MUNICIPAL UTILITIES FRIDAY PACKET

March 20, 2020

2020 Water and Wastewater Rate Study

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Introduction of the 2020 Water and Wastewater Rate Study was scheduled for presentation to City Council at the March 19, 2020, Work Study Session. Due to the cancellation of public meetings in response the Coronavirus, this Friday Packet and the following memorandum and set of presentation slides will serve as an alternate form of communication.

MEMORANDUM – ISSUE REVIEW SESSION

TO: Mayor and Council

THROUGH: Ken Jones, Deputy City Manager, CFO

FROM: Terry Piekarz, Municipal Utilities Director
Tara Ford, Interim Deputy Municipal Utilities Director – Water Utilities

DATE: March 19, 2020

SUBJECT: 2020 Water and Wastewater Rate Study

AGENDA ITEM: XX

PURPOSE:
To present to City Council an overview of the 2020 Water and Wastewater Rate Study and provide an update on residential outreach and the Water Efficiency Certification Pilot Program

RECOMMENDATION OR DIRECTION REQUESTED:
Guidance from Council on priorities to consider during the 2020 Rate Study

CITY COUNCIL STRATEGIC PRIORITY AND RELATED PERFORMANCE MEASURE:
Safe & Secure Communities
1.27 City Infrastructure and Assets
Strong Community Connections
2.02 Customer Service Satisfaction
Sustainable Growth & Development
4.03 Water Conservation
Financial Stability & Vitality
5.01 Quality of Business Services

BACKGROUND INFORMATION:
The last water and wastewater utility rate study was completed in 2017. Based on the rate study recommendations, Council adopted a 4.25 percent water rate increase effective January 1, 2018. In addition, a new Fifth Tier, beginning at water usage greater than 40,000 gallons, and a sewer "return flow" cap of 12,000 gallons, were implemented for the single-family residential customer class. Tier 5 of the water rate structure was based on a valid philosophy, used throughout the industry, that large-volume customers create additional infrastructure needs for the City's water delivery system during times of peak consumption and that the demand created by those customers should be borne by those same customers. This rationale is the basis for a "cost-based rate-making policy", in which each customer class pays the costs associated with and allocated to the class, understanding that no rate policy is perfect. Flood Irrigation customers received their first rate increase in more than a decade as City Council adopted a 50 percent cost recovery strategy. There were no rate adjustments for wastewater. In 2019, a rate model update was conducted in lieu of a rate study to verify if revenue adjustments were necessary for 2020. The model update confirmed that no water or wastewater adjustments were needed at that time.

Benchmark Cities	Most Recent Rate Change	Number of Tiers	Highest Tier Start	Rate in Highest Tier	45,000 Gallons
Gilbert	11/1/2018	4	30,001+	$2.06	$71.86
Chandler	10/1/2017	4	60,001+	$3.27	$102.30
Avondale	2/20/2018	4	12,001+	$4.45	$170.77
Tempe	**1/1/2018**	**5**	**40,001+**	**$5.10**	**$172.64**
Scottsdale	11/1/2019	5	65,001+	$6.10	$177.45
Peoria	7/1/2019	4	20,001+	$4.87	$188.05
Glendale	1/1/2019	4	30,001+	$5.92	$192.90
Surprise	7/1/2019	3	20,001+	$5.44	$206.50
Mesa	7/1/2018	5	24,001+	$6.46	$232.53
Phoenix	2/1/2020	*	7,481+*	$6.30	$239.32
Goodyear	1/1/2020	4	30,001+	$10.31	$308.73

*Phoenix has seasonal rates and bills per 100 cubic feet

This memo provides detail on the rate study process, future cost factors that may influence revenue needs, the public outreach plan and the Large Volume Residential Customer (LVRC) Pilot Program (LVRC are those who have been in Tier 5 at least once since January 2018). In addition, staff is requesting guidance from Council on priorities to consider during the 2020 Water and Wastewater Rate Study.

