



Village of La Grange Park Water & Sewer Rate Study

John Mick, PE
Jim Sparber, PE
Lauren Schuld, PE

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Study Objectives

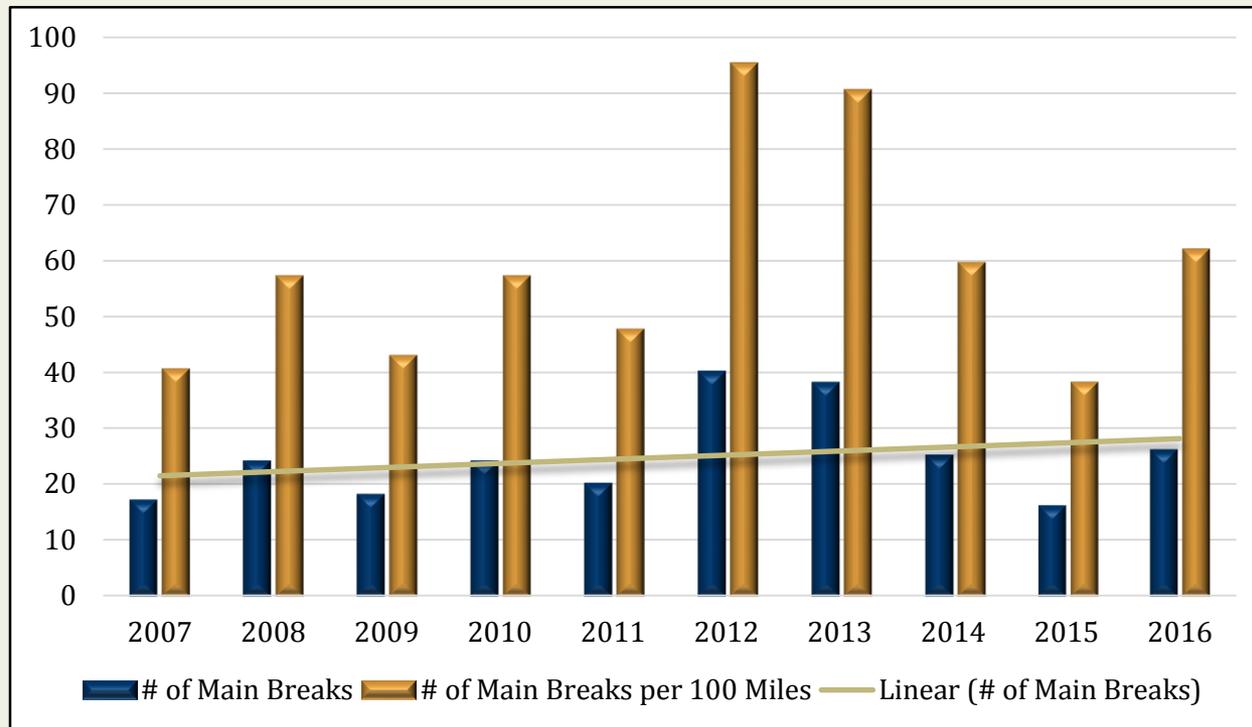
- Evaluate existing water and sewer systems - develop a CIP
- Prepare a 10-year projection of water and sewer finances
- Identify systems of equitable water and sewer rates to meet revenue requirements for the next 5 years

Capital Improvements – Water System

- System pumping and storage capacity - sufficient
- Distribution system
 - Above average break rate due to aging infrastructure in need of renewal
 - Lower than desired pressure in southwest corner of Village
 - Opportunities to improve fire flow and system circulation

Capital Improvements – Water System

Water Main Break History

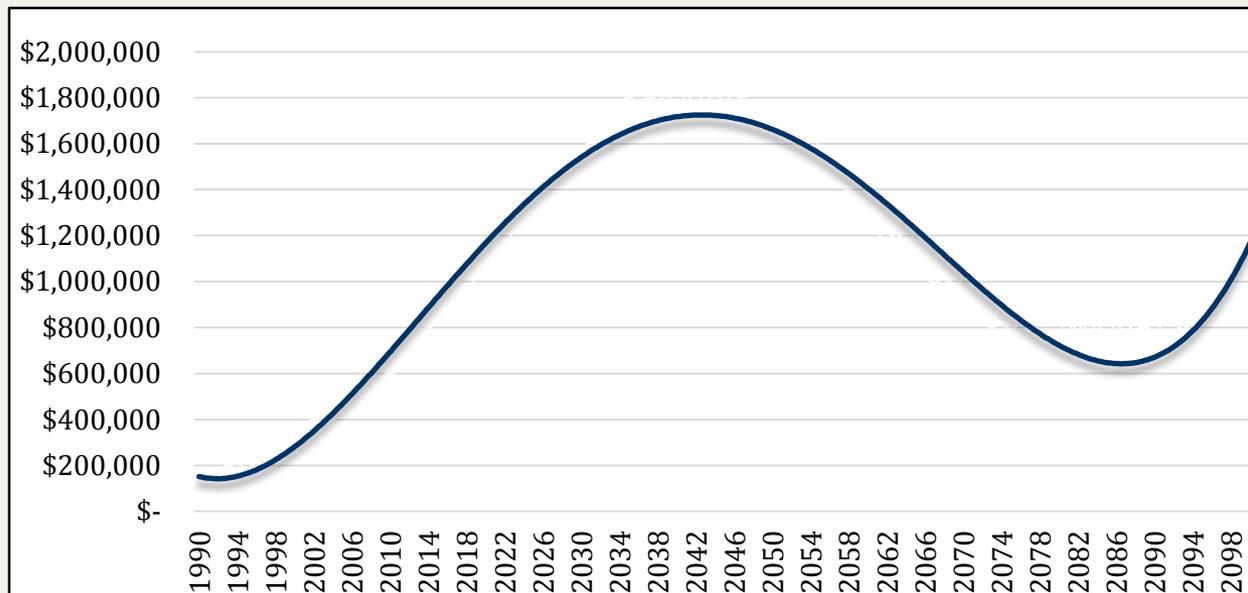


Capital Improvements – Water System

Installation Date of Water Main

Decade of Installation	Age in 2020	Length (ft)	% of Total System
1900	120	12,085	6.2%
1920	100	51,935	26.4%
1950	70	95,280	48.5%
1960	60	24,345	12.4%
1980	40	1,340	0.7%
1990	30	6,125	3.1%
2000	20	5,323	2.7%

Projected Annual Expenditure for Water Main Replacement



Note: graphic reflects recommended investment levels, not historical expenditures.

Capital Improvements – Water System



Village of La Grange Park, Illinois

Proposed Water System Improvements

Proposed Improvements

- Year 1
- Year 2
- Year 3
- Year 4
- Year 5
- Years 6-10
- System Enhancements
- Existing Water Main

BAXTER & WOODMAN

0 500 1,000 Feet
1 Inch = 1,000 feet

Capital Improvements – Water System

Location	Project Description	FY 2018/2019	FY 2019/2020	FY 2020/2021	FY 2021/2022	FY 2022/2023	Years 6 - 10
LaGrange Rd	31st St to Garfield Ave	\$ 525,000					
Raymond Ave	26th St to 31st St	\$ 910,000					
Robinhood Ln	26th St to 31st St		\$ 1,155,000				
Castle Circle	Cul-de-sac		\$ 105,000				
31st St	La Grange Rd to Kemman Ave			\$ 1,530,000			
Homestead Rd	Jackson St to Harding Ave				\$ 455,000		
Maple Ave	36th St to 29th St				\$ 630,000		
29th St	La Grange Rd to Woodside Rd				\$ 157,500		
Edgewood Ave	Harding St to Jackson Ave					\$ 735,000	
Park Rd	Dead End to Oak Ave					\$ 350,000	
Harding Ave	Edgewood Ave to Brainard Ave					\$ 245,000	
Water Tower Repaint	-						\$ 750,000
Beach Ave	26th St to 29th St						\$ 525,000
Forest Rd	Jackson St to Harding Ave						\$ 455,000
Community Dr	Garfield Ave to Harding Ave						\$ 750,000
Kings Ct	Robinhood Ln to Robinhood Ln						\$ 525,000
Finsbury Ln	Remainder of Subdivision						\$ 840,000
Morgan Ave	26th St to 31st St						\$ 910,000
Harrison Ave	26th St to 31st St						\$ 910,000
Forest Rd	26th St to 31st St						\$ 910,000
Sub-Total		\$ 1,435,000	\$ 1,260,000	\$ 1,530,000	\$ 1,242,500	\$ 1,330,000	\$ 6,575,000
West Side Water Tower (0.5 MG)	-						\$ 1,400,000
Richmond Ave	Edgewood Ave to Park Rd						\$ 490,000
26th St	Kemman Ave to Maple Ave						\$ 1,050,000
Oak Ave	Edgewood Ave to Brainard Ave						\$ 245,000
30th St	La Grange Rd to Barnsdale Rd						\$ 875,000
Beach Ave	Woodlawn Ave to Southview Ave						\$ 525,000
Pine Tree Lane	Pine Tree Ln to Forest Preserve Dr						\$ 140,000
Sub-Total Enhancements							\$ 4,725,000

Years 1-5: 3.4 miles of replacement (8% of system)

Years 6-10: 3.1 miles of replacement (7% of system)

