



City of Fullerton
2018 Water Rate Study

Rate Study Preliminary Recommendations

February 5, 2019



Agenda

- 1) Study Background
- 2) Proposed Rate Structure Adjustments & Impacts
- 3) Financial Plan
- 4) Proposed Rate Increases

Fullerton's water system is large and aging

15 reservoirs (67.5 million gallons)

10 active wells

15 pump stations

4 primary pressure zones (12 sub-zones)

6 active MWD connections

430* miles of distribution pipes

* Over 50% of pipes older than 50 years old

2018 Water Rate Study Background

Previous water rate study completed in 2013

Drivers for current study:

- ✓ **Schedule:** Last adopted rate schedule ended in 2018
- ✓ **Legal:** Recent court decisions have “raised the bar” for transparency and cost-to-service requirements for water rates (Prop 218).
- ✓ **Revenue short-falls:**
 - ✓ Recent drought
 - ✓ Relatively low fixed revenue
 - ✓ Static “pass-through” policy
- ✓ **System Needs:** Fullerton continues to experience above-average water pipe breaks.

2018 Water Rate Study Approach

1. Rate analysis developed by consultant in collaboration with City staff
2. Ad Hoc Committee and public engaged to review and revise recommendations
 - 5 workshops to shape capital investment approach and rate structure
 - Evening meeting to allow for more public input (today)
3. Recommendations to City Council (tonight)

Water Rate Ad Hoc Committee

- The Rate Study Ad-Hoc Committee is made up of 6 at-large members from the Energy and Resource Management Committee (ERMC) and the Citizens Infrastructure Review Committee (CIRC).
- The Ad Hoc Committee was formed to actively participate in:
 - Reviewing and providing input to proposed water rate structure changes and rate increases.
 - Representing not only ratepayers but also owners of the water system.

Water Rate Study

Rate Structure

Customer Classes

Existing

Classification

- Single Family Residential
- Multifamily Residential
- Commercial
- Industrial
- Private Fire Line
- Temporary Water
- Municipal
- Agricultural
- Residential/Agricultural
- Residential Landscape
- Single Family with Fire Sprinkler
- Multifamily with Manual Rubbish

Proposed

Classification

Accounts

• Single Family Residential	26,392	85.0%
• Multifamily Residential	1,913	6.2%
• Commercial	1,974	6.4%
• Industrial	115	0.4%
• Agricultural	2	0.01%
• Landscape	399	1.3%
• Municipal	272	0.9%

Current Rates

Fixed Meter Charge:

- Based on meter size
- 22.4% fixed revenue (relatively low)

Meter Size	Monthly Rate
5/8"	\$14.78
1"	\$17.74
1 1/2"	\$32.52
2"	\$45.82
3"	\$79.81
4"	\$113.81
6"	\$180.32
8"	\$302.99
10"	\$441.92
12"	(na)

Water Usage Rates:

3 tiers for single family and multi-family

Current Tiered Rates Residential			
Tier	Rate (per TGAL)	Allocation (single family)	Allocation (Multi-Family) (per unit)
1	\$3.213	7,500 gal.	4,000 gal.
2	\$3.510	12,500 gal.	6,000 gal.
3	\$3.799	(na)	(na)

Uniform water usage rates for all other customers:

Commercial:	\$3.075 / TGAL
Industrial:	\$3.130 / TGAL
Municipal:	\$2.440 / TGAL
Agricultural:	\$3.403 / TGAL
Landscape:	\$3.767 / TGAL

(TGAL = thousand gallons)

Proposed Rate Design Approach

1) Update Meter Equivalency Schedule

- More equitable
- Larger meters will be affected

2) Enhance connection between water rates and the cost to provide water service

- Tied directly to the cost of purchased and pumped water
- Results in increase in fixed revenue from 22% to 42.1%

3) Establish a *dynamic* Pass-Through policy:

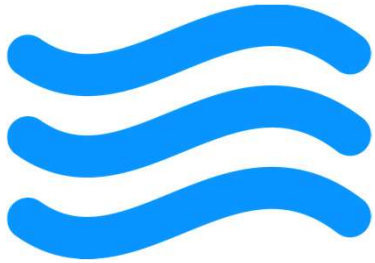
- Ensures that pass-through increases are directly proportionate to the increase in costs

Meter Equivalency Schedule Update

Meter Size	Existing Schedule	Proposed Schedule ⁽¹⁾	Rated flow in gallons per minute
5/8"	1.00	1.00	20
1"	1.20	1.67	50
1 1/2"	2.20	3.33	100
2"	3.10	5.33	160
3"	5.40	10.67	320
4"	7.70	16.67	500
6"	12.20	33.33	1,000
8"	20.50	53.33	1,600
10"	29.90	80.00	2,400
12"	47.60	112.50	3,375

(1) Source: Table B-1, Appendix B, *AWWA M1 Manual*, 7th Ed.

