Water Pollution Control Facilities (WPCF) Permit

Class V Stormwater Underground Injection Control Systems

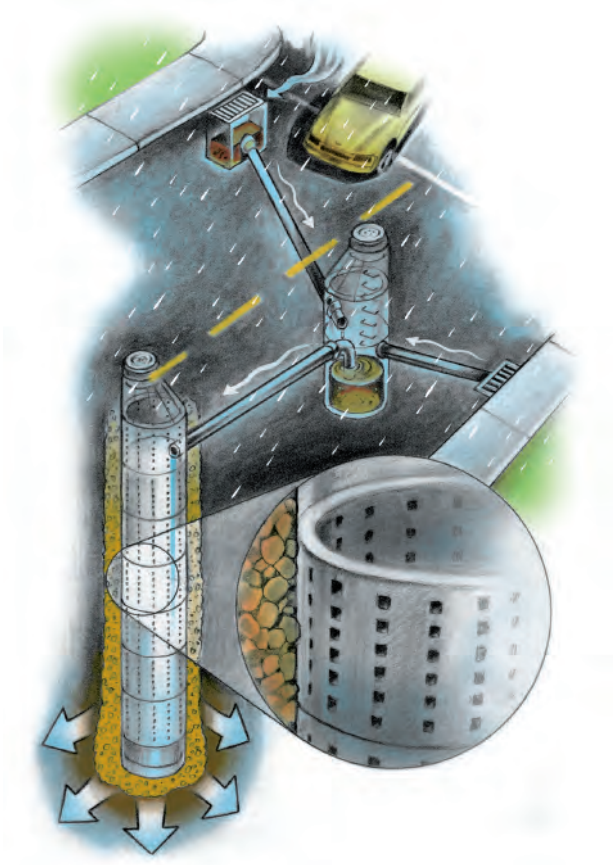
DEQ Permit Number 102830

Underground Injection Control Management Plan

▪

Annual Report No. 4

Fiscal Year 2008 - 2009
(July 1, 2008 - June 30, 2009)



November 1, 2009

Prepared by

ENVIRONMENTAL SERVICES
CITY OF PORTLAND
working for clean rivers

— CITY OF PORTLAND —
ENVIRONMENTAL SERVICES
1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204-1912 ▪ Sam Adams, Commissioner ▪ Dean Marriott, Director

November 1, 2009

Mr. Rodney Weick
Stormwater and Underground Injection Control Manager
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

Subject: Submittal of UICMP Annual Report No. 4
City of Portland
DEQ Water Pollution Control Facilities Permit No. 102830

Dear Rodney:

The City of Portland's Bureau of Environmental Services is pleased to submit the *Underground Injection Control Management Plan Annual Report No. 4 – Fiscal Year 2008-2009.* 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. 4* summarizes programmatic activities implemented by the City in fiscal year 08-09 (July 1, 2008 – June 30, 2009) and proposed activities for the coming fiscal year 09-10. 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 under five BMP categories to prevent, minimize, and control pollutants prior to infiltration conducted during fiscal year 08-09. It also identifies the main projected activities for fiscal year 09-10.

System Monitoring summarizes the third-year results of UIC monitoring conducted under the *Stormwater Discharge Monitoring Plan* (SDMP) and submitted in the second-year *Stormwater Discharge Monitoring Report* (July 15, 2009).

Evaluation and Response provides an overview of evaluation and response actions conducted during fiscal year 08-09 and the main projected activities for fiscal year 09-10.

Corrective Actions summarizes the corrective actions implemented during fiscal year 08-09 and projected main activities for fiscal year 09-10 to address UICs that do not meet permit requirements.

The report also contains the following appendices:

Appendix A: UICs Identified/Constructed during Fiscal Year 08-09
Appendix B: Status of Category 2 and Category 3 UICs
Appendix C: Status of Sara Title III and Commercial Industrial Inspection Work.

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. 4 – 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. 4

Fiscal Year 2008-2009
(July 1, 2008 – June 30, 2009)

November 1, 2009

Prepared By:
City of Portland, Bureau of Environmental Services

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Introduction

This *Underground Injection Control Management Plan (UICMP)Annual Report No. 4* 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 programmatic activities during the fourth permit reporting year (July 1, 2008 through June 30, 2009).

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 FY08-09 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, 2008, December 1, 2008, March 1, 2009, and June 1, 2009.

- Continued to implement the *Systemwide Assessment Follow-up Actions* workplan (December 2006) to address the approximately 950 UICs that were identified for follow-up as part of the systemwide assessment. The document outlines the activities and projected timeframes that will be implemented to evaluate UICs that meet any of the following criteria.
  - UICs with inadequate separation distance from groundwater.
  - UICs that receive drainage from facilities that store, handle, or use hazardous or toxic materials in quantities requiring registration under the Superfund Amendment and Reauthorization Action Title III.
  - UICs that receive drainage from commercial/industrial properties with site activities that may cause stormwater entering a public UIC to exceed MADLs (maximum allowable discharge limits) established in the permit.
  - UICs within close proximity to domestic use wells.

- Completed work to identify and address any potential threat to City-owned UICs that receive drainage from a SARA Title III facility.

- Completed inspections to identify and address any potential threat to City-owned UICs that receive drainage from commercial and industrial properties.

- Received and responded to approximately 1,684 complaint calls (citywide) to the City's spill hotline regarding pollution complaints, spills, sanitary sewer overflows, dye tests, and seepage discharges.

- Continued to provide oversight to ensure that commercial and industrial facilities comply with retrofit requirements under the Columbia South Shore Well Field Wellhead Protection Program. Conducted 152 inspections and follow-up inspections of businesses in the wellhead protection area. Thirty-one violations were identified, most related to containment, labeling, and reporting requirements.

- Continued public outreach by the Portland Water Bureau and Columbia Slough Watershed Council to increase education and awareness about groundwater protection within the Columbia Slough Watershed and Columbia South Shore Wellfield Wellhead Protection Area. In partnership with the Columbia Corridor Association (CCA), provided outreach to regulated businesses.

- In accordance with *Stormwater Management Manual* requirements, signed off on permits for 890 source control measures at sites with high-risk characteristics or activities.

- Conducted 6,069 erosion control-related inspections of private construction sites (citywide). Inspected 290 active public construction projects with erosion control components.

- Worked with other City programs, watershed councils, and community groups to coordinate public education, stewardship activities, and integration of stormwater and groundwater protection messages.

- Provided outreach to Bureau of Development Services (BDS) and Bureau of Environmental Services (BES) to coordinate with and response to UIC site-specific questions and programmatic items.

- Cleaned 1,951 sedimentation and sump manholes.

- Swept approximately 483 miles of streets draining to public UICs. This represents 73 percent of the 665 total miles of streets that drain to public UICs.

- Continued discussions with the Oregon Water Resources Department (OWRD) regarding issues relating to the water supply well construction rules and UIC rules.

- Continued the evaluation process for potential changes to City code/policy to limit the installation of new domestic wells or require connection to public water supply (if available).

- Participated in the ACWA Groundwater Committee and began partnering with DEQ to develop a regional WPCF permit template.

- Completed the 2008 revision of the City's *Stormwater Management Manual* (effective October 2008). Updated sections regarding requirements for UIC registration, rule authorization, permitting, and decommissioning; added requirements for investigations in areas of shallow groundwater.

System Monitoring

- Prepared and submitted year 4 (October 2008 – 2009) UIC compliance and supplemental monitoring locations to DEQ.

- Implemented year 4 stormwater compliance and supplemental monitoring. Forty UIC locations were sampled in year 4 and tested for common and priority pollutants.

- Compiled and evaluated year 4 stormwater data. Notified DEQ of year 4 annual mean concentration exceedances of the permit's maximum allowable discharge limits (MADLs).

- Prepared and submitted the *Annual Stormwater Discharge Monitoring Report – Year 4 – October 2008 – May 2009* to DEQ.

- Performed a preliminary stormwater discharge trend analysis for the four years of data.

- Completed and evaluated the results of supplemental monitoring for UICs near drinking water wells.

Evaluation and Response

- Reviewed UICs that previously received a "no further action" (NFA) designation to determine if previous NFA decisions are still protective of groundwater and if additional analyses need to be performed. As a result of this review, updated the Category 3 UIC list.

- Completed the final year of stormwater discharge monitoring of 10 supplemental UICs located within 500 feet of a domestic well, 500 feet of a public water well that does not have a time of travel, or the 2-year time of travel of a public water well.

- Responded to year 4 MADL exceedances. During year 4 stormwater discharge monitoring (see Section 3), four common pollutants were detected during individual sampling events at concentrations above their respective MADLs: PCP, B(a)P, DEHP, and lead.

Corrective Action

- Completed engineering pre-design evaluation of potential corrective alternatives for the 29 Category 2 UICs, in accordance with the *Corrective Action Plan* (CAP).

- Completed engineering design and selected a contractor for construction activities for four Category 2 corrective actions that will be used as demonstration projects to evaluate technologies to increase separation distance.

- Initiated engineering design for the remaining 25 Category 2 UICs.

- Based on new USGS depth to groundwater information, developed an updated prioritized Category 3 UICs list, with the following changes:

  - Added 22 UICs determined to have a vertical separation distance $\geq$ 5 feet and <10 feet.

  - Revised the vertical separation distance for eight UICs from < 5 feet to $\geq$ 5 and < 10 feet.

  - Because the above 30 UICs now fall in the $\geq$ 5 feet vertical separation distance, the *Decision Making Framework for Protectiveness Demonstrations* can be applied for them to receive an NFA designation.

  - Eliminated six UICs determined to have a vertical separation distance of $\geq$10 feet.

  - Revised the vertical separation distance for 13 UICs (from $\geq$ 5 feet to< 5 feet); changed these UICs from an NFA designation to needing corrective actions that will include either retrofits to increase separation distance or decommissioning.

- Continued pre-design activities for Category 3 UICs in accordance with the scope and schedule of the *Systemwide Assessment Follow-Up Actions* work plan.

- Submitted an NFA request to DEQ for review and approval of groundwater protectiveness demonstrations as the selected corrective action for 22 UICs located in City of Portland parks with < 5 feet vertical separation distance.

- Continued to develop a regional corrective action plan (permit modification) for DEQ approval.

- Submitted NFA requests to DEQ for the three Category 4 UICs identified in year 3.

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) 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. (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 fourth fiscal year of permit implementation (July 1, 2008 through June 30, 2009). This includes detailed information, including proposed timelines and implementation schedules, for work associated with the following:

- UICs in areas of shallow groundwater
- UICs within close proximity to domestic or public water wells
- Overall monitoring strategy, including pentachlorophenol (PCP) source identification

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 alters 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 4* (July 2008).
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 described in *Stormwater Discharge Monitoring Plan*.
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

Requirement	Permit Reference	Where Requirement is Addressed in Annual Report
System Monitoring (continued)		
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)	Identified in first annual report; update provided in Section 5
Identify Category 3 UICs.	C(12)(e)	Section 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 4* (July 2008) 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. It includes two types of monitoring: stormwater discharge monitoring and BMP monitoring.

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 FY08-09 (July 1, 2008 to June 30, 2009) and identifies activities planned for implementation in the next fiscal year (FY09-10).

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 July 15 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
- *UICMP Update* (due November 1, 2010)
- *Corrective Action Plan Update* (due November 1, 2010)

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
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
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
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

UICMP Element/Document	Submittal Information
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
Evaluation and Response/Corrective Actions	
Corrective Action Plan	Submitted July 15, 2006 DEQ Public Comment Period: June 24 – July 24, 2008 DEQ Approval: October 6, 2008
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

UICMP Element/Document	Submittal Information
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, 2008
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
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
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

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 December 2006 UICMP.

1.7.2 Personnel Changes

Rod Struck left the program in FY 08-09. Mary Stephens was on an extended leave of absence during FY 08-09. Barbara Adkins was acting UIC program manager for FY 08-09.

1.8 Minor and/or Major Permit Modifications

No major or minor permit modifications were initiated during FY08-09. The City is in the process of working with DEQ to initiate a permit modification for FY 09-10.

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 to the UICMP or it components.

1.11 Relationship to Other Water Quality Programs

BES works cooperatively with many other City bureaus on watershed issues. Although not all of the following activities are specifically required as part of the WPCF permit, they are closely associated with the UIC program, are related to stormwater quality, and are a part of restoring watershed health. These programs and projects are coordinated with the *Portland Watershed Management Plan* for greatest watershed health benefits.

1.11.1 Portland Watershed Management Plan

In 2005, the Portland Watershed Management Plan (PWMP) was developed to guide the City's commitment to improve watershed health and protect and enhance its natural resources. The PWMP is based on the "watershed approach." The watershed approach can be described as an overall context that defines how the City does its ongoing work in developing and maintaining its infrastructure, property redevelopment, and open space maintenance. (City infrastructure includes storm and sanitary sewer systems, roads, water supply system, etc.) Doing the work of the City using the watershed approach means that activities—such as construction of new infrastructure and repair and upgrading of existing features, redevelopment of areas such as the South Waterfront, and construction of new parks—are done in a manner that protects and enhances watershed health wherever feasible. Rather than focusing separately on single issues or meeting specific regulatory requirements such as protection of water quality or cleanup of contaminated sediments, the PWMP collectively considers all activities that affect watershed conditions. The UIC program is an integral part of the watershed approach, providing protection of valuable groundwater resources within the water cycle of each watershed.

The watershed approach reflects and implements core City values. In addition to protecting and improving the quality of the watershed, these values include improved public safety, economic vitality, and community stewardship. This approach relies on integrating the activities of multiple City bureaus and maximizes the use of limited resources by looking for solutions that meet multiple objectives.

Watershed Investment Fund (WIF): With the adoption of the Portland Watershed Management Plan in 2005, the Watershed Investment Fund was initiated to step up the city's investment in the protection and restoration of Portland's watershed health. For 2008-2009, WIF funding, averaging $1,500,000 per year, supported 15 BES projects throughout the city of Portland. Projects included highest-priority stream and slough restoration projects, green streets, and other stormwater retrofit projects.

Implementation Plan: Implementation of the PWMP will rely on a management system to collect and evaluate the performance of PWMP projects. Priority projects for existing funds will be selected using the information available, including effectiveness monitoring data and performance measures. As future watershed project funding becomes available, the intention of the PWMP is to evaluate and select projects using a greater quantity and quality of information to improve the certainty of project success. Over time, the goal of this approach will be to move

implementation toward a series of defined indicators, targets, and benchmarks to better link actions to improvements in watershed conditions.

1.11.2 NPDES MS4 Permit

DEQ first issued a National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit to Portland co-permittees (the City of Portland, Port of Portland, and Multnomah County) on September 7, 1995, and renewed the permit for a second term in March 2004. DEQ subsequently reconsidered the second-term permit and reissued a modified permit in July 2005. The permit was scheduled to expire on February 28, 2009; it has been administratively extended by DEQ. The co-permittees submitted a permit renewal application for the third permit term to DEQ on September 2, 2008.

The permit establishes controls and limitations for stormwater discharges from the municipal separate storm sewer system (MS4) to receiving waters. Its purpose is to reduce the discharge of pollutants from the MS4 to protect water quality and meet the intent of the federal Clean Water Act. The City's stormwater management area includes sections of the City within the urban services boundary that drain to the City's separate storm sewer system. The permit does not cover discharges from private facilities with individual NPDES permits, stormwater that discharges to sumps, the combined sewer system, or directly to natural stream systems.

The permit regulations do not prescribe specific numerical water quality standards or limits that must be met. Rather, the standard is reduction of pollutants in discharges from the MS4 to the "maximum extent practicable", allowing permittees program implementation flexibility based on local conditions, resources, and priorities.

The permit is implemented through a *Stormwater Management Plan* (SWMP), which is incorporated into the permit by reference. The SWMP includes the following key elements:

- Best management practices (BMPs) the City will implement throughout the permit term to reduce pollutants in stormwater discharges.
- Performance measures, which track implementation of the BMPs.
- Benchmarks, which estimate the future reduction of pollutants with EPA-approved total maximum daily load waste load allocations. (The benchmarks are goals, not numeric standards.)
- Monitoring that will be conducted to track the long-term progress of the SWMP.

Prior to issuance of the WPCF permit, some activities specifically related to public UICs were reported in the *NPDES MS4 Annual Compliance Report*. Examples of these activities include number of sumps and sedimentation manholes cleaned and repaired.

Some components of the UICMP are similar to BMPs in the SWMP—for example, public education, pollution control, and operations and maintenance activities such as street sweeping. Reporting on these elements may therefore be common to both annual reports.

1.11.3 BES System Plan

The BES System Plan update began in late 2005; a draft document is due in spring 2010. This project is the update of the 1999 BES Public Facilities Plan. The BES System Plan is a comprehensive facilities planning document that guides the bureau's expenditures by identifying and recommending projects that maintain, improve, or expand the wastewater/stormwater infrastructure system. Projects are developed using both natural and engineered solutions to satisfy regulatory requirements and are implemented in a manner protective of public health, water quality, and the environment. The System Plan's infrastructure focus is complementary to the watershed approach of the PWMP.

The System Plan is being developed with an asset management context that considers life-cycle costs, risk, and the environmental and social benefits in the project's ranking. This new ranking methodology will enable the ranking of projects across different asset classes (e.g., a stormwater project ranked against a sanitary sewer project).

Elements of the BES System Plan include a sewer rehabilitation plan, an updated combined sewer plan, and an updated sanitary sewer plan. Work on the stormwater facilities element of the System Plan will begin in fall 2009 and will be completed in 2012. UIC elements will be included as part of the stormwater portion of the plan.

1.11.4 Combined Sewer Overflow Reduction

The City is in the last of four major phases of a program to control combined sewer overflows (CSOs) to the Willamette River and Columbia Slough. Activities have included a combination of stormwater inflow reductions (roof drain disconnections, sump installation, local separation) and large structural solutions (including the West Side CSO tunnel system completed in 2006 and the East Side CSO tunnel system scheduled for completion in 2011), as well as treatment plant and pump station upgrades. Since 1990, Portland has reduced CSOs from 6.0 billion gallons per year to about 2.0 billion gallons on an annual average basis. CSO discharges to the Columbia Slough have been reduced by over 99 percent, while discharges to the Willamette River have been reduced by over 40 percent to date. Over 2 billion gallons of local stream and stormwater runoff have been removed from the combined sewer system through the use of sumps, downspout disconnections, and stream separations. Inflow reduction to the CSO is reliant on local area infiltration of stormwater, both in surface BMPs and through UICs.

1.11.5 Pretreatment Programs and Publicly Owned Treatment Works (POTWs)

Many of the City's more traditional operations and infrastructure support water quality goals. Sanitary sewage is collected for treatment at the Columbia Boulevard and Tryon Creek publicly owned treatment works (POTWs). Existing pretreatment programs protect the sanitary system infrastructure, reduce pollutant releases to surface waters during combined sewer overflows, and prevent discharges that could cause treatment upsets or result in pollutant pass-through to surface waters.

BES's Industrial Source Control Division (ISCD) has administered a state and federally approved industrial pretreatment program since 1983. The program was implemented as a federal mandate to control the discharge of toxic pollutants from industrial sources that interfere with the operation of Portland's wastewater treatment plants, collection systems, and biosolids uses.

1.11.6 Science, Fish and Wildlife Section—Endangered Species Act (ESA) Program

Portland's Endangered Species Act Program was created in March 1998, shortly after the National Oceanographic and Atmospheric Association (NOAA) listed steelhead trout in the lower Columbia River system as a threatened species under the federal Endangered Species Act (ESA). Chinook and chum salmon were subsequently listed as a threatened species in March 1999 and coho salmon in June 2005. On August 12, 2005, the National Marine Fisheries Service (NMFS) announced designations of critical habitat areas in Portland for salmon and steelhead listed under the ESA. The designated areas in Portland include Johnson Creek (including Kelley Creek and Crystal Springs), Tryon Creek, the north part of the Columbia Slough (and Smith and Bybee Lakes), and the mainstem Willamette River. In addition, the Columbia River is home to 13 ESA-listed salmon and steelhead and is designated as critical habitat for all of these species along the Portland city boundary.

The ESA program takes an integrated, citywide approach to salmon recovery, recognizing that the most important step the City can take to restore healthy salmon populations is to restore healthy watersheds. This comprehensive approach ensures that salmon recovery goals are compatible with other City goals and that restoration actions address multiple environmental objectives. Stormwater program activities closely relate to ESA goals; implementation of BMPs will mitigate stormwater quantity impacts and improve water quality. An important element of aquatic species protection is maintenance of base level stream flows. Infiltration via UICs helps support those stream flows.

1.11.7 Portland Harbor Superfund Site

The current Portland Harbor Superfund Study area covers about a 10-mile stretch of the Lower Willamette from below the Broadway Bridge to just upstream of the Columbia Slough confluence. It is designated as a Superfund site because of sediment contamination. Portland Harbor has a long history of shipping, industrial, and commercial activity because of its key location on the Willamette River. The operational and waste disposal practices common to these industries many years ago polluted the river. Discharges from sewer outfalls, stormwater, and agricultural runoff may also contribute to the contamination. The City of Portland is a member of the Lower Willamette Group, a coalition of businesses and the Port of Portland. The group has voluntarily stepped forward to fund and participate in the site investigation. This work includes characterizing the extent of contamination in fish, wildlife, and sediments in the harbor and assessing risks to humans, fish and wildlife, and the environment from contaminated sediments.

Additionally, BES has an Intergovernmental Agreement with DEQ to jointly investigate and control sources of contamination discharging to the City's conveyance systems. The BES Portland Harbor program works closely with DEQ and the BES Industrial Stormwater program to identify sites with potential contamination, evaluate stormwater and groundwater pathways, and determine appropriate controls. The interplay of UICs with groundwater resources is an important element of the evaluation of Portland Harbor.

1.12 City Budget and Funding

The City of Portland has invested more than $653 million in stormwater management services and facilities over the past 14 years.[1] The revenue requirements for permit year FY08-09 totaled approximately $75.1 million, allocated as follows:

Major Program Category	Requirements	Percentage Share
Enforcement and Development Review	$ 7.1 million	9%
Watershed Program & Habitat Restoration	14.4 million	19%
Facilities Operations and Maintenance	19.4 million	26%
Capital Improvements*	34.2 million	46%
Total Revenue Requirements	**$ 75.1 million**	
* Includes debt service, facilities planning and engineering, construction engineering, and construction contracts.		

Eighty-five 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 FY09-10, the City plans to invest $72.8 million in stormwater management services and facilities. Direct monthly user fees will pay for 82 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 years:

[1] The 14-year time period reflects the implementation period of the City's NPDES MS4 permit.

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Single-Family Residential Charge	$13.30	$14.26	$16.82	$17.33	$18.55
Residential rate per 1,000 square feet of impervious area	$5.54	$5.94	$7.01	$7.22	$7.73
Non-residential rate per 1,000 square feet of impervious area	$6.06	$6.45	$7.56	$7.91	$8.43

At the close of FY 2008-2009, City Council increased the monthly stormwater management charge for single-family residences from $18.55 to $19.80. The residential rate increased from $7.43 to $8.25 per 1,000 square feet of impervious surface per month, and the commercial rate increased from $8.43 to $8.86 per 1,000 square feet of impervious area per month.

