

WATER AND SEWER RATE STUDY

PREPARED FOR

VILLAGE OF ROUND LAKE



PREPARED BY

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Table of Contents

Section I Executive Summary

General	I-1
Funding Mechanism.....	I-1
Existing User Charges	I-1
Water and Sewer Capital Improvements	I-2
User Charge Development	I-3
User Charge Assumptions	I-3
CLCJAWA Charges	I-3
NWRWRF/LCPWD/LRSD Charges	I-4
Recommended User Charges	I-5
Impact on Customers.....	I-8
Comparison with Neighboring Communities	I-8
Recommendations	I-8

Section II Introduction

Background	II-1
Scope	II-1

Section III Existing Village Fund and User Charges

Water and Sewer Fund	III-1
Existing User Charges	III-1
<i>Water and Sewer User Charges</i>	III-1
<i>Rates for Users Outside Village Limits</i>	III-2
<i>Senior Discount</i>	III-2
<i>Insufficiency of Current User Charges</i>	III-2

Section IV Projected Customers and Billable Flow Volume

General	IV-1
Customers	IV-1
Metered Consumption	IV-2
JAWA Metered Versus Billed Water Consumption	IV-2
Projected Billed Water Consumption	IV-4

Table of Contents

Section V Projected Revenues and Expenses

General	V-1
Revenues	V-2
Expenses	V-1
<i>Debt Service</i>	V-2
<i>Capital Improvements</i>	V-2
<i>Replacement Fund</i>	V-2
Water Revenues and Expenses	V-4
Sewer Revenues and Expenses.....	V-4

Section VI User Charge Development

Methodology	VI-1
System Expenditures	VI-1
Miscellaneous Revenues	VI-1
Fixed System Costs	VI-4
Variable System Costs.....	VI-4
<i>Base User Costs</i>	VI-4
<i>Debt Service Costs</i>	VI-8
<i>Replacement and Capital Improvements Costs</i>	VI-8
Pass-Through Charges.....	VI-10
<i>General</i>	VI-10
<i>JAWA User Charges</i>	VI-10
<i>LCPWD and NWRWRF User Charges</i>	VI-13
<i>LRSD User Charges</i>	VI-13
User Charge Alternates	VI-13
Alternate A	VI-13
Alternate B	VI-15
Alternate C	VI-17
Alternate D	VI-20
Summary of Alternates	VI-22
Recommendations	VI-22

Section VII Impact on Village Customers

Financial Impact of Village Users	VII-1
Comparison with Other Communities	VII-1

Appendices

Appendix A	Customers and Water Usage
Appendix B	Water and Sewer Fund (50) Financial Forecast 2020 - 2024
Appendix C	Village of Round Lake, Water and Sewer Fund - Debt Service
Appendix D	Capital Improvements Program, Fiscal Year End 2019 – 2024 CIP Document by Fund
Appendix E	Alternate A, Calculated Annual Requirements – Cash Balance, Financing, and Debt Service Projections
Appendix F	Alternate B, Constant Rates for Five Year Period – Cash Balance, Financing, and Debt Service Projections
Appendix G	Alternate C, Three Year Adjustment Followed by CPI Index – Cash Balance, Financing, and Debt Service Projections
Appendix H	Alternate D, Increase Charges by Constant Dollar Amount Annually - <i>FOR ILLUSTRATIVE PURPOSES - NOT RECOMMENDED</i> Index – Cash Balance, Financing, and Debt Service Projections

List of Tables

Table I-1	Village of Round Lake Existing User Charges.....	I-1
Table I-2	Projected CJCJAWA Water Rate (\$ per 1,000 gallons)	I-4
Table I-3	NWRWRF and LCPWD User Charges.....	I-5
Table I-4	Rate Summary and Projected Monthly Cost	I-6
Table I-5	Comparison of Typical Residential Monthly Bill in..... Neighboring Communities	I-9
Table III-1	Village of Round Lake Existing User Charges.....	III-2
Table IV-1	Summary of Number of Customers by Customer Class..... (FY 2017)	IV-1
Table IV-2	Average Number of Customers (FY 2015 through 2017)	IV-1
Table IV-3	Summary of Metered Water Usage by Customer Class..... (FY2017)	IV-2
Table IV-4	Historical Water and Sewer Usage.....	IV-3
Table V-1	Capital Improvements Plan, Moves, and Carryovers	V-3
Table V-2	Water Revenues and Expenditures	V-5
Table V-3	Sewer Revenues and Expenditures	V-8
Table VI-1	Water and Sewer Fund - Total Expenditures by Classification	VI-2
Table VI-2	Revenues for Rate Projection Calculations	VI-3
Table VI-3	Water Administrative Expenditures (For Fixed Fee Portion of	VI-5
	Rate Structure)	
Table VI-4	Sewer Administrative Expenditures (For Fixed Fee Portion of	VI-6
	Rate Structure)	

List of Tables

Table VI-5	Base User Costs (Less Miscellaneous Revenue, Exclusive of Debt Service and Replacement / CIP Funding)	VI-7
Table VI-6	Debt Service Costs	VI-9
Table VI-7	Replacement and Capital Improvements Cost	VI-11
Table VI-8	Projected CJCJAWA Water Rate (\$ per 1,000 gallons)	VI-12
Table VI-9	NWRWRF and LRSD User Charges	VI-13
Table VI-10	Alternate A Proposed User Charges	VI-14
Table VI-11	Alternate A Year End and Target Fund Balances	VI-15
Table VI-12	Alternate B Proposed User Charges	VI-16
Table VI-13	Alternate B Year End and Target Fund Balances	VI-17
Table VI-14	Alternate C Proposed User Charges	VI-18
Table VI-15	Alternate C Year End and Target Fund Balances	VI-19
Table VI-16	Alternate D Proposed User Charges (For Illustrative Purposes, Not Recommended)	VI-20
Table VI-17	Alternate D Year End and Target Fund Balances	VI-21
Table VI-18	Rate Summary and Projected Monthly Cost	VI-23
Table VII-1	Comparison of Typical Monthly Residential Bill in Neighboring Communities	VII-2

Section I

Executive Summary

General

RHMG was retained by the Village of Round Lake to review the water and sewer user charges currently assessed by the Village. User charges must 1) insure that sufficient revenues are collected to meet system needs and 2) equitably distribute the cost of service among all customers.

Adjustment of the Village's existing rates is necessary to make up for current revenue shortages and address reasonable goals for continued system operation, maintenance, repairs, replacement and capital improvements. Increased funding levels to provide for funding of capital improvements, as well as future rehabilitation of Village infrastructure, is recommended.

Funding Mechanism

Operation of the Village of Round Lake's water and sewer utilities is financed via the Water and Sewer Fund. The Water and Sewer Fund is a separate enterprise account, whose revenue is solely derived from the use of the Village's water and sewer services via user charges.

Existing User Charges

The Village of Round Lake currently uses a fixed fee plus uniform volume charge. Volumetric charges are based upon metered water usage. As discussed later, the Village also collects fees from: the Central Lake County Joint Action Water Agency (JAWA), the Lake County Public Works Department (LCPWD), the Northwest Regional Water Reclamation Facility (NWRWRF), and the Lakes Region Sanitary District.

The following Village user charges are currently assessed to customers:

Table I-1
Village of Round Lake
Existing User Charges

Service	Existing User Charge
Village Fixed Fee (Water and Sewer)	\$ 7.04 per month
Village Volumetric Charge (Water and Sewer)	\$ 3.79 per 1,000 gallons

An analysis of the Village's projected operating costs and revenues was performed. Current user charges are insufficient to provide the necessary revenue for the Village's Water and Sewer Fund. A rate increase is recommended to provide adequate revenues for system operation over the next five years.

Water and Sewer Capital Improvements

As part of this study, Village staff updated its capital improvements plan for its water and sewer facilities. Significant capital improvements to the water and sewer system are required in the next five years. The Village's five-year Capital Improvements Plan for FY 2020 through FY 2024, identified over \$11.84 Million Dollars in Water and Sewer Fund projects for repair, rehabilitation, and expansion of existing water supply, distribution, and storage facilities and sewage collection facilities.


Existing fund reserves and projected revenues under the existing rate structure are insufficient to finance the proposed capital improvement projects. Financing of capital improvement projects in this study considered a combination of utilization of existing fund balances and increased user charges. (Financing of capital improvements with loans or bonds is also an option but was eliminated from consideration after initial review with Village staff.)

As part of this rate study modifications to the 5-year capital improvements plan presented in the FY 2019 budget were made to reduce the impact of increased user charges on Village customers. These changes included the following:

- Moving the Capri / Avalon Water Main Replacement project from FY 2021 - FY 2022 to FY 2022 – FY 2023.
- Moving the Cedar Lake Road Water Main Replacement project from FY 2022 – FY 2023 to FY 2023 – FY 2024.
- Moving the Route 134 Water Main Improvements project (Cedar Lake Road east) from FY 2021 to FY 2022.
- Moving the construction of the new 750,000-gallon elevated tank from FY 2023 – 2024 to FY 2025 – 2026, or beyond.

User Charge Development

User charge development considers the equitable distribution of water and sewer system operating and capital costs among system users. In general, the iterative process used in developing user charges was as follows:

- 
1. Project annual billed water consumption and number of customers.
 2. Project annual expenses for the Water and Sewer Fund
 3. Estimate revenues from sources other than user charges (e.g. interest, tap-on fees, sales taxes, etc.)
 4. Consider utilization of existing fund reserves and any debt service needs.
 5. Calculate revenue requirements that must be recovered from user charges.
 6. Allocate user charge revenue requirements to customers
 7. Examine fund balances and compare to target levels.
 8. Evaluate impact of rates on customers and adjust rates accordingly.
 9. Recommend final rates

User Charge Assumptions

With input by Village staff, ultimately four user charge alternates were fully developed as described in Section VI and are presented for the Village's consideration. Detailed calculations for each alternate are also included in the appendices. Based upon input from Village staff, each of these alternates assume:

- Fixed (\$ per month) plus variable (\$ per 1,000 gallons) user charge components.
- No new debt service to be used for capital improvements.
- Target year end fund balances/reserves equal to 30% of operating expenses, plus 50% of annual debt service and existing replacement.
- Modifications to the 5-year capital improvements plan presented in the FY 2019 budget to reduce the impact of increased user charges on Village customers.

CLCJAWA Charges

The Village of Round Lake currently purchases Lake Michigan water from the Central Lake County Joint Action Water Agency (CLCJAWA or JAWA). Water bills from CLCJAWA are based

upon metered flows at their receiving stations. Table I-2 presents the current and proposed CLCJAWA rates for the next five years. Due to debt retirement and reduced per unit operating costs, fees charged by CLCJAWA will decrease over the next several years.

Water distribution systems experience normal losses throughout the system (water that is not used by customers) due to factors such as system leakage and flushing for maintenance. As a result, the amount of water supplied by CLCJAWA is greater than the amount used by Village customers. In the case of Round Lake, the metered supply from CLCJAWA is approximately 13% greater than water consumed by the Village customers. To assure adequate collection of CLCJAWA fees, the CLCJAWA base rate at the delivery structure must be increased by 13% to compute the Village customer charge. The assessed CLCJAWA charges for Village customers, which accounts for water losses in the system, are also shown in Table I-2.

**Table I-2
Projected CJCJAWA Water Rate (\$ per 1,000 gallons) [1] [2]**

FYE	CLCJAWA O&M Rate	Debt Service Rate for Charter CLCJAWA Members	CLCJAWA CIP Rate	CLCJAWA Misc. Revenue Deduct	Base CLCJAWA Water Rate [3]	% (+ or -)	Proposed Round Lake Customer CLCJAWA Rate [4]
2020	\$1.13	\$1.64	\$0.13	-\$0.02	\$2.88	1.77%	\$3.25
2021	\$1.13	\$0.99	\$0.13	-\$0.02	\$2.23	-22.57%	\$2.52
2022	\$1.15	\$0.52	\$0.14	-\$0.02	\$1.79	-19.73%	\$2.02
2023	\$1.17	\$0.52	\$0.14	-\$0.02	\$1.81	1.12%	\$2.05
2024	\$1.19	\$0.50	\$0.14	-\$0.02	\$1.81	0.00%	\$2.05

Notes:

[1] From CLCJAWA, FYE 2019 Financial Plan - Draft - Combined Water Rates: Exhibit F

[2] Charter member rates only. New member rates will be higher due to costs for either connection fee payments and/or infrastructure improvements.

[3] Base water rate is assessed on usage at the delivery structure from CLCJAWA.

[4] Round Lake customer rate is adjusted to reflect water losses in the distribution system (13%). Customer rate = 1.13 x Base CLCJAWA Water Rate.

NWRWRF/ LCPWD / LRSD Charges

The Village is also required to collect and remit charges to downstream governmental entities for the transmission and treatment of wastewater generated within the Village boundaries. Current charges assessed by the Northwest Regional Wastewater Reclamation Facility (NWRWRF) for wastewater treatment and the Lake County Public Works Department (LCPWD) for transmission are as follows:

**Table I-3
NWRWRF and LCPWD User Charges**

Service	Existing User Charge
NWRWRF Charge (Wastewater Treatment)	\$ 2.23 per 1,000 gallons
LCPWD Charge (Sewer Transmission)	\$ 1.44 per 1,000 gallons
LCPWD Excess Flow Facility Charge	\$ 1.50 per month

Sewage within limited areas of the Village is also tributary to facilities owned and operated by the Lakes Region Sanitary District. In these areas, a charge of \$3.19 per 1,000 gallons applies, in addition to LCPWD and NWRWRF charges.

Recommended User Charges

Table I-4 provides a summary of the four alternate rate structures presented for consideration as part of this user charge study.

- Alternate A – Alternate A rate increases vary in proportion to the need for each year of the 5-year study period.
- Alternate B – Alternate B assumes that Village rates are increased in FY 2020 and then are held constant for the next four years. The fixed and volumetric charges implemented are the average of those calculated for the five-year study period under Alternate A.
- Alternate C – Alternate C assumes a moderate increase in Village rates for the first three years of implementation. After that Village rates are increased by Consumer Price Index.

A fourth alternate, Alternate D, was also presented which assumes that rates are increased an equal dollar amount over the five-year study period. Alternate D was not recommended due to insufficient fund balances.



RHMG ENGINEERS, INC.

November, 2018



Table I-4 and VI-18
Rate Summary and Projected Monthly Cost
 (Page 1 of 2)

Rate Summary					
	Current	Year	Alternate A	Alternate B	Alternate C
Village Fixed Monthly Fee (Water)	\$ 3.56 per month	FY 2020	\$ 3.59 per month	\$ 3.93 per month	\$ 3.59 per month
		FY 2021	\$ 3.76 per month	\$ 3.93 per month	\$ 3.76 per month
		FY 2022	\$ 3.93 per month	\$ 3.93 per month	\$ 3.93 per month
		FY 2023	\$ 4.10 per month	\$ 3.93 per month	\$ 4.10 per month
		FY 2024	\$ 4.27 per month	\$ 3.93 per month	\$ 4.27 per month
Village Water Consumption Charge	\$ 2.16 per 1000 gal	FY 2020	\$ 3.09 per 1000 gal	\$ 5.67 per 1000 gal	\$ 3.50 per 1000 gal
		FY 2021	\$ 4.87 per 1000 gal	\$ 5.67 per 1000 gal	\$ 5.70 per 1000 gal
		FY 2022	\$ 6.39 per 1000 gal	\$ 5.67 per 1000 gal	\$ 6.75 per 1000 gal
		FY 2023	\$ 6.97 per 1000 gal	\$ 5.67 per 1000 gal	\$ 6.89 per 1000 gal
		FY 2024	\$ 7.03 per 1000 gal	\$ 5.67 per 1000 gal	\$ 7.03 per 1000 gal
Village Fixed Monthly Fee (Sewer)	\$ 3.48 per month	FY 2020	\$ 3.51 per month	\$ 3.85 per month	\$ 3.51 per month
		FY 2021	\$ 3.68 per month	\$ 3.85 per month	\$ 3.68 per month
		FY 2022	\$ 3.85 per month	\$ 3.85 per month	\$ 3.85 per month
		FY 2023	\$ 4.03 per month	\$ 3.85 per month	\$ 4.03 per month
		FY 2024	\$ 4.20 per month	\$ 3.85 per month	\$ 4.20 per month
Village Sewer Consumption Charge	\$ 1.63 per 1000 gal	FY 2020	\$ 2.83 per 1000 gal	\$ 2.95 per 1000 gal	\$ 1.95 per 1000 gal
		FY 2021	\$ 2.93 per 1000 gal	\$ 2.95 per 1000 gal	\$ 2.35 per 1000 gal
		FY 2022	\$ 3.06 per 1000 gal	\$ 2.95 per 1000 gal	\$ 2.90 per 1000 gal
		FY 2023	\$ 2.93 per 1000 gal	\$ 2.95 per 1000 gal	\$ 2.96 per 1000 gal
		FY 2024	\$ 3.02 per 1000 gal	\$ 2.95 per 1000 gal	\$ 3.02 per 1000 gal
Village Fixed Monthly Fee (Water Plus Sewer)	\$ 7.04 per month	FY 2020	\$ 7.10 per month	\$ 7.78 per month	\$ 7.10 per month
		FY 2021	\$ 7.44 per month	\$ 7.78 per month	\$ 7.44 per month
		FY 2022	\$ 7.78 per month	\$ 7.78 per month	\$ 7.78 per month
		FY 2023	\$ 8.13 per month	\$ 7.78 per month	\$ 8.13 per month
		FY 2024	\$ 8.47 per month	\$ 7.78 per month	\$ 8.47 per month
Village Total Water Plus Sewer Consumption	\$ 3.79 per 1000 gal	FY 2020	\$ 5.92 per 1000 gal	\$ 8.62 per 1000 gal	\$ 5.45 per 1000 gal
		FY 2021	\$ 7.80 per 1000 gal	\$ 8.62 per 1000 gal	\$ 8.05 per 1000 gal
		FY 2022	\$ 9.45 per 1000 gal	\$ 8.62 per 1000 gal	\$ 9.65 per 1000 gal
		FY 2023	\$ 9.90 per 1000 gal	\$ 8.62 per 1000 gal	\$ 9.84 per 1000 gal
		FY 2024	\$ 10.05 per 1000 gal	\$ 8.62 per 1000 gal	\$ 10.05 per 1000 gal
CLCJAWA Water Consumption Charge	\$ 2.83 per 1000 gal	FY 2020	\$ 3.25 per 1000 gal	\$ 3.25 per 1000 gal	\$ 3.25 per 1000 gal
		FY 2021	\$ 2.52 per 1000 gal	\$ 2.52 per 1000 gal	\$ 2.52 per 1000 gal
		FY 2022	\$ 2.02 per 1000 gal	\$ 2.02 per 1000 gal	\$ 2.02 per 1000 gal
		FY 2023	\$ 2.05 per 1000 gal	\$ 2.05 per 1000 gal	\$ 2.05 per 1000 gal
		FY 2024	\$ 2.05 per 1000 gal	\$ 2.05 per 1000 gal	\$ 2.05 per 1000 gal
NWRWRD/LCPWD Fixed Fee	\$ 1.50 per month	FY 2020	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
		FY 2021	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
		FY 2022	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
		FY 2023	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
		FY 2024	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
NWRWRD/LCPWD Consumption Charge	\$ 3.67 per 1000 gal	FY 2020	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal
		FY 2021	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal
		FY 2022	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal
		FY 2023	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal
		FY 2024	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal



November, 2018



**Table I-4 and VI-18
Rate Summary and Projected Monthly Cost
(Page 2 of 2)**

Estimated Residential Monthly Bill for Varying Usage															
	Current			FY 2020											
				Alternate A				Alternate B				Alternate C			
	Usage (gallons/month)	2,000	5,000	7,500	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500
Water Bill (\$/month)	\$13.54	\$28.51	\$40.99	\$16.27	\$35.29	\$51.14	24%	\$21.77	\$48.53	\$70.83	70%	\$17.09	\$37.34	\$54.22	31%
Sewer Bill (\$/month)	\$15.58	\$31.48	\$44.73	\$18.01	\$37.51	\$53.76	19%	\$18.60	\$38.47	\$55.03	22%	\$16.25	\$33.11	\$47.16	5%
Total (\$/month)	\$29.12	\$59.99	\$85.72	\$34.28	\$72.80	\$104.90	21%	\$40.37	\$87.00	\$125.86	45%	\$33.34	\$70.45	\$101.38	17%

	FY 2021											
	Alternate A				Alternate B				Alternate C			
	Usage (gallons/month)	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500
Water Bill (\$/month)	\$18.54	\$40.71	\$59.19	15%	\$20.31	\$44.88	\$65.36	-8%	\$20.20	\$44.86	\$65.41	20%
Sewer Bill (\$/month)	\$18.38	\$38.18	\$54.68	2%	\$18.60	\$38.47	\$55.03	0%	\$17.22	\$35.28	\$50.33	7%
Total (\$/month)	\$36.92	\$78.89	\$113.87	8%	\$38.91	\$83.35	\$120.39	-4%	\$37.42	\$80.14	\$115.74	14%

*Decrease in bill due to lower JAWA charges.

	FY 2022											
	Alternate A				Alternate B				Alternate C			
	Usage (gallons/month)	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500
Water Bill (\$/month)	\$20.75	\$45.98	\$67.01	13%	\$19.31	\$42.38	\$61.61	-6%	\$21.47	\$47.78	\$69.71	7%
Sewer Bill (\$/month)	\$18.81	\$39.00	\$55.83	2%	\$18.60	\$38.47	\$55.03	0%	\$18.49	\$38.20	\$54.63	8%
Total (\$/month)	\$39.56	\$84.98	\$122.84	8%	\$37.91	\$80.85	\$116.64	-3%	\$39.96	\$85.98	\$124.34	7%

*Decrease in bill due to lower JAWA charges.

	FY 2023											
	Alternate A				Alternate B				Alternate C			
	Usage (gallons/month)	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500
Water Bill (\$/month)	\$22.14	\$49.20	\$71.75	7%	\$19.37	\$42.53	\$61.83	0%	\$21.97	\$48.78	\$71.11	2%
Sewer Bill (\$/month)	\$18.73	\$38.53	\$55.03	-1%	\$18.60	\$38.47	\$55.03	0%	\$18.79	\$38.67	\$55.24	1%
Total (\$/month)	\$40.87	\$87.73	\$126.78	3%	\$37.97	\$81.00	\$116.86	0%	\$40.76	\$87.45	\$126.35	2%

*Decrease in bill due to debt service retirement

	FY 2024											
	Alternate A				Alternate B				Alternate C			
	Usage (gallons/month)	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500
Water Bill (\$/month)	\$22.43	\$49.67	\$72.37	1%	\$19.37	\$42.53	\$61.83	0%	\$22.43	\$49.67	\$72.37	2%
Sewer Bill (\$/month)	\$19.08	\$39.15	\$55.88	2%	\$18.60	\$38.47	\$55.03	0%	\$19.07	\$39.14	\$55.85	1%
Total (\$/month)	\$41.51	\$88.82	\$128.25	1%	\$37.97	\$81.00	\$116.86	0%	\$41.50	\$88.81	\$128.22	2%

Impact on Existing Customers

To illustrate the impact of the new user charges on Village residents, bills for users with varying levels of water consumption were calculated as shown also in Table I-4. The typical residential customer using consuming 5,000 gallons of water a month pays \$59.99 for water and sewer service. Monthly bills for a typical residential user under Alternate A would increase to \$72.80 per month in FY 2020. FY 2020 bills for typical residential users under Alternate B and C would be \$87.00 and \$70.45 per month, respectively. By FY 2025, average monthly bills would increase to: Alternate A - \$88.82 per month; Alternate B - \$81.00 per month; and Alternate C - \$88.81 per month.

Comparison with Neighboring Communities

Table I-5 provides a comparison of projected monthly Village charges for the typical residential user under the proposed alternates with those charges assessed in other northern Illinois water and sewer systems. Current costs for water and sewer service within the Village of Round Lake are in the lower half of surveyed communities. Even with the substantial increase in rates proposed, average monthly costs for water and sewer under Alternates A and C in FY 2019 will remain in the middle to upper third quartile of all communities surveyed. As neighboring communities continue to review and update their operation and infrastructure needs, it is expected that the Village's newly adjusted rates will continue to compare favorably with those of its neighbors. Alternate B has rates near the highest of neighboring communities as these rates reflect the average rate needed over the 5-year study period and the Village portion of these rates will not be increased further over that time.

Recommendations

The following recommendations are the result of this study:

1. Implement the selected rate structure *no later than* May 1, 2019 to provide an appropriate customer notification period.
2. Adopt an automatic increase of user charges effective May 1 of each calendar year, based upon the Consumers Price Index for all Urban Consumers published by the Bureau of Labor Statistics of the United States Department of Labor for Chicago-Gary-Kenosha, IL-IN-WI, All Items for the previous calendar year, with a minimum increase of 2 percent and a maximum increase of 4%. Allow for waiver of this automatic increase by the Village Board in any given year, if desired.

