2011 – Present
9175 N Bradford	**DeWils Industries**	2011 – Present
9300 N Decatur	Rodin	2000 – 2010
6710 N Catlin	**Bushwacker Inc.**	2005 – Present

Notes:

(1) Current NECs are indicated in bold.

Table 3 summarizes additional site-specific, programmatic, and conveyance system source controls for Basin 52A.

Table 3. Basin 52A Source Controls

Site/Area	Source Controls	Implementation Timeframe
Source Control Measures (SCM) at DEQ Cleanup Sites		
Mar Com, Inc. – North Parcel (ECSI #4797)	Removal of contaminated soil and sandblast grit. Any future redevelopment of this parcel would likely fall under City's Stormwater Management Manual Requirements and be subject to the Greenway requirements.	2007
City Conveyance System		
N. Ivanhoe Street	The City constructed two water quality swales on N. Ivanhoe as part of pedestrian improvements. The swales treat stormwater from the adjacent right-of-way.	2012
N. Edison Street	The City installed a water quality swale along N. Edison as part of a storm sewer extension project. The swale treats stormwater from the adjacent right-of-way.	2012
Other (Programmatic Source Controls)(1)		
Bushwacker, Inc.	**Stormwater Management Manual Requirements**	Ongoing
Bushwacker, Inc.	**City Discharge Authorization(2)**	Ongoing
See listing in Table 2	**NPDES No Exposure Certifications**	Ongoing

Notes:

NPDES = National Pollutant Discharge Elimination System

(1) Programmatic source controls are described in detail in the Municipal Report.

(2) In compliance with City code, the site prepared a Stormwater Pollution Control Plan.

Ongoing municipal programs (e.g., 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, there are no major sources of contaminants in Basin 52A. Therefore, future discharges from Outfall 52A 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 52A.

8 References

BES. 2000. Preliminary Evaluation of City Outfalls. Portland Harbor Study Area. Notebook 1: Eastshore Stormwater and CSO Outfalls. City of Portland, Bureau of Environmental Services. December 2000.

BES. 2006. City Outfall Basin 52A Catch Basin Solids Sampling Adjacent to Mar Com, Inc. Technical Memorandum No. OF52A-1. To M. Romero (DEQ) from D. Sanders and L. Scheffler (BES). June 9, 2006.

BES. 2010. Stormwater Evaluation Report. City of Portland, Bureau of Environmental Services. February 2010.

CH2M HILL. 2004. Programmatic Source Control Remedial Investigation Work Plan for the City of Portland Outfalls Project. Prepared for the City of Portland, Bureau of Environmental Services, March 19, 2004.

DEQ. 2009. DEQ Site Summary Report – Details for ECSI Site ID 4797, Mar Com Inc. – North Parcel. DEQ Environmental Cleanup Site Information (ECSI) Database, updated April 2009; accessed August 15, 2013. http://www.deq.state.or.us/lq/ECSI/ecsidetail.asp?seqnbr=4797

DEQ. 2011. DEQ Site Summary Report – Details for ECSI Site ID 2350, Mar Com Inc. – South Parcel. DEQ Environmental Cleanup Site Information (ECSI) Database, updated December 5, 2011; accessed August 15, 2013. http://www.deq.state.or.us/lq/ECSI/ecsidetail.asp?seqnbr=2350

EPA. 2010. Re: Portland Harbor Superfund Site; Administrative Order on Consent for Remedial Investigation and Feasibility Study; Docket No. CERCLA-10-2001-0240. Portland Harbor Feasibility Study Source Tables. Letter from EPA to Mr. Bob Wyatt, Chairman, Lower Willamette Group. November 23, 2010.

