



**Utility Rate Study Presentation**  
**January 23, 2019**  
**Director of Public Works**  
**Joe Pomroy**

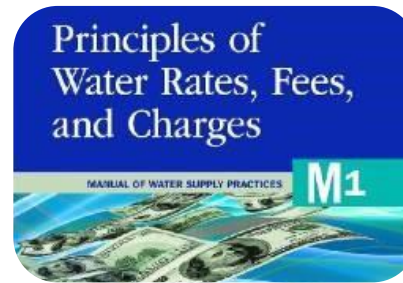
# The Director of Public Works is hired to...



protect our  
source water.



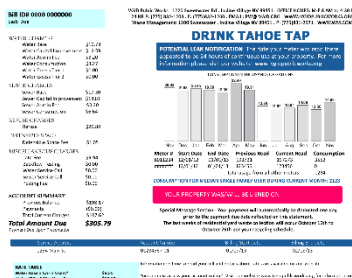
provide safe  
tap water.



be fiscally  
responsible.



maintain  
infrastructure.



provide high  
quality service.



promote safety.



safely transport  
effluent.

# Summary

- Rate Study Purpose
- Rate Study Fundamentals
- 2019-20 Water and Sewer Budgets
- Five Year Operating and Capital Projections
- Water and Sewer Rates
- Rate Comparisons
- Timeline
- Recommendation

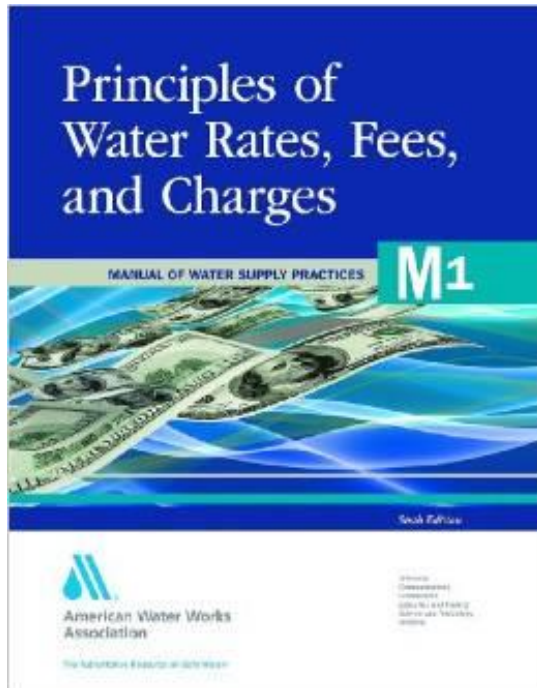
# Rate Study Purpose

- Determine CIP and Operating Expenses
- Determine Revenue Projections
- Examine Full Cost Pricing
- Balance Costs Equitably Among User Classes
- Provide Price Signals to Users
- Determine Needs for Bonding
- Fund Utility for Future Users

# Rate Study Fundamentals

- District Strategic Plan
  - Mission, Vision, Goals and Objectives, Culture Training, & Customer Service Training
- Industry Best Practices
  - Effective Utility Management
  - AWWA Best Practice Manuals
  - Professional Organizations, AWWA & WEF
  - Industry Peers
  - Benchmarking and Performance Measures

# Rate Study Fundamentals



- AWWA Manuals of Practice
- Industry best practices
- Guiding document – 60 years
- 300 pages of rate info
- Commodity demand method
- Increasing block rate structure

# Water Budget Summary

| <b>Water Budget</b>    | <b>2018-19<br/>Budget</b> | <b>2019-20<br/>Proposed</b> | <b>% Change</b> |
|------------------------|---------------------------|-----------------------------|-----------------|
| <b>Revenue</b>         |                           |                             |                 |
| Water Revenue          | <b>5,136,858</b>          | <b>5,316,070</b>            | <b>3.5%</b>     |
|                        |                           |                             |                 |
| <b>Expenditure</b>     |                           |                             |                 |
| Salaries and Benefits* | 1,793,027                 | 1,875,600                   | 4.6%            |
| Professional Services  | 46,050                    | 46,200                      | 0.3%            |
| Services and Supplies  | 911,518                   | 939,000                     | 3.0%            |
| Insurance              | 93,720                    | 92,000                      | -1.8%           |
| Utilities              | 472,414                   | 477,100                     | 1.0%            |
| Central Services Cost  | 154,300                   | 174,000                     | 12.8%           |
| Fuels Management       | 50,000                    | 50,000                      | 0.0%            |
| <b>Expenditures</b>    | <b>3,521,029</b>          | <b>3,653,900</b>            | <b>3.8%</b>     |
|                        |                           |                             |                 |
| <b>Debt Service</b>    |                           |                             |                 |
| Principal              | 230,534                   | 237,000                     |                 |
| Interest               | 76,486                    | 67,000                      |                 |

