

Village of Glenwillow, Ohio

2011 Sewer Rate Study

Final Edition

Prepared For:
The Village of Glenwillow, Ohio

URS Corporation
1375 Euclid Ave. Suite 600 Cleveland, Ohio 44115 (216) 622-2400

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1.0 EXECUTIVE SUMMARY

1.0 Executive Summary

In February 1993, the Village of Glenwillow (Village) entered into an agreement with the City of Bedford Heights to provide wastewater treatment for of all or a portion of the sanitary wastewater generated by the Village. Under this agreement, customers within the Village are to be charged the same rates as customers within the City of Bedford Heights, plus a fee for sewer cleaning and maintenance, plus an additional charge for the City of Cleveland to provide billing services.

The Village is responsible for construction of its local sewer system, utility costs and major repairs at the two pump stations, and any significant non-routine maintenance, repairs or other capital improvements.

This study represents an update to the Sewer Rate Study URS prepared in 2001 which provided an analysis of the costs of providing sanitary sewer service. These costs of service include the administrative costs, operation, maintenance and replacement costs, and the capital recovery costs. In order to cover these costs, the Village established its own sewer use charges. Newly constructed home sewer use customers are required to pay a tap-in fee when hooking up to the system, and all sewer use customers within the Village pay a local sewer user charge for each thousand cubic feet of water used to pay for pump station utilities and major repairs, administration, and capital improvement projects. Existing homeowners connecting to the sanitary sewer system are only required to pay the City of Bedford Heights tap-in fee.

There are a small number of residents in the Village whose sanitary sewage goes to the Northeast Ohio Regional Sewer District (NEORS) Southerly Wastewater Treatment Plant. These customers are required to pay both the local Village fees and the City of Bedford Heights maintenance fee.

In addition to the Village portion of the user rate, these additional rates are included overall for a typical resident, as shown below:

Components of Sanitary Sewer Rate for Typical Resident (2011)

Current Rate (per mcf)	Description	Entity
\$47.69	Sewage Treatment	City of Bedford Heights
\$3.24	Maintenance Fee	City of Bedford Heights
\$8.33	Pump Stations and Cap Imp.	FBO Village of Glenwillow
\$4.82	Billing Fee	City of Cleveland

Based upon our updated analysis of the sewer tap in fee rates, we are recommending the following revised rates be established for the local Glenwillow sewer usage charge:

Recommended Village of Glenwillow Rates (2012-2021)

	Residential User Rate	Commercial User Rate	Maintenance Fee	Residential Tap-in Fee	Commercial Tap-in Fee*
2012	\$8.33	\$8.33	\$3.24	\$1,744.00	\$8,844.00
2013	\$8.33	\$8.33	\$3.24	\$1,744.00	\$8,844.00
2014	\$8.33	\$8.33	\$3.24	\$1,744.00	\$8,844.00
2015	\$8.33	\$8.33	\$3.24	\$1,744.00	\$8,844.00
2016	\$8.33	\$8.33	\$3.24	\$1,744.00	\$8,844.00
2017	\$8.75	\$8.75	\$3.24	\$1,831.20	\$9,286.20
2018	\$9.18	\$9.18	\$3.24	\$1,922.76	\$9,750.51
2019	\$9.64	\$9.64	\$3.24	\$2,018.90	\$10,238.04
2020	\$10.13	\$10.13	\$3.24	\$2,119.84	\$10,749.94
2021	\$10.64	\$10.64	\$3.24	\$2,225.84	\$11,287.43

**Commercial tap-in fees based upon EDUs (see Section 4)*

These rates are based upon the following:

- Capital Improvement Projects
- Annual O&M Expenses
- Pump Station Maintenance
- Allocations from the Village's General Fund
- Future Demand Forecasting
- Anticipated New Customers

The Village of Glenwillow should perform an analysis of the sanitary sewer rates on an annual basis to ensure adequate revenues are being generated to offset the system expenses. Special emphasis should be placed on the review in 2016 for the recommended 2017-2021 rate and tap-in fee increases.

2.0 SCOPE OF SERVICES

2.0 Scope of Services

URS' services under this study are being provided as a review and to update the Sewer Rates established for the Village of Glenwillow in 2000. As part of this Study:

1. URS shall begin discussions with the Village and the Village's Engineer (Chagrin Valley Engineering, Ltd.) to review the exact requirements of the Use Sewer Rate Study and to establish time frames for submission of the study.
2. URS shall obtain and review the Village's Sewer Service Agreement with Bedford Heights, associated Bedford Heights sewer use regulations, the Village's Sewer System Comprehensive Plan and Comprehensive Land Use Plan.
3. URS shall develop budgetary estimates of cost to administer the sanitary sewer utility, to maintain a reserve fund to perform non-routine maintenance and repairs and to maintain a reserve fund to offset the cost of the existing and future capital improvements.
4. URS shall perform a cost of service analysis to determine the adequacy of the current "tap-in" fee being charged by the Village (in addition to the Bedford Heights tap in fee) per customer user class in comparison with the estimated growth within the Village. In addition, URS will work with the Village and Village Engineer to determine an appropriate "tap-in" fee, on an EDU basis, for the un-sewered camp area in the vicinity of Wheeling & Lake Erie Railroad and Austin Powder Drive.
5. URS shall prepare draft ordinance(s) needed to implement the recommended plan of action. The draft documents are for the use by the Village Legal Counsel in preparing the actual legal documents to be adopted by the Village.
6. URS shall compile results of the previously described tasks into a written study for review and approval by the Village. URS will provide the Village with an electronic draft copy (.pdf format) and up to three (3) paper copies, if required, of the draft study. URS will provide the Village with five (5) paper copies of the final study.
7. URS shall meet with the Village to obtain input and to respond to comments as necessary to finalize the services. The meetings should take place initially at the outset of the effort, upon completion of the cost of service analysis, and to review the draft study.

