

# **COMPREHENSIVE WATER AND SEWER RATE AND FEE STUDY**

**PREPARED FOR**

**VILLAGE OF ALGONQUIN**



**PREPARED BY**

**RHMG ENGINEERS, INC.  
CONSULTING ENGINEERS  
975 CAMPUS DRIVE, MUNDELEIN, IL 60060**



**PROJECT NO. 21623000**

**JANUARY, 2016**

# Section I

## Executive Summary

### General

RHMG was retained by the Village of Algonquin to review the water and sewer user charges and tap-on fees 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.

Modifications to the Village user charges are necessary due to reduced system revenues and increased costs. The Village has implemented a very successful water conservation program to reduce the pressures on the area's limited groundwater supply and the Village's infrastructure. As a result of this program, water consumption has markedly decreased in the Village. This decrease in water consumption resulted in water sales dropping by more than \$300,000 over budgeted projections last year. In addition, slowdown in area development has resulted in reduced tap-on fee revenues. State funding of Village programs have also been reduced, and the Village's home rule tax revenue of approximately \$1,000,000 per year has been diverted from the Water and Sewer Fund to the Village's road fund.

At the same time as water revenues decrease, the Village's infrastructure continues to age, requiring increased maintenance and replacement. Addressing rehabilitation of aging underground infrastructure will require increased funding levels to its annual maintenance program. Rehabilitation of the Village's watermains will require estimated funding of \$750,000 per year. Collection system and lift station rehabilitation is also needed at an estimated cost of \$1,480,000 per year. In addition to the above, projects for repairs, rehabilitation, and expansion of existing water supply, treatment, and storage facilities and wastewater treatment facilities totaling approximately \$22,800,000 are proposed for FY 16/17 through FY 21/22.

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, repair, and replacement.

### Funding Mechanisms

Operation of the Village of Algonquin's water and sewer utilities is financed via two separate funds:

- Water and Sewer Operating Fund
- Water and Sewer Improvement and Construction Fund

The Water and Sewer Operating Fund is a separate enterprise account that does not receive any tax income. Its revenue is derived from the use of the Village’s water and sewer services via user charges.

The Village’s Water and Sewer Improvement and Construction Fund provides for the construction of improvements to the Village water and sewer distribution and infrastructure. The Water and Sewer Improvement and Construction Fund is currently financed solely from water and sewer tap-on fees and interest on fund balances. Until FY 14/15, the fund also benefited from home rule sales tax revenue.

## Existing User Charges

The Village of Algonquin uses a uniform volume rate structure for both water and sewer charges. Charges are based upon metered water usage. The Village currently assesses its customers the following user charges:

**Table I-1  
Village of Algonquin  
Existing User Charges**

Service	Existing User Charge
Water Only	\$ 4.00 per 1,000 gallons
Sanitary Sewer Only	\$ 3.81 per 1,000 gallons
Combined Water and Sanitary Sewer	\$ 7.81 per 1,000 gallons

To encourage water conservation, the Village also employs surcharge rates for the summer months for high residential water users. During the months of June, July, and August, consumption charges are increased to three times the above rates for water usage above 18,000 gallons per month. In addition to the above, customers located outside of the Village limits are assessed a higher rate for water and sewer service.

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 Operating Fund. A rate increase is recommended to provide adequate revenues for system operation over the next six years.

## Water and Sewer Construction and Improvement Fund


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 six years. Approximately \$10,700,000 in improvements to the Village’s water supply, treatment, and storage facilities are proposed for FY 16/17 through FY 21/22. Approximately

\$12,100,000 in improvements to the wastewater treatment facilities are proposed for FY 16/17 through FY 21/22. (In addition to these projects, annual watermain and sewer collection system repairs described previously are also proposed.)

Existing fund reserves and future tap-on fees are insufficient to finance the proposed capital improvement projects. Financing of projects in the Water and Sewer Improvement and Construction fund considered a combination of utilization of existing fund balances, user charges (in the form of a replacement charge), new debt service (IEPA loan funding), and/or a new Village sales tax.

## 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:

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1. Project annual billed water consumption and number of customers.
  2. Project annual expenses for the Water and Sewer Operating Fund and the Water and Sewer Improvement and Construction 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.
  5. Calculate revenue requirements that must be recovered from user charges.
  6. Allocate user charge revenue requirements on a per 1,000 gallon basis (Alternate Nos. 1, 2, or 7) or a fixed charge (per customer) plus a per 1,000 gallon basis (Alternate Nos. 3, 4, 5, 6, and 8).
  7. Examine fund balances and determine any new debt service needs.
  8. Evaluate impact of rates on customers
  9. Recommend final rates

## User Charge Alternates

Eight alternates for user charges for the Village of Algonquin were examined as discussed in Section VI of the report. Table I-2 provides a summary of the eight alternate rate structures presented for consideration as part of this user charge study. Detailed calculations for each user charge alternate are also included in the appendices. Summaries of the alternates examined are included on the pages following Table I-2.