On October 30, 2006, the City launched Clean River Rewards to promote private stormwater management efforts. Ratepayers earn discounts worth as much as 35 percent of their monthly stormwater user fee, based on the extent and effectiveness of private onsite stormwater facilities. BES developed program criteria that will set the highest financial incentive for facilities that manage stormwater to the strictest water quality, volume, and flow control standards, particularly for commercial, industrial, and institutional ratepayers. As of June 30, 2009, a total of 32,997 utility ratepayers with active accounts have registered for stormwater discounts:

- 31,563 single-family residential ratepayers account for a total of 70,269,767 square feet of impervious area managed for stormwater.
- 1,434 multifamily, commercial, and industrial ratepayers account for a total of 29,477,293 square feet of impervious area managed for stormwater.

Stormwater System Development Charges

Formerly based on impervious area, the methodology for assessing system development charges (SDCs) for new development and significant redevelopment was revised in permit year three to include two components. One component represents the charge for stormwater facilities that handle runoff from individual properties. For FY08-09, this onsite portion was assessed based on $136.00 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 FY08-09, the rates were $4.27 per linear foot and $2.23 per vehicle trip. At the end of FY08-09, City Council increased the rates for stormwater system development charges to $145.00 per 1,000 square feet of impervious area, $4.50 per linear foot of frontage, and $2.36 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.

1.13 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. It also identifies projected main activities for FY09-10.

Section 3: System Monitoring, summarizes the fourth-year results of UIC monitoring conducted under the *Stormwater Discharge Monitoring Plan* (SDMP) and submitted in the *Annual Stormwater Discharge Monitoring Report, Year 4, October 2008-May 2009* (July 15, 2009).

Section 4: Evaluation and Response, identifies evaluation and response actions conducted during FY08-09 and projected main activities for FY09-10.

Section 5: Corrective Actions, summarizes the corrective actions implemented during FY08-09 and projected main activities for FY09-10 to address UICs that do not meet permit requirements.

Appendix A identifies UICs identified/constructed during FY08-09.
Appendix B identifies the status of Category 2 and 3 UICs.
Appendix C identifies the status of SARA Title III and commercial industrial inspection work.

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 FY08-09

- Submitted quarterly *UIC Registration Database* updates to DEQ on September 1, 2008, December 1, 2008, March 1, 2009, and June 1, 2009.

- Identified 49 new public UIC[2] records in quarterly *UIC Registration Database* updates:

[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.

- 39 new UIC records in the September 1, 2008 database update
- 3 new UIC records in the December 1, 2008 database update
- 5 new UIC records in the March 1, 2009 database update
- 2 new UIC records in the June 1, 2009 database update

These UIC records are listed in Appendix A.

- Submitted decommissioning reports for closure of 17 UICs to DEQ.

2.2.2 SA-1: Projected Main Activities for FY09-10

- 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 FY08-09

- Continued to implement the *Systemwide Assessment Follow-up Actions* (submitted to DEQ December 1, 2006) workplan to address the approximately 950 UICs that were identified for follow-up as part of the systemwide assessment. The work addresses and evaluates UICs that meet any of the following criteria.
  - UICs with inadequate separation distance from groundwater (see Sections 4 and 5).
  - UICs that receive drainage from facilities that store, handle, or use hazardous or toxic materials in quantities requiring registration under the Superfund Amendment and Reauthorization Action Title III (see Section 2.3).
  - UICs that receive drainage from commercial/industrial properties with site activities that may cause stormwater entering a public UIC to exceed MADLs established in the permit (see Section 2.3).
  - UICs within close proximity to domestic or public water wells (see Sections 3 and 4).

- Continued focused monitoring program to assess water quality entering UICs within close proximity to domestic use wells (see Section 3).

2.2.4 SA-2: Projected Main Activities for FY09-10

- Continue implementation of actions identified in the *Systemwide Assessment Follow-up Actions* workplan.

- Evaluate newly constructed or identified UICs for the five 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 FY08-09

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.

- Completed work on SARA Title III facilities that were identified for short-term and long-term follow-up as part of the *Systemwide Assessment Follow-up Actions* workplan (reported on in UICMP Annual Report No. 2). The purpose of the work is to identify and address any potential threat to City-owned UICs that receive drainage from a SARA Title III facility. (See Appendix C for details.)

- Completed inspections of commercial/industrial properties identified as part of the *Systemwide Assessment Follow-up Action* workplan. The purpose of the work is to identify and address any potential threat to City-owned UICs that receive drainage from commercial industrial businesses. (See Appendix C for details.)

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.

- The BES spill response hotline received a total of 1,300 daytime calls (citywide) regarding pollution complaints, spills, sanitary sewer overflows, dye tests, and seepage discharges. All calls are responded to with at least a return telephone call; 80 to 90 percent receive a site visit.

- The hotline received 384 after-hours complaint calls (citywide). The duty officer responded on-scene to 44 of these after-hours events; this included 24 after-hours events on weekends and 20 after-hours events on weekdays.

- The spill response hotline received approximately 2,200 daytime additional information-only calls (citywide) and responded by providing agency referrals, industrial information, technical assistance, and regulatory information.

- BES issued 38 warnings concerning possible violations of City Code 17.39.

- 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 FY08-09, seven two-alarm fire results 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 FY 08-09, 35 calls were received from towing companies. No enforcement actions were taken.

- BES and the Water Bureau continued to implement Columbia South Shore Wellfield (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, United States Coast Guard, DEQ, Oregon State Police, Oregon Department of Transportation, Clean Water Services, Water Environment Services, Port of Portland, Portland Fire Bureau, Portland Fire Bureau 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. Portland's program is administered by the Portland Water Bureau, with inspections being conducted by Fire Bureau inspectors every two years.

- Continued to provide oversight to ensure that commercial and industrial facilities comply with retrofit requirements under the Columbia South Shore Well Field Wellhead Protection Program.
  - Conducted 152 inspections and follow-up inspections of businesses in the wellhead protection. Thirty-one wellhead protection violations were identified, most related to containment, labeling, and reporting requirements.
  - Added updated features to the database to better track use of hazardous materials.
  - Promoted hazardous waste reduction and non-hazardous alternatives, focusing on the reduction or elimination of halogenated solvents.

- Completed the sixth year of providing education and outreach to affected residents and businesses and one-on-one technical assistance to businesses to help them comply with requirements of the Columbia South Shore Well Field Wellhead Protection Program. Program requirements include structural and operational BMPs to reduce the occurrence of spills and minimize spill impacts. Portland's program is administered by the Portland Water Bureau, with inspections conducted bi-annually by Portland Fire inspectors. Public outreach by the Portland Water Bureau and Columbia Slough Watershed Council during permit year 4 included:

  <u>Technical Assistance to Regulated Businesses:</u>
  - Conducted 15 phone consultations.
  - Conducted 38 site visits.
  - Had two articles in Columbia Corridor Association newsletter.
  - Conducted one fire inspector training/site visit.
  - Called all regulated businesses to check in with them on program implementation.
  - Distributed 24 free spill kits, required signs, secondary containment pallets, and stormdrain covers.
  - Made multiple presentations at Columbia Corridor Association (CCA) breakfast forums about the groundwater protection program.

- Maintained the CCA and PortlandOnline webpage on the protection program and requirements.
- Partnered with Zero Waste Alliance to contact a subset of regulated businesses that use halogenated solvents to explore their uses and potential alternatives

Public Outreach

- Slough School - groundwater module: 545 students
- Groundwater 101: 33 participants
- Subs on the Slough: 31 participants
- Cycle the Well Field: 34 participants
- Aquifer Adventure: 500 participants
- Explorando: 400 participants
- Clean Water Festival:150 students
- Metro Hazardous Waste Round-up: 300 participants
- Other Events with Groundwater Content (Regatta, Awards Celebration, Migratory Bird Festival, Slough and Wetlands 101)
  Total participants/contacts: 1,993 (not including technical assistance activities listed above)

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.

- In accordance with SWMM requirements, the City signed off on permits for a total of 890 source control measures at sites with high-risk characteristics or activities. This inventory is citywide and is not limited to areas draining to UICs. Table 2-1 shows facility location by watershed. (Note: When the SWMM is applied, drainage from high-risk areas is prohibited from draining to public UICs, and stormwater is managed onsite.)

Table 2-1
Source Control Measures

Source Control Type	Willamette River	Columbia Slough	Johnson Creek	Fanno Creek	Tryon Creek	Other	Totals
Site Dewatering & Discharges[1]	10	7	0	0	0	2	19
Solid Waste Storage/ Containers/Compactors[1,2]	381	138	50	8	7	55	639
Material Transfer Areas/Loading Docks[1]	26	31	2	0	0	2	61
Fueling[1]	11	5	0	1	0	2	19
Liquid Storage/Tank Farms[1]	20	14	2	1	0	2	39
Vehicle Washing[1]	6	7	1	0	0	1	15
Exterior Bulk Storage[1]	4	7	2	0	0	2	15
Development on/near Contaminated Sites	30	18	4	0	0	6	58
Parking - above and below grade[1]	15	0	3	1	0	4	23
Water Reclaim & Reuse	2	0	0	0	0	0	2
FY08-09 Totals	**505**	**227**	**64**	**11**	**7**	**76**	**890**

[1]Alternative SWMM controls may have been used as result of the appeals process.
[2]Tenants of the same site may have shared source controls. As a result source controls in these categories may be counted more than once.

Erosion Control

- There were 5,018 active private construction permits subject to erosion control inspection (citywide). The Bureau of Development Services (BDS) conducted 6,069 erosion control-related inspections of private construction sites (citywide).

- There were 289 active public construction projects (citywide) with erosion control components. In general, public sites are inspected daily during construction.

- Erosion control complaints (received through the erosion control hotline or staff referrals) were tracked through the City's building permit tracking program, TRACS. A total of 239 cases were opened and responded to, with 162 cases closed (citywide). (The erosion control hotline was incorporated the Bureau of Development Services' Site Services Complaint Line effective May 2009.)

- The pre-permit-issuance site meeting program was continued, where the applicant's team meets onsite to discuss erosion control and other sensitive site issues. Six pre-issuance site visits were completed, with one of those requiring a second visit.

Prevention of Illegal Disposal

- Continued to implement solid waste and recycling programs (curbside recycling and yard debris collection, and neighborhood cleanup collection events) to help prevent illegal dumping.

Other

- BES, the Fire Bureau, and General Services continued working together on the City's fire station seismic upgrade to incorporate environmental issues. Specifically, all upgrades include washing areas that discharge to the sanitary system, with appropriate pretreatment. This eliminates discharges of wash water to City storm or ground disposal systems. To date, 24 remodeled stations and 5 new stations have been completed with indoor vehicle wash areas and oil/water separators. Three additional stations will have vehicle wash areas with an oil/water separator when built or remodeled. BES continues to review new stations and remodeled stations' plans as they proceed through the building permit process. All stations are designed to incorporate many environmental components to achieve and exceed stormwater quality goals.

2.3.2 PC-1: Projected Main Activities for FY09-10

- Continue to implement the *Spill Prevention and Pollution Control Plan*, including the Spill Protection-Citizen Response (SPCR) team hotline and response activities.

- Continue to address SARA Title III and commercial/industrial businesses that were identified in the systemwide assessment as potentially draining to a City-owned UIC and that conduct activities that may pose a threat to a UIC, requiring further evaluation.

- Continue to implement the Columbia South Shore Well Field Wellhead Protection Program.

- Continue to implement the *Stormwater Management Manual*.

- Continue to operate the citywide erosion and construction site pollutant control program, including the erosion control hotline.

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 FY08-09

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 Education Advisory Committee (comprising educators from the Portland region) provides feedback and guidance on BES's education programs and activities.

- Reached 6,412 students (grades K-12) with classroom programs that provide hands-on, interactive science education about stormwater and other environmental issues.

- Involved 6,727 students (K-12) in education field programs that offer watershed investigations and field assessments, such as how to measure water quality and conduct macroinvertebrate sampling as indicators of water quality health. Also included are stormwater tours, boat tours, and restoration experiences along streams and wetlands. In addition, 2,627 of the students combined education with natural area restoration service projects.

- Co-sponsored delivery of the assembly program: *Living Streams, Stories for Healthy Watersheds*. The assembly was presented to a combination of 4,569 elementary students, teachers and family audiences at special events within the City of Portland. The assembly focuses on stormwater pollution, what students can do to protect rivers and streams, and the relationship of stormwater pollution to wildlife health. An accompanying assembly curriculum on the BES website received 8,109 hits.

- Provided jet boat tours of the Willamette River to 768students in the Johnson Creek, Fanno, and Willamette Watersheds. Canoe trips on the Columbia Slough were offered for 171 students in the Columbia Slough Watershed. All students completed special classroom studies and a stewardship project to be eligible. The focus of the tours was on river and slough history, how land usage impacts waterways, combined sewer overflow history, stormwater pollution, and how personal actions can help prevent stormwater pollution.

- Checked out stormwater and watershed curriculum kits and field equipment to 12 Portland elementary and middle school teachers for them to work independently with students in the classroom and at special school events.

- Provided teacher and community training workshops, involving 82 participants.

- Presented Stormwater - Soak it Up, a 75-minute classroom program for grades 4-12, and special interest groups totaling 352 students and teachers. The students learned to identify pollutants, distinguish between pervious and impervious surfaces, calculate runoff, and design greener cities within given budget constraints.

- Presented Tours of Stormwater Solutions to 63 students. Students visited bioswales, stormwater planters, ecoroofs, porous pavement, and creative downspout disconnections. They learned how these solutions can filter pollution, slow down stormwater, and prevent erosion.

- Presented Watershed Awareness to 788 students, grades 3-6. This program focuses on common non-point sources of pollution found in a watershed and how to prevent stormwater pollution.

- Targeted schools with onsite stormwater facilities for extended outreach. Schools included Mt. Tabor Middle School, Kelly School, and Forest Park School. Students learned about stormwater pollution prevention, their school's sustainable stormwater facilities and participated in maintenance activities for their facilities.

- Participated in six community events, with a total of 991 participants. These were the Children's Clean Water Festival, Columbia Slough Regatta, Explorando El Columbia Slough, Sustainable Living Show, Arbor Day, and the City of Portland Native American Month Brown Bag. All events included stormwater pollution prevention messages.

- Held quarterly Education Advisory Committee meetings to review and advise on public education approaches and activities.

Stewardship Activities and Community Events

Columbia Slough Watershed

- Co-sponsored and participated in numerous community events in which stormwater was a topic of instruction. The total attendance was approximately 3,000 persons.

- Participated in developing projects for the Columbia Slough Watershed Council Action Plan, which identifies numerous stormwater watershed restoration projects and activities for the Council and its partners.

Willamette Watershed

- Co-sponsored and participated in seven community events, reaching a total of 281 citizens.

- Provided information on watershed health for the Stephens Creek subwatershed and the Willamette Watershed in general.

- Coordinated with stakeholders to complete the SE Clay Green Street – Route to the River planning.

Johnson Creek Watershed

- Continued working with the Johnson Creek Watershed Council and streamside property owners to encourage watershed stewardship.

- Attended Lents Urban Renewal Advisory Committee and Powellhurst Gilbert Neighborhood Association meetings to inform them about the Johnson Creek watershed restoration program and its projects.

- Gave presentations at the Lents, Pleasant Valley and Powellhurst Gilbert Neighborhood Associations, with 80 people attending, for the East Lents Floodplain Restoration Project.

- Participated in two public events, with a total of 50 participants, for the Portland Plan, which will update the City's Comprehensive Plan. BES is leading the effort to incorporate stormwater management and other natural resource goals and strategies into the plan. BES's public involvement objective is to ensure that community members understand and provide input on the connections between stormwater management, natural resources and land use planning.

Other

- Partnered with East Multnomah Soil and Water Conservation District, Metro, and many community hosts to offer the Naturescaping Program. The program offers workshops to teach participants to manage their property to use native plants, stop erosion, manage stormwater, and reduce chemical and water use. In FY08-09, 1,277 participants attended workshops, and the program reached over 19,000 people at public events. The programs are offered throughout Portland and nearby suburbs. Participants can attend any workshop, regardless of location.

- BES partnered with AmeriCorps' Northwest Service Academy to sponsor an Americorps member to serve as BES's Stormwater Stewardship Coordinator. Coordinated multiple events focused on stormwater management and pollution prevention throughout the city's watersheds, reaching at least 700 people.

Regional Coalition for Clean Rivers and Streams

- Continued participation in the Regional Coalition for Clean Rivers and Streams, with the following activities:
  - Continued working with a local advertising agency to develop and implement a multi-year public awareness campaign.
  - Launched the Coalition's redeveloped website in July 2008. The website features an online quiz with questions about pollution prevention from information available on the website.
  - As part of the updated and upgraded website, engaged in a significant social marketing effort starting in spring 2009, including "blog seeding" (providing information to similar content blogs), establishing and using a Twitter account, establishing a Facebook page,

and posting the Coalition's television ad on YouTube under the username CleanRiverTips.
  - Distributed water bill inserts with tips regarding stormwater runoff to 214,000 Portland ratepayer accounts from March-May 2009.
  - Maintained a budget of $72,000 per year to educate the public about the impact stormwater runoff pollution has on the health of rivers and streams for people, fish, and wildlife.

Publications and Signage

- Included inserts in City water/sewer bills:
  - September/October/November 2008: A bill insert titled "Floodplains, Watersheds, and Clean Rivers" was distributed to 214,000 accounts.
  - December 2008 & January/February 2009: A bill insert titled "What Not to Flush" was distributed to 214,000 accounts.
  - March/April/May 2009: A Regional Coalition bill insert with information and tips regarding stormwater runoff was distributed to 214,000 accounts.
- Updated and posted fact sheets, brochures, and educational materials on the BES Sustainable Stormwater Management website. The materials included information about Green Streets, ecoroofs, stormwater management facility planting guides, green streets and other sustainable stormwater approaches. The website received over 135,000 views during FY08-09, a 35 percent increase over FY07-08.
- Distributed a variety of educational materials at community meetings and events.

Coordination with Other Programs and Groups

- BES coordinated with other City projects and programs (e.g., Endangered Species Act Program, Willamette Stormwater Control Program, Portland Harbor Superfund Program, BES Watershed Programs) to integrate stormwater activities and messages.
- BES worked with watershed councils and other community groups to coordinate public education and stewardship activities.

Eco-logical Business Program

- Continued to work with the Regional Pollution Prevention Outreach Team and Automotive Eco-Logical Advisory Subcommittee for the Portland metropolitan region to certify automotive repair and service shops. By the end of permit year 4, 35 shops were certified in the City of Portland.
- Used EPA grant funding to purchase spill prevention and containment devices to use as incentives for firms to participate in the Ecological Business Program.

- Continued a promotional campaign to raise awareness and communicate the importance of supporting auto shops that operate environmentally responsible business practices. The campaign used newspapers, the Redirect Guide, the Chinook Book, and local news advertising to promote the Eco-logical Business message.

- Continued implementing the Eco-logical Business Program for the landscape services sector. Certified three full-service, one design, and two installation firms that all do work in the City of Portland.

- Continued participation in local environmental and neighborhood events, including the annual sustainability fair and the greener home and garden show, to promote use of certified automotive and landscape businesses. Also attended the annual Oregon Landscape Contractors Association conference to garner more interest from program participants.

BEST Business Center

- The BEST Business Center assists Portland businesses with resources and information to help them green their operations. The BEST Business Center is run by the Bureau of Planning and Sustainability (formerly Office of Sustainable Development), in partnership with the Portland Water Bureau, Portland Development Commission, Metro, Pacific Power, and Portland General Electric. To date, the center OSD has been contacted by over 260 businesses looking to green their operations.

  Each year, the City recognizes Portland's most sustainable businesses with the BEST Awards. In 2009, 10 businesses received the BEST Award for their efforts to reduce waste and toxics, conserve energy, develop green products and services, and promote sustainable food systems.

  In April 2009, the center launched a new award called Portland Climate Champions to recognize 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.

2.4.2 ET-1: Projected Main Activities for FY09-10

- Continue the Clean Rivers Education Program for grades K-12.

- Continue Education Advisory Committee meetings to review and advise on public participation approaches and activities.

- Continue to produce publications and website materials.

- Continue to work with other City bureaus, watershed councils, and other community groups to provide educational activities and messages.

- Continue the major outreach to community youth to increase their awareness of urban watershed and water quality issues, increase their connection to greenspaces and streams so they desire to protect and appreciate them, and educate them about how they can protect their watersheds.

- Continue certifications in the Eco-Logical Business Program with the Pollution Prevention Outreach Team and automotive and landscape advisory groups. The goal for FY 09-10 is to have three more auto shops certified and four more landscape services certified in the City of Portland.

- Continue participation in the BEST Program.

- Incorporate new UIC fact sheets into community outreach activities.

- Update the stormwater UIC website. Incorporate new fact sheets, depth to groundwater maps, and links to the *Stormwater Management Manual*, DEQ website, and other appropriate agencies.

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.

2.4.3 ET-2: Key Accomplishments for FY08-09

- UIC staff provided outreach to Bureau of Development Services (BDS) and Bureau of Environmental Services Engineering group managers and staff to coordinate with and response to UIC site-specific questions and programmatic items.

- Conducted training for new duty officer staff on the BES spill response hotline and staff response duties.

2.4.4 ET-2: Projected Main Activities for FY09-10

- Continue to conduct training to City staff on the BES spill response hotline and staff response duties. Continue duty officer training sessions.

- 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 FY08-09

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 3,366 facility inspection/maintenance visits citywide (multiple visits to some locations after major rain events). (This number includes, but is not limited to, UIC-specific visits.)

- Cleaned approximately 8,632 inlets (citywide).

- Repaired or constructed 230 inlets, 1,701 linear feet of inlet lead, and 1,016 linear feet of culvert.

- Cleaned 1,494 sedimentation and sump manholes.

- Continued to implement retrofits to the existing storm drainage system, as identified during routine operations and maintenance activities. Completed conversion of a total of 1,230 linear feet from ditches to swales or porous shoulders.

- Continued to evaluate UIC stormwater quality monitoring data to evaluate the relationship between stormwater quality, maintenance frequency, and traffic volumes.

Street Sweeping

- Swept approximately 483 miles of streets draining to public UICs. This represents 73 percent of the 665 total miles of streets that drain to public UICs.

Bureau of Maintenance BMPs

- BOM continued to implement BMPs within the right-of-way to protect water quality. This includes:
  - Following ODOT's *Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices.*
  - Tracking and removing abandoned erosion control devices.
  - Using the trenchless liner repair system.
  - Using bio-pillows for sediment control on impervious surfaces and hydrocarbon-absorbing booms to trap sediment, oil, and grease while cleaning the grinding machine.
  - 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 to prevent these materials from entering the storm drain system
  - Placing bio pillows and oil-absorbent booms before entering storm drains.
  - Using water-based asphalt emulsions and biodegradable asphalt release agents.

- BOM staff continued to look at piloting new materials and applications directed toward enhancing water quality.

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 FY09-10

- Continue to implement the UICMP *Operations & Maintenance Plan*.

- 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.

- Continue ditch-to-swale conversions.

- Continue to evaluate new materials and processes, pilot test tools and techniques, and monitor developments in related fields.

- Continue to invite guest speakers and host vendor demonstrations to keep apprised of new materials and practices.

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 FY08-09

Development Review Process and UICs

- Key staff from BES and BDS 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

- Continued discussions with the Oregon Water Resources Department (OWRD) regarding issues relating to the water supply well construction rules and UIC rules. DEQ and OWRD acknowledge conflicts in their rules, but have not recommended a course of action or designated staff resources to offer.

- Continued the evaluation process for potential changes to City code/policy to limit the installation of new domestic wells or require connection to public water supply (if available). The Water Bureau declined to move a water connection requirement forward.