Rate Structure Cost Categories



Commodity Costs

Driven by the volume of water sold

- Water Purchases
- Pumping Electricity
- Conservation Program



Water Usage Charge

57.9% of total



Account Costs

Driven by the cost of managing accounts

- Administration
- Billing
- Account management



Fixed Account Charge

3.1% of total



Utility Costs

Driven by the size of the utility infrastructure

- Operations
- Maintenance
- Capital

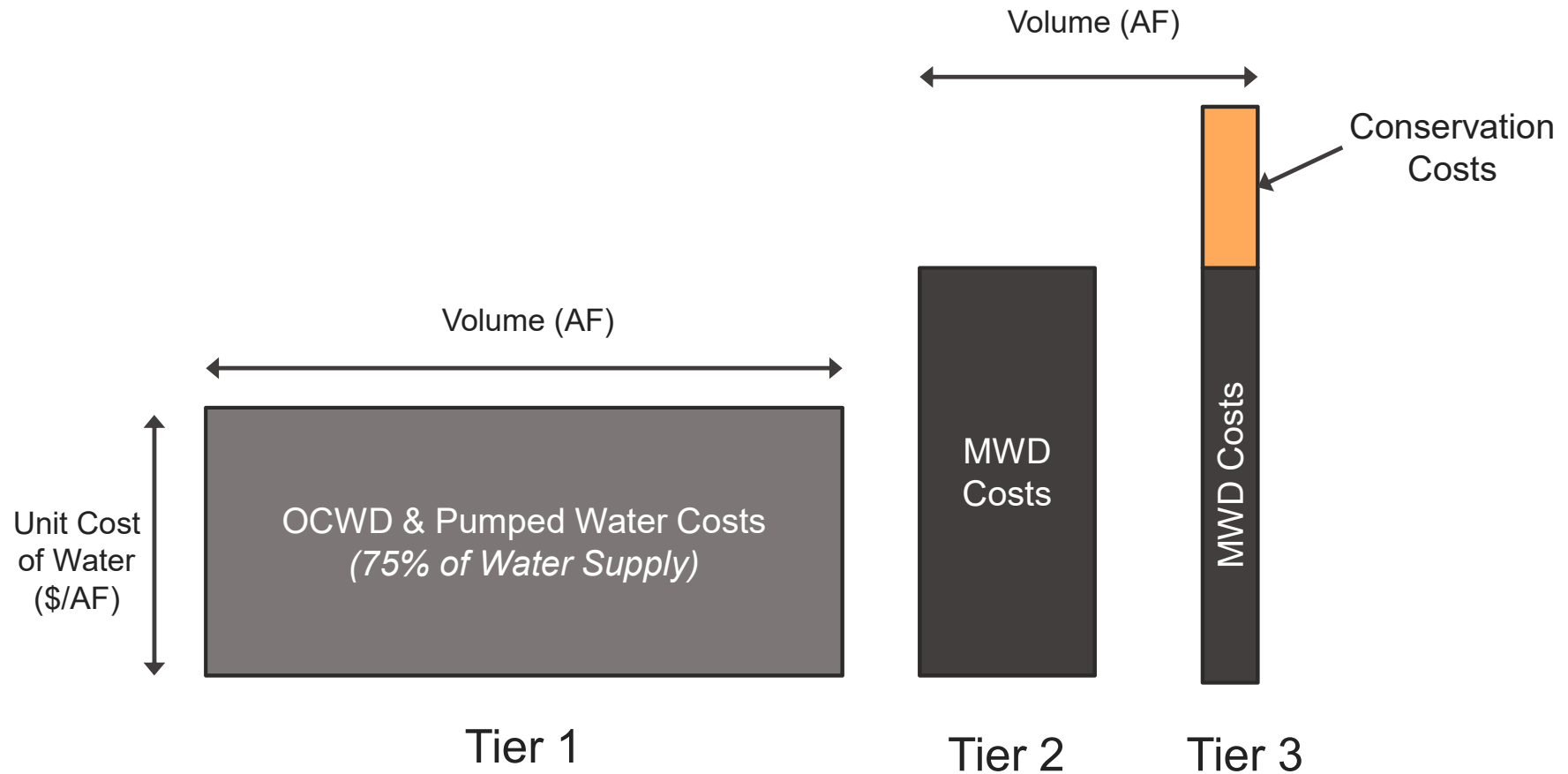


Fixed Utility Charge

39.0% of total

Total fixed revenue: 42.1% (vs. 22% currently)

