

MEMORANDUM



Public Works Department

Date: November 21, 2016
To: Mayor and City Council
From: Marilyn DeRosa, Deputy Public Works Director (350-2660)
Thru: Don Bessler, Public Works Director (350-8205)
Subject: Water and Sewer Rate Structure Review

Purpose

The purpose of this memo is to provide information and data related to the rate adjustment adopted in January 1, 2016, for the water and sewer utility.

Background

In 2015, Public Works conducted an 8-month cost of service and rate study for its water, sewer, and solid waste utilities. During that period of time, staff presented at several Work Study Sessions and hosted stakeholder workshops to obtain feedback and gauge customer reaction as study recommendations were developed:

- April 2015 Work Study Session: Public Works staff presented a strategy to combine water/sewer and solid waste rate studies into one bi-annual study with rate adjustment recommendations and use of a Consumer Price Index (CPI) for rate adjustments in alternate years.
- May 2015: Staff held three customer workshops for industrial, commercial, and residential customers.
- August 2015 Work Study Session: Staff discussed the feedback received from the May customer workshops and presented a recommendation for a **modified inclining block structure** for single family residential customers (SFR). Under this structure, volume is separated into four tiers, 0-6,000 gallons, 6,001 to 12,000 gallons, 12,001 to 20,000 gallons, and more than 20,000 gallons, respectively. Pricing is lowest in the first tier of water volume use, increasing by 125% in tier two. Pricing for tiers three and four is 150% of the previous tier.
- September 2015 Work Study Session: Staff presented the actual 2-year rate adjustments utilizing the modified inclining block structure.
- October 2015: After receiving Council direction to proceed with the recommended rates, the information was discussed at a stakeholder workshop in October.
- November 2015: Public Hearings and adoption of the rates. The adopted rate structure and rates effective January 1, 2016, and January 1, 2017, are shown below:

PRE-2016 TIERS	PRE-2016 RATES (X1,000 GAL)	CURRENT TIERS	RATES (X1,000 GAL)	
			CY2016	CY2017 (Not to Exceed)*
WATER				
0 to 8,000 gals	\$2.00	0 to 6,000 gals	\$1.79	\$1.88*
8,001 to 15,000 gals	\$2.50	6,001 to 12,000 gals	\$2.24	\$2.35*
15,001 to 25,000 gals	\$3.13	12,001 to 20,000 gals	\$3.36	\$3.52*
> 25,000 gals	\$3.92	> 20,000 gals	\$5.05	\$5.29*
SEWER				
Residential	\$1.75		\$1.84	\$1.89*

A two-year rate adjustment for Solid Waste was also adopted at that time.

December 1, 2016 Work Study Session

An item has been placed on the City Council's December 1st Work Study Session agenda to discuss the impact of the January 1, 2016, changes on users in the SFR classification, present consumption data, and provide Council with options regarding the rate adjustment scheduled to take effect January 1, 2017.

Rate-Setting Objectives

The objectives of the rate-setting process identified last year align well with City Council's strategic priorities:

STRATEGIC PRIORITY

Sustainable Growth and Development
 Financial Stability and Vitality
 Quality of Life
 Safe and Secure Communities
 Strong Community Connections

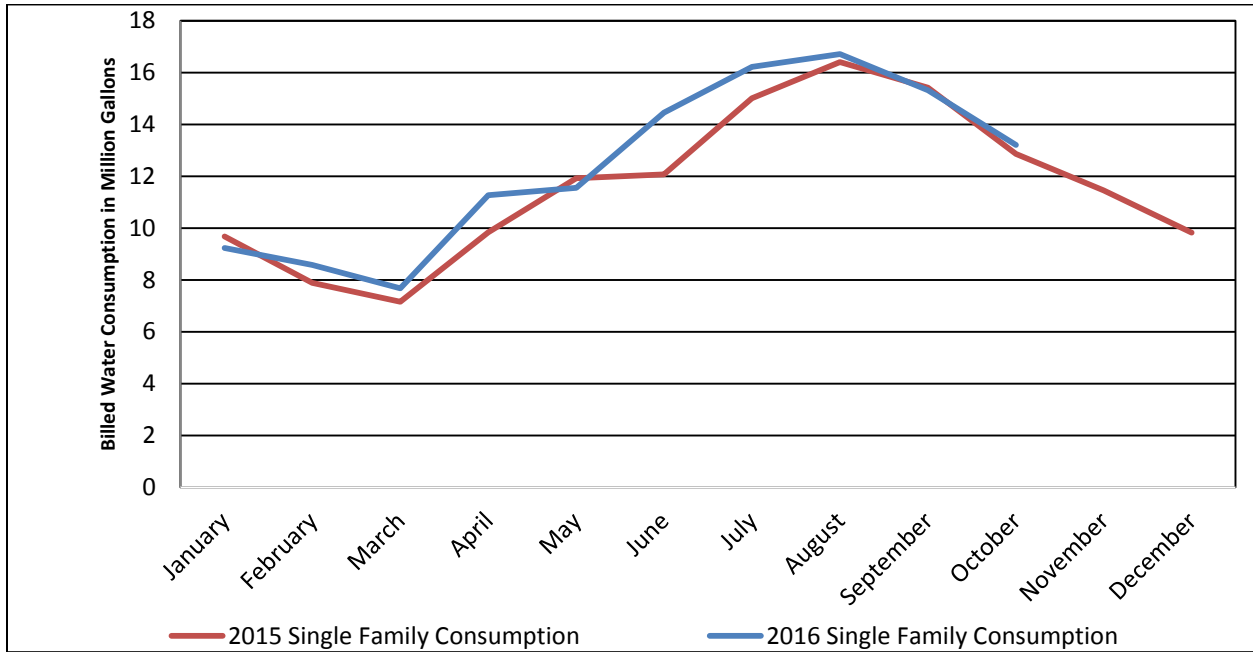
OBJECTIVE

Strong Conservation Message
 Cost Recovery
 Infrastructure Funding
 Affordability
 Public Health and Emerging Regulations
 Transparent and Inclusive Public Process

