

It's Your Water Conservation Plan – what are you going to do?

Central Texas Water Conservation Symposium
Austin, Texas

John T. Sutton
Texas Water Development Board

*Unless specifically noted, this presentation does not
necessarily reflect official Board positions or decisions.*

Who Needs to Submit?

≥3300
connections

Financial
obligation
w/TWDB >\$500k

Surface water
right w/TCEQ

Wholesale
customer

When to Revise?

Every five years

Due May 1

More often if needed

Helpful Hint: Plan year is considered the year it was adopted, not drafted

Starting with the Basics

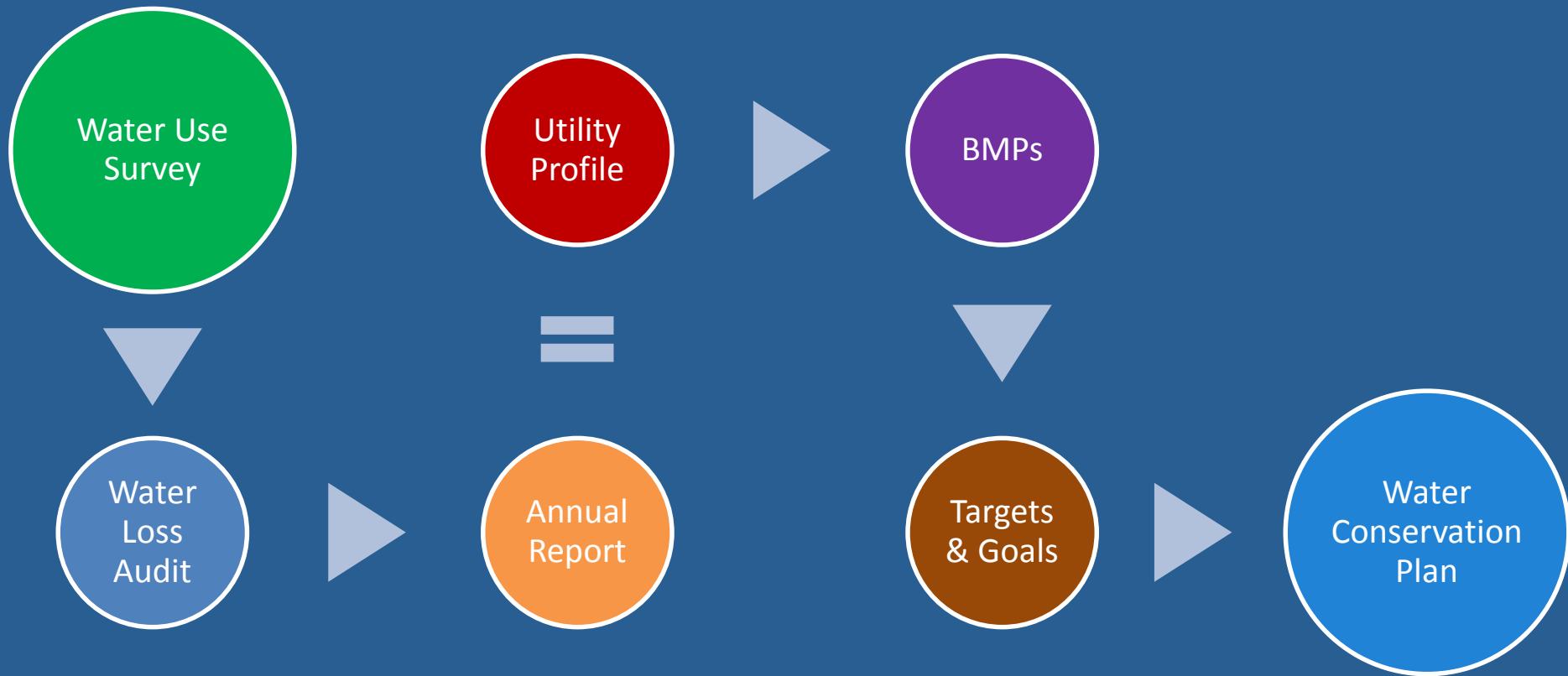
DO

- Other departments
- Involve customers
- Use the data
- Be realistic
- Set goals
- **Provide details**

Don't

- Copies of TWDB materials
- Complete text of Texas Code
- General statements
- Copy other plans

Process



Online Application



Water Loss, Use and Conservation

WLUC Water Use Survey Water Loss Audit Water Conservation

Water Loss Audit

- Water Loss Audit List

PWS Code	System Name	Year Due	Status	Submitted Date	Authorized Users
1260002	City of Watertown	2019	Not Submitted		

Water Conservation Annual Report

- WC Annual Report List

PWS Code	Utility Type	System Name	Year Due	Status	Submitted Date	Authorized Users
1260002	Retail Water Supplier	City of Watertown	2019	Not Started		

Water Conservation Utility Profile

- WC Utility Profile List

No record found

Water Conservation Plan

- WC Plan List

No record found

Water Loss

Texas Water Development Board Water Loss Audit [Home](#) [Logout](#) [Agency Policies](#) [Contact Us](#)

Home **Worksheet** Audit Report Request Access WLUC Home APM H

Water Audit Report for 2400903, Year 2017

The **Save** button will save any data you enter for retrieval on future visits to this site.
Use the **Submit Worksheet** button to save your data and indicate that your form is completed and ready for TWDB review.

IMPORTANT - Read this - How to use the **Save**, **Submit Worksheet** and **Un-Submit Worksheet** buttons →

If further assistance is needed contact YLA_Group@twdb.texas.gov or 512 483 0967.

*** FIELDS MARKED WITH A RED STAR MUST BE FILLED-OUT BEFORE THIS FORM CAN BE SUBMITTED.**

A. Water Utility General Information

1. Water Utility Name: CITY OF ROUND ROCK

1a. Regional Water Planning Area: G

1b. Address: 221 E MAIN ST
ROUND ROCK, TX 78664-5271

2. Contact Information

* 2a. Name: Luc Test

* 2b. Telephone Number: (512) 123-4567

* 2c. Email Address: lwtest08@gmail.com

Have you completed Water Loss Auditor Training?