Capital Improvements – Sewer System

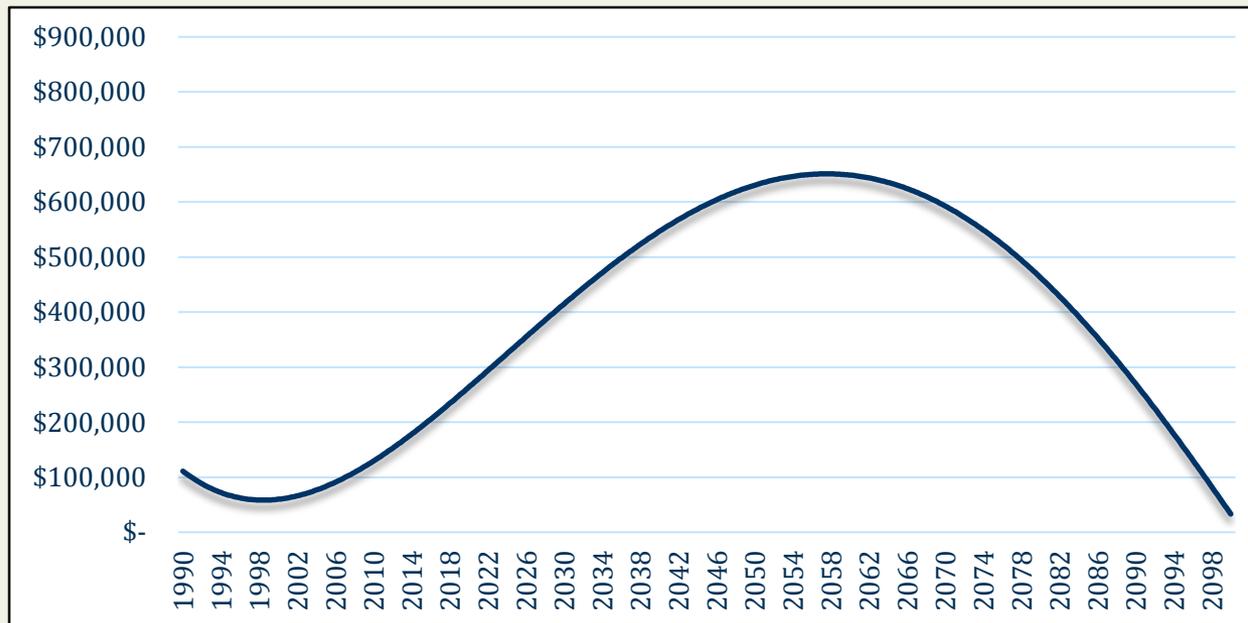
- Collection System
 - Reaching end of useful life
 - A program for evaluating sewer condition and providing for repairs has been established by the Village
 - Continuation of the program is necessary

Capital Improvements – Sewer System

Installation Date of Sanitary Sewer

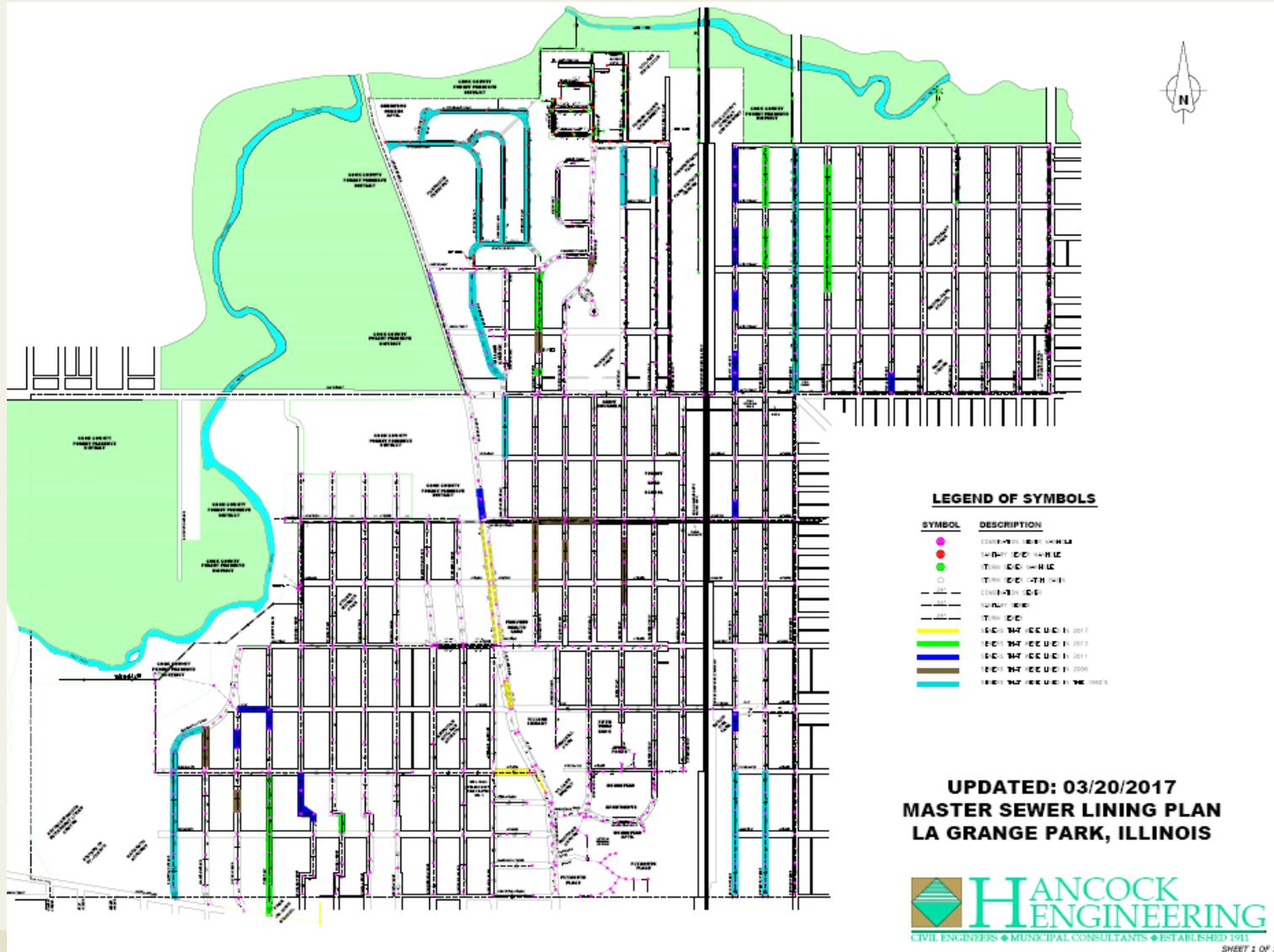
Decade of Installation	Age in 2020	Length (ft)	% of Total System
1890	130	19,465	7.8%
1900	120	16,715	6.7%
1920	100	86,265	34.7%
1950	70	125,845	50.7%

Projected Annual Expenditure for Sewer Renewal



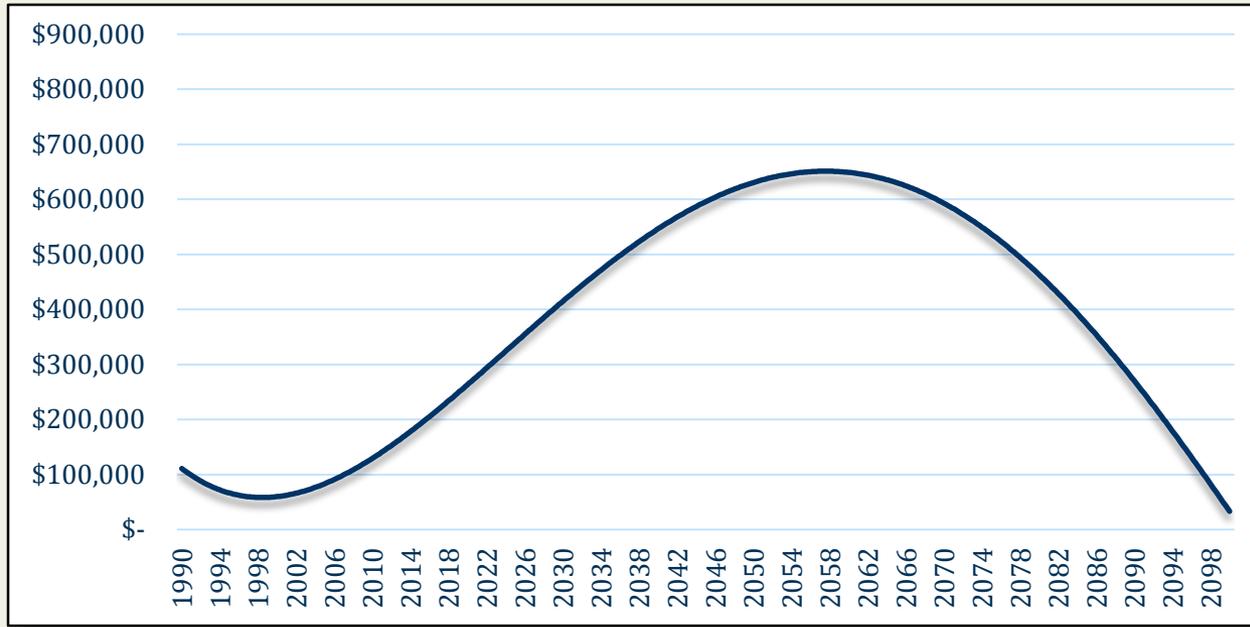
Note: graphic reflects recommended investment levels, not historical expenditures.

