Underground Injection Control Management Plan

■

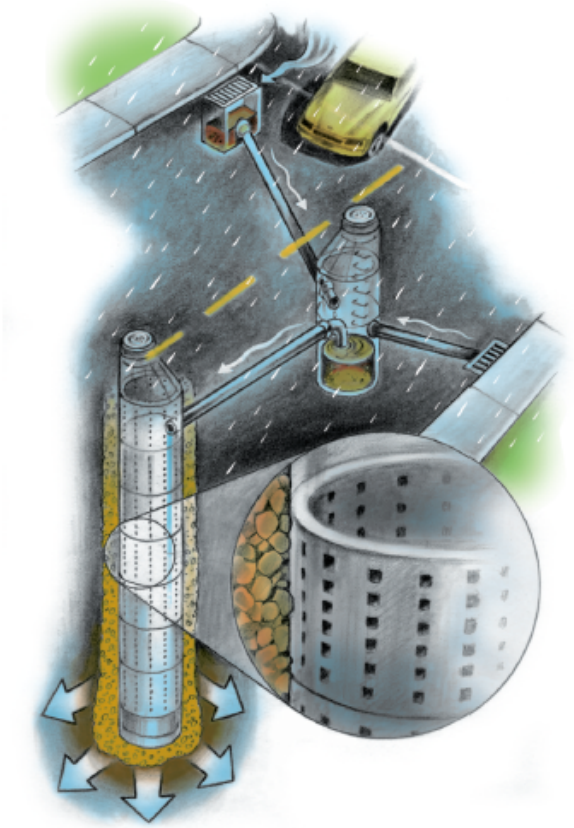
Annual Report No. 8

Fiscal Year 2012 – 2013
(July 1, 2012 – June 30, 2013)

Water Pollution Control Facilities (WPCF) Permit

Class V Stormwater Underground Injection Control Systems

DEQ Permit Number 102830



November 1, 2013

Prepared by

ENVIRONMENTAL SERVICES
CITY OF PORTLAND
working for clean rivers

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204 ▪ Dan Saltzman, Commissioner ▪ Dean Marriott, Director

November 1, 2013

Mr. David Cole, R.G.
UIC Hydrogeologist
Oregon Department of Environmental Quality, Northwest Region
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

Subject: Submittal of UICMP Annual Report No. 8
City of Portland
DEQ Water Pollution Control Facilities Permit No. 102830

Dear Dave:

The City of Portland's Bureau of Environmental Services is pleased to submit the *Underground Injection Control Management Plan Annual Report No. 8 – Fiscal Year 2012-2013.* This document was prepared in accordance with the Water Pollution Control Facilities (WPCF) permit (DEQ Permit No.102830) for the City's Class V Stormwater Underground Injection Control Systems (UIC). The permit was issued on June 1, 2005.

The *UICMP Annual Report No. 8* summarizes programmatic activities implemented by the City in fiscal year (FY) 2012-13 (July 1, 2012 – June 30, 2013), and proposed activities for the coming FY 2013-14. Completed activities, key accomplishments, and activities for the coming fiscal year are organized and described relative to the following four UIC program elements:

System Management summarizes citywide actions implemented during FY 12-13 under five BMP categories to prevent, minimize, and control pollutants prior to infiltration. It also identifies the main projected activities for FY 13-14.

System Monitoring summarizes the eighth-year results of UIC monitoring conducted under the *Stormwater Discharge Monitoring Plan* (SDMP) and submitted in the eighth-year *Stormwater Discharge Monitoring Report* (November 1, 2013).

Evaluation and Response provides an overview of evaluation and response actions conducted during FY 12-13 and the main projected activities for FY 13-14.

Corrective Actions summarizes the corrective actions implemented during FY 12-13 and projected main activities for FY 13-14 to address UICs that do not meet permit requirements.

The report also contains the following appendices:

Appendix A: UICs Identified, Constructed, or Removed during Fiscal Year 12-13 (including closure reports for decommissioned UICs)
Appendix B: Status of Category 3 UICs
Appendix C: Spills That Have Occurred within Areas Serviced by UICs

If you have questions or need additional information, please call me at 503-823-5737. I look forward to our continued collaboration on implementing the WPCF Permit.

Sincerely,

Barbara Adkins
UIC Program Manager
City of Portland
Bureau of Environmental Services

Enclosures:
Underground Injection Control Management Plan Annual Report No.8 – 3 hard copies (w/enclosed electronic copy)

cc: UIC project file w/ enclosures

City of Portland, Oregon

Water Pollution Control Facilities (WPCF) Permit For
Class V Stormwater Underground Injection Control Systems

Permit Number: 102830

Underground Injection Control Management Plan Annual Report No. 8

Fiscal Year 2012-2013
(July 1, 2012 – June 30, 2013)

November 1, 2013

Prepared By:
City of Portland, Bureau of Environmental Services

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Introduction

This *Underground Injection Control Management Plan (UICMP) Annual Report No. 8* is submitted to the Oregon Department of Environmental Quality (DEQ) to fulfill reporting requirements for the City of Portland's Water Pollution Control Facility (WPCF) Permit for Class V Stormwater Underground Injection Control Systems (UICs). The report summarizes UIC program activities during the eighth permit reporting year (July 1, 2012 through June 30, 2013).

Background

DEQ issued the WPCF permit to the City on June 1, 2005. As required by the permit, the City prepared a *UIC Management Plan* (UICMP) and submitted it to DEQ for approval on December 1, 2006. The UICMP describes the activities the City will implement throughout the permit term (June 1, 2005 – May 31, 2015) to protect groundwater and meet WPCF permit requirements. The permit also requires the City to submit a UICMP annual report that summarizes the status of implementing the UICMP and each of its components.

The City has organized the UICMP and the annual report into the following four major program elements:

- **System Management** includes ongoing, programmatic activities (best management practices, or BMPs) that prevent, minimize, or control pollutants.
- **System Monitoring** includes ongoing actions to demonstrate that UICs are operated in a manner that protects groundwater and meets WPCF permit conditions.
- **Evaluation and Response** describes the process and criteria used to identify, evaluate, and prioritize actions needed to protect groundwater and meet permit requirements.
- **Corrective Action** includes the processes to evaluate, rank, select, and implement appropriate corrective actions to address UICs that do not meet WPCF permit requirements.

This annual report describes the activities that occurred in FY12-13 in each of these four areas. Key accomplishments are summarized below and described in more detail in the body of the report.

Key Accomplishments

System Management

- Submitted quarterly *UIC Registration Database* updates to DEQ on September 1, 2012, December 1, 2012, March 1, 2013, and June 1, 2013.

- Continued to implement remaining actions identified in the *Systemwide Assessment Follow-up Actions Workplan* (submitted to DEQ December 1, 2006), specifically for UICs with inadequate separation distance from groundwater.

- Received and responded to 17 calls regarding spills located within or near an area where UICs are the primary method for stormwater disposal.

- Continued to provide oversight to ensure that commercial and industrial facilities comply with requirements under the Columbia South Shore Well Field Wellhead Protection Program.

- Continued to provide education, outreach, and technical assistance to residents and businesses affected by the Columbia South Shore Well Field Wellhead Protection Program, in conjunction with the Columbia Corridor Association and Columbia Slough Watershed Council.

- In accordance with the City's *Stormwater Management Manual* requirements, signed off on permits for approximately 1,099 source control measures (citywide) at sites with high-risk characteristics or activities.

- Conducted 3,854 erosion control-related inspections of private construction sites (citywide).

- Inspected 541active public construction projects with erosion control components (citywide).

- Responded to 14 erosion control complaints.

- Through the Clean Rivers Education Program, involved approximately 15,750 students (citywide) in hands-on activities that teach them about the causes and effects of water pollution and how individuals can help protect water resources.

- Participated in numerous community activities and events involving stormwater management and watershed protection issues and actions.

- Continued to educate employees on permit requirements and groundwater protection.

- Continued to develop employee training and public education.

- Cleaned 1,944 sedimentation and sump manholes.

- Swept major arterials six times during the year.

- Continued evaluation of the review and approval process for private UICs to achieve a more streamlined and consistent registration process for both public and private UICs.

System Monitoring

- Submitted year 8 (October 2012 – 2013) UIC compliance and supplemental monitoring locations to DEQ on August 31, 2012.

- Implemented year 8 stormwater compliance and supplemental monitoring. Nineteen UIC locations were sampled in year 8.

- Compiled and evaluated year 8 stormwater data. Permit Modification No. 4 (dated December 6, 2012) increased maximum allowable discharge limits (MADLs) one order of magnitude for four constituents [pentachlorophenol, di(2-ethylhexyl)phthalate (DEHP), benzo(a)pyrene, and total lead]; there were no year 8 annual mean concentration exceedances of the permit's MADLs.

- Prepared and submitted the *Annual Stormwater Discharge Monitoring Report – Year 8 – October 2012 – May 2013* to DEQ (November 1, 2013).

- Performed a preliminary stormwater discharge trend analysis for the 8 years of data, using box plots to identify potential differences in pollutant concentrations.

- Prepared and submitted year 9 (October 2013 – May 2014) UIC monitoring locations to DEQ.

Evaluation and Response

- Reviewed UICs that previously received a "no further action" (NFA) designation to ensure that no major changes have occurred in the City's depth to groundwater estimates and monitoring data and confirm groundwater protectiveness.

- Identified and evaluated additional UICs with potentially inadequate separation as new data became available. Performed compliance determinations on UICs identified to have potentially inadequate separation distance.

- Identified no new Category 4 UICs.

- Responded to year 8 MADL exceedances. During year 8 stormwater discharge monitoring, three common pollutants were detected during individual sampling events at concentrations above their respective MADLs: pentachlorophenol, di(2-ethylhexyl)phthalate (DEHP), and benzo(a)pyrene.

Corrective Action

- Initiated design activities for Category 3 UICs, in accordance with the scope of the *Systemwide Assessment Follow-Up Actions Workplan*.

- Removed 73 UICs from the Category 3 UIC list through either corrective actions or compliance confirmation.

1 Introduction

1.1 Overview

The Oregon Department of Environmental Quality (DEQ) issued the City of Portland's Water Pollution Control Facility (WPCF) Permit for Class V Stormwater Underground Injection Control Systems (UICs) on June 1, 2005 (Permit No. 102830).

As required by Schedule D(1) of the WPCF permit, the City prepared a *UIC Management Plan* (UICMP), which was submitted it to DEQ for approval on December 1, 2006 and revised in December 2012 (Version 2). The UICMP describes the activities the City will implement throughout the permit term (June 1, 2005 – May 31, 2015) to protect groundwater and meet WPCF permit requirements. (See Section 1.2 for additional information about the UICMP.)

The WPCF permit also requires the City to submit a UICMP annual report that summarizes the status of implementing the UICMP and each of its components. Accordingly, this annual report summarizes activities that occurred during the eighth fiscal year of permit implementation (July 1, 2012 through June 30, 2013).

Table 1-1 summarizes the WPCF permit requirements for the annual report and identifies where the requirements are addressed in this annual report.

Table 1-1
Summary of WPCF Permit Annual Report Requirements[a]

Requirement	Permit Reference	Where Requirement is Addressed in Annual Report
General Requirements		
The Permittee must notify the Department of any changes in key personnel or areas of responsibility	D(5)(b)	Section 1.7
Unusual conditions encountered	D(15)(a)(i)	No unusual conditions were encountered.
Permit violations that may have occurred	D(15)(a)(ii)	No permit violations have occurred.
Minor and/or major permit modifications	D(15)(a)(vi)	Section 1.8
A demonstration of legal authority to implement the UICMP	D(15)(i)	Section 1.6
A discussion of significant land use changes that alter traffic volume, patterns of potential pollutants to a Permittee owned or operated public UIC. If the affected public UIC is a permanent trend monitoring point, then the Permittee must discuss the impact to the trend analyses and identify, for Department approval, a replacement UIC for trend analysis.	D(15)(j)	Included in *Annual Stormwater Discharge Monitoring Report - Year 8* (November 2013).
The status of implementing the UICMP and each of its components	D(15)(d)	Section 1.9
A discussion of any proposed changes to the UICMP or its components	D(15)(f)	Section 1.10
System Management		
Employee Training and Public Education program must be developed and implemented to educate Permittee's personnel and the public of the permit conditions and requirements	D(10)(d)	Section 2.4
…summarize any public UIC discovered or identified during or after the system-wide assessment	C(20)(b)	Section 2.2
A list of newly constructed …. public UICs during the reporting period	D(15)(k)	Section 2.2
A summary of BMPs implemented during the annual reporting period and the results of those BMPs and a description of BMPs to be employed during the next reporting year	D(15)(h)	Sections 2.2 through 2.6
Summarize the decommissioning of motor vehicle floor drains that discharge to public UICs.	C(13)(d)	Not applicable; no floor drains identified as draining to public UICs.
A summary of maintenance activities and supporting data.	D(15)(c)	Information on inspections, cleaning, and repair activities included in Section 2.5. O&M conducted as a response action is described in *Stormwater Discharge Monitoring Plan*.

Requirement	Permit Reference	Where Requirement is Addressed in Annual Report
System Monitoring		
Any other information, finding, condition, spills and/or action that is relevant to the management of the Permittee's public UICs or groundwater protection during operation of the public UICs	D(15)(n)	Sections 3 and 4
A summary and analysis of BMP monitoring accumulated during the annual reporting period	D(15)(l)	Section 3
Provide BMP monitoring results in the annual UICMP reports.	D(10)(c)(iv)	Section 3
Provide a brief overview summary of the monitoring results provided in the annual monitoring report for the reporting period.	D(15)(b)	Section 3
Include a comparison of the data to data from previous annual reporting periods.	D(15)(g)	Section 3
Violations (i.e., exceedances of permit established limits)	F(4)(d)	Section 3
Corrective Actions		
Identify Category 2 UICs.	C(12)(d) C(20)(c)	As of November 1, 2011, all corrective actions for Category 2 UICs have been completed.
Identify Category 3 UICs.	C(12)(e)	Sections 4 and 5 and Appendix B.
Identify Category 4 UICs.	B(7)(j)	Sections 3, 4, and 5
Provide a summary of the UIC system management for the reporting period, including: (iii) Corrective actions taken to prevent further permit violations (iv) Other corrective actions taken or initiated	D(15)(a)	Section 5
An updated prioritized list of non-compliant public UICs with implementation and completion schedules	D(15)(a)(v)	Section 5 and Appendix B.
A discussion of any compliance response action taken during the reporting period	D(15)(e)	Included in *Annual Stormwater Discharge Monitoring Report – Year 8* (November 2013) and summarized in Section 5.
Provide a prioritized list of all non-compliant public UICs by category. Include a prioritized subset of the non-compliant public UICs that must be corrected during the CIP year.	D(15)(m)	Section 5
Any part of the UIC system placed under a Department Order for a regional corrective action and the nature of the Department Order (if applicable)	D(15)(a)(vii)	Section 5
[a] Where applicable, permit requirements are grouped by the UICMP categories developed by the City of Portland.		

1.2 Overview of the UICMP

As required by the WPCF permit, the UICMP identifies and discusses the best management practices (BMPs) the City will employ throughout the permit period to protect groundwater quality, support watershed health, and meet permit conditions. These include structural, non-structural, and institutional controls. In accordance with the permit, the UICMP also includes the following:

- UIC Registration Database
- Operations and Maintenance (O&M) Plan
- BMP Monitoring Program
- Employee Training and Public Education
- Spill Prevention and Pollution Control (SPPC) Plan
- Abandonment, Decommissioning, or Alteration of Public UIC Injection Systems Plan

The UICMP also meets the requirements of OAR 340-044-0018(3)(b)(C). These requirements specify that municipalities with 50 or more stormwater injection systems must prepare and implement a written UIC management plan that includes a systemwide assessment, system controls, monitoring, and a plan for record keeping and reporting.

The UICMP is organized into the following four major elements:

- **System Management** includes ongoing, programmatic activities (best management practices, or BMPs) that prevent, minimize, or control pollutants before they can be discharged to a UIC. BMPs are organized into the following five categories:

  - System Inventory and Assessment (SA)
  - Pollution Control (PC)
  - Education and Training (ET)
  - Operations and Maintenance (OM)
  - Policy and Regulation (PR)

- **System Monitoring** includes ongoing actions to demonstrate that UICs are operated in a manner that protects groundwater and meets WPCF permit conditions.

Information collected through implementation of System Management and System Monitoring activities are used to identify program improvements or UICs that may require additional evaluation, response action, or corrective action.

- **Evaluation and Response** uses data and information from System Management (e.g., UIC location, depth to groundwater) and System Monitoring (e.g., results of maximum allowable discharge limits [MADL] monitoring) activities to assess UIC compliance status. It also defines the process and criteria used to identify, evaluate, and prioritize actions necessary to protect groundwater and meet permit requirements.

- **Corrective Action** addresses UICs shown to be non-compliant with WPCF permit requirements through the Evaluation and Response process. It includes the process used to evaluate, rank, select, and implement appropriate corrective actions. A variety of corrective actions are available, including options that do not involve construction (such as institutional controls or an assessment to demonstrate protectiveness), structural/engineering controls, and UIC closure.

1.3 Relationship of the UICMP to the UIC Program and UICMP Annual Reports

The UICMP is a comprehensive plan that describes the City's overall UIC program. It includes processes, tasks, and, where possible, implementation schedules. In many cases, however, it is difficult to determine implementation details years in advance because so many variables are involved. For that reason, UICMP implementation details will be included on a yearly basis in the UICMP annual reports. This annual report provides information about key accomplishments during FY12-13 (July 1, 2012 to June 30, 2013) and identifies activities planned for implementation in the next fiscal year (FY13-14).

1.4 Other UIC Program Documents

The WPCF permit requires the City to prepare a variety of documents that together describe the programmatic actions and management practices the City will implement to protect groundwater and meet permit requirements. Some of these documents are included as appendices to the UICMP, while others were submitted to DEQ separately. Table 1-2 shows the relationship of these documents to the four major UICMP elements.

