



# CITY OF ST. HELENA

## AD HOC REVENUE SOURCE TASK FORCE WATER & WASTE WATER RATE STUDY

August 4, 2016

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

# TASK FORCE MEMBERS



*Mayor Alan Galbraith*  
*Vice Mayor Peter White*

*Vice Chair Katie Leonardini*  
*Chuck Vondra*  
*Wayne Armstrong*  
*Jack Stuart*

# RATE STUDY TEAM

## City Staff

Jennifer Tuell, Project Manager  
Jennifer Phillips  
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April Mitts  
Jennifer Weeks  
Mandy Kellogg  
Chrissy Cook

## Hansford Economic Consulting

Catherine Hansford  
Rachel Kirkpatrick  
Zach Gustafson

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

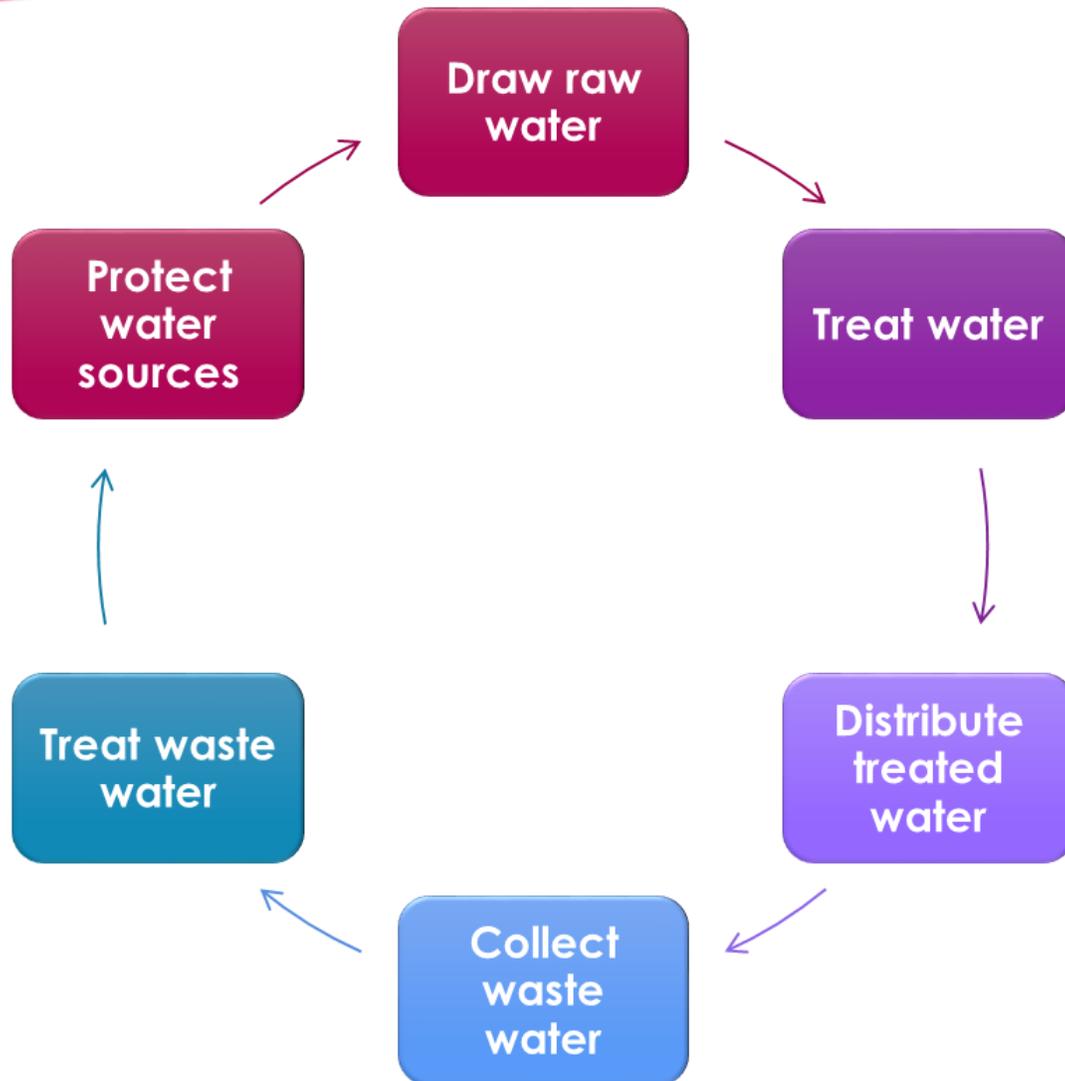
Deep groundwater fed by the Sonoma Volcanic aquifer, through two wells located 410 and 653 feet below the surface, commonly referred to as the Stonebridge Wells.



