CITY OF Salem AT YOUR SERVICE
PUBLIC WORKS DEPARTMENT
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October 24, 2013

Nancy Gramlich
Middle Willamette Basin Coordinator
Oregon Department of Environmental Quality
750 Front Street NE Suite 120
Salem OR 97301

SUBJECT: **City of Salem Total Maximum Daily Load Implementation Plan Progress Report FY 2012-13**

Dear Ms. Gramlich:

The enclosed Total Maximum Daily Load (TMDL) Implementation Plan progress report describes activities completed by the City of Salem from July 1, 2012, through June 30, 2013. The City of Salem is pleased to submit this progress report, as a Designated Management Agency, per the requirements listed in *Oregon Administrative Rule* (OAR) Chapter 340 Division 042. We trust you will find that this report sufficiently demonstrates that the City of Salem is fulfilling its obligations associated with the Willamette Basin and Molalla/Pudding Subbasin TMDLs.

Please contact Heather Dimke, Stormwater Program Coordinator, at 503-588-6063, extension 7734, if you have any questions or to request additional information.

Sincerely,

Francis Kessler
Operations Division Manager

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Enclosure: City of Salem TMDL Implementation Plan Progress Report FY 2012-13
cc: Peter Fernandez, P.E., Public Works Director
Sam Kidd, Stormwater and Wastewater Collections Services Supervisor
Keith Bondaug-Winn, AIC Stormwater Quality Supervisor
File: Chrono; Regulatory

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TOTAL MAXIMUM DAILY LOAD (TMDL) IMPLEMENTATION PLAN PROGRESS REPORT: FY 2012-2013

For the

City of Salem

October 23, 2013

City of Salem, Oregon
Public Works Department
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1 INTRODUCTION

This report summarizes the progress of Total Maximum Daily Load (TMDL) associated implementation activities conducted by the City of Salem (the City) in response to the Willamette Basin and Molalla-Pudding Subbasin TMDLs and as described in the City's TMDL Implementation Plan, which was approved by the State of Oregon Department of Environmental Quality (ODEQ) in July 2010. This is the City of Salem's fourth annual TMDL progress report, detailing implementation activities for the fiscal year beginning July 1, 2012, and ending June 30, 2013 (FY 2012-13).

2 BACKGROUND AND REPORTING REQUIREMENTS

On September 21, 2006, ODEQ issued the Willamette Basin TMDL as an Order, and submitted the TMDL to the Environmental Protection Agency (EPA) for approval. In late December 2008, ODEQ similarly issued the Molalla-Pudding Subbasin TMDL as an Order, and subsequently submitted that TMDL to the EPA for approval. ODEQ developed a Water Quality Management Plan (WQMP) to describe the overall framework for implementing the TMDLs for both basins. The WQMP includes a description of activities, programs, legal authorities, and other measures for which ODEQ and other designated management agencies (DMAs) have regulatory responsibility. TMDL implementation activities would be carried out under existing regulatory authorities, programs, and water quality restoration plans, as well as by TMDL Implementation Plans that certain DMAs would develop to fulfill requirements of the TMDL.

As a DMA, the City of Salem was required to develop a TMDL Implementation Plan for review and approval by ODEQ, and to subsequently implement activities associated with the approved plan. On January 22, 2010, City and ODEQ staff met regarding the inter-relationship between the City's existing National Pollutant Discharge Elimination System (NPDES) permits, the Willamette Basin and Molalla-Pudding Subbasin TMDL programs, and associated annual reports. It was agreed that November 1st was an acceptable date for the City's submission of its TMDL Implementation Plan Progress Report, and that report would encompass the City's responsibilities under both the Willamette and Molalla-Pudding TMDLs. However, because of the differing effective dates of the two TMDLs (which in turn trigger subsequent reporting requirements), the following specific reporting requirements were agreed upon:

- The TMDL Progress Report (for both TMDLs) will be submitted to the ODEQ by November 1st of each year, coinciding with the City's Municipal Separate Storm Sewer System (MS4) Permit Annual Report.
- The MS4 Permit Annual Report will be submitted to ODEQ's Portland Office, with a copy being provided to ODEQ's Salem Office as an exhibit or appendix to the TMDL Progress Report.
- The first Progress Report for the Willamette Basin TMDL will be submitted by **November 1, 2010**. It will encompass the time period from August 5, 2009, (date of ODEQ's approval of the City's Implementation Plan), through June 30, 2010 (end of fiscal year).
- The first Progress Report for the Molalla-Pudding Subbasin TMDL will be submitted by **November 1, 2011**, and encompass the time period beginning with the date of ODEQ's approval of the City's

Implementation Plan through June 30, 2011. It will also encompass the City's activities relative to the Willamette TMDL and serve as the City's second Progress Report for that TMDL.

3 LOCAL AREA TMDL WATER BODIES

3.1 WILLAMETTE RIVER TMDL

The Willamette Basin TMDL pollutants of concern are elevated summer temperatures, elevated bacteria levels, and mercury. This TMDL encompasses the Willamette River and tributaries within the City of Salem's jurisdiction.

3.2 MOLALLA-PUDDING TMDL

The Molalla-Pudding Subbasin TMDL pollutants of concern are elevated summer temperatures, elevated bacteria levels, mercury, iron, and DDT. The Molalla-Pudding Subbasin encompasses an eastern portion of Salem's wastewater and stormwater service area. All wastewater collected from within the eastern City limits and adjacent service areas within the unincorporated East Salem Service District (within Salem's Urban Growth Boundary but outside the City limits) is collected and transported to the Willow Lake Water Pollution Control Facility (WLWPCF) for treatment and discharge to the Willamette River. The City's stormwater system is intertwined with the stormwater system owned and operated by Marion County (through the East Salem Service District). The collected (and in many cases co-mingled) stormwater runoff in much of East Salem is ultimately discharged at several locations into the Little Pudding River drainage system.

4 RELEVANT WATER QUALITY PERMITS AND PROGRAMS

City of Salem activities associated with maintaining compliance with four (4) individual ODEQ-issued NPDES water quality permits contribute, in part, to maintaining compliance with the City's ODEQ-approved TMDL Implementation Plan. These activities are summarized in the sub-sections that follow, in context of the following NPDES permits:

- City of Salem Willow Lake Water Pollution Control Facility (WLWPCF) National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge Permit (Permit No. 101145, File No. 78140)
- City of Salem NPDES Municipal Separate Storm Sewer System (MS4) Discharge Permit (Permit No. 101513, File No. 108919)
- City of Salem 1200-CA Permit (File No. 109744) for Erosion Prevention and Sediment Control (EPSC) on All City Land Disturbing Construction Projects
- City of Salem 1200-Z Industrial Stormwater Permit for McNary Field Airport Operations (File No. 106923)

The City's TMDL Implementation Plan includes Best Management Practice (BMP) activities that are related to the NPDES MS4 Permit and Stormwater Management Plan (SWMP), the NPDES Wastewater Discharge Permit, and additional non-point source BMPs. The non-point source BMPs were identified to supplement activities associated with the compliance of the ODEQ-issued NPDES permits.

The BMP activities are listed in the TMDL Implementation Plan BMP Progress Matrix (provided in Appendix A). A column labeled "BMP Source" identifies the origin of the activity. The MS4 SWMP encompasses a significant component of the City's TMDL strategies. A summary of MS4 SWMP activities completed in FY 2012-13 can be found in the MS4 Annual Report (Appendix B).

The TMDL Implementation Plan BMP Progress Matrix was updated in FY 2011-12 to appropriately reflect the BMP activities currently required under the renewed MS4 Permit and 2010 SWMP.

4.1 NPDES WASTEWATER DISCHARGE PERMIT

The City of Salem submitted its NPDES Wastewater Discharge Permit Annual Report for FY 2012-13 to the ODEQ on August 2, 2013. The submittal consisted of two separate reports as required by the City's NPDES Permit. These reports included:

1. Inflow Removal Program Report
2. Salem's Management, Operation, and Maintenance (sMOM) Program Report

During the reporting period of FY 2012-13, the City continued to comply with requirements of its NPDES Wastewater Discharge Permit, and as a result, in part, has satisfied requirements of its TMDL Implementation Plan.

4.2 NPDES MS4 PERMIT

The MS4 Permit and associated Stormwater Management Plan (SWMP) authorize discharges from the municipal stormwater system into waters of the state. The City's current NPDES MS4 Permit was issued on December 30, 2010, and is scheduled to expire in December 29, 2015. The approved 2010 SWMP has been incorporated into this renewed MS4 Permit by reference and is now reflected in the TMDL Implementation Plan BMP Progress Matrix (Appendix A).

The Environmental Protection Agency (EPA) conducted an inspection of the City's MS4 and SWMP on July 31, 2012, through August 2, 2012, to assess compliance with the NPDES MS4 Permit. Results of this inspection were not received during this reporting period.

As reported in the City's NPDES MS4 Annual Report (FY 2012-13), the City continues to implement activities identified in the 2010 SWMP. Pending ODEQ approval of the report, the City believes itself in continued compliance with MS4 Permit requirements and continues to satisfy, in part, the requirements of its TMDL Implementation Plan.

4.3 NPDES 1200-CA PERMIT

The City possesses an NPDES 1200-CA Permit that addresses Erosion Prevention and Sediment Control (EPSC) measures for all land disturbing construction projects conducted and owned by the City. By minimizing the potential for sediment-laden runoff from construction sites, pollutants associated with sediment (principally metals, but also bacteria, iron, and DDT) are also minimized. As a result, EPSC requirements are incorporated into construction drawings and specifications, the 1200-CA Permit is included in City contract documents, and EPSC measures are an agenda item at all preconstruction conferences.

The City initiated its local EPSC program in 2001 with the adoption of Salem Revised Code (SRC) Chapter 75, *Erosion Prevention and Sediment Control*. Amendments to SRC Chapter 75 were initiated in FY 2012-13 to ensure consistency with MS4 Permit requirements. The EPSC program continues to be managed adaptively and proactively to provide increased education and training as well as enforcement. During this reporting period, EPSC training was provided to regional area contractors and design consultants by City and local agency staff at the "2nd Annual Mid-Willamette Valley Erosion Control Summit" (January 15, 2013), and to City Engineering Division staff to ensure compliance with 1200-CA and MS4 Permit requirements. The City added one full time inspector during this fiscal year who is dedicated to erosion control and ensuring compliance with the 1200-CA Permit and SRC Chapter 75.

The City is not currently an ODEQ-agent for implementation of the NPDES 1200-C Permit program, but may consider that potential as ODEQ's program continues to evolve.

During the reporting period of FY 2012-13, the City continued to comply with requirements of its 1200-CA Permit, and as a result, in part, has satisfied requirements of its TMDL Implementation Plan.

4.4 NPDES 1200-Z PERMIT

On June 28, 2012, the City submitted an application along with an updated Stormwater Pollution Control Plan (SWPCP) to the ODEQ for renewal of the NPDES 1200-Z Permit for the City's McNary Field Airport Operations. On July 11, 2012, the City received confirmation that the ODEQ is administratively extending permit coverage and has requested that the City continue to operate under the expired 1200-Z Permit and SWPCP until a permit assignment letter is issued.

Stormwater discharges from the Airport's drainage system are regularly monitored in accordance with conditions of the 1200-Z Permit, and any irregularities (if encountered) are investigated and addressed by Airport staff, drawing upon the resources of the City's Environmental Services staff as appropriate. In FY 2012-13, Public Works and Airport Staff collected four outfall samples required under the 1200-Z Permit.

In addition, although principally associated with flight operations safety, the Airport continues to maintain a proactive geese control program which provides a secondary stormwater benefit of reducing the impact birds may be having on bacteria levels in the Airport's stormwater runoff. Airport Staff also continued an aggressive Pocket Gopher eradication program and anticipates improving these programs in the future.

During the reporting period of FY 2012-13, the City continued to comply with requirements of its NPDES 1200-Z Permit, and as a result, has satisfied certain requirements of its TMDL Implementation Plan.

5 HIGHLIGHTS OF BACTERIA MANAGEMENT STRATEGIES

5.1 WASTEWATER TREATMENT FACILITIES

The Willow Lake Water Pollution Control Facility (WLWPCF) has continued to comply with NPDES Wastewater Permit effluent standards for bacteria. The City has invested approximately $229 million for improvements at the WLWPCF, the North River Road Wet Weather Treatment Facility (NRRWWTF), and various collection system/pump station improvements as part of its efforts to reduce SSOs and to comply with ODEQ's water quality bacteria standard. The total treatment capacity of the wastewater treatment system is 205 MGD. Future improvement projects will be identified in the 5-year Capital Improvement Plan and budgeted for annually.