3.0 COST OF SERVICE ANALYSIS

3.0 Cost of Service Analysis

The cost to provide sanitary sewer services to the households and industries of the Village has been divided into two segments:

1. Operation, Maintenance, and Replacement Costs
2. Capital Improvement Projects

Section 3.0 describes the elements that make up each of these costs that will ultimately affect the local user charge.

3.1 Operation, Maintenance, and Replacement Costs

The City of Bedford Heights is responsible for the cleaning and maintenance of the Village sanitary sewers and force mains, according to the current agreement between the Village of Glenwillow and the City. The Village customers will pay to the City a surcharge on their sewer rate of \$3.24 per thousand cubic foot (mcf) of water use for this service. The revenues received are placed into to a fund by the City of Bedford Heights to track this work item, which is then accessed for related expenses on a force account basis.

The City of Bedford Heights Maintenance Fund balance was \$30,618 in 2010 as a result of this cleaning and maintenance surcharge. The associated cleaning and maintenance expenses charged by Bedford Heights in 2010 totaled \$15,719 for pump station maintenance and sewer cleaning/television inspection. The current balance in the City's Maintenance Fund is adequate for the services provided.

In addition to the cleaning and maintenance of the sewers provided by the City of Bedford Heights, the Operation, Maintenance, and Replacement Costs (OM&R) that the Village is responsible for include the annual maintenance of the sewage pump stations, electric utility charges, and the future replacement costs of the sewers and the pump stations. These items are not included with the Bedford Heights maintenance responsibilities under the current agreement. Item No. 2 (Richmond Road Pump Station Annual Maintenance) and Item No. 5 (Pettibone Road Pump Station Annual Maintenance) as shown under "Annual Sanitary Sewer Expenses" in Table 3.1, represent these costs.

The Village of Glenwillow has taken responsibility for the electrical power and/or natural gas consumption of the individual pump stations. The following represents annual electrical cost for each respective station in 2010:

<u>Pump Station</u>	<u>Electric Utility Cost in: 2010</u>
Richmond Road	\$5,600
Pettibone Road	\$2,300

Item No. 1 (Richmond Road Pump Station Electrical Usage) and Item No. 4 (Pettibone Road Pump Station Electrical Usage) as shown under “Annual Sanitary Sewer Expenses” in Table 3.1, represent these costs.

In addition, the Village also contracts with engineering consultants and other miscellaneous services for sanitary sewer related services. These expenses are captured in Item No. 6 (Sanitary Sewer Fun Expenditures), as shown under “Annual Sanitary Sewer Expenses” in Table 3.1.

Table 3.1 below summarizes the estimated OM&R costs for the existing sanitary sewer system. The table also includes other Sanitary Sewer Reserve Fund Expenditures that include engineering, repairs and maintenance of equipment, other contracted services, natural gas, telephone, and electricity.

Table 3.1. Annual Typical Sanitary Sewer Expenses – OM&R

No.	Item	2012
	Operation and Maintenance (O&M) and Replacement	
1	Richmond Road PS Electric Usage	\$ 5,600.00
2	Richmond Road PS Annual Maintenance (pump in 2017, pump in 2018)	\$ -
3	Richmond Road PS Improvements* (deferred until 2026)	\$ -
4	Pettibone Road PS Electric Usage	\$ 2,300.00
5	Pettibone Road PS Annual Maintenance (Pumps repl. in 2016)	\$ 4,000.00
6	Other Sanitary Sewer Fund Expenditures	\$ 23,700.00
	Subtotal O&M	\$ 35,600.00

3.2 Capital Improvement Projects

The Pergl Road Sanitary Sewer Improvements Project is divided into three (3) phases and is expected to occur in 2012-2014 at a cost of \$1,495,841. Funding for the future Phase I, Phase II, Phase III Pergl Road Sanitary Sewer Improvements Projects is expected to come from the following sources:

1. Sanitary Sewer Reserve Fund
2. Ohio Public Works Commission (OPWC) Loan
3. Grants
4. Loan (20-years at 4% interest)

The percentages of each Phase's costs are shown in Option No. 1 (the recommended option) as discussed in section 4.0. These percentages vary in Option No. 2 and Option No. 3.

4.0 USER CHARGE DEVELOPMENT

4.0 User Charge Development

In order to generate revenue for the Sanitary Sewer Reserve Fund, the Village charges its customers a fee for sewer usage. The sewer user charges have been divided into two categories:

1. Sanitary Sewer Tap-in Fee
2. Sanitary Sewer Rate Surcharge (based on water usage)

The user charges historically have been developed based on the estimated administrative, debt, and OM&R costs. Consideration is given to the number of customers that are currently tied into the sewer system. It is these customers who will be responsible for paying the debt service on the initial and future construction.

Future Users

Future residential users for the next 10 years are assumed as follows:

1. Two (2) miscellaneous new users per year connecting to sanitary sewer
2. Odd Fellows Fresh Air Camp includes the equivalent of 4 new residential users connecting to sanitary sewer between 2013-2016
3. Existing Pergl Road Development includes 73 new users connecting to sanitary sewer between 2014-2016
4. A new 10-15 acre development and new 60 acre development include 8 new users connecting to sanitary sewer per year between 2017-2021

Future commercial users for the next 10 years are assumed as follows:

1. One (1) new commercial user per year connecting to sanitary sewer

Demand

Based upon Village of Glenwillow data from 2007-2010, a reduction in water demand is observed at a rate of -1.36% per year. This reduction is in line with demand reduction seen recently among City of Cleveland Water users. This demand rate of -1.36% was forecast for each of the next 10 years.

Based upon City of Cleveland Water records with the Village of Glenwillow, an approximate annual demand of 12 MCF was assumed for residential users. This demand is assumed to decrease at a rate of -1.36% per year.