## City of Napa

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

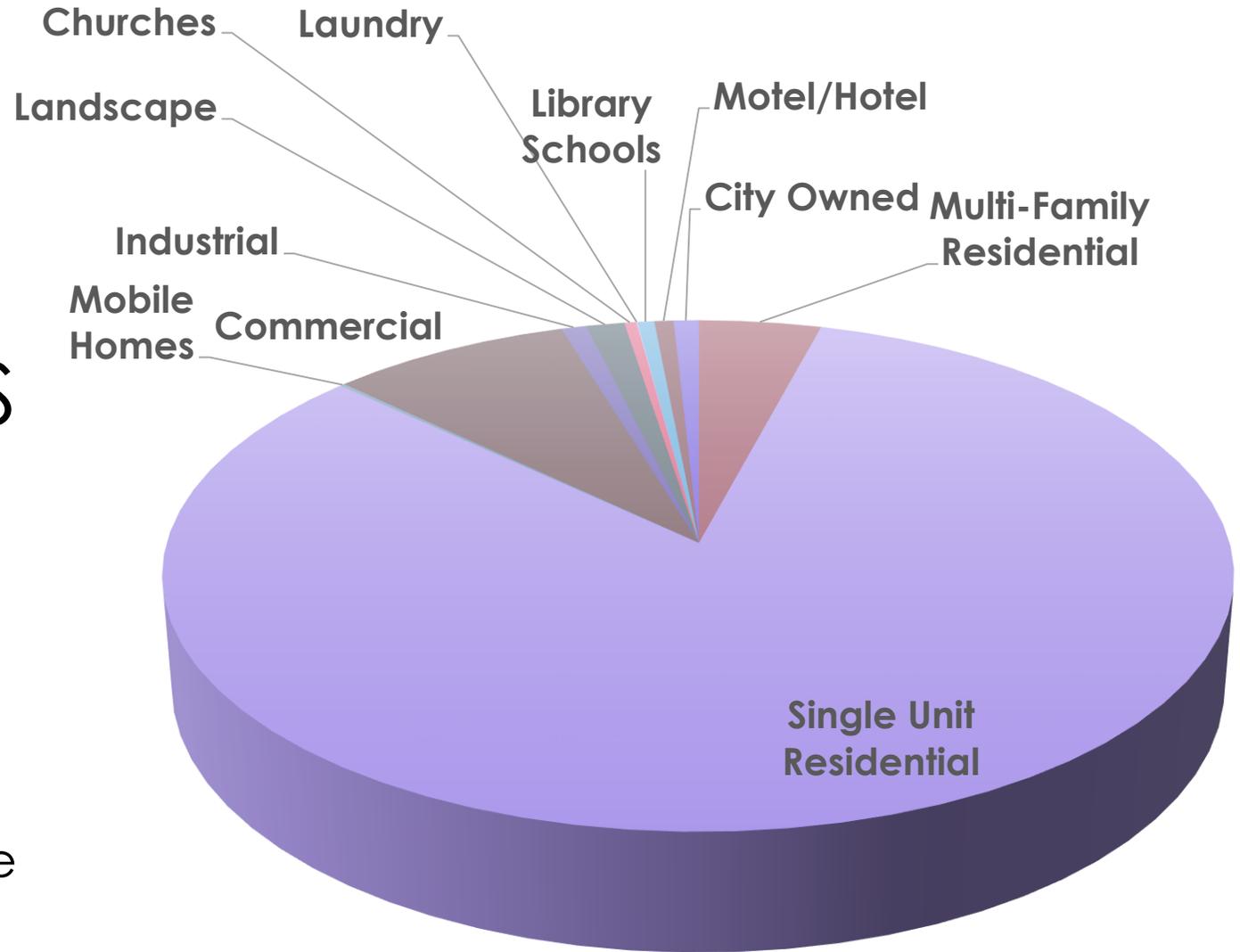
# MISSION



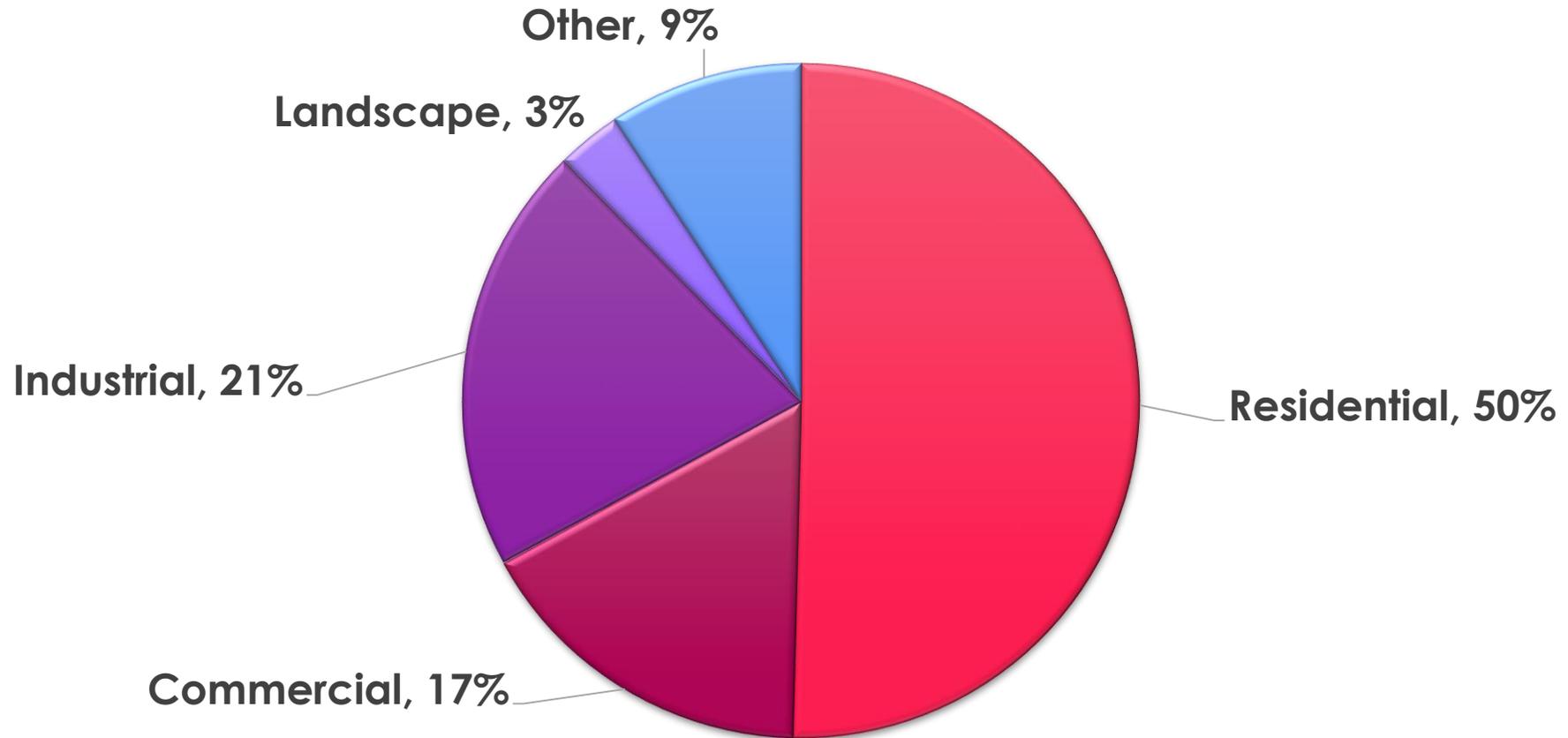
- Protect public health & environment
- Protect and sustain economic growth
- Manage & maintain infrastructure
- Support public safety
- Provide direct utility services to approximately 6,000 residents
- Utility refers to only water and waste water services

# ST. HELENA UTILITY CUSTOMERS

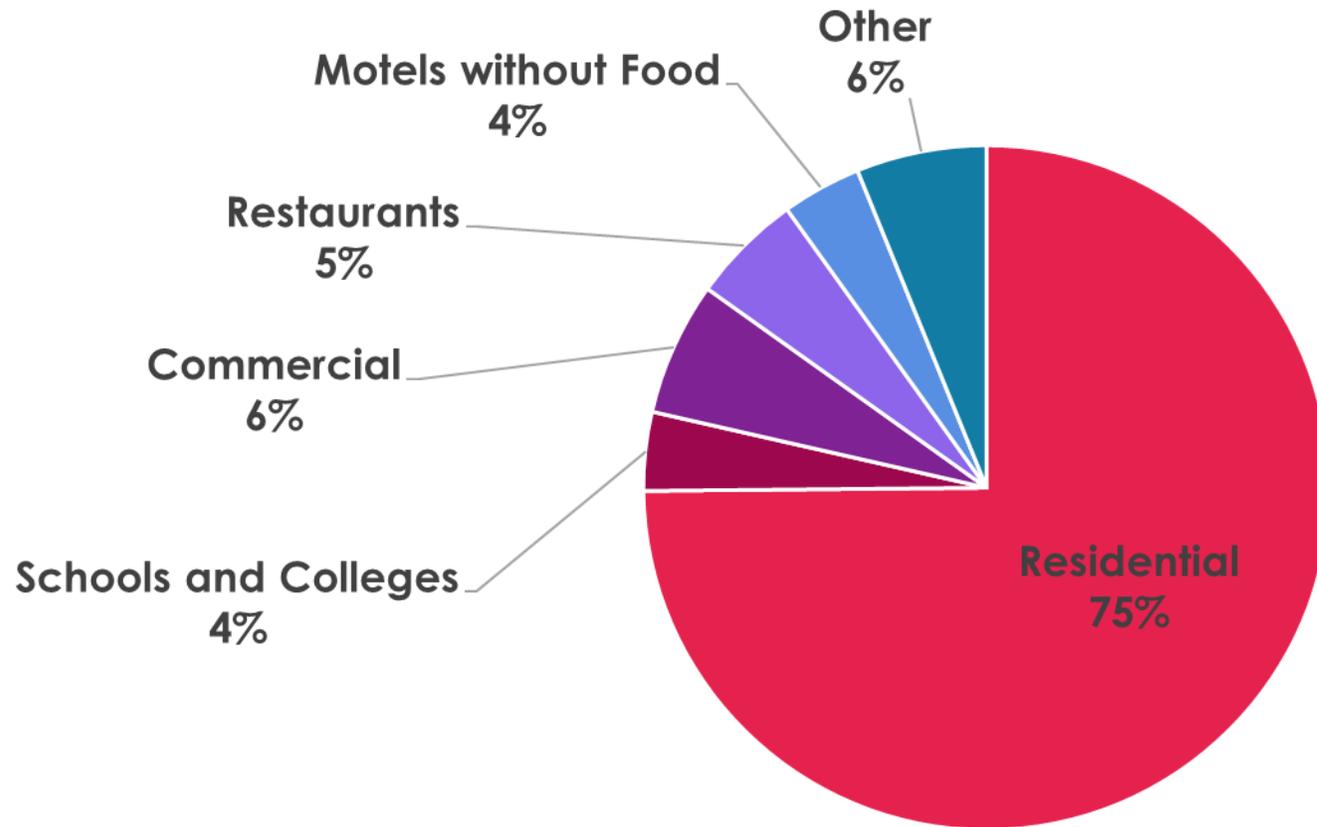
- Approximately 2,700 connections
- Small water provider
- Distributes over 550 million gallons of clean drinking water each year
- The majority of connections are residential
- Bill in HCF = Hundred Cubic Feet