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

	Rate Summary									
	Current	Year	Alternate No. 1 (Uniform Rate, Replacement Fund, Sales Tax Used)	Alternate No. 2 (Uniform Rate, Replacement Fund, No Sales Tax Used)	Alternate No. 3 (Billing Fee Plus Consumption Charge, Replacement Fund, Sales Tax Used, Optional Meter Replacement Charge)	Alternate No. 4 (Billing Fee Plus Consumption Charge, Replacement Fund, No Sales Tax Used, Optional Meter Replacement Charge)	Alternate No. 5 (Fixed Fee Plus Consumption Charge, Replacement Fund, Sales Tax Used)	Alternate No. 6 (Fixed Fee Plus Consumption Charge, Modified Replacement Fund, Modified Water and Sewer Annual Rehab, No Sales Tax Used, Relative Uniform Annual Percent Increase)	Alternate No. 7 (Modification of Alt. 2, Uniform Rate, Modified Replacement Fund, Modified Water and Sewer Annual Rehab, No Sales Tax Used, Relative Uniform Annual Percent Increase)	RECOMMENDED ALTERNATE Alternate No. 8 (Modification of Alternate No. 6, Fixed Fee Plus Consumption Charge, Replacement Fund, Modified Water and Sewer Annual Rehab, No Sales Tax Used, Increased Fixed Fees, Higher Initial Recovery of Operating Deficits)
Water Consumption Charge	\$ 4.00 per 1000 gal	FY 16/17	\$ 4.87 per 1000 gal	\$ 5.39 per 1000 gal	\$ 4.67 per 1000 gal	\$ 5.19 per 1000 gal	\$ 4.32 per 1000 gal	\$ 4.04 per 1000 gal	\$ 4.57 per 1000 gal	\$ 4.00 per 1000 gal
		FY 17/18	\$ 5.58 per 1000 gal	\$ 6.15 per 1000 gal	\$ 5.37 per 1000 gal	\$ 5.94 per 1000 gal	\$ 5.01 per 1000 gal	\$ 4.66 per 1000 gal	\$ 5.21 per 1000 gal	\$ 4.57 per 1000 gal
		FY 18/19	\$ 6.25 per 1000 gal	\$ 6.83 per 1000 gal	\$ 6.03 per 1000 gal	\$ 6.61 per 1000 gal	\$ 5.67 per 1000 gal	\$ 5.40 per 1000 gal	\$ 5.96 per 1000 gal	\$ 5.18 per 1000 gal
		FY 19/20	\$ 6.79 per 1000 gal	\$ 7.36 per 1000 gal	\$ 6.56 per 1000 gal	\$ 7.13 per 1000 gal	\$ 6.19 per 1000 gal	\$ 6.21 per 1000 gal	\$ 6.79 per 1000 gal	\$ 5.81 per 1000 gal
		FY 20/21	\$ 7.23 per 1000 gal	\$ 7.81 per 1000 gal	\$ 7.00 per 1000 gal	\$ 7.58 per 1000 gal	\$ 6.62 per 1000 gal	\$ 7.12 per 1000 gal	\$ 7.71 per 1000 gal	\$ 6.52 per 1000 gal
		FY 21/22	\$ 7.57 per 1000 gal	\$ 8.15 per 1000 gal	\$ 7.33 per 1000 gal	\$ 7.91 per 1000 gal	\$ 6.94 per 1000 gal	\$ 7.99 per 1000 gal	\$ 8.60 per 1000 gal	\$ 7.30 per 1000 gal
Sewer Consumption Charge	\$ 3.81 per 1000 gal	FY 16/17	\$ 4.61 per 1000 gal	\$ 5.33 per 1000 gal	\$ 4.40 per 1000 gal	\$ 5.12 per 1000 gal	\$ 4.03 per 1000 gal	\$ 4.05 per 1000 gal	\$ 4.61 per 1000 gal	\$ 4.08 per 1000 gal
		FY 17/18	\$ 5.54 per 1000 gal	\$ 6.40 per 1000 gal	\$ 5.33 per 1000 gal	\$ 6.19 per 1000 gal	\$ 4.95 per 1000 gal	\$ 5.01 per 1000 gal	\$ 5.59 per 1000 gal	\$ 5.03 per 1000 gal
		FY 18/19	\$ 6.78 per 1000 gal	\$ 7.64 per 1000 gal	\$ 6.56 per 1000 gal	\$ 7.42 per 1000 gal	\$ 6.17 per 1000 gal	\$ 6.17 per 1000 gal	\$ 6.76 per 1000 gal	\$ 6.17 per 1000 gal
		FY 19/20	\$ 7.95 per 1000 gal	\$ 8.81 per 1000 gal	\$ 7.73 per 1000 gal	\$ 8.59 per 1000 gal	\$ 7.33 per 1000 gal	\$ 7.61 per 1000 gal	\$ 8.21 per 1000 gal	\$ 7.54 per 1000 gal
		FY 20/21	\$ 8.70 per 1000 gal	\$ 9.57 per 1000 gal	\$ 8.47 per 1000 gal	\$ 9.34 per 1000 gal	\$ 8.06 per 1000 gal	\$ 9.23 per 1000 gal	\$ 9.85 per 1000 gal	\$ 8.74 per 1000 gal
		FY 21/22	\$ 9.62 per 1000 gal	\$ 10.49 per 1000 gal	\$ 9.38 per 1000 gal	\$ 10.25 per 1000 gal	\$ 8.96 per 1000 gal	\$ 10.27 per 1000 gal	\$ 10.91 per 1000 gal	\$ 9.64 per 1000 gal
Total Water Plus Sewer Consumption Charge	\$ 7.81 per 1000 gal	FY 16/17	\$ 9.48 per 1000 gal	\$ 10.72 per 1000 gal	\$ 9.07 per 1000 gal	\$ 10.31 per 1000 gal	\$ 8.35 per 1000 gal	\$ 8.09 per 1000 gal	\$ 9.18 per 1000 gal	\$ 8.08 per 1000 gal
		FY 17/18	\$ 11.12 per 1000 gal	\$ 12.55 per 1000 gal	\$ 10.70 per 1000 gal	\$ 12.13 per 1000 gal	\$ 9.96 per 1000 gal	\$ 9.67 per 1000 gal	\$ 10.80 per 1000 gal	\$ 9.60 per 1000 gal
		FY 18/19	\$ 13.03 per 1000 gal	\$ 14.47 per 1000 gal	\$ 12.59 per 1000 gal	\$ 14.03 per 1000 gal	\$ 11.84 per 1000 gal	\$ 11.57 per 1000 gal	\$ 12.72 per 1000 gal	\$ 11.35 per 1000 gal
		FY 19/20	\$ 14.74 per 1000 gal	\$ 16.17 per 1000 gal	\$ 14.29 per 1000 gal	\$ 15.72 per 1000 gal	\$ 13.52 per 1000 gal	\$ 13.82 per 1000 gal	\$ 15.00 per 1000 gal	\$ 13.35 per 1000 gal
		FY 20/21	\$ 15.93 per 1000 gal	\$ 17.38 per 1000 gal	\$ 15.47 per 1000 gal	\$ 16.92 per 1000 gal	\$ 14.68 per 1000 gal	\$ 16.35 per 1000 gal	\$ 17.56 per 1000 gal	\$ 15.26 per 1000 gal
		FY 21/22	\$ 17.19 per 1000 gal	\$ 18.64 per 1000 gal	\$ 16.71 per 1000 gal	\$ 18.16 per 1000 gal	\$ 15.90 per 1000 gal	\$ 18.26 per 1000 gal	\$ 19.51 per 1000 gal	\$ 16.94 per 1000 gal
Billing Fee	\$ 0.00 per month		\$ 0.00 per month	\$ 0.00 per month	\$ 2.50 per month	\$ 2.50 per month				
Billing Fee Rebate for E-Payments	\$ 0.00 per month		\$ 0.00 per month	\$ 0.00 per month	\$ 1.50 per month	\$ 1.50 per month		\$ 2.00 per month		\$ 1.00 per month
Optional Meter Replacement Charge					Meter Size Monthly Replacement Fee	Meter Size Monthly Replacement Fee				
					3/4" \$ 2.10 per month	3/4" \$ 2.10 per month				
					1" \$ 2.40 per month	1" \$ 2.40 per month				
					1-1/2" \$ 4.70 per month	1-1/2" \$ 4.70 per month				
					2" \$ 8.50 per month	2" \$ 8.50 per month				
					3" \$ 11.80 per month	3" \$ 11.80 per month				
					4" \$ 19.40 per month	4" \$ 19.40 per month				
Fixed Monthly Fee (Water)	Not Applicable	FY 16/17					\$ 2.94 per month	\$ 2.94 per month		\$ 5.00 per month
		FY 17/18					\$ 3.02 per month	\$ 3.02 per month		\$ 5.00 per month
		FY 18/19	Not Applicable	Not Applicable	See Above for Monthly Billing Fee	See Above for Monthly Billing Fee	\$ 3.09 per month	\$ 3.09 per month	Not Applicable	\$ 5.00 per month
		FY 19/20					\$ 3.17 per month	\$ 3.17 per month		\$ 5.00 per month
		FY 20/21					\$ 3.25 per month	\$ 3.25 per month		\$ 5.00 per month
		FY 21/22					\$ 3.33 per month	\$ 3.33 per month		\$ 5.00 per month
Fixed Monthly Fee (Sewer)	Not Applicable	FY 16/17					\$ 3.09 per month	\$ 3.09 per month		\$ 5.00 per month
		FY 17/18					\$ 3.17 per month	\$ 3.17 per month		\$ 5.00 per month
		FY 18/19	Not Applicable	Not Applicable	See Above for Monthly Billing Fee	See Above for Monthly Billing Fee	\$ 3.25 per month	\$ 3.25 per month	Not Applicable	\$ 5.00 per month
		FY 19/20					\$ 3.33 per month	\$ 3.33 per month		\$ 5.00 per month
		FY 20/21					\$ 3.41 per month	\$ 3.41 per month		\$ 5.00 per month
		FY 21/22					\$ 3.50 per month	\$ 3.50 per month		\$ 5.00 per month