- Based on the responses from DEQ and OWRD, further code, rule petitioning, or legislative activity is not recommended at this time. The City will monitor the number of occurrences of UIC/drinking water well proximity and manage for those occurrences. The City will revisit the rule/code modification at a later date, depending on the level of occurrence.

- Modified the BDS plumbing permit application to include permit fees for new construction of private facilities.

Regional Coordination

- The City participated in the ACWA Groundwater Committee and is partnering with DEQ to develop a regional WPCF permit template.

Watersheds Advisory Committee

- The Watershed Science Advisory Group (WSAG) and the Stormwater Advisory Committee (SAC) merged in FY08/09 and began meeting as the Watersheds Advisory Committee (WSAC) in October 2008. The WSAC includes external stakeholders as well as city and state agency representatives. The committee's charge is to advise the City of Portland Bureau of Environmental Services, the City Commissioner in Charge of Environmental Services, City Council, and other city bureaus, as appropriate, on direction, priorities and concepts for implementing the watershed approach in an integrated and maximized manner across the city. The WSAC also advises on stormwater management in the context of watershed health, with the goal of maximizing and leveraging the contribution of any activity to achievement of multiple city goals and objectives. During FY08/09, the WSAC met bimonthly and discussed implementation of the Portland Watershed Management Plan, development of the Portland Plan, and provided recommendations on prioritizing Grey-to-Green initiative projects.

Grey to Green Initiative

- The City continued to implement the Grey to Green initiative, including a 5-year goal to implement over 43 acres of ecoroofs and more than 900 Green Streets citywide as a way to improve watershed health. Activities in FY08-09 included selecting and implementing Green Street projects for "1% for Green" funding.

Stormwater Management Manual Revision

- Completed the 2008 revision of the *Stormwater Management Manual* (effective October 2008). Updated UIC sections included:
  - Updated information regarding requirements for UIC registration, rule authorization, permitting, and decommissioning.
  - Added a new requirement for depth to groundwater investigation for areas of shallow groundwater.
  - Added a link to the *Estimation of Depth to Ground Water and Configuration of Water Table in the Portland, Oregon Area*, prepared by the USGS.

Land Acquisition

- The Johnson Creek Willing Seller Program acquired approximately 5.8 acres of floodplain property in FY 08-00. Since June 1997, the program has purchased a total of approximately 134 acres. Much of the property that has been acquired as part of this program is located in areas of shallow groundwater and adjacent to identified Category 2 and Category 3 UICs.

2.6.2 PR-1: Projected Main Activities for FY09-10

- Continue to encourage DEQ and OWRD to evaluate/revise rules (OAR 340-044 and 340-071).
- Participate in DEQ UIC rule revision (OAR 344-040) as appropriate.
- Continue to coordinate the review and approval process with BDS for private UIC registrations and development issues.
- Continue to work with BDS and DEQ to develop consistent design standards and guidance for UICs on private and public property.
- As part of the fifth year of the permit, the City will conduct a review and update of the UICMP as appropriate.
- As needed, work with the Watersheds Advisory Committee (WSAC) to develop and refine stormwater management policies.
- Continue to purchase land for stormwater management and natural resource protection, and work with property owners to protect existing natural areas.
- Continue to provide training and technical assistance on the *Stormwater Management Manual* to City staff and the development community**.**
- Continue implementation of the Grey to Green initiative.

3 System Monitoring

The System Monitoring program element involves ongoing UIC monitoring activities 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.

- 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 or successfully implement corrective actions, as identified in the *BMP Monitoring Program*.

3.1 Compliance Monitoring

3.1.1 Key Accomplishments for FY08-09

- Submitted year 4 (October 2008 – 2009) UIC compliance and supplemental monitoring locations to DEQ on August 31, 2008. Supplemental monitoring locations were selected to assess the quality of stormwater discharged to UICs located near domestic or public water wells.

- Implemented year 4 stormwater compliance and supplemental monitoring. Forty UIC locations were sampled in year 4 and tested for common and priority pollutants as defined by the permit.

- Compiled and evaluated year 4 stormwater data. Notified DEQ of year 4 annual mean concentration exceedances of the permit's maximum allowable discharge limits (MADLs) on July 9, 2009.

- Prepared and submitted the *Annual Stormwater Discharge Monitoring Report – Year 4 – October 2008 – May 2009* to DEQ on July 15, 2009. The report results are summarized in Section 3.1.2, below

- Performed a preliminary stormwater discharge trend analysis for the 4 years of data, using box plots to identify potential differences in pollutant concentrations. Preliminary results are summarized in Section 3.1.2, below.

- Prepared and submitted year 5 (October 2009 – 2010) UIC monitoring locations to DEQ on August 31, 2009, including 30 compliance monitoring locations selected in accordance with the SDMP. Because of annual geometric mean exceedances for pentachlorophenol and lead MADLs, two additional sites from year 4 will be sampled again in year 5.

3.1.2 UIC Stormwater Year 4 Monitoring Summary

The City of Portland's UIC compliance 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. Five sampling events were completed, as required by the permit, between October 2008 and May 2009. Stormwater samples from discharges to City-owned UICs were analyzed for both common and priority pollutants, as defined by the permit. Field and laboratory data collected during year 4 met the data quality objectives defined in the SDMP.

Forty UIC locations, stratified based on estimated traffic volume (>1,000 vehicle trips per day [TPD] and <1,000 TPD), were sampled in year 4, as follows:

- Thirty UICs selected to implement the year 4 compliance monitoring (i.e., monitoring network) described in the SDMP:
  - Panel 4 (15 rotating UIC locations sampled in permit years 4 and 10)
  - Panel 6 (15 fixed UIC locations sampled in permit years 1 through 10)

- Ten supplemental UICs located near domestic or public water wells (see Section 4.4.2).

Year 4 Results [3]

- All 14 common pollutants and six priority pollutants analytes (antimony, barium, beryllium, 2,4-D, glyphosate, and mercury) were detected in year 4.

- Four pollutants—PCP, di(2-ethylhexyl)phthalate [DEHP], benzo(a)pyrene [B(a)P], and lead—were detected in year 4 at concentrations above their respective MADLs in at least one sample. Detected concentrations of other common and priority pollutant analytes were below their respective MADLs. The City reported MADL exceedances to DEQ, as required by the permit.[4]

- Twenty-eight ancillary pollutants (i.e., pollutants detected using the analytical methods for common pollutants) were detected at low concentrations (generally less than 1 µg/L). The 10 ancillary pollutants detected at the highest frequencies (greater than 50 percent) for individual sampling events are polycyclic aromatic hydrocarbons (PAHs). Of the PAHs detected, naphthalene had the highest concentration (2.24 µg/L).

[3] A full discussion of monitoring methodology and results can be found in the *Annual Stormwater Discharge Monitoring Report – Year 4* (July 2009).

[4] Actions taken in response to individual MADL exceedances are reported in Section 4: Evaluation and Response.

Annual Mean Concentrations

- Annual mean concentrations were calculated for pollutants that were detected during individual sampling events at concentrations >50 percent of the MADL. Theoretically, the mean concentration cannot exceed the MADL if detected concentrations during the five individual sampling events are <50 percent of the MADL.

- Annual geometric mean concentrations for five UIC locations (P6_1, P6_7, P6_14, SP3_6, and SP3_8) exceeded the MADL for PCP (1.0 µg/L). Annual geometric means for these locations range from 1.1 to 1.5 µg/L, slightly above the MADL. One site (SP3_8) also exceeded the MADL for lead (50 µg/L). Three of the five UICs (P6_1, P6_7, and P6_14) were previously identified in Year 2 as Category 4 UICs. SP3_6 and SP3_8 will be sampled again in year 5.

- Annual geometric mean concentrations for DEHP and lead were less than their respective MADLs.

- The WPCF permit requires the City to identify UICs in which the annual mean concentration exceeds the MADL for two consecutive years as Category 4 UICs[5]. No new Category 4 UICs were identified in year 4.

Preliminary Trend Analysis

Years 1, 2, 3, and 4 pollutant concentration data were compared using box plots. Box plots were prepared to identify potential differences in pollutant concentrations between:

- Permit years (year 1, year 2, year 3, year 4)
- Traffic categories (<1,000 TPD; ≥1,000 TPD)
- Sample panels (Panel 1, Panel 2, Panel 3, Panel 4, Panel 6, supplemental panels [SP1, SP2, and SP3]).

In general, the box plots prepared for years 1, 2, 3, and 4 data are very similar for each variable. For the pollutants evaluated (lead, dissolved lead, PCP, DEHP), the concentration ranges were generally narrow, and the annual medians and geometric means were well below their respective MADLs (i.e., <50 percent). Pollutant concentrations appear to be slightly higher in the ≥1,000 TPD traffic category than in the <1,000 TPD category and very similar between sample panels.

Response Actions

Section 4 summarizes the actions taken during the year 4 wet season (October 2008 – May 2009) to further understand pollutant sources, prevent pollutants of concern from exceeding respective MADLs, and respond to conditions identified during implementation of the stormwater discharge

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

monitoring program. These actions are discussed in the *Annual Stormwater Discharge Monitoring Report – Year 4*, dated July 2009.

3.1.3 Projected Main Activities for FY09-10

- Select UIC locations for year 5 monitoring (i.e., Panel 5). (UIC locations were submitted to DEQ on September 1, 2009.)
- Implement year 5 UIC compliance monitoring in accordance with the SDMP.
- Document, analyze, and report results of the 2009-2010 (year 5) stormwater monitoring in the *Annual Stormwater Discharge Monitoring Report – Year 5*. That report will be submitted to DEQ by July 15, 2010.
- 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 6 compliance, and year 5 carryover, if any, stormwater monitoring locations.
- Notify DEQ of year 6 stormwater monitoring locations by September 1, 2010.

3.2 BMP Monitoring

3.2.1 Key Accomplishments for FY08-09

- Completed engineering design and bid specifications for contractor procurement for four demonstration projects to evaluate technologies to increase separation distance (see Section 5.2).
- Evaluated the need for and/or the objectives of the *BMP Monitoring Plan*, based on the results of the UIC stormwater discharge monitoring program and the groundwater protectiveness demonstrations. It was determined that groundwater is protected and the BMP monitoring program meets the intent of the WPCF permit. Therefore, specific BMP effectiveness monitoring is not warranted.

3.2.2 Projected Main Activities for FY09-10

- Construct the demonstration projects to evaluate technologies to increase the separation distance between shallow groundwater and the bottom of the UIC (see Section 5.2).

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

The permit requires the City to identify compliance response and corrective actions for UICs that do not meet stormwater discharge limits, minimum requirements for vertical separation distance, or other permit conditions. The permit and DEQ's *Fact Sheet and Class V Underground Injection Control (UIC) Permit Evaluation* report (DEQ, 2005) identify several types of activities the City may use to evaluate and/or demonstrate that groundwater is protected in accordance with OAR 340-040. These activities include groundwater monitoring, risk assessment, structural retrofitting of UICs, UIC decommissioning, or other actions as directed or approved by DEQ. The term "risk assessment" as referenced in the permit and as used in the *UIC Management Plan* (BES, 2006) is used to indicate the evaluation of potential risk for adverse impacts to groundwater quality, as defined by OAR 340-040 and OAR 340-044, associated with stormwater discharged into City-owned UICs.

Stormwater entering City-owned UICs is discharged into subsurface soil, infiltrates through the soil (i.e., unsaturated zone), and eventually recharges groundwater. Prior to entering the unsaturated zone, large-size particulate matter (which stormwater pollutants may be sorbed to) falls out of suspension into the sump (e.g., sediment trap ring) at the bottom of the UIC. Pollutant concentrations would be reduced as the pollutant travels from the UIC vertically downward though unsaturated soil into groundwater by various physical processes (advection, dispersion, dilution, diffusion, volatilization, sorption/desorption), chemical reactions (ion exchange, complexation, abiotic transformation), and biological activity (aerobic and anaerobic biodegradation). Pollutant concentrations at the point stormwater enters groundwater are expected to be significantly lower than the input concentration.

The permit allows for unsaturated zone soils to function as part of the water quality treatment system. To ensure that the unsaturated zone does function as intended as part of the treatment system, a sufficient vertical separation distance must be maintained to reduce pollutant concentrations in stormwater being infiltrated to levels protective of drinking water quality.

During FY 07-08, an evaluation tool was developed by the City and approved by DEQ. This Groundwater Protectiveness Demonstration (GWPD) 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.

4.1.1 Tool Development

The GWPD tool was developed using a phased approach under DEQ oversight. The purpose of the phased approach was to allow the tool to be developed in a methodical manner. Phase 1 focused on the development of the methodology and assumptions to be used in evaluating a limited number of UICs with a single issue (MADL exceedance) and a single pollutant (PCP). Phase 2 built on the results of Phase 1 and incorporated DEQ's comments on the Phase 1 results. Phase 2 expanded the Phase 1 methodology to evaluate two issues (vertical separation distance and potential MADL exceedance) and multiple pollutants representative of stormwater entering the City's UIC system.

Phase 3 involved developing the *Decision Making Framework for Groundwater Protectiveness Demonstrations*, based upon the methodology, assumptions, and results of the Phase 1 and 2 analyses. Phase 3 included applying the results of Phase 2 to a wider range of UIC issues and conditions that might be expected to exist in Portland and developing protocols for consistently applying the GWPD tool to determine whether a particular set of UIC site conditions is protective of groundwater and where further evaluation or corrective action is required. The *Decision Making Framework for Groundwater Protectiveness Demonstrations,* submitted to DEQ in June 2008, 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 separation distance
- UICs located within permit-specified 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)[6]

In addition, a groundwater fate and transport analysis was performed and included in the *Decision Making Framework for Groundwater Protectiveness Demonstrations* to demonstrate that identified domestic and public water wells located within permit UIC setbacks (i.e., Category 2 and Category 3 UICs, both non-compliant because of inadequate vertical separation distances) are protected pending the completion of corrective actions. DEQ approved the

[6] 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 $\geq$50% of the MADL (*Decision Making Framework for Groundwater Protectiveness Demonstrations,* submitted to DEQ July 19, 2008).

Decision Making Framework for Groundwater Protectiveness Demonstrations on October 20, 2008.

4.1.2 Implementation of Decision-Making Framework (Decision Documentation and Verification)

The City applied the *Decision Making Framework for Groundwater Protectiveness Demonstrations* 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 Report No. 3* (November 2008) and in the reports listed in Table 1-2.

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 to ensure that additional analyses do not need to be performed. 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 3 monitoring.
    - New pollutants of interest are not identified.
    - Significant increases in pollutant concentrations or pollutant concentration trends are not identified.

Sections 4.2 to 4.4 provide the results of this review.

4.2 Further Evaluation of UIC Separation Distance

The WPCF permit requires that UICs more than 5 feet deep must have a minimum separation distance of 10 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

In early 2009, the USGS modified the depth to groundwater information for the City of Portland. As a result of this modification, the City identified changes to the list of Category 3 UICs last reported in *UICMP Annual Report No.3*. Updated information was reported to DEQ through

written correspondence dated April 1, 2009. As a result of this update, the City identified the following changes to the Category 3 UIC list (see Section 5 for updated Category 3 list):

- 30 UICs were added to the list of UICs identified with a vertical separation distance between ≥ 5 and < 10 feet:
  - 22 new Category 3 UICs were identified with a separation distance between ≥ 5 and < 10 feet.
  - 8 UICs shifted from a separation distance of < 5ft to a separation distance of ≥ 5 feet.
  - These locations are addressed through the application of the *Decision Making Framework of Groundwater Protectiveness Demonstrations* in Section 5 of this report.

- 13 UICs shifted from a separation distance of ≥ 5 feet to a separation distance of < 5 feet. As a result of this change, these locations no longer meet the assumptions of the *Decision Making Framework of Groundwater Protectiveness Demonstrations* and cannot receive an NFA through a groundwater protectiveness demonstration. These locations have been added to the prioritized list of Category 3 UICs that are scheduled for a corrective action to address inadequate vertical separation distance (see Section 5.3.3).

- 6 UICs previously reported with a separation distance between ≥ 5 and < 10 feet were determined to have a separation distance of >10 feet and have been removed from the Category 3 list (see section 5.3.2).

For the 111 UICs that were not affected by the modified USGS information and still have vertical separation distances between ≥ 5 feet and < 10 and previously received an NFA confirmation (Appendix B, Table B-1), the decision verification process was applied (as required annually, per the permit) through the following steps:

- **Verification of vertical separation distance:** Updated USGS depth to groundwater data (as described above) were used in combination with existing construction information to calculate vertical separation distance between the bottom of the UIC and seasonal high groundwater. All locations previously identified as having > 5 feet and < 10 feet vertical separation distance were confirmed and are reported in section 5 of this report. All newly identified UICs with < 5 feet vertical separation distance were added to the prioritized Category 3 UIC list requiring corrective actions, also reported in section 5 of this report. 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 4 monitoring are similar to detections, frequency, and concentration ranges in years 1 -3. Common pollutants detected in year 1 - year 4 data are generally at low concentrations and below their respective MADLs. Concentration ranges for pentachlorophenol, DEHP, and lead are similar for years 1, 2, 3, and 4. Concentrations are generally at low concentrations 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 - 4. There are no new pollutants of interest, no significant increases in pollutant concentrations, and no increases in pollutant concentration trends. For details, refer to *Annual Discharge Monitoring Report – Year 4 (October 2008 – May 2009)*.

4.2.2 Key Accomplishments for FY08-09

- Continued evaluation and selection of corrective action alternatives for UICs determined to be non-compliant with the permit (see Sections 5.3 and 5.4).

- 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. Reported and prioritized newly identified Category 3 UICs to DEQ in accordance with the permit requirements (see Section 5.3).

4.2.3 Projected Main Activities for FY09-10

- Continue identification and evaluation of UICs as new data become available (e.g., modified USGS depth to groundwater study, data generated by local studies).

- 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.

- Apply the protocols in the *Decision Making Framework for Groundwater Protectiveness Demonstrations* to any new UICs identified with vertical separation distances >5 feet 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

Seven UICs were previously identified as Category 4 UICs and received NFAs based on groundwater protectiveness demonstrations. The decision verification process was applied through the following steps:

- **Verification of vertical separation distance:** Updated 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 for the seven Category 4 UICs with NFA designations. Based on the updated USGS depth to groundwater information, all seven 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 4 monitoring are similar to detections, frequency, and concentration ranges in years 1 -3. Common pollutants detected in year 1 - 4 data are generally at low concentrations and below their respective MADLs. Concentration ranges for pentachlorophenol, DEHP, and lead are similar for years 1, 2, 3, and 4. Concentrations are generally at low concentrations and within narrow ranges at individual UIC locations. Concentrations for the ≥1,000 TPD traffic category appear to be slightly higher than the <1,000 TPD traffic category in years 1 - 4. There are no new pollutants of interest, no significant increases in pollutant concentrations, and no increases in pollutant concentration trends. For details, refer to *Annual Discharge Monitoring Report – Year 4 (October 2008 – May 2009)*. Based on this information, the seven Category 4 UICs meet the conditions of the groundwater protectiveness demonstration.

4.3.2 Key Accomplishments for FY08-09

- Reported MADL exceedances to DEQ within 7 days following receipt of validated analytical data for five storm events. Twenty-six sample concentrations from 11 UIC locations exceeded the MADL of 1.0 µg/L for PCP. Eight individual sample concentrations from five UIC locations exceeded the MADL of 50.0 µg/L for lead. Thirteen individual sample concentrations from 10 UIC locations exceeded the MADL of 6.0 µg/L for DEHP. One individual sample concentration from one UIC location exceeded the MADL of 0.2 µg/L for benzo(a)pyrene.

- No new Category 4 UICs were identified in FY08-09. Two locations were identified to be carried over for a second year of sampling before a Category 4 determination can be made. Details are provided in the July 2009 *Annual Stormwater Discharge Monitoring Report – Year 4*.

4.3.3 Projected Main Activities for FY09-10

- Implement year 5 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:** Updated 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 the updated information, 20 locations were identified with < 5 feet vertical separation distance and have been identified for corrective actions, as described in section 5. The remaining 378 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 4 monitoring are similar to detections, frequency, and concentration ranges in years 1 -3. Common pollutants detected years 1 - 4 data are generally at low concentrations and below their respective MADLs. Concentration ranges for pentachlorophenol, DEHP, and lead are similar for years 1, 2, 3, and 4. Concentrations are generally at low concentrations and within narrow ranges at individual UIC locations. Concentrations for the ≥1,000 TPD traffic category appear to be slightly higher than the <1,000 TPD traffic category in years 1 - 4. There are no new pollutants of interest, no significant increases in pollutant concentrations, and no increases in pollutant concentration trends. For details refer to *Annual Discharge Monitoring Report – Year 4 (October 2008 – May 2009)*. Based on this information, the UICs meet the conditions of the groundwater protectiveness demonstration.

4.4.2 Key Accomplishments for FY08-09

- Completed the final year of stormwater discharge monitoring of 10 supplemental UICs located within 500 feet of a domestic well, 500 feet of a public water well that does not have a time of travel, or the 2-year time of travel of a public water well, in accordance with

UICER Guideline No. 3: Proximity to Drinking Water Wells. Supplemental monitoring locations were randomly selected using the method described in the SDMP and stratified by traffic category. The objectives of this monitoring program included:

  - Assess the quality of stormwater discharged to UICs located near domestic or public water wells.
  - Demonstrate that the results of the citywide annual compliance monitoring program (described in the SDMP) are representative of stormwater discharging to UICs located within 500 feet of a domestic well, 500 feet of a public water well, and the 2-year time of travel of a public water well.

- Sampled five storm events at each year 4 supplemental monitoring location. Sampling and analyses were performed in accordance with the SDMP. Two of the supplemental locations exceeded their annual geometric MADL concentrations for PCP and will be sampled in year 5 to confirm results.
- Evaluated and presented results in the *Annual Stormwater Discharge Monitoring Report – Year 4* (July 2008).

4.4.3 Projected Main Activities for FY09-10

- Collect year 5 stormwater quality data. Continue to collect stormwater monitoring data and evaluate the quality of stormwater entering UICs. Projected timeline: October 2009 – May 2010.

- Evaluate stormwater quality data. Continue evaluation of the results of the annual compliance monitoring program (described in the SDMP). Projected timeline: October 2009 – November 1, 2010.
  - Identify pollutants, if any, that exceed permit limits (e.g., PCP) 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 pre-design and design activities on Category 2 and 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 efforts to address Category 2 and Category 3 UICs is provided in Sections 5.2 and 5.3 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 2007 are described in this section.

4.5.1 Key Accomplishments for FY08-09

- Implemented *UIC Evaluation and Response Guidelines* (UICER) No 2 in response to year 4 individual and annual mean MADL exceedances (see Section 3). During year 4 stormwater discharge monitoring, four common pollutants were detected during individual sampling events at concentrations above their respective MADLs: PCP, B(a)P, DEHP, and lead.

4.5.2 Projected Main Activities for FY09-10

- Implement actions, as needed and appropriate, in response to any year 5 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

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 3 locations determined to be compliant based on updated construction information. For a summary of UICs with inadequate separation distance prior to FY-08/09, refer to *UICMP Annual Report No 3*.

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.3*. 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 the update, the City identified changes to the Category 3 UIC list, as discussed in Section 4.2.1. (See Sections 5.3.2 -5.3.4 for updated Category 3 lists.)