# WATER USE BY CUSTOMER TYPE



# WASTE WATER FLOW



- Collect, treat and discharge waste water
- 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”*

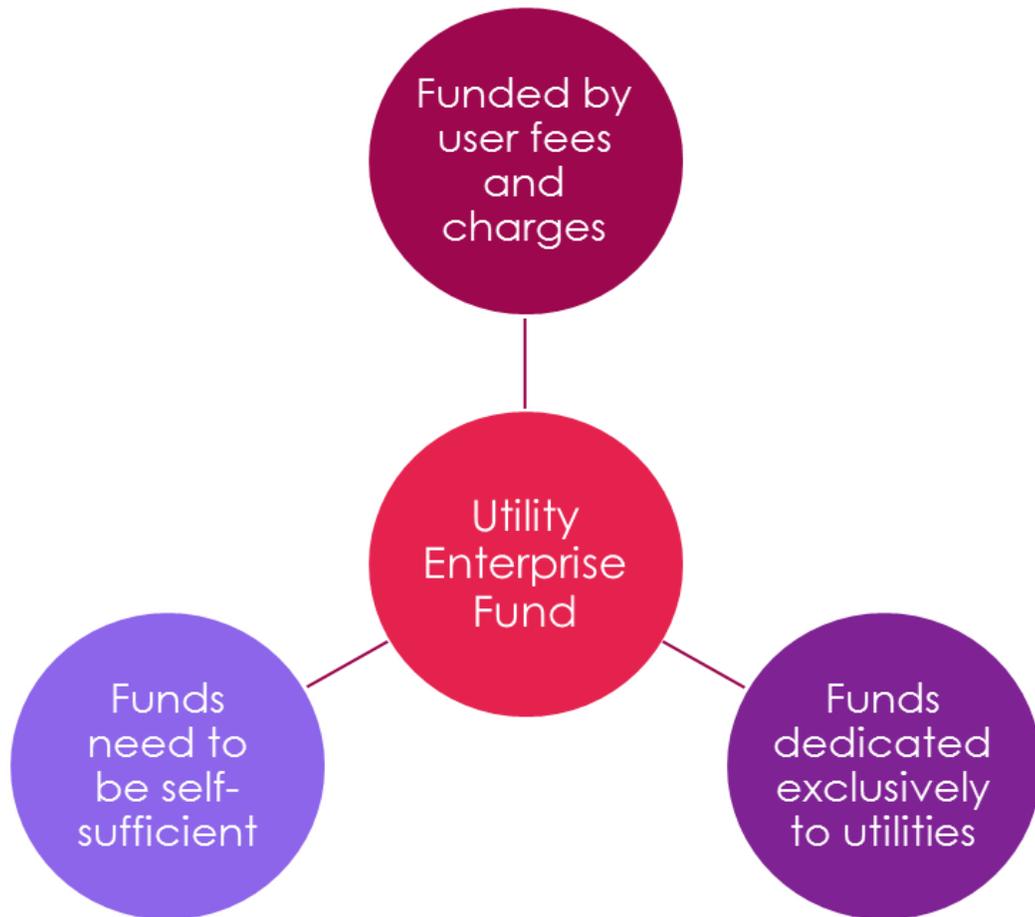
*– Juan, PW Water Distribution*

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

# WHAT IS A RATE STUDY?



# ENTERPRISE FUND OBLIGATIONS



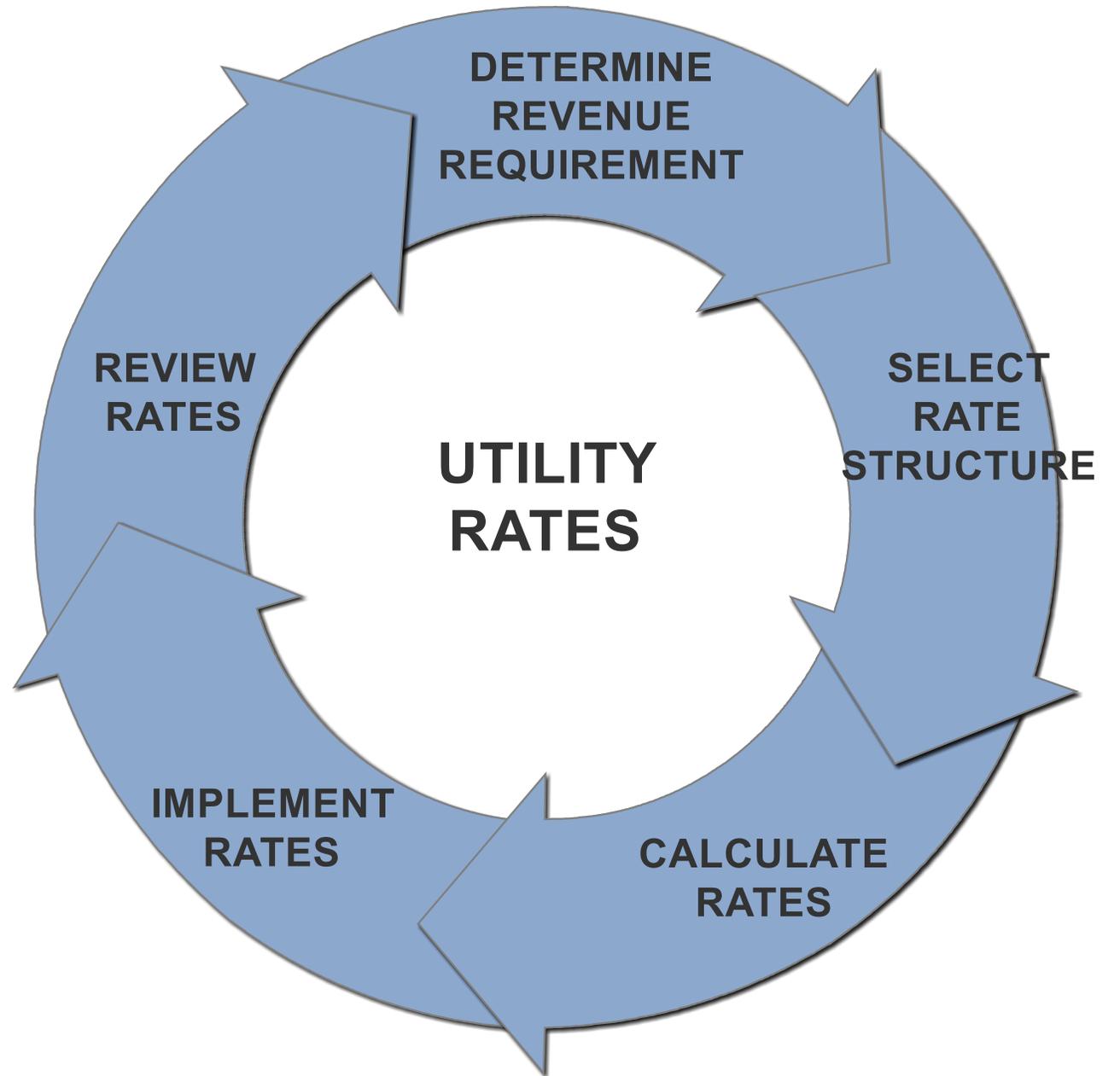
- Operating expenses are primarily funded through:
  - Water and waste water charges and surcharges that our customers pay for the services they receive
  - Miscellaneous fees for services customers request from the Division of Water & Waste Water