Yes

No

3. Reporting Period:

* 3a. Start Date: (m/d/yyyy)

* 3b. End Date: (m/d/yyyy)

Water Use Survey

- Water Use Survey List

Survey Number	PWS Code	System Name	Status	File Date	Authorized Users
0316200	840003	Water Springs SUD	Submitted		123

Water Loss Audit

- Water Loss Audit List

PWS Code	System Name	Year Due	Status	Submitted Date	Authorized Users
840003	Water Springs SUD	2019	Submitted	05/01/2018	

Water Conservation Annual Report

- WC Annual Report List

PWS Code	Utility Type	System Name	Year Due	Status	Submitted Date	Authorized Users
840003	Retail Water Supplier	Water Springs SUD	2019	Not Started		

Water Conservation Utility Profile

- WC Utility Profile List

PWS Code	Utility Type	System Name	Year Due	Status	Submitted Date	Authorized Users
840003	Retail Water Supplier	Water Springs SUD	2018	Not Started		

Water Conservation Plan

- WC Plan List

PWS Code	Utility Type	System Name	Year Due	Status	Submitted Date	Authorized Users
840003	Retail Water Supplier	Water Springs SUD	2019	Not Started		

- + Utility Profile
- Conservation Plan
- Annual Report

Utility Profile
Retail Water Supplier

SECTION I: Utility Data

Water Utility General Information

Name of Utility: Effervescent Water Supply

B. System Input

Provide system input data for the previous five years.
Total System Input = Self supplied + Imported - Exported

Year	Water Produced in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2018	24,053,096,907	0	1,284,475,258	22,768,621,649	192
2017	22,903,189,691	0	1,344,741,237	21,558,448,454	182
2016	25,064,414,141	0	1,327,069,388	23,737,344,753	203
2015	23,269,618,947	15,099,738,852	12,668,445,835	25,700,911,964	220
2014	23,464,359,009	15,322,817,424	12,460,868,091	26,326,308,342	225
Historic Average	23,750,935,739	6,084,511,255	5,817,119,962	24,018,327,032	204

- + Utility Profile
- Conservation Plan
- Annual Report

Utility Profile
Retail Water Supplier

SECTION II: System Data

Water Utility General Information

Name of Utility: Effervescent Water Supply

B. Accounting Data

1. For the previous five years, enter the number of gallons of RETAIL water provided to each major water use category.

Water Use Category	Residential - Single Family	Residential - Multi-family (units)	Industrial	Commercial	Institutional	Agricultural	Total
2018	1,740,205,118	52,790,190	0	344,619,018	48,159,390	0	2,185,773,716
2017	1,644,972,157	50,912,940	0	321,091,629	62,014,950	0	2,078,991,676
2106	16,551,000	0	0	0	0	0	16,551,000
2015	18,087,000	0	0	0	0	0	18,087,000
2014	1,554,150,103	44,820,240		292,897,623			1,891,867,966

+ Utility Profile
Conservation Plan
Annual Report

Utility Profile Retail Water Supplier

SECTION II: System Data

F. Peak Day Use

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2014	5,866,731	6,873,456	1.1716
2015	4,897,126	4,064,717	0.8300
2016	5,165,980	5,814,836	1.1256
2017	6,413,742	8,316,717	1.2967
2018	6,726,172	8,916,228	1.3256

G. Summary of Historic Water Use

Water Use Category	Historic Average	Percent of Connections	Percent of Water Use
Residential - Single Family	994,793,075	92.87%	80.34%
Residential - Multi-Family	29,704,674	1.38%	2.40%
Industrial	0	0.00%	0.00%
Commercial	191,721,654	5.71%	15.48%
Institutional	22,034,868	0.03%	1.78%
Agricultural	0	0.00%	0.00%

Requirements

Evaluation of w/ww system, this includes UP

5 & 10-year goals for Total, Residential, and Water Loss GPCDs

Implementation schedule to achieve goals

Method for tracking implementation and effectiveness

Master meter and universal metering information

Measures to determine water loss

Leak detection, repair, and water loss program details

Non-promotional water rate structure

Means of implementation and enforcement

Documentation to regional water planning group

Copy of Drought Contingency Plan

Conservation Tool

- Pre-loaded data for 462 water utilities
- Alternative base and projected data can be used
- Menu of possible conservation activities
- Develop and save different scenarios
- Estimate water savings and costs
- Estimate water savings for annual report

Water Conservation Plans

Water Conservation Plan (New Users)

Water Conservation Plan (Registered Users)

The purpose of a Water Conservation Plan is to ensure water use efficiency within your operation. The Water Conservation Plan is a strategy or combination of strategies for reducing the consumption of water, reducing the loss or waste of water, improving or maintaining the efficiency in the use of water, or increasing recycling and reuse of water. It contains best management practice measures to try to meet the targets and goals identified within the plan. The effectiveness of your water conservation plan is in the implementation of your water conservation program. Reviewing your program annually will help to evaluate program successes and needs. The water conservation plan, [including targets and goals](#), must be revised every 5 years.

- [Municipal Water Conservation Planning Tool](#) - The MWCPT contains pre-loaded data to assist in the development of conservation plans. A guide to using the tool can be found [here](#). In addition, a training workshop for the tool can be found [here](#).
- [Water Conservation Plan Checklist \(TWDB Form -1968\)](#) - The WCP Checklist outlines the components that your plan should contain.
- [Water Conservation Plan FAQs](#) - The WCP FAQs are a list of common questions and answers received regarding WCPs.
- [Water Conservation Plan Tutorial](#) - The WCP Tutorial provides additional step by step guidance on how to develop a water conservation plan.

Water for Texas Conference 2019

Best Management Practices

Agriculture

Literature

Resources

Education

Outreach

Municipal

- Water Conservation Plans
- Water Conservation Plan ~ Utility Profile
- Water Conservation Plan ~ Annual Reports
- Water Loss Audit
- Water Loss Auditor Training
- Historical Water Loss Audit and Conservation Annual Report Data
- Industrial, Commercial & Institutional (ICI)



Municipal Water Conservation Planning Tool

This tool was developed to assist water utilities with their water conservation planning and reporting. It provides an accounting framework for projecting future conservation program costs and water savings as well as estimating the water savings from previous implementation of conservation measures.

It is recommended that users review the User Guide to familiarize themselves with the tool's functionality. Quick Start Guides also are provided below. Users may add additional worksheets to the workbook, which may be useful for keeping notes or performing additional data calculations.

Conservation Plan Quick Start

Step 1. Go to the **Baseline Demand Projection** worksheet and click the **Find My Utility** button to locate your utility. If your utility is not listed, select UNLISTED and enter your utility's Planning Region and name when prompted. Choose whether you will use the TWDB baseline demand projection for your utility or enter your own baseline projection. If your utility is UNLISTED, you will have to enter your own baseline projection.

Step 2. Go to the **Conservation Measures** worksheet and select the conservation measures you want to include in your analysis. There are two types of measures: Pre-Defined Measures and User-Defined Measures. Pre-Defined Measures already are fully specified. You only need to enter the average annual level of activity for these measures by planning decade and indicate whether any of the measures will be debt financed. With User-Defined Measures, you must also specify their cost and water savings parameters. You can also copy any Pre-Defined Measure and paste it into the corresponding User-Defined Measure table so that you can customize it to your utility.

