

WASTEWATER RATE STUDY FY 2018-19



March 2018



March 29, 2018

Mayor Huff and City Councilmembers
City of Inman
20 South Main Street
Inman, SC 29349

Subject: WASTEWATER RATE STUDY – FY 2019

Dear Mayor Huff and City Councilmembers:

WILLDAN FINANCIAL SERVICES (Willdan) is pleased to submit to the City of Inman, South Carolina (the “City”) the Wastewater Rate Study report (the “Report”) for your consideration. Willdan has completed the study of the City’s wastewater rates and have summarized the results of the investigations, analyses and conclusions in this Report.

INTRODUCTION

The City owns and operates public wastewater collection, transmission, treatment and disposal facilities providing utility services to both residential and nonresidential customers within the City limits, as well as certain surrounding areas, both incorporated and unincorporated. Water service for the City’s wastewater customers is provided by either the Inman Campobello Water District (“ICWD”) or the Startex-Jackson-Wellford-Duncan Water District (“SJWD”). During recent years, the City has focused greater attention and effort on strategic planning measures in all areas of the City operations in order to ensure that it remains prepared for the future. As part of the strategic planning measures, the City has commissioned a wastewater rate study to analyze the revenue sources and expenditures of the utility system and provide recommendations for proposed rate and/or rate structure adjustments in order to meet the financial and administrative goals and objectives of the City. The primary objectives of the rate study include:

- Full cost recovery (i.e. operating costs, debt and other expenditure requirements);
- Cost-based rate structure;
- Consistency with industry standards;
- Equity among customer classes;
- Administrative efficiency (i.e. easy to understand and implement); and
- 5-Year Capital Funding Plan.



	SUMMARY OF PROPOSED RATES
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The rate study methodology applied in the development of the Report consisted of reviewing the historical operating results of the wastewater utility system, analyzing the budget to identify the net revenue requirements to be recovered from user rate revenues, performing general cost of service allocations based on the rate components, and revising the rates based on the applicable costs and expenditures to be recovered from user rates. In addition, an analysis of the system customers and usage characteristics was performed in order to identify the rate determinants since these are the primary sources for generating revenues. The allocated revenue requirements were utilized in conjunction with the rate determinants and rate structure in order to develop proposed wastewater rates.

The findings and conclusions of the rate analysis, as well as the resulting revised rate recommendations, were utilized to develop a projection of future operating results for a 5-year planning period from fiscal year 2019 (beginning July 1, 2018) through fiscal year 2023 (herein referred to as the “Projection Period”). The purpose for developing the 5-year projections is to demonstrate the financial capability of the wastewater revenues to support system operations. The analyses, findings and accompanying recommendations are presented in the subsequent sections of the Report.

The wastewater rate analysis described in the Report are performed based on the general guidelines of the defined objectives, as well as common industry standards with regard to setting utility rates. In addition to focusing on these major objectives, the rate analyses performed herein will consider other factors in designing rates. As will be discussed in detail later in the Report, such other rate considerations generally include sensitivity to the impact on existing customers, the relative comparability with neighboring utilities, the City’s existing rate structure, and the impact on future development. The proposed wastewater rates are summarized in **Table 1**.



**TABLE 1
PROPOSED RATES**

Description	Proposed Rates - FY 2019	
	Inside City	Outside City
Minimum Charge:		
5/8 or 3/4 Inch	\$ 15.70	\$ 32.69
1.0 Inch	\$ 20.41	\$ 42.49
1.5 Inch	\$ 28.26	\$ 58.84
2.0 Inch	\$ 37.68	\$ 78.45
3.0 Inch	\$ 62.80	\$ 130.75
4.0 Inch	\$ 91.06	\$ 189.59
6.0 Inch	\$ 169.56	\$ 353.02
8.0 Inch	\$ 263.76	\$ 549.15
Volumetric Per 1,000 Gallons:		
General Service	\$ 3.99	\$ 6.08
Industrial Outside City	n/a	\$ 5.38

EXISTING USER RATES

The City has established user rates that are applied to the retail customers (residential, commercial and industrial) of the system. The rates charged for wastewater service are approved by the City Council and are not subject to administrative review or approval by any other local or state agency. The City has historically adjusted rates as necessary to provide for recovery of financial obligations including operating expenses, debt service, capital expenditures and any other expenses and transfers. The current rates were adopted and made effective in July 2016.

Current Rates

The existing wastewater rates consist of 1) monthly base charges that designate the minimum amount a customer will pay, and 2) volumetric rates per 1,000 gallons based upon the amount of monthly metered water usage (i.e. billable wastewater flow). The monthly base charges are currently based on customer class (residential vs. commercial) with commercial customers paying a higher base charges regardless of connection size. The volumetric rates utilize a uniform rate structure such that the rate per 1,000 gallons remains constant for all levels of metered usage. Customers located outside the City limits pay higher rates than those within the City limits. Also, industrial customers located outside the City limits have a different rate than general service outside customers. The existing rates for the wastewater service are summarized in **Table 2**.



**TABLE 2
EXISTING RATES**

Description	Existing Rates	
	Wastewater	
Minimum Charge:		
Inside City Residential	\$	14.96
Outside City Residential	\$	31.46
Inside City Commercial	\$	23.76
Outside City Commercial	\$	38.06
Industries Outside City	\$	23.76
School District One	\$	23.76
Volumetric Per 1,000 Gallons:		
Inside City Residential	\$	3.80
Outside City Residential	\$	5.34
Inside City Commercial	\$	3.80
Outside City Commercial	\$	5.34
Industries Outside City	\$	5.12
School District One	\$	3.80

RATE STRUCTURE REVIEW

In an effort to meet the objectives of establishing rates that are administratively efficient, equitable and based upon the cost of service provided, the analysis developed herein includes a review of the existing rate structure. In reviewing the rate structure, primary consideration is given to the overall equity of the rate structure as it applies to various customers and customer classes. Consideration is also given to administrative efficiency, the comparativeness of the rate structure with other regional utility systems, as well as common industry standards for wastewater utility rates. Upon review, certain rate structure modifications are proposed. A general description of the proposed rate structure revisions is provided in the following discussions.

Monthly Base Charges

It is common practice in the utility industry to establish a rate structure that includes an incremented service availability charge (monthly base charge) such that customers placing a greater potential demand requirement on the system (those with larger connections) will pay proportionately more for the service availability component. The City’s existing rate structure currently does not apply such a practice of increasing the monthly base charge as the connection size increases, rather the City charges based on customer class.