**Table I-5 and VII-1
Comparison of Typical Monthly Residential Bill in Neighboring Communities**

Municipality	Typical Residential Water Bill (\$/month) [1]	Typical Residential Sewer Bill (\$/month) [1]	Typical Residential Water and Sewer Bill (\$/month) [1]
Cary	\$23.67	\$12.85	\$36.52
Huntley	\$18.10	\$23.20	\$41.30
Algonquin	\$22.85	\$25.15	\$48.00
Lindenhurst	\$40.70	\$7.69	\$48.39
McHenry	\$17.70	\$34.85	\$52.55
Lake in the Hills / Lake in the Hills Sanitary District	\$29.78	\$24.00	\$53.78
Gilberts	\$27.50	\$27.50	\$55.00
Antioch	\$20.95	\$36.90	\$57.85
West Dundee	\$28.97	\$28.97	\$57.93
Johnsburg	\$27.09	\$31.35	\$58.44
Hainesville (Cranberry Lake)	\$37.00	\$22.35	\$59.35
Carpentersville	\$30.37	\$29.22	\$59.59
Round Lake / CLCJAWA / NWRWRF (Current)	\$28.51	\$31.48	\$59.99
Mundelein / CLCJAWA	\$36.05	\$24.05	\$60.10
Round Lake Heights / CLCJAWA / NWRWRF	\$31.25	\$29.05	\$60.30
Gurnee (W of 94) / CLCJAWA / LCPWD/ NSWRD	\$29.61	\$34.31	\$63.92
Batavia	\$27.53	\$36.55	\$64.08
Round Lake Beach / CLCJAWA / NWRWRF	\$41.80	\$23.85	\$65.65
Crystal Lake	\$32.14	\$33.60	\$65.74
Hainesville (Deerpoint, Misty Hill)	\$37.00	\$29.91	\$66.91
Bartlett - Cook/Kane Counties	\$48.50	\$19.41	\$67.91
Volo / Lakes Region Sanitary District / LCPWD/ NWRWRF	\$32.50	\$35.80	\$68.30
Barrington	\$26.60	\$43.00	\$69.59
Proposed Alt C Round Lake / CLCJAWA / NWRWRF	\$37.34	\$33.11	\$70.45
Libertyville / CLCJAWA	\$36.38	\$34.11	\$70.49
Island Lake / Northern Moraine Water Reclamation District	\$32.23	\$39.51	\$71.74
Proposed Alt A Round Lake / CLCJAWA / NWRWRF	\$35.29	\$37.51	\$72.80
Lake Villa / NWRWRF	\$42.25	\$32.90	\$75.15
Wauconda	\$34.90	\$42.10	\$77.00
Grayslake / CLCJAWA / LCPWD / NSWRD	\$32.65	\$46.25	\$78.90
Bartlett - DuPage County	\$48.50	\$32.09	\$80.59
Lake Zurich / LCPWD	\$31.25	\$51.25	\$82.50
Fox River Grove	\$30.14	\$54.09	\$84.23
Proposed Alt B Round Lake / CLCJAWA / NWRWRF	\$48.53	\$38.45	\$86.98
Fox Lake / NWRWRF	\$40.96	\$46.61	\$87.57
Lakewood / Lakewood Utilities	\$38.48	\$54.63	\$93.10

Notes:

[1] Based upon average residential consumption of 5,000 gallons per month.

This automatic increase based upon the CPI would go into effect on the following dates:

Alternate	Implement CPI Rate Increase Beginning
Alternate A	Annually beginning May 1, 2023
Alternate B	Annually beginning May 1, 2025
Alternate C	Annually beginning May 1, 2022

3. Conduct an asset management study and/or continue to update the Village's capital improvements plan as additional needs in the Village are identified. Re-evaluate rates and financing strategies for funding of long-term capital improvements and system replacement needs beyond the time frame used in this study.

Section II

Introduction

Background

RHMG was retained by the Village of Round Lake to review the water and sewer user charges currently assessed by the Village. User charges must 1) insure that sufficient revenues are collected to meet system needs and 2) equitably distribute the cost of service among all customers.

Scope

An evaluation of the Village expenditures and revenues is required to develop user charges which will recover current and future system operating costs. This study develops a schedule for future rate increases over the next five years.

The scope of this study is to:

1. Compile and analyze historic expenditures and revenues.
2. Review historical metered water usage to determine average customer consumption.
3. Prepare water projections for the service area for the study period.
4. Review system costs and revenue requirements for the water and sewer systems, including:
 - Operation and maintenance expenditures
 - Capital and replacement cost components
 - Debt service requirements
5. Develop alternative cost allocation methodologies.
6. Identify future financing needs and debt service requirements.
7. Recommend user charges for Village users.
8. Calculate the impact of rates increases on customers within the Village.
9. Compare existing and proposed rates to those charged by neighboring communities.

Section III

Existing Village Fund and User Charges

Water and Sewer Fund

The Water and Sewer Fund is a separate enterprise account, whose revenue is solely derived from the use of the Village's water and sewer services via user charges. The revenues and expenditures are directly related to the demand for these water and sewer services and are not supplemented by any other fund. At the beginning of FY19, the Water and Sewer Fund had a fund balance of \$5,887,664.

Approximately 97.1% of the revenue for this fund is currently generated from water and sewer fees. Of the revenue generated by user fees, 42.4 percent comes from Village fees, 23.4 percent comes from Central Lake County Joint Action Water Agency (JAWA) Lake Michigan water fees, and 31.3 percent comes from Lake County Public Works Department (LCPWD), Northwest Regional Water Reclamation Facility (NWRWRF), and Lakes Region Sanitary District (LRSD) sewage transmission and treatment fees. Other revenue sources are generated from new meter sales, late payment charges, interest on cash reserves, and other miscellaneous revenue.

Existing User Charges

Water and Sewer User Charges - The Village of Round Lake uses a fixed fee plus uniform volume rate structure for both water and sewer charges. The volumetric component of the charges is based upon metered water usage. A uniform rate structure means that the cost per volume charged remains the same regardless of the volume of usage. A combined water and sewer rate is currently assessed.

As discussed above, the Village also collects water fees for the supply of Lake Michigan water for the Central Lake County Joint Action Water Agency (JAWA). Additional fees for wastewater collection and treatment are also collected by the Village for the Lake County Public Works Department (LCPWD), the Northwest Regional Water Reclamation Facility (NWRWRF), and the Lakes Region Sanitary District (LRSD, in certain limited areas).

The following charges are currently assessed Village customers for water and sewer service:

**Table III-1
Village of Round Lake
Existing User Charges**

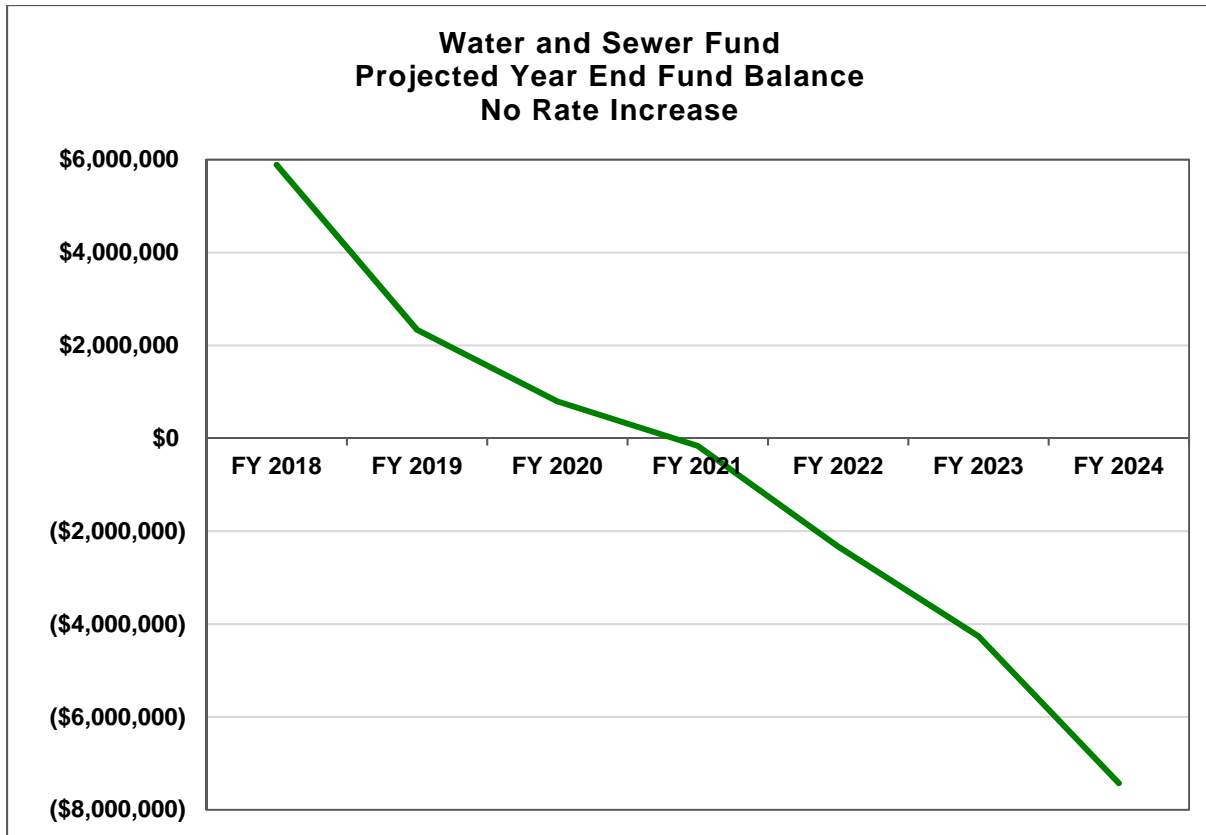
Service	Existing User Charge
Village Fixed Fee (Water and Sewer)	\$ 7.04 per month
Village Volumetric Charge (Water and Sewer)	\$ 3.79 per 1,000 gallons
JAWA Charge	\$ 2.73 per 1,000 gallons
NWRWRF Charge (Wastewater Treatment)	\$ 2.23 per 1,000 gallons
LCPWD Charge (Sewer Transmission)	\$ 1.44 per 1,000 gallons
LCPWD Excess Flow Facility Charge	\$ 1.50 per month
LRSD User Charge (Sewer Transmission) [1]	\$3.19 per 1,000 gallons

Notes: [1] In limited areas served by LRSD.

Rates for Users Outside Village Limits – In addition to the above, customers located outside of the Village limits are assessed a higher rate for water and sewer service. The rates for users outside of the Village limits are 150% of the applicable rates for users inside the Village.

Senior Discount – One dollar (\$1.00) of Village fixed fee charge per month is waived for customers qualifying for a senior utility tax rebate.

Insufficiency of Current User Charges - Current user charges are insufficient to provide the necessary revenue for operation of the Village’s water and sewer systems with the improvements as planned in the Village’s Capital Improvements Plan. As indicated previously, the Water and Sewer Fund had a fund balance of \$5,887,664 at beginning of FY19. As shown in the figure below, this reserve is projected to be depleted by FY 2021 if user charges are not increased to match current trends for rising operation and maintenance costs and required capital improvements. (This graph is based upon a revised schedule for Capital Improvements as discussed later in this report.)



Section IV

Projected Customers and Billable Volume

General

The Village of Round Lake maintains detailed records of the number of customers served by the Village by customer type and the metered water consumption for each. Appendix A provides a summary of the number of customers and water usage by customer class for FY 2013 through 2017.

Customers

In FY 2017, there were 5,269 water customers and 5,113 sewer customers in the Village. Residential users comprised the largest number of users. Other customer classes include connections from commercial and industrial water users, as noted below.

Table IV-1
Summary of Number of Customers by Customer Class (FY2017)

Customer Class	Number of Water Customers	Percent of Total Water Customers	Number of Sewer Customers	Percent of Total Sewer Customers
Residential	5,136	97.5%	4,981	97.4%
Commercial	108	2.0%	108	2.1%
Industrial	25	0.5%	24	0.5%
Total	5,269	100%	5,113	100%

For fixed fee projections used in this study, the average number of customers for FY 2015 through FY 2017 were used, as shown in Appendix A and as summarized below:

Table IV-2
Average Number of Customers (FY 2015 through 2017)

Number of Water Customers	Number of Sewer Customers
5,260	5,090

Metered Consumption

Metered water consumption is the basis for both water and sewer bills in the Village. There are a few unmetered users which are assessed a flat rate based upon an estimated water usage. The following table summarized the water and sewer usage by customer class.

**Table IV-3
Summary of Metered Water Usage by Customer Class (FY2017)**

Customer Class	Annual Water Consumption (gallons)	Percent of Total Water Usage	Annual Sewer Billing (gallons)	Percent of Total Sewer Usage
Residential	330,858,000	93.1%	315,922,000	93.2%
Commercial	23,527,000	6.6%	21,898,000	6.5%
Industrial	1,049,000	0.3%	1,127,000	0.3%
Total	355,434,000	100%	338,947,000	100%

In FY 2017, residential customers accounted for 97.5 percent of the total number of customers in the system and consumed only 93.1% of the total water annually in the Village. The average residential water consumption in FY 2017 was approximately 176 gallons per day per residential dwelling unit (gpd/D.U.) or an average monthly bill based upon 5,000 gallons per month. Residential water consumption is significantly less than similar Northeast Illinois communities, which typically averages 270 gpd/D.U.

JAWA Metered Versus Billed Water Consumption

The Village of Round Lake purchases Lake Michigan water from the Central Lake County Joint Action Water Agency. Bills to CLCJAWA are based upon metered flows at the JAWA receiving stations. Water distribution systems experience normal losses throughout the system (water that is not used by customers) due to factors such as system leakage and flushing for maintenance. As a result, the amount of water supplied by CLCJAWA is greater than the amount used by Village customers. *In the case of Round Lake, the metered supply from CLCJAWA is approximately 13% greater than water consumed by the Village customers.*

Table IV-4 presents a summary of annual water pumped/received from CLCJAWA, the annual water billed to Village customers, and annual water consumption used as the basis for sewer billing for FY09 through FY18. (The total water billed to Village customers is marginally greater than the total billed sewer usage as there are customers in the Village which have only water service.)

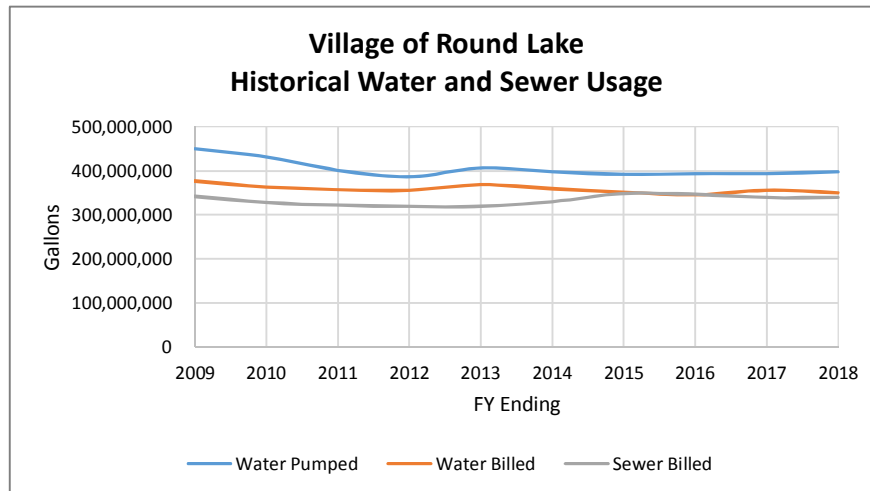


November, 2018



**Table IV-4
Village of Round Lake
Historical Water and Sewer Usage**

Fiscal Year End	Total Pumped Water (gallons)	Change from Previous Year	Total Billed Water (gallons)	Change from Previous Year	Total Billed 'Sewer' (gallons)	Change from Previous Year
2009	450,242,670	-	376,435,000	-	341,616,000	-
2010	431,500,800	(4.16%)	363,004,000	(3.57%)	327,791,000	(4.05%)
2011	401,121,810	(7.04%)	356,996,000	(1.66%)	321,398,000	(1.95%)
2012	386,306,000	(3.69%)	355,362,000	(0.46%)	318,999,000	(0.75%)
2013	406,174,600	5.14%	368,196,000	3.61%	319,044,000	0.01%
2014	397,586,500	(2.11%)	359,238,000	(2.43%)	329,644,000	3.32%
2015	391,715,320	(1.48%)	351,398,313	(2.18%)	348,098,000	5.60%
2016	392,890,906	0.30%	345,254,000	(1.75%)	346,211,000	(0.54%)
2017	393,404,000	0.13%	355,434,443	2.95%	338,947,000	(2.10%)
2018	397,921,000	1.15%	350,233,000	(1.46%)	339,438,000	0.14%
Average 2009-2018	404,886,000	(1.61%)	358,155,000	(0.69%)	333,119,000	(0.06%)
Average 2014-2018	394,704,000	0.40%	352,312,000	0.04%	340,468,000	1.26%
Average 2016-2018	394,739,000	(0.35%)	350,307,000	(0.33%)	341,532,000	0.99%
USE	395,000,000	Gallons/Year	350,000,000	Gallons/Year	340,000,000	Gallons/Year



Gallons Pumped - Per monthly JAWA invoices

Gallons Billed - From billing registers. Based on month read versus bill date.

For the period of FY09 through FY2018, the annual water pumped from CLCJAWA averaged 404,886,000 gallons. The total water metered and billed to Village customers was 358,155,000 gallons and the total annual sewer billing averaged 333,119,000 gallons.

As shown in Table IV-4, water pumpage and consumption has decreased over time. In FY16 through FY18, the annual average for total water pumped decreased to 394,739,000 gallons. The total billed water and billed sewer for that same time period also decreased to 350,307,000 gallons. The total billed sewer increased to 341,532,000 gallons.

Projected Billed Water Consumption

For rate studies, it is important provide reasonably conservative projections of water consumption. Overstating water usage in the development of rate structures, will result in the underestimation of rates needed and generate insufficient revenue to adequately operate and maintain the system. Conversely, grossly underestimating water consumption, will unnecessarily inflate rates and overburden Village customers.

For this study, it is recommended that rates be developed based upon an annual water consumption (metered at the customer) of 350,000,000 gallons per year and an annual sewer usage of 340,000,000 gallons per year.

Section V

Projected Revenues and Expenses

General

This section describes the projected revenues and expenditures for the Water and Sewer Fund which were used in the development of the user charge alternatives for the Village. RHMG reviewed historical, budgeted, and projected revenues and expenditures for the Village for FY15 through FY24. Future projections were prepared by the Village based upon historical data and appropriate inflation indexes (see Appendix B) Limited additional development was assumed over the next five years.

Revenues

The primary sources of revenue for the Water and Sewer Fund are water and sewer user charges. These include user charge revenue for CLCJAWA, NWRWRF, LCPWD, and LRSD, which are collected and passed through to the appropriate agency.

CLCJAWA Revenues and Expenses in the Village's financial forecasts were modified to reflect a proposed reduction in JAWA charges over the study period. In addition, as discussed later, it is recommended to adjust the JAWA rate charged Village customers to account for water losses in the system, so that collected JAWA revenues will equal the cost for JAWA water as metered at the delivery structure. (Currently, the Village makes up the difference between JAWA costs and customer collected JAWA revenues in the Village user charge.) The financial forecasts shown in Appendix B reflect these changes.

The table in Appendix B also lists other miscellaneous "non-user charge related" revenues. These include income from items such as meter sales, water lien revenue, interest on existing fund balances and sewer penalties. For the development of user charges, revenue from these fees was assumed to be negligible as income from these sources cannot be guaranteed.

Expenses

Historical and projected expenditures for the Village's Water and Sewer Fund are also summarized in Appendix B. These expenditures include items such as personnel costs, professional and contractual services, commodities, building and ground maintenance, utilities, vehicles and equipment, infrastructure maintenance and replacement, capital improvements, and debt service. Projections for most Village expenditures assumed an increase of 1.5% per year, with a few exceptions. IMRF costs per the prescribed schedule were used. Insurance

costs were assumed to increase at 3 to 10 percent per year. Additional detail regarding debt service, capital improvements, and replacement funding is provided below.

Debt Service - The Water and Sewer Fund has existing debt service for the Series 2010 C General Obligation Bonds Alternate Revenue Source. Debt service on these bonds is paid for via the Water and Sewer Fund. The amortization schedule for the bonds is provided in Appendix C. Annual principal and interest payments vary from approximately \$135,000 to \$140,000 per year. The bonds will be fully paid by the end of FY 2022.

Initial draft user charge alternates considered financing of a portion of proposed capital improvements via low interest loans from the Illinois Environmental Protection Agency's Public Water Supply Revolving Loan Program and Water Pollution Control Revolving Loan Program. Based upon input from Village staff, it was ultimately decided not to take on additional debt for financing of capital water and sewer improvements. The spreadsheets presented herein make provisions for future financing should that become desirable in the future.

Capital Improvements - Significant capital improvements to the water and sewer system were projected for the Village in the Capital Improvements Plan included in its FY 2019 budget. The Village's five-year Capital Improvements Plan for FY 2020 through FY 2024 identified over \$11.84 Million Dollars in Water and Sewer Fund projects for repair, rehabilitation, and expansion of existing water supply, distribution, and storage facilities and sewage collection facilities (see Appendix D).

As part of this rate study modifications to the 5-year capital improvements plan presented in the FY 2019 budget were made to reduce the impact of increased user charges on Village customers. These changes included the following:

- Moving the Capri / Avalon Water Main Replacement project from FY 2021 - FY 2022 to FY 2022 – FY 2023.
- Moving the Cedar Lake Road Water Main Replacement project from FY 2022 – FY 2023 to FY 2023 – FY 2024.
- Moving the Route 134 Water Main Improvements project (Cedar Lake Road east) from FY 2021 to FY 2022.
- Moving the construction of the new 750,000-gallon elevated tank from FY 2023 – 2024 to FY 2025 – 2026, or beyond.

The revised capital improvements plan used this study, incorporating the above changes, is presented in Table V-1.

Replacement Fund – Three replacement funds receive contributions from the Water and Sewer Fund based upon an inventory of items and the annual depreciation amount to fund replacement of such items in the future. The three funds include the Vehicle Replacement Fund, the Technology Replacement Fund, and the Building Replacement Fund.