Step 3. Once you've selected/defined your conservation measures and entered their activity levels, click the **Manage Scenarios** button on the worksheet to save your selections and measure specifications. You can create as many scenarios as you like.

Step 4. Review your Conservation Plan. Your Conservation Plan's annual implementation activity, water savings, and costs are summarized on the **Conservation Plan** worksheet. Projected water use under your Conservation Plan is summarized on the **Plan Demand Projection** worksheet.

Single-Year Savings Calculator Quick Start

Step 1. Go to the **Single-Year Savings Calculator** worksheet. Click the **Manage Scenarios** button and load your Conservation Plan.

Step 2. Enter the activity completed in the year you are interested in for each measure in your Conservation Plan.

Step 3. If you implemented measures that are not in your Conservation Plan, go to the **Conservation Measures** worksheet and select Y in the **Include in Plan?** column for the additional measures you want to include. If any of these additional measures are user-defined measures, make sure they are fully specified before returning to the **Single-Year Savings Calculator** worksheet.

The Municipal Water Conservation Planning Tool was Developed by:

Alliance for Water Efficiency
M.Cubed
Freese & Nichols, Inc.
Texas State University
Watearth, Inc.

Start

1. Baseline Demand Projection

2. Conservation Measures

3. Conservation Plan

4. Plan Demand Projection

Single-Year Savings Calculator

Plumbing Fixture Inventory

Pre-Defined Measures

Passive Savings

Baseline Demand Projection

View Settings Help

Find My Utility

Utility: PFLUGERVILLE

Planning Region: K

Select Projection to Use: Use TWDB Projection

TWDB Pre-Populated Projection
 Tables below will be blank if TWDB does not have data for your utility.

User Entered Projection
 If you are using your own Baseline Demand Projection, enter values for the yellow-shaded cells in the tables below in the units specified.

Projections	Reported	Projected						Avg Annual
	2016	2020	2030	2040	2050	2060	2070	Growth % 2020-70

Base Period	Projected						Avg Annual
	2020	2030	2040	2050	2060	2070	Growth % 2020-70

Population								
Retail Service Area	33,575	63,118	78,714	96,187	113,524	131,029	131,180	1.5%

								0.0%
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Connections								
Single Family	12,158	18,840	23,495	28,710	33,885	39,110	39,155	1.5%
Multi Family	29	45	56	70	87	108	135	2.2%
ICI	548	849	1,059	1,321	1,647	2,054	2,562	2.2%
Total	12,735	19,734	24,610	30,101	35,619	41,272	41,852	1.5%

	0	0	0	0	0	0	0	0.0%
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ICI = Industrial, Commercial, and Institutional

Baseline Demand (in kGal)								
Single Family	1,104,929	1,651,787	1,990,348	2,392,275	2,794,292	3,204,001	3,204,443	1.3%
Multi Family	72,575	108,494	130,731	157,131	183,537	210,447	210,477	1.3%
ICI	326,715	494,715	598,916	720,842	844,337	970,820	970,081	1.4%
Sales Subtotal	1,504,218	2,254,996	2,719,996	3,270,248	3,822,166	4,385,268	4,385,001	1.3%
Other Uses	67,557	104,689	130,556	159,537	188,293	217,327	217,577	1.5%
Water Loss	191,493	287,486	347,289	417,858	488,603	560,745	560,743	1.3%
Production Total	1,763,268	2,647,170	3,197,841	3,847,643	4,499,062	5,163,339	5,163,321	1.3%

								0.0%
	0	0	0	0	0	0	0	0.0%

Baseline GPCD								
Total	144	115	111	110	109	108	108	-0.1%
Residential	96	76	74	73	72	71	71	-0.1%
Water Loss	16	12	12	12	12	12	12	-0.1%

	0	0	0	0	0	0	0	0.0%
	0	0	0	0	0	0	0	0.0%
	0	0	0	0	0	0	0	0.0%

GPCD = gallons per capita-day

Water Loss %	10.86	10.86	10.86	10.86	10.86	10.86	10.86	0.0%
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
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Specify the Plan's Conservation Measures

Why aren't Education and Water Rates pre-defined measures?

Utility: **PLUGERVILLE**

Scenario: **Blank**

ID: **Name**

Include in Plan?	Average Annual Level of Activity for each Measure by Decade				
	2020-30	2031-40	2041-50	2051-60	2061-70
Y/N					

Measure Accounting Unit	Measure Delivery Method
-------------------------	-------------------------

Cost Parameters		Debt Finance Capital Cost?
Implementation Cost \$ per Unit of Activity O&M	Capital	

Water Savings Parameters						Useful Life (T) years
Unit Savings (u) gpd	Freerider Rate (f) %/yr	Decay Rate (d) %/yr	Plumb. Code Interaction Y/N	Nat. Repl. Rate (n) %/yr		

Measure Unit Costs	
Per Activity Unit	Per Acre-Foot

Pre-Defined Conservation Measures

Single-Family Measures

PRE-SF-01	HE Toilet Rebate	N																		
PRE-SF-02	Bathroom Retrofit	N																		
PRE-SF-03	Showerhead and Aerator Kit	N																		
PRE-SF-04	Clothes Washer Rebate	N																		
PRE-SF-05	Home Water Reports	N																		
PRE-SF-06	Irrigation Audits - High Users	N																		
PRE-SF-07	High-Efficiency Sprinkler Nozzle Rebate	N																		
PRE-SF-08	Smart Irrigation Controller Rebate	N																		
PRE-SF-09	WaterWise Landscape Rebate	N																		
PRE-SF-10	Rainwater Harvesting Rebate	N																		
PRE-SF-11	Rain Barrel	N																		

Toilet	Rebate	\$ 113	\$ -					25.2	20%	0%	Y	4%	99	\$ 113	\$ 363
Toilet	Direct Installation	\$ 329	\$ -					28.5	0%	0%	Y	4%	99	\$ 329	\$ 748
Showerhead	Distribution	\$ 10	\$ -					6.4	50%	0%	Y	7%	99	\$ 10	\$ 274
Clothes Washer	Rebate	\$ 156	\$ -					13.0	20%	0%	Y	7%	99	\$ 156	\$ 1,374
SF Acct.	Distribution	\$ 7	\$ -					12.1	0%	0%	N	0%	1	\$ 7	\$ 516
SF Acct.	Site Visit	\$ 99	\$ -					33.0	0%	0%	N	0%	3	\$ 99	\$ 924
SF Acct.	Rebate	\$ 110	\$ -					12.4	0%	0%	N	0%	10	\$ 110	\$ 917
SF Acct.	Rebate	\$ 210	\$ -					31.4	0%	0%	N	0%	10	\$ 210	\$ 694
SF Acct.	Rebate	\$ 550	\$ -					79.4	20%	0%	N	0%	15	\$ 550	\$ 649
SF Acct.	Rebate	\$ 355	\$ -					39.9	0%	0%	N	0%	15	\$ 355	\$ 666
SF Acct.	Rebate	\$ 64	\$ -					4.3	0%	0%	N	0%	15	\$ 64	\$ 1,113