The methodology for incrementing the base charge is often based upon standardized demand criteria established by the American Water Works Association (AWWA) and the Water Environmental Federation (WEF) pursuant to the size of the water meter. Since the amount of wastewater flow is a direct function of the size of the water meter, it is equitable to use the water meter size as the basis for the potential wastewater impact. The AWWA/WEF meter-size criteria are commonly used to establish a standard unit of measure for customers referred to as an Equivalent Residential Unit (ERU). Based upon the established standards, an ERU is equal to one single-family residential connection with a 5/8 x 3/4-inch water meter. The applicable ERU factors for larger connection are based upon the incremental increase in potential demand as compared to that of a standard water meter size. The factors are determined by hydraulic flow capabilities as defined by AWWA and WEF, and commonly utilized by the utility industry. A summary of the standard AWWA meter-size equivalency factors is provided in **Table 3**.

TABLE 3 METER EQUIVALENCY FACTORS		
Meter Size	AWWA Factors ⁽¹⁾	Existing Factors
5/8 or 3/4 Inch	1.00	1.00
1.0 Inch	2.50	1.00
1.5 Inch	5.00	1.00
2.0 Inch	8.00	1.00
3.0 Inch	16.00	1.00
4.0 Inch	25.00	1.00
6.0 Inch	50.00	1.00
8.0 Inch	80.00	1.00

(1) Meter-size equivalency factors established by the AWWA and identified in AWWA Standards C700, M1 and M22, as well as WEF Manual of Practice No. 27.

In general, the practice of increasing the monthly base charge as the connection size increases is appropriate and equitable since, the larger the connection, the more potential demand a connection may place upon the system. As such, this practice will be recommended for the proposed rates. However, the wastewater rates to be developed herein will utilize a phase-in approach that will be factor adjusted so as to achieve a structure that is in accordance with the AWWA/WEF meter equivalency factors as identified in the previous table. The proposed base charge phasing approach will utilize the 5/8x3/4-inch base charge as the basis and will adjust the meter factors over the 5-fiscal year Projection Period until the factors become consistent with AWWA/WEF meter factors. The proposed factor phasing approach is provided in **Table 4**.



Meter Size	Existing Factors	Phasing Implementation				
		Year 1	Year 2	Year 3	Year 4	Year 5
5/8 or 3/4 Inch	1.00	1.00	1.00	1.00	1.00	1.00
1.0 Inch	1.00	1.30	1.60	1.90	2.20	2.50
1.5 Inch	1.00	1.80	2.60	3.40	4.20	5.00
2.0 Inch	1.00	2.40	3.80	5.20	6.60	8.00
3.0 Inch	1.00	4.00	7.00	10.00	13.00	16.00
4.0 Inch	1.00	5.80	10.60	15.40	20.20	25.00
6.0 Inch	1.00	10.80	20.60	30.40	40.20	50.00
8.0 Inch	1.00	16.80	32.60	48.40	64.20	80.00

Volumetric Rates

The rate structure for wastewater utilizes a uniform volumetric rate per 1,000 CF of billable wastewater flow (i.e. metered water flows to which wastewater volumetric rates are applied). This type of rate structure is administratively efficient, common for wastewater systems and consistent with industry standards. As such, there are no revisions proposed for the general structure of the volumetric wastewater rates.

Outside City Surcharge

For customer located outside the City limits, the existing rate structure applies a surcharge on the rates. Although city-owned utilities are not required to apply a surcharge for service provided outside the City limits, the surcharge is often utilized to recover the additional costs incurred by the utility for serving outside of the municipal boundaries, as well as to provide an incentive for customers to potentially annex into the City limits. While it is common practice within the utility industry to apply different rates for customers located outside of the municipal limits in accordance with an adopted outside-city surcharge methodology, such a practice is typically done utilizing a consistent surcharge factor. Currently, the wastewater rates apply a 2.103 times outside-City surcharge on the residential base charge, a 1.602 times outside-City surcharge on the commercial base charge, and a 1.405 times outside-City surcharge on the volumetric rates. For purposes of equity and consistency with other utility systems in South Carolina, it is proposed that the City adopt a policy of applying an outside-City surcharge of 2.0 times the inside rates for all rate components. This change will result in consistency within the wastewater rate structure and bring the wastewater surcharge closer to that of the water rates. However, similar to the process for the base charges, the rates to be developed herein will utilize a phase-in approach that will be factor adjusted so as to achieve the proposed outside differentials. The proposed factor phasing approach is provided in **Table 5**.



TABLE 5 PROPOSED OUTSIDE RATE STRUCTURE PHASING						
Meter Size	Existing Factors	Proposed Outside-City Surcharge Factors				
		Year 1	Year 2	Year 3	Year 4	Year 5
Outside Surcharges -Base Charges:						
Residential	2.103	2.082	2.049	2.020	2.004	2.000
Commercial	1.602	1.682	1.809	1.924	1.985	2.000
Outside Surcharges - Volumetric Rates:						
Factor	1.405	1.524	1.714	1.886	1.977	2.000

PROJECTED REVENUE REQUIREMENTS

The determination of the monthly user rates and charges to be applied to wastewater customers is based upon the estimated revenue requirements of the system. Revenue requirements consist of the operating, maintenance, debt service, capital and other monetary expenditures necessary to provide, maintain and perpetuate quality services to meet the goals and objectives of the utility system.

The rate analysis performed herein utilizes the City’s approved budget for fiscal year 2017/18 (the “Budget” for fiscal year ending June 30, 2018) as the basis for developing the revenue requirements to be recovered from user rates over the Projection Period. The Budget, as prepared by the City, has certain expenditures that are allocated between identifiable wastewater components. In developing the rate analysis, certain adjustments are made such that the expenditures are categorized into either Operating and Maintenance (O&M) expenses or Non-Operating expenses. The O&M expenses are primarily those ongoing costs for labor, materials, supplies, services, etc., required to manage and operate the utility system on a day-to-day basis while maintaining a dependable level of service. The estimated O&M requirements are generally a function of a budgetary process and are directly related to the level of service provided to customers of the utility system. The non-operating expenses include such items as debt service, capital outlay and any other expenses & transfers. The Budget also identifies estimated revenues to be derived from sources other than the retail wastewater user rates and charges. Such other revenue sources include connection fees, interest earnings, penalty fees and various other miscellaneous service charges. The revenues generated from the other sources are applied to the gross revenue requirements to reduce the amount of revenues required from user rates. The result is the net revenue requirement. The development of the net revenue requirement associated with the Budget, as adjusted, is summarized in **Exhibit 1** at the end of this Report.