As a result of these changes, the prioritized Category 3 list of UICs with a vertical separation distance < 5 feet has been updated to 190 UICs. The updated and prioritized list is in Appendix B, Table B-2.

5.2 Category 2 UICs

The permit defines Category 2 UICs as those identified as non-compliant during the *Systemwide Assessment*. Twenty-nine (29) Category 2 UICs were identified and prioritized in *UICMP Annual Report No. 1* (December 2006). The permit requires Category 2 UIC corrective actions to be completed by November 1, 2010.

5.2.1 Key Accomplishments for FY08-09

- Completed engineering pre-design evaluation of potential corrective alternatives for Category 2 UICs.

- Continued internal BES team meetings to facilitate coordination and communication between the Category 2 UIC project and the regional evaluation of UICs in shallow groundwater (i.e., Category 3 UICs).

- Completed engineering design and selected a contractor for construction activities for four Category 2 UIC corrective actions that will be used as demonstration projects to evaluate technologies to increase separation distance (*Systemwide Assessment Follow-up Actions* workplan - Task 2). Construction will be completed in fall 2009. Five locations were originally considered for demonstration projects, but were reduced to four as a result of coordination issues with a nearby property owner. This fifth location will be included with the remaining Category 2 locations.

- Initiated engineering design for the remaining 25 Category 2 UICs. Design is estimated to be competed by December 2009, with construction starting in spring 2010.

Appendix B, Table B-3 lists prioritized Category 2 UICs, the corrective status, and identification of the anticipated corrective action response.

5.2.2 Projected Main Activities for FY09-10

- Continue implementing the *Corrective Action Plan* for the identified Category 2 UICs to meet the permit-required corrective action completion date of November 1, 2010. FY09-10 activities will include:

  - Complete engineering design and development of project specifications for selected corrective actions for 25 Category 2 UICs. Target completion: December 2009.

  - Develop a schedule and budget for construction of 25 Category 2 corrective actions. Projected timeframe: December 2009.

  - Bid, award, and issue notice to proceed for 25 Category 2 corrective actions. Projected timeframe: April 2010.

  - Initiate construction of 25 Category 2 corrective actions. Projected timeframe: April 2010 – October 2010.

- Complete engineering design and project specifications for UIC demonstration projects (four UICs) to increase vertical separation distance.

- Meet with DEQ on a periodic basis to provide an overview of work completed to date, schedule, issues, etc.

5.3 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. Updates to USGS depth to groundwater information used to identify Category 3 UICs are described in section 5.1. The specific changes to the Category 3 lists are detailed in sections 5.3.2 – 5.3.4.

5.3.1 Key Accomplishments for FY08-09

- Based on the new USGS depth to groundwater dataset, developed an updated prioritized Category 3 list. Identified 22 new Category 3 UICs and notified DEQ in writing within 30 days after completion of the compliance determination, in accordance with the permit. Appendix B (Table B-4) lists new Category 3 UICs and the following information for each non-compliant UIC:
  - Location of each non-compliant UIC
  - Nature of the non-compliant condition
  - Estimated UIC depth
  - UIC pretreatment
  - Predominant land use
  - Estimated traffic volume
  - Estimated vertical separation distance
  - Distance to nearest well (e.g., domestic, irrigation, public)
  - Determination of whether the UIC is located within the 2-year time of travel (TOT) of a public supply well
  - Identification of the anticipated corrective action
  - Project status
  - Planned FY09-10 activities

- Continued pre-design activities for Category 3 UICs in accordance with the scope and schedule of the *Systemwide Assessment Follow-Up Actions* work plan, and coordinated with efforts for Category 2 UICs to the extent practicable (see Section 5.2). Specifically:
  - Selected and initiated design of demonstration projects to increase separation distance.
  - Defined and developed preliminary groups of UICs with similar characteristics or where similar technologies may be applicable in developing corrective action alternatives.
  - Initiated development and evaluation of corrective action alternatives to increase UIC separation distance or manage stormwater using surface infiltration facilities at individual Category 3 UICs with vertical separation distances <5 feet.
  - Continued discussions with DEQ regarding moving toward a regional corrective action for Category 2 and 3 non-compliant UICs. Initiated development of preliminary scope(s), schedule(s), and budget(s) for design and implementation of a regional corrective action approach.
- Met with DEQ on a periodic basis to provide an overview of work completed to date and to discuss next steps.

- Submitted a "no further action" request to DEQ for review and approval of groundwater protectiveness demonstrations as the selected corrective action for 22 UICs located in City of Portland parks with < 5 feet vertical separation distance *(City of Portland Parks UICs Groundwater Protectiveness Demonstration No Further Action Request, July 13, 2009).*

5.3.2 Eliminated Category 3 UICs

Using the new depth to groundwater measurements, six UICs previously identified as Category 3 UICs now have a vertical separation distance of ≥10 feet. Therefore, these UICs are compliant with the permit and have been removed from the Category 3 list. Appendix B (Table B-5) lists these six UICs.

5.3.3 New Category 3 UICs

Using the new depth to groundwater measurements, 22 new UICs were determined to have less than 10 feet vertical separation distance and are therefore new Category 3 UICs. This information was originally reported to DEQ by letter on April 1, 2009. Summary information for these UICs is included in Appendix B, Table B-1. Because these 22 new Category 3 UICs have > 5 feet vertical separation distance, they are being addressed through application of the *Decision Making Framework for Protectiveness Demonstrations* discussed in section 5.3.4.

Thirteen UICs originally identified as having ≥ 5 feet now are identified as having < 5 feet vertical separation distance. These locations originally received an NFA based on a protectiveness demonstration. They have now been added to the list of Category 3 UICs identified to receive corrective actions that will include retrofits to increase separation distance or decommissioning. Appendix B, Table B-6 summarizes these UICs.

5.3.4 Category 3 UICs - No Further Action Determinations

In addition to the 22 new UICs described in section 5.3.3, eight UICs originally identified as having < 5 feet vertical separation distance are now identified as having a vertical separation distance between ≥ 5 and < 10 feet as a result of the updated USGS information (Appendix B, Table B-7). Because these 30 UICs now fall in the ≥ 5 feet vertical separation distance, the *Decision Making Framework* can be applied for them to receive NFAs, using a protectiveness demonstration as the identified corrective action. NFAs are identified as appropriate corrective actions under Schedule D, Section 12(c) of the WPCF permit. The corrective actions were selected in accordance with the *Corrective Action Plan* (*CAP*; BES, 2006a).

The following steps from the *Decision Making Framework* were applied:

1) Identify UICs of interest and summarize UIC characteristics. (Appropriate information is provided in Appendix B, Table B-1.) .

2) Determine if groundwater is protected.
    a. UICs with vertical separation distance < 5 feet have been identified and reported as Category 3 UICs (see section 5.3.3).
    b. Vertical separation distances are ≥5 feet and the following assumptions apply.
        i. UIC is managed (i.e., operated and maintained) under the City of Portland's permit.
        ii. UIC receives urban right-of-way runoff.

iii. UIC construction is similar to that described in the Conceptual Site Model presented in section 7 of the *Decision Making Framework Document.*

iv. Stormwater pollutant types concentration entering the UIC are represented by the pollutants identified in Table 4-2 of the *Decision Making Framework*. For average stormwater pollutant types, refer to *Annual Stormwater Discharge Monitoring Report, Year 4*, July 2009.

The assumptions listed above are all true; therefore, groundwater is protected when the vertical separation distance is > 5 feet for the 30 identified UICs, and an NFA is warranted.

3) Decision documentation and verification:
   a. Appropriate UIC information is documented in Table B-1, and water quality information is documented in the *Annual Stormwater Discharge Monitoring Report, Year 4*, July 2009.
   b. Decision verification for all Category 3 UICs will be reviewed on an annual basis and reported as part of the UICMP annual report. Verification of existing UICs that previously received NFAs is located is Section 4-2 of this report.

5.3.5 Projected Main Activities for FY09-10

- Complete corrective actions for the remaining 190 Category 3 UICs with separation distance < 5 feet (see Appendix B, Table B-2). Projected timeline: Complete by July 15, 2011, or in accordance with a regional corrective action plan as allowed by the permit.

- Continue pre-design activities for Category 3 UICs in accordance with the scope and schedule of the permit and *Systemwide Assessment Follow-Up Actions* workplan. Specifically, continue and complete task 2 and task 3 of Section 2 of the workplan, including:
  - Complete construction of Category 2 demonstration projects and start construction of remaining Category 2 UICs to increase separation distance (see Section 5.2). Target completion date: October 2010.
  - Continue discussions with DEQ to finalize a regional corrective action for selected non-compliant UICs (change completion date through permit modification). The permit allows for a regional corrective action if the nature of the corrective action requires more than three full CIP cycles to complete. The City is pursuing a regional corrective action for completion of the Category 3 UICs. Regional corrective actions may be approved by DEQ and implemented through either a permit modification under OAR 340-045-0055 or a DEQ-issued order. Projected timeline: November 2009 – July 2010.
  - Develop and evaluate alternatives to increase separation distance or manage stormwater using infiltration, by individual UICs and/or groups of Category 3 UICs. Target completion date: December 2009.
  - Develop preliminary scope(s), schedule(s), and budget(s) for design and implementation of a regional corrective action approach to increase separation distances or manage

surface water using infiltration for Category 3 UICs. Target completion date: December 2009.

- Meet with DEQ on a periodic basis to provide an overview of work completed to date and to discuss next steps. Projected timeline: September 2009 – July 2010.

5.4 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.

5.4.1 Key Accomplishments for FY08-09

- Based on the results of the year 4 stormwater monitoring data, no new Category 4 UICs were identified in year 4 (see Sections 3 and 4.3).

- Applied the *Decision Making Framework for Groundwater Protectiveness Demonstrations* to the three individual Category 4 UICs identified in year 3, and determined that groundwater quality is protected in accordance with Oregon Administrative Rules 340-040.

- Submitted NFA requests for the three Category 4 UICs identified in year 3 to DEQ on March 30, 2009.

- Received approval of *Decision Making Framework for Groundwater Protectiveness Demonstrations (GWPD)* from DEQ on October 20, 2008.

5.4.2 Summary of Category 4 UICs

Category 4 UICs Identified in Year 2

Following completion of the year 2 monitoring, UICs in which the annual mean concentration exceeded the MADL for two consecutive years were identified as Category 4 UICs in the July 2007 *Annual Stormwater Discharge Monitoring Report – Year 2*. Table 5-1 lists those Category 4 UICs.

Table 5-1: Category 4 UICs Identified in Year 2

Location Code	Approximate Address	BES UIC No.	Traffic Category (TPD)	Estimated Separation Distance Between UIC and Groundwater (ft)	Year 1 Annual Geometric PCP Conc. (µg/L)	Year 2 Annual Geometric PCP Conc. (µg/L)	Year 3 Annual Geometric PCP Conc. (µg/L)
P1_1	6940 N. Macrum Ave.	AAG769	< 1000	73	1.1	1.2	0.5
P6_1	3500 SE 112th Ave.	ADW577	≥ 1000	64	1.2	1.0	1.3
P6_7	608 NE 87th Ave.	ADV645	< 1000	148	2.0	1.8	0.6
P6_14	4289 NE Prescott St.	AD1252	≥ 1000	64	1.5	1.4	1.5

Corrective actions for 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 is 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). DEQ issued an NFA determination for the four Category 4 UICs on May 30, 2008. A copy of that letter is included in the *Decision Making Framework for Groundwater Protectiveness Demonstrations.*

Category 4 UICs Identified in Year 3

Following completion of the year 3 monitoring, UICs in which the annual mean concentration exceeded the MADL for two consecutive years were identified as Category 4 UICs in the July 2008 *Annual Stormwater Discharge Monitoring Report – Year 3*. Table 5-2 lists those Category 4 UICs.

The proposed corrective action for these UICs is a groundwater protectiveness demonstration. The GWPD was performed in accordance with the *Decision Making Framework for Groundwater Protectiveness Demonstrations* and submitted to DEQ on February 11, 2009.

Table 5-2: Category 4 UICs Identified in Year 3

Location Code	Approximate Address	BES UIC No.	Traffic Category (Trips per Day)	Separation Distance [a] (ft)	Year 2 Annual Geometric Mean Pentachlorophenol Concentration (µg/L)	Year 3 Annual Geometric Mean Pentachlorophenol Concentration (µg/L)
P2_5	10150 SE Ankeny St.	ADR885	≥ 1,000	158	3.2	1.7
P2_13	4107 SE Reedway St.	ADU790	≥ 1,000	58	1.9	1.1
P2_14	8409 N. Woolsey Ave.	AAH289	≥ 1,000	55	2.5	1.3

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.

Category 4 UICs Identified in Year 4

Following completion of the year 4 monitoring, no new Category 4 UICs were identified in year 4 (see Sections 3 and 4.3).

5.4.3 Projected Main Activities for FY09-10

The following actions are planned for FY09-10:

- Sample two UICs that exceeded the annual geometric mean for PCP (and lead for one of the two UICs) again in year 5 (see Section 3.1.2).
- Evaluate whether any UICs will be identified as Category 4 UICs.

Appendix A
Public UICs Identified/Constructed During FY08-09

Appendix A: Public UICs Identified/Constructed During FY08-09

Date UIC Reported	BES Unit ID	UIC DEQ ID	EPA UIC Classification	Current Status [1]	UIC Location	Traffic Volume	Pre-treatment Type
9/1/2008	ADU564	10102-7319	Class V Injection Well	AC	10600 SE DIVISION ST	>1000	No Sed MH
9/1/2008	ANN751	10102-9351	Class V Injection Well	AC	2500 N ALBERTA ST	<1000	No Sed MH
9/1/2008	ANS967	10102-9397	Class V Injection Well	AC	14026 SE ALDER ST	<1000	Sed MH
9/1/2008	ANY006	10102-9458	Class V Injection Well	AC	5934 SE 134TH AVE	Not Available	Sed MH
9/1/2008	ANY346	10102-9479	Class V Injection Well	AC	14149 SE ELLIS ST	<1000	Sed MH
9/1/2008	R00133	10102-9480	Class V Injection Well	UC	5420 SE Cooper St	Not Available	Sed MH
9/1/2008	ANY416	10102-9481	Class V Injection Well	UC	3940 SE 99TH AVE	Not Available	Sed MH
9/1/2008	R00135	10102-9482	Class V Injection Well	UC	SE 75th Ave & SE Lafayette St	Not Available	Sed MH
9/1/2008	R00136	10102-9483	Class V Injection Well	UC	SE 75th Ave & Lafayette St	Not Available	Sed MH
9/1/2008	R00137	10102-9484	Class V Injection Well	UC	5252 SE Cooper St.	Not Available	Sed MH
9/1/2008	ANY011	10102-9485	Class V Injection Well	AC	5914 SE 134TH PL	Not Available	Sed MH
9/1/2008	ANY015	10102-9486	Class V Injection Well	AC	5814 SE 134TH PL	<1000	Sed MH
9/1/2008	ABS401	10102-9487	Class V Injection Well	AC	1420 SE 100TH AVE	Not Available	No Sed MH
9/1/2008	ABW368	10102-9488	Class V Injection Well	AC	2205 SE 103RD DR	Not Available	No Sed MH
9/1/2008	ANY497	10102-9489	Class V Injection Well	AC	1519 NE 148TH AVE	>1000	No Sed MH
9/1/2008	ANY498	10102-9490	Class V Injection Well	AC	1520 NE 148TH AVE	>1000	No Sed MH
9/1/2008	R00138	10102-9491	Class V Injection Well	UC	12532 SE Long St	Not Available	Sed MH
9/1/2008	R00139	10102-9492	Class V Injection Well	UC	5104 SE 122nd Ave	Not Available	Sed MH
9/1/2008	R00140	10102-9493	Class V Injection Well	UC	13605 SE Reedway St	Not Available	Sed MH
9/1/2008	R00141	10102-9494	Class V Injection Well	UC	13619 SE Reedway St.	Not Available	Sed MH

Date UIC Reported	BES Unit ID	UIC DEQ ID	EPA UIC Classification	Current Status	UIC Location	Traffic Volume	Pre-treatment Type
9/1/2008	ANY604	10102-9495	Class V Injection Well	PA	8323 SE 69TH AVE	<1000	No Sed MH
9/1/2008	PRK197	10102-9496	Class V Injection Well	AC	Gabriel Park, SW 45th/Vermont St	Not Available	No Sed MH
9/1/2008	AED991	10102-9497	Class V Injection Well	AC	16629 SE WASHINGTON ST	<1000	No Sed MH
9/1/2008	AMQ114	10102-9498	Class V Injection Well	AC	8801 N VANCOUVER AVE	>1000	No Sed MH
9/1/2008	AMS309	10102-9499	Class V Injection Well	AC	16630 SE WASHINGTON ST	<1000	No Sed MH
9/1/2008	AMT420	10102-9500	Class V Injection Well	AC	9258 SE SALMON ST	<1000	No Sed MH
9/1/2008	AMT891	10102-9501	Class V Injection Well	AC	3630 SE 160TH AVE	<1000	No Sed MH
9/1/2008	AMT894	10102-9502	Class V Injection Well	AC	14102 SE MARKET ST	<1000	No Sed MH
9/1/2008	AMT895	10102-9503	Class V Injection Well	AC	1201 SE 168TH AVE	<1000	No Sed MH
9/1/2008	AMU340	10102-9504	Class V Injection Well	AC	208 SE 109TH AVE	<1000	No Sed MH
9/1/2008	AMU343	10102-9505	Class V Injection Well	AC	132 SE 109TH AVE	<1000	No Sed MH
9/1/2008	AMU344	10102-9506	Class V Injection Well	AC	2005 SE 146TH AVE	<1000	No Sed MH
9/1/2008	AMU347	10102-9507	Class V Injection Well	AC	7704 SE 68TH AVE	<1000	No Sed MH
9/1/2008	AMU348	10102-9508	Class V Injection Well	AC	7619 SE 68TH AVE	<1000	No Sed MH
9/1/2008	ANB939	10102-9509	Class V Injection Well	AC	2405 NE 84TH AVE	<1000	No Sed MH
9/1/2008	ANH198	10102-9510	Class V Injection Well	AC	2232 SE 98TH AVE	<1000	No Sed MH
9/1/2008	ANU305	10102-9511	Class V Injection Well	AC	4130 SW MOODY AVE	Removed 20090601 - Ownership changed from Public to Private	
9/1/2008	ANU306	10102-9512	Class V Injection Well	AC	4130 SW MOODY AVE	Removed 20090601 - Ownership changed from Public to Private	
9/1/2008	ABS394	10102-9513	Class V Injection Well	AC	10000 SE MAIN ST	>1000	No Sed MH
9/1/2008	ABS399	10102-9514	Class V Injection Well	AC	1400 SE 100TH AVE	Not Available	No Sed MH

Date UIC Reported	BES Unit ID	UIC DEQ ID	EPA UIC Classification	Current Status	UIC Location	Traffic Volume	Pre-treatment Type
12/1/2008	R00143	10102-9515	Class V Injection Well	UC	NE 128th Ave & NE Wasco St	Not Available	Sed MH
12/1/2008	ANZ687	10102-9516	Class V Injection Well	UC	5117 SE 136TH AVE	<1000	Sed MH
12/1/2008	ABS389	10102-9517	Class V Injection Well	AC	9800 SE MAIN ST	>1000	No Sed MH
3/1/2009	R00145	10102-9518	Class V Injection Well	UC	8141 SE Mill St.	Not Available	Sed MH
3/1/2009	R00146	10102-9519	Class V Injection Well	UC	7808 - 7816 SE Ogden St	Not Available	Sed MH
3/1/2009	R00147	10102-9520	Class V Injection Well	UC	3316 SE 131st Ave	Not Available	Sed MH
3/1/2009	APB322	10102-9521	Class V Injection Well	AC	5000 SE 104TH AVE	>1000	No Sed MH
3/1/2009	APB633	10102-9522	Class V Injection Well	AC	2900 NE 117TH AVE	<1000	Sed MH
6/1/2009	R00150	10102-9523	Class V Injection Well	UC	SE 133rd Ave & SE Ankeny Ct	Not Available	Sed MH
6/1/2009	R00151	10102-9524	Class V Injection Well	UC	11510 SE Holgate Blvd	Not Available	Sed MH

[1] AC = in service; PA = abandoned; UC = under construction

Appendix B
Category 2 and 3 UIC Status

Table B-1: Category 3 UICs with > 5 feet Vertical Separation Distance and "No Further Action Determinations"

