



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



2008 – 2009 Proposed Budget --- Budget Summary Wastewater Services Fund

2008 – 2009 Wastewater Services Fund Budget Highlights

- The Water Reclamation Facility (WRF) is now in its 13th-year of operation. As the revised *Facilities Master Plan* is completed, the planning process will begin for the next 20 years of operation. The process will consider plant capacity as it relates to continued community growth and the changing regulatory environment addressing water quality in Oregon. This will include responding to the results of a second Total Maximum Daily Load (TMDL) being performed in the Yamhill Basin by the Oregon Department of Environmental Quality (DEQ). The TMDL will address bacteria, iron and temperature. Other challenges will include responding to toxics and mixing zone evaluations, development of a revised plan to address wet weather operation, and the creation of a Mercury Reduction Plan required by DEQ as part of the most recent TMDL performed on the Willamette River Basin. Beyond the immediate issues, the future may require Wastewater Services to address such things as micro-contaminants in the form of pharmaceuticals, hormones, and a growing list of organic contaminants found in wastewater.
- The WRF's National Pollutant Discharge Elimination System (NPDES) permit will expire in December of 2008. As required by DEQ, a permit renewal application will be submitted in June 2008. During the past two years, data was collected to perform the Reasonable Potential Analysis for Toxic Pollutants (RPA). RPA involves testing the effluent (treated wastewater) from the WRF for "priority pollutants". Each pollutant is then measured against water quality standards for a potential violation. DEQ will use the results of the RPA to determine if additional permit limits are required in the revised permit. The Wastewater Services staff will collaborate with DEQ during the RPA review and the NPDES permit development to ensure the WRF's operational interests are represented.
- The 2009 Proposed Budget reflects a change in operating philosophy to address maintenance needs of the City's conveyance system. Historically the maintenance crew has focused primarily on performing inspections and cleaning of the sanitary sewer system, with virtually all system repairs performed by outside contactors. To reduce the backlog of minor system repairs, beginning next fiscal year, City staff will perform the smaller repairs in-house. This will be accomplished by increasing the crew size by one Utility Worker II and purchasing some additional equipment to support this effort.
- Begin to implement the results of the Capacity, Management, Operation and Maintenance (CMOM) Gap Analysis performed by CH2M Hill during the *Sanitary Sewer Master Plan*, by addressing the data management system and developing a work order driven maintenance system, reassessing the current sanitary sewer system cleaning schedule, and developing a proactive approach to address minor system repairs.
- Conveyance System Crew to continue to maintain the stormwater system as a cooperative effort with the Public Works Division.
- New Programs, Projects, or Equipment:
 - \$20,000 – Perform next oxidation ditch gear box and motor replacement.
 - \$35,000 – Alkalinity storage and delivery system.
 - \$80,000 – Purchase a dump truck to support both the plant and conveyance system crews.
 - \$6,500 – Generator and auto transfer switch for Oregon Street Pump Station.
 - \$275,000 – General conveyance system repairs.
 - \$35,000 – Construction shoring to support performing in-house sewer line repairs.

2008 – 2009 Proposed Budget --- Budget Summary Wastewater Services Fund

- New Programs, Projects, or Equipment – continued:
 - \$40,000 – Replace the computer and system software to support the closed-circuit TV (CCTV) equipment on the TV Van.
 - \$28,000 – Camera and transporter for TV Van to perform inspections on six inches pipes.
 - \$50,000 – Cozine gravity line manhole repairs.

Full-Time Equivalents

	<u>2007 - 2008</u>	<u>Change</u>	<u>2008 - 2009</u>
FTE Adopted Budget	18.91		
Extra Help - WRF		+ 0.88	
Add Utility Worker II		<u>1.00</u>	
FTE Proposed Budget		+ 1.88	20.79

Short- and Long-Term Issues

Administration – #75-01

➤ Short-Term Issues

- Collaborate with DEQ during the NPDES permit renewal process.
- Participate in South Yamhill River Total Maximum Daily Load (TMDL) process with DEQ.

➤ Long-Term Issues

- Begin planning process to address recommendations from the *Facilities Plan* to address future community growth and regulatory challenges.
- Develop schedule to address recommendations/requirements from the revised *Sanitary Sewer Master Plan*.