The proposed wastewater rates developed in the Report are designed for assumed implementation effective July 1, 2018 for the entire fiscal year 2018/19 (fiscal year 2019, herein referred to as the “Test Year”). The projected Test Year revenue requirements, as well as the requirements for the remaining years of the Projection Period are estimated by utilizing the adjusted Budget as a basis



and making annual escalation adjustments for each line-item in accordance with historical cost escalation trends, as well as assumed future activities and events that may impact the system. Such projections include increasing applicable O&M expenses by inflationary and/or customer growth factors depending upon the nature of the expense, utilizing actual debt service requirements as provided in the applicable debt service schedules, using capital outlay estimates as provided by the City, and tying non-operating transfers to revenues or O&M expenses as applicable. The projected net revenue requirements and system allocations for the Test Year and the remaining years of the Projection Period are summarized in **Exhibit 2**. The Test Year revenue requirements that are used for developing the user rates proposed herein are provided in **Table 6**.

TABLE 6	
TEST YEAR REVENUE REQUIREMENTS - FY 2019	
Description	Total
Total O&M	\$ 1,120,110
Debt Service	356,139
Other Expenditures	242,080
Gross Requirement	\$ 1,718,329
Less Other Revenues	(28,630)
Net Requirement	\$ 1,689,699

**COST COMPONENT
ALLOCATIONS**

In order to design rates to recover expenses on a cost basis, it is necessary to further allocate system costs to the various rate structure components proposed herein. The wastewater utility costs are commonly classified into three categories for generally accepted rate-making purposes. These cost categories include 1) availability costs (i.e. fixed or capacity related costs); 2) customer costs; and 3) variable or flow related costs. A general basis for the assignment of the net revenue requirements is as follows:

1. Availability Costs (Monthly Base Charge) - Those costs incurred to establish a state of readiness to serve, and maintain the wastewater system capable of meeting the total combined demands of the customers. Such costs are generally fixed in nature and typically include portions of the operating expenses (especially labor costs), certain capital expenditures, and other costs that do not vary materially with the quantity of flow or cannot be designated specifically as variable costs. These costs may also be related to contractual obligations such as debt service payments that must be fulfilled whether or not the system operates.

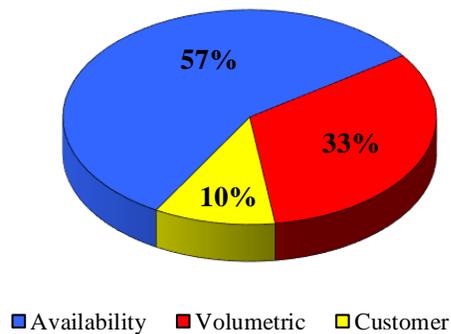
2. Customer Costs (Customer Charge) – Those costs that are directly related to providing administrative and customer service functions. The applicable costs may include such items as customer accounting, meter reading, preparing and mailing

utility billing statements, and a portion of the labor expenses. Generally, these costs are incurred on a customer/event basis (i.e. reading a meter, mailing a billing statement, etc.) and have no direct relation with the amount of capacity made available to a customer or the level of service provided.

3. Variable Costs (Volumetric Rates) - Those costs that vary substantially or directly with the amount of service provided. Common variable costs include such flow or service-related items as chemicals, electricity, maintenance and certain other portions of the budgeted operating expenses.

The rate category criteria described above are generally applied to the individual cost items in the budgeted revenue requirements in order to allocate the costs to each rate component. These

FIGURE 1
ALLOCATION OF REVENUE REQUIREMENTS
WASTEWATER SYSTEM



allocations are then utilized to further develop the user rates and charges. The allocation of the net revenue requirements to the various rate components is summarized in **Figure 1** and detailed in **Exhibit 3**.

It should be noted that strict allocations pursuant to the above criteria or rate components often result in an unreasonably high minimum monthly charge since many of the utility costs are inherently fixed in nature. Therefore, in designing the wastewater rates, certain considerations are made with regard to rate-

making allocations in order to more uniformly provide reasonable and acceptable levels for each rate component. While providing for such considerations may result in rate components that vary from the strict cost of service application, the objectives of cost recovery and equity are maintained. The other rate-making considerations are detailed in the rate calculation sections later in the Report.

In addition, although the cost analysis has identified a separate allocation for customer related costs, in order to maintain consistency with the existing rate structure, the user rates and charges developed herein will not include a separate customer billing charge. As such, for rate design purposes, these costs will be recovered as necessary from the two remaining rate components.

CUSTOMERS AND BILLABLE FLOW

The wastewater rate study performed herein is heavily reliant upon a detailed analysis of the system customers and accompanying usage characteristics. The existing utility customer base and metered/billable flows provide the determinants utilized in calculating the monthly user rates and charges, and become the foundation for projecting future revenues generated by the wastewater system.

It is important to note that the customer and flow analysis focuses primarily on the customer classifications that will be impacted by the user rates and charges to be developed in the Report. This consists of the general service (retail) customers that currently pay for utility services pursuant to the existing user rates and charges as previously detailed. For the purpose of the rate study, it is these customers and their accompanying flows that will generate revenues based upon the proposed user rates and charges.

Customer Billing Analysis

For the purpose of the rate study, detailed information was provided for each individual customer for the period from January 2013 through November 2017 that offered a breakdown of the wastewater customer by class, water meter size, billed flows and charges. The historical billing data was queried from the electronic billing records of both ICWD and SJWD for the time period described. An analysis of the billing data was conducted in order to obtain an understanding of the existing customers, customer classes, and billable flows per customer class. In addition, the historical billing data provides a basis to estimate future customer growth trends within each class. In accordance with the data, as well as discussions with City staff, the wastewater system provides service to various identifiable retail customer classes consisting of:

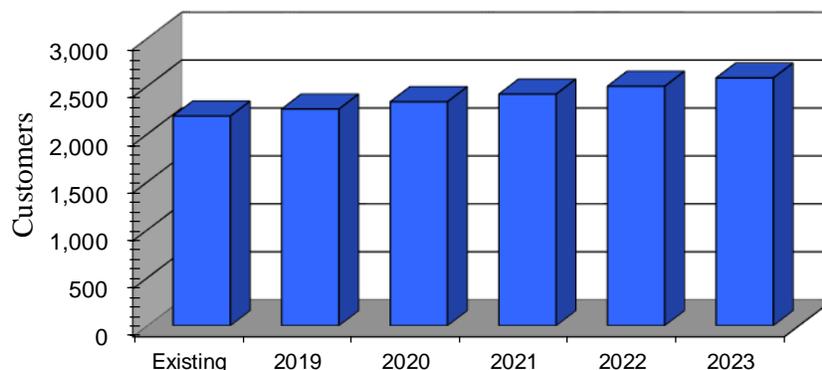
- Residential;
- Commercial;
- Industrial; and
- School Districts.

Each of these customer classes embodies certain common characteristics that provide the basis for establishing an equitable allocation of system costs. The billing data was utilized to identify the number of customer accounts within each class, the applicable ERUs based on water meter size, and the metered/billable flow profiles.