The Purpose of a Rate Study

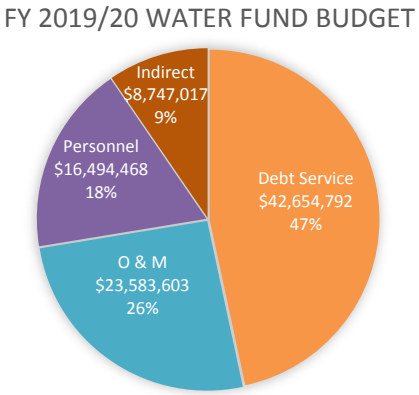
The City's Water Utility is an enterprise fund. An enterprise fund is a self-supporting government fund that sells goods and services to the public for a fee. Fees and rates should recover all the costs to provide the service. In addition, a cost of service analysis, a multi-step process designed to distribute revenue responsibilities to customer classes in proportion to the demands that those customer classes place on the water system, is completed to establish equitable, cost-based rates. Establishing cost-based rates, fees and charges is an important component in a well-managed and operated water utility. Cost-based rates provide enough funding to allow communities to build, operate, maintain and reinvest in their water and wastewater systems, providing the community with safe and reliable drinking water, fire protection and safe and reliable collection and treatment of wastewater. Properly and adequately funded water systems also allow for the economic development and sustainability of the community. For near-term financial planning purposes, Tempe utilizes a projection period of 10 years. This time frame provides a reasonable forecast of anticipated revenue needs, thereby assisting management, policymakers and the public to foresee potential revenue shortfalls under existing rates and to avoid surprises when future changes in rate levels are requested. Projections in the 10-year forecast are typically enough to satisfy investors, bond-rating agencies and other interested parties.

Rate Study Process

- *Identify and Prioritize Ratemaking Objectives* - The fundamental objectives and outcomes that a rate structure should achieve (i.e., financial integrity, greater resource efficiency, rate stability, equity and clarity for customers).
- *Identify Costs and Determine Revenue Requirements* - The financial obligations of the utility to its bondholders, employees and customers.
- *Allocate Costs to Customer Classes* - The principle of cost causation: revenues should be recovered from those responsible for the costs being incurred.
- *Design a Rate Structure* - Choose a rate structure that corresponds best to the utility's values and objectives.
- *Evaluate and Select the Rate Structure* - Evaluate the effect of rates on water demand (demand forecasting), revenue (sales modeling) and customer bills.

Factors Affecting Costs

The Water Utilities FY 2019-20 Operational Budget is $91,479,880, allocated across 31 different cost centers. In addition, Water oversees a wide range of projects included in the City's Capital Improvements Program (CIP). The projects range from plant and facility improvements and upgrades, to technology improvements, to distribution and collection system rehabilitation. The total estimated cost for 11 projects submitted in the CIP for FY 2020-21 is $64,278,597 for water and $21,915,897 for six submitted projects in wastewater. The total combined estimated CIP costs for the 5-year plan is $328,545,584. Over a 10-year forecast there is more than half a billion dollars in capital investments to be made.

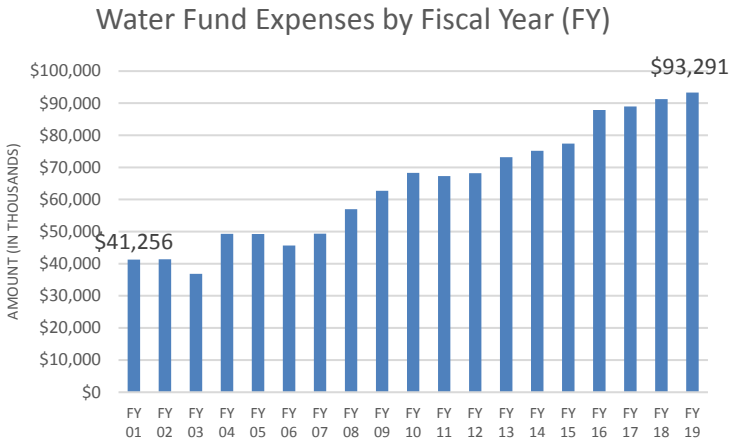


The following summary provides context for these projected costs. The Water Utilities Division is staffed by about 147 full-time employees in six functional areas:

- Water Operations (water production, plant and field sites, field site maintenance).
- Water Distribution and Wastewater Collection (preventive maintenance, construction, waterline repairs).
- Environmental Services (compliance, permitting, water quality, pretreatment, laboratory services).
- Water Engineering (master planning, capital improvements, GIS, utility locating).

- Water Resources (resource management, water conservation, Tempe Town Lake Operations).
- Administration (security and administrative support).

Water Treatment - The City owns and operates municipal water treatment facilities and infrastructure including the 50 million gallons per day (MGD) Johnny G. Martinez Water Treatment Plant (JGMWTP) and the 50 MGD South Tempe Water Treatment Plant (STWTP). In the 5-year CIP, more than $53 million is budgeted for planned infrastructure improvements and asset rehabilitation projects.



Expenses have more than doubled during the last 20 years (average increase = almost 6 percent) annually.

Wastewater Treatment - The City has 14 percent ownership in the 91st Avenue Wastewater Treatment Plant, a regional wastewater treatment facility co-owned with the cities of Phoenix, Glendale, Mesa and Scottsdale. An estimated 19 MGD of wastewater is sent to this facility for treatment. The City-owned Kyrene Water Reclamation Facility (KWRF) is currently off-line. Plans to bring the KWRF back on-line, as part of the City's long-term wastewater reclamation strategy, will be considered as a scenario during the 10-year financial forecast. In the 5-year CIP, more than $71 million is budgeted for planned infrastructure improvements and asset rehabilitation projects.

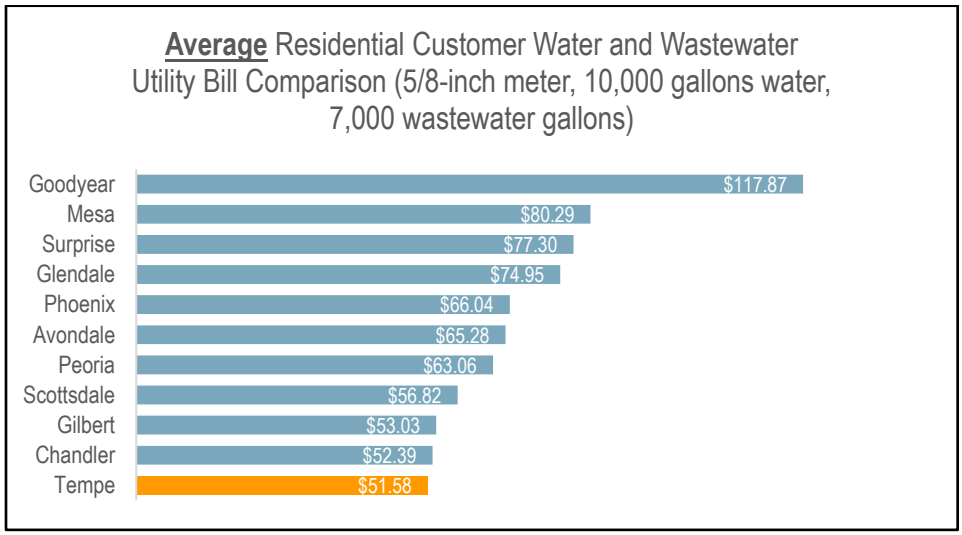
Water Distribution - Tempe maintains more than 850 miles of water transmission and service lines, ranging in size from 4 to 66 inches in diameter, and accompanying appurtenances consisting of more than 25,000 valves, 9,000 fire hydrants, 43,000 residential and commercial meters, 13 well sites, 2 booster stations and several above-ground storage tanks. In the 5-year CIP, more than $72 million is budgeted for planned infrastructure improvements and asset rehabilitation projects.