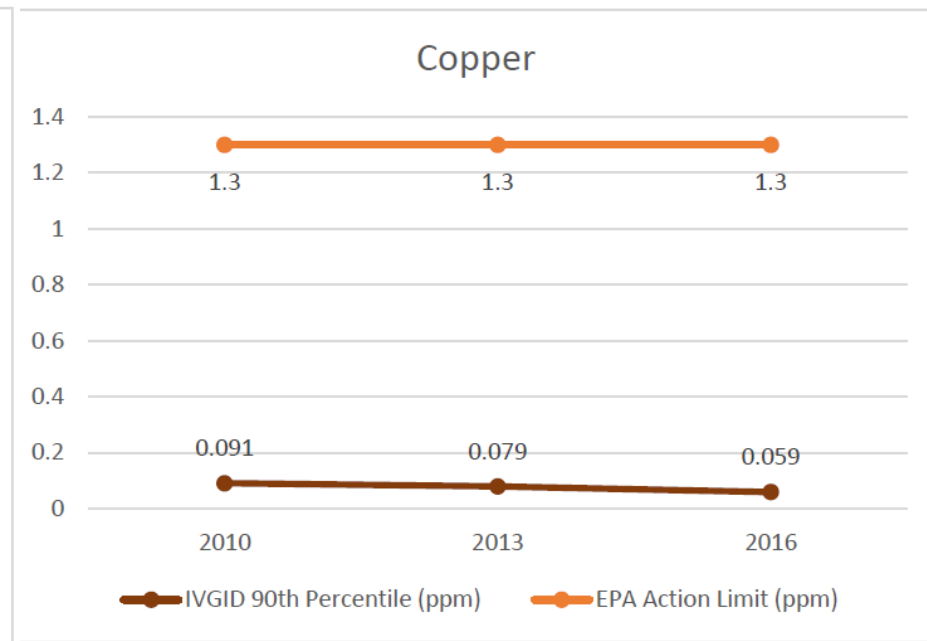
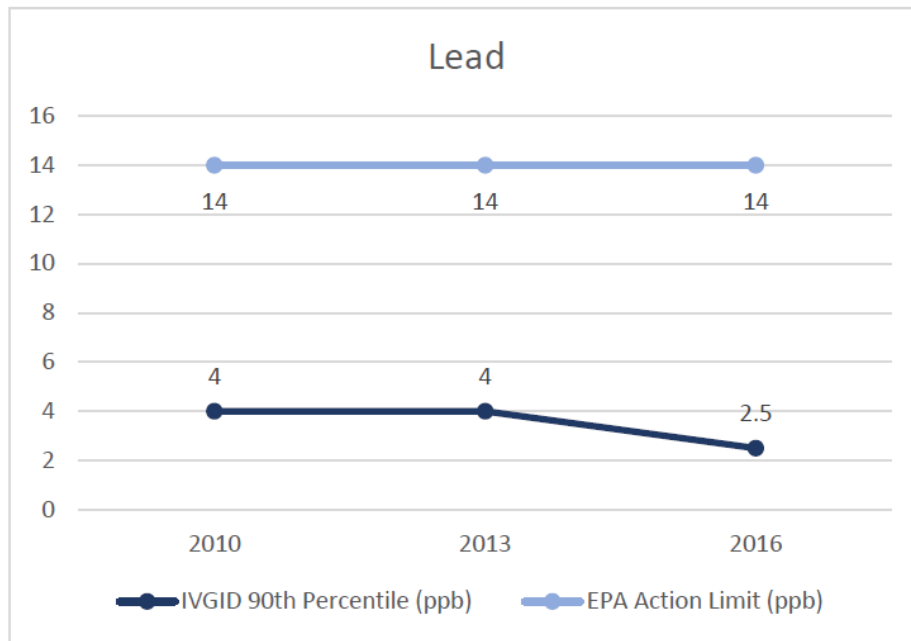
# Utility Customer Experience

- Reliability – 100% Service Goal
- Consistent product
- Customer conveniences and information
  - On-line accounts, e/bills and e/pay
  - Speak to a person, not a machine
  - Move in and Move out
  - Designating a tenant or agent for the account
  - Leak notification by email and bill



# Protecting our Water - Lead and Copper

- U.S. concern with Lead in water because of Flint Mich.
- Compliance with Federal Lead and Copper Rule
- Sampling at 20 Single Family Homes
- Sampling in 2019



# Water Budget – Chemicals

| <b>Chemical</b>  | <b>Budgeted Expense</b> |
|--|-------------------------|
| Liquid Oxygen to Make Ozone for Water Disinfection                   | \$26,000                |
| Sodium Hypochlorite for Water Disinfection                           | \$19,000                |
| Calcium Thiosulfate Disinfection Process Chemical                    | \$7,500                 |
| Sodium Silicate for Corrosion Control and Control of Lead and Copper | \$84,000                |
| <b>Total</b>   | <b>\$136,500</b>        |

# Water Conservation Program

- Starting July 1, 2019
- Water Conservation Rebate Program
  - \$100 Bill Credit for Newly Installed:
    - Water Sense Labeled Dishwasher
    - Water Sense Labeled Toilet
    - Automated leak sensors
    - Limited to \$10,000
- Continue Water Audit Program
- Assist with Residential Leak Detection

# Protecting our Water - Backflow

- Protect the consumer
- Protect the water supply
- Educate the consumer
- Revenue of \$105,000 (1,700 tests)



# Sewer Budget Summary

| <b>Sewer Budget</b>    | <b>2018-19<br/>Budget</b> | <b>2019-20<br/>Proposed</b> | <b>% Change</b> |
|------------------------|---------------------------|-----------------------------|-----------------|
| <b>Revenue</b>         |                           |                             |                 |
| <b>Sewer Revenue</b>   | <b>6,714,622</b>          | <b>6,970,645</b>            | <b>3.8%</b>     |
|                        |                           |                             |                 |
| <b>Expenditures</b>    |                           |                             |                 |
| Salaries and Benefits* | 1,925,890                 | 2,014,400                   | 4.6%            |
| Professional Services  | 52,200                    | 52,400                      | 0.4%            |
| Services and Supplies  | 819,318                   | 843,900                     | 3.0%            |
| Insurance              | 113,520                   | 105,600                     | -7.0%           |
| Utilities              | 446,339                   | 450,800                     | 1.0%            |
| Central Services Cost  | 154,300                   | 174,000                     | 12.8%           |
| Fuels Management       | 50,000                    | 50,000                      | 0.0%            |
| <b>Expenditures</b>    | <b>3,561,567</b>          | <b>3,691,100</b>            | <b>3.6%</b>     |
|                        |                           |                             |                 |
| <b>Debt Service</b>    |                           |                             |                 |
| Principal              | 279,144                   | 287,000                     |                 |
| Interest               | 56,970                    | 45,000                      |                 |