1.5 Other Program Reporting Requirements

In addition to the UICMP annual report, the City will fulfill reporting requirements specified in the WPCF permit by submitting the following reports to DEQ:

- *Annual Stormwater Discharge Monitoring Locations* (due September 1 of each year)
- *Annual Stormwater Discharge Monitoring Report* (due November 1 of each year)
- Interim compliance reporting:
  - Detection of priority pollutant screen (PSS) pollutants
  - Exceedance of MADLs for individual sampling events
  - Exceedance of annual mean concentration for any MADL
  - Quarterly reports

Table 1-2
UIC Program Documents Related to UICMP Elements

UICMP Element/Document	Submittal Information
System Management	
Systemwide Assessment	Submitted July 15, 2006
UIC Registration Database	Submitted September 1, 2005 and updated quarterly
UIC Management Plan	Submitted December 1, 2006 DEQ Public Comment Period: June 24-July 24, 2008 DEQ Approval: October 6, 2008 Revised December 2012 (Version 2)
UIC Management Plan Five Year Review Report	Submitted November 1, 2010
Operations and Maintenance Plan	Submitted December 1, 2006 (UICMP Appendix B) DEQ Public Comment Period: June 24-July 24, 2008 DEQ UICMP Approval: October 6, 2008
Spill Prevention and Pollution Control Plan	Submitted December 1, 2006 (UICMP Appendix C) DEQ Public Comment Period: June 24-July 24, 2008 DEQ UICMP Approval: October 6, 2008
Decommissioning Procedure for Underground Injection Control Systems	Draft submitted November 1, 2006 Final submitted December 1, 2006 (UICMP Appendix D) DEQ Public Comment Period: June 24-July 24, 2008 DEQ UICMP Approval: October 6, 2008 DEQ Permit Modification to update the Decommissioning Procedure (UICMP Appendix D): October 4, 2011
WPCF UIC Minor Permit Modification No. 1	DEQ Approval: November 6, 2006
WPCF UIC Major Permit Modification No.1	DEQ Approval: December 10, 2009
WPCF UIC Minor Permit Modification No. 2	DEQ Approval: July 27, 2011
WPCF UIC Minor Permit Modification No. 3	DEQ Approval: July 14, 2011
WPCF UIC Major Permit Modification No. 2	DEQ Approval: October 4, 2011
WPCF UIC Major Permit Modification No.3	DEQ Approval: April 19, 2012
WPCF UIC Major Permit Modification No. 4	DEQ Approval: December 6, 2012

UICMP Element/Document	Submittal Information
System Monitoring	
Stormwater Discharge Monitoring Plan (SDMP) - *Sampling Design Plan* - *Quality Assurance Project Plan (QAPP)* - *Sample Analysis Plan (SAP)*	Submitted July 15, 2005 Final submitted August 30, 2006 DEQ Public Comment Period: June 24-July 24, 2008 DEQ Approval: October 6, 2008 DEQ Permit Modifications to revise SDMP monitoring requirements: Modification No. 1: November 6, 2006 Modification No. 2: October 4, 2011 Modification No.3: April 19, 2012 Revised December 2012 (Version 2)
BMP Monitoring Program	Submitted December 1, 2006 (UICMP Appendix E) DEQ Public Comment Period: June 24-July 24, 2008 DEQ UICMP Approval: October 6, 2008
Annual Stormwater Discharge Monitoring Report – Year 1 (October 2005 - May 2006)	Submitted July 15, 2006
Annual Stormwater Discharge Monitoring Report – Year 2 (October 2006 - May 2007)	Submitted July 15, 2007
Annual Stormwater Discharge Monitoring Report – Year 3 (October 2007- May 2008)	Submitted July 15, 2008
Annual Stormwater Discharge Monitoring Report – Year 4 (October 2008- May 2009)	Submitted July 15, 2009
Annual Stormwater Discharge Monitoring Report – Year 5 (October 2009- May 2010)	Submitted July 15, 2010
Annual Stormwater Discharge Monitoring Report – Year 6 (October 2010- May 2011)	Submitted July 15, 2011
Annual Stormwater Discharge Monitoring Report – Year 7 (October 2011- May 2012)	Submitted November 1, 2012
Annual Stormwater Discharge Monitoring Report – Year 8 (October 2012- May 2013)	Submitted November 1, 2013

UICMP Element/Document	Submittal Information
Evaluation and Response/Corrective Actions	
Corrective Action Plan (CAP)	Submitted July 15, 2006 DEQ Public Comment Period: June 24 – July 24, 2008 DEQ Approval: October 6, 2008
Corrective Action Plan Update	Submitted November 1, 2010
Corrective Actions: Category 1 Underground Injection Control Systems	Submitted July 15, 2005; completed July 2006
Compliance Determination Procedure	Submitted December 1, 2006 (UICMP Appendix F) DEQ Public Comment Period: June 24-July 24, 2008 DEQ UICMP Approval: October 6, 2008
Prioritization Procedure	Submitted December 1, 2006 (UICMP Appendix G) DEQ Public Comment Period: June 24-July 24, 2008 DEQ UICMP Approval: October 6, 2008
Evaluation and Response Guidelines	Submitted December 1, 2006 (UICMP Appendix H) DEQ Public Comment Period: June 24-July 24, 2008 DEQ UICMP Approval: October 6, 2008
Systemwide Assessment Follow-up Actions Workplan	Submitted December 1, 2006 DEQ Approval: October 6, 2008
Category 4 UIC Corrective Actions – Groundwater Protectiveness Demonstrations (UICs identified in sampling year 2)	Submitted May 30, 2008 DEQ No Further Action Determination – May 30, 2008
Category 4 UIC Corrective Actions – Groundwater Protectiveness Demonstrations (UICs identified in sampling year 3)	Submitted March 30, 2009 DEQ No Further Action Determination – May 30, 2009
Evaluation of Vertical Separation Distance – Groundwater Protectiveness Demonstration	Submitted May 27, 2008 DEQ Approval: June 5, 2008
Decision Making Framework for Groundwater Protectiveness Demonstrations	Submitted June 19, 2008 DEQ Approval: October 20, 2008
Category 3 UICs – Groundwater Protectiveness Demonstration – Vertical Separation Distance ≥5 Feet – No Further Action Request	Submitted June 18, 2008 DEQ Approval: October 6, 2008

UICMP Element/Document	Submittal Information
Evaluation and Response/Corrective Actions (continued)	
Ubiquitous Pollutants – Groundwater Protectiveness Demonstration	Submitted July 17, 2008 DEQ Approval: October 6, 2008
UICs within Permit-Specified Well Setbacks – Groundwater Protectiveness Demonstration – No Further Action Request	Submitted July 24, 2008 DEQ Approval: October 6, 2008
City of Portland Parks UICs Groundwater Protectiveness Demonstration No Further Action Request	Submitted July 13, 2009 DEQ Approval: October 21, 2009
Category 2 UIC Corrective Actions Request for Timeline Extension City of Portland WPCF Permit No. 102830	Submitted February 19, 2010 DEQ Approval: February 25, 2010
Groundwater Protectiveness Demonstration and Request for Approval of 5- foot Separation Distance for Three Category 2 UIC Corrective Actions	Submitted May 14, 2010 DEQ Approval: August 5, 2010
Groundwater Protectiveness Demonstration and Request for Approval of 5-foot Separation Distance for New UICs	Submitted July 20, 2011 DEQ Approval: July 28, 2011
Groundwater Protectiveness Demonstration and Request for Approval of Maintaining Category 3 UICs (Non-compliant due to less than 5 feet of Vertical Separation Distance)+	Submitted May 31, 2012 DEQ Approval: June 14, 2012
Annual UICMP Reports	
Underground Injection Control Management Plan – Annual Report No. 1 - Fiscal Year 2005-2006 (July 1, 2005 – June 30, 2006)	Submitted December 1, 2006
Underground Injection Control Management Plan – Annual Report No. 2 - Fiscal Year 2006-2007 (July 1, 2006 – June 30, 2007)	Submitted November 1, 2007 DEQ Approval: October 14, 2008
Underground Injection Control Management Plan – Annual Report No. 3 - Fiscal Year 2007-2008 (July 1, 2007 – June 30, 2008)	Submitted November 1, 2008
Underground Injection Control Management Plan – Annual Report No. 4 - Fiscal Year 2008-2009 (July 1, 2008 – June 30, 2009)	Submitted November 1, 2009

UICMP Element/Document	Submittal Information
Annual UICMP Reports (continued)	
Underground Injection Control Management Plan – Annual Report No. 5 - Fiscal Year 2009-2010 (July 1, 2009 – June 30, 2010)	Submitted November 1, 2010
Underground Injection Control Management Plan – Annual Report No. 6 - Fiscal Year 2010-2011 (July 1, 2010 – June 30, 2011)	Submitted November 1, 2011
Underground Injection Control Management Plan – Annual Report No. 7 - Fiscal Year 2011-2012 (July 1, 2011 – June 30, 2012)	Submitted November 1, 2012
Underground Injection Control Management Plan – Annual Report No. 8 - Fiscal Year 2012-2013 (July 1, 2012 – June 30, 2013)	Submitted November 1, 2013

1.6 Legal Authority

The Charter of the City of Portland grants broad authority to the City "to exercise any power or authority granted to the City by statute *** and [provides that the City] may do any other act necessary or appropriate to carry out such authority, or exercise any other power implied by the specific power granted." Such authority includes, among other things, "all powers commonly known as the police power to the same extent as the State of Oregon has or could exercise said power and make and enforce *** [as] necessary or appropriate water, local, police, sanitary and safety laws and regulations." *Chapter 2-105, Charter of the City of Portland, Oregon*

In addition, the Portland City Code addresses regulation of stormwater discharges, building requirements, zoning, erosion and sediment control and public improvements in Chapters 10, 17, 24, 29, and 33. Chapter 17.38 and 17.39 specifically address Drainage and Water Quality and Stormwater Discharges, respectively.

1.7 UIC Program Staff

1.7.1 Key Roles and Responsibilities

The WPCF permit designates the Bureau of Environmental Services (BES) as the bureau responsible for implementing the WPCF permit and for identifying and managing the regulatory and technical components of the UIC program citywide and across bureaus. Key staff roles and responsibilities for the UIC program are summarized in the November 1, 2010, *UIC Management Plan Five Year Review Report.*

1.7.2 Personnel Changes

There were no personnel changes in FY 2012-13.

1.8 Minor and/or Major Permit Modifications

In FY 2012-13, the City requested a major permit modification to be more consistent with the approach and discharge limits in the DEQ WPCF permit template. DEQ issued *WPCF UIC Major Permit Modification No. 4* on December 6, 2012. The changes included:

- Revised the definition of *non-compliant.*
- Modified the definition of *separation distance* to allow for a minimum vertical separation distance of 5 feet for all new UICs.
- Modified permit language that does not allow UICs with less than 5 feet of vertical separation distance (which was added as part of *Major Permit Modification No.1,* December 10, 2009) to allow existing UICs with less than 5 feet of separation.
- Modified the MADL concentrations for Table 1 of the City's permit for four constituents (pentachlorophenol, di(2-ethylhexyl)phthalate, benzo(a)pyrene, and lead).

1.9 Status of Implementing the UICMP and Its Components

This annual report provides the status of implementing the UICMP and it components.

1.10 Proposed Changes to the UICMP or Its Components

There are no proposed changes at this time.

1.11 City Budget and Funding

The City of Portland has invested more than $1.01 billion in stormwater management services and facilities over the past 18 years.[1] The revenue requirements for FY12-13 totaled approximately $101 million, allocated as follows:

Major Program Category	**Requirements**	**Percentage Share**
Enforcement and Development Review	$ 11.2 million	11%
Watershed Program & Habitat Restoration	13.9 million	14%
Facilities Operations and Maintenance	29.0 million	29%
Capital Improvements*	46.0 million	46%
Total Revenue Requirements	**$ 101.0 million**	
* Includes debt service, facilities planning and engineering, construction engineering, and construction contracts.		

[1] The 18-year time period reflects the implementation period of the City's NPDES MS4 permit.

Eighty-six percent of these revenue requirements are financed through direct monthly user fees. The remaining revenue sources include direct charges for new private development (system development charges), service charges, permit fees, and regulatory charges and penalties. More details on City revenues are provided below.

In fiscal year 13-14, the City plans to invest $105.6 million in stormwater management services and facilities. Direct monthly user fees will pay for 89 percent of these investments.

Stormwater Management Charges

City Council approves revised stormwater monthly user fees and stormwater system development charges (SDCs) at the start of each fiscal year. Monthly user fees are adjusted to reflect operating, maintenance, and capital costs of the City's sanitary sewer and drainage system. The rate adjustments are based upon cost of service principles, ensuring equity by charging ratepayers according to the amount of sewer and drainage service they use.

The following table reports the monthly single-family stormwater management charge and the monthly stormwater rate per 1,000 square feet of impervious area for the last five permit years:

	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
Single-Family Residential Charge	$18.55	$19.80	$21.79	$22.36	$23.90
Residential rate per 1,000 square feet of impervious area	$7.73	$8.25	$9.08	$9.32	$9.96
Non-residential rate per 1,000 square feet of impervious area	$8.43	$8.86	$9.66	$9.97	$10.55

At the close of FY 12-13, City Council increased the monthly stormwater management charge for single-family residences from $23.90 to $24.88. The residential rate increased from $9.96 to $10.37 per 1,000 square feet of impervious surface per month, and the commercial rate increased from $10.55 to $10.97 per 1,000 square feet of impervious area per month.

Stormwater System Development Charges

The methodology for assessing system development charges (SDCs) for new development and significant redevelopment includes two components. One component represents the charge for stormwater facilities that handle runoff from individual properties. For fiscal year 2012-13, this onsite portion was assessed based on $164.00 per 1,000 square feet of impervious area. Riparian properties that drain directly to the Columbia Slough, Columbia River, or Willamette River are exempt from this portion of the SDC. The other portion represents the cost of stormwater facilities that handle runoff from public rights-of-way. This portion was assessed based on the use of the transportation system, using road frontage and vehicle trips to allocate the costs. For fiscal year 2012-13, the rates were $5.12 per linear foot and $2.68 per vehicle trip. At the end of fiscal year 2012-13, City Council increased the rates for stormwater system development charges to $169.00 per 1,000 square feet of impervious area, $5.50 per linear foot of frontage, and $2.91 per daily vehicle trip.

Discounts may be granted only for the "onsite" part of the charge for facilities constructed as part of new development. Discounts range from 80 percent for retention of the 100-year event to no discount for control of the 10-year storm.

1.12 Organization of the Annual Report

The remainder of this annual report contains the following sections:

Section 2: System Management, identifies citywide actions implemented under the five BMP categories to prevent, minimize, and control pollutants prior to infiltration. Where relevant, it also identifies projected main activities for FY13-14.

Section 3: System Monitoring, summarizes compliance monitoring [as detailed in the *Annual Stormwater Discharge Monitoring Report, Year 8, October 2012-May 2013* (November 1, 2013)].

Section 4: Evaluation and Response, identifies evaluation and response actions conducted during FY12-13 and projected main activities for FY13-14.

Section 5: Corrective Actions, summarizes the corrective actions implemented during FY12-13 and projected main activities for FY13-14 to address UICs that do not meet permit requirements.

Appendix A identifies UICs identified, constructed, or removed during FY12-13 (including closure reports for decommissioned UICs).
Appendix B identifies the status of Category 3 UICs.
Appendix C identifies spills that occurred within areas serviced by UICs.

2 System Management

2.1 Overview

The System Management program element involves a series of actions, called best management practices (BMPs) that serve to prevent, minimize, and control pollutants in stormwater prior to discharge to a UIC. These BMPs are organized into the following five general BMP categories and are applied to the entire UIC system on an ongoing basis.

- System Inventory and Assessment
- Pollution Control
- Education and Training
- Operations and Maintenance
- Policy and Regulation

2.2 System Inventory and Assessment (SA)

Ongoing activities necessary to provide stormwater drainage infrastructure include the registration and construction of new UICs, replacement of existing UICs, and decommissioning of existing UICs. Ongoing system inventory and assessment activities are important to manage all known public UICs within the City of Portland and to assess drainage to each UIC for potential impacts to groundwater. This BMP category focuses on updating and refining information related to the location and physical characteristics of existing and new UICs. It fulfills two WPCF requirements:

- Develop and implement a comprehensive *UIC Registration Database*.
- Evaluate UICs relative to the factors that could present a risk to groundwater quality.

SA-1: Install, replace, retrofit, and decommission UICs as needed to provide public infrastructure for stormwater management. Maintain a comprehensive system inventory/data management system to register new UICs and track the location, physical characteristics, and status of all public UICs.

2.2.1 SA-1: Key Accomplishments for FY12-13

- Submitted quarterly *UIC Registration Database* updates to DEQ on September 1, 2012, December 1, 2012, March 1, 2013, and June 1, 2013.

- Identified 25 new public UIC[2] records in quarterly *UIC Registration Database* updates:
  - 9 new UIC records in the September 1, 2012 database update
  - 5 new UIC records in the December 1, 2012 database update
  - 5 new UIC records in the March 1, 2013 database update
  - 6 new UIC records in the June 1, 2013 database update

  These UIC records are listed in Appendix A.

- During FY 12-13, six UICs were decommissioned, and closure reports were submitted to DEQ for four of those locations. Midway through FY 12-13, it was determined that required closure reports for decommissioned UICs would be included as part of the annual report. Appendix A of this report therefore contains the remaining two closure reports. (One of the decommissioned locations does not currently have an ID. This is because the location was found and decommissioned as part of a construction project, so in a future database update, the location will be added and then removed.)

- Removed 17 public UIC records in quarterly UIC *Registration Database* updates. The removals may have been decommissioned or identified through field investigations as not existing. These records are listed in Appendix A.

2.2.2 SA-1: Projected Main Activities for FY13-14

- Continue to regularly update the *UIC Registration Database* to include new and decommissioned UICs and other relevant information.

- Continue to submit quarterly *UIC Registration Database* updates to DEQ.

SA-2: Evaluate the location of public UICs relative to factors that may create adverse impacts to groundwater.

2.2.3 SA-2: Key Accomplishments for FY12-13

- Continued to implement *Systemwide Assessment Follow-up Actions,* specifically for UICs with inadequate separation distance from groundwater (see Sections 4 and 5).

2.2.4 SA-2: Projected Main Activities for FY13-14

- Continue implementation of remaining actions identified in the *Systemwide Assessment Follow-up Actions Workplan*, specifically for UICs with inadequate separation distance from groundwater.

[2] Some UICs identified as new facilities in quarterly reports may not be recently discovered or newly constructed UICs. UICs may be identified as new as a result of database management. For example, correcting a database identifier for a facility from a sedimentation manhole to a UIC would trigger the UIC to appear as a new sump in the BES database, even though the facility itself is not new.

- Evaluate newly constructed or identified UICs for the four characteristics that may potentially create adverse impacts to groundwater. Incorporate the resulting information into the Evaluation and Response process, as appropriate.

- Integrate new system data into the *UIC Registration Database*, as appropriate.

2.3 Pollution Control (PC)

Activities and practices such as spills, illegal disposal, improper site management, and erosion can increase the discharge of pollutants to public UICs, with potential negative impacts to groundwater. This BMP category focuses on reducing such pollutant discharges from both public and private sites and activities. It fulfills two WPCF permit requirements:

- Implement a *Spill Prevention and Pollution Control (SPPC) Plan*.
- Identify activities conducted on commercial/industrial properties or SARA Title III facilities that may result in a violation of MADLs in stormwater discharging to a public UIC.

PC-1: Identify, prevent, minimize, and control activities and practices that can increase pollutant discharges to public UICs.

2.3.1 PC-1: Key Accomplishments for FY12-13

Spill Prevention and Pollution Control (SPPC) Plan

- Continued to implement the SPPC Plan (submitted in December 2006), which includes improving ongoing citywide pollution control activities to identify and control activities on private properties, including commercial/industrial properties and SARA Title III facilities where site activities (e.g., illegal disposal, improper storage and handling of materials, and erosion) could result in a violation of MADLs in stormwater discharging to a UIC.

Spill Protection-Citizen Response (SPCR) Team

SPCR staff responds immediately to emergency spills and investigates pollution complaints regarding spills, illegal disposal, improper site management, and erosion. Citizens can call in reports on a dedicated spill response hotline 7 days a week, and staff is available 24 hours a day to respond to spills, slicks, and other suspicious or inappropriate discharges. The program refers problems to other enforcement agencies as appropriate. The SPCR team also provides education and technical assistance to property owners to improve site management and address work practices that may impact stormwater discharges. SPCR staff support the entire City, including areas that use UICs for management of stormwater.

- In FY12-13, received 17 calls regarding spills located within or near an area where UICs are the primary method for stormwater disposal. Only two of these spills reached a UIC system. Upon inspection, all of the spills were determined to have minimal to no impact. All of the systems were cleaned and inspected as appropriate. Appendix C shows this information in

table format, including date, release type, volume, location, identification of the closest UIC, and if the spill entered a UIC.

- The BES Spill Section continued a communication protocol with the Portland Fire Bureau that automatically pages the BES duty officer for a two-alarm event. Upon receiving the page, the duty officer contacts the Fire Bureau to identify if the duty officer is needed by the fire responders. Many events do not require the duty officer to respond to the site. In FY12-13, no two-alarm fire events resulted in pages to the duty officer.

- The BES Spill Section continued a communication protocol with the towing companies on the City of Portland towing contract. This notification ensures that BES will be contacted for auto fluid clean-up actions and for events that threaten to impact a stormwater facility (catch basin and downstream stormwater system). The duty officer may respond to events, depending on the reported information. Many events do not require the duty officer to respond. In FY12-13, 10 after-hours calls were received by the duty officer from towing companies. No enforcement actions were taken.

- BES and the Water Bureau continued to implement Columbia South Shore Well Field (CSSW) Protection Area signage. The signs list the BES spill response hotline number and read: "TO REPORT SPILLS CALL (503) 823-7180."

Regional Spill Response Committee

- This multi-agency committee was established in 1995 to consult and debrief on spill response activities throughout the region. It also provides staff training and coordination. Members include representatives from the Oregon Emergency Response System, Environmental Protection Agency Criminal Investigations (EPA CID), United States Coast Guard (USCG), Oregon Department of Environmental Quality (DEQ), Oregon Department of Transportation (ODOT), Clean Water Services (CWS), Water Environment Services (WES), Port of Portland, Portland Fire Bureau (PFB) Hazmat, City of Gresham, City of Milwaukie, City of Portland Water Bureau, and BES. BES chairs and attends all of the meetings.

Columbia South Shore Well Field Wellhead Protection Program

The City continued to implement the Columbia South Shore Well Field Wellhead Protection Program and reference manual for the City of Portland (and also in effect in Gresham and Fairview). The program focuses on groundwater protection through the implementation of mandatory spill containment BMPs and facility inspections for commercial and industrial facilities located within the Columbia South Shore Well Field Wellhead Protection Area (WHPA) overlay zone. The program also includes education and outreach efforts to affected residents and businesses and one-on-one technical assistance to businesses to help them comply with program requirements. Program requirements include structural and operational BMPs to reduce the occurrence of spills and minimize spill impacts.

- Conducted 532 inspections (includes re-inspections, regular fire inspections, and building final inspections) of businesses in the wellhead protection area (including Gresham and Fairview), and conducted 52 plan reviews.

- Conducted 108 individual technical assistance consultations.

