



# Town of Lovettsville



## Water and Sewer Rate Study Council Presentation

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# Municipal and Financial Services Group

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- Specialized Financial and Management Consulting Practice
  - Focus on the financing of municipal and environmental infrastructure
  - Analysis of efficient delivery of public sector services
- Nationally Recognized
  - Practice started in 1976 as part of a large CPA firm
  - Became independent firm in 2001
  - Nationwide client base/focus on Mid-Atlantic
- Established track record of work in Northern VA
  - Loudoun Water
  - Middleburg
  - Leesburg
  - Purcellville



# Guiding Principles and Objective

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- The water and sewer systems must be financially self-supporting
- Growth pays for growth
- The Town should maintain reserves to provide for contingencies and unplanned expenses
- Water and sewer rates shall be kept as low as possible *over time*

## ***Objective: Ensure rates are stable through sound financial management and system maintenance***

- ✓ Review water and sewer funds to maintain financial stability and health
- ✓ Prepare long-term financial plan that includes capital investments required for a sustainable system

# Study Overview – Rate Setting Process

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Step 1 - Identify Revenue Requirements (Cost of Providing Service)



Step 2 – Identify Customer and Usage Patterns

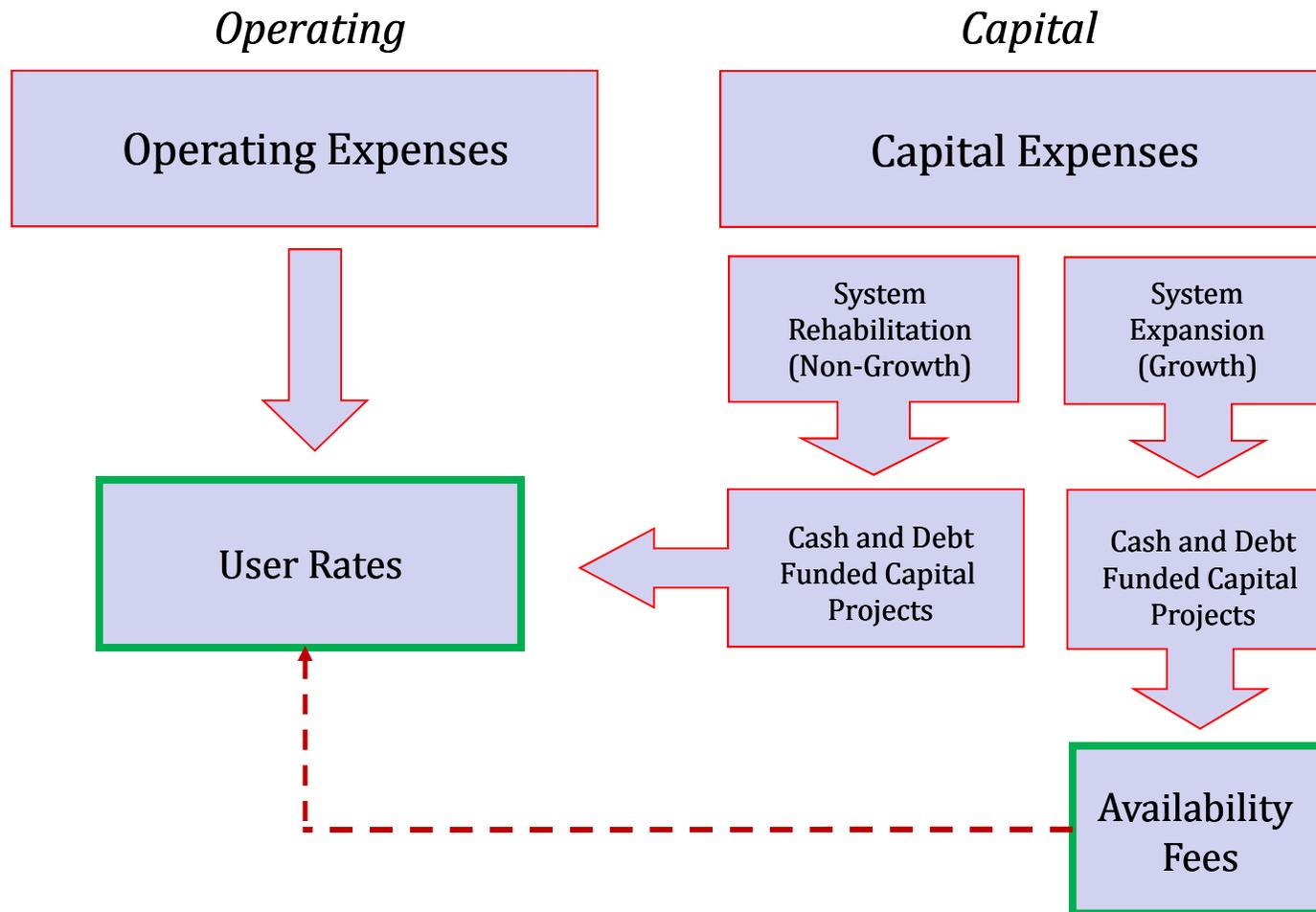


Step 3 – Develop Cost and Usage Projections



Step 4 – Develop Financial Plan and Recommend Rates

# Study Overview – Flow of Funds



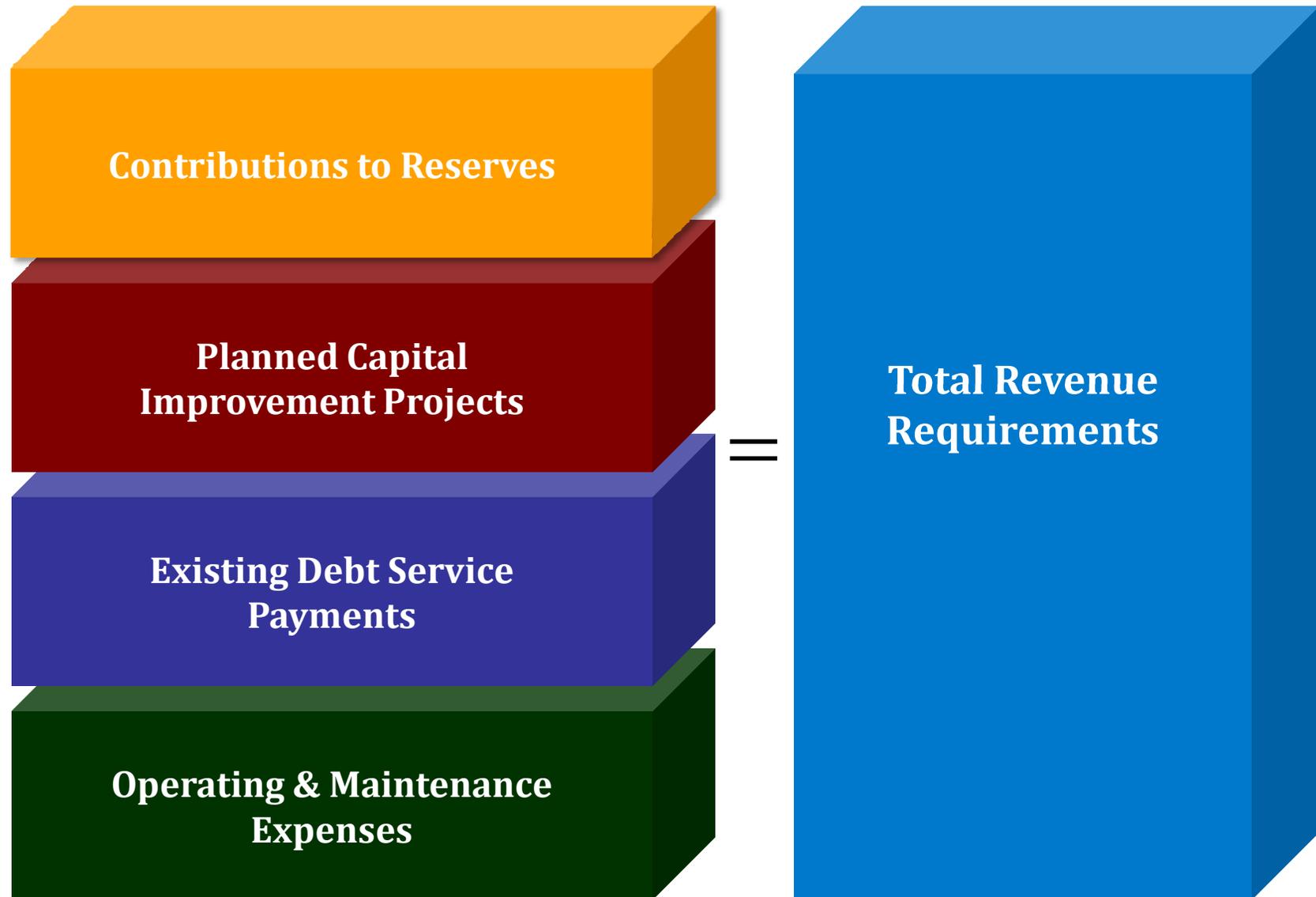
*If availability fees are set at less than cost or anticipated growth does not occur, existing customers will have to make up the difference via higher user rates.*

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# Water and Sewer Revenue Requirements



# “Building Blocks” of Revenue Requirements



# Operating & Maintenance Reserve

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- Serves as working capital
- Maintaining 90 days of annual operating expenses (25% of O&M expenses) is recommended
- If existing cash balance exceeds target O&M reserve balance, no contribution is required
