



CITY OF ST. HELENA

AD HOC REVENUE SOURCE TASK FORCE WATER & WASTEWATER RATE STUDY MEETING 2

September 13, 2016

NOTE: Until the rate study is completed and approved by City Council, all information presented is considered DRAFT.

BACKGROUND



ST. HELENA WATER SYSTEM OVERVIEW



Bell Canyon

The Louis Stralla Water Treatment Plant draws surface water from the Bell Canyon Reservoir, which holds approximately 765 million gallons of water.



Stonebridge Wells

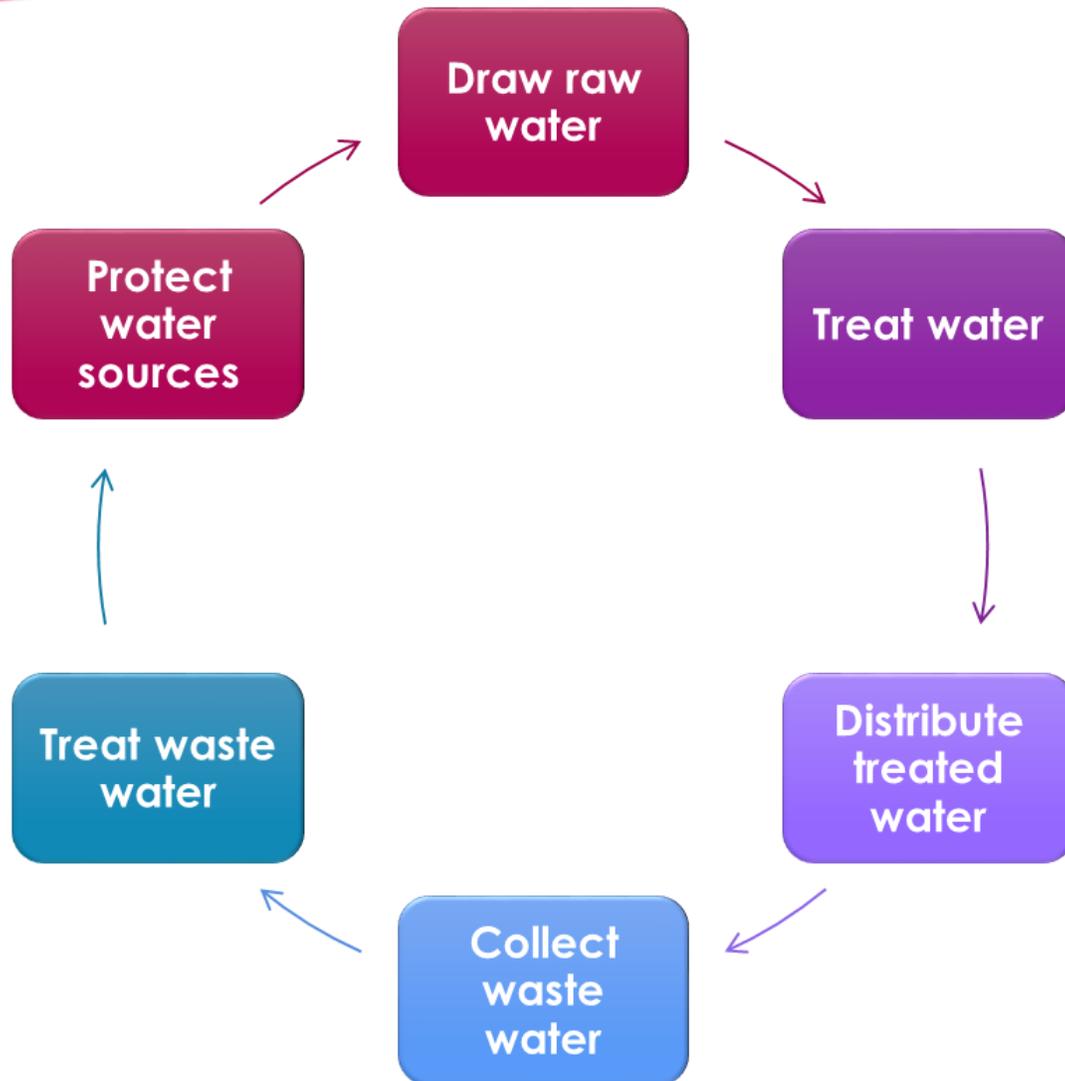
Deep groundwater fed by the Sonoma Volcanic aquifer, through two wells located 410 and 653 feet below the surface, commonly referred to as the Stonebridge Wells.



City of Napa

St. Helena purchases 600 acre feet of water from the City of Napa every year.

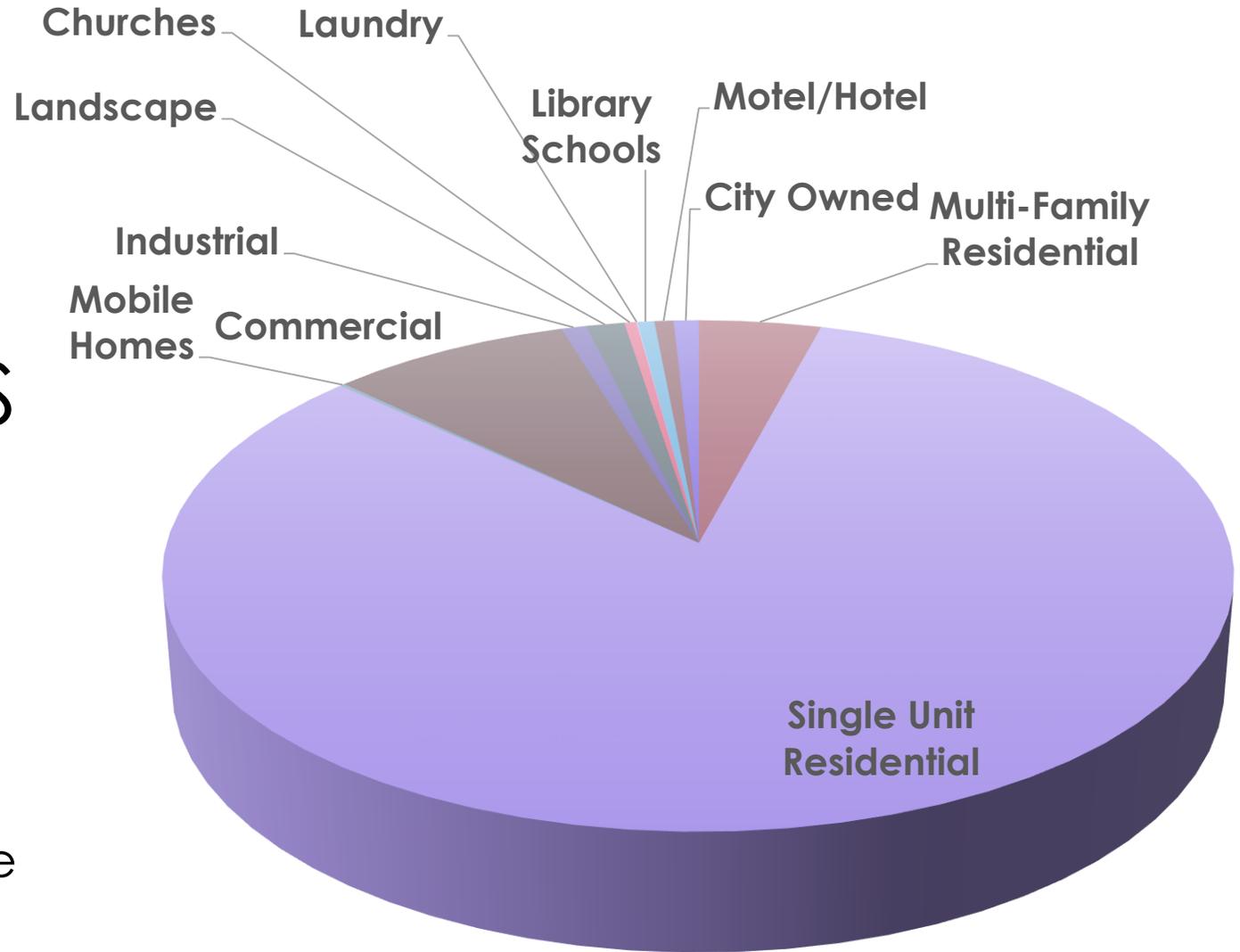
MISSION



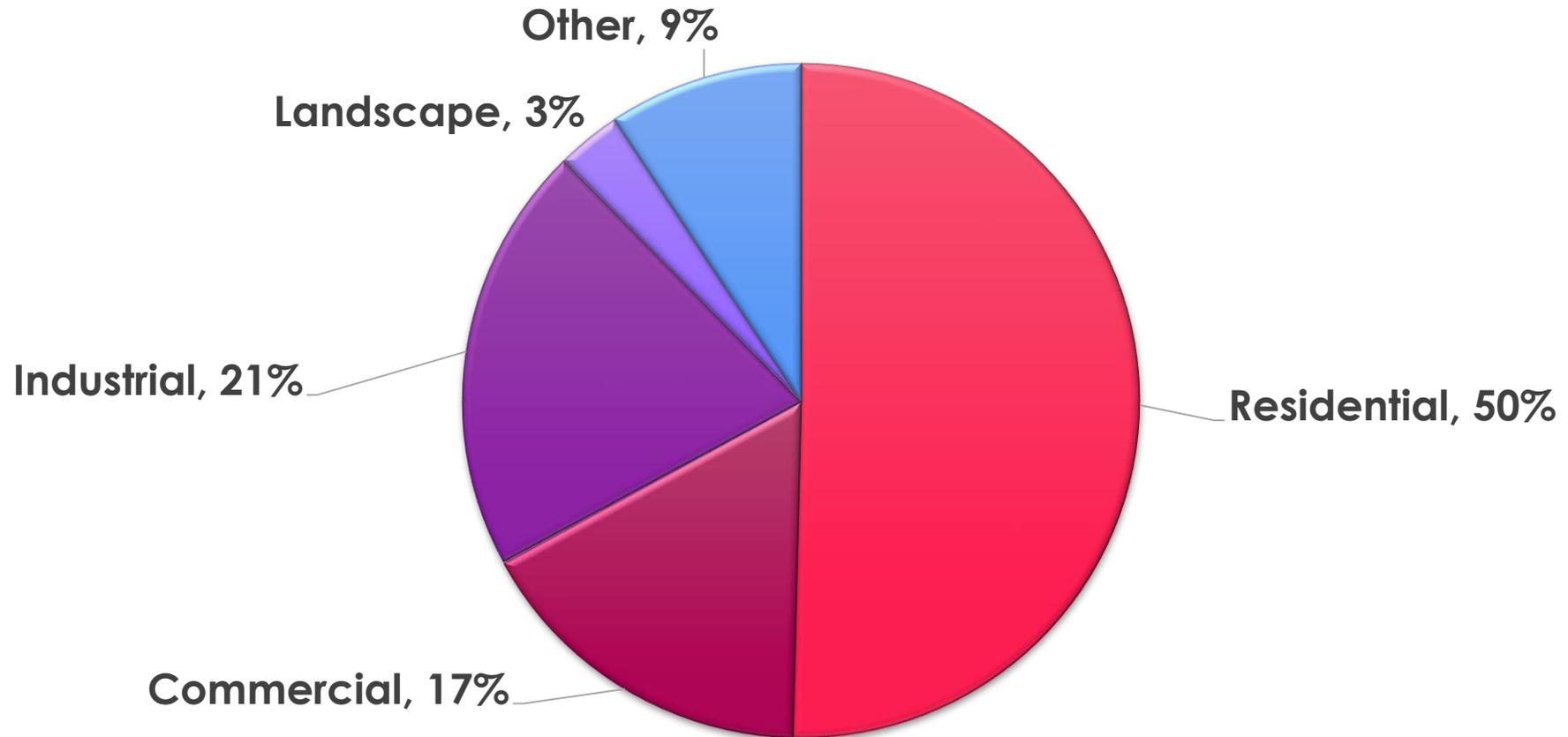
- Protect public health & environment
- Protect and sustain economic growth
- Manage & maintain infrastructure
- Support public safety
- Provide direct utility services to approximately 6,000 residents
- Utility refers to only water and wastewater services