Proposed Tiered Water Usage Rates



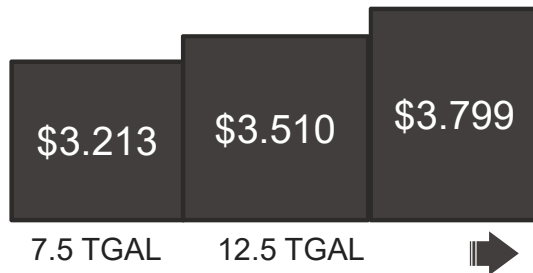
Rate Structure Comparison

With no rate increases (not viable, comparison only)

Current Rate Structure

Fixed Meter Charge: \$14.78 (5/8" meter)

Water Usage Rate:

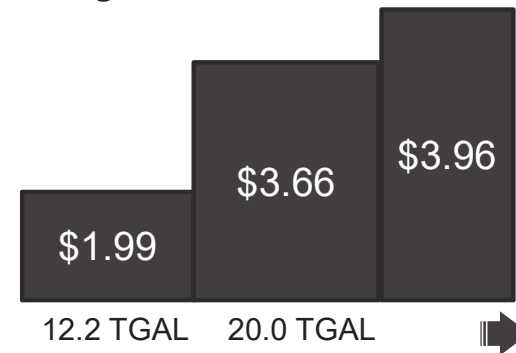


Average Residential Bill*: \$50.81

Proposed Rate Structure

Fixed Meter Charge: \$23.08 (5/8" meter)

Water Usage Rate:



Average Residential Bill: \$44.77

* Monthly bill for a 5/8" Meter and 10,900 gallons of water usage per month

Proposed Rate Structure (no rate increases)

Fixed Meter Charge:

	Current	Restructured
Meter Size	Monthly Rate	Monthly Rate
5/8"	\$14.78	\$23.08
1"	\$17.74	\$36.64
1 1/2"	\$32.52	\$70.54
2"	\$45.82	\$111.22
3"	\$79.81	\$219.71
4"	\$113.81	\$341.76
6"	\$180.32	\$680.79
8"	\$302.99	\$1,087.62
10"	\$441.92	\$1,630.07
12"	(na)	\$2,291.17

Restructured Tiered Rates Residential			
Tier	Rate (per TGAL)	Allocation (Single Family)	Allocation (Multi-Family) (per unit)
1	\$1.99	12,200 gal.	4,900 gal.
2	\$3.66	20,000 gal.	7,000 gal.
3	\$3.96	(na)	(na)

Current Tiered Rates Residential			
Tier	Rate (per TGAL)	Allocation (single family)	Allocation (Multi-Family) (per unit)
1	\$3.213	7,500 gal.	4,000 gal.
2	\$3.510	12,500 gal.	6,000 gal.
3	\$3.799	(na)	(na)

Uniform Water Usage Rates for all other customers:
Restructured = \$2.45 / TGAL

Current: Commercial: \$3.075 / TGAL
 Industrial: \$3.130 / TGAL
 Municipal: \$2.440 / TGAL
 Agricultural: \$3.403 / TGAL
 Landscape: \$3.767 / TGAL

Pass-Through Formula

Recommendations:

- Adopt a pass-through policy that dynamically responds to *actual* changes in water supply costs
- Increase transparency in the pass-through process

$$\begin{array}{l} \text{Tiered Rates} \left\{ \begin{array}{l} \text{Adjusted Tier 1 Rate} \left(\frac{\$}{\text{TGAL}} \right) = \text{Current Rate} + \text{OCWD Rate Increase} + \text{Pumping Rate Increase} \\ \text{Adjusted Tier 2 Rate} \left(\frac{\$}{\text{TGAL}} \right) = \text{Current Tier 2 Rate} + \text{MWD Rate Increase} \\ \text{Adjusted Tier 3 Rate} \left(\frac{\$}{\text{TGAL}} \right) = \text{Current Tier 3 Rate} + \text{MWD Rate Increase} \end{array} \right. \end{array}$$