Table I-2  
Rate Summary and Projected Monthly Cost  
(Page 2 of 2)

Estimated Residential Monthly Bill for Varying Usage

		FY 2016/2017																																							
		Current				Alternate No. 1				Alternate No. 2				Alternate No. 3 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 4 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 5				Alternate No. 6 (Excluding E-Billing Rebate)				Alternate No. 6 (Including E-Billing Rebate)				Alternate No. 7				Alternate No. 8 (Including E-Billing Rebate)			
Usage (gallons/month)		3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change
Water Bill (\$/month)		\$12.00	\$24.00	\$40.00		\$14.61	\$29.22	\$48.70	22%	\$16.17	\$32.34	\$53.90	35%	\$15.26	\$29.27	\$47.95	22%	\$16.82	\$32.39	\$53.15	35%	\$15.90	\$28.86	\$46.14	20%	\$15.06	\$27.18	\$43.34	13%	\$14.06	\$26.18	\$42.34	9%	\$13.71	\$27.42	\$45.70	14%	\$16.50	\$28.50	\$44.50	19%
Sewer Bill (\$/month)		\$11.43	\$22.86	\$38.10		\$13.83	\$27.66	\$46.10	21%	\$15.99	\$31.98	\$53.30	40%	\$14.45	\$27.65	\$45.25	21%	\$16.61	\$31.97	\$52.45	40%	\$15.18	\$27.27	\$43.39	19%	\$15.24	\$27.39	\$43.39	20%	\$14.24	\$26.39	\$42.39	15%	\$13.83	\$27.66	\$46.10	21%	\$16.74	\$28.98	\$45.30	27%
Total (\$/month)		\$23.43	\$46.86	\$78.10		\$28.44	\$56.88	\$94.80	21%	\$32.16	\$64.32	\$107.20	37%	\$29.71	\$56.92	\$93.20	21%	\$33.43	\$64.36	\$105.60	37%	\$31.08	\$56.13	\$89.53	20%	\$30.30	\$54.57	\$86.73	16%	\$28.30	\$52.57	\$84.73	12%	\$27.54	\$55.08	\$91.80	18%	\$33.24	\$57.48	\$89.80	23%

		FY 2017/2018																																							
		Alternate No. 1				Alternate No. 2				Alternate No. 3 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 4 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 5				Alternate No. 6 (Excluding E-Billing Rebate)				Alternate No. 6 (Including E-Billing Rebate)				Alternate No. 7				Alternate No. 8 (Including E-Billing Rebate)							
Usage (gallons/month)		3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change
Water Bill (\$/month)		\$16.74	\$33.48	\$55.80	15%	\$18.45	\$36.90	\$61.50	14%	\$17.36	\$33.47	\$54.95	14%	\$19.07	\$36.89	\$60.65	14%	\$18.05	\$33.08	\$53.12	15%	\$17.00	\$30.98	\$49.62	14%	\$16.00	\$29.98	\$48.62	15%	\$15.63	\$31.26	\$52.10	14%	\$18.21	\$31.92	\$50.20	12%				
Sewer Bill (\$/month)		\$16.62	\$33.24	\$55.40	20%	\$19.20	\$38.40	\$64.00	20%	\$17.24	\$33.23	\$54.55	20%	\$19.82	\$38.39	\$63.15	20%	\$18.02	\$32.87	\$52.67	21%	\$18.20	\$33.23	\$53.27	21%	\$17.20	\$32.23	\$52.27	22%	\$16.77	\$33.54	\$55.90	21%	\$19.59	\$34.68	\$54.80	20%				
Total (\$/month)		\$33.36	\$66.72	\$111.20	17%	\$37.65	\$75.30	\$125.50	17%	\$34.60	\$66.70	\$109.50	17%	\$38.89	\$75.28	\$123.80	17%	\$36.07	\$65.95	\$105.79	17%	\$35.20	\$64.21	\$102.89	18%	\$33.20	\$62.21	\$100.89	18%	\$32.40	\$64.80	\$108.00	18%	\$37.80	\$66.60	\$105.00	16%				