ST. HELENA UTILITY CUSTOMERS

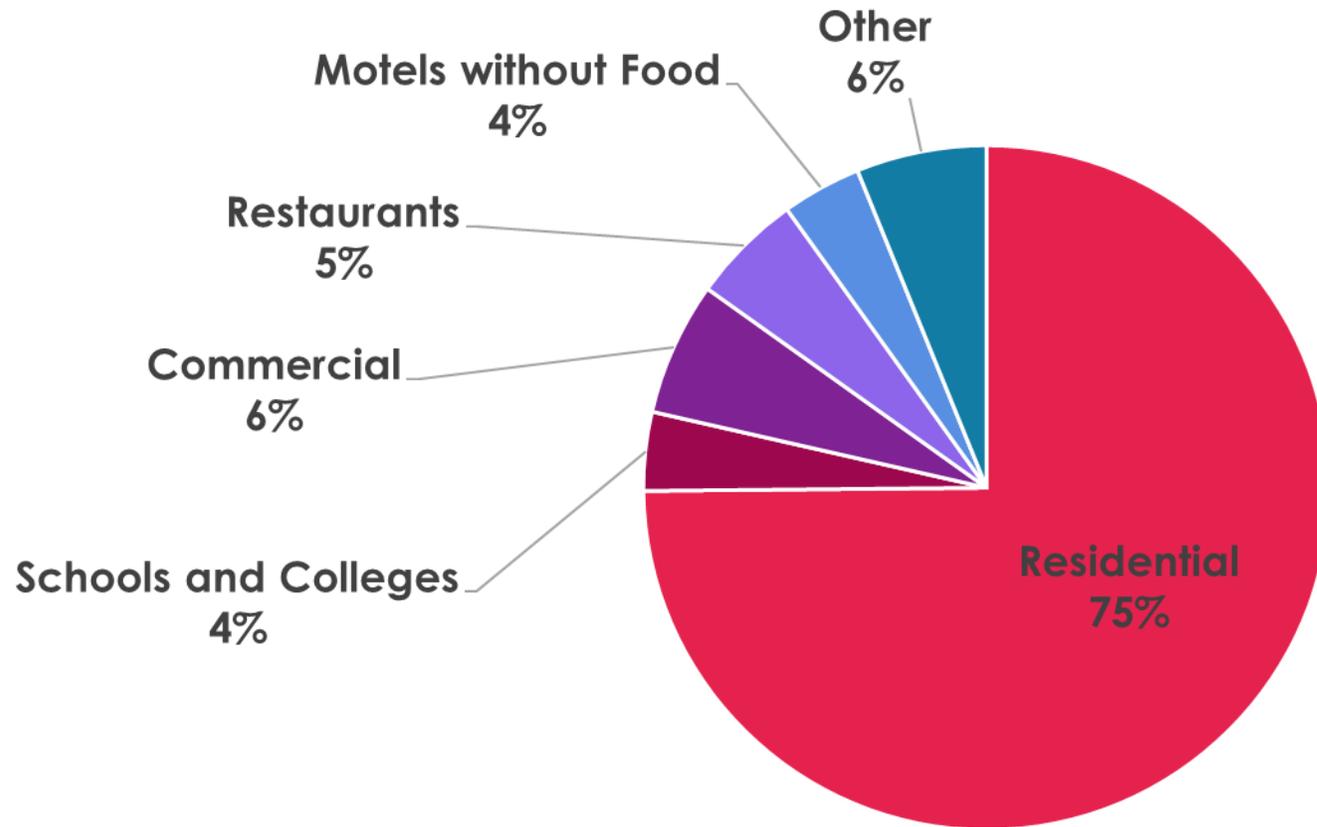
- Approximately 2,700 connections
- Small water provider
- Distributes over 550 million gallons of clean drinking water each year
- The majority of connections are residential
- Bill in HCF = Hundred Cubic Feet



WATER USE BY CUSTOMER TYPE



WASTEWATER FLOW



- Collect, treat and discharge wastewater
- Average dry weather flow is ~146 million gallons per year
- With a permitted capacity of 0.5 MGD average daily dry weather flow

ASSETS

“We have pipes installed before the 1960’s still in use today”

– Juan, PW Water Distribution

- Assets are vast, complex and aging
- 22 miles wastewater pipe
- 6 storage tanks
- 4 pump stations
- Water and wastewater Treatment facilities
- Many assets are well over 30 years old
- Need to meet stringent state and federal regulations

OPERATING FUND 561 WATER NET POSITION

Estimated Water Unrestricted Net Position @ 6/30/16		\$4,923,632
Total Revenues	\$3,783,308	
Total Expenses	(\$5,122,115)	
Revenues less Expenses		(\$1,338,807)
Use of Water Cash	(\$1,338,807)	
Estimated Water Net Position @ 6/30/17		\$3,584,825
Restricted Funds for Water Capital Projects	\$3,059,438	
Estimated Water Unrestricted Net Position @ 6/30/17		\$525,387
Estimated Percentage of Expenses		10%

OPERATING FUND 571 WASTEWATER NET POSITION

Estimated WW Unrestricted Net Position @ 6/30/16		(\$79,804)
Total Revenues	\$2,110,647	
Total Expenses	(\$2,057,934)	
Revenues less Expenses		\$52,713
Use of wastewater Cash	\$0	
Estimated WW Unrestricted Net Position @ 6/30/17		(\$27,091)
Estimated Percentage of Expenses		(1%)

PURPOSE OF THE RATE STUDY

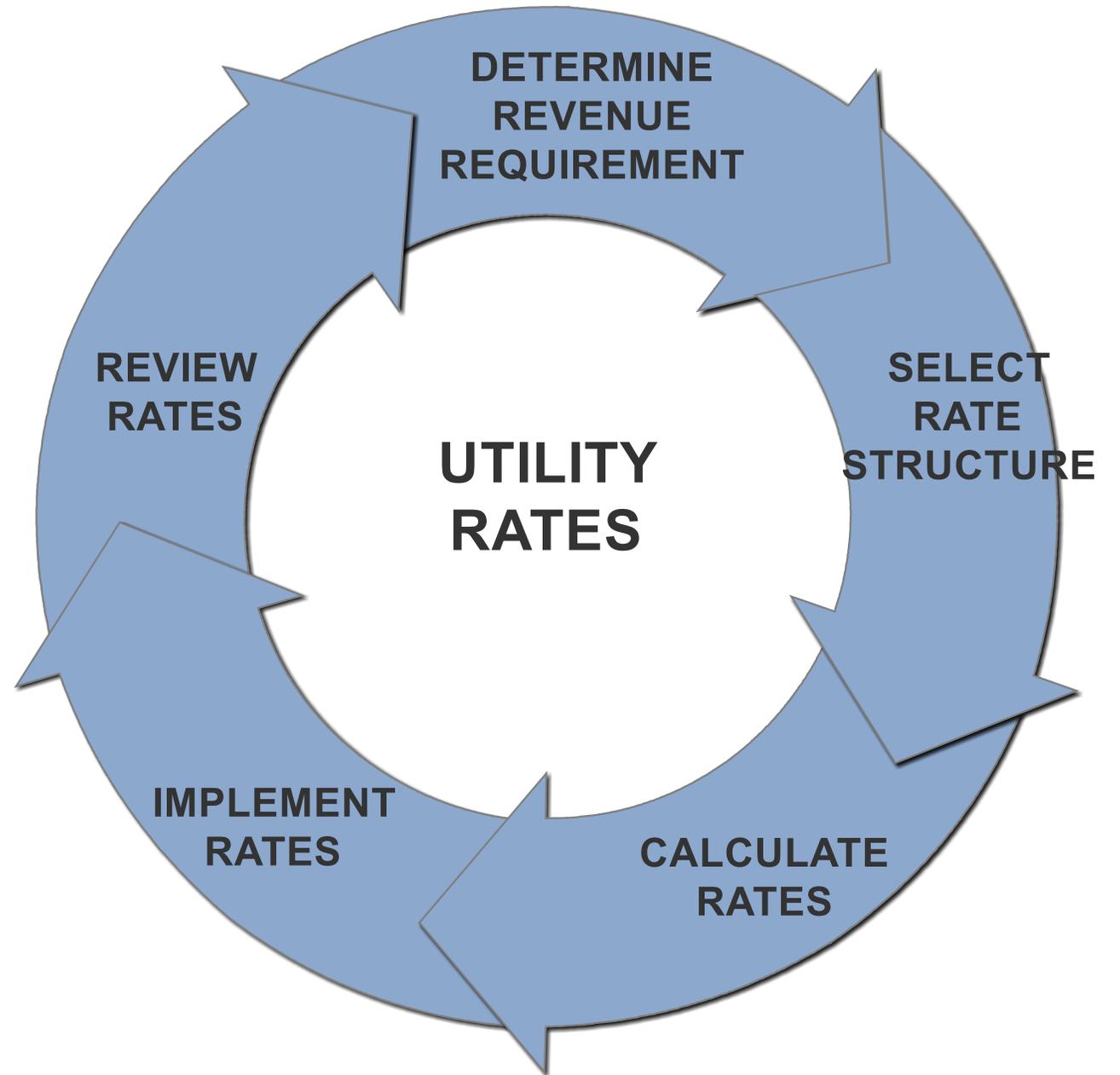


RATE-SETTING PROCESS

Rates should be reviewed every
3-5 years

Planning for future
improvements is critical

- Financial standards drive a “self-sustaining” utility
- Equitable cost recovery
- Meet new and changing regulations



REVENUE REQUIREMENTS

- Determine funding needed to meet financial needs
 - Operations
 - Maintenance
 - Debt service
 - System rehabilitation
 - Capital improvements

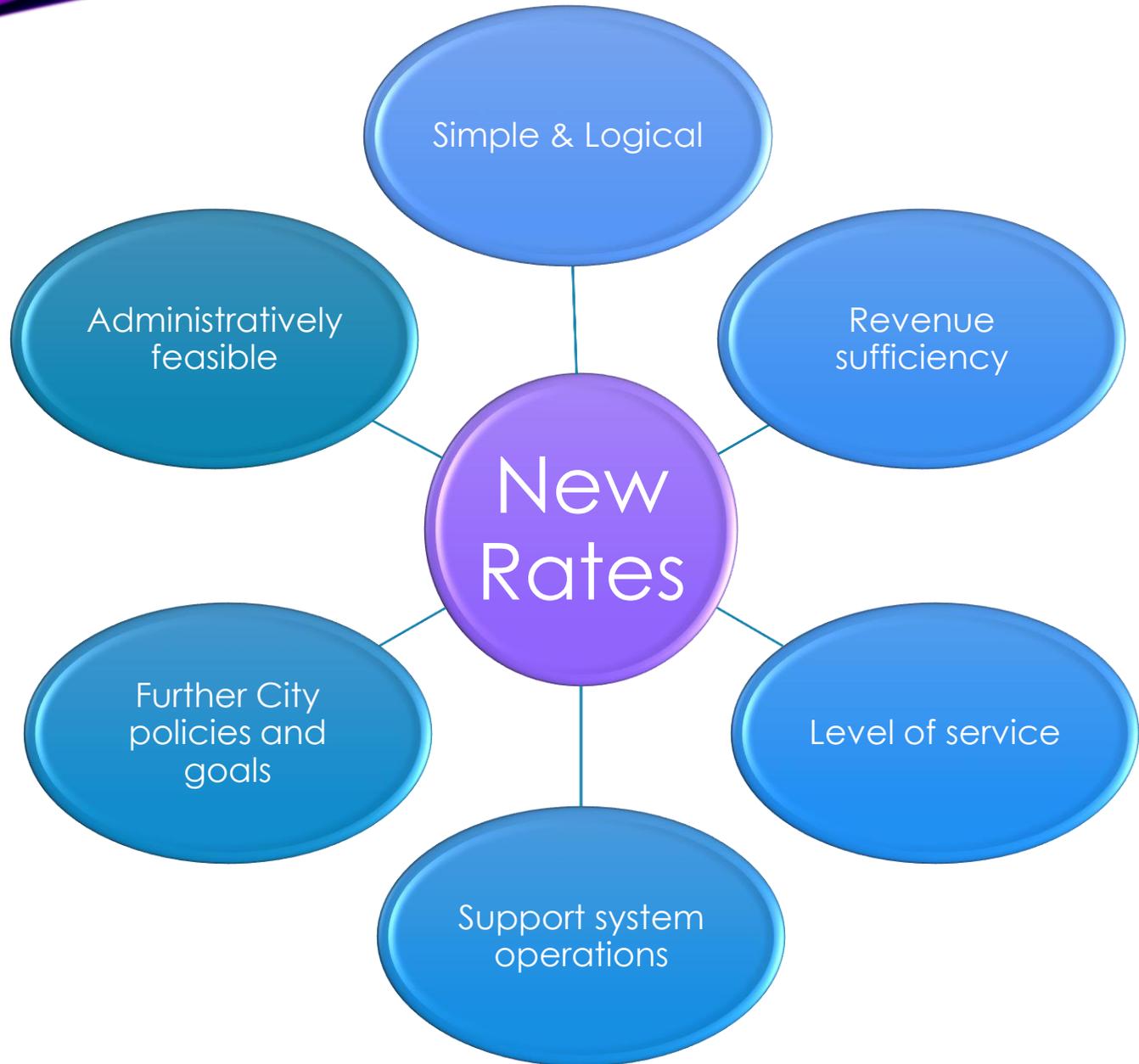


RATE STRUCTURE



- How to collect the necessary revenue requirement
 - Base and Use Charges
 - Want to reflect local customer water and wastewater needs/demands
 - Meet multiple objectives