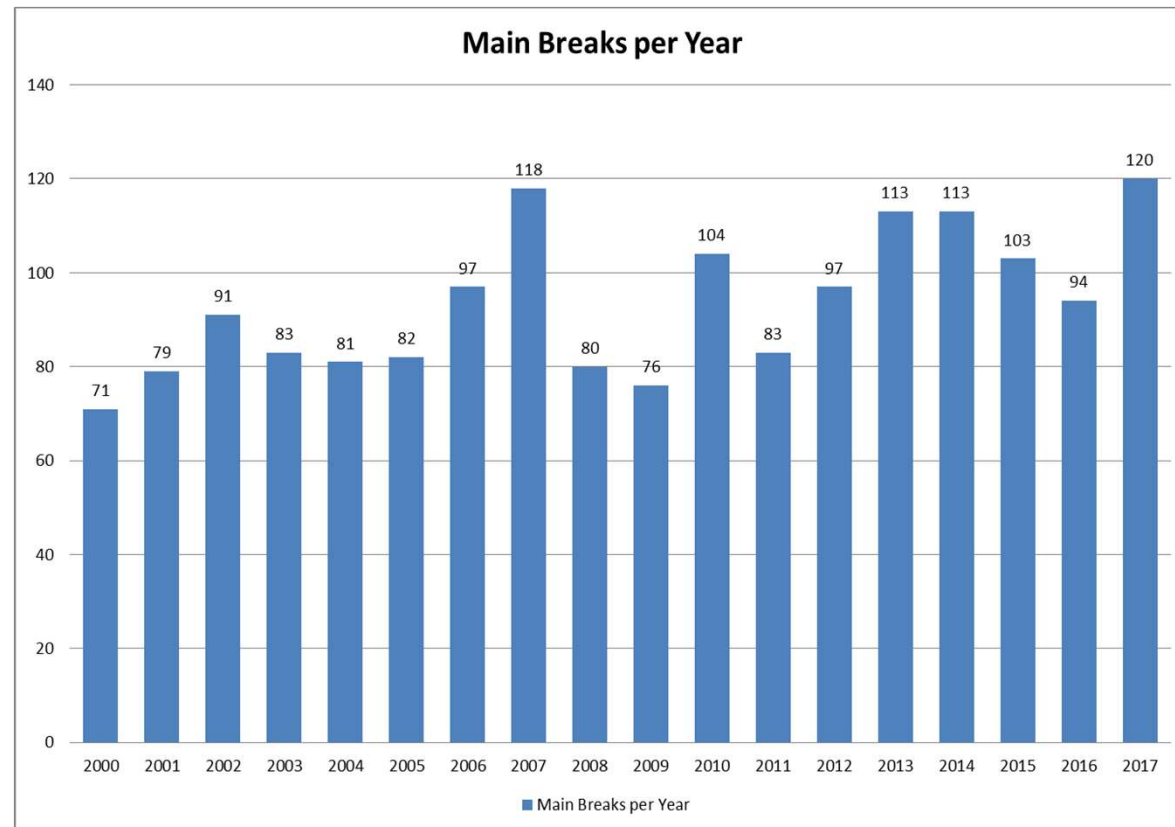
$$\begin{array}{l} \text{Uniform Rates} \left\{ \begin{array}{l} \text{Change in Uniform Rate} \left(\frac{\$}{\text{TGAL}} \right) = \text{Change in Tier 1 Rate} \times 75\% + \text{Change in Tier 2 Rate} \times 25\% \\ \text{(weighted average of the tiered rates)} \end{array} \right. \end{array}$$