Table 4.1 Projected Annual Residential User Demand

Year	Demand Rate	MCF per Res.
2011	-	12
2012	-1.36%	11.84
2013	-1.36%	11.67
2014	-1.36%	11.51
2015	-1.36%	11.35
2016	-1.36%	11.18
2017	-1.36%	11.02
2018	-1.36%	10.86
2019	-1.36%	10.69
2020	-1.36%	10.53
2021	-1.36%	10.37

4.1 Sewer Tap-In Fee

The sewer tap-in fee, or connection fee, is a one time cost to be paid by the customer at the time of connection. The tap-in fee should include the administrative costs to issue the permits and inspect the connection and the capital recovery fee.

The permit fee portion of the tap-in fee has been described in prior sections of this study to recover administrative and inspection cost associated with the new connection to the sewer. The Village of Glenwillow portion of the fee is based upon EDUs for commercial residents.

The Village currently does not plan to charge the existing Pergl Road residents, Pettibone Road residents, and the Odd Fellows Fresh Air Camp users with local tap-in fees. In addition, Emerald Valley Business Park users are exempt from local tap-in fees. However, all of these residents would still be required to pay the Bedford Heights tap-in fee. This was taken into consideration when developing recommendations for future tap-in fees.

The tap-in fee may take either of two forms; a structured rate based upon the type of connection: residential, commercial or industrial (similar to Bedford Heights) or a flat rate based upon the estimated flows from the new connection. The Village of Glenwillow has opted for a flat rate approach for residential, and a structured rate for commercial.

The current flat rate is \$ 1,744 for every 400 gallons/day of estimated flow from that user for a connection to the sewer system. For example, households, apartment units and trailers would be charged \$ 1,744 per unit for a connection.

The tap-in fee is paid at the time of application for a sewer use permit. The applicant would have to file an application and pay the respective fees to both Bedford Heights and the Village of Glenwillow, as outlined in the Table 4.2.

4.2 Sewer Usage Charge

Currently, Village customers pay the same sewer rates as Bedford Heights customers plus an additional \$3.24 per thousand cubic fee (mcf) of water used. The \$3.24/mcf rate covers the City of Bedford Heights' cost to clean and maintain the Village sewers and force mains. In addition, there is an \$8.33 surcharge for all Village users that funds the Village's Sanitary Sewer Fund. This surcharge covers operation, maintenance of the pump stations, and future replacement costs for pump stations and sewers.

The Village has an arrangement with the City of Cleveland to collect this surcharge with their billings and transfer the funds to the Village on a monthly basis.

The Village of Glenwillow has setup a fund specifically dedicated for OM&R cost associated with the sanitary sewer system, which is accessed by Bedford Heights on a force account basis. All revenue generated by the \$3.24 Bedford Heights O&M charge are placed in this fund.

4.3 User Charge Recommendations

Changes to the Village of Glenwillow portion of the tap-in rates and sewer usage rates are recommended for the Village in the future. An increase in sewer usage rates and tap-in fees will be needed to account for the following expenses:

1. Pergl Road Sanitary Sewer Project (Phase I, II, and III)
2. Electric usage at Richmond Road PS and Pettibone Road PS
3. Pump replacements at Richmond Road PS and Pettibone Road PS
4. Annual maintenance at Richmond Road PS and Pettibone Road PS
5. Engineering consultants
6. Miscellaneous contracted services
7. Miscellaneous maintenance and repairs

A 5% increase in the Village's portion of the user rate and tap-in fee is recommended beginning in 2017 and 5% annually through 2021. Each of the options below incorporates these increases.

4.3.1 Option No. 1

See attached Figure No. 1 for detailed Option No. 1 spreadsheet. This option is recommended, as it keeps a healthy and positive balance in the Sanitary Sewer Fund throughout 2012-2021.

Pergl Road Sanitary Sewer Improvements Phase I is paid with the following:

1.	Cash (from Sanitary Sewer Reserve Fund)	25%
2.	Grant	37.5%
3.	OPWC Loan (0% interest, 30-year loan)	37.5%

Pergl Road Sanitary Sewer Improvements Phase II is paid with the following:

4.	Cash (from Sanitary Sewer Reserve Fund)	25%
5.	Grant	37.5%
6.	OPWC Loan (0% interest, 30-year loan)	37.5%

Pergl Road Sanitary Sewer Improvements Phase III is paid with the following:

7.	Loan (4% interest, 20-year loan)	25%
8.	Grant	37.5%
9.	OPWC Loan (0% interest, 30-year loan)	37.5%

The Sanitary Sewer Fund balance is \$316,120 at the beginning of 2012. The cash payments for Phase I and Phase II of the Pergl Road Sanitary Sewer Improvements Project are taken directly from this Fund and reduce the balance to \$74,191 in 2014. In order to keep a positive balance in the Fund, a loan is taken out for one third of the total cost for Phase III, as opposed to paying in cash.

Between 2012-2016, the Village's sanitary sewer expenses will be larger than the generated revenue, however all rates and tap in fees are kept at current levels. Beginning in 2017, a 5% increase in both the user sewer charge and the tap in fee occur and are increased by 5% annually through 2021. By 2021, the Sanitary Sewer Fund balance increases back to \$207,630, which is approximately the same balance as 2012.

4.3.2 Option No. 2

See attached Figure No. 2 for detailed Option No. 2 spreadsheet. This option shows a 'worst-case-scenario' in which both the Grant and OPWC Loan are not secured for Phase II and Phase III of the Pergl Road Sanitary Sewer Improvements.

Phase I Pergl Road Sanitary Sewer Improvements is paid with the following:

- | | |
|--|-------|
| 1. Cash | 25% |
| 2. Grant | 37.5% |
| 3. OPWC Loan (0% interest, 30-year loan) | 37.5% |

Phase II Pergl Road Sanitary Sewer Improvements is paid with the following:

- | | |
|-------------------------------------|-----|
| 1. Cash | 25% |
| 2. Loan (4% interest, 20-year loan) | 75% |

Phase III Pergl Road Sanitary Sewer Improvements is paid with the following:

- | | |
|-------------------------------------|-----|
| 1. Cash | 25% |
| 2. Loan (4% interest, 20-year loan) | 75% |

This option creates a negative Sanitary Sewer Fund balance beginning in 2014 that becomes increasingly more negative through 2021.