# Sewer Budget – Chemicals

| <b>Chemical</b>                               | <b>Budgeted Expense</b> |
|---|-------------------------|
| Solids Dewatering Polymer                     | \$76,000                |
| Sodium Hypochlorite for Effluent Disinfection | \$26,000                |
| Odor Control Chemicals                        | \$29,000                |
| Sewer pH Adjustment Chemical                  | \$27,000                |
| <b>Total</b>                                  | <b>\$158,000</b>        |

# Sewer Budget – Sewer Mains

| Sewer Main Activity                                     | Budgeted Expense       |
|---|------------------------|
| Sewer Main Cleaning<br>120,000 feet of hydroflush       | \$66,000 (\$0.55/foot) |
| Sewer Main CCTV Inspection<br>30,000 feet of inspection | \$45,000 (\$1.50/foot) |
| Sewer Main Repairs                                      | \$40,000               |
| <b>Total</b>  | <b>\$151,000</b>       |

# Utilities Personnel

| Budget Year | Full Time | Part Time | Total |
|-------------|-----------|-----------|-------|
| 2006-07     | 31.2      | 0.7       | 31.9  |
| 2016-17     | 31.2      | 3.3       | 34.5  |
| 2017-18     | 31.2      | 3.4       | 34.6  |
| 2018-19     | 32.2      | 2.4       | 34.6  |
| 2019-20     | 32.2      | 2.2       | 34.4  |



# Budgeted Expenses 2019-20

| Budget Item  | Budgeted Expense |
|--|------------------|
| Customer Service<br>(Billing, meter reading, front office) | \$398,000        |
| Fleet Maintenance Services                                 | \$344,000        |
| Buildings Maint. Services                                  | \$109,000        |
| Fuel   | \$65,000         |
| Regulatory Permits<br>(NDEP, NDSL, BSDW)                   | \$32,000         |

# Utility Budget Summary

| Utility Budget                 | 2018-19<br>Budget | 2019-20<br>Proposed | % Change    |
|--------------------------------|-------------------|---------------------|-------------|
| <b>Revenues</b>                |                   |                     |             |
| <b>Water and Sewer Revenue</b> | <b>11,851,480</b> | <b>12,286,715</b>   | <b>3.7%</b> |
|                                |                   |                     |             |
| <b>Expenditures</b>            |                   |                     |             |
| Salaries and Benefits*         | 3,718,917         | 3,890,000           | 4.6%        |
| Professional Services          | 98,250            | 98,600              | 0.4%        |
| Services and Supplies          | 1,730,836         | 1,782,900           | 3.0%        |
| Insurance                      | 207,240           | 197,600             | -4.7%       |
| Utilities                      | 918,753           | 927,900             | 1.0%        |
| Central Services Cost          | 308,600           | 348,000             | 12.8%       |
| Fuels Management               | 100,000           | 100,000             | 0.0%        |
| <b>Expenditures</b>            | <b>7,082,596</b>  | <b>7,345,000</b>    | <b>3.7%</b> |
|                                |                   |                     |             |
| <b>Debt Service</b>            |                   |                     |             |
| Principal                      | 509,678           | 524,000             |             |
| Interest                       | 133,456           | 112,000             |             |
| <b>Debt Service Total</b>      | <b>643,134</b>    | <b>636,000</b>      |             |