Water Rate Study

Financial Plan

Water Main Break History

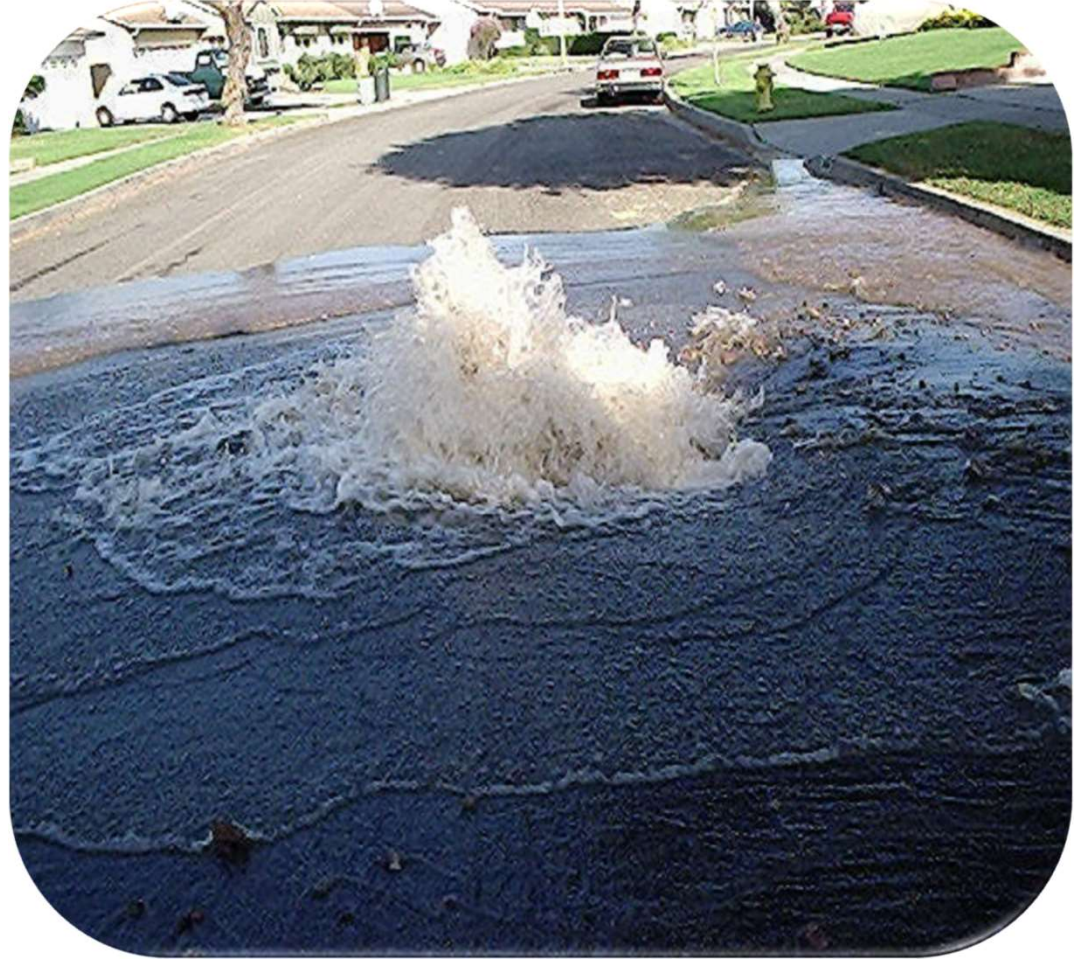
- Over 50% of pipelines are older than 50 years old (past the expected useful life)
- Highest rate of water main breaks in Orange County
- Water main breaks disrupt service to all customers
 - *Repair shutdowns can affect over 1,000 customers for 5 - 8 hours*
 - *Unsettling to residential customers*
 - *Economic impact on businesses*
- Repair of failed pipes is significantly more expensive than “proactive” repair of aging pipes
- Water main break costs range from \$5,000 to \$20,000 (or more) per event.