  - Maximum contribution of 15 days of O&M expenses (if needed)
- Rates are set in order to maintain this reserve

# Repair, Replacement & Rehabilitation (“3R”) Reserve

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- What Should We Be Spending?
  - ✓ Review of existing assets
  - ✓ Estimated useful life used to determine replacement year
  - ✓ Estimation of replacement costs
- What Are We Spending?
  - ✓ Repair and replacement of assets
- What is Required Contribution to Make Up the Difference?
  - ✓ Difference between annual required reinvestment and annual spending

# Capital Projects and Funding

	Funding	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Water Capital Projects</b>						
Upgrades to Existing Water Tower	3R	\$6,000	\$6,000	-	-	-
Water Facility Improvement	3R	\$100,000	-	\$35,000	-	-
Water Line Replacement	Loan / 3R	-	\$230,000	\$20,000	\$15,000	\$290,000
New Water Tower	Avail. Fees	-	-	-	-	\$10,000
<b>Total</b>		<b>\$106,000</b>	<b>\$236,000</b>	<b>\$55,000</b>	<b>\$15,000</b>	<b>\$300,000</b>
<b>Water Capital Funding</b>						
User Rates (Cash)		-	-	-	-	-
User Rates (Loan)		-	-	-	-	\$145,000
3R Reserve		\$106,000	\$236,000	\$55,000	\$15,000	\$145,000
Availability Fees (Cash)		-	-	-	-	\$10,000
Availability Fees (Loan)		-	-	-	-	-
<b>Total</b>		<b>\$106,000</b>	<b>\$236,000</b>	<b>\$55,000</b>	<b>\$15,000</b>	<b>\$300,000</b>
<b>NO SEWER PROJECTS</b>						

# Water Availability Fee Cash Flow

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Availability Fees Sold	1	0	4	5	6
<b>Water Availability Fee Revenue*</b>	<b>\$8,100</b>	<b>-</b>	<b>\$32,400</b>	<b>\$40,500</b>	<b>\$48,600</b>
<b>Expenses</b>					
Existing Debt Service	\$42,900	\$46,600	\$45,000	\$43,500	\$46,800
Cash Funded Capital Projects	-	-	-	-	\$10,000
Projected Debt Service	-	-	-	-	-
<b>Total Expenses</b>	<b>\$42,900</b>	<b>\$46,600</b>	<b>\$45,000</b>	<b>\$43,500</b>	<b>\$56,800</b>
<b>Surplus / (Shortfall)</b>	<b>(\$34,800)</b>	<b>(\$46,600)</b>	<b>(\$12,600)</b>	<b>(\$3,000)</b>	<b>(\$8,200)</b>
<b>Beginning of Year Balance</b>	-	-	-	-	-
Surplus / (Shortfall)	(\$34,800)	(\$46,600)	(\$12,600)	(\$3,000)	(\$8,200)
<b>End of Year Balance</b>	-	-	-	-	-
<b>Shortfall to be made up by Water Rates</b>	<b>(\$34,800)</b>	<b>(\$46,600)</b>	<b>(\$12,600)</b>	<b>(\$3,000)</b>	<b>(\$8,200)</b>