- Provided education and outreach to affected residents and businesses to help them comply with requirements of the program, in conjunction with the Columbia Corridor Association and Columbia Slough Watershed Council. Activities included:
  - Provided technical assistance to 77 businesses.
  - Published newsletter articles on the protection program.
  - Distributed free spill kits, required signs, secondary containment pallets, and stormdrain covers.
  - Maintained the CCA and PortlandOnline webpage on the protection program and requirements.

Source Control Measures

The City's *Stormwater Management Manual* (SWMM) requires storm and sanitary source controls for site uses and characteristics that generate, or have the potential to generate, specific pollutants of concern. These requirements apply to new development projects, redevelopment projects, tenant improvements, and existing sites proposing new offsite discharges.

- The City conducted 159 land use reviews for source control measures at sites subject to SWMM requirements and issued permits for approximately 1,099 source control measures at sites with high-risk characteristics or activities. These numbers are citywide and are not limited to areas draining to UICs. (Note: When the SWMM is applied, drainage from high-risk areas is prohibited from draining to public UICs, and stormwater is managed onsite.)

- Continued review of Chapter 4 of the SWMM to identify potential source control requirement updates.

Erosion Control

- There were 4,741 active private construction permits subject to erosion control inspection (citywide). The Bureau of Development Services (BDS) conducted 3,854 erosion control-related inspections of private construction sites (citywide). (Even though a permit is active, there may be times when no activities that require erosion control inspection are occurring.) This number includes only approved inspections.

- All private development sites with qualifying ground disturbance areas were inspected for temporary and permanent erosion control measures at the beginning and near or at completion of the project. At interim checks conducted during the course of regular building inspections, the inspector notes any identified erosion control deficiencies, and the site operator is required to implement corrective action.

- There were 541active public construction projects (citywide) with erosion control components. In general, public sites are inspected daily during construction.

- Erosion control complaints (received through the complaint hotline or staff referrals) were tracked through the City's building permit tracking program, TRACS. A total of 14 cases were opened and responded to, with 12 cases closed (citywide).

- Continued the pre-permit-issuance site meeting program, where the applicant's team can choose to meet with staff onsite to discuss erosion control and other sensitive site issues. No applicants requested a pre-permit-issuance site visit this fiscal year.

Prevention of Illegal Disposal

- To help prevent illegal dumping, continued to implement curbside collection services (residential garbage, recycling, yard debris and food scrap collection). Continued the City's partnership with Neighborhood Coalition Offices and Metro to administer neighborhood cleanup collection events.

2.4 Education and Training (ET)

This BMP category fulfills the WPCF permit requirement for an employee training and public education program to educate City personnel and the public of the conditions and requirements of the permit.

ET-1: Implement public education activities that will raise awareness of groundwater protection and promote pollution prevention and control.

2.4.1 ET-1: Key Accomplishments for FY12-13

Clean Rivers Education Program

This program involves hands-on activities that teach students about the causes and effects of water pollution and what individuals can do to protect water resources. The programs also provide community service projects, teacher workshops, and curriculum resources. A number of the programs focus on stormwater and pollution prevention. An estimated 15,750 students participated in these activities citywide.

- Reached 7,777 students (grades K-12) with classroom programs that provide hands-on, interactive science education about stormwater and other environmental issues.

- Involved 5,371 students (K-12) in education field programs that offer watershed investigations and field assessments, stormwater tours, boat tours, and restoration experiences. Of these, 2,065 students combined education with natural area restoration service projects.

- Provided canoe trips to 474 students in the Columbia Slough and northern Willamette River watersheds. These included classroom studies and stewardship projects related to stormwater pollution.

- Checked out stormwater and watershed curriculum kits and field equipment to eight Portland elementary and middle school teachers.

- Presented Stormwater - Soak it Up, a 75-minute classroom program for grades 4-12 and special interest groups, totaling 1,332 students and teachers.

- Presented Tours of Stormwater Solutions to 208 students. Students visited bioswales, stormwater planters, ecoroofs, porous pavement, and creative downspout disconnections.

- Presented Watershed Awareness to 471 students, grades 3-6. This program focuses on common non-point sources of pollution and pollution prevention.

- Continued the permanent storm drain curb marker program. Participating community and school volunteers also distributed doorhangers with stormwater pollution prevention messages and clean river tips to nearby residences. Number of participants: 72.

- Targeted schools with onsite stormwater facilities for extended outreach. Students learned about stormwater pollution prevention and their school's sustainable stormwater facilities and participated in maintenance activities for their facilities.

- Presented *Futures Working for Clean Rivers* career education programs to 42 students in the Columbia Slough watershed.

- Continued quarterly Education Advisory Committee meetings to provide input and feedback for public education approaches and activities.

Stewardship Activities and Community Events

- Sponsored, co-sponsored, and participated in numerous community activities and events throughout the City's watersheds that involved stormwater management and watershed protection issues and actions (e.g., workshops, educational presentation and activities, training, restoration projects). More than 20,000 people took part in these activities.

Regional Coalition for Clean Rivers and Streams

- In FY 2012-13, the coalition engaged in the following activities:
  - Distributed key messages about stormwater pollution prevention across the region through a variety of media (television, radio, billboards, transit, online and social media).
  - Increased the reach of its messages 35 percent over the previous fiscal year, creating a total of 30,226,431 impressions during its active campaign.
  - Increased traffic to the Coalition website by 10 percent from the previous year.
  - Broadcast radio commercials in Spanish for first time.

Stormwater-related Information

- Included inserts in City water/sewer bills mailed to more than 200,000 customers:
  - December 2012/January and February 2013: "Living in a Floodplain" provided information about flooding caused by fall and winter storms and included information on incentive programs to help residents and businesses manage stormwater on their property.
  - March/April/May 2013: "What is Stormwater Runoff?" provided an overview of stormwater runoff; explained how the City manages stormwater through green infrastructure; and included information on incentive programs to help residents and businesses manage stormwater on their property.
  - June/July/August 2013: "Summer Sewer Construction" provided an overview of large sewer construction projects planned for summer 2013 that will help manage stormwater, improve water quality, and protect public health.
- Updated and posted fact sheets, brochures, and educational materials on the BES website about the Sustainable Stormwater Program (396,951 page views); Treebate Incentive for planting yard trees (13,973 page views); Green Street Stewards Program (6,187 page views); Ecoroof Incentive Program (18,365 page views); Native Plant Resources (4,579 page views); and Brownfield Program (16,292 page views).
- The Green Street Steward Program continued to educate and recruit volunteer Green Street Stewards, with help from a full-time AmeriCorps service member. Through June 2013, the program has reached 1,800 individuals through tabling events, knock-and-talks, and trainings. Thirty-six people have volunteered to become Green Street Stewards and adopt 66 Green Street facilities.
- Distributed a variety of educational materials at community meetings and events.

Eco-logical Business Program

- Continued to work with the Regional Pollution Prevention Outreach Team (P2O Team), Automotive Eco-Logical Advisory Subcommittee, and Landscape Eco-Logical Advisory Subcommittee for the Portland metropolitan region to certify businesses under the Eco-Logical Business Program. Eco-Logical Business Program activities in FY2012-13 included:
  - Two landscape service businesses were newly certified and five were recertified, bringing the total number of certified landscapers to 22.
  - The Eco-Logical Business Program completed a final BMP field guide and draft BMP manuals and certification checklists for the stormwater facility maintenance sector. The program made a presentation at the Portland chapter of the Oregon Landscape Contractor Association, with over 40 contractors in attendance.

- Continued to participate in local environmental events, including the annual sustainability fair, to promote the use of certified businesses.

- Provided an informational table at the annual Oregon Landscape Contractors Association conference.

- Completed a grant with partner Portland State University using students to develop pollution reduction measurement tools related to Eco-Logical Business Program certification.

- Continued to distribute EcoBiz newsletters every three months to more than 200 certified firms and program partners. The newsletters provide program updates, highlight pollution prevention success stories, and collect information about materials use.

Sustainability at Work

- Sustainability at Work (formerly the BEST Business Center) continued to assist Portland businesses with resources and information to help them green their operations. The center is run by the Bureau of Planning and Sustainability, in partnership with the Portland Water Bureau, Bureau of Environmental Services, Bureau of Transportation, Metro, Pacific Power, and the Energy Trust of Oregon. The program conducted the following activities in FY12-13:

  - Conducted on-site assessments for 166 businesses and assisted a total of 941 businesses. Assisted over 200 businesses with water and stormwater-related topics, resulting in 12 referrals to the Bureau of Environmental Services.

  - Collaborated with Sustainable Business Oregon to implement the statewide Innovation in Sustainability Awards, which replaces the BEST Awards in recognizing Portland's most sustainable businesses. Five awards were presented in recognition of reduced waste and toxics, energy conservation, development of green products and services, and promotion of sustainable food systems.

  - Administered Sustainability at Work Certification, recognizing businesses that have taken measurable steps to reduce their greenhouse gas emissions through energy efficiency, renewable power, transportation incentives, water conservation, recycling and waste prevention. To date, 111 businesses have been certified.

ET-2: Conduct employee training to ensure that UICs on public property are designed, constructed, operated, and closed in ways that meet WPCF permit requirements and protect groundwater.

2.4.2 ET-2: Key Accomplishments for FY12-13

- Continued to educate employees on groundwater protection and permit requirements.
- Continued to develop employee training and public education. Incorporated updates related to Permit Modifications No. 1-4 in programmatic messages.
- Provided ongoing coordination with the Bureau of Parks and Recreation. Responded to UIC site-specific questions and discussed O&M practices for Parks-owned UICs.
- Conducted training for new duty officer staff on the BES spill response hotline and staff response duties.

2.4.3 ET-2: Projected Main Activities for FY13-14

- Continue to develop information focused on groundwater protection and UICs for City staff.
- Continue to coordinate with BES engineering and construction groups to identify any UIC process issues and data gaps.
- Continue to coordinate with BDS development review staff on UIC design standards and on the review and approval process for UICs registered on private property.
- Continue to work with other bureaus to coordinate with and provide training on source control, operations and maintenance, spill prevention and response, and development review.
- Continue evaluation of existing training approaches and schedules and revise/update as needed.

2.5 Operations and Maintenance (OM)

Operations and maintenance BMPs for City UICs are important in order to both remove pollutants from UICs (e.g., UIC cleaning) and prevent pollutant discharges into UICs (e.g., street sweeping). This BMP category identifies O&M practices both for UICs located in City-managed rights-of-ways and for UICs on other City-owned property. It fulfills the WPCF permit requirement to implement an O&M Plan for public UICs.

OM-1: Implement operations and maintenance practices to remove or prevent pollutants from entering public UICs located in City-managed rights-of-ways and on other City-owned property.

2.5.1 OM-1: Key Accomplishments for FY12-13

Facility Maintenance

- Implemented the UICMP *Operations and Maintenance Plan*.
- Continued discussions with other City bureaus to standardize operations and maintenance procedures for UICs on City property, based on the O&M templates established in the City's *Stormwater Management Manual*.
- Made debris screen/inlet inspection/maintenance visits to 352 locations citywide (multiple visits to some locations after major rain events). (This number includes, but is not limited to, UIC-specific visits.)
- Cleaned approximately 13,066 catch basins and inlets (citywide).
- Cleaned 1,944 sedimentation and sump manholes.
- Repaired or constructed 278 inlets and inlet leads and 2,163 linear feet of culvert (citywide).
- Continued to implement retrofits to the existing storm drainage system, as identified during routine operations and maintenance activities. Completed conversion of a total of 836 linear feet from ditches to swales or porous shoulders (citywide).
- Continued to evaluate UIC stormwater quality monitoring data to evaluate the relationship between stormwater quality, maintenance frequency, and traffic volumes.

Street Sweeping

- Swept major arterials six times during the year.

Portland Bureau of Transportation Maintenance Operations (PBOT Maintenance Operations) BMPs

- Continued to implement BMPs within the right-of-way to protect water quality, including:
  - Following ODOT's *Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices.*
  - Using the trenchless liner repair system.
  - Using bio-pillows for sediment control on impervious surfaces to trap sediment during all sediment-disturbing activities.
  - Using low-disturbance sign installation methods to avoid or minimize digging.
  - Using mild cleaners, with no solvents, to clean signs.
  - Monitoring weather conditions during asphalt grinding
  - Hand-applying asphalt where necessary to prevent these materials from entering the storm drain system
  - Using water-based asphalt emulsions and biodegradable asphalt release agents

- Continued to pilot test alternative methods, products, and practices to reduce pollutant discharges.

Site-specific O&M actions conducted as a response action are discussed in Section 4: Evaluation and Response.

2.5.2 OM-1: Projected Main Activities for FY13-14

- Continue to use UIC stormwater quality monitoring data to evaluate the relationship between stormwater quality, maintenance frequency, and traffic volume. Where appropriate, adjust current O&M Plan maintenance schedules and targets.

- Continue to standardize operations and maintenance procedures for UICs on City property, based on the O&M templates established in the *Stormwater Management Manual*. Develop applicable tracking systems.

2.6 Policy and Regulation (PR)

The development of policies, codes, and administrative rules is a key element in providing long-term protection of groundwater. This BMP category includes City initiatives, such as policies that promote the implementation of green streets as alternatives or retrofits for UICs, as well as code and administrative rules pertaining to groundwater protection.

PR-1: Review and modify City policies, codes, and regulations to enhance groundwater protection.

2.6.1 PR-1: Key Accomplishments for FY12-13

Development Review Process and UICs

- Continued evaluation of the review and approval process for private UICs, identifying issues and process gaps and identifying strategies for a more streamlined and consistent registration process for both public and private UICs.

Policy Initiatives

- There are inconsistencies between water supply well construction rules and UIC rules. The City will resume discussions with the Oregon Water Resources Department (OWRD) and DEQ about this issue when those agencies initiate revisions to the UIC rules.

Regional Coordination

- The City participated in the ACWA (Association of Clean Water Agencies) Groundwater Committee, participated in the completion process for the DEQ regional WPCF permit template, and tracked the issuance of individual municipal WPCF permits.

Stormwater Management Manual Revision

- The last revision of the *Stormwater Management Manual* occurred in October 2008. UIC updates or changes will be provided for the next revision. In FY12-13, participated in quarterly meetings for System Planning and *Stormwater Management Manual* updates.

Administrative Rules

- Initiated development of City of Portland Administrative Rules ENB-4.13 *Administrative Rules for Discharges to the City Storm Sewer and Drainage System* and ENB-4.15 *Enforcement Rules.*

Land Acquisition

- The Grey to Green Land Acquisition Program acquired 87 acres of natural area.

2.6.2 PR-1: Projected Main Activities for FY13-14

- Participate in the UIC rules revision process (OAR 340-044 and 340-040) when initiated by DEQ and OWRD.
- Complete City of Portland Administrative Rules ENB-4.13 *Administrative Rules for Discharges to the City Storm Sewer and Drainage System* and ENB-4.15 *Enforcement Rules.*
- Continue to coordinate the review and approval process for private UIC registrations and development issues.

3 System Monitoring

The System Monitoring program element involves ongoing UIC monitoring conducted to demonstrate that UICs are operated in a manner that meets WPCF permit requirements and protects groundwater as a drinking water resource. System Monitoring includes two types of monitoring:

- Stormwater discharge monitoring of a representative subset of UICs, as identified in the *Stormwater Discharge Monitoring Plan* (SDMP). This is subsequently referred to as compliance monitoring and is discussed in section 3.1 below.

- Monitoring to determine the effectiveness of BMPs in controlling pollutant discharges to UICs and to identify technologies that can be used to improve stormwater quality. BMP monitoring to demonstrate reductions in pollutant discharges for a variety of structural and non-structural BMPs is documented in the *Effectiveness Evaluation of Best Management Practices for Stormwater in Portland Oregon* (September 2006). Since then, continued UIC monitoring has shown that stormwater discharge limits are in compliance with the permit and that the BMPs currently in use are meeting requirements.

3.1 Compliance Monitoring

3.1.1 Key Accomplishments for FY12-13 [3]

- Submitted year 8 (October 2012 – 2013) UIC compliance and supplemental monitoring locations to DEQ on August 31, 2012. Supplemental monitoring locations were selected to assess the quality of stormwater discharged to UICs located near commercial and industrial facilities.

- Implemented year 8 stormwater compliance and supplemental monitoring. Nineteen UIC locations were sampled in year 8 and tested for common and priority pollutants as defined by the permit.

- Compiled and evaluated year 8 stormwater data. Permit Modification No. 4 (dated December 6, 2012) increased maximum allowable discharge limits (MADLs) one order of magnitude for four constituents [pentachlorophenol, di(2-ethylhexyl)phthalate (DEHP), benzo(a)pyrene, and total lead]; there were no year 8 annual mean concentration exceedances of the permit's modified MADLs.

- Prepared and submitted the *Annual Stormwater Discharge Monitoring Report – Year 8 – October 2012 – May 2013* to DEQ (November 1, 2013). The report results are summarized in Section 3.1.2, below.

[3] See the *Annual Stormwater Discharge Monitoring Report – Year 8 – October 2012 – May 2013* (November 1, 2013) for detailed monitoring results.

- Performed a preliminary stormwater discharge trend analysis for the 8 years of data, using box plots to identify potential differences in pollutant concentrations.

- Prepared and submitted year 9 (October 2012 – May 2013) UIC monitoring locations to DEQ on August 30, 2013, included only 15 compliance monitoring locations selected in accordance with Permit Modification No. 3 (issued by DEQ on April 19, 2012).

3.1.2 UIC Stormwater Year 8 Monitoring Summary

The City of Portland's UIC monitoring program was implemented in accordance with the final SDMP. The monitoring program was designed to be representative of the estimated 9,000 City-owned/operated UICs. Nineteen UIC locations were sampled in year 8, including:

- 15 UICs selected to implement the required year 8 monitoring (i.e., compliance monitoring) described in the SDMP: Panel 3(15 rotating UIC locations sampled in permit years 3 and 8)
- Four carry-over UICs from Year 7 because of annual MADL exceedances

UIC monitoring locations were selected on the basis of two traffic flow categories: <1,000 trips per day (TPD) and ≥1,000 TPD. Year 8 locations (i.e., Panel 3and four carry-over UICs) included 10 UIC locations in the <1,000 TPD category and nine locations in the ≥1,000 TPD category.

Year 8 Results[4]

Three sampling events were completed between October 2012 and May 2013, in accordance with Permit Modification No. 3 (April 19, 2012) and SDMP Version 2 (December 2012). Stormwater discharge samples were analyzed for common pollutant analytes (e.g., metals, volatile organic compounds, semivolatile organic compounds, and pesticides) as defined by the permit. Testing of priority pollutant screen (PPS) analytes is not required in permit year 8; however, three PPS analytes are reported because they were detected during analysis of the common pollutants by the U.S. Environmental Protection Agency (EPA) test methods.

- All nine common pollutants and two of three PPS analytes (2,4-D, picloram) were detected in year 8.

- Twenty-two ancillary pollutants (i.e., analytes derived from the analytical methods for common pollutants) were generally detected at low concentrations. The nine ancillary pollutants detected at the highest frequencies (>50%) during all individual sampling events are polycyclic aromatic hydrocarbons (PAHs). PAHs are expected in urban rights-of-way. Generally, sources include fresh and used petroleum products associated with motor vehicle

[4] A full discussion of monitoring methodology and results can be found in the Annual Stormwater Discharge Monitoring Report—Year 8 (November 2013).

combustion, exhaust, and wear and tear; they also include other sources such as wood preservatives and cigarette filters.

Maximum Allowable Discharge Limit (MADL) Exceedances

- Three common pollutants [pentachlorophenol, di(2-ethylhexyl)phthalate (DEHP), and benzo(a)pyrene] were detected in five UICs in year 8 at concentrations above their respective MADLs in at least one sample. Detected concentrations of other common and PPS analytes were below their respective MADLs. The City reported MADL exceedances to DEQ, as required by the permit.

Annual Geometric Mean Concentrations

- Samples collected before the approval of Permit Modification No. 4 were compared to the original MADLs in the WPCF permit (i.e., original MADL), and samples collected after Permit Modification No. 4 was approved were compared to the new MADLs (i.e., modified MADLs).

- Three UIC locations had annual geometric mean concentrations that exceeded the original MADLs for at least one pollutant. None of the UICs exceeded the modified MADLs of 10 µg/L for pentachlorophenol and 2 µg/L for benzo(a)pyrene. All three of the UIC locations exceeded the original MADL (1.0 µg/L) for pentachlorophenol, and one of the 3 UICs also exceeded the original MADL (0.2 µg/L) for benzo(a)pyrene. Annual geometric means for UICs exceeding a MADL ranged from 1.133 to 1.729 µg/L for pentachlorophenol and 0.22 µg/L for benzo(a)pyrene, all only slightly above their respective MADLs.