4.3.3 Option No. 3

See attached Figure No. 3 for detailed Option No. 3 spreadsheet. This option is the same as Option No. 1, except that the Phase III portion of the Pergl Road Sanitary Sewer Improvements is paid in cash, as opposed to taking out a loan as presented in Option No. 1. Using cash creates a negative balance in the Sanitary Sewer Fund in 2014, however the fund becomes positive once again in 2019.

4.4 Overall Sanitary Rates and Fees

The overall sanitary sewer tap-in fees are summarized below in Table 4.2. This includes the existing Bedford Heights tap-in fee and the Village of Glenwillow tap-in fee.

**Table 4.2
Sewer Tap-In Fees**

Existing Bedford Heights Tap-In Fees (Based Upon a Structured Rate)	
Single Family Residence	\$1,000
Multi-family Residence (less than 1,000 gpd)	\$1,700
Multi-family Residence (1,000-2,500 gpd)	\$3,000
Commercial or Industrial (greater than 2,500 gpd)	\$5,000
Proposed Additional Glenwillow Increase Tap-In Fees (Based Upon a Flat Rate)	
Per Equivalent Dwelling Unit (400 gallon/day)	\$1,744*
Resulting Total Tap-In Fee	
Single Family Residence	\$2,744*
Multi-family Residence	No. of EDU's x \$1,744* + \$3,100
Commercial or Industrial	No. of EDU's x \$1,744* + \$5,100

**This fee increases by 5% annually beginning in 2017*

The recommended sewer tap-in fees were based upon the recovery of the initial capitalization grant and provides for a \$100 per tap-in permit administration fee. Existing homeowners and existing landfills would only be charged the Bedford Heights tap-in fee, as applicable, and the Glenwillow permit administration fee.

The "flat rate" type of capital recovery fee has been recommended due to the fact that we believe it is the fairest means of assessing the cost of the constructing the sewer system and most predictable means of capital recovery. The flat rate fee is based upon estimated sewerage use and therefore each customer is charged based upon the true benefit received.

Table 4.3 below provides a basis of estimating sewerage flow and resulting connection fees.

**Table 4.3
User Categories and EDU Criteria**

Type of User	Estimated Sewage Flow (GPD)	EDU
Residential:		
Homes	400 per home	1 per home
Apartments	400 per apt.	1 per apt.
Trailer Parks	400 per trailer	1 per trailer
Vacation Cottages	400 per cottage	1 per cottage
Non-Residential:		
Assembly Hall	2 per seat	0.005 per seat
Church	8 per sanctuary seat	0.02 per sanctuary seat
Country Club	48 per member	0.12 per member
Institution	100 per resident	0.25 per resident
Hospitals	300 per bed	0.75 per bed
Ordinary Restaurant (Not 24-hour)	35 per seat	0.09 per seat
24-Hour Restaurant	50 per seat	0.12 per seat
Restaurant along Freeway	100 per seat	0.25 per seat
Tavern/Bar (Very Little Food Service)	36 per seat	0.09 per seat
Laundry	400 per machine	1.00 per machine
Motels	100 per room	0.25 per room
Office Building	20 per employee	0.05 per employee
Recreational Vehicle - Parks and Camps	50 per trailer or tent	0.22 per trailer or tent
Retail Store	10 per employee	0.04 per employee
Elementary Schools	15 per pupil	0.04 per pupil

¹OEPA suggested sewage flow guide is basis for EDU.

²EDU is equivalent to 400 gals/day - 1 EDU minimum for any service.

Middle and High Schools	20 per pupil	0.05 per pupil
Service Station	100 - 1st pump island 500 - additional islands	0.25 1st island 1.25 - additional islands
Swimming Pool	4 per swimmer	0.01 per swimmer

As compared to other local rates, as shown in below Table 4.4. The NEORS Suburbs Rate is currently set to increase 15% annually.

Table 4.4 Other Area Sanitary Sewer Rates

Entity	2011 Sanitary Sewer Rate (per mcf)
City of Solon	\$37.95
NEORS Suburbs Rate	\$48.00

All options as discussed assume an annual contribution from the Village's General Fund to the Sanitary Sewer Fund. This contribution is \$10,000 in 2012, and increases by \$5,000 annually. This contribution is critical to keeping a healthy balance in the Sanitary Sewer Fund as shown in Option No. 1.

The options presented postpone the replacement of the Richmond Road Pump Station until 2026, however one pump is anticipated to be replaced in 2017 and one pump is anticipated to be replaced in 2018.

Option No. 1 is recommended because it maintains a positive balance in the Sanitary Sewer Fund through 2021. Between 2012-2016, the Village would spend more than the revenues generated; however, in 2017-2021 expenses are less than revenues generated. The Sanitary Sewer Fund reaches a low of approximately \$66,000 in 2016; however it continues to build to a balance of approximately \$200,000 in 2021.

Table 4.5 below summarizes the recommended sewer rate increases.

**Table 4.5
2011 Sanitary Sewer Rates**

Existing Bedford Heights Outside Users Sewer Rates (including \$3.24 surcharge) :	
Residential	\$47.69/mcf
Commercial	\$49.74/mcf
Industrial	\$49.74/mcf
Institutional	\$47.69/mcf
Governmental	\$47.69/mcf
Proposed Glenwillow Surcharge:	
All Users	\$8.33/mcf*
Total Sewer Rates :	
Residential	\$56.02/mcf
Commercial	\$58.07/mcf
Industrial	\$58.07/mcf
Institutional	\$56.02/mcf
Governmental	\$56.02/mcf

**This rate increases by 5% annually beginning in 2017*

The recommended sewer use rate for Glenwillow does not take into consideration of additional billing fees by the City of Cleveland Water.