		FY 2018/2019																																							
		Alternate No. 1				Alternate No. 2				Alternate No. 3 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 4 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 5				Alternate No. 6 (Excluding E-Billing Rebate)				Alternate No. 6 (Including E-Billing Rebate)				Alternate No. 7				Alternate No. 8 (Including E-Billing Rebate)							
Usage (gallons/month)		3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change
Water Bill (\$/month)		\$18.75	\$37.50	\$62.50	12%	\$20.49	\$40.98	\$68.30	11%	\$19.34	\$37.43	\$61.55	12%	\$21.08	\$40.91	\$67.35	11%	\$20.10	\$37.11	\$59.79	12%	\$19.29	\$35.49	\$57.09	15%	\$18.29	\$34.49	\$56.09	15%	\$17.88	\$35.76	\$59.60	14%	\$20.04	\$35.58	\$56.30	11%				
Sewer Bill (\$/month)		\$20.34	\$40.68	\$67.80	22%	\$22.92	\$45.84	\$76.40	19%	\$20.93	\$40.61	\$66.85	22%	\$23.51	\$45.77	\$75.45	19%	\$21.76	\$40.27	\$64.95	23%	\$21.76	\$40.27	\$64.95	21%	\$20.76	\$39.27	\$63.95	22%	\$20.28	\$40.56	\$67.60	21%	\$23.01	\$41.52	\$66.20	20%				
Total (\$/month)		\$39.09	\$78.18	\$130.30	17%	\$43.41	\$86.82	\$144.70	15%	\$40.27	\$78.04	\$128.40	17%	\$44.59	\$86.68	\$142.80	15%	\$41.86	\$77.38	\$124.74	17%	\$41.05	\$75.76	\$122.04	18%	\$39.05	\$73.76	\$120.04	19%	\$38.16	\$76.32	\$127.20	18%	\$43.05	\$77.10	\$122.50	16%				

		FY 2019/2020																																							
		Alternate No. 1				Alternate No. 2				Alternate No. 3 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 4 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 5				Alternate No. 6 (Excluding E-Billing Rebate)				Alternate No. 6 (Including E-Billing Rebate)				Alternate No. 7				Alternate No. 8 (Including E-Billing Rebate)							
Usage (gallons/month)		3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change
Water Bill (\$/month)		\$20.37	\$40.74	\$67.90	9%	\$22.08	\$44.16	\$73.60	8%	\$20.93	\$40.61	\$66.85	8%	\$22.64	\$44.03	\$72.55	8%	\$21.74	\$40.31	\$65.07	9%	\$21.80	\$40.43	\$65.27	14%	\$20.80	\$39.43	\$64.27	14%	\$20.37	\$40.74	\$67.90	14%	\$21.93	\$39.36	\$62.60	11%				
Sewer Bill (\$/month)		\$23.85	\$47.70	\$79.50	17%	\$26.43	\$52.86	\$88.10	15%	\$24.44	\$47.63	\$78.55	17%	\$27.02	\$52.79	\$87.15	15%	\$25.32	\$47.31	\$76.63	17%	\$26.16	\$48.99	\$79.43	22%	\$25.16	\$47.99	\$78.43	22%	\$24.63	\$49.26	\$82.10	21%	\$27.12	\$49.74	\$79.90	20%				
Total (\$/month)		\$44.22	\$88.44	\$147.40	13%	\$48.51	\$97.02	\$161.70	12%	\$45.37	\$88.24	\$145.40	13%	\$49.66	\$96.82	\$159.70	12%	\$47.06	\$87.62	\$141.70	13%	\$47.96	\$89.42	\$144.70	18%	\$45.96	\$87.42	\$142.70	19%	\$45.00	\$90.00	\$150.00	18%	\$49.05	\$89.10	\$142.50	16%				

		FY 2020/2021																																							
		Alternate No. 1				Alternate No. 2				Alternate No. 3 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 4 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 5				Alternate No. 6 (Excluding E-Billing Rebate)				Alternate No. 6 (Including E-Billing Rebate)				Alternate No. 7				Alternate No. 8 (Including E-Billing Rebate)							
Usage (gallons/month)		3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change
Water Bill (\$/month)		\$21.69	\$43.38	\$72.30	6%	\$23.43	\$46.86	\$78.10	6%	\$22.25	\$43.25	\$71.25	7%	\$23.99	\$46.73	\$77.05	6%	\$23.11	\$42.97	\$69.45	7%	\$24.61	\$45.97	\$74.45	14%	\$23.61	\$44.97	\$73.45	14%	\$23.13	\$46.26	\$77.10	14%	\$24.06	\$43.62	\$69.70	11%				
Sewer Bill (\$/month)		\$26.10	\$52.20	\$87.00	9%	\$28.71	\$57.42	\$95.70	9%	\$26.66	\$52.07	\$85.95	9%	\$29.27	\$57.29	\$94.65	9%	\$27.59	\$51.77	\$84.01	9%	\$31.10	\$58.79	\$95.71	20%	\$30.10	\$57.79	\$94.71	20%	\$29.55	\$59.10	\$98.50	20%	\$30.72	\$56.94	\$91.90	14%				
Total (\$/month)		\$47.79	\$95.58	\$159.30	8%	\$52.14	\$104.28	\$173.80	7%	\$48.91	\$95.32	\$157.20	8%	\$53.26	\$104.02	\$171.70	7%	\$50.70	\$94.74	\$153.46	8%	\$55.71	\$104.76	\$170.16	17%	\$53.71	\$102.76	\$168.16	18%	\$52.68	\$105.36	\$175.60	17%	\$54.78	\$100.56	\$161.60	13%				