November, 2018



**Table V-1
Capital Improvements Plan, Moves, and Carryovers**

Project	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 19 - 24
Water CIP							
MXU Replacement [1]	\$ 100,000	\$ 100,000	\$ 30,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 260,000
Fire Hydrant Painting [2]	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 60,000
Valve Exercise [2]	\$ 30,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 90,000
Water Storage Tank Cleaning [2]	\$ 15,000	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -	\$ 45,000
Well #2 Roof and Insulation Replacement [3]	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Large Trucks New (Split 50/50 with Sewer)	\$ -	\$ 97,500	\$ 62,500	\$ -	\$ -	\$ -	\$ 160,000
750,000 Gallon Elevated Tank [7]	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Brooks Farm Water Interconnect	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Capri/Avilon Water Main Replacement [8]	\$ -	\$ -	\$ -	\$ 78,300	\$ 1,092,300	\$ -	\$ 1,170,600
Cedar Lake Road Water Main Replacement [9]	\$ -	\$ -	\$ -	\$ -	\$ 116,500	\$ 2,174,000	\$ 2,290,500
CLCJAWA Receiving Station	\$ 660,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 660,000
CLCJAWA South Pumping Station	\$ 1,629,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,629,000
Emergency Water Interconnect - RL Beach	\$ 147,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 147,000
Orchard St/Ravine Ave/Cranberry Ct Water Main Replacement	\$ -	\$ -	\$ -	\$ -	\$ 39,800	\$ 569,800	\$ 609,600
Replace Non-Operative Water Main Valves & Fire Hydrants	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 300,000
Route 134 Water Main Improvements - Cedar Lake Rd. East [10]	\$ -	\$ -	\$ -	\$ 1,265,000	\$ -	\$ -	\$ 1,265,000
Upgrade Controls & Install Back Up Power Generator	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 720,000
Water System Master Plan Update	\$ 52,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 52,000
Water Tower Painting	\$ -	\$ 255,000	\$ 340,000	\$ 340,000	\$ 255,000	\$ -	\$ 1,190,000
Wilson Water Tower Instrument Cabinet	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Geographic Information System (GIS) Software (Annual cost split 50/50 with Sewer) [4]	\$ 2,625	\$ 2,625	\$ 2,625	\$ 2,625	\$ 2,625	\$ 2,625	\$ 15,750
Total - CIP Water	\$ 2,885,625	\$ 637,125	\$ 652,125	\$ 1,877,925	\$ 1,733,225	\$ 2,938,425	\$ 10,724,450
Water - Moves and Carryovers							
Water and Sewer Rate Study (Cost Split 50/50 with Sewer)	\$ 7,030	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,030
CLCJAWA Delivery Structure	\$ 30,330	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,330
CLCJAWA Pumping Station	\$ 8,877	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,877
Well No. 3 Rehabilitation	\$ 6,935	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,935
Total Water Moves and Carryovers	\$ 53,172	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 53,172
Total Water - CIP Moves and Carryovers	\$ 2,938,797	\$ 637,125	\$ 652,125	\$ 1,877,925	\$ 1,733,225	\$ 2,938,425	\$ 10,777,622
Total - Rate or Reserve Funded Water CIP, Moves, and Carryover Items (Shaded)	\$ 2,938,797	\$ 637,125	\$ 652,125	\$ 1,877,925	\$ 1,733,225	\$ 2,938,425	\$ 10,777,622
						Average 2019 - 2024	\$ 1,796,270
Total - Debt Funded Water CIP Items (Non-Shaded)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer - CIP							
Nippersink Lift Station Remodel/Replacement	\$ -	\$ 444,000	\$ -	\$ -	\$ -	\$ -	\$ 444,000
Large Trucks New (Split 50/50 with Sewer)	\$ -	\$ 97,500	\$ 62,500	\$ -	\$ -	\$ -	\$ 160,000
Sanitary Sewer Master Plan Update	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,000
Sanitary Sewer System Inspecting, Cleaning, and Maintenance	\$ 168,000	\$ 308,000	\$ 158,000	\$ 143,000	\$ 143,000	\$ 110,000	\$ 1,030,000
Geographic Information System (GIS) Software (Annual cost split 50/50 with Water) [4]	\$ 2,625	\$ 2,625	\$ 2,625	\$ 2,625	\$ 2,625	\$ 2,625	\$ 15,750
Lift Station Repairs [5]	\$ 60,000	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Cellular SCADA Transmitters for Lift Stations [6]	\$ 35,000	\$ 35,000	\$ 35,000	\$ 12,000	\$ -	\$ -	\$ 117,000
Total - CIP Sewer	\$ 340,625	\$ 927,125	\$ 258,125	\$ 157,625	\$ 145,625	\$ 112,625	\$ 1,941,750
Sewer - Moves and Carryovers							
Water and Sewer Rate Study (Cost Split 50/50 with Water)	\$ 7,030	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,030
Cedar Lake Road Lift Station / Squaw	\$ 3,801	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,801
Cedar Lake Road Lift Station / Squaw	\$ 12,589	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,589
Sanitary Sewer Televised Tape Review	\$ 11,952	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,952
Sanitary Sewer Emergency Rehab - Design	\$ 3,620	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,620
Sanitary Sewer Emergency Rehab - Construction	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,000
Cambridge Lift Station and Force Main Replacement	\$ 85,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 85,000
Total Sewer Moves and Carryovers	\$ 198,992	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 198,992
Total Sewer - CIP, Moves, and Carryovers	\$ 539,617	\$ 927,125	\$ 258,125	\$ 157,625	\$ 145,625	\$ 112,625	\$ 2,140,742
Total - Rate or Reserve Funded Sewer CIP, Moves, and Carryover Items (Shaded)	\$ 539,617	\$ 927,125	\$ 258,125	\$ 157,625	\$ 145,625	\$ 112,625	\$ 2,140,742
						Average 2019 - 2024	\$ 356,790
Total - Debt or Reserve Funded Sewer CIP Items (Non-Shaded)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total CIP Water and Sewer	\$ 3,226,250	\$ 1,564,250	\$ 910,250	\$ 2,035,550	\$ 1,878,850	\$ 3,051,050	\$ 12,666,200
Total Moves and Carryovers Water and Sewer	\$ 252,164	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 252,164
Total Rate or Reserve Funded Water and Sewer CIP, Moves, and Carryover Items	\$ 3,478,414	\$ 1,564,250	\$ 910,250	\$ 2,035,550	\$ 1,878,850	\$ 3,051,050	\$ 12,918,364
Total Debt Funded Water and Sewer CIP, Moves, and Carryover Items	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Notes:
 Items shaded in yellow are projected to be paid for by fund revenues or reserves.
 Unshaded items are assumed to be paid by debt service.
 [1] Included as separate line item in budget, as Water Meters (MXU's) (50-60-74-77428).
 [2] Included in separate line item in budget, as B&G Maintenance (CIP Items) (50-60-79-77901).
 [3] Included in separate line item in budget, as B&G Repairs (CIP Items) 50-60-79-77905.
 [4] Included in separate line item in budget, as IT Maintenance Services (50-60-91-99107).
 [5] Included as separate line item in budget, as Lift Station Repairs (50-60-92-99208).
 [6] Included as separate line item in budget, as SCADA Maintenance (50-60-91-99101).
 [7] Project years changed from FYs 23/24 shown in CIP to FYs 25/26
 [8] Project years changed from FYs 21/22 shown in CIP to FYs 22/23
 [9] Project years changed from FYs 22/23 shown in CIP to FYs 23/24
 [10] Project year changed from FY 21 shown in CIP to FY 22

In addition to the above funds, it is recommended that the Village establish a replacement fund to provide means of financing the future repair and replacement of aging water and sewer facilities. As the Village's system continues to age, these repair and replacement costs will be ongoing and ever increasing. In this study, a proposed CIP/Replacement Fund allocation has been incorporated into the rate structure which includes both new infrastructure and existing infrastructure replacement projects included in the Capital Improvements Plan.

Replacement funding requirements are often developed through the preparation of a detailed asset management plan, in which the age, condition, expected life and replacement/repair cost of each structure and item of equipment is established. It is recommended that a detailed asset management plan be developed within the next five years to identify funding needs for long term replacement of assets. Following development of this plan, CIP/Replacement Funding levels incorporated in the current rate structure can be reviewed for future long-term replacement needs.

Water Revenues and Expenses

The Village currently assesses users a combined water and sewer rate, however some users only have water service while others only have sewer service. Accordingly, it was requested to establish separate rates for water and sewer. Revenues and expenses for the combined water and sewer system were separated to account for items directly attributable to the water system. The revenue and expenses for the water system are shown in Table V-2.

Sewer Revenues and Expenses

Revenues and expenses for items directly attributable for the sewer system are shown in Table V-3.



November, 2018



**Table V-2
Water Revenues and Expenditures**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Revenues							
Licenses & Permits							
50-05-54-55411	Water/Sewer Permits	0	0	0	0	0	0
Charges for Services							
50-05-56-55603	Meter Etc. For Resale	2,500	2,500	2,500	2,500	2,500	2,500
50-05-56-55604	LRSD User Fees	0	0	0	0	0	0
50-05-56-55606	LRSD Connection Fees	0	0	0	0	0	0
50-05-56-55623	Water Lien Revenue	0	0	0	0	0	0
50-05-56-55627	W/S Maintenance Fee	900,000	913,500	927,203	941,111	955,227	969,556
50-05-56-55629	Water Fees (CLCIAWA) [2]	990,000	1,137,600	880,850	707,050	714,950	714,950
50-05-56-55631	Sewer Fees (NWRWRF/LCPWD)	0	0	0	0	0	0
50-05-56-55633	Excess Facility Charges	0	0	0	0	0	0
50-05-56-55637	W/S Penalties	75,000	76,125	77,267	78,426	79,602	80,796
Investment Income							
50-05-64-56401	Interest Income	22,587	168	98	0	0	0
Miscellaneous							
50-05-66-56601	Miscellaneous Receipts	750	750	750	750	750	750
Total Receipts		1,990,837	2,130,643	1,888,668	1,729,836	1,753,029	1,768,552
Expenditures							
Payroll Expenses							
50-60-70-67001	Regular Salaries	262,250	271,850	285,050	298,100	311,650	324,300
50-60-70-67021	Part-time Salaries	10,750	9,000	9,000	9,000	9,000	9,000
50-60-70-67026	Seasonal	7,800	2,750	2,750	2,750	2,750	2,750
50-60-70-67031	Overtime	12,125	12,625	12,625	12,625	12,625	12,625
Taxes, Pensions & Insurance							
50-60-71-67101	IMRF Expense	28,250	29,870	31,256	32,626	34,049	35,377
50-60-71-67107	Dental Insurance	2,375	2,494	2,618	2,749	2,887	3,031
50-60-71-67108	Vision Insurance	275	283	292	300	310	319
50-60-71-67109	Life Insurance	425	438	451	464	478	493
50-60-71-67110	Health Insurance	35,000	38,500	42,350	46,585	51,244	56,368
50-60-71-67111	Social Security	18,250	18,366	19,184	19,993	20,834	21,618
50-60-71-67112	Medicare	4,250	4,295	4,487	4,676	4,872	5,056
50-60-71-67116	Unemployment Compensation	0	0	0	0	0	0
Personnel Related							
50-60-72-67202	Uniforms	1,300	1,320	1,339	1,359	1,380	1,400
50-60-72-67204	Dues & Memberships	403	409	415	421	427	434
50-60-72-67206	Medical/Psychological	208	211	214	217	220	224
50-60-72-67208	Meeting, Travel, & Training	2,165	2,197	2,230	2,264	2,298	2,332
50-60-72-67234	Hiring Process	300	300	300	300	300	300
Professional Services							
50-60-73-77301	Auditing Expense	3,529	3,635	3,744	3,856	3,972	4,091
50-60-73-77307	Engineering Expenses	6,000	6,090	6,181	6,274	6,368	6,464
50-60-73-77313	Legal Services	17,500	17,500	17,500	17,500	17,500	17,500
50-60-73-77320	Consulting Services	0	0	0	0	0	0
Commodities							
50-60-74-77428	Water Meters	26,750	27,151	27,559	27,972	28,391	28,817
50-60-74-77430	Office Supplies	750	761	773	784	796	808
50-60-74-77432	Postage Expense	16,250	16,494	16,741	16,992	17,247	17,506
Contractual Services							
50-60-75-77519	Risk Management Ins. Premium	43,037	47,340	52,074	57,282	63,010	69,311
50-60-75-77529	Metra Easements	0	0	0	0	0	0
50-60-75-77535	Outsourcing Water Bills	14,875	15,098	15,325	15,554	15,788	16,025
50-60-75-77537	Legal Notices	363	368	373	379	385	391
50-60-75-77545	Water Meter Testing	8,000	8,120	8,242	8,365	8,491	8,618
50-60-75-77547	Water Samples	12,000	12,180	12,363	12,548	12,736	12,927
Miscellaneous Expenses							
50-60-77-77740	RLSD Grant Reimb.	0	0	0	0	0	0
Building & Grounds							
50-60-79-77901	B&G Maintenance	9,800	9,947	10,096	10,248	10,401	10,557
50-60-79-77903	B&G Contracts	23,537	23,890	24,248	24,612	24,981	25,355
50-60-79-77905	B&G Repairs	31,150	31,617	32,092	32,573	33,061	33,557
50-60-79-77907	B&G Supplies	5,250	5,329	5,409	5,490	5,572	5,656
50-60-79-77911	Landscaping	5,800	5,887	5,975	6,065	6,156	6,248
Capital Outlay							
50-60-80-88001	Equipment	4,375	4,441	4,507	4,575	4,643	4,713
50-60-80-88002	Safety Equipment	750	761	773	784	796	808
50-60-80-88018	Office Equipment	350	355	361	366	371	377
50-60-80-88024	Vehicle Equipment	1,000	1,250	1,250	1,250	1,250	1,250



November, 2018



**Table V-2
Water Revenues and Expenditures**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Utilities							
50-60-82-88202	Telephone Charges	1,890	1,918	1,947	1,976	2,006	2,036
50-60-82-88204	Cellular Service	600	609	618	627	637	646
50-60-82-88206	Electrical Service	27,500	27,913	28,331	28,756	29,187	29,625
50-60-82-88208	Heating	2,500	2,538	2,576	2,614	2,653	2,693
50-60-82-88210	JAWA Expense [3]	1,125,000	1,137,600	880,850	707,050	714,950	714,950
50-60-82-88212	Lake County Sewer	0	0	0	0	0	0
50-60-82-88214	Excess Facility Charges	0	0	0	0	0	0
Vehicles & Equipment							
50-60-84-88402	Gas & Oil	9,000	9,135	9,272	9,411	9,552	9,696
50-60-84-88404	Vehicle Repairs	7,500	7,613	7,727	7,843	7,960	8,080
50-60-84-88405	Equipment Repairs	8,375	8,501	8,628	8,758	8,889	9,022
50-60-84-88406	Vehicle Maintenance	2,000	2,030	2,060	2,091	2,123	2,155
50-60-84-88408	Equipment Maintenance	1,500	1,523	1,545	1,569	1,592	1,616
50-60-84-88410	Radio Read System	4,000	2,000	2,000	2,000	2,000	2,000
50-60-84-88412	Equipment Rental	500	500	500	500	500	500
Charges for Services							
50-60-90-99005	J.U.L.I.E.	1,400	1,421	1,442	1,464	1,486	1,508
Technology							
50-60-91-99101	SCADA Maintenance	9,700	14,550	21,825	32,738	33,229	33,229
50-60-91-99105	Network Repairs	500	500	500	500	500	500
50-60-91-99107	IT Maintenance Services	7,875	6,000	6,000	6,000	6,000	6,000
50-60-91-99117	IT Equipment	1,500	0	0	0	0	0
Infrastructure Maintenance							
50-60-92-99202	Repairs to Sewers	0	0	0	0	0	0
50-60-92-99204	Repair to Water Lines	50,000	50,750	51,511	52,284	53,068	53,864
50-60-92-99206	Repairs Pumps / Telemet	0	0	0	0	0	0
50-60-92-99208	Lift Station Repairs	0	0	0	0	0	0
Debt Service							
50-60-94-99418	2010C Bonds Principal	62,500	62,500	62,500	67,500	0	0
50-60-94-99420	2010C Bonds Interest	6,842	6,841	4,810	2,498	0	0
50-60-94-99432	Bond Admin & Disclosure Fees	300	300	300	300	0	0
Total Disbursements		1,948,171	1,977,861	1,755,089	1,624,378	1,593,573	1,624,726
Excess (Deficiency) of Operating Revenues Over Operating Expenditures		42,666	152,782	133,579	105,458	159,457	143,826
Capital Items [1]							
50-60-74-77428	Water Meters (MXU's)	100,000	100,000	30,000	10,000	10,000	10,000
50-60-79-77901	B&G Maintenance (CIP Items)	65,000	12,000	47,000	12,000	47,000	12,000
50-60-79-77905	B&G Repairs (CIP Items)	15,000	0	0	0	0	0
50-60-80-88001	Equipment	0	0	0	0	0	0
50-60-81-88101	Water/Sewer Improvements Revised CIP [1]	2,703,000	522,500	572,500	1,853,300	1,673,600	2,913,800
50-60-91-99101	SCADA Maintenance	0	0	0	0	0	0
50-60-91-99107	IT Maintenance Services	2,625	2,625	2,625	2,625	2,625	2,625
50-60-92-99208	Lift Station Repairs	0	0	0	0	0	0
Total Capital Acquisitions		2,885,625	637,125	652,125	1,877,925	1,733,225	2,938,425
Replacement Funding							
Contributions							
50-80-96-99660	Contribution to Vehicle Repl.	(44,779)	(49,225)	(49,225)	(49,225)	(49,225)	(49,225)
50-80-96-99661	Contribution to Technology Repl.	(11,099)	(10,227)	(10,227)	(10,227)	(10,227)	(10,227)
50-80-96-99662	Contribution to Building Repl.	(10,986)	(11,831)	(12,676)	(12,676)	(12,676)	(12,676)
Total Replacement Funding		(66,864)	(71,283)	(72,128)	(72,128)	(72,128)	(72,128)
Excess of Revenues and Transfers In Over Expenditures, Capital, and Transfers Out Before Carryovers		(2,909,824)	(555,626)	(590,674)	(1,844,595)	(1,645,896)	(2,866,727)



November, 2018



**Table V-2
Water Revenues and Expenditures**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Moves & Carryovers							
50-60-92-99208	Lift Station Repairs	0	0	0	0	0	0
50-60-81-88101	Water and Sewer Rate Study	7,030	0	0	0	0	0
50-60-81-88101	Cedar Lake Road Lift Station / Squaw	0	0	0	0	0	0
50-60-81-88101	Cedar Lake Road Lift Station / Squaw	0	0	0	0	0	0
50-60-81-88101	Sanitary Sewer System Televising	0	0	0	0	0	0
50-60-81-88101	Sanitary Sewer Televised Tape Review	0	0	0	0	0	0
50-60-81-88101	Sanitary Sewer Emergency Rehab - Design	0	0	0	0	0	0
50-60-81-88101	Sanitary Sewer Emergency Rehab - Constructi	0	0	0	0	0	0
50-60-81-88101	CLCJAWA Delivery Structure	30,330	0	0	0	0	0
50-60-81-88101	CLCJAWA Pumping Station	8,877	0	0	0	0	0
50-60-81-88101	Rehabilitate Nippersink Road	0	0	0	0	0	0
50-60-81-88101	Well No. 3 Rehabilitation	6,935	0	0	0	0	0
50-60-81-88101	Cambridge Lift Station Design	0	0	0	0	0	0
50-60-81-88101	Cambridge Lift Station and Force Main Replac	0	0	0	0	0	0
50-60-81-88101	Cambridge SCADA Integration	0	0	0	0	0	0
50-60-81-88101	Midland Water Main Replacement	0	0	0	0	0	0
50-60-81-88101	Dorothy Water Main Replacement	0	0	0	0	0	0
50-60-81-88101	Washington Street Main Improv.	0	0	0	0	0	0
Total Carryovers		53,172	0	0	0	0	0
Excess of Revenues and Transfers In Over Expenditures, Capital, and Transfers Out							
After Carryovers		(2,962,996)	(555,626)	(590,674)	(1,844,595)	(1,645,896)	(2,866,727)

Notes:

- [1] The timing of some of the Capital Improvements was changed as part of the rate analyses. See Capital Improvements Plan, Moves, and Carryovers table for revised timing of specific projects. See Appendix for CIP included in FY2019 budget for comparison.
- [2] JAWA expenses for FY 2020 through 2024 were adjusted based upon JAWA rate projections and water delivery of 395,000,000 gal/year.



November, 2018

**Table V-3
Sewer Revenues and Expenditures**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Revenues							
Licenses & Permits							
50-05-54-55411	Water/Sewer Permits	0	0	0	0	0	0
Charges for Services							
50-05-56-55603	Meter Etc. For Resale	0	0	0	0	0	0
50-05-56-55604	LRSD User Fees	73,500	74,603	75,722	76,857	78,010	79,180
50-05-56-55606	LRSD Connection Fees	0	0	0	0	0	0
50-05-56-55623	Water Lien Revenue	0	0	0	0	0	0
50-05-56-55627	W/S Maintenance Fee	900,000	913,500	927,203	941,111	955,227	969,556
50-05-56-55629	Water Fees (CLCJAWA)	0	0	0	0	0	0
50-05-56-55631	Sewer Fees (NWRWRF/LCPWD)	1,140,000	1,140,000	1,140,000	1,140,000	1,140,000	1,140,000
50-05-56-55633	Excess Facility Charges	111,500	111,500	111,500	111,500	111,500	111,500
50-05-56-55637	W/S Penalties	0	0	0	0	0	0
Investment Income							
50-05-64-56401	Interest Income	22,587	168	98	0	0	0
Miscellaneous							
50-05-66-56601	Miscellaneous Receipts	750	750	750	750	750	750
Total Receipts		2,248,337	2,240,520	2,255,273	2,270,218	2,285,487	2,300,986
Expenditures							
Payroll Expenses							
50-60-70-67001	Regular Salaries	262,250	271,850	285,050	298,100	311,650	324,300
50-60-70-67021	Part-time Salaries	10,750	9,000	9,000	9,000	9,000	9,000
50-60-70-67026	Seasonal	7,800	2,750	2,750	2,750	2,750	2,750
50-60-70-67031	Overtime	12,125	12,625	12,625	12,625	12,625	12,625
Taxes, Pensions & Insurance							
50-60-71-67101	IMRF Expense	28,250	29,870	31,256	32,626	34,049	35,377
50-60-71-67107	Dental Insurance	2,375	2,494	2,618	2,749	2,887	3,031
50-60-71-67108	Vision Insurance	275	283	292	300	310	319
50-60-71-67109	Life Insurance	425	438	451	464	478	493
50-60-71-67110	Health Insurance	35,000	38,500	42,350	46,585	51,244	56,368
50-60-71-67111	Social Security	18,250	18,366	19,184	19,993	20,834	21,618
50-60-71-67112	Medicare	4,250	4,295	4,487	4,676	4,872	5,056
50-60-71-67116	Unemployment Compensation	0	0	0	0	0	0
Personnel Related							
50-60-72-67202	Uniforms	1,300	1,320	1,339	1,359	1,380	1,400
50-60-72-67204	Dues & Memberships	403	409	415	421	427	434
50-60-72-67206	Medical/Psychological	208	211	214	217	220	224
50-60-72-67208	Meeting, Travel, & Training	2,165	2,197	2,230	2,264	2,298	2,332
50-60-72-67234	Hiring Process	300	300	300	300	300	300
Professional Services							
50-60-73-77301	Auditing Expense	3,529	3,635	3,744	3,856	3,972	4,091
50-60-73-77307	Engineering Expenses	6,000	6,090	6,181	6,274	6,368	6,464
50-60-73-77313	Legal Services	17,500	17,500	17,500	17,500	17,500	17,500
50-60-73-77320	Consulting Services	0	0	0	0	0	0
Commodities							
50-60-74-77428	Water Meters	0	0	0	0	0	0
50-60-74-77430	Office Supplies	750	761	773	784	796	808
50-60-74-77432	Postage Expense	16,250	16,494	16,741	16,992	17,247	17,506
Contractual Services							
50-60-75-77519	Risk Management Ins. Premium	43,037	47,340	52,074	57,282	63,010	69,311
50-60-75-77529	Metra Easements	0	0	0	0	0	0
50-60-75-77535	Outsourcing Water Bills	14,875	15,098	15,325	15,554	15,788	16,025
50-60-75-77537	Legal Notices	363	368	373	379	385	391
50-60-75-77545	Water Meter Testing	0	0	0	0	0	0
50-60-75-77547	Water Samples	0	0	0	0	0	0
Miscellaneous Expenses							
50-60-77-77740	RLSD Grant Reimb.	0	0	0	0	0	0
Building & Grounds							
50-60-79-77901	B&G Maintenance	9,800	9,947	10,096	10,248	10,401	10,557
50-60-79-77903	B&G Contracts	23,537	23,890	24,248	24,612	24,981	25,355
50-60-79-77905	B&G Repairs	31,150	31,617	32,092	32,573	33,061	33,557
50-60-79-77907	B&G Supplies	5,250	5,329	5,409	5,490	5,572	5,656
50-60-79-77911	Landscaping	5,800	5,887	5,975	6,065	6,156	6,248



November, 2018

**Table V-3
Sewer Revenues and Expenditures**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Capital Outlay							
50-60-80-88001	Equipment	4,375	4,441	4,507	4,575	4,643	4,713
50-60-80-88002	Safety Equipment	750	761	773	784	796	808
50-60-80-88018	Office Equipment	350	355	361	366	371	377
50-60-80-88024	Vehicle Equipment	1,000	1,250	1,250	1,250	1,250	1,250
Utilities							
50-60-82-88202	Telephone Charges	1,890	1,918	1,947	1,976	2,006	2,036
50-60-82-88204	Cellular Service	600	609	618	627	637	646
50-60-82-88206	Electrical Service	27,500	27,913	28,331	28,756	29,187	29,625
50-60-82-88208	Heating	2,500	2,538	2,576	2,614	2,653	2,693
50-60-82-88210	JAWA Expense	0	0	0	0	0	0
50-60-82-88212	Lake County Sewer	1,140,000	1,140,000	1,140,000	1,140,000	1,140,000	1,140,000
50-60-82-88214	Excess Facility Charges	111,500	111,500	111,500	111,500	111,500	111,500
Vehicles & Equipment							
50-60-84-88402	Gas & Oil	9,000	9,135	9,272	9,411	9,552	9,696
50-60-84-88404	Vehicle Repairs	7,500	7,613	7,727	7,843	7,960	8,080
50-60-84-88405	Equipment Repairs	8,375	8,501	8,628	8,758	8,889	9,022
50-60-84-88406	Vehicle Maintenance	2,000	2,030	2,060	2,091	2,123	2,155
50-60-84-88408	Equipment Maintenance	1,500	1,523	1,545	1,569	1,592	1,616
50-60-84-88410	Radio Read System	0	0	0	0	0	0
50-60-84-88412	Equipment Rental	500	500	500	500	500	500
Charges for Services							
50-60-90-99005	J.U.L.I.E.	1,400	1,421	1,442	1,464	1,486	1,508
Technology							
50-60-91-99101	SCADA Maintenance	9,700	14,550	21,825	32,738	33,229	33,229
50-60-91-99105	Network Repairs	500	500	500	500	500	500
50-60-91-99107	IT Maintenance Services	7,875	6,000	6,000	6,000	6,000	6,000
50-60-91-99117	IT Equipment	1,500	0	0	0	0	0
Infrastructure Maintenance							
50-60-92-99202	Repairs to Sewers	6,000	6,090	6,181	6,274	6,368	6,464
50-60-92-99204	Repair to Water Lines	0	0	0	0	0	0
50-60-92-99206	Repairs Pumps / Telemet	0	0	0	0	0	0
50-60-92-99208	Lift Station Repairs	75,000	76,125	77,267	78,426	79,602	80,796
Debt Service							
50-60-94-99418	2010C Bonds Principal	62,500	62,500	62,500	67,500	0	0
50-60-94-99420	2010C Bonds Interest	6,842	6,841	4,810	2,498	0	0
50-60-94-99432	Bond Admin & Disclosure Fees	300	300	300	300	0	0
Total Disbursements		2,054,921	2,073,775	2,107,513	2,150,359	2,111,406	2,142,309
Excess (Deficiency) of Operating Revenues Over Operating Expenditures		193,416	166,745	147,760	119,859	174,081	158,677
Capital Items [1]							
50-60-74-77428	Water Meters (MXU's)	0	0	0	0	0	0
50-60-79-77901	B&G Maintenance (CIP Items)	0	0	0	0	0	0
50-60-79-77905	B&G Repairs (CIP Items)	0	0	0	0	0	0
50-60-80-88001	Equipment	0	0	0	0	0	0
50-60-81-88101	Water/Sewer Improvements Revised CIP [1]	243,000	849,500	220,500	143,000	143,000	110,000
50-60-91-99101	SCADA Maintenance	35,000	35,000	35,000	12,000	0	0
50-60-91-99107	IT Maintenance Services	2,625	2,625	2,625	2,625	2,625	2,625
50-60-92-99208	Lift Station Repairs	60,000	40,000	0	0	0	0
Total Capital Acquisitions		340,625	927,125	258,125	157,625	145,625	112,625
Replacement Funding							
Contributions							
50-80-96-99660	Contribution to Vehicle Repl.	(44,779)	(49,225)	(49,225)	(49,225)	(49,225)	(49,225)
50-80-96-99661	Contribution to Technology Repl.	(11,099)	(10,227)	(10,227)	(10,227)	(10,227)	(10,227)
50-80-96-99662	Contribution to Building Repl.	(10,986)	(11,831)	(12,676)	(12,676)	(12,676)	(12,676)
Total Replacement Funding		(66,864)	(71,283)	(72,128)	(72,128)	(72,128)	(72,128)
Excess of Revenues and Transfers In Over Expenditures, Capital, and Transfers Out Before Carryovers		(214,074)	(831,663)	(182,493)	(109,894)	(43,672)	(26,076)



November, 2018

**Table V-3
Sewer Revenues and Expenditures**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Moves & Carryovers							
50-60-92-99208	Lift Station Repairs	0	0	0	0	0	0
50-60-81-88101	Water and Sewer Rate Study	7,030	0	0	0	0	0
50-60-81-88101	Cedar Lake Road Lift Station / Squaw	3,801	0	0	0	0	0
50-60-81-88101	Cedar Lake Road Lift Station / Squaw	12,589	0	0	0	0	0
50-60-81-88101	Sanitary Sewer System Televising	0	0	0	0	0	0
50-60-81-88101	Sanitary Sewer Televised Tape Review	11,952	0	0	0	0	0
50-60-81-88101	Sanitary Sewer Emergency Rehab - Design	3,620	0	0	0	0	0
50-60-81-88101	Sanitary Sewer Emergency Rehab - Constructic	75,000	0	0	0	0	0
50-60-81-88101	CLCJAWA Delivery Structure	0	0	0	0	0	0
50-60-81-88101	CLCJAWA Pumping Station	0	0	0	0	0	0
50-60-81-88101	Rehabilitate Nippersink Road	0	0	0	0	0	0
50-60-81-88101	Well No. 3 Rehabilitation	0	0	0	0	0	0
50-60-81-88101	Cambridge Lift Station Design	0	0	0	0	0	0
50-60-81-88101	Cambridge Lift Station and Force Main Replace	85,000	0	0	0	0	0
50-60-81-88101	Cambridge SCADA Integration	0	0	0	0	0	0
50-60-81-88101	Midland Water Main Replacement	0	0	0	0	0	0
50-60-81-88101	Dorothy Water Main Replacement	0	0	0	0	0	0
50-60-81-88101	Washington Street Main Improv.	0	0	0	0	0	0
Total Carryovers		198,992	0	0	0	0	0
Excess of Revenues and Transfers In Over Expenditures, Capital, and Transfers Out After Carryovers							
		(413,066)	(831,663)	(182,493)	(109,894)	(43,672)	(26,076)

Notes:


[1] The timing of some of the Capital Improvements was changed as part of the rate analyses. See Capital Improvements Plan, Moves, and Carryovers table for revised timing of specific projects. See Appendix for CIP included in FY2019 budget for comparison.