5.2 PUBLIC EDUCATION AND OUTREACH

Outreach activities have been identified in the TMDL Implementation Plan BMP Progress Matrix (Appendix A) that accentuate the City's comprehensive effort to improve local water quality through public education. Each year the Public Works Natural Resources Outreach Specialist develops a work plan based on targeted pollutants and audiences. Tools are developed and/or implemented to meet the work plan elements based on staff and funding resources. TMDL pollutants are included as a component of other outreach efforts, such as programs relating to water conservation and stormwater. Activities conducted during this reporting period are highlighted in the following sections.

5.2.1 FIVE YEAR STORMWATER OUTREACH PLAN

During FY 2012-13, the 5-year stormwater outreach plan was completed. Staff continue to operate under the guidance of the plan, with continued outreach targeting E. coli that will end with an effectiveness evaluation in the summer of 2014.

One highlight of these outreach efforts is the development of the Capital Canine Club (CCC) in conjunction with the City of Keizer and Marion County. The CCC is based on social marketing principles for promoting a desired public behavior (i.e., pet waste pick up). When CCC members pledge to pick up after their pets, the City agrees to post their pet's photo on the CCC webpage and provides a free clip-on leash mutt mitt dispenser.

The City also partnered with Marion County and the City of Keizer to host "Howl-a-Palooza", a community resource event for dog owners that includes pet waste information and the chance to become a CCC member.

Quarterly "*Know the Scoop"* news briefs were mailed to 620 people in FY 2012-13. This newsletter provides information about what the City of Salem and other community members are doing to help share the "pick up after your pet" message.

6 HIGHLIGHTS OF MERCURY MANAGEMENT STRATEGIES

6.1 WASTEWATER MERCURY MANAGEMENT STRATEGIES

Through implementation of SRC Chapter 74 *Pretreatment Provisions*, the City established local discharge limits for mercury to reduce its introduction to the wastewater collection system and WLWPCF. Compliance with discharge limits is achieved through the City's Industrial Wastewater Pretreatment Program, which consists of regular inspections of both permitted and non-permitted facilities. In addition, the WLWPCF collects monthly influent and effluent mercury concentration data.

6.2 UPDATE OF THE CITY'S STORMWATER MANAGEMENT DESIGN STANDARDS

During FY 2012-13, revisions to the Stormwater Management Design Standards (Design Standards) and a new stand-alone stormwater chapter (Chapter 71) for the Salem Revised Code (SRC) continued. Revisions to the Design Standards will include requirements for structural stormwater quality facilities (e.g., stormwater planters, rain gardens, and vegetated filter strips), as well as measures to further address stormwater quantity and source controls. A key performance target for stormwater quality facilities will be the effective control (and reduction) of total suspended solids (TSS). Suspended solids such as soil particles inherently carry mercury (principally from air deposition, but also from naturally occurring and transportation-related sources) and other pollutants. By requiring stormwater treatment facilities that reduce TSS concentrations in stormwater, it is anticipated that mercury concentrations in stormwater discharges will be reduced as well. The revised Design Standards and new SRC Chapter 71 will apply citywide to both public and private new development and redevelopment projects. The revised Design Standards and SRC Chapter 71 will become effective no later than January 1, 2014.

6.3 RETROFIT FEASIBILITY STUDY

Public Works staff continued efforts on a retrofit feasibility study that will allow the City to identify and prioritize retrofit opportunities within the stormwater system to provide water quality treatment and TSS removal. This study will inform the retrofit strategy that must be submitted to the ODEQ by November 1, 2014, per the requirements outlined in Schedule A.6 of the MS4 Permit.

During this reporting period, the City of Salem retrofitted a surface detention basin (Saddle Club Road) into a subsurface gravel treatment wetland, which provides water quality treatment as well as enhanced detention and infiltration. This project serves three functions in terms of developing a retrofit strategy: 1) It provides a better understanding of the City's capabilities in the internal design and construction of a retrofitted surface detention basin; 2) Monitoring data (e.g., TSS and E.coli) collected at this structural BMP facility will provide supporting data for effective pollutant removal, and 3) The process used to identify this project helped to identify a preliminary list of City-owned detention facilities, which may serve as viable candidates for future retrofit projects.

6.4 AMALGAM SEPARATORS

Environmental Services staff continued to survey dental offices in FY 2012-13 to certify compliance with Oregon Senate Bill 704. Senate Bill 704 requires new dental offices to install amalgam separators and comply with BMPs recommended by the Oregon Dental Association (ODA); and it requires established offices operating in accordance with the BMPs to have installed amalgam separators by January 1, 2011. Although the City has no responsibility for regulatory oversight under SB 704, Environmental Services continues to track new dentists through the building permit process and verify amalgam separator installations and good mercury housekeeping practices in order to limit discharges of mercury to the WLWPCF.

Accomplishments during the life of the program:

- 258 dentists/offices surveyed
- 147 amalgam separator installations verified
- 54 do not use amalgam due to the nature of their practice

Accomplishments during fiscal year 2012-13:

- 7 new dentists/offices identified through the plans review process
- 4 new surveys sent and returned
- 3 surveys will be sent upon completion of the project

6.5 EROSION CONTROL OUTREACH PLAN

According to ODEQ's analysis in the Willamette Basin TMDL, the two principal contributors of mercury to the Willamette River are surface soil erosion (50.2 percent) and air deposition either directly through the air or through runoff (43.6 percent). Effective implementation of the City's erosion prevention program follows requirements of its MS4 Permit and 1200-CA Permit. As mentioned in Section 4.3, the City continues to provide training to City staff, local consultants and developers, individual homebuilders, and subcontractors. As part of the Mid-Willamette Outreach Group (M-WOG), Salem staff collaborated with the City of Keizer, Marion County, and the Marion Soil and Water Conservation District to coordinate the "2nd Annual Mid-Valley Erosion Control Summit" at Keizer City Hall on January 15, 2013, that was geared toward local contractors.

6.6 MERCURY TAKE-BACK PROGRAMS

The City does not currently administer its own public take back program for mercury, and thus has focused its energy collaborating with local partners by promoting existing residential and small business programs administered by Marion County. The Salem-Keizer Recycling & Transfer Station now takes mercury-containing waste, including compact fluorescent lights (CFLs), seven days-a-week excluding major holidays. The new hours improve recycling opportunities and convenience, while reducing the need to plan and promote designated collection events.

Under the Resource Conservation and Recovery Act (RCRA), the City's Environmental Services section administers an internal hazardous waste program. This program includes mercury waste collection (including spent CFLs) by the City's Facilities section for all City facilities. The Facilities staff is responsible for the collection of thousands of spent CFLs annually, and the Environmental Services section is responsible for the proper storage and disposal of these materials through a licensed hazardous waste contractor.

7 HIGHLIGHTS OF TEMPERATURE MANAGEMENT STRATEGIES

7.1 WASTEWATER TREATMENT TEMPERATURE MANAGEMENT STRATEGIES

Maximum wastewater discharge limits for temperature as well as other water quality constituents are enforced for area businesses per SRC Chapter 74 *Pretreatment Provisions* and associated City-issued wastewater discharge permits. A waste load allocation for temperature will be incorporated into the WLWPCF NPDES Wastewater Discharge Permit once it is renewed. The City has complied and will continue to comply with its NPDES Wastewater Discharge Permit at its treatment facilities, and it will continue to enforce industrial pretreatment temperature effluent limits of local businesses.

7.2 CHANNEL AND STREAM BANK ENHANCEMENTS

During FY 2012-13, City staff continued efforts to develop a Stream Mitigation Bank Program for City-funded projects that require mitigation for in-stream impacts. One objective under the program is to preserve and improve targeted stream reaches on a prioritized basis. The viability of such a program depends on the cooperation and approval from the U.S. Army Corps of Engineers (COE), the Oregon Department of State Lands (DSL), and the Interagency Review Team (IRT).

The final draft of the stream mitigation process was completed in January 2010. City staff and Pacific Habitat Services (consultant) completed the mitigation bank "prospectus," which describes the framework and a pilot project for the stream banking program. The prospectus was submitted to and approved by the COE and DSL in June 2011.

Upon approval of the Prospectus, the City held meetings with the state/federal IRT to discuss the technical aspects of the stream mitigation program. Based on input from the IRT, a draft Mitigation Bank Instrument (MBI) was completed and submitted to the DSL and COE in late February 2012. A completeness review by the agencies identified a number of issues that required revision of the MBI document. A revised MBI document has been submitted to the DSL and COE for a completeness review.

In FY 2012-13 the City and consultant updated the methodology in response to IRT questions, prepared a draft of the Waln Creek prospectus, and updated the MBI draft in response to IRT comments.

7.3 RIPARIAN DATA PRIORITIZATION

The City has conducted several analyses related to riparian and urban tree canopy. Although no actual reduction in temperature loading takes place through these studies, the activities will help prioritize and

identify specific locations for future temperature-related projects. To date, the City has conducted the following activities:

- Completed a Riparian Shade Inventory (FY 2008-09)
- Conducted a Riparian Shade Prioritization study, including the development of a GIS-based decision support tool (FY 2010-11)

Data from the Riparian Shade Prioritization Study and Urban Tree Canopy study helped the City to identify priority locations for targeted riparian and neighborhood tree planting activities in FY 2012-13 (see Section 7.5.1). During this reporting period, Public Works staff collaborated to modify the City's "Free Tree Program" to target areas indicated as having low riparian shade and neighborhood canopy cover. Under contract with Friends of Trees, targeted areas will be planted with native trees and shrubs during the next fiscal year.

7.4 RIPARIAN ACTION PLAN

One objective of the Riparian Action Plan is to identify and implement one City showcase project. During FY 2012-13, City staff discussed options for modifying the City's Free Tree Program to bring about this goal. Using data from the riparian shade inventory, City staff surveyed five locations having low riparian canopy cover as potential project sites. From this list, Clark Creek Park was selected to receive targeted planting/restoration work in FY 2013-14. In addition to planting the City-owned park, up to 20 private taxlots will be identified and invited to participate in the planting project.

Another objective of the Riparian Action Plan is the development and implementation of a Riparian Outreach Plan that includes the following tasks:

- increasing volunteer opportunities,
- working with local tree service companies for riparian replanting options, and
- recruiting tree groups for program implementation assistance

During FY 2012-13, staff created a brochure under the Clean Streams campaign that included actions streamside property owners can take to reduce their impacts on local streams. This document was sent to Salem's streamside residents during this reporting period.

City efforts have continued to follow the five urban non-point temperature strategies that were identified in the City's TMDL Implementation Plan as follows:

1. Assess conditions of the local creeks to determine shade potential and heat sink sources via the shade inventory (completed 2009)

2. Prioritize stream reaches for planting opportunities (ongoing)

3. Conduct targeted outreach to private landowners where potential opportunities to increase effective shade are the greatest (first targeted outreach scheduled for FY 2013-14)

4. Develop budget and plans for the overall program, as well as for each specific plan element (ongoing)

5. Develop a tracking program for shade improvements (requested for FY 2014-15 budget)

7.5 TREE AND WETLAND PRESERVATION

The City recognizes that the preservation of urban trees aids in water quality, minimizes the quantity of stormwater runoff, and reduces erosion while enhancing habitat. As such, the City continues to coordinate with its departments and the public regarding tree and wetland preservation, consistent with Chapters 68 and 126 of the Salem Revised Code (SRC). In pursuit of developing an outreach plan for educating the public about trees, a City Tree Team was assembled in 2009 to review major tree and vegetation-related code. In FY 2009-10 the Team began coordination of tree preservation issues within the City, including coordination under a proposed Urban Forestry Program.

7.5.1 URBAN TREE CANOPY

The City's Community Development and Public Works Planning staff led a citywide, interdepartmental effort to review tree and vegetation preservation-related chapters of the Salem Revised Code. The City's "Tree Team" made suggestions for short-term and long-term, minor and major changes for tree protection and code language consistency. Efforts to align and/or revise the language within the new stormwater–dedicated chapter of the SRC, erosion control code, Public Works Design Standards, and the City's Unified Development Code process have continued during this reporting year.