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

➤ Short-Term Issues

- Continue alkalinity control during summer permit.
- Evaluate and implement changes as necessary to meet the TMDL requirements as the process for the South Yamhill River is completed.
- Add emergency power generation at the Oregon Street Pump Station.
- Continue to improve pump station control systems and perform upgrades to the older stations.
- Respond to any new permit requirements or regulatory changes related to the TMDL process.

➤ Long-Term Issues

- Continue to look for improvements in operational efficiencies and controls.
- Continue to address equipment replacement and major rehab requirements as the treatment facility ages by maintaining an appropriate maintenance and replacement schedule.

The WRF treated
1.8 billion gallons of
wastewater in 2007.



In 2007, 5,900,000
pounds of pollutants
were removed
from wastewater
prior to being
discharged into the
South Yamhill River.

2008 – 2009 Proposed Budget --- Budget Summary

Wastewater Services Fund

Short- and Long-Term Issues - Continued

Laboratory – #75-74-310

↷ Short-Term Issues

- Continue active participation in the state-wide discussion with respect to Oregon's position on laboratory certification through the National Laboratory Accreditation Certification Institute.
- Continue support of the Yamhill Basin Council by performing laboratory analysis for a baseline monitoring study within the Yamhill Basin Watershed.

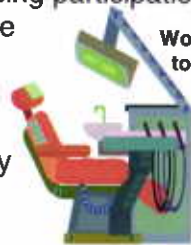
↷ Long-Term Issues

- Continue WWS's Laboratory Internship Program with Linfield College.
- Develop a replacement schedule for aging laboratory instruments.

Pretreatment Program – #75-74-315

↷ Short-Term Issues

- Continue follow up on survey results of all non-residential users to characterize their wastewater discharge.
- Complete the Oregon Dental Association (ODA) mercury reduction program by increasing participation to 100% of McMinnville dentists using the ODA Best Management Practices (BMP) approach to mercury recovery. This will assist local dentists to comply with HB 3611.



Working with the ODA to obtain 100% participation of McMinnville dentists using the ODA Best Management Practice to increase mercury recovery.

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

↷ Long-Term Issues

- Create public accessibility to the Pretreatment Program by making documents and forms available via the City web site.

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

Conveyance Systems – #75-78

↷ Short-Term Issues

- Complete upgrade of the TV Van CCTV system and train staff.
- Finalize a replacement strategy for the VacCon (hydro cleaning truck).
- Complete Hansen software training for all 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 schedule and adjust as necessary to maintain appropriate level of service.
- Develop a comprehensive approach to stormwater management in cooperation with Engineering, Public Works and Wastewater Services Pretreatment.
- Improve WWS's data management system to ensure accurate condition ratings for all sanitary sewer pipes.



Replaced 290 feet of sanitary mainline in 2007.

Core Services

↷ Administration

- Provide support to meet the short-term and long-term issues of all of wastewater services areas.

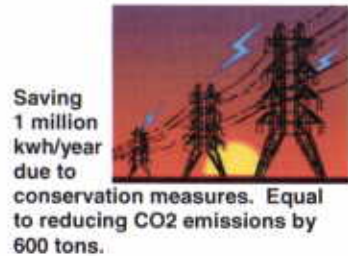
↷ Plant / Pump Station

- Provide cost effective and efficient operation of the WRF necessary to achieve NPDES permit requirements.
- Provide 24-hour per day alarm monitoring response for WRF and pump stations.

2008 – 2009 Proposed Budget --- Budget Summary Wastewater Services Fund

Core Services - Continued

- Continued to focus on improving energy efficiencies and employing sustainable approaches when feasible.



- Perform predictive, preventative, and corrective maintenance required to keep equipment operational and minimize down time.
- Perform equipment repairs and upgrades that will extend the useful life of the WRF and pump station equipment.

Pretreatment

- Provide source control for the collection system and WRF to protect against illicit discharges and harmful wastes that impact the treatment processes or may be harmful to employees working in the collection system.
- Prepare and issue permits to industrial dischargers, provide public education on pretreatment programs, and enforce the sewer user ordinance as required.



Laboratory

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

- Maintain compliance record with the States Environmental Protection Agency's (USEPA) quality assurance program by continuing to 100% on all test parameters.