Capital Improvements – Sewer System



Capital Improvements – Sewer System

Projected Annual Expenditure for Sewer Renewal

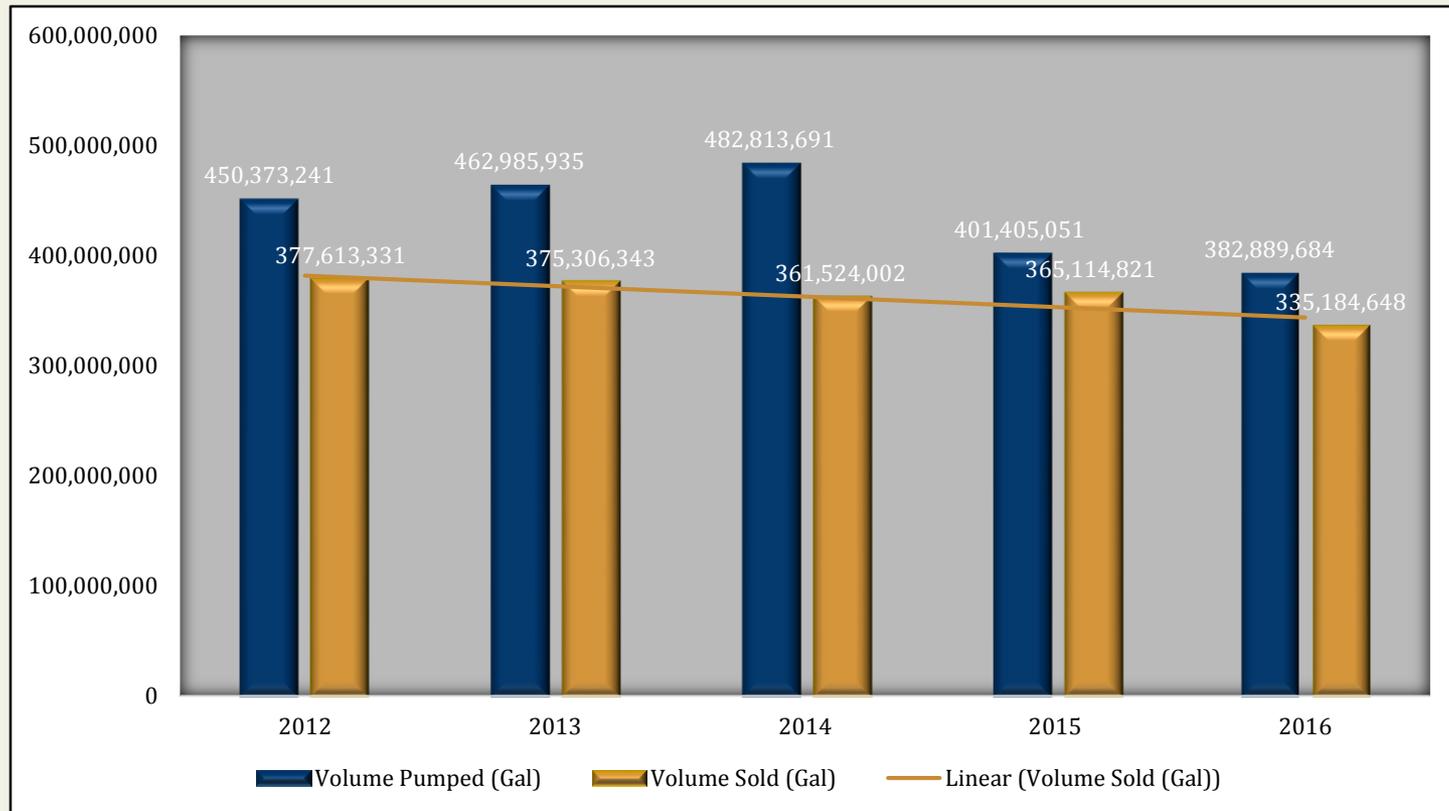


Recommendations:

- Continue to fund cleaning and televising at \$75,000 annually
- Fund lining and repair program at \$300,000 annually (3,500 ft/yr)