- The annual geometric mean is calculated for pollutants detected at a concentration $\geq$50 percent of the MADL for an individual sampling location in at least one sampling event; therefore, geometric means were also calculated for DEHP at four UIC locations and for lead at one UIC location. The annual geometric means for these locations ranged from 3.575 to 5.482 µg/L for DEHP and was 15.3 µg/L for lead, well below each pollutant's original MADL (6 µg/L and 50 µg/L, respectively). Annual geometric mean concentrations were not calculated for any other pollutants because their concentrations were <50 percent of the MADL.

Preliminary Trend Analysis

The following general observations were made:

- Pentachlorophenol, lead, arsenic, and DEHP generally appear to be symmetric on a log scale. However, benzo(a)pyrene and total chromium appear to be truncated by the non-detect values.
- The $\geq$1,000 TPD traffic category has a slightly higher median concentration than the <1,000 TPD category for total chromium, DEHP, total lead, and pentachlorophenol. Total arsenic and benzo(a)pyrene had slightly higher concentrations in the <1000 TPD category.

- The 75th percentile of the distributions of the evaluated pollutants are all less than their respective MADLs. No measurement exceeded 50 percent of the modified MADLs approved in Permit Modification No. 4.

Year 8 Response Actions

No new source investigations were initiated in response to Year 8 monitoring results. However, source investigations were continued for three locations where an annual geometric mean for a pollutant exceeded a MADL in Year 7.

Category 4 UICs

- No new Category 4 UICs were identified in year 8.

- A total of 17 locations have been identified as Category 4 UICs based on sampling results during years 1 through 8. Four of the 17 UICs were identified as Category 4 UICs after only one year of monitoring in year 6, in lieu of sampling for a second consecutive year.

Additional Monitoring

- No UICs had annual geometric mean concentrations that exceeded the MADL for a pollutant in year 8 therefore no additional monitoring will be required in Year 9.

3.1.3 Projected Main Activities for FY13-14

- Select UIC locations for year 9 monitoring (i.e., Panel 4). (UIC locations were submitted to DEQ on August 30, 2013.)

- Implement year 9 UIC compliance monitoring in accordance with Permit Modification No. 3 (issued by DEQ on April 19, 2012) and SDMP Version 2 (December 2012).

- Document, analyze, and report results of the 2013-2014 (year 9) stormwater monitoring in the *Annual Stormwater Discharge Monitoring Report – Year 9*. That report will be submitted to DEQ by November 1, 2014 (per DEQ Permit Action Letter dated July 14, 2011).

- Continue to work with DEQ to demonstrate through the SDMP-required compliance monitoring that discharges to public UICs meet permit MADLs and are protective of groundwater quality (see Section 4).

- Initiate planning and selection of year 10 compliance and any year 9 carryover locations.

- Notify DEQ of year 10 stormwater monitoring locations by September 1, 2014.

4 Evaluation and Response

The Evaluation and Response program element uses data and information from System Management (e.g., UIC location, depth to groundwater) and System Monitoring (e.g., results of stormwater discharge monitoring) activities to assess UIC compliance status. It also defines the process and criteria used to identify, evaluate, and prioritize actions necessary to protect groundwater and meet permit requirements.

4.1 Decision Making Framework for Groundwater Protectiveness Demonstrations

During FY 07-08, a Groundwater Protectiveness Demonstration (GWPD) tool was developed by the City and approved by DEQ. This tool is a solute transport spreadsheet model that evaluates the reduction of stormwater pollutant concentrations entering the UIC by unsaturated soil before the infiltrated stormwater reaches groundwater. The tool is used to evaluate the fate and transport of pollutants in different geologic units by modifying the appropriate physical and chemical input parameters to characterize the properties of the geologic materials and pollutants.

In June 2008, the City submitted the *Decision Making Framework for Groundwater Protectiveness Demonstrations* to DEQ (approved October 20, 2008), which includes the protocols for applying the GWPD tool to UICs that fall within four specific categories identified during permit negotiations and permit implementation:

- UICs with inadequate vertical separation distance
- UICs located within permit-specified horizontal setbacks from domestic or public water wells
- UICs with stormwater concentrations exceeding permit-specified MADLs at end-of-pipe where stormwater enters the UIC
- UICs that have ubiquitous stormwater pollutants (e.g., PCP in stormwater)[5]

The City applied the decision-making framework to evaluate the four categories identified above. As a result, the City received "no further action" (NFA) determinations for UICs identified within those categories. Specific details about the framework development and applications for NFAs can be found in *UICMP Annual Reports No. 3, 4, 5, and 6* and in the reports listed in Table 1-2.

[5] Ubiquitous pollutants are defined as "pollutants frequently detected in stormwater as a result of their widespread, non-point source origin, such as PCP associated with treated wood utility poles found throughout the urban environment" (*Ubiquitous Pollutants Groundwater Protectiveness Demonstration,* submitted to DEQ July 17, 2008). They have also been defined as "a pollutant detected in the City's Year 1 and Year 2 Stormwater Discharge Monitoring Program at a detection frequency of > 75% and with a concentration of ≥50% of the MADL (*Decision Making Framework for Groundwater Protectiveness Demonstrations,* submitted to DEQ July 19, 2008).

As part of this UICMP annual report, UICs that received an NFA designation in each of the four categories were reviewed to verify that the previous NFA decisions are still protective of groundwater and ensure that additional analyses do not need to be performed (decision verification process). The following key assumptions of the GWPD were used as the basis of the review:

- **Vertical separation distance:** Separation distances are calculated using the most current total UIC depth and USGS-generated depth to groundwater estimates for the Portland area. If the depth-to-groundwater estimates are revised or modified, separation distances must be recalculated, and the minimum 5-foot separation distance must be verified.
- **Results of the stormwater discharge monitoring program**: Results must be reviewed to ensure that:
  - Pollutants detected are similar in concentration and frequency of detection to those identified in Year 1 – Year 8 monitoring.
  - New pollutants of interest are not identified.
  - Significant increases in pollutant concentrations or pollutant concentration trends are not identified.

Two components of Permit Modification No. 4 (December 6, 2012) affect the decision verification process:

- MADL concentrations for four common pollutants (pentachlorophenol, di(2-ethylhexyl)phthalate, benzo(a)pyrene, and lead) were increased by an order of magnitude.
- The required separation distance was reduced from 10 feet to 5 feet.

Because of these two changes, a number of Category 3 and Category 4 UICs are no longer considered to be out of compliance. As a result, these UICs do not require the original NFA designation and therefore do not require a decision verification process to be applied to them. During FY 13-14, the decision making framework will be reviewed, and updates will be made as appropriate to reflect these permit modifications. For this FY12-13 annual report, however, the decision verification process was followed. It is still a valid way to document that the depth to groundwater values and the City's monitoring data (used as part of prior protectiveness demonstrations) are still consistent and valid, and that groundwater is still being protected.

Sections 4.2 to 4.4 provide the results of the decision verification process.

Also in FY 12-13, the City completed a groundwater protectiveness demonstration and received DEQ approval to keep existing UICs with less than 5 feet of separation distance in service as long as they are located outside of permit-required drinking water well setbacks and have a sedimentation manhole in series. The two results of this approval are:

- UICs with less than 5 feet of separation distance that do not currently have a sedimentation manhole will be retrofitted with a sedimentation manhole.
- UICs with less than 5 feet of separation distance and located within a drinking water well setback will be retrofitted to increase separation distance to a minimum of 5 feet.

These changes are also discussed in section 5 of this report because they impact the Category 3 corrective action work that is currently being completed.

4.2 Further Evaluation of UIC Separation Distance

The WPCF permit (including Permit Modification No. 4) requires that UICs more than 5 feet deep must have a minimum separation distance of 5 feet between the bottom of the UIC and seasonal high groundwater. UICs less than 5 feet deep must have a minimum separation distance of 5 feet. See section 5.1 of this report for a current summary of UICs with inadequate vertical separation distance.

4.2.1 Decision Verification

During FY12-13, the City identified no new Category 3 UICs.

Of the list of Category 3 UICs identified in *UICMP Annual Report No.6*, 73 UICs have been removed through either the completion of a corrective action or determination of permit compliance (see Appendix B, Table B-2).

Section 5 of this report provides further details about the 73 removals from the Category 3 list, as well as the overall scope and schedule for the remaining Category 3 UICs.

Previous to this FY, the permit required a decision verification process to be applied to UICs that have a vertical separation distance between $\geq$ 5 feet and < 10 or are located in a City of Portland park, and that previously received an NFA confirmation. As discussed above, the City continued to apply the verification process this year to ensure that no major changes have occurred in the City's depth to groundwater estimates and monitoring data.

- **Verification of vertical separation distance:** USGS depth to groundwater data were used in combination with existing construction information to calculate vertical separation distance between the bottom of the UIC and seasonal high groundwater. All vertical separation distances are reported and updated as part of the UIC database quarterly updates.
- **Verification of stormwater discharge monitoring results:** In general, pollutants detected in year 8 monitoring are similar to detections, frequency, and concentration ranges in years 1 - 7. Common pollutants detected in years 1 - 8 data are generally at low concentrations and below their respective MADLs. Concentration ranges for pentachlorophenol, DEHP, and lead are similar for years 1 - 8. Concentrations are generally low and within narrow ranges at individual UIC locations. Concentrations for the $\geq$1,000 trips per day (TPD) traffic category appear to be slightly higher than the <1,000 TPD traffic category in years 1- 8.

  For details, refer to *Annual Discharge Monitoring Report – Year 8 (October 2012 – May 2013)*.

4.2.2 Key Accomplishments for FY12-13

- Continued evaluation and selection of corrective action alternatives for UICs determined to be non-compliant with the permit (see Section 5).
- Identified and evaluated additional UICs with potential inadequate separation as new data became available. Performed compliance determinations on UICs identified to have potentially inadequate separation distance.

4.2.3 Projected Main Activities for FY13-14

- Continue identification and evaluation of UICs as new data become available.
- Perform compliance determinations on any new UICs identified with potentially inadequate separation distance. Report and prioritize any newly identified Category 3 UICs to DEQ in accordance with the permit, as appropriate.
- Review and update as appropriate the *Decision Making Framework for Groundwater Protectiveness Demonstrations* to reflect the changes implemented as part of *Permit Modification No.4*.
- Apply the protocols in the *Decision Making Framework for Groundwater Protectiveness Demonstrations* to any new UICs as appropriate to determine if groundwater is protected or corrective action is required.

4.3 Further Evaluation of Stormwater Pollutants Exceeding MADLs

The WPCF permit requires the City to notify and report stormwater discharges that exceed the MADLs defined in Table 1 of the permit. Notification and reporting requirements of individual stormwater event and annual mean MADL exceedances are described in the *Quality Assurance Project Plan* (QAPP; City of Portland, 2006). In addition, annual monitoring reports must include (per Permit Schedule B, Section 7) identification and discussion of any exceedance of an individual storm event MADL or annual mean MADL concentration, including:

> (1) Any potential cause of the exceedance, to the extent practicable and if known; and
>
> (2) Actions taken during the wet season to reduce the concentration of the pollutant of concern.

Actions taken to assess the potential cause of the exceedance were evaluated in general accordance with *UICER Guideline No. 2: MADL Exceedances* and are described below. Actions taken during the wet season to reduce concentrations are described as response actions in Section 4.5.

4.3.1 Decision Verification

As discussed previously, Permit Modification No. 4 increased MADL levels for four common pollutants (pentachlorophenol, di(2-ethylhexyl)phthalate, benzo(a)pyrene, and lead) by an order of magnitude. As a result, UICs previously identified as Category 4 are no longer Category 4. To maintain consistency and confirm protectiveness, however, the decision verification process was still applied through the following steps:

- **Verification of vertical separation distance:** USGS depth to groundwater data (as described in Section 4.2) were used in combination with existing construction information to calculate vertical separation distance between the bottom of the UIC and seasonal high groundwater. Based on current USGS depth to groundwater information, all previous locations still have >10 feet vertical separation distance and meet the conditions of the groundwater protectiveness demonstration.

- **Verification of stormwater discharge monitoring results:** In general, pollutants detected in year 8 monitoring are similar to detections, frequency, and concentration ranges in years 1 - 7. Common pollutants detected in years 1 - 8 data are generally at low concentrations and below their respective MADLs. Concentration ranges for pentachlorophenol, DEHP, and lead are similar for years 1 - 8. Concentrations are generally low and within narrow ranges at individual UIC locations. Concentrations for the ≥1,000 trips per day (TPD) traffic category appear to be slightly higher than the <1,000 TPD traffic category in years 1- 8.

  For details, refer to *Annual Discharge Monitoring Report – Year 8 (October 2012 – May 2013)*.

4.3.2 Key Accomplishments for FY12-13

- Prior to implementation of the new MADLs, five individual sampling event MADL exceedances were reported to DEQ within 7 days following receipt of validated analytical data from the first storm event. After the new MADLs were in place, no exceedences were reported for the remaining sampling events.

- No new Category 4 UICs were identified in FY12-13.

4.3.3 Projected Main Activities for FY13-14

- Implement year 9 stormwater compliance monitoring, and report MADL exceedances in accordance with the permit and QAPP.

4.4 Further Evaluation of UICs near Domestic Wells

The WPCF permit requires that stormwater discharges meet the MADLs defined in Table 1 of the permit for UICs that are located:

- Less than 500 feet from a domestic well;
- Within a 2-year time of travel of a public water well; or
- Less than 500 feet from a public water well without a delineated time of travel.

Stormwater quality discharge limits established in the WPCF permit are designed to protect groundwater as a drinking water resource in accordance with OAR 340-040.

4.4.1 Decision Verification

Previously, 398 UICs were identified within the permit-specified setbacks from confirmed and unconfirmed drinking water wells. These locations have received NFAs based on groundwater protectiveness demonstrations. The decision verification process was applied through the following steps:

- **Verification of vertical separation distance:** USGS depth to groundwater data were used in combination with existing construction information to calculate vertical separation distance between the bottom of the UIC and seasonal high groundwater. Based on that information, seven locations were identified with < 5 feet vertical separation distance and have been identified for corrective actions, as described in section 5. The remaining locations were determined to have > 5 feet vertical separation distance and still meet the conditions of the groundwater protectiveness demonstration.

- **Verification of stormwater discharge monitoring results:** In general, pollutants detected in year 8 monitoring are similar to detections, frequency, and concentration ranges in years 1 - 7. Common pollutants detected in years 1 - 8 data are generally at low concentrations and below their respective MADLs. Concentration ranges for pentachlorophenol, DEHP, and lead are similar for years 1 - 8. Concentrations are generally low and within narrow ranges at individual UIC locations. Concentrations for the ≥1,000 trips per day (TPD) traffic category appear to be slightly higher than the <1,000 TPD traffic category in years 1- 8.

  For details, refer to *Annual Discharge Monitoring Report – Year 8 (October 2012 – May 2013)*.

4.4.2 Key Accomplishments for FY12-13

- Implemented corrective action engineering pre-design and design activities on Category 3 UICs identified as having inadequate separation distance and located near domestic wells.

4.4.3 Projected Main Activities for FY13-14

- Collect year 9 stormwater quality data. Compliance stormwater monitoring data will be used to evaluate the quality of stormwater entering UICs and confirm that groundwater is protected. Projected timeline: October 2013 – May 2014.

- Evaluate stormwater quality data. Continue evaluation of the results of the annual compliance monitoring program (described in the SDMP). Projected timeline: October 2013 – November 1, 2014.
  - Identify pollutants, if any, that exceed permit limits during individual sampling events or annual geometric mean concentration (see Section 4.3).
  - Verify the results of the *UICs within Permit-Specified Well Setbacks - Groundwater Protectiveness Demonstration – No Further Action Request.* This document was prepared by the City of Portland Bureau of Environmental Services and submitted to DEQ for approval in July 2008. DEQ's approval was obtained on October 6, 2008.

- Continue corrective action engineering design activities on Category 3 UICs identified as having inadequate separation distance and located near domestic wells. The City is actively evaluating corrective action alternatives for these UICs to provide adequate separation distance, meet permit requirements, and protect groundwater in accordance with OAR 340-040, which protects all groundwater as a drinking water resource. A detailed description of the City's work to address Category 3 UICs is provided in Section 5 of this report.

4.5 Response Actions

Response actions are intended to reduce elevated stormwater discharge concentrations at the surface in order to meet permit discharge limits. Meeting permit limits (i.e., MADLs) at the "end of pipe" demonstrates compliance with state and federal requirements for the protection of "underground sources of drinking water" and "waters of the state." Response actions are intended to be implemented in a timely manner and are considered interim in nature, until a final compliance determination is made or a final corrective action is implemented.

Implementation of *UIC Evaluation and Response Guidelines* (UICER) Nos. 1 through 8 (see UICMP - Appendix H) is considered to be applicable and appropriate response actions. UICER guidelines implemented since July 2011 are described in this section.

4.5.1 Key Accomplishments for FY12-13

- Implemented *UIC Evaluation and Response Guidelines* (UICER) No 2 in response to year 8 individual and annual mean MADL exceedances (see Section 3). During year 8 stormwater discharge monitoring, common pollutants were exceeded for the first sampling event. After

the first sampling event, Permit Modification No. 4 increased the MADLs, and no pollutants were detected above their MADLs for all remaining sampling events.

4.5.2 Projected Main Activities for FY13-14

- Implement actions, as needed and appropriate, in response to any year 9 individual stormwater discharge monitoring MADL exceedances, unusual conditions observed during UIC sampling, inspections, or citizen complaints.

5 Corrective Actions

The Corrective Actions program element addresses UICs that are determined to be non-compliant with WPCF permit requirements through the Evaluation and Response process. This program includes the processes used to evaluate, rank, select, and implement appropriate corrective actions. A variety of corrective actions are available, including options that do not involve construction (such as institutional controls or an assessment to demonstrate protectiveness), structural/ engineering controls, and UIC closure.

5.1 Summary of UICs with Inadequate Separation Distance

UICMP Annual Report No 3 identified 308 Category 3 UICs. That group included 186 Category 3 UICs with < 5 feet vertical separation distance that would require corrective action; 119 Category 3 UICs that received NFA designations through the use of a groundwater protectiveness demonstration (GWPD); and three locations determined to be compliant based on updated construction information. For a summary of UICs with inadequate separation distance prior to FY 09-10, refer to *UICMP Annual Report No 4*.

In early 2009, the USGS modified the depth to groundwater information for the City of Portland. As a result of that modification, the City identified changes to the list of Category 3 UICs reported in *UICMP Annual Report No.4*. Updated information was reported to DEQ through written correspondence titled *Changes to USGS Depth to Groundwater Data Modifications to Category 3 UIC List* (April 1, 2009). As a result of those changes, the prioritized Category 3 list of UICs with < 5 feet vertical separation distance was updated to 190 UICs.

Since *UICMP Annual Report No. 4,* two of the 190 UICs have been removed from the Category 3 list. Twenty-two UICs located in City of Portland parks have also received an NFA designation (October 21, 2009) through application of the GWPD. In FY10-11, 33 UICs were removed from the Category 3 list through either completion of a corrective action or determination of permit compliance. In FY11-12, 9 UICs were removed from the Category 3 list through either completion of a corrective action or determination of permit compliance, and two new locations with less than 5 feet of separation distance were added. As part of major Permit Modification No. 1, one of the Category 2 UICs was included in the Category 3 list.

In FY 12-13, the City completed a groundwater protectiveness demonstration (GWPD) that allows the City to keep UICs with less than 5 feet separation distance in service. This allowed for the removal of 73 UICs from the Category 3 list. As part of the GWPD approval, the City agreed to increase separation distance on the seven UIC locations located within drinking water well setbacks. The City also agreed to add a sedimentation manhole in series to 47 UICs that have less than 5 feet of separation distance and currently do not have a sedimentation manhole. These changes bring the final total to 54 Category 3 UICs that still require a corrective action. The updated and prioritized list of Category 3 UICs is provided in Appendix B, Table B-1.

5.2 Category 3 UICs

The permit defines Category 3 UICs as those identified as non-compliant following completion of the *Systemwide Assessment*. The permit requires Category 3 corrective actions to be completed within three full CIP cycles following the annual report date for the reporting period in which the non-compliant public UICs are reported as discovered, or in accordance with a DEQ-approved regional corrective action. An updated Category 3 UIC list is provided in Appendix B (Table B-1). Specific changes to the Category 3 list are described in the following sections.

5.2.1 Key Accomplishments for FY12-13

- Initiated design activities for Category 3 UICs, in accordance with the scope of the *Systemwide Assessment Follow-Up Actions Workplan*.
- Removed 73 UICs from the Category 3 UIC list through either completion of corrective action or determination of permit compliance.
- Met with DEQ on a periodic basis to provide an overview of work completed to date and discuss next steps.

5.2.2 Eliminated Category 3 UICs

Seventy-three Category 3 UICs were removed from the corrective action list, based on the groundwater protectiveness demonstration. Appendix B, Table B-2 provides the details.