UIC Compliance Category	Non-compliant Condition	Hansen UIC Node Number	Location [1]	Hansen UIC Depth (ft) [2]	Sedimentation Manhole (yes/no)	Predominant Landuse	Estimated Traffic Count	2008 Separation Distance[3] (ft)	2009 Separation Distance[4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date [7]	Anticipated Corrective Action [8]
3	Separation Distance	ADV391	7823 NE COLUMBIA BLVD	18	No	IND	21309	11.0	9.3	2555	No	Medium	July-2011	GWPD-NFA
3	Separation Distance	ADV392	7824 NE COLUMBIA BLVD	21.2	No	IND	21309	6.5	5.8	2676	No	Medium	July-2011	GWPD-NFA
3	Separation Distance	ADV393	7940 NE COLUMBIA BLVD	20	No	IND	24196	7.0	5.3	2760	No	Medium	July-2011	GWPD-NFA
3	Separation Distance	ADW787	8200 SE FLAVEL ST	0	No	IND	24758	10.2	9.3	1996	No	Medium	July-2011	GWPD-NFA
3	Separation Distance	AMY572	5400 NE COLUMBIA BLVD	0	No	IND	23268	10.3	9.6	2243	No	Medium	July-2011	GWPD-NFA
3	Separation Distance	ADV181	10200 SE FOSTER RD	20	No	IND	27607	8.0	6.7	2466	No	Medium	July-2011	GWPD-NFA
3	Separation Distance	ADW302	6300 SE 103RD AVE	19	No	IND	27474	6.3	5.8	2326	No	Medium	July-2011	GWPD-NFA
3	Separation Distance	ADV976	13100 NE SANDY BLVD	19	No	COM	20925	8.4	7.4	1066	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV122	6300 SE 102ND AVE	21	Yes	IND	27607	7.3	6.1	2530	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW250	12160 SE HOLGATE BLVD	21	No	COM	13104	9.3	8.8	573	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW251	12198 SE HOLGATE BLVD	21	No	COM	14463	8.6	8.0	429	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW281	4504 SE 122ND AVE	19	No	COM	12589	8.9	8.7	325	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANS554	9700 N EDISON ST	30	Yes	IND	838	3.2	7.7	3270	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV118	10104 SE WOODSTOCK BLVD	23	Yes	IND	795	7.8	7.1	2602	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV169	10064 SE WOODSTOCK BLVD	25.75	Yes	IND	795	6.0	5.1	2710	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW253	4549 SE 122ND AVE	20	No	MFR	12589	7.0	7.0	371	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW254	4549 SE 122ND AVE	21	No	MFR	12589	5.7	5.6	326	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW276	4700 SE 122ND AVE	19	No	MFR	12589	6.0	5.5	477	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP656	5600 SE 101ST AVE	20	No	SFR	606	9.7	8.6	2024	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP657	5600 SE 101ST AVE	21	No	SFR	606	8.6	7.5	2026	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP665	10100 SE REEDWAY ST	18	No	SFR	606	11.4	10.0	2049	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP666	10100 SE REEDWAY ST	21	No	SFR	606	8.1	6.6	2025	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV123	5536 SE 101ST AVE	22	No	SFR	606	7.7	6.7	2023	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV124	5608 SE 101ST AVE	22	No	SFR	606	7.4	6.3	2028	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV129	10104 SE REEDWAY ST	22	No	SFR	606	6.8	5.3	2000	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW222	5498 SE 105TH AVE	20	No	SFR	3946	8.6	8.1	752	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW228	5436 SE 108TH AVE	18	Yes	SFR	3826	8.4	7.0	436	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW285	5737 SE 15TH AVE	30	No	MFR	970	1.1	6.4	3923	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW835	7764 SE 18TH AVE	27	No	SFR	806	11.9	8.1	4018	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW837	8028 SE 37TH AVE	30	No	SFR	1809	9.6	8.9	3818	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANB019	13242 SE BUSH ST	0	No	SFR	870	10.3	9.9	615	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANL730	11465 SE PARDEE ST	0	No	SFR	864	8.4	7.0	702	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT980	7450 SE 83RD AVE	28.3	Yes	MFR	7471	10.2	9.2	1950	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU729	12140 SE SCHILLER ST	15.9	Yes	MFR	12363	8.2	7.5	757	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU733	12150 SE PARDEE ST	16.33	Yes	MFR	12589	9.6	9.2	490	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU750	12612 SE HOLGATE BLVD	14.5	Yes	SFR	5035	6.9	5.9	719	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV202	5961 SE 122ND AVE	22.7	Yes	MFR	11031	3.5	5.3	1172	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV959	8154 SE MALDEN ST	29	Yes	IND	201	7.0	6.4	1773	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMX933	3838 SE 136TH AVE	30	Yes	MFR	10240	6.3	6.3	650	Yes	Low	July-2011	GWPD-NFA
3	Separation Distance	ACK084	5500 SE 99TH AVE	0	Yes	SFR	4748	8.6	7.6	2197	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP637	5798 SE 97TH AVE	30	Yes	SFR	991	6.7	6.2	2544	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP670	5740 SE 101ST AVE	21	Yes	SFR	634	8.2	6.8	2094	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP675	5838 SE 101ST AVE	21	Yes	SFR	675	7.5	6.4	2169	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP810	6034 SE 99TH AVE	24.5	Yes	SFR	557	8.6	7.2	2809	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADR051	15415 NE BEECH ST	30	Yes	MFR	247	8.7	9.3	763	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADR054	3645 NE 154TH AVE	30	Yes	MFR	247	10.5	8.9	738	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADS534	2125 SE 18TH AVE	19	Yes	SFR	2315	5.4	5.7	2649	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT436	3938 SE 130TH AVE	30	Yes	SFR	1735	7.4	6.6	795	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT442	12980 SE BUSH ST	30	Yes	SFR	1735	10.3	9.6	519	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT448	3815 SE 131ST AVE	30	Yes	SFR	759	7.4	7.2	585	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT449	13190 SE FRANCIS ST	30.8	Yes	SFR	759	5.5	5.1	735	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT450	12980 SE CENTER ST	30	Yes	SFR	1735	7.3	6.5	911	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT456	13010 SE CENTER ST	27	Yes	SFR	1735	8.9	8.1	946	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT460	13910 SE CORA ST	16	Yes	SFR	735	5.6	7.6	525	Yes	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT697	12427 SE RAMONA ST	20.7	Yes	MFR	1089	2.5	5.9	1134	No	Low	July-2011	GWPD-NFA

Table B-1: Category 3 UICs with > 5 feet Vertical Separation Distance and "No Further Action Determinations"

UIC Compliance Category	Non-compliant Condition	Hansen UIC Node Number	Location [1]	Hansen UIC Depth (ft) [2]	Sedimentation Manhole (yes/no)	Predominant Landuse	Estimated Traffic Count	2008 Separation Distance[3] (ft)	2009 Separation Distance[4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date [7]	Anticipated Corrective Action [8]
3	Separation Distance	ADT698	12559 SE RAMONA ST	23.8	Yes	MFR	1089	6.1	7.9	976	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT721	13810 SE KNIGHT ST	18	Yes	SFR	735	9.2	8.3	303	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT722	5920 SE 138TH PL	19	Yes	SFR	735	7.6	6.7	200	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU022	8335 SE 7TH AVE	31	Yes	SFR	780	5.1	8.7	1544	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU206	8635 SE 9TH AVE	30	Yes	SFR	1282	7.8	9.6	2474	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU686	5500 SE 101ST AVE	24	Yes	SFR	3994	8.9	9.0	2018	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU689	5470 SE 100TH AVE	30	Yes	SFR	3892	5.9	5.1	2361	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU707	5420 SE 99TH AVE	28	Yes	SFR	4748	11.0	9.9	2170	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU724	5420 SE 113TH AVE	17	Yes	SFR	3295	5.2	5.4	929	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV113	5645 SE 97TH AVE	30	Yes	SFR	1090	10.0	8.8	2114	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV114	5600 SE 97TH AVE	30	Yes	SFR	1090	9.7	8.5	2162	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV115	5700 SE 97TH AVE	30	Yes	SFR	991	7.7	6.9	2399	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV117	5790 SE 97TH AVE	30	Yes	SFR	991	6.8	6.2	2521	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV120	9700 SE KNIGHT ST	30	Yes	MFR	991	6.4	6.1	2756	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV133	5736 SE 101ST AVE	22	Yes	SFR	634	7.3	5.8	2088	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV138	5832 SE 101ST AVE	21	Yes	SFR	675	7.6	6.5	2161	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV139	5900 SE 98TH AVE	26	Yes	MFR	544	9.9	9.1	2910	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV149	6002 SE 99TH AVE	26.5	Yes	SFR	557	7.0	5.7	2788	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV160	9842 SE HAROLD ST	30	Yes	SFR	4748	7.7	6.7	2267	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV171	10110 SE MARTINS ST	20	Yes	SFR	723	8.2	7.7	2402	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV173	6000 SE 101ST AVE	21	Yes	SFR	675	7.0	6.3	2273	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV174	9704 SE YUKON ST	29.5	Yes	MFR	991	7.2	6.3	3079	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV175	9807 SE YUKON ST	25	Yes	MFR	544	10.4	9.4	2972	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV194	5524 SE 115TH AVE	18	Yes	SFR	521	6.0	6.4	461	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMQ081	8705 SE 16TH AVE	30	Yes	SFR	575	9.9	8.7	3913	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW041	13200 NE PRESCOTT DR	19	No	SFR	0	9.2	8.7	840	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW070	4225 NE 134TH AVE	19	No	SFR	108	9.1	8.8	773	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW227	5350 SE 109TH AVE	19	No	SFR	461	9.6	8.7	784	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW259	11943 SE LIEBE ST	17	No	MFR	273	7.0	6.4	422	No	Low	July-2011	GWPD-NFA
3	Separation Distance	PRK039	SW Iowa/55th St	13	No	SFR	0	5.192	7.87	1247.881	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW262	5222 SE 113TH AVE	18	No	SFR	450	9.6	9.2	833	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADW865	7722 SE LAMBERT ST	26	No	SFR	0	11.9	9.9	2130	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACK389	5034 SE 114TH AVE	20	Yes	SFR	182	9.0	8.7	482	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACK566	13400 SE RAYMOND ST	30	Yes	MFR	314	8.2	9.8	160	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP661	10202 SE ELLIS ST	20	Yes	SFR	490	6.4	5.3	1693	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACP667	5700 SE 102ND AVE	19	Yes	SFR	440	6.5	5.2	1743	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ACU075	8600 SE KNAPP ST	30	Yes	SFR	441	9.8	8.3	2479	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADR039	3650 NE 158TH AVE	30	Yes	MFR	247	9.1	9.4	514	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT424	12542 SE MALL ST	20	Yes	SFR	186	5.6	5.3	773	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT425	13038 SE CORA ST	22	Yes	SFR	422	7.2	6.7	1527	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT439	13036 SE BUSH PL	30	Yes	SFR	0	9.9	9.6	315	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT477	4100 SE 140TH AVE	30	Yes	SFR	433	2.0	5.2	736	Yes	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT717	13014 SE ELLIS ST	30	Yes	SFR	336	7.1	8.1	1247	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT718	5538 SE 131ST AVE	30	Yes	SFR	361	8.5	9.5	1162	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT967	9090 SE COOPER ST	31	Yes	SFR	334	9.8	8.7	3899	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT970	7300 SE 85TH AVE	32	Yes	SFR	448	9.7	9.3	2462	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT971	8600 SE KNAPP ST	31	Yes	SFR	441	8.3	6.9	2484	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT972	8630 SE KNAPP ST	30	Yes	SFR	462	7.6	7.2	2506	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT977	8728 SE KNAPP ST	27	Yes	SFR	415	9.4	9.2	2571	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT978	8820 SE RURAL ST	28	Yes	SFR	402	9.8	9.1	3072	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT984	8711 SE HENDERSON ST	28.3	Yes	SFR	462	6.0	6.0	2109	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU200	804 SE CLATSOP ST	32	Yes	SFR	375	4.8	7.8	2211	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU211	905 SE LINN ST	30	Yes	SFR	450	4.8	7.2	2782	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU696	10146 SE INSLEY ST	30	Yes	SFR	70	8.7	8.4	1822	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU726	11600 SE PARDEE ST	29.2	Yes	SFR	425	5.8	5.0	645	No	Low	July-2011	GWPD-NFA

Table B-1: Category 3 UICs with > 5 feet Vertical Separation Distance and "No Further Action Determinations"

UIC Compliance Category	Non-compliant Condition	Hansen UIC Node Number	Location [1]	Hansen UIC Depth (ft) [2]	Sedimentation Manhole (yes/no)	Predominant Landuse	Estimated Traffic Count	2008 Separation Distance[3] (ft)	2009 Separation Distance[4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date [7]	Anticipated Corrective Action [8]
3	Separation Distance	ADU728	4720 SE 120TH AVE	15.2	Yes	MFR	192	10.5	9.9	352	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU736	12332 SE LONG ST	15.5	Yes	MFR	195	7.1	6.4	428	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU770	13400 SE RAYMOND ST	30	Yes	MFR	314	8.0	9.5	171	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV157	10000 SE HENRY ST	21	Yes	SFR	356	10.0	9.2	2740	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV170	9736 SE HENRY ST	25	Yes	MFR	249	9.4	8.5	3285	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV172	9933 SE YUKON ST	20	Yes	SFR	356	10.6	9.2	2555	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV952	8206 SE 75TH PL	30	Yes	SFR	115	9.2	6.5	2517	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV954	7726 SE LAMBERT ST	31	Yes	SFR	395	10.8	9.1	2247	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV957	7915 SE 76TH PL	30	Yes	SFR	0	11.4	9.6	2341	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV960	8008 SE MALDEN ST	30	Yes	SFR	291	10.4	9.3	2061	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMN822	4535 SE 115TH AVE	30	Yes	SFR	278	10.5	9.8	1035	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMP308	5575 SE 139TH AVE	21.4	Yes	SFR	180	9.0	8.8	364	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMQ101	6035 SE 15TH AVE	30	Yes	SFR	380	9.3	7.3	3426	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMQ103	6204 SE 15TH AVE	30	Yes	SFR	344	12.4	9.2	3218	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMR318	13928 SE BOISE CT	25.5	Yes	SFR	0	3.9	7.5	764	Yes	Low	July-2011	GWPD-NFA
3	Separation Distance	AMU235	10325 N MACRUM AVE	30	Yes	MFR	0	8.6	7.9	2693	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMY013	6002 SE 140TH AVE	13	Yes	SFR	203	10.9	9.6	166	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANA018	11804 SE MALL ST	32	Yes	SFR	186	7.3	6.6	1060	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANA276	6422 SE 97TH AVE	30	Yes	MFR	310	6.8	6.3	3436	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANA283	9700 SE HENRY ST	30	Yes	MFR	249	6.1	5.2	3460	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANA284	9700 SE HENRY ST	30	Yes	MFR	249	6.4	5.5	3485	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANA601	12110 SE PARDEE ST	16.5	Yes	MFR	124	9.6	9.3	566	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANA609	11736 SE INSLEY ST	17	Yes	MFR	369	8.3	7.5	431	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANA612	4706 SE 113TH AVE	30	Yes	SFR	450	9.0	8.5	633	No	Low	July-2011	GWPD-NFA

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 Separation distance based on previous USGS groundwater data and used to develop Category 3 UIC list provided in UICMP Annual Report No 3.

4 Separation distance based on update to USGS groundwater data as discussed in annual report No 4.

5 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.

6 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.

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

8 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 = Commericial POS = Parks and Open Space
GWPD = Groundwater Protectiveness Demonstration NFA = No Further Action

Table B-2 : 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 Landuse	Estimated Traffic Count	2008 Separation Distance [3] (ft)	2009 Separation Distance [4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date [7]	Anticipated Corrective Action [8]	FY08-09 Project Status	FY09-10 Planned Activities
3	Separation Distance	ADW304	11741 SE FOSTER RD	19	No	IND	25775	-4.5	2.5	1281	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANB177	8110 NE COLUMBIA BLVD	0	No	IND	24196	-5.6	-5.6	2986	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW303	11501 SE FOSTER RD	19	No	IND	25775	-9.4	-8.6	1249	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADP904	8521 NE COLUMBIA BLVD	31	Yes	IND	22873	-4.4	-6.5	4008	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW312	11540 SE FOSTER RD	18	No	COM	25775	-8.1	-6.6	1292	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANB179	6015 NE 80TH AVE	19.5	No	IND	6658	-5.9	-7.0	2423	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACQ013	11716 SE FOSTER RD	20	No	MFR	25775	-3.3	4.0	1332	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV121	6200 SE 102ND AVE	30	Yes	IND	27607	-1.7	-3.0	2461	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV974	10900 NE MARX ST	16.3	No	IND	1714	-0.8	-2.0	1786	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANB185	6245 NE 80TH AVE	0	No	IND	2900	-26.5	-27.3	1978	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW275	12150 SE HAROLD ST	22	No	COM	11646	-1.5	-1.2	1160	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMR553	8100 SE CRYSTAL SPRINGS BLVD	30	Yes	IND	895	-12.8	-12.9	1136	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANB182	6135 NE 80TH AVE	17	No	IND	2900	-12.9	-13.3	2178	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACK563	13600 SE HOLGATE BLVD	30	No	SFR	9961	-2.8	-1.4	867	Yes	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACK564	13600 SE HOLGATE BLVD	30	No	SFR	9961	-3.1	-2.2	884	Yes	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT682	5803 SE 122ND AVE	27	Yes	IND	11133	-11.4	-11.0	1615	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV204	5825 SE 122ND AVE	25	Yes	IND	11031	-7.5	-6.1	1460	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV384	8111 NE HOLMAN ST	14	No	IND	0	-11.1	-10.1	2314	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW261	4919 SE 122ND AVE	21	No	MFR	12138	0.0	-0.2	756	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW313	5601 SE 122ND AVE	24	No	MFR	11400	-3.7	-3.6	1181	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADR046	3808 NE 156TH AVE	30	Yes	MFR	13444	-1.1	-1.0	360	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU768	13500 SE HOLGATE BLVD	30	No	SFR	4568	-12.3	-10.1	1028	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU769	13600 SE HOLGATE BLVD	30	No	SFR	4568	-3.5	-2.6	901	Yes	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV188	10310 SE ELLIS ST	22	No	SFR	1051	1.1	0.3	1322	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW264	5450 SE 114TH PL	0	No	SFR	3642	-5.7	-5.2	419	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW286	3039 SE TOLMAN ST	30.2	No	SFR	1503	-2.0	-2.1	3575	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMY402	11246 SE HAROLD ST	0	No	SFR	3295	-8.7	-8.4	928	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA587	13008 SE HOLGATE BLVD	0	No	SFR	4710	-14.2	-15.3	894	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA590	13250 SE HOLGATE BLVD	0	No	SFR	4710	-19.6	-20.8	1024	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ST17A	STATION17, 848 N TOMAHAWK ISLAND DR	11	No	COM	0	-3.417	-3.081	2882.354	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA591	13250 SE HOLGATE BLVD	0	No	SFR	4710	-19.6	-20.9	1027	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA592	13250 SE HOLGATE BLVD	0	No	SFR	4710	-19.7	-21.0	1031	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA596	13033 SE HOLGATE BLVD	0	No	SFR	4710	-14.9	-16.1	928	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA889	11305 SE HAROLD ST	0	No	SFR	3295	-8.3	-8.0	920	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AAC311	1445 NE MARINE DR	10	No	SFR	11064	0.4	0.7	567	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AAV769	4022 NE 142ND AVE	0	No	SFR	0	-0.1	-0.6	809	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACK562	13600 SE HOLGATE BLVD	30	Yes	SFR	9961	-2.4	-0.6	849	Yes	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT454	12830 SE HOLGATE BLVD	20.3	Yes	SFR	5035	0.1	0.0	1045	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT475	4241 SE 136TH AVE	27	Yes	SFR	10104	-7.7	-7.6	798	Yes	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT690	12221 SE REEDWAY ST	27	Yes	MFR	11400	-7.3	-7.0	1308	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT730	14037 SE FOSTER RD	30	Yes	SFR	14500	3.8	2.0	780	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV203	5918 SE 122ND AVE	30	Yes	MFR	10908	-0.9	0.7	1096	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW321	5732 SE 122ND AVE	20	No	MFR	11195	-3.0	-3.0	1544	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMX688	4406 SE 136TH AVE	22.75	Yes	SFR	9961	-4.1	-3.6	647	Yes	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA899	1801 NE MARINE DR	10	No	SFR	11064	0.4	0.9	1196	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA900	1839 NE MARINE DR	10	No	SFR	11064	1.4	1.7	1196	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACK560	13500 SE HOLGATE BLVD	30	Yes	SFR	4568	-12.7	-10.4	1031	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT455	4332 SE 130TH AVE	30	Yes	SFR	1606	-7.7	-8.6	1256	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT459	4344 SE 138TH PL	30	Yes	SFR	735	-9.0	-8.2	219	Yes	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT689	5544 SE 128TH AVE	30	Yes	SFR	1298	-7.2	-6.3	1431	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT696	12319 SE RAMONA ST	20.2	Yes	MFR	1089	-2.0	0.0	1292	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU027	8434 SE 7TH AVE	30	Yes	SFR	780	-5.1	1.1	1790	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU734	5423 SE 121ST AVE	30	Yes	MFR	806	-7.3	-8.1	981	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU735	5500 SE 121ST AVE	30	Yes	MFR	4885	-7.7	-8.5	955	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU738	5031 SE 128TH AVE	30	Yes	SFR	1544	-11.0	-11.4	761	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU755	13000 SE HAROLD ST	29	Yes	SFR	1341	-3.1	-2.8	1307	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU756	13000 SE HAROLD ST	30	Yes	SFR	1371	-1.3	1.4	1287	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV158	6210 SE 101ST AVE	29	Yes	IND	836	0.5	-0.1	2600	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV187	10298 SE ELLIS ST	24	Yes	SFR	1051	-0.1	-0.8	1427	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV191	11080 SE HAROLD ST	22.9	Yes	SFR	3791	-1.9	-2.5	543	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV193	5710 SE 115TH AVE	24	Yes	SFR	521	-2.3	-0.7	313	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	BGS001	800 NW 6TH AVE	12.1	No	COM	0	-3.548	-7.681	4457.797	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV961	7920 SE 79TH AVE	31	Yes	SFR	816	-0.4	-1.6	1774	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMS283	12500 SE HAROLD ST	25	Yes	SFR	1477	-4.7	-4.7	1007	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMY600	13515 SE HOLGATE BLVD	21	Yes	MFR	4568	-4.3	-1.8	1009	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA589	13250 SE HOLGATE BLVD	0	Yes	SFR	4710	-19.5	-20.7	1020	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANB108	11020 NE MARX ST	16	No	IND	1714	3.1	1.7	1817	No	Medium	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACK357	4918 SE 122ND AVE	20	No	MFR	12138	0.8	0.6	702	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP889	10357 SE ELLIS ST	19	No	SFR	279	2.3	1.6	1104	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADN954	300 NE WINCHELL ST	30	No	IND	250	1.9	4.0	530	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design