*\*assumes no changes in the Town's Water Availability Fee  
Totals may not be exact due to rounding*

# Sewer Availability Fee Cash Flow

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Availability Fees Sold	25	29	28	34	12
<b>Sewer Availability Fee Revenue*</b>	<b>\$297,500</b>	<b>\$345,100</b>	<b>\$333,200</b>	<b>\$404,600</b>	<b>\$142,800</b>
<b>Expenses</b>					
Existing Debt Service	\$439,800	\$438,600	\$437,200	\$435,500	\$434,000
Cash Funded Capital Projects	-	-	-	-	-
Projected Debt Service	-	-	-	-	-
<b>Total Expenses</b>	<b>\$439,800</b>	<b>\$438,600</b>	<b>\$437,200</b>	<b>\$435,500</b>	<b>\$434,000</b>
<b>Surplus / (Shortfall)</b>	<b>(\$142,300)</b>	<b>(\$93,500)</b>	<b>(\$104,000)</b>	<b>(\$30,900)</b>	<b>(\$291,200)</b>
<b>Beginning of Year Balance</b>	<b>\$2,043,700</b>	<b>\$1,901,400</b>	<b>\$1,807,900</b>	<b>\$1,704,000</b>	<b>\$1,673,000</b>
Surplus / (Shortfall)	(\$142,300)	(\$93,500)	(\$104,000)	(\$30,900)	(\$291,200)
<b>End of Year Balance</b>	<b>\$1,901,400</b>	<b>\$1,807,900</b>	<b>\$1,704,000</b>	<b>\$1,673,000</b>	<b>\$1,381,800</b>
<b>Shortfall to be made up by Sewer Rates</b>	-	-	-	-	-

*\*assumes no changes in the Town's Sewer Availability Fee  
Totals may not be exact due to rounding*

# Water User Rate Revenue Requirements

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Operating Costs</b>					
Operating Expenses	\$300,000	\$306,000	\$312,200	\$318,500	\$324,900
Operating Reserve Contribution	-	-	-	\$900	\$1,600
<b>Total Operating Costs</b>	<b>\$300,000</b>	<b>\$306,000</b>	<b>\$312,200</b>	<b>\$319,400</b>	<b>\$326,500</b>
<b>Capital Costs</b>					
Existing Debt Service	-	-	-	-	-
Cash Funded Capital Projects	-	-	-	-	-
Projected Debt Service	-	-	-	-	-
3R Reserve Contribution	\$30,400	\$30,400	\$30,400	\$29,500	\$28,800
Availability Fee Shortfall	\$34,800	\$46,600	\$12,600	\$3,000	\$8,200
<b>Total Capital Costs</b>	<b>\$65,200</b>	<b>\$77,000</b>	<b>\$43,000</b>	<b>\$32,500</b>	<b>\$37,000</b>
<b>Total Revenue Requirement</b>	<b>\$365,100</b>	<b>\$383,000</b>	<b>\$355,200</b>	<b>\$351,900</b>	<b>\$363,500</b>
<i>Less Miscellaneous Revenues*</i>	<i>\$122,400</i>	<i>\$103,100</i>	<i>\$105,800</i>	<i>\$108,700</i>	<i>\$111,600</i>
<b>Net Revenue Requirement</b>	<b>\$242,700</b>	<b>\$279,800</b>	<b>\$249,400</b>	<b>\$243,200</b>	<b>\$251,900</b>
3R Funded Capital Projects	\$106,000	\$236,000	\$55,000	\$15,000	\$145,000

*\*largest misc. revenues are cell tower leases, connection fees, reimbursement from Loudoun Water and penalties  
Totals may not be exact due to rounding*

# Sewer User Rate Revenue Requirements

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Operating Costs</b>					
Operating Expenses	\$441,000	\$449,900	\$459,000	\$468,200	\$477,600
Operating Reserve Contribution	-	\$18,500	\$18,900	\$19,200	\$19,600
Total Operating Costs	\$441,000	\$468,400	\$477,900	\$487,400	\$497,200
<b>Capital Costs</b>					
Existing Debt Service	\$43,300	\$43,200	\$43,000	\$42,800	\$42,600
Cash Funded Capital Projects	-	-	-	-	-
Projected Debt Service	-	-	-	-	-
3R Reserve Contribution	\$20,800	\$2,300	\$1,900	\$1,600	\$1,200
Availability Fee Shortfall	-	-	-	-	-
Total Capital Costs	\$64,100	\$45,500	\$44,900	\$44,400	\$43,800
<b>Total Revenue Requirement</b>	<b>\$505,100</b>	<b>\$513,900</b>	<b>\$522,800</b>	<b>\$531,800</b>	<b>\$541,100</b>
<i>Less Miscellaneous Revenues*</i>	<i>\$37,600</i>	<i>\$37,600</i>	<i>\$37,600</i>	<i>\$37,600</i>	<i>\$37,600</i>
<b>Net Revenue Requirement</b>	<b>\$467,600</b>	<b>\$476,300</b>	<b>\$485,200</b>	<b>\$494,300</b>	<b>\$503,500</b>
3R Funded Capital Projects	-	-	-	-	-

*\*largest misc. revenues are connection fees, reimbursement from Loudoun Water and penalties*