5.2.3 New Category 3 UICs

No new Category 3 UICs were identified during FY 12-13

5.2.4 Projected Main Activities for FY13-14

- Continue design and implementation of corrective actions for the remaining 54 Category 3 UICs with separation distance < 5 feet (see Appendix B, Table B-1). Projected timeline: Complete by May 31, 2015.
- Meet with DEQ on a periodic basis to provide an overview of work completed to date and discuss next steps. Projected timeline: September 2013 – July 2014.

5.3 Category 4 UICs

The permit defines Category 4 UICs as those that become non-compliant by failing to meet the annual geometric mean MADL within one wet season after the exceedance or failing to satisfy any groundwater protection conditions of permit Schedule A.

5.3.1 Key Accomplishments for FY12-13

- Based on the results of the year 8 stormwater monitoring data, no new Category 4 UICs were identified in year 8 (see Section 4.3.2).

5.3.2 Summary of Category 4 UICs

Previously Identified Category 4 UICs

UICs in which the annual mean concentration exceeds the MADL for two consecutive years are identified as Category 4 UICs. Table 5-1 lists Category 4 UICs that have been identified throughout the permit term. (No Category 4 UICs were identified in years 4, 7, and 8.) Category 4 UICs are reported in the annual *Stormwater Discharge Monitoring Report*.

Corrective actions for the Category 4 UICs listed above were identified, evaluated, and selected in accordance with the *Corrective Action Plan* (CAP) (2006). The corrective action for these Category 4 UICs was a groundwater protectiveness demonstration (i.e., risk assessment), performed in accordance with *UICER Guideline No. 6: Groundwater Protectiveness Demonstration*. The groundwater protectiveness demonstrations were developed with DEQ input, and the final documents were reviewed and approved by DEQ (see Section 4.1).

Category 4 UICs Identified in Year 8

Following completion of the year 8 monitoring, no new Category 4 UICs were identified.

5.3.3 Projected Main Activities for FY13-14

- Submit NFA to DEQ for UICs identified as Category 4 UICs after only one year of monitoring in FY 10-11 (Year 6) .

- Evaluate whether any year 9 UICs will be identified as Category 4 UICs.

Table 5-1
Category 4 UICs Identified through Year 8

Location Code	Approximate Address	BES UIC No.	Traffic Category (TPD)	Estimated Separation Distance Between UIC and Groundwater (ft)[a]	Year of Category 4 UIC Designation	Pollutant for Category 4 UIC Designation
P1_1	6940 N. Macrum Ave.	AAG769	< 1000	73	Year 2	PCP
P6_1	3500 SE 112th Ave.	ADW577	≥ 1000	64	Year 2	PCP
P6_7	608 NE 87th Ave.	ADV645	< 1000	148	Year 2	PCP
P6_14	4289 NE Prescott St.	ADQ252	≥ 1000	64	Year 2	PCP
P2_5	10150 SE Ankeny St.	ADR885	≥ 1,000	158	Year 3	PCP
P2_13	4107 SE Reedway St.	ADU790	≥ 1,000	58	Year 3	PCP
P2_14	8409 N. Woolsey Ave.	AAH289	≥ 1,000	55	Year 3	PCP
SP3_6	490 NE 133rd Ave.	ADS048	≥ 1,000	96	Year 5	PCP
SP3_8	12198 SE Holgate Blvd.	ADW251	≥ 1,000	8	Year 5	PCP
P5_15	5190 N Vancouver Ave.	ADP960	≥ 1,000	129	Year 6	PCP
SP4_2	8335 SE Division St	ADP094	≥ 1,000	106	Year 6	PCP
SP4_10	10475 SE Division St	ADW349	≥ 1,000	97	Year 6	PCP
SP5_2[b]	17020 SE Division St	ADS798	≥ 1,000	32	Year 6	PCP
SP5_9[b]	14741 SE Stark St	AMP103	≥ 1,000	78	Year 6	PCP/DEHP
SP5_10[b]	3341 SE 122nd Ave	ADW625	≥ 1,000	32	Year 6	PCP/DEHP
P1_10[b]	10647 E Burnside St	ADR905	≥ 1,000	118	Year 6	PCP/DEHP
P5_5	10331 Se Clinton St	ADW558	≤1000	84	Year 6	B(a)P

a The estimated separation distance is defined as the approximate depth in feet from the bottom-most perforation in the UIC to the approximate seasonal-high groundwater level. The bottom-most perforation is defined as the bottom of the UIC minus 2 feet. Two feet were added to all separation distance calculations to account for the standard depth of the sediment trap ring on standard City UIC design.

b UIC location exceeded a MADL for the first time in Year 6, but was identified as a Category 4 UIC in lieu of sampling for a second consecutive year in Year 7.

Appendix A
Public UICs Identified, Constructed, or Removed
FY12-13

Date UIC Reported	BES Unit ID	UIC DEQ ID	EPA UIC Classification	Current Status [1]	UIC Location	Traffic Volume	Pre-treatment Type	Action Type
9/1/12	ADR873	10102-8022	Class V Injection Well	AC	9986 E BURNSIDE ST	8676	No SED MH	Add
9/1/12	ADR910	10102-8159	Class V Injection Well	AC	10859 E BURNSIDE ST	9459	No SED MH	Add
9/1/12	ADR905	10102-8165	Class V Injection Well	AC	10647 E BURNSIDE ST	9519	No SED MH	Add
9/1/12	ADR902	10102-8169	Class V Injection Well	AC	10484 E BURNSIDE ST	9519	No SED MH	Add
9/1/12	APX942	10102-9691	Class V Injection Well	AC	14417 NE MILTON ST	415	SED MH	Add
9/1/12	APX949	10102-9692	Class V Injection Well	AC	10568 SE CHERRY BLOSSOM DR	11470	SED MH	Add
9/1/12	APX943	10102-9693	Class V Injection Well	AC	8409 SE DIVISION ST	379	SED MH	Add
9/1/12	APX946	10102-9694	Class V Injection Well	AC	8243 SE DIVISION ST	508	SED MH	Add
9/1/12	ANP662	10102-9695	Class V Injection Well	AC	9642 E BURNSIDE ST	9127	No SED MH	Add
12/1/12	AQB627	10102-9696	Class V Injection Well	UC	1900 N INTERSTATE AVE	5610	Rock Trench	Add
12/1/12	AQB628	10102-9697	Class V Injection Well	UC	1900 N INTERSTATE AVE	1222	Rock Trench	Add
12/1/12	AQB649	10102-9698	Class V Injection Well	UC	431 N WHEELER PL	1184	Rock Trench	Add
12/1/12	APZ793	10102-9699	Class V Injection Well	AC	15110 SE GLADSTONE ST	454	No SED MH	Add
12/1/12	R00327	10102-9700	Class V Injection Well	UC	7816 SE 64th Ave	263	Swale	Add
3/1/13	R00328	10102-9701	Class V Injection Well	UC	SE 80th and SE Sherman	586	SED MH	Add
3/1/13	R00329	10102-9702	Class V Injection Well	UC	SE 80th and SE Sherman	570	SED MH	Add
3/1/13	R00330	10102-9703	Class V Injection Well	UC	SE 80th and SE Grant	570	SED MH	Add
3/1/13	APT304	10102-9704	Class V Injection Well	AC	7906 SE HARNEY ST	610	Swale	Add
3/1/13	R00332	10102-9705	Class V Injection Well	UC	8259 NE Schuyler Street	313	Swale	Add
6/1/13	AQC899	10102-9706	Class V Injection Well	AC	1045 NE SHAVER ST	592	SED MH	Add
6/1/13	AQC900	10102-9707	Class V Injection Well	AC	1045 NE SHAVER ST	592	SED MH	Add
6/1/13	R00335	10102-9708	Class V Injection Well	UC	SE 127th and SE Stark - NE corner of intersection	286	Swale	Add
6/1/13	R00336	10102-9709	Class V Injection Well	UC	NE 109th St. & NE Prescott Ave	456	SED MH	Add
6/1/13	R00337	10102-9710	Class V Injection Well	UC	SE Sandy Blvd & SE Oak St	10239	SED MH	Add
6/1/13	R00338	10102-9711	Class V Injection Well	UC	SE Sandy Blvd / SE 8th Ave & SE Stark St	174	SED MH	Add
6/1/12	ADV831	10102-1443	Class V Injection Well	AC	13828 E BURNSIDE ST	7873	No SED MH	Remove
6/1/12	ADW867	10102-4841	Class V Injection Well	AC	8108 SE 86TH AVE	827	No SED MH	Remove
6/1/12	ADV827	10102-8035	Class V Injection Well	AC	13310 E BURNSIDE ST	7910	No SED MH	Remove
9/1/12	AMV633	10102-1920	Class V Injection Well	PA	13605 SE REEDWAY ST	9566	No SED MH	Remove
9/1/12	ADS190	10102-6834	Class V Injection Well	AC	2198 SE 96TH DR	5752	SED MH	Remove
9/1/12	ABW228	10102-6835	Class V Injection Well	AC	2200 SE 96TH DR	316	SED MH	Remove

9/1/12	ABW230	10102-6836	Class V Injection Well	AC	2370 SE 96TH DR	316	SED MH	Remove
9/1/12	ABW232	10102-6837	Class V Injection Well	AC	2400 SE 96TH DR	316	SED MH	Remove
9/1/12	ADU349	10102-7939	Class V Injection Well	AC	1400 SE 71ST AVE	2283	No SED MH	Remove
9/1/12	ANA135	10102-808	Class V Injection Well	AC	9790 SE CARUTHERS ST	544	No SED MH	Remove
9/1/12	APV751	10102-9687	Class V Injection Well	AC	5499 SE 100TH AVE	3892	No SED MH	Remove
12/1/12	ADW077	10102-3972	Class V Injection Well	AC	14417 NE MILTON ST	415	No SED MH	Remove
12/1/12	ADU539	10102-6832	Class V Injection Well	AC	2100 SE 96TH AVE	5752	No SED MH	Remove
12/1/12	APN236	10102-9534	Class V Injection Well	AC	6426 NE SUMNER ST	4397	Swale	Remove
3/1/13	ADV346	10102-2676	Class V Injection Well	AC	2300 NE MORGAN ST	434	No SED MH	Remove
3/1/13	AMY572	10102-351	Class V Injection Well	AC	5400 NE COLUMBIA BLVD	23268	No SED MH	Remove
3/1/13	ANA730	10102-860	Class V Injection Well	AC	8698 NE DUDDLESON ST	Not Available	No SED MH	Remove

— CITY OF PORTLAND —
ENVIRONMENTAL SERVICES

1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204 ▪ Nick Fish, Commissioner ▪ Dean Marriott, Director

September 24, 2013

Greg Geist
Oregon Department of Environmental Quality
Underground Injection Control System Permit Manager
2020 SW 4th Ave, Suite 400
Portland, OR 97201

RE: City of Portland UIC Decommissioning – Node ADV573

Dear Greg,

The City of Portland Bureau of Environmental Services decommissioned one City-owned Class V UIC sump during May 2013. This UIC was used to discharge storm water from City Rights-of-Way near NE Brazee Street and NE 132nd Avenue. This UIC was decommissioned and converted to a sedimentation manhole. A new UIC sump was installed just downstream of the subject UIC/new sedimentation manhole. The old system only included two inlets and one UIC.

This UIC was decommissioned in accordance with the City of Portland's UIC Decommissioning Procedures accepted by DEQ in December 2006 and the Major Modification #2 approved by DEQ in October 2011. The UIC did not contain water at the time of decomissioning. The solids contained within the UIC were removed and disposed at Riverbend Landfill under disposal permit 112956OR.

Please find enclosed the UIC Pre-Closure Evaluation and supporting documentation for UIC ADV573.

Please call me at (503) 823-7881 if you need any additional information.

Kind Regards,

John O'Donovan
Professional Engineer

Enc.

UIC Pre-Closure Evaluation Form – UIC ADV573 (10102-1456)

UIC TO BE DECOMMISSIONED

Pre-Closure Notification and Location maps are provided in Attachment 1

UIC Node	DEQ ID	Address	Purpose of UIC Closure
ADV573	10102-1456	2415 NE 132nd Ave	This UIC has been converted to a sedimentation manhole, with a new UIC downstream. It was previously a sub-standard system with two inlets and one UIC. It is used to manage roadway runoff in City Right-of-Way. Work was done under BES Project E10278 – Safe Routes to School 2012 Grnst

INSPECTION RESULTS Photos and Field Inspection Sheet in Attachment 2

UIC Node	Sediment in UIC	Water in UIC	Any observed EFOCs
ADV573	Approximately 1.5 ft of sediment contained within UIC. Manhole was paved over previous to construction.	None	One TWP within 100 feet, in grassy area likely does not drain to this UIC system.

EFOC = Environmental Feature of Concern
TWP = Treated Wood Pole

ENVIRONMENTAL RECORDS SEARCH SUMMARY

Please refer to Attachment 3 for a list of databases included in the search, and any available site summary reports related to the findings

UIC Node	Findings
ADV573	▪ No environmental records were found that would indicate an environmental feature of concern for this UIC ▪ This UIC is located in geologic unit Qfc – Coarse-grained facies (Pleistocene)

SAMPLING

UIC Node	Sampling Conducted[1]	Results Exceeding Screening Values
ADV573	None	Not applicable

[1]**UICs are required to be sampled only if they meet the criteria outlined in:**
Oregon DEQ. October 2011. Major Modification #2, Water Pollution Control Facilities Permit for Class V Stormwater Underground Injection Control Systems, Permit Number 102830, File Number 111885. Page 11 of 12, UIC Management Plan.

EVALUATION OF IMPACTS TO GROUNDWATER

Map showing nearest well provided in Attachment 4

UIC Node	Depth of UIC	Depth to Groundwater[2]	Separation Distance	Closest Confirmed Well	Potential Impacts to Groundwater
ADV573	9.50 ft	104 ft	94.5 ft	Mult 1218, 1,500 ft	None

[2]**Seasonal High Depth to Groundwater.**

Source information:

City of Portland. July 2006. Systemwide Assessment: Underground Injection Control Systems (UICs).

Snyder, Daniel T. 2008. Estimated Depth to Groundwater and Configuration of the Water Table in the Portland, Oregon Area. USGS Scientific Investigations Report 2008-5059.

DECOMMISSIONING AND DISPOSAL

UIC Node	Decommissioning Method	Disposal Method for UIC Contents
ADV573	In-Place, Following Decommissioning Procedure (December 2006)[3], Step 11 Decommission UIC (Field Procedure). Converted to Sedimentation Manhole.	Sediment contained within the UIC was disposed at Riverbend Landfill under permit 112956OR.

[3] *City of Portland, December 2006 – Version 2 (December 2012). Decommissioning Procedure for Underground Injection Control Systems (final). Appendix D to WPCF Permit 102830.*

Attachment 1

Pre-Closure Notification Form
Location Map
Facility Profiler Map

UNDERGROUND INJECTION CONTROL REGISTRATION
PRE-CLOSURE NOTIFICATION

(Submit two copies. See pages 3 and 4 for detailed instructions.)

Return form with your payment to:
Oregon Department of Environmental Quality
Attn: Business Office
811 SW Sixth Avenue
Portland OR 97204

DEQ USE ONLY
Date Received: _____
UIC #: _____

A. AUTHORIZATION FEE

1. **Number of injection systems closing:** 1 x $100 = $ 0 (Included in annual Permit fee) **(Amount enclosed)**

B. FACILITY NAME, LOCATION & CONTACT

1. Facility Legal Name: City of Portland UIC
2. Common Name: City of Portland UIC
3. Facility Physical Address: 2415 NE 132nd Ave.
   City, State, Zip Code: Portland, OR 97230
4. Facility Mailing Address: 1120 SW 5th Ave. Rm 1000
   City, State, Zip Code: Portland, OR 97204
5. Name of Owner/Operator: City of Portland BES
   Address: 1120 SW 5th Ave. Rm. 1000
   City, State, Zip Code: Portland, OR 97204
6. Phone Number: 503-823-5524
   Fax Number: 503-823-5565
   e-mail address: bethany.nabhan@portlandoregon.gov
7. Consultant Contact: Bethany Nabhan
   Consultant Phone Number: 503-823-5524

C. FACILITY DESCRIPTION (ATTACH DOCUMENTS AS NEEDED)

1. Latitude (decimal format – see page 3): 45.540569 Longitude (decimal format – see page 3): -122.527153
2. If registered, list UIC number, e.g., 11117-05. Type of UIC System(s): 0102-1456 Number of injection systems: 1
3. Injection/Disposal System Design (check all that apply): ADU573 Class V
   ☒ Drywell or sump ☐ Auto floor drain ☐ Cesspool ☐ Sewage drill hole ☐ Septic tank/drainfield/leachfield ☐ Other
4. Attach a site map showing UIC location(s), facility buildings and their use, parking areas, roads and water features. ☒ Attached
5. Year of UIC construction: unknown Proposed date of injection system closure: April-May 2013
   List all UICs on next page.
6. SIC/NAICS Code: N/A Nature of business at facility: City PDW - UIC for storm water drainage
7. Closure plan (check all that apply, or attach a brief description of how the UIC[s] will be closed, associated with types):
   - ☐ Sample Fluids/sediments
   - ☒ Appropriate disposal of remaining fluids/sediments
   - ☐ Remove contaminated soil
   - ☒ Conversion to other well type
   - ☐ Pump out/fill with rocks and seal
   - ☐ Attach to a municipal system
   - ☐ Clean out
   - ☐ Install permanent plug
   - ☐ Other (describe): _____
8. A sampling plan for UIC closure is required and must be approved by DEQ before closure may commence. The plan must also be overseen by a registered Professional Geologist, Engineering Geologist, or Professional Engineer. ☒ Sampling plan attached See reference listed on back
9. List any other DEQ or public agency permits applied for or issued to this facility: N/A
10. Note past site uses: residential
11. If SARA Title III facility: List materials handled, stored, or used: N/A
12. Note nearest brownfield or remediation site within one-half mile: Tom Woodyard LUST (0.05 mi)
    ESCI/LUST # and name (attach map from Profiler – see reverse side): 26-03-0541
13. DEQ regional contact person: Greg Geist

D. SIGNATURE OF LEGALLY AUTHORIZED REPRESENTATIVE

I hereby certify that the information contained in this registration is true and correct to the best of my knowledge and belief.

John O'Donovan
Name of Legally Authorized Representative (type or print)

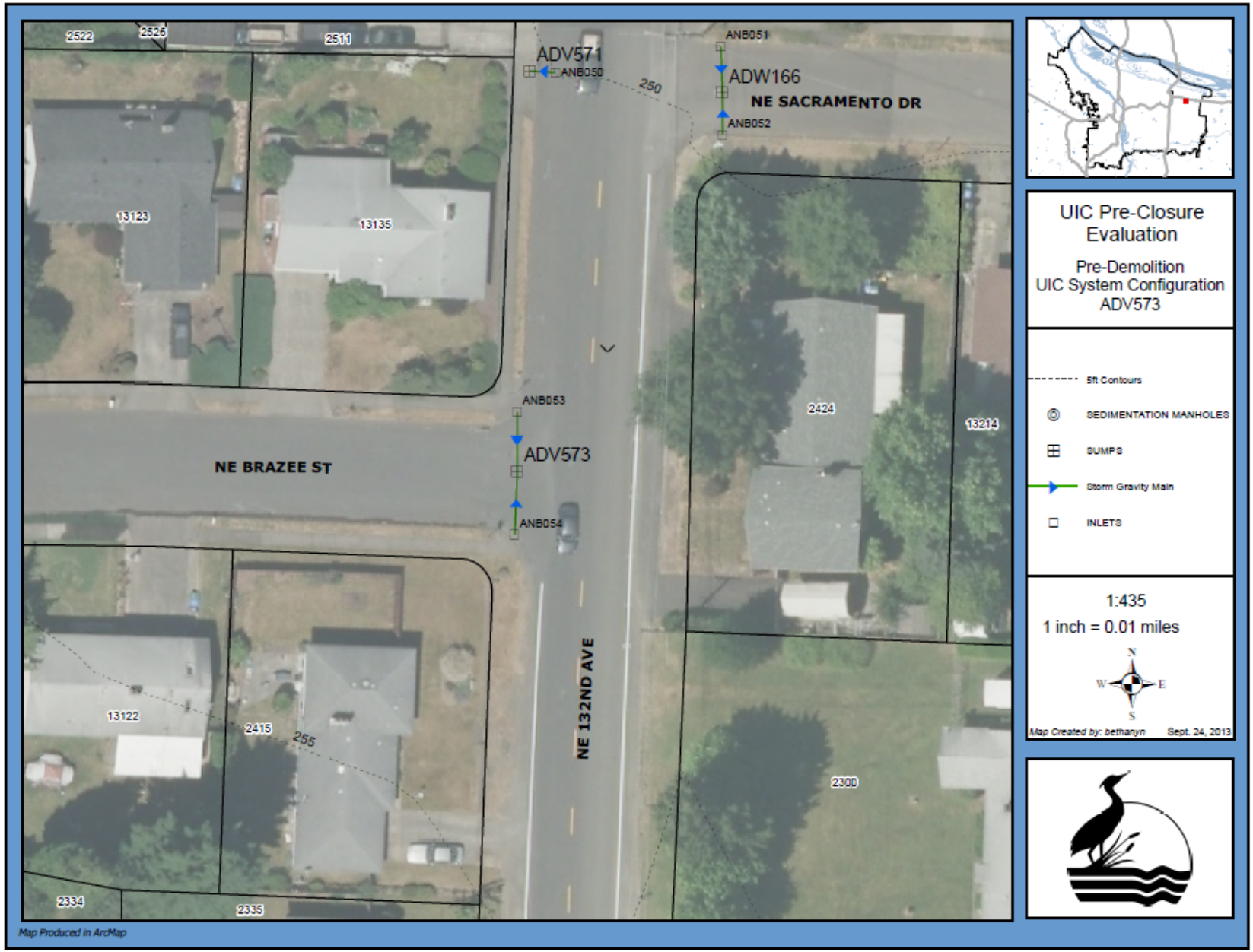
Senior Engineer
Title

Signature of Legally Authorized Representative

9/24/2013
Date

8. Please refer to:

- Decommissioning Procedure for Stormwater Underground Injection Control (Final Version). City of Portland, December 2006 - Version 2 (December 2012)
- Major modification #2, Water Pollution Control facilities permit for class II stormwater underground Injection Control systems. WPCF Permit #102830. Exp. may 31, 2015. Page 11 of 12, UIC management plan.