		FY 2021/2022																																							
		Alternate No. 1				Alternate No. 2				Alternate No. 3 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 4 (Excluding Optional Meter Replacement Charge and E-Pay Rebate)				Alternate No. 5				Alternate No. 6 (Excluding E-Billing Rebate)				Alternate No. 6 (Including E-Billing Rebate)				Alternate No. 7				Alternate No. 8 (Including E-Billing Rebate)							
Usage (gallons/month)		3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change*	3,000	6,000	10,000	Percent Change	3,000	6,000	10,000	Percent Change
Water Bill (\$/month)		\$22.71	\$45.42	\$75.70	5%	\$24.45	\$48.90	\$81.50	4%	\$23.24	\$45.23	\$74.55	5%	\$24.98	\$48.71	\$80.35	4%	\$24.15	\$44.97	\$72.73	5%	\$27.30	\$51.27	\$83.23	12%	\$26.30	\$50.27	\$82.23	12%	\$25.80	\$51.60	\$86.00	12%	\$26.40	\$48.30	\$77.50	11%				
Sewer Bill (\$/month)		\$28.86	\$57.72	\$96.20	11%	\$31.47	\$62.94	\$104.90	10%	\$29.39	\$57.53	\$95.05	10%	\$32.00	\$62.75	\$103.75	10%	\$30.38	\$57.26	\$93.10	11%	\$34.31	\$65.12	\$106.20	11%	\$33.31	\$64.12	\$105.20	11%	\$32.73	\$65.46	\$109.10	11%	\$33.42	\$62.34	\$100.90	9%				
Total (\$/month)		\$51.57	\$103.14	\$171.90	8%	\$55.92	\$111.84	\$186.40	7%	\$52.63	\$102.76	\$169.60	8%	\$56.98	\$111.46	\$184.10	7%	\$54.53	\$102.23	\$165.83	8%	\$61.61	\$116.39	\$189.43	11%	\$59.61	\$114.39	\$187.43	11%	\$58.53	\$117.06	\$195.10	11%	\$59.82	\$110.64	\$178.40	10%				

\*Based upon usage of 6,000 gallons per month.

### Alternate No. 1

- Uniform rate structure based upon metered water consumption
- Watermain and lift station rehabilitation/replacement funded at \$750,000 per year and \$230,000 per year, respectively, through operating fund. Sewer rehabilitation/replacement funding increases over 6-year study period to target value of \$1,250,000 per year.
- Capital system improvements financed through a combination of:
  - Tap-on fees – assumes \$500,000 per year
  - Replacement Fund – Starts at 25% of 2014 depreciation in FY 16/17 and increases by 5% per year to 50% of depreciation in FY 21/22
  - Home Rule Sales Tax Revenue – \$1,000,000 per year of new Home Rule Sales Tax revenue is used to offset customer funding of the replacement fund.
- Debt Service – Assumes financing of approximately \$10,257,500 of improvements with loans from the Illinois Environmental Protection Agency Revolving Loan Fund Programs

### Alternate No. 2

- Uniform rate structure based upon consumption
- Watermain and lift station rehabilitation/replacement funded at \$750,000 per year and \$230,000 per year, respectively, through operating fund. Sewer rehabilitation/replacement funding increases over 6-year study period to target value of \$1,250,000 per year.
- Capital system improvements financed through a combination of:
  - Tap-on fees – assumes \$500,000 per year
  - Replacement Fund – Starts at 25% of 2014 depreciation in FY 16/17 and increases by 5% per year to 50% of depreciation in FY 21/22
  - No Home Rule Sales Tax Revenue used to offset replacement funding by user charges
- Debt Service – Assumes financing of approximately \$10,257,500 of improvements with loans from the Illinois Environmental Protection Agency Revolving Loan Fund Programs



### **Alternate No. 3**

- Fixed paper billing fee of \$2.50 applied to each customer account.
- Rebate of \$1.50 given to users selecting to electronically pay their bill.
- Optional additional charge for meter replacement based upon meter size (This optional charge could be included in any of the alternates examined, if desired.)
- System costs, other than billing costs, allocated uniformly to customers based upon consumption.
- Watermain and lift station rehabilitation/replacement funded at \$750,000 per year and \$230,000 per year, respectively, through operating fund. Sewer rehabilitation/replacement funding increases over 6-year study period to target value of \$1,250,000 per year.
- Capital system improvements financed through a combination of:
  - Tap-on fees – assumes \$500,000 per year
  - Replacement Fund – Starts at 25% of 2014 depreciation in FY 16/17 and increases by 5% per year to 50% of depreciation in FY 21/22
  - Home Rule Sales Tax Revenue – \$1,000,000 per year of new Home Rule Sales Tax revenue is used to offset system user funding of the replacement fund.
- Debt Service – Assumes financing of approximately \$10,257,500 of improvements with loans from the Illinois Environmental Protection Agency Revolving Loan Fund Programs

### **Alternate No. 4**

- Fixed paper billing fee of \$2.50 applied to each customer account.
- Rebate of \$1.50 given to users selecting to electronically pay their bill.
- Optional additional charge for meter replacement based upon meter size (This optional charge could be included in any of the alternates examined, if desired.)
- System costs, other than billing costs, allocated uniformly to customers based upon consumption.
- Watermain and lift station rehabilitation/replacement funded at \$750,000 per year and \$230,000 per year, respectively, through operating fund. Sewer rehabilitation/replacement funding increases over 6-year study period to target value of \$1,250,000 per year.
- Capital system improvements financed through a combination of:
  - Tap-on fees – assumes \$500,000 per year
  - Replacement Fund – Starts at 25% of 2014 depreciation in FY 16/17 and increases by 5% per year to 50% of depreciation in FY 21/22
  - No Home Rule Sales Tax Revenue used to offset replacement funding by user charges
- Debt Service – Assumes financing of approximately \$10,257,500 of improvements with loans from the Illinois Environmental Protection Agency Revolving Loan Fund Programs.