# PURPOSE OF THE STUDY

- Identify the “true cost” to deliver water to the different users
- Determine funding needed over the next 5-10 years to operate and maintain the utility systems
- Create adequate revenue to fund CIP (Capital Improvement Program)
- Ensure costs are allocated equitably for all customer classes
- Establish appropriate rate schedules for five years
- To meet all legal requirements for water and waste water rates

# RATE-SETTING PROCESS



# 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 waste water needs/ demands
  - Meet multiple objectives

# BALANCE OF MULTIPLE OBJECTIVES



WHY IS THE CITY DOING  
A RATE STUDY NOW?



# BEST PRACTICES



- 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

# ST. HELENA PRACTICES



- The water fund is pulling from reserves for general operations
- The waste water 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 not following best practices for reserve amounts for water and waste water bonds
- Both water and waste water have large capital improvement projects to be completed over the next 10 years



# GOALS

- Adequately fund the water and waste water 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

WHAT ARE THE LAWS  
GOVERNING UTILITY RATES?



# PROP 218



- Fees/charges shall not exceed the funds required to provide the service.
- Fees/charges shall not be used for any other purpose than that for which it is imposed.
- Fees/charges shall not exceed the proportional cost of service to each property.
- Fees/charges based on potential/future use of the service is not permitted

# RATE IMPLEMENTATION

- Affects all properties with water service available to property
- Must provide a Public Hearing Notice including:
  - Amount of rate
  - Basis upon which rate is calculated
  - Reason for the rate
  - Date, time and location of public hearing

- One protest per parcel (could be owner or tenant but not both)
- Rate increases cannot be implemented if >50% of property owners protest

# SUBSIDIES

- Low-income discounts and subsidies between customer types prohibited in rates
- Can provide subsidies **if** subsidy is:
  - funded by a discretionary fund (General Fund)
  - voluntary donations by other customers, or
  - approved as a special tax by 2/3<sup>rds</sup> of rate payers
- General fund currently subsidizing low income customers



# SAN JUAN CAPISTRANO

2015: Ruling in the San Juan Capistrano case created stricter standards on how tiered rates should be set under Prop 218

**“...the City failed to demonstrate that the tiers correspond to the actual cost of providing service at a given level of usage...”**

**“...rates were not proportional to the cost of service...”**

As a result of the San Juan Capistrano case, many agencies have either eliminated their tiered rates in favor of a uniform rate, or revised their tiered rates to better comply with the standards set by the San Juan Capistrano case.

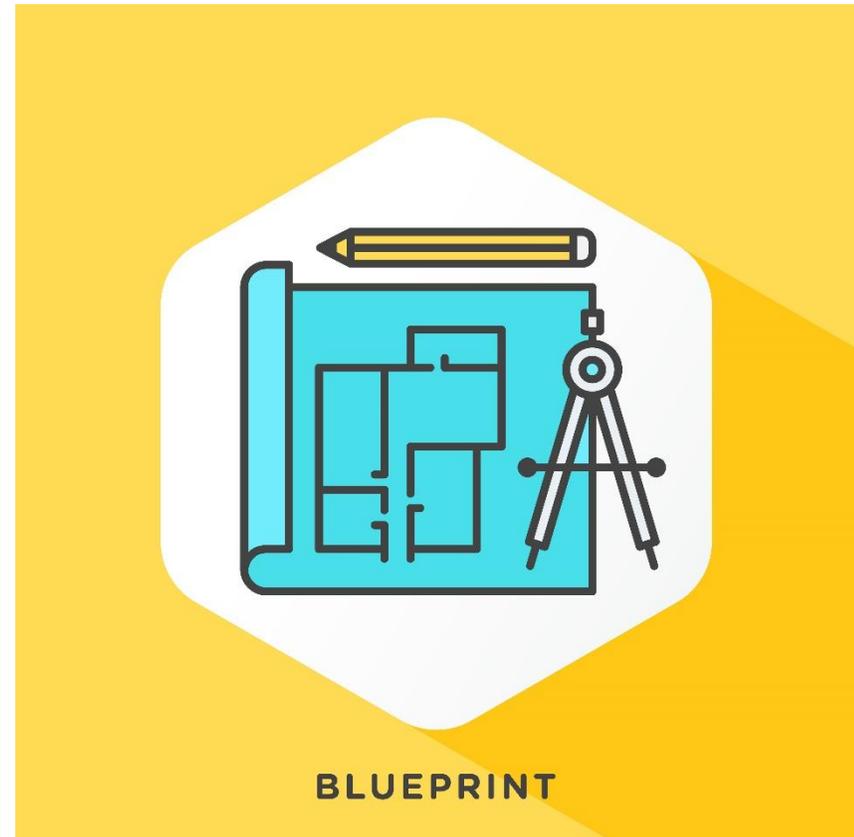


WHAT IS THE CIP? &  
WHY IS IT IMPORTANT?