*Totals may not be exact due to rounding*

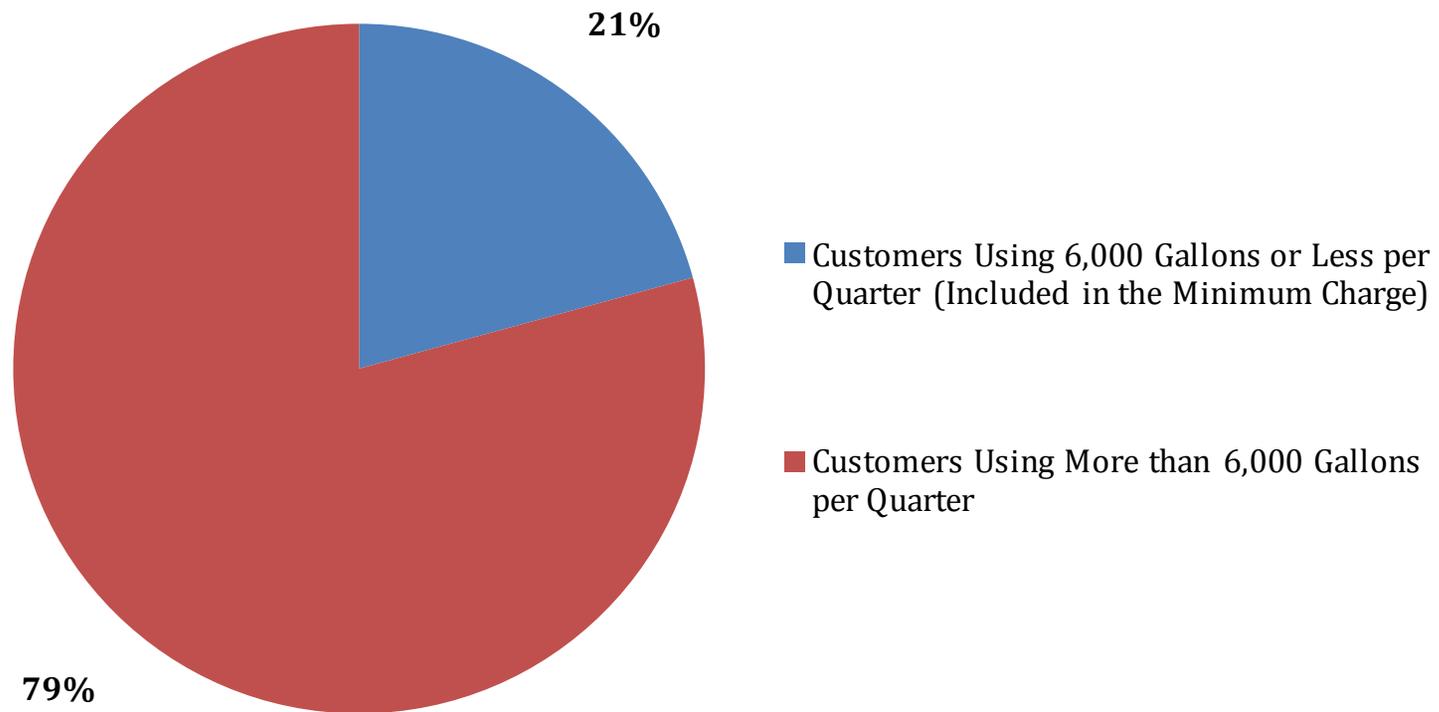
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# Customers and Usage



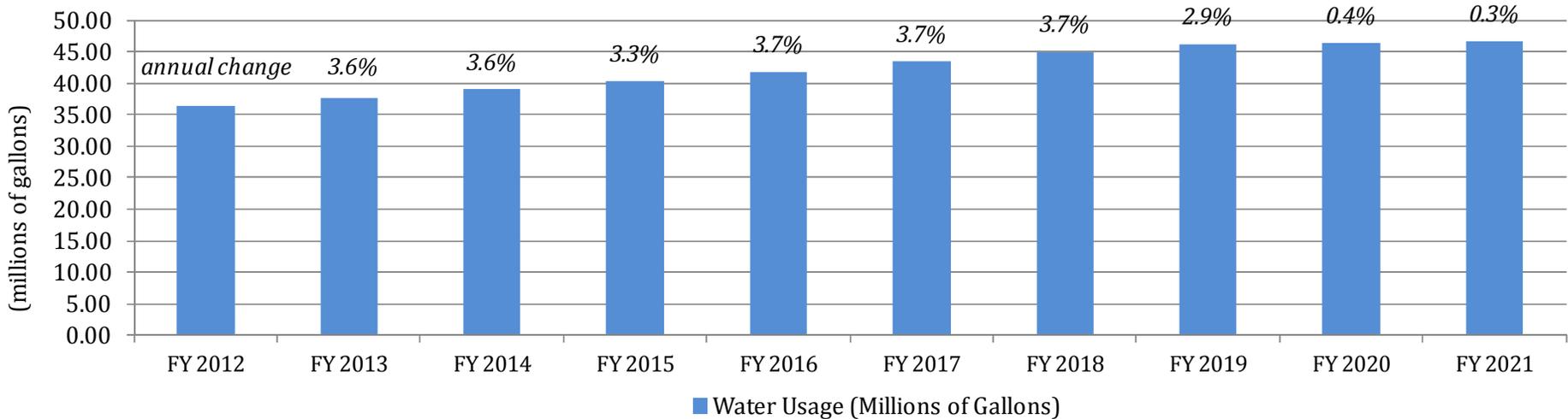
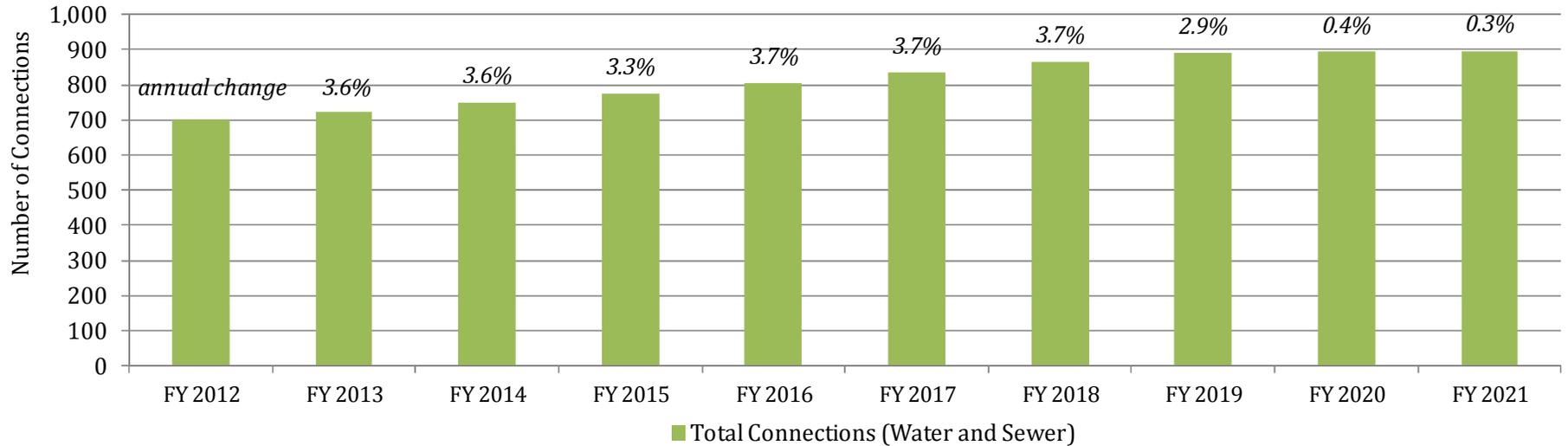
# Actual FY 2012 Customers and Usage