Customer Accounts

An account is defined as a single connection to the System, regardless of customer class or connection size. The historical customer data was utilized to establish growth trends for each customer classification. The growth trends were then used to project the average number of accounts/users within each class for the Test Year plus the remaining years of the Projection Period. The existing and projected average customer accounts are summarized in **Figure 2**.

**FIGURE 2
CUSTOMER GROWTH PROJECTIONS
WASTEWATER SYSTEM**



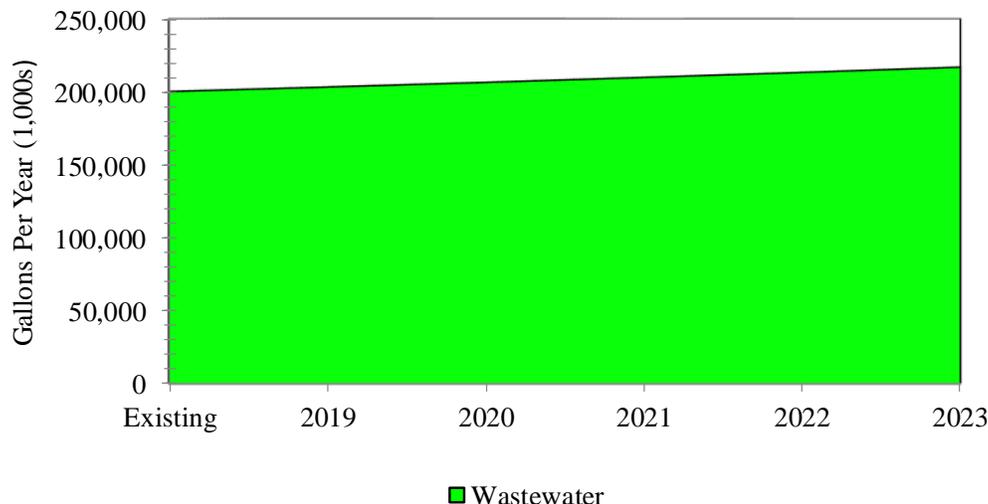
The City has experienced positive customer growth in recent years, particularly within the residential customer class. Based on recent economic expectations in the southeastern real estate markets, as well as discussions with City staff, the estimated customer growth assumptions are consistent with the recent historical trends reflected in the customer data. As such, it is assumed that growth will continue at levels comparable with such recent amounts. The growth assumptions are included in the projected customers illustrated in the previous graph.

Metered/Billable Flow Projections

The customer and billing data also served as the basis for determining the total billable flow and the allocation of the flow among the various customer classes. This information was utilized to estimate the average flow per account for each customer class. Generally, the statistical trends resulting from such an analysis do not vary materially from year to year. As such, the results identified in the analysis are considered as reliable indicators to project future events with respect to flows. The projected revenue-generating wastewater flows are summarized in **Figure 3**.



**FIGURE 3
METERED/BILLABLE FLOW PROJECTIONS
WASTEWATER SYSTEM**



The changes in the annual wastewater flows are consistent with the customer growth assumptions previously addressed. If actual customer growth varies the amounts projected herein, it is anticipated that the future flows will adjust accordingly.

Summary of Customer Analysis

As previously described, the historical billing data was utilized to estimate growth trends that are used to project the system customers in the future. A projection of future customers and billable flows is necessary since these are the primary components utilized in estimating the revenues each year of the Projection Period. The projected customer accounts and billable flows are provided in **Exhibit 4**.

	PROPOSED RATES - FY 2019
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In conjunction with the existing rate structure and the proposed structural modifications previously discussed, the proposed wastewater rates are composed of two rate components consisting of a base charge and volumetric rates. The monthly base charge is based on the size of the water meter and the volumetric rates are charged per 1,000 gallons of billable wastewater flow as determined by the metered water usage. As previously addressed, this type of rate structure meets the City's objectives and provides a reasonable allocation of the cost among the various customer classes pursuant to the demand and usage characteristics determined for each customer class.

The methodology used to calculate the wastewater rates proposed herein involves applying the projected customers and flows to the existing rates in order to develop the estimated revenues, comparing the projected revenues to the estimated Test Year revenue requirements, and adjusting the wastewater rates on a percentage basis as necessary to generate the revenues sufficient to meet the revenue needs of the utility system. The following discussions provide some of the considerations applied in developing the proposed rates.

Base Charges

In general, the monthly base should, to the extent practicable, recover as much of the fixed costs as possible. Such fixed costs include debt service payments, a certain portion of personnel expenses (salaries and benefits) and various other operating costs that are not variable in nature. The monthly base charge is calculated by dividing the total costs allocated to the service availability rate component (fixed costs), as previously determined, among the average number of accounts (the base charge rate determinant) anticipated for the Test Year. While this calculation provides a pure cost-based monthly base charge, there are other factors that must be considered in designing rates in order to satisfy the City's objectives. Such other rate considerations include, but are not limited to:

1. Sensitivity to existing customers - the proposed rates must consider the impact on existing customers and avoid putting an inequitable financial burden on any particular customer class.
2. Comparability with neighboring utilities - the proposed rates should consider, and be relatively comparable to, the rates and charges applied to customers of neighboring utilities of relatively similar size for similar service.
3. Existing rate structure - the proposed rates must consider the logistics and cost/benefit implications of instituting significant changes to the existing rates and rate structure.
4. Economic development - the proposed rates must consider the potential for future development within the City's service area and ensure that the rates do not make it cost-prohibitive for future development.



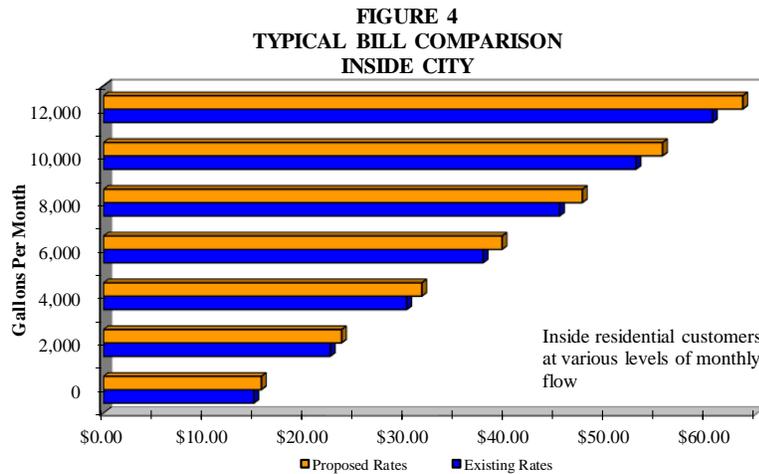
The proposed rates developed herein utilize these considerations, as well as discussions with City staff, professional judgment and prior experience with comparable utility systems. As previously addressed, the goal is to eventually have monthly base charges that are incremented for larger meter sizes in accordance with AWWA/WEF meter equivalency standards. Applying this structure will eliminate the differential between residential and commercial. The monthly base charge will be applied by the size of the water meter, regardless of the customer class. The first stage of such incrementing adjustments is applied to the proposed rates for the Test Year.

