


WASTEWATER SERVICES



<u>Organization Set – Departments</u>	<u>Organization Set #</u>
• Administration	75-01
• Plant	75-72
• Environmental Services	75-74
• Pump Stations	75-76
• Conveyance Systems	75-78



2010 – 2011 Proposed Budget --- Budget Summary

Wastewater Services Fund

2010 – 2011 Wastewater Services Fund

Budget Highlights

- Continue commitment to exceed environmental requirements, to protect water resources and to guard public health.
- Wastewater Division service and staffing levels are consistent with the previous budget year. Some notable aspects of this budget include:
 - Sanitary sewer line improvements to lessen rain induced infiltration and inflow (I&I) sanitary sewer problems.
 - Planning and preparation for future community wastewater needs continues to be a significant budget component.
 - Sustainability and energy conservation elements are included in several areas.
 - Attention to new regulatory requirements relating to the division permits and Yamhill River water quality.
- The Water Reclamation Facility (WRF) is now in its 15th-year of operation. As part of a long term wastewater treatment planning process, the new WRF Facilities Master Plan has been approved by the Department of Environmental Quality (DEQ). This plan covers the next 20 year planning period relating to wastewater facility capacity needs to accommodate continued community growth and changing water quality regulations. The plan includes various alternatives and options for capital improvements to respond to future system needs. Funding to start design and construction of some of these facility improvements is included in this budget.
- The Sanitary Sewer Conveyance Master Plan recommended significant repair, rehabilitation and replacement of aging sewer lines. Moreover, the 1999 sewer overflow consent decree and the Oregon sewer overflow requirements include 2010 timelines for compliance. Funding is included to continue these efforts.
- New water quality regulations likely will include:
 - Involvement in the second Yamhill River TMDL focusing on temperature limitations and other pollutants.
 - Toxics sampling and implementation plan development for toxics reductions in response to Senate Bill 737.
- Pretreatment Program revisions related to DEQ requirements and program effectiveness.
- New Programs, Projects, or Equipment:
 - Energy efficiency projects: Projects directed at increasing efficiency and decreasing energy use. These include the Cozine Pump Station wet well mixer, improvements to WRF equipment and energy efficiency program.
 - WRF Facility and Pump Station reliability improvements: These projects are directed at increasing reliability and minimizing the potential for Sanitary Sewer Overflows. Included are a pump retrieval system and an emergency pumping system.
 - Digital Projection System: This project is aimed at increasing the functionality of the Admin Conference room which is used by City staff and outside agencies.
 - General Sewer System Repairs and Maintenance: This is designed to increase reliability, capacity and efficiency through I&I reduction.
 - Conveyance Department Equipment: This will increase the capabilities of the Conveyance staff by replacing the existing vacuum/jet truck and provide excavation equipment. The current economic conditions make these purchases very effective due to projected decreased costs.

2010 – 2011 Proposed Budget --- Budget Summary

Wastewater Services Fund

Full-Time Equivalents

	<u>2009 - 2010</u>	<u>Change</u>	<u>2010 - 2011</u>
FTE Adopted Budget	19.22		
Extra Help - Wastewater Services		+ 0.24	
FTE Proposed Budget		+ 0.24	19.46

Short- and Long-Term Issues

Administration – #75-01

Short-Term Issues

- Involvement with DEQ during the National Pollutant Discharge Elimination System (NPDES) permit renewal process.
- Participate in South Yamhill River Total Maximum Daily Load (TMDL) process with DEQ.

Long-Term Issues

- Initiate design and construction related to Secondary Treatment improvements recommended in the WRF Facilities Master Plan to accommodate future community growth and meet expected regulatory requirements.
- Develop priority planning to address recommendations from the revised Sanitary Sewer Master Plan.
- Succession planning and employee development related to personnel changes anticipated within the division.
- Public outreach and education related to wastewater issues.

Plant / Pump Stations - #75-72 and #75-76

Short-Term Issues

- Compliance with a discharge permit that remains among the most complex and stringent in Oregon.
- Increase pumping capabilities for the Biosolids hauling operation.
- Continued focus on sustainability goals and opportunities for improvements; i.e.: electrical, natural gas, water and chemical efficiencies.
- Improvement to plant and pump station computer control systems, including remote access to improve emergency response.
- Increased reliability of systems to minimize the potential for sanitary sewer overflows.