Multi-Family Measures

PRE-MF-01	HE Toilet Rebate	N																		
PRE-MF-02	Bathroom Retrofit	N																		
PRE-MF-03	Showerhead and Aerator Kit	N																		
PRE-MF-04	Clothes Washer Rebate	N																		
PRE-MF-05	Irrigation Audits - High Users	N																		
PRE-MF-06	High-Efficiency Sprinkler Nozzle Rebate	N																		
PRE-MF-07	Smart Irrigation Controller Rebate	N																		
PRE-MF-08	WaterWise Landscape Rebate	N																		
PRE-MF-09	Rainwater Harvesting Rebate	N																		

Toilet	Rebate	\$ 113	\$ -					34.7	20%	0%	Y	4%	99	\$ 113	\$ 263
Toilet	Direct Installation	\$ 329	\$ -					45.7	0%	0%	Y	4%	99	\$ 329	\$ 466
Showerhead	Distribution	\$ 10	\$ -					6.1	50%	0%	Y	7%	99	\$ 10	\$ 289
Clothes Washer	Rebate	\$ 156	\$ -					31.7	20%	0%	Y	13%	99	\$ 156	\$ 849
MF Acct.	Site Visit	\$ 213	\$ -					123.0	0%	0%	N	0%	3	\$ 213	\$ 533
MF Acct.	Rebate	\$ 410	\$ -					49.8	0%	0%	N	0%	10	\$ 410	\$ 854
MF Acct.	Rebate	\$ 510	\$ -					117.7	0%	0%	N	0%	10	\$ 510	\$ 449
MF Acct.	Rebate	\$ 5,250	\$ -					793.8	20%	0%	N	0%	15	\$ 5,250	\$ 619
MF Acct.	Rebate	\$ 2,911	\$ -					462.6	0%	0%	N	0%	15	\$ 2,911	\$ 471

Industrial, Commercial, Institutional Measures

PRE-ICI-01	HE Toilet Rebate	N																		
PRE-ICI-02	Urinal Rebate	N																		
PRE-ICI-03	Clothes Washer Rebate	N																		
PRE-ICI-04	Commercial General Rebate	N																		
PRE-ICI-05	Kitchen Pre-Rinse Spray Valve Installation	N																		
PRE-ICI-06	Irrigation Audits - High Users	N																		
PRE-ICI-07	High-Efficiency Sprinkler Nozzle Rebate	N																		
PRE-ICI-08	Smart Irrigation Controller Rebate	N																		
PRE-ICI-09	WaterWise Landscape Rebate	N																		
PRE-ICI-10	Rainwater Harvesting Rebate	N																		
PRE-ICI-11	Commercial Dishwasher Rebate	N																		
PRE-ICI-12	Commercial Food Steamer Rebate	N																		

Enter the number per YEAR you expect to do in this decade.

Toilet	Rebate	\$ 138	\$ -					32.0	20%	0%	Y	4%	99	\$ 138	\$ 349
Urinal	Rebate	\$ 138	\$ -					17.0	20%	0%	Y	4%	99	\$ 138	\$ 657
Clothes Washer	Rebate	\$ 227	\$ -					86.0	20%	0%	Y	13%	99	\$ 227	\$ 455
Other	Rebate	\$ 2	\$ -					1.0	50%	0%	N	0%	15	\$ 2	\$ 252
ICI Acct.	Direct Installation	\$ 213	\$ -					77.0	0%	0%	Y	10%	99	\$ 213	\$ 322
ICI Acct.	Site Visit	\$ 213	\$ -					123.0	0%	0%	N	0%	3	\$ 213	\$ 533
ICI Acct.	Rebate	\$ 410	\$ -					49.8	0%	0%	N	0%	10	\$ 410	\$ 854
ICI Acct.	Rebate	\$ 510	\$ -					117.7	0%	0%	N	0%	10	\$ 510	\$ 449
ICI Acct.	Rebate	\$ 5,250	\$ -					793.8	20%	0%	N	0%	15	\$ 5,250	\$ 619
ICI Acct.	Rebate	\$ 2,911	\$ -					462.6	0%	0%	N	0%	15	\$ 2,911	\$ 471
ICI Acct.	Rebate	\$ 1,028	\$ -					158.2	0%	0%	N	0%	20	\$ 1,028	\$ 394
ICI Acct.	Rebate	\$ 513	\$ -					223.3	0%	0%	N	0%	10	\$ 513	\$ 238

User-Defined Conservation Measures

Single-Family Measures

USR-SF-01		N																		
USR-SF-02																				

Utility Scenario: PFLUGERVILLE Going Slow		Include in Plan? Y/N	Average Annual Level of Activity for each Measure by Decade				
ID	Name		2020-30	2031-40	2041-50	2051-60	2061-70

Single-Family Measures

PRE-SF-01	HE Toilet Rebate	Y	100	100	100	100		
PRE-SF-02	Bathroom Retrofit	N						
PRE-SF-03	Showerhead and Aerator Kit	N						
PRE-SF-04	Clothes Washer Rebate	N						
PRE-SF-05	Home Water Reports	Y	20	20	20	20	20	20
PRE-SF-06	Irrigation Audits - High Users	Y	5	5	5	5	5	5
PRE-SF-07	High-Efficiency Sprinkler Nozzle Rebate	N						
PRE-SF-08	Smart Irrigation Controller Rebate	N						
PRE-SF-09	WaterWise Landscape Rebate	N						
PRE-SF-10	Rainwater Harvesting Rebate	N						
PRE-SF-11	Rain Barrel	Y	100	100	100	100	100	100

Multi-Family Measures

PRE-MF-01	HE Toilet Rebate	Y	20	20				
PRE-MF-02	Bathroom Retrofit	N						
PRE-MF-03	Showerhead and Aerator Kit	N						
PRE-MF-04	Clothes Washer Rebate	N						
PRE-MF-05	Irrigation Audits - High Users	Y	2	2	2	2	2	2
PRE-MF-06	High-Efficiency Sprinkler Nozzle Rebate	N						
PRE-MF-07	Smart Irrigation Controller Rebate	N						
PRE-MF-08	WaterWise Landscape Rebate	N						
PRE-MF-09	Rainwater Harvesting Rebate	N						