The Village of Glenwillow should perform an analysis of the sanitary sewer rates on an annual basis to ensure adequate revenues are being generated to offset system expenses.

5.0 DRAFT ORDINANCE

5.0 Draft Ordinance

Ordinance No.:

An ordinance establishing new rates and charges for sanitary sewer services in the Village of Glenwillow.

WHEREAS, the agreement between the Village of Glenwillow, Ohio and the City of Bedford Heights, Ohio dated February 3, 1993, established the terms and conditions per the Bedford Heights Public Service Code Section 917 through 920 including references therein or modifications by ordinance thereto for use of the sanitary sewers in the Village and ultimate conveyance to the Bedford Heights Sewer System.

WHEREAS, the agreement between the Village of Glenwillow, Ohio and the City of Bedford Heights, Ohio dated February 3, 1993, established that sewer users in Glenwillow pay the same rates per thousand cubic feet as sewer users in Bedford Heights, plus a maintenance fee, plus billing charges levied by the City of Cleveland.

WHEREAS, the Sewer Usage Rate Study dated **November, 1996**, determined that a sewer fund should be established for the operations of the sewer system and the 2000 Sewer Rate Study Update identified the need for the revision and/or replacement of the rates previously established.

NOW, THEREFORE, be it ordained by the Council of the Village of Glenwillow, Ohio, that:

Section 1: The Village of Glenwillow will continue to maintain a sewer fund in order to own and operate a sanitary sewer system. The fund shall be used for operating, maintaining, replacing, constructing, purchasing equipment for, and for paying debt services, capital costs, and administrative cost deemed necessary for the sanitary sewer system.

Section 2: The sewer usage rate charge per each thousand cubic feet (mcf) of sanitary sewer service for all classes of customers shall be \$8.33 to be paid in addition to the sewer usage rate established by the City of Bedford Heights, Ordinance No. 2000-05 and the agreement between the Village of Glenwillow, Ohio and the City of Bedford Heights dated February 3, 1993. The sewer rates are hereby established to be in force effective **xxxxxxx**, as follows:

User Classification	Rate for Bedford Heights Users (per mcf)*	Rate for Glenwillow Users (per mcf)
Residential	\$47.69	\$56.02
Commercial/Industrial	\$49.74	\$58.07
Institutional/Governmental	\$47.69	\$56.02

*Includes \$3.24 per mcf for sewer maintenance by the City of Bedford Heights. The City of Cleveland may levy additional charges to cover billing costs.

The Village residential users served by private water wells and not served by the City of Cleveland Water Department will be charged sewer rates on the basis of 1.5 mcf per quarter.

The sewer use rates shall be automatically adjusted to reflect any changes in the Bedford Heights base rates by the same amount of the Bedford Heights adjustment.

Section 3: A sewer Tap-In Fee shall be paid in addition to the Tap-In Sewer Permit charges established by the City of Bedford Heights Ordinance No. 96-100. The tap-in fees are hereby established to be in force effective XXXXXXXX, as follows:

User Classification	Bedford Heights Tap-In Fee	Glenwillow Tap-In Fee	Total Tap-In Fee
Single Class Residence	\$1,000	\$1,744	\$2,744
Multi-Family Residence	\$3,000	Based upon No. of EDU's x \$1,744 + \$3,100	
Commercial/Industrial	\$5,000	Based upon No. of EDU's x \$1,744 + \$5,100	

An Equivalent Dwelling Unit (EDU) represents an average user with discharges at an average rate of 400 gallons per day. The Glenwillow Tap-In fee is charged at a rate of \$1,744 per EDU (or 400 gpd equivalent). Estimates of average daily flow or EDU's shall be based upon Table 4.2 of the 2000 Sewer Rate Study.

After the first full year of discharge or a significant increase in discharge, the Village may elect to review the estimated average daily flow used to calculate the tap-in fee charge versus the actual flow experienced and re-calculate the tap-in fee to be paid. The sewer customer shall pay the additional fee within sixty days of being notified by the Village that additional tap-in fees are warranted.

Section 4: All Village households and the landfills which exist prior to adoption of Ordinance No. 1997-1-13 and the properties within the Emerald Valley Business Park are exempt of the Glenwillow Capital Recovery Fee.

Section 5: The Mayor of the Village of Glenwillow shall be authorized to negotiate the amount of the capital recovery fee for commercial/industrial users in consideration of furthering the economic prosperity of the Village.

All proposed Capital Recovery Fee Abatements in excess of \$10,000 shall be approved by Village Council. The authorization for Capital Recovery Fee Abatement shall expire on January 1, 2005, unless extended by amendatory legislation

Section 6: The Village shall perform a user rate analysis annually at the end of each calendar year to confirm adequate revenues are being generated to offset the costs of operating, maintaining and replacing the sanitary sewer system.

Section 7: It is found and determined that all formal actions of this Council concerning and relating to the adoption of this Ordinance were adopted in an open meeting of this Council, and that all deliberations of this Council and any of its committees that resulted in such formal action, were in meetings open to the public, in compliance with all legal requirements including Section 121.22 of the Ohio Revised Code.

Section 8: Any and all ordinance inconsistent with the provisions of this Ordinance be and the same are hereby repealed.

Section 9: This Ordinance is hereby determined to be an emergency measure immediately necessary for the preservation of the public peace, health, safety and welfare by reason of the need to receive adequate revenues to maintain the continuous operation of the sanitary sewer service and shall take effect and be in force immediately upon its passage and approval by the Mayor.