2522
2526
2511
ADV571
ANB050
250
ANB051
ADW166
NE SACRAMENTO DR
ANB052
13123
13135
ANB053
ADV573
NE BRAZEE ST
ANB054
2424
13214
NE 132ND AVE
13122
2415
255
2300
2334
2335
Map Produced in ArcMap
UIC Pre-Closure Evaluation
Pre-Demolition
UIC System Configuration
ADV573
5ft Contours
SEDIMENTATION MANHOLES
SUMPS
Storm Gravity Main
INLETS
1:435
1 inch = 0.01 miles
N
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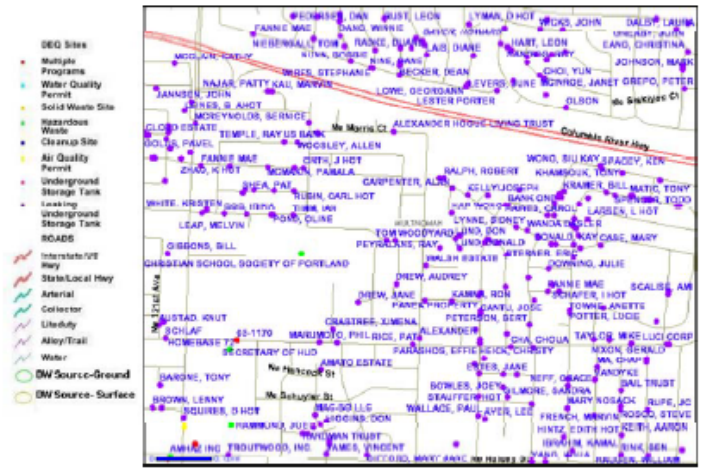
Map Created by: bethanyn
Sept. 24, 2013

Oregon DEQ Facility Profiler 2.0

[Help] [Close Window]

Image Dimensions (in Pixels): width 600 height 500 Update



[DEQ's Privacy Notice] [Contact DEQ] [Application Feedback]

Disclaimer: *This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.*

Attachment 2
Inspection Sheet and
Site Photos

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
Environmental Policy Division: Underground Injection Control Management Program
1120 SW 4th Ave Room 1000
Portland, OR 97204

UNDERGROUND INJECTION CONTROL (UIC) DECOMMISSIONING FIELD DATA AND INSPECTION SHEET

Date: 5/9/13 Time: 10:00	UIC No: ADV573	Inspector Name: Bethany Nathan

SITE CONDITIONS

Site Name and Address: 2415 NE 132nd Ave.	*UIC Type:
Observed Traffic Volume/Type: low - residential (+ construction zone)	
Weather Conditions: cloudy, cool	Observed Stormwater Flow: none

Street Drainage Type:
- ☒ Curb and Gutter
- ☐ No Curb
- ☐ Gravel/Dirt Road
- ☐ Other:_____

UIC Condition/Contents:
- ☐ Presence of water--depth
- ☒ Presence of sediment--depth
- ☐ Oily sheens/staining
- ☐ Unusual odors (solvents, etc)
- ☐ Floatable objects
- ☒ Garbage/debris/foreign materials
- ☐ Other:_____

Sed-Manhole Condition/Contents:
- ☐ Presence of water--depth
- ☐ Presence of sediment--depth
- ☐ Oily sheens/staining
- ☐ Unusual odors
- ☐ Floatable objects
- ☐ Garbage/debris/foreign materials
- ☐ Other: _____

No Sed mH

Describe other conditions or any potential environmental contaminants of potential concern (COPCs) likely to impact soil, groundwater or stormwater.

- 5 yd max

Other environmental features of concern or sources of potential contamination may include:

- to ll top of sediment

- ☐ Staining on site or street
- ☐ Presence of gasoline, grease or oil
- ☒ Telephone poles (treated wood) | across street to south - 9.5 ft deep total
- ☐ Commercial /Industrial activities draining to UIC
- ☐ Materials in drums, tanks, bags or plastic containers stored near UIC
- ☐ Presence of fuel and chemical storage or similar within the drainage area
- ☐ Vehicle maintenance and repair
- ☐ PCB containing trasformers
- ☐ Poor housekeeping
- ☐ Other

Note current and past land uses at the site. Residential

Please contact BES CSA staff for relevant database review including DEQ ECSI sites, leaking underground storage tanks (LUSTs) facilities and other contaminated sites that could have a direct impact on site drainage.

Photo(s) Taken? (Y) / N (Include photo numbers and description)

*UIC TYPE

TYPE 1 UIC: Residential UIC— Residential land-use within drainage area plus low traffic (< 1000 trips per day).

TYPE 2 UIC: Residential UIC—Residential land-use within drainage area plus high traffic (> 1000 trips per day)

TYPE 3 UIC: Commercial or Industrial UIC – Commercial or industrial land use within the drainage catchment

File pathway and name.doc

UIC ADV573 Inspection Photos:

System configuration:

Above - During Construction (looking east/northeast - inlets not visible, new UIC being tested visible in left-hand side of image. Plate covering subject UIC),

Below - Google Maps image pre-construction (looking west)

Previously paved-over UIC ADV573 being uncovered

View inside UIC ADV573 before decommissioning

Attachment 3
Environmental Records
Database List

The following databases were searched for environmental issues that may indicate there was an impact to the UIC system:

Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
The CERCLIS database lists known and potentially hazardous waste facilities and remedial activities reported to the EPA by state and local agencies around the nation.

Federal National Priority List (NPL)
The NPL database is a subset of CERCLIS properties and identifies facilities for priority cleanup under the Superfund Program.

National Response Center (NRC)
The primary function of the NRC is to serve as the sole national point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

EPA Envirofacts
The EPA Envirofacts list identifies sites that handle hazardous waste, have permitted discharges to water, report toxic releases, or have active or archived Superfund reports.

DEQ Environmental Cleanup Site Information System (ECSI)
The ECSI system includes facilities entered into the DEQ database pursuant to the site discovery requirements of ORS 466.560. The list includes facilities where investigation or cleanup has been initiated and facilities suspected of a release of hazardous substances.

Oregon State Fire Marshal (OSFM) Hazardous Materials Spills List
The OSFM Hazardous Materials Spills List identifies sites that experienced a spill or encountered hazardous materials requiring a hazardous materials response team.

DEQ Leaking Underground Storage Tank (LUST) List
The DEQ LUST list identifies facilities that are currently or have been under investigation for leaking underground storage tanks.

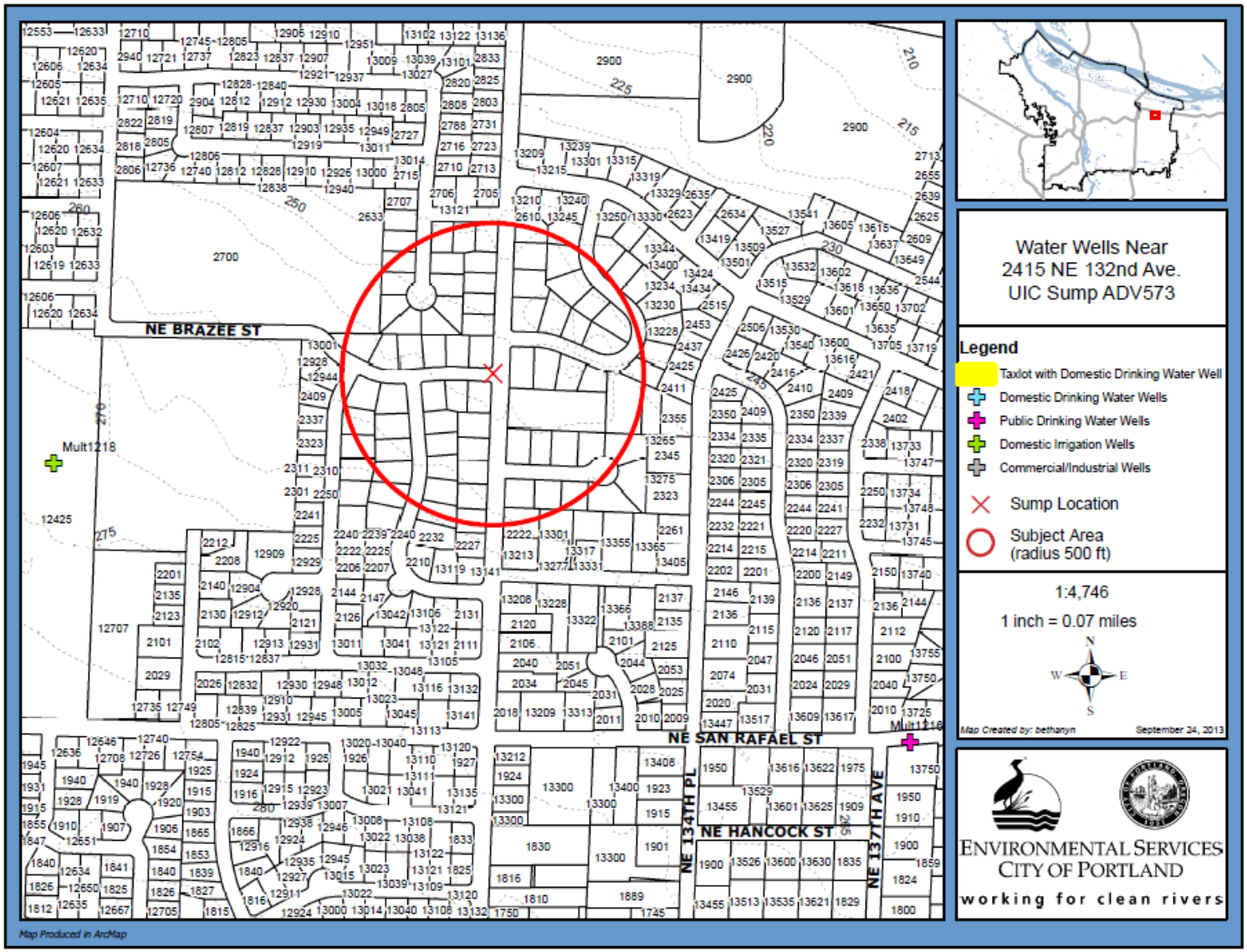
DEQ Regulated Underground Storage Tank (UST) List
This DEQ database lists facilities with registered USTs in operation and/or decommissioned. The UST List is a listing of all regulated underground storage tank facilities in Oregon.

Oregon Water Resources Department
The Oregon Water Resources Department maintains records of well logs installed in the state of Oregon.

City of Portland Historic Heating Oil Tank Permits
The City of Portland maintains records of historic residential heating oil tank permits. The permits are for the installation or upgrade of heating oil tanks and associated equipment only, so the condition and current status of these tanks are usually not known.

Attachment 4

Location of Nearest Domestic Supply Water Wells - Map



Water Wells Near
2415 NE 132nd Ave.
UIC Sump ADV573

Legend

- Taxlot with Domestic Drinking Water Well
- Domestic Drinking Water Wells
- Public Drinking Water Wells
- Domestic Irrigation Wells
- Commercial/Industrial Wells
- Sump Location
- Subject Area (radius 500 ft)

1:4,746

1 inch = 0.07 miles

N
W E
S

Map Created by: bethanyn

September 24, 2013

ENVIRONMENTAL SERVICES
CITY OF PORTLAND
working for clean rivers

— CITY OF PORTLAND —
ENVIRONMENTAL SERVICES

1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204 ▪ Nick Fish, Commissioner ▪ Dean Marriott, Director

October 2, 2013

Greg Geist
Oregon Department of Environmental Quality
Underground Injection Control System Permit Manager
2020 SW 4th Ave, Suite 400
Portland, OR 97201

RE: City of Portland UIC Decommissioning – Newly Discovered UIC at Northwest Corner of NE Glisan St. and NE 157th Ave.

Dear Greg,

The City of Portland Office of Transportation decommissioned one City-owned Class V UIC sump during April 2013. It was an old County sump buried at the northwest corner of NE Glisan Street and NE 157th Avenue. Construction crews discovered the UIC while doing sidewalk and ADA ramp installation work at that intersection. This UIC was at one time most likely used to discharge stormwater from roadways in the vicinity of that intersection, but was found below an inlet draining to a newer UIC system, and did not appear to currently be connected to any inlets or to be draining stormwater. This UIC was decommissioned because it was in the way of scheduled sidewalk construction and is not necessary for stormwater management.

This UIC was decommissioned in accordance with the City of Portland's UIC Decommissioning Procedures accepted by DEQ in December 2006 and the Major Modification #2 approved by DEQ in October 2011. It was filled with CLSM and reburied. An ADA ramp was installed above it. Since this UIC was not managing stormwater and was not essential, it was not replaced by any other stormwater management system.

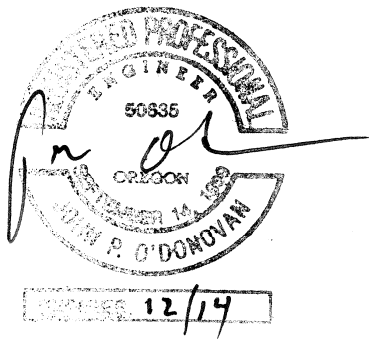
The City is in the process of registering this UIC, but a registration number has not yet been generated for it.

Please find enclosed the UIC Pre-Closure Evaluation and supporting documentation for this UIC. Please call me at (503) 823-7881 if you need any additional information.

Kind Regards,

John O'Donovan
Professional Engineer

Enc.



UIC Pre-Closure Evaluation Form – Newly Discovered UIC at Northwest Corner of NE Glisan and 157th

UIC TO BE DECOMMISSIONED

Pre-Closure Notification and Location maps are provided in Attachment 1

UIC Node	DEQ ID	Address	Purpose of UIC Closure
Newly Discovered UIC at NWC of NE Glisan and 157th	None	Northwest Corner of NE Glisan and 157th, Portland OR	This was an old Multnomah County sump that the City inherited when it annexed this portion of the city. The sump was in ROW and was once used for roadway stormwater drainage.

INSPECTION RESULTS Photos and Field Inspection Sheet in Attachment 2

UIC Node	Sediment in UIC	Water in UIC	Any observed EFOCs
Newly Discovered UIC at NWC of NE Glisan and 157th	5.4 feet deep	None	One TWP immediately adjacent to UIC.

EFOC = Environmental Feature of Concern
NWC = Northwest Corner
TWP = Treated Wood Pole

ENVIRONMENTAL RECORDS SEARCH SUMMARY

Please refer to Attachment 3 for a list of databases included in the search, and any available site summary reports related to the findings

UIC Node	Findings
Newly Discovered UIC at NWC of NE Glisan and 157th	▪ No environmental records were found that would indicate an environmental feature of concern for this UIC ▪ This UIC is located in geologic unit Qfc – Coarse-grained facies (Pleistocene)

SAMPLING

UIC Node	Sampling Conducted[1]	Results Exceeding Screening Values
Newly Discovered UIC at NWC of NE Glisan and 157th	None	Not Applicable

[1]**UICs are required to be sampled only if they meet the criteria outlined in:**
Oregon DEQ. October 2011. Major Modification #2, Water Pollution Control Facilities Permit for Class V Stormwater Underground Injection Control Systems, Permit Number 102830, File Number 111885. Page 11 of 12, UIC Management Plan.

EVALUATION OF IMPACTS TO GROUNDWATER

Map showing nearest well provided in Attachment 4

UIC Node	Depth of UIC	Depth to Groundwater[2]	Separation Distance	Closest Confirmed Well	Potential Impacts to Groundwater
Newly Discovered UIC at NWC of NE Glisan and 157th	18 ft	122 feet	104 feet	515 ft South, MULT 66706	None

[2]**Seasonal High Depth to Groundwater.**
Source information:

City of Portland. July 2006. Systemwide Assessment: Underground Injection Control Systems (UICs).

Snyder, Daniel T. 2008. Estimated Depth to Groundwater and Configuration of the Water Table in the Portland, Oregon Area. USGS Scientific Investigations Report 2008-5059.

DECOMMISSIONING AND DISPOSAL

UIC Node	Decommissioning Method	Disposal Method for UIC Contents
Newly Discovered UIC at NWC of NE Glisan and 157th	In-Place, Following Decommissioning Procedure (December 2006)[3], Step 11 Decommission UIC (Field Procedure)	Sediment contained within the UIC was disposed at Riverbend Landfill under permit 113095OR. 1.10 Tons of sediment was disposed at the landfill.

[3] *City of Portland, December 2006 – Version 2 (December 2012). Decommissioning Procedure for Underground Injection Control Systems (final). Appendix D to WPCF Permit 102830.*

Attachment 1

Pre-Closure Notification Form
Location Map
Facility Profiler Map

UNDERGROUND INJECTION CONTROL REGISTRATION
PRE-CLOSURE NOTIFICATION

(Submit two copies. See pages 3 and 4 for detailed instructions.)