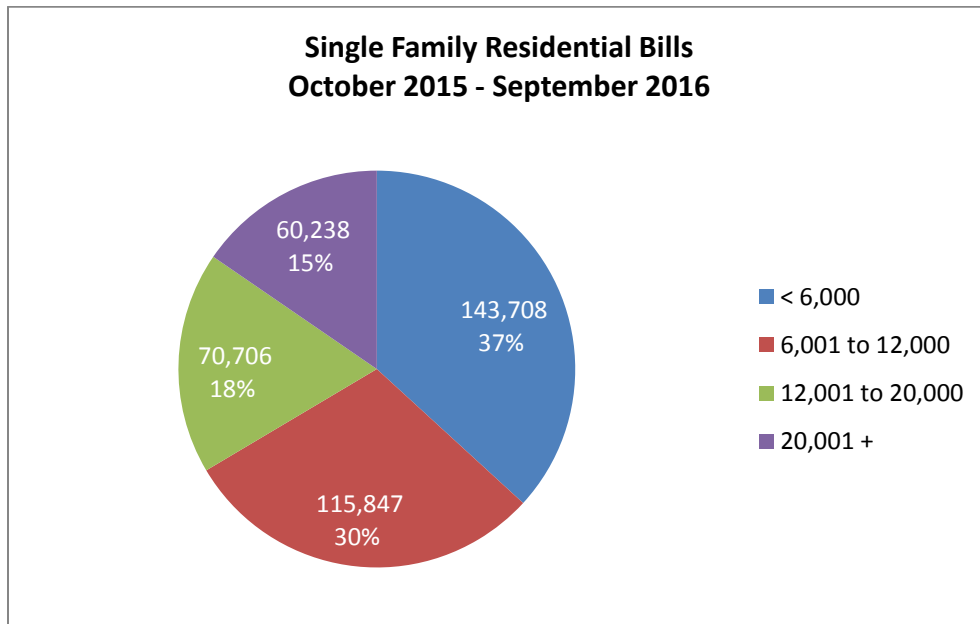
Findings/Data

Customer concerns regarding high water bills are only partly related to the rate adjustments of January, 2016. Weather changes played a major role in increasing water demand Citywide which led to higher bills. Charting precipitation vs. daily water demand displays a clear drop in water demand when measurable rain events occur. In 2015, Tempe had 35 measurable rain events that were fairly evenly spread between January and October. In

contrast, there were only 19 measurable rain events in 2016, with large gaps of dry periods between January and October. The impact of these dry periods on water demand is illustrated by comparing billed SFR consumption in 2015 to 2016 (see chart below). There were two large dry periods in 2016 – February through April and June through August. In both time periods billed water consumption increased significantly.



Although weather has increased water demand, the existing rate structure has benefited, or had minimal impact to, 85% of SFR accounts by reducing the volume cost of water in the first two tiers.



Next Steps

Utility rates adjustments are scheduled for January 1, 2017, of 4.75% in water and 2.5% in sewer according to the adopted schedule from last year. The cost of service and rate study for the next round of rate adjustments will begin in March, 2017. Staff recommends a return to Work Study Session in early 2017 with a series of policy discussion items (e.g. the balance between affordability, conservation, households with large lots, and essential versus discretionary water consumption) that will provide guidance for the next study.

Water and Sewer Rates

Issue Review Session
December 1, 2016



2015 Background



New Rates effective

- January 1, 2016
- January 1, 2017



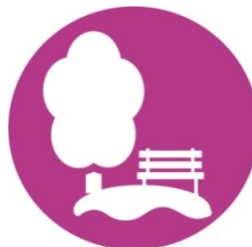
COUNCIL STRATEGIC PRIORITIES



Sustainable Growth
& Development



Financial Stability
& Vitality



Quality of Life

RATE-SETTING OBJECTIVES

Strong Conservation Message
Revenues Cover Expenditures
Infrastructure Funding
Affordability
Emerging Regulations