Industrial, Commercial, Institutional Measures

PRE-ICI-01	HE Toilet Rebate	N						
PRE-ICI-02	Urinal Rebate	N						
PRE-ICI-03	Clothes Washer Rebate	N						
PRE-ICI-04	Commercial General Rebate	N						
PRE-ICI-05	Kitchen Pre-Rinse Spray Valve Installati	N						
PRE-ICI-06	Irrigation Audits - High Users	Y	2	2	2	2	2	2
PRE-ICI-07	High-Efficiency Sprinkler Nozzle Rebate	N						
PRE-ICI-08	Smart Irrigation Controller Rebate	N						
PRE-ICI-09	WaterWise Landscape Rebate	N						
PRE-ICI-10	Rainwater Harvesting Rebate	N						
PRE-ICI-11	Commercial Dishwasher Rebate	N						
PRE-ICI-12	Commercial Food Steamer Rebate	N						

Utility Scenario: PFLUGERVILLE Sky's The Limit		Include in Plan? Y/N	Average Annual Level of Activity for each Measure by Decade				
ID	Name		2020-30	2031-40	2041-50	2051-60	2061-70

Single-Family Measures

PRE-SF-01	HE Toilet Rebate	Y	100					
PRE-SF-02	Bathroom Retrofit	Y	100	100	100	100		
PRE-SF-03	Showerhead and Aerator Kit	N						
PRE-SF-04	Clothes Washer Rebate	Y	75	75				
PRE-SF-05	Home Water Reports	Y	50	50	50	50	50	50
PRE-SF-06	Irrigation Audits - High Users	Y	200	225	250	275	300	
PRE-SF-07	High-Efficiency Sprinkler Nozzle Rebate	Y						
PRE-SF-08	Smart Irrigation Controller Rebate	Y	350	375	400	450	500	
PRE-SF-09	WaterWise Landscape Rebate	Y	400	450	500	550	600	
PRE-SF-10	Rainwater Harvesting Rebate	Y	100	150	200	250	300	
PRE-SF-11	Rain Barrel	N						

Multi-Family Measures

PRE-MF-01	HE Toilet Rebate	Y	15					
PRE-MF-02	Bathroom Retrofit	Y	10	10	10			
PRE-MF-03	Showerhead and Aerator Kit	N						
PRE-MF-04	Clothes Washer Rebate	N						
PRE-MF-05	Irrigation Audits - High Users	Y	10	20	30	40	50	
PRE-MF-06	High-Efficiency Sprinkler Nozzle Rebate	N						
PRE-MF-07	Smart Irrigation Controller Rebate	N						
PRE-MF-08	WaterWise Landscape Rebate	Y	20	20	20	20	20	
PRE-MF-09	Rainwater Harvesting Rebate	Y	15	15	15	15	15	

Industrial, Commercial, Institutional Measures

PRE-ICI-01	HE Toilet Rebate	Y	100	20				
PRE-ICI-02	Urinal Rebate	Y	30					
PRE-ICI-03	Clothes Washer Rebate	N						
PRE-ICI-04	Commercial General Rebate	N						
PRE-ICI-05	Kitchen Pre-Rinse Spray Valve Installati	N						
PRE-ICI-06	Irrigation Audits - High Users	Y	40	40	40	40	40	40
PRE-ICI-07	High-Efficiency Sprinkler Nozzle Rebate	N						
PRE-ICI-08	Smart Irrigation Controller Rebate	N						
PRE-ICI-09	WaterWise Landscape Rebate	Y	100	100	100	100	100	100
PRE-ICI-10	Rainwater Harvesting Rebate	Y	10	20	30	40	50	
PRE-ICI-11	Commercial Dishwasher Rebate	Y	20	20	20	20	20	
PRE-ICI-12	Commercial Food Steamer Rebate	Y	10	10	10	10	10	

Conservation Plan

View Settings Help | Manage Scenarios

Utility: PFLUGERVILLE
 Scenario: Sky's The Limit

ID	Name	Savings Unit Cost \$/AF	Annual Measure Implementation				Active Water Savings by Planning Year (kGal)				Total Cost by Planning Year (2018 \$)			
			2020	2024	2029	2030	2020	2024	2029	2030	2020	2024	2029	2030

Single-Family Measures

PRE-SF-01	HE Toilet Rebate	\$ 363	100	100	100	100	736	3,398	6,168	6,658	\$ 11,300	\$ 11,300	\$ 11,300	\$ 11,300
PRE-SF-02	Bathroom Retrofit	\$ 748	100	100	100	100	1,039	4,797	8,708	9,399	\$ 32,900	\$ 32,900	\$ 32,900	\$ 32,900
PRE-SF-04	Clothes Washer Rebate	\$ 1,374	75	75	75	75	284	1,233	2,086	2,222	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700
PRE-SF-05	Home Water Reports	\$ 516	50	50	50	50	221	221	221	221	\$ 350	\$ 350	\$ 350	\$ 350
PRE-SF-06	Irrigation Audits - High Users	\$ 924	200	200	200	200	2,409	7,227	7,227	7,227	\$ 19,800	\$ 19,800	\$ 19,800	\$ 19,800
PRE-SF-07	High-Efficiency Sprinkler Nozzle Rebate	\$ 917	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -	\$ -
PRE-SF-08	Smart Irrigation Controller Rebate	\$ 694	350	350	350	350	4,010	20,052	40,103	40,103	\$ 73,500	\$ 73,500	\$ 73,500	\$ 73,500
PRE-SF-09	WaterWise Landscape Rebate	\$ 649	400	400	400	400	9,272	46,359	92,719	101,991	\$ 220,000	\$ 220,000	\$ 220,000	\$ 220,000
PRE-SF-10	Rainwater Harvesting Rebate	\$ 666	100	100	100	100	1,457	7,283	14,566	16,023	\$ 35,500	\$ 35,500	\$ 35,500	\$ 35,500
Subtotal		\$ 676					19,428	90,570	171,799	183,844	\$ 405,050	\$ 405,050	\$ 405,050	\$ 405,050

Multi-Family Measures

PRE-MF-01	HE Toilet Rebate	\$ 263	15	15	15	15	152	702	1,274	1,375	\$ 1,695	\$ 1,695	\$ 1,695	\$ 1,695
PRE-MF-02	Bathroom Retrofit	\$ 466	10	10	10	10	167	770	1,398	1,509	\$ 3,290	\$ 3,290	\$ 3,290	\$ 3,290
PRE-MF-05	Irrigation Audits - High Users	\$ 533	10	10	10	10	449	1,347	1,347	1,347	\$ 2,130	\$ 2,130	\$ 2,130	\$ 2,130
PRE-MF-08	WaterWise Landscape Rebate	\$ 619	20	20	20	20	4,636	23,180	46,359	50,995	\$ 105,000	\$ 105,000	\$ 105,000	\$ 105,000
PRE-MF-09	Rainwater Harvesting Rebate	\$ 471	15	15	15	15	2,533	12,663	25,326	27,858	\$ 43,665	\$ 43,665	\$ 43,665	\$ 43,665
Subtotal		\$ 561					7,936	38,662	75,705	83,085	\$ 155,780	\$ 155,780	\$ 155,780	\$ 155,780