Long-Term Issues

- Evaluate and implement changes to meet new TMDL requirements for the South Yamhill River.
- Plan for capital improvements to achieve higher operational efficiencies and enhanced controls.
- Plan for increased costs and attention associated with preventative and emergency maintenance on aging equipment.



Dave Gehring, Sr. Operator and Rick Williams, Sr. Environmental Technician make modifications to plant equipment. The WRF staff has maintained perfect regulatory compliance for three years and consistently reduce nutrient and other pollutants discharging to the Yamhill River.

2010 – 2011 Proposed Budget --- Budget Summary

Wastewater Services Fund

Short- and Long-Term Issues - Continued

Laboratory – #75-74-310

⚡ Short-Term Issues

- Revise standard operating procedures and testing methods.
- Continue to work cooperatively with the Yamhill Basin Council on projects that affect the Yamhill River watershed.
- Maintain compliance record with the Environmental Protection Agency (EPA) quality assurance program by continuing to score 100% on all test parameters.

The Wastewater Services Laboratory consistently meets federal requirements for quality control.

(Pictured: Steve Covey, Sr. Lab Technician and Lora Lyons, Lab Technician. 20 years of combined City experience.)



Long-Term Issues

- Continue Wastewater Services Laboratory internship program with Linfield College for the 6th year.
- Work with High School students in a “job shadow” program.
- Develop and implement a replacement schedule for aging laboratory instruments.

Pretreatment Program – #75-74-315

⚡ Short-Term Issues

- Continue follow up on survey results of all nonresidential users to characterize their wastewater discharge.



Rick Williams, Sr. Environmental Technician and Tim Munro, Environmental Technician II perform industrial sampling to protect wastewater facilities, the environment and the public health. The Pretreatment Department administered user charges for flow and extra strength wastewater totaling \$287,368 in 2009.

- Provide revised Pretreatment Program procedures including an updated Sewer Use Ordinance for Council adoption.
- Continue public outreach and education on pretreatment topics.
- Implement pharmaceutical drug take back program to help remove these chemicals from wastewater systems.

⚡ Long-Term Issues

- Expand community outreach regarding stormwater management and fats, oils, and grease (FOG) control.

Conveyance Systems – #75-78-320

⚡ Short-Term Issues

- Prioritization of conveyance video and cleaning work.
- Maintain existing equipment and develop a replacement schedule for the major equipment.
- Identify and correct priority repair projects.
- Perform software training for conveyance crew members.

⚡ Long-Term Issues

- Maintain the sanitary sewer collection system in compliance with the National Pollutant Discharge Elimination System (NPDES) permit.
- Evaluate sanitary sewer cleaning and video inspection schedule and adjust to maintain appropriate level of service.
- Planning for stormwater system management in cooperation with Engineering, Public Works and Wastewater Services Pretreatment.
- Improve conveyance data management rating system to ensure accurate sewer asset management.

2010 – 2011 Proposed Budget --- Budget Summary

Wastewater Services Fund

Core Services

Administration

- Provide organization, planning and support to meet the short-term and long-term needs of all of Wastewater Services sections.
- Ensure the reporting requirements to EPA, DEQ, and other regulatory agencies are achieved.

Plant / Pump Station

- Provide stable and cost effective operation of the WRF necessary to achieve NPDES permit requirements and protect the environment.
- Provide 24-hour per day alarm monitoring and response for the WRF and pump stations.
- Land application of exceptional quality biosolids.



4.0 million gallons of biosolids were recycled and applied to agricultural land in 2009. This reduced the use of non-renewable chemical fertilizers.

- Perform predictive, preventative, and corrective maintenance required to keep equipment operational and extend the useful life of the WRF and pump station equipment.

Pretreatment

- Provide industries and the public, information and education on pretreatment programs and goals.
- Issue permits to industrial dischargers, and perform required sampling and monitoring.
- Provide protection for the sewer system and WRF to protect against illicit discharges and harmful wastes that impact the treatment processes, environment or may be harmful to employees working in the collection system.