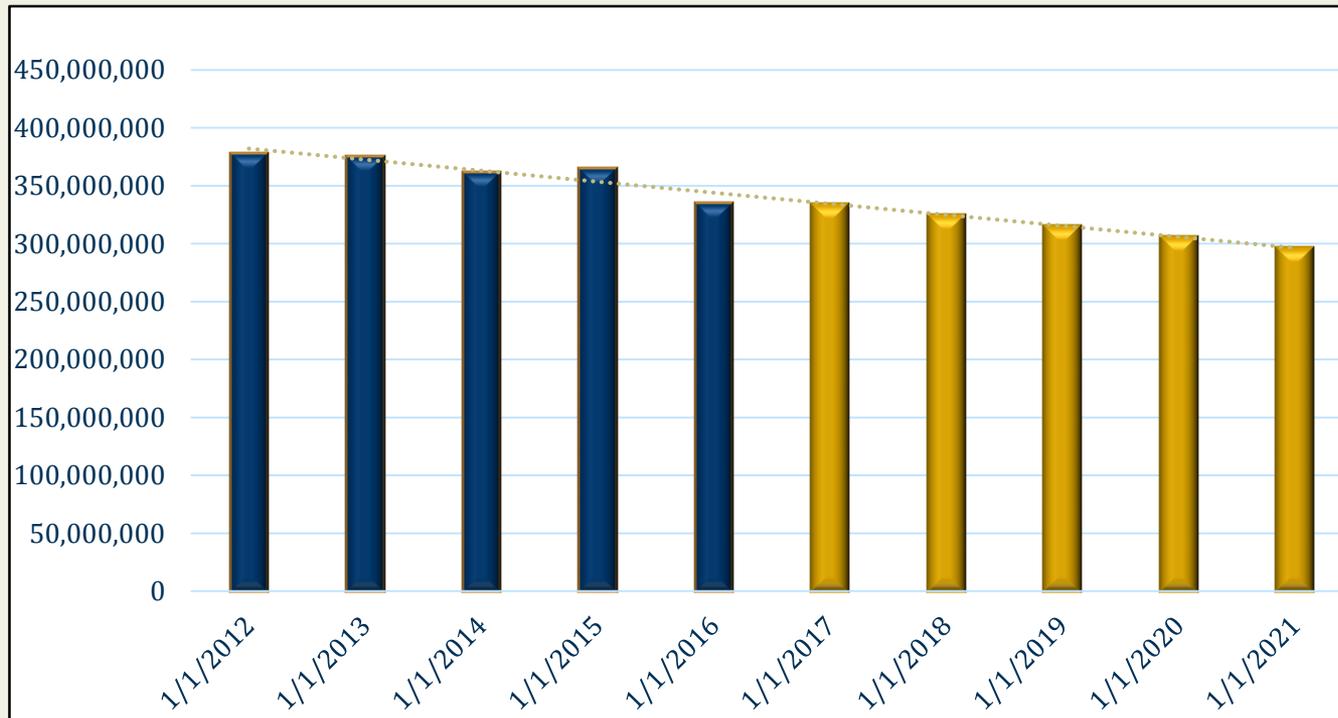
Rate Analysis – Water Usage

Water Usage Trends



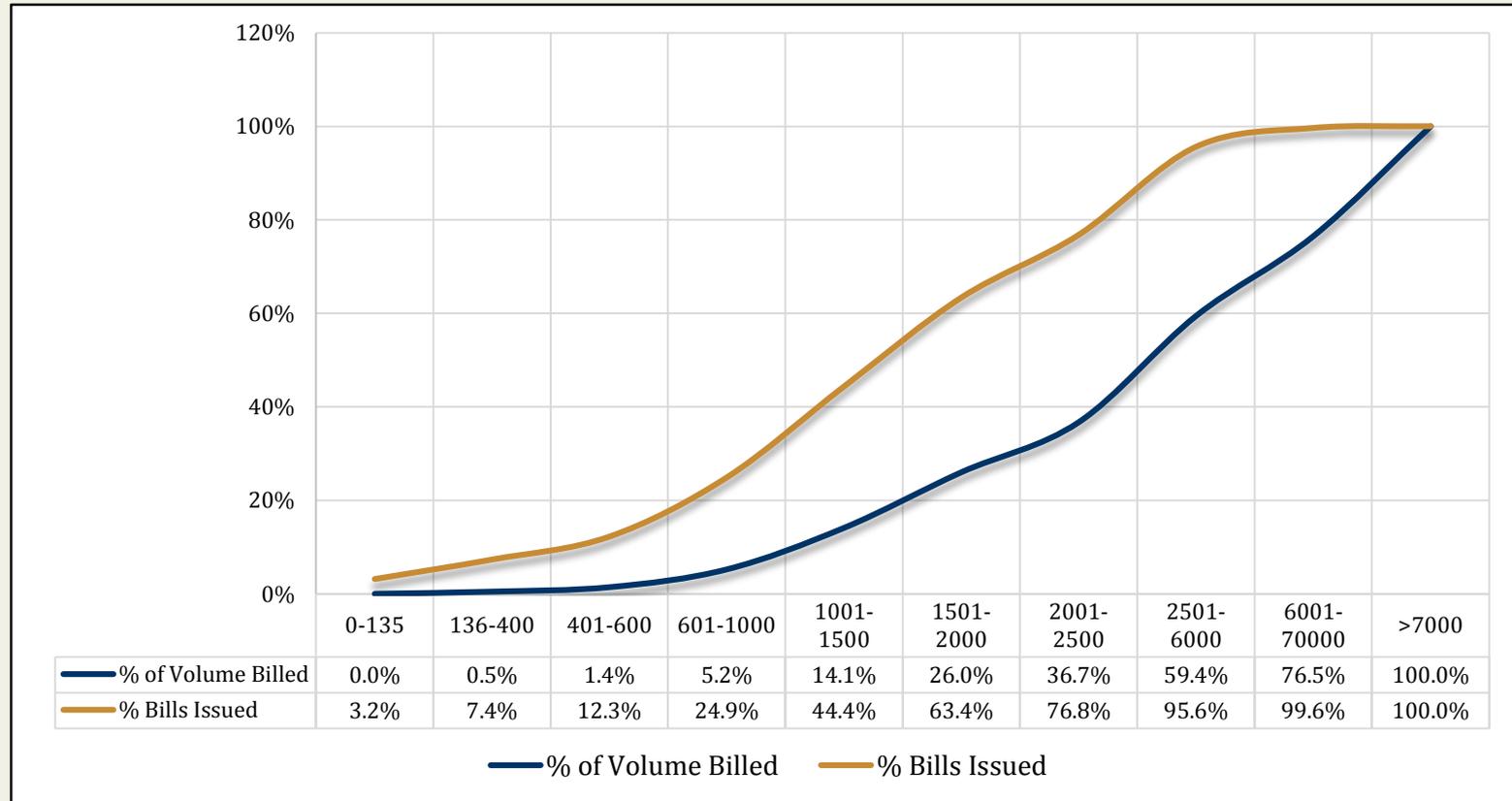
Rate Analysis – Water Usage

Projected Water Sales



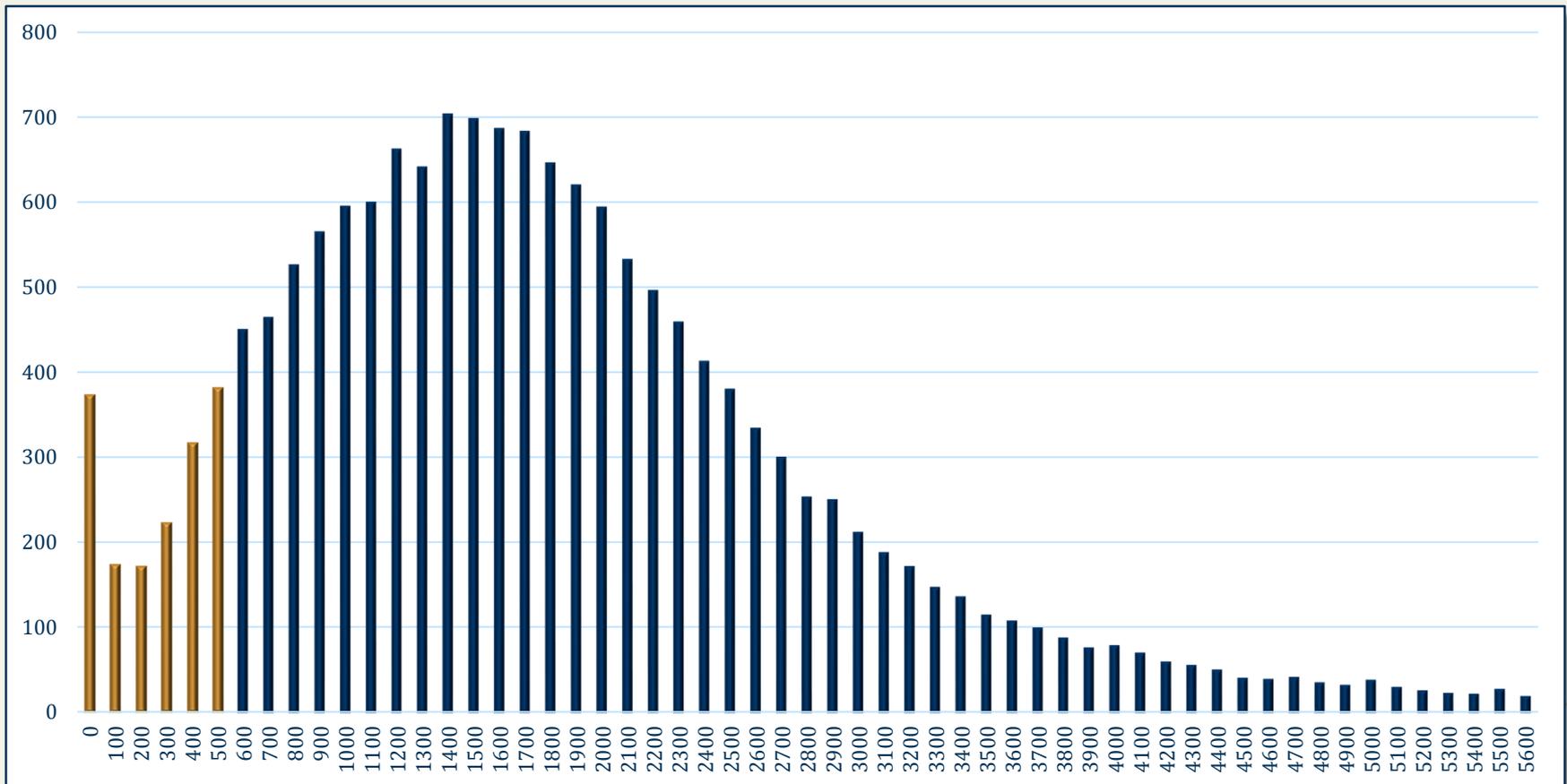
Rate Analysis – User Profile

Bills Issued vs. Water Volume Sold



Rate Analysis – User Profile

Frequency of Bills Issued vs. Water Volume Sold



Rate Analysis – Current Rates

Current User Rates:

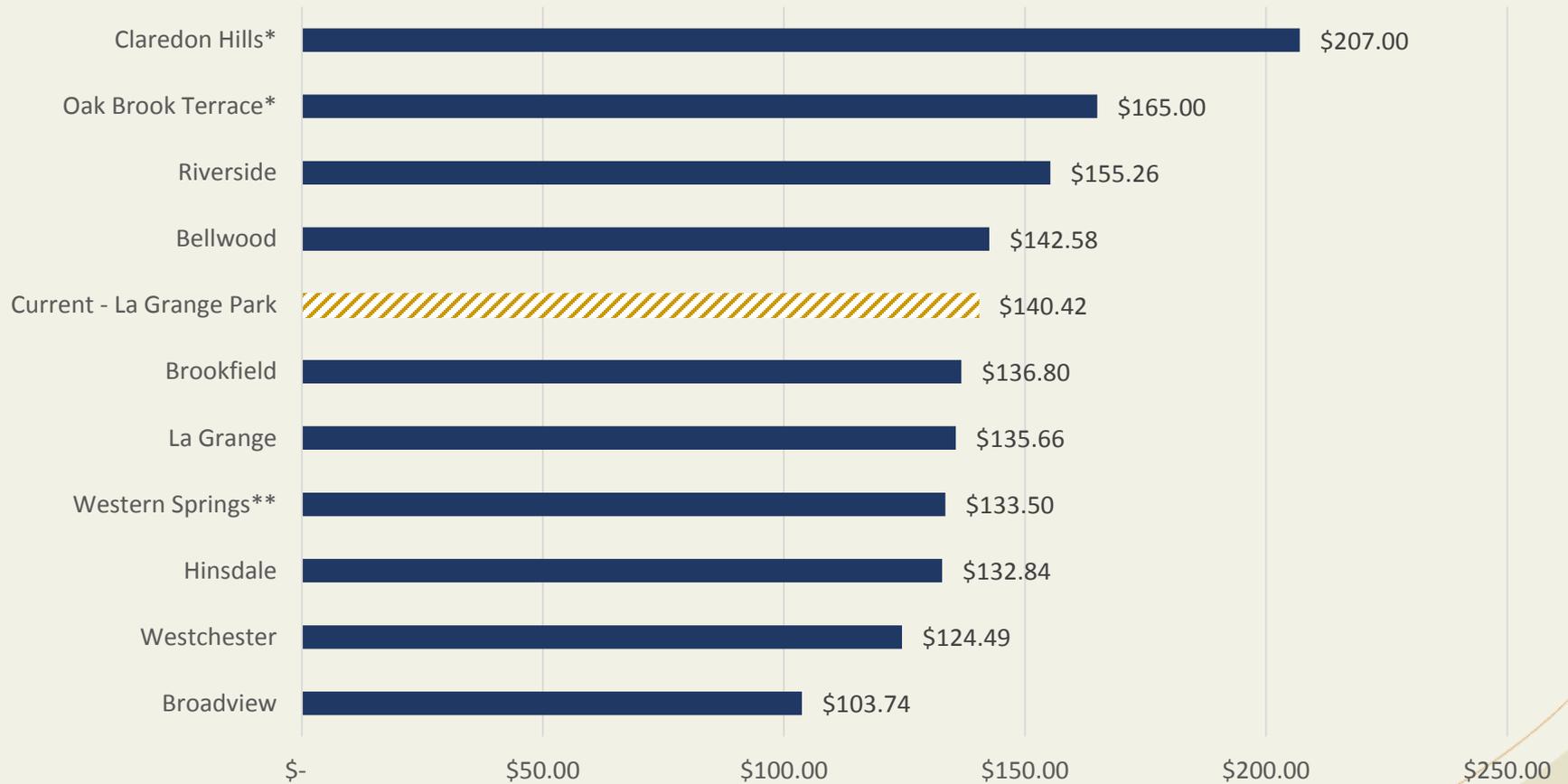
Water Usage per 100 cubic feet	\$ 7.71
Sewer Usage per 100 cubic feet	<u>\$ 2.32</u>
Total	\$10.03