Industrial, Commercial, Institutional Measures

PRE-ICI-01	HE Toilet Rebate	\$ 349	100	100	100	100	934	4,310	7,825	8,445	\$ 13,800	\$ 13,800	\$ 13,800	\$ 13,800
PRE-ICI-02	Urinal Rebate	\$ 657	30	30	30	30	149	687	1,248	1,347	\$ 4,140	\$ 4,140	\$ 4,140	\$ 4,140
PRE-ICI-06	Irrigation Audits - High Users	\$ 533	40	40	40	40	1,796	5,387	5,387	5,387	\$ 8,520	\$ 8,520	\$ 8,520	\$ 8,520
PRE-ICI-09	WaterWise Landscape Rebate	\$ 619	100	100	100	100	23,180	115,898	231,797	254,977	\$ 525,000	\$ 525,000	\$ 525,000	\$ 525,000
PRE-ICI-10	Rainwater Harvesting Rebate	\$ 471	10	10	10	10	1,688	8,442	16,884	18,572	\$ 29,110	\$ 29,110	\$ 29,110	\$ 29,110
PRE-ICI-11	Commercial Dishwasher Rebate	\$ 394	20	20	20	20	1,155	5,776	11,551	12,707	\$ 20,560	\$ 20,560	\$ 20,560	\$ 20,560
PRE-ICI-12	Commercial Food Steamer Rebate	\$ 238	10	10	10	10	815	4,075	8,150	8,150	\$ 5,130	\$ 5,130	\$ 5,130	\$ 5,130
Subtotal		\$ 577					29,717	144,576	282,842	309,585	\$ 606,260	\$ 606,260	\$ 606,260	\$ 606,260

Utility & General Measures

Subtotal	NA						0	0	0	0	\$ -	\$ -	\$ -	\$ -
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Grand Total for Plan	\$ 608						57,081	273,807	530,346	576,514	\$ 1,167,090	\$ 1,167,090	\$ 1,167,090	\$ 1,167,090
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Conservation Plan Demand Projection

View Settings Help | Adjust Column Width | Manage Scenarios

Utility:	PFLUGERVILLE								
Scenario:	Sky's The Limit								
Volume Units:	AF								
Projections	2020	2024	2029	2030	2040	2050	2060	2070	2020-70

Avg Annual Growth %

Population

Retail Service Area	63,118	69,356	77,154	78,714	96,187	113,524	131,029	131,180	1.5%
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Connections

Single Family	18,840	20,702	23,030	23,495	28,710	33,885	39,110	39,155	1.5%
Multi Family	45	49	55	56	70	87	108	135	2.2%
ICI	849	933	1,038	1,059	1,321	1,647	2,054	2,562	2.2%
Total	19,734	21,684	24,122	24,610	30,101	35,619	41,272	41,852	1.5%

Baseline Demand

(in AF)

Single Family	5,069	5,485	6,004	6,108	7,342	8,575	9,833	9,834	1.3%
Multi Family	333	360	394	401	482	563	646	646	1.3%
ICI	1,518	1,646	1,806	1,838	2,212	2,591	2,979	2,977	1.4%
Sales Subtotal	6,920	7,491	8,205	8,347	10,036	11,730	13,458	13,457	1.3%
Other Uses	321	353	393	401	490	578	667	668	1.5%
Water Loss	882	956	1,047	1,066	1,282	1,499	1,721	1,721	1.3%
Production Total	8,124	8,800	9,645	9,814	11,808	13,807	15,846	15,846	1.3%
Water Loss %	11%	11%	11%	11%	11%	11%	11%	11%	0.0%

Baseline GPCD

Total	115	113	112	111	110	109	108	108	-0.1%
Residential	76	75	74	74	73	72	71	71	-0.1%
Water Loss	12	12	12	12	12	12	12	12	-0.1%

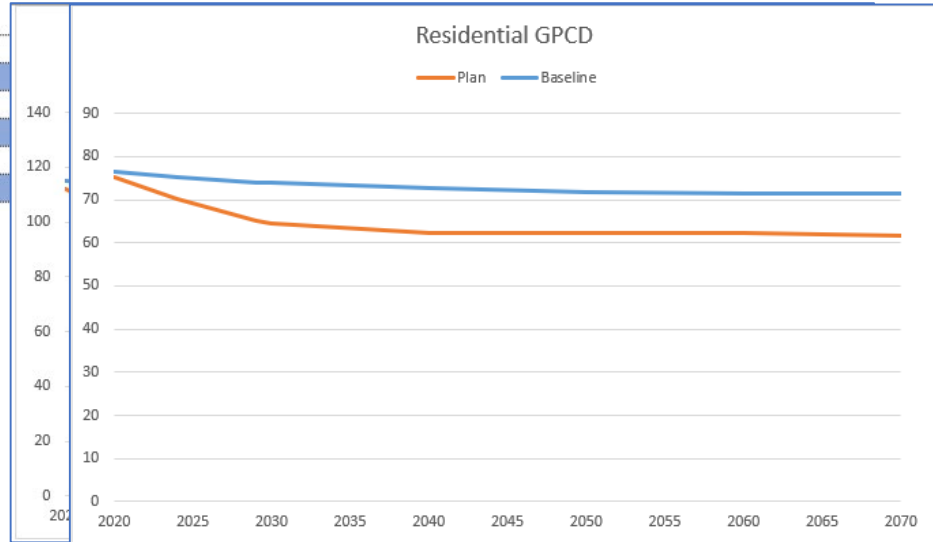
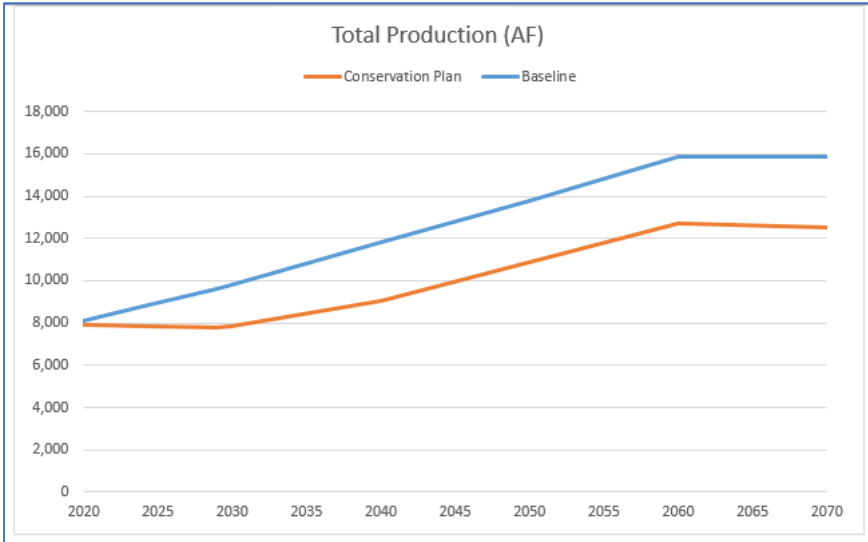
Plan Active Savings