Laboratory

- Perform required laboratory analysis per the NPDES permit.
- Maintain precision and accuracy through extensive quality assurance and quality control measures.

Conveyance Systems

- Maintain the sanitary sewer system to protect health and prevent property and environmental damage due to system failure.



The Conveyance Department is responsible for maintaining 149 miles of sanitary sewer infrastructure.

(Pictured: Utility II Workers Joe Rinkes and Matt Bernards)

- Select sewer project repairs to be performed by staff.
- Continue to maintain the stormwater system as a cooperative effort with the Public Works Division to remove pollutants before they are discharged to the streams and rivers.
- Coordinate sewer rehabilitation and replacement projects.
- Clean sanitary sewer mainlines and TV inspect the majority of lines every two to three years to identify defects that could cause blockages or allow inflow and infiltration (I&I) into the system.
- Replace sanitary sewer laterals from the sewer mainline to property line as needed.
- Utilize an asset management system to record sewer maintenance and condition and prioritize repairs.



Wastewater Services Fund --- Historical Highlights

- 1900** First organized effort for a municipal sewage collection system was made early in the 1900's.
- 1915** The original 11th Street Trunk Sewer is constructed, and the 48" line was designed as a combined sewer with an outfall to the South Yamhill River.
- 1950** In the early 1950's, construction of interceptor sewers were built to collect sewage from the Cozine Trunk and 11th Street Trunk to divert all sewage into the City's first wastewater treatment plant.
- 1953** McMinnville's first "trickling filter" wastewater treatment facility begins operation on May 4, 1953. The construction cost totaled \$396,456.40 and was designed to serve a population of 8,000. The residential user fee was \$0.75 per month.



- 1956** The Northeast Trunk Sewer is constructed to provide sewer service to the north and northeast sections of the City. The Northeast Trunk provided the first major sanitary sewer conveyance system that did not also collect stormwater drainage.
- 1964** First sewage treatment plant upgrade was completed in March 1964, adding a new 35' digester with mechanical mixing and upgraded digester heating system.
- 1971** Major expansion and upgrade of the wastewater plant to an activated sludge treatment system to meet a growing population and changing water quality standards.
- 1989** Department of Environmental Quality (DEQ) conducts first Total Maximum Daily Load (TMDL) study on the South Yamhill River. The study determines phosphorus and ammonia limits (nutrients) are necessary.
- 1991** Alternatives are studied to achieve new requirements with consultant CH2M-Hill to develop the *1991 Facilities Plan*. This included an infiltration & inflow (I&I) reduction analysis of the conveyance system.
- 1992** A fast-track design for new wastewater facilities is conducted. The City's Pretreatment Program is approved by DEQ on October 25, 1992.
- 1993** City breaks ground on constructing the new Water Reclamation Facility (WRF).
- 1993** Department of Environmental Quality (DEQ) issues a Stipulation and Final Order (SFO) to eliminate all sewage overflows into the Yamhill River from the City's conveyance system during storm events when rainfall is less than a one in 5-year storm event.



Wastewater Services Fund --- Historical Highlights

1994 City explores privatization of WRF operations and management. City Council decides to retain direct operating control of WRF after considering cost and quality analysis.

1995 First *Wet Weather Management Plan* to control I&I is submitted to DEQ. Consultant estimates costs at \$30 million to comply with the plan.

1996 The \$28 million Water Reclamation Facility (WRF) begins operating on January 24, 1996 in response to new water quality standards and the City's growing population.



1996 Construction of the \$8 million Cozine Pump Station and trunk replacement project begins. Official Inflow and Infiltration (I&I) program implemented.

1997 Alpine Avenue Sewer Improvement Project to reduce I&I is completed in summer 1997.

1997 City Council adopts private sewer lateral ordinance defining the responsibilities for property owners to repair defective sewer laterals.

1998 WRF receives two awards from The Pacific Northwest Pollution Control Association -- Municipal Water Protection Award for WRF's contribution to clean water and George W. Burke Facility Safety Award.

1998 City purchases first TV inspection unit to inspect underground pipes.

1999 The Oregon Association of Clean Water Agencies (ACWA) presents the Outstanding Member Agency Award contribution to improving water quality.