BALANCE OF MULTIPLE OBJECTIVES





GOALS

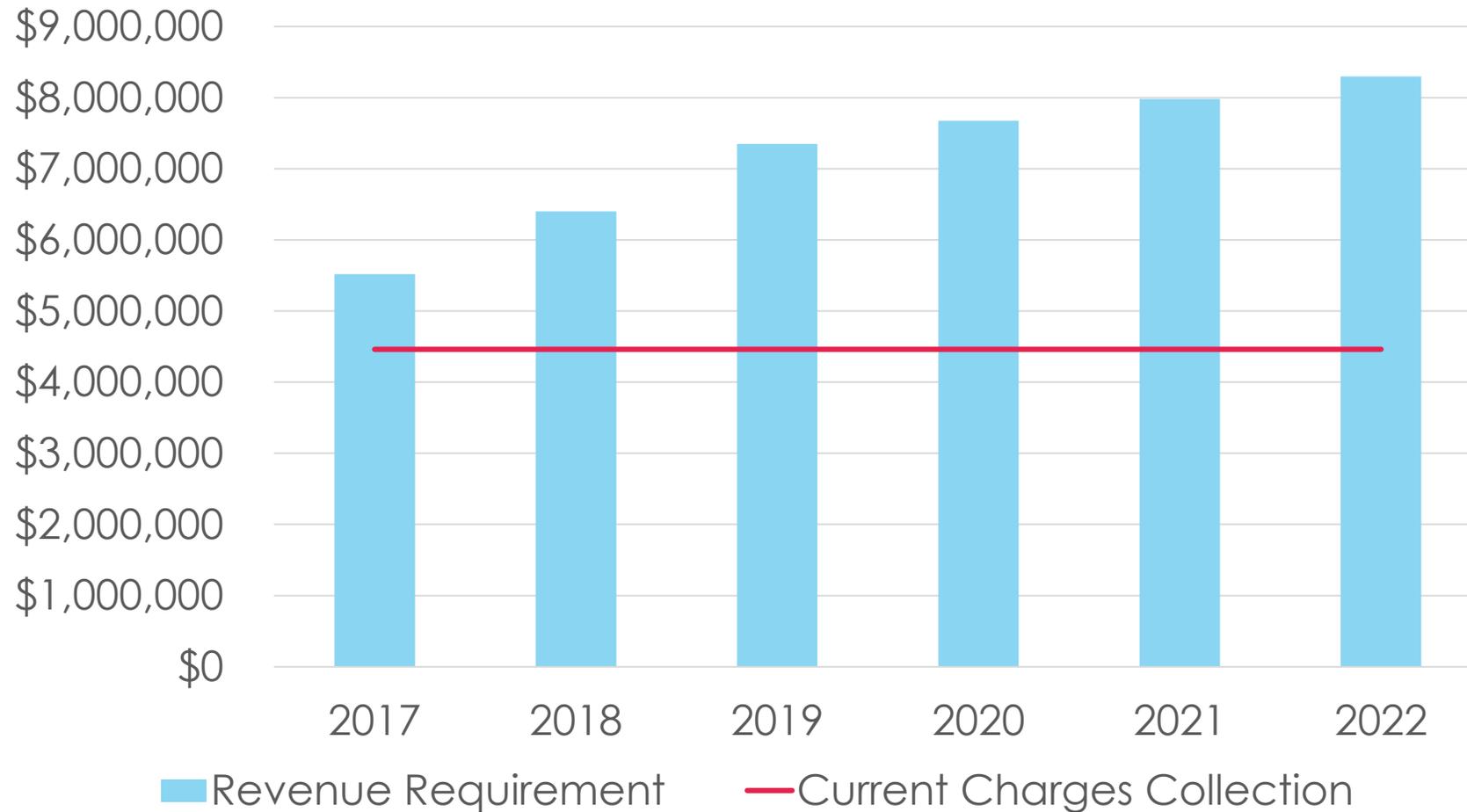
- Adequately fund the water and wastewater systems
- Operate systems safely and provide clean, safe and reliable water
- Meet regulations and environmental standards
- Fund future system rehabilitation costs
- Provide timely maintenance extending assets' useful lives as far as possible
- Ensure existing water sources remain viable
- Build reserve funding for emergencies and changing regulatory compliance
- Ensure equitable cost allocation
- Compliance with Proposition 218 and other legal requirements

ST. HELENA RATES BACKGROUND

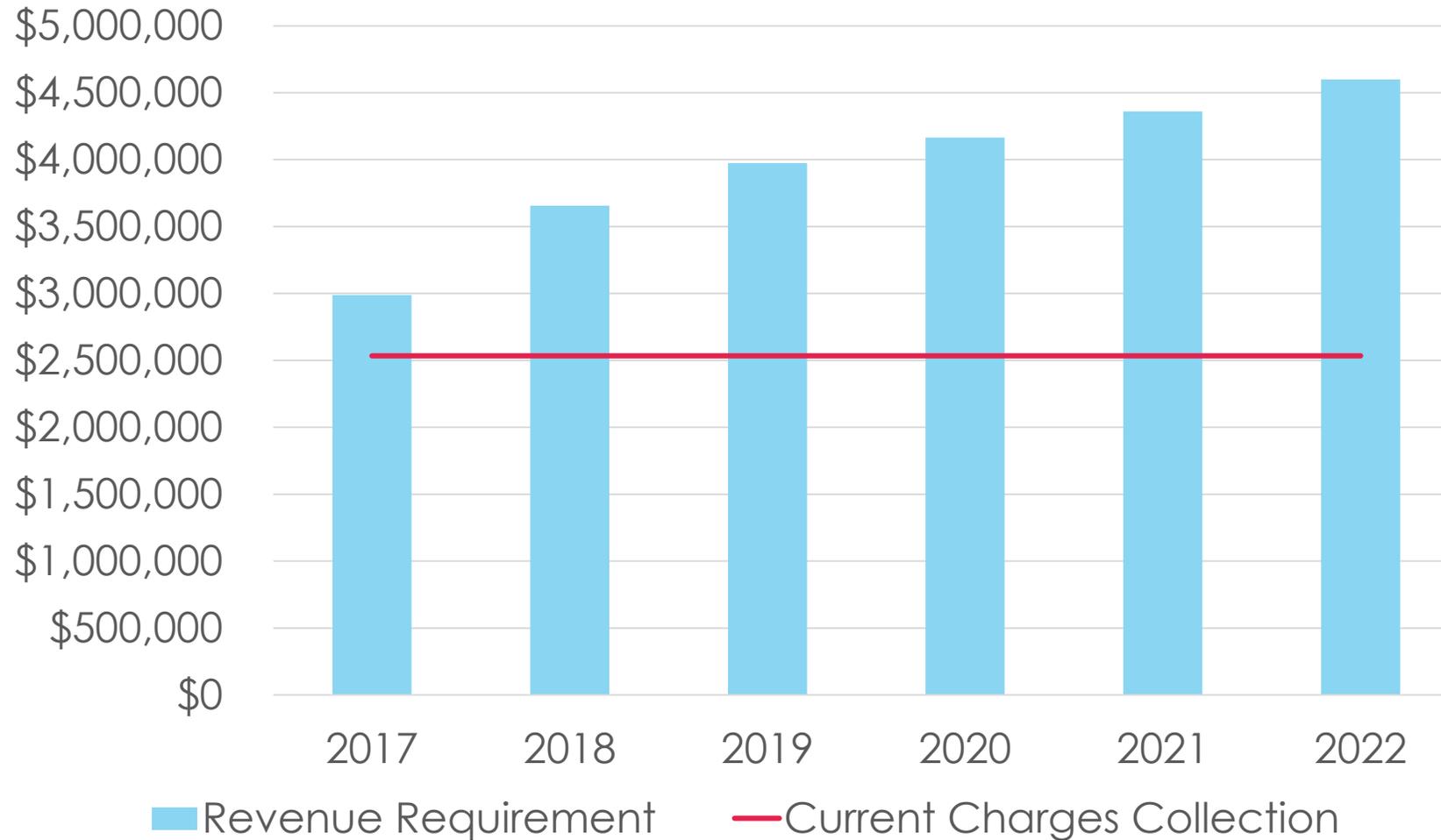


- The water fund is pulling from reserves for general operations
- The wastewater fund has no reserves and negative fund balance
- Rates have been adjusted by the CPI annually since the last rate study in 2011
- January 2016 was the last automatic rate increases, from the 2011 study
- City is not following best practices for reserve amounts for water and wastewater bonds
- Both water and wastewater have large capital improvement projects to be completed over the next 10 years

WATER FUND REVENUE REQUIREMENT



WASTEWATER FUND REVENUE REQUIREMENT



MAJOR ASSUMPTIONS

- Growth is **Conservative** – Population increases 0.2% per year; equates to 5 residential units / year
 - U.S. Census reports St. Helena added 75 units / year between 2010 and 2015
- New Rates – In effect February 8th, 2017, and increase November 8th, 2017 and each November 8th thereafter
- System Rehabilitation – Costs accounted for in the models
- Rate Structure is modified for both Water and Wastewater

WHAT IS THE ROLE OF THE
TASK FORCE?



TASK FORCE



- Review the overall methodology of the rate study
- Provide feedback to the Rate Study Team
- Opportunity for education and sharing information
- Review items that are policy decisions
- Review rate study methodology, before it is presented to City Council

WATER RATE STUDY



CURRENT BASE AND USE CHARGES

- Base Rate
 - All customers pay a base charge by meter size
- Use Rate
 - Customers pay a use charge based on the amount of water used
 - Two billing tiers for water
 - Classification into Tier 1 or Tier 2 depends on quantity of water use **and** customer type
 - Same rate in Tier 1 and Tier 2 for residential and non-residential customers
 - Designated landscape irrigation meters pay a consistent use rate (no tiers)



ST. HELENA TIERED RATE EXAMPLES

- Single Family
 - Tier 1 = 0-14 HCF
 - Tier 2 = 15+ HCF
- Multi-Family
 - Tier 1 = 0-5 HCF
 - Tier 2 = 6+ HCF
- Non-residential 5/8" & 1" meters:
 - Tier 1 = 0-36 HCF
 - Tier 2 = 37+ HCF
- Non-residential 1.5" meters:
 - Tier 1 = 0-120 HCF
 - Tier 2 = 121+ HCF
- Non-residential 2" meters:
 - Tier 1 = 0-192 HCF
 - Tier 2 = 193+ HCF

HCF = hundred cubic feet or one unit

WATER RATE STRUCTURE OPTIONS

WATER STUDY		
Scenario 1	Modified Current Rate Structure - Uniform	Same as current except no tiers for use charges
	<ul style="list-style-type: none">All customers pay a base charge by meter size per month + a flat use charge for all water	<ul style="list-style-type: none">In the wake of San Juan Capistrano (Prop. 218 interpretation), incremental costs of water service difficult to establish for St. Helena
Scenario 2	New Seasonal Rate Structure	Seasonal use rates
	<ul style="list-style-type: none">All customers pay a uniform base charge by meter size per month + a seasonal use charge for all water <p>Peak = May through October Off-Peak = November through April</p>	

ACTION ITEMS FOR WATER



STANDBY RATE

- Currently, the St. Helena Municipal Code allows any customer to go on “Standby”
- Standby: water is completely turned off
- Customer is charged \$2.50 a month
- Base rate is not paid while on standby
- Though there is no water use by the property, the utility system still requires revenue to operate
- Fixed costs of the system are captured in base charges