PASSED: _____
Mark Cegelka, Mayor

APPROVED:

EFFECTIVE: _____

ATTEST:

PUBLISHED: _____
Clerk of Council

Village of Glenwillow: Option No. 3

Annual Sanitary Sewer Expenses												
No.	Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Operation and Maintenance (O&M) and Replacement												
1	Richmond Road PS Electric Usage	\$ 5,600.00	\$ 5,824.00	\$ 6,056.96	\$ 6,298.24	\$ 6,551.21	\$ 6,813.26	\$ 7,085.79	\$ 7,369.22	\$ 7,663.99	\$ 7,970.55	
2	Richmond Road PS Annual Maintenance (pump in 2017, pump in 2018)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,291.43	\$ 22,143.08	\$ -	\$ -	\$ -	
3	Richmond Road PS Improvements* (deferred until 2026)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
4	Pettibone Road PS Electric Usage	\$ 2,300.00	\$ 2,392.00	\$ 2,487.68	\$ 2,587.19	\$ 2,690.67	\$ 2,798.30	\$ 2,910.23	\$ 3,026.64	\$ 3,147.71	\$ 3,273.62	
5	Pettibone Road PS Annual Maintenance (Pumps repl. in 2016)	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	
6	Sanitary Sewer Fund Electric Usage	\$ 23,700.00	\$ 24,648.00	\$ 25,633.92	\$ 26,659.28	\$ 27,725.65	\$ 28,834.67	\$ 29,988.06	\$ 31,187.58	\$ 32,435.09	\$ 33,732.49	
	Subtotal O&M	\$ 35,600.00	\$ 36,864.00	\$ 38,178.56	\$ 39,545.70	\$ 40,967.53	\$ 52,737.66	\$ 62,127.16	\$ 41,583.44	\$ 43,246.78	\$ 44,976.65	
Capital Projects												
8	Pergl Road Sanitary Sewer (Ph. I, II) - Cash**	\$ 110,992.50	\$ 121,443.75	\$ 141,524.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
9	Pergl Road Sanitary Sewer - Loan (not used)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
10	Pergl Road Sanitary Sewer (Ph. I, II, III) - OPWC Loan***	\$ 5,549.63	\$ 11,621.82	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	
	Subtotal Capital Projects	\$ 116,542.13	\$ 133,065.57	\$ 160,222.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	
	TOTAL	\$ 152,142.13	\$ 169,929.57	\$ 198,400.58	\$ 58,243.72	\$ 59,665.55	\$ 78,435.68	\$ 80,825.18	\$ 60,281.46	\$ 61,944.80	\$ 63,674.67	

Annual Sanitary Sewer Revenues												
No.	Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
1	Existing Glenwillow Rate Revenue (Residential)	\$ 20,015.91	\$ 20,031.66	\$ 22,436.30	\$ 24,670.29	\$ 26,830.86	\$ 28,725.24	\$ 30,712.00	\$ 32,794.15	\$ 34,974.69	\$ 37,256.60	
2	Existing Glenwillow Rate Revenue (Commercial)	\$ 5,102.58	\$ 5,251.02	\$ 5,393.34	\$ 5,529.55	\$ 5,659.64	\$ 6,072.79	\$ 6,506.36	\$ 6,961.02	\$ 7,437.45	\$ 7,936.32	
3	Existing Glenwillow Tap In Fee Revenue (Residential)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,952.00	\$ 14,649.60	\$ 15,382.08	\$ 16,151.18	\$ 16,958.74	
4	Existing Glenwillow Tap In Fee Revenue (Commercial)	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 9,286.20	\$ 9,750.51	\$ 10,238.04	\$ 10,749.94	
5	General Fund Allocation	\$ 10,000.00	\$ 15,000.00	\$ 20,000.00	\$ 25,000.00	\$ 30,000.00	\$ 35,000.00	\$ 40,000.00	\$ 45,000.00	\$ 50,000.00	\$ 55,000.00	
	TOTAL	\$ 43,962.49	\$ 49,126.68	\$ 56,673.64	\$ 64,043.84	\$ 71,334.50	\$ 92,594.03	\$ 101,154.16	\$ 109,887.77	\$ 118,801.37	\$ 127,901.59	
	REVENUE - EXPENSES =	\$ (108,179.64)	\$ (120,802.89)	\$ (141,726.94)	\$ 5,800.11	\$ 11,668.95	\$ 14,158.35	\$ 20,328.98	\$ 49,606.30	\$ 56,856.56	\$ 64,226.92	
	SANITARY SEWER FUND BALANCE	\$ 207,940.88	\$ 87,137.99	\$ (54,588.94)	\$ (48,788.83)	\$ (37,119.88)	\$ (22,961.53)	\$ (2,632.56)	\$ 46,973.75	\$ 103,830.31	\$ 168,057.23	

Village of Glenwillow: Option No. 2

Annual Sanitary Sewer Expenses											
No.	Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Operation and Maintenance (O&M) and Replacement											
1	Richmond Road PS Electric Usage	\$ 5,600.00	\$ 5,824.00	\$ 6,056.96	\$ 6,299.24	\$ 6,551.21	\$ 6,813.26	\$ 7,085.79	\$ 7,369.22	\$ 7,663.99	\$ 7,970.55
2	Richmond Road PS Annual Maintenance (pump in 2017, pump in 2018)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,291.43	\$ 22,143.08	\$ -	\$ -	\$ -
3	Richmond Road PS Improvements* (deferred until 2026)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Pettibone Road PS Electric Usage	\$ 2,300.00	\$ 2,392.00	\$ 2,487.68	\$ 2,587.19	\$ 2,690.67	\$ 2,798.30	\$ 2,910.23	\$ 3,026.64	\$ 3,147.71	\$ 3,273.62
5	Pettibone Road PS Annual Maintenance (Pumps repl. in 2016)	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ -	\$ -	\$ -	\$ -	\$ -
6	Sanitary Sewer Fund Expenditures	\$ 23,700.00	\$ 24,648.00	\$ 25,633.92	\$ 26,659.28	\$ 27,725.65	\$ 28,834.67	\$ 29,988.06	\$ 31,187.58	\$ 32,435.09	\$ 33,732.49
	Subtotal O&M	\$ 35,600.00	\$ 36,864.00	\$ 38,178.56	\$ 39,545.70	\$ 40,967.53	\$ 59,737.66	\$ 62,127.16	\$ 41,583.44	\$ 43,246.78	\$ 44,976.65
Capital Projects											
8	Pergl Road Sanitary Sewer (Ph. I, II, III) - Cast**	\$ 110,992.50	\$ 121,443.75	\$ 141,524.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Pergl Road Sanitary Sewer (Ph. II, III) - Loan	\$ 38,379.55	\$ 83,105.01	\$ 83,105.01	\$ 83,105.01	\$ 83,105.01	\$ 83,105.01	\$ 83,105.01	\$ 83,105.01	\$ 83,105.01	\$ 83,105.01
10	Pergl Road Sanitary Sewer (Ph. I) - OPWC Loan***	\$ 5,549.63	\$ 5,549.63	\$ 5,549.63	\$ 5,549.63	\$ 5,549.63	\$ 5,549.63	\$ 5,549.63	\$ 5,549.63	\$ 5,549.63	\$ 5,549.63
	Subtotal Capital Projects	\$ 116,542.13	\$ 165,372.93	\$ 230,178.64	\$ 88,654.64	\$ 88,654.64	\$ 88,654.64	\$ 88,654.64	\$ 88,654.64	\$ 88,654.64	\$ 88,654.64
	TOTAL	\$ 152,142.13	\$ 202,236.93	\$ 268,357.20	\$ 128,200.34	\$ 129,622.17	\$ 148,392.30	\$ 150,781.80	\$ 130,238.08	\$ 131,901.42	\$ 133,631.29