The City updated its Urban Tree Canopy study in FY 2010-11 and conducted a Potential Urban Tree Canopy study in FY 2011-12. In FY 2012-13, a stakeholder Community Forestry Advisory Committee was formed to assist in developing a strategic plan, including a recommendation to set a canopy goal. This group completed its work in December 2012, with six goals and 145 specific actions related to protecting, increasing, and enhancing the City's urban forest. The final recommendations were presented to the Public Works Director in December 2012. Following the work of the committee, public outreach about the Strategic Plan and urban canopy benefits was conducted throughout the remainder of the fiscal year (January 2013 through June 30, 2013).

As part of the Community Forestry Strategic Plan, citywide coordination on tree issues was identified as an action item. As such, the City Tree Team will continue to meet quarterly. In addition, more substantial code changes may be recommended for advancement to City Council.

Another recommendation of the Strategic Plan was to involve a nonprofit tree group, such as Friends of Trees, to expand into Salem. Having such a group increases the visibility of tree planting opportunities, trains and recruits local volunteers, and provides many other services to the public that may be outside the capacity of the City. In March of 2013, Friends of Trees was contracted by the City to conduct a community tree planting event in a low canopy neighborhood. The event was a collaborative effort between the City, Friends of Trees, and the Salem-Keizer School District. Twenty trees were planted at the Hoover Elementary School and adjacent Hoover Park.

The City will continue to assess tree planting opportunities within City-owned properties and on local schools, as well as future engagement of Friends of Trees in other planting projects.

8 HIGHLIGHTS OF TOTAL SUSPENDED SOLIDS (TSS) STRATEGIES

Total Suspended Solids (TSS) is closely correlated to iron and DDT, and therefore serves as a surrogate for those pollutants in the Molalla-Pudding Subbasin TMDL. Although iron is a naturally occurring material, it may be contributed in unnatural concentrations through runoff and erosion. Similarly, DDT may be introduced to water bodies through runoff and/or bank erosion at higher stream flows. In both cases erosion is seen as a major contributor of iron and DDT and is therefore addressed in the Molalla-Pudding Subbasin TMDL.

The City has continued its efforts to reduce erosion into local area water bodies through point source and non-point source BMPs. The City has complied with the requirements of the NPDES 1200-CA Permit during the FY 2012-13 reporting period and continues to comply with such requirements to minimize the potential for pollution and sediment-laden runoff from construction sites (see Section 4.3). Concurrently, modifications to the City's EPSC program were initiated during the FY 2012-13 reporting period to maintain compliance with the requirements listed under Schedule A.4.c of the NPDES MS4 Permit and minimize the potential for pollution from the municipal stormwater system.

Preparation of a retrofit strategy and hydromodification study will specifically address opportunities for improving the water quality and flow control capabilities of the City's MS4 infrastructure, and thereby further reduce stormwater impacts to City streams. Both of these documents will be completed in accordance with the time schedules set forth in Schedules A.5 and A.6 of the MS4 Permit.

The City's efforts to revise the Stormwater Design Standards (see Section 6.2) include a key performance target for stormwater treatment facilities to reduce TSS concentrations in stormwater. Through such efforts, the concentration of soil particles in stormwater discharges, which may contain mercury, iron, and DDT, will be reduced.

9 PRESCRIPTION DRUG TAKE-BACK PROGRAM

Water pollution organizations have been concerned for several years over the method of disposal of prescription drugs. Improper disposal down sinks and toilets have contributed to the drugs showing up in treatment facilities and passing through to rivers and streams. Likewise, improper disposal in household waste has led to drugs leaching through landfills and ending up in rivers and streams. This program is not included in the City's TMDL Implementation Plan but is remains relevant to the goals of improving water quality.

In October of 2011 the City opened a prescription drug collection facility in the Salem Police Department lobby. Citizens may bring unwanted prescriptions and medications to the site for free disposal 24 hours a day, seven days a week. During FY 2012-13, a total of 684.66 pounds of medications and associated packaging were received. Since the facility opened in 2011, a total of 1,182.16 pounds of medications have been collected.

10 COMPLIANCE WITH LAND USE REQUIREMENTS

The City has sole jurisdiction for the administration of land use requirements and actions within its City limits. Accordingly, all of the strategies outlined in the TMDL Implementation Plan are considered to be consistent with the City's land use plans and implementing codes. The City will evaluate and endeavor to maintain consistency with local and statewide land use laws in any future actions related to TMDL implementation. During this fiscal year, City staff continued to incorporate selected chapters of the Salem Revised Code (SRC) into a single, Unified Development Code (UDC) in order to simplify and clarify development requirements in Salem.

11 FISCAL ANALYSIS

Salem Public Works activities identified in the TMDL Implementation Plan are funded through the recently adopted stormwater utility as well as through water and wastewater user fees (Water and Sewer Fund 310). The Water and Sewer Fund 310 adopted budget for FY 2012-13 is provided in Appendix C. Stormwater-specific budgets are provided in the City's 2013 MS4 Annual Report (Appendix B, Section 3, Table 2).

In 2009, City staff began working on a proposal to create a stormwater utility that would fund stormwater services with a separate stormwater fee. The purpose of creating a stormwater utility was to align stormwater rates with the stormwater impacts of the ratepayer's property, which can be directly linked to the property's impervious surface area. On December 6, 2010, the Salem City Council voted to approve creation of a stormwater utility. The new Stormwater Utility was successfully implemented in January 2013, and will be phased in over three successive years. The fee structure includes credits that provide for reductions in the impervious surface-based portion of the utility fee for ratepayers who have stormwater treatment and/or flow control facilities on their property. Generally, the credit is higher for facilities that are categorized as green stormwater infrastructure than for more traditional stormwater facilities.

The Water and Sewer Fund 310 is self-supporting, with water and wastewater rates currently being reviewed and updated every two years through the City's utility rate-setting process. Salem's utility rates are based on cost of service rate-setting principles: respective system users pay in accordance with the level of utility service they receive. The Cost of Service Analysis (COSA) itself is also periodically reviewed and updated to reflect changes in the systems which have occurred over time. An update to the COSA was completed during the last fiscal year and adopted by City Council in August 2012.

12 LEGAL AUTHORITY

12.1 WASTEWATER

The City operates its wastewater collection system, NRRWWTF, and WLWPCF, in accordance with its ODEQ-issued NPDES Permit. The legal authority governing the system's operation is generally set forth by SRC Chapter 73 (Sewers), with much more specific authority and responsibilities set forth by SRC Chapter

74 (Pretreatment Provisions). SRC Chapter 74 specifically addresses the operation of the City's wastewater collection system, NRRWWTF, WLWPCF, and constitutes the City's "Pretreatment Ordinance".

12.2 STORMWATER

In addition to the specific SRC Chapters 73 and 74 related to wastewater and stormwater management, the City also has the legal authority to implement and enforce its Erosion Prevention and Sediment Control (EPSC) Program through SRC Chapter 75. Additional riparian protections are contained in SRC Chapter 68 (Preservation of Trees and Vegetation), SRC Chapter 140 (Floodplain Overlay Zones), and SRC Chapter 141 (Willamette Greenway).

In conjunction with revising the Stormwater Management Design Standards (see Section 6.2), City staff continued with preparation of a stand-alone chapter for stormwater for the SRC (new SRC Chapter 71) during FY 2012-13. The first reading of this ordinance took place at the August 26, 2013, City Council meeting and the code has been referred to the Planning Commission for review and public hearing. The public hearing is scheduled for October 1, 2013, after which Planning Commission will return the ordinance to Council, which is expected to take action in November 2013. The stormwater-dedicated chapter for the SRC will provide the City with the authority to implement many of the requirements of the renewed MS4 Permit.

13 CONCLUSION

As discussed in this TMDL progress report, by fulfilling the requirements of the City's NPDES Wastewater Discharge Permit, MS4 Permit, 1200-CA Permit, and 1200-Z Permit, as well as implementing 'non-point source BMPs' in the TMDL Implementation Plan, the City of Salem believes it continues to fulfill its responsibilities as a DMA under the Willamette River and Molalla-Pudding Subbasin TMDLs.

Appendix A

City of Salem TMDL Implementation Plan BMP Progress Matrix for the Willamette Basin and Molalla/Pudding Subbasin

TMDL Implementation Plan BMP Progress Matrix for the Willamette Basin and Molalla/Pudding Subbasin

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
RC1 - Planning					
1. Provide City-wide Master Planning for stormwater to address both water quality and water quantity. As part of master planning efforts, continue to evaluate new detention and water quality opportunities within the Urban Growth Boundary (UGB), and consider sites in upstream areas that may affect Salem, and in downstream areas that may be affected by runoff from Salem.	2010 SWMP	Track Schedule for updating the Master Plan. Report on master plan update actions.	Maintain Master Plan and complete next update within the MS4 permit cycle.	Community is involved with permit review process. This task is implemented citywide and addresses regulatory requirements addressed by the TMDL.	See FY 2012-13 MS4 Annual Report
2. Develop and maintain watershed management plans by developing a prioritized schedule and implementing watershed management plans based on available funding. Develop the Pilot Pringle Creek Watershed Management Plan as a model for the City's other prioritized urban watersheds. Identify capital improvement needs and potential "early action" activities and projects to ensure that the plan has a strong implementation component.	2010 SWMP	Report on completion of hydromodification study.Report on completion of retrofit plan.Track implementation actions of Pringle Creek Watershed Management Plan.Report on strategy for completing future watershed management plans.	Complete a hydromodification study and retrofit plan by November 1, 2014.Incorporate recommendations and early action items of watershed management plans with completion of hydromodification study and retrofit plan.Develop strategy for completing future watershed management plans by November 1, 2014.	A pilot watershed plan would address issues and areas that are in need of water quality improvement. This plan would also identify priority capital improvement projects within a watershed. The pilot watershed plan would identify areas within an urban watershed that require attention and offer guidance on what to look for and areas to address in other urban watersheds. The point of this task is to identify activities that would aid in water quality enhancement and identify ways to implement watershed CIPs and activities. The Pringle Creek Watershed Plan is currently available in draft form.	See FY 2012-13 MS4 Annual Report
3. City staff will continue to update the official "waterways" map for use by City staff in applying various regulations and standards. As studies are performed that warrant the revision of the designated waterways, including goundtruthing, that information will be incorporated into the update process.	2010 SWMP	Track completion of groundtruthing and map updates.	Compile database of maps and waterways references.Complete field groundtruthing by end of FY 2011-12. Update map by end of FY 2012-13.	The official waterways map is in the constant process of being updated. This waterways map does not directly effect pollutants or regulatory factors. The main purpose for the waterways map is so that the city has a standard to go by that can act as an official document.	See FY 2012-13 MS4 Annual Report
4. City staff will meet a minimum of once per year to discuss coordination of efforts relating to stormwater. Topics may include the following, as they are applicable: grant funding, outreach, program review, annual report, monitoring, sharing of data, adaptive management, review/update of documents and programs, training needs, documentation of protocols, coordination of databases, involvement of inspections, maintenance, and operations in plan review and program developed, checklists, effective Erosion Prevention and Sediment Control Program including enforcement, strategizing addressing hotspots, plan review, stormwater BMPs, and development of written enforcement strategy. Provide factsheets/manuals to new employees at the City to inform them about the City's efforts for pollution prevention. At least annual trainings will be provided to specified City of Salem employees involved in MS4-related activities regarding the permit, including its intentions and their responsibilities in relation to the MS4. Feedback for improving processes will be encouraged and brought to the coordination meeting(s). Training needs will be determined by City staff meeting mentioned above. Consider adding stormwater pollution prevention training as an action item of the FY 2011-12 Environmental Action Plan that addresses pollution prevention on a city-wide level.	2010 SWMP	Prepare an annual meeting summary.Track changes made to the implementation of the stormwater program based on coordination discussions.Track major items of coordination.Track training attendance.Share and document training suggestions for MS4 implementation changes.	Conduct annual formal coordination meetings for stormwater, more often if necessary. Conduct annual training of employees involved in MS4-related positions, more often if necessary.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
5. Coordinate with other agencies such as NGOs, private environmental groups, and watershed councils.	2010 SWMP	Document any MOAs.	Develop a list of contacts and identify issues of coordination.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
6. The City will work with Marion and Polk Counties and the City of Keizer to coordinate stormwater management programs and activities within the greater Salem-Keizer Urban Growth Boundary. Coordination may include the establishment of appropriate intergovernmental agreements (IGAs) regarding potential uniform stormwater design standards, operations and maintenance activities, and public education and involvement efforts within the UGB.	2010 SWMP	Report on significant coordination activities or programs.Report on completion of SKAPAC Agreement and other IGAs.	Review and update the October 2000 SKAPAC Stormwater Management Agreement by the end of the permit term to reflect each jurisdiction's respective MS4 Permit and SWMP.	Pollutants are not directly effected by coordinating operations and maintenance activities between city and county. This process is not very readily implemented and also does not directly address regulatory programs. The City coordinates with the county when we are performing operations in their area and have the opportunity to help them. The city occasionally cleans ditches for the county and we also share the workload of the inmate crew between the City and the County; This is more of a utilities planning issue.	See FY 2012-13 MS4 Annual Report