Water Purchase – Cost to Village

Year	BNRWC Rate Charge per 1,000 gallons	BNRWC Rate Charge per 100 cubic feet
2008/09	\$2.32	\$1.74
2009/10	\$2.55	\$1.91
2010/11	\$2.80	\$2.09
2011/12	\$2.85	\$2.13
2012/13	\$3.42	\$2.56
2013/14	\$3.82	\$2.86
2014/15	\$4.29	\$3.21
2015/16	\$4.84	\$3.62
2016/17	\$4.94	\$3.70
2017/18	\$5.15	\$3.85
2018/19	\$5.45	\$4.08
2019/20	\$5.72	\$4.28
2020/21	\$6.01	\$4.50
2021/22	\$6.31	\$4.72

Rate Analysis – Community Comparison

Average User Bill – 1400 CF



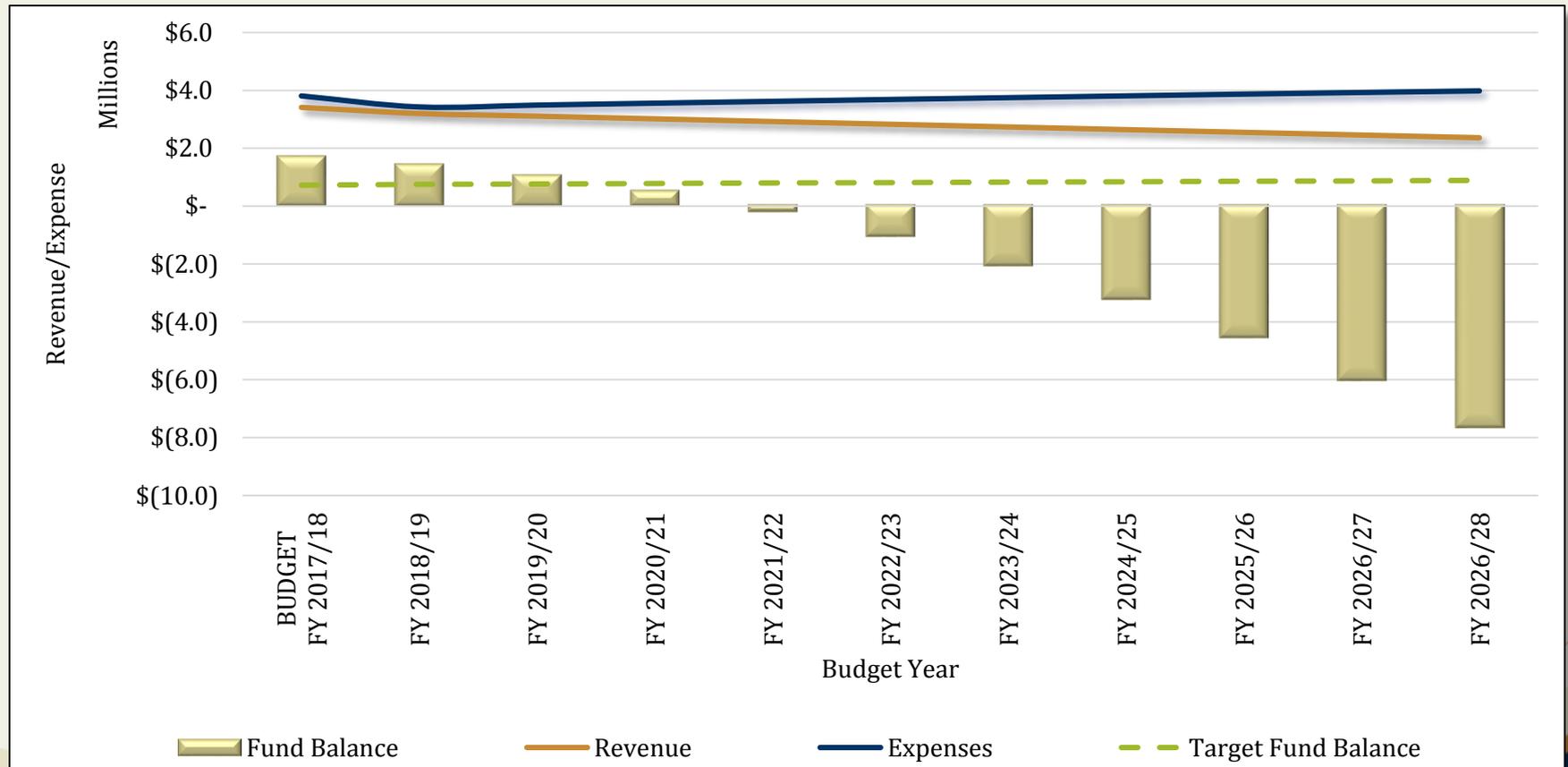
* Communities do not pay property tax for sewer service