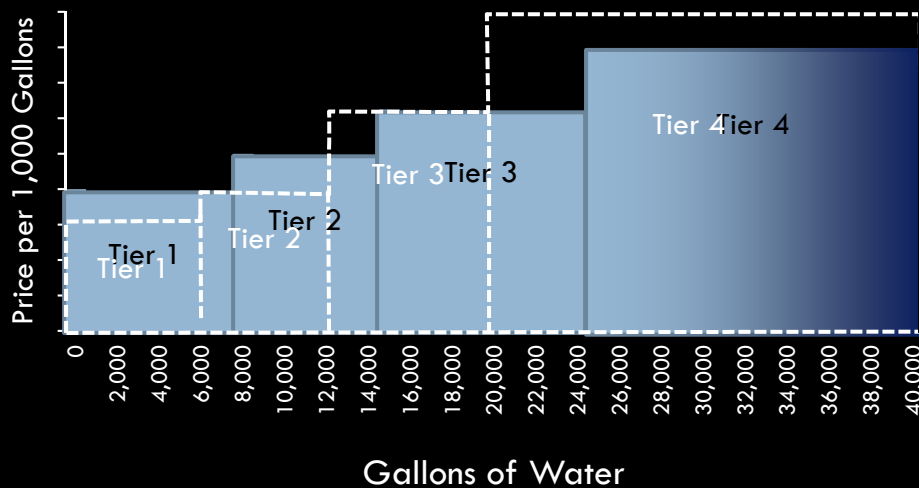


Strong Community
Connections



Safe & Secure
Communities

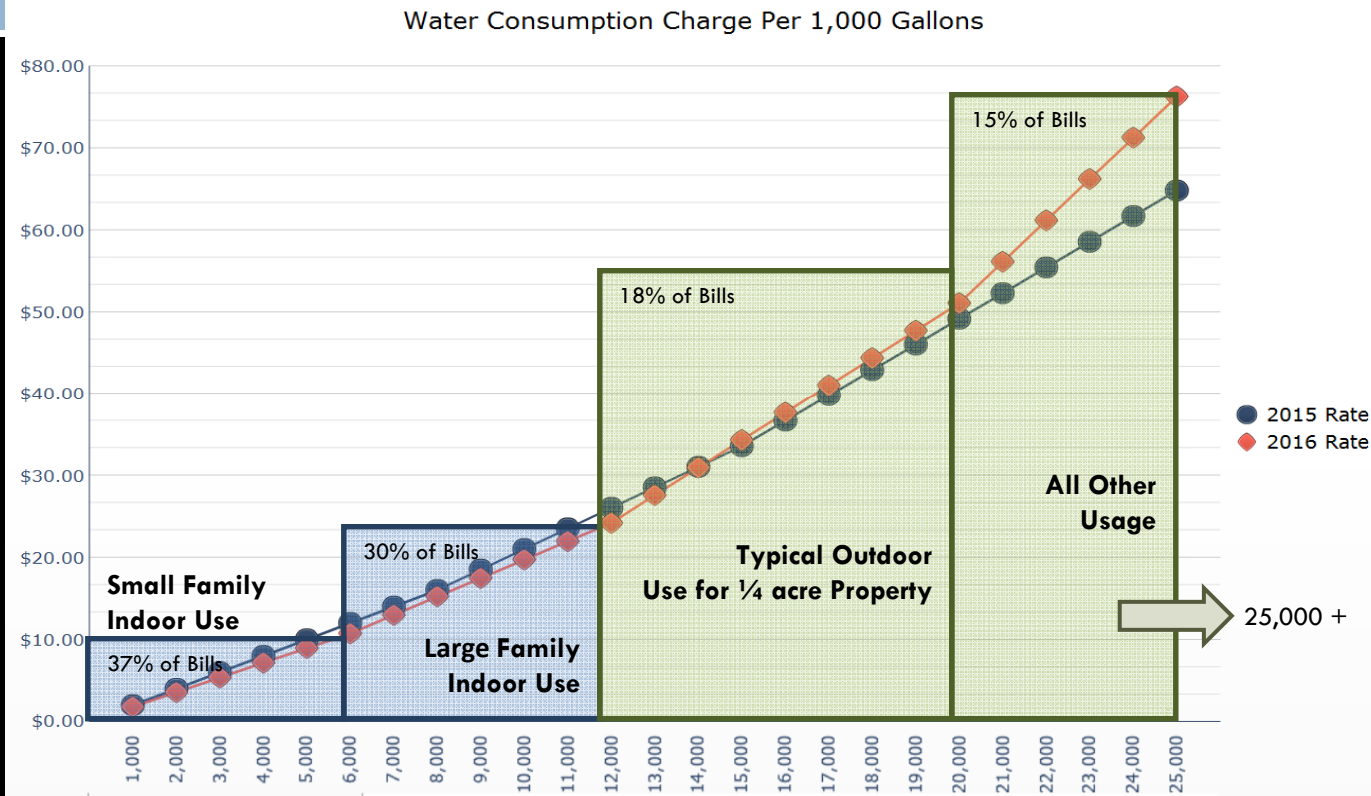
Single Family Residential Structure



PRE-2016 TIERS (GALLONS)	PRE-2016 MULTIPLIER FOR RATES	CURRENT TIERS (GALLONS)	CURRENT MULTIPLIER FOR RATES
0 to 8,000	1.00	0 to 6,000	1.00
8,001 to 15,000	x1.25	6,001 to 12,000	x1.25
15,001 to 25,000	x1.25	12,001 to 20,000	x1.50
> 25,000	x1.25	> 20,000	x1.50

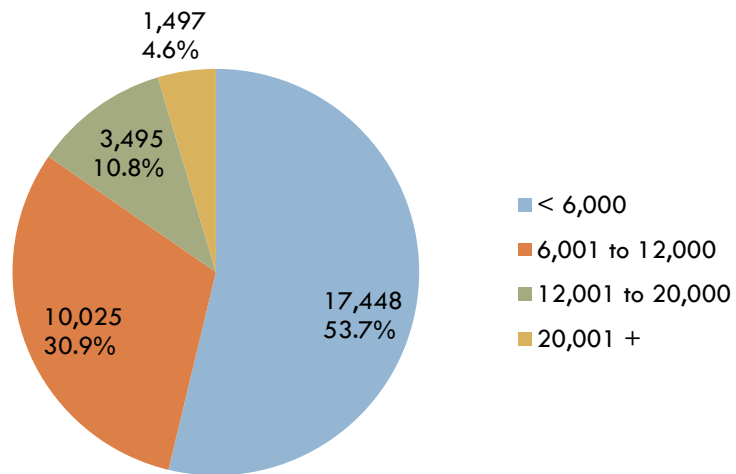
- Pre-2016: Each TIER is priced 25% higher than the previous TIER.
- 2016: TIER 2 is priced 25% higher than TIER 1. TIERS 3 and 4 are priced 50% higher than the previous TIER.