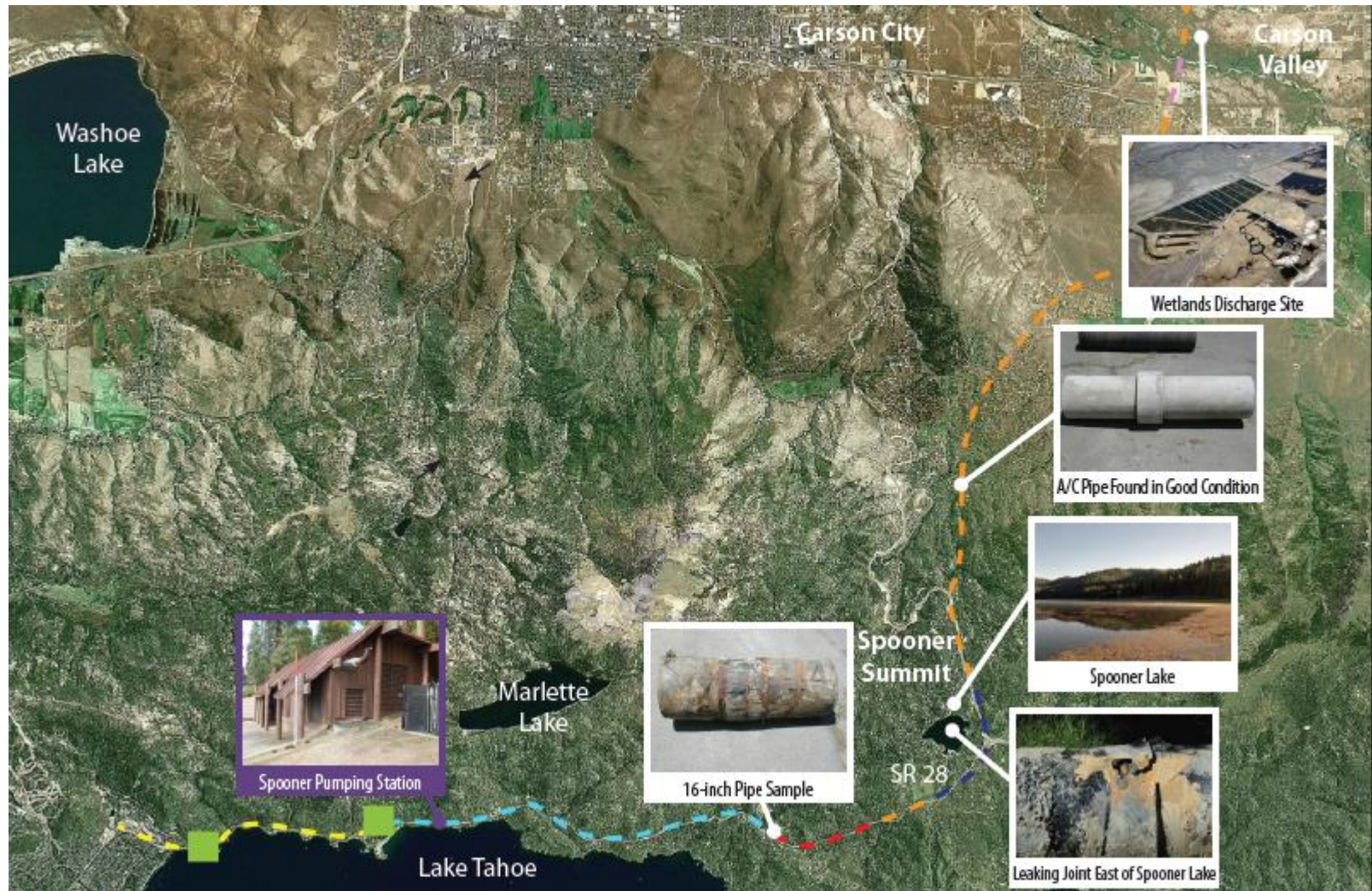
# 2019-20 Capital Projects

- Effluent Export Funding
- SPS-1 Pump Drive Replacement
- Water Reservoir Safety Improvements
- Burnt Cedar Electrical Improvements
- WRRF Aeration Project
- Preliminary Estimate \$4.32 M
- New Dump Truck

# Effluent Export Pipeline Phases

- Phase 1 Years 2006 – 2009
  - Replaced 29,700 linear feet
  - Total Cost - \$15,300,000
  - District Share - \$3,700,000
  - USACE Share - \$11,600,000
- Phase 2 Years 2014 – 2024
  - Replace up to 31,000 linear feet
  - Total Project Cost Estimated at \$23,000,000
  - Accumulate \$2,000,000 per year