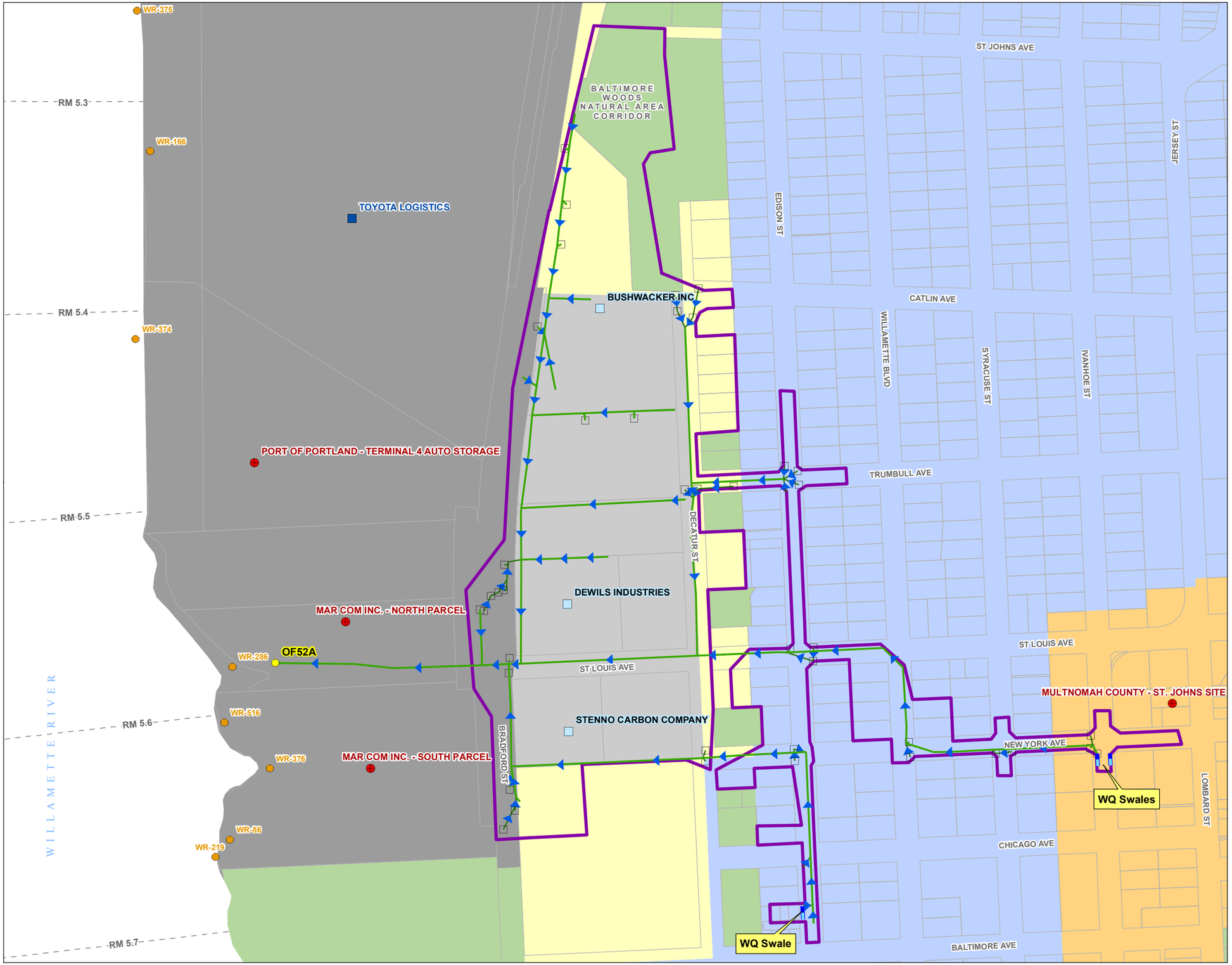
List of Figures

Figure 1: Basin 52A Overview and Conveyance System Source Controls

Figure 2: Basin 52A Upland Site Source Controls

FIGURE 1

Basin 52A
Overview and Conveyance System Source Controls



Basin 52A
DEQ ECSI Site
NPDES Stormwater Permit
NPDES No Exposure Certification

Conveyance System
- Storm Line
- Water Quality (WQ) Swale
- Catch Basin
- City Outfall
- Non-City Outfall

Land Use/Zoning
- Heavy Industrial
- Light Industrial
- General Employment
- Commercial
- Residential
- Parks and Open Space

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

N

0 125 250 375
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

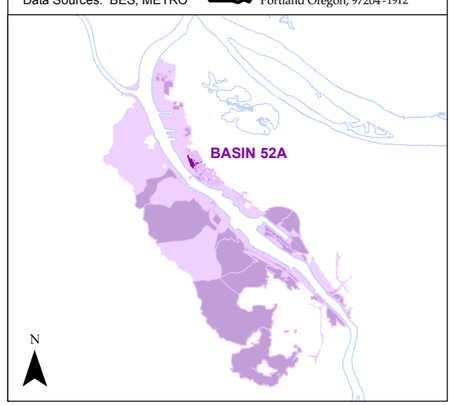


FIGURE 2

Basin 52A
Upland Site Source Controls

- Basin 52A
- Tax Lot

All Other Features

- NPDES Stormwater Discharge Permit
- City Discharge Authorization
- 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

N

0 140 280 420
Feet

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

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