** Community uses municipal wells for water supply, not Lake Michigan water

Rate Analysis – Baseline Scenario

Baseline = Maintain current rates and level of annual infrastructure investment

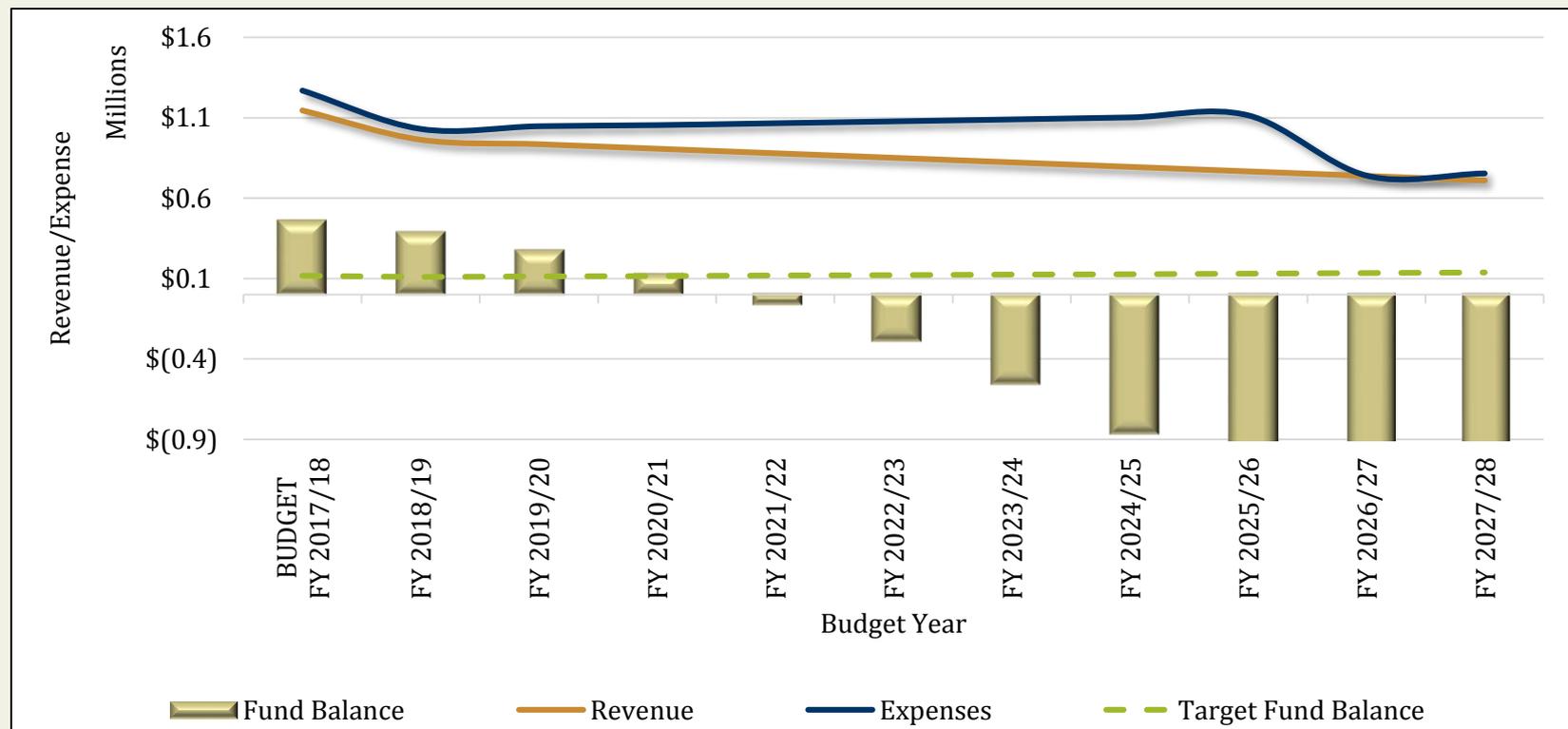
Projected Water Fund Balance



Rate Analysis – Baseline Scenario

Baseline = Maintain current rates and level of annual infrastructure investment

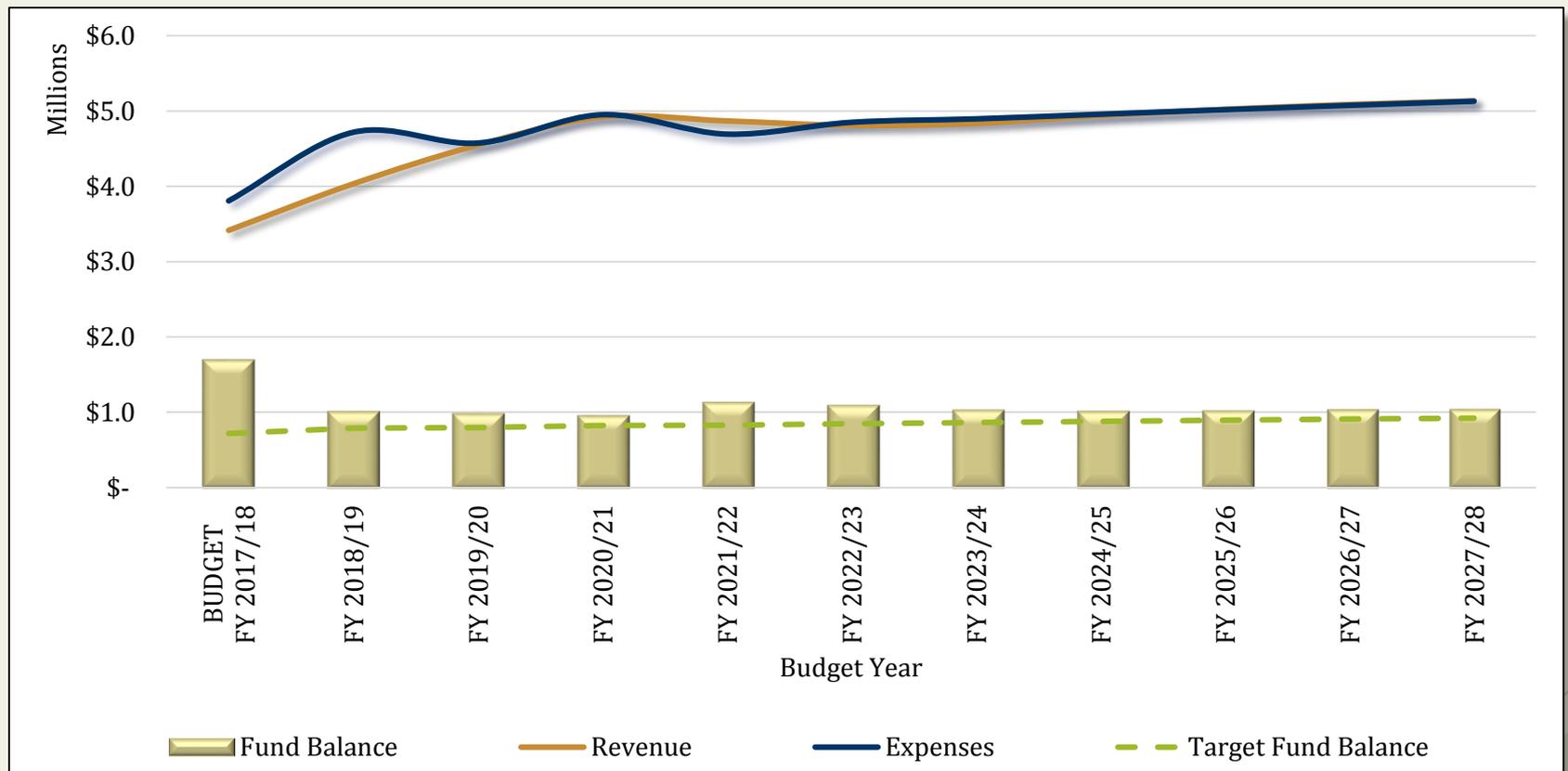
Projected Sewer Fund Balance



Rate Analysis – Alternate A

Alternate A = Recommended improvements funded with cash

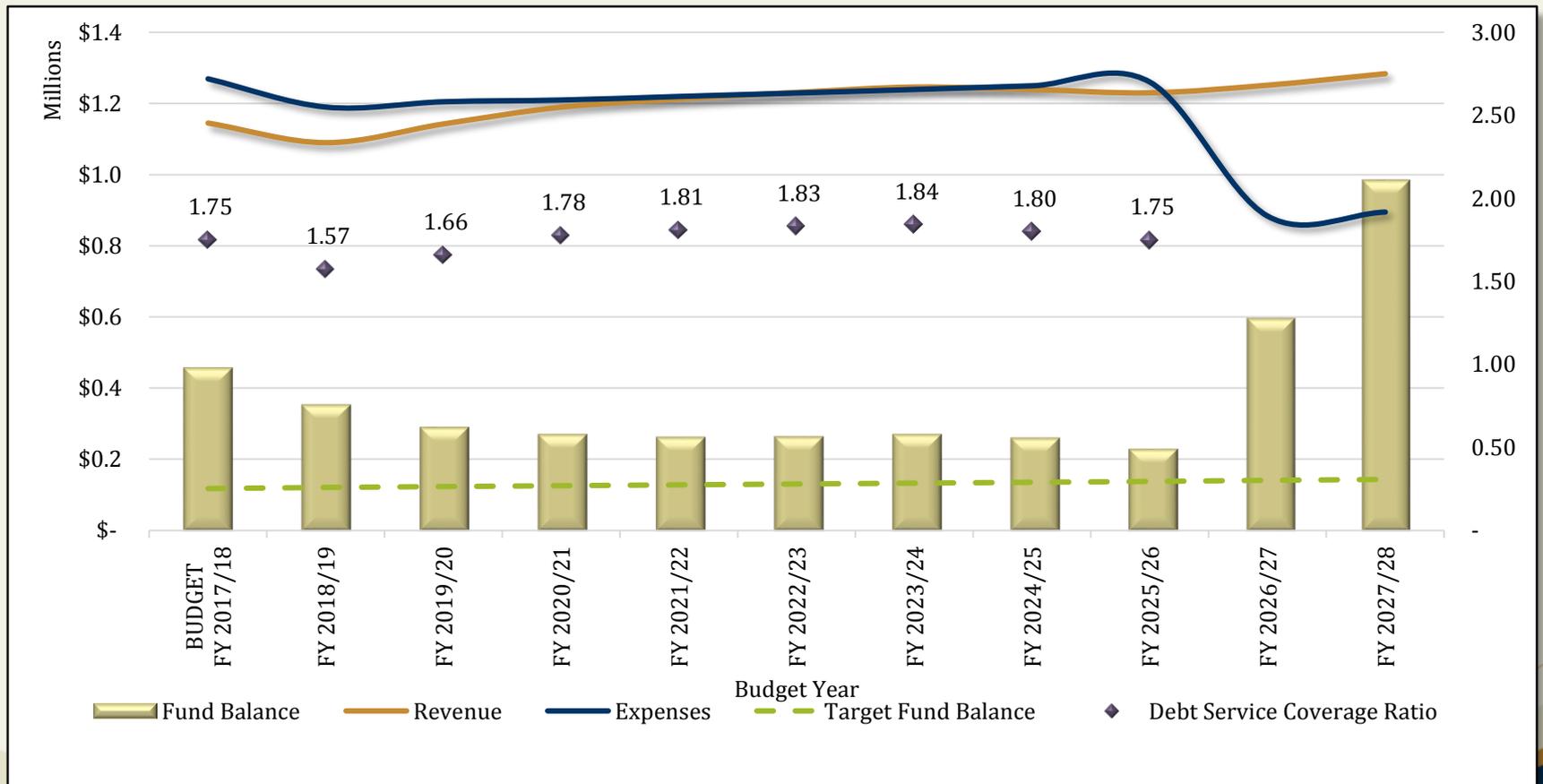
Projected Water Fund Balance



Rate Analysis – Alternate A

Alternate A = Recommended improvements funded with cash

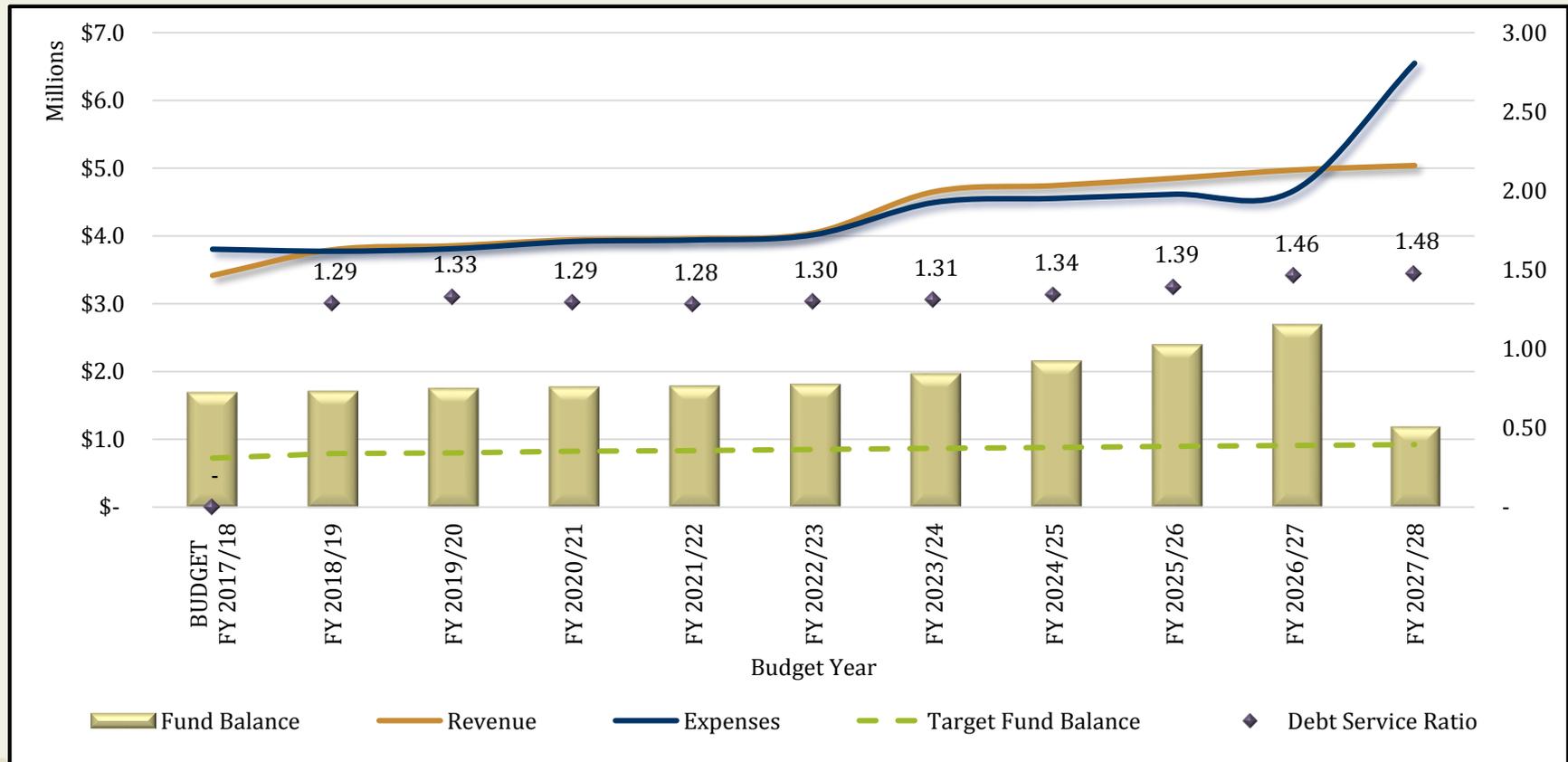
Projected Sewer Fund Balance



Rate Analysis – Alternate B

Alternate B = Recommended improvements funded with debt

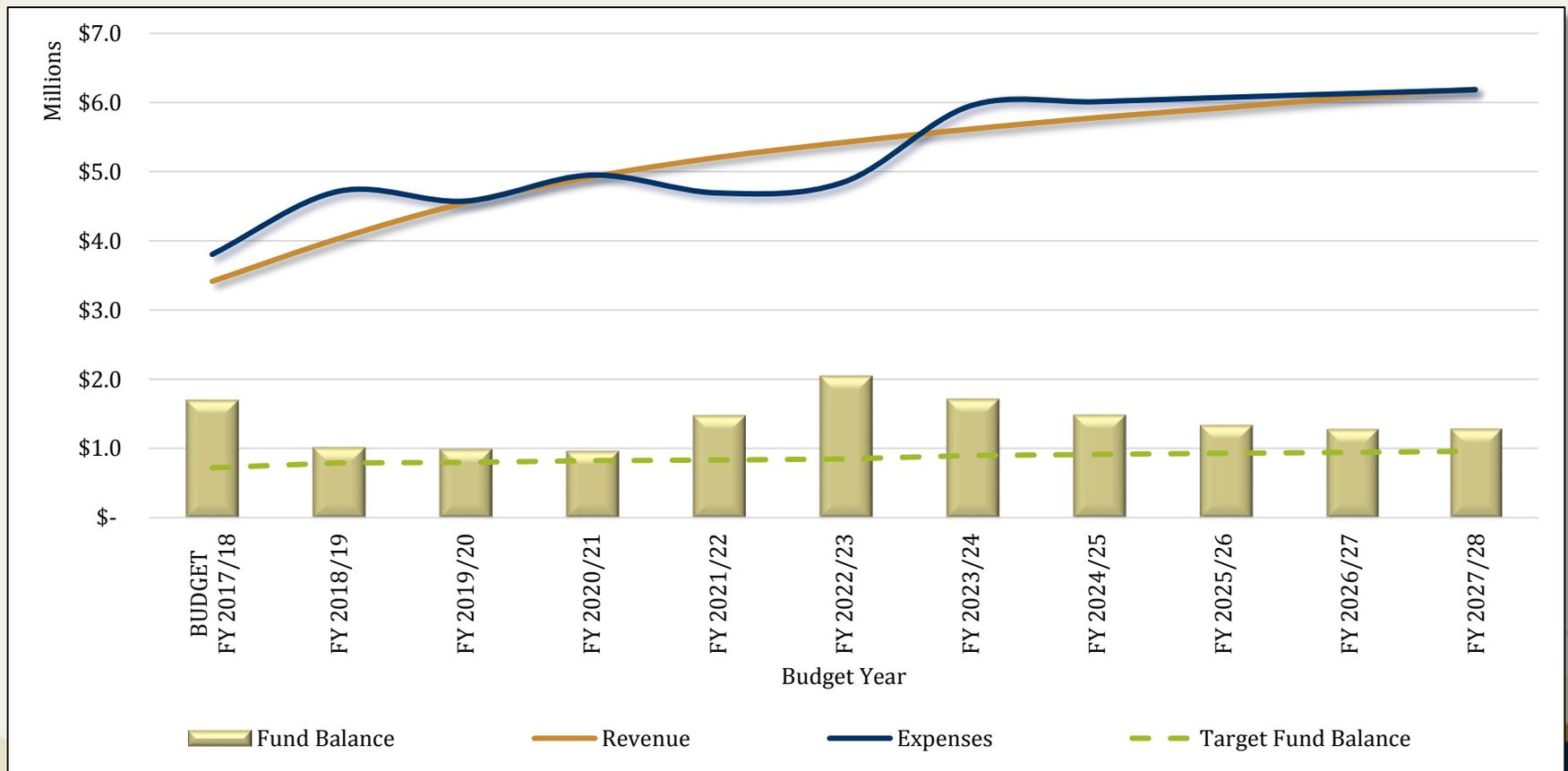
Projected Water Fund Balance



Rate Analysis – Alternate C

Alternate C = Enhanced improvements funded with cash

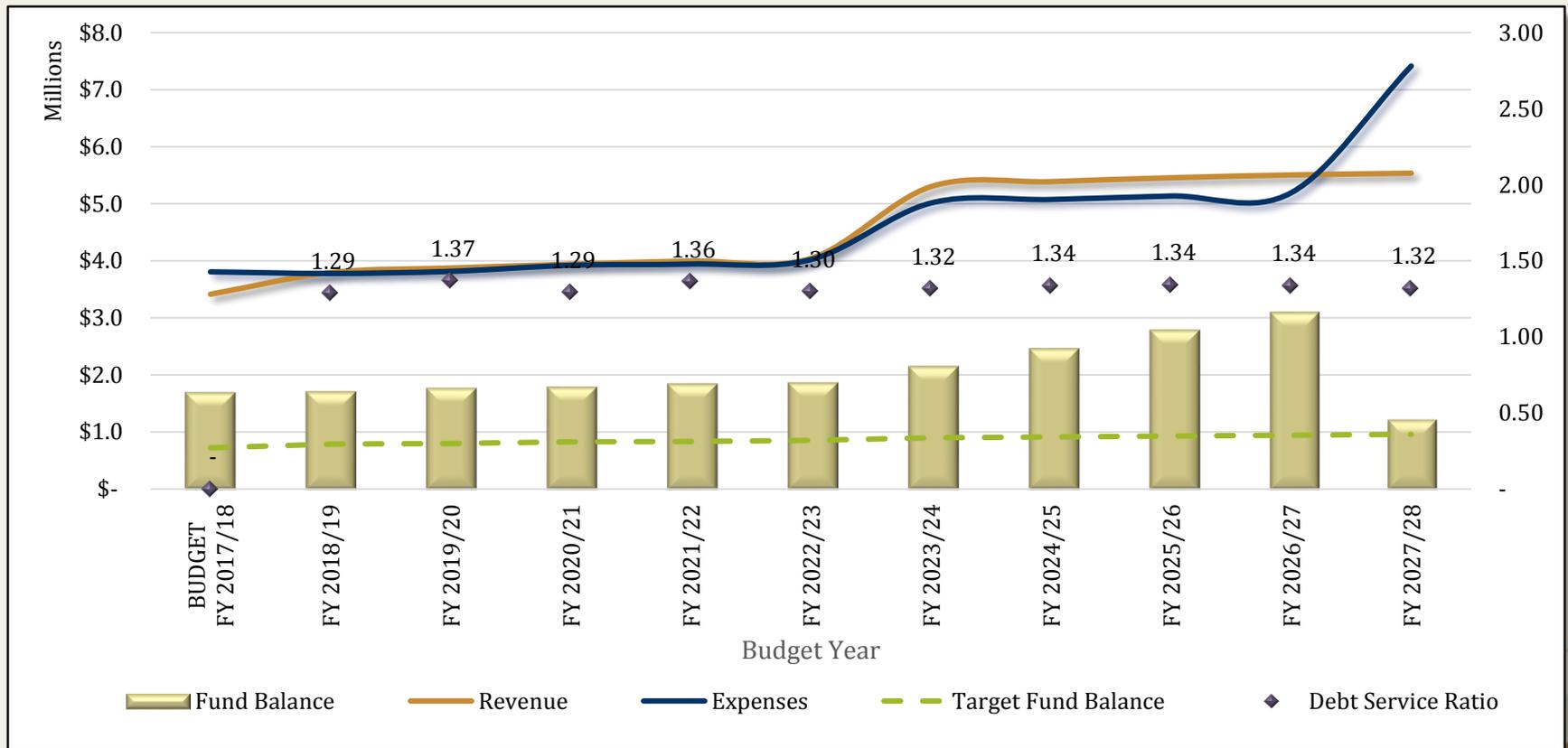
Projected Water Fund Balance



Rate Analysis – Alternate D

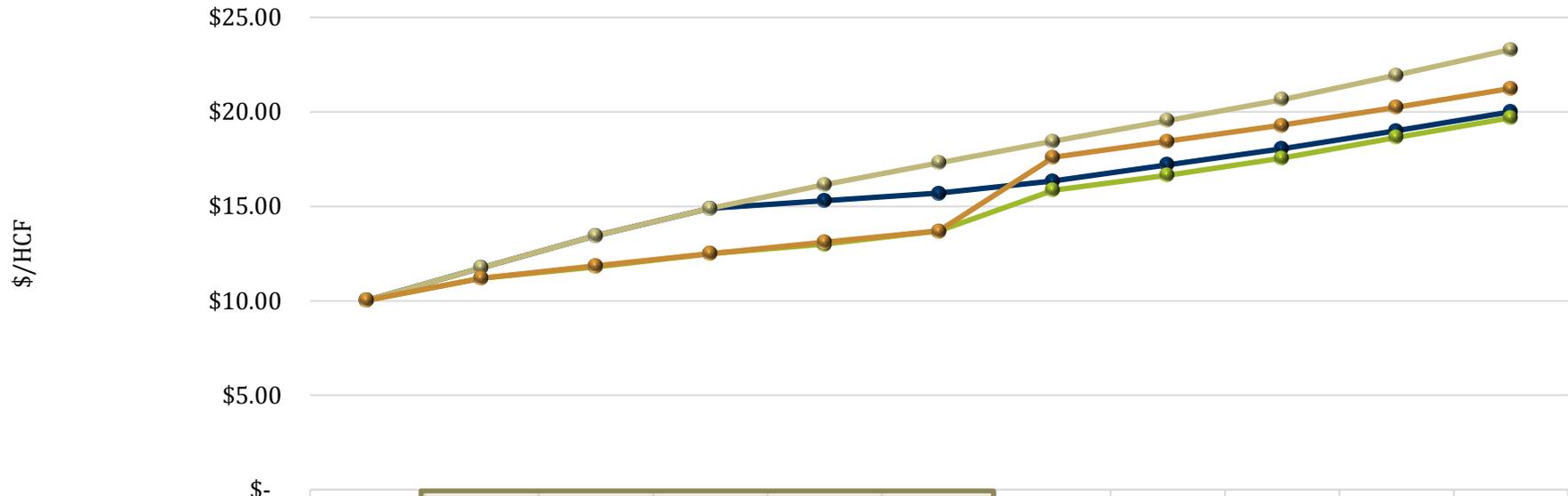
Alternate D = Enhanced improvements funded with debt