# Export Pipeline Segment Map

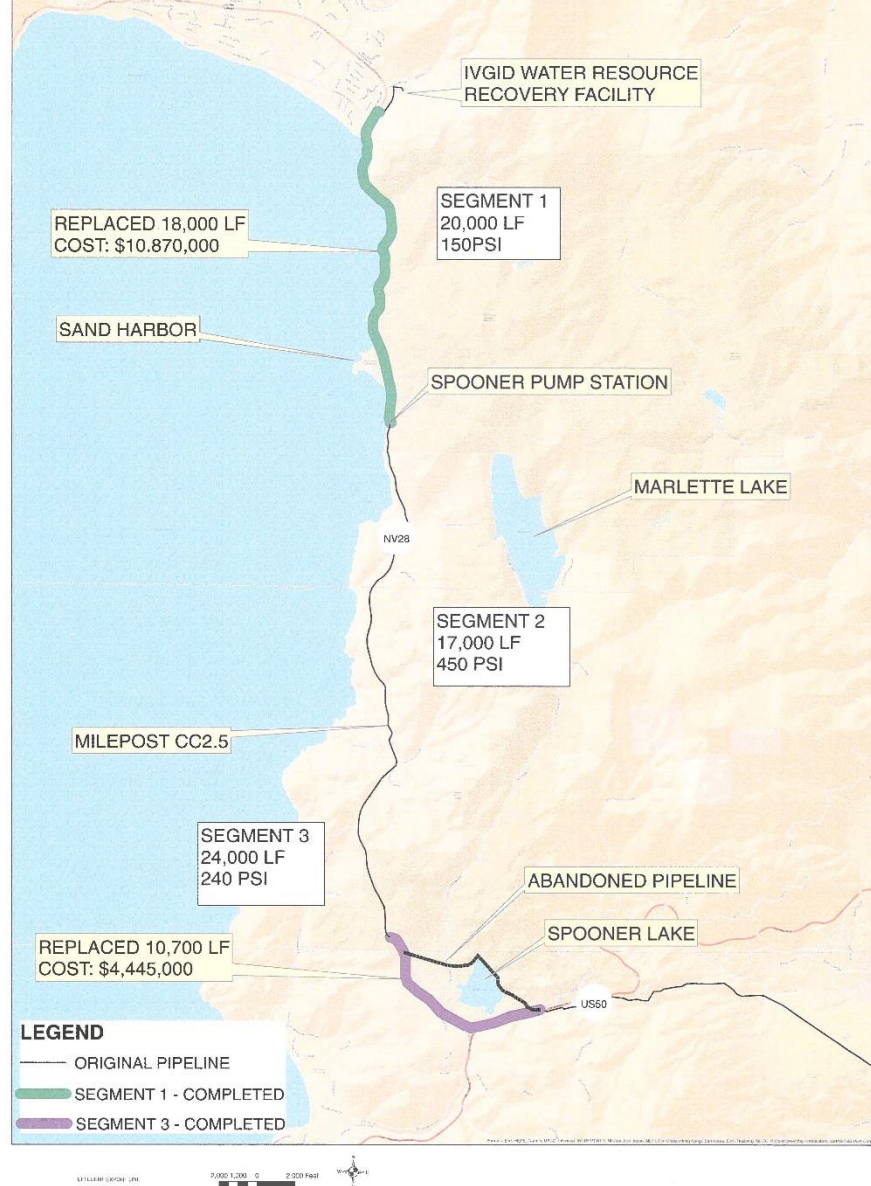




# EFFLUENT EXPORT PIPELINE

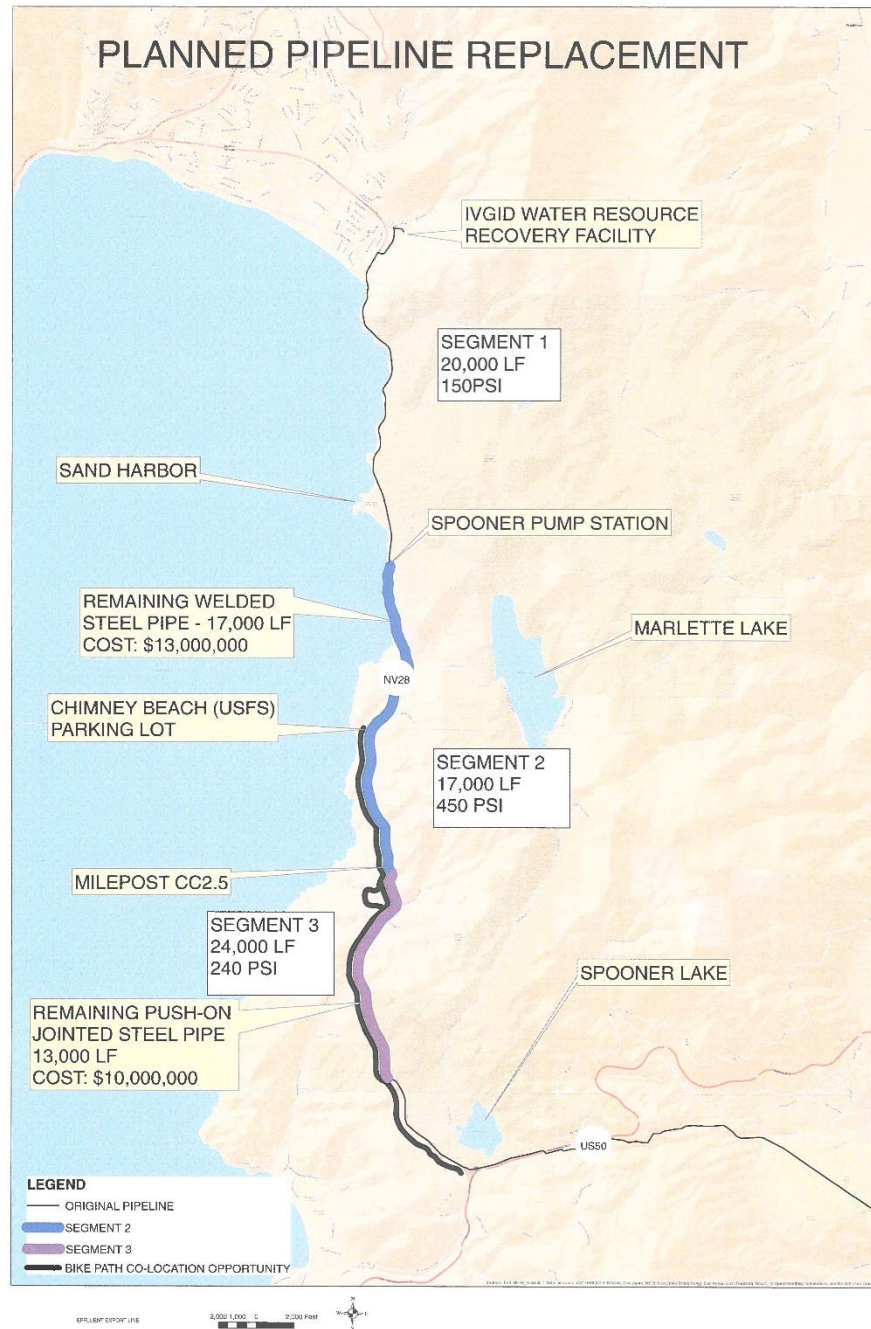


# COMPLETED PIPELINE REPLACEMENT 2006-2009





# PLANNED PIPELINE REPLACEMENT

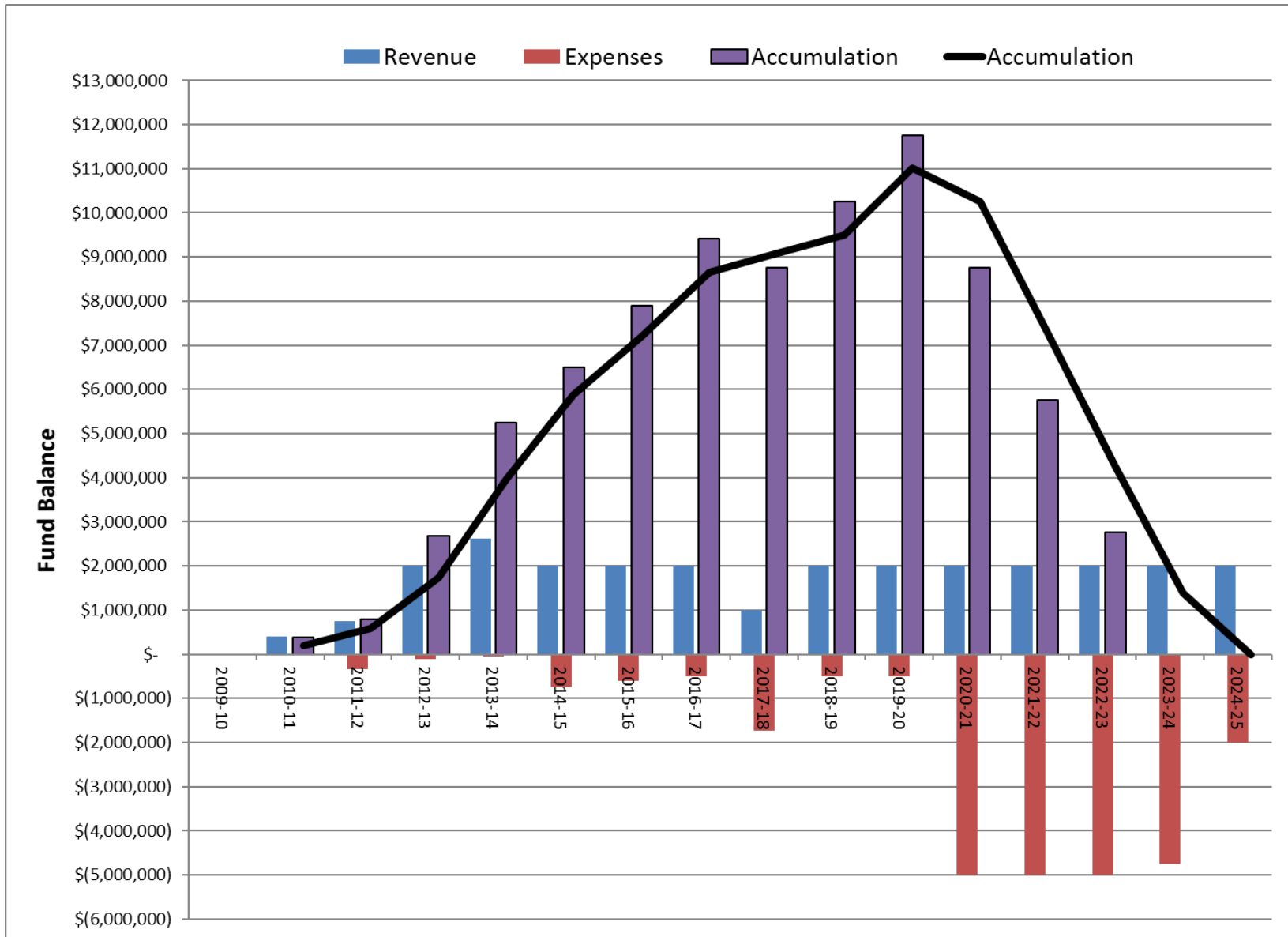




# Export Pipeline Phase II

|                            | <b>Annual CIP<br/>Expenses</b> | <b>Cumulative CIP<br/>Expenses</b> | <b>Annual CIP<br/>Revenue</b> | <b>Project<br/>Balance</b> | <b>Sewer Rate<br/>Increase</b> |
|----------------------------|--------------------------------|------------------------------------|-------------------------------|----------------------------|--------------------------------|
| <b>2010-11 Fiscal Year</b> | \$21,250                       | \$21,250                           | \$400,000                     | \$378,750                  | 3.9%                           |
| <b>2011-12 Fiscal Year</b> | \$330,827                      | \$352,077                          | \$750,000                     | \$797,923                  | 9.4%                           |
| <b>2012-13 Fiscal Year</b> | \$111,663                      | \$463,740                          | \$2,000,000                   | \$2,686,260                | 9.9%                           |
| <b>2013-14 Fiscal Year</b> | \$59,424                       | \$523,164                          | \$2,624,338                   | \$5,251,174                | 11.1%                          |
| <b>2014-15 Fiscal Year</b> | \$744,805                      | \$1,267,969                        | \$2,000,000                   | \$6,506,369                | 9.1%                           |
| <b>2015-16 Fiscal Year</b> | \$606,318                      | \$1,874,287                        | \$2,000,000                   | \$7,900,051                | 4.0%                           |
| <b>2016-17 Fiscal Year</b> | \$494,331                      | \$2,368,618                        | \$2,000,000                   | \$9,405,720                | 3.8%                           |
| <b>2017-18 Fiscal Year</b> | \$1,743,164                    | \$4,111,782                        | \$1,000,000                   | \$8,662,556                | 3.3%                           |
| <b>2018-19 Fiscal Year</b> | <i>\$700,000</i>               | \$4,811,782                        | <i>\$2,000,000</i>            | \$10,056,602               | 4.0%                           |