Volumetric Rates

The volumetric rates recover the costs allocated to the variable cost component. In addition, the volumetric rates necessarily recover any unrecovered costs allocated to the availability and customer components. The rate determinants associated with the volumetric rates consist of the anticipated amount of billable wastewater flow. In accordance with the City’s existing rate structure, there will be no rate difference based on customer class (with the exception of outside-City industrial). As such, all standard residential and commercial customers are simply referred to as General Service. The proposed wastewater rates for the Test Year are provided in **Table 7**.

TABLE 7 PROPOSED RATES		
Description	Proposed Rates - FY 2019	
	Inside City	Outside City
Minimum Charge:		
5/8 or 3/4 Inch	\$ 15.70	\$ 32.69
1.0 Inch	\$ 20.41	\$ 42.49
1.5 Inch	\$ 28.26	\$ 58.84
2.0 Inch	\$ 37.68	\$ 78.45
3.0 Inch	\$ 62.80	\$ 130.75
4.0 Inch	\$ 91.06	\$ 189.59
6.0 Inch	\$ 169.56	\$ 353.02
8.0 Inch	\$ 263.76	\$ 549.15
Volumetric Per 1,000 Gallons:		
General Service	\$ 3.99	\$ 6.08
Industrial Outside City	n/a	\$ 5.38

TYPICAL MONTHLY BILL COMPARISON



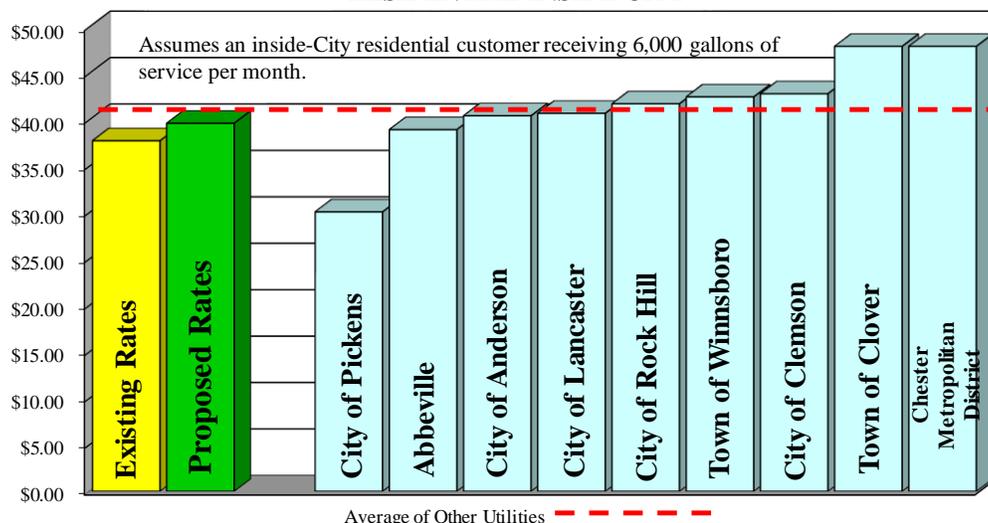
In addition to reviewing the effect that a change in the rates will have on the system revenues, it is also important for utility management to understand the impact that a change will have on the existing customers. **Exhibit 5** provides a comparison of several typical monthly bills for the residential, commercial and industrial customer classes at various flow levels for wastewater under the existing and proposed rates. A

graphical illustration of the typical bill comparison is provided in **Figure 4** for a residential customer with wastewater service. Based on the proposed rates, the typical City customer with monthly flow of 6,000 gallons per month will experience an increase of approximately **\$1.88** per month in their wastewater bill.

RATE COMPARISON WITH NEIGHBORING UTILITIES

In order to provide the City with additional insight regarding the proposed rate levels, the analysis includes a comparison of both the existing and proposed user rates relative to the user rates imposed by other wastewater utility systems located in the same general region of South Carolina as the City. A summary analysis is provided comparing the cost of monthly wastewater service for a typical residential customer (assumed to have a 5/8 x 3/4-inch water meter) calculated under the existing and proposed rates of the City with those of the other neighboring utilities. The rates utilized for the other utilities shown were in effect as of January 2018 and are exclusive of local taxes, outside surcharges, franchise fees or other rate adjustments. A summary comparison with neighboring utilities for a residential customer using 6,000 gallons of service per month is illustrated in **Figure 5**.

**FIGURE 5
COMPARISON WITH OTHER UTILITY SYSTEMS
RESIDENTIAL INSIDE CITY**



It should be noted that when making comparisons for wastewater service, several factors influence the level of rates and charges. Such factors may include:

- 1) Level of treatment and effluent disposal methods of wastewater service;
- 3) Anticipated capital improvement programs and capital financing methods;
- 4) Plant capacity utilization, age of facilities, and assistance in construction by federal or state grants, connection fees, developer contributions, etc;
- 5) General Fund and administrative fee transfers made by municipal systems which may account for differences in the level of rates charged; and
- 6) Bond covenants and funding requirements of the rates.

For the utilities included in the rate comparisons, no analysis has been performed with consideration to the above-mentioned factors as they relate to the reported wastewater rates currently being charged. A more detailed comparison of the City's existing and proposed user rates for a residential customer with a 5/8 x 3/4-inch meter in relation to those imposed by the neighboring utilities is provided in **Exhibit 6**.

	PROJECTED OPERATING RESULTS
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As a conclusion to the study, a proforma operating statement is developed for the wastewater system. The statement is developed in order to summarize the projected financial results based on the system revenues, expenses and other revenue requirements anticipated in future years. The individual operating statements cover the 5-fiscal year Projection Period through June 30, 2023 and are prepared on a cash-flow basis. In addition, the individual statements provide the applicable annual percentage rate adjustments necessary to meet the projected revenue requirements. The annual rate adjustments are considered for wastewater and further separated by the base charge and volumetric rate components. The following discussions describe the development of the major components of the projected operating results.