The laboratory performs between 15,000 & 20,000 analyses annually.

Conveyance Systems

- Maintain the sanitary sewer system to prevent property and environmental damage due to failure of the systems.
- 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 mainline to property line as needed.
- Maintain storm drainage lines and catch basins to prevent flooding, identify structural problems and remove pollutants before they are discharged to the streams and rivers.
- Support the Pretreatment Program staff by helping to identify illicit discharges, and alert the WRF Operations staff of possible system impacts that may result in NPDES permit compliance problems.
- Input maintenance and condition data into the Hansen Maintenance Management Program.



Number of service connections:



◆ 1,284 general service/commercial





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 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 storm 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 of the original trickling filter 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) evaluation on the South Yamhill River. River is water quality limited for phosphorus and ammonia.

1991 The *1991 Facilities Plan* includes an infiltration & inflow (I&I) reduction analysis of the conveyance system.

1992 City's Pretreatment Program is approved by DEQ on October 25, 1992.

1993 City breaks ground on 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.

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

Wastewater Services Fund --- Historical Highlights

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.

1996 Official Inflow and Infiltration 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 Spending reaches 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.



2005 WRF begins tenth year of operation in January 2005.

2005 Sewer lines were relocated and 3 Mile Lane #2 Pump Station was eliminated.

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

2005 An equipment storage building is completed adjacent to the WRF.



Wastewater Services Fund --- Historical Highlights

2005 The Wastewater Conveyance System Maintenance Crew moves to the WRF and WRF Manager assumes supervisory management of the program.

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 DEQ conducting second TMDL analysis on Yamhill River addressing bacteria, temperature, and iron.

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

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



2007 Compliance Award received from PNCWA for no permit violations in calendar year 2007.

2008 NPDES permit expires December 2008 -- Permit renewal application will be sent to DEQ in June 2008.



DEQ issues revised NPDES permits every 5 years.

2008 - 2009 Proposed Budget --- Personal Services Summary
Salaries Paid From More Than One Source
Wastewater Services Fund

<u>Position Description</u>				<u>Detailed Summary</u>	
Fund	Number of	Range	Total	Page	Amount
Department	Employees		Salary		
Section					
<u>SS & SD Maintenance Supervisor</u>	1	336	55,884		
Street Fund (0.15 FTE)				183	8,383
Wastewater Services Fund					
Conveyance Systems					
Sanitary (0.85 FTE)				309	47,501
<u>Mechanic - Public Works</u>	1	332	48,626		
General Fund					
Park Maintenance (0.47 FTE)				150	22,854
Street Fund (0.47 FTE)				183	22,854
Wastewater Services Fund					
Administration (0.06 FTE)				298	2,918
<u>Utility Worker II - WWS</u>	5	326	204,165		
Street Fund (0.75 FTE)				183	30,623
Wastewater Services Fund					
Conveyance Systems					
Sanitary (4.25 FTE)				309	173,542

Budget Document Report

75 - WASTEWATER SERVICES FUND

2006 ACTUAL	2007 ACTUAL	2008 AMENDED BUDGET	Department :N/A Section :N/A Program :N/A	2009 PROPOSED BUDGET	2009 APPROVED BUDGET	2009 ADOPTED BUDGET
RESOURCES						
<u>BEGINNING FUND BALANCE</u>						
0	0	0	4075 Designated Begin FB-WW Svc Fd	0	0	0
1,067,206	1,032,309	1,035,000	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, 2008.	1,100,000	1,100,000	1,100,000
131,523	131,523	0	4075-10 Designated Begin FB-WW Svc Fd - Storm Drainage	0	0	0
103,407	0	0	4075-99 Designated Begin FB-WW Svc Fd - PERS Reserve	0	0	0
494,204	1,126,163	930,000	4090 Beginning Fund Balance Estimated July 1, 2008 undesignated cash carryover from the 2007-2008 fiscal year.	1,300,000	1,300,000	1,550,000
1,796,340	2,289,995	1,965,000	<u>TOTAL BEGINNING FUND BALANCE</u>	2,400,000	2,400,000	2,650,000
1,796,340	2,289,995	1,965,000	<u>TOTAL RESOURCES</u>	2,400,000	2,400,000	2,650,000