

PNWS-AWWA Conference

Eugene, Oregon

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STATE OF OREGON

WATER EFFICIENCY STANDARDS



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WHO WE ARE...

Oregon Water Resources Department (OWRD):

- State agency
- Administer laws governing surface and ground water resources throughout the state



WHAT WE DO...

OWRD's core functions:

- Protect existing water rights
- Facilitate voluntary streamflow restoration
- Increase the understanding of demands on the state's water resources
- Provide accurate & accessible water resource data
- Facilitate water supply solutions

BENEFICIAL USE OF WATER

Water must be used for a beneficial purpose

- Cannot waste water



WHAT IS “WASTE” OF WATER?

In Oregon, “waste” is defined as:

“...the continued use of more water than is needed to satisfy the specific beneficial uses for which a right was granted”

OAR 690-400-0010(16)



REGULATION OF WASTEFUL PRACTICES

OWRD has the authority to enforce against, and to prevent, wasteful uses of water

- OAR Chapter 690, Division 400
- OAR Chapter 690, Division 410

OAR (Oregon Administrative Rule)



OREGON'S EFFICIENCY STANDARDS

Water use efficiency standards in Oregon:

- Set in OAR Chapter 690, Division 86

- Work to achieve 15% water loss
- Then, reduce to no more than 10% water loss



- Actions to achieve these standards are:

- Prescribed in OAR 690-086
- Implemented under a Division 86 Water Management and Conservation Plan (WMCP)

WATER MANAGEMENT AND CONSERVATION PLANS (WMCP)

A WMCP is a tool to help water suppliers:

- Evaluate water demands
- Manage existing water sources
- Consider alternative water sources, including conservation, for future supply
- Prepare for water supply shortages or emergencies



WHEN IS A WMCP REQUIRED?

■ OWRD Actions

- New Water Use Permit issued
- Water Use Permit Extension of Time Approved
- WMCP Update
 - Schedule specified in previously approved WMCP

■ Other Agency Actions

- Condition of Loan (Infrastructure Finance Authority)
- Capacity Analysis (Oregon Health Authority)

WMCP CONSERVATION REQUIREMENTS

All municipal water suppliers that submit a WMCP must have:

- Fully metered system
- Annual water audits
- Meter testing and maintenance program
- Rate structure based, in part, on the quantity of water metered at the service connection
- Leak detection program, if total water losses exceed 10%



WMCP CONSERVATION REQUIREMENTS

Additionally, suppliers that:

- Serve more than 7,500 people
-OR-
- Need to initiate/expand diversion of water under an extended permit with environmental resource issues...

Must implement:

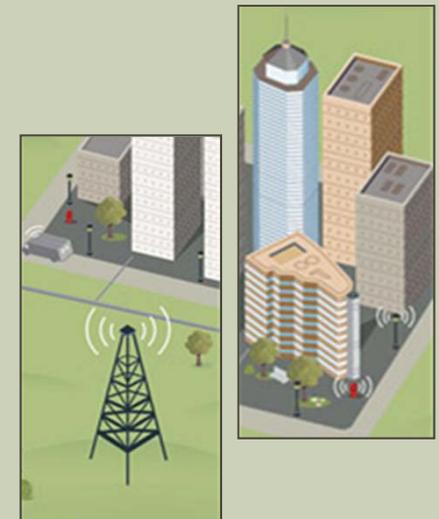
- System-wide leak repair or line replacement program, if total water losses exceed 15%

OREGON SUCCESS STORIES

- CITY OF GRESHAM -

Advanced Metering Infrastructure (AMI)

- Replaced all small residential and commercial meters (1-inch & smaller)
 - ~16,000 AMI meters installed over a 7-month period in 2011
- Began replacing large meters (industrial/commercial) in 2012
 - Installed 535 AMI meters (*last fall, 15 to go*)
- Benefits:
 - Faster response time to leaks
 - Anticipate 2%-5% accuracy improvement



OREGON SUCCESS STORIES

- CITY OF CORVALLIS -

■ 2003/2004 leak detection survey

- 80 miles of pipeline / 53 leaks
- Leak repairs saved the City an estimated 30.5 MG of water per year and \$43,000

■ 2009 leak detection survey

- 129 miles of pipeline / 44 leaks

■ Process modifications at water treatment plant

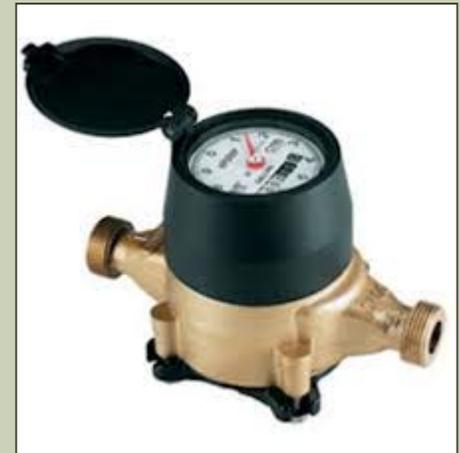
- Saves an estimated 8 MG gallons of water per year



OREGON SUCCESS STORIES

- CITY OF BEND -

- Prior to 1998, 51% of Bend's 12,300+ service connections were unmetered
- Bend is now a fully metered system (*since December 2004*)
 - Recently upgraded to AMI technology
- All fire hydrant use within Bend's service area requires metering
 - Better tracking of non-fire-related hydrant water use



OREGON SUCCESS STORIES

- CITY OF HILLSBORO -

- Water audits between 2002 and 2008 showed an average system gain of 10% (or -10% loss)
- Began troubleshooting to determine cause of system gain
- Eventually traced to 12 sonic master meters
 - Over 10 years old
 - Could not be calibrated
- Replaced with magnetic meters
 - Now in range of 3% water loss



OREGON SUCCESS STORIES

- CITY OF COLUMBIA CITY -

- In early 2002, Columbia City's water losses had reached 35%
- By 2010, the City had reduced its water losses down to 10% through:
 - Water audits performed on a monthly basis
 - Leak detection practices
 - Giving high priority to repair those leaks
- Also recently received funding to undertake a new project to control system pressure
 - 80% of the City's system currently exceeds 80 psi

OREGON SUCCESS STORIES

- EUGENE WATER & ELECTRIC BOARD -

■ Toilet rebate program

- About 1,600 inefficient toilets were replaced between 1995 and 2008
- Saves an estimated 34 MG of water per year



■ Sustainable Landscape Program workshop

- EWEB assisted Lane County Extension Service with development of program
- Promotes efficient landscape irrigation
- In 2012, residents within EWEB's service area reduced outdoor water use by 205,000 gallons

OREGON SUCCESS STORIES

- MEDFORD WATER COMMISSION -

- Launched a website to promote efficient water use for landscaping
www.medford.watersmartgardening.com



- Assisted City of Medford in recent revision of its Landscape Ordinance
 - Focused on reduction of high water use landscapes
 - Established landscape design standards
 - Lawn configuration
 - Soil composition
 - Irrigation method



LINKS AND RESOURCES

- **OWRD Website:**

www.oregon.gov/OWRD.pages.index.aspx

- **Oregon Water Law:**

www.oregon.gov/owrd/Pages/law/index.aspx

- **Municipal Water Management:**

www.oregon.gov/owrd/pages/mgmt_muni_wmcp.aspx

- **OWRD Conservation Share-House webpage:**

www.oregon.gov/owrd/Pages/Conservation_Sharehouse.aspx

QUESTIONS ?

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