

Appendix A

Best Management Practices for Overall System Management

System Management Program Element

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Best Management Practices for Overall System Management

This section describes the best management practices (BMPs) that will be applied to the entire underground injection control (UIC) system on an ongoing basis to prevent, minimize, and control pollutants in stormwater prior to discharge to a UIC. These BMPs are part of the Systemwide Management program element of the UIC Management Plan (UICMP). The BMPs are grouped within five general action categories:

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

The five BMP categories encompass a comprehensive range of actions that together will help ensure that UICs are constructed, operated, and maintained in a manner that meets the requirements of the Water Pollution Control Facility (WPCF) permit and protects groundwater for use as drinking water resource. The BMPs identify tasks that will be undertaken to address specific WPCF permit requirements. They also identify activities the City implements that are not required by the permit, but contribute to stormwater management, groundwater protection, and watershed health.

Category: System Inventory and Assessment (SA)

Overview

Ongoing activities necessary to provide stormwater drainage infrastructure will include the registration and construction of new UICs, replacement and retrofit 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. The BMPs focus on updating and refining information related to the location and physical characteristics of existing and new public UICs. This BMP category fulfills two WPCF requirements:

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

The System Inventory and Assessment category includes the two BMPs identified below.

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

These activities generally relate to ongoing public infrastructure management; however, some activities may occur as a result of the Evaluation and Response program element (as described in Section 5 of the UICMP) or Corrective Action program element (as described in Section 6 of the UICMP).

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.

Introduction

UICs are the only form of stormwater disposal available for many public rights-of-way located east of the Willamette River. Future public infrastructure needs will be satisfied through the construction of new UICs, replacement or retrofit of existing UICs, and decommissioning of existing UICs.

As required by the UIC WPCF permit, the City has developed a UIC Registration Database that identifies the physical and spatial characteristics of known public UICs. The UIC database serves as the primary tracking mechanism and data source for public UICs. The database was completed and submitted to DEQ on September 1, 2005. Since that time, updates have been provided to DEQ quarterly.

BMP SA-1 includes the following activities:

- Tracking of data and information resulting from installation, replacement, retrofitting, or decommissioning of UICs as needed to provide stormwater infrastructure for public facilities and rights-of-way. Examples include new public roads, road rehabilitation, UIC retrofit activities, and replacement of failed UICs.
- Registration of new UICs, and maintaining, updating, and reporting on the physical and spatial characteristics of UICs as part of the UIC Registration Database for public UICs.

Links between SA-1 and Other UICMP Sections

- **BMP SA-2** generates data and information resulting from the evaluation of public UICs relative to factors that could have and adverse impact on groundwater.
- Decommissioning of UICs will follow the guidelines provided in *Decommissioning Procedure for Underground Injection Control Systems* (included in the UICMP as Appendix D).

Permit-Required Activities

[*Relevant permit sections: C(5)(c), C(16), D(10)(a)—UIC Registration Database*]

The City will implement the following tasks to fulfill WPCF requirements:

Task 1: Update the UIC Registration Database regularly to include new and decommissioned UICs and other relevant new information. Submit quarterly UIC Registration Database updates to DEQ.

Assignment: Bureau of Environmental Services

Timeframe: First day of each quarter (December, March, June, September)
Fiscal Year 2005-2006 to Fiscal Year 2014-2015

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

Introduction

The WPCF permit requires the City to evaluate public UICs for the following five factors that may present a risk for adverse impacts to groundwater:

1. Receives drainage from motor vehicle maintenance floor drains, indoor parking facilities, fire station bay drains;
2. Receives drainage from Superfund Amendment and Reauthorization Act (SARA) Title III facilities;
3. Receives drainage from commercial/industrial properties that have site activities that may result in a permit violation;
4. Has inadequate separation distance to groundwater; or
5. Is within 500 feet of a drinking water well or within 2-year time of travel.

The City submitted a *Systemwide Assessment* of all known public UICs to DEQ on July 15, 2006. Part of the assessment included identifying public UICs for which further evaluation/information was needed to make a conclusive determination about any of the five factors listed above.

