



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



2009 – 2010 Proposed Budget --- Budget Summary Wastewater Services Fund

2009 – 2010 Wastewater Services Fund Budget Highlights

- Continue commitment to exceed environmental requirements to protect water resources.
- Wastewater Division service and staffing levels are consistent with the previous budget year. Some notable aspects of this budget include:
 - 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.
 - Sewer line improvements to lessen rain induced infiltration and inflow (I&I) sanitary sewer problems.
 - Attention to various regulatory requirements relating to the division permits and Yamhill River water quality.
- The Water Reclamation Facility (WRF) is now in its 14th-year of operation. As part of a long term wastewater treatment planning process, the WRF Facilities Master Plan is currently under review by the Department of Environmental Quality (DEQ). This plan was developed with consultant expertise and considers wastewater facility capacity related to continued community growth and the changing regulations addressing water quality. The plan includes various alternatives and options for capital improvements to respond to future system needs. Funding to start design of these facility improvements is included in this budget.
- The recently completed Sanitary Sewer Conveyance Master Plan has recommended significant repair, rehabilitation and replacement of existing aging sewer lines. Work planned will include “trenchless” technologies where feasible to minimize disruptions due to conventional pipe replacement with the goal

of achieving infiltration and inflow (I&I) removal targets in year 2010. Lower project cost is anticipated due to contractor availability with the construction slow-down.

- Involvement in the second Total Maximum Daily Load (TMDL) study being performed for the South Yamhill River by the Oregon Department of Environmental Quality (DEQ). The TMDL will address bacteria, iron and temperature issues. Other challenges may include National Pollutant Discharge Elimination System (NPDES) permit reissuance and new requirements related to “persistent bioaccumulating toxics” (pharmaceuticals, dioxins, etc).
- Program revisions in the Pretreatment section related to DEQ requirements and program effectiveness.
- New Programs, Projects, or Equipment:
 - \$ 39,000 – Energy efficiency projects:
 - \$14,000 – Cozine Pump Station wet well mixer.
 - \$10,000 – Cozine PS HVAC improvements.
 - \$15,000 – WRF equipment improvements.



Additional energy conservation

- \$460,000 – General sewer system repairs and maintenance.
- \$ 40,000 – Headworks Building exterior access stairs.
- \$ 8,000 – Headworks lab safety fume-hood.
- \$ 12,600 – Administration Building access system addition.
- \$ 9,000 – Lab effluent sampling enclosure.
- \$ 13,700 – Hydraulic power unit and associated tools.
- \$ 25,000 – Smoke testing of sewer lines (I&I).

2009 – 2010 Proposed Budget --- Budget Summary Wastewater Services Fund

Full-Time Equivalents

	<u>2008-2009</u>	<u>Change</u>	<u>2009-2010</u>
FTE Adopted Budget	19.04		
Extra Help - WWS		- 0.16	
SS & SD Maintenance Supervisor		+ 0.05	
Utility Worker II - WWS		+ 0.25	
Mechanic - Public Works		+ 0.04	
FTE Proposed Budget		+ 0.18	19.22

Short- and Long-Term Issues

Administration – #75-01

➤ Short-Term Issues

- Involvement with DEQ during the NPDES permit renewal process.
- Participate in South Yamhill River Total Maximum Daily Load (TMDL) process with DEQ.
- Respond to DEQ review comments regarding the WRF Facilities Master Plan and obtain City Council approval.

➤ Long-Term Issues

- Initiate design process to address recommendations from the WRF Facilities Master Plan to address future community growth and regulatory requirements.
- Develop priority planning to address recommendations from the revised Sanitary Sewer Master Plan.
- Succession planning and training related to management changes anticipated within the division.

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.



The WRF treated 1.7 billion gallons and removed 5.9 million pounds of pollutants from wastewater in 2008.

- Additional alkalinity control with new equipment during the summer permit to improve treatment.
- Continued focus on sustainability goals and opportunities for improvements (electrical, natural gas, water and chemical efficiencies).
- Continue to improve pump station control systems and perform upgrades to the older stations.
- Respond to any new permit requirements or regulatory changes.

➤ Long-Term Issues

- Evaluate and implement changes to meet applicable new TMDL requirements for the South Yamhill River.
- Plan for capital improvements to achieve operational efficiencies and enhanced controls.
- Asset management including replacement and major rehabilitation requirements as the facilities age.
- Public outreach and education related to biosolids recycling.