Water Usage Tier Profile

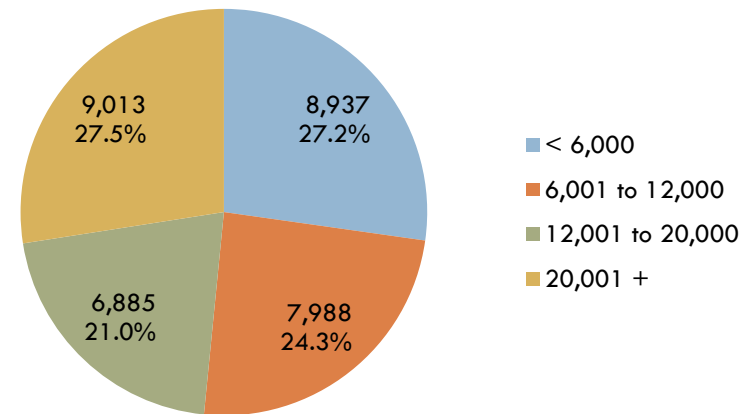


Single Family Residential Bills by Tier

March 2016



August 2016

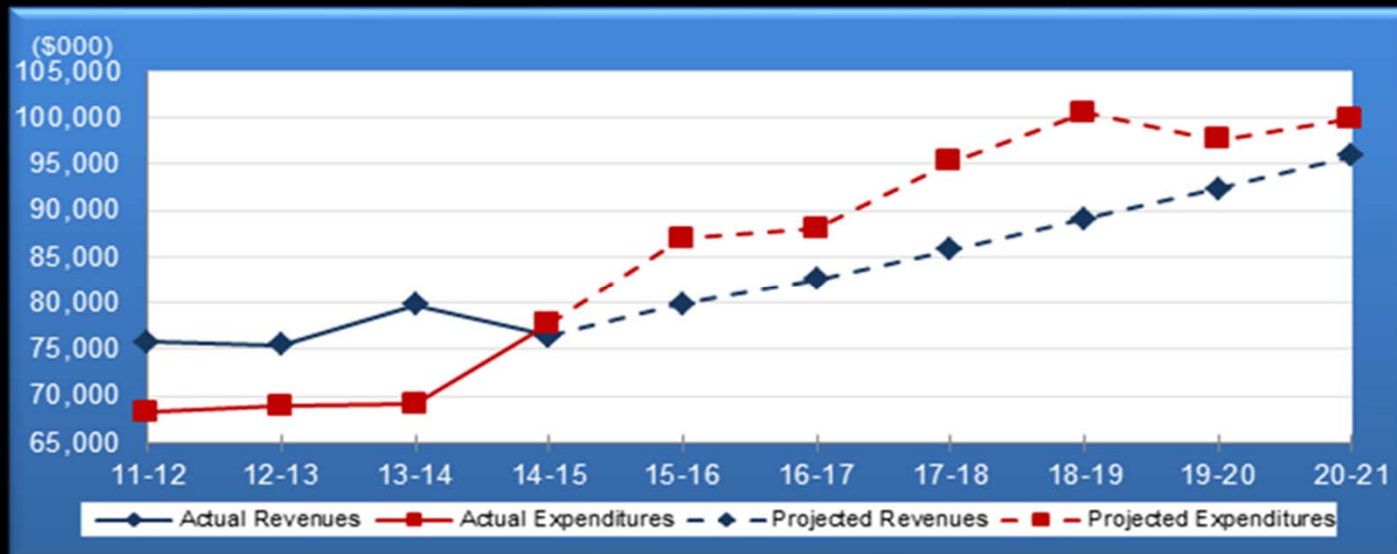


Water Volume Rates

PRE-2016 TIERS	PRE-2016 RATES (X1,000 GAL)	CURRENT TIERS	RATES (X1,000 GAL)	
			CY2016	CY2017 *
WATER				
0 to 8,000 gals	\$2.00	0 to 6,000 gals	\$1.79	\$1.88*
8,001 to 15,000 gals	\$2.50	6,001 to 12,000 gals	\$2.24	\$2.35*
15,001 to 25,000 gals	\$3.13	12,001 to 20,000 gals	\$3.36	\$3.52*
> 25,000 gals	\$3.92	> 20,000 gals	\$5.05	\$5.29*
SEWER				
Residential	\$1.75		\$1.84	\$1.89*