**Water and Sewer Customers: 699; Usage: 36,360,000 gallons**



**Average Quarterly Usage per Account: 13,000 Gallons**

# Demand Projections



*Based on Town's projection of when availability fees will be sold*

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# Financial Plan and Sample Bills



# User Rate Financial Plan

Water	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Net Revenue Requirement	\$242,700	\$279,800	\$249,400	\$243,200	\$251,900
Revenue at Current Rates	\$248,100	\$256,300	\$265,800	\$275,600	\$285,700
<b>Surplus/(Shortfall)</b>	<b>\$5,400</b>	<b>(\$23,600)</b>	<b>\$16,400</b>	<b>\$32,400</b>	<b>\$33,800</b>
<b>Proposed Rate Adjustment</b>	<b>3.0%</b>	<b>3.0%</b>	<b>3.0%</b>	<b>3.0%</b>	<b>3.0%</b>
<b>Resulting Surplus/(Shortfall)</b>	<b>\$12,800</b>	<b>(\$8,000)</b>	<b>\$41,000</b>	<b>\$67,000</b>	<b>\$79,400</b>

Sewer	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Net Revenue Requirement	\$467,600	\$476,300	\$485,200	\$494,300	\$503,500
Revenue at Current Rates	\$359,800	\$378,300	\$396,300	\$416,200	\$421,900
<b>Surplus/(Shortfall)</b>	<b>(\$107,800)</b>	<b>(\$98,000)</b>	<b>(\$88,900)</b>	<b>(\$78,000)</b>	<b>(\$81,600)</b>
<b>Proposed Rate Adjustment</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>
<b>Resulting Surplus/(Shortfall)</b>	<b>(\$86,200)</b>	<b>(\$51,200)</b>	<b>(\$13,200)</b>	<b>\$31,200</b>	<b>\$61,100</b>

*Rate increases from FY 2019 to FY 2023 are set at 2% per year to account for inflation*

*Totals may not be exact due to rounding*

# Proposed Rates under Financial Plan

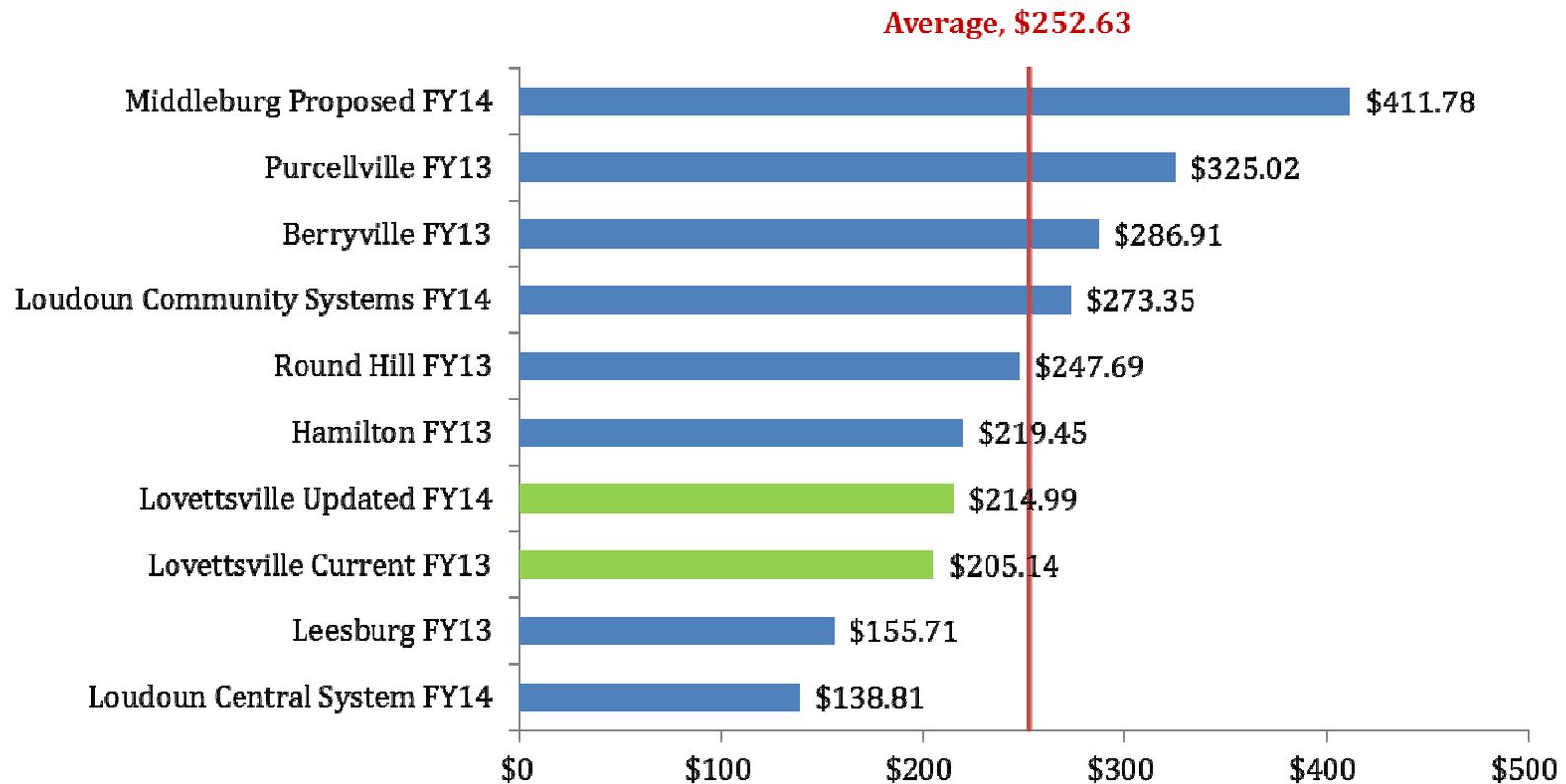
	Current FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Water Rate Increase</b>		<b>3.0%</b>	<b>3.0%</b>	<b>3.0%</b>	<b>3.0%</b>	<b>3.0%</b>
<b>Water Inside Town Rates</b>						
Minimum Charge (Includes 6,000 gallons/Quarter)	\$37.86	\$39.00	\$40.17	\$41.37	\$42.61	\$43.89
Rate per 1,000 gallons (Over 6,000 gallons per Quarter)	\$6.31	\$6.50	\$6.69	\$6.90	\$7.10	\$7.32
<b>Sewer Rate Increase</b>		<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>
<b>Sewer Inside Town Rates</b>						
Minimum Charge (Includes 6,000 gallons/Quarter)	\$56.82	\$60.23	\$63.84	\$67.67	\$71.73	\$76.04
Rate per 1,000 gallons (Over 6,000 gallons per Quarter)	\$9.47	\$10.04	\$10.64	\$11.28	\$11.96	\$12.67