Section VI

User Charge Development

Methodology

This section outlines the development of user charges for the Village's water and sewer systems. User charge development considers the equitable distribution of water and sewer system operating, replacement, and capital costs among system users. In general, the iterative process used in developing user charges was as follows:

- 
1. Project annual billed water and sewer consumption and number of customers.
 2. Project annual expenses for the water system and the sewer system
 3. Estimate revenues from sources other than user charges (e.g. interest, tap-on fees, sales taxes, etc.)
 4. Consider utilization of existing fund reserves and any debt service needs.
 5. Calculate revenue requirements that must be recovered from user charges.
 6. Allocate user charge revenue requirements to customers
 7. Examine fund balances and compare to target levels.
 8. Evaluate impact of rates on customers and adjust rates accordingly.
 9. Recommend final rates.

System Expenditures

Table VI-1 provides a summary of the expenditures for the Village's water and sewer systems which are described in greater detail in Section V. Budget costs for FY 2019 and projected costs for FY 2020 through FY 2024 are shown.

Miscellaneous Revenues

Table VI-2 provides a summary of the miscellaneous revenues for the water and sewer systems which may be used to offset expenses when determining Village user charges. These include pass-through charges from CLCJAWA, NWRWRF, LCPWD, and LRSD as well as meter fees and miscellaneous receipts. The Village also recovers a portion of the operation and maintenance costs through water and sewer penalties (late fees) and interest income.



November, 2018



**Table VI-1
Water and Sewer Fund - Total Expenditures by Classification**

	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Water						
Water - Disbursements Excl. Debt Service	\$ 1,878,530	\$ 1,908,220	\$ 1,687,479	\$ 1,554,081	\$ 1,593,573	\$ 1,624,726
Water - Existing Replacement	\$ 66,864	\$ 71,283	\$ 72,128	\$ 72,128	\$ 72,128	\$ 72,128
Water - Existing Debt Service	\$ 69,642	\$ 69,641	\$ 67,610	\$ 70,298	\$ -	\$ -
Water - Capital, Moves,& Carryovers [1]	\$ 2,938,797	\$ 637,125	\$ 652,125	\$ 1,877,925	\$ 1,733,225	\$ 2,938,425
Total Water Expenditures	\$ 4,953,832	\$ 2,686,269	\$ 2,479,342	\$ 3,574,431	\$ 3,398,926	\$ 4,635,279
Sewer						
Sewer - Disbursements Excl. Debt Service	\$ 1,985,280	\$ 2,004,134	\$ 2,039,903	\$ 2,080,061	\$ 2,111,406	\$ 2,142,309
Sewer - Existing Replacement	\$ 66,864	\$ 71,283	\$ 72,128	\$ 72,128	\$ 72,128	\$ 72,128
Sewer - Existing Debt Service	\$ 69,642	\$ 69,641	\$ 67,610	\$ 70,298	\$ -	\$ -
Sewer - Capital, Moves,& Carryovers [1]	\$ 539,617	\$ 927,125	\$ 258,125	\$ 157,625	\$ 145,625	\$ 112,625
Total Sewer Expenditures	\$ 2,661,402	\$ 3,072,183	\$ 2,437,766	\$ 2,380,112	\$ 2,329,159	\$ 2,327,062
Total Water and Sewer	\$ 7,615,234.00	\$ 5,758,452.24	\$ 4,917,107.67	\$ 5,954,543.48	\$ 5,728,084.81	\$ 6,962,340.86

Notes:

[1] The timing of some of the Capital Improvements was changed as part of the rate analyses. See Capital Improvements Plan, Moves, and Carryovers table for revised timing of specific projects. See Appendix for CIP included in FY2019 budget for comparison.



November, 2018



**Table VI-2
Revenues for Rate Projection Calculations**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Revenues - Water							
Licenses & Permits							
50-05-54-55411	Water/Sewer Permits						
Charges for Services							
50-05-56-55603	Meter Etc. For Resale	2,500	2,500	2,500	2,500	2,500	2,500
50-05-56-55604	LRSD User Fees	-	-	-	-	-	-
50-05-56-55606	LRSD Connection Fees	-	-	-	-	-	-
50-05-56-55623	Water Lien Revenue	-	-	-	-	-	-
50-05-56-55627	Water Maintenance Fee	To Be Determined					
50-05-56-55629	Water Fees (CLCJAWA)	990,000	1,137,600 [1]	880,850 [1]	707,050 [1]	714,950 [1]	714,950 [1]
50-05-56-55631	Sewer Fees (NWRWRF/LCPWD)	-	-	-	-	-	-
50-05-56-55633	Excess Facility Charges	-	-	-	-	-	-
50-05-56-55637	W/S Penalties	Neglected for Rate Determination					
Investment Income							
50-05-64-56401	Interest Income	Neglected for Rate Determination					
Miscellaneous							
50-05-66-56601	Miscellaneous Receipts	750	750	750	750	750	750
Water - Total Assumed Receipts for Rate Calc.		993,250	1,140,850	884,100	710,300	718,200	718,200
Revenues - Sewer							
Licenses & Permits							
50-05-54-55411	Water/Sewer Permits	-	-	-	-	-	-
Charges for Services							
50-05-56-55603	Meter Etc. For Resale	-	-	-	-	-	-
50-05-56-55604	LRSD User Fees	73,500	74,603	75,722	76,857	78,010	79,180
50-05-56-55606	LRSD Connection Fees	-	-	-	-	-	-
50-05-56-55623	Water Lien Revenue	-	-	-	-	-	-
50-05-56-55627	Sewer Maintenance Fee	To Be Determined					
50-05-56-55629	Water Fees (CLCJAWA)	-	-	-	-	-	-
50-05-56-55631	Sewer Fees (NWRWRF/LCPWD)	1,140,000	1,140,000	1,140,000	1,140,000	1,140,000	1,140,000
50-05-56-55633	Excess Facility Charges	111,500	111,500	111,500	111,500	111,500	111,500
50-05-56-55637	W/S Penalties	Neglected for Rate Determination					
Investment Income							
50-05-64-56401	Interest Income	Neglected for Rate Determination					
Miscellaneous							
50-05-66-56601	Miscellaneous Receipts	750	750	750	750	750	750
Sewer - Total Assumed Receipts for Rate Calc.		1,325,750	1,326,853	1,327,972	1,329,107	1,330,260	1,331,430

Notes:

[1] In future years, the CLCJAWA rate assessed customers will be adjusted for system losses so that collected JAWA will equal JAWA expenditures. These figures have been modified to reflect the adjustment for system losses and the projected JAWA rates.

For the purpose of this analysis, revenue from penalties was assumed to be negligible as income from these sources cannot be guaranteed. In addition, interest income is expected to decline as fund balances are used for capital improvements and replacement projects. Therefore, interest income was also neglected for the purposes of determining rates.

Fixed System Costs

A portion of the Village expenses are fixed costs which are incurred regardless of the amount of water consumed in the system. In keeping with the Village's current rate structure, fixed costs were assumed to include 50 percent of salary, taxes, pensions, and insurance costs. Other costs such as postage, billing, and water sampling are also included. A summary of fixed costs for the water system and sewer system are included in Table VI-3 and Table VI-4, respectively. Fixed costs are allocated equally to all customers, regardless of usage, based upon the number of customers in the water and sewer systems as shown in Table VI-5.

The calculated fixed user charge for the water system varies from \$3.59 per customer per month in FY 2020 to \$4.27 per customer per month in FY 2024. The calculated sewer system fixed user charge varies from \$3.51 per customer per month in FY 2020 to \$4.20 per customer per month in FY 2024.

Variable System Costs

Variable system costs are allocated to system users in proportion to metered water consumption. For this study and clarity in examining how Village funds are spent on the water and sewer system, variable system costs have been divided into three components:

- Base User Costs
- Replacement and Capital Improvements Costs
- Debt Service Costs

Base User Costs – Base user costs are system expenses for operating the water and sewer systems such as personnel, utilities, infrastructure maintenance, commodities, professional and contractual services, etc. Base user costs exclude fixed system costs, debt service, and capital/replacement costs. Miscellaneous revenues are also deducted from these system expenses to determine the base user costs which must be recovered from system users.

Base user costs were allocated to customers based upon water usage as shown in Table VI-5. Base user costs for the water system vary from \$1.54 per 1,000 gallons in FY 2020 to \$1.82 per 1,000 gallons in FY 2040. Base user costs for the sewer system vary from \$1.36 per 1,000 gallons in FY 2020 to \$1.63 per 1,000 gallons in FY 2040.



November, 2018



**Table VI-3
Water Administrative Expenditures (For Fixed Fee Portion of Rate Structure)**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Payroll Expenses							
50-60-70-67001	Regular Salaries <i>(50% of total)</i>	131,125	135,925	142,525	149,050	155,825	162,150
Taxes, Pensions, and Insurance (50% of total)							
50-60-71-67101	IMRF Expense	14,125	14,935	15,628	16,313	17,024	17,689
50-60-71-67107	Dental Insurance	1,188	1,247	1,309	1,375	1,443	1,516
50-60-71-67108	Vision Insurance	138	142	146	150	155	159
50-60-71-67109	Life Insurance	213	219	225	232	239	246
50-60-71-67110	Health Insurance	17,500	19,250	21,175	23,293	25,622	28,184
50-60-71-67111	Social Security	9,125	9,183	9,592	9,997	10,417	10,809
50-60-71-67112	Medicare	2,125	2,148	2,243	2,338	2,436	2,528
Commodities							
50-60-74-77432	Postage Expense	16,250	16,494	16,741	16,992	17,247	17,506
Contractual Services							
50-60-75-77535	Outsourcing Water Bills	14,875	15,098	15,325	15,554	15,788	16,025
50-60-75-77547	Water Samples	12,000	12,180	12,363	12,548	12,736	12,927
Total Water Administrative Expenditures		218,663	226,820	237,272	247,842	258,933	269,739



November, 2018



**Table VI-4
Sewer Administrative Expenditures (For Fixed Fee Portion of Rate Structure)**

Account #	Description	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Payroll Expenses							
50-60-70-67001	Regular Salaries <i>(50% of total)</i>	131,125	135,925	142,525	149,050	155,825	162,150
Taxes, Pensions, and Insurance (50% of total)							
50-60-71-67101	IMRF Expense	14,125	14,935	15,628	16,313	17,024	17,689
50-60-71-67107	Dental Insurance	1,188	1,247	1,309	1,375	1,443	1,516
50-60-71-67108	Vision Insurance	138	142	146	150	155	159
50-60-71-67109	Life Insurance	213	219	225	232	239	246
50-60-71-67110	Health Insurance	17,500	19,250	21,175	23,293	25,622	28,184
50-60-71-67111	Social Security	9,125	9,183	9,592	9,997	10,417	10,809
50-60-71-67112	Medicare	2,125	2,148	2,243	2,338	2,436	2,528
Commodities							
50-60-74-77432	Postage Expense	16,250	16,494	16,741	16,992	17,247	17,506
Contractual Services							
50-60-75-77535	Outsourcing Water Bills	14,875	15,098	15,325	15,554	15,788	16,025
50-60-75-77547	Water Samples	0	0	0	0	0	0
Total Sewer Administrative Expenditures		206,663	214,640	224,910	235,294	246,196	256,811



November, 2018



**Table VI-5
Base User Costs (Less Miscellaneous Revenue, Exclusive of Debt Service and Replacement / CIP Funding)**

Water	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Water System Administrative Expenses	\$218,663	\$226,820	\$237,272	\$247,842	\$258,933	\$269,739
Water System Customers	5,260	5,260	5,260	5,260	5,260	5,260
Fixed Monthly Water Fee (\$/Month/User)	\$3.46	\$3.59	\$3.76	\$3.93	\$4.10	\$4.27
Water System Operating Expenditures (Excluding Debt Service, Existing Replacement, and Capital, Moves and Carryovers) (see Table 5)	\$1,878,530	\$1,908,220	\$1,687,479	\$1,554,081	\$1,593,573	\$1,624,726
Less Water System Administrative Expenses	\$218,663	\$226,820	\$237,272	\$247,842	\$258,933	\$269,739
Less Miscellaneous Revenue (see Table 6)	\$993,250	\$1,140,850	\$884,100	\$710,300	\$718,200	\$718,200
Deficiency to be Recovered Via User Charges	\$666,617	\$540,550	\$566,106	\$595,939	\$616,440	\$636,787
Total Projected Billed Consumption (gallons/year)	350,000,000	350,000,000	350,000,000	350,000,000	350,000,000	350,000,000
Base Water Cost Exclusive of Debt Service and Replacement / CIP Funding (\$/1,000 gal)	\$1.90	\$1.54	\$1.62	\$1.70	\$1.76	\$1.82

Sewer	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Sewer System Administrative Expenses	\$206,663	\$214,640	\$224,910	\$235,294	\$246,196	\$256,811
Sewer System Customers	5,090	5,090	5,090	5,090	5,090	5,090
Fixed Monthly Sewer Fee (\$/Month/User)	\$3.38	\$3.51	\$3.68	\$3.85	\$4.03	\$4.20
Sewer System Operating Expenditures (Excluding Debt Service, Existing Replacement, and Capital, Moves and Carryovers) (see Table 5)	\$1,985,280	\$2,004,134	\$2,039,903	\$2,080,061	\$2,111,406	\$2,142,309
Less Sewer System Administrative Expenses	\$206,663	\$214,640	\$224,910	\$235,294	\$246,196	\$256,811
Less Miscellaneous Revenue (see Table 6)	\$1,325,750	\$1,326,853	\$1,327,972	\$1,329,107	\$1,330,260	\$1,331,430
Deficiency to be Recovered Via User Charges	\$452,867	\$462,641	\$487,021	\$515,660	\$534,949	\$554,067
Total Projected Billed Usage (gallons/year)	340,000,000	340,000,000	340,000,000	340,000,000	340,000,000	340,000,000
Base Sewer Cost Exclusive of Debt Service and Replacement / CIP Funding (\$/1,000 gal)	\$1.33	\$1.36	\$1.43	\$1.52	\$1.57	\$1.63

Debt Service Costs – Debt service costs include principal and interest on loans and bond issues for the water and sewer systems. As discussed previously, the Village currently has only one outstanding bond issue for the water and sewer system, the Series 2010 C General Obligation Bonds, Alternate Revenue Source. Debt service on these bonds is paid for via the Water and Sewer Fund. The amortization schedule for the bonds is provided in Appendix C. Annual principal and interest payments for vary from approximately \$135,000 to \$140,000 per year.

Debt service for this bond issue was split equally between the water and sewer fund as shown in Table VI-6. User costs for water system debt service were calculated as \$0.19 to \$0.20 per 1,000 gallons and as \$0.20 to \$0.21 per 1,000 gallons for the sewer system. Debt service for both the water and sewer systems fall to zero in FY 2023, when the existing bonds are fully paid off.

Initial draft user charge alternates considered financing of a portion of proposed capital improvements via low interest loans from the Illinois Environmental Protection Agency's Public Water Supply Revolving Loan Program and Water Pollution Control Revolving Loan Program. Based upon input from Village staff, it was ultimately decided not to take on additional debt for financing of capital water and sewer improvements. Table VI-6 and others presented herein have included provisions for future loan financing should that become desirable in the future.

Replacement and Capital Improvements Costs – Replacement and Capital Improvement costs include planned contributions to the Village's vehicle, technology, and replacement funds, as well funding required for the Village's capital and replacement projects outlined in the Capital Improvements Plan. Replacement and Capital Improvement projects are proposed to be funded by a combination of Water and Sewer Fund reserves, coupled with income generated from a new variable user charge component for replacement and CIP funding.

Current Village financial practices recommend ending fiscal year fund target balances equal to 30 percent of operating expenses and replacement costs plus 50 percent of debt service costs. Proposed funding levels for replacement and capital improvements were calculated to accomplish the schedule for projects presented in Table V-1, while maintaining desired ending fiscal year target balances. As discussed previously in Section V, modifications to the 5-year capital improvements plan presented in the FY 2019 budget were made to reduce the impact of increased user charges on Village customers. These changes included the following:

- Moving the Capri / Avalon Water Main Replacement project from FY 2021 - FY 2022 to FY 2022 – FY 2023.
- Moving the Cedar Lake Road Water Main Replacement project form FY 2022 – FY 2023 to FY 2023 – FY 2024.
- Moving the Route 134 Water Main Improvements project (Cedar Lake Road east) from FY 2021 to FY 2022.
- Moving the construction of the new 750,000-gallon elevated tank from FY 2023 – 2024 to FY 2025 – 2026, or beyond.



November, 2018



**Table VI-6
Debt Service Costs**

Water	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Water - Existing Debt Service [1]	\$69,642	\$69,641	\$67,610	\$70,298	\$0	\$0
Projected Debt Service for Future Water Projects (Principal and Interest) (See Table D-7)	\$0	\$0	\$0	\$0	\$0	\$0
Total Debt Service	\$69,642	\$69,641	\$67,610	\$70,298	\$0	\$0
Total Projected Billed Consumption (gallons/year)	350,000,000	350,000,000	350,000,000	350,000,000	350,000,000	350,000,000
Water Debt Service Cost (\$/1,000 gal)	\$0.20	\$0.20	\$0.19	\$0.20	\$0.00	\$0.00

Sewer	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Sewer - Existing Debt Service [1]	\$69,642	\$69,641	\$67,610	\$70,298	\$0	\$0
Projected Debt Service for Future Sewer Projects (Principal and Interest) (See Table D-7)	\$0	\$0	\$0	\$0	\$0	\$0
Total Debt Service	\$69,642	\$69,641	\$67,610	\$70,298	\$0	\$0
Total Projected Billed Consumption (gallons/year)	340,000,000	340,000,000	340,000,000	340,000,000	340,000,000	340,000,000
Sewer Debt Service Cost (\$/1,000 gal)	\$0.20	\$0.20	\$0.20	\$0.21	\$0.00	\$0.00

Notes:

[1] Assumes existing debt service split 50% to water fund and 50% to sewer fund.

Even with the above noted changes, the magnitude of water and sewer capital improvement and replacement projects proposed is considerable, with approximately \$7,840,000 of water projects and \$1,600,000 of sewer projects planned for FY 2020 through FY 2024.

To fund these projects *without additional debt service*, existing replacement funding for the water system must be increased from current levels of approximately \$67,000 per year up to approximately \$1,820,000 per year for the water system over FY 2020 through 2024 as shown in Table VI-7. Similarly, replacement funding for the sewer system would need to be increased from approximately \$67,000 per year up to approximately \$470,000 per year over FY 2020 through 2024. These increased levels of funding would increase user costs in stages from the current \$0.19 per 1,000 gallons (current) up to \$5.21 per 1,000 gallons (FY 2024) for the water system and from 0.20 per 1,000 gallons (current) up to \$1.39 per 1,000 gallons (FY 2024) for the sewer system.

As discussed previously, it is recommended that a detailed asset management plan be developed within the next five years to identify funding needs for long term replacement of assets beyond the current 5-year study period. Following development of this plan, CIP/Replacement Funding levels incorporated in the current rate structure can be adjusted for future long-term replacement needs.

Pass-Through Charges

General – The Village of Round Lake collects fees for the supply of Lake Michigan water to the Village, as well as for the transmission and treatment of wastewater. These fees are assessed by the Central Lake County Joint Action Water Agency (“JAWA” or “CLCJAWA” for Lake Michigan water supply), the Lake County Public Works Department (“LCPWD” for wastewater transmission), the Northwest Regional Water Reclamation Facility (“NWRWRF” for wastewater treatment), and by the Lakes Region Sanitary District (LRSD) for wastewater transmission in limited areas of the Village.

JAWA User Charges - The Village of Round Lake currently purchases Lake Michigan water from the Central Lake County Joint Action Water Agency (CLCJAWA or JAWA). Water bills from CLCJAWA are based upon metered flows at their receiving stations. Table VI-8 presents the current and anticipated CLCJAWA rates through 2040. Due to debt retirement and reduced per unit operating costs, fees charged by CLCJAWA will decrease over the next several years.

Water distribution systems experience normal losses throughout the system (water that is not used by customers) due to factors such as system leakage and flushing for maintenance. As a result, the amount of water supplied by CLCJAWA is greater than the amount used by Village customers. In the case of Round Lake, the metered supply from CLCJAWA is approximately 13% greater than water consumed by the Village customers.



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November, 2018



**Table VI-7
Replacement and Capital Improvements Cost**

Water	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Existing Replacement Funding [1]	\$66,864	\$71,283	\$72,128	\$72,128	\$72,128	\$72,128
Recommended Additional Replacement / CIP Funding - Water		\$400,000	\$1,000,000	\$1,500,000	\$1,750,000	\$1,750,000
Replacement Funding to Be Recovered Via User Charge	\$66,864	\$471,283	\$1,072,128	\$1,572,128	\$1,822,128	\$1,822,128
Total Projected Billed Consumption (gallons/year)	350,000,000	350,000,000	350,000,000	350,000,000	350,000,000	350,000,000
Water Replacement/CIP Cost (\$/1,000 gal)	\$0.19	\$1.35	\$3.06	\$4.49	\$5.21	\$5.21

Sewer	Budget 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Existing Replacement Funding [1]	\$66,864	\$71,283	\$72,128	\$72,128	\$72,128	\$72,128
Recommended Additional Replacement / CIP Funding - Sewer		\$360,000	\$370,000	\$380,000	\$390,000	\$400,000
Replacement Funding to Be Recovered Via User Charge	\$66,864	\$431,283	\$442,128	\$452,128	\$462,128	\$472,128
Total Projected Billed Consumption (gallons/year)	340,000,000	340,000,000	340,000,000	340,000,000	340,000,000	340,000,000
Sewer Replacement/CIP Cost (\$/1,000 gal)	\$0.20	\$1.27	\$1.30	\$1.33	\$1.36	\$1.39

Notes:

[1] Assumes 50/50 split between water and sewer.