*CY2017 rate adjustment 4.75% in water and 2.50% in sewer

Long Range Forecast: Water/Wastewater Fund



Fund Balance as
% of Revenue

72%

82%

88%

75%

66%

53%

38%

31%

28%

Environmental Changes

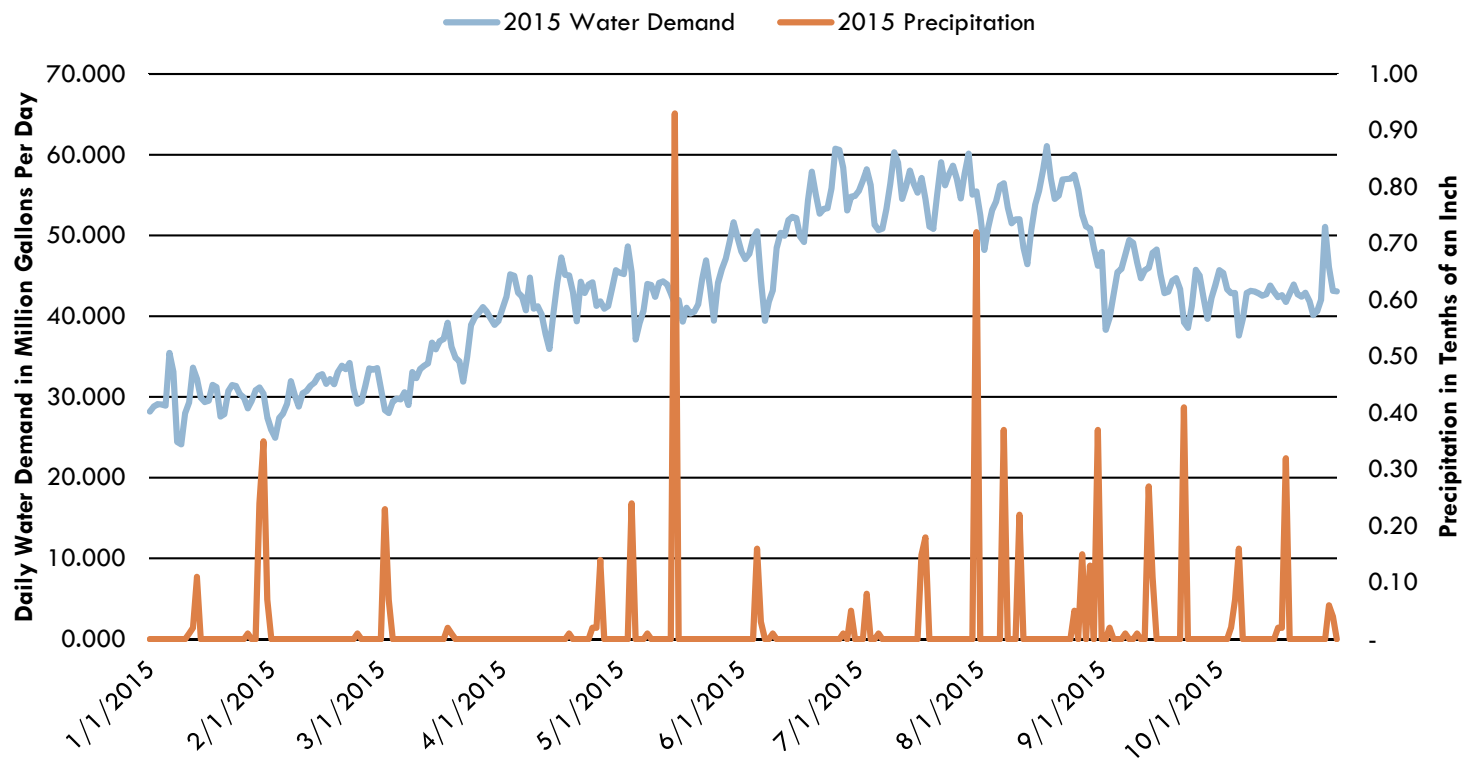
2015 Precipitation



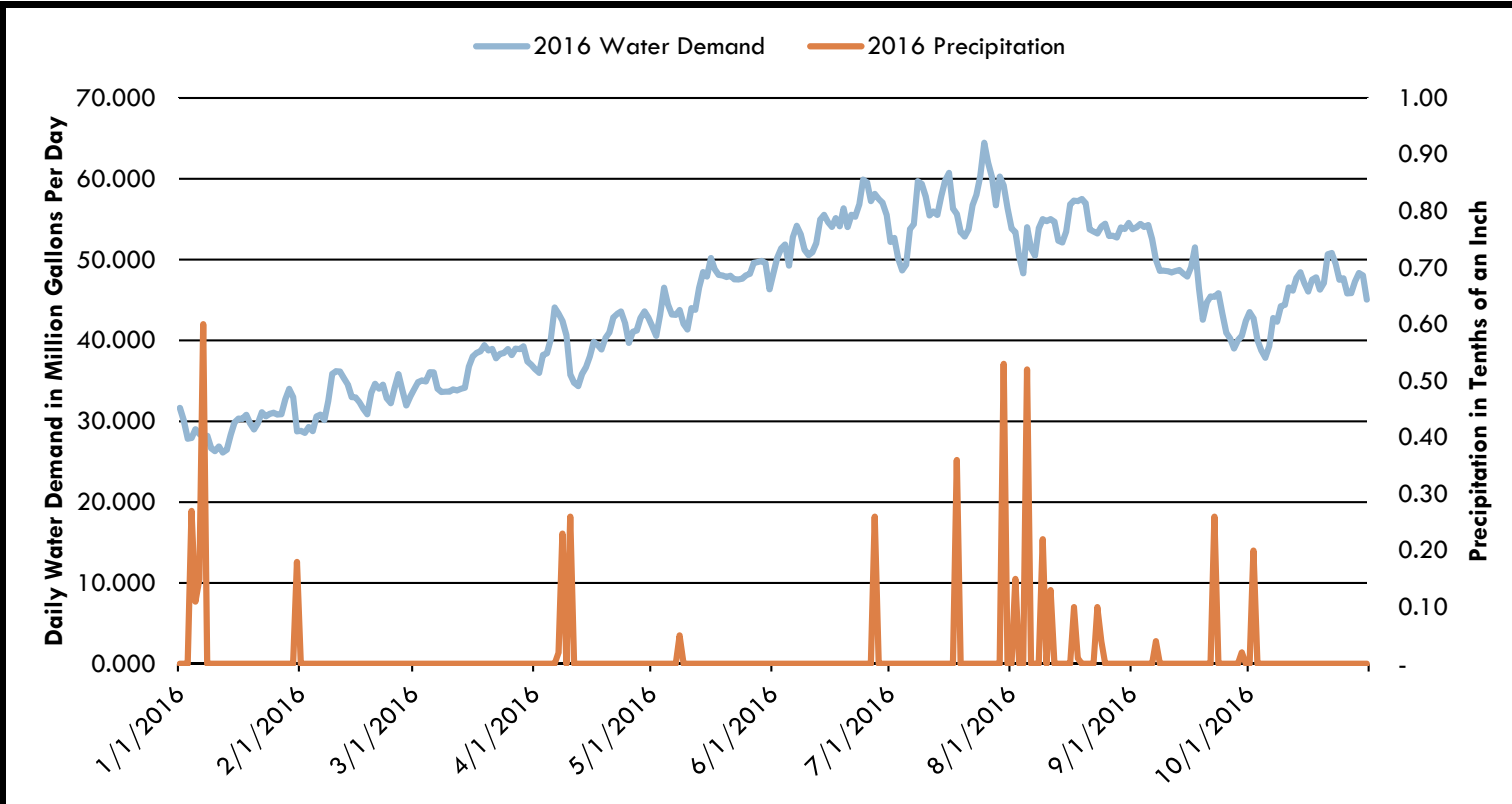
2016 Precipitation



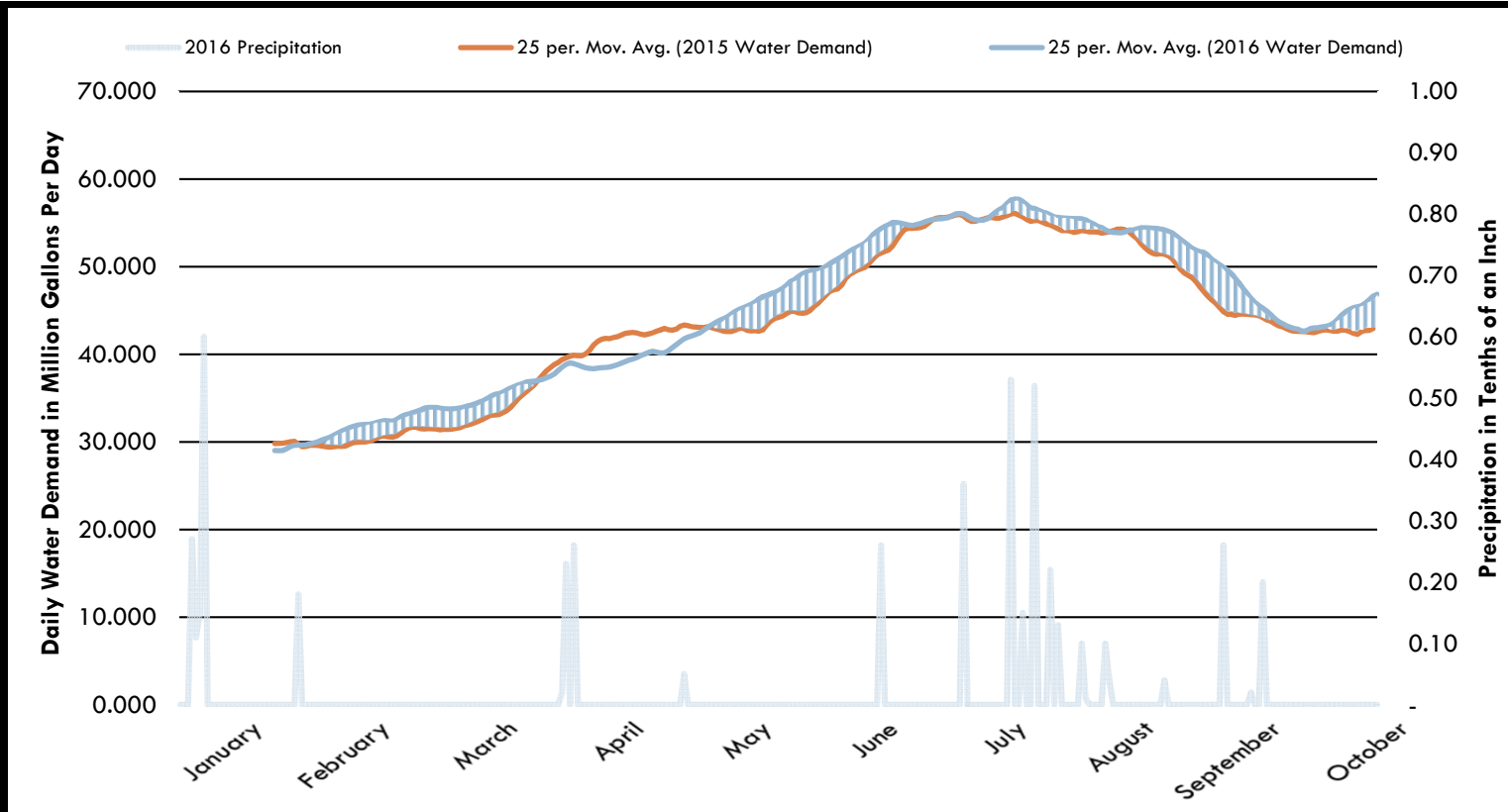