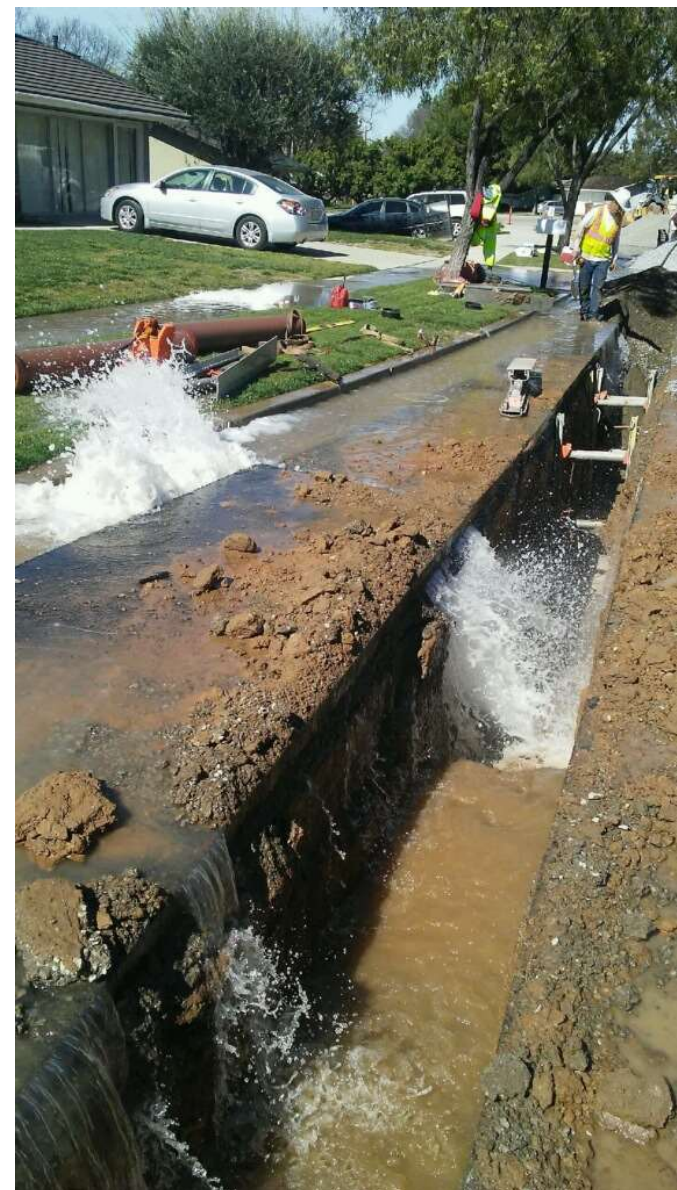


Main Plant Well 4



Oak Street

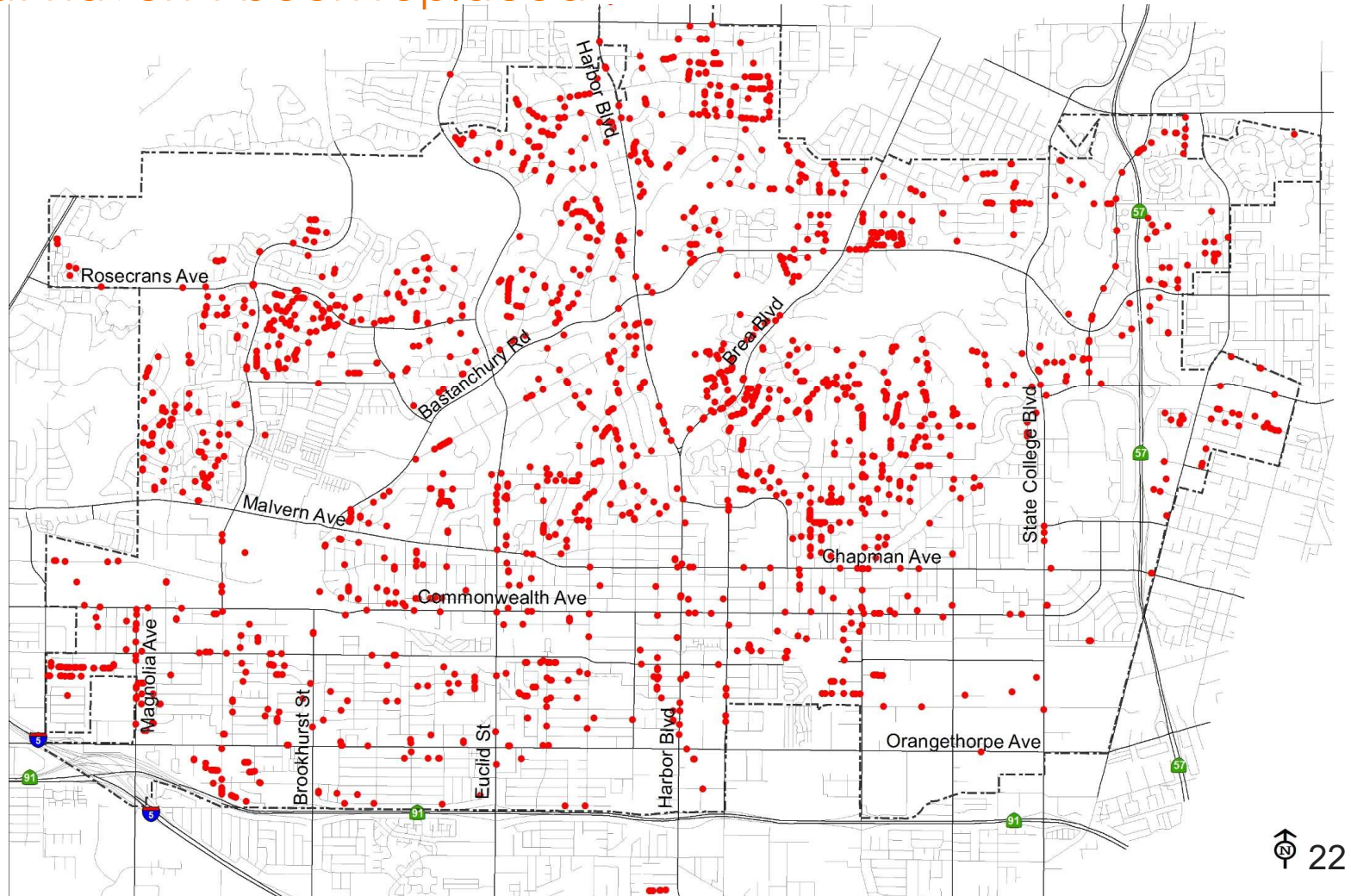






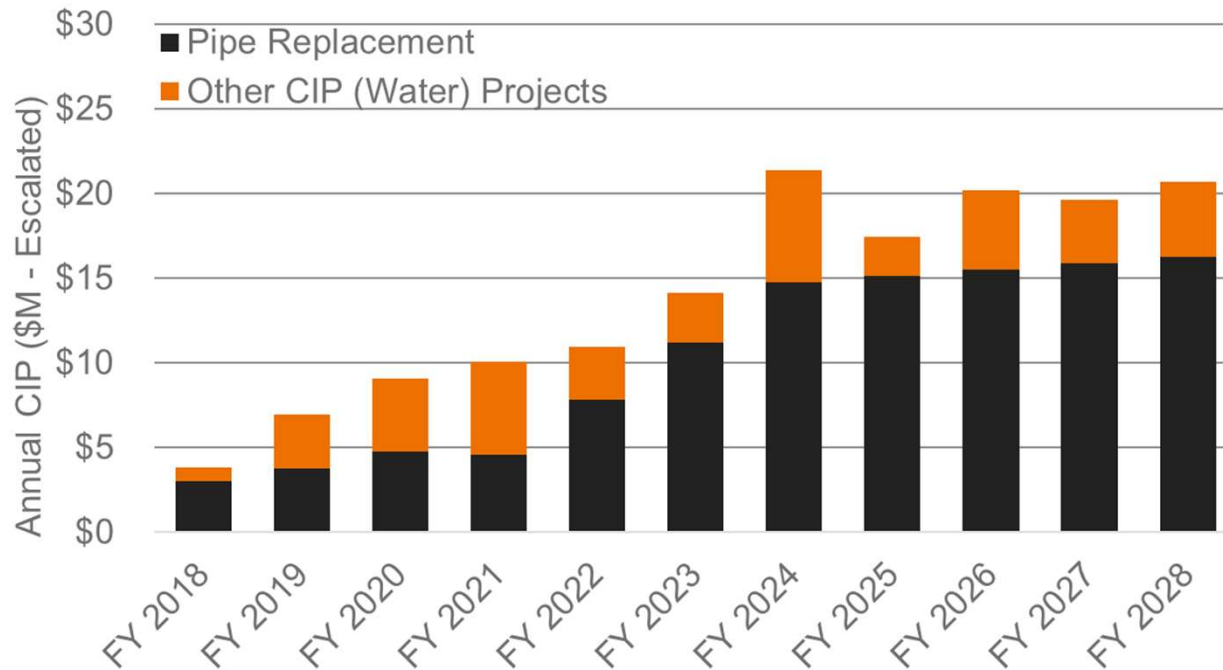
Water Main Rupture Sites

Only for pipes that haven't been replaced



Recommended Capital Spending

9 miles of pipe replacement per year by 2024
+ Critical infrastructure rehabilitation (primarily wells)



10-year average = \$15.0 million

Proposed rate revenue increases

9 miles of pipe replacement per year by 2023

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Rate Revenue:	\$39.2M	\$43.0 M	\$46.0 M	\$49.2M	\$51.7M
Increase (%)	19.0%	15.0%	7.0%	7.0%	5.0%