BMP SA-2 includes the following activities:

- Developing and implementing a description of follow-up activities (*e.g.*, additional field investigations) for UICs identified in the *Systemwide Assessment*; and
- Evaluating proposed or newly identified UICs for the listed factors.

Links between SA-2 and Other UICMP Sections

- **BMP SA-1** provides regular database updates to incorporate data generated in **BMP SA-2**.
- **BMP PC-1** includes ongoing systemwide activities to identify UICs that may drain commercial/industrial properties or SARA Title III facilities where site activities could adversely impact stormwater.

Permit-Required Activities

(Not in any order of priority)

[*Relevant permit sections: C(6), C(12), D(8)—Systemwide Assessment*]

The City will implement the following tasks to fulfill WPCF requirements:

Task 1: Develop a workplan and implementation schedule for follow-up actions (*e.g.*, additional field investigations) on UICs identified in the *Systemwide Assessment*.

Assignment: Bureau of Environmental Services

Timeframe: Submitted the workplan to DEQ December 1, 2006

Task 2: Implement the workplan.

Assignment: Bureau of Environmental Services

Timeframe: Established in the workplan

Task 3: Evaluate proposed or newly identified UICs for the five listed factors. Incorporate the resulting information into the UIC Database and the Evaluation and Response process.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2005-2006 to Fiscal Year 2014-2015

Category: Pollution Control (PC)

Overview

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:

1. Implement a Spill Prevention and Pollution Control (SPPC) Plan.¹
2. Identify activities conducted on commercial/industrial properties, or SARA Title III facilities that may result in a violation of maximum allowable discharge limits (MADLs) in stormwater discharging to a public UIC.

The SPPC Plan describes the spill/emergency prevention and response activities the City implements to control the release of pollutants to UICs and protect groundwater. It focuses equally on spill prevention activities and spill response activities, and applies to all public rights-of-way and City properties with UICs. The SPPC plan also describes the roles of the City bureaus involved in controlling and responding to spills and emergencies: Environmental Services, Maintenance, Fire & Rescue, Water, Portland Parks & Recreation, General Services, Police, and the Office of Emergency Management.

The City submitted a *Systemwide Assessment* of all known public UICs to DEQ on July 15, 2006. Part of the assessment included identifying public UICs that may drain private properties with site activities classified as commercial or industrial, or registered under SARA Title III. BMP PC-1 provides for ongoing identification of private properties that may have the potential to have an adverse impact on stormwater entering a public UIC.

The City's activities in this category are included under one best management practice:

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

¹ The SPPC Plan is included as Appendix C of the UICMP.

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

Introduction

Potential sources of pollutants that can impact public UICs include the following:

- Spills and leaks. These include accidental or unplanned discharges. Examples include fluids released from vehicle accidents, leaking storage containers, firefighting activities, and other emergency events where pollutants may enter a public UIC.
- Illegal disposal. This includes both solid and liquid wastes. Examples include dumping used motor oil, garbage, or other materials into catch basins.
- Improper site management. This includes discharges resulting from improper storage and handling of materials and wastes or insufficient pollution prevention/control measures. Examples include the exposure of material or waste storage areas to stormwater.
- Erosion: If not properly managed, construction site activities can result in erosion and the discharge of sediment and other pollutants into public UICs.

Links between PC-1 and Other UICMP Sections

- **BMP ET-1 and ET-2** include educational and outreach programs that address pollution prevention.
- The WPCF permit requires the City to identify commercial/industrial properties or SARA Title III facilities where site activities could result in a violation of MADLs in stormwater discharging to a UIC. Based on information obtained through PC-1 activities, a UIC or group of UICs may be identified for further assessment in the Evaluation and Response program element.

Permit-Required Activities

[*Relevant permit section: D(10)(c): Spill Prevention and Control Plan*]

The City will implement the following task to fulfill WPCF permit requirements:

Task 1: Implement the SPPC Plan which defines prevention and response activities for spills and emergency events where pollutants may enter a public UIC.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2005-2006 to Fiscal Year 2014-2015

The SPPC Plan includes ongoing citywide pollution control activities to identify and control activities on private properties, including commercial/industrial properties or SARA Title III facilities where site activities could result in a violation of MADLs in stormwater discharging to a UIC (*e.g.*, illegal disposal, improper storage and handling of materials, and erosion). The Spill Protection-Citizen Response (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 hotline seven 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.