2015 Precipitation and Water Demand



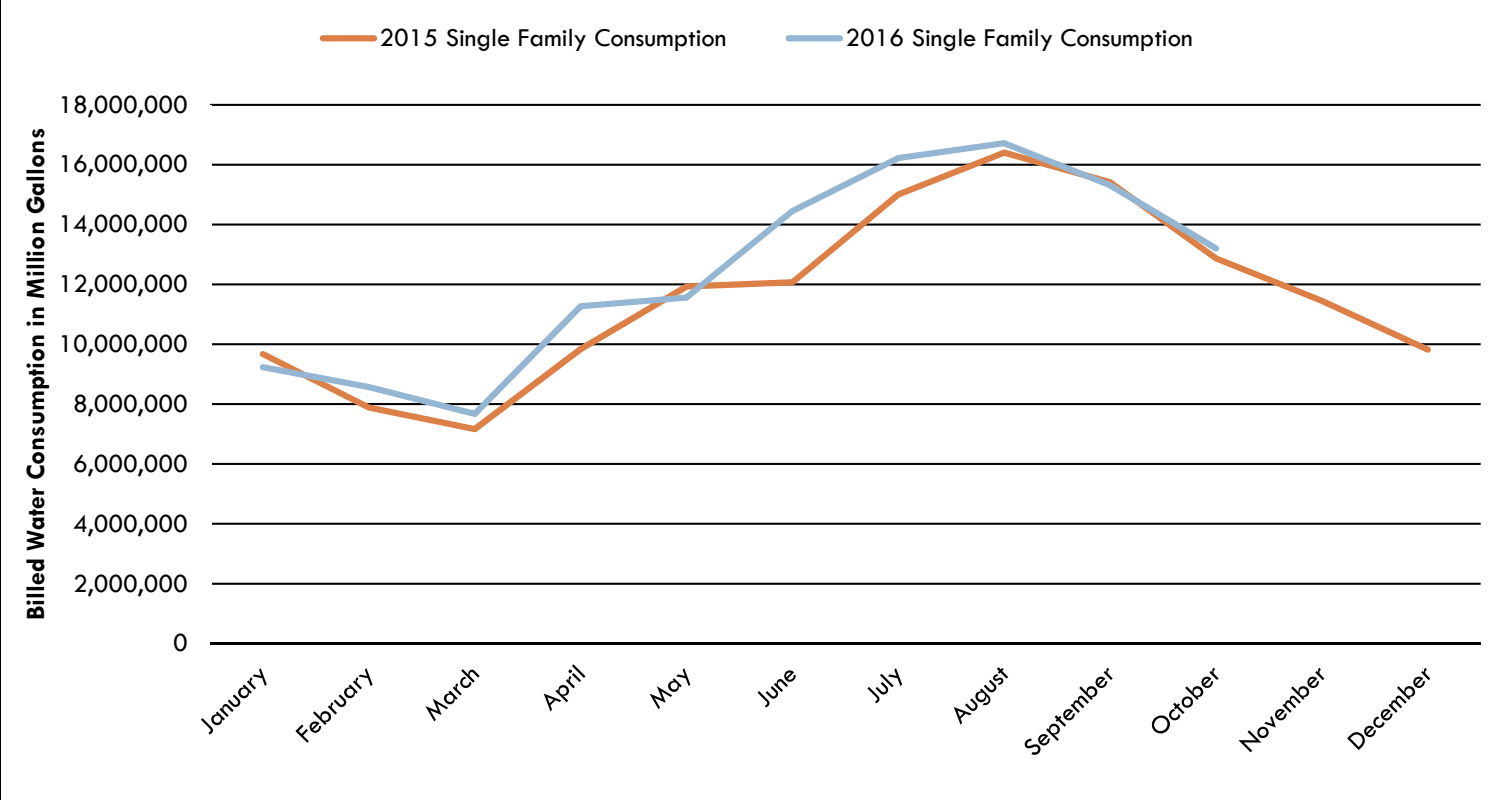
2016 Precipitation and Water Demand



2015-2016 Comparison



Single Family Water Consumption Data



Valley Comparison – Average SFR Water Charge

Last Updated 11/22/2016

Tempe Single Family Utility Rate Calculator/Comparison Dashboard

Single Fa...