Table B-2 : 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 Landuse	Estimated Traffic Count	2008 Separation Distance[3] (ft)	2009 Separation Distance[4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date[7]	Anticipated Corrective Action[8]	FY08-09 Project Status	FY09-10 Planned Activities
3	Separation Distance	ADR047	3838 NE 154TH AVE	30	Yes	MFR	13300	-1.2	-1.7	624	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT683	12230 SE RAMONA ST	19.5	Yes	MFR	11133	-3.6	-3.5	1536	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT716	12140 SE RAMONA ST	28	Yes	POS	11195	-11.5	-10.9	1482	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU725	4908 SE 122ND AVE	19	No	MFR	12138	2.0	1.7	713	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV205	5906 SE 122ND AVE	28	Yes	MFR	11031	-9.7	-8.4	1442	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV244	3954 SE 136TH AVE	30	No	MFR	10205	2.3	2.3	560	Yes	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW256	4745 SE 122ND AVE	20	No	MFR	12363	4.3	3.4	661	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW257	4754 SE 122ND AVE	22	Yes	MFR	12363	1.5	0.8	682	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW258	4857 SE 122ND AVE	21	No	MFR	12261	1.3	0.9	790	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW265	12150 SE RAYMOND ST	16.5	No	MFR	12138	4.5	4.1	778	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW266	5000 SE 122ND AVE	20	No	MFR	12138	0.7	0.3	691	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW267	5021 SE 122ND AVE	20	No	MFR	11953	1.6	0.8	777	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW269	5211 SE 122ND AVE	22	No	MFR	11953	1.0	-0.6	870	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW271	5403 SE 122ND AVE	21	No	MFR	11646	0.9	0.1	1048	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW272	5404 SE 122ND AVE	17.9	No	MFR	11646	3.6	2.9	1019	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW273	5436 SE 122ND AVE	17.5	No	MFR	11646	3.5	3.6	1212	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW274	5500 SE 122ND AVE	20.2	No	MFR	11646	0.6	0.8	1231	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANW740	6457 NE 66TH AVE	0	No	SFR	439	-5.7	-7.7	1089	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP891	10246 SE ELLIS ST	20	No	SFR	1051	4.3	3.5	1478	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADR045	3737 NE 156TH AVE	30	Yes	MFR	470	4.6	4.5	453	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU749	12220 SE HOLGATE BLVD	24	Yes	COM	5249	4.7	4.1	275	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV126	5608 SE 99TH AVE	30	No	SFR	557	4.9	3.8	2535	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV146	5980 SE 102ND AVE	22	No	SFR	688	3.9	2.6	1987	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV154	6034 SE 102ND AVE	26	No	SFR	894	0.9	-0.3	2130	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW230	5440 SE 111TH AVE	19	No	SFR	1848	3.5	3.0	639	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW233	5500 SE 104TH AVE	0	No	SFR	4096	0.5	-0.5	1045	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA271	10000 SE WOODSTOCK CT	30	Yes	IND	2082	2.3	2.0	3002	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA598	4425 SE 130TH AVE	15.6	No	SFR	4814	2.0	1.1	970	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AAJ188	300 NE WINCHELL ST	30	Yes	IND	250	2.5	4.6	559	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT426	4144 SE 132ND AVE	30	Yes	SFR	0	-0.8	-1.5	1399	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT451	4490 SE 125TH AVE	20	Yes	SFR	5249	4.2	3.3	487	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT466	4100 SE 133RD AVE	30	Yes	SFR	389	-0.3	-1.0	1286	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT471	13612 SE CORA ST	21	Yes	SFR	10104	-1.0	-0.9	771	Yes	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT687	12246 SE ELLIS ST	25	Yes	SFR	224	-4.1	-3.9	1366	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT688	12532 SE ELLIS ST	30	Yes	SFR	236	-8.6	-8.0	1326	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT691	12506 SE REEDWAY ST	25	Yes	SFR	187	-4.0	-3.8	1555	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU731	11134 SE STEELE ST	30.1	Yes	SFR	173	-1.7	-2.3	1074	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU732	11945 SE RAYMOND ST	30	Yes	MFR	491	-6.3	-7.0	681	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU740	13120 SE RAYMOND ST	26	Yes	SFR	314	-1.9	1.0	377	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU753	13030 SE MITCHELL ST	30	Yes	SFR	178	-2.3	-2.3	1010	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU754	13030 SE MITCHELL ST	30	Yes	SFR	178	-2.3	-2.4	1008	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV189	10398 SE ELLIS ST	20	Yes	SFR	279	0.9	0.4	1054	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV190	10402 SE ELLIS ST	20	Yes	SFR	279	0.5	0.2	1003	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV196	12010 SE REEDWAY ST	28	Yes	MFR	205	-11.0	-11.1	962	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV197	5605 SE 120TH AVE	26	Yes	MFR	192	-4.4	-5.2	680	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV950	8318 SE 78TH AVE	26	Yes	SFR	86	-8.7	-11.3	1849	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV956	8108 SE LAMBERT ST	31	Yes	MFR	492	0.1	-1.4	1535	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW260	12199 SE LIEBE ST	17	No	MFR	12261	5.1	4.8	801	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMQ114	8801 N VANCOUVER AVE	0	No	SFR	0	3.4	4.5	811	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMX686	4406 SE 135TH AVE	25.4	Yes	SFR	186	-9.6	-9.0	1003	Yes	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP660	5608 SE 99TH AVE	30	Yes	SFR	557	5.0	3.9	2534	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP682	5988 SE 102ND AVE	22	Yes	SFR	688	4.1	2.8	2004	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP887	10304 SE ELLIS ST	19	Yes	SFR	1051	4.5	3.7	1372	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADR048	3734 NE 154TH AVE	30	Yes	MFR	0	4.0	3.0	734	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT453	12920 SE HOLGATE BLVD	19.6	Yes	SFR	4814	0.7	-0.1	1112	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT457	13044 SE CENTER ST	30	Yes	SFR	849	4.7	4.2	925	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT458	13136 SE CENTER ST	30	Yes	SFR	860	3.0	2.5	986	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT468	13630 SE CENTER ST	28.4	Yes	MFR	898	2.7	2.5	455	Yes	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU205	805 SE MARION ST	32	Yes	SFR	631	-0.3	3.7	2429	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU722	5208 SE 111TH AVE	30.6	Yes	SFR	2563	-0.8	-1.0	1122	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU743	12780 SE SCHILLER ST	15.4	Yes	SFR	1778	1.6	0.8	817	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU757	5506 SE 130TH AVE	30	Yes	SFR	1371	1.1	3.9	1334	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV125	5600 SE 99TH AVE	30	Yes	SFR	557	5.2	4.0	2526	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV137	5828 SE 99TH AVE	30	Yes	SFR	557	3.7	2.5	2642	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV144	5905 SE 102ND AVE	21	Yes	SFR	553	4.7	3.4	1961	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV951	8312 SE 75TH PL	30	Yes	SFR	501	5.2	2.0	2515	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMR622	13515 SE HOLGATE BLVD	21	Yes	MFR	4568	1.2	1.8	960	Yes	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMR771	4736 SE 115TH AVE	31	Yes	SFR	821	3.6	2.5	449	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMT874	5712 SE 103RD AVE	20	Yes	SFR	1109	1.9	1.1	1457	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA841	9956 SE HAROLD ST	30	No	SFR	3892	4.9	4.0	2354	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP892	10324 SE ELLIS ST	21	No	SFR	142	1.5	0.7	1247	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADR053	15420 NE ALTON ST	30	Yes	MFR	0	1.2	1.2	609	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design

Table B-2 : 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 Landuse	Estimated Traffic Count	2008 Separation Distance [3] (ft)	2009 Separation Distance [4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date [7]	Anticipated Corrective Action [8]	FY08-09 Project Status	FY09-10 Planned Activities
3	Separation Distance	ADT433	12323 SE HOLGATE BLVD	21.8	Yes	MFR	5249	5.8	4.6	230	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV130	5635 SE 102ND AVE	22	No	SFR	440	3.7	2.3	1734	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV135	5736 SE 102ND AVE	21	No	SFR	426	4.0	2.8	1791	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW229	5436 SE 109TH AVE	20.5	No	SFR	461	3.2	2.5	444	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADW248	12024 SE RAYMOND ST	18	No	MFR	0	3.8	3.2	1089	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANA264	10000 SE WOODSTOCK BLVD	30	Yes	IND	356	3.3	2.5	2929	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP693	6036 SE 102ND AVE	22	Yes	SFR	894	4.9	3.9	2160	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV161	10004 SE HAROLD ST	30	Yes	SFR	3892	4.5	3.5	2305	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV168	6490 SE 99TH AVE	29.5	Yes	MFR	557	4.6	4.0	3037	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP890	10203 SE ELLIS ST	20	No	SFR	490	5.9	4.8	1646	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT428	13110 SE GLADSTONE CT	30	Yes	SFR	0	1.2	0.8	1220	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT463	13236 SE CORA ST	23.3	Yes	SFR	419	1.9	0.7	1543	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT464	13326 SE CORA ST	25	Yes	SFR	418	-2.2	-3.2	1363	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT465	4024 SE 134TH AVE	24	Yes	SFR	418	4.6	4.8	1114	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT472	13722 SE CORA ST	19	Yes	SFR	413	1.2	1.4	551	Yes	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT473	13820 SE GLADSTONE ST	20.9	Yes	SFR	430	4.0	4.1	520	Yes	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADT474	13658 SE CORA ST	19.7	Yes	SFR	413	0.5	0.6	610	Yes	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU727	4903 SE 114TH AVE	30	Yes	SFR	182	3.4	2.8	243	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU744	12524 SE SCHILLER ST	16	Yes	SFR	416	2.3	2.0	513	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADU758	12908 SE MITCHELL ST	21	Yes	SFR	178	1.9	3.4	1173	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV127	5610 SE 102ND AVE	21	No	SFR	490	5.4	4.1	1720	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADV955	7916 SE LAMBERT ST	31	Yes	SFR	395	4.0	3.1	1878	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ANN224	5700 SE 134TH PL	0	No	SFR	0	2.3	2.0	363	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ADQ418	4656 NE 118TH AVE	30	Yes	COM	436	5.0	3.3	1472	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	ACP672	5800 SE 102ND AVE	19	Yes	SFR	426	6.0	4.9	1800	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	AMV613	5640 SE 137TH AVE	30	Yes	MFR	180	5.3	4.6	648	No	Low	July 2011	Increase Separation Distance	Planning/Predesign	Predesign/Design
3	Separation Distance	PRK011	Ankeny Plaza, SW Ankeny/Ash	0.5	No	COM	0	3.9	3.6	1629	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK052	Johnson Creek Park, SE Sherrett/SE 21st	2	No	POS	0	6.3	3.6	5146	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK053	Johnson Creek Park, SE Sherrett/SE 21st	2	No	POS	0	8.6	4.8	5112	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK054	Johnson Creek Park, SE Sherrett/SE 21st	2	No	POS	0	8.1	4.4	5135	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK125	East Delta Park, N Victory Blvd	3	No	POS	0	-4.8	-4.0	602	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK126	East Delta Park, N Victory Blvd	3	No	POS	0	-4.9	-4.0	609	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK127	East Delta Park, N Victory Blvd	3	No	POS	0	-5.1	-4.2	590	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK128	East Delta Park, N Victory Blvd	3	No	POS	0	-4.3	-4.3	533	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK129	East Delta Park, N Victory Blvd	3	No	POS	0	-4.4	-4.2	533	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK130	East Delta Park, N Victory Blvd	3	No	POS	0	-3.2	-4.4	509	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK131	East Delta Park, N Victory Blvd	3	No	POS	0	1.6	-1.2	596	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK132	East Delta Park, N Victory Blvd	3	No	POS	0	1.9	-0.7	512	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK133	East Delta Park, N Victory Blvd	3	No	POS	0	3.3	0.7	490	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK142	East Delta Park, N Victory Blvd	3	No	POS	0	2.8	1.0	284	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK134	East Delta Park, N Victory Blvd	2	No	POS	0	4.2	1.5	524	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK135	East Delta Park, N Victory Blvd	2	No	POS	0	4.6	2.1	434	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK136	East Delta Park, N Victory Blvd	3	No	POS	0	-0.6	-0.1	602	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK137	East Delta Park, N Victory Blvd	3	No	POS	0	0.0	-0.6	675	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK138	East Delta Park, N Victory Blvd	3	No	POS	0	-0.2	-0.9	721	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK139	East Delta Park, N Victory Blvd	3	No	POS	0	-0.4	-0.8	735	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK140	East Delta Park, N Victory Blvd	3	No	POS	0	3.2	1.3	268	No	Low	July 2011	GWPD	GWPD	GWPD
3	Separation Distance	PRK141	East Delta Park, N Victory Blvd	3	No	POS	0	2.6	0.9	303	No	Low	July 2011	GWPD	GWPD	GWPD

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 Separation distance based on previous USGS groundwater data and used to develop Category 3 UIC list provided in UICMP Annual Report No 3.

4 Separation distance based on update to USGS groundwater data as discussed in annual report No 4.

5 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.

6 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.

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

8 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 = Commericial POS = Parks and Open Space
GWPD = Groundwater Protectiveness Demonstration NFA = No Further Action

Table B-3: Category 2 UIC Prioritization and Status

UIC Compliance Category	Non-Compliant Condition	Hansen UIC Node Number	Location [1]	Hansen UIC Depth (ft) [2]	Sedimentation Manhole (yes/no)	Predominant Landuse	Estimated Traffic Count	USGS 2007 Depth to GW (ft)	2008 Separation Distance [3] (ft)	2009 Separation Distance [4] (ft)	Distance to Nearest Well (ft) [5]	Within 2=year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date [7]	Anticipated Corrective Action [8]	FY08-09 Project Status	FY09-10 Planned Activities
2	Separation Distance	ADU741	13100 SE RAYMOND ST	30	YES	SFR	314	20	-8	-6	368	NO	Medium	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADT737	6300 SE 142ND AVE	30	YES	SFR	14,500	22	-6	-8	505	NO	Medium	Nov. 2010	Horizontal UIC	Predesign	Design/Construction
2	Separation Distance	AMR712	6300 SE 142ND AVE	25.5	YES	SFR	14,500	21	-3	-4	512	NO	Medium	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADT686	12210 SE ELLIS ST	27	YES	MFR	11,461	18	-7	-6	1,268	NO	Medium	Nov. 2010	Shallow Sump	Design/Construction	Design/Construction
2	Separation Distance	ACK372	5432 SE 118TH AVE	18	YES	MFR	369	23	7	6	381	NO	Medium	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADU737	12790 SE STEELE ST	25	YES	SFR	1,544	18	-5	-5	1,256	NO	Medium	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADW268	5201 SE 122ND AVE	20	NO	MFR	11,953	19	1	1	1,187	NO	Medium	Nov. 2010	Horizontal UIC	Design/Construction	Design/Construction
2	Separation Distance	ADS535	2704 SE 18TH AVE	30	YES	SFR	2,315	22	-6	-6	2,666	NO	Low	Nov. 2010	Horizontal UIC	Predesign	Design/Construction
2	Separation Distance	ADV195	11910 SE REEDWAY ST	30.9	YES	MFR	216	16	-13	-13	684	NO	Low	Nov. 2010	Horizontal UIC	Predesign	Design/Construction
2	Separation Distance	ADU739	12852 SE RAYMOND ST	26	YES	SFR	314	15	-9	-9	688	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	AMV633	13605 SE REEDWAY ST	30	YES	MFR	9,566	33	5	5	829	NO	Low	Nov. 2010	Shallow Sump	Design/Construction	Design/Construction
2	Separation Distance	ADU730	5239 SE 112TH AVE	30.1	YES	SFR	NA	25	-4	-4	1,108	NO	Low	Nov. 2010	Shallow Sump	Predesign	Design/Construction
2	Separation Distance	ADU751	12204 SE STEELE ST	20.4	YES	MFR	11,953	19	1	0	1,408	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	AMX684	13220 SE MALL ST	25.1	YES	SFR	186	15	-9	-9	1,410	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADT695	12410 SE ELLIS ST	28.9	YES	SFR	236	19	-8	-8	1,872	NO	Low	Nov. 2010	Shallow Sump	Predesign	Design/Construction
2	Separation Distance	ADU742	4739 SE 128TH AVE	15	YES	SFR	1,778	15	2	1	858	NO	Low	Nov. 2010	Infiltration Swale	Design/Construction	Design/Construction
2	Separation Distance	ADU748	4680 SE 128TH AVE	14	YES	SFR	1,877	15	3	2	915	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADU747	12728 SE LONG ST	14.2	YES	SFR	1,877	15	3	2	952	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ACP664	5704 SE 99TH AVE	30	YES	SFR	557	32	4	3	2,557	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADV128	5708 SE 99TH AVE	30	YES	SFR	557	32	4	3	2,559	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ANA606	12048 SE RAYMOND ST	20	NO	MFR	463	20	2	1	866	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	AMR769	11605 SE LONG ST	31	YES	SFR	NA	30	1	1	526	NO	Low	Nov. 2010	Shallow Sump	Predesign	Design/Construction
2	Separation Distance	ADU745	12532 SE LONG ST	15	YES	SFR	195	17	4	3	683	NO	Low	Nov. 2010	Horizontal UIC	Design/Construction	Design/Construction
2	Separation Distance	AMT956	5120 SE 118TH AVE	24	YES	MFR	369	23	1	1	795	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADU746	4680 SE 127TH AVE	16	YES	SFR	286	16	2	2	825	NO	Low	Nov. 2010	Infiltration Swale	Predesign	Design/Construction
2	Separation Distance	ADT427	4118 SE 132ND AVE	30	YES	SFR	NA	29	1	0	1,214	NO	Low	Nov. 2010	Shallow Sump	Predesign	Design/Construction
2	Separation Distance	AMP310	13915 SE REEDWAY ST	22.6	YES	SFR	180	27	6	7	561	NO	Low	Nov. 2010	Horizontal UIC	Predesign	Design/Construction
2	Separation Distance	ACZ265	7891 SE 46TH AVE	30	YES	SFR	299	35	7	7	1,664	NO	Low	Nov. 2010	Shallow Sump	Predesign	Design/Construction
2	Separation Distance	ADT990	9703 SE CLAYBOURNE ST	30.2	YES	MFR	393	34	5	5	3,279	NO	Low	Nov. 2010	Shallow Sump	Predesign	Design/Construction

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 Separation distance based on previous USGS groundwater data and used to develop Category 3 UIC list provided in UICMP Annual Report No 3.

4 Separation distance based on update to USGS groundwater data as discussed in annual report No 4.

5 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.

6 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.

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

8 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 = Commericial POS = Parks and Open Space

Table B-4: Newly Identified Category 3 UICs.

UIC Compliance Category	Non-compliant Condition	Hansen UIC Node Number	Location [1]	Hansen UIC Depth (ft) [2]	Sedimentation Manhole (yes/no)	Predominant Landuse	Estimated Traffic Count	2008 Separation Distance[3] (ft)	2009 Separation Distance[4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date[7]	Anticipated Corrective Action[8]
3	Separation Distance	ADW787	8200 SE FLAVEL ST	0	No	IND	24758	10.2	9.3	1996	No	Medium	July 2012	GWPD-NFA
3	Separation Distance	AMY572	5400 NE COLUMBIA BLVD	0	No	IND	23268	10.3	9.6	2243	No	Medium	July 2012	GWPD-NFA
3	Separation Distance	ADV391	7823 NE COLUMBIA BLVD	18	No	IND	21309	11.0	9.3	2555	No	Medium	July 2012	GWPD-NFA
3	Separation Distance	ADV157	10000 SE HENRY ST	21	Yes	SFR	356	10.0	9.2	2740	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADV113	5645 SE 97TH AVE	30	Yes	SFR	1090	10.0	8.8	2114	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADT980	7450 SE 83RD AVE	28.3	Yes	MFR	7471	10.2	9.2	1950	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ANB019	13242 SE BUSH ST	0	No	SFR	870	10.3	9.9	615	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADT442	12980 SE BUSH ST	30	Yes	SFR	1735	10.3	9.6	519	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADV175	9807 SE YUKON ST	25	Yes	MFR	544	10.4	9.4	2972	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADV960	8008 SE MALDEN ST	30	Yes	SFR	291	10.4	9.3	2061	No	Low	July 2012	GWPD-NFA
3	Separation Distance	AMN822	4535 SE 115TH AVE	30	Yes	SFR	278	10.5	9.8	1035	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADU728	4720 SE 120TH AVE	15.2	Yes	MFR	192	10.5	9.9	352	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADR054	3645 NE 154TH AVE	30	Yes	MFR	247	10.5	8.9	738	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADV172	9933 SE YUKON ST	20	Yes	SFR	356	10.6	9.2	2555	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADV954	7726 SE LAMBERT ST	31	Yes	SFR	395	10.8	9.1	2247	No	Low	July 2012	GWPD-NFA
3	Separation Distance	AMY013	6002 SE 140TH AVE	13	Yes	SFR	203	10.9	9.6	166	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADU707	5420 SE 99TH AVE	28	Yes	SFR	4748	11.0	9.9	2170	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADV957	7915 SE 76TH PL	30	Yes	SFR	NA	11.4	9.6	2341	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ACP665	10100 SE REEDWAY ST	18	No	SFR	606	11.4	10.0	2049	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADW865	7722 SE LAMBERT ST	26	No	SFR	NA	11.9	9.9	2130	No	Low	July 2012	GWPD-NFA
3	Separation Distance	ADW835	7764 SE 18TH AVE	27	No	SFR	806	11.9	8.1	4018	No	Low	July 2012	GWPD-NFA
3	Separation Distance	AMQ103	6204 SE 15TH AVE	30	Yes	SFR	344	12.4	9.2	3218	No	Low	July 2012	GWPD-NFA

Notes:

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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 Separation distance based on previous USGS groundwater data and used to develop Category 3 UIC list provided in UICMP Annual Report No 3.

4 Separation distance based on update to USGS groundwater data as discussed in annual report No 4.

5 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.

6 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.

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

8 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 = Commericial POS = Parks and Open Space
GWPD = Groundwater Protectiveness Demonstration NFA = No Further Action

Table B-5: Removals from Category 3 UIC List

UIC Compliance Category	Non-compliant Condition	Hansen UIC Node Number	Location [1]	Hansen UIC Depth (ft) [2]	Sedimentation Manhole (yes/no)	Predominant Landuse	Estimated Traffic Count	2008 Separation Distance[3] (ft)	2009 Separation Distance[4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	Reason Removed from November 2008 Category 3 UIC List
3	Separation Distance	ADT461	13940 SE CORA ST	19.2	Yes	SFR	413	9.2	13.1	614	Yes	Identified to have > 10 feet vertical separation
3	Separation Distance	ADU028	8430 SE 8TH AVE	30	Yes	SFR	187	9.8	11.4	1883	No	Identified to have > 10 feet vertical separation
3	Separation Distance	ADW289	3522 SE MARTINS ST	30	No	SFR	628	9.2	11.1	3055	No	Identified to have > 10 feet vertical separation
3	Separation Distance	AMQ134	6209 SE 13TH AVE	30	Yes	SFR	316	3.8	14.8	2768	No	Identified to have > 10 feet vertical separation
3	Separation Distance	AMR610	4560 SE 136TH AVE	13	Yes	MFR	9961	9.6	11.0	741	Yes	Identified to have > 10 feet vertical separation
3	Separation Distance	PRK113	N Crawford/Pittsburgh	6	No	POS	NA	8.6	12.0	554	No	Identified to have > 10 feet vertical separation

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 Separation distance based on previous USGS groundwater data and used to develop Category 3 UIC list provided in UICMP Annual Report No 3.

4 Separation distance based on update to USGS groundwater data as discussed in annual report No 4.

5 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.

Acronyms:

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

Table B-6: Category 3 UICs Updated from > 5 feet Vertical Separation Distance to < 5 feet Vertical

UIC Compliance Category	Non-compliant Condition	Hansen UIC Node Number	Location [1]	Hansen UIC Depth (ft) [2]	Sedimentation Manhole (yes/no)	Predominant Landuse	Estimated Traffic Count	2008 Separation Distance[3] (ft)	2009 Separation Distance[4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date[7]	Anticipated Corrective Action[8]
3	Separation Distance	ACP660	5608 SE 99TH AVE	30	Yes	SFR	557	5.0	3.9	2534	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	ACP672	5800 SE 102ND AVE	19	Yes	SFR	426	6.0	4.9	1800	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	ACP890	10203 SE ELLIS ST	20	No	SFR	490	5.9	4.8	1646	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	ADQ418	4656 NE 118TH AVE	30	Yes	COM	436	5.0	3.3	1472	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	ADT433	12323 SE HOLGATE BLVD	21.8	Yes	MFR	5249	5.8	4.6	230	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	ADV125	5600 SE 99TH AVE	30	Yes	SFR	557	5.2	4.0	2526	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	ADV127	5610 SE 102ND AVE	21	No	SFR	490	5.4	4.1	1720	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	ADV951	8312 SE 75TH PL	30	Yes	SFR	501	5.2	2.0	2515	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	ADW260	12199 SE LIEBE ST	17	No	MFR	12261	5.1	4.8	801	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	AMV613	5640 SE 137TH AVE	30	Yes	MFR	180	5.3	4.6	648	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	PRK052	Johnson Creek Park, SE Sherrett/SE 21st	2	No	POS	NA	6.3	3.6	5146	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	PRK053	Johnson Creek Park, SE Sherrett/SE 21st	2	No	POS	NA	8.6	4.8	5112	No	Low	July 2012	Increase Separation Distance
3	Separation Distance	PRK054	Johnson Creek Park, SE Sherrett/SE 21st	2	No	POS	NA	8.1	4.4	5135	No	Low	July 2012	Increase Separation Distance

Notes:

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3 Separation distance based on previous USGS groundwater data and used to develop Category 3 UIC list provided in UICMP Annual Report No 3.

4 Separation distance based on update to USGS groundwater data as discussed in annual report No 4.

5 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.

6 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.

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

8 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.