Related Groundwater Protection Activities

The City will continue to implement the activities included in this Section that are not required by the WPCF permit but that contribute to groundwater protection. These following actions are voluntary in nature and may be modified or discontinued at the City's discretion:

- Participate in the 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. The committee meets quarterly and is chaired by Portland's Bureau of Environmental Services. Member agencies include:

- City of Portland – Bureaus of Environmental Services, Fire, Maintenance, and Water
- Oregon Department of Transportation
- State Police
- Oregon Department of Fish and Wildlife
- National Marine Fisheries Service (NOAA Fisheries)
- Clean Water Services
- Clackamas County
- Multnomah County
- Port of Portland

Assignment: Bureau of Environmental Services

- Implement the Columbia South Shore Well Field Wellhead Protection Area Program.

Columbia South Shore Well Field (CSSW) groundwater is used as an emergency backup for the 800,000 Oregonians served by the Bull Run supply and also provides supplemental supply during the summer demand season. To protect this valuable drinking water resource, the cities of Portland, Gresham, and Fairview adopted a common set of wellhead protection regulations aimed at new and existing businesses that use and store hazardous materials that pose a threat to groundwater in the CSSW. Portland's City Council adopted the regulations on July 2, 2003. The new regulations require industrial sites that have hazardous materials to implement retrofits by 2008. Retrofits predominately include paving, covering, and berming of outdoor activity and storage areas, as well as retrofitting of UICs with sedimentation manholes for pretreatment and spill containment. The City provides oversight to ensure compliance with the mandated retrofit requirements and schedule (per Title 21 of City Code). The City also provides education and technical assistance to businesses to help them comply with the requirements.

Assignment: Portland Water Bureau, Bureau of Environmental Services, Fire Bureau

- Require implementation of source control measures as specified in the City's *Stormwater Management Manual* (SWMM).

The 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 off-site discharges.

Assignment: Bureau of Environmental Services

- Implement the requirements of Title 10 and the *Erosion Control Manual*.

Title 10 of City Code and the City's *Erosion Control Manual* (finalized in March 2000) provide a comprehensive, citywide erosion and construction site pollutant control program. The Title 10 regulations and the *Erosion Control Manual* cover site planning, use and adequacy of BMPs, and inspection and enforcement measures for any ground-disturbing activity. The manual includes BMPs for seven types of activities: site dewatering, spill prevention and control, solid waste management, vehicle and equipment fueling, vehicle and equipment maintenance, concrete waste management, and structure preparation and painting. Ongoing training and assistance on erosion, sediment, and pollutant control are provided to City staff and contractors/permit applicants.

The Bureau of Development Services operates an automated erosion control hotline to receive complaints about erosion, sediment, and pollutant problems. The bureaus of Development Services and Environmental Services then identify and implement an

appropriate response, including education, technical assistance, or enforcement. This process applies to both permitted construction activities and non-permitted/non-construction activities.

Assignment: Bureau of Development Services, Portland Water Bureau, Bureau of Environmental Services, Portland Office of Transportation, and Parks and Recreation

- Implement solid waste programs to prevent illegal disposal.

The Office of Sustainable Development manages residential and commercial solid waste and recycling programs that prevent illegal disposal of solid and liquid wastes that could result in the discharge of pollutants into public UICs. These programs include curbside recycling, yard debris collection, and bulky waste collection. The programs link closely with neighborhood, non-profit, and regional agency programs for the management of almost any type of material, from construction debris to household hazardous waste.

Assignment: Office of Sustainable Development

- Use the Neighborhood Inspections Program to help enforce the City's property maintenance code.

This program uses enforcement, education, and referrals to help residential property owners comply with maintenance requirements and prevent nuisances such as trash, debris, and illegal dumping that can contribute to pollutant discharges into public UICs.