*Note: Outside Town Rates are 250% of Inside Town Rates*

# Average Customer Quarterly Bill

Inside Town, 13,000 Gallons (Average Customer)	Current FY 2013	Proposed FY 2014	<i>\$ Change</i>	<i>% Change</i>
Water Bill	\$82.03	\$84.49	\$2.46	3.0%
Sewer Bill	\$123.11	\$130.50	\$7.39	6.0%
<b>Total Bill</b>	<b>\$205.14</b>	<b>\$214.99</b>	<b>\$9.85</b>	<b>4.8%</b>

# Sample Average Quarterly Bill Comparison (Residential, 5/8 inch meter, 13,000 gallons)



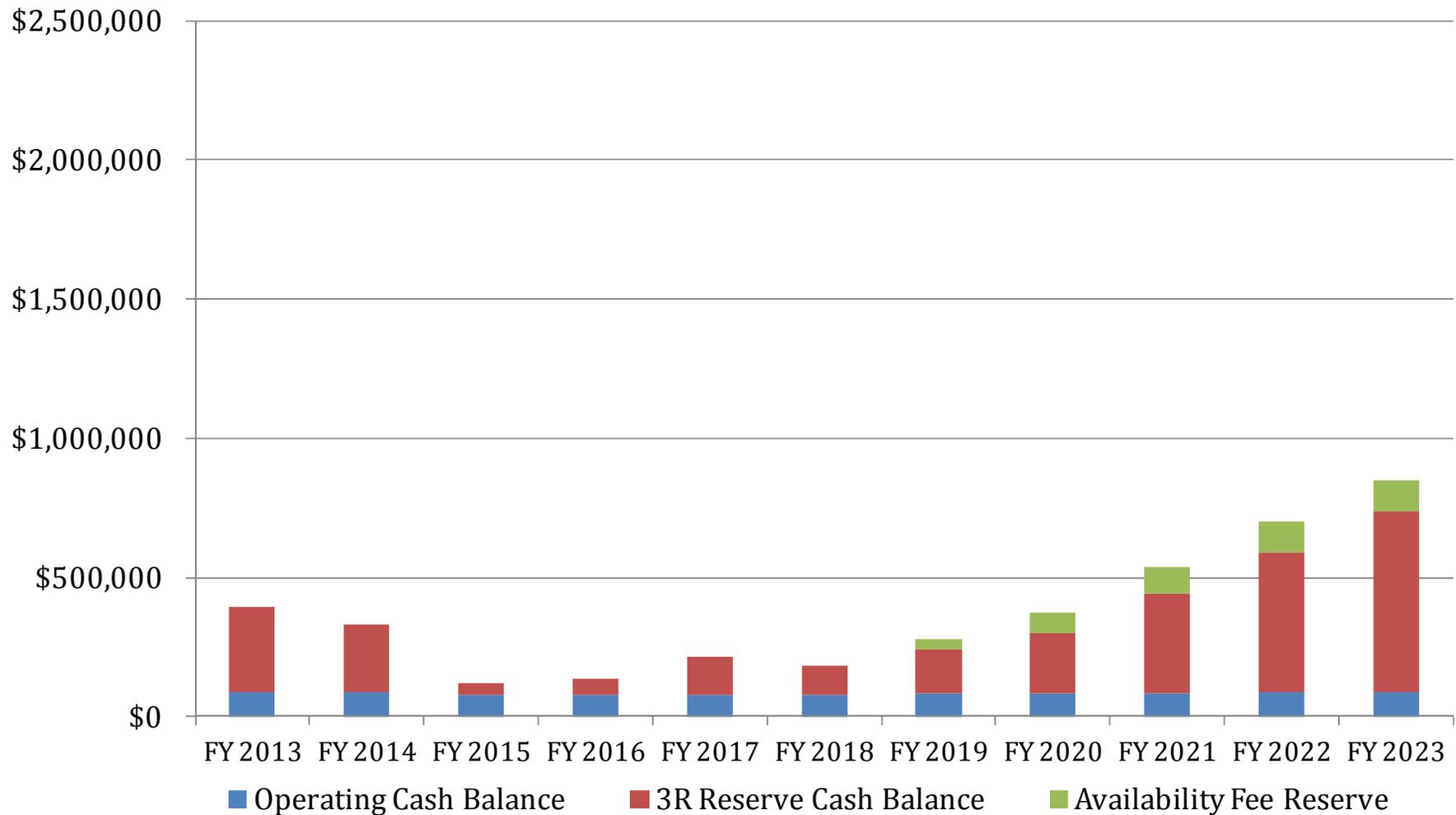
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# Projected Cash Balances