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

Table B-7: Category 3 UICs Updated from < 5 feet Vertical Separation Distance to > 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 Landuse	Estimated Traffic Count	2008 Separation Distance[3] (ft)	2009 Separation Distance[4] (ft)	Distance to Nearest Well (ft) [5]	Within 2 year time of travel (yes/no)	UIC Priority [6]	Target Compliance Date[7]	Anticipated Corrective Action[8]
3	Separation Distance	ADW285	5737 SE 15TH AVE	30	No	MFR	970	1.1	6.4	3923	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT477	4100 SE 140TH AVE	30	Yes	SFR	433	2.0	5.2	736	Yes	Low	July-2011	GWPD-NFA
3	Separation Distance	ADT697	12427 SE RAMONA ST	20.7	Yes	MFR	1089	2.5	5.9	1134	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ANS554	9700 N EDISON ST	30	Yes	IND	838	3.2	7.7	3270	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADV202	5961 SE 122ND AVE	22.7	Yes	MFR	11031	3.5	5.3	1172	No	Low	July-2011	GWPD-NFA
3	Separation Distance	AMR318	13928 SE BOISE CT	25.5	Yes	SFR	NA	3.9	7.5	764	Yes	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU211	905 SE LINN ST	30	Yes	SFR	450	4.8	7.2	2782	No	Low	July-2011	GWPD-NFA
3	Separation Distance	ADU200	804 SE CLATSOP ST	32	Yes	SFR	375	4.8	7.8	2211	No	Low	July-2011	GWPD-NFA

Notes:

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3 Separation distance based on previous USGS groundwater data and used to develop Category 3 UIC list provided in UICMP Annual Report No 3.

4 Separation distance based on update to USGS groundwater data as discussed in annual report No 4.

5 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.

6 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.

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

8 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:

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Appendix C
Status of SARA Title III and
Commercial Industrial Inspection Work

Table C-1 SARA Title III Follow Up Inspection Results As Reported in Annual Report No.2									Table C-1 SARA Title III Follow Up Inspection Results FY 08-09					
BES UIC ID	**Business Name**	**Business Address**	**Potential Issues Identified in Systemwide Assessment**	**Site Visit Date**	**Issues Identified During Systemwide Assessment Remaining after Follow-up Site Visit**	**Additional Potential Issues Identified during Follow-up Site Visit**	**Mechanism to Address Issues**	**Follow-up**	**Reinspection Site Visit Date**	**Potential Issues Identified during Follow-up Site Visit**	**Follow-up Letter Date**	**2009 Follow-up Phone Calls**	**2009 Follow-up Inspection Date**	**Recommended Follow-up (1-2)[1]**
ADQ893	AL's AUTOMOTIVE SERVICE CTR	3445 NE 82ND	Fueling Vehicle/Equipment Maintenance Area	6/14/2007	None	Waste Storage Stored materials	Follow-up Visit, Tech Assistance, Follow-up Letter	Limited / Short-term	10/29/2008	AG Liquid Storage Exterior Bulk Storage Waste and Recycling	12/12/2008	18-Feb	31-Mar	1
ADT056 & ADT061	AMIGOS/OROSCO AUTO REPAIR	12920 SE STARK ST	Fueling Vehicle/Equipment Maintenance Area Waste Storage	5/29/2007	None	None	Follow-up Visit, Tech Assistance, Follow-up Letter	None						
ADV500	Beaver Towing Inc.	9111 NE Halsey	Vehicle/Equipment Maintenance Area Waste Storage	5/23/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ABN212 & ADR971	BILAL MAHAD LLC	12128 E BURNSIDE	Fueling	5/30/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADT309	CHARLIES TIRE FACTORY	4215 SE 82ND AVE	Wash Area - Auto Wash Area - Heavy Equipment Vehicle/Equipment Maintenance Area Chemical Storage Waste Storage	6/21/2007	Wash Area Waste Storage	None	Follow-up Visit, Tech Assistance, Follow-up Letter	Limited / Short-term	10/29/2008	vehicle washing Waste and Recycling	12/12/2008	2/18/2009	31-Mar	1
AMP944	Craftsman Body & Paint	414 NE 80th Ave	Wash Area - Auto	5/22/2007	None	Waste Storage	Follow-up Visit, Tech Assistance, Education and Training, Follow-up Letter	Limited / Short-term	11/6/2008	Maintenance Vehicle Washing Vehicle Waste and recycling	12/12/2008	2/17/2009	31-Mar	2
ADT392	CURTIS TRAILERS INC	10177 & 10178 SE POWELL BLVD (office building) 10043-10305 SE Powell (business)	Wash Area - Auto Fueling Vehicle/Equipment Maintenance Area Chemical Storage Waste Storage Other Storage Manufacturing Area	6/27/2007	None	None	Follow-up Letter, Tech Assistance, Follow-up Visit	None						
ADS251 & ADW462	FIRESTONE	12141 SE DIVISION ST	Vehicle/Equipment Maintenance Area Waste Storage	5/29/2007	None	None	Follow-up Letter, Tech Assistance, Follow-up Letter	None						
ADU051 & ADU043	FURBISH CHEMICAL SUPPLY	7953 SE 13TH	Wash Area - Auto Chemical Storage	5/23/2007	Wash Area	None	Follow-up Visit, Tech assistance, Follow-up Letter	Limited / Short-term	10/23/2008	Washing Vehicle Material Transfer	12/12/2008	17-Feb	31-Mar	1
ADT053	International Collision Repair	12436 SE Stark St	Wash Area - Auto Wash Area - Heavy Equipment Waste Storage	6/20/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADT053	INT'L COLLISION REPAIRS INC	12444 SE STARK ST	Wash Area - Auto Wash Area - Heavy Equipment Waste Storage	Same site as above	same site as above	same site as above	same site as above	None						
ANA737	JAMALS AM-PM	1511 NE 102ND AVE	Fueling Waste Storage Other Storage	5/30/2007	Other Storage	None	Follow-up Visit, Tech Assistance, Follow-up Letter	Limited / Short-term	11/7/2008	AG Liquid Storage Plumbing/Drainage	12/12/2008	3/10 & 3/18 3/26 & 3/26 3/31 & 5/18 6/26 & 9/24	31-Mar	2
ADQ922	JERRYS TRANSMISSIONS	7631 NE SANDY BLVD	Waste Storage	* out of business	None	NA	Out of business	None						
ADU026 & ADU062	K & K COLOR LAB INC.	8302 SE 13th Ave 8302-8308 13th (Taxlot)	Waste Storage Other Storage	5/24/2007	None	None	Follow-up Visit, Tech Assistance, Follow-up Letter	None						
ADS947	KELLY MOORE PAINT CO INC	1414 SE 82ND AVE	Chemical Storage	5/29/2007	None	None	Follow-up Visit, Tech assistance, Follow-up Letter	None						
ANA245	Khan FNS LLC	16150 SE STARK ST	Fueling	5/30/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ANB155 & ANB157	L & M Construction Chemicals	6510 NE Columbia Blvd	Chemical Storage Waste Storage	5.30/07	None	Loading dock	Follow-up Visit, Tech assistance, Follow-up Letter	Limited / Short-term	11/7/2008	Material Transfer Exterior Bulk Storage Waste and Recycling	12/12/2008	2/17 3/18	31-Mar	1
ADR712	MIDAS MUFFLER SHOP	11750 NE HALSEY ST	Vehicle/Equipment Maintenance Area Waste Storage	5/30/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADP515	PIERENS AUTOMOTIVE	2105 N KILLINGSWORTH	Vehicle/Equipment Maintenance Area Waste Storage	6/1/2007	Vehicle/equipment maintenance	Exterior Storage of Bulk Materials Above Ground Storage of Liquid Materials	Follow-up Visit , Tech Assistance, Follow-up Letter	Limited / Short-term	Out of Business Building being renovated					N/a
ANA762	Pioneer Oil	9270 NE Glisan	Fueling Waste Storage	5/16/2007	None	None	Follow-up Visit, Tech Assistance, Education and Training, Follow-up Letter	None						
ADP240	PORTLAND RECYCLING TEAM II (**Far West Fibers&Rcy**)	2005 N PORTLAND BLVD	Waste Storage Other Storage	6/15/2007	Waste Storage Other Storage	None	Follow-up Visit, Tech Assistance, BMP Implementation, Follow-up Letter	Long-term	9/15/2008	AG Oil Storage Tank Exterior Bulk Storage Waste and Recycling	12/12/2008	2/18 & 3/18 3/26 & 3/31 6/15 & 9/24	31-Mar	2
ADP390	PORTLAND SCHOOL DISTRICT 1J	7200 NE 11TH AVE	Chemical Storage Waste Storage	5/30/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADP981	PORTLAND SCHOOL DISTRICT 1J	4906 NE 6TH AVE	Waste Storage	6/27/2007	None	None	Follow-up Visit, Follow-up Letter	None						

Table C-1 SARA Title III Follow Up Inspection Results As Reported in Annual Report No.2									Table C-1 SARA Title III Follow Up Inspection Results FY 08-09					
BES UIC ID	**Business Name**	**Business Address**	**Potential Issues Identified in Systemwide Assessment**	**Site Visit Date**	**Issues Identified During Systemwide Assessment Remaining after Follow-up Site Visit**	**Additional Potential Issues Identified during Follow-up Site Visit**	**Mechanism to Address Issues**	**Follow-up**	**Reinspection Site Visit Date**	**Potential Issues Identified during Follow-up Site Visit**	**Follow-up Letter Date**	**2009 Follow-up Phone Calls**	**2009 Follow-up Inspection Date**	**Recommended Follow-up (1-2)[1]**
AMT127	PORTLAND SCHOOL DISTRICT 1J	5210 N Kerby	Loading Receiving Areas	6/27/2007	None	None	Follow-up Visit, Follow-up Letter	None						
AMY572	QWEST CORPORATION	5230 NE COLUMBIA BLVD	Wash Area - Auto	2/9/2006	None	None	Follow-up Visit, Follow-up Letter	None						
ADN485	SCHUCK'S AUTO SUPPLY	5915 NE SANDY BLVD	Vehicle/Equipment Maintenance Area Waste Storage Other Storage	6/19/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADP964	SCHUCK'S AUTO SUPPLY	5212 NE MLK BLVD	Vehicle/Equipment Maintenance Area Waste Storage Other Storage	6/11/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADU300	SPAR-TEK INDUSTRIES INC	2221 N ARGYLE ST	Fueling Vehicle/Equipment Maintenance Area Waste Storage	5/30/2007	None	Outdoor manufacturing	Follow-up Visit, Tech Assistance, BMP Implementation, Follow-up Letter	Long-term	10/1/2008	Outdoor Manufacturing				1
ADS541 & ADS542	TOMS AUTO PAINTING & BODY	8449 SE POWELL BLVD	Wash Area - Auto Chemical Storage Waste Storage Other Storage	5/30/2007	Washing Waste Storage	None	Follow-up Visit, Tech Assistance, Follow-up Letter	Limited / Short-term	10/23/2008	Washing Vehicle AG Storage Liquid Exterior Storage Waste and Recycling Plumbing/Drainage	12/12/2008	2/17 3/26	31-Mar	2
AMY572	UNITED RENTALS NORTHWEST	5413 NE COLUMBIA BLVD	Wash Area - Auto	NA	None	NA	Does not drain to UIC	None						
AAF126 & ADN372	St. Johns Tire Center	7301 N Lombard St	Loading Receiving Area	5/24/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADP135	Express Lube	3436 N Lombard St	Vehicle/Equip Maintenance Area Other Storage Waste Storage/Dumpsters	5/18/07	None	None	Follow-up Visit, Follow-up Letter	None						
ADP896	Steel Yard Inc The	6880 NE Columbia Blvd	Loading Receiving Area Other Storage	5/24/2007	Other Storage	None	Follow-up Visit, Tech Assistance, Education and Training, Follow-up Letter	Limited / Short-term	11/7/2008	Fueling Exterior Bulk Storage Waste and Recycling	12/12/2008	2/17 3/26	31-Mar	1
ADQ128	Trellis West PC	4933 NE 31st Ave	Waste Storage/Dumpsters	NA	None	NA	Out of business	None						
ADQ224	Turton's Automotive	4601 NE Killingsworth St 4602 NE Killingsworth St 4600 NE Killingsworth St	Loading Receiving Area Wash Area - Auto	5/25/2007	None	Waste Storage	Follow-up Visit, Tech Assistance, Follow-up Letter	Limited / Short-term	11/7/2008	AG Oil Storage Tank Waste and Recycling	12/12/2008	2/17 & 3/26 3/31 & 6/26 9/24	31-Mar	1
ADR508	Munnell & Sherril Inc	1163 NE 63rd Ave	Loading Receiving Area	5/27/2007	None	None	Follow-up Visit, Tech Assistance, Follow-up Letter	None						
ADR668	Gateway Hardware	10414 NE Halsey St	Loading Receiving Area Chemical Storage Waste Storage/Dumpsters	6/19/2007	None	None	Follow-up Visit, Tech Assistance, Follow-up Letter	None						
ADR865	M & N Plastics	38 SE 97th Ave	Loading Receiving Area	6/21/2007	None	Wash Area	Follow-up Visit, Tech Assistance, Follow-up Letter	Limited / Short-term	11/6/2008	Washing Vehicle Fueling AG Liquid Storage	12/12/2008	1/13 2/17	31-Mar	1
ADR895	Fischer Automotive	325 NE 100th Ave	Indoor Work Area Entrances	5/23/2007	None	Vehicle Maintenance	Follow-up Letter, Tech Assistance	Limited / Short-term	11/6/2008	Vehicle Maintenance AG Storage Tanks	12/12/2008	2/17 3/26	31-Mar	1
ADR934	Ron Tonkin Grand Tourismo	426 NE 102nd Ave	Vehicle/Equip Maintenance Area	6/11/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADS227	Portland Sand & Gravel	10717 SE Division St	Waste Storage/Dumpsters	5/31/2007	None	Wheel wash needed	Follow-up Visit, Tech assistance, BMP Implementation, Follow-up Letter	Long-term	10/1/2008	Wheel Wash Installed.				
ADS631	Custom Automotive Restoration	3400 SE 122nd Ave	Loading Receiving Areas Wash Area - Auto	5/25/2007	None	None	Follow-up Visit, Tech Assistance, Follow-up Letter	None						
ADT012	Integrity Auto Inc	539 SE 122nd Ave	Loading Receiving Areas	5/18/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADU860	Woodstock Hardware	4430 SE Woodstock Blvd	Waste Storage/Dumpsters	6/19/2007	None	None	Follow-up Visit, Follow-up Letter	None						
ADV067	Division Transmission Now **General Auto Sales**	8509 SE Foster Rd	Other Storage Waste Storage/Dumpsters	5/29/2007	Other Storage Waste Storage	None	Follow-up Visit, Tech Assistance, Follow-up Letter	Limited / Short-term	10/24/2008	AG Storage Liquids Exterior Bulk Storage Waste and Recycling	12/12/2008	2/18 & 3/18 3/31 & 6/28 9/24	31-Mar	2
ADV073	Kadel's Portland Auto Body	8230 SE Woodstock Blvd	Loading Receiving Areas	6/19/2007	Waste Storage	Vehicle Washing	Follow-up Visit, Tech Assistance, Follow-up Letter	Limited / Short-term	10/29/2008	Washing Vehicle Exterior Storage Waste and Recycling Plumbing/Drainage Issues	12/12/2008	2/19 & 3/27 4/7 & 4/10 9/24	31-May	2
	Kadel's Portland Auto Body	8206 SE Woodstock Blvd	Indoor Work Area Entrances	Same site as above	same site as above	same site as above	same site as above	Limited / Short-term						

Table C-1 SARA Title III Follow Up Inspection Results As Reported in Annual Report No.2									Table C-1 SARA Title III Follow Up Inspection Results FY 08-09					
BES UIC ID	**Business Name**	**Business Address**	**Potential Issues Identified in Systemwide Assessment**	**Site Visit Date**	**Issues Identified During Systemwide Assessment Remaining after Follow-up Site Visit**	**Additional Potential Issues Identified during Follow-up Site Visit**	**Mechanism to Address Issues**	**Follow-up**	**Reinspection Site Visit Date**	**Potential Issues Identified during Follow-up Site Visit**	**Follow-up Letter Date**	**2009 Follow-up Phone Calls**	**2009 Follow-up Inspection Date**	**Recommended Follow-up (1-2)[1]**
ADV074	Kadel's Portland Auto Body	8308 SE Woodstock Blvd	Waste Storage/Dumpsters	Same site as above	same site as above	same site as above	same site as above	Limited / Short-term						
ANA577	Ron's Hot Wash To Go Inc	6537 SE 131st Ave	Chemical Storage	5/31/2007	None	None	Follow-up Visit, Follow-up Letter	None						
	Notes:	1.) 1= no follow-up necessary; 2= intermittent contact or periodic inspection helpful Shaded rows are businesses inspected in 2008-2009												

STATUS OF SARA TITLE III AND COMMERCIAL/INDUSTRIAL INSPECTION WORK

Sara Title III Activities

The City of Portland's water pollution control facilities (WPCF) permit requires an inventory of all UICs that receive stormwater or other fluids from industrial and commercial properties that store, handle, or use hazardous or toxic materials in quantities requiring registration under the federal Superfund Amendment and Reauthorization Act (SARA) Title III. As described in UICMP Annual Report No.2 and as part of the City of Portland's *Systemwide Assessment* report (submitted July 15, 2006) and *Systemwide Assessment Follow-Up Actions* workplan (submitted December 1, 2006), 19 facilities were identified for short-term and long-term follow-up actions. These facilities were requested to implement actions to address an identified site activity that could pose a threat to drainage entering a City-owned UIC. During FY08-09, follow-up site visits were completed to confirm that previously requested actions were implemented. Table C-1 provides Information specific to these locations. All of the 19 facilities implemented the requested actions. Some of the facilities were identified for periodic site visits to monitor their site activities as appropriate.

Commercial/Industrial Activities

In addition to Sara Title III site visits, the WPCF permit requires an inventory of all UICs that receive drainage from industrial and commercial properties with site activities that may result in a discharge of pollutants to a UIC and may cause a violation of permit conditions. As part of the *Systemwide Assessment*, the City identified 138 businesses that may be conducting site activities that could pose an impact to drainage to 147 UICs. During FY08-09, the UIC program implemented follow-up actions as detailed in the *Systemwide Assessment Follow-up Actions* workplan. As described in the workplan, the City conducted site visits for all of the identified businesses. At the time of this report, all site visits have been completed, but the information is still being reviewed for accuracy and identification of potential follow-up actions. Table C-2 identifies the facilities and the site visit dates.

As with SARA Title III work, City staff conducted site visits to determine if identified activities posed any impacts to drainage to City-owned UICs. Staff will develop site-specific recommendations for each site where one or more activities demonstrated a potential to introduce pollutants to a City-owned UIC. The recommendations will include one or more of the five following mechanisms.

- **Site Visit Follow-up Letters**. After completion of the facility visit, the City will document the meeting with a follow-up letter to the facility representative. This letter will document the results of the meeting, identify additional information needed, and identify the City's expectations for future stormwater-related activities.

- **Education and Training**. Education and training may be provided to increase facility awareness of issues associated with UIC requirements (e.g., city, state and federal regulations) and the potential impacts to groundwater associated with stormwater discharges

to the subsurface. This training could include use of fact sheets, guidance, signage, or other materials to educate employees about stormwater pollutants and UICs. Educational efforts may also include discussion of resources available from DEQ, EPA, and other agencies and organizations regarding stormwater management and BMPs. The City may provide limited training regarding potentially applicable BMPs.

- **Technical Assistance.** Technical assistance, often provided during site visits or inspections, provides information tailored to help individual facilities comply with pertinent regulations. The City will work with the facility owner or representative to identify potential pollutant sources and to minimize or eliminate the potential of pollutants entering stormwater. In addition, the City may also refer facilities to DEQ for technical assistance (e.g., DEQ's Hazardous Waste Program or Toxic Use Reduction Program).

- **BMP Implementation.** The City will help the identified facility owner or operator identify potentially applicable structural or nonstructural BMPs. BMPs will be identified using the City of Portland *Stormwater Management Manual*, DEQ's *BMPs for UICs* (DEQ, 1998; http://www.deq.state.or.us/wq/groundwa/uicbmp.htm), or other available sources. The City will also assist or provide oversight in developing the scope and schedule for implementation of selected BMPs by the facility. In addition, the City may provide recommendations for selecting BMP performance measures.

- **Follow-up Facility Visits.** As necessary, the City may conduct a follow-up visit(s) to verify that identified site issues have been addressed. If identified issues are not addressed within the identified time frame, the City may, as necessary and appropriate:
  - Initiate enforcement activities,
  - Install temporary BMPs (e.g., berms, catchbasin closure) or permanent structural BMPs (e.g., vegetated swales) to prevent stormwater pollutants from entering the City's UIC, or
  - Refer the facility to DEQ for further evaluation, permitting, and/or investigation under the appropriate regulatory authority (e.g., Water Quality, UIC, Environmental Cleanup, Solid Waste, Hazardous Waste, UST).