PROJECTED REVENUES

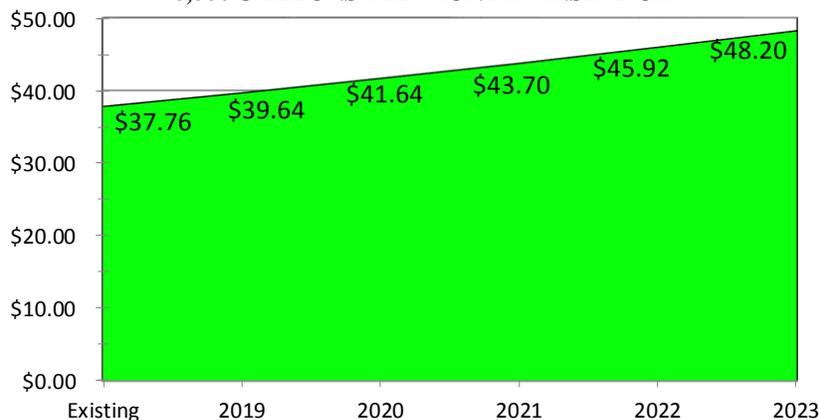
The user rate and charge revenues are estimated by applying the existing and proposed rates to the projected customers and flows. The revenues for the Projection Period are estimated for wastewater and further segmented by rate component and customer class. The resulting revenues are then compared to the projected revenue requirements (i.e. O&M expenses, debt service, capital outlay, transfers, etc) in each fiscal year in order to determine if the revenues are sufficient to satisfy the expenditure needs of the system. To the extent that there are revenue shortfalls, the wastewater rates are adjusted on a percentage basis as necessary to generate the required level of revenues. The projected wastewater revenues are provided in **Exhibit 7**.

The projected revenues include the annual wastewater rate adjustments anticipated for the remaining years of Projection Period beyond the Test Year. The revenues also include annual rate structure adjustments developed in accordance with the proposed phasing plans previously addressed in the Report. The projected wastewater user rates from which the projected operating results are developed for the entire 5-fiscal year Projection Period are provided in **Exhibit 8**.

The projected user rates provided herein for the periods beyond the Test Year are intended for strategic planning purposes and to provide the City with the future rates that may be needed to satisfy the projected cash flow requirements. The rates are developed in accordance with the assumed customer, flow, expenditure and revenue estimates projected in the wastewater rate study. It is important to note that, since it is necessary to utilize a number of assumptions to develop the projected operating results, to the extent that actual customers, flows and/or system expenditures differ from those assumed herein, additional rate adjustments may be required. For informative purposes, a calculation of the typical monthly bill for a representative residential customer based on the projected rates, as well as the accompanying change in the monthly bill for each year of the Projection Period is included in **Exhibit 8**. An illustration of the projected typical bill rate path is provided in **Figure 6**.



**EXHIBIT 6
PROJECTED 5-YEAR RATE PATH
6,000 GALLONS PER MONTH - INSIDE CITY**



PROJECTED REVENUE REQUIREMENTS

As previously discussed, the estimated revenue requirements for the Test Year are developed utilizing the Budget as a basis. The revenue requirements for the Test Year and the remainder of the Projection Period are developed by escalating the budgeted costs on a line-item basis in accordance with assumed future activities and events that may impact the system. The costs associated with certain operating expenses that are typically more variable in nature, such as chemicals and electrical power, are escalated pursuant to various factors based on a combination of estimated customer and/or flow growth, and assumed inflationary forces. Personnel related costs such as employee salaries and benefits are generally escalated based on assumed labor escalator factors that, over the Projection Period, include adjustments in pay and incremental addition of employees as necessary. Certain expenses that do not generally vary with system growth (e.g. telephones, publications, training, etc.) are assumed to either escalate based only on inflation or remain relatively constant. Materials, supplies, general repairs and maintenance expenses generally increase from current levels based on inflationary factors that directly impact the wastewater industry. Such factors are derived on a composite basis from historical analyses of price indices used by many utilities for financial forecasting.

The City’s wastewater system currently has outstanding debt service obligations for various loans. In addition, the City has identified various capital improvement projects that will require funding from new debt during the Projection Period. The estimated future payments associated with the new debt are based on discussions with City staff and are intended for order-of-magnitude planning purposes only. The payment amounts are allocated to each system based upon the proportionate share of capital costs to be funded from the bonds. The addition of the estimated new debt service payments is included in the analysis developed herein. The total projected revenue requirements for the Projection Period are addressed in detail in a previous section of the Report.



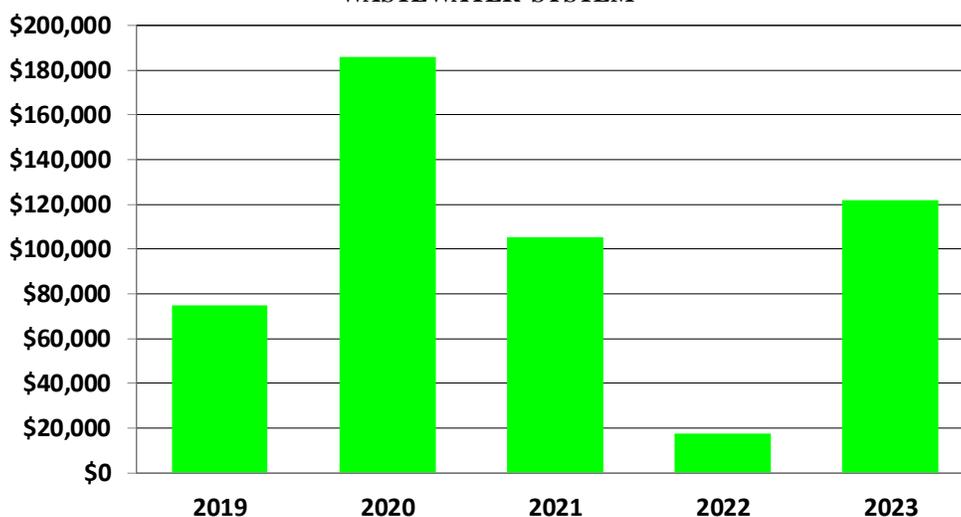
DEBT SERVICE & COVERAGE

The projected operating statement also includes a calculation of the annual debt service coverage. Debt service coverage is generally viewed as an indicator of the financial strength of the utility. The debt service coverage ratio is calculated by dividing the net revenues by the annual debt service requirement for the outstanding and anticipated new debt. For the purpose of the debt service coverage calculation developed herein, the net revenues consist of the total operating revenues (user rate revenues plus other revenues) less the O&M expenses. It is important to note that, while the debt service coverage calculations developed herein are based on the relative flow-of-fund requirements defined in most common revenue bond ordinances, the results are provided for informative purposes only, and not intended as a legally supportable calculation for representation to bondholders.