#### **Alternate No. 5**

- Portion of operation and maintenance costs collected via fixed monthly user charge
- Variable operating and maintenance costs, allocated uniformly to customers based upon consumption
- Watermain and lift station rehabilitation/replacement funded at \$750,000 per year and \$230,000 per year, respectively, through operating fund. Sewer rehabilitation/replacement funding increases over 6-year study period to target value of \$1,250,000 per year.
- Capital system improvements financed through a combination of:
  - Tap-on fees – assumes \$500,000 per year
  - Replacement Fund – Starts at 25% of 2014 depreciation in FY 16/17 and increases by 5% per year to 50% of depreciation in FY 21/22
  - Home Rule Sales Tax Revenue – \$1,000,000 per year of new Home Rule Sales Tax revenue is used to offset system user funding of the replacement fund.
- Debt Service – Assumes financing of approximately \$10,257,500 of improvements with loans from the Illinois Environmental Protection Agency Revolving Loan Fund Programs

#### **Alternate No. 6**

- Portion of operation and maintenance costs collected via fixed monthly user charge
- Variable operating and maintenance costs, allocated uniformly to customers based upon consumption.
- Watermain and sewer rehabilitation/replacement funded initially from WSIC fund at \$750,000 per year and \$1,250,000 per year, respectively, with gradual transition to funding from operating fund over 6-year study period. Lift station replacement of \$230,000 per year funded from operating fund.
- Capital system improvements financed through a combination of:
  - Tap-on fees – assumes \$500,000 per year
  - Replacement Fund – Starts at 0% of 2014 depreciation in FY 16/17 and increases by 10% per year to 50% of depreciation in FY 21/22
  - No Home Rule Sales Tax Revenue used to offset replacement funding by user charges
- Debt Service – Assumes financing of approximately \$19,753,500 of improvements with loans from the Illinois Environmental Protection Agency Revolving Loan Fund Programs

### Alternate No. 7

- Variation of Alternate No. 2
- Uniform rate structure based upon consumption
- Watermain and sewer rehabilitation/replacement funded initially from WSIC fund at \$750,000 per year and \$1,250,000 per year, respectively, with gradual transition to funding from operating fund over 6-year study period. Lift station replacement of \$230,000 per year funded from operating fund.
- .Capital system improvements financed through a combination of:
  - Tap-on fees – assumes \$500,000 per year
  - Replacement Fund – Starts at 0% of 2014 depreciation in FY 16/17 and increases by 10% per year to 50% of depreciation in FY 21/22
  - No Home Rule Sales Tax Revenue used to offset replacement funding by user charges
- Debt Service – Assumes financing of approximately \$19,753,500 of improvements with loans from the Illinois Environmental Protection Agency Revolving Loan Fund Programs

### Alternate No. 8

- Portion of operation and maintenance costs collected via fixed monthly user charge (water - \$5.00 per month, sewer \$5.00 per month)
- Rebate of \$1.00 given to users selecting to electronically pay their bill.
- Remaining operation and maintenance costs allocated uniformly to customers based upon consumption.
- Watermain and sewer rehabilitation/replacement funded initially from WSIC fund at \$750,000 per year and \$1,250,000 per year, respectively, with gradual transition to funding from operating fund over 6-year study period. Lift station replacement of \$230,000 per year funded from operating fund.
- .Capital system improvements financed through a combination of:
  - Tap-on fees – assumes \$500,000 per year
  - Replacement Fund – Starts at 25% of 2014 depreciation in FY 16/17 and increases by 5% per year to 50% of depreciation in FY 21/22
  - No Home Rule Sales Tax Revenue used to offset replacement funding by user charges
- Debt Service – Assumes financing of approximately \$13,749,500 of new improvements with loans from the Illinois Environmental Protection Agency Revolving Loan Fund Programs

## Recommended User Charges

After review of the alternates and their impact on Village customers, Village staff has recommended Alternate No. 8 for the Village Board’s consideration, with the proposed charges becoming effective November, 2016. Alternate No. 8 institutes fixed fees of \$5.00 per month for the water and sewer systems, with a consumption charge based upon water usage as noted in Table I-3 below. Customers electing to use e-billing would receive a \$1.00 per month rebate on their bills. Detailed calculations and fund balance projections for Alternate No. 8 are presented in Table I-4.

**Table I-3  
Village of Algonquin  
Recommended User Charges  
Alternate No. 8**

Description	Recommended Water User Charges		Recommended Sewer User Charges	
Fixed Fee	\$5.00 per month		\$5.00 per month	
E-Billing Rebate	(\$1.00 Combined Water and Sewer)			
Consumption Charge (per 1,000 gallons)	2016/17*	\$4.00	2016/17*	\$4.08
	2017/18	\$4.57	2017/18	\$5.03
	2018/19	\$5.18	2018/19	\$6.17
	2019/20	\$5.81	2019/20	\$7.54
	2020/21	\$6.52	2020/21	\$8.74
	2021/22	\$7.30	2021/22	\$9.64
	Beyond 2022	CPI Increase	Beyond 2022	CPI Increase

\*Charge proposed to be assessed beginning in November, 2016

The above rates cover operation and maintenance costs and reasonable goals for continued system repair and replacement.

## 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-2. Under Alternate No. 8, a typical residential user in the Village consuming 6,000 gallons of water per month and electing electronic billing will pay approximately \$57.48 per month for water and sewer service in 2016. This reflects a \$10.62 per month increase (23%) over the existing rate structure.



January, 2016



**Table I-4  
Alternate No. 8**

**(Initial Fixed Fee Plus Consumption Charge with E-Billing Rebate, Replacement Funding with Phased Implementation, Modified Annual Water and Sewer Rehabilitation, No Sales Tax Revenue Financing, E-Billing Rebate, Relatively Uniform Annual Percent Increase in Monthly Bills)  
Cash Balance, Financing, and Debt Service Projections Under Conservative Water Use Projections**

