

Water Conservation Data & Activity

Regional Water Planning
Assistance Workshop
May 12, 2017

Meeting Demand

- The plan accounts for the high efficiency plumbing fixtures
- Water management strategy for municipal water conservation includes:
 - plumbing retrofits
 - efficient washing machines
 - reduction in landscape watering

Region L

- Goal of 140 gpcd
 - ≥ 140 to reduce use by one percent
 - < 140 to reduce use by .25 percent annually
- 119 Municipal WUGs
 - 45 with needs by 2040
 - 38 have a WCP

Region L

- Population with Conservation WMS
 - ≤ 1000 (1)
 - $>1000 <10,000$ (12)
 - $>10,000 <50,000$ (15)
 - $>50,000 <100,000$ (4)
 - $>100,000$ (1)

Use and Goals

5 Year Goals

Total: 139 gpcd

Residential: 92 gpcd

Water Loss: 17 gpcd

Total gpcd was 119 in 2015

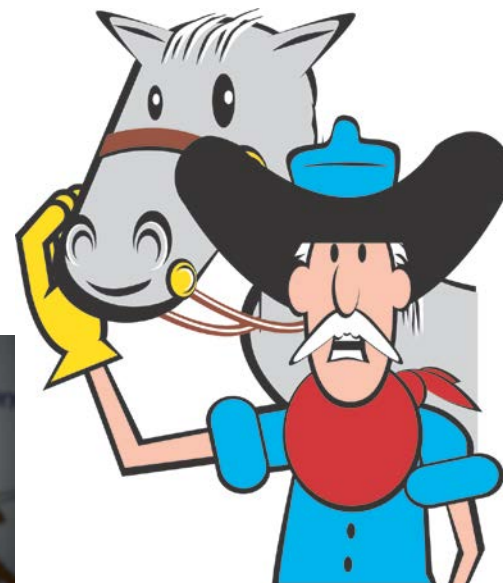
2015 Conservation Activities and Best Management Practices

• Public Education	20	• Water Survey	4
• System Water Audit	18	• Irrigation Evaluation	4
• Rates & Pricing	17	• Small Utility Assistance	4
• Metering	17	• Clothes Washer	4
• Water Waste Prohibition	15	• Water Wise	4
• Water Reuse	12	• Athletic Fields	3
• School Education	11	• Park	3
• Landscape Irrigation	9	• Rain Water Harvesting	3
• Conservation Coordinator	7	• Non-Profit Organizations	2
• Toilets	6	• ICI Programs	2
• Golf Courses	5	• ICI Incentives	1
• Showerhead	5	• Graywater	1
• Cost Effective Analysis	4	• Wholesale Agency Assist	0

2015 annual conservation reports of 29 entities
(3 did not identify using any BMPs)

Education

- TWDB brochures
 - 500 free per year
 - Minimal cost afterwards
- School Programs
 - Major Rivers
 - TWDB KIDS



Water Loss

- Water Loss Audit
 - On-line application
 - Workshops
- Leak Detection
 - Equipment loan

2015 Water Loss Audits

Region L				Billed Metered	
129 Audits Submitted	System Input Volume 112,568,919,385	Authorized Consumption 95,064,987,412 84.5%	Billed Consumption 92,945,866,403 82.6%	92,926,476,463 82.6%	Revenue Water 92,945,866,403 82.6%
				Billed Unmetered 19,389,940 0.0%	
			Unbilled Consumption 2,119,121,009 1.9%	Unbilled Metered 660,701,036 0.6%	Non-revenue Water 19,623,052,982 17.4%
				Unbilled Unmetered 1,458,419,973 1.3%	
		Water Loss 17,503,931,973 15.5%	Apparent Loss 2,981,856,617 2.6%	Unauthorized Consumption 280,665,743 0.2%	
				Customer Meter Accuracy Loss 2,514,850,692 2.2%	
				Systematic Data Handling Discrepancy 186,340,182 0.2%	
			Real Loss 14,522,075,356 12.9%	Reported Breaks and Leaks 3,380,909,847 3.0%	
Unreported Loss 11,141,165,509 9.9%					

2015 - Summary of Reported Water Loss Audits in Region L with Statewide Totals

Performance Indicators

SWP Region	Number Of Audits Submitted		Real Loss Gallons per Mile per Day Entities with <32 connections per mile (gal/mi/day)	Real Loss Gallons per Service Connection per Day Entities with >= 32 connections per mile ((gal/con/day)	Apparent Loss Gallons per Service Connection per Day (gal/con/day)	Total Non-Revenue Water (%)	Dollar Value Real Loss	Dollar Value Apparent Loss	Infrastructure Leakage Index (ILI) Entities with >3000 connections
Region L	128	Median	670.89	29.10	5.41	17.0	12,906.42	4,559.78	2.12
		Average	1,019	50	10	21.0	124,796,341	431,469	2.90
Statewide Totals	1943	Median	350.47	22.09	4.88	15.9	7,361.24	4,966.03	2.40
		Average	628	33	9	18.7	186,223,062	8,140,936	3.09

Meter Program

- Identify consumption patterns
 - Implement and target conservation measures
 - Implement asset upgrades and expansion
 - District metering helps isolate water loss and implement effective pressure management strategies
- Testing and Replacing
 - Decreases rate increase frequency
 - Increases revenue
- Improving Meter Reading and Data Collection Practices
 - Reduces theft of service
 - Reduces data errors

Conservation Rate Structures

- Compel the customer to implement cost effective water conservation measures and practices
- Charges are based on volumes consumed
- Recover fixed costs
- Increasing block tiers
 - cost per unit increases as the customer uses more water

Rates and Goals and Benefits

- Reduce daily peak usage
- Reduce seasonal peak usage
- Reduce total system demand
- Communicate general water conservation need
- Reward efficient users in the lower tiers
- Charge for non-efficient water use
- Balance conservation goals with price equity and revenue stability

No Cost/Low Cost

- Water Waste
 - Water running into the streets
 - Time of day watering
 - Day of week watering
- Conservation Coordinator
 - Designated point person
- Non-Profit Organizations
 - Partnering

Resources

- Best Management Practices
www.twdb.texas.gov/conservation/BMPs/Mun/index.asp
- Water Conservation Plans
www.twdb.texas.gov/conservation/municipal/plans/index.asp
- Water Loss Audits and Leak Detection
www.twdb.texas.gov/conservation/resources/waterloss-resources.asp
www.twdb.texas.gov/conservation/municipal/waterloss/index.asp
- Brochures
www.twdb.texas.gov/publications/brochures/conservation/index.asp
- School Programs
www.twdb.texas.gov/conservation/education/index.asp
- Alliance for Water Efficiency
www.allianceforwaterefficiency.org/
www.financingsustainablewater.org/tools/awe-sales-forecasting-and-rate-model

Water Conservation Data & Activity

John Sutton
Municipal Water Conservation
512-463-7988
john.sutton@twdb.texas.gov
www.twdb.texas.gov