Annual Sanitary Sewer Revenues											
No.	Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	Existing Glenwillow Rate Revenue (Residential)	\$ 20,015.91	\$ 20,031.66	\$ 22,436.30	\$ 24,670.29	\$ 26,830.86	\$ 28,725.24	\$ 30,712.00	\$ 32,794.15	\$ 34,974.69	\$ 37,256.60
2	Existing Glenwillow Rate Revenue (Commercial)	\$ 5,102.58	\$ 5,251.02	\$ 5,393.34	\$ 5,529.55	\$ 5,659.64	\$ 6,072.79	\$ 6,506.36	\$ 6,961.02	\$ 7,437.45	\$ 7,936.32
3	Existing Glenwillow Tap In Fee Revenue (Residential)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,952.00	\$ 14,649.60	\$ 15,382.08	\$ 16,151.18	\$ 16,958.74
4	Existing Glenwillow Tap In Fee Revenue (Commercial)	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 9,286.20	\$ 9,750.51	\$ 10,238.04	\$ 10,749.94
5	General Fund Allocation	\$ 10,000.00	\$ 15,000.00	\$ 20,000.00	\$ 25,000.00	\$ 30,000.00	\$ 35,000.00	\$ 40,000.00	\$ 45,000.00	\$ 50,000.00	\$ 55,000.00
	TOTAL	\$ 43,962.49	\$ 49,126.68	\$ 56,673.64	\$ 64,043.84	\$ 71,334.50	\$ 92,594.03	\$ 101,154.16	\$ 109,887.77	\$ 118,801.37	\$ 127,901.59
	REVENUE - EXPENSES =	\$ (108,179.64)	\$ (153,110.25)	\$ (211,683.56)	\$ (64,156.51)	\$ (58,287.67)	\$ (55,798.27)	\$ (49,627.64)	\$ (20,350.32)	\$ (13,100.06)	\$ (5,729.70)
	SANITARY SEWER FUND BALANCE	\$ 207,940.88	\$ 54,830.63	\$ (156,852.92)	\$ (221,009.43)	\$ (279,297.10)	\$ (335,095.37)	\$ (384,723.01)	\$ (405,073.33)	\$ (418,173.38)	\$ (423,903.08)

Village of Glenwillow: Option No. 1

Annual Sanitary Sewer Expenses											
No.	Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Operation and Maintenance (O&M) and Replacement										
1	Richmond Road PS Electric Usage	\$ 5,600.00	\$ 5,824.00	\$ 6,056.96	\$ 6,299.24	\$ 6,551.21	\$ 6,813.26	\$ 7,085.79	\$ 7,369.22	\$ 7,663.99	\$ 7,970.55
2	Richmond Road PS Annual Maintenance (pump in 2017, pump in 2018)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,291.43	\$ 22,143.08	\$ -	\$ -	\$ -
3	Richmond Road PS Improvements* (deferred until 2026)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Pettibone Road PS Electric Usage	\$ 2,300.00	\$ 2,392.00	\$ 2,487.68	\$ 2,587.19	\$ 2,690.67	\$ 2,798.30	\$ 2,910.23	\$ 3,026.64	\$ 3,147.71	\$ 3,273.62
5	Pettibone Road PS Annual Maintenance (Pumps repl. in 2016)	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ -	\$ -	\$ -	\$ -	\$ -
6	Sanitary Sewer Fund Expenditures	\$ 23,700.00	\$ 24,648.00	\$ 25,633.92	\$ 26,659.28	\$ 27,725.65	\$ 28,834.67	\$ 29,988.06	\$ 31,187.58	\$ 32,435.09	\$ 33,732.49
	Subtotal O&M	\$ 35,600.00	\$ 36,864.00	\$ 38,178.56	\$ 39,545.70	\$ 40,967.53	\$ 59,737.66	\$ 62,127.16	\$ 41,583.44	\$ 43,246.78	\$ 44,976.65
	Capital Projects										
8	Pergl Road Sanitary Sewer (Ph. I, II) - Cash**	\$ 110,992.50	\$ 121,443.75	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Pergl Road Sanitary Sewer (Ph. III) - Loan	\$ -	\$ -	\$ 12,743.84	\$ 12,743.84	\$ 12,743.84	\$ 12,743.84	\$ 12,743.84	\$ 12,743.84	\$ 12,743.84	\$ 12,743.84
10	Pergl Road Sanitary Sewer (Ph. I, II, III) - OPWC Loan***	\$ 5,549.63	\$ 11,621.82	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02	\$ 18,698.02
	Subtotal Capital Projects	\$ 116,542.13	\$ 133,065.57	\$ 31,441.86	\$ 31,441.86	\$ 31,441.86	\$ 31,441.86	\$ 31,441.86	\$ 31,441.86	\$ 31,441.86	\$ 31,441.86
	TOTAL	\$ 152,142.13	\$ 169,929.57	\$ 69,620.42	\$ 70,987.56	\$ 72,409.39	\$ 91,179.51	\$ 93,569.02	\$ 73,025.30	\$ 74,688.64	\$ 76,418.51