# CAPITAL IMPROVEMENT PLAN

- Five Year Planning Document
- Maintain and improve City infrastructure
- \$18.7M over five years
- Four Categories:
  - Civic
  - Streets
  - Waste Water
  - Water



# OVERVIEW

## FY 16/17 – FY 20/21 Capital Improvement Plan

### Funding by Project Category

|                   | FY 16/17           | FY 17/18           | FY 18/19           | FY 19/20         | FY 20/21        | Five Year Total     |
|-------------------|--------------------|--------------------|--------------------|------------------|-----------------|---------------------|
| Civic             | \$331,000          | \$20,000           | \$20,000           | \$20,000         | \$20,000        | \$411,000           |
| Streets           | \$801,665          | \$290,000          | \$125,000          | \$850,000        | \$850,000       | \$2,916,665         |
| <i>Wastewater</i> | <i>\$692,070</i>   | <i>\$427,000</i>   | <i>\$588,000</i>   | <i>\$528,000</i> | <i>\$38,000</i> | <i>\$2,273,070</i>  |
| <i>Water</i>      | <i>\$4,801,319</i> | <i>\$7,179,173</i> | <i>\$1,078,433</i> | <i>\$0</i>       | <i>\$0</i>      | <i>\$13,058,925</i> |
| <b>Total</b>      | \$6,626,054        | \$7,916,173        | \$1,811,433        | \$1,398,000      | \$908,000       | \$18,656,660        |

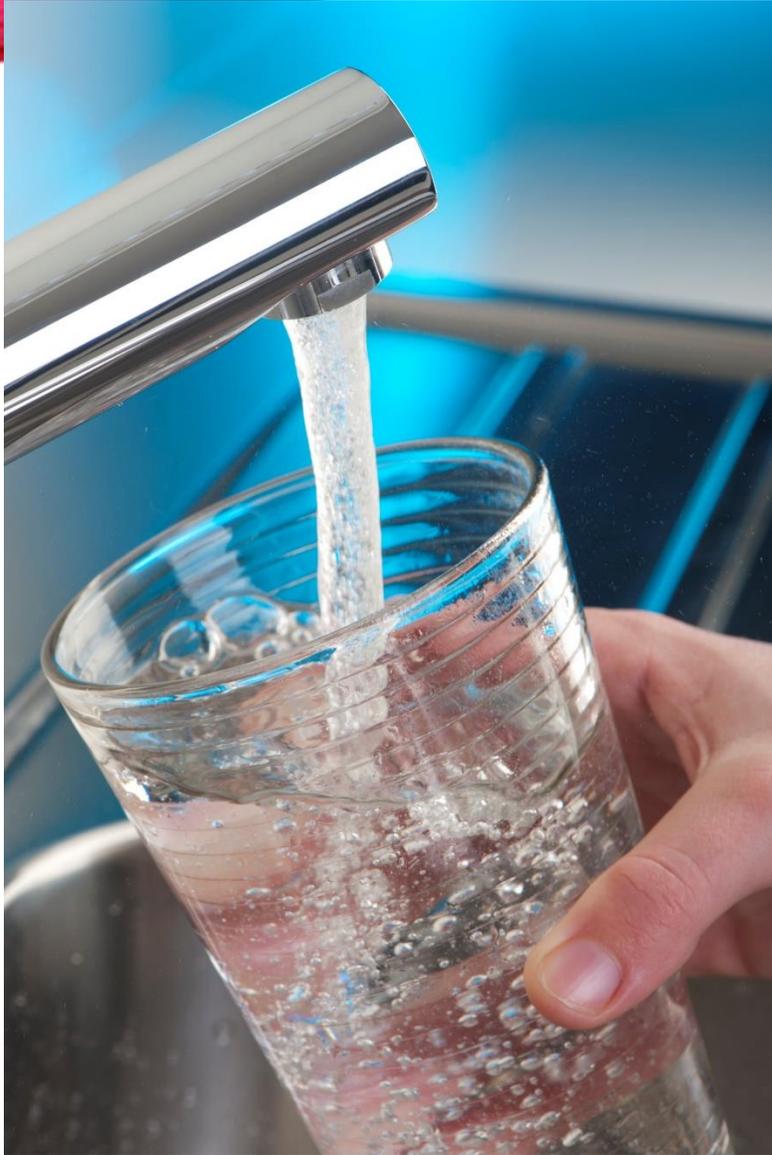
# WATER & WASTE WATER CAPITAL NEEDS

- Regulatory compliance
- Deferred maintenance



# WATER NET POSITION

|  |                      |                      |
|--|----------------------|----------------------|
| <b>Estimated Water Unrestricted Net Position @ 6/30/16</b> |                      | <b>\$4,923,632</b>   |
| Total Revenues   | \$3,783,308          |                      |
| Total Expenses   | (\$5,122,115)        |                      |
| Revenues less Expenses                                     |                      | <b>(\$1,338,807)</b> |
| <b>Use of Water Cash</b>                                   | <b>(\$1,338,807)</b> |                      |
| 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%                  |