2009 – 2010 Proposed Budget --- Budget Summary

Wastewater Services Fund

Short- and Long-Term Issues - Continued

Laboratory – #75-74-310

Short-Term Issues

- Continue participation in anticipated laboratory certification program.
- Continue support of the Yamhill Basin Council by performing laboratory analyses for various monitoring studies within the Yamhill Basin Watershed.
- Maintain compliance record with the Environmental Protection Agency (EPA) quality assurance program by continuing to score 100% on all test parameters.



Long-Term Issues

- Continue Wastewater Services Laboratory internship program with Linfield College for the 5th 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.



Pretreatment Program administered user charges for flow and extra strength wastewater totaling \$360,867.

- Provide revised Pretreatment Program procedures including an updated Sewer Use Ordinance for Council adoption.

- Continue public outreach and education on pretreatment topics.
- Create public accessibility to the Pretreatment Program by making documents and forms available on the City web site.

Long-Term Issues

- Expand community outreach regarding stormwater management and fats, oils, and grease (FOG) control.
- Evaluate additional pharmaceutical drug take back program to help remove these chemicals from wastewater systems.

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.

2009 – 2010 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.



Recycled 4.8 million gallons of biosolids (fertilizer) to agricultural land in 2008.

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

Pretreatment

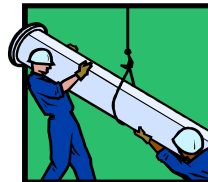
- Provide industries and the public, information and education on pretreatment programs and goals.
- Issue permits to industrial dischargers, and perform required sampling and monitoring.
- Provide protection for the sewer system and WRF to protect against illicit discharges and harmful wastes that impact 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.
- 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.



5 sanitary mainline repairs and 34 sanitary lateral repairs or replacements were completed in 2008.

- 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 WRF with Outstanding Member Agency Award for its 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.

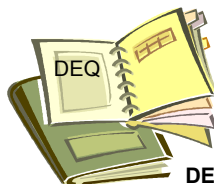


2007 PNCWA presents WRF with 2006 Project of the Year Award for the energy saving HVAC upgrade to the administration building.

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.



DEQ issues revised NPDES permits every 5 years.

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

2009 Ron Bittler leaves the City as WWS Manager after 15 years of leadership and Ernie Strahm is promoted to the position.

2009 - 2010 Proposed Budget --- Personal Services Summary
Salaries Paid From More Than One Source
Wastewater Services Fund

<u>Position Description</u>	Number of Employees	Range	Total Salary	<u>Detailed Summary</u>	
Fund Department Section				Page	Amount
<u>SS & SD Maintenance Supervisor</u>	1	338	63,945		
Street Fund (0.10 FTE)				186	6,395
Wastewater Services Fund					
Conveyance Systems					
Sanitary (0.90 FTE)				314	57,551
<u>Mechanic - Public Works</u>	1	326	48,680		
General Fund					
Park Maintenance (0.45 FTE)				157	21,906
Street Fund (0.45 FTE)				186	21,906
Wastewater Services Fund					
Administration (0.10 FTE)				300	4,868
<u>Utility Worker II - WWS</u>	5	326	217,509		
Street Fund (0.50 FTE)				186	21,751
Wastewater Services Fund					
Conveyance Systems					
Sanitary (4.50 FTE)				314	195,758

Budget Document Report

75 - WASTEWATER SERVICES FUND

2007 ACTUAL	2008 ACTUAL	2009 AMENDED BUDGET	Department :N/A Section :N/A Program :N/A	2010 PROPOSED BUDGET	2010 APPROVED BUDGET	2010 ADOPTED BUDGET
RESOURCES						
<u>BEGINNING FUND BALANCE</u>						
0	0	0	4075 Designated Begin FB-WW Svc Fd	0	0	0
1,032,309	1,086,340	1,100,000	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, 2009.	1,000,000	1,000,000	1,000,000
131,523	0	0	4075-10 Designated Begin FB-WW Svc Fd - Storm Drainage	0	0	0
1,126,163	1,246,703	1,550,000	4090 Beginning Fund Balance Estimated July 1, 2009 undesignated cash carryover from the 2008-2009 fiscal year.	1,465,000	1,465,000	1,731,000
2,289,995	2,333,042	2,650,000	<u>TOTAL BEGINNING FUND BALANCE</u>	2,465,000	2,465,000	2,731,000
2,289,995	2,333,042	2,650,000	TOTAL RESOURCES	2,465,000	2,465,000	2,731,000