Single Family Back Up Data

Water Calculator

Select Meter Size: 5/8" 3/4" 1"

Select Gallons: 9,000

Select Rate Increase: 0.00%

Current Fee	\$ Increase	Total
\$28.96	\$0.00	\$28.96

Wastewater Calculator

Gallons (Winter Average): 6,000

Select Rate Increase: 0.00%

Current Fee	\$ Increase	Total
\$21.34	\$0.00	\$21.34

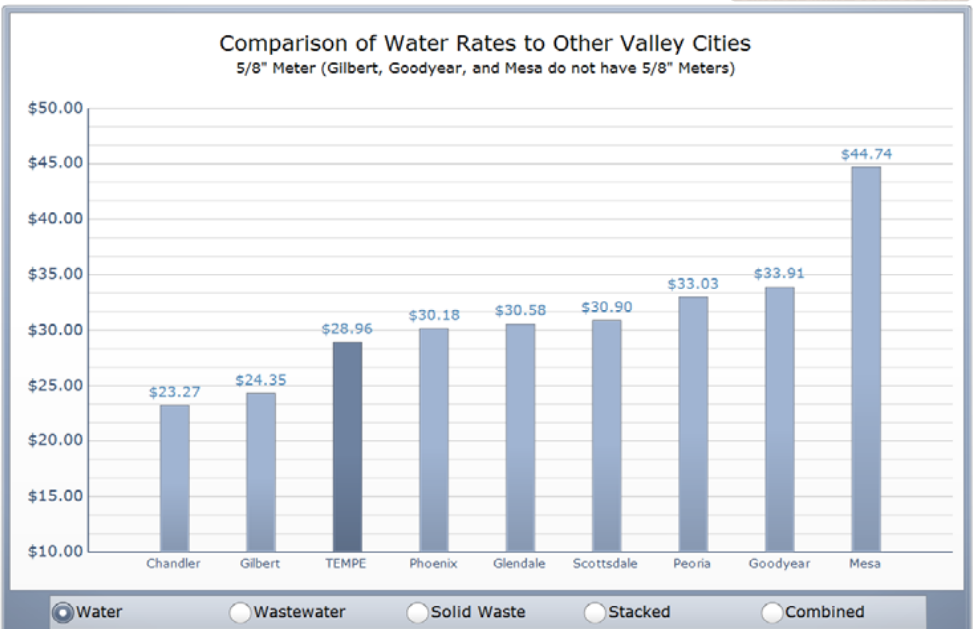
Solid Waste Calculator

Select Rate Increase: 0.00%

Current Fee	Increase	Total
\$23.00	\$0.00	\$23.00

Combined Monthly Totals

Current Fee	Increase	Total	% Increase
\$73.30	\$0.00	\$73.30	0.0%



	Chandler	Gilbert	Glendale	Goodyear	Mesa	Peoria	Phoenix	Scottsdale	Tempe
Adopted Rate	Oct-15	Jul-09	Oct-10	Jan-16	Aug-16	Jul-16	Mar-16	Jul-15	Jan-16

Valley Comparison – Average SFR Wastewater Charge

Last Updated 11/22/2016

Tempe Single Family Utility Rate Calculator/Comparison Dashboard

Single Fa...

Single Family Back Up Data

Water Calculator

Select Meter Size: 5/8" 3/4" 1"

Select Gallons: 9,000

Select Rate Increase: 0.00%

Current Fee	\$ Increase	Total
\$28.96	\$0.00	\$28.96

Wastewater Calculator

Gallons (Winter Average): 6,000

Select Rate Increase: 0.0%

Current Fee	\$ Increase	Total
\$21.34	\$0.00	\$21.34

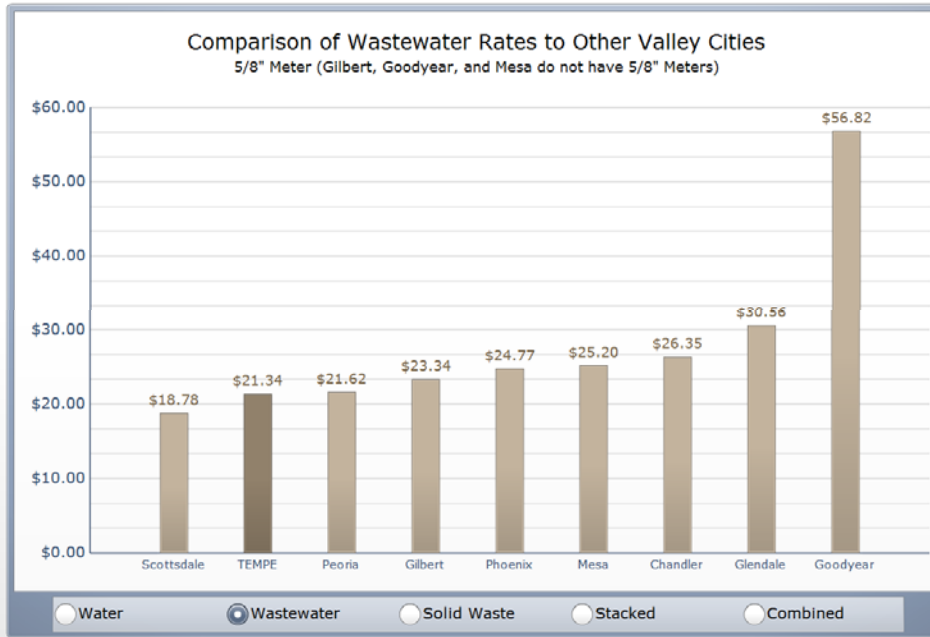
Solid Waste Calculator

Select Rate Increase: 0.0%

Current Fee	Increase	Total
\$23.00	\$0.00	\$23.00

Combined Monthly Totals

Current Fee	Increase	Total	% Increase
\$73.30	\$0.00	\$73.30	0.0%



Adopted Rate	Chandler	Gilbert	Glendale	Goodyear	Mesa	Peoria	Phoenix	Scottsdale	Tempe
	Oct-15	Jul-09	Oct-10	Jan-16	Aug-16	Jul-16	Mar-16	Jul-15	Jan-16

Valley Comparison – Large SFR Water Charge

Last Updated 11/22/2016

Tempe Single Family Utility Rate Calculator/Comparison Dashboard

Single Fa...