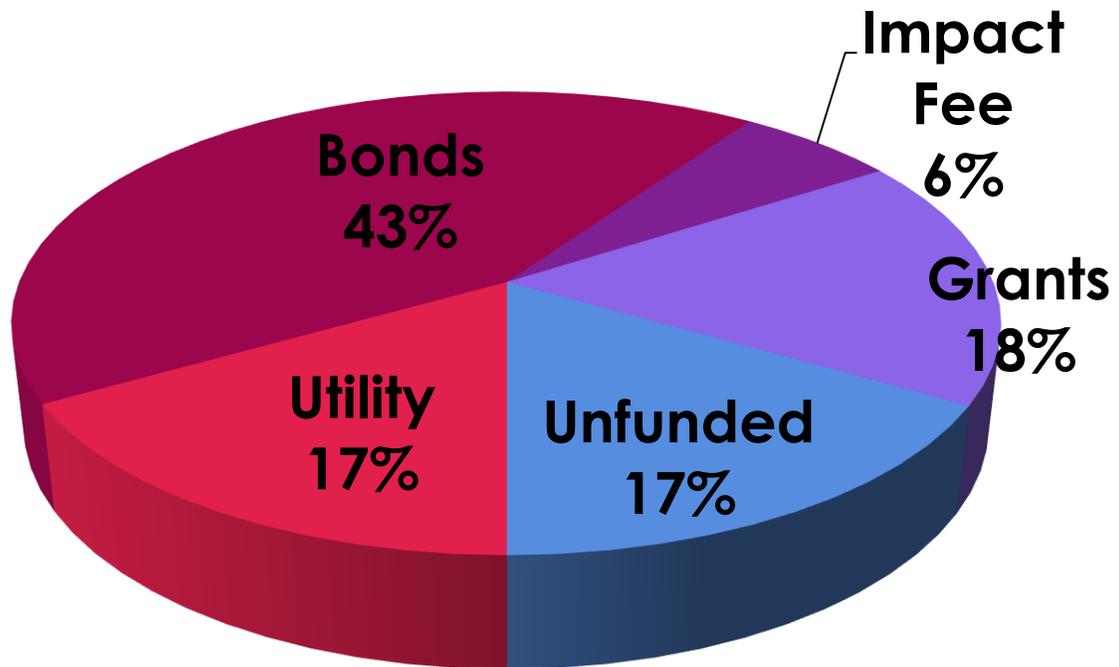


# WATER

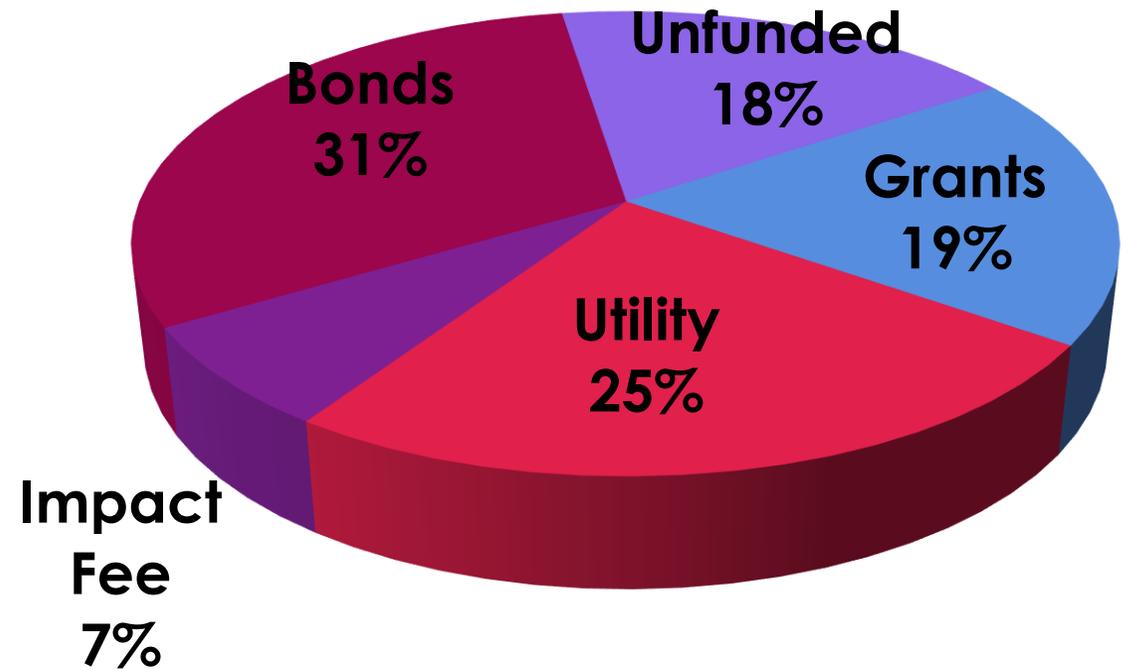
- Utilize existing capital fund balance
  - Current capital project utility fund balance is \$1,040,000
  - Five year capital project utility fund expenditure is \$4,874,126
  - Fiscal Year 2017/2018 will require additional funds

# WATER

## FY 16/17 Funding



## Five Year Funding



# WATER – CAPITAL PROJECTS

| PROJECT NAME                            | ESTIMATED PROJECT COST |
|---|------------------------|
| York Creek Upper Dam Removal/Mitigation | \$6,500,000            |
| Meadowood Tank Upgrade                  | \$398,948              |
| Bell Canyon Reservoir Improvements      | TBD                    |
| Recycled Water Mains                    | TBD                    |
| Dwyer Road Booster                      | \$2,590,000            |
| Bell Canyon Tower Valve Replacement     | \$287,325              |
| Bell Valve House Valve Replacement      | \$575,135              |
| Holmes Tank Upgrade                     | \$1,428,000            |
| Bell Canyon Creek Inflow Measurement    | \$872,645              |
| Replace Telemetry at LSWTP              | TBD                    |
| Influent Valve Actuator                 | TBD                    |
| Lower Reservoir Water Treatment         | TBD                    |
| Raw Water Metering Station              | TBD                    |

# WATER – CAPITAL PROJECTS

| PROJECT NAME                         | ESTIMATED PROJECT COST |
|--------------------------------------|------------------------|
| Tank 2 Rehabilitation                | \$750,000              |
| Well Filter Rehabilitation           | \$265,541              |
| Pump Station Upgrades                | \$200,000              |
| Replace 12" Transmission Main        | TBD                    |
| Lower Reservoir Dam Rehab            | \$590,695              |
| Bell Canyon Intake Tower Replacement | \$2,000,000            |
| Upgrade Rutherford Pump Station      | \$500,000              |
| <b>Total</b>                         | <b>\$16,868,289</b>    |

# WASTE WATER

- Utilize existing capital fund balance
  - Current capital fund balance is roughly \$1,100,000
  - Five year capital project expenditure is \$2,203,020
  - Fiscal Year 2018/2019 will require additional funds
  - Waste water net position is less than zero

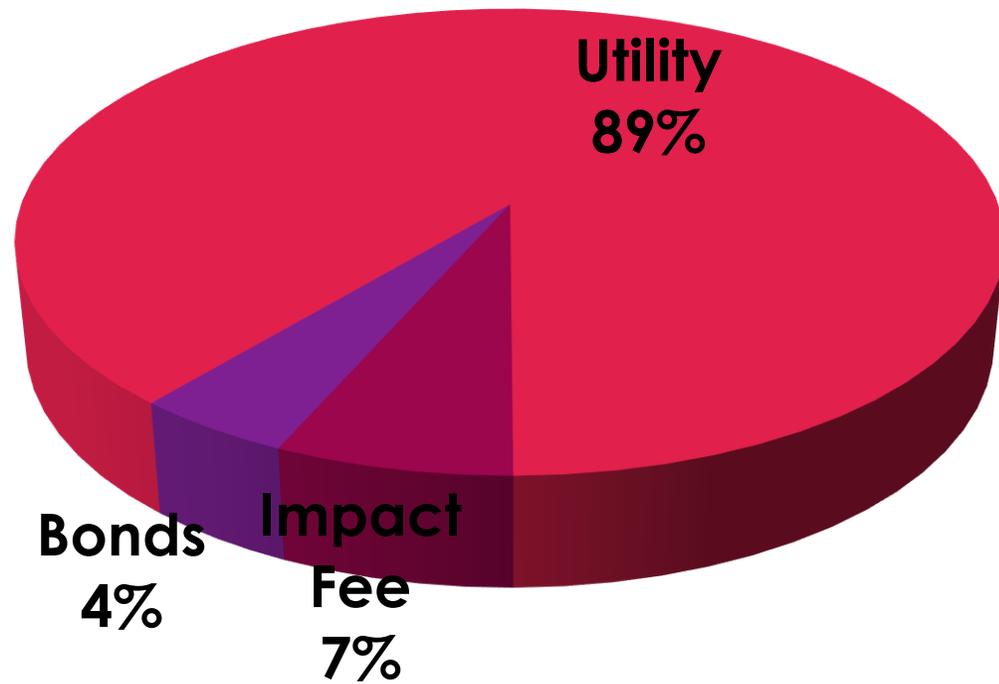


# WASTE WATER NET POSITION

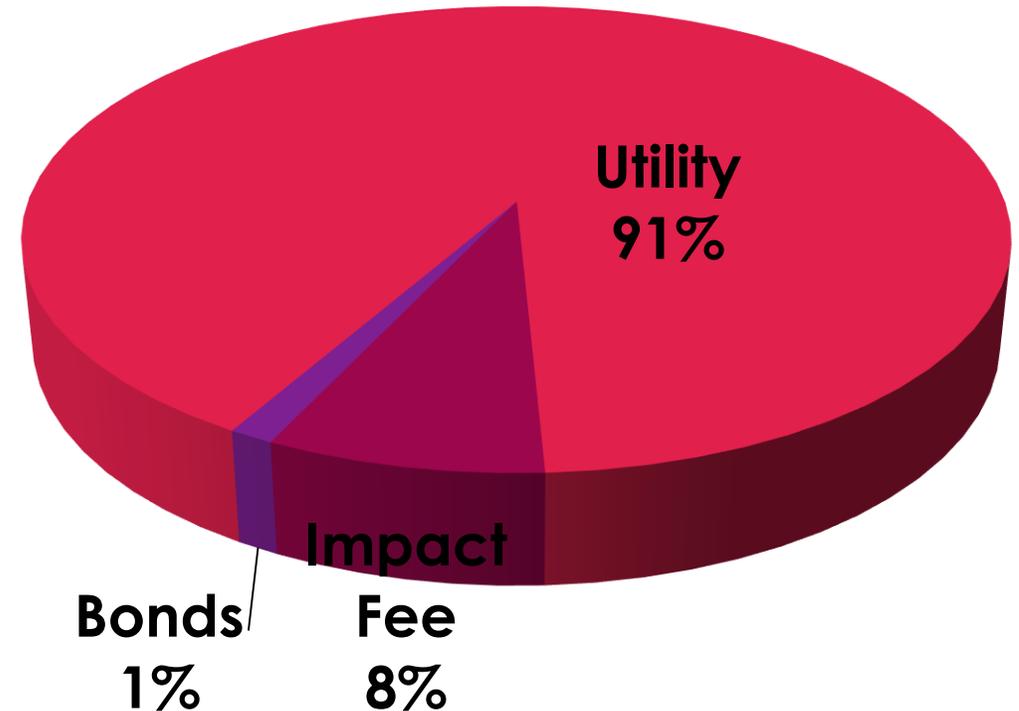
|   |               |                   |
|---|---------------|-------------------|
| <b>Estimated WW Unrestricted Net Position @ 6/30/16</b> |               | <b>(\$79,804)</b> |
| Total Revenues  | \$2,110,647   |                   |
| Total Expenses  | (\$2,057,934) |                   |
| Revenues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