|                            | \$4,811,782                    |                                    | \$14,774,338                  |                            |                                |

# Export Project CIP Funding



# Export Pipeline Replacement Cost Reduction Strategy

- USACE Funding Support
  - 50% – 75% potential funding support
  - Lobbying efforts in DC via Marcus Faust continue
  - Discussions with USACE Sacramento District continue
- Bike Path Co-Location
  - \$7M potential cost savings
  - Work with TTD continues
  - NEPA effort underway
- Reduction in Pipeline Replacement
  - \$2M - \$4M per mile of pipe
  - Based on outcome of condition assessment

# 2019 5-Year Rate Study

- Water Rates - ↑ 4.0%
- Sewer Rates - ↑ 4.0%
- Overall Rates - ↑ 4.0%
- Increase is Spread Across Rate Components
- Average 3.5% Increase for Next 5 Years
- Commodity-Demand Model (fixed, variable, and CIP components)

# Operating Revenues and Expenses

| <b>5-Year Plan</b> | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b>  | <b>5-Yr Sum</b>  |
|--------------------|----------------|----------------|----------------|----------------|-----------------|------------------|
| Operating Revenue  | 7,360,000      | 7,650,000      | 7,952,000      | 8,265,000      | 8,591,000       | \$39,818,000     |
| Operating Expense  | (7,348,000)    | (7,598,000)    | (7,856,000)    | (8,122,000)    | (8,398,000)     | (\$39,322,000)   |
|                    |                |                |                |                | <b>Subtotal</b> | <b>\$496,000</b> |

Does not include depreciation

# Capital Revenues and Expenses

| <b>5-Year Plan</b> | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b>  | <b>5-Yr Sum</b>    |
|--------------------|----------------|----------------|----------------|----------------|-----------------|--------------------|
| Capital Revenue    | 5,047,000      | 5,139,000      | 5,253,000      | 5,371,000      | 5,491,000       | 26,301,000         |
| Capital Expense    | (4,860,000)    | (4,727,000)    | (4,885,000)    | (4,638,000)    | (4,543,000)     | (23,653,000)       |
|                    |                |                |                |                | <b>Subtotal</b> | <b>\$2,648,000</b> |

Note 1 - Capital Expense is net of grants and debt proceeds.