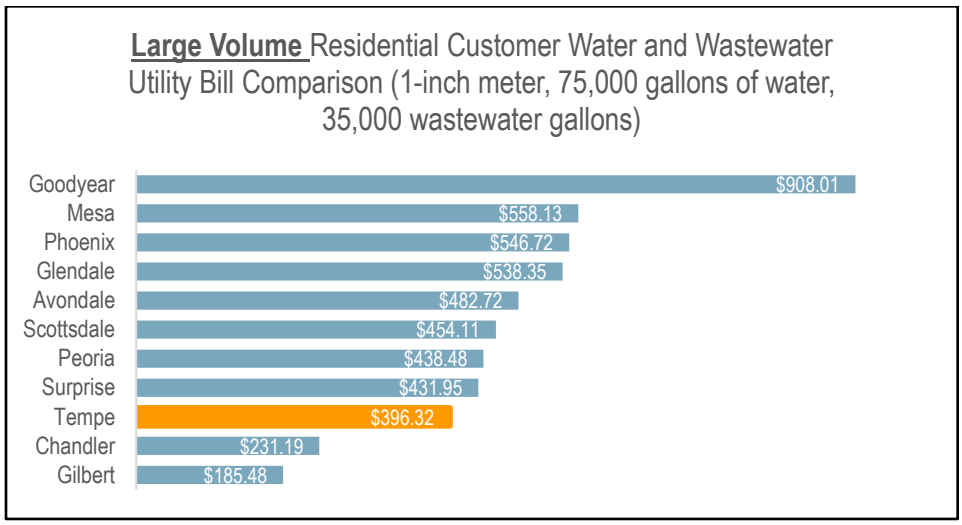
Wastewater Collection - Tempe maintains 550 miles of wastewater collection lines, ranging in size from 4 to 54 inches in diameter, more than 11,000 sanitary sewer manholes, 1,600 storm water manholes, 4 wastewater lift stations and accompanying odor control infrastructure. In the 5-year CIP, more than $67 million is budgeted for planned infrastructure improvements and asset rehabilitation projects.

Water Demand - Current water usage in Tempe averages 40 MGD, with a daily peak demand of about 67 MGD (July 2019). Water demand is met primarily with surface water treated at the water treatment plants. Groundwater well infrastructure is used to supplement water supply and demand as necessary. In the 5-year CIP, more than $24 million is budgeted for new groundwater infrastructure and a water supply lease with the White Mountain Apache Tribe.

Benchmarking Utility Rates to Other Valley Cities

Numerous utility rate increases have been adopted by other Valley municipalities since Tempe's last rate adjustment in January 2018. All the communities in the following comparison, except the City of Chandler, have increased water and wastewater rates at least once and some, like the City of Phoenix, have increased rates twice in the last two years. The following charts provide a comparison of fees for the average Tempe residential customer (5/8-inch meter, 10,000 gallons water, 7,000 wastewater gallons) and a large volume Tempe residential customer (1-inch meter, 75,000 gallons of water, 35,000 wastewater gallons).