# WASTE WATER

## FY 16/17 Funding



## Five Year Funding



# WASTE WATER

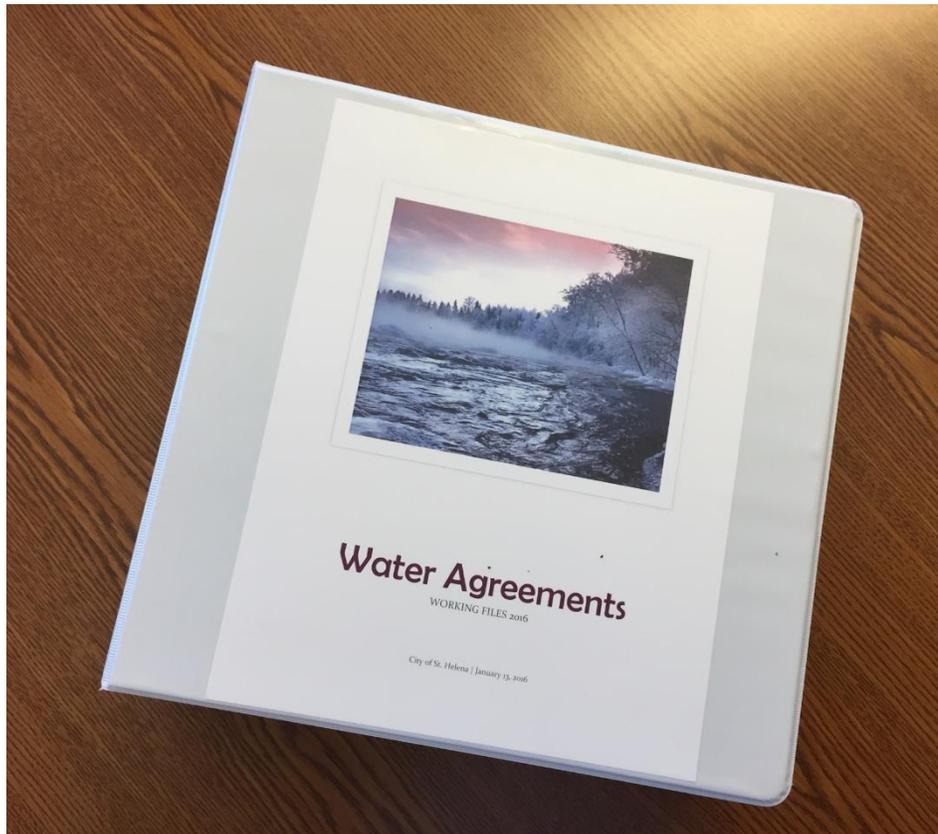
| PROJECT NAME                                   | TOTAL PROJECT COST |
|--|--------------------|
| Recycled Water (Tertiary Treatment)            | TBD                |
| Misc. Maintenance Projects                     | \$175,000          |
| WWTP Upgrades Phase I                          | \$1,442,108        |
| Reclamation Field Improvements                 | \$142,000          |
| Pond 2 & 3 Levee                               | \$120,000          |
| Automation for Disinfection and Dechlorination | \$157,000          |
| Oak Avenue Sewer Line Replacement              | TBD                |
| New Well                                       | \$65,000           |
| Sludge Removal                                 | \$150,000          |
| Charter Oak Sewer Repair                       | \$467,049          |
| Install and Operate Temp WWTP Office           | \$17,000           |
| <b>TOTAL</b>                                   | <b>\$2,770,157</b> |

# WATER AGREEMENTS



# WATER AGREEMENTS

- Types of Agreements
  - Purchased water
  - Fire Service
  - Non-potable water
  - Potable water
- Continue to work on detailed historical analysis and overall review
- City is committed to provide water per the terms of the agreements



# WATER AGREEMENTS

- Potable Water Agreements
  - 24 water agreements known
  - Majority of agreements base price on water rates
  - Majority of agreements have penalties if customer uses more water than stated in agreement



# 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

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, before it is presented to City Council

The background features a light blue gradient with several flowing, wavy lines in shades of red, pink, and cyan. The word "BREAK" is centered in a bold, black, sans-serif font.

**BREAK**

# WATER RATE STUDY



HOW ARE THE CURRENT  
RATES SET?



# 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

|                   |   |  |
|-------------------|---|--|
| <b>Scenario 1</b> | <b>Modified Current Rate Structure - Uniform</b>  | <b>Same as current except no tiers for use charges</b> |
|                   | <ul style="list-style-type: none"><li>All customers pay a base charge by meter size per month + a flat use charge for all water</li></ul>   |  |
| <b>Scenario 2</b> | <b>New Seasonal Rate Structure</b>  | <b>Seasonal use rates</b>                              |
|                   | <ul style="list-style-type: none"><li>All customers pay a uniform base charge by meter size per month + a seasonal use charge for all water</li></ul> <p>Peak = May through October<br/>Off-Peak = November through April</p> |  |