TMDL Implementation Plan BMP Progress Matrix for the Willamette Basin and Molalla/Pudding Subbasin

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
7. Evaluate existing detention facilities and potential new detention sites for potential conjunctive uses (as water quality facilities and for retrofitting opportunities). Continue to perform facility site searches to locate ponds, wetlands, vegetated swales and other water quality facilities as existing water quantity and quality facilities are evaluated and potential new sites are identified. Coordinate with RC1-1 and RC1-2.	2010 SWMP	Complete a retrofit plan before end of year four of the MS4 permit cycle. Develop a strategy to identify and prioritize potential retrofit projects by November 1, 2013.Identify a minimum annual budget for stormwater retrofit projects as part of the retrofit strategy by November 1, 2014.	Report on available budget and completion of retrofit project efforts.	Evaluation of sites, no action done that would impact water quality.Activity is a tracking and planning activity, does not directly impact actual water quality or regulatory factors.Community involvement projects such as Eola Basin, 12th street bioswale and Kroger Park.	See FY 2012-13 MS4 Annual Report
8. The City will continue to be an active member of the Oregon Association of Clean Water Agencies (ORACWA). The City will use this medium to obtain copies of materials that have been produced by others. City staff will stay current on latest available educational and technical guidance materials.	2010 SWMP	Report on City participation with ORACWA events.	Attend a minimum of one stormwater-related workshop or conference annually. Attend groundwater-related workshops and conferences as funds allow.Make information obtained at these events available to other City staff.	The City attends many ACWA meetings that address varying issues. This task does not address pollutants directly, but does highly address regulatory factors by means of City staff gaining insight on implementation of jurisdictional requirements. This is an educational opportunity as well as an opportunity to share and learn about successes, failures, and processes that have been acted out by other jurisdictions. This task is highly implemented and meetings are attended by staff citywide.	See FY 2012-13 MS4 Annual Report
RC2 - Capital Improvements					
1. Implement stormwater projects (including stormwater conveyance, quantity, quality, and stream/habitat improvement) based on priorities established under the Capital Improvement Program (CIP) and the Stormwater Master Plan consistent with available funding.	2010 SWMP	Track number and description of projects completed. Report updated CIP list annually.	• Include a funding line item for CIPs in proposed stormwater budget. • Review and prioritize CIPs and budget annually. • Implement CIPs based on prioritization and available funding.	Sediment bonded pollutant loading decreased by pipe replacements, no anticipated impact on pesticides; projects include structures for fish passage.	See FY 2012-13 MS4 Annual Report
2. Continue to coordinate capital improvement projects with the Water Resources Section to integrate multiple resource agency permitting needs. The review is intended to identify integrated opportunities and permitting needs to meet water quality-related requirements.	2010 SWMP	• Track number of projects reviewed. • Track number of projects permitted.	• Review and integrate multiple resource agency permitting needs, including MS4 permit requirements, into 100% of CIP projects.	Integrated water quality requirements are up and coming. This task has the potential of addressing certain polluting factors and reducing polluting factors. Both regulatory organizations are addressed through this task.	See FY 2012-13 MS4 Annual Report
3. The City continues to acquire physical access-easements for public and private stormwater facilities. This is done by identifying existing facilities for which easements, rights-of-way, or permit-of-entry agreements are needed for stormwater facilities; and developing a plan for acquiring the same, given current funding limitations.	2010 SWMP	• Report on easement acquisition and prioritization process.	• Within one year of completion of the hydromodification study and retrofit plan, prioritize easement acquisitions for stormwater facilities. • Following prioritization, identify funding source(s) for inclusion in budget.	Stormwater Services has a file of Stormwater easements within the city. The next step would be to identify assets that are not among those listed in the file.	See FY 2012-13 MS4 Annual Report
RC3 - Update of Stormwater Management Design Standards					
1. Continue to encourage the use of structural BMPs for stormwater quality improvement and flood peak reduction opportunities. Develop stormwater quality design and associated maintenance standards for new and redevelopment. Continue to evaluate opportunities to provide incentives for alternative stormwater management practices, including Low Impact Development (LID). Maintain and update the Stormwater Management Design Standards after they are developed.	2010 SWMP	• Document revisions made to Stormwater Management Design Standards. • Document the development of any incentives for implementation of LID techniques.	• Develop incentives for LID and other stormwater quantity and quality management practices. • Develop updated stormwater design standards to include structural stormwater quality BMPs. • Maintain Stormwater Management Design Standards and update as needed.	The process of reviewing and recommending does not directly affect pollutants or regulatory factors. Current design standards, when implemented, are to follow that of the City of Portland and Clean Water Services. Design standards and stormwater code currently being revised and developed.	See FY 2012-13 MS4 Annual Report
2. Continue to implement process to identify and remove barriers for implementing LID techniques. Update the Stormwater Management Design Standards and associated Salem Revised Code (SRC) provisions as appropriate.	2010 SWMP	• Document the review of design standards and SRC to minimize barriers to implementation of LID techniques.	• Within three years of implementing the revised stormwater design standards, review and, as appropriate, modify design standards and SRC to minimize barriers to implementation of LID techniques.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
3. City staff is implementing the Water Quality Development Standards set forth by SRC Chapter 141 for all development requiring a Willamette Greenway Permit.	2010 SWMP	• Track number of Willamette Greenway Permits issued and description of water quality measures employed. • Track number of new facilities constructed.	• Implement Water Quality Development Standards in Willamette Greenway.	Water quality development standards set forth in SRC 141 are designed to protect and enhance the floodway and riparian zone of the Willamette Greenway. This task directly addresses certain pollutants and regulatory requirements. The code is implemented and requires public involvement in order to be reviewed and accepted.	See FY 2012-13 MS4 Annual Report

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
4. Continue to review all residential, commercial, and industrial plans submitted for City-issued building permits for compliance with the City's Stormwater Management Design Standards. Conduct inspections of completed projects prior to the City's acceptance of those projects and project close-out to ensure work was done in accordance with approved plans. Maintain database of plans reviewed and final inspections conducted. See IND1-Task 2 for standards specific to industrial facilities.	2010 SWMP	• Maintain database of plans reviewed and final inspections conducted.	• Review all residential, commercial, and industrial plans submitted for City-issued permits for compliance with the City's Stormwater Management Design Standards and associated SRC provisions. • Conduct inspections once construction is completed to ensure work was done in accordance with approved plans.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
RC4 - Operations & Maintenance					
1. Continue with the existing street sweeping schedule for all areas, maintaining the record of observations, quantity, and quality of material collected in the daily log books. Collect and compile this information for making recommendations for modified methods, schedules, and for NPDES MS4 permit annual reporting and overall program evaluation.	2010 SWMP	• Record quantity of material collected during sweeping operations. • Record number of curb-miles of streets swept. • Track and report changes made to sweeping schedule, if any.	• Review street sweeping program annually for effectiveness and any necessary revisions to sweeping schedule. • Continue sweeping City streets on four zone schedule, sweeping heaviest zone 8 times per year and lightest zone 2-3 times per year. • Continue sweeping City-owned parking lots as needed.	Street sweeping mainly effects the amount of debris settable solids that enter or do not enter the storm system and the pollutants that are associated with those solids. TMDL is affected by addressing polluting factors that are associated with sediment particles and of concerns in the mid-Willamette Basin watershed. ESA is addressed due to the effects street sweeping has on the sediment load that enters water bodies within the city, in turn increasing the quality of water for fish use. A leaf pick-up program is implemented every fall, city wide, by the street sweeping crew to pick up leaves throughout the city in coordination with volunteers.	See FY 2012-13 MS4 Annual Report
2. The City will continue to perform de-icing operations in a way that minimizes stormwater pollution such as conducting annual inspections and training to ensure proper operation of the de-icing chemical storage facility, utilization of the expanded covered storage areas for de-icing materials, maintaining proper function of sediment traps and catch basins in the storage yard, and coordinating de-icing activities with Airport Operations and their 1200-Z permit. The City is also looking for ways to improve current operations by investigating and evaluating potential cost-effective recycling opportunities for used de-icing sand material.	2010 SWMP	• Document review of recycling opportunities. • Document dates of activities for annual inspections and training. • Document de-icing quantities applied annually.	• Continue current de-icing operations to prevent stormwater pollution. • Investigate potential cost-effective recycling opportunities for de-icing sand material	Dissolved oxygen and Debris Settable Solids are of concern because they are pollutants that are effected by de-icing activities. De-icing does not occur very often and on a limited scale, so regulatory factors are effected on a limited scale. This BMP addresses the proper handling of pollutants to decrease runoff and regulatory factors that are concerned with those pollutants. This is also an implemented task.	See FY 2012-13 MS4 Annual Report
3. Continue to review and update the O&M practices and activity schedules defined in the Drainage Program Evaluation Notebook (DPEN) (including updating GIS database). Utilize Hansen IMS data to develop and refine work programs. This review will serve as a basis for budgeting and allocating resources; scheduling work; and reporting on and evaluating the performance and costs for the overall O&M program and specific activities.	2010 SWMP	• Track revisions made to O&M practices and activity schedules.	• Update DPEN and IMS database activities and schedules. • Create line items in budget for specific O&M activities. • Review and update O&M practices and activity schedules every 3 years.	Utilization and updates to the O&M practices and activity schedules databases and mapping systems does not directly effect pollutants or regulatory factors. This task is moderately implemented.Setting performance standards for this program would affect certain pollutants concentrations and would address regulatory criteria based on the performance standards put into action. This is a way to address the effectiveness of the program and implement new actions. Direct impact on types of material replaced- pvc replacing metal, timing of schedule to reduce most amount of sediment load through system.	See FY 2012-13 MS4 Annual Report
4. Continue to improve the O&M training program and activities especially with regards to safety and protection of water quality.	2010 SWMP	• Document reviews and modifications to the O&M training program. • Record O&M training activities completed. • Document ACWA meetings and workshops attended.	• Conduct O&M safety meetings twice per month. • Attend ACWA committee meetings and workshops as scheduled. • Conduct weekly tailgate meetings with Operations crews.	Relates directly to how operations conducts business, erosion control measures taken in field, SOP's; primary effect is on sediment and sediment bound pollutants.	See FY 2012-13 MS4 Annual Report
5. Integrated Pest Management (IPM) Program: Salem Parks Operations Division will continue their program for careful monitoring and management of pesticides, herbicides and fertilizers, and will provide public information. Review and refine the IPM Program during the permit cycle, ensuring proper handling and storage of pesticides, herbicides, and fertilizers.	2010 SWMP	• Document revisions made to IPM Program. • Document inspections of storage facilities.	• Review and refine IPM Program during the MS4 permit cycle. • Routine inspections of storage facilities for proper storage of materials and chemicals.	Integrated Pest Management, when implemented on a citywide scale through the Parks department, greatly decreases the amount of pesticides that enter a waterway and directly address regulatory organizations by enhancing water quality within city waterways. City of Salem Parks currently has standards that exceed the Oregon Department of Agriculture standards for pesticide applications.	See FY 2012-13 MS4 Annual Report