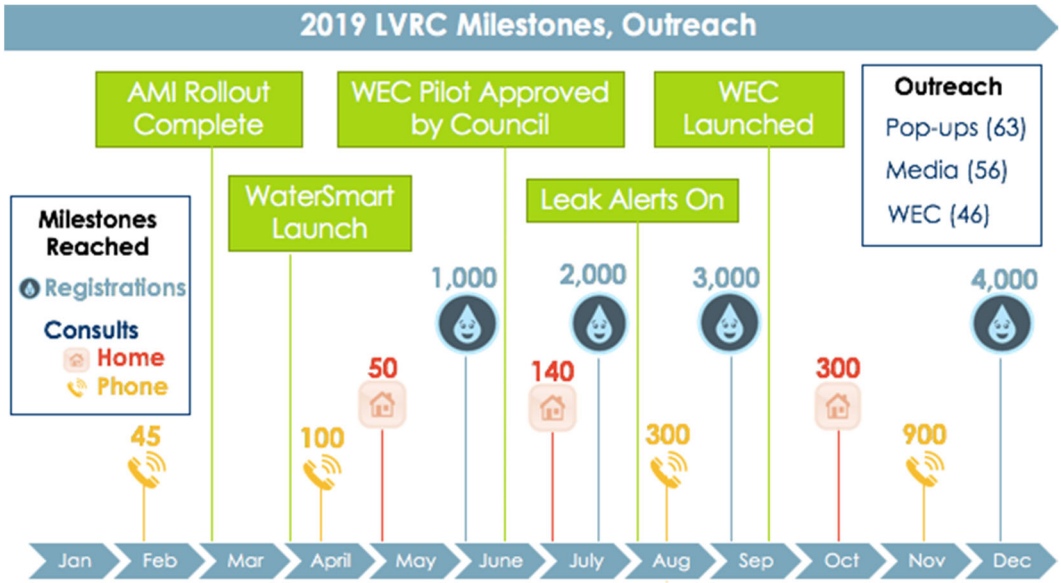


Public Outreach

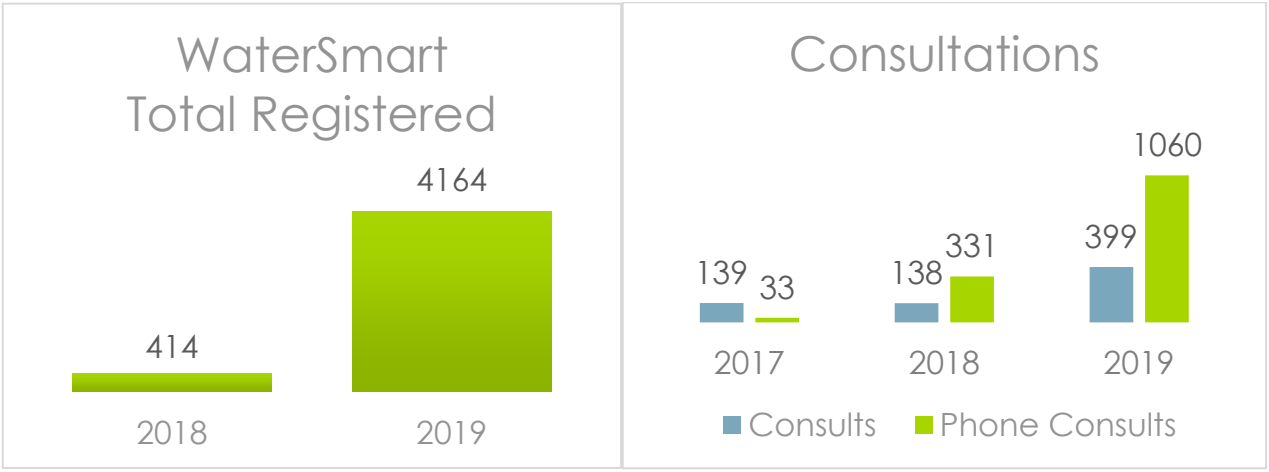
Staff is proposing a robust public outreach process to ensure broad community engagement throughout the rate study. This includes the establishment of a stakeholder group, public meetings, establishment of a rate study website and presentations to the Sustainability and Neighborhood Advisory Commissions. The process will conclude with presentation of rate study recommendations to Council and two additional public meetings in the Fall. Working with Neighborhood Services we plan to assemble a stakeholder group made up of representatives of each customer class.