November, 2018



**Table VI-8
Projected CLCJAWA Water Rate (\$ per 1,000 gallons) [1], [2]**

FYE	CLCJAWA O&M Rate	Debt Service Rate for Charter CLCJAWA Members	CLCJAWA CIP Rate	CLCJAWA Misc. Revenue Deduct	Base CLCJAWA Water Rate [3]	% (+ or -)	Proposed Round Lake Customer CLCJAWA Rate [4]
2020	\$1.13	\$1.64	\$0.13	-\$0.02	\$2.88	1.77%	\$3.25
2021	\$1.13	\$0.99	\$0.13	-\$0.02	\$2.23	-22.57%	\$2.52
2022	\$1.15	\$0.52	\$0.14	-\$0.02	\$1.79	-19.73%	\$2.02
2023	\$1.17	\$0.52	\$0.14	-\$0.02	\$1.81	1.12%	\$2.05
2024	\$1.19	\$0.50	\$0.14	-\$0.02	\$1.81	0.00%	\$2.05
2025	\$1.21	\$0.51	\$0.14	-\$0.02	\$1.84	1.66%	\$2.08
2026	\$1.23	\$0.51	\$0.15	-\$0.02	\$1.87	1.63%	\$2.11
2027	\$1.24	\$0.51	\$0.15	-\$0.02	\$1.88	0.53%	\$2.12
2028	\$1.25	\$0.51	\$0.16	-\$0.02	\$1.90	1.06%	\$2.15
2029	\$1.25	\$0.50	\$0.16	-\$0.02	\$1.89	-0.53%	\$2.14
2030	\$1.26	\$0.33	\$0.18	-\$0.02	\$1.75	-7.41%	\$1.98
2031	\$1.28	\$0.33	\$0.18	-\$0.02	\$1.77	1.14%	\$2.00
2032	\$1.30	\$0.33	\$0.20	-\$0.02	\$1.81	2.26%	\$2.05
2033	\$1.32	\$0.06	\$0.20	-\$0.02	\$1.56	-13.81%	\$1.76
2034	\$1.34	\$0.06	\$0.22	-\$0.02	\$1.60	2.56%	\$1.81
2035	\$1.36	\$0.06	\$0.22	-\$0.02	\$1.62	1.25%	\$1.83
2036	\$1.39	\$0.03	\$0.23	-\$0.02	\$1.63	0.62%	\$1.84
2037	\$1.41	\$0.00	\$0.23	-\$0.02	\$1.62	-0.61%	\$1.83
2038	\$1.43	\$0.00	\$0.23	-\$0.02	\$1.64	1.23%	\$1.85
2039	\$1.45	\$0.00	\$0.23	-\$0.02	\$1.66	1.22%	\$1.88
2040	\$1.47	\$0.00	\$0.23	-\$0.02	\$1.68	1.20%	\$1.90

Notes:

- [1] From CLCJAWA, FYE 2019 Financial Plan - Draft - Combined Water Rates: Exhibit F
- [2] Charter member rates only. New member rates will be higher due to costs for either connection fee payments and/or infrastructure improvements.
- [3] Base water rate is assessed on usage at the delivery structure from CLCJAWA.
- [4] Round Lake customer rate is adjusted to reflect water losses in the distribution system system (13%). Customer rate = 1.13 x Base CLCJAWA Water Rate.

To assure adequate collection of CLCJAWA fees, the CLCJAWA base rate at the delivery structure must be increased by 13% to compute the Village customer charge. (Currently, the Village makes up the difference between JAWA costs and customer collected JAWA revenues in the Village user charge.) The assessed CLCJAWA charges for Village customers, which accounts for water losses in the system, are also shown in Table VI-8.

LCPWD and NWRWRF User Charges - The Village is also required to collect and remit charges to various downstream governmental entities for the transmission and treatment of wastewater generated within the Village boundaries. Current charges assessed by the Northwest Regional Wastewater Reclamation Facility (NWRWRF) for wastewater treatment and the Lake County Public Works Department (LCPWD) for transmission are as follows:

**Table VI-9
NWRWRF and LRSD User Charges**

Service	Existing User Charge
NWRWRF Charge (Wastewater Treatment)	\$ 2.23 per 1,000 gallons
LCPWD Charge (Sewer Transmission)	\$ 1.44 per 1,000 gallons
LCPWD Excess Flow Facility Charge	\$ 1.50 per month

LRSD User Charges – Sewage within limited areas of the Village is also tributary to facilities owned and operated by the Lakes Region Sanitary District. In these areas, a charge of \$3.19 per 1,000 gallons applies, in addition to LCPWD and NWRWRF charges.

User Charge Alternates

Four user charge alternates were developed. Each incorporate a fixed fee plus variable rate structure and have been designed to allow for construction of projects included in the modified capital improvements plan without additional debt service.

User Charge Alternate A

Detailed calculations for Alternate A are presented in Appendix E. Under Alternate A, the annual rate increases vary in proportion to the need for each year of the 5-year study period. The recommended user charges and ending and target year end fund balances under Alternate A are provided in Tables VI-10 and VI-11.

**Table VI-10
Alternate A
Proposed User Charges**

Alternate A: Water – Village and CLCJAWA Charges:

FY	Fixed Monthly Village Water Fee	Recommended Village Water User Charge (\$/1,000 gallons)	CLCJAWA Water Fixed Monthly Fee	Recommended CLCJAWA Water User Charge (\$/1,000 gallons) [5]	Total Fixed Monthly Water Fee	Total Water User Charge: Village Plus CLCJAWA - \$/1,000)	Percent Change
FY 2019 Existing	\$3.56	\$2.16 [1]	\$0.00	\$2.83 [6]	\$3.56	\$4.99	
FY 2020	\$3.59	\$3.09	\$0.00	\$3.25 [5]	\$3.59	\$6.34	27%
FY 2021	\$3.76	\$4.87	\$0.00	\$2.52 [5]	\$3.76	\$7.39	17%
FY 2022	\$3.93	\$6.39	\$0.00	\$2.02 [5]	\$3.93	\$8.41	14%
FY 2023	\$4.10	\$6.97	\$0.00	\$2.05 [5]	\$4.10	\$9.02	7%
FY 2024	\$4.27	\$7.03	\$0.00	\$2.05 [5]	\$4.27	\$9.08	1%

Notes:

[1] Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019.

Alternate A: Sewer – Village, NWRWRD, LPCWD Charges:

FY	Fixed Monthly Village Sewer Fee	Recommended Village Sewer User Charge (\$/1,000 gallons)	NWRWRF / LPCWD Water Fixed Monthly Fee	NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Sewer Fee	Total Sewer User Charge: Village Plus NWRWRD Plus LPCWD - \$/1,000)	Percent Change
FY 2019	\$3.48	\$1.63 [1]	\$1.50	\$3.67	\$4.98	\$5.30	
FY 2020	\$3.51	\$2.83	\$1.50	\$3.67	\$5.01	\$6.50	23%
FY 2021	\$3.68	\$2.93	\$1.50	\$3.67	\$5.18	\$6.60	2%
FY 2022	\$3.85	\$3.06	\$1.50	\$3.67	\$5.35	\$6.73	2%
FY 2023	\$4.03	\$2.93	\$1.50	\$3.67	\$5.53	\$6.60	-2%
FY 2024	\$4.20	\$3.02	\$1.50	\$3.67	\$5.70	\$6.69	1%

Notes:

[1] Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019.

**Table VI-10 (Continued)
Alternate A
Proposed User Charges**

Alternate A: Total Water and Sewer – Village, CLCJAWA, NWRWRD, LPCWD Charges:

FY	Fixed Monthly Village Fee (Water and Sewer)	Total Village Water and Sewer Charge (\$/1,000 gallons)	CLCJAWA / NWRWRD / LPCWD Water Fixed Monthly Fee	CLCJAWA / NWRWRD / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Fee	Total Water and Sewer User Charge: Village, CLCJAWA, NWRWRD, LPCWD - (\$/1,000)	Percent Change in Variable Rate
FY 2019	\$7.04	\$3.79	\$1.50	\$6.50	\$8.54	\$10.29	
FY 2020	\$7.10	\$5.92	\$1.50	\$6.92	\$8.60	\$12.84	25%
FY 2021	\$7.44	\$7.80	\$1.50	\$6.19	\$8.94	\$13.99	9%
FY 2022	\$7.78	\$9.45	\$1.50	\$5.69	\$9.28	\$15.14	8%
FY 2023	\$8.13	\$9.90	\$1.50	\$5.72	\$9.63	\$15.62	3%
FY 2024	\$8.47	\$10.05	\$1.50	\$5.72	\$9.97	\$15.77	1%

**Table VI-11
Alternate A
Year End and Target Fund Balances**

FY	Projected Ending Balance	Target Ending Fund Balance/Reserves (30% of Operating Expense, Plus 50% Annual Debt Service)
FY 2019	\$2,338,896	\$1,268,903
FY 2020	\$1,532,838	\$1,286,117
FY 2021	\$1,990,608	\$1,229,101
FY 2022	\$1,835,592	\$1,203,817
FY 2023	\$2,096,611	\$1,154,770
FY 2024	\$1,197,259	\$1,173,387

User Charge Alternate B

Detailed calculations for Alternate B are presented in Appendix F. Alternate B assumes that Village rates are increased in FY 2020 and then are held constant for the next four years. The fixed and volumetric charges implemented are the average of those calculated for the five-year study period under Alternate A. The recommended user charges and ending and target year end fund balances under Alternate B are provided in Tables VI-12 and VI-13.

**Table VI-12
Alternate B
Proposed User Charges**

Alternate B: Water – Village and CLCJAWA Charges:

FY	Fixed Monthly Village Water Fee	Recommended Village Water User Charge (\$/1,000 gallons)	CLCJAWA Water Fixed Monthly Fee	Recommended CLCJAWA Water User Charge (\$/1,000 gallons) [5]	Total Fixed Monthly Water Fee	Total Water User Charge: Village Plus CLCJAWA - \$/1,000)	Percent Change in Variable Rate
FY 2019	\$3.56	\$2.16 [1]	\$0.00	\$2.83 [6]	\$3.56	\$4.99	
FY 2020	\$3.93	\$5.67	\$0.00	\$3.25 [5]	\$3.93	\$8.92	79%
FY 2021	\$3.93	\$5.67	\$0.00	\$2.52 [5]	\$3.93	\$8.19	-8%
FY 2022	\$3.93	\$5.67	\$0.00	\$2.02 [5]	\$3.93	\$7.69	-6%
FY 2023	\$3.93	\$5.67	\$0.00	\$2.05 [5]	\$3.93	\$7.72	0%
FY 2024	\$3.93	\$5.67	\$0.00	\$2.05 [5]	\$3.93	\$7.72	0%

Notes:

[1] Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019.

Alternate B: Sewer – Village, NWRWRD, LPCWD Charges:

FY	Fixed Monthly Village Sewer Fee	Recommended Village Sewer User Charge (\$/1,000 gallons)	NWRWRF / LCPWD Water Fixed Monthly Fee	NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Sewer Fee	Total Sewer User Charge: Village Plus NWRWRD Plus LCPWD - \$/1,000)	Percent Change in Variable Rate
FY 2019	\$3.48	\$1.63 [1]	\$1.50	\$3.67	\$4.98	\$5.30	
FY 2020	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	25%
FY 2021	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%
FY 2022	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%
FY 2023	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%
FY 2024	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%

Notes:

[1] Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019.

**Table VI-12 (Continued)
Alternate B
Proposed User Charges**

Alternate B: Total Water and Sewer – Village, CLCJAWA, NWRWRD, LPCWD Charges:

FY	Fixed Monthly Village Fee (Water and Sewer)	Total Village Water and Sewer Charge (\$/1,000 gallons)	CLCJAWA / NWRWRD / LPCWD Water Fixed Monthly Fee	CLCJAWA / NWRWRD / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Fee	Total Water and Sewer User Charge: Village, CLCJAWA, NWRWRD, LPCWD - (\$/1,000)	Percent Change in Variable Rate
FY 2019	\$7.04	\$3.79	\$1.50	\$6.50	\$8.54	\$10.29	
FY 2020	\$7.78	\$8.62	\$1.50	\$6.92	\$9.28	\$15.54	51%
FY 2021	\$7.78	\$8.62	\$1.50	\$6.19	\$9.28	\$14.81	-5%
FY 2022	\$7.78	\$8.62	\$1.50	\$5.69	\$9.28	\$14.31	-3%
FY 2023	\$7.78	\$8.62	\$1.50	\$5.72	\$9.28	\$14.34	0%
FY 2024	\$7.78	\$8.62	\$1.50	\$5.72	\$9.28	\$14.34	0%

**Table VI-13
Alternate B
Year End and Target Fund Balances**

FY	Projected Ending Balance	Target Ending Fund Balance/Reserves (30% of Operating Expense, Plus 50% Annual Debt Service)
FY 2019	\$2,338,896	\$1,268,903
FY 2020	\$2,520,470	\$1,286,117
FY 2021	\$3,287,758	\$1,229,101
FY 2022	\$2,844,946	\$1,203,817
FY 2023	\$2,637,645	\$1,154,770
FY 2024	\$1,197,259	\$1,173,387

User Charge Alternate C

Detailed calculations for Alternate C are presented in Appendix G. Alternate C assumes a moderate increase in Village rates for the first three years of implementation. After that Village rates are increased by Consumer Price Index for all Urban Consumers published by the Bureau of Labor Statistics of the United States Department of Labor for Chicago-Gary-Kenosha, IL-IN-WI, All Items (1982-84=100) for the previous calendar year, with a minimum increase of 2 percent and a maximum increase of 4%. The recommended user charges and ending and target year end fund balances under Alternate C are provided in Tables VI-14 and VI-15.

**Table VI-14
Alternate C
Proposed User Charges**

Alternate C: Water – Village and CLCJAWA Charges:

FY	Fixed Monthly Village Water Fee	Recommended Village Water User Charge (\$/1,000 gallons)	CLCJAWA Water Fixed Monthly Fee	Recommended CLCJAWA Water User Charge (\$/1,000 gallons) [5]	Total Fixed Monthly Water Fee	Total Water User Charge: Village Plus CLCJAWA - \$/1,000)	Percent Change in Variable Rate
FY 2019	\$3.56	\$2.16 [1]	\$0.00	\$2.83 [6]	\$3.56	\$4.99	
FY 2020	\$3.59	\$3.50	\$0.00	\$3.25 [5]	\$3.59	\$6.75	35%
FY 2021	\$3.76	\$5.70	\$0.00	\$2.52 [5]	\$3.76	\$8.22	22%
FY 2022	\$3.93	\$6.75	\$0.00	\$2.02 [5]	\$3.93	\$8.77	7%
FY 2023	\$4.10	\$6.89	\$0.00	\$2.05 [5]	\$4.10	\$8.94	2%
FY 2024	\$4.27	\$7.03	\$0.00	\$2.05 [5]	\$4.27	\$9.08	2%

Notes:

[1] Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019.

Alternate C: Sewer – Village, NWRWRD, LPCWD Charges:

FY	Fixed Monthly Village Sewer Fee	Recommended Village Sewer User Charge (\$/1,000 gallons)	NWRWRF / LCPWD Water Fixed Monthly Fee	NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Sewer Fee	Total Sewer User Charge: Village Plus NWRWRD Plus LCPWD - \$/1,000)	Percent Change in Variable Rate
FY 2019	\$3.48	\$1.63 [1]	\$1.50	\$3.67	\$4.98	\$5.30	
FY 2020	\$3.51	\$1.95	\$1.50	\$3.67	\$5.01	\$5.62	6%
FY 2021	\$3.68	\$2.35	\$1.50	\$3.67	\$5.18	\$6.02	7%
FY 2022	\$3.85	\$2.90	\$1.50	\$3.67	\$5.35	\$6.57	9%
FY 2023	\$4.03	\$2.96	\$1.50	\$3.67	\$5.53	\$6.63	0.9%
FY 2024	\$4.20	\$3.02	\$1.50	\$3.67	\$5.70	\$6.69	0.9%

Notes:

[1] Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019.

**Table VI-14 (Continued)
Alternate C
Proposed User Charges**

Alternate C: Total Water and Sewer – Village, CLCJAWA, NWRWRD, LPCWD Charges:

FY	Fixed Monthly Village Fee (Water and Sewer)	Total Village Water and Sewer Charge (\$/1,000 gallons)	CLCJAWA / NWRWRD / LPCWD Water Fixed Monthly Fee	CLCJAWA / NWRWRD / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Fee	Total Water and Sewer User Charge: Village, CLCJAWA, NWRWRD, LPCWD - (\$/1,000)	Percent Change in Variable Rate
FY 2019	\$7.04	\$3.79	\$1.50	\$6.50	\$8.54	\$10.29	
FY 2020	\$7.10	\$5.45	\$1.50	\$6.92	\$8.60	\$12.37	20%
FY 2021	\$7.44	\$8.05	\$1.50	\$6.19	\$8.94	\$14.24	15%
FY 2022	\$7.78	\$9.65	\$1.50	\$5.69	\$9.28	\$15.34	8%
FY 2023	\$8.13	\$9.84	\$1.50	\$5.72	\$9.63	\$15.56	1.5%
FY 2024	\$8.47	\$10.05	\$1.50	\$5.72	\$9.97	\$15.77	1.3%

**Table VI-15
Alternate C
Year End and Target Fund Balances**

FY	Projected Ending Balance	Target Ending Fund Balance/Reserves (30% of Operating Expense, Plus 50% Annual Debt Service)
FY 2019	\$2,338,896	\$1,268,903
FY 2020	\$1,377,138	\$1,286,117
FY 2021	\$1,928,208	\$1,229,101
FY 2022	\$1,844,792	\$1,203,817
FY 2023	\$2,085,581	\$1,154,770
FY 2024	\$1,185,264	\$1,173,387

User Charge Alternate D

User Charge Alternate D is provided for illustrative purposes only. Alternate D assumes that Village fixed and variable charges are increased by a fixed amount each year. Detailed calculations for Alternate D are presented in Appendix H. The user charges and ending and target year end fund balances under Alternate D are provided in Tables VI-16 and VI-17. **Note that Alternate D does not yield adequate ending fund balances and is not recommended.** Additional funding is required in the first few years of the study period to accommodate the desired capital improvements.

**Table VI-16
Alternate D
User Charges
(For Illustrative Purposes Not Recommended)**

Alternate D: Water – Village and CLCJAWA Charges:

FY	Fixed Monthly Village Water Fee	Recommended Village Water User Charge (\$/1,000 gallons)	CLCJAWA Water Fixed Monthly Fee	Recommended CLCJAWA Water User Charge (\$/1,000 gallons) [5]	Total Fixed Monthly Water Fee	Total Water User Charge: Village Plus CLCJAWA - \$/1,000)	Percent Change in Variable Rate
FY 2019	\$3.56	\$2.16 [1]	\$0.00	\$2.83 [6]	\$3.56	\$4.99	
FY 2020	\$3.70	\$3.13	\$0.00	\$3.25 [5]	\$3.70	\$6.38	28%
FY 2021	\$3.84	\$4.11	\$0.00	\$2.52 [5]	\$3.84	\$6.63	4%
FY 2022	\$3.99	\$5.08	\$0.00	\$2.02 [5]	\$3.99	\$7.10	7%
FY 2023	\$4.13	\$6.06	\$0.00	\$2.05 [5]	\$4.13	\$8.11	14%
FY 2024	\$4.27	\$7.03	\$0.00	\$2.05 [5]	\$4.27	\$9.08	12%

Notes:

[1] Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019.

Alternate D: Sewer – Village, NWRWRD, LPCWD Charges:

FY	Fixed Monthly Village Sewer Fee	Recommended Village Sewer User Charge (\$/1,000 gallons)	NWRWRF / LCPWD Water Fixed Monthly Fee	NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Sewer Fee	Total Sewer User Charge: Village Plus NWRWRD Plus LCPWD - \$/1,000)	Percent Change in Variable Rate
FY 2019	\$3.48	\$1.63 [1]	\$1.50	\$3.67	\$4.98	\$5.30	
FY 2020	\$3.62	\$1.91	\$1.50	\$3.67	\$5.12	\$5.58	5%
FY 2021	\$3.77	\$2.19	\$1.50	\$3.67	\$5.27	\$5.86	5%
FY 2022	\$3.91	\$2.46	\$1.50	\$3.67	\$5.41	\$6.13	5%
FY 2023	\$4.06	\$2.74	\$1.50	\$3.67	\$5.56	\$6.41	5%
FY 2024	\$4.20	\$3.02	\$1.50	\$3.67	\$5.70	\$6.69	4%

Notes:

[1] Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019.

**Table VI-16
Alternate D
User Charges
(For Illustrative Purposes Not Recommended)**

Alternate D: Total Water and Sewer – Village, CLCJAWA, NWRWRD, LPCWD Charges:

FY	Fixed Monthly Village Fee (Water and Sewer)	Total Village Water and Sewer Charge (\$/1,000 gallons)	CLCJAWA / NWRWRD / LCPWD Water Fixed Monthly Fee	CLCJAWA / NWRWRD / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Fee	Total Water and Sewer User Charge: Village, CLCJAWA, NWRWRD, LCPWD - (\$/1,000)	Percent Change in Variable Rate
FY 2019	\$7.04	\$3.79	\$1.50	\$6.50	\$8.54	\$10.29	
FY 2020	\$7.33	\$5.04	\$1.50	\$6.92	\$8.83	\$11.96	16%
FY 2021	\$7.61	\$6.29	\$1.50	\$6.19	\$9.11	\$12.48	4%
FY 2022	\$7.90	\$7.55	\$1.50	\$5.69	\$9.40	\$13.24	6%
FY 2023	\$8.18	\$8.80	\$1.50	\$5.72	\$9.68	\$14.52	10%
FY 2024	\$8.47	\$10.05	\$1.50	\$5.72	\$9.97	\$15.77	9%

**Table VI-17
Alternate D
Year End and Target Fund Balances**

FY	Projected Ending Balance	Target Ending Fund Balance/Reserves (30% of Operating Expense, Plus 50% Annual Debt Service)
FY 2019	\$2,338,896	\$1,268,903
FY 2020	\$1,248,790	\$1,286,117
FY 2021	\$1,197,577	\$1,229,101
FY 2022	\$389,442	\$1,203,817
FY 2023	\$269,997	\$1,154,770
FY 2024	(\$629,355)	\$1,173,387

Note targeted ending fund balances are not consistently met.

Summary of Alternates

Table VI-18 provides a summary of the three recommended alternate rate structures presented for the Village’s consideration as part of this user charge study.

Recommendations

The following recommendations are the result of this study:

1. Implement the selected rate structure *no later than* May 1, 2019 to provide an appropriate customer notification period.
2. Adopt an automatic increase of user charges effective May 1 of each calendar year based upon the Consumers Price Index for all Urban Consumers published by the Bureau of Labor Statistics of the United States Department of Labor for Chicago-Gary-Kenosha, IL-IN-WI, All Items for the previous calendar year, with a minimum increase of 2 percent and a maximum increase of 4%. Allow for waiver of this automatic increase by the Village Board in any given year, if desired.

This automatic increase based upon the CPI would go into effect on the following dates:

Alternate	Implement CPI Rate Increase Beginning
Alternate A	Annually beginning May 1, 2023
Alternate B	Annually beginning May 1, 2025
Alternate C	Annually beginning May 1, 2022

3. Conduct an asset management study and/or continue to update the Village’s capital improvements plan as additional needs in the Village are identified. Re-evaluate rates and financing strategies for funding of long-term capital improvements and system replacement needs beyond the time frame used in this study.



RHMG ENGINEERS, INC.