(in AF)

Single Family	60	278	527	564	778	879	988	1,070	
Multi Family	24	119	232	255	348	353	354	356	
ICI	91	444	868	950	1,334	1,403	1,475	1,549	
Other	0	0	0	0	0	0	0	0	
Water Loss	0	0	0	0	0	0	0	0	
Total Plan Savings	175	840	1,628	1,769	2,461	2,635	2,817	2,975	

Utility:	PFLUGERVILLE								Avg Annual Growth %
Scenario:	Sky's The Limit								
Volume Units:	AF								
Projections	2020	2024	2029	2030	2040	2050	2060	2070	2020-70

Plan Demand Projection (in AF)									
Single Family	5,010	5,207	5,477	5,544	6,563	7,697	8,845	8,764	1.1%
Multi Family	309	242	162	146	134	210	292	290	-0.1%
ICI	1,427	1,202	938	888	878	1,188	1,504	1,428	0.0%
Sales Subtotal	6,745	6,651	6,577	6,578	7,575	9,095	10,641	10,482	0.9%
Other Uses	321	353	393	401	490	578	667	668	1.5%
Water Loss	861	853	849	850	983	1,178	1,378	1,358	0.9%
Production Total	7,927	7,857	7,819	7,829	9,048	10,851	12,685	12,508	0.9%
Water Loss %	11%	11%	11%	11%	11%	11%	11%	11%	0.0%



Single-Year Savings Calculator

View Settings Help Clear Activity Manage Scenarios

Utility: PFLUGERVILLE
 Scenario: Sky's The Limit
 Volume Units: kGal

ID	Name	Enter Reporting Year Activity	Activity Water Savings (kGal)	Savings Unit Cost \$/AF
Single-Family Measures				
PRE-SF-01	HE Toilet Rebate	75	552	\$ 363
PRE-SF-02	Bathroom Retrofit		0	\$ -
PRE-SF-04	Clothes Washer Rebate		0	\$ -
PRE-SF-05	Home Water Reports	20	88	\$ 516
PRE-SF-06	Irrigation Audits - High Users	10	120	\$ 924
PRE-SF-07	High-Efficiency Sprinkler Nozzle Rebate		0	\$ -
PRE-SF-08	Smart Irrigation Controller Rebate		0	\$ -
PRE-SF-09	WaterWise Landscape Rebate		0	\$ -
PRE-SF-10	Rainwater Harvesting Rebate		0	\$ -
Subtotal			761	\$ 389
Multi-Family Measures				
PRE-MF-01	HE Toilet Rebate	8	81	\$ 263
PRE-MF-02	Bathroom Retrofit		0	\$ -
PRE-MF-05	Irrigation Audits - High Users	4	180	\$ 533
PRE-MF-08	WaterWise Landscape Rebate		0	\$ -
PRE-MF-09	Rainwater Harvesting Rebate		0	\$ -
Subtotal			261	\$ 350
Industrial, Commercial, Institutional Measures				
PRE-ICI-01	HE Toilet Rebate		0	\$ -
PRE-ICI-02	Urinal Rebate		0	\$ -
PRE-ICI-06	Irrigation Audits - High Users	3	135	\$ 533
PRE-ICI-09	WaterWise Landscape Rebate		0	\$ -
PRE-ICI-10	Rainwater Harvesting Rebate		0	\$ -
PRE-ICI-11	Commercial Dishwasher Rebate		0	\$ -
PRE-ICI-12	Commercial Food Steamer Rebate		0	\$ -
Subtotal			135	\$ 533
Utility & General Measures				
Subtotal			0	NA
Grand Total for Reporting Year			1,156	\$ 389

Best Management Practices

- Probably Doing
 - Conservation coordinator
 - Pricing/rates
 - Metering all connections
 - System audit & loss control
 - Public information
- Strongly Consider
 - Pricing/rates
 - School education/public info
 - Partnering with nonprofits
 - Prohibiting water waste
- Need to Consider
 - Cost effective analysis
 - Athletic field, golf course, and park conservation
 - Landscape irrigation conservation and incentives
 - Residential irrigation audits
 - ICI programs
 - Incentive programs
 - Graywater
 - Rainwater harvesting and reuse programs
 - Wholesale agency assistance
 - Small utility outreach

Details, Details, Details!