Update on Large Volume Residential Outreach and Pilot Program

Water Conservation staff amplified its efforts in the Spring of 2019 to reach out to LVRC through intense multi-media initiatives. The outreach focused on increasing registration on the WaterSmart Customer Portal and providing on-site home and landscape water consultations. Staff utilized many approaches, such as print ads, postcards and direct email campaigns and coordinated 63 local Neighborhood pop-ups and events. These efforts resulted in more than 1,000 phone consultations, 399 residential home and landscape water consultations and 3,841 new registrations on WaterSmart in 2019.



The WaterSmart Online Portal empowered customers with actionable data that incentivized increased interest in water conservation programs. Potential leak alerts were activated for Single-Family Residential customers in late August 2019, resulting in 5,837 automated alerts and an estimated 8.6 million gallons in prevented water waste. Staff provided 399 water consultations, estimated to save an average of 50,132 gallons of water per year per household. Staff also provided telephone consultations, walking customers through leak detection or identifying causes of spikes in water usage.

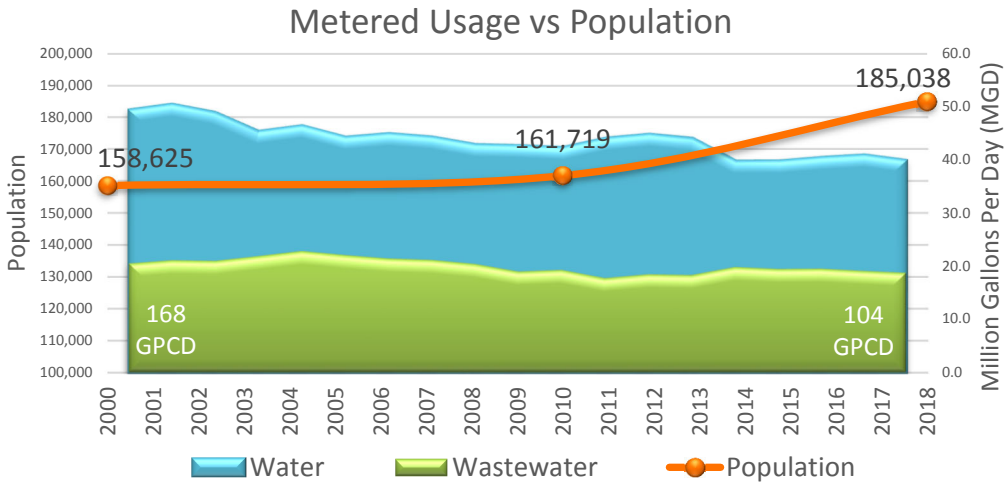


During the June 20, 2019, Work Study Session, Council approved a proposed pilot program that enabled LVRC to avoid being billed at Tier 5 ("discretionary use") rates by demonstrating water-efficiency efforts that contribute to the City Council's priorities. The program, later coined the Water Efficiency Certification (WEC) Pilot Program, was launched on September 1, 2019, and currently has 46 certified participants receiving monthly messages and texts. Each certified resident met the participation criteria:

- Received a water consultation
- Registered on the WaterSmart Online Portal
- Signed up for monthly WHENTOWATER text alerts
- Have no open leak or agree to repair any open leaks within 30 days
- Agree to yearly follow-up consultations and periodic check-ins
- Agree to implement at least one of the key recommendations provided during the consultation

The WEC Pilot Program was promoted from August to December of 2019 by postcard, email and verbally (during on-site consultations) to **EVERY** LVRC. Nearly all 46 certified participants have been in Tier 5 at least once, although the program attracted three households that were not LVRC but wanted to be certified.

Water Conservation staff, in partnership with Customer Services, Communication and Media Relations and the Neighborhood Services Office, continues its work to assist customers in achieving water use efficiency, focusing on the most successful, measurable and socially equitable strategies.



Water conservation efforts over the last 20+ years is working. This trend is generally attributed to changes in Federal plumbing standards, which is reflected in our city code, greater awareness through education and outreach, customer engagement and shifts to more desert-friendly landscaping practices.

FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:
Funds have been budgeted for the rate study out of cost center 3002-6656.

ATTACHMENTS:
PowerPoint Presentation

2020 Water and Wastewater Rate Study

Tempe City Council
Work Study Session
March 19, 2020

Tempe
Making waves in the desert

Strategic Priorities

Safe & Secure Communities

Strong Community Connections

Sustainable Growth & Development

Financial Stability & Vitality

- 1.27 - Achieve 100% compliance with industry standards related to the replacement or rehabilitation of infrastructure and assets.
- 2.02 – Achieve satisfaction ratings of "Very Satisfied" or "Satisfied" with the "Quality of Customer Service" greater than or equal to the top 10% of the national benchmark cities as measured in the Community Survey.
- 4.03 – Achieve the Council adopted water conservation goal of less than or equal to 110 gallons of residential water use per capita per day.
- 5.01 - Achieve ratings of "Very Satisfied" or "Satisfied" with the "overall level and quality of business services provided by the City of Tempe" greater than or equal to the national benchmark cities as measured in the Business Survey.

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Overview

- Rate Study purpose
- Updates since 2018
- Factors affecting costs and cost recovery
- Next steps
- Questions and input

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Rate Study Purpose

- Self-supportive enterprise fund
- Ten-year forecast
- Cost of service analysis
  - Recovery of cost by customer class

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Updates Since 2018

- Advanced Metering Infrastructure (AMI)
- WaterSmart Customer Portal
- Large Volume Residential Customer (LVRC) Outreach
- Water Efficiency Certification (WEC) Pilot Program

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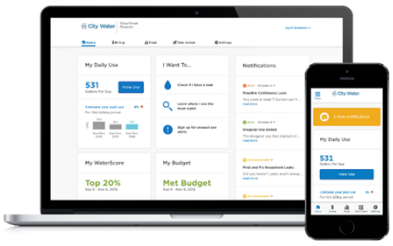
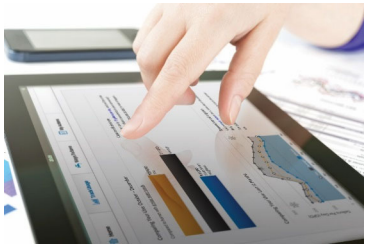
AMI and WaterSmart

- Interactive water management portal
- Easy way to access and interpret water use
- Conservation recommendations
- Potential leak alerts





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Large Volume Residential Customer Outreach

- Intensified citywide outreach and marketing strategies
  - 63 neighborhood and event pop-ups
  - 31 postcards and ads
  - 25 email blasts

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Water Efficiency Certification Pilot Program

- Provide a rate incentive for efficiency efforts
- Increase targeted outreach efforts to Tier 5
- 46 residents certified
- Report results after 18-month pilot period

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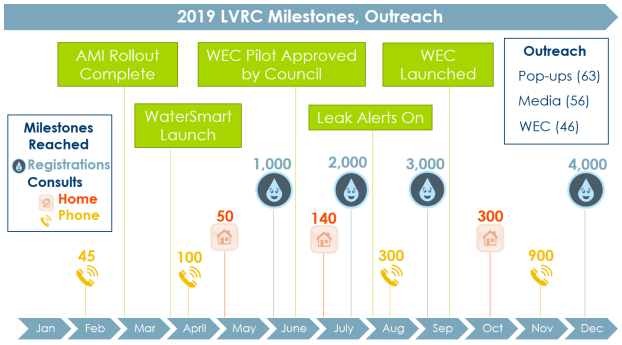
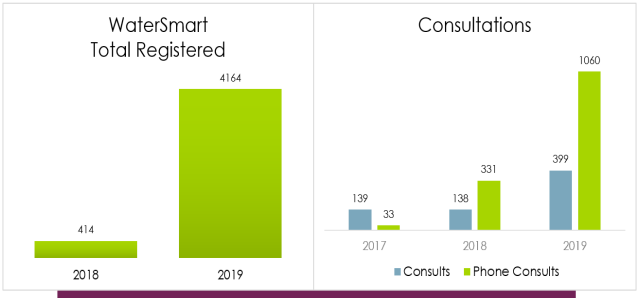
Saving Money and Water