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
6. Continue the storm sewer cleaning and TV inspection program, concentrating on known areas of localized flooding complaints (this alerts the City to locations of debris build-up and minimizes erosion potential) and persistent operation and maintenance problems, and looking for potential illicit discharges and seepage from sanitary sewers, see ILL2. Also focus on significant industrial/commercial areas where potential illicit discharges may be of concern.	2010 SWMP	• Track number of inspections; identify areas with persistent O&M problems. • Track number of cross-connections found. • Track length of conveyance system cleaned and inspected.	• Concentrate storm sewer cleaning and TV inspection on areas with historical problems and high potential for illicit discharges. • Inspect 120,000 LF of conveyance system annually.	Pollutants that are sediment bound are affected by the cleaning of storm sewer systems are addressed by this task. This is a highly implemented program and in certain situations can address issues that are focused on by ESA and TMDL.	See FY 2012-13 MS4 Annual Report
7. Continue supporting annual Stream Cleaning Program. More than one half of the stream miles in the City of Salem are inspected annually by walking each stream segment. Using summer interns the City inspects the riparian areas and streams, picks up litter and garbage, inspects for illicit discharges (ILL2), addresses potential conveyance concerns, and evaluates areas for stream restoration.	2010 SWMP	• Track length of waterways walked each year. • Document stream restoration projects completed each year. • Document the amount of litter and garbage removed each year.	• Walk 50% of the waterways within the City each year for stream cleanup and enhancement. • Complete one stream restoration project each year.	Removal of trash and excess debris, invasive species removal and restoration and replanting projects all directly effect pollutant levels in the stream and address issues pertaining to regulatory organizations. Community involvement is also a key role in the stream cleanup program, which involves attending community events such as watershed council meetings and preparing and presenting data at these events. This program is implemented annually.	See FY 2012-13 MS4 Annual Report
8. Continue to regularly inspect and maintain public structural stormwater control facilities. Coordinate with RC4 Task 9.	2010 SWMP	• Track number of public facilities inspected and maintained. • Track amount of sediment and debris removed from all facilities.	• Regularly inspect all public detention and water quality facilities.	Low ratings for pollutants based on minimal sediment retained in a detentions facility. ESA is a factor due to fish passage concerns on detention designs. Since the facilities are private, there is a level of community involvement that takes place such as contacting the owner of the basin. This is also a highly implemented task.	See FY 2012-13 MS4 Annual Report
9. Develop and implement a long-term maintenance strategy for public and private stormwater control facilities. This strategy will identify procedures and/or priorities for inventorying, mapping, inspecting, and maintaining facilities.	2010 SWMP	• Track number of private facilities located, mapped, and inspected. • Track progress toward developing a facility long-term maintenance strategy.	• Document and implement a long-term maintenance strategy for public and private stormwater control facilities during the MS4 permit cycle.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
10. Ditch maintenance is performed to assure adequate conveyance, and consists of two components: (1) Ditch Cleaning – Cleaning consists of removal of sediment in the bottom of roadside ditches only as needed for proper conveyance, with limited vegetation disturbance and the use of straw wattles to reduce sedimentation and erosion within the ditch. (2) Ditch Mowing – Mowing is typically conducted by inmate crews using hand-held equipment. Vegetation cutting facilities conveyance and reduces the risk of potential fires in summer months.	2010 SWMP	• Track length of ditch maintenance performed (cleaning and mowing). • Track amount of sediment and debris removed.	• Regularly inspect and maintain 100% of City ditches using appropriate water quality BMPs.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
11. Public catch basins are cleaned on a regular basis with a Vactor truck. During catch basin cleaning activities, inspections are done and repairs are scheduled if needed.	2010 SWMP	• Track the number and percent of catch basins cleaned annually. • Report on any analysis of removed material.	• Clean and inspect 75% of catch basins annually. • Periodically analyze the material removed from the catch basins.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
12. Continue to refine the maintenance program for public and private stormwater detention and water quality facilities. The City maintains an informational packet outlining ownership and maintenance responsibilities and compliance assurance procedures to encourage owners of private detention and water quality systems to perform maintenance. Coordinate with RC 4 Task 9.	2010 SWMP	• Track number of information packets distributed regarding private stormwater control facilities. • Track maintenance requirements of long-term maintenance strategy.	• Maintain informational package for ownership maintenance responsibilities for detention and water quality facilities. • Implement maintenance activities and requirements identified in long-term maintenance strategy (RC4 Task 9).	Low rating for WQ parameters of concerns based on minimal water retention time in detention basin. Fish passage on design criteria for these structures is a main concern in placement and types used. Letter are also sent out to inform the public and private owners about responsibilities and maintenance if their detention basin is in poor condition, thus enhancing community involvement and implementation of the program.	See FY 2012-13 MS4 Annual Report
RC5 - Public Education & Participation					
1. Develop and implement a public outreach and education strategy with goals, objectives, identified target audiences, partners, identified target contaminants, and messaging. Conduct a public education program effectiveness evaluation of outreach procedures/efforts. Adjust the program based on the results in year five. (See Table A.1 – Public Outreach Program Matrix, June 2008).	2010 SWMP	• Document public outreach and involvement activities for two (2) education campaigns. • Document outreach activities for other divisions. • Document the results of the effectiveness evaluation and subsequent changes to the outreach procedures/efforts.	• Create two (2) public education campaigns* from the Public Outreach Program Matrix. • Support outreach and educational activities for other divisions**. • Conduct an effectiveness evaluation of the outreach program before the end of year four of the MS4 permit cycle.	Public information to support the SWMP is highly implemented through public response efforts conducted through the stormwater division and other operations divisions throughout the City. Informing public on SWMP issues does address regulatory requirements, but does not have a direct effect on pollutants by actively removing them. This task is based on public involvement. Public information is a step to increase the involvement of the public and the active removal of pollutants.	See FY 2012-13 MS4 Annual Report
2. Coordinate activities of various groups within the Public Works Department and other City departments assigned responsibility for public outreach and citizen contacts on stormwater matters.	2010 SWMP	• Document quarterly meetings and outcomes.	• Quarterly meetings of various groups assigned responsibility for public outreach and citizen contacts on stormwater matters.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
3. Increase the use of community partnerships to carry out outreach goals.	2010 SWMP	• Document partnerships and outcomes of partnership activities.	• Develop one new partnership per year to carry out outreach goals.	This task also addresses public awareness and education while correlating with other organizations to address issues of common concern. This task supports public involvement and is highly implemented. This task supports efforts to constructively deal with regulations and concerns within the community to give different organizations an understanding of view points.	See FY 2012-13 MS4 Annual Report
4. Investigate the use of a stormwater utility to provide an adequate funding base to support expanded public outreach (see RC6).	2010 SWMP	• Document public education budget and expenditures. • Document Utility implementation plan showing public education and outreach needs.	• Develop a yearly public education budget. • Document public education and outreach needs in the Stormwater Utility Implementation Plan.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
RC6 - Stormwater Management Program Financing					
1. In conjunction with the updated Stormwater Master Plan (RC1-1), review and update the Stormwater System Development Charge (SDC) methodology to address both stormwater quantity and quality.	2010 SWMP	• Report on update to Stormwater SDC methodology.	• Adopt updated Stormwater SDC methodology by the end of the MS4 permit cycle.	Modify system development charges with incentives for pervious surface in order to decrease storm water discharge load. SDCs are implemented city-wide, but review process of SDCs is on a small scale. SDC program methodology has no direct impact on pollutants, but can decrease pollutant loading in storm water discharge in the long run by encouraging pervious surface and decrease urban runoff.	See FY 2012-13 MS4 Annual Report
2. Implement a new stormwater utility capable of generating stormwater fees historically paid for by water and/or sewer utility customers. The new utility will include incentives to encourage users to implement alternative stormwater management practices such as LID.	2010 SWMP	• Report on adoption of new stormwater utility.	• Adopt new stormwater utility by the end of the MS4 permit cycle.	This task fits in as a requirement under the WQMP in order to secure funds for water quality monitoring and sampling. This task does not directly effect pollutants, but could have a decreasing pollutant load effect by encouraging pervious surface through a stormwater utility. This task is not currently implemented, and would effect the public on a city-wide scale.	See FY 2012-13 MS4 Annual Report
3. Identify and pursue grant opportunities for stormwater quality projects, including potential retrofit and LID project opportunities.	2010 SWMP	• Track number of grants applied for each year. • Track number of grants received each year.	• Pursue grant opportunities as staff resources allow.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
RC7 - Maintain & Update GIS System					
1. Continue maintenance of the GIS database and Hansen IMS database. These on-going updates will also reflect completion of any stormwater Master Plan capital improvement projects, new facilities added to the system, potential "hot-spots" for illicit discharges, refinement of data for the existing system, updated information on wetlands, perennial streams, waterways, and floodplain/floodway designations, and information updated on a periodic basis for the City's Urban Growth Boundary. The GIS database will be accessible by City departments for review purposes.	2010 SWMP	• Record maintenance/updates made to database.	• Continue performing database updates annually. • Create record of GIS maintenance activities.	This task is based on updating an information source, therefore; does not directly effect pollutants, regulatory requirements, or require any public involvement. All maintenance activities are updated on an ongoing basis.This task has no direct effect on pollutants, but effects ESA by designating waterways and hydraulic connections where fish are or would be present. The completion of this task would increase the knowledge base of potential impacts for TMDL and methodology for collecting and analyzing data. This information is not updated on a consistent basis.	See FY 2012-13 MS4 Annual Report
2. Integrate the information in the GIS and IMS. The City plans to integrate the data from both the GIS and Hansen IMS databases so that information in the Hansen IMS database can be visualized using the GIS system.	2010 SWMP	• Track completion of action plan items. • Track implementation status of database integration.	• Create an action plan for how the GIS and IMS system will be integrated and updated. • Implement action plan to integrate GIS and IMS.	This task is pursued for 2010. Currently stormwater services attaches a GIS JPEG to Hansen Service Requests and Work Orders. This task is implemented, but has no direct effect on pollutants or regulatory requirements.	See FY 2012-13 MS4 Annual Report
RC8 - City Stormwater Grant Program					
1. Expand matching grant program for watershed protection and preservation to allow for funding of stormwater-related activities, such as promoting water-wise landscaping, reduction of stormwater discharges, restoring riparian areas, stormwater quantity reduction, stormwater quality/treatment, etc.	2010 SWMP	• Maintain a list of grant awards tracking funding and projects.	• Continue to fund $50,000 grant program. • Expand matching grant program for watershed protection. • Promote the grant program in conjunction with RC5 outreach activities.	Grants awarded can greatly impact local water quality and some enhancement projects can greatly reduce the potential erosion and subsequent pollution of surface water bodies. It is expected that community involvement and awareness would increase with an expanded grant program while addressing issues of concern enforced by regulatory programs. Impact of small scale project have limited effect of overall stream temperature. This program only targets stream side property owners limiting its scope of community involvement without much advertisement.Programs that encourage riparian protection and enhancement effect most pollutants by decreasing soil erosion and increase stream bank infiltration, hence increasing the uptake of potential water pollutants. The riparian vegetation also enhances shade area over waterways in turn addressing specific ESA and TMDL parameters. The free tree program is highly implemented and based on public involvement.	See FY 2012-13 MS4 Annual Report
RC9 - Legal/Ordinances					

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
1. In process of revising the Stormwater Management Design Standards (RC 3 Task 1) and developing a stormwater-dedicated chapter to the SRC (RC 9 Task 3), coordinate with Community Development's effort to adopt a Unified Development Code (UDC). It is envisioned that the stormwater dedicated SRC would be integrated into the UDC framework.	2010 SWMP	• Report on progress for adoption of UDC and integration of stormwater-related SRC.	• Adopt the UDC and integrate stormwater-related revisions to the SRC by the end of the MS4 permit cycle.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
2. Continue to enforce the SRC and review and revise it as necessary to reflect the updated Stormwater Management Design Standards that principally focus on requirements associated with on-site water quality facilities for new development or redevelopment (RC3).	2010 SWMP	• Track any MS4 stormwater pertinent revisions made to the SRC.	• Revise SRC (as needed).	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
3. Develop a new SRC chapter dedicated solely to stormwater management. It is currently envisioned that this will be done after the City's renewed MS4 Permit is issued, and in conjunction with implementation of the new stormwater utility and updated Stormwater SDC Methodology (RC6) and the updated Stormwater Master Plan (RC1).	2010 SWMP	• Report on adoption of the new SRC chapter for stormwater, and processes/milestones enroute to formal adoption of the SRC revisions.	• Adopt the new SRC chapter for stormwater by the end of the MS4 permit cycle.	City codes and revisions involve the public for review. This task has the possibility of being implemented on a city wide scale, but is not currently at that level. Pollutants are directly effected with the revision of city codes due to the code focusing on reducing pollutant load and enforcing water quality treatment facilities	See FY 2012-13 MS4 Annual Report
ILL1 - Spill Prevention & Response					
1. Continue to review and refine the existing spill prevention and emergency response program to protect ground and surface water quality. New activities will be proposed and implemented as appropriate, and coordination and cooperation among other relevant agencies and ODOT will be maintained and improved. This review will be coordinated with the de-icing activities of the Airport Operations and their 1200-Z permit, and possibly the Oregon Air National Guard.	2010 SWMP	• Document refinements to cleanup procedures for vehicular accidents and structural fires.	• Continue to implement the spill prevention and emergency response program and review and revise as needed.	Refining spill emergency response plan directly effects spill pollutants by improving the response and clean-up of these pollutants. This task does not require public involvement, but does address regulatory requirements.	See FY 2012-13 MS4 Annual Report
2. Continue to coordinate timely responses to, and clean-up of emergency response sites and structural fires among Fire, Building and Safety, Development Services, and Environmental Services staff. The Fire Department has the lead role for response at emergency response and structural fire sites and all major vehicular accidents. Environmental Services (ES) staff will provide assistance when requested by the on-scene incident commander. One of the ES responsibilities is to make sure that the cleanup activities are conducted in an environmentally sensitive manner.	2010 SWMP	• Track the number and category of spill events responded to, including an estimate of the amount of spilled materials collected and any associated enforcement actions.	• Develop a review schedule with a checklist for the spill response plan.	Spill materials, house fires, and car crashes are factors that are being considered in comparison to polluting factors that this task is addressing. Habitat requirements and spill materials addresses ESA requirements. This task can also be implemented as part of the TMDL Implementation plan as a spill response effort.	See FY 2012-13 MS4 Annual Report