FY	Water User Charges						Sewer User Charges					Projected Revenue							Projected Expenses				Fund Balance				
	Fixed Monthly Water Charge (\$/month)	Recommended Base Water User Charge (\$/1,000 gallons)	Recommended Water Replacement Charge (\$/1,000 gallons)	Recommended Water Debt Service Charge (\$/1,000 gallons)	Total Recommended Water User Charge (\$/1,000 gallons)	Percent Change in Variable Charge Only (For Overall Percent Change see change in projected monthly bill below)	Fixed Monthly Sewer Charge (\$/month)	Recommended Base Sewer User Charge (\$/1,000 gallons)	Recommended Sewer Replacement Charge (\$/1,000 gallons)	Recommended Sewer Debt Service Charge (\$/1,000 gallons)	Total Recommended Sewer User Charge (\$/1,000 gallons)	Percent Change in Variable Charge Only (For Overall Percent Change see change in projected monthly bill below)	Projected Water Consumption	Starting Balance	Projected Fixed Fee Revenue	Projected Base User Charge Revenue	Projected Replacement Charge Revenue	Projected Debt Service Charge Revenue	Projected Miscellaneous Revenue	Total Projected Revenue	Total Projected Expenditures	Transfer to Water and Sewer Improvement and Construction Fund	Total Projected Debt Service	Total Projected Expenditures and Transfers	Projected Ending Balance	Change in Ending Fund Balance	Check Versus Utilization of Reserves
FY 15/16	\$5.00 [1]	\$2.90 [1]	\$0.52 [1]	\$0.58 [1]	\$4.00 [1]		\$5.00 [1]	\$2.78 [1]	\$0.72 [1]	\$0.58 [1]	\$4.08 [1]		700,000,000	\$ 5,393,600	\$ 436,600	\$ 4,428,667 [1]	\$ 289,333 [1]	\$ 812,000 [1]	\$ 170,500	\$ 6,137,100 [1]	\$ 5,937,200	\$ 289,333	\$ 807,000	\$ 7,033,533	\$ 4,497,167	\$ (896,433)	\$ 661,200
FY 16/17	\$5.00	\$2.90	\$0.52	\$0.58	\$4.00	0%	\$5.00	\$2.78	\$0.72	\$0.58	\$4.08	7%	698,740,000	4,497,167	1,309,800	3,968,843	866,438	810,538	125,500	7,081,119	6,611,660	866,438	808,625	8,286,723	3,291,563	(1,205,604)	1,205,000
FY 17/18	\$5.00	\$3.31	\$0.62	\$0.64	\$4.57	14%	\$5.00	\$3.49	\$0.87	\$0.67	\$5.03	23%	697,482,000	3,291,563	1,309,800	4,742,878	1,039,248	913,701	125,500	8,131,128	7,099,630	1,039,248	912,474	9,051,352	2,371,339	(920,225)	920,000
FY 18/19	\$5.00	\$3.62	\$0.73	\$0.83	\$5.18	13%	\$5.00	\$4.29	\$1.01	\$0.87	\$6.17	23%	696,227,000	2,371,339	1,309,800	5,507,156	1,211,435	1,183,586	125,500	9,337,477	7,889,670	1,211,435	1,180,754	10,281,859	1,426,957	(944,382)	950,000
FY 19/20	\$5.00	\$4.14	\$0.83	\$0.84	\$5.81	12%	\$5.00	\$5.26	\$1.16	\$1.12	\$7.54	22%	694,974,000	1,426,957	1,309,800	6,532,756	1,382,998	1,362,149	125,500	10,713,203	8,240,150	1,382,998	1,361,137	10,984,285	1,155,875	(271,082)	275,000
FY 20/21	\$5.00	\$4.54	\$0.94	\$1.04	\$6.52	12%	\$5.00	\$6.01	\$1.31	\$1.42	\$8.74	16%	693,723,000	1,155,875	1,309,800	7,318,778	1,560,877	1,706,559	125,500	12,021,513	8,952,660	1,560,877	1,707,687	12,221,224	956,164	(199,710)	200,000
FY 21/22	\$5.00	\$5.19	\$1.05	\$1.06	\$7.30	12%	\$5.00	\$6.75	\$1.46	\$1.43	\$9.64	10%	692,474,000	956,164	1,309,800	8,268,140	1,738,110	1,724,260	125,500	13,165,810	9,756,780	1,738,110	1,726,237	13,221,127	900,848	(55,317)	50,000

Notes:  
 [1] Implementation of the FY 16/17 rate is recommended for January through April of FY 15/16.  
 Existing water user charge: \$4.00 per 1,000 gallons with \$0.58 per 1,000 gallons attributable to water debt service  
 Existing sewer user charge: \$3.81 per 1,000 gallons with \$0.58 per 1,000 gallons attributable to sewer debt service

FY	Water and Sewer Improvement and Construction Fund								Projected Revenue			Projected Expenses - Water			Projected Expenses - Sewer			Fund Balance	
	Starting Balance	Transfer from Water and Sewer Operating Fund (Replacement Charge) See Above	Home Rule Sales Tax	Projected Tap-On Fees	Projected TIF Reimbursement	Projected Miscellaneous Revenues	Total Projected Revenues and Transfers	Water Capital Improvements	Utilization of Reserves (Water)	Required Capital Improvements Financing (Water)	Sewer Capital Improvements	Utilization of Reserves (Sewer)	Required Capital Improvements Financing (Sewer)	Total Utilization of Reserves (Water and Sewer)	Projected Ending Balance				
FY 15/16	\$ 7,200,864	\$ 289,333	\$ -	\$ 750,000	\$ -	\$ 15,100	\$ 1,054,433	\$ 1,048,500	\$ 1,048,500	\$ -	\$ 544,500	\$ 544,500	\$ -	\$ 1,593,000	\$ 6,662,297				
FY 16/17	6,662,297	866,438	-	500,000	-	15,000	1,381,438	3,116,000	3,116,000	-	1,507,000	1,507,000	-	4,623,000	3,420,735				
FY 17/18	3,420,735	1,039,248	-	500,000	-	15,000	1,554,248	2,467,000	1,867,000	600,000	1,573,000	573,000	1,000,000	2,440,000	2,534,983				
FY 18/19	2,534,983	1,211,435	-	500,000	-	15,000	1,726,435	4,020,000	2,070,000	1,950,000	2,236,000	236,000	2,000,000	2,306,000	1,955,418				
FY 19/20	1,955,418	1,382,998	-	500,000	-	15,000	1,897,998	930,000	930,000	-	3,184,000	516,000	2,668,000	1,446,000	2,407,416				
FY 20/21	2,407,416	1,560,877	-	500,000	-	15,000	2,075,877	2,398,500	162,000	2,236,500	4,090,000	885,000	3,205,000	1,047,000	3,436,293				
FY 21/22	3,436,293	1,738,110	-	500,000	-	15,000	2,253,110	-	-	-	3,221,000	3,221,000	-	2,468,403					

FY	Debt Service							
	Existing	Water			Sewer			Total
	Existing Debt Service Annual Payment	Water Projects Funded Via IEPA Loan in FY	New Water IEPA Loan Debt Service Annual Payment	Cumulative Water IEPA Loan Debt Service Payment	Sewer Projects Funded Via IEPA Loan in FY	New Sewer Debt Service Annual Payment	Cumulative Sewer IEPA Loan Debt Service Payment	Total Annual Debt Service Payment
FY 15/16	\$ 801,425	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 801,425
FY 16/17	804,325	-	-	-	-	-	-	804,325
FY 17/18	806,625	600,000	38,306	38,306	1,000,000	63,843	63,843	908,774
FY 18/19	808,325	1,950,000	124,494	162,800	2,000,000	127,686	191,529	1,162,654
FY 19/20	824,425	-	-	162,800	2,668,000	170,333	361,862	1,349,087
FY 20/21	834,475	2,236,500	142,784	305,584	3,205,000	204,616	566,478	1,706,537
FY 21/22	833,625	-	-	305,584	-	-	566,478	1,705,687