1999 WRF added a third channel of ultraviolet (UV) lights, which is used to disinfect the WRF's effluent.

1999 City submits revised *Wet Weather Management Plan* to meet DEQ's 2010 timeline for elimination of overflows.

2000 Sewer capital investments reach an estimated \$54 million on the WRF construction, pump station improvements, and collection system repairs.

2001 A large screen was installed ahead of the Raw Sewage Pump Station to remove debris from the influent prior to being pumped into the WRF.

2003 A new pump station was built, which replaced 3 Mile Lane #1 Pump Station. Sewer lines were relocated and 3 Mile Lane #2 Pump Station was eliminated.

2005 A new pump station added in the Autumn Ridge Development.

2005 An equipment storage building is completed for sewer maintenance equipment and the Conveyance System Maintenance crew moves to the division. The WRF Manager assumes supervisory management of the program.

Wastewater Services Fund --- Historical Highlights

2006 Water Reclamation Facility and Conveyance System Maintenance are re-named Wastewater Services Division.

2006 Pacific Northwest Clean Water Association (PNCWA) presents WRF with 2005 Compliance Award for no permit violations in calendar year 2005.

2006 PCWA presents WRF with 2006 Project of the Year Award for the energy saving HVAC upgrade to the Administration Building.



2008 PNCWA presents WRF with 2007 Compliance Award for no permit violations in calendar year 2007.

2008 DEQ working on the second TMDL analysis on Yamhill River addressing bacteria, temperature, and iron.

2008 NPDES discharge permit expires; new permit application submitted to DEQ in June 2008.

2008 Sanitary sewer master plan updates completed for the Water Reclamation Facilities and the Conveyance System.

2009 Ron Bittler - WWS Manager, leaves the City after 15 years of leadership. Ernie Strahm is promoted to Operations Manager, and Ron Gillenardo is hired as the new Operations Superintendent.

2010 - 2011 Proposed Budget --- Personal Services Summary
Salaries Paid From More Than One Source
Wastewater Services Fund

Position Description

Fund Department Section	Number of Employees	Range	Total Salary	<u>Detailed Summary</u>	
				Page	Amount
<u>SS & SD Maintenance Supervisor</u>	1	338	63,946		
Street Fund (0.10 FTE)				178	6,395
Wastewater Services Fund					
Conveyance Systems					
Sanitary (0.90 FTE)				296	57,551
<u>Mechanic - Public Works</u>	1	326	48,680		
General Fund					
Park Maintenance (0.45 FTE)				152	21,906
Street Fund (0.45 FTE)				178	21,906
Wastewater Services Fund					
Administration (0.10 FTE)				284	4,868
<u>Utility Worker II - WWS</u>	5	326	222,392		
Street Fund (0.50 FTE)				178	22,239
Wastewater Services Fund					
Conveyance Systems					
Sanitary (4.50 FTE)				296	200,153

Budget Document Report

75 - WASTEWATER SERVICES FUND

2008 ACTUAL	2009 ACTUAL	2010 AMENDED BUDGET	Department : <i>N/A</i> Section : <i>N/A</i> Program : <i>N/A</i>	2011 PROPOSED BUDGET	2011 APPROVED BUDGET	2011 ADOPTED BUDGET
RESOURCES						
<u>BEGINNING FUND BALANCE</u>						
1,086,340	1,000,000	1,000,000	4075-05 Designated Begin FB-WW Svc Fd - Sewer A/R Non-cash Designated Beginning Fund Balance comprised of estimated Sewer Accounts Receivable balance at July 1, 2010.	1,000,000	1,000,000	1,000,000
1,246,703	1,678,932	1,731,000	4090 Beginning Fund Balance Estimated July 1, 2010 undesignated cash carryover from the 2009-2010 fiscal year.	1,974,850	1,974,850	2,014,850
2,333,042	2,678,932	2,731,000	<u>TOTAL BEGINNING FUND BALANCE</u>	2,974,850	2,974,850	3,014,850
2,333,042	2,678,932	2,731,000	<i>TOTAL RESOURCES</i>	2,974,850	2,974,850	3,014,850