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
3. Continue to conduct daily City vehicle and equipment inspections for leaks and repairs as needed. Staff will review current procedures on an ongoing basis and implement improvements as necessary.	2010 SWMP	• Report revisions to the daily inspection program	• Continue to implement the daily equipment inspection program.	Daily inspections are performed by operator and turned into fleet services daily. This is a cause to reduce runoff pollution by preventative measures. Most polluting factors are not addressed by this task, although regulatory requirements are being addressed by decreasing pollutant loading in a proactive manner. This task is highly implemented.	See FY 2012-13 MS4 Annual Report
4. Develop an updated Operations Pollution Prevention Plan; incorporating new/expanded/relocated Operations-oriented facilities.	2010 SWMP	• Track progress toward updating the Operations Pollution Prevention Plan. • Track implementation of the Operations Pollution Prevention Plan.	• Update the Operations Pollution Prevention Plan by the end of the MS4 permit cycle. • Implement the updated Operations Prevention Plan upon completion.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
ILL2 - Illicit Discharge Elimination Program					
1. Continue to respond to reports of unusual discharges or suspicious water quality conditions within the stormwater system and urban streams. Where able, identify sources/causes and implement appropriate corrective actions. Utilize database to document associated activities.	2010 SWMP	• Track calls and mitigation actions taken in database.	• Respond to reports of illicit discharges and suspicious water quality conditions. • Maintain database to document unusual/suspicious discharges, sources found, and corrective actions taken.	This task directly impacts the discharge of point source pollutants and their effects on water quality. This task is also highly implemented and reports of unusual discharges are recorded into a database for further tracking.	See FY 2012-13 MS4 Annual Report
2. Environmental Services staff will continue inspections of the City's wastewater users, through the pretreatment program, verifying the proper handling and disposal of both wastewater and stormwater.	2010 SWMP	• Track number of inspections and associated findings.	• Inspect City's wastewater users for proper management of wastewater and stormwater.	Inspections help to ensure that proper pollution load reduction methods are being taken for permit holders.	See FY 2012-13 MS4 Annual Report
3. Work with Wastewater Collection Services to identify and correct cross-connections between the sanitary sewer and stormwater systems.	2010 SWMP	• Document number of cross-connections identified and corrective actions taken.	• Review stormwater and ambient stream monitoring data to identify possible cross-connection discharges into the stormwater system. • Maintain communications with Wastewater Collections and other City staff to identify any stream cross connection problems.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
4. Develop and update a storm sewer outfall dry weather inspection and monitoring prioritization plan.	2010 SWMP	• Document review of outfall monitoring plan. • Document priorities established for monitoring and inspection. • Track dry weather inspections conducted and results of inspection.	• Prioritize outfalls for storm sewer outfall inspection and monitoring, and inspect annually. • Coordinate prioritization process with ILL 2 Task 5.	Dry weather discharge sampling being implemented by stormwater services. This sampling is random and identifies pollution sources therefore having no direct effect on pollutants. The sampling is a monitoring process that is in coordination with the TMDL Implementation plan. This task is in the process of being implemented and involves the public if they report or are the cause of a dry weather discharge.	See FY 2012-13 MS4 Annual Report
5. Identify and map contaminated sites in the GIS system. With input from other City departments, identify a list of areas where there either has been a substantial spill or there is the potential for a spill or illicit discharge. These areas are identified based on activities on site, history of problems, or specific industry, for example. These areas will be mapped in the GIS system for use across City departments.	2010 SWMP	• Track number of contaminated sites added to the GIS system.	• Continue to identify and map contaminated sites in the GIS system.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
ILL3 - Illegal Dumping Control Program					
1. Continue to sponsor the Adopt-a-Street Program. The program is an effective way to get residents involved in keeping the community's streets clean and consequently preventing trash and debris from entering the storm drainage system.	2010 SWMP	• Record the miles of adopted streets, number of participating groups, and volume of litter collected through the Adopt-a-Street Program.	• Continue to support the Adopt-a-Street Program.	Adopt-A-Street program decreases the amount of trash on streets that would eventually enter the waterways by encouraging litter pick up. This program is highly implemented and on a citywide scale.	See FY 2012-13 MS4 Annual Report
2. Continue to provide the 24-hour Public Works Dispatch Reporting Center to receive and respond to calls regarding illegal dumping and other environmental complaints/problems and responses thereto. Continue to advertise hotline on City website, utility bill inserts, business cards, public brochures, and consumer confidence reports. As circumstances warrant, publicly report illicit discharges through use of various media outlets.	2010 SWMP	• Record number and types of reported illegal dumping incidents. • Track media outreach when a discharge warrants.	• Continue to operate the 24-hour Public Works Dispatch Reporting Center. • Assign reports to appropriate City staff for action, including actions taken under ILL2-1.	Taking calls and recording illegal dumping incidents does not directly effect pollutants, but is highly implemented. This task is based on public involvement and city residence calling in to report illegal dumping. The follow-up on this task is addressed in ILL-2 task 3.	See FY 2012-13 MS4 Annual Report

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
3. Continue to support the Adopt-a-Stream program, which involves teachers and students in gathering water quality data from streams, thereby providing water resource education to students through experience. The City supports the program by facilitating projects and providing technical assistance and resources.	2010 SWMP	• Maintain a descriptive list of adopt a stream program projects, objectives, outcomes upon completion, and number of participants.	• Continue to support the Adopt-A-Stream Program.	The Adopt-a-Stream program addresses regulatory factors by assisting the City with water quality testing. The program also encourages riparian area enhancement. The restoration projects that are completed through the Adopt-a-Stream program aid in water quality enhancement by increasing infiltration in riparian zones which increases the uptake of nutrients from the waterway and decreasing erosion potential. Increased riparian vegetation also increases shade zones within the streams.	See FY 2012-13 MS4 Annual Report
4. Continue to support Marion County in their efforts to provide convenient alternatives for legal disposal of household hazardous wastes and other recyclable materials.	2010 SWMP	• Document frequency and type of support activities	• Continue to support Marion County in providing alternatives for household hazardous waste disposal.	Offering convenient means for waste disposal has the potential to reduce pollutant loads of certain polluting factors that are commonly found in hazardous waste. This program is based on public involvement and is highly implemented. This program also addresses priority issues in the TMDL Implementation Plan and ESA habitat requirements.	See FY 2012-13 MS4 Annual Report
5. Continue to support the annual yard debris cleanup effort.	2010 SWMP	• Record amount of debris cleaned up and level of participation.	• Support the annual yard debris cleanup effort.	Debris clean-up addresses a few specific polluting factors directly, but in a major way. Regulatory requirements are addressed by directly impacting these polluting factors. This task is implemented and is based on public involvement.	See FY 2012-13 MS4 Annual Report
IND1 - Industrial Stormwater Discharge Program					
1. Environmental Services will inspect stormwater systems while conducting inspections of City-permitted industrial wastewater users, and work with DEQ to coordinate the permitting and compliance processes for industrial users in the Salem area, including DEQ-issued 1200-Z permitted sources, underground storage tank (UST) removal, and site remediation permits issued by DEQ for sources/sites within the City. Coordination options include: receiving information on proposed 1200-Z permits, commenting on proposed permits, and meeting periodically with DEQ on coordination efforts.	2010 SWMP	• Track coordination efforts with DEQ. • Include stormwater observations as appropriate on inspection reports and follow-up actions.	• Inspect stormwater systems while conducting inspections of City-permitted wastewater users. • Develop process to coordinate with DEQ on industrial permits within the City.	Coordinating the permitting process has no direct effect on pollutants. Coordinating with DEQ will assist the City with addressing TMDL issues through permit requirements. New permits are open for public comment.	See FY 2012-13 MS4 Annual Report
2. During plan review, review industrial facilities for the potential of requiring pretreatment of stormwater prior to discharge based on the industrial activities of the specific facility. Conduct inspections of industrial facilities requiring stormwater pretreatment to ensure structural controls have been built according to approved plans.	2010 SWMP	• Maintain database of plans reviewed and final inspections conducted.	• Review industrial plans as necessary for additional stormwater treatment. • Conduct inspections once construction is completed to ensure work was done in accordance with approved plans.	Reviewing plans for stormwater pretreatment addresses regulatory factors by assessing the water quality and level at which the City will allow non-treated discharge to enter the storm system. This task also includes identifying and managing those sources. This influences waste load allocations, critical habitat improvements, and the overall water quality of the storm system. Certain levels of pollutants are addressed with the requirement of pretreatment facilities. This task also requires public involvement.	See FY 2012-13 MS4 Annual Report
3. Surveys are sent to applicable business classes (restaurants, metal finishers/platers, radiator shops, dry cleaners, printing shops, photo processors, etc.) as part of the pretreatment business survey database, part of the industrial pretreatment program for wastewater. Customers will be surveyed on major on-site activities to identify potential locations for public education, future sampling, and tracking down illicit discharges. Illicit stormwater discharges from these business groups are address in ILL2.	2010 SWMP	• Track number of surveys sent out. • Track number of surveys returned and entered into database. • Track targeted public education activities for specific industries.	• Send surveys to new customers as accounts are opened. • Enter survey results into database – on-going as surveys are returned.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
4. Continue the semi-annual Technical Bulletin for the City's industrial users and produce other materials for these users. This activity is principally associated with the City's wastewater Pretreatment Program, but will be used as a vehicle to address stormwater related issues as well.	2010 SWMP	• Track published technical materials prepared for industrial users each year.	• Produce two technical bulletins for industrial users each year.	Impact of technical material provided to user on user behavior is unknown at this time	See FY 2012-13 MS4 Annual Report
CON1 - Construction Site Control Program					
1. Continue implementation of the Erosion Prevention and Sediment Control program for developments that meet or exceed the threshold indicated in SRC Chapter 75, which includes the submission of erosion prevention and sediment control plans with structural and non-structural BMPs. Review program experiences annually and implement improvements as appropriate including Code amendments if needed.	2010 SWMP	• Track number of erosion control plans reviewed for compliance with SRC 75.	• Implement SRC 75. • Conduct annual program reviews. • Implement appropriate improvements and/or Code amendments. • Perform plan reviews for erosion control requirements.	Implementing SRC 75 addresses pollution reduction for those pollutants associated with sediment loads and erosion. This task also addresses TMDL with sediment pollution load reduction strategies. This task is implemented , but enforcement actions are minimal. DEQ 1200-C coordination could be better. This task does not involve the public.	See FY 2012-13 MS4 Annual Report