Assumes IEPA loan, 20 year term, semi-annual payments.  
 Interest rate: 2.50%

FY	Projected Monthly Bill (Excluding E-Billing Rebate)					
	Water Monthly Bill (Fixed Fee Plus Consumption) [1]	Percent Change	Sewer Monthly Bill (Fixed Fee Plus Consumption) [1]	Percent Change	Total Water and Sewer Monthly Bill [1]	Percent Change
FY 15/16	\$24.00		\$22.86		\$46.86	
FY 16/17	\$29.00	21%	\$29.48	29%	\$58.48	25%
FY 17/18	\$32.42	12%	\$35.18	19%	\$67.60	16%
FY 18/19	\$36.08	11%	\$42.02	19%	\$78.10	16%
FY 19/20	\$39.86	10%	\$50.24	20%	\$90.10	15%
FY 20/21	\$44.12	11%	\$57.44	14%	\$101.56	13%
FY 21/22	\$48.80	11%	\$62.84	9%	\$111.64	10%

Notes:  
 [1] Based upon usage of 6,000 gallons per month.

FY	Projected Monthly Bill (Including E-Billing Rebate)					
	Water Monthly Bill (Fixed Fee Plus Consumption) [1]	Percent Change	Sewer Monthly Bill (Fixed Fee Plus Consumption) [1]	Percent Change	Total Water and Sewer Monthly Bill [1]	Percent Change
FY 15/16	\$24.00		\$22.86		\$46.86	
FY 16/17	\$28.50	19%	\$28.98	27%	\$57.48	23%
FY 17/18	\$31.92	12%	\$34.68	20%	\$66.60	16%
FY 18/19	\$35.58	11%	\$41.52	20%	\$77.10	16%
FY 19/20	\$39.36	11%	\$49.74	20%	\$89.10	16%
FY 20/21	\$43.62	11%	\$56.94	14%	\$100.56	13%
FY 21/22	\$48.30	11%	\$62.34	9%	\$110.64	10%

Notes:  
 [1] Based upon usage of 6,000 gallons per month.

## Comparison with Neighboring Communities

Table I-6 provides a comparison of total Village costs under the recommended rate structure with those costs charged to users of other northern Illinois water and sewer systems. Current costs for water and sewer service within the Village of Algonquin are among the lowest of its neighbors. Even with the substantial increase in rates proposed, average monthly costs for water and sewer in FY 16/17 will remain lower than the majority of the communities surveyed.

## Tap-On Fees

The Village currently assesses tap-on fees (as known as connection fees) to new customers connecting to the Village's water and sewer systems. Existing water and sewer tap-on fees within the Village of Algonquin are as follows:

**Table I-5  
Village of Algonquin Tap-On Fees**

Type of Development	Water	Sewer
Dwelling unit with 1 or 2 bedrooms	\$7,571	\$6,861
Dwelling unit with 3 or more bedrooms	\$8,040	\$7,658
All other uses (per P.E. or part thereof)	\$2,180 (Min. \$7,571)	\$1,854 (Min. \$6,861)

A survey of tap-on fees (connection fees) in neighboring communities was conducted. The Village's tap-on fees are in the top 20% of fees charged by neighboring communities, but are not the highest in the area. No increases to the Village's tap-on fees are recommended at this time.

## Recommendations

The following recommendations are the result of this study:

1. Implement the new rate structure outlined under Alternate No. 8 effective November 1, 2016 to provide an appropriate customer notification period. (Note that the calculations in the report assume implementation of the new rates effective January, 2016, so some adjustments to annual expenditures or utilization of reserves may be required. These adjustments should be reviewed annually as part of the budgeting process.)



January, 2016



**Table I-6  
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]
Huntley	\$17.40	\$22.98	\$40.38
Woodstock	\$19.80	\$22.92	\$42.72
Cary	\$26.51	\$19.86	\$46.37
<b>Algonquin - Current</b>	<b>\$24.00</b>	<b>\$22.86</b>	<b>\$46.86</b>
Bartlett - Cook/Kane Counties	\$38.16	\$13.83	\$51.99
Gilberts	\$27.00	\$27.00	\$54.00
Crystal Lake	\$26.81	\$27.89	\$54.70
<b>Algonquin - Proposed (Alternate No. 8)</b>	<b>\$28.50</b>	<b>\$28.98</b>	<b>\$57.48</b>
Lake in the Hills / Lake in the Hills Sanitary District	\$33.95	\$24.00	\$57.95
West Dundee	\$42.42	\$17.92	\$60.34
Bartlett - DuPage County	\$38.16	\$22.49	\$60.65
Barrington	\$23.53	\$39.31	\$62.84
Island Lake / Northern Moraine Water Reclamation District	\$30.80	\$32.25	\$63.05
McHenry	\$22.88	\$42.06	\$64.94
Batavia	\$30.58	\$35.21	\$65.79
Fox River Grove	\$30.22	\$38.02	\$68.24
Carpentersville	\$37.74	\$36.42	\$74.16
Wauconda	\$32.78	\$42.70	\$75.48
Lakewood -- Lakewood Utilities	\$41.83	\$57.18	\$99.00

Notes:

[1] Based upon average residential consumption of 6,000 gallons per month.

2. 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 beyond the six-year time frame used in this study. Consider future reallocation of proposed sales tax revenue to other Village funds if Water and Sewer Improvement and Construction Fund reserves exceed long term needs.
3. Continue the summer billing rates (three times standard rates) to continue to encourage water consumption. Due to the difficulty in changing the billing system in the summer and fall to implement and remove the conservation rates each year, it is recommended that the conservation rates remain in effect year round. Note however due to typical seasonal water usage, it is unlikely that residential bills will be affected by conservation rates in periods other than the summer months.
4. Beginning in Fiscal Year 2022/2023, adopt an automatic increase of user charges based upon the Consumers Price Index (CPI), effective January 1 of each calendar year. Allow for waiver of this automatic increase by the Village Board in any given year, if desired.
5. No increases to the Village's tap-on fees are recommended at this time.