November, 2018



**Table I-4 and VI-18
Rate Summary and Projected Monthly Cost
(Page 1 of 2)**

Rate Summary					
	Current	Year	Alternate A	Alternate B	Alternate C
Village Fixed Monthly Fee (Water)	\$ 3.56 per month	FY 2020	\$ 3.59 per month	\$ 3.93 per month	\$ 3.59 per month
		FY 2021	\$ 3.76 per month	\$ 3.93 per month	\$ 3.76 per month
		FY 2022	\$ 3.93 per month	\$ 3.93 per month	\$ 3.93 per month
		FY 2023	\$ 4.10 per month	\$ 3.93 per month	\$ 4.10 per month
		FY 2024	\$ 4.27 per month	\$ 3.93 per month	\$ 4.27 per month
Village Water Consumption Charge	\$ 2.16 per 1000 gal	FY 2020	\$ 3.09 per 1000 gal	\$ 5.67 per 1000 gal	\$ 3.50 per 1000 gal
		FY 2021	\$ 4.87 per 1000 gal	\$ 5.67 per 1000 gal	\$ 5.70 per 1000 gal
		FY 2022	\$ 6.39 per 1000 gal	\$ 5.67 per 1000 gal	\$ 6.75 per 1000 gal
		FY 2023	\$ 6.97 per 1000 gal	\$ 5.67 per 1000 gal	\$ 6.89 per 1000 gal
		FY 2024	\$ 7.03 per 1000 gal	\$ 5.67 per 1000 gal	\$ 7.03 per 1000 gal
Village Fixed Monthly Fee (Sewer)	\$ 3.48 per month	FY 2020	\$ 3.51 per month	\$ 3.85 per month	\$ 3.51 per month
		FY 2021	\$ 3.68 per month	\$ 3.85 per month	\$ 3.68 per month
		FY 2022	\$ 3.85 per month	\$ 3.85 per month	\$ 3.85 per month
		FY 2023	\$ 4.03 per month	\$ 3.85 per month	\$ 4.03 per month
		FY 2024	\$ 4.20 per month	\$ 3.85 per month	\$ 4.20 per month
Village Sewer Consumption Charge	\$ 1.63 per 1000 gal	FY 2020	\$ 2.83 per 1000 gal	\$ 2.95 per 1000 gal	\$ 1.95 per 1000 gal
		FY 2021	\$ 2.93 per 1000 gal	\$ 2.95 per 1000 gal	\$ 2.35 per 1000 gal
		FY 2022	\$ 3.06 per 1000 gal	\$ 2.95 per 1000 gal	\$ 2.90 per 1000 gal
		FY 2023	\$ 2.93 per 1000 gal	\$ 2.95 per 1000 gal	\$ 2.96 per 1000 gal
		FY 2024	\$ 3.02 per 1000 gal	\$ 2.95 per 1000 gal	\$ 3.02 per 1000 gal
Village Fixed Monthly Fee (Water Plus Sewer)	\$ 7.04 per month	FY 2020	\$ 7.10 per month	\$ 7.78 per month	\$ 7.10 per month
		FY 2021	\$ 7.44 per month	\$ 7.78 per month	\$ 7.44 per month
		FY 2022	\$ 7.78 per month	\$ 7.78 per month	\$ 7.78 per month
		FY 2023	\$ 8.13 per month	\$ 7.78 per month	\$ 8.13 per month
		FY 2024	\$ 8.47 per month	\$ 7.78 per month	\$ 8.47 per month
Village Total Water Plus Sewer Consumption	\$ 3.79 per 1000 gal	FY 2020	\$ 5.92 per 1000 gal	\$ 8.62 per 1000 gal	\$ 5.45 per 1000 gal
		FY 2021	\$ 7.80 per 1000 gal	\$ 8.62 per 1000 gal	\$ 8.05 per 1000 gal
		FY 2022	\$ 9.45 per 1000 gal	\$ 8.62 per 1000 gal	\$ 9.65 per 1000 gal
		FY 2023	\$ 9.90 per 1000 gal	\$ 8.62 per 1000 gal	\$ 9.84 per 1000 gal
		FY 2024	\$ 10.05 per 1000 gal	\$ 8.62 per 1000 gal	\$ 10.05 per 1000 gal
CLCJAWA Water Consumption Charge	\$ 2.83 per 1000 gal	FY 2020	\$ 3.25 per 1000 gal	\$ 3.25 per 1000 gal	\$ 3.25 per 1000 gal
		FY 2021	\$ 2.52 per 1000 gal	\$ 2.52 per 1000 gal	\$ 2.52 per 1000 gal
		FY 2022	\$ 2.02 per 1000 gal	\$ 2.02 per 1000 gal	\$ 2.02 per 1000 gal
		FY 2023	\$ 2.05 per 1000 gal	\$ 2.05 per 1000 gal	\$ 2.05 per 1000 gal
		FY 2024	\$ 2.05 per 1000 gal	\$ 2.05 per 1000 gal	\$ 2.05 per 1000 gal
NWRWRD/LCPWD Fixed Fee	\$ 1.50 per month	FY 2020	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
		FY 2021	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
		FY 2022	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
		FY 2023	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
		FY 2024	\$ 1.50 per month	\$ 1.50 per month	\$ 1.50 per month
NWRWRD/LCPWD Consumption Charge	\$ 3.67 per 1000 gal	FY 2020	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal
		FY 2021	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal
		FY 2022	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal
		FY 2023	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal
		FY 2024	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal	\$ 3.67 per 1000 gal



November, 2018



**Table I-4 and VI-18
Rate Summary and Projected Monthly Cost
(Page 2 of 2)**

Estimated Residential Monthly Bill for Varying Usage															
	Current			FY 2020											
				Alternate A				Alternate B				Alternate C			
	2,000	5,000	7,500	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change
Usage (gallons/month)															
Water Bill (\$/month)	\$13.54	\$28.51	\$40.99	\$16.27	\$35.29	\$51.14	24%	\$21.77	\$48.53	\$70.83	70%	\$17.09	\$37.34	\$54.22	31%
Sewer Bill (\$/month)	\$15.58	\$31.48	\$44.73	\$18.01	\$37.51	\$53.76	19%	\$18.60	\$38.47	\$55.03	22%	\$16.25	\$33.11	\$47.16	5%
Total (\$/month)	\$29.12	\$59.99	\$85.72	\$34.28	\$72.80	\$104.90	21%	\$40.37	\$87.00	\$125.86	45%	\$33.34	\$70.45	\$101.38	17%

	FY 2021											
	Alternate A				Alternate B				Alternate C			
	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change
Usage (gallons/month)												
Water Bill (\$/month)	\$18.54	\$40.71	\$59.19	15%	\$20.31	\$44.88	\$65.36	-8%	\$20.20	\$44.86	\$65.41	20%
Sewer Bill (\$/month)	\$18.38	\$38.18	\$54.68	2%	\$18.60	\$38.47	\$55.03	0%	\$17.22	\$35.28	\$50.33	7%
Total (\$/month)	\$36.92	\$78.89	\$113.87	8%	\$38.91	\$83.35	\$120.39	-4%	\$37.42	\$80.14	\$115.74	14%

*Decrease in bill due to lower JAWA charges.

	FY 2022											
	Alternate A				Alternate B				Alternate C			
	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change
Usage (gallons/month)												
Water Bill (\$/month)	\$20.75	\$45.98	\$67.01	13%	\$19.31	\$42.38	\$61.61	-6%	\$21.47	\$47.78	\$69.71	7%
Sewer Bill (\$/month)	\$18.81	\$39.00	\$55.83	2%	\$18.60	\$38.47	\$55.03	0%	\$18.49	\$38.20	\$54.63	8%
Total (\$/month)	\$39.56	\$84.98	\$122.84	8%	\$37.91	\$80.85	\$116.64	-3%	\$39.96	\$85.98	\$124.34	7%

*Decrease in bill due to lower JAWA charges.

	FY 2023											
	Alternate A				Alternate B				Alternate C			
	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change
Usage (gallons/month)												
Water Bill (\$/month)	\$22.14	\$49.20	\$71.75	7%	\$19.37	\$42.53	\$61.83	0%	\$21.97	\$48.78	\$71.11	2%
Sewer Bill (\$/month)	\$18.73	\$38.53	\$55.03	-1%	\$18.60	\$38.47	\$55.03	0%	\$18.79	\$38.67	\$55.24	1%
Total (\$/month)	\$40.87	\$87.73	\$126.78	3%	\$37.97	\$81.00	\$116.86	0%	\$40.76	\$87.45	\$126.35	2%

*Decrease in bill due to debt service retirement

	FY 2024											
	Alternate A				Alternate B				Alternate C			
	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change	2,000	5,000	7,500	Percent Change
Usage (gallons/month)												
Water Bill (\$/month)	\$22.43	\$49.67	\$72.37	1%	\$19.37	\$42.53	\$61.83	0%	\$22.43	\$49.67	\$72.37	2%
Sewer Bill (\$/month)	\$19.08	\$39.15	\$55.88	2%	\$18.60	\$38.47	\$55.03	0%	\$19.07	\$39.14	\$55.85	1%
Total (\$/month)	\$41.51	\$88.82	\$128.25	1%	\$37.97	\$81.00	\$116.86	0%	\$41.50	\$88.81	\$128.22	2%

Section VII

Impact on Village Customers

Financial Impact on Village Users

To illustrate the impact of the increased user charges on Village residents, bills for a typical residential user were calculated. The projected monthly bills for each alternate based upon varying water consumption levels and the annual percent increase for each year of the 5-year study period are shown on Page 2 of Table VI-18.

Comparison with Other Communities

Table VII-1 provides a comparison of projected monthly Village charges for the typical residential user under the proposed alternates with those charges assessed in other northern Illinois water and sewer systems. Current costs for water and sewer service within the Village of Round Lake are in the lower half over surveyed communities. Even with the substantial increase in rates proposed, average monthly costs for water and sewer under Alternates A and C in FY 2019 will remain in the middle to upper third quartile of all communities surveyed. As neighboring communities continue to review and update their operation and infrastructure needs, it is expected that the Village's newly adjusted rates will continue to compare favorably with those of its neighbors. Alternate B has rates near the highest of neighboring communities as these rates reflect the average rate needed over the 5-year study period and the Village portion of these rates will not be increase further over that time.



November, 2018



**Table I-5 and VII-1
Comparison of Typical Monthly Residential Bill in Neighboring Communities**

Municipality	Typical Residential Water Bill (\$/month) [1]	Typical Residential Sewer Bill (\$/month) [1]	Typical Residential Water and Sewer Bill (\$/month) [1]
Cary	\$23.67	\$12.85	\$36.52
Huntley	\$18.10	\$23.20	\$41.30
Algonquin	\$22.85	\$25.15	\$48.00
Lindenhurst	\$40.70	\$7.69	\$48.39
McHenry	\$17.70	\$34.85	\$52.55
Lake in the Hills / Lake in the Hills Sanitary District	\$29.78	\$24.00	\$53.78
Gilberts	\$27.50	\$27.50	\$55.00
Antioch	\$20.95	\$36.90	\$57.85
West Dundee	\$28.97	\$28.97	\$57.93
Johnsburg	\$27.09	\$31.35	\$58.44
Hainesville (Cranberry Lake)	\$37.00	\$22.35	\$59.35
Carpentersville	\$30.37	\$29.22	\$59.59
Round Lake / CLCJAWA / NWRWRF (Current)	\$28.51	\$31.48	\$59.99
Mundelein / CLCJAWA	\$36.05	\$24.05	\$60.10
Round Lake Heights / CLCJAWA / NWRWRF	\$31.25	\$29.05	\$60.30
Gurnee (W of 94) / CLCJAWA / LCPWD/ NSWRD	\$29.61	\$34.31	\$63.92
Batavia	\$27.53	\$36.55	\$64.08
Round Lake Beach / CLCJAWA / NWRWRF	\$41.80	\$23.85	\$65.65
Crystal Lake	\$32.14	\$33.60	\$65.74
Hainesville (Deerpoint, Misty Hill)	\$37.00	\$29.91	\$66.91
Bartlett - Cook/Kane Counties	\$48.50	\$19.41	\$67.91
Volo / Lakes Region Sanitary District / LCPWD/ NWRWRF	\$32.50	\$35.80	\$68.30
Barrington	\$26.60	\$43.00	\$69.59
Proposed Alt C Round Lake / CLCJAWA / NWRWRF	\$37.34	\$33.11	\$70.45
Libertyville / CLCJAWA	\$36.38	\$34.11	\$70.49
Island Lake / Northern Moraine Water Reclamation District	\$32.23	\$39.51	\$71.74
Proposed Alt A Round Lake / CLCJAWA / NWRWRF	\$35.29	\$37.51	\$72.80
Lake Villa / NWRWRF	\$42.25	\$32.90	\$75.15
Wauconda	\$34.90	\$42.10	\$77.00
Grayslake / CLCJAWA / LCPWD / NSWRD	\$32.65	\$46.25	\$78.90
Bartlett - DuPage County	\$48.50	\$32.09	\$80.59
Lake Zurich / LCPWD	\$31.25	\$51.25	\$82.50
Fox River Grove	\$30.14	\$54.09	\$84.23
Proposed Alt B Round Lake / CLCJAWA / NWRWRF	\$48.53	\$38.45	\$86.98
Fox Lake / NWRWRF	\$40.96	\$46.61	\$87.57
Lakewood / Lakewood Utilities	\$38.48	\$54.63	\$93.10

Notes:

[1] Based upon average residential consumption of 5,000 gallons per month.



Appendix A



October, 2017



**Appendix A
Village of Round Lake
Customers and Water Usage**

FY End		Residential Customers (Metered)			Residential Customers (Unmetered)			Commercial Customers			Industrial Customers			Total Customers		
		Village W/S	CLCJAWA	City Sewer	Village W/S	CLCJAWA	LCPWD/NWRWRF	Village W/S	CLCJAWA	City Sewer	Village W/S	CLCJAWA	City Sewer	Village W/S	CLCJAWA	City Sewer
2013	Avg. Customers	5,034	5,034	4,866	2	0	2	107	107	107	25	25	24	5,168	5,165	4,999
	Total Gallons Billed (1,000)		343,295	296,967		0	176		23,980	21,055		921	846		368,196	319,044
2014	Avg. Customers	5,077	5,078	4,903	2	0	2	107	107	105	25	25	24	5,211	5,209	5,034
	Total Gallons Billed (1,000)		333,483	306,312		0	195		24,711	22,111		1,044	1,024		359,238	329,644
2015	Avg. Customers	5,119	5,118	4,936	2	0	2	106	106	104	25	25	24	5,253	5,249	5,067
	Total Gallons Billed (1,000)		326,220	324,922		0	202		24,328	22,049		850	925		351,398	348,098
2016	Avg. Customers	5,144	5,143	4,957	2	0	2	107	107	106	25	25	24	5,277	5,274	5,089
	Total Gallons Billed (1,000)		320,330	321,590		0	199		23,999	23,423		925	998		345,254	346,211
2017	Avg. Customers	5,151	5,136	4,979	2	0	2	107	108	108	25	25	24	5,285	5,269	5,113
	Total Gallons Billed (1,000)		330,858	315,732		0	190		23,527	21,898		1,049	1,127		355,434	338,947
		Average 2013-2017			Avg. Customers			5,239			5,233			5,060		
		Total Gallons Billed (1,000)			355,904			336,389								
		Average 2015-2017			Avg. Customers			5,272			5,264			5,090		
		Total Gallons Billed (1,000)			350,696			344,419								
USE		Avg. Customers			5,260			5,090								
		Total Gallons Billed (1,000)			350,000			340,000								



Appendix B

**Appendix B
Water & Sewer Fund (50)
Financial Forecast 2020-2024**

Account #	Description	Audit Actual 2015	Audit Actual 2016	Budget 2017	Projected 2017	Budget 2018	Budget 2019	% W	% S	Forecast 2020	% W	% S	Forecast 2021	% W	% S	Forecast 2022	% W	% S	Forecast 2023	% W	% S	Forecast 2024	% W	% S	%	NOTES
Excess of Revenues and Transfers In Over Expenditures, Capital, and Transfers Out After Carryovers		(339,176)	227,814	(2,994,253)	(234,688)	(4,892,671)	(3,376,061)			(1,387,289)			(773,167)			(1,954,489)			(1,689,568)			(2,892,803)				
Changes to Cash & Investment Balance																										
Excess of Revenues over Expenditures		(339,176)	227,814	(2,994,253)	(234,688)	(4,892,671)	(3,376,061)			(1,387,289)			(773,167)			(1,954,489)			(1,689,568)			(2,892,803)				
Other Adjustments		0	0	0	0	0	0			0			0			0			0			0				
Net Increase (Decrease) in Cash		(339,176)	227,814	(2,994,253)	(234,688)	(4,892,671)	(3,376,061)			(1,387,289)			(773,167)			(1,954,489)			(1,689,568)			(2,892,803)				
Beginning Cash & Investment Balance		7,079,303	6,740,127	6,967,941	6,967,941	3,973,688	6,733,253			3,357,192			1,969,903			1,196,736			(757,753)			(2,447,321)				
Ending Cash & Investment Balance		6,740,127	6,967,941	3,973,688	6,733,253	(918,983)	3,357,192			1,969,903			1,196,736			(757,753)			(2,447,321)			(5,340,124)				
Operating Cash (30% of Operating Expenses)		1,075,049	1,107,295	1,021,229	1,129,764	1,159,323	1,173,886			1,118,394			1,090,423			1,111,494			1,111,494			1,130,110				
Debt Service Reserve		138,333	135,458	135,458	137,583	138,683	138,683			134,620			139,995			0			0			0				
Reserve for Replacement Funds (Contributions)		133,665	139,674	139,674	140,876	133,728	142,566			144,256			144,256			144,256			144,256			144,256				
Reserve for Capital		5,393,081	5,585,514	2,677,327	5,325,030	(2,350,717)	1,902,057			572,632			(177,938)			(2,013,503)			(3,703,071)			(6,614,491)				
Cash Available		6,740,127	6,967,941	3,973,688	6,733,253	(918,983)	3,357,192			1,969,903			1,196,736			(757,753)			(2,447,321)			(5,340,124)				

Notes:
 [1] Water/Sewer Breakdown from Capital Improvements Plan in FY 2019 Budget.
 [2] Adjusted to match figure in Capital Improvements Plan contained in FY 2019 Budget.
 [3] The timing of some of the Capital Improvements was changed as part of the rate analyses. See Capital Improvements Plan, Moves, and Carryovers table for revised timing of specific projects. See Appendix for CIP included in FY2019 budget for comparison.
 [4] JAWA expenses for FY 2020 through 2024 were adjusted based upon JAWA rate projections and water delivery of 395,000,000 gal/year.
 [5] For FY 2020 through FY 2024, JAWA rate assessed Village customers will be adjusted for water losses so that JAWA revenues match JAWA expenses.



Appendix C

Appendix C
Village of Round Lake
Water and Sewer Fund - Debt Service

4/30/2017

Debt Supported by Water/Sewer
Series 2010C Bonds

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
07/01/17	-	8,791.25	8,791.25
01/01/18	120,000.00	8,791.25	128,791.25
07/01/18	-	6,841.25	6,841.25
01/01/19	125,000.00	6,841.25	131,841.25
07/01/19	-	4,810.00	4,810.00
01/01/20	125,000.00	4,810.00	129,810.00
07/01/20	-	2,497.50	2,497.50
01/01/21	135,000.00	2,497.50	137,497.50
07/01/21	-	-	-
01/01/22	-	-	-
07/01/22	-	-	-
01/01/23	-	-	-
07/01/23	-	-	-
01/01/24	-	-	-
07/01/24	-	-	-
01/01/25	-	-	-
07/01/25	-	-	-
01/01/26	-	-	-
07/01/26	-	-	-
01/01/27	-	-	-
07/01/27	-	-	-
01/01/28	-	-	-
07/01/28	-	-	-
01/01/29	-	-	-
Total:	\$ 505,000.00	\$ 45,880.00	\$ 550,880.00



Appendix D

Capital Projects

Fund Summary

**CAPITAL IMPROVEMENTS PROGRAM
FISCAL YEAR END 2019 - 2024 CIP DOCUMENT
BY FUND (Sorted by Account Number)**

Project	Account No.	2019	2020	2021	2022	2023	2024
General Fund (01)							
Public Works							
Traffic Sign Replacement	01-60-74-77452	\$22,200	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
Geographic Information System (GIS) Software	01-60-91-99107	\$5,250	\$5,250	\$5,250	\$5,250	\$5,250	\$5,250
Total General Fund (01)		\$27,450	\$13,250	\$13,250	\$13,250	\$13,250	\$13,250
Motor Fuel Tax Fund (10)							
Crack Sealing Program	10-60-74-77436	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Madrona Village Neighborhoods 1 & 2 Resurfacing	10-60-83-88301	\$501,000					
Madrona Village Neighborhoods 5	10-60-83-88301		\$505,340				
Pavement Maintenance	10-60-83-88301			\$550,000	\$550,000	\$550,000	\$550,000
Wildspring Road Resurfacing	10-60-83-88301		\$852,925				
Total Motor Fuel Tax Fund (10)		\$516,000	\$1,373,265	\$565,000	\$565,000	\$565,000	\$565,000
Capital Projects Fund (35)							
Madrona Village Neighborhoods 5	35-20-73-77307	\$32,160					
Pavement Maintenance	35-20-73-77307		\$31,250	\$31,250	\$31,250	\$31,250	\$31,250
Pavement Management Report Update	35-20-73-77307			\$25,000			
Subdivision Ordinance & Standard Construction Details Update	35-20-73-77307	\$7,500					
Wildspring Road Resurfacing	35-20-73-77307	\$49,000					
Back-up Generator	35-20-80-88001						\$85,000
Parkway Tree Pruning Program	35-20-80-88028	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$45,000
Parkway Tree Replacement Program	35-20-80-88028	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$10,000
Capri/Avilon Water Main Replacement	35-20-83-88301			\$19,800	\$258,100		
Parkview Unit 1 Resurfacing	35-20-83-88301	\$555,600					
Cedar Lake Road Bicycle Path Connection	35-20-88-88801	\$8,100	\$66,900				
Cedar Valley Park Pond Public Flood Control Project	35-20-88-88801	\$75,000	\$83,400	\$75,000	\$40,000		
Concrete Curb and Gutter and Sidewalk Repair Program	35-20-88-88801	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Conversion to LED Street Lights Program	35-20-88-88801	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Improve Village Owned Property	35-20-88-88801	\$60,000					
Material Storage Bins	35-20-88-88801	\$52,000	\$52,000	\$30,000			
Orchard St/Ravine Ave/Cranberry Ct Water Main Replacement	35-20-88-88801					\$16,600	\$228,800
Round Lake High School Stormwater Lift Station	35-20-88-88801	\$85,300					
Tear Downs	35-20-88-88801	\$35,000	\$35,000	\$35,000			
Wetland Maintenance - Village Open Space	35-20-88-88801	\$11,000	\$12,000	\$11,000	\$5,000	\$10,000	\$13,000
Total Capital Projects Fund (35)		\$1,220,660	\$530,550	\$477,050	\$584,350	\$307,850	\$528,050
Water / Sewer Fund (50)							
MXU Replacements	50-60-74-77428	\$100,000	\$100,000	\$30,000	\$10,000	\$10,000	\$10,000
Fire Hydrant Painting	50-60-79-77901	\$20,000		\$20,000		\$20,000	
Valve Exercise	50-60-79-77901	\$30,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Water Storage Tank Cleaning	50-60-79-77901	\$15,000		\$15,000		\$15,000	
Well #2 Roof & Insulation Replacement	50-60-79-77905	\$15,000					
Large Trucks (New)	50-60-80-88004		\$195,000	\$125,000			
750,000 Gallon Elevated Tank	50-60-81-88101					\$55,000	\$2,345,000
Brooks Farm Water Interconnect	50-60-81-88101	\$30,000					
Capri/Avilon Water Main Replacement	50-60-81-88101			\$78,300	\$1,092,300		
Cedar Lake Road Water Main Replacement	50-60-81-88101				\$116,500	\$2,174,000	
CLCJAWA Receiving Station	50-60-81-88101	\$660,000					
CLCJAWA South Pumping Station	50-60-81-88101	\$1,629,000					
Emergency Water Interconnect - RL Beach	50-60-81-88101	\$147,000					
Nippersink Lift Station Remodel/Replacement	50-60-81-88101		\$444,000				
Orchard St/Ravine Ave/Cranberry Ct Water Main Replacement	50-60-81-88101					\$39,800	\$569,800
Replace Non-Operative Water Main Valves & Fire Hydrants	50-60-81-88101	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Route 134 Water Main Impr. - Cedar Lake Rd. East	50-60-81-88101			\$1,265,000			
Sanitary Sewer Master Plan Update	50-60-81-88101	\$75,000					
Sanitary Sewer System Inspecting, Cleaning and Maintenance	50-60-81-88101	\$168,000	\$308,000	\$158,000	\$143,000	\$143,000	\$110,000
Upgrade Controls & Install Back Up Power Generator	50-60-81-88101	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000
Water System Master Plan Update	50-60-81-88101	\$52,000					
Water Tower Painting	50-60-81-88101		\$255,000	\$340,000	\$340,000	\$255,000	
Wilson Water Tower Instrument Cabinet	50-60-81-88101	\$15,000					
Geographic Information System (GIS) Software	50-60-91-99107	\$5,250	\$5,250	\$5,250	\$5,250	\$5,250	\$5,250
Lift Station Repairs	50-60-92-99208	\$60,000	\$40,000				
Cellular SCADA Transmitters for Lift Stations	50-61-91-99101	\$35,000	\$35,000	\$35,000	\$12,000		
Total Water / Sewer Fund (50)		\$3,226,250	\$1,564,250	\$2,253,550	\$1,901,050	\$2,899,050	\$3,222,050
Commuter Parking Lot Fund (51)							
Commuter Lot Maintenance and Paving	51-60-86-88601	\$205,400				\$24,800	\$282,700
Total Commuter Lot Fund (51)		\$205,400	\$0	\$0	\$0	\$24,800	\$282,700
Vehicle Replacement Fund (60)							
Radar Trailer	60-40-80-88001						\$20,000
Community Service Vehicle	60-40-80-88004				\$31,500		
Police Vehicles	60-40-80-88004	\$84,557	\$89,153	\$122,437	\$94,583	\$97,420	\$100,343
Community Service Vehicle	60-40-80-88024				\$5,000		