Typical Residential Water Bill*

Based on proposed rates:	\$53.31	\$59.95	\$64.15	\$68.64	\$72.07
Based on current rates:	\$50.81				

* Monthly water bill for single family home with 5/8" meter and 10,900 gallons of water usage

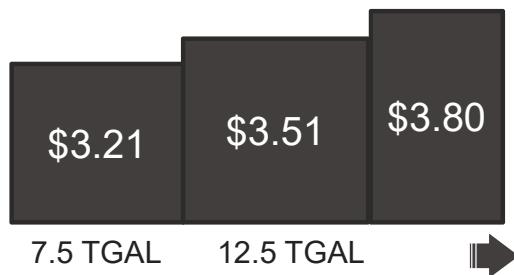
Rate Comparison

Year 1

Current Rate Structure

Fixed Meter Charge: \$14.78 (5/8" meter)

Water Usage Rates:

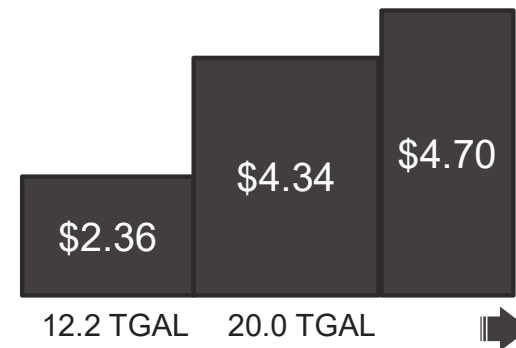


Average Residential Bill: \$50.81

Proposed Rates

Fixed Meter Charge: \$27.59 (5/8" meter)

Water Usage Rates:



Average Residential Bill: \$53.31

Proposed Rates in Year 1

Fixed Meter Charge:

	Current	Proposed
Meter Size	Monthly Rate	Monthly Rate
5/8"	\$14.78	\$27.59
1"	\$17.74	\$43.83
1 1/2"	\$32.52	\$84.41
2"	\$45.82	\$133.11
3"	\$79.81	\$262.98
4"	\$113.81	\$409.08
6"	\$180.32	\$814.92
8"	\$302.99	\$1,301.93
10"	\$441.92	\$1,951.27
12"	(na)	\$2,742.66

Proposed Tiered Rates Residential			
Tier	Rate (per TGAL)	Allocation (Single Family)	Allocation (Multi-Family) (per unit)
1	\$2.36	12,200 gal.	4,900 gal.
2	\$4.34	20,000 gal.	7,000 gal.
3	\$4.70	(na)	(na)

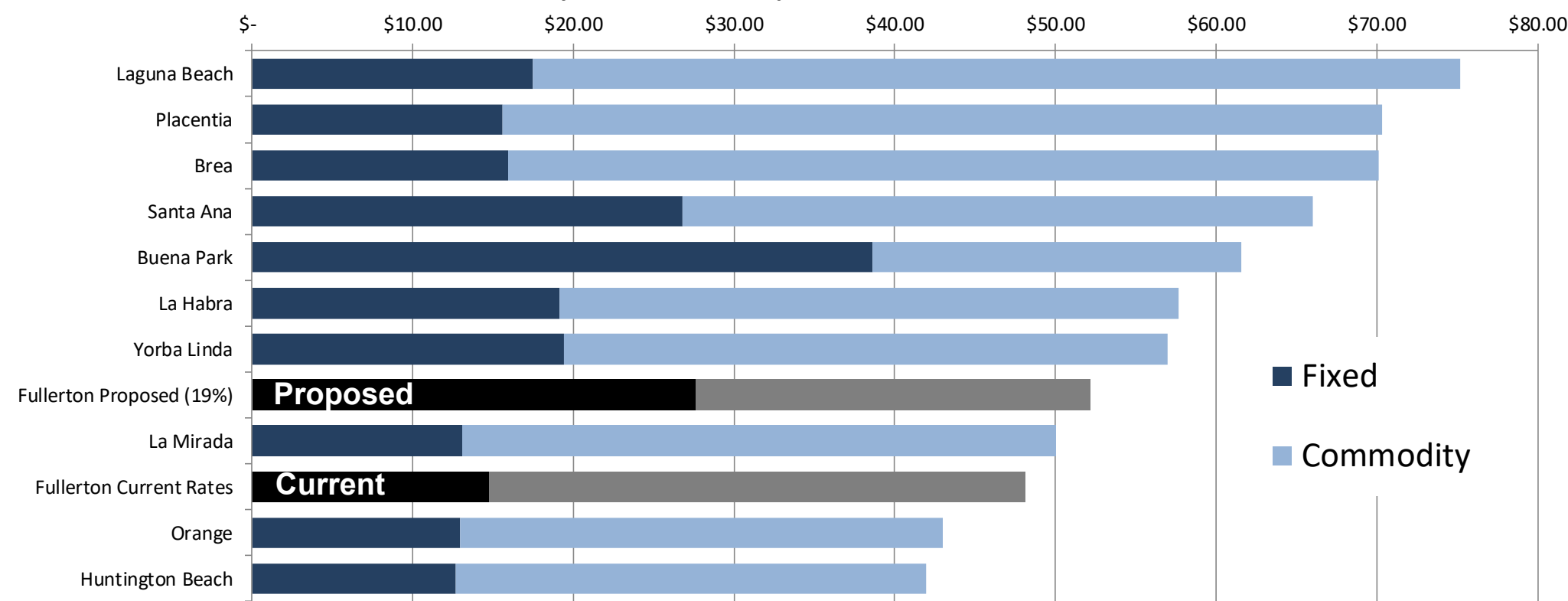
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Survey – Average Residential Water Users

Water Bill Survey at 10,400 Gallons per Month



Rate Study Achievements

- ✓ Updated meter equivalency schedule to be more equitable
- ✓ Enhanced connection between water rates and the cost to provide water service
- ✓ Increased revenue stability through higher fixed rates
- ✓ Proposed rate increases to meet the needs of system deficiencies
- ✓ Established a *dynamic* policy to “pass-through” increases in wholesale water costs

Next Steps

- Revise recommendations based on feedback from City Council (as needed)
- Present final recommendation to City Council
- City Council directs City staff to mail Prop. 218 Notification
- 45-day waiting period
- Public Hearing
- Rates implemented on July 1, 2019