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
2. Continue to train and educate City staff and private contractors about stormwater pollution at construction sites, with an emphasis on prevention and control BMPs. Provide notice to construction site operators concerning where education and training to meet erosion and sediment control requirements can be obtained.	2010 SWMP	• Track education and training programs conducted and number of staff/public trained.	• Provide annual erosion control training to City staff and private contractors.	This task does not directly effect pollutants, but addresses the educational component of the TMDL Implementation. Educating city staff allows for further education of the public and a smarter work force.	See FY 2012-13 MS4 Annual Report
3. Document and streamline site plan review, inspection, and enforcement procedures for the construction site runoff control program.	2010 SWMP	• Track completion of documented procedures.	• Complete documentation of site plan review, inspection, and enforcement procedures before the end of year four of the MS4 permit cycle.	NPDES MS4 Permit	See FY 2012-13 MS4 Annual Report
4. Continue to review and update the Erosion Prevention and Sediment Control Technical Guidance Handbook.	2010 SWMP	• Track updates made to the Technical Guidance Handbook.	• Update Technical Guidance Handbook before the end of year four of the MS4 permit cycle.	The Technical Guidance Handbook addresses pollution reduction by means of standards set forth within the guidebook. Setting standards for pollution reduction methods addresses TMDL . This task is implemented and involves the public on a limited scale.	See FY 2012-13 MS4 Annual Report
5. Continue to coordinate with the City's 1200-CA Permit for City construction projects subject to its program.	2010 SWMP	• Track renewal of 1200-CA permit.	• Requirements for 1200-CA compliance incorporated into City construction plans, specifications, and contract documents. • Make erosion prevention and sediment control a key agenda item at all pre-construction conferences. • Include inspection of all site erosion prevention and sediment control measures as part of City projects.	Compliance of the permit requires pollution reduction within the permit's jurisdiction. TMDL is addressed by complying with the permit standards in order to address pollution load reductions. The standards are not always met when the city is permitted by the 1200-CA permit.	See FY 2012-13 MS4 Annual Report
MON1 - Monitoring					
1. Continue to install and maintain flow and water quality monitoring stations in City waterways to support selection of capital improvement projects, update the hydrologic-hydraulic computer model, and help direct policies to protect the health of these water bodies. The actual rate of installation and the total number of stations will be based on the maintenance requirements of the stations, available funding, and coordination with urban watershed assessments/plans.	2010 SWMP	• Track number of additional monitoring stations implemented.	• Install additional monitoring stations. • Monitor the station alarms in conjunction with the illicit discharge control program (ILL2, Task 1). • Follow up on potential hotspots or problem areas as may be identified through data analyses.	Monitoring water quality has no impact on it, but is essential for establishing baseline condition, in forming benchmarks and recording if progress is being made towards meeting those benchmarks.	See FY 2012-13 MS4 Annual Report
2. Continue the urban stream and Willamette River water quality sampling program, with emphasis on reviewing and evaluating sampling data to prioritize investigations and improvement/maintenance projects. This sampling augments the monitoring plan included in the City's 2008 NPDES MS4 Permit Renewal application.	2010 SWMP	• Document findings regarding trends.	• Update database for collected data. • Review collected data for purposes of trending and benchmarking by the end of the permit term. • Follow-up on potential hotspots or problem areas as may be identified by the data review.	Sampling does not directly affect the outlined pollutants, but does address critical measures enforced by the TMDL. Implementation and community involvement of this procedure continue to increase with participation of community organizations to take part in sampling and the increasing improvements in our sapling technique and materials. Cooperation with North Salem HS for data gathering.	See FY 2012-13 MS4 Annual Report
3. Continue to implement all components (MS4 outfall, instream, pesticide, and macro-invertebrate) of the City's "Surface Water and Stormwater Monitoring Plan."	2010 SWMP	• Provide summary statistics for sampling results from each wet-weather season. • Track any modifications to the monitoring plan.	• Implement the City's Stormwater Monitoring Plan, including MS4 outfall, instream, pesticide, and macro-invertebrate monitoring components	Bioassessments quantify the amount of pollutants found, but have no direct impact on the pollutant load of the area. Pringle Creek Watershed Bioassessment is still in the process of completion, therefore no other bioassessments have been implemented. We are not currently in the position to prioritize watershed basins for assessments.	See FY 2012-13 MS4 Annual Report
NPDES Wastewater Permit					
WW1. Complete the new River Road Wet Weather Treatment Facility.	NPDES Wastewater Discharge Permit	Construction Completed and Facilities Operational	Completed November 2008	Compliance with Willow Lake NPDES Permit and MAO	Completed November 2008
WW2. Increase the Willow Lake WPCF hydraulic capacity from 105 to 155 MGD maximum wet weather flow.	NPDES Wastewater Discharge Permit	Construction Completed and Facilities Operational	Completed November 2009	Compliance with Willow Lake NPDES Permit and MAO	Completed November 2009
WW3. Maintain compliance with the NPDES Permit and MAO for the Willow Lake WPCF.	NPDES Wastewater Discharge Permit	Monthly Discharge Monitoring Report (DMR) Submitted to the DEQ	On-going and December 31, 2009	Compliance with Willow Lake NPDES Permit and MAO	The City's obligation under MAO No. WQ/M-WR-97-147 has been fulfilled and the MAO was terminated on March 1, 2012.

TMDL Implementation Plan BMP Progress Matrix for the Willamette Basin and Molalla/Pudding Subbasin

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
WW4. Submit the annual Collection System Report to the DEQ.	NPDES Wastewater Discharge Permit	Annual Report Submitted to the DEQ	Annually - November 1st	Compliance with Willow Lake NPDES Permit and MAO	Submitted August 2, 2013
WW5. Update the Wastewater Master Plan and Willow Lake WPCF Facilities Plan.	NPDES Wastewater Discharge Permit	Adopted Master Plan	Incorporate wastewater projects into 5-year CIP Plan	Needed to Reflect Completed CIP Projects and Success at Reducing SSOs.	On-going
WW6. Collect Willow Lake WPCF influent and effluent mercury concentration data monthly, and twice a year low-level analytical data of the influent and effluent concentrations for total and methyl mercury.	NPDES Wastewater Discharge Permit	Sampling Results reported in Monthly Discharge Monitoring Report (DMR)	On-going	Compliance with Willow Lake NPDES Permit and MAO	On-going
Non-point					
NP1. Assess Salem tree canopy, conduct a riparian shade analysis, and identify priority areas which are heat sink locations.	Riparian plan	Completed Shade Inventory Completed Canopy Study Completed Riparian Shade Prioritization	Shade Inventory occurred in FY 08/09. Riparian Shade Prioritization and Tree Canopy Study completed in FY 10/11.	No actual reduction in temperature loading takes place through these activities, but activities set up site specific locations for future temperature-related projects.	Completed Riparian Outreach Strategic Plan in FY 2012-13. Data from Riparian Shade Inventory used to identify targeted area for riparian planting in FY 2012-13. Location to be planted in FY 2013-14.
NP2. Temperature reduction incentives plan, using locations identified in the shade prioritization study in 10-12, target neighborhoods using various pre-existing programs and funds, including free tree, the watershed protection grant, OWEB grants, and Oregon 319 grants.	Riparian plan	Use of prioritization in incentive plan and targeted projects.	Target native riparian plantings by FY12-13 and ongoing based on prioritization.Promote riparian restoration and plantings through Watershed Protection and Preservation Grant Program.	Without the shade analysis study done it is unknown the impact current City programs have on temperature loading in the city streams	See BMP RC 8-1 of MS4 Annual Report for a list of FY 2012-13 projects that received funding through the City's Watershed Protection & Preservation Grant Program. Shade Inventory/Prioritization was used to target priority taxlots for Free Tree Program in FY 2012-13.
NP3. Look for opportunities to incorporate riparian restoration when conducting City CIP projects, and pursue acquisition of easements on riparian lands both on and near CIP sites.	Non-point (Temperature CIP Plan)	Document number of easements and restoration activities conducted within the CIP process, number and mapping of properties acquired.	Easement acquisition shall occur on an individual project by project basis.	Conservation and restoration of riparian areas has a solid well documented improvement on water quality, however scores assigned to individual parameters are lower than typically reported due to the City being reactive to builders and building project, and not having funding for City implementation for proactive plan in either CIP processes or private building sector.	Easement prioritization and acquisition will follow completion of Retrofit Plan and Hydromodifcaion Assessment required under current NPDES MS4 Permit.
NP4. Assess and address target audiences with public education efforts; cooperate with others to leverage resources.	Non-Point	Update list of stakeholders and target groups, including relation to stormwater program.	Check permit	Public education efforts does not directly effect pollutants, but does assist in addressing polluting sources and reducing water quality polluting factors within the city.	A five-year outreach plan was completed in FY 2012-13 that includes options for addressing targeted pollutants (E. coli and turbidity). Annual "Mid-Willamette Valley Erosion Control Summit" and "Howl-a-Palooza" are City sponsored events that engage targeted audiences.
NP5. Creatively use a combination of publications, media and other appropriate public information tools to support and implement the Stormwater Management Program. Coordinate with the public information activities of related programs and allied agencies. Where appropriate, utilize cooperative public information opportunities. Much of this effort will be a product of other BMPs from this Stormwater Management Plan, but should consider the following areas: *Erosion and sediment control (one for general use, one for engineers-developers-contractors, and one for City staff – especially construction inspectors) *Water quality facilities and best management practices (general use and engineers-developers-contractors) *Stream and riparian restoration, including fish issues, the Endangered Species Act, and water quality (temperature) *Wetlands for both habitat and water quality management *Stormwater system maintenance *Chemical use reduction (fertilizers and pesticides)	Non-Point	List of materials and methods used for public information; list of cooperative programs and agencies used by the City.	On-going	Public information to support the SWMP is highly implemented through public response efforts conducted through the stormwater division and other operations divisions throughout the City. Informing public on SWMP issues does address regulatory requirements, but does not have a direct effect on pollutants by actively removing them. This task is based on public involvement. Public information is a step to increase the involvement of the public and the active removal of pollutants.	See RC5 of the MS4 Annual Report (Public Education and Participation).

TMDL Implementation Plan BMP Progress Matrix for the Willamette Basin and Molalla/Pudding Subbasin

Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
NP6. Participate in watershed council and neighborhood association meetings; assist local citizens groups.	Non-Point	List of relative requests and follow up action items	On-going	This task also addresses public awareness and education while correlating with other organizations to address issues of common concern. This task supports public involvement and is highly implemented. This task supports efforts to constructively deal with regulations and concerns within the community to give different organizations an understanding of view points.	See RC1 (Planning)Task 5 of the MS4 Annual Report.
NP7. Distribute an updated "perceptionnaire" (Your Opinion Please) to the public via mail, personal contact, urban watershed workshops, and the City's Internet site. An updated perceptionnaire will be developed and targeted for distribution during fiscal year 2005 - 06.	Non-Point	Survey results/indications	Once per permit term.	The development of a public response/feedback form about various resources within the City of Salem's departments would be a great way to gain insight on the overall opinion of the public and the City's response to their needs and concerns. This task does not directly effect pollutants or regulatory factors, but does increase involvement within the community and allows the City to gain further information on public contact methods that could be improved and gain an overall understanding of the public's general perception.	A survey for streamside residents requesting information about pollution prevention behaviors was created and mailed during FY 2011-12.
NP8. Continue to regularly maintain the Water Resources website. Website topics include: Natural resources issues (landslide hazards, wetlands, fish and the Endangered Species Act, trees, and native plants), outreach educational programs, topical news, and current events. Water Resources staff will maintain the website, with stormwater quality items and community feedback opportunities being regular features.	Non-Point	List of website updates and number of "hits."	DELETE TASK: The City of Salem changed to a unified website that does not track website hits. This performance indicator is no longer valid.	Website maintenance does not directly effect pollutants or regulatory requirements, but does involve the public and is highly implemented.	Water Resources Section no longer exists. Recommended for modification/deletion.
NP9. Review consistency of public education / participation program goals and objectives against the Stormwater Master Plan and BMPs set forth in the revised Stormwater Management Plan.	Non-point	Education and participation addressing goals and objectives of Master Plan and Management Plan.	Annually	Reviewing goals of public education/participation objectives does not directly effect pollutants. The review of BMP objectives is important to consider when providing public education and addressing stormwater concerns within the City. The public is not involved in the review process, but is effected by it. BMP objectives are related to regulatory requirements, therefore; regulating factors are addressed in the review process of BMPs when considering public education.	The public education and public participation program is defined by the new MS4 Permit and associated Stormwater Management Plan, not the Stormwater Master Plan.
NP10. Continue to coordinate with City departments and educate the public regarding trees, consistent with Chapters 68, 86, and 132, and new stormwater and erosion control codes of the Salem Revised Code (SRC).	Non-point	Development of outreach and education plan for trees	Coordination began FY 2009-10, and will be ongoing. Development of outreach and education plan to begin FY 2010/11	Preservation of urban trees aids in water quality and quantity treatment of stormwater runoff and reduces erosion while enhancing habitat. Response to the public about tree concerns is implemented citywide.	Ongoing
NP11. City Pet Waste Program, continue to work with public and interested parties to reduce dog waste, including presentations about dog fecal disposal during Take the pledge presentations, Bark in the Park, and installation of mutt mitt stations in city parks	Non-Point (Bacterial Education Sections)	Development of program and number of groups included with distribution of program material, number of bags equipped and stations installed, and number of park patrol volunteers participating in the program. Types and number of information dissemination.	Campaign was held in FY 08/09, and limited in 09/10. Targeted pet waste campaign re-initiated in FY 11/12.	It is recognized that this program results in actual reduction in fecal matter waste streams in Salem park areas, therefore warranting a 2 rating on bacterial reduction, it was however not given a greater reduction value because it is unknown at this time effectiveness of volunteer effort in lbs of reduction and removal of Fecal matter, as information of program increases and implementation expands this will increase values of bacterial reduction.	See RC 5 (Public Education and Participation) Task 1 of the MS4 Annual Report.
NP12. Review city code conditions, and other regional examples to determine if an Animal Waste Ordinance is needed and whether it would provide benefit	Non-Point (Bacterial Education Sections)	Determine if code is necessary and/or politically feasible	FY 2010-11	It is unknown the effect a City ordinance would have on bacterial loads with in the city.	No current need has been identified.