SUMMARY OF PROJECTED OPERATING RESULTS

The cash-flow statements developing the projected operating results are detailed in **Exhibit 9** for the wastewater operations. The results demonstrate that the proposed rates and charges along with the other system revenues and estimated future rate adjustments are anticipated to be sufficient to satisfy the projected revenue requirements and capital needs of the utility system. A graphical illustration of the projected operating results is provided in **Figure 7**.

**FIGURE 7
PROJECTED OPERATING RESULTS
WASTEWATER SYSTEM**





GENERAL ASSUMPTIONS AND CONSIDERATIONS

In the development of the proposed user rates and charges, certain historical reviews and analyses have been performed, together with the application of assumptions based on prudent financial, operational and ratemaking relationships. The cost criteria and customer usage characteristics associated with general ratemaking procedures are representative of averages and are not intended as indicators of any individual customer.

In the preparation of the rate study, certain assumptions have been made with respect to conditions that may occur in the future. While it is believed that these assumptions are reasonable for the purpose of this update, they are dependent upon future events and actual conditions may differ from those assumed. In addition, the study has used and relied upon certain information that was provided by other parties not associated with Willdan. Such information includes, among other things, the City's audited financial statements, annual operating budgets, periodic reports, and other information and data provided by the City, its independent auditors, and other sources. While the sources are believed to be reliable, there has been no independent verification of the information and no assurances are offered with respect thereto. To the extent that future conditions differ from those assumed herein or provided by others, the actual results may vary from those projected.

CONCLUSIONS

As previously addressed, the purpose of this study is to provide a review of the City's existing utility rates and to determine if rate adjustments are necessary to meet the budgeted and/or projected financial needs in future years. This Report is the result of the collaborative efforts of representatives from both the City and Willdan. The City staff was diligent and cooperative in their efforts to ensure the availability and quality of source data on financial and operating matters. Based on the reviews, analyses and assumptions discussed herein, it is concluded that:

1. The proposed user rates and charges are anticipated to generate sufficient revenues to meet the revenue requirements of the system based upon the projected expenditures, transfers, customers and billable flows estimated for the Test Year. The proposed rates are based on an assumed implementation date of July 1, 2018 (i.e. the beginning of Fiscal Year 2019). To the extent that the implementation date is postponed, additional rate adjustments and/or appropriations from existing reserves may be necessary.
2. The estimated revenues and resulting rate adjustments for the remaining years of the Projection Period beyond the Test Year are developed based on the customer



growth assumptions generated from the historical analyses. If the customer growth projections are not realized, additional rate adjustments may be necessary.

3. Customer account growth for the wastewater system is projected based on historical customer account data as provided by the City as well as discussions with City staff regarding developer activity and anticipated construction. The customer information indicates that the utility system has experienced a certain amount of continued new growth during recent years. As such, for the purpose of the analyses developed herein, it is assumed that growth will continue at levels consistent with recent historical trends.
4. The projection of billable wastewater flows is based on historical trends with regard to the average flow per user for each customer class. The average wastewater flows per account is developed from historical customer data and are assumed to remain relatively constant for the Projection Period. The historical billing data provided by the City was utilized to identify the average flow statistics for system customers. For the analyses developed herein, it is assumed that the average usage statistics for the Projection Period will be consistent with recent historical average usage levels as realized in fiscal years 2013 through 2017, or as otherwise assumed based on discussions with staff. Applying the estimated average usage statistics, it is assumed that the wastewater sales will increase with the estimated growth in customers. However, it is important to note that annual variations in rainfall and other climatological factors may influence the level of future water demands and the accompanying billable wastewater flows for the City.
5. The future rate adjustments assume that the City will not undertake any significant annexations during the Projection Period that would result in a material increase in the operating expenses for the wastewater system, or cause existing outside-City customers to become inside-City customers thereby reducing the revenues from those customers. To the extent that any annexations occur resulting in a significant reduction in outside-City customers, additional rate adjustments may be required.
6. Future capital improvement projects are assumed to occur as reported by the City in its capital improvement program (CIP). To the extent that the timing of such projects may change from that estimated herein, the cost of such projects and resulting impact on future rates and charges may vary from those indicated.
7. Based on an analysis of historical customer billing data, as well as discussions with City staff, there is expected to be continued new development (both residential and non-residential) in the City's service territory. Such new growth will result in the need for additional facilities and expanded system capacity. For growing utility systems, it is prudent and common practice to develop and implement capacity-related charges specifically for equitably funding the additional facility needs caused by new development. Such charges are often referred to as capacity fees and provide a mechanism for growth to pay for itself without placing an

unnecessary financial burden on existing customers. The City does not currently have capacity-related charges to recover the capital costs incurred for the treatment and major transmission capacity that will be made available to future customers. Currently, such capital costs are funded by all existing system customers and recovered through the monthly user rates and charges. As such, the City should consider commissioning a capacity fee study that will develop charges to recover treatment and transmission capital costs, and be applied to all new customers connecting to the wastewater utility systems in accordance with the legislative requirements of the State of South Carolina for the implementation of such charges.

	RECOMMENDATIONS
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Based on the reviews, analyses and assumptions addressed herein, as well as the resulting conclusions provided above, it is respectfully recommended that the City:

1. Adopt the proposed wastewater rates developed herein.
2. Enact the proposed rates to become effective as of July 1, 2018 (fiscal year 2019).
3. Readdress the rate analysis on an annual basis in order to review the assumptions and projections, and make adjustments as required to maintain the financial integrity of the utility system.
4. Conduct a wastewater capacity fee study to establish a funding mechanism such that new customers connecting to the system will pay for the capital facilities associated with growth.

We appreciate the opportunity to be of service to the City in this engagement. In addition, we would like to thank you and the other members of the City staff for the valuable assistance provided during the completion of the rate study.