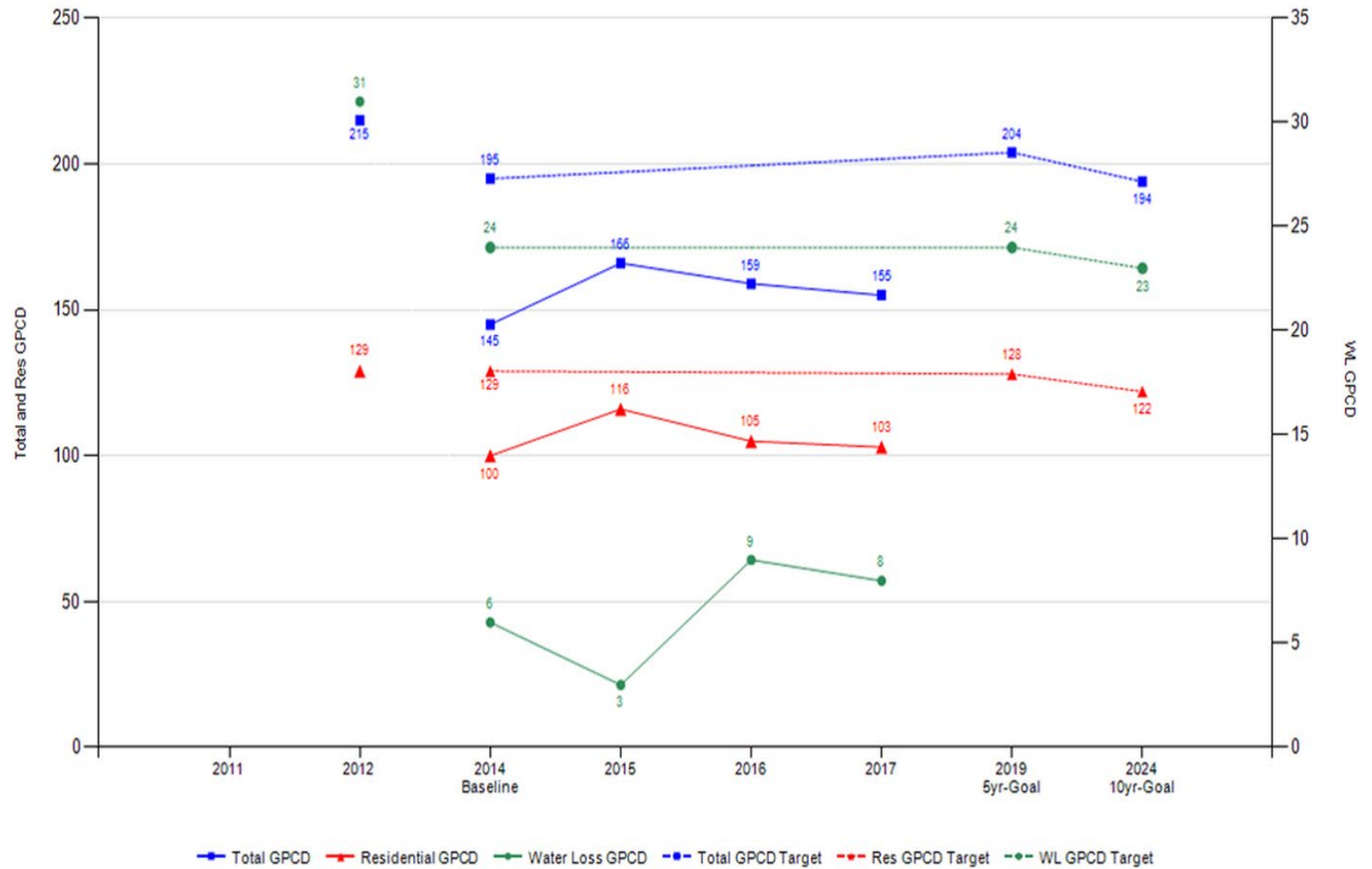


Utility Name:

Get Graph Report



City of Watertown



Utility Profile
+ Conservation Plan
Annual Report

Conservation Plan Retail Water Supplier

CONTACT INFORMATION

Wastewater ID Number: 20388

Conservation Plan Contact Information:

Last Name: *

First Name: *

Title:

Address:

City: State: **Select**

Zip:

Zip+4:

Email: *

Phone: x

Is this person the designated Conservation Coordinator? Yes No

Regional Water Planning Group: M

Groundwater Conservation District:

Our records indicate that you:

- Received financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a surface water right with TCEQ

Utility Profile

+ Conservation Plan

Annual Report

Water Conservation Plan

5-AND 10-YR GOALS FOR WATER SAVINGS For Retail Water Supplier

Provide specific and quantified five- and 10-year goals in the table below.
In the first column, historic data, if available, from previously submitted annual reports has been entered.

For assistance in determining how to identify appropriate goals for your Water Conservation Plan, refer to [Water Conservation Plans ~ Identifying Targets and Goals](#).

	Historic 5 Year Average	Baseline	5-Year Goal For year 2023	10-Year Goal For year 2028
Total GPCD ¹	157	<input type="text"/>	151	148
Residential GPCD ²	85	<input type="text"/>	120	119
Water Loss (GPCD) ³	17	<input type="text"/>	15	13
Water Loss Percentage ⁴	10.83 %	0.00 %	9.93 %	8.78 %

1. Total GPCD = (Total Gallons in System / Permanent Population) / 365
2. Residential GPCD = (Gallons used for Residential use / Residential Population) / 365
3. Water Loss GPCD = (Total Water Loss / Permanent Population) / 365
4. Water Loss Percentage = (Total Water Loss / Total Gallons in System) x 1000 or (Water Loss GPCD / Total GPCD) x 100

Upload Conservation Plan:

- Utility Profile
- Conservation Plan
- Annual Report

Water Conservation Plan

5-AND 10-YR GOALS FOR WATER SAVINGS For Retail Water Supplier

Provide specific and quantified five- and 10-year goals in the table below. In the first column, historic data, if available, from previously submitted annual reports has been entered.

For assistance in determining how to identify appropriate goals for your Water Conservation Plan, refer to [Water Conservation Plans – Identifying Targets and Goals](#).

	Historic 5 Year Average	Baseline	5-Year Goal For year 2024	10-Year Goal For year 2029
Total GPCD ¹	144	141	143	139
Residential GPCD ²	78	74	77	75
Water Loss (GPCD) ³	8	8	14	14
Water Loss Percentage ⁴	6.00 %	5.67 %	10.00 %	10.00 %

1. Total GPCD = (Total Gallons in System / Permanent Population) / 365
2. Residential GPCD = (Gallons used for Residential use / Residential Population) / 365
3. Water Loss GPCD = (Total Water Loss / Permanent Population) / 365
4. Water Loss Percentage = (Total Water Loss / Total Gallons in System) x 1000 or (Water Loss GPCD / Total GPCD) x 100

Upload Conservation Plan:

View	Delete	File Name	File Description
		Waterwood_LWCP18.pdf	

Now What?

Wrote it

Submitted it

TWDB/TCEQ approved it

Done?

In Summary...

- Address the minimum requirements
- Consider best management practices
- Incorporate projects/activities
- **Provide details!**
- Utilize available resources (**new tool!**)
- Request an early review of draft
- Use plan as a beneficial tool
- Surface water right holders follow TCEQ

Resources

- Historic report data

www.twdb.texas.gov/apps/wcreps/wcreports.aspx

- Online reporting application (LUC)

- Water Conservation Planning Tool

- Water conservation information

www.twdb.texas.gov/conservation/municipal/plans/index.asp

- Best management practices

www.twdb.texas.gov/conservation/BMPs/Mun/index.asp

And More...

- Quantifying Conservation Report

www.twdb.texas.gov/conservation/doc/StatewideWaterConservationQuantificationProject.pdf?d=8371.500000008382

- Regional water plans

www.twdb.texas.gov/waterplanning/rwp/index.asp

- Water Loss Auditor Training

www.twdb.texas.gov/conservation/municipal/waterloss/auditor_training.asp

- Us!

John Sutton

Municipal Water Conservation

john.Sutton@twdb.texas.gov

512-463-7988

Travis Brice

Water Conservation Specialist

travis.brice@twdb.texas.gov

512-475-1639