# ACTION ITEMS FOR WATER



# STANDBY RATE

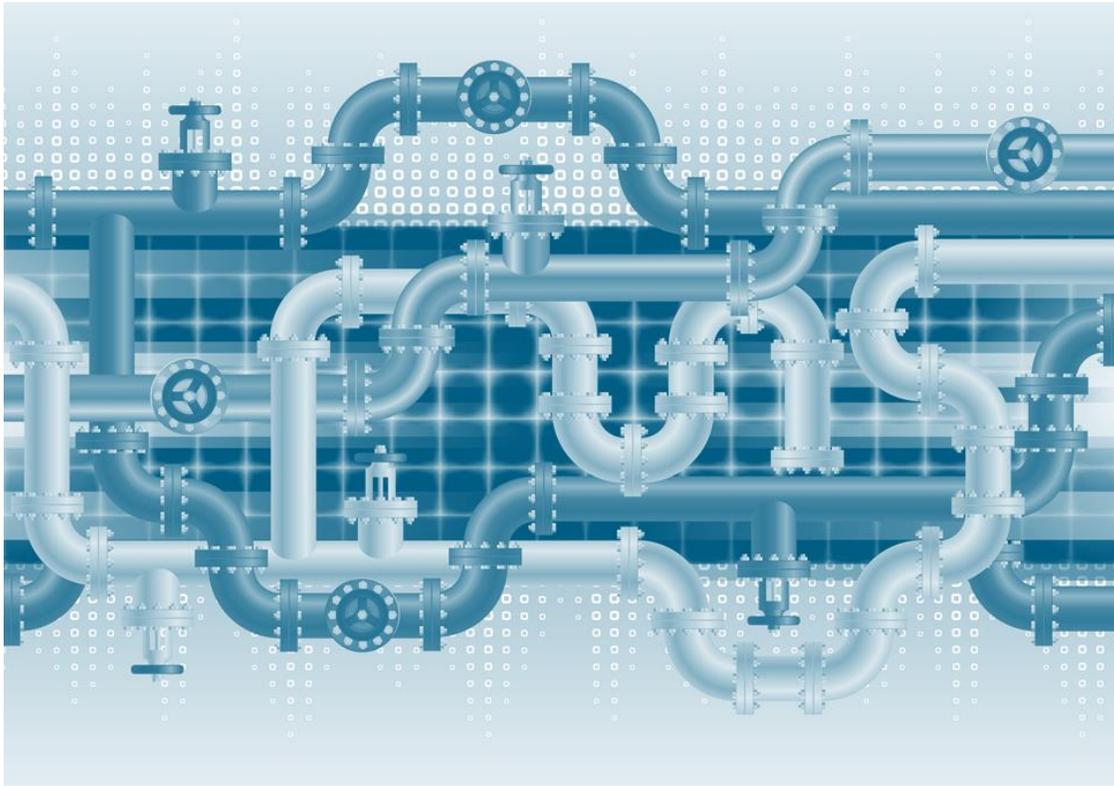
- Currently, the St. Helena Municipal Code allows any customer to go on “Standby”
- Standby: water is completely turned off
- Customer is charged \$2.50 a month
- Base rate is not paid while on standby
- Though there is no water use by the property, the utility system still requires revenue to operate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



## Options:

1. Keep municipal code the same, create mechanism to subsidize standby services
2. Update municipal code, all customers pay base rate
3. Implement a fee to turn on and off water

# 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

## Options:

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

# 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



## 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

# 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

## 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



# DROUGHT SURCHARGES

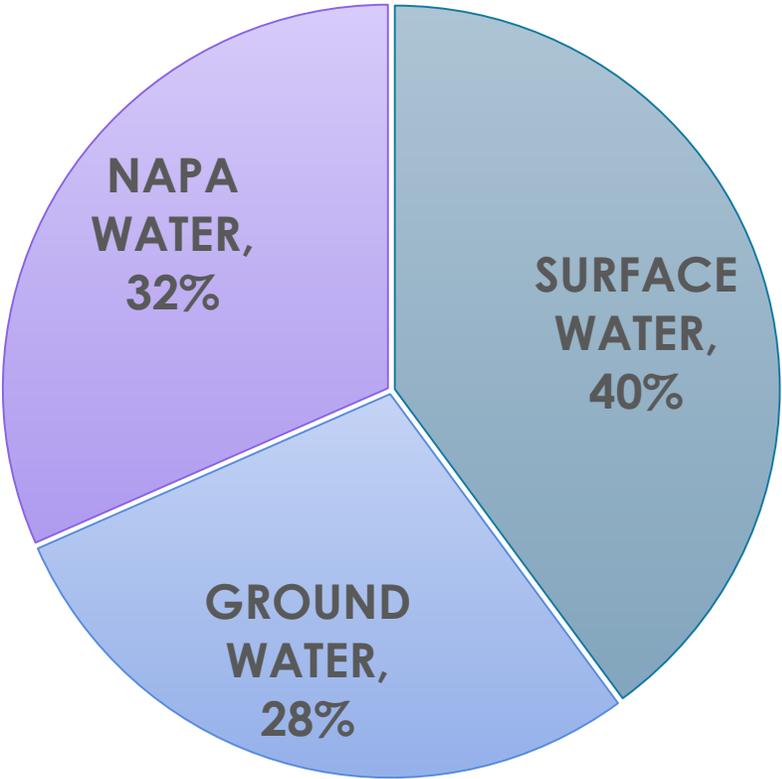
- During a drought additional water conservation leads to a decline in revenue, and the cost to deliver each unit of water increases
- A drought surcharge would help offset the revenue loss during drought periods and the increased cost per unit of water
- To do this, drought criteria needs to be clearly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

## **Example:**

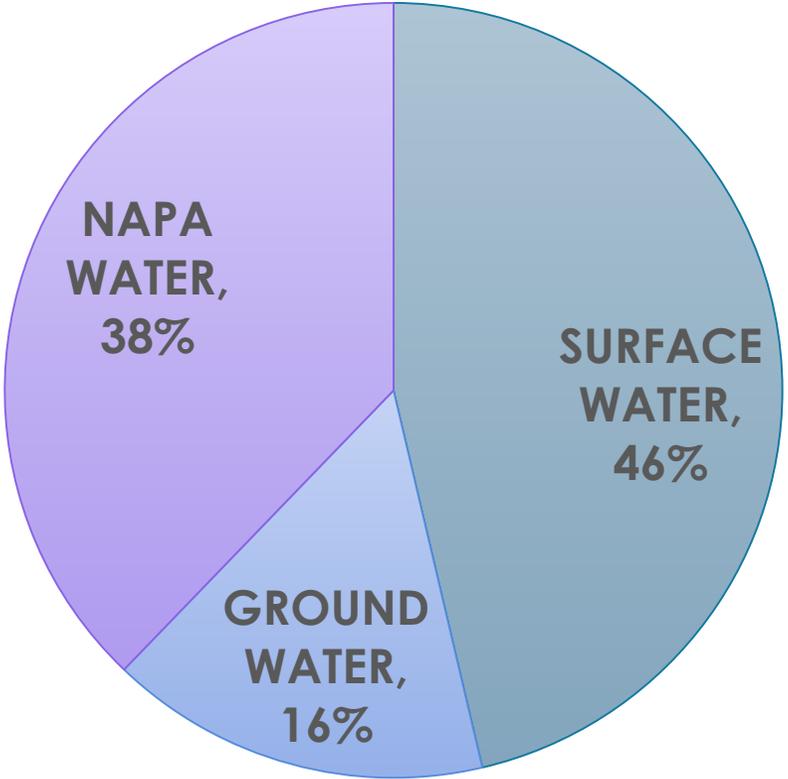
- Napa Agreement condition: In a dry year, “If Napa purchases supplies from an outside source, St. Helena shall pay Napa the actual price paid by Napa to fulfill St. Helena’s requested quantity from an outside source plus a 10% administration fee. In addition, St. Helena shall pay Napa the then current treat and wheel rate in effect to American Canyon (current rate is \$2.69/1,000 gallons).”

# WATER SUPPLY DROUGHT VS. NON-DROUGHT YEARS

2013 – 601,650,000 gallons



2015 – 501,660,000 gallons



# DROUGHT SURCHARGES



## Options

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

# 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 April through October

# 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. 70% base rate/30% 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

# WASTE WATER RATE STUDY



HOW ARE THE CURRENT  
RATES SET?



# WASTE WATER 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 waste water

# WASTE WATER 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 waste water 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 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 waste water
- Mobile Home parks classified as residential

# RATE STRUCTURE OPTIONS

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)

# 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>