Assignment: Portland Office of Neighborhood Involvement

- Track and coordinate with regional programs that provide pollution prevention and materials control to minimize pollutant discharges to public UICs.

Examples of these programs include Metro's Household Hazardous Waste Program and Information Resource Center, and Multnomah County Animal Control permitting (to ensure proper control of animal wastes).

Assignment: Bureau of Environmental Services

Category: Education and Training

Overview

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. It includes the following two BMPs:

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

Key messages that will be conveyed through education and training are:

- UICs are an element of an overall watershed strategy to protect and maintain the natural hydrologic cycle. The City supports this overall watershed approach by emphasizing use of vegetated facilities to treat and infiltrate stormwater prior to discharge to a UIC.
- Source control and pollution prevention actions at the ground surface—by citizens as well as by the City—can reduce pollutant loads entering UICs, protect groundwater, and meet permit requirements.
- Public and private UICs should be designed and sited in accordance with the City's SWMM and the WPCF permit.
- Operations and maintenance activities are an essential component of ensuring the City protects groundwater and meets permit requirements and protects groundwater.
- Public and private UICs should be designed and sited in accordance with the City's SWMM and the WPCF permit.

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

Introduction

The Bureau of Environmental Services (BES) currently conducts a number of public education programs and activities that convey information and messages relevant to stormwater, pollution prevention, source control, and environmental protection. These include the following:

- **Clean Rivers Education programs for grades K-12.** These hands-on programs 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 (*e.g.*, marking storm drain inlets with “No Dumping, Drains to Stream”), 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.
- **Regional Coalition for Clean Rivers and Streams.** BES is a member of this coalition of agencies and municipalities in the Portland/Vancouver metro area dedicated to educating the public about the impacts of stormwater runoff pollution. The coalition develops an annual regionwide public awareness campaign that can reach more than 1.4 million people living in the four-county area.
- **Watershed-specific education and stewardship activities.** BES conducts watershed planning and implements watershed programs in the Columbia Slough, Johnson Creek, Fanno Creek, Tryon Creek, and Willamette River Watersheds. The integrated watershed-based approach stresses comprehensive, multi-objective watershed management along geographical boundaries, coordinating the various jurisdictional and public interests within those areas. Each program includes a variety of public education and stewardship activities that focus on the specific needs of that watershed, including coordination and partnerships with watershed councils and other concerned community groups.
- **Publications and signage.** BES publishes and disseminates a variety of educational and informational materials that address stormwater-related issues and activities and are targeted at numerous audiences. BES also develops signage that provides information about specific projects (*e.g.*, stormwater demonstration projects).
- **Coordination with other City programs.** BES coordinates with other City projects and programs (*e.g.*, Endangered Species Act Program, Portland Parks and Recreation programs/ projects, Urban Forestry, River Renaissance) to integrate stormwater-related activities and messages.

Links between ET-1 and Other UICMP Sections

- **BMP PC-1** includes education activities targeted at specific audiences, including fact sheets about spill control and response for industrial/commercial clients and technical assistance to businesses in the CSSW Wellhead Protection Area.

Permit-Required Activities

(Not in any order of priority)

[*Relevant permit section:* D(10)(d)—Employee Training and Public Education]

The City will implement the following tasks to fulfill WPCF permit requirements:

Task 1: Continue to implement existing public education programs and activities.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2005-2006 to Fiscal Year 2014-2105

Task 2: Develop UIC-specific information and messages about groundwater protection to incorporate into existing and new education programs.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2007-2008 to Fiscal Year 2009-2010; thereafter as needed

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.

Introduction

Employee training focuses on providing information to City of Portland staff to raise their knowledge of the UIC permit requirements and to ensure that city practices related to UICs are protective of groundwater. City bureaus involved in UIC-related activities are:

- Bureau of Environmental Services
- Portland Parks and Recreation
- Fire Bureau
- Bureau of Maintenance
- Portland Office of Transportation
- Portland Water Bureau
- Bureau of General Services
- Bureau of Development Services

Types of training currently conducted include:

- Training for relevant City staff members on spill prevention and response.
- Training for Bureau of Maintenance staff members responsible for operations and maintenance of UICs in public rights-of-way.
- Training for Portland Office of Transportation staff members who pave roads or who conduct activities in or near UICs to ensure that UICs do not get paved over and that material from road maintenance or construction activities do not enter UICs.
- Training for relevant staff members of bureaus with UICs on their property (e.g., City parks, fire stations, police stations).
- Training for relevant Portland Water Bureau staff members regarding activities where water may enter UICs (e.g., flushing of fire hydrants).
- Training for development review staff members on requirements of the WPCF permit and Oregon Administrative Rules for UICs (OAR 340-044).
- Training for relevant City staff members on the application of the City's SWMM requirements for new development and redevelopment (e.g., regarding the stormwater management hierarchy and the installation of UICs in public rights-of-way).

- Training for staff from various City bureaus through the use of a City training video, *Stormwatch*, an outreach and education tool that provides general pollution and response messages.

Links between ET-2 and Other UICMP Sections

- **BMP PR-1** includes tasks to evaluate the review and approval process for UICs registered on private property and to develop consistent design standards and guidance for UICs on private and public property. Once this has been done, appropriate training will be provided to development review staff.

Permit-Required Activities

(Not in any order of priority)

[*Relevant permit section:* D(10)(d)—Employee Training and Public Education]

The City will implement the following tasks to fulfill WPCF permit requirements:

Task 1: Continue to implement existing staff training on stormwater management, pollution prevention, operations and maintenance, spill prevention and response, and development review.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2005-2006 to Fiscal Year 2014-2105

Task 2: Maintain records of training locations/times, groups trained, and topics covered.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2005-2006 to Fiscal Year 2014-2105

Task 3: Evaluate the existing training approaches and schedules and revise/update as needed.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2007-2008 to Fiscal Year 2014-2105

Task 4: Provide enhanced training for development review staff on UIC design standards, and review and approval process for UICs registered on private property.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2007-2008 to Fiscal Year 2009-2010

Category: Operations and Maintenance

Overview

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 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. This BMP fulfills the WPCF permit requirement to implement an Operations and Maintenance (O&M) Plan for public UICs. The City's activities in this category are included under one BMP:

- **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.**

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.

Introduction

The City has developed an O&M Plan² that describes the activities the City currently implements to effectively manage its public UICs and protect groundwater quality. The O&M Plan includes the following information:

- Goals and objectives;
- Maintenance targets and schedules;
- Maintenance practices for sedimentation manholes;
- Maintenance practices for UICs;
- Street sweeping and vector control;
- Materials management;
- Recordkeeping;
- O&M for UICs on City-held and operated properties; and
- Roles and responsibilities.

In addition to the activities currently implemented under the O&M Plan, additional assessment or procedures are needed in some areas. These items are summarized below:

Traffic Volumes

Maintenance inspection and cleaning targets for UICs in public rights-of-way are currently based on sediment accumulation rates, rather than on specific traffic counts. Additional City maintenance activities such as street sweeping, however, are adjusted to reflect differing traffic loads. The relationships between stormwater quality, maintenance frequency, and traffic volumes will initially be evaluated using data generated as part of the UIC compliance monitoring. If additional data are needed to fully evaluate these relationships, the data may be generated as part of the BMP Monitoring Program.

Maintenance Access

Out of the City's total inventory of approximately 9,000 UICs, approximately 176 may have inadequate maintenance access (fully or partially obstructed by pavement) and have only a generalized location description. Most of these 176 are assumed to be old Multnomah County sumps (inherited by the City in the 1970s and 1980s) where there were no plans with construction details or the plans were lost in transfer.

² The O&M Plan is included as Appendix B of this UICMP.

UICs on Other City Property

City parks, fire stations, police stations, and other City properties have drywells and soakage trenches to infiltrate flows from impervious and pervious areas. As part of the *Systemwide Assessment*, the relevant City bureaus participated in locating and identifying these UICs. Some facilities on City-held and operated properties do not have standardized operations and maintenance procedures at this time. Maintenance templates in the City's SWMM describe general maintenance practices established for soakage trenches and drywells.