Note 2 – Include Bond Payment ~\$640,000 per year.

Note 2 – All Capital is from Current 2018-19 5-Year CIP

# Total Revenues and Expenses

| <b>2019 Five Year<br/>Rate Study</b> | <b>5-Year Total</b> |
|--------------------------------------|---------------------|
| Operating and Capital<br>Revenues    | \$66,119,000        |
| Operating and Capital<br>Expenses    | \$62,975,000        |
| <b>Net increase in reserves</b>      | <b>\$3,114,000</b>  |

# 2014 5-Year Rate Study

- How did we do on our projections over the 5 year period from 2014 to 2019?

| Component      | Projected<br>In 2014 | Actual<br>Looking Back |
|----------------|----------------------|------------------------|
| Annual Average | 3.9 % / yr           | 3.6 % / yr             |
| Total Increase | 21.1 %               | 19.4 %                 |



# Proposed 2019 Water Rates

| Current<br>2018 Rate Component | 2018 Rate       |  | Proposed<br>2019 Rate Component | 2019 Rate       | Change        |
|--------------------------------|-----------------|--|---------------------------------|-----------------|---------------|
| Base Rate                      | \$ 11.23        |  | Base Rate                       | \$ 11.97        | \$0.74        |
| Capital Improvements           | \$ 14.80        |  | Capital Improvements            | \$ 15.10        | \$0.30        |
| Customer Account Fee           | \$ 3.76         |  | Customer Account Fee            | \$ 3.97         | \$0.21        |
| Defensible Space               | \$ 1.05         |  | Defensible Space                | \$ 1.05         | -             |
| <b>Monthly Water Bill</b>      | <b>\$ 30.84</b> |  | <b>Monthly Water Bill</b>       | <b>\$ 32.09</b> | <b>\$1.25</b> |
| Consumption                    | \$ 1.50         |  | Consumption                     | \$ 1.55         | \$0.05        |
| 1st Tier                       | \$ 0.93         |  | 1st Tier                        | \$ 0.93         | \$0.00        |
| 2nd Tier                       | \$ 1.30         |  | 2nd Tier                        | \$ 1.34         | \$0.04        |

Consumption, Tier 1 and Tier 2 is cost per 1000 gallons of water use

# Proposed 2019 Sewer Rates

| Current<br>2018 Rate Component | 2018 Rate       |  | Proposed<br>2019 Rate Component | 2019 Rate       | Change         |
|--------------------------------|-----------------|--|---------------------------------|-----------------|----------------|
| Base Rate                      | \$ 18.30        |  | Base Rate                       | \$ 19.54        | \$ 1.24        |
| Capital Improvements           | \$ 30.70        |  | Capital Improvements            | \$ 31.45        | \$ 0.75        |
| Customer Account Fee           | \$ 3.76         |  | Customer Account Fee            | \$ 3.97         | \$ 0.21        |
| <b>Monthly Sewer Bill</b>      | <b>\$ 52.76</b> |  | <b>Monthly Sewer Bill</b>       | <b>\$ 54.96</b> | <b>\$ 2.20</b> |
| Sewer Use Rate                 | \$ 3.10         |  | Sewer Use Rate                  | \$ 3.20         | \$ 0.10        |

Sewer Use is cost per 1000 gallons of water use.

Residential sewer consumption is capped in summer months.

# Utility Bill History – Median User

| Year          | Monthly Water Charge | Monthly Sewer Charge | Total Monthly Water and Sewer Charge |
|---------------|----------------------|----------------------|--------------------------------------|
| 2014          | \$35.41              | \$55.75              | \$91.16                              |
| 2015          | \$36.15              | \$57.96              | \$94.11                              |
| 2016          | \$37.15              | \$60.24              | \$97.39                              |
| 2017          | \$38.47              | \$62.22              | \$100.69                             |
| 2018          | \$39.79              | \$63.88              | \$103.67                             |
| Proposed 2019 | \$41.35              | \$66.44              | \$107.78                             |

The breakdown of the **\$16.62** Rate Increase from 2014 to 2019

- **\$5.18** for CIP Revenue Increase, average increase of **2.4%** per yr
- **\$10.44** for Operating Revenue Increase, average increase of **4.2%** per yr

# Utility Bill – Median User

| Charge                                     | Amount   | % of Bill |
|--|----------|-----------|
| Variable                                   | \$20.73  | 19%       |
| Fixed                                      | \$39.45  | 37%       |
| Capital                                    | \$46.55  | 43%       |
| Defensible Space<br>(watershed protection) | \$1.05   | 1%        |
| Total                                      | \$107.78 | 100%      |

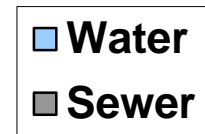
# Commercial Rates

| Meter Size | Water and Sewer Base Rates<br>Monthly Base Bill |
|------------|---|
| 3/4"       | \$87.05   |
| 1"         | \$139.35  |
| 1 1/2"     | \$268.93  |
| 2"         | \$425.05  |
| 3"         | \$789.59  |
| 4"         | \$1,310.25                                      |
| 6"         | \$2,610.73                                      |
| 8"         | \$4,171.93                                      |