During FY-09-10, follow-up letters and additional inspections will be conducted as necessary, based on the results of the facility site visits. Updates will be provided in the UICMP Annual Report No.5

Table C-2: Commercial Industrial Businesses Identified for Follow Up Inspections

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
AAD536	ADN308	Dave's Truck Maintenance &		5330/5331 N Columbia Ct	Parking Lots, Driveways and Aprons Vehicle Storage Indoor Work Area Entrances	7538-12	Truck-Repairing & Service	25-Jun
AAL004	ADP405	Eastside Foreign Car Svc		7000 NE M L King Blvd	Vehicle Storage	7538-01	Automobile Repairing & Service	11-Jun
AAL004	ADP405	Probasco-Ross		6936 NE M L King Blvd	Parking Lots, Driveways and Aprons Vehicle Storage Waste Storage/Dumpsters	5511-03	Automobile Dealers-Used Cars	24-Jun
AAN383	ADP793	Bighouse Auto Repair		3009 NE Killingsworth St	Vehicle Storage Indoor Work Area Entrances Waste Storage/Dumpsters	7538-01	Automobile Repairing & Service	13-May
AAN383	ADP793	U-Haul Co		3009 NE Killingsworth St	Vehicle Storage Indoor Work Area Entrances Waste Storage/Dumpsters	7513-03	Truck Renting & Leasing	25-Jun
AAQ262	ADP914	Frank Gillespie Union 76 Svc		5429 N Interstate Ave	Fueling Parking Lots, Driveways and Aprons	5541-01	Service Stations-Gasoline & Oil	24-Jun
AAT161		Ardy's Auto Repair		4105 NE M L King Blvd	Vehicle Storage Indoor Work Area Entrance	7532-01	Automobile Body-Repairing & Painting	12-Jun
AAZ146	ADN587	Everist Brothers Automotive		7305 NE Fremont St	Parking Lots, Driveways and Aprons Indoor Work Area Entrances	7538-01	Automotive Repair, Services and Parking	17-Jun
ABN215	ADR972	Color Score Instant Print	El Indio	11925 SE Stark St	Vehicle Storage	2759-98	Commercial Printing Nec	23-Jun
ABN372	ADS013	Ron Tonkin Chevrolet		122 NE 122nd Ave	Indoor Work Area Entrance Vehicle Storage Parking Lots, Driveways and Aprons	5511-02	Automobile Dealers-New Cars	13-Oct

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
ABN464	ADS033	International Collision	Out of Business (OOB)	420 SE 122nd Ave	Fueling Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	5-Jun
ABW068	ADP104	Raab's Auto Repair	Eagle Construction and Roofing	8525 SE Division St	Vehicle StorageParking Lots, Driveways and Aprons	7539-08	Alternators & Generators-Automotive-Rpr	2-Jun
ABZ829	ADU084	Auto Oasis Self Serve Car Wash	Astro Jet Car Wash	3420 SE 50th Ave	Parking Lots, Driveways and Aprons Wash Area - Auto	7542-01	Car Washing & Polishing	19-May
ABZ829 ADU084		Sam's Auto Body & Paint Inc		3320 SE 50th Ave	Parking Lots, Driveways and Aprons Loading Receiving Area	7532-01	Automobile Body-Repairing & Painting	20-May
ACP533		Ross Auto Wholesale		6302 SE 82nd Ave	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	14-Oct
ADN305		Heliarc Specialists Inc		9751 N Taft Ave	Indoor Work Area Entrance Waste Storage/Dumpsters	7692-03	Welding	6-May
ADN332		My Car Care Ctr		7911 N Lombard St	Vehicle Storage Waste Storage/Dumpsters	7549-03	Automobile Lubrication Service	6-May
ADN334		Rose City Chevrolet	Out of Business (OOB)	8150 N Lombard St	Parking Lots, Driveways and Aprons Vehicle Storage	5511-03	Automobile Dealers-Used Cars	
ADN342	ADN343	Honda Of St Johns Motorcycle		7741 N Lombard St	Parking Lots, Driveways and Aprons Vehicle Storage	5511-02	Automobile Dealers-New Cars	25-Jun
ADN408	AMT838	Master Muffler Inc		6027 N Lombard St	Parking Lots, Driveways and Aprons Indoor Work Area Entrances	7533-01	Mufflers & Exhaust Systems-Engine	12-Jun
ADN488		Natural Press		5944 NE Sandy Blvd	Indoor Work Area Entrance	2752-02	Manufacturing	17-Jun
ADN524		Burchett Sign Svc		3232 NE 67th Ave	Indoor Work Area Entrance Parking Lots, Driveways and Aprons	3993-02	Manufacturing	27-May

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
ADN527	ADN534	A-1 Rental Inc	No drainage to UIC	6412 NE Sandy Blvd	Waste Storage/Dumpsters Vehicle Storage Fueling	7513-03	Automotive Repair, Services and Parking	14-May
ADN527	ADN534	L E Auto Repair	No drainage to UIC	6410 NE Sandy Blvd	Waste Storage/Dumpsters Vehicle Storage Fueling	7538-01	Automotive Repair, Services and Parking	14-May
ADN527	ADN534	Penske Truck Rental	No drainage to UIC	6412 NE Sandy Blvd	Waste Storage/Dumpsters Vehicle Storage Fueling	7513-03	Automotive Repair, Services and Parking	14-May
ADN663		Auto Oasis Self Serve Car W	Jet Car Wash—Self-Serve	5810 N Lombard St	Parking Lots, Driveways and Aprons Wash Area - Auto	7542-01	Car Washing & Polishing	6-May
ADN752		Zelmer Enterprises, Inc.	Business relocated Astoria	8263 N Dana Ave	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7549-01	Automobile Wrecking	
ADN871		Mackin's Auto Body		8026 N Denver Ave	Parking Lots, Driveways and Aprons Vehicle Storage Indoor Work Area Entrances	7532-01	Automobile Body-Repairing & Painting	18-Jun
ADN891		Lombard 76		2001 N Lombard St	Parking Lots, Driveways and Aprons Fueling	5541-01	Service Stations-Gasoline & Oil	25-Jun
ADN942		United Auto Renew	Express Auto Body Shop	801 N Lombard St	Indoor Work Area Entrance Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	12-Jun
ADP094		Auto Accessory Distributing		8335 SE Division St	Other Storage Vehicle Storage Indoor Work Area Entrances	5013-13	Automobile Parts & Supplies-Wholesale	2-Jun
ADP498	ADP515	Pieren's Automotive	Completed as part of Sara Title III Inspections	2105 N Killingsworth St	Indoor Work Area Entrances Vehicle Storage Parking Lots, Driveways and Aprons Waste Storage/Dumpsters	7538-01	Automobile Repairing & Service	

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
ADP544		Dan Hall's Automotive Machine		1831 N Killingsworth St	Indoor Work Area Entrances (ADP544)	7538-02	Automobile Machine Shop Service	18-Jun
ADP546		Baisley Hi Performance	No drainage to UIC	5511 N Interstate Ave	Waste Storage/Dumpsters/Dumpsters Parking Lots, Driveways and Aprons	7699-67	Motorcycles & Motor Scooters-Rpr & Svc	4-May
ADP569		Dao's Complete Auto Body & Rpr	Out of Business (OOB)	5822 N Interstate Ave	Loading Receiving Area	7532-01	Automobile Body-Repairing & Painting	4-May
ADP662		VIP Collision Ctr		6444 NE M L King Blvd	Loading Receiving Area Indoor Work Area Entrance Waste Storage/Dumpsters	7532-01	Automobile Body-Repairing & Painting	7-May
ADP704		Tuan Auto Service		1405 NE Killingsworth Ave	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7538-01	Automobile Repairing & Service	18-Jun
ADP851		Huynh Ba BP		3323 NE Killingsworth	Parking Lots, Driveways and Aprons Indoor Work Area Entrances Fueling	7538-01	Automobile Repairing & Service	18-Jun
ADP900		Industrial Tire Svc		7331 NE Killingsworth	Other Storage Indoor Work Area Entrances Waste Storage/Dumpsters	5531-23	Tire-Dealers-Retail	25-Jun
ADP937		Neil Kelly Designers/Remodeler		804 N Alberta St	Loading Receiving Area	1521-39	Remodeling & Repairing Bldg Contractors	6-May
ADQ007		Motorcycle Tire & Wheel		701 NE Alberta St	Loading Receiving Area Indoor Work Area Entrance Parking Lots, Driveways and Aprons	5571-03	Motorcycles & Motor Scooters-Supplies	11-May
ADQ012		Accuracy Grinding Inc	Out of Business (OOB)	1301 NE Alberta St	Parking Lots, Driveways and Aprons Other Storage	3479-10	Grinding-Precision & Production	14-May
ADQ013		A Burns Painting & Sndblstng		5005 NE 14th Ave	Indoor Work Area Entrance Parking Lots, Driveways and Aprons Chemical Storage	1721-01	Painters	11-May

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
ADQ018		Banks Sails Northwest		1222 NE Alberta St	Parking Lots, Driveways and Aprons Loading Receiving Area	2394-01	Sailmakers	7-May
ADQ053	ADQ078	Best Auto Repair		1904 NE Alberta St	Waste Storage/Dumpster Vehicle Storage Vehicle/Equipment Maintenance Area	7538-01	Automobile Repairing & Service	8-May
ADQ054		Guy's Interior Restorations		2016 NE Alberta St	Loading Receiving Area	7532-07	Automobile Seatcovers Tops & Upholstery	7-May
ADQ067	ADQ087	A Street Transmissions	International Auto Body	1451 NE Alberta St	Loading Receiving Area	7537-01	Transmissions-Automobile	11-May
ADQ069	ADQ088	Portland Auto Svc		1505 NE Alberta St	Vehicle Storage Indoor Work Area Entrances	7538-01	Automobile Repairing & Service	18-Jun
ADQ230		42nd Ave Body Shop	Alameda Metal Works	4242 NE Alberta St	Parking Lots, Driveways and Aprons Indoor Work Area Entrances Waste Storage/Dumpsters	7532-01	Automobile Body-Repairing & Painting	13-May
ADQ315		SOS Automotive		6208 NE Killingsworth	Parking Lots, Driveways and Aprons Vehicle Storage Indoor Work Area Entrances	7538-01	Automobile Repairing & Service	17-Jun
ADQ796		Barrett Automotive		4413 NE Fremont St	Vehicle Storage Waste Storage/Dumpsters Indoor Work Area Entrances	7538-01	Automobile Repairing & Service	8-May
ADQ812		Blue Ribbon Auto Body		4225 NE Cully Blvd	Vehicle Storage Other Storage Waste Storage/Dumpsters Indoor Work Area Entrances	7532-01	Automobile Body-Repairing & Painting	13-May
ADQ812		Jalisco's Automotive	Blue Ribbon Auto Body	4205 NE Cully Blvd	Vehicle Storage Other Storage Waste Storage/Dumpsters Indoor Work Area Entrances	7538-01	Automobile Repairing & Service	13-May

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
ADQ922		Sports Car Ctr		7745 NE Sandy Blvd	Parking Lots, Driveways and Aprons Vehicle/Equipment Maintenance Area	7538-01	Automotive Repair, Services and Parking	18-May
ADR132		Cardonz Straight Up Auto S	Arthur's Automotive	5710 NE Fremont St	Fueling Vehicle Storage	7538-01	Automobile Repairing & Service	17-Jun
ADR132		Rose City Arco		5710 NE Fremont St	Fueling Vehicle Storage	5541-01	Service Stations-Gasoline & Oil	25-Jun
ADR306		Jiffy Lube		10227 NE Halsey St	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7549-03	Automobile Lubrication Service	17-Jun
ADR471		Danny Auto Repair	No drainage to UIC	5961 NE Halsey St	Vehicle Storage Vehicle/Equipment Maintenance Area	7538-01	Automobile Repairing & Service	13-May
ADR671		John's Shop		10355 NE Clackamas St	Vehicle Storage Waste Storage/Dumpsters	7538-01	Automobile Repairing & Service	19-May
ADR716		J B Motors		1318 NE 117th Ave	Wash Area - Auto Parking Lots, Driveways and Aprons	5511-03	Automobile Dealers-Used Cars	13-Oct
ADR865		M & N Plastics	Completed as part of Sara Title III Inspections	38 SE 97th Ave	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	3089-01	Plastics-Mold-Manufacturers	
ADR874		ACP Auto Body		10033 E Burnside St	Indoor Work Area Entrances Vehicle Storage Waste Storage/Dumpsters	7532-01	Automobile Body-Repairing & Painting	20-May
ADR886		Brownie Auto Sales		10144 NE Glisan St	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	13-Oct
ADR895		Fischer Automotive	Completed as part of Sara Title III Inspections	325 NE 100th Ave	Indoor Work Area Entrances Vehicle Storage	7538-01	Automobile Repairing & Service	

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
ADS066	ADS067	Discount Auto Repair	Edo Mechanic Auto Repair	14055 SE Stark St	Indoor Work Area Entrances Vehicle/Equipment Maintenance Area Vehicle Storage Waste Storage/Dumpster	7538-01	Automobile Repairing & Service	5-Jun
ADS092	AMP103	Eastside Swedish Motors Inc		14721 SE Stark St	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	13-Oct
ADS224		Car Team-Novus	Auto Trim Design	2440 SE 110th Ave	Indoor Work Area Entrances Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	7532-03	Automobile Customizing	4-Jun
ADS226		Dang's Body Shop & Towing Svc	Highlight Auto Body	11109 SE Division St	Indoor Work Area Entrance Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	23-Jun
ADS296		Dan's Automotive Svc	Total Car Care Center	1561 SE 122nd Ave	Vehicle Storage Indoor Work Area Entrances	7538-01	Automobile Repairing & Service	11-Jun
ADS321		Division Auto Ctr	Collision Auto Center (pending opening)	12335 SE Division St	Indoor Work Area Entrances Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	3-Jun
ADS528	ADS704	AAA Alternators & Starters	Ultimate Eyelashes	17309 SE Division St	Parking Lots, Driveways and Aprons Indoor Work Area Entrance	7538-01	Automobile Repairing & Service	19-Jun
ADS690		Division St Bp		14440 SE Division St	Fueling Waste Storage/Dumpsters	5541-01	Service Stations-Gasoline & Oil	13-Oct
ADS798		Enterprise Rent-A-Car		17020 SE Division St	Vehicle Storage	7514-01	Automobile Renting	23-Jun
ADS929		Atlas Motors LLC		605 SE 82nd Ave	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	26-Jun
ADS931		Chuck Wise Motors		930 SE 82nd Ave	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	25-Jun

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
ADS947		B & D Auto	Family Auto Network	1348 SE 82nd Ave	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	26-Jun
ADS949		Cycle Gear		8930 SE Stark St	Loading Receiving Area Parking Lots, Driveways and Aprons Waste Storage/Dumpsters	5571-05	Motorcycles & Motor Scooters-Accessories	19-May
ADS949		Showroom Shine	Buddy Moore Used Car Sales	8804 SE Stark St	Vehicle Storage	7532-01	Automobile Body-Repairing & Painting	19-Jun
ADS957		E & A Auto Repair		8228 SE Taylor St	Indoor Work Area Entrance Parking Lots, Driveways and Aprons	7538-01	Automobile Repairing & Service	19-Jun
ADS957		J P Automotive	Out of Business (OOB)	8226 SE Taylor St	Indoor Work Area Entrance Parking Lots, Driveways and Aprons	7538-01	Automobile Repairing & Service	
ADS957		Bob's Auto Sales	Tony's Auto Sales	1026 SE 82nd Ave	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	26-Jun
ADT012		AYQ Auto Repair	Santana Auto Repair	605 SE 122nd Ave	Fueling	7538-01	Automobile Repairing & Service	11-Jun
ADT131		Pacific Tire Sales		14800 SE Stark St	Indoor Work Area Entrances	5531-23	Tire-Dealers-Retail	13-Oct
ADT178	ADT184	Nasko's Imports		5409 SE Francis St	Parking Lots, Driveways and Aprons Waste Storage/Dumpsters Vehicle Storage	7538-01	Automobile Repairing & Service	4-Jun
ADT195		Magic Auto Body & Paint	Stephen's Auto Body and Paint	4121 SE 60th Ave	Indoor Work Area Entrance Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	22-Jun
ADT312	ADT313	Midas Auto Svc Experts		3635 SE 82nd Ave	Parking Lots, Driveways and Aprons Waste Storage/Dumpsters	7533-01	Mufflers & Exhaust Systems-Engine	2-Jun

City Owned UIC	Additional City Owned UICs	Business Name	Current Business Status / Name 2009	Business Address	Possible Drainage Characteristics and Potential Issues	Primary SIC Code	Primary SIC Category	2009 Inspection Date
ADT646		Craig's Automotive	Bill's Quality Automotive	6835 SE Foster Rd	Parking Lots, Driveways and Aprons Vehicle/Equipment Maintenance Area	7538-01	Automobile Repairing & Service	3-Jun
ADT647		Larry & Sons Trans Shop Clutch		6959 SE Foster Rd	Indoor Work Area Entrance Parking Lots, Driveways and Aprons Waste Storage/Dumpsters	7538-01	Automobile Repairing & Service	3-Jun
ADT682		Atomic Auto Body		5825 SE 122nd Ave	Vehicle Storage Waste Storage/Dumpsters Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	14-Jun
ADT929		AAA Alternators & Starters	Oregon Green Free	6735 SE 82nd Ave	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	3694-05	Alternators & Starters-Marine (Mfrs)	23-Jun
ADU157		Portland Tire & Wheel		3039 SE 82nd Ave	Parking Lots, Driveways and Aprons Waste Storage/Dumpsters	5531-23	Tire-Dealers-Retail	13-Oct
ADU183		Tire Factory	Ken's Tire Service	8228 SE Division St	Indoor Work Area Entrance Parking Lots, Driveways and Aprons	5531-23	Tire-Dealers-Retail	29-Jun
ADU476		Ron Tonkin Parts	Mount Hood Motor Sports	12136 SE Stark St	Indoor Work Area Entrances Vehicle Storage	7542-03	Automobile Detail & Clean-Up Service	23-Jun
ADU501		Beaver Towing		9111 NE Halsey St	Vehicle Storage Waste Storage/Dumpsters Loading Receiving Area	7549-01	Wrecker Service	19-May
ADU512		ISC Volvo Svc Ctr	Gary Small Saab	1940 SE 82nd Ave	Vehicle Storage	5531-11	Automobile Parts & Supplies-Retail-New	19-Jun
ADU512		G P Auto Sales	Johnson RV Sales	1950 SE 82nd Ave	Wash Area - Auto Vehicle Storage	5511-03	Automobile Dealers-Used Cars	6/29/2009 and 10/14/09

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ADU512		Gary Small Saab	Same as Business Identified above	1940 SE 82nd Ave	Vehicle Storage	5511-02	Automobile Dealers-New Cars	
ADU512		U-Haul Co		2121 SE 82nd Ave	Vehicle Storage	7513-03	Truck Renting & Leasing	14-Oct
ADU606		Foster Road Auto Clinic	Auto Tech Automotive	5130 SE 75th Ave	Indoor Work Area Entrances	7539-14	Brake Service	6/22/2009 and 10/13/09
ADU607		Curt's Cash Corner	Small Wonders	7979 SE Foster Rd	Vehicle Storage Waste Storage/Dumpsters	5932-26	Second Hand Stores	2-Jun
ADU610		Leathers Oil Co		5434 SE 72nd Ave	Fueling Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	5541-01	Service Stations-Gasoline & Oil	13-Oct
ADU612		Darling-Acme Office Machine Co	Out of Business (OOB)	7610 SE Foster Rd	Vehicle Storage Loading Receiving Area	5044-03	Copying & Duplicating Machines & Supls	2-Jun
ADU612		White Knuckle Motor Sports Inc	Le Car	7622 SE Foster Rd	Indoor Work Area Entrance Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	5571-01	All Terrain Vehicles	3-Jun
ADU612		Mc Collum Automotive	No drainage to UIC	7510 SE Foster Rd	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	22-Jun
ADU615	ADU617	B & M Engine Svc		5243 SE 77th Ave	Vehicle Storage Waste Storage/Dumpster	7538-01	Automobile Repairing & Service	2-Jun
ADU858		Shell		4228 SE Woodstock Blvd	Fueling Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	5541-01	Service Stations-Gasoline & Oil	14-Oct
ADV009		Executive Workshop		7420 SE Woodstock Blvd	Indoor Work Area Entrance Parking Lots, Driveways and Aprons	2674-01	Bags-Paper (Manufacturers)	22-Jun
ADV037		Paul's Automotive	Discount Muffler	6441 SE 82nd Ave	Vehicle Storage Indoor Work Area Entrances	7538-01	Automobile Repairing & Service	19-Jun

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ADV037		Jim Gray Auto Sales		6521 SE 82nd Ave	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	13-Oct
ADV067		Division Transmission	Completed as part of Sara Title III Inspections	8509 SE Foster Rd	Vehicle Storage Indoor Work Area Entrances	7537-01	Transmissions-Automobile	
ADV073		Kadel's Auto Body	Completed as part of Sara Title III Inspections	8230 SE Woodstock Blvd	Indoor Work Area Entrances Open dumpsters Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	
ADV109		Ad Graphics		8730 SE Woodstock Blvd	Parking Lots, Driveways and Aprons Waste Storage/Dumpsters	2759-98	Commercial Printing Nec	3-Jun
ADV238		Hyperformance Auto	Out of Business (OOB)	12214 SE Powell Blvd	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7538-01	Automobile Repairing & Service	23-Jun
ADV356		ABC Vacation Trailer Rental		6040 NE 42nd Ave	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7519-03	Trailer Renting & Leasing	25-Jun
ADV371		Clauson Auto Repair	All Car Care	5941 NE Killingsworth	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7538-01	Automobile Repairing & Service	18-Jun
ADV688		Ron Tonkin Nissan		1212 NE 122nd Ave	Vehicle Storage	5511-02	Automobile Dealers-New Cars	13-Oct
ADV694	ADV695	Menlo Park 76		520 NE 122nd Ave	Fueling Indoor Work Area Entrances Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	5541-01	Service Stations-Gasoline & Oil	13-Oct
ADV724		Dan's Auto Upholstery		327 SE 80th Ave	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7532-07	Automobile Seatcovers Tops & Upholstery	19-Jun
ADW010		Quality Used Tires		8138 NE Sandy Blvd	Other Storage	5531-23	Auto and Home Supply Stores	25-Jun

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ADW308		Tire Empire		12160 SE Foster Rd	Indoor Work Area Entrances Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	5531-23	Tire-Dealers-Retail	14-Oct
ADW323		Specialty Masonry Contractors		6424 SE 122nd Ave	Other storage Vehicle/Equipment Maintenance Area	3993-02	Signs (Manufacturers)	4-Jun
ADW323		Foster Road Chevron		12220 SE Foster Rd	Fueling Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	5541-01	Service Stations-Gasoline & Oil	13-Oct
ADW323		Modern Auto		6438 SE 122nd Ave	Vehicle Storage Indoor Work Area Entrances Parking Lots, Driveways and Aprons	5511-03	Automobile Dealers-Used Cars	13-Oct
ADW349		Europa Motors LTD		10455 SE Division St	Vehicle Storage Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7538-01	Automobile Repairing & Service	23-Jun
ADW457		Shell		2450 SE 122nd Ave	Fueling Parking Lots, Driveways and Aprons Waste Storage/Dumpsters	5541-01	Service Stations-Gasoline & Oil	14-Oct
ADW625		Custom Automotive Restoration		3400 SE 122nd Ave	Indoor Work Area Entrances Parking Lots, Driveways and Aprons	7532-04	Automobile Restoration-Antique & Classic	23-Jun
ADW777	ADW778	Eastside Auto Sales		6603 SE 82nd Ave	Vehicle Storage	5511-03	Automobile Dealers-Used Cars	13-Oct
ADW781		Johnson Rv Sales		6850 SE 82nd Ave	Vehicle Storage	5561-03	Recreational Vehicles	19-Jun
AMT147		Motor Sports Engineering		5307 N Albina Ave	Indoor Work Area Entrance Waste Storage/Dumpsters Vehicle Storage	5521-03	Automobile Dealers Performance & Race	24-Jun

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AMU501		U-Haul Co		16119 SE Stark St	Vehicle Storage	7513-03	Truck Renting & Leasing	14-Oct
AMU502	ANA245	Stark Street Shell		16150 SE Stark St	Fueling Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	5541-01	Service Stations-Gasoline & Oil	14-Oct
AMW089		A Better 'T' Shirt Co		747 N Sumner St	Parking Lots, Driveways and Aprons Loading Receiving Area	2759-02	Screen Printing	4-May
ANA271		Buckle's Collision Ctr		10004 SE Foster Rd	Indoor Work Area Entrances Vehicle Storage Parking Lots, Driveways and Aprons	7532-01	Automobile Body-Repairing & Painting	11-Jun
ANA271		Kalberer Frame & Line-Up		9975 SE Woodstock Ct	Indoor Work Area Entrances Vehicle Storage Parking Lots, Driveways and Aprons	7539-03	Wheel Alignment-Frame & Axle Svc-Auto	11-Jun
ANA905		Friendly Food Mart		6010 NE Killingsworth	Parking Lots, Driveways and Aprons; Fueling	5411-03	Convenience Stores	18-Jun
ANB148		JaMac Speaker Co		8600 NE Sandy Blvd	Loading Receiving Area	3651-98	Manufacturing	18-May
ANB148		Thomas Automotive		8540 NE Sandy Blvd	Parking Lots, Driveways and Aprons Vehicle Storage Waste Storage/Dumpsters Outdoor maintenance	7538-01	Automotive Repair, Services and Parking	18-May
ANB159		General Equipment Co		6767 NE Columbia Blvd	Vehicle Storage Other Storage	4953-11	Recycling Equipment & Systems	14-May
ANB161		Karyeta Auto		6750 NE Columbia Blvd	Vehicle Storage	7538-01	Automobile Repairing & Service	31-Mar
ANB302		Leathers Oil Co		11421 SE Powell Blvd	Fueling Waste Storage/Dumpsters Parking Lots, Driveways and Aprons	5541-01	Service Stations-Gasoline & Oil	13-Oct

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ANC294		A Master Touch Body & Paint		12738 SE Foster Rd	Indoor Work Area Entrances Vehicle Storage Other Storage Waste Storage/Dumpsters	7532-01	Automobile Body-Repairing & Painting	3-Jun