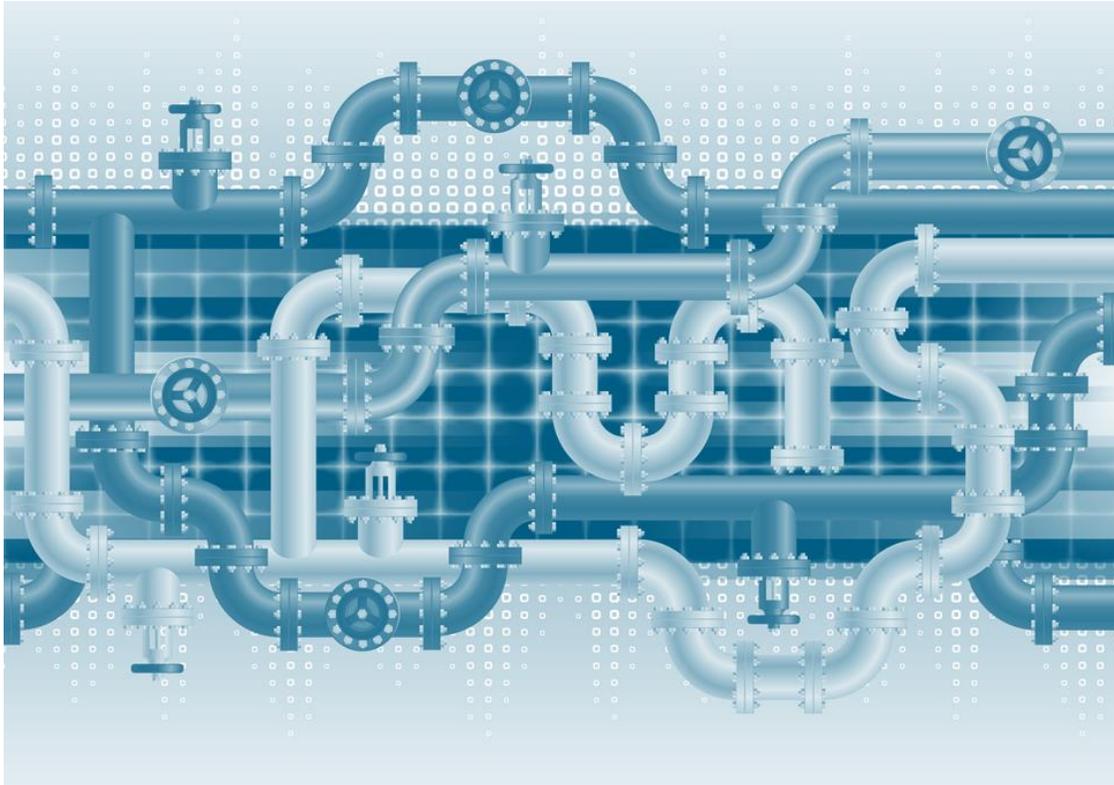
CUSTOMER SUBSIDIES PROHIBITED

As upheld in Paland v. Brooktrails CSD (2013) the Court of Appeal “We conclude the water and sewer **base rates** imposed on parcels with water or sewer connections regardless of whether they are active or inactive, and **whether or not the property owner uses the services, is a fee** subject to the provisions of article XIII D, section 6, not an assessment subject to the requirements of article XIII D, section 4.

- St. Helena - “Standby” means customer subsidies
- As found by the courts, base rates are fees imposed whether or not the utility service is used

STANDBY RATE

8/4 COMMITTEE RECAP



Options:

1. Keep municipal code the same, create mechanism to subsidize standby services
2. Update municipal code, all customers pay base rate

Note: City should implement a fee to turn on and off water

* Vote was unanimous. Numbers presented herein assume ALL customers pay a base rate every month.

SURCHARGES FOR SPECIFIC GEOGRAPHICAL AREAS

- There are several geographical areas within the City's water system
- Many of these small geographical areas require tanks or special pump stations for water delivery
- Currently only Meadowood is being charged a surcharge
- Surcharges are intended to cover the cost specific to those facilities
- The only difference between Meadowood and other pumping zones, is that these customers are outside the City limits
- Other pumping stations inside City limits also benefit specific customers, however those areas are not paying a surcharge

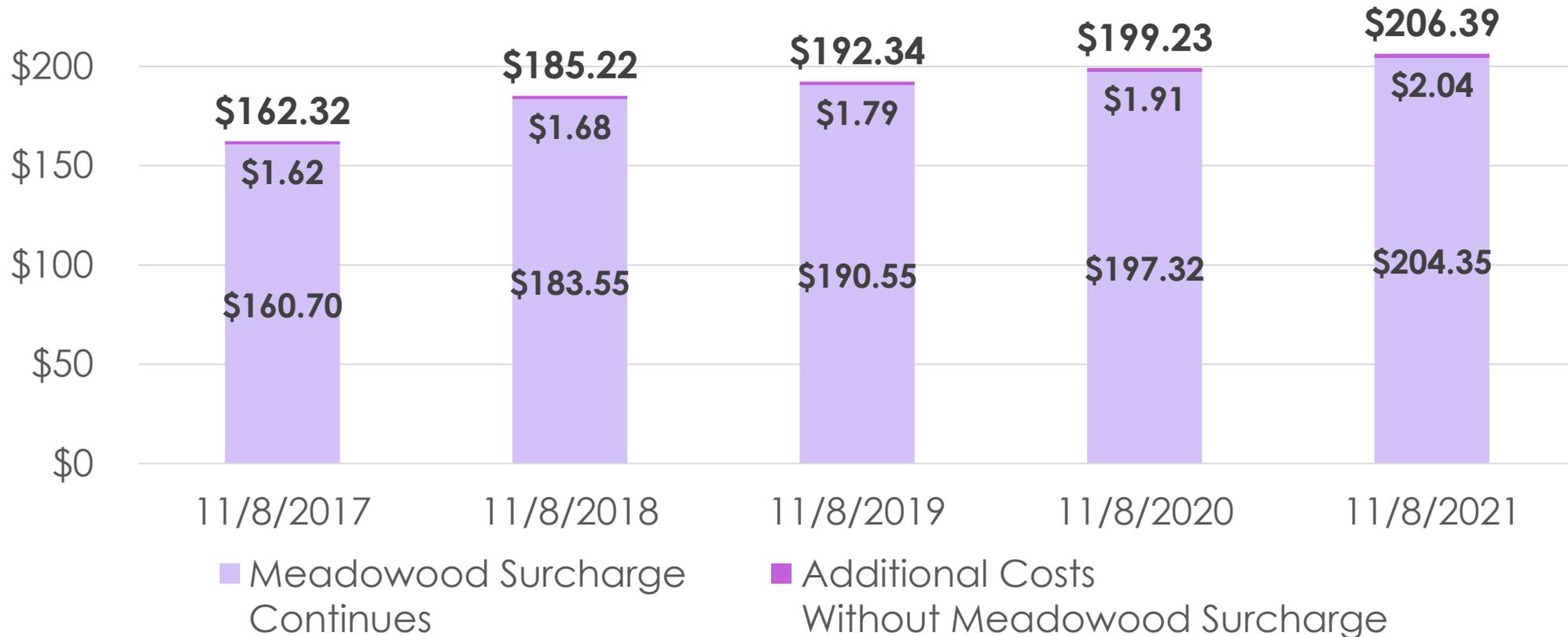
SURCHARGES FOR SPECIFIC GEOGRAPHICAL AREAS 8/4 COMMITTEE RECAP

Options:

1. Meadowood surcharge
 - Surcharge calculated on actual cost to operate and maintain facilities
2. Integrate Meadowood pumping charges into water system
 - All customers pay for system-wide facilities costs
3. Add surcharges for other geographical areas

RATE IMPACT – MEADOWWOOD SURCHARGE

Meadowood Impacts on Single Family 5/8", 17 HCF Avg. Monthly Use



RATE IMPACT – MEADOWWOOD SURCHARGE

Cost Item	Fiscal Year					
	2017	2018	2019	2020	2021	2022
Maintenance and Electric Costs						
Maintenance Cost / Month [1]	\$2,345	\$2,579	\$2,837	\$3,121	\$3,433	\$3,776
Electric Cost / Month [2]	\$613	\$644	\$676	\$710	\$746	\$783
Rehabilitation Costs [3]	\$1,220	\$1,256	\$1,294	\$1,333	\$1,373	\$1,414
Interfund Cost Allocation [4]	\$765	\$803	\$843	\$885	\$929	\$976
Monthly Meadowood Area Costs	\$4,943	\$5,283	\$5,651	\$6,049	\$6,481	\$6,949
Monthly Cost per Unit [5]	\$32.95	\$35.22	\$37.67	\$40.33	\$43.21	\$46.33
Annual Meadowood Area Cost	\$59,311	\$63,391	\$67,807	\$72,589	\$77,771	\$83,390
Monthly Cost per Customer						
Meadowood Complex (99 units + clubhouse)	\$3,295.08	\$3,521.74	\$3,767.05	\$4,032.73	\$4,320.63	\$4,632.79
Per Residential unit	\$32.95	\$35.22	\$37.67	\$40.33	\$43.21	\$46.33

Source: City of St. Helena, HEC.

meadowood costs

[1] Increased by annual maintenance cost inflation factor of 10%.

[2] FY 2014 (last non-drought year) cost increased by annual services cost inflation factor of 5%.

[3] Includes depreciation of the pumping station and two tanks. Inflated by 3% each year.

[4] Interfund cost allocation increased by annual salaries and benefits inflation factor of 5%.

[5] Total number meadowood customers:	Meadowood Complex	100
	Single Family Units	50
	TOTAL UNITS	150

**Calculated
February 8, 2017
cost to Meadowood
customers:**

- **Residential units = \$32.95/month**
- **Meadowood complex = \$3,295.08/month**

**Currently generates
~\$55,000/year**

SURCHARGES FOR SPECIFIC GEOGRAPHICAL AREAS

Options:

1. Meadowood surcharge
 - Surcharge calculated on actual cost to operate and maintain facilities
2. Integrate Meadowood pumping charges into water system
 - All customers pay for system-wide facilities costs
3. Add surcharges for other geographical areas

NOTES:

- Data presented on remaining slides assume option 1: Meadowood surcharges remain.
- If the Task Force opts to eliminate the Meadowood pumping surcharges, rates shown in remaining slides will increase by <\$2/month for 5/8" single family homes.

FUNCTIONAL COST ALLOCATION

- Functional cost allocation: determine fixed costs of the system (base rates) and variable costs in the system (use rates)
- Currently, 30% of water revenue comes from the base rate and 70% of water revenue come from the use charges
- Initial Functional Cost Allocation analysis supports shifting to a 70% base rate allocation and 30% use rate allocation
- Benefits: likely to make the City less vulnerable to revenue loss due to drought or water conservation
- To soften bill impacts to customers the rate study may implement a gradual shift over time

FUNCTIONAL COST ALLOCATION

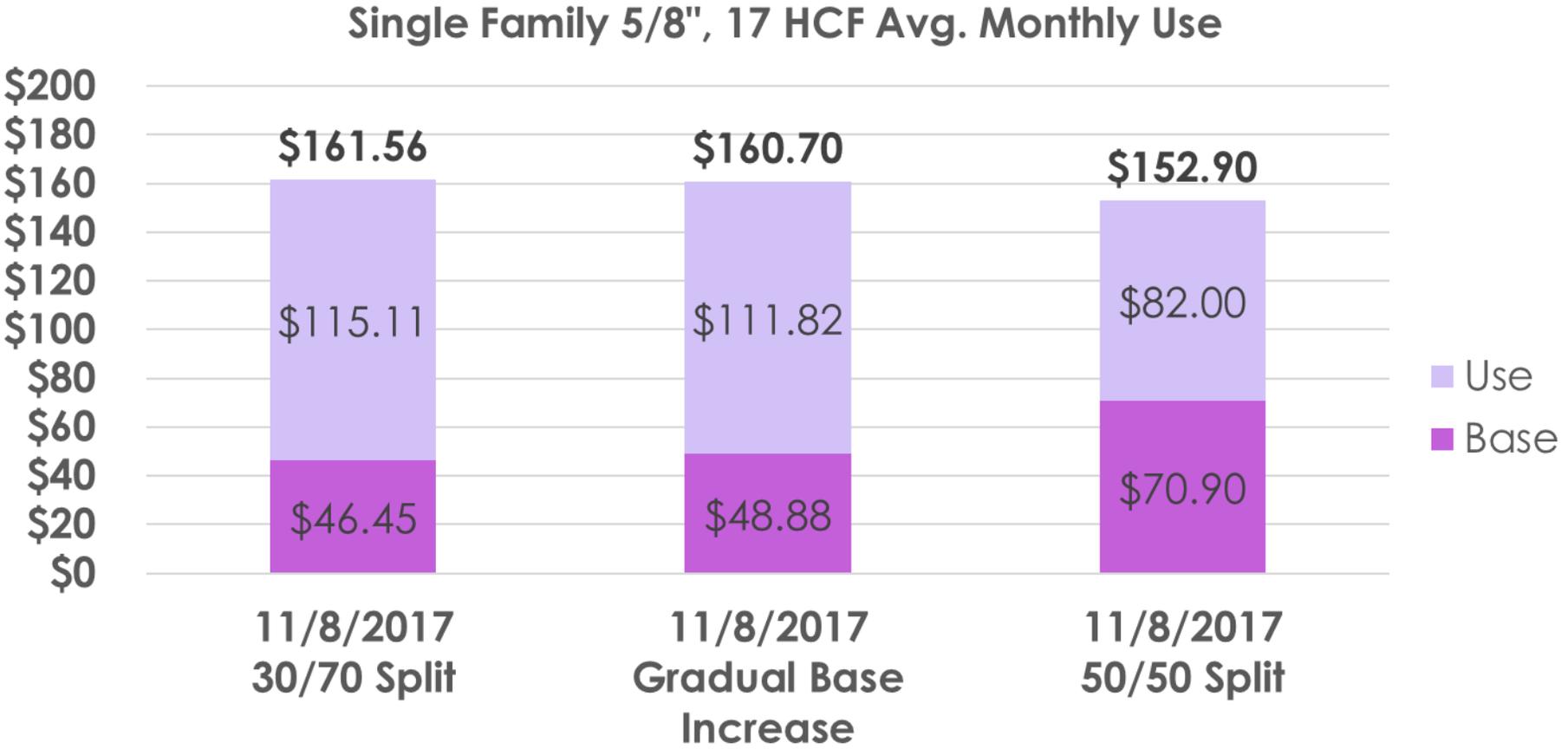
8/4 COMMITTEE RECAP



Options:

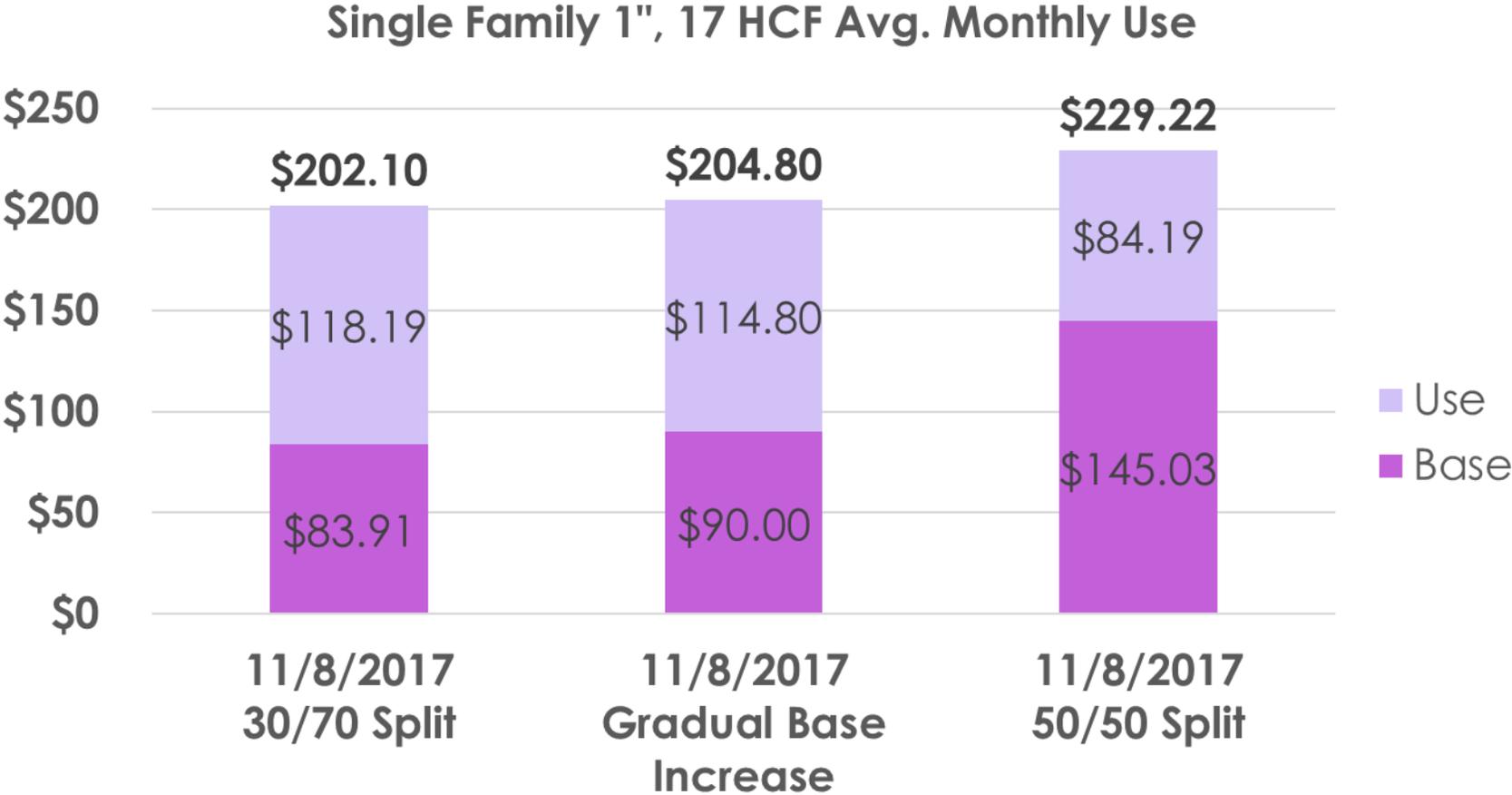
1. Keep 30% of water revenue from the base rate and 70% of water revenue from the use charges
2. Make gradual change so more revenue is collect in the base rate
3. Increase % in base rate immediately (example 50% base, 50% use)

RATE IMPACT – CHANGE TO COST ALLOCATION



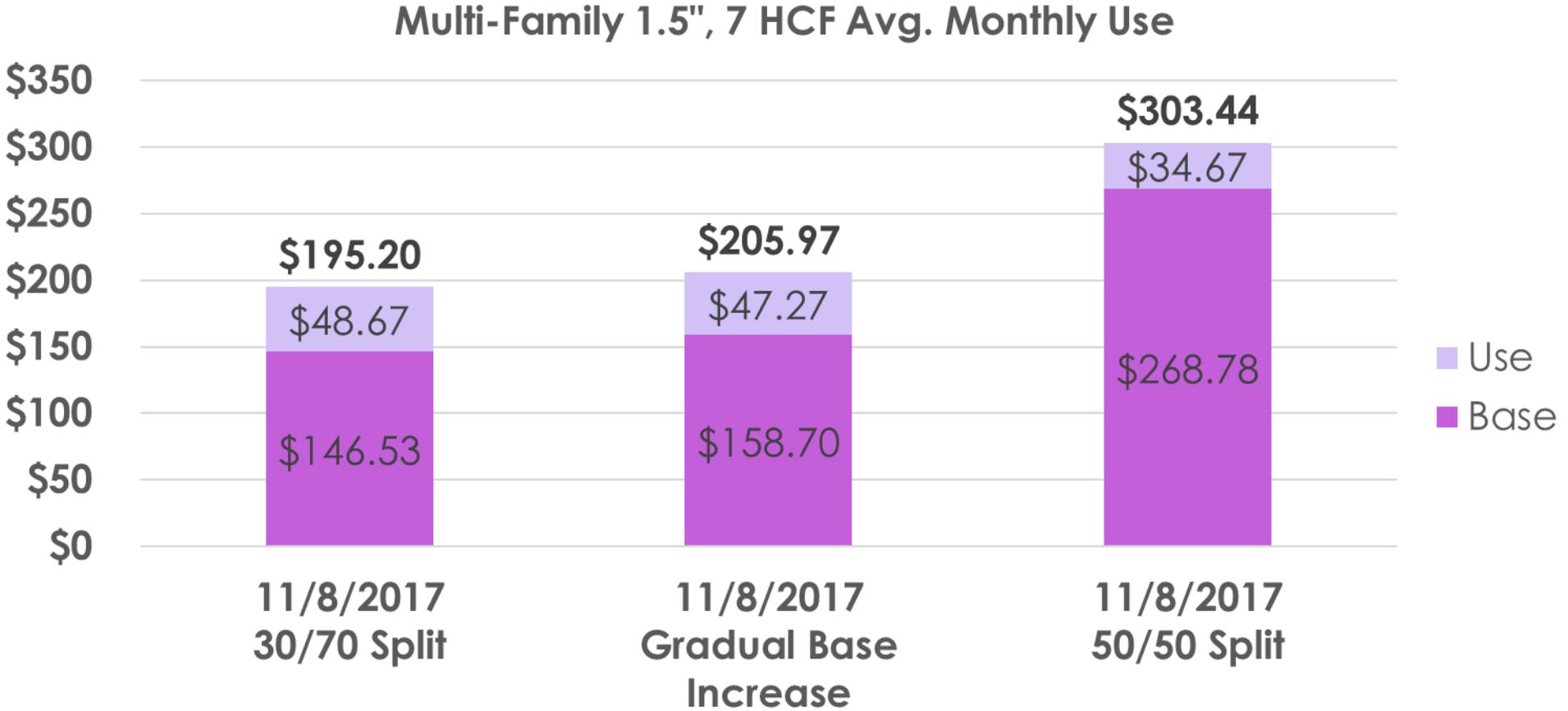
*Assumes Meadowood area pays surcharges

RATE IMPACT – CHANGE TO COST ALLOCATION



*Assumes Meadowood area pays surcharges

RATE IMPACT – CHANGE TO COST ALLOCATION



*Assumes Meadowood area pays surcharges

FUNCTIONAL COST ALLOCATION



Options:

1. Keep 30% of water revenue from the base rate and 70% of water revenue from the use charges
2. Make gradual change so more revenue is collect in the base rate
3. Increase % in base rate immediately (example 50% base, 50% use)

NOTE: Data presented on remaining slides assume option 2.

RESIDENTIAL CUSTOMER BASE FEE

- Currently all 1" customers pay greater base rate charges than 5/8" customers.
 - To meet CA Residential Code, Section R313 (fire sprinklers), many new homes are equipped with 1" meters
- Actual water use at the home is typically no different
- Water rates could be structured so that single family accounts with 1" and 5/8" meters pay the same base rate
- All other accounts with 1" meters would pay the 1" meter base rate



RESIDENTIAL CUSTOMER BASE FEE

8/4 COMMITTEE RECAP

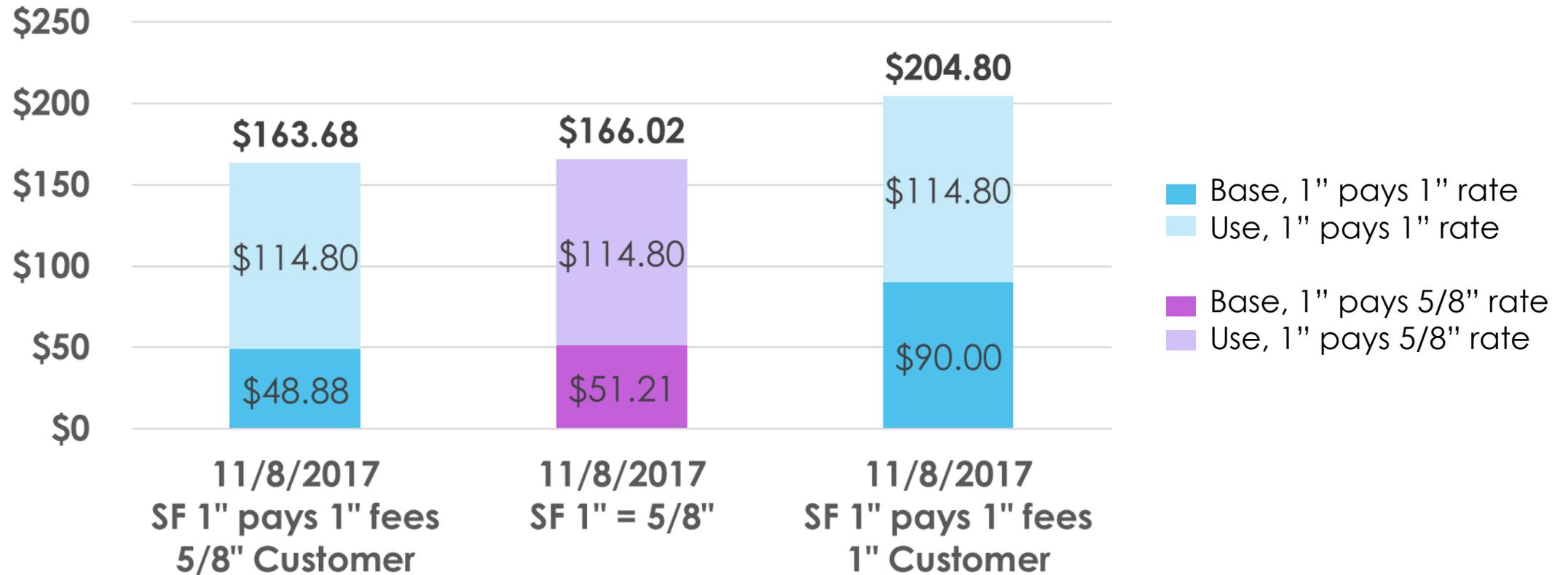
Options:

1. 1" meter residential customers continue to pay more per month for the service charge
2. For residential only 1" meters pay the same as 5/8" meters



RESIDENTIAL CUSTOMER BASE FEE – RATE IMPACT

Single Family, 17 HCF Avg. Monthly Use



*Assumes gradual base increase option, Meadowood area pays surcharge

RESIDENTIAL CUSTOMER BASE FEE

Options:

1. 1" meter residential customers continue to pay more per month for the service charge
2. For residential only 1" meters pay the same as 5/8" meters

NOTE: Data presented on remaining slides assume option 1.