# Full Cost Pricing

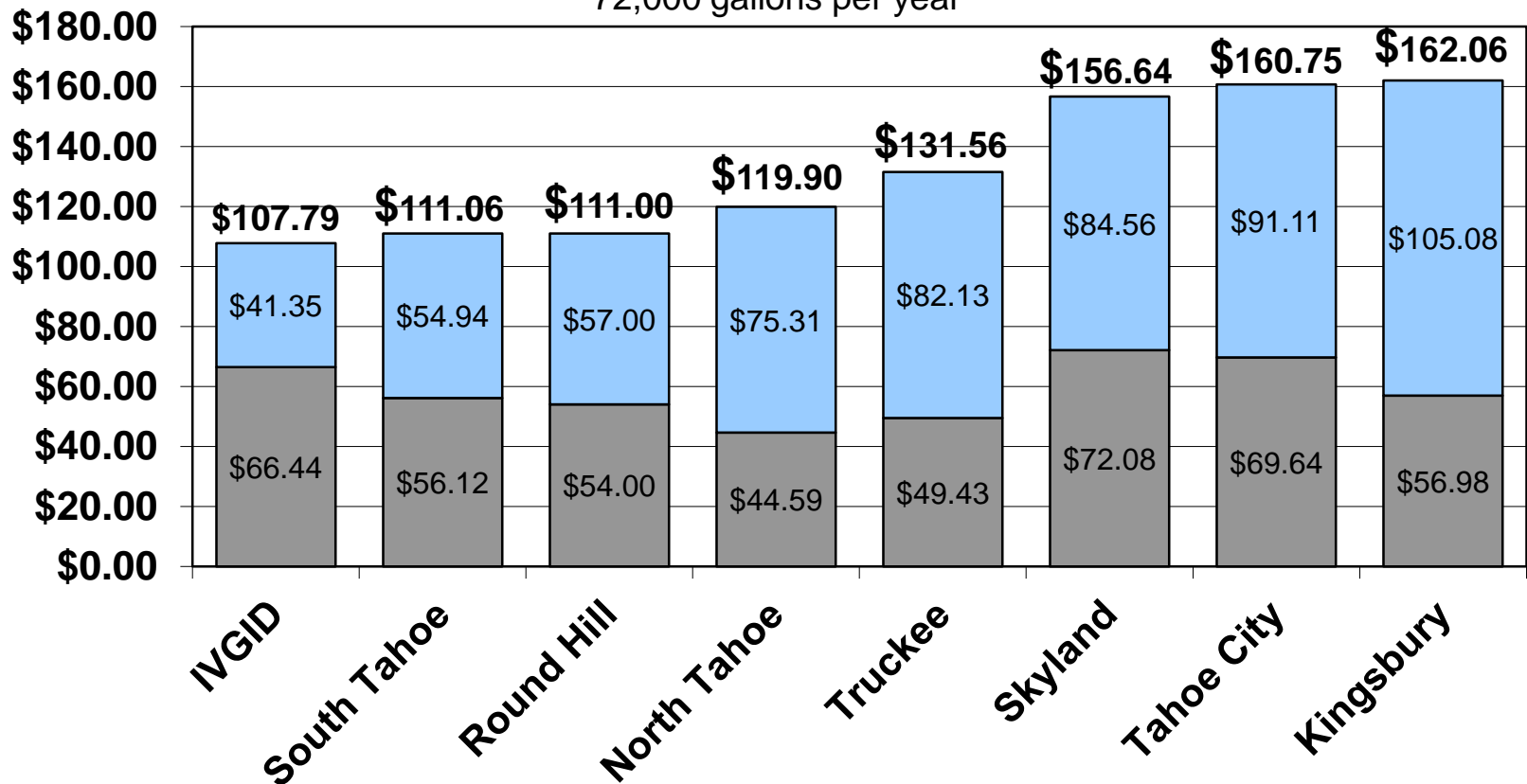
| <b>Customer Class</b> | <b>2019-20<br/>Budgeted<br/>Expense</b> | <b>2019-20<br/>Budgeted<br/>Revenue</b> |
|-----------------------|---|---|
| Water Rate Fixed      | \$1,899,000                             | \$1,952,000                             |
| Water Rate Variable   | \$1,763,000                             | \$1,699,000                             |
| Water Rate CIP        | \$1,187,000                             | \$1,663,000                             |
| Sewer Rate Fixed      | \$2,370,000                             | \$2,406,000                             |
| Sewer Rate Variable   | \$1,290,000                             | \$1,303,000                             |
| Sewer Rate CIP        | \$3,030,000                             | \$3,262,000                             |

# 2019 Utility Bill Comparison



## Single Family Average Monthly Bill Rates Applied to the Median User

6,000 gallons per month  
72,000 gallons per year



# 2019 5-Year Rate Study

- Water Rates - ↑4.0%
- Sewer Rates - ↑4.0%
- Overall Rates - ↑4.0%
- Increase is Spread Across Rate Components
- Average 3.5% Increase for Next 5 Years
- Commodity-Demand Model (fixed, variable, and CIP components)



# Other Changes

- Changes proposed to user fees (backflow, service calls, inspections)
- 5% Increase to connection fees for water and sewer

# Utility Rate Timeline

| Activity   | Date             |
|--|------------------|
| Utility Rate Study Presentation  | January 23, 2019 |
| Utility Rate Study Revisions if Directed by Board                              | February 6, 2019 |
| Set Date for Public Hearing to Adopt New Utility Rates – if no major revisions | February 6, 2019 |
| Notice of Public Hearing Published in Newspaper                                | March 8, 2019    |
| Courtesy Ad for Public Hearing Published in Newspaper                          | April 5, 2019    |
| Conduct Public Hearing and Adopt New Utility Rates                             | April 10, 2019   |
| New Utility Rates become effective pending approval                            | May 20, 2019     |

# Recommendation

- That the Board of Trustees provide direction and comment to Staff on the 2019 Five Year Utility Rate Study and proposed utility rate increase for 2019.
- Direct staff to prepare documents and Utility Rate Schedules for a one year average 4.0% utility rate increase in accordance with the 2019 Utility Rate Study.