Return form with your payment to:
Oregon Department of Environmental Quality
Attn: Business Office
811 SW Sixth Avenue
Portland OR 97204

DEQ USE ONLY
Date Received: _____
UIC #: _____

A. AUTHORIZATION FEE

1. **Number of injection systems closing:** 1 x $100 = $ 0 (Included in annual Permit fee) **(Amount enclosed)**

B. FACILITY NAME, LOCATION & CONTACT

1. Facility Legal Name: City of Portland UIC
2. Common Name: City of Portland UIC
3. Facility Physical Address: NWC NE 157th + Glisan
   City, State, Zip Code: Portland, OR 97230
4. Facility Mailing Address: 1120 SW 5th Ave. Rm. 1000
   City, State, Zip Code: Portland, OR 97204
5. Name of Owner/Operator: City of Portland BES
   Address: 1120 SW 5th Ave. Rm. 1000
   City, State, Zip Code: Portland, OR 97204
6. Phone Number: 503-823-5524
   Fax Number: 503-823-5565
   e-mail address: bethany.nabhan@portlandoregon.gov
7. Consultant Contact: Bethany Nabhan — Consultant Phone Number: 503-823-5524

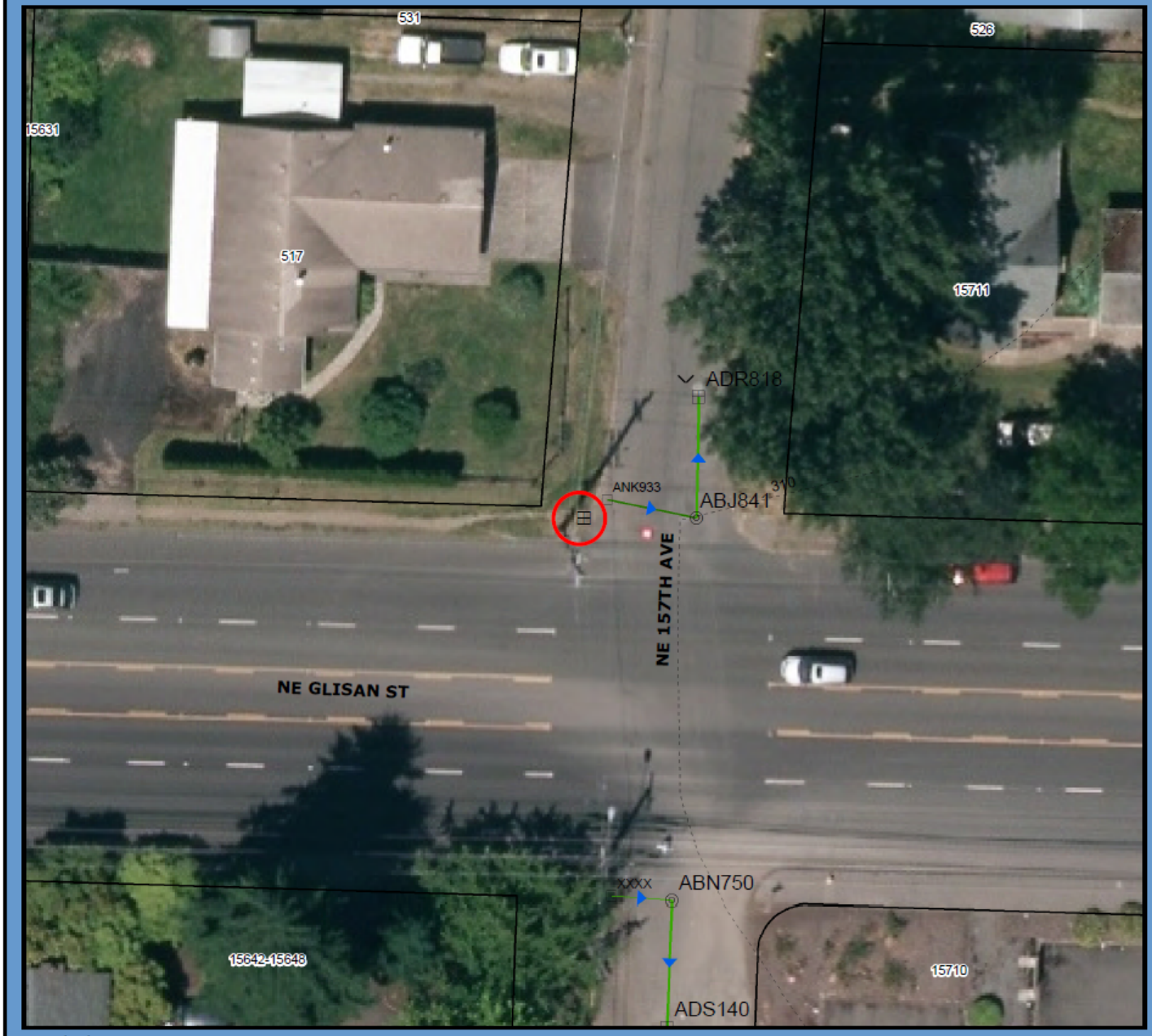
C. FACILITY DESCRIPTION (ATTACH DOCUMENTS AS NEEDED)

1. Latitude (decimal format – see page 3): 45.526541 Longitude (decimal format – see page 3): -122.501564
2. If registered, list UIC number, e.g., 11117-05. Type of UIC System(s): Class V (Not currently registered) Number of injection systems: 1
3. Injection/Disposal System Design (check all that apply):
   ☒ Drywell or sump ☐ Auto floor drain ☐ Cesspool ☐ Sewage drill hole ☐ Septic tank/drainfield/leachfield ☐ Other
4. Attach a site map showing UIC location(s), facility buildings and their use, parking areas, roads and water features. ☒ Attached
5. Year of UIC construction: unknown Proposed date of injection system closure: April 2013
   List all UICs on next page.
6. SIC/NAICS Code: N/A Nature of business at facility: City ROW - for roadway drainage
7. Closure plan (check all that apply, or attach a brief description of how the UIC[s] will be closed, associated with types):
   ☐ Sample Fluids/sediments
   ☒ Appropriate disposal of remaining fluids/sediments
   ☐ Remove contaminated soil
   ☐ Conversion to other well type
   ☒ Pump out/fill with rocks and seal
   ☐ Attach to a municipal system
   ☐ Clean out
   ☐ Install permanent plug
   ☐ Other (describe): _____
8. A sampling plan for UIC closure is required and must be approved by DEQ before closure may commence. The plan must also be overseen by a registered Professional Geologist, Engineering Geologist, or Professional Engineer. ☒ Sampling plan attached See reference listed on back
9. List any other DEQ or public agency permits applied for or issued to this facility: N/A
10. Note past site uses: residential, commercial nearby
11. If SARA Title III facility: List materials handled, stored, or used: N/A
12. Note nearest brownfield or remediation site within one-half mile: Darling, Irene LUST (0.15mi.)
    ESCI/LUST # and name (attach map from Profiler – see reverse side): 26-01-5060
13. DEQ regional contact person: Greg Geist

D. SIGNATURE OF LEGALLY AUTHORIZED REPRESENTATIVE

I hereby certify that the information contained in this registration is true and correct to the best of my knowledge and belief.

John O'Donovan — **Name of Legally Authorized Representative** (type or print)
Senior Engineer — **Title**
Signature of Legally Authorized Representative
10/2/2013 — **Date**



UIC Pre-Closure Evaluation

Pre-Demolition
UIC System Configuration
Previously Unknown UIC

- 5ft Contours
- SEDIMENTATION MANHOLES
- SUMPS
- Storm Gravity Main
- INLETS

1:330
1 inch = 0.01 miles

N
W E
S

Map Created by: bethanyn Sept. 24, 2013

Map Produced in ArcMap

Oregon DEQ Facility Profiler 2.0

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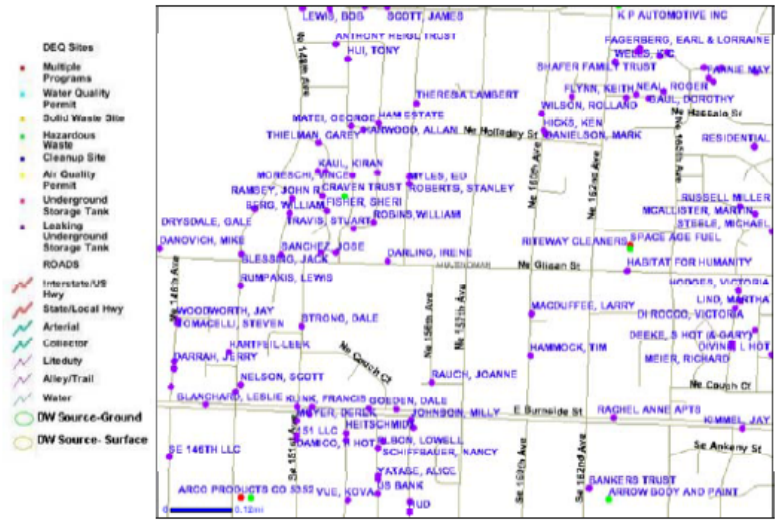
Image Dimensions (in Pixels): width 600 height 500 Update



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Disclaimer: *This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.*

Attachment 2
Inspection Sheet and
Site Photos

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
Environmental Policy Division: Underground Injection Control Management Program
1120 SW 4th Ave Room 1000
Portland, OR 97204

UNDERGROUND INJECTION CONTROL (UIC) DECOMMISSIONING FIELD DATA AND INSPECTION SHEET

Date: 4/19/2013 Time: 13:00	UIC No: Unknown UIC	Inspector Name: Bethany Nabhan

SITE CONDITIONS

Site Name and Address: NW corner of NE Glisan + 157th	*UIC Type:
Observed Traffic Volume/Type: Med-heavy on Glisan, 157th not busy	
Weather Conditions: Cool, showers	Observed Stormwater Flow: none

Street Drainage Type:	UIC Condition/Contents:	Sed-Manhole Condition/Contents:
☒ Curb and Gutter on Glisan	☐ Presence of water--depth	☐ Presence of water--depth
☒ No Curb on 157th	☒ Presence of sediment--depth	☐ Presence of sediment--depth
☐ Gravel/Dirt Road	☐ Oily sheens/staining	☐ Oily sheens/staining
☐ Other:_____	☐ Unusual odors (solvents, etc)	☐ Unusual odors
	☐ Floatable objects	☐ Floatable objects
	☐ Garbage/debris/foreign materials	☐ Garbage/debris/foreign materials
	☐ Other:_____	☐ Other:_____
	5.4 ft of sediment	No Sed. No inlets

Describe other conditions or any potential environmental contaminants of potential concern (COPCs) likely to impact soil, groundwater or stormwater.

Other environmental features of concern or sources of potential contamination may include:

- ☐ Staining on site or street
- ☐ Presence of gasoline, grease or oil
- ☒ Telephone poles (treated wood) immediately adjacent
- ☐ Commercial /Industrial activities draining to UIC
- ☐ Materials in drums, tanks, bags or plastic containers stored near UIC
- ☐ Presence of fuel and chemical storage or similar within the drainage area
- ☐ Vehicle maintenance and repair
- ☐ PCB containing trasformers
- ☐ Poor housekeeping
- ☐ Other

- depth to top of Sed 12.6ft.
- Perforated rings.
- no inlets to UIC next to CB that are replacing ADA ramp will be these
- opening is 8 inches wide

Note current and past land uses at the site. Residential, Commercial

Please contact BES CSA staff for relevant database review including DEQ ECSI sites, leaking underground storage tanks (LUSTs) facilities and other contaminated sites that could have a direct impact on site drainage.

5/29/13 - UIC vactored out
- final depth 18ft

Photo(s) Taken (Y) N (Include photo numbers and description)

*UIC TYPE

TYPE 1 UIC: Residential UIC— Residential land-use within drainage area plus low traffic (< 1000 trips per day).

TYPE 2 UIC: Residential UIC—Residential land-use within drainage area plus high traffic (> 1000 trips per day)

TYPE 3 UIC: Commercial or Industrial UIC – Commercial or industrial land use within the drainage catchment

DAILY FIELDWORK REPORT

Date: 4/19/13 **Job No.**_____

Job Name: NE Glisan 157th UIC **Prime Contractor:** Stacy + Witbeck

Inspection Staff Assigned to Job: Bethany Nabhan

Summary of Work Completed: Inspected recently discovered UIC @ NWC of NE Glisan + 157th. Located right where ADA ramp will be installed. need to decommission it - but it needs to be cleaned out first. DTSed is 12.6 ft. No water @ time of inspection, but heavy down pour night after filled up excavation where UIC is. Likely took on that water

Schedule Issues:

On-Site Problems: - Gas line right above opening of UIC
- opening of UIC is 8 inches wide
- will need better access for vac truck to get in there.

Other Issues:

Inspection Photos – NE 157th and Glisan:

Location of newly-discovered UIC at the northwest corner of NE 157th and Glisan

8 inch opening in concrete lid of buried UIC. The pipe visible in the picture is a natural gas line. The concrete lid had to be broken in half in order for the UIC to be vactored out prior to decommissioning, so as not to disturb the gas line.

Attachment 3
Environmental Records
Database List

The following databases were searched for environmental issues that may indicate there was an impact to the UIC system:

Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
The CERCLIS database lists known and potentially hazardous waste facilities and remedial activities reported to the EPA by state and local agencies around the nation.

Federal National Priority List (NPL)
The NPL database is a subset of CERCLIS properties and identifies facilities for priority cleanup under the Superfund Program.

National Response Center (NRC)
The primary function of the NRC is to serve as the sole national point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

EPA Envirofacts
The EPA Envirofacts list identifies sites that handle hazardous waste, have permitted discharges to water, report toxic releases, or have active or archived Superfund reports.

DEQ Environmental Cleanup Site Information System (ECSI)
The ECSI system includes facilities entered into the DEQ database pursuant to the site discovery requirements of ORS 466.560. The list includes facilities where investigation or cleanup has been initiated and facilities suspected of a release of hazardous substances.

Oregon State Fire Marshal (OSFM) Hazardous Materials Spills List
The OSFM Hazardous Materials Spills List identifies sites that experienced a spill or encountered hazardous materials requiring a hazardous materials response team.

DEQ Leaking Underground Storage Tank (LUST) List
The DEQ LUST list identifies facilities that are currently or have been under investigation for leaking underground storage tanks.

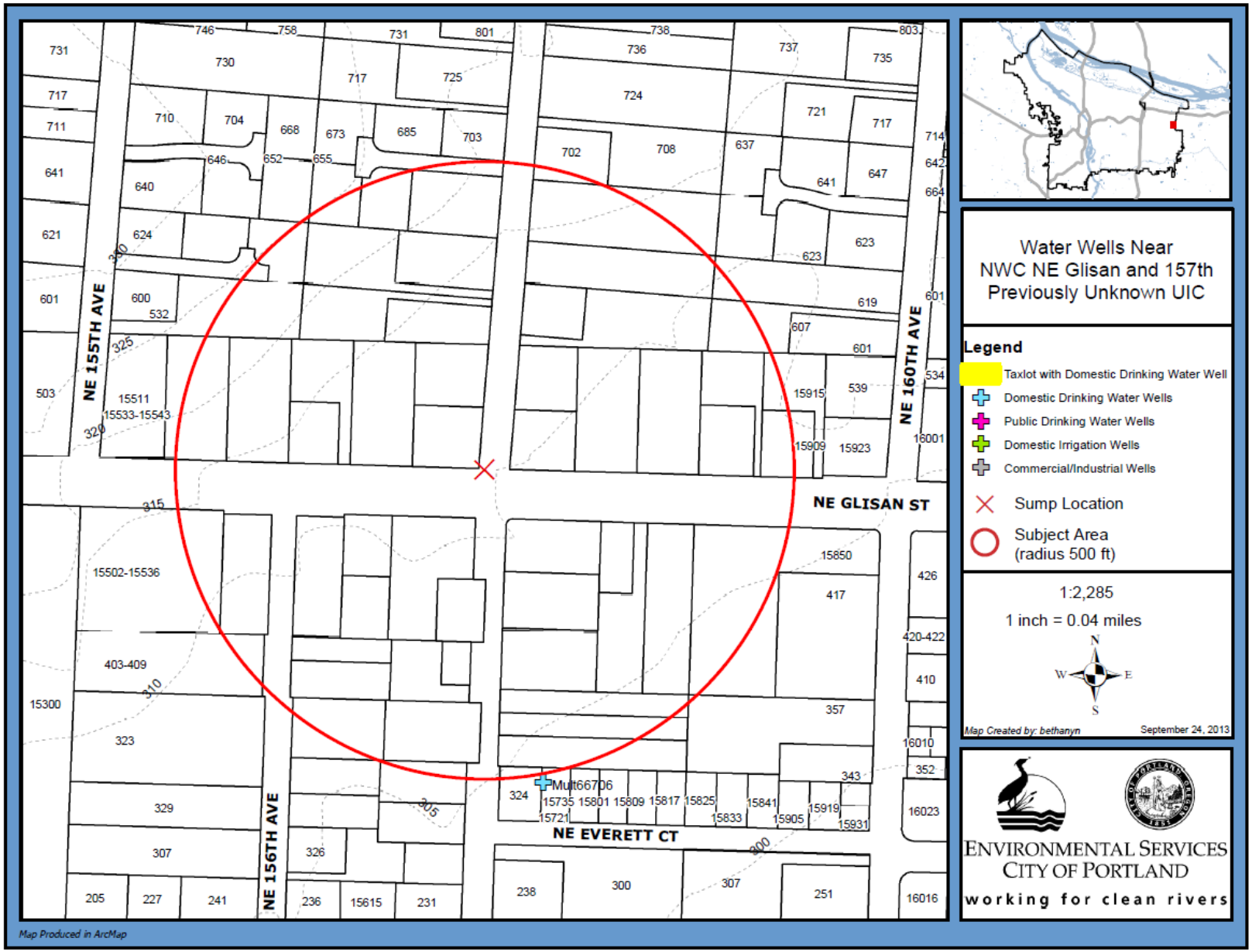
DEQ Regulated Underground Storage Tank (UST) List
This DEQ database lists facilities with registered USTs in operation and/or decommissioned. The UST List is a listing of all regulated underground storage tank facilities in Oregon.

Oregon Water Resources Department
The Oregon Water Resources Department maintains records of well logs installed in the state of Oregon.

City of Portland Historic Heating Oil Tank Permits
The City of Portland maintains records of historic residential heating oil tank permits. The permits are for the installation or upgrade of heating oil tanks and associated equipment only, so the condition and current status of these tanks are usually not known.

Attachment 4

Location of Nearest Domestic Supply Water Wells - Map


NE 155TH AVE
NE 156TH AVE
NE 160TH AVE
NE GLISAN ST
NE EVERETT CT
Mult66706
Water Wells Near
NWC NE Glisan and 157th
Previously Unknown UIC
Legend
Taxlot with Domestic Drinking Water Well
Domestic Drinking Water Wells
Public Drinking Water Wells
Domestic Irrigation Wells
Commercial/Industrial Wells
Sump Location
Subject Area
(radius 500 ft)
1:2,285
1 inch = 0.04 miles
N
W
E
S
Map Created by: bethanyn
September 24, 2013
ENVIRONMENTAL SERVICES
CITY OF PORTLAND
working for clean rivers
Map Produced in ArcMap

MULT 66706

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

WELL I.D. # L 33731
START CARD # 123128

Instructions for completing this report are on the last page of this form.

(1) LAND OWNER Well Number 8-02
Name Oscar Ugalde
Address 324 NE 157th
City Portland State Or Zip 97230

(2) TYPE OF WORK
☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:
☐ Rotary Air ☐ Rotary Mud ☒ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:
☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval ☐ Yes ☒ No Depth of Completed Well 125 ft.
Explosives used ☐ Yes ☒ No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
12	0	21	Bentonite	0	30	32
10	21	30				
6	30	125				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☒ Other Bentonite
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+1	121	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☐ Inside ☒ Outside ☐ None
Final location of shoe(s) 121

(7) PERFORATIONS/SCREENS:
☐ Perforations Method
☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☒ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
25	10		1 hr.