**CAPITAL IMPROVEMENTS PROGRAM
FISCAL YEAR END 2019 - 2024 CIP DOCUMENT
BY FUND (Sorted by Account Number)**

Project	Account No.	2019	2020	2021	2022	2023	2024
Police Vehicles Equipment	60-40-80-88024	\$16,391	\$16,883	\$23,185	\$17,911	\$18,448	\$19,001
Heavy Equipment	60-60-80-88001	\$180,000		\$63,000	\$34,000	\$180,000	\$338,000
Large Trucks	60-60-80-88004	\$85,000		\$340,000		\$190,000	
Pickup Truck Replacements	60-60-80-88004	\$46,000			\$42,000		\$47,000
Refurbish Trucks: Liquid Anti-Icing Capabilities	60-60-80-88024	\$8,000	\$8,000				
Total Vehicle Replacement Fund (60)		\$419,948	\$114,036	\$548,622	\$224,994	\$485,868	\$524,344
<u>Technology Replacement Fund (61)</u>							
Financial Management System	61-20-91-99103	\$250,000					
Replace Technology Equipment	61-20-91-99117	\$11,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Replace Village Computers/Server	61-20-91-99117	\$1,000		\$3,000	\$21,000	\$1,000	\$1,000
Body Camera Replacements	61-40-80-88001	\$6,000	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
ID Badge Printer	61-40-80-88001	\$6,000					
Automated External Defibrillator Replacements	61-40-80-88024				\$5,000	\$5,000	
Mobile Data Computers	61-40-80-88024	\$16,000	\$16,000	\$16,000	\$16,000	\$16,000	\$16,000
Radar Unit(s)	61-40-80-88024	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Building Video Surveillance System	61-40-91-99117	\$4,000	\$3,000	\$3,000	\$5,000	\$20,000	\$3,000
Community Room Technology	61-40-91-99117	\$3,000	\$3,000	\$3,000	\$6,000	\$1,500	\$1,500
Interview Room Hi-Definition Video Recording System	61-40-91-99117	\$4,000	\$4,000			\$15,000	
Replace Technology Equipment (From Admin.)	61-40-91-99117	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Replace Village Computers/Server (From Admin.)	61-40-91-99117	\$21,000	\$7,000	\$0	\$6,000	\$6,000	\$21,000
UPS Batteries Replacement and Maintenance	61-40-91-99117			\$6,000			
Replace Technology Equipment (From Admin.)	61-60-91-99117	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Replace Technology Equipment (Water/Sewer - From Admin.)	61-60-91-99117	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Replace Village Computers/Server (From Admin.)	61-60-91-99117	\$8,000	\$1,500	\$2,000	\$1,000		\$8,000
Replace Village Computers/Server (Water/Sewer - From Admin.)	61-60-91-99117	\$8,000	\$1,500	\$32,000	\$1,000		\$8,000
Replace Technology Equipment (From Admin.)	61-70-91-99117	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Replace Village Computers/Server (From Admin.)	61-70-91-99117			\$4,000	\$3,000		
Total Technology Replacement Fund (61)		\$353,500	\$64,500	\$97,500	\$92,500	\$93,000	\$87,000
<u>Building Replacement Fund (62)</u>							
Building Equipment Replacement	62-20-80-88001	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Temperature Control Systems	62-20-80-88001				\$35,000		
Office Furniture Repair and Replacement	62-20-80-88018		\$10,000		\$10,000		\$10,000
Carpet Repairs	62-20-85-88501	\$20,000	\$20,000				
Insulate Exposed Attic	62-20-85-88501			\$20,000			
Painting	62-20-85-88501	\$5,000				\$5,000	
Village Hall Vestibule	62-20-85-88501	\$15,000					
Welcome Signs	62-20-88-88801	\$75,000	\$75,000	\$25,000			
Building Equipment Replacement (From Admin.)	62-40-80-88001	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Community Room Furniture & Carpeting	62-40-80-88018		\$30,000	\$15,000			
Office Furniture Repair and Replacement	62-40-80-88018	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Warning Sirens	62-40-80-88801	\$55,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Building Upkeep	62-40-85-88501	\$25,000	\$15,000	\$10,000	\$10,000	\$10,000	\$25,000
Carpet Repairs	62-40-85-88501	\$2,500	\$10,000	\$10,000	\$5,000	\$5,000	\$2,500
Community Room Furniture & Carpeting Cleaning	62-40-85-88501	\$5,000					
Building Equipment Replacement (From Admin.)	62-60-80-88001	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Office Furniture Repair and Replacement (From Admin.)	62-60-80-88018	\$5,000		\$5,000		\$5,000	
Painting (From Admin.)	62-60-85-88501	\$5,000				\$5,000	
Salt Barn Repairs	62-60-85-88501	\$20,000					\$12,000
Municipal Buildings - Parking Lot Pavement Maintenance	62-60-88-88801	\$70,000					
Office Furniture Repair and Replacement (From Admin.)	62-70-80-88018	\$5,000		\$5,000		\$5,000	
Total Building Replacement Fund (62)		\$342,500	\$220,000	\$150,000	\$120,000	\$95,000	\$109,500
Grand Total		\$6,311,708	\$3,879,851	\$4,104,972	\$3,501,144	\$4,483,818	\$5,331,894



Appendix E

**Appendix E
Alternate A
Calculated Annual Requirements
Cash Balance, Financing, and Debt Service Projections**

FY	Water and Sewer Use				Water User Charges							Sewer User Charges					Total Village Water and Sewer Charges						
	Projected Water Customers	Projected Water Consumption (gallons)	Projected Sewer Customers	Projected Sewer Use (gallons)	Fixed Water Charge		Water Consumption Charge				Percent Change	Fixed Sewer Charge		Consumption Charge			Percent Change	Total Water and Sewer Fixed Monthly Fee	Total Water and Sewer User Charge (\$/1,000 gallons)				
					Calculated Fixed Monthly Village Water Fee	Recommended Fixed Monthly Village Water Fee	Water Base User Cost (\$/1,000 gallons)	Water Replacement/CI P Cost (\$/1,000 gallons)	Water Debt Service Cost (\$/1,000 gallons)	Total Water Cost (\$/1,000 gallons)		Recommended Village Water User Charge (\$/1,000 gallons)	Fixed Monthly Village Sewer Fee	Recommended Fixed Monthly Village Sewer Fee	Sewer Base User Cost (\$/1,000 gallons)	Sewer Replacement/CIP Cost (\$/1,000 gallons)				Sewer Debt Service Cost (\$/1,000 gallons)	Total Sewer Cost (\$/1,000 gallons)	Recommended Village Sewer User Charge (\$/1,000 gallons)	
FY 2019	5,260	350,000,000	5,090	340,000,000	\$3.56 [1]	\$3.56 [1]	\$1.90	\$0.19	\$0.20	\$2.29	\$2.16 [1]		\$3.48 [1]	\$3.48 [1]	\$1.33	\$0.20	\$0.20	\$1.73	\$1.63 [1]		\$7.04	\$3.79	
FY 2020	5,260	350,000,000	5,090	340,000,000	\$3.59	\$3.59	\$1.54	\$1.35	\$0.20	\$3.09	\$3.09	43%	\$3.51	\$3.51	\$1.36	\$1.27	\$0.20	\$2.83	\$2.83	74%	\$7.10	\$5.92	56%
FY 2021	5,260	350,000,000	5,090	340,000,000	\$3.76	\$3.76	\$1.62	\$3.06	\$0.19	\$4.87	\$4.87	58%	\$3.68	\$3.68	\$1.43	\$1.30	\$0.20	\$2.93	\$2.93	4%	\$7.44	\$7.80	32%
FY 2022	5,260	350,000,000	5,090	340,000,000	\$3.93	\$3.93	\$1.70	\$4.49	\$0.20	\$6.39	\$6.39	31%	\$3.85	\$3.85	\$1.52	\$1.33	\$0.21	\$3.06	\$3.06	4%	\$7.78	\$9.45	21%
FY 2023	5,260	350,000,000	5,090	340,000,000	\$4.10	\$4.10	\$1.76	\$5.21	\$0.00	\$6.97	\$6.97	9%	\$4.03	\$4.03	\$1.57	\$1.36	\$0.00	\$2.93	\$2.93	-4%	\$8.13	\$9.90	5%
FY 2024	5,260	350,000,000	5,090	340,000,000	\$4.27	\$4.27	\$1.82	\$5.21	\$0.00	\$7.03	\$7.03	1%	\$4.20	\$4.20	\$1.63	\$1.39	\$0.00	\$3.02	\$3.02	3%	\$8.47	\$10.05	2%

Notes: [1] Assumes implementation of new rates on May 1, 2019. Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019. Existing water/sewer user charge: \$7.04 per month plus \$3.79 per 1,000 gal.

FY	Fund Projections										Target Ending Fund Balance/Reserves (30% of Operating Expense, Plus 50% Annual Debt Service, Plus Existing Replacement)
	Projected Revenue				Projected Expenses				Fund Balance		
	Starting Balance	Projected Village User Charge Revenue [2]	Projected Miscellaneous Revenue [3]	Total Projected Revenue	Expenditures (Includes existing replacement, excludes CIP, Moves & Carryovers and Debt Service)	Capital Improvements, Moves, and Carryovers Funded by Rates or Reserves (see below)	Total Projected Debt Service (see below)	Total Projected Expenditures	Projected Ending Balance	Change in Ending Fund Balance	
FY 2019	\$5,887,664	\$1,747,466 [1]	\$2,319,000	\$4,066,466 [1]	\$3,997,537	\$3,478,414	\$139,283	\$7,615,234	\$2,338,896	(\$3,548,768)	\$1,268,903
FY 2020	\$2,338,896	\$2,484,692	\$2,467,703	\$4,952,395	\$4,054,920	\$1,564,250	\$139,283	\$5,758,452	\$1,532,838	(\$806,058)	\$1,286,117
FY 2021	\$1,532,838	\$3,162,806	\$2,212,072	\$5,374,878	\$3,871,638	\$910,250	\$135,220	\$4,917,108	\$1,990,608	\$457,770	\$1,229,101
FY 2022	\$1,990,608	\$3,760,120	\$2,039,407	\$5,799,527	\$3,778,398	\$2,035,550	\$140,595	\$5,954,543	\$1,835,592	(\$155,016)	\$1,203,817
FY 2023	\$1,835,592	\$3,940,644	\$2,048,460	\$5,989,104	\$3,849,235	\$1,878,850	\$0	\$5,728,085	\$2,096,611	\$261,019	\$1,154,770
FY 2024	\$2,096,611	\$4,013,358	\$2,049,630	\$6,062,988	\$3,911,291	\$3,051,050	\$0	\$6,962,341	\$1,197,259	(\$899,352)	\$1,173,387

Notes: [2] Excludes revenue from NWRWRF, LCWPD, and CLCIJAWA which are pass through charges. [3] Includes revenue from NWRWRF, LCPWD, and CLCIJAWA.

FY	Water and Sewer Capital Improvements, Moves, and Carryovers						
	Projected Expenses - Water			Projected Expenses - Sewer			Water/Sewer CIP, Moves, and Carryovers Funded by Rates or Reserves (Water and Sewer)
	Water Capital Improvements, Moves, and Carryovers	Funded by Rates or Reserves (Water)	Financed Capital Improvements, Moves, and Carryovers (Water)	Sewer Capital Improvements, Moves, and Carryovers	Funded by Rates or Reserves (Sewer)	Financed Capital Improvements, Moves, and Carryovers (Sewer)	
FY 2019	\$2,938,797	\$2,938,797	\$0	\$539,617	\$539,617	\$0	\$3,478,414
FY 2020	\$637,125	\$637,125	\$0	\$927,125	\$927,125	\$0	\$1,564,250
FY 2021	\$652,125	\$652,125	\$0	\$258,125	\$258,125	\$0	\$910,250
FY 2022	\$1,877,925	\$1,877,925	\$0	\$157,625	\$157,625	\$0	\$2,035,550
FY 2023	\$1,733,225	\$1,733,225	\$0	\$145,625	\$145,625	\$0	\$1,878,850
FY 2024	\$2,938,425	\$2,938,425	\$0	\$112,625	\$112,625	\$0	\$3,051,050
Total	\$10,777,622	\$10,777,622	\$0	\$2,140,742	\$2,140,742	\$0	\$12,918,364

FY	Water				Sewer				Total Annual Debt Service Payment
	Existing Water Debt Service Annual Payment	Water Projects Financed in FY	Loan Term (Years)	Interest Rate	Existing Sewer Debt Service Payment	Sewer Projects Financed in FY	Loan Term (Years)	Interest Rate	
FY 2019	\$69,642	\$0	20	2.5%	\$69,642	\$0	20	2.5%	\$139,283
FY 2020	\$69,641	\$0	20	2.5%	\$69,641	\$0	20	2.5%	\$139,283
FY 2021	\$67,610	\$0	20	2.5%	\$67,610	\$0	20	2.5%	\$135,220
FY 2022	\$70,298	\$0	20	2.5%	\$70,298	\$0	20	2.5%	\$140,595
FY 2023	\$0	\$0	20	2.5%	\$0	\$0	20	2.5%	\$0
FY 2024	\$0	\$0	20	2.5%	\$0	\$0	20	2.5%	\$0

Notes: [4] Assumes semi-annual payments.

SUMMARY: WATER - VILLAGE PLUS CLCIJAWA CHARGES

FY	Fixed Monthly Village Water Fee	Recommended Village Water User Charge (\$/1,000 gallons)	CLCIJAWA Water Fixed Monthly Fee	Recommended CLCIJAWA Water User Charge (\$/1,000 gallons) [5]	Total Fixed Monthly Water Fee	Total Water User Charge: Village Plus CLCIJAWA - (\$/1,000)	Percent Change
FY 2019 Existing	\$3.56	\$2.16 [1]	\$0.00	\$2.83 [6]	\$3.56	\$4.99	
FY 2020	\$3.59	\$3.09	\$0.00	\$3.25 [5]	\$3.59	\$6.34	27%
FY 2021	\$3.76	\$4.87	\$0.00	\$2.52 [5]	\$3.76	\$7.39	17%
FY 2022	\$3.93	\$6.39	\$0.00	\$2.02 [5]	\$3.93	\$8.41	14%
FY 2023	\$4.10	\$6.97	\$0.00	\$2.05 [5]	\$4.10	\$9.02	7%
FY 2024	\$4.27	\$7.03	\$0.00	\$2.05 [5]	\$4.27	\$9.08	1%

Notes: [5] CLCIJAWA rate assessed Round Lake customers has been adjusted to reflect water losses in the distribution system (13%). Customer CLCIJAWA rate = 1.13 x Base CLCIJAWA Water Rate. [6] Current rate assessed by Village equals CLCIJAWA Rate as no adjustment for system losses is currently made.

SUMMARY: SEWER - VILLAGE PLUS NWRWRF AND LCPWD CHARGES

FY	Fixed Monthly Village Sewer Fee	Recommended Village Sewer User Charge (\$/1,000 gallons)	NWRWRF / LCPWD Water Fixed Monthly Fee	NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Sewer Fee	Total Sewer User Charge: Village Plus NWRWRF Plus LCPWD - (\$/1,000)	Percent Change
FY 2019 Existing	\$3.48	\$1.63 [1]	\$1.50	\$3.67	\$4.98	\$5.30	
FY 2020	\$3.51	\$2.83	\$1.50	\$3.67	\$5.01	\$6.50	23%
FY 2021	\$3.68	\$2.93	\$1.50	\$3.67	\$5.18	\$6.60	2%
FY 2022	\$3.85	\$3.06	\$1.50	\$3.67	\$5.35	\$6.73	2%
FY 2023	\$4.03	\$2.93	\$1.50	\$3.67	\$5.53	\$6.60	-2%
FY 2024	\$4.20	\$3.02	\$1.50	\$3.67	\$5.70	\$6.69	1%

SUMMARY: TOTAL WATER PLUS SEWER (INCLUDING CLCIJAWA, NWRWRF, LCPWD)

FY	Fixed Monthly Village Fee (Water and Sewer)	Total Village Water and Sewer Charge (\$/1,000 gallons)	CLCIJAWA / NWRWRF / LCPWD Water Fixed Monthly Fee	CLCIJAWA / NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Fee	Total Water and Sewer User Charge: Village, CLCIJAWA, NWRWRF, LCPWD - (\$/1,000)	Percent Change
FY 2019 Existing	\$7.04	\$3.79	\$1.50	\$6.50	\$8.54	\$10.29	
FY 2020	\$7.10	\$5.92	\$1.50	\$6.92	\$8.60	\$12.84	25%
FY 2021	\$7.44	\$7.80	\$1.50	\$6.19	\$8.94	\$13.99	9%
FY 2022	\$7.78	\$9.45	\$1.50	\$5.69	\$9.28	\$15.14	8%
FY 2023	\$8.13	\$9.90	\$1.50	\$5.72	\$9.63	\$15.62	3%
FY 2024	\$8.47	\$10.05	\$1.50	\$5.72	\$9.97	\$15.77	1%



Appendix F

**Appendix F
Alternate B
Constant Rates for Five Year Period
Cash Balance, Financing, and Debt Service Projections**

FY	Water and Sewer Use				Water User Charges									Sewer User Charges					Total Village Water and Sewer Charges				
	Projected Water Customers	Projected Water Consumption (gallons)	Projected Sewer Customers	Projected Sewer Use (gallons)	Fixed Water Charge		Water Consumption Charge					Percent Change	Fixed Sewer Charge		Sewer Consumption Charge				Total Water and Sewer Fixed Monthly Fee	Total Water and Sewer User Charge (\$/1,000 gallons)			
					Calculated Fixed Monthly Village Water Fee	Recommended Fixed Monthly Village Water Fee	Water Base User Cost (\$/1,000 gallons)	Replacement/CIP Cost (\$/1,000 gallons)	Water Debt Service Cost (\$/1,000 gallons)	Total Water Cost (\$/1000 gallons)	Recommended Village Water User Charge (\$/1,000 gallons)		Calculated Fixed Monthly Village Sewer Fee	Recommended Fixed Monthly Village Sewer Fee	Sewer Base User Cost (\$/1,000 gallons)	Sewer Replacement/CIP Cost (\$/1,000 gallons)	Sewer Debt Service Cost (\$/1,000 gallons)	Total Sewer Cost (\$/1000 gallons)			Recommended Village Sewer User Charge (\$/1,000 gallons)		
																						Percent Change	Percent Change
FY 2019	5,260	350,000,000	5,090	340,000,000	\$3.56 [1]	\$3.56 [1]	\$1.90	\$0.19	\$0.20	\$2.29	\$2.16 [1]	163%	\$3.48 [1]	\$3.48 [1]	\$1.33	\$0.20	\$0.20	\$1.73	\$1.63 [1]	81%	\$7.04	\$8.62	128%
FY 2020	5,260	350,000,000	5,090	340,000,000	\$3.59	\$3.93	\$1.54	\$1.35	\$0.20	\$3.09	\$5.67	0%	\$3.51	\$3.85	\$1.36	\$1.27	\$0.20	\$2.83	\$2.95	0%	\$7.78	\$8.62	0%
FY 2021	5,260	350,000,000	5,090	340,000,000	\$3.76	\$3.93	\$1.62	\$3.06	\$0.19	\$4.87	\$5.67	0%	\$3.68	\$3.85	\$1.43	\$1.30	\$0.20	\$2.93	\$2.95	0%	\$7.78	\$8.62	0%
FY 2022	5,260	350,000,000	5,090	340,000,000	\$3.93	\$3.93	\$1.70	\$4.49	\$0.20	\$6.39	\$5.67	0%	\$3.85	\$3.85	\$1.52	\$1.33	\$0.21	\$3.06	\$2.95	0%	\$7.78	\$8.62	0%
FY 2023	5,260	350,000,000	5,090	340,000,000	\$4.10	\$3.93	\$1.76	\$5.21	\$0.00	\$6.97	\$5.67	0%	\$4.03	\$3.85	\$1.57	\$1.36	\$0.00	\$2.93	\$2.95	0%	\$7.78	\$8.62	0%
FY 2024	5,260	350,000,000	5,090	340,000,000	\$4.27	\$3.93	\$1.82	\$5.21	\$0.00	\$7.03	\$5.67	0%	\$4.20	\$3.85	\$1.63	\$1.39	\$0.00	\$3.02	\$2.95	0%	\$7.78	\$8.62	0%

Notes: [1] Assumes implementation of new rates on May 1, 2019. Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019. Existing water/sewer user charge: \$7.04 per month plus \$3.79 per 1,000 gal.

FY	Projected Revenue				Projected Expenses				Fund Balance		Target Ending Fund Balance/Reserves (30% of Operating Expense, Plus 50% Annual Debt Service, Plus Existing Replacement)
	Starting Balance	Projected Village User Charge Revenue [2]	Projected Miscellaneous Revenue [3]	Total Projected Revenue	Expenditures (Includes existing replacement, excludes CIP, Moves & Carryovers and Debt Service)	Capital Improvements, Moves, and Carryovers Funded by Rates or Reserves (see below)	Total Projected Debt Service	Total Projected Expenditures	Projected Ending Balance	Change in Ending Fund Balance	
FY 2019	\$5,887,664	\$1,747,466 [1]	\$2,319,000	\$4,066,466 [1]	\$3,997,537	\$3,478,414	\$139,283	\$7,615,234	\$2,338,896	(\$3,548,768)	\$1,268,903
FY 2020	\$2,338,896	\$3,472,324	\$2,467,703	\$5,940,027	\$4,054,920	\$1,564,250	\$139,283	\$5,758,452	\$2,520,470	\$181,574	\$1,286,117
FY 2021	\$2,520,470	\$3,472,324	\$2,212,072	\$5,684,396	\$3,871,638	\$910,250	\$135,220	\$4,917,108	\$3,287,758	\$767,288	\$1,229,101
FY 2022	\$3,287,758	\$3,472,324	\$2,039,407	\$5,511,731	\$3,778,398	\$2,035,550	\$140,595	\$5,954,543	\$2,844,946	(\$442,812)	\$1,203,817
FY 2023	\$2,844,946	\$3,472,324	\$2,048,460	\$5,520,784	\$3,849,235	\$1,878,850	\$0	\$5,728,085	\$2,637,645	(\$207,301)	\$1,154,770
FY 2024	\$2,637,645	\$3,472,324	\$2,049,630	\$5,521,954	\$3,911,291	\$3,051,050	\$0	\$6,962,341	\$1,197,259	(\$1,440,386)	\$1,173,387

Notes: [2] Excludes revenue from NWRWRF, LCWPD, and CLCIAWA which are pass through charges. [3] Includes revenue from NWRWRF, LCPWD, and CLCIAWA.

FY	Water and Sewer Capital Improvements, Moves, and Carryovers			Water/Sewer		
	Water Capital Improvements, Moves, and Carryovers	Projected Expenses - Water	Projected Expenses - Sewer	Water Capital Improvements, Moves, and Carryovers	Projected Expenses - Sewer	Water/Sewer
FY 2019	\$2,938,797	\$2,938,797	\$0	\$2,938,797	\$0	\$3,478,414
FY 2020	\$637,125	\$637,125	\$0	\$927,125	\$0	\$1,564,250
FY 2021	\$652,125	\$652,125	\$0	\$258,125	\$258,125	\$910,250
FY 2022	\$1,877,925	\$1,877,925	\$0	\$157,625	\$157,625	\$2,035,550
FY 2023	\$1,733,225	\$1,733,225	\$0	\$145,625	\$145,625	\$1,878,850
FY 2024	\$2,938,425	\$2,938,425	\$0	\$112,625	\$112,625	\$3,051,050
Total	\$10,777,622	\$10,777,622	\$0	\$2,140,742	\$2,140,742	\$12,918,364

FY	Water			Debt Service			Sewer			Total	
	Existing Water Debt Service Annual Payment	Water Projects Financed in FY	Loan Term (Years)	Interest Rate	New Water Debt Service Annual Payment [4]	Cumulative Water Debt Service Payment	Existing Sewer Debt Service Payment	Sewer Projects Financed in FY	Loan Term (Years)		Interest Rate
FY 2019	\$69,642	\$0	20	2.5%	\$0	\$69,642	\$69,642	\$0	20	2.5%	\$139,283
FY 2020	\$69,641	\$0	20	2.5%	\$0	\$69,641	\$69,641	\$0	20	2.5%	\$139,283
FY 2021	\$67,610	\$0	20	2.5%	\$0	\$67,610	\$67,610	\$0	20	2.5%	\$135,220
FY 2022	\$70,298	\$0	20	2.5%	\$0	\$70,298	\$70,298	\$0	20	2.5%	\$140,595
FY 2023	\$0	\$0	20	2.5%	\$0	\$0	\$0	\$0	20	2.5%	\$0
FY 2024	\$0	\$0	20	2.5%	\$0	\$0	\$0	\$0	20	2.5%	\$0

Notes: [4] Assumes semi-annual payments.

SUMMARY: WATER - VILLAGE PLUS CLCIAWA CHARGES

FY	Fixed Monthly Village Water Fee	Recommended Village Water User Charge (\$/1,000 gallons)	CLCIAWA Water Fixed Monthly Fee	Recommended CLCIAWA Water User Charge (\$/1,000 gallons) [5]	Total Fixed Monthly Water Fee	Total Water User Charge: Village Plus CLCIAWA - \$/1,000	Percent Change
FY 2019	\$3.56	\$2.16 [1]	\$0.00	\$2.83 [6]	\$3.56	\$4.99	79%
FY 2020	\$3.93	\$5.67	\$0.00	\$3.25 [5]	\$3.93	\$8.92	-8%
FY 2021	\$3.93	\$5.67	\$0.00	\$2.52 [5]	\$3.93	\$8.19	-6%
FY 2022	\$3.93	\$5.67	\$0.00	\$2.02 [5]	\$3.93	\$7.69	0%
FY 2023	\$3.93	\$5.67	\$0.00	\$2.05 [5]	\$3.93	\$7.72	0%
FY 2024	\$3.93	\$5.67	\$0.00	\$2.05 [5]	\$3.93	\$7.72	0%

Notes: [5] CLCIAWA rate assessed Round Lake customers has been adjusted to reflect water losses in the distribution system (13%). Customer CLCIAWA rate = 1.13 x Base CLCIAWA Water Rate. [6] Current rate assessed by Village equals CLCIAWA Rate as no adjustment for system losses is currently made.