DROUGHT SURCHARGES



- During a drought additional water conservation leads to a decline in revenue, and the cost to deliver each unit of water increases
- A drought surcharge would help offset the revenue loss during drought periods and the increased cost per unit of water
- To do this, drought criteria needs to be clearly defined and adopted

DROUGHT SURCHARGES

8/4 COMMITTEE RECAP



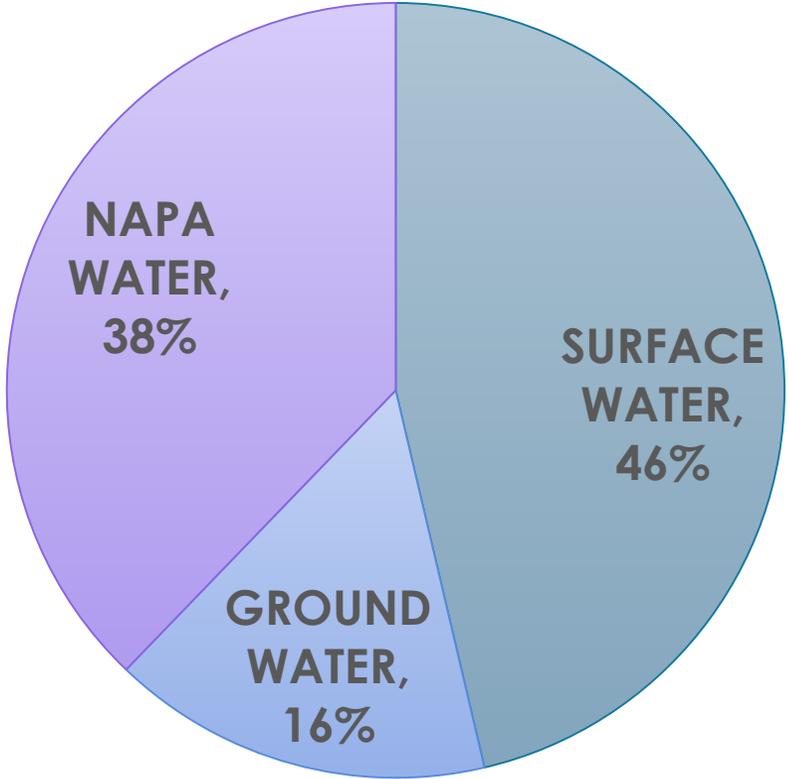
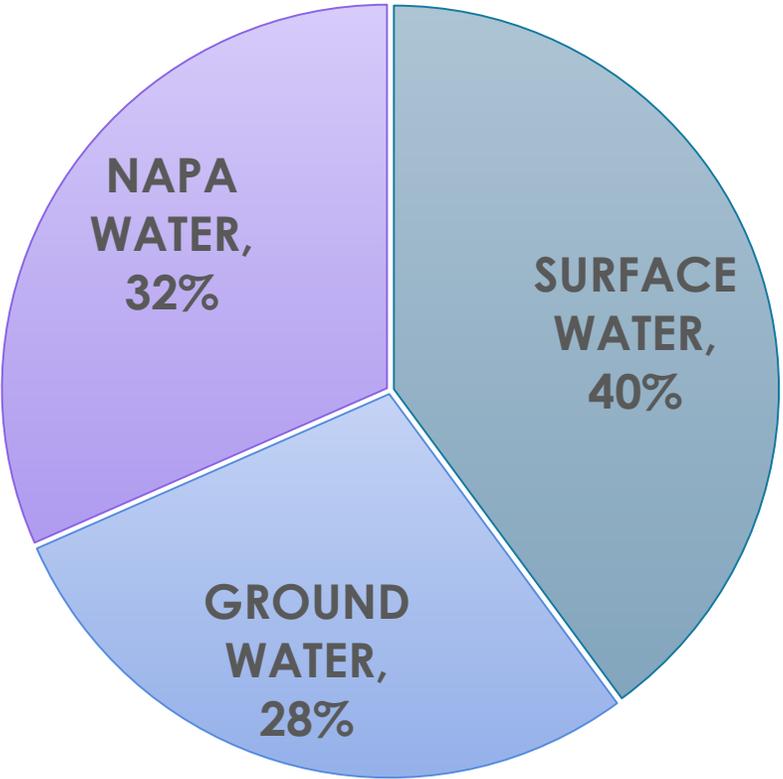
Options

1. Implement a drought surcharge
 - Consensus 8/4 pending review of cost impacts
2. Do not implement a drought surcharge

WATER SUPPLY DROUGHT VS. NON-DROUGHT YEARS

2013 – 601,650,000 gallons

2015 – 501,660,000 gallons



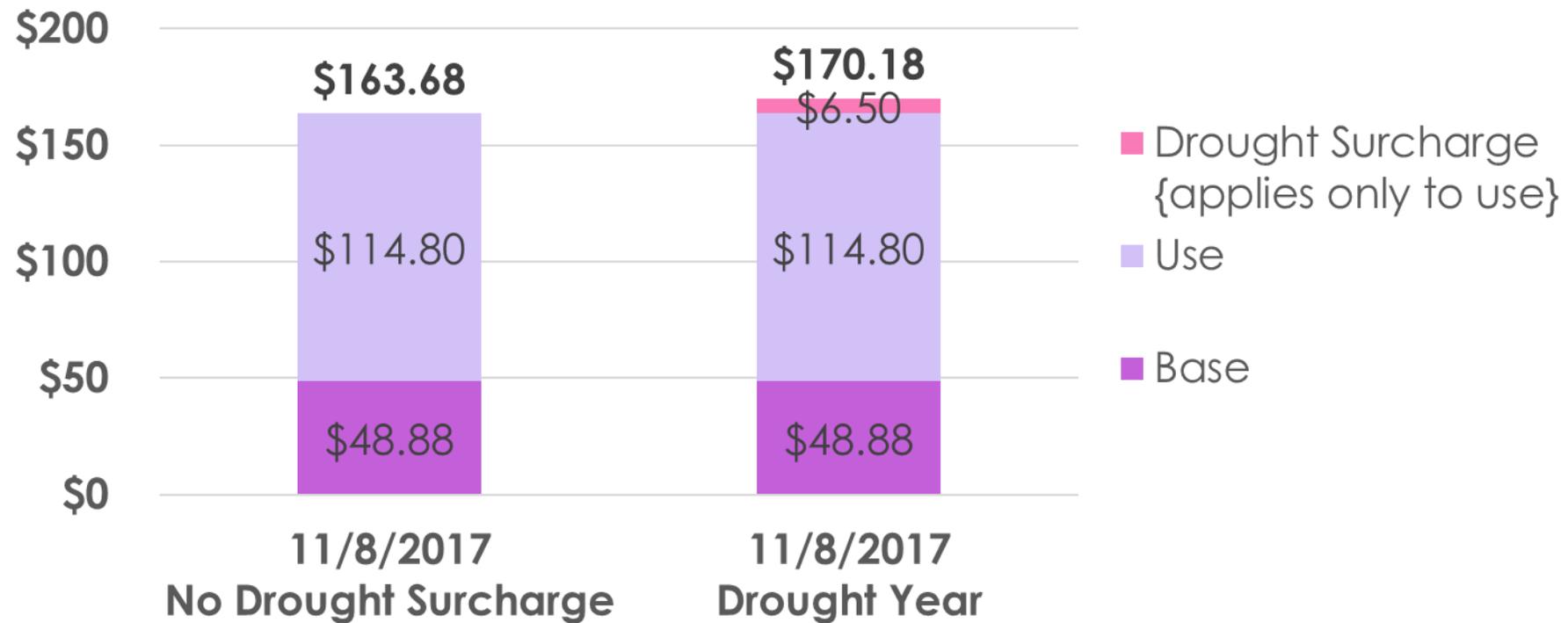
DROUGHT SURCHARGES

Source Costs	Imported Water <i>City of Napa</i>	Surface Water <i>Bell Canyon</i>	Ground Water <i>Stonebridge Wells</i>	Total <i>All Sources</i>
<u>Fiscal Year 2015</u>				
Total Costs		\$618,531	\$65,392	\$683,923
Total Supply		219,284,953	100,448,200	319,733,153
Cost per 1,000 Galls	\$6.70	\$2.82	\$0.65	\$2.14
DROUGHT YEAR				
Wtd. Avg. Cost per 1,000 Galls.	\$2.53	\$1.31	\$0.10	\$3.94
Source of Supply	38%	46%	16%	100%
NON-DROUGHT YEAR				
Wtd. Avg. Cost per 1,000 Galls.	\$2.12	\$1.13	\$0.19	\$3.43
Source of Supply	32%	40%	28%	100%
All Other Operations Costs (assumed not to change)				\$1,814,740
All Other Operations Costs per HCF				\$5.68
TOTAL DROUGHT YEAR COST PER HCF				\$9.62
TOTAL NON-DROUGHT YEAR COSTS PER HCF				\$9.10
<i>Ratio of Drought to Non-Drought</i>			<i>1.06</i>	

- The water supply mix in a drought year increases the cost per unit of water produced
- Costs to produce water are 6% higher in a drought year

DROUGHT SURCHARGES RATE IMPACT

Single Family 5/8", 17 HCF Avg. Monthly Use



*Assumes 1" SF customers pay 1" rate, gradual base increase option, Meadowood area pays surcharge

DROUGHT SURCHARGES



Options

1. Implement a drought surcharge
2. Do not implement a drought surcharge

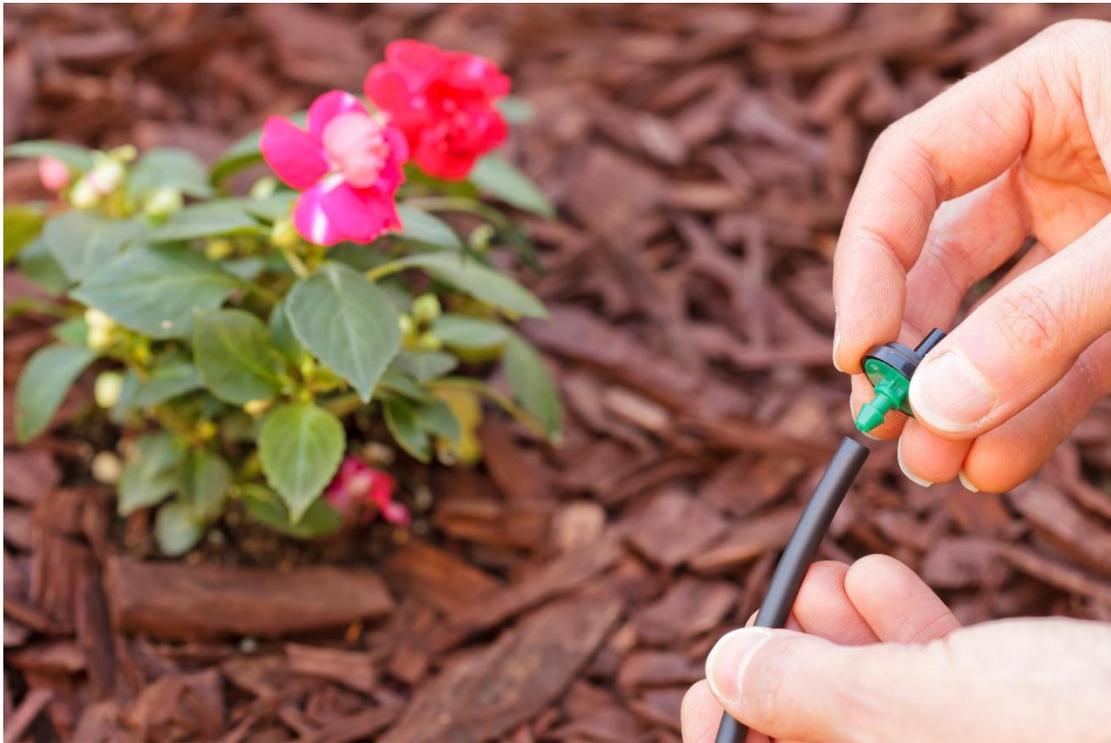
NOTE: Data presented on remaining slides assume option 2.