TMDL Implementation Plan BMP Progress Matrix for the Willamette Basin and Molalla/Pudding Subbasin

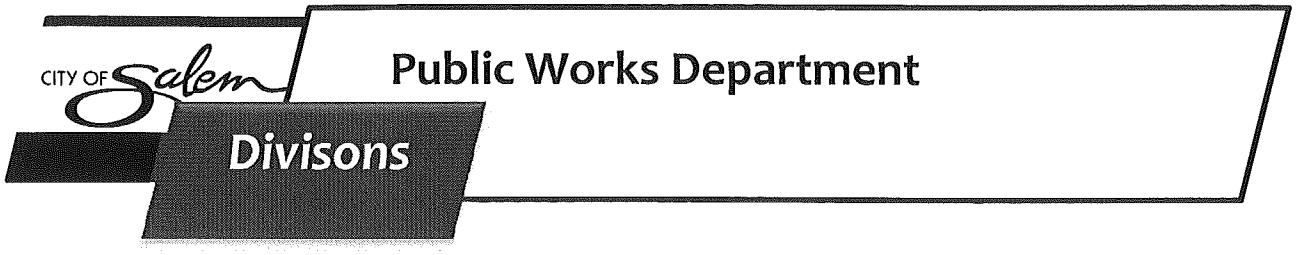
Best Management Practices and Tasks	BMP Source	Tracking Measures	Measurable Goals	Justifications: Explanation of Key Points in Analysis of BMP	Status/Reporting Summary (Through June 30, 2013)
NP13. Public mercury educational program, collaborate with local partners by promoting take back programs already operating in area for mercury containing items	Non-point (Mercury, public sector)	Promotion of mercury take back opportunities and events with Marion County.	On-going	Marion County is the leading local agency regarding mercury take back. The City will assist with promoting activities. City currently does not actively have a program schedule for promoting take back program and does not currently have drop off sites thus at this time the mercury waster load is not being reduced by this city activity	The Salem-Keizer Recycling & Transfer Station now takes CFLs 7 days/week excluding major holidays. The hours improve recycling opportunities and convenience, and reduce the need to hold collection events. The City participates in advertising that the facility now accepts CFLs from residents during business hours.
NP14. Internal City operational mercury reduction program, review and update and ensure Standard Operating Procedures for material replacement and waste containing mercury is done properly	Non-point (Mercury , internal)	Reduction strategies identified and implemented. Coordinate with Tye and Don.	Review of current mercury reduction strategies in City Operations FY 2010-11, particularly fleet and facilities. Implementation of mercury reduction strategies --ongoing	Proper handling and disposal of mercury - containing items ensures, that HG is not improperly disposed.	Fleet Services follows all pertinent laws regarding proper disposal of mercury switches found in older vehicles; Facilities collects, packages, and stores CFLs, then contacts Environmental Services to dispatch pickup by City's contracted Hazardous Waste hauler.
NP15. Work closely with Marion County staff on mercury reduction programs. Distribute water and sewer bill inserts, and participate in compact fluorescent light take back program.	Non-Point	Number of inserts distributed. Number of CFLs Recycled.	On-going	Compliance with Mercury TMDL	On-going
NP16. Environmental Services will track new dentists through the building permit process and will verify sites for amalgam separator installations and good mercury housekeeping practices; visit with all of the community's identified, existing dentists and provide compliance certifications to ODA	Non-Point	Number of dentists contacted. Number of Amalgam Separators Installed and Certified. Pounds of Mercury Collected Annually.	On-going	Compliance with Mercury TMDL	On-going
E. Coli outreach tasks	Non-Point	Will vary based on program elements, but can include measures such as: number of Mutt Mitts in Parks replenished annually; number of participants in public involvement; number of responses to promotions; number of partners sharing our message; survey of pet owners.	On-going	Compliance with Bacteria TMDL	See individual BMPs listed under RC5 (Public Education and Participation) of the MS4 Annual Report.
Mercury outreach tasks	Non-Point	Will vary based on program elements, but can include measures such as: number of retailers in Salem-Keizer that participate in a Take-Back CFLs program; erosion outreach plan development; increase in minimum buffer width; number of promotions for mercury take-back; number of riparian plants planted, including ground cover; number of dentists receiving fact sheets or information packets.	On-going	Compliance with Mercury TMDL	
Temperature outreach tasks	Non-Point	Will vary based on program elements, but can include measures such as: number of trees and shrubs planted; number of site plans developed and planted; number of milestones of Elements of the Riparian Action Plan Enacted.	On-going	Compliance with Temperature TMDL	

Appendix B

NPDES MS4 Annual Report (FY 2012-13)

Appendix C

Water and Sewer Fund Adopted Budget FY 2012-13



Administration

Engineering

Parks and Transportation Services

Recreation Services

Wastewater Treatment

Operations

This section includes the divisions in bold text.

Budget Summaries

The Public Works Department budget is divided between the Public Works Fund (Fund 155), the Water and Sewer Fund (Fund 310), and the General Fund (Fund 101). Each is shown separately in the fiscal budget document. The Public Works Fund houses the engineering, and parks and transportation services division budgets. The Water and Sewer Fund includes budgets for administration, operations and wastewater treatment divisions, as well as the non-divisional component of the department's budget. The General Fund includes budgets for City recreation services and the Center 50+.

The *Water and Sewer Fund Budget by Division* table represents three years of historical expenditures, with the adopted FY 2011-12 and adopted FY 2012-13 budgets for each division of the department.

Water and Sewer Fund Budget by Division

	Actual 08-09	Actual 09-10	Actual 10-11	Adopted 11-12	Adopted 12-13
Administration	$125,892,744	$ 43,825,723	$ 40,648,297	$ 50,832,300	$ 46,351,830
Wastewater Treatment	8,222,009	8,336,162	8,481,457	8,976,360	9,482,510
Operations	22,397,026	20,494,585	22,071,458	23,710,540	24,642,030
Total	$156,511,779	$ 72,656,470	$ 71,201,212	$ 83,519,200	$ 80,476,370
% Change		-53.58%	-2.00%	17.30%	-3.64%

The *Water and Sewer Fund Budget by Category* table represents three years of historical revenues and expenditures, with the adopted FY 2011-12 and adopted FY 2012-13 budgets by category. The expense categories include Personal Services, Materials/Services, Capital Outlay, Debt Services, Contingencies, and Transfers. The table shows the total fund budget, the percent change in total budget and the full-time equivalent employee (FTE) count for each year. The budget includes an addition of two positions for operations, a dispatch supervisor and an engineering technician, and an increase of .25 FTE for a desktop publishing specialist for an overall increase of 2.25 FTE.

Water and Sewer Budget by Category					
	Actual 08-09	Actual 09-10	Actual 10-11	Adopted 11-12	Adopted 12-13
Beginning Working Capital	$ 17,233,006	$ 29,411,443	$ 30,325,166	$ 33,383,970	$ 38,982,820
Water	22,360,555	22,443,192	22,771,837	23,491,090	23,629,190
Sewer	40,526,431	45,461,908	47,418,622	48,598,610	48,097,030
Permits and Fees	886,222	2,369,537	1,537,464	1,640,000	1,698,200
Internal/Other Agencies	660,736	334,963	606,452	628,660	580,150
Grants	53,266	6,452	33,120	-	-
Interest	384,649	160,491	134,035	100,000	100,000
Loan Collections	3,207,089	349,861	276,188	302,000	76,000
Other Revenue	290,342	404,129	107,915	91,400	94,400
Bond Proceeds	90,534,018	-	-	-	-
Transfers	9,786,910	2,039,660	1,415,390	1,078,870	1,060,360
Total Resources	$185,923,223	$102,981,636	$104,626,190	$ 109,314,600	$114,318,150
Personal Services	$ 17,454,009	$ 19,552,158	$ 19,923,960	$ 22,241,320	$ 22,768,060
Materials/Services	26,478,551	22,078,681	23,427,121	24,973,800	26,354,850
Capital Outlay	1,775,583	603,027	2,583,249	192,190	420,800
Debt Services	107,162,162	23,099,204	23,194,972	23,236,890	24,086,660
Contingencies	-	-	-	1,500,000	3,500,000
Transfers	3,641,473	7,323,400	2,071,910	11,375,000	3,346,000
Total Expenditures	$156,511,779	$ 72,656,470	$ 71,201,212	$ 83,519,200	$ 80,476,370
% Change		-53.58%	-2.00%	17.30%	-3.64%
FTE	220.80	243.30	248.30	244.05	246.30

**The significant increase in actual expenditures in FY 2008-09 represents the result of a $90 million refinancing of commercial paper with full faith and credit debt.*

FY 2012-13 Highlights and Significant Changes

Operations

New Engineering Technician position

This position is a conversion from an 11-month seasonal position. Staff in this position enter data and update the water asset information recorded in the maintenance management system (Hansen). On-going and timely input into the maintenance management system is critical to properly locating utilities for private- and public-sector construction projects.

New Customer Services/Dispatch Supervisor position

As a result of budget cuts in early 2011, the vacant dispatch supervisor was eliminated from the budget. The dispatch supervisor provided administration and daily supervision of eight part-time and full-time employees at the 24/7 Public Works Dispatch Communication Center. The direct responsibilities of that position were absorbed by the customer services manager. After more than a year of combining these duties, management has determined this is more work than one person can effectively and efficiently manage. This new position will have responsibilities for both dispatch and customer services supervision, as well as backup to the customer services manager and supervisor.

WATER AND SEWER PERFORMANCE MEASURES	RESULTS	
	2010	2011
Number of calls where crews were sent out to fix local flooding due to clogged catch basins	228	136
Number of plan reviews for single family dwellings completed in 10 days or less	463	335
Number of millions of gallons of industrial wastewater received and treated at the Willow Lake Pollution Control Facility (WLPCF)	818.68	775.55
Number of industries inspected for compliance with Categorical Industrial Users (CIUs) and Significant Industrial Users (SIUs)	29	25
Number of industries in significant non-compliance with CIUs and SIUs	2	0
Number of industries issued citations for non-compliance with CIUs and SIUs	3	0
Number of industries issued warnings for non-compliance with CIUs and SIUs	9	1
Number of industries issued notices of violation for non-compliance with CIUs and SIUs	9	5
Number of full facility inspections conducted on permitted industries	55	47
Number of work orders completed in operations	7,716	8,914
Number of emergency work orders completed in operations	3	6
Number of corrective work orders completed in operations	1,421	1,928
Number of preventive maintenance work orders completed in operations	6,292	6,980
Number of sanitary sewer overflows reported to the Oregon Department of Environmental Quality in compliance with wastewater NPDES permit	5	6
Percentage of system wide water loss found in water management and conservation annual water loss audit (system leakage)	18%	15.57%
Amount in millions for seven major contracts bid and awarded	$18.9	$14.4
Amount in millions of additional contracts awarded to consultants of record	$3.6	$3.1