Permit-Required Activities

(Not in any order of priority)

[*Relevant permit section: D(10)(b)—O&M Plan*]

The City will implement the following tasks to fulfill WPCF permit requirements:

Task 1: Implement the O&M Plan.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2005-2006 to Fiscal Year 2014-2105

Task 2: Use UIC stormwater quality monitoring data to evaluate the relationship between cleaning schedules and traffic volume. Where appropriate, adjust current O&M Plan maintenance schedules and targets.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2007-2008 to Fiscal Year 2009-2010

Task 3: Standardize operations and maintenance procedures for UICs on City property, based on the O&M templates established in the SWMM. Develop applicable tracking systems.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2007-2008 to Fiscal Year 2009-2010

Task 4: Evaluate UICs that have inadequate maintenance access and develop recommendations to address them.

Assignment: Bureau of Environmental Services

Timeframe: Fiscal Year 2007-2008 to Fiscal Year 2009-2010

Related Groundwater Protection Activities

The City will implement the activities included in this Section that are not required by the WPCF permit but that contribute to groundwater protection. These following actions are voluntary in nature and may be modified or discontinued at the City's discretion:

- Evaluate Alternative Outlet Structures. The most commonly required repair of UIC system components is replacement of the 90-degree elbow (inverted outlet) within the sedimentation manhole. Over the last year, the City has been experimenting with new snout or hood outlets that are expected to perform better than the 90-degree elbows.

Assignment: Bureau of Environmental Services

Category: Policy and Regulation

Overview

The development of policies, codes, and administrative rules is a key element in providing long-term protection of groundwater. The City's activities in this category are included under one BMP:

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

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

Introduction

This BMP 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.

Links between PR-1 and Other UICMP Sections

- **BMP PR-1** includes tasks to evaluate the review and approval process for UICs registered on private property and to develop consistent design standards and guidance for UICs on private and public property. Once this has been done, appropriate training will be provided to development review staff under **BMP ET-2**.

Permit-Required Activities

There are no specific permit requirements relevant to this BMP.

Related Groundwater Protection Activities

The City will implement the activities included in this Section that are not required by the WPCF permit but that contribute to groundwater protection. These following actions are voluntary in nature and may be modified or discontinued at the City's discretion:

- Develop and implement a Green Streets Program.

In August 2005, the City formed the Green Streets Cross-Bureau Team, comprising staff members from 10 City bureaus and offices with expertise in stormwater engineering, transportation, planning, utilities, parks, sustainability, and maintenance. The team was charged with creating a programmatic approach to implementing green streets and identifying solutions to implementation issues. In April 2006, the team completed its Phase I Report that identifies opportunities and challenges and recommends solutions for key issues. Phase II work, underway in fiscal year 2006-07, will focus on developing a programmatic approach to implementing green streets.

Assignment: Bureau of Environmental Services, Portland Office of Transportation

- Clarify and implement the stormwater hierarchy for development/redevelopment projects, as specified in the City's SWMM.

The stormwater hierarchy is used to determine the ultimate discharge point for stormwater from a development/redevelopment site. It protects groundwater resources by requiring the use of onsite surface filtration facilities where practicable. Where infiltration at the ground surface is not possible, UICs may be used, along with the appropriate degree of pollution reduction (depending on the source of the stormwater runoff). The City is currently developing the 2007 SWMM, which will include revisions/clarifications to the current hierarchy contained in the 2004 SWMM.

Assignment: Bureau of Environmental Services, Portland Office of Transportation

- Evaluate the need to develop code restricting the conversion of existing irrigation wells to drinking water wells to ensure adequate separation distance from public UICs.

Assignment: Bureau of Environmental Services

- Evaluate the need to develop code restricting the installation of new private drinking water wells or irrigation wells to ensure new drinking water and irrigation wells are not installed near public UICs.

Assignment: Bureau of Environmental Services

- Work with the Bureau of Development Services and Oregon Department of Environmental Quality (DEQ) to evaluate the review and approval process for UICs registered on private property.

Assignment: Bureau of Environmental Services

- Work with the Bureau of Development Services and DEQ to develop consistent design standards and guidance for UICs on private and public property.

Assignment: Bureau of Environmental Services