Projected Water Fund Balance



Rate Analysis – Summary

Combined Water & Sewer Rate per 100 Cubic Feet



	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28
● Recommended Improvements	\$10.03	\$11.75	\$13.45	\$14.90	\$15.30	\$15.70	\$16.35	\$17.20	\$18.05	\$19.00	\$20.00
● Recommended Improvements - Debt	\$10.03	\$11.20	\$11.80	\$12.50	\$13.00	\$13.70	\$15.85	\$16.65	\$17.55	\$18.65	\$19.70
● Enhanced Improvements	\$10.03	\$11.75	\$13.45	\$14.90	\$16.15	\$17.30	\$18.45	\$19.55	\$20.65	\$21.95	\$23.30
● Enhanced Improvements - Debt	\$10.03	\$11.20	\$11.85	\$12.50	\$13.10	\$13.70	\$17.60	\$18.45	\$19.30	\$20.25	\$21.25

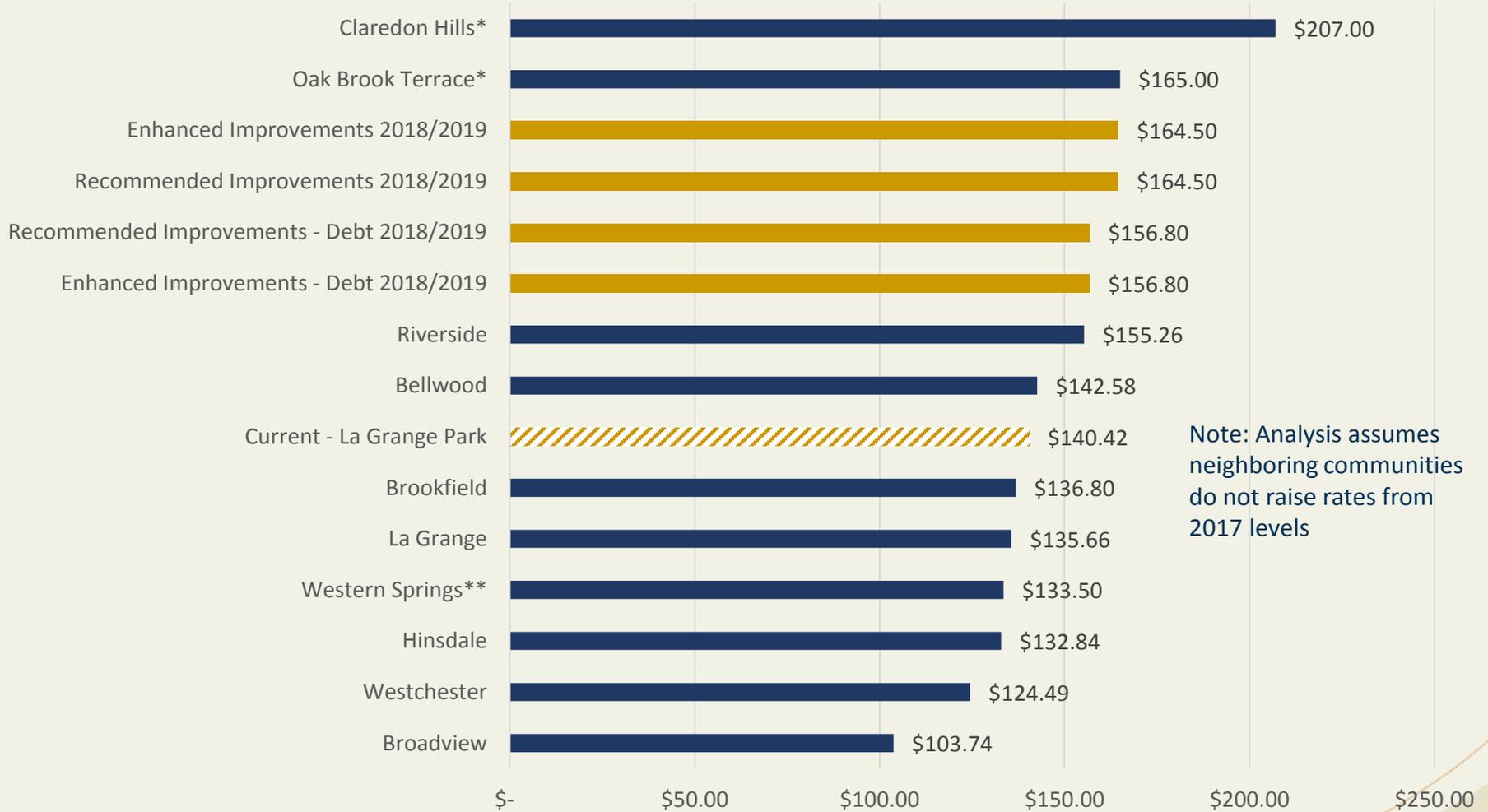
Rate Analysis – Summary

Quarterly Bill for Typical Residential User

Year	Recommended Improvements		Recommended Improvements - Debt		Enhanced Improvements		Enhanced Improvements - Debt	
	Quarterly Bill	Increase	Quarterly Bill	Increase	Quarterly Bill	Increase	Quarterly Bill	Increase
FY 2017/18	\$140.42		\$140.42		\$140.42		\$140.42	
FY 2018/19	\$164.50	\$24.08	\$156.80	\$16.38	\$164.50	\$24.08	\$156.80	\$16.38
FY 2019/20	\$188.30	\$23.80	\$165.20	\$ 8.40	\$188.30	\$23.80	\$165.90	\$ 9.10