Annual Sanitary Sewer Revenues											
No.	Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	Existing Glenwillow Rate Revenue (Residential)	\$ 20,015.91	\$ 20,031.66	\$ 22,436.30	\$ 24,670.29	\$ 26,830.86	\$ 28,725.24	\$ 30,712.00	\$ 32,794.15	\$ 34,974.69	\$ 37,256.60
2	Existing Glenwillow Rate Revenue (Commercial)	\$ 5,102.58	\$ 5,251.02	\$ 5,393.34	\$ 5,529.55	\$ 5,659.64	\$ 6,072.79	\$ 6,506.36	\$ 6,961.02	\$ 7,437.45	\$ 7,936.32
3	Existing Glenwillow Tap In Fee Revenue (Residential)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,952.00	\$ 14,649.60	\$ 15,362.08	\$ 16,151.18	\$ 16,958.74
4	Existing Glenwillow Tap In Fee Revenue (Commercial)	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 8,844.00	\$ 9,286.20	\$ 9,750.51	\$ 10,238.04	\$ 10,749.94
5	General Fund Allocation	\$ 10,000.00	\$ 15,000.00	\$ 20,000.00	\$ 25,000.00	\$ 30,000.00	\$ 35,000.00	\$ 40,000.00	\$ 45,000.00	\$ 50,000.00	\$ 55,000.00
	TOTAL	\$ 43,962.49	\$ 49,126.68	\$ 56,673.64	\$ 64,043.84	\$ 71,334.50	\$ 92,594.03	\$ 101,154.16	\$ 109,887.77	\$ 118,801.37	\$ 127,901.59
	REVENUE - EXPENSES =	\$ (108,179.64)	\$ (120,802.89)	\$ (12,946.77)	\$ (6,943.72)	\$ (1,074.89)	\$ 1,414.51	\$ 7,585.14	\$ 36,862.47	\$ 44,112.73	\$ 51,483.08
	SANITARY SEWER FUND BALANCE	\$ 207,940.88	\$ 87,137.99	\$ 74,191.22	\$ 67,247.50	\$ 66,172.61	\$ 67,587.12	\$ 75,172.26	\$ 112,034.73	\$ 156,147.46	\$ 207,650.54

*PS improvements represents entire pump station replacement, with replacement year indicated

Perrill Road Phase I, II, III = \$1,495,941 total cost

** Cash represents 45% of the total cost of the Perrill Road Sanitary Sewer project

**OPWC loan represents 37.5% of the total cost of the Perrill Road Sanitary Sewer project

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Pump Station	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00
Richmond	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00
Perrillone	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
Richmond	\$ 560.00	\$ 560.00	\$ 560.00	\$ 560.00	\$ 560.00	\$ 560.00	\$ 560.00	\$ 560.00	\$ 560.00	\$ 560.00	\$ 560.00
Perrillone	\$ 230.00	\$ 230.00	\$ 230.00	\$ 230.00	\$ 230.00	\$ 230.00	\$ 230.00	\$ 230.00	\$ 230.00	\$ 230.00	\$ 230.00
Pump station replacements	\$210,000.00	\$210,000.00	\$210,000.00	\$210,000.00	\$210,000.00	\$210,000.00	\$210,000.00	\$210,000.00	\$210,000.00	\$210,000.00	\$210,000.00
Inflation assumed at 4% per year	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25	\$ 379,960.25
Richmond Road PS Replacement	\$350,000	2011 Dollars	\$350,000								
Perrillone Road PS Replacement	\$355,838	2011 Dollars	\$355,838								
Perrillone Road PS Replacement	\$500,000	2011 Dollars	\$500,000								
Richmond	\$17,500	2011 Dollars	\$17,500								
Perrillone	\$10,000	2011 Dollars	\$10,000								
Richmond	\$560	2011 Dollars	\$560								
Perrillone	\$230	2011 Dollars	\$230								

Based upon maintenance expense records (2007-2010), \$10,000 will be assumed for 2012 (split between the pump stations, \$5000 each) and will increase with inflation.

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Existing Residential Accounts	201	22	201	22	201	22	201	22	201	22	201
Glenwillow Tap In Fee (Residential)	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000	\$ 1,744,000
Glenwillow Tap In Fee (Commercial)	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000	\$ 8,544,000
Existing Glenwillow Rate (All)	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000	\$ 10,288,000

Approx. Annual Residential MCF (2011)

Approx. Annual Commercial MCF (2011)

Approx. Avg. Commercial EDU

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Demand Rate	-	12	11.84	11.84	11.84	11.84	11.84	11.84	11.84	11.84	11.84	11.84
MCF per Res.	-	12	11.84	11.84	11.84	11.84	11.84	11.84	11.84	11.84	11.84	11.84
MCF per Com.	-	27	26.69	26.69	26.69	26.69	26.69	26.69	26.69	26.69	26.69	26.69

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Res. Cnt.	201	22	201	22	201	22	201	22	201	22	201
Total Com. Cnt.	201	22	201	22	201	22	201	22	201	22	201
New Res. Cnt.	2	1	2	1	2	1	2	1	2	1	2
New Com. Cnt.	1	1	1	1	1	1	1	1	1	1	1

Forecast Cleveland Water Pressure Zone 2 Demand

Independent Order of Odd Fellows Prison Velly Lodge 708 and Fresh Air Camp

25 Cottages: We are assuming 50 gal/flushage (1.5 gpcd per person)

1 Other Lodge