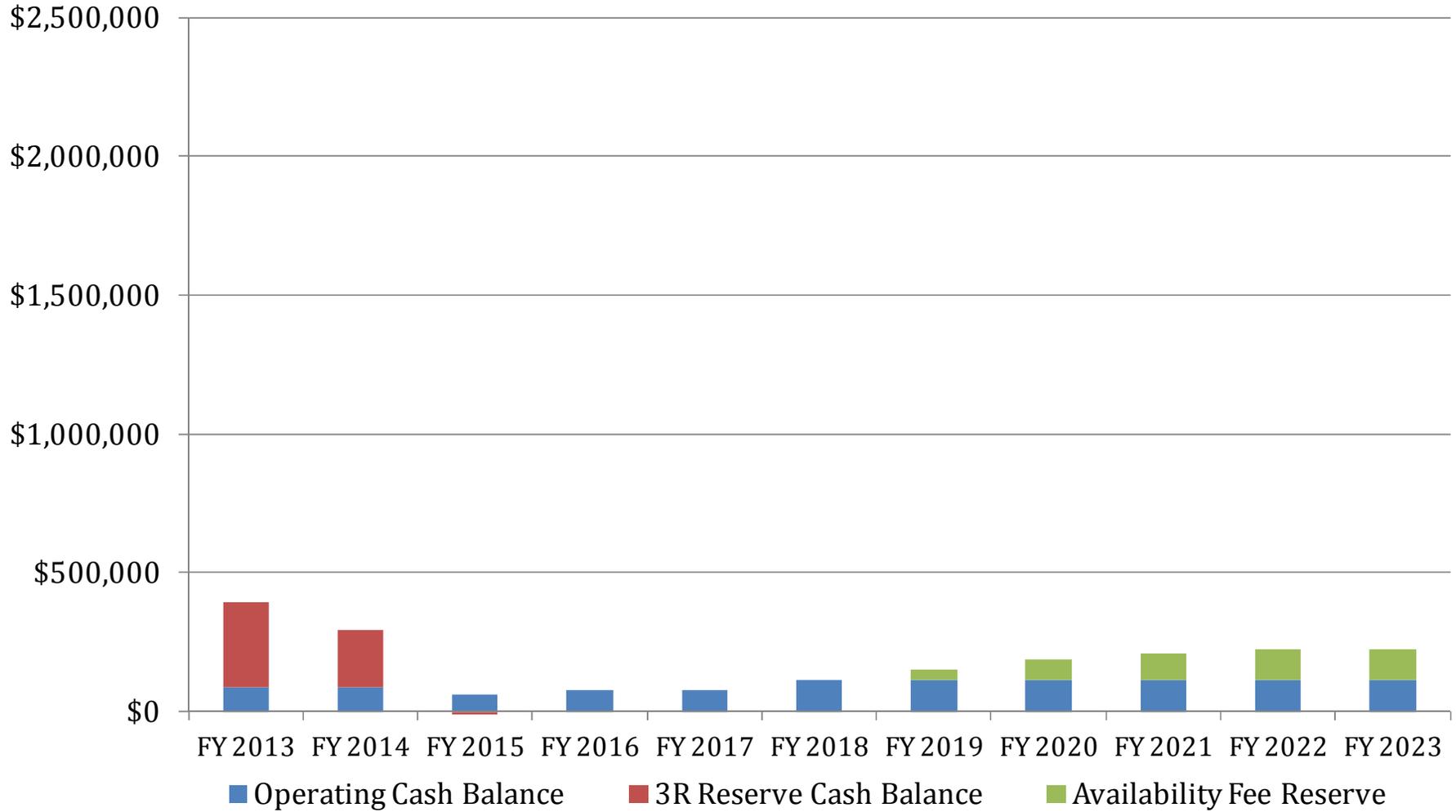
# Total Cash Balance – All Water Funds

*Assumes Adoption of the Financial Plan*



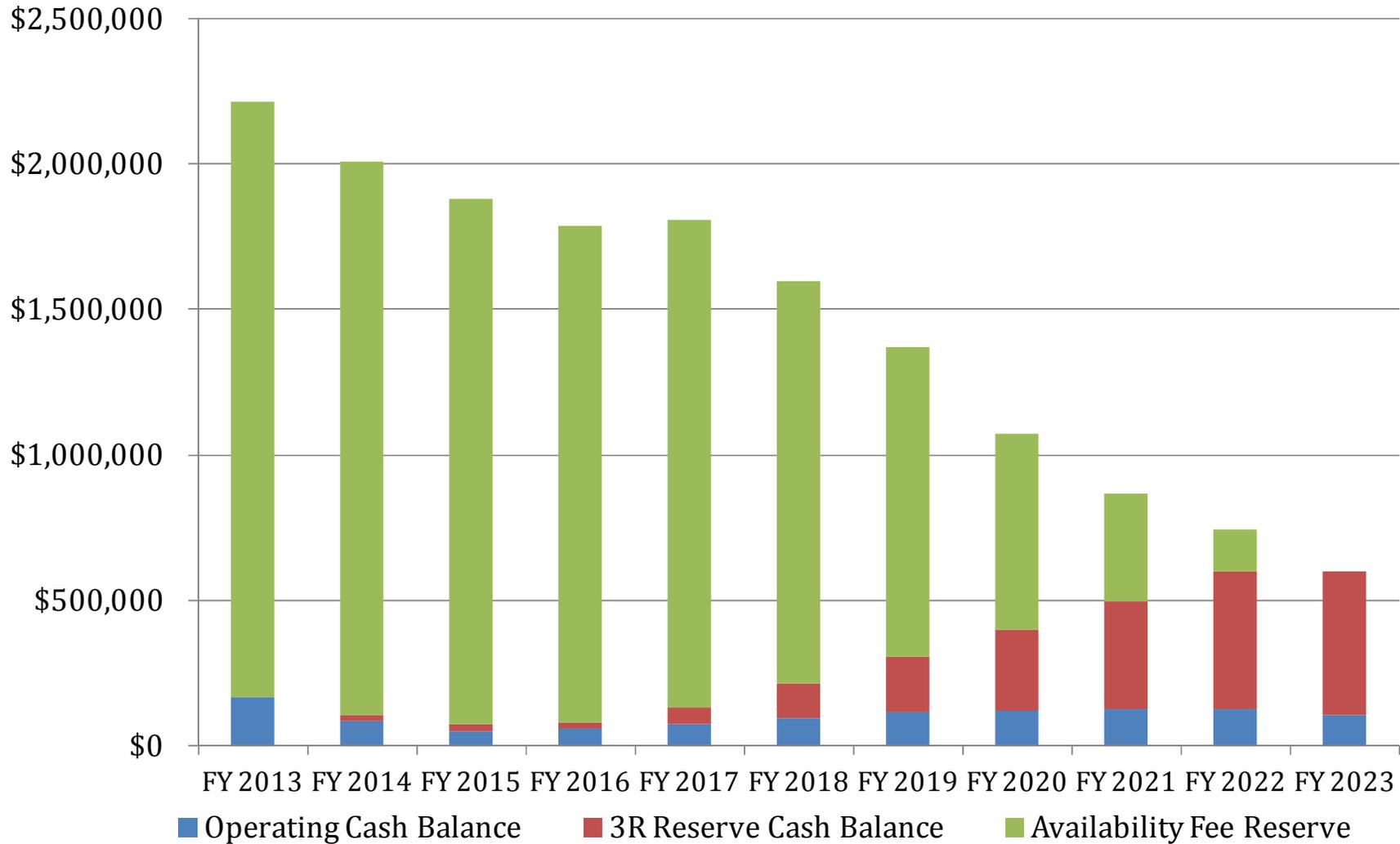
# Total Cash Balance – All Water Funds

*Assumes No Water Rate Adjustments*



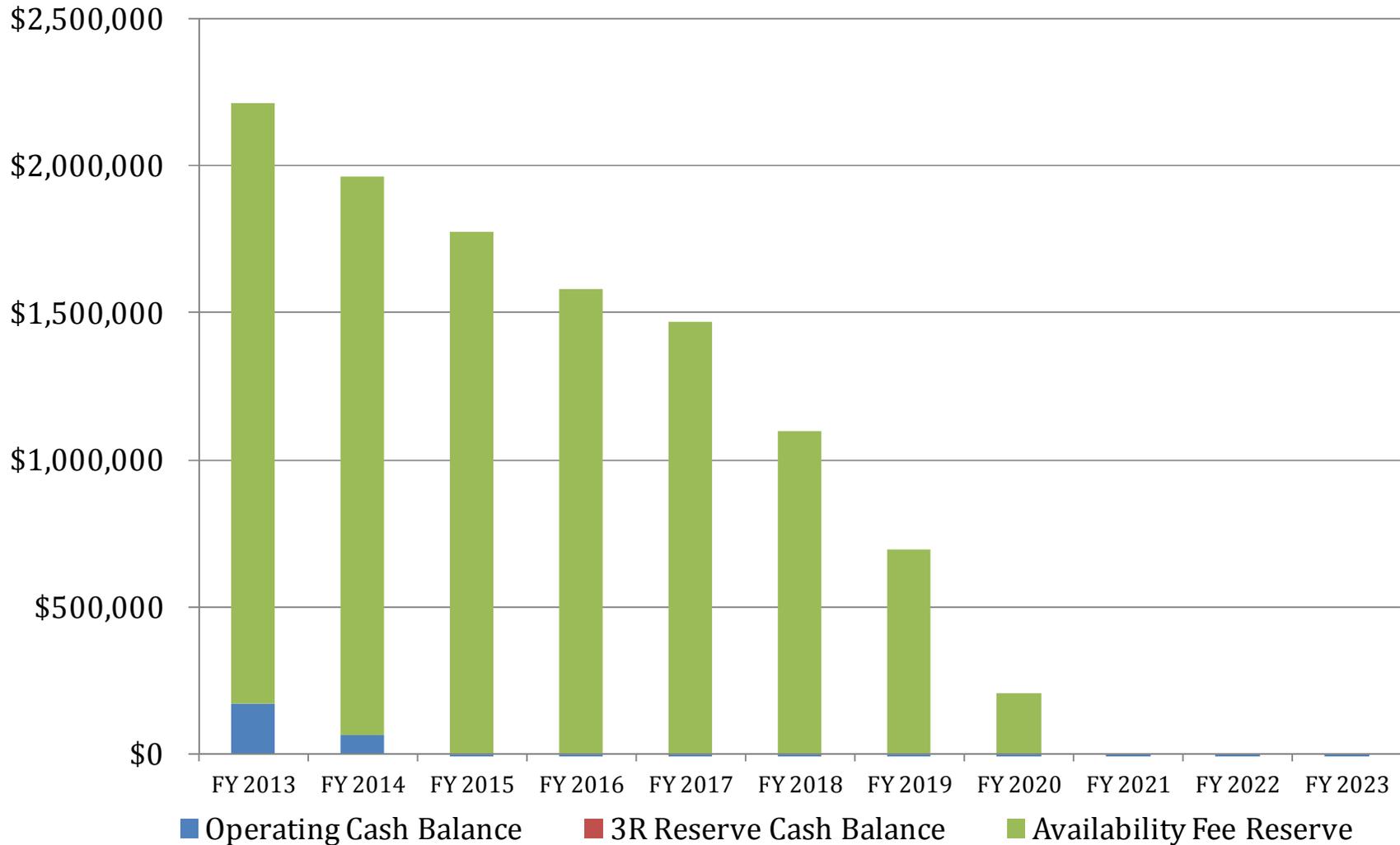
# Total Cash Balance – All Sewer Funds

*Assumes Adoption of the Financial Plan*



# Total Cash Balance – All Sewer Funds

*Assumes No Sewer Rate Adjustments*



# Recommendations

- In order to prepare the water and sewer funds for future capital expenditures we recommend the following rate adjustments:

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Water Rate Adjustment</b>	3.0%	3.0%	3.0%	3.0%	3.0%
<b>Sewer Rate Adjustment</b>	6.0%	6.0%	6.0%	6.0%	6.0%

- Additionally, we recommend that the Town:
  - Annually update the Town's water and sewer model with actual data and compare to projected values
  - Complete another rate study in 3 – 5 years in order to more accurately project capital costs for fiscal years 2018 – 2023