Saved an estimated 8.6 million gallons through 5,837 leak alerts

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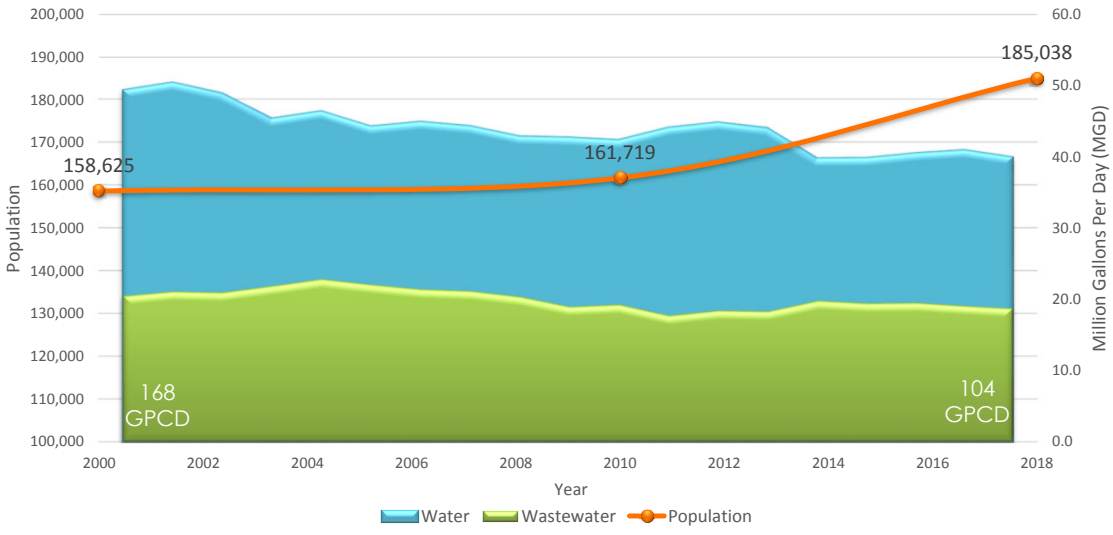
Metered Usage Compared to Population



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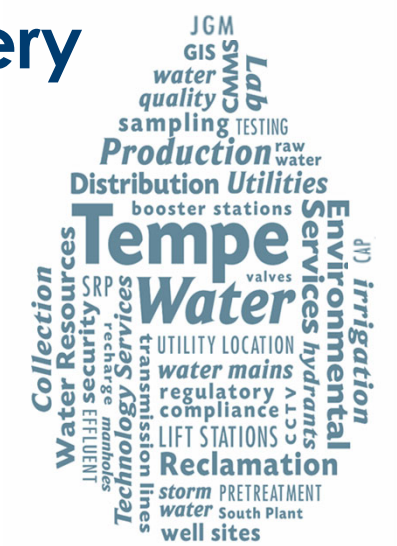
Factors Affecting Costs and Cost Recovery

- Aging Infrastructure
- Fund Balance
- Capacity/Drought Preparedness
- Emerging Regulations



Rate Study Outreach Strategy

Spring

- Create stakeholder group
- 2 public meetings
- Rate Study website

Summer

- Meetings
  - Stakeholder group
  - Sustainability Commission
  - Neighborhood Advisory Commission

Fall

- Council WSS in Sept 2020
- 2 public meetings

Council Action

- Nov. 2020

Discussion

- Continue conservation efforts
- Flood irrigation cost recovery policy
- Council direction on rate study process