Temperature of water 53 Depth Artesian Flow Found
Was a water analysis done? ☐ Yes By whom
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other
Depth of strata:

(9) LOCATION OF WELL by legal description:
County Mult Latitude Longitude
Township 1N N or S Range 2E E or W. WM.
Section 36 SE 1/4 SE 1/4
Tax Lot 2643 Lot Block Subdivision
Street Address of Well (or nearest address) 324 NE 157th
Portland, Or 97230

(10) STATIC WATER LEVEL:
97 ft. below land surface. Date 3-28-02
Artesian pressure lb. per square inch Date

(11) WATER BEARING ZONES:
Depth at which water was first found

From	To	Estimated Flow Rate	SWL
110	121	25	90

(12) WELL LOG:
Ground Elevation

Material	From	To	SWL
Silt- brown	0	3	
Boulders- gravel	3	18	
Gravel-cemented	18	27	
Boulders- cobbles- gravel	27	45	
Gravel- cobbles- loose	45	110	
Gravel- loose	110	121	90
Clay- gray	121	125	

RECEIVED
JUN 05 2002
WATER RESOURCES DEPT.
SALEM, OREGON

Date started 3-15-02 Completed 3-28-02

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
WWC Number
Signed Date

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
WWC Number
Signed Date 4-5-02

ORIGINAL – WATER RESOURCES DEPARTMENT FIRST COPY – CONSTRUCTOR SECOND COPY – CUSTOMER

Appendix B
Category 3 UIC Status

Table B-1 : Prioritized Category 3 UICs with < 5 feet Vertical Separation Distance

UIC Compliance Category	Non-compliant Condition	Hansen UIC Node Number	Location [1]	Hansen UIC Depth (ft) [2]	Sedimentation Manhole (yes/no)	Predominant Land use	Estimated Traffic Count	Separation Distance (ft)	Distance to Nearest Well (ft) [3]	Within 2 year time of travel (yes/no)	UIC Priority [4]	Target Compliance Date[5]	Anticipated Corrective Action[6]	FY12-13 Project Status	FY13-14 Planned Activities	DEQID
3	Separation Distance	ANA889	11305 SE HAROLD ST	Unkn	No	SFR	3295	-8	920	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-1036
3	Separation Distance	ANA899	1801 NE MARINE DR	10	No	SFR	11064	1	1196	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-1041
3	Separation Distance	ANA900	1839 NE MARINE DR	10.2	No	SFR	11064	2	1196	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-1042
3	Separation Distance	ADV974	10900 NE MARX ST	16.3	No	IND	1714	-2	1786	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-1316
3	Separation Distance	AAC311	1445 NE MARINE DR	14.9	No	SFR	11064	-4	567	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-1919
3	Separation Distance	AMY402	11246 SE HAROLD ST	Unkn	No	SFR	3295	-8	928	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-263
3	Separation Distance	ADV384	8111 NE HOLMAN ST	14	No	IND	2980	-10	2314	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-3106
3	Separation Distance	ADV193	5710 SE 115TH AVE	24	Yes	SFR	521	-1	313	No	Medium	May 2015	Increase Separation Distance or Decommission	Design / Construction	Design / Construction	10102-5267
3	Separation Distance	ADW303	11501 SE FOSTER RD	19	No	IND	25775	-9	1249	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5272
3	Separation Distance	ADW304	11741 SE FOSTER RD	19	No	IND	25775	3	1281	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5273
3	Separation Distance	ACQ013	11716 SE FOSTER RD	20	No	MFR	25775	4	1333	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5279
3	Separation Distance	ADW312	11540 SE FOSTER RD	18	No	COM	25775	-6	1299	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5280
3	Separation Distance	ADW313	5601 SE 122ND AVE	20	No	MFR	11400	0	1181	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5281
3	Separation Distance	ADW321	5732 SE 122ND AVE	20	No	MFR	11195	-3	1544	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5311
3	Separation Distance	ADV188	10310 SE ELLIS ST	22	No	SFR	982	0	1322	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5464
3	Separation Distance	ADW286	3039 SE TOLMAN ST	30.2	No	SFR	1503	-2	3575	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5590

3	Separation Distance	ADW260	12199 SE LIEBE ST	17	No	MFR	12261	5	801	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-560
3	Separation Distance	ADW269	5211 SE 122ND AVE	20	No	MFR	11953	1	870	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-574
3	Separation Distance	ADW229	5436 SE 109TH AVE	20.5	No	SFR	461	2	444	No	Medium	May 2015	Increase Separation Distance or Decommission	Design / Construction	Design / Construction	10102-5764
3	Separation Distance	ADW230	5440 SE 111TH AVE	19	No	SFR	1848	3	639	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5765
3	Separation Distance	ADW233	5500 SE 104TH AVE	Unkn	No	SFR	1872	0	1045	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5768
3	Separation Distance	ADW256	4745 SE 122ND AVE	20	No	MFR	12363	3	661	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5887
3	Separation Distance	ADW257	4754 SE 122ND AVE	22	No	MFR	12363	1	682	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5888
3	Separation Distance	ADW258	4857 SE 122ND AVE	20.6	No	MFR	12261	1	790	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5889
3	Separation Distance	ADW261	4919 SE 122ND AVE	21	No	MFR	12138	0	756	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5891
3	Separation Distance	ACK357	4918 SE 122ND AVE	20	No	MFR	12138	1	702	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5892
3	Separation Distance	ADW264	5450 SE 114TH PL	Unkn	No	SFR	3582	-5	419	No	Medium	May 2015	Increase Separation Distance or Decommission	Design / Construction	Design / Construction	10102-5894
3	Separation Distance	ADW265	12150 SE RAYMOND ST	16.5	No	MFR	12138	4	778	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5895
3	Separation Distance	ADW266	5000 SE 122ND AVE	20	No	MFR	12138	0	691	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5896
3	Separation Distance	ADW267	5021 SE 122ND AVE	19.5	No	MFR	11953	1	777	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5897
3	Separation Distance	ADW271	5403 SE 122ND AVE	25	No	MFR	11646	-4	1048	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5900
3	Separation Distance	ADW272	5404 SE 122ND AVE	19.9	No	MFR	11646	1	1019	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5901
3	Separation Distance	ADW273	5436 SE 122ND AVE	17.5	No	MFR	11646	4	1212	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5902
3	Separation Distance	ADW274	5500 SE 122ND AVE	20.2	No	MFR	11646	1	1231	No	Medium	May 2015	Upgrade system with additon of	Design / Construction	Design / Construction	10102-5903

3	Separation Distance	ADW275	12122 SE HAROLD ST	20	No	COM	11646	1	1160	No	Medium	May 2015	sedimentation manhole	Design / Construction	Design / Construction	10102-5904
3	Separation Distance	ADU725	4908 SE 122ND AVE	19	No	MFR	12138	2	713	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-5915
3	Separation Distance	AMR771	4736 SE 115TH AVE	31	Yes	SFR	821	3	449	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-6110
3	Separation Distance	ADU749	12220 SE HOLGATE BLVD	24	Yes	COM	5249	4	275	No	Medium	May 2015	Increase Separation Distance or Decommission	Design / Construction	Design / Construction	10102-619
3	Separation Distance	ADT433	12323 SE HOLGATE BLVD	21.8	Yes	MFR	5249	5	230	No	Medium	May 2015	Increase Separation Distance or Decommission	Design / Construction	Design / Construction	10102-6298
3	Separation Distance	ADT451	4490 SE 125TH AVE	20.6	Yes	SFR	5249	3	487	No	Medium	May 2015	Increase Separation Distance or Decommission	Design / Construction	Design / Construction	10102-6312
3	Separation Distance	ADT453	12920 SE HOLGATE BLVD	19.6	Yes	SFR	4814	0	1112	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-6314
3	Separation Distance	ADT454	12830 SE HOLGATE BLVD	20.6	Yes	SFR	5035	0	1045	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-6315
3	Separation Distance	ANA587	13008 SE HOLGATE BLVD	17	No	SFR	4710	-2	894	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-709
3	Separation Distance	ANA596	13033 SE HOLGATE BLVD	Unkn	No	SFR	4710	-16	928	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-714
3	Separation Distance	ANA598	4425 SE 130TH AVE	19	No	SFR	1606	-2	970	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-715
3	Separation Distance	ANB108	11020 NE MARX ST	16	No	IND	1714	2	1817	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-791
3	Separation Distance	ANA841	9956 SE HAROLD ST	30	No	SFR	3768	4	2354	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-855
3	Separation Distance	ANB179	6015 NE 80TH AVE	19.5	No	IND	6658	-7	2423	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-868
3	Separation Distance	ANB182	6135 NE 80TH AVE	19.9	No	IND	2900	-16	2178	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-869
3	Separation Distance	ANB185	6245 NE 80TH AVE	Unkn	No	IND	2900	-27	1978	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-870
3	Separation Distance	APJ198	848 N TOMAHAWK ISLAND DR	11	No Data	COM	5270	-3	2882	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-9243

3	Separation Distance	AAV769	4022 NE 142ND AVE	Unkn	No	SFR	220	-1	809	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-9474
3	Separation Distance	ANW740	6457 NE 66TH AVE	18	No	SFR	439	4	1089	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-9478
3	Separation Distance	AMQ114	8801 N VANCOUVER AVE	3	No	IND	9654	4	811	No	Medium	May 2015	Upgrade system with additon of sedimentation manhole	Design / Construction	Design / Construction	10102-9498

Notes:

1 Addresses are not considered precise location information and are subject to change as city staff better describe the physical UIC locations relative to nearby properties.

2 UIC depth of 0 indicates depth is not reported in the City UIC database. Depth assumed to be 30 feet for compliance determination.

3 UICs near drinking water wells were scored more conservatively than described in the *UIC Prioritization Procedure (Appendix F of the UIC Management Plan (December 2006)).* UICs within 500 of a drinking water well or within a 2- year time of travel were assigned a high criteria score rather than looking at the potential susceptibility of the drinking water well to impacts from the UIC.

4 UIC priority determined in general accordance the *UIC Prioritization Procedure*. If no value was available (NA) default values were assigned. The prioritization was developed as a means of assessing potential adverse impacts to groundwater that may be associated with individual UICs and categorizing them by priority for attention. UICs are listed in this table in descending order by their numeric prioritization score and non-compliant category.

5 Target Compliance date based on three full CIP funding cycles per the WPCF permit.

6 Corrective action will be determined in accordance with the *Corrective Action Plan* (July 2006). At this time, information is limited to the general response action anticipated for the non-compliant UIC. Once a corrective action is selected, it will be reported in subsequent UICMP Annual Reports.

Acronyms:

NA = Not Available TPD = Trips per Day

SFR = Single Family Residential MFR= Multifamily residential IND = Industrial COM = Commercial POS = Parks and Open Space

GWPD = Groundwater Protectiveness Demonstration NFA = No Further Action

Table B-2: Removals from Category 3 UIC List

UIC Compliance Category	Non-compliant Condition	Hansen UIC Node Number	Location [1]	Updated Hansen UIC Depth (ft)	Sedimentation Manhole (yes/no)	Predominant Land use	Estimated Traffic Count	Separation Distance (ft)	Distance to Nearest Well (ft)	Within 2 year time of travel (yes/no)	Reason Removed from November 2012 Category 3 UIC List	DEQ ID
3	Separation Distance	AMT874	5712 SE 103RD AVE	21.2	Yes	SFR	1109	0	1457	No	GWPD	10102-117
3	Separation Distance	ADV951	8312 SE 75TH PL	30	Yes	SFR	115	2	2515	No	GWPD	10102-120
3	Separation Distance	ADV130	5635 SE 102ND AVE	22	Yes	SFR	440	2	1734	No	GWPD	10102-164
3	Separation Distance	ADV144	5905 SE 102ND AVE	20.6	Yes	SFR	553	4	1961	No	GWPD	10102-165
3	Separation Distance	ADV190	10402 SE ELLIS ST	21	Yes	SFR	279	-1	1003	No	GWPD	10102-169
3	Separation Distance	AMR622	13515 SE HOLGATE BLVD	21	Yes	MFR	4568	2	960	No	GWPD	10102-1908
3	Separation Distance	AMS283	12500 SE HAROLD ST	25	Yes	SFR	1477	-5	1007	No	GWPD	10102-232
3	Separation Distance	ADV204	5825 SE 122ND AVE	25	Yes	IND	11031	-6	1460	No	GWPD	10102-267
3	Separation Distance	AMV613	5640 SE 137TH AVE	30	Yes	MFR	180	5	648	No	GWPD	10102-285
3	Separation Distance	AMY600	13515 SE HOLGATE BLVD	21	Yes	MFR	4568	-2	1009	No	GWPD	10102-352
3	Separation Distance	ADQ418	4656 NE 118TH AVE	30.1	Yes	COM	436	3	1472	No	GWPD	10102-3576
3	Separation Distance	ADR048	3734 NE 154TH AVE	30.2	Yes	MFR	247	3	734	No	GWPD	10102-4041
3	Separation Distance	ADV950	8318 SE 78TH AVE	27.5	Yes	SFR	86	-13	1849	No	GWPD	10102-4830
3	Separation Distance	ADV196	12010 SE REEDWAY ST	29.5	Yes	MFR	205	-13	962	No	GWPD	10102-5269
3	Separation Distance	ADV197	5605 SE 120TH AVE	26	Yes	MFR	192	-5	680	No	GWPD	10102-5270
3	Separation Distance	ADV203	5918 SE 122ND AVE	31.7	Yes	MFR	10908	-1	1096	No	GWPD	10102-5286
3	Separation Distance	ADV205	5906 SE 122ND AVE	27	Yes	MFR	11031	-7	1442	No	GWPD	10102-5287
3	Separation Distance	ADT682	5803 SE 122ND AVE	27.5	Yes	IND	11133	-11	1615	No	GWPD	10102-5288
3	Separation Distance	ADT683	12230 SE RAMONA ST	19	Yes	MFR	11133	-3	1534	No	GWPD	10102-5289
3	Separation Distance	ADT687	12246 SE ELLIS ST	25	Yes	SFR	224	-4	1366	No	GWPD	10102-5292
3	Separation Distance	ADT688	12532 SE ELLIS ST	30	Yes	SFR	236	-8	1326	No	GWPD	10102-5293
3	Separation Distance	ADT689	5544 SE 128TH AVE	31.5	Yes	SFR	1262	-8	1431	No	GWPD	10102-5294
3	Separation Distance	ADT690	12221 SE REEDWAY ST	27	Yes	MFR	11400	-7	1308	No	GWPD	10102-5295
3	Separation Distance	ADT691	12506 SE REEDWAY ST	25	Yes	SFR	180	-4	1555	No	GWPD	10102-5296
3	Separation Distance	ADT696	12319 SE RAMONA ST	20.2	Yes	MFR	1089	0	1286	No	GWPD	10102-5300
3	Separation Distance	ADT716	12140 SE RAMONA ST	28	Yes	POS	11195	-11	1482	No	GWPD	10102-5319
3	Separation Distance	AMR553	8100 SE CRYSTAL SPRINGS BLVD	30	Yes	IND	895	-13	1136	No	GWPD	10102-5347
3	Separation Distance	ACP660	5608 SE 99TH AVE	30	Yes	SFR	557	4	2534	No	GWPD	10102-5407
3	Separation Distance	ADV127	5610 SE 102ND AVE	21	Yes	SFR	490	4	1720	No	GWPD	10102-5412
3	Separation Distance	ADV135	5736 SE 102ND AVE	20.7	Yes	SFR	426	3	1791	No	GWPD	10102-5422
3	Separation Distance	ADV146	5980 SE 102ND AVE	22	Yes	SFR	553	3	1987	No	GWPD	10102-5429
3	Separation Distance	ACP682	5988 SE 102ND AVE	21.8	Yes	SFR	553	3	2004	No	GWPD	10102-5431
3	Separation Distance	ADV154	6034 SE 102ND AVE	26.1	Yes	SFR	688	0	2130	No	GWPD	10102-5435
3	Separation Distance	ACP693	6036 SE 102ND AVE	22	Yes	SFR	688	4	2160	No	GWPD	10102-5436
3	Separation Distance	ACP887	10304 SE ELLIS ST	20.5	Yes	SFR	982	2	1372	No	GWPD	10102-5458
3	Separation Distance	ACP889	10357 SE ELLIS ST	19	Yes	SFR	279	2	1104	No	GWPD	10102-5460
3	Separation Distance	ACP890	10203 SE ELLIS ST	20	Yes	SFR	790	5	1646	No	GWPD	10102-5461
3	Separation Distance	ACP891	10246 SE ELLIS ST	20.4	Yes	SFR	982	3	1478	No	GWPD	10102-5462
3	Separation Distance	ADV187	10298 SE ELLIS ST	23.5	Yes	SFR	982	0	1427	No	GWPD	10102-5463
3	Separation Distance	ACP892	10324 SE ELLIS ST	22	Yes	SFR	142	0	1247	No	GWPD	10102-5465
3	Separation Distance	ADV189	10398 SE ELLIS ST	20	Yes	SFR	279	0	1054	No	GWPD	10102-5466
3	Separation Distance	ADV191	11080 SE HAROLD ST	22.9	Yes	SFR	3387	-3	543	No	GWPD	10102-5468
3	Separation Distance	AMX688	4406 SE 136TH AVE	22.75	Yes	SFR	9961	-4	647	No	GWPD	10102-558
3	Separation Distance	ADU731	11134 SE STEELE ST	30.1	Yes	SFR	173	-2	1074	No	GWPD	10102-5910
3	Separation Distance	ADU734	5423 SE 121ST AVE	30	Yes	MFR	806	-8	981	No	GWPD	10102-5912
3	Separation Distance	ADU735	5500 SE 121ST AVE	30	Yes	MFR	806	-9	955	No	GWPD	10102-5914
3	Separation Distance	ADU738	5031 SE 128TH AVE	30	Yes	SFR	1544	-11	761	No	GWPD	10102-5921
3	Separation Distance	ADU740	13120 SE RAYMOND ST	26	Unkn	SFR	314	NA	NA	No	Decommissioned	10102-5923
3	Separation Distance	ADU743	12780 SE SCHILLER ST	15.6	Yes	SFR	1778	1	817	No	GWPD	10102-5924
3	Separation Distance	ADU744	12524 SE SCHILLER ST	16	Yes	SFR	416	2	513	No	GWPD	10102-5925

3	Separation Distance	ADU753	13030 SE MITCHELL ST	26	Yes	SFR	178	2	1010	No	GWPD	10102-5934
3	Separation Distance	ADU755	13000 SE HAROLD ST	29	Yes	SFR	1341	-3	1307	No	GWPD	10102-5936
3	Separation Distance	ADU758	12908 SE MITCHELL ST	21	Yes	SFR	178	3	1173	No	GWPD	10102-5938
3	Separation Distance	ADT426	4144 SE 132ND AVE	30	Yes	SFR	2840	-2	1399	No	GWPD	10102-6287
3	Separation Distance	ADT428	13110 SE GLADSTONE CT	30	Yes	SFR	849	1	1220	No	GWPD	10102-6289
3	Separation Distance	ADT463	13236 SE CORA ST	25.5	Yes	SFR	419	-2	1543	No	GWPD	10102-6324
3	Separation Distance	ADT464	13326 SE CORA ST	25.5	Yes	SFR	418	-4	1363	No	GWPD	10102-6325
3	Separation Distance	ADT466	4100 SE 133RD AVE	30	Yes	SFR	389	-1	1286	No	GWPD	10102-6326
3	Separation Distance	ADT471	13612 SE CORA ST	21	Yes	SFR	10104	-1	771	No	GWPD	10102-6331
3	Separation Distance	ADT472	13722 SE CORA ST	19	Yes	SFR	9257	1	551	No	GWPD	10102-6332
3	Separation Distance	ADT473	13820 SE GLADSTONE ST	20.9	Yes	SFR	427	4	520	No	GWPD	10102-6333
3	Separation Distance	ADT474	13658 SE CORA ST	19.7	Yes	SFR	403	1	610	No	GWPD	10102-6334
3	Separation Distance	ADT475	4241 SE 136TH AVE	27	Yes	SFR	10104	-8	798	No	GWPD	10102-6335
3	Separation Distance	ANA589	13250 SE HOLGATE BLVD	9	Yes	SFR	4710	0	1020	No	GWPD	10102-710
3	Separation Distance	ANA590	13250 SE HOLGATE BLVD	10	Yes	SFR	4710	-1	1024	No	GWPD	10102-711
3	Separation Distance	ANA591	13250 SE HOLGATE BLVD	10	Yes	SFR	4710	-1	1027	No	GWPD	10102-712
3	Separation Distance	ANA592	13250 SE HOLGATE BLVD	10.6	Yes	SFR	4710	-2	1031	No	GWPD	10102-713
3	Separation Distance	ADT455	4332 SE 130TH AVE	20	Yes	SFR	1606	1	1256	No	GWPD	10102-822
3	Separation Distance	ADT465	4024 SE 134TH AVE	24.2	Yes	SFR	1145	5	1114	No	GWPD	10102-833
3	Separation Distance	AMX686	4406 SE 135TH AVE	25.4	Yes	SFR	2034	-9	1003	No	GWPD	10102-925
3	Separation Distance	APR303	2542 SE 18TH AVE	23	Yes	SFR	422	2	2635	No	GWPD	10102-9640
3	Separation Distance	ADU751	12204 SE Steele St	20.4	Yes	MFR	11953	0	1408	No	GWPD	10102-
3	Separation Distance	APS154	8874 SE 9TH AVE	31	No	SFR	1817	-5	3171	No	Decommissioned	10102-9653

Notes:
[1] Addresses are not considered precise location information and are subject to change as city staff better describe the physical UIC locations relative to nearby properties.

Acronyms:
NA = Not Available TPD = Trips per Day
SFR = Single Family Residential MFR= Multifamily residential IND = Industrial COM = Commercial POS = Parks and Open Space

Appendix C
Spills That Have Occurred within Areas Serviced by UICs

Appendix C: Spills That Have Occurred within Areas Serviced by UICs

Date	Release Type	Volume	Spill Location	Did Fluids Reach City-owned UIC? (Y/N)	Closest City-owned UIC Catch Basin
8/16/12	Auto Fluids	Unknown	601 NE 162ND AVE	N	ADR816
8/18/12	Auto Fluids	Unknown	621 NE 162ND (see above)	N	ADR816
8/24/12	Sewage	Unknown	NE 79TH (S of PRESCOTT)	N	ADQ919
8/27/12	Auto Fluids	Unknown	2434 N DEKUM ST	N	AMZ912
9/10/12	Granite Slurry	Unknown	7805 NE Halsey St	N	ADR214
10/11/12	Oil	10-20 gal	1406 NE 52nd Ave	N	ADR498
10/25/12	Oil	Unknown	7980-7974 SE 6th Ave	N	ADU045
12/12/12	Auto Fluids	Minimal	1205 NE 131st Ave	N	ADR727
12/13/12	Pool water	Unknown	2104 NE Morgan Street	Y	ADV346
2/6/13	Oil Solvent	10-30 gal	5520 NE MLK Blvd	N	ADP716
2/22/13	Oil	Unknown	N Oatman & N Holland St	Y	ADP145
2/27/13	Unknown	Unknown	4532 NE 55TH Ave	N	ADQ281
03/25/13	Unknown	Minimal	6435 NE 26th Ave	N	ADP450
4/17/13	Concrete Slurry	Unknown	3810 SE 60th Ave	Unknown	ADT208
4/26/13	Motor Oil	1 qt	6620 NE 6th Ave	N	AAK952 ADP361
5/19/13	Cooking Oil/Grease	Unknown	NE 20TH & ALBERTA ST	N	ADQ078
6/23/13	Diesel	5 gal	3205 SE 54th Ave	Unknown	ADU074

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