Respectfully Yours,

WILLDAN FINANCIAL SERVICES



Daryll Parker
Principal Consultant

EXHIBITS 1 - 9

SUPPORTING OUTPUT FOR THE WASTEWATER RATE STUDY



**WASTEWATER RATE STUDY FOR THE
CITY OF INMAN, SOUTH CAROLINA**

Prepared by Willdan Financial Services



EXHIBIT 1
CURRENT BUDGET & APPLICABLE ANALYSIS ADJUSTMENTS
WASTEWATER SYSTEM

Line	Description	Budgeted 2018	Adjustment	Adjusted 2018
PERSONNEL SERVICES				
1	Salaries	\$ 309,481		\$ 309,481
2	Retirement	34,940		34,940
3	FICA Taxes	24,057		24,057
4	Health Insurance	56,249		56,249
5	Workers' Comp.	12,000		12,000
6	Total	\$ 436,727	\$ 0	\$ 436,727
OPERATING EXPENSES				
7	Electricity	\$ 110,000		\$ 110,000
8	Billing Charge	107,000		107,000
9	Chemicals	43,000		43,000
10	Vehicle Insurance	13,000		13,000
11	Supplies & Printing	12,000		12,000
12	Uniforms	10,000		10,000
13	Vehicles Gasoline	10,000		10,000
14	Telephone	10,000		10,000
15	Building Maintenance	8,000		8,000
16	Vehicle Repairs	7,500		7,500
17	Lab Supplies	7,000		7,000
18	Tort Liab. Insurance	6,000		6,000
19	Misc. Supplies	5,000		5,000
20	Postage	1,200		1,200
21	Cleaning Service	900		900
22	Accounting & Legal Fees	25,000		25,000
23	Engineering Fees	110,000		110,000
24	Equipment Repairs	45,000		45,000
25	Contract Lab Testing	40,000		40,000
26	Sludge Land Apply	20,000		20,000
27	Dues, Travel, Training	12,000		12,000
28	Pretreatment	5,000		5,000
29	Plant Insurance	5,000		5,000
30	Contingency	5,000		5,000
31	Water	4,500		4,500
32	DHEC Dues	3,200		3,200
33	Bank Service Fees	1,800		1,800
34	PUPS	600		600
35	Total	\$ 627,700	\$ 0	\$ 627,700
36	TOTAL O&M	\$ 1,064,427	\$ 0	\$ 1,064,427

EXHIBIT 1
CURRENT BUDGET & APPLICABLE ANALYSIS ADJUSTMENTS
WASTEWATER SYSTEM

Line	Description	Budgeted 2018	Adjustment	Adjusted 2018
NON-OPERATING				
Debt Service:				
37	Dprctn,Rural Dvlp,Conting,BB&T	\$ 397,094	\$ (397,094)	\$ 0
38	Sewer System Refunding Bond, Series 2017 (BQ)	0	100,527	100,527
39	USDA Loan 1	0	152,124	152,124
40	USDA Loan 2	0	51,984	51,984
41	USDA Loan 3	0	51,504	51,504
42	Total Debt Service	\$ 397,094	\$ (40,955)	\$ 356,139
Other Expenditures & Transfers:				
43	Lines & Pumps	\$ 90,000	\$ 0	\$ 90,000
44	New Equipment-CAPITAL	80,000	0	80,000
45	General Fund Transfer	0	60,000	60,000
46	Total Other Expenditures	\$ 170,000	\$ 60,000	\$ 230,000
47	TOTAL NON-OPERATING	\$ 567,094	\$ 19,045	\$ 586,139
48	TOTAL EXPENDITURES	\$ 1,631,521	\$ 19,045	\$ 1,650,566
REVENUES				
49	Customer Volume	\$ 1,000,000	\$ (1,000,000)	\$ 0
50	Sewer Net Assets Appropriated	257,086	(257,086)	0
51	Milliken Industrial	250,000	(250,000)	0
52	Phelps Dodge	35,000	(35,000)	0
53	Chesnee WWTP	30,500	(30,500)	0
54	School District 1	30,335	(30,335)	0
55	Connection Fees	22,000	0	22,000
56	Interest Income	3,600	0	3,600
57	Milliken	2,000	0	2,000
58	Misc Income	1,000	0	1,000
59	Total Revenues	\$ 1,631,521	\$ (1,602,921)	\$ 28,600
NET REVENUE REQUIREMENT				
Revenues Needed From User Rates:				
60	O&M Expenses	\$ 1,064,427	\$ 0	\$ 1,064,427
61	Non-Operating Expenses	567,094	19,045	586,139
62	TOTAL EXPENDITURES	\$ 1,631,521	\$ 19,045	\$ 1,650,566
63	Less System Revenues	(1,631,521)	1,602,921	(28,600)
64	NET REVENUE REQUIREMENT	\$ 0	\$ 1,621,966	\$ 1,621,966

**EXHIBIT 2
PROJECTED REVENUE REQUIREMENTS
WASTEWATER SYSTEM**

Line	Description	Budget 2018	Escalation Reference	Test Year 2019	Projected For Fiscal Year Ending June 30:			
					2020	2021	2022	2023
PERSONNEL SERVICES								
1	Salaries	\$ 309,481	Labor	\$ 324,960	\$ 341,208	\$ 358,268	\$ 376,181	\$ 394,990
2	Retirement	34,940	Labor	36,690	38,525	40,451	42,474	44,598
3	FICA Taxes	24,057	Labor	25,260	26,523	27,849	29,241	30,703
4	Health Insurance	56,249	Labor	59,060	62,013	65,114	68,370	71,789
5	Workers' Comp.	12,000	Labor	12,600	13,230	13,892	14,587	15,316
6	Total	<u>\$ 436,727</u>		<u>\$ 458,570</u>	<u>\$ 481,499</u>	<u>\$ 505,574</u>	<u>\$ 530,853</u>	<u>\$ 557,396</u>
OPERATING EXPENSES								
7	Electricity	\$ 110,000	Utilities/Fuel	\$ 118,800	\$ 128,304	\$ 138,568	\$ 149,653	\$ 161,625
8	Billing Charge	107,000	Customer	110,570	114,263	118,102	122,141	126,282
9	Chemicals	43,000	Infl/Flow	45,440	48,016	50,758	53,692	56,790
10	Vehicle Insurance	13,000	General	13,390	13,792	14,206	14,632	15,071
11	Supplies & Printing	12,000	General	12,360	12,731	13,113	13,506	13,911
12	Uniforms	10,000	General	10,300	10,609	10,927	11,255	11,593
13	Vehicles Gasoline	10,000	Utilities/Fuel	10,800	11,664	12,597	13,605	14,693
14	Telephone	10,000	Customer	10,330	10,675	11,034	11,411	11,798
15	Building Maintenance	8,000	General	8,240	8,487	8,742	9,004	9,274
16	Vehicle Repairs	7,500	Infl/Cust	7,980	8,494	9,043	9,633	10,258
17	Lab Supplies	7,000	Infl/Flow	7,400	7,820	8,267	8,745	9,250
18	Tort Liab. Insurance	6,000	General	6,180	6,365	6,556	6,753	6,956
19	Misc. Supplies	5,000	M&S	5,130	5,258	5,389	5,524	5,662
20	Postage	1,200	Infl/Cust	1,280	1,362	1,450	1,545	1,645
21	Cleaning Service	900	General	930	958	987	1,017	1,048
22	Accounting & Legal Fees	25,000	General	25,750	26,523	27,319	28,139	28,983
23	Engineering Fees	110,000	Infl/Cust	117,080	124,620	132,670	141,320	150,492
24	Equipment Repairs	45,000	Infl/Flow	47,550	50,246	53,115	56,185	59,427
25	Contract Lab Testing	40,000	Infl/Flow	42,270	44,667	