PREFERRED RATE STRUCTURE

- All rates must be based on the actual cost of providing water
- Rates cannot be artificially inflated to discourage water use
- Tiered rates are not compatible with St. Helena's water supply and use
- The cost to provide water in the summer months is higher than the winter months, which supports seasonal use charges
- Seasonal rates help increase water conservation awareness
 - California Constitution Article X, Section 2 requires water resources of the State be put to beneficial use to the fullest extent they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented.
 - Seasonal rates reflect additional costs to produce and deliver water May through October

PREFERRED RATE STRUCTURE

8/4 COMMITTEE RECAP



Options

1. Implement a seasonal rate structure
 - Consensus 8/4 pending review of cost impacts
2. Do not implement a seasonal rate structure, implement a uniform rate structure

RATE STRUCTURE IMPACT

Single Family 5/8", **17 HCF** Avg.
Summer Monthly Use



Single Family 5/8", **7 HCF** Avg.
Winter Monthly Use

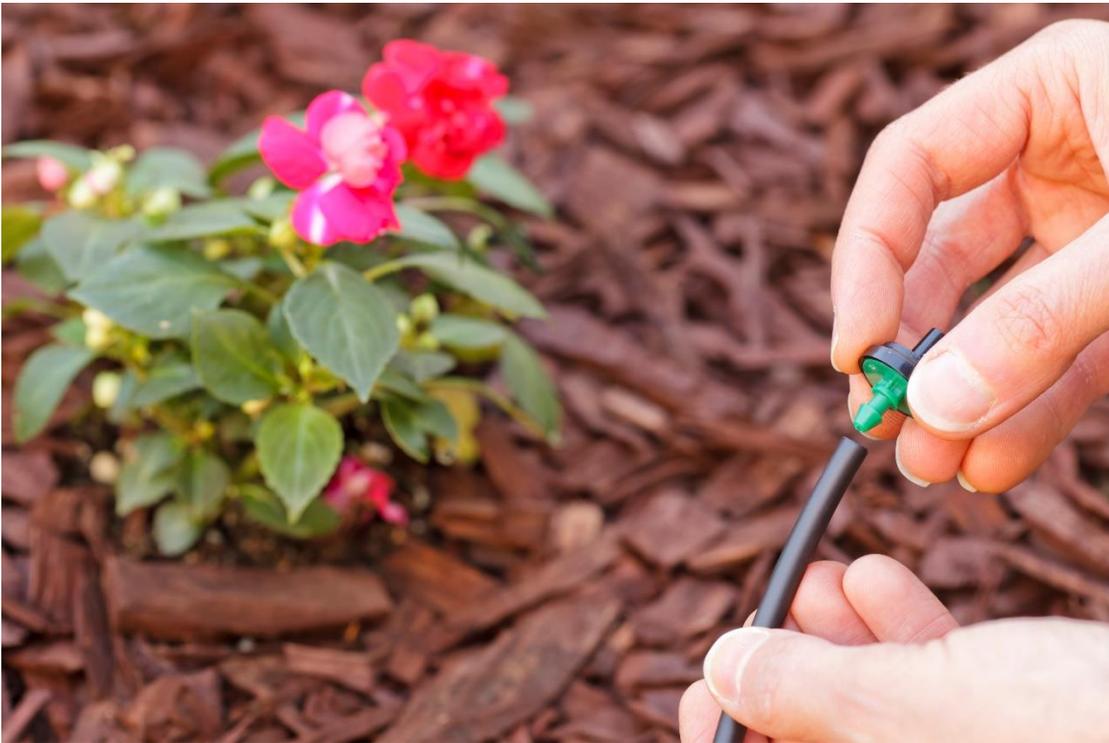


*Assumes no drought surcharge, 1" SF customers pay 1" rate, gradual base increase option, Meadowood area pays surcharge

PREFERRED RATE STRUCTURE

Options

1. Implement a seasonal rate structure
2. Do not implement a seasonal rate structure, implement a uniform rate structure



REVIEW

- Standby Rate
- Surcharges for specific geographical areas (Meadowood)
- Functional Cost Allocation
 - 30% base rate/70% use rate vs. gradual base rate increase vs. 50% base rate/50% use rate
- Residential Base Rate
 - Base meter rates for single family customers (5/8" vs 1")
- Drought Surcharges
- Preferred Rate Structure
 - Uniform or Seasonal use charges

WASTEWATER RATE STUDY



HOW ARE THE CURRENT
RATES SET?



WASTEWATER CURRENT BASE AND USE CHARGES

Residential

- All single family pay same base rate, per dwelling unit
- Charged per HCF of water based on winter average (Jan, Feb, Mar)

Non-Residential

- All other account types, including multi-family
- Charged base rate according to meter sizes **and** customer classification
- Charged per HCF of water based on a customer classification
- Customer classification is determined by typical flow and strength of wastewater

WASTEWATER CURRENT BASE AND USE CHARGES

- There is not a good nexus to support this rate structure
- It likely passes Prop 218 requirements since it is based on the customer's ability to use water that may pass through to the wastewater system

Residential

Single Family

Non-Residential

Churches
City Owned Building
Commercial
Industrial
Laundry
Library & Schools
Motel/Hotel
Multi Family

RATE STRUCTURE OPTIONS

Scenario 1

Modified Current Rate Structure

- Single family pay monthly flat base rate and per HCF of water
- Multi-family/mobile homes and non-residential pay monthly flat base rate based on meter size per month and per HCF of water
- Use rate for religious places are based on changed strength parameters

Same as current except:

- Religious places/community centers are broken out as own rate category

RATE STRUCTURE OPTIONS

Scenario 2

New Rate Structure

- All Residential (single family, multi-family and mobile homes) pay flat base rate based on number of dwelling units plus a use charge calculated on the average winter water use
- Flat monthly charge for schools based on number of students
- Non-residential pay flat base rate by customer type (per account) plus a use charge calculated on the average winter water use

Changes:

- Rates based on flow and strength of wastewater
- Mobile Home parks classified as residential

RATE STRUCTURE OPTIONS

8/4 COMMITTEE RECAP

The rate study includes 2 rate scenarios:

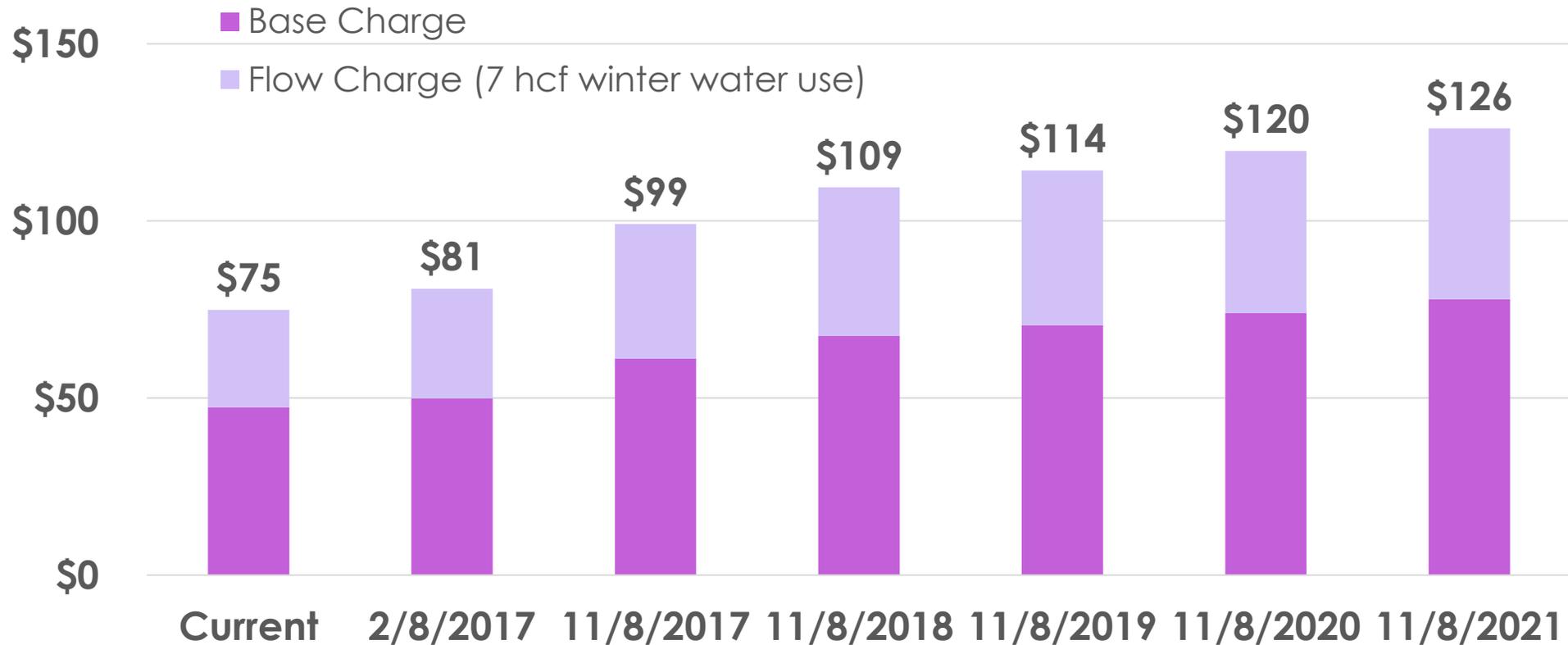
- Scenario 1 – Slightly modify the existing rate structure.
- Scenario 2 - All costs (in the base and use charges) are allocated on flow and strength customer characteristics. Mobile homes are treated as Residential. Schools are charged on a per student basis.

Options:

1. Slightly modify the existing rate structure (Scenario 1)
2. Move to new rate structure (Scenario 2)

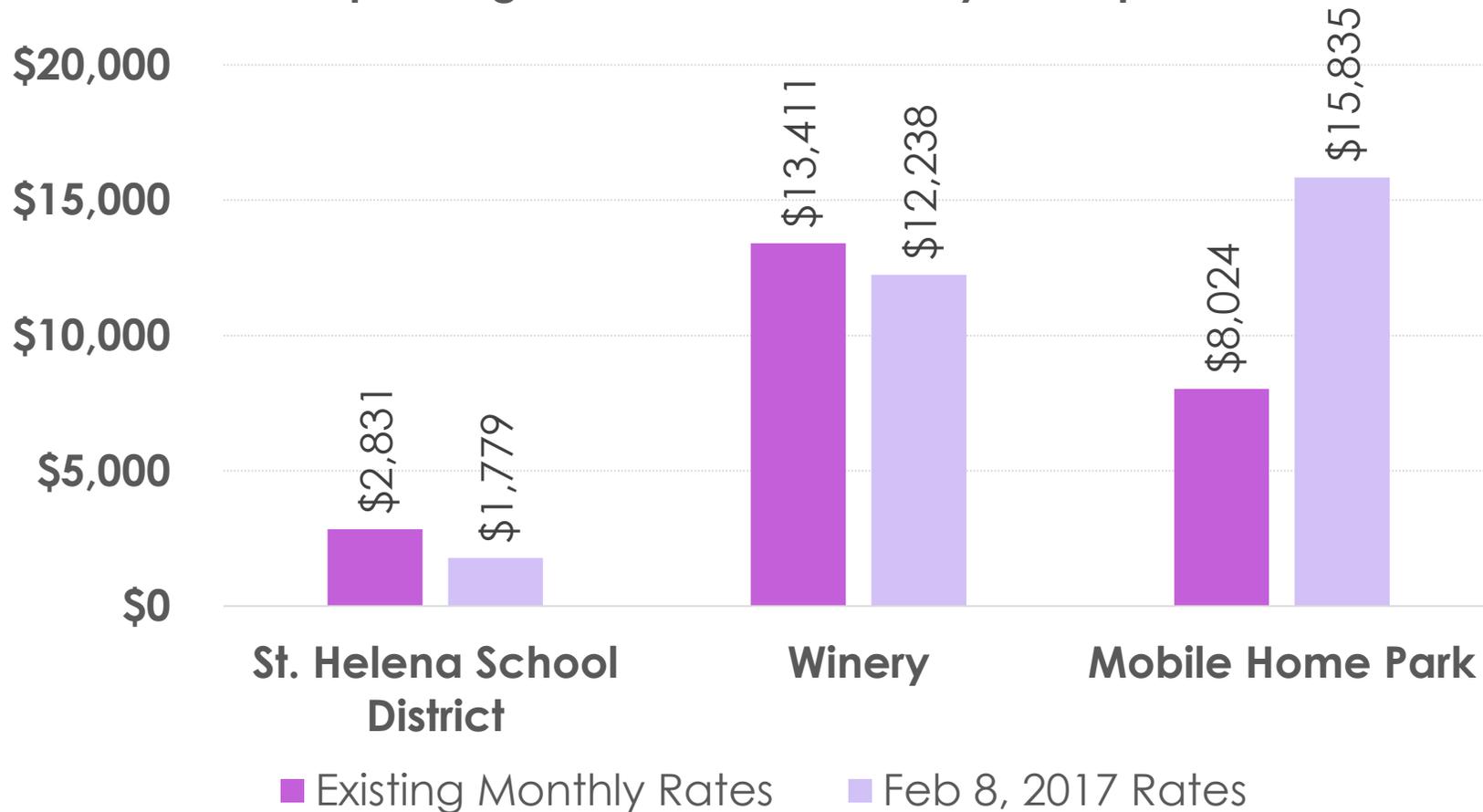
RATE STRUCTURE – RATE IMPACTS

Single Family Monthly Bill, 7 HCF Avg. Monthly Use



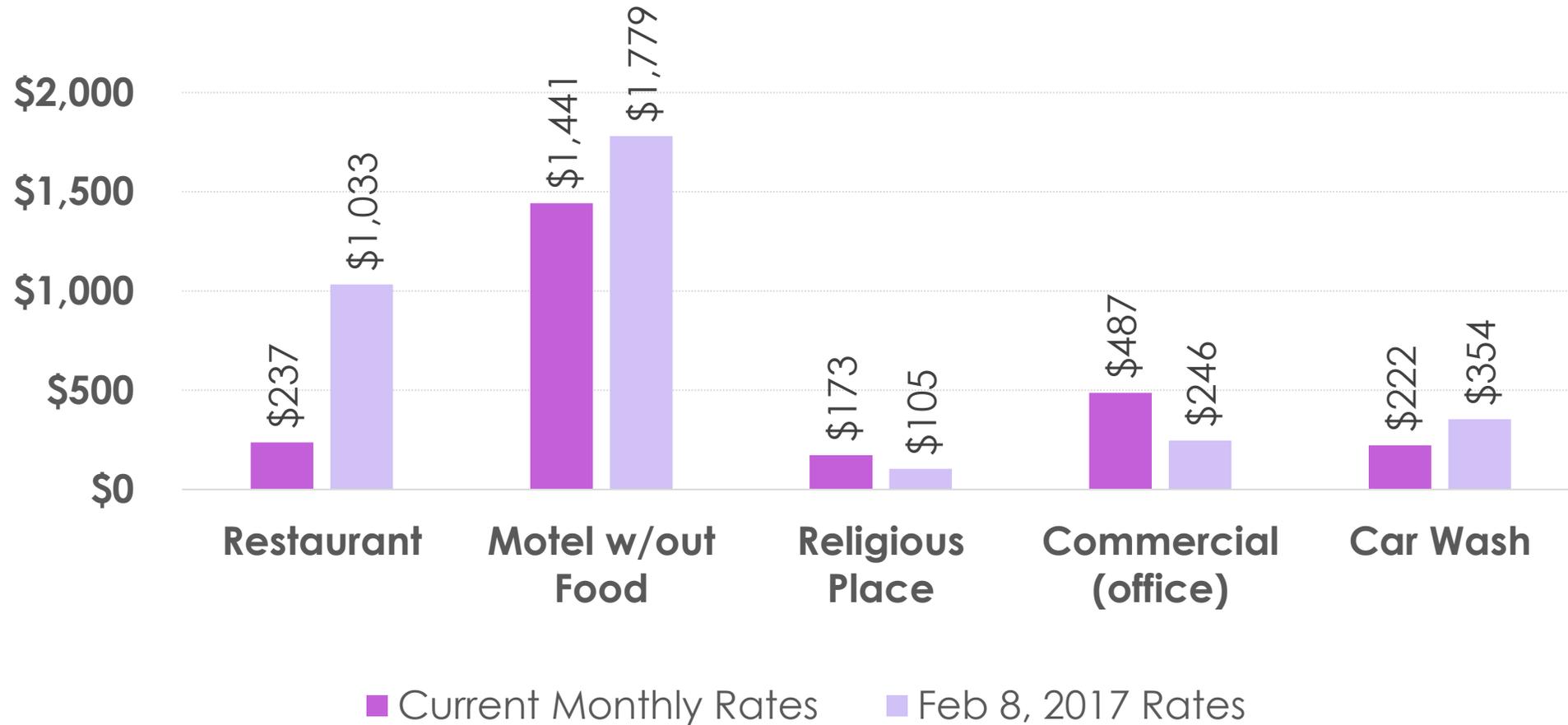
NEW RATE STRUCTURE – RATE IMPACTS

Sample Large Water Users Monthly Bill Impact



NEW RATE STRUCTURE – RATE IMPACTS

Sample Non-Residential Wastewater Users Monthly Bill Impact

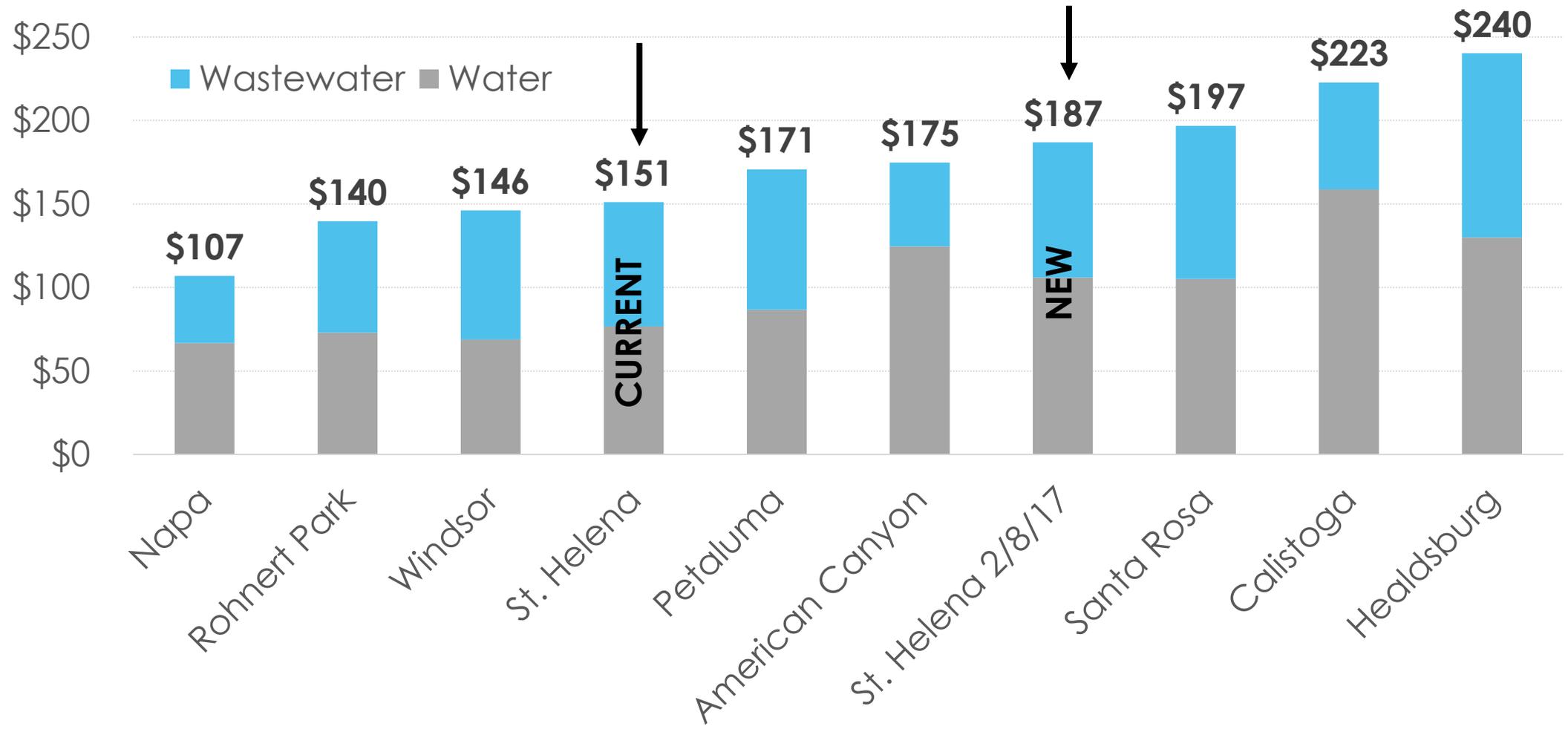


COMBINED UTILITIES IMPACT



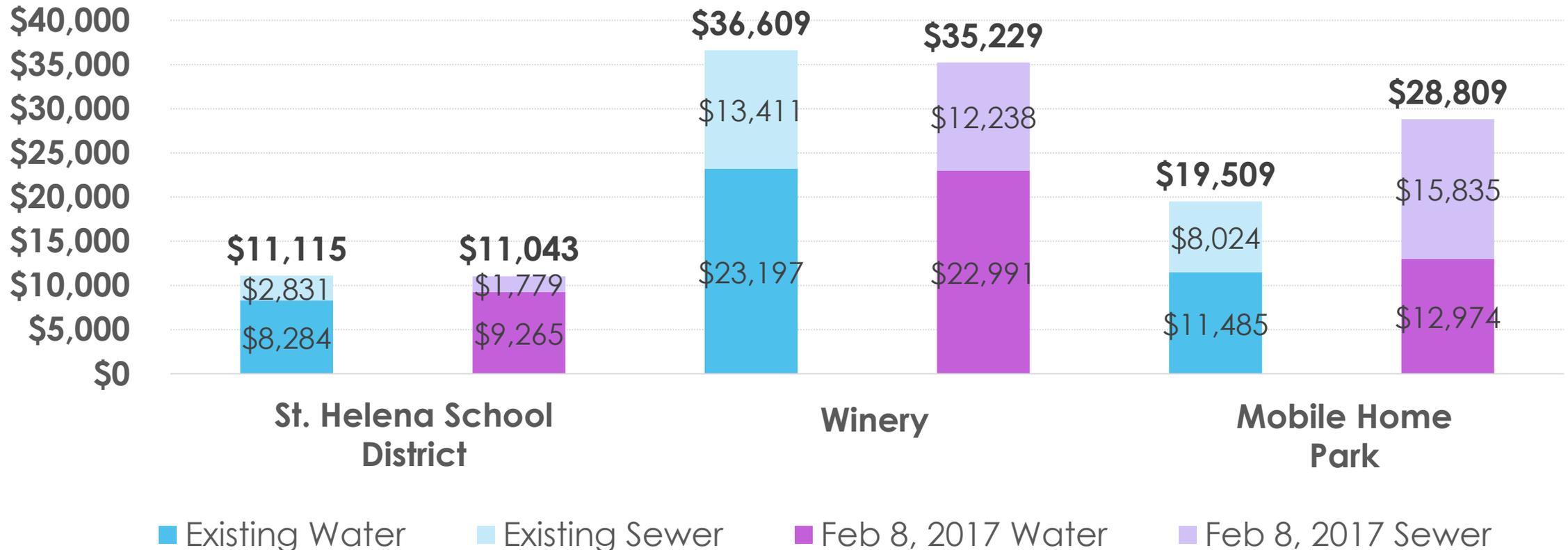
RATE COMPARISON

Typical Monthly Bill for a 5/8" Residential Home in Non-Drought Year
(uniform rate structure), new wastewater rate structure



LARGE WATER USERS COMBINED UTILITIES IMPACT

Estimated Combined Utilities Bill for Large Water Users



PUBLIC FORUM

- Please limit comments to three minutes



NEXT STEPS



REBATE PROGRAMS



- Toilet Retrofit
- Clothes Washer
- Smart Irrigation Controller
- Cash for Grass
- Laundry to Landscape (Greywater)
- Rainwater Harvesting
- Recirculating Hot Water Pump
- Water Neutrality Program

<http://www.cityofsthelena.org/water>