FY 2020/21	\$208.60	\$20.30	\$175.00	\$ 9.80	\$208.60	\$20.30	\$175.00	\$ 9.10
FY 2021/22	\$214.20	\$ 5.60	\$182.00	\$ 7.00	\$226.10	\$17.50	\$183.40	\$ 8.40
FY 2022/23	\$219.80	\$ 5.60	\$191.80	\$ 9.80	\$242.20	\$16.10	\$191.80	\$ 8.40
FY 2023/24	\$228.90	\$ 9.10	\$221.90	\$30.10	\$258.30	\$16.10	\$246.40	\$54.60
FY 2024/25	\$240.80	\$11.90	\$233.10	\$11.20	\$273.70	\$15.40	\$258.30	\$11.90
FY 2025/26	\$252.70	\$11.90	\$245.70	\$12.60	\$289.10	\$15.40	\$270.20	\$11.90
FY 2026/27	\$266.00	\$13.30	\$261.10	\$15.40	\$307.30	\$18.20	\$283.50	\$13.30
FY 2027/28	\$280.00	\$14.00	\$275.80	\$14.70	\$326.20	\$18.90	\$297.50	\$14.00

Rate Analysis – Community Comparison

Average User Bill – 1400 cf



Note: Analysis assumes neighboring communities do not raise rates from 2017 levels

* Communities do not pay property tax for sewer service

** Community uses municipal wells for water supply, not Lake Michigan water

Recommendations

- Continue to invest in infrastructure renewal.
- Years 6-10 have significant uncertainty. Consider information presented in light of future Village plans.
- All proposed alternates are viable and can be supported. The path forward is a matter of Village Board policy.