SUMMARY: SEWER - VILLAGE PLUS NWRWRF AND LCPWD CHARGES

FY	Fixed Monthly Village Sewer Fee	Recommended Village Sewer User Charge (\$/1,000 gallons)	NWRWRF / LCPWD Water Fixed Monthly Fee	NWRWRF / LCPWD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Sewer Fee	Total Sewer User Charge: Village Plus NWRWRF Plus LCPWD - \$/1,000	Percent Change
FY 2019	\$3.48	\$1.63 [1]	\$1.50	\$3.67	\$4.98	\$5.30	25%
FY 2020	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%
FY 2021	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%
FY 2022	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%
FY 2023	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%
FY 2024	\$3.85	\$2.95	\$1.50	\$3.67	\$5.35	\$6.62	0%

SUMMARY: TOTAL WATER PLUS SEWER (INCLUDING CLCIAWA, NWRWRF, LCPWD)

FY	Fixed Monthly Village Fee (Water and Sewer)	Total Village Water and Sewer Charge (\$/1,000 gallons)	CLCIAWA / NWRWRF / LCPWD Water Fixed Monthly Fee	CLCIAWA / NWRWRF / LCPWD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Fee	Total Water and Sewer User Charge: Village, CLCIAWA, NWRWRF, LCPWD - \$/1,000	Percent Change
FY 2019 Existing	\$7.04	\$3.79	\$1.50	\$6.50	\$8.54	\$10.29	51%
FY 2020	\$7.78	\$8.62	\$1.50	\$6.92	\$9.28	\$15.54	-5%
FY 2021	\$7.78	\$8.62	\$1.50	\$6.19	\$9.28	\$14.81	-3%
FY 2022	\$7.78	\$8.62	\$1.50	\$5.69	\$9.28	\$14.31	0%
FY 2023	\$7.78	\$8.62	\$1.50	\$5.72	\$9.28	\$14.34	0%
FY 2024	\$7.78	\$8.62	\$1.50	\$5.72	\$9.28	\$14.34	0%



Appendix G



**Appendix G
Alternate C
Three Year Adjustment Followed by CPI Index
Cash Balance, Financing, and Debt Service Projections**

FY	Water and Sewer Use				Water User Charges							Sewer User Charges					Total Village Water and Sewer Charges						
	Projected Water Customers	Projected Water Consumption (gallons)	Projected Sewer Customers	Projected Sewer Use (gallons)	Fixed Water Charge		Water Consumption Charge				Percent Change	Fixed Sewer Charge		Consumption Charge			Percent Change	Total Water and Sewer Fixed Monthly Fee	Total Water and Sewer User Charge (\$/1,000 gallons)				
					Calculated Fixed Monthly Village Water Fee	Recommended Fixed Monthly Village Water Fee	Water Base User Cost (\$/1,000 gallons)	Water Replacement/CIP Cost (\$/1,000 gallons)	Water Debt Service Cost (\$/1,000 gallons)	Total Water Cost (\$/1,000 gallons)		Recommended Village Water User Charge (\$/1,000 gallons)	Fixed Monthly Village Sewer Fee	Recommended Fixed Monthly Village Sewer Fee	Sewer Base User Cost (\$/1,000 gallons)	Sewer Replacement/CIP Cost (\$/1,000 gallons)				Sewer Debt Service Cost (\$/1,000 gallons)	Total Sewer Cost (\$/1,000 gallons)	Recommended Village Sewer User Charge (\$/1,000 gallons)	
FY 2019	5,260	350,000,000	5,090	340,000,000	\$3.56 [1]	\$3.56 [1]	\$1.90	\$0.19	\$0.20	\$2.29	\$2.16 [1]	62%	\$3.48 [1]	\$3.48 [1]	\$1.33	\$0.20	\$0.20	\$1.73	\$1.63 [1]	20%	\$7.04	\$3.79	44%
FY 2020	5,260	350,000,000	5,090	340,000,000	\$3.59	\$3.59	\$1.54	\$1.35	\$0.20	\$3.09	\$3.50	62%	\$3.51	\$3.51	\$1.36	\$1.27	\$0.20	\$2.83	\$1.95	20%	\$7.10	\$5.45	44%
FY 2021	5,260	350,000,000	5,090	340,000,000	\$3.76	\$3.76	\$1.62	\$3.06	\$0.19	\$4.87	\$5.70	63%	\$3.68	\$3.68	\$1.43	\$1.30	\$0.20	\$2.93	\$2.35	21%	\$7.44	\$8.05	48%
FY 2022	5,260	350,000,000	5,090	340,000,000	\$3.93	\$3.93	\$1.70	\$4.49	\$0.20	\$6.39	\$6.75	18%	\$3.85	\$3.85	\$1.52	\$1.33	\$0.21	\$3.06	\$2.90	23%	\$7.78	\$9.65	20%
FY 2023	5,260	350,000,000	5,090	340,000,000	\$4.10	\$4.10	\$1.76	\$5.21	\$0.00	\$6.97	\$6.89	2%	\$4.03	\$4.03	\$1.57	\$1.36	\$0.00	\$2.93	\$2.96	2%	\$8.13	\$9.84	2%
FY 2024	5,260	350,000,000	5,090	340,000,000	\$4.27	\$4.27	\$1.82	\$5.21	\$0.00	\$7.03	\$7.03	2%	\$4.20	\$4.20	\$1.63	\$1.39	\$0.00	\$3.02	\$3.02	2%	\$8.47	\$10.05	2%

Notes: [1] Assumes implementation of new rates on May 1, 2019. Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019. Existing water/sewer user charge: \$7.04 per month plus \$3.79 per 1,000 gal.

FY	Fund Projections										Target Ending Fund Balance/Reserves (30% of Operating Expense, Plus 50% Annual Debt Service, Plus Existing Replacement)
	Projected Revenue				Projected Expenses				Fund Balance		
	Starting Balance	Projected Village User Charge Revenue [2]	Projected Miscellaneous Revenue [3]	Total Projected Revenue	Expenditures (Includes existing replacement, excludes CIP, Moves & Carryovers and Debt Service)	Capital Improvements, Moves, and Carryovers Funded by Rates or Reserves (see below)	Total Projected Debt Service	Total Projected Expenditures	Projected Ending Balance	Change in Ending Fund Balance	
FY 2019	\$5,887,664	\$ 1,747,466 [1]	\$ 2,319,000	\$ 4,066,466 [1]	\$3,997,537	\$3,478,414	\$139,283	\$7,615,234	\$2,338,896	(\$3,548,768)	\$1,268,903
FY 2020	\$2,338,896	\$2,328,992	\$2,467,703	\$4,796,695	\$4,054,920	\$1,564,250	\$139,283	\$5,758,452	\$1,377,138	(\$961,758)	\$1,286,117
FY 2021	\$1,377,138	\$3,256,106	\$2,212,072	\$5,468,178	\$3,871,638	\$910,250	\$135,220	\$4,917,108	\$1,928,208	\$551,070	\$1,229,101
FY 2022	\$1,928,208	\$3,831,720	\$2,039,407	\$5,871,127	\$3,778,398	\$2,035,550	\$140,595	\$5,954,543	\$1,844,792	(\$83,416)	\$1,203,817
FY 2023	\$1,844,792	\$3,920,414	\$2,048,460	\$5,968,774	\$3,849,235	\$1,878,850	\$0	\$5,728,085	\$2,085,581	\$240,789	\$1,154,770
FY 2024	\$2,085,581	\$4,012,393	\$2,049,630	\$6,062,023	\$3,911,291	\$3,051,050	\$0	\$6,962,341	\$1,185,264	(\$900,317)	\$1,173,387

Notes: [2] Excludes revenue from NWRWRF, LCWPD, and CLCIJAWA which are pass through charges. [3] Includes revenue from NWRWRF, LCPWD, and CLCIJAWA.

FY	Water and Sewer Capital Improvements, Moves, and Carryovers						
	Projected Expenses - Water			Projected Expenses - Sewer			Water/Sewer CIP, Moves, and Carryovers Funded by Rates or Reserves (Water and Sewer)
	Water Capital Improvements, Moves, and Carryovers	Funded by Rates or Reserves (Water)	Financed Capital Improvements, Moves, and Carryovers (Water)	Sewer Capital Improvements, Moves, and Carryovers	Funded by Rates or Reserves (Sewer)	Financed Capital Improvements, Moves, and Carryovers (Sewer)	
FY 2019	\$2,938,797	\$2,938,797	\$0	\$539,617	\$539,617	\$0	\$3,478,414
FY 2020	\$637,125	\$637,125	\$0	\$927,125	\$927,125	\$0	\$1,564,250
FY 2021	\$652,125	\$652,125	\$0	\$258,125	\$258,125	\$0	\$910,250
FY 2022	\$1,877,925	\$1,877,925	\$0	\$157,625	\$157,625	\$0	\$2,035,550
FY 2023	\$1,733,225	\$1,733,225	\$0	\$145,625	\$145,625	\$0	\$1,878,850
FY 2024	\$2,938,425	\$2,938,425	\$0	\$112,625	\$112,625	\$0	\$3,051,050
Total	\$10,777,622	\$10,777,622	\$0	\$2,140,742	\$2,140,742	\$0	\$12,918,364

FY	Water				Sewer				Total Annual Debt Service Payment
	Existing Water Debt Service Annual Payment	Water Projects Financed in FY	Loan Term (Years)	Interest Rate	Existing Sewer Debt Service Payment	Sewer Projects Financed in FY	Loan Term (Years)	Interest Rate	
FY 2019	\$69,642	\$0	20	2.5%	\$69,642	\$0	20	2.5%	\$139,283
FY 2020	\$69,641	\$0	20	2.5%	\$69,641	\$0	20	2.5%	\$139,283
FY 2021	\$67,610	\$0	20	2.5%	\$67,610	\$0	20	2.5%	\$135,220
FY 2022	\$70,298	\$0	20	2.5%	\$70,298	\$0	20	2.5%	\$140,595
FY 2023	\$0	\$0	20	2.5%	\$0	\$0	20	2.5%	\$0
FY 2024	\$0	\$0	20	2.5%	\$0	\$0	20	2.5%	\$0

Notes: [4] Assumes semi-annual payments.

SUMMARY: WATER - VILLAGE PLUS CLCIJAWA CHARGES

FY	Fixed Monthly Village Water Fee	Recommended Village Water User Charge (\$/1,000 gallons)	CLCIJAWA Water Fixed Monthly Fee	Recommended CLCIJAWA Water User Charge (\$/1,000 gallons) [5]	Total Fixed Monthly Water Fee	Total Water User Charge: Village Plus CLCIJAWA - (\$/1,000)	Percent Change
FY 2019 Existing	\$3.56	\$2.16 [1]	\$0.00	\$2.83 [6]	\$3.56	\$4.99	
FY 2020	\$3.59	\$3.50	\$0.00	\$3.25 [5]	\$3.59	\$6.75	35%
FY 2021	\$3.76	\$5.70	\$0.00	\$2.52 [5]	\$3.76	\$8.22	22%
FY 2022	\$3.93	\$6.75	\$0.00	\$2.02 [5]	\$3.93	\$8.77	7%
FY 2023	\$4.10	\$6.89	\$0.00	\$2.05 [5]	\$4.10	\$8.94	2%
FY 2024	\$4.27	\$7.03	\$0.00	\$2.05 [5]	\$4.27	\$9.08	2%

Notes: [5] CLCIJAWA rate assessed Round Lake customers has been adjusted to reflect water losses in the distribution system (13%). Customer CLCIJAWA rate = 1.13 x Base CLCIJAWA Water Rate. [6] Current rate assessed by Village equals CLCIJAWA Rate as no adjustment for system losses is currently made.

SUMMARY: SEWER - VILLAGE PLUS NWRWRF AND LCPWD CHARGES

FY	Fixed Monthly Village Sewer Fee	Recommended Village Sewer User Charge (\$/1,000 gallons)	NWRWRF / LCPWD Water Fixed Monthly Fee	NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Sewer Fee	Total Sewer User Charge: Village Plus NWRWRF Plus LCPWD - (\$/1,000)	Percent Change
FY 2019 Existing	\$3.48	\$1.63 [1]	\$1.50	\$3.67	\$4.98	\$5.30	
FY 2020	\$3.51	\$1.95	\$1.50	\$3.67	\$5.01	\$5.62	6%
FY 2021	\$3.68	\$2.35	\$1.50	\$3.67	\$5.18	\$6.02	7%
FY 2022	\$3.85	\$2.90	\$1.50	\$3.67	\$5.35	\$6.57	9%
FY 2023	\$4.03	\$2.96	\$1.50	\$3.67	\$5.53	\$6.63	0.9%
FY 2024	\$4.20	\$3.02	\$1.50	\$3.67	\$5.70	\$6.69	0.9%

SUMMARY: TOTAL WATER PLUS SEWER (INCLUDING CLCIJAWA, NWRWRF, LCPWD)

FY	Fixed Monthly Village Fee (Water and Sewer)	Total Village Water and Sewer Charge (\$/1,000 gallons)	CLCIJAWA / NWRWRF / LCPWD Water Fixed Monthly Fee	CLCIJAWA / NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Fee	Total Water and Sewer User Charge: Village, CLCIJAWA, NWRWRF, LCPWD - (\$/1,000)	Percent Change
FY 2019 Existing	\$7.04	\$3.79	\$1.50	\$6.50	\$8.54	\$10.29	
FY 2020	\$7.10	\$5.45	\$1.50	\$6.92	\$8.60	\$12.37	20%
FY 2021	\$7.44	\$8.05	\$1.50	\$6.19	\$8.94	\$14.24	15%
FY 2022	\$7.78	\$9.65	\$1.50	\$5.69	\$9.28	\$15.34	8%
FY 2023	\$8.13	\$9.84	\$1.50	\$5.72	\$9.63	\$15.56	1.5%
FY 2024	\$8.47	\$10.05	\$1.50	\$5.72	\$9.97	\$15.77	1.3%



Appendix H

**Appendix H
Alternate D
Increase Charges by Constant Dollar Amount Annually - FOR ILLUSTRATIVE PURPOSES - NOT RECOMMENDED
Cash Balance, Financing, and Debt Service Projections**

FY	Water and Sewer Use				Water User Charges								Sewer User Charges					Total Village Water and Sewer Charges					
	Projected Water Customers	Projected Water Consumption (gallons)	Projected Sewer Customers	Projected Sewer Use (gallons)	Fixed Water Charge		Water Consumption Charge				Percent Change	Fixed Sewer Charge		Consumption Charge			Percent Change	Total Water and Sewer Fixed Monthly Fee	Total Water and Sewer User Charge (\$/1,000 gallons)				
					Calculated Fixed Monthly Village Water Fee	Recommended Fixed Monthly Village Water Fee	Water Base User Cost (\$/1,000 gallons)	Water Replacement/CIP Cost (\$/1,000 gallons)	Water Debt Service Cost (\$/1,000 gallons)	Total Water Cost (\$/1,000 gallons)		Recommended Village Water User Charge (\$/1,000 gallons)	Fixed Monthly Village Sewer Fee	Recommended Fixed Monthly Village Sewer Fee	Sewer Base User Cost (\$/1,000 gallons)	Sewer Replacement/CIP Cost (\$/1,000 gallons)				Sewer Debt Service Cost (\$/1,000 gallons)	Total Sewer Cost (\$/1,000 gallons)	Recommended Village Sewer User Charge (\$/1,000 gallons)	
FY 2019	5,260	350,000,000	5,090	340,000,000	\$3.56 [1]	\$3.56 [1]	\$1.90	\$0.19	\$0.20	\$2.29	\$2.16 [1]		\$3.48 [1]	\$3.48 [1]	\$1.33	\$0.20	\$0.20	\$1.73	\$1.63 [1]		\$7.04	\$3.79	
FY 2020	5,260	350,000,000	5,090	340,000,000	\$3.59	\$3.70	\$1.54	\$1.35	\$0.20	\$3.09	\$3.13	45%	\$3.51	\$3.62	\$1.36	\$1.27	\$0.20	\$2.83	\$1.91	17%	\$7.33	\$5.04	33%
FY 2021	5,260	350,000,000	5,090	340,000,000	\$3.76	\$3.84	\$1.62	\$3.06	\$0.19	\$4.87	\$4.11	31%	\$3.68	\$3.77	\$1.43	\$1.30	\$0.20	\$2.93	\$2.19	15%	\$7.61	\$6.29	25%
FY 2022	5,260	350,000,000	5,090	340,000,000	\$3.93	\$3.99	\$1.70	\$4.49	\$0.20	\$6.39	\$5.08	24%	\$3.85	\$3.91	\$1.52	\$1.33	\$0.21	\$3.06	\$2.46	13%	\$7.90	\$7.55	20%
FY 2023	5,260	350,000,000	5,090	340,000,000	\$4.10	\$4.13	\$1.76	\$5.21	\$0.00	\$6.97	\$6.06	19%	\$4.03	\$4.06	\$1.57	\$1.36	\$0.00	\$2.93	\$2.74	11%	\$8.18	\$8.80	17%
FY 2024	5,260	350,000,000	5,090	340,000,000	\$4.27	\$4.27	\$1.82	\$5.21	\$0.00	\$7.03	\$7.03	16%	\$4.20	\$4.20	\$1.63	\$1.39	\$0.00	\$3.02	\$3.02	10%	\$8.47	\$10.05	14%

Notes: [1] Assumes implementation of new rates on May 1, 2019. Existing combined monthly water and sewer fee split in proportion to projected costs for FY 2019. Existing water/sewer user charge: \$7.04 per month plus \$3.79 per 1,000 gal.

FY	Fund Projections										Target Ending Fund Balance/Reserves (30% of Operating Expense, Plus 50% Annual Debt Service, Plus Existing Replacement)
	Projected Revenue				Projected Expenses				Fund Balance		
	Starting Balance	Projected Village User Charge Revenue [2]	Projected Miscellaneous Revenue [3]	Total Projected Revenue	Expenditures (Includes existing replacement, excludes CIP, Moves & Carryovers and Debt Service)	Capital Improvements, Moves, and Carryovers Funded by Rates or Reserves (see below)	Total Projected Debt Service	Total Projected Expenditures	Projected Ending Balance	Change in Ending Fund Balance	
FY 2019	\$5,887,664	\$ 1,747,466 [1]	\$ 2,319,000	\$ 4,066,466 [1]	\$3,997,537	\$3,478,414	\$139,283	\$7,615,234	\$2,338,896	(\$3,548,768)	\$1,268,903
FY 2020	\$2,338,896	\$2,200,644	\$2,467,703	\$4,668,347	\$4,054,920	\$1,564,250	\$139,283	\$5,758,452	\$1,248,790	(\$1,090,106)	\$1,286,117
FY 2021	\$1,248,790	\$2,653,823	\$2,212,072	\$4,865,895	\$3,871,638	\$910,250	\$135,220	\$4,917,108	\$1,197,577	(\$51,213)	\$1,229,101
FY 2022	\$1,197,577	\$3,107,001	\$2,039,407	\$5,146,408	\$3,778,398	\$2,035,550	\$140,595	\$5,954,543	\$389,442	(\$808,135)	\$1,203,817
FY 2023	\$389,442	\$3,560,180	\$2,048,460	\$5,608,640	\$3,849,235	\$1,878,850	\$0	\$5,728,085	\$269,997	(\$119,445)	\$1,154,770
FY 2024	\$269,997	\$4,013,358	\$2,049,630	\$6,062,988	\$3,911,291	\$3,051,050	\$0	\$6,962,341	(\$629,355)	(\$899,352)	\$1,173,387

Notes: [2] Excludes revenue from NWRWRF, LCWPD, and CLCIJAWA which are pass through charges. [3] Includes revenue from NWRWRF, LCPWD, and CLCIJAWA. Note Target Ending Fund Balances Not Consistently Met

FY	Water and Sewer Capital Improvements, Moves, and Carryovers						
	Projected Expenses - Water			Projected Expenses - Sewer			Water/Sewer CIP, Moves, and Carryovers Funded by Rates or Reserves (Water and Sewer)
	Water Capital Improvements, Moves, and Carryovers	Funded by Rates or Reserves (Water)	Financed Capital Improvements, Moves, and Carryovers (Water)	Sewer Capital Improvements, Moves, and Carryovers	Funded by Rates or Reserves (Sewer)	Financed Capital Improvements, Moves, and Carryovers (Sewer)	
FY 2019	\$2,938,797	\$2,938,797	\$0	\$539,617	\$539,617	\$0	\$3,478,414
FY 2020	\$637,125	\$637,125	\$0	\$927,125	\$927,125	\$0	\$1,564,250
FY 2021	\$652,125	\$652,125	\$0	\$258,125	\$258,125	\$0	\$910,250
FY 2022	\$1,877,925	\$1,877,925	\$0	\$157,625	\$157,625	\$0	\$2,035,550
FY 2023	\$1,733,225	\$1,733,225	\$0	\$145,625	\$145,625	\$0	\$1,878,850
FY 2024	\$2,938,425	\$2,938,425	\$0	\$112,625	\$112,625	\$0	\$3,051,050
Total	\$10,777,622	\$10,777,622	\$0	\$2,140,742	\$2,140,742	\$0	\$12,918,364

FY	Water				Sewer				Total Annual Debt Service Payment
	Existing Water Debt Service Annual Payment	Water Projects Financed in FY	Loan Term (Years)	Interest Rate	Existing Sewer Debt Service Payment	Sewer Projects Financed in FY	Loan Term (Years)	Interest Rate	
FY 2019	\$69,642	\$0	20	2.5%	\$69,642	\$0	20	2.5%	\$139,283
FY 2020	\$69,641	\$0	20	2.5%	\$69,641	\$0	20	2.5%	\$139,283
FY 2021	\$67,610	\$0	20	2.5%	\$67,610	\$0	20	2.5%	\$135,220
FY 2022	\$70,298	\$0	20	2.5%	\$70,298	\$0	20	2.5%	\$140,595
FY 2023	\$0	\$0	20	2.5%	\$0	\$0	20	2.5%	\$0
FY 2024	\$0	\$0	20	2.5%	\$0	\$0	20	2.5%	\$0

Notes: [4] Assumes semi-annual payments.

SUMMARY: WATER - VILLAGE PLUS CLCIJAWA CHARGES

FY	Fixed Monthly Village Water Fee	Recommended Village Water User Charge (\$/1,000 gallons)	CLCIJAWA Water Fixed Monthly Fee	Recommended CLCIJAWA Water User Charge (\$/1,000 gallons) [5]	Total Fixed Monthly Water Fee	Total Water User Charge: Village Plus CLCIJAWA - (\$/1,000)	Percent Change
FY 2019 Existing	\$3.56	\$2.16 [1]	\$0.00	\$2.83 [6]	\$3.56	\$4.99	
FY 2020	\$3.70	\$3.13	\$0.00	\$3.25 [5]	\$3.70	\$6.38	28%
FY 2021	\$3.84	\$4.11	\$0.00	\$2.52 [5]	\$3.84	\$6.63	4%
FY 2022	\$3.99	\$5.08	\$0.00	\$2.02 [5]	\$3.99	\$7.10	7%
FY 2023	\$4.13	\$6.06	\$0.00	\$2.05 [5]	\$4.13	\$8.11	14%
FY 2024	\$4.27	\$7.03	\$0.00	\$2.05 [5]	\$4.27	\$9.08	12%

Notes: [5] CLCIJAWA rate assessed Round Lake customers has been adjusted to reflect water losses in the distribution system (13%). Customer CLCIJAWA rate = 1.13 x Base CLCIJAWA Water Rate. [6] Current rate assessed by Village equals CLCIJAWA Rate as no adjustment for system losses is currently made.

SUMMARY: SEWER - VILLAGE PLUS NWRWRF AND LCPWD CHARGES

FY	Fixed Monthly Village Sewer Fee	Recommended Village Sewer User Charge (\$/1,000 gallons)	NWRWRF / LCPWD Water Fixed Monthly Fee	NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Sewer Fee	Total Sewer User Charge: Village Plus NWRWRF Plus LCPWD - (\$/1,000)	Percent Change
FY 2019 Existing	\$3.48	\$1.63 [1]	\$1.50	\$3.67	\$4.98	\$5.30	
FY 2020	\$3.62	\$1.91	\$1.50	\$3.67	\$5.12	\$5.58	5%
FY 2021	\$3.77	\$2.19	\$1.50	\$3.67	\$5.27	\$5.86	5%
FY 2022	\$3.91	\$2.46	\$1.50	\$3.67	\$5.41	\$6.13	5%
FY 2023	\$4.06	\$2.74	\$1.50	\$3.67	\$5.56	\$6.41	5%
FY 2024	\$4.20	\$3.02	\$1.50	\$3.67	\$5.70	\$6.69	4%

SUMMARY: TOTAL WATER PLUS SEWER (INCLUDING CLCIJAWA, NWRWRF, LCPWD)

FY	Fixed Monthly Village Fee (Water and Sewer)	Total Village Water and Sewer Charge (\$/1,000 gallons)	CLCIJAWA / NWRWRF / LCPWD Water Fixed Monthly Fee	CLCIJAWA / NWRWRF / LCWPD Water User Charge (\$/1,000 gallons)	Total Fixed Monthly Fee	Total Water and Sewer User Charge: Village, CLCIJAWA, NWRWRF, LCPWD - (\$/1,000)	Percent Change
FY 2019 Existing	\$7.04	\$3.79	\$1.50	\$6.50	\$8.54	\$10.29	
FY 2020	\$7.33	\$5.04	\$1.50	\$6.92	\$8.83	\$11.96	16%
FY 2021	\$7.61	\$6.29	\$1.50	\$6.19	\$9.11	\$12.48	4%
FY 2022	\$7.90	\$7.55	\$1.50	\$5.69	\$9.40	\$13.24	6%
FY 2023	\$8.18	\$8.80	\$1.50	\$5.72	\$9.68	\$14.52	10%
FY 2024	\$8.47	\$10.05	\$1.50	\$5.72	\$9.97	\$15.77	9%