Single Family Back Up Data

Water Calculator

Select Meter Size

5/8"
 3/4"
 1"

Select Gallons

30,000

Select Rate Increase

0.00%

Current Fee	\$ Increase	Total
\$112.96	\$0.00	\$112.96

Wastewater Calculator

Gallons (Winter Average)

15,000

Select Rate Increase

0.0%

Current Fee	\$ Increase	Total
\$37.90	\$0.00	\$37.90

Solid Waste Calculator

Select Rate Increase

0.0%

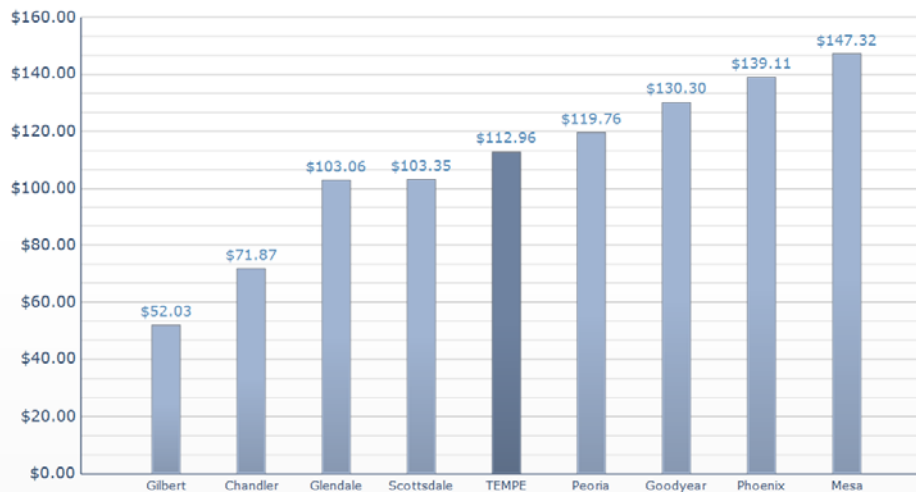
Current Fee	Increase	Total
\$23.00	\$0.00	\$23.00

Combined Monthly Totals

Current Fee	Increase	Total	% Increase
\$173.86	\$0.00	\$173.86	0.0%

Comparison of Water Rates to Other Valley Cities

5/8" Meter (Gilbert, Goodyear, and Mesa do not have 5/8" Meters)



Water
 Wastewater
 Solid Waste
 Stacked
 Combined

	Chandler	Gilbert	Glendale	Goodyear	Mesa	Peoria	Phoenix	Scottsdale	Tempe
Adopted Rate	Oct-15	Jul-09	Oct-10	Jan-16	Aug-16	Jul-16	Mar-16	Jul-15	Jan-16

Valley Comparison – Large SFR Wastewater Charge

Last Updated 11/22/2016

Tempe Single Family Utility Rate Calculator/Comparison Dashboard

Single Fa...

Single Family Back Up Data

Water Calculator

Select Meter Size

5/8"
 3/4"
 1"

Select Gallons

30,000

Select Rate Increase

0.00%

Current Fee	\$ Increase	Total
\$112.96	\$0.00	\$112.96

Wastewater Calculator

Gallons (Winter Average)

15,000

Select Rate Increase

0.0%

Current Fee	\$ Increase	Total
\$37.90	\$0.00	\$37.90

Solid Waste Calculator

Select Rate Increase

0.0%

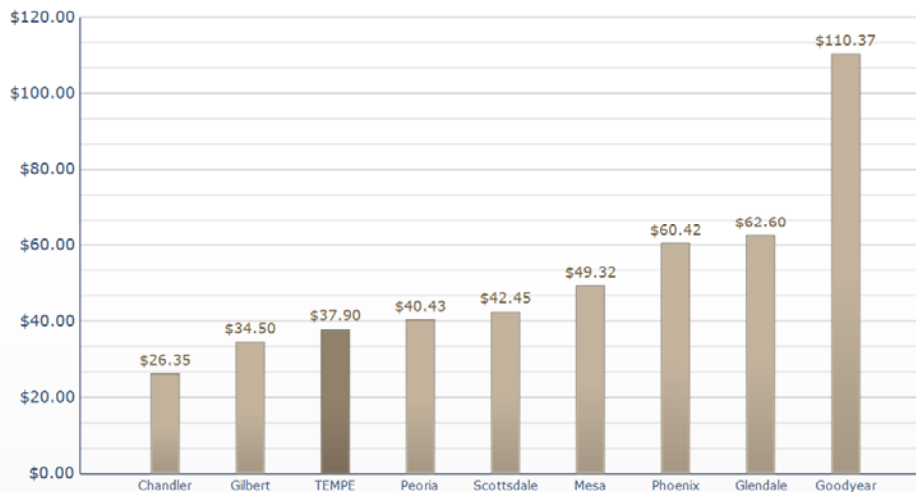
Current Fee	Increase	Total
\$23.00	\$0.00	\$23.00

Combined Monthly Totals

Current Fee	Increase	Total	% Increase
\$173.86	\$0.00	\$173.86	0.0%

Comparison of Wastewater Rates to Other Valley Cities

5/8" Meter (Gilbert, Goodyear, and Mesa do not have 5/8" Meters)

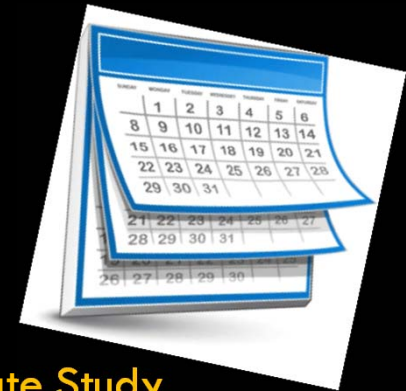


Water
 Wastewater
 Solid Waste
 Stacked
 Combined

	Chandler	Gilbert	Glendale	Goodyear	Mesa	Peoria	Phoenix	Scottsdale	Tempe
Adopted Rate	Oct-15	Jul-09	Oct-10	Jan-16	Aug-16	Jul-16	Mar-16	Jul-15	Jan-16

Council Options

- **OPTION 1:** PROCEED with implementation of previously approved rate adjustment on January 1, 2017
- **OPTION 2:** DELAY January 1, 2017, rate adjustments
Requires Council Action – December 8th



MARCH 2017: Conduct Bi-Annual Water/Sewer/Solid Waste Rate Study
Prepare policy discussion for upcoming WSS

- | | | |
|-----------------|---|--------------------|
| ▪ Affordability | ➔ | Multiplier |
| ▪ Conservation | | Return Flow Credit |
| ▪ Large lots | | Tier Size |
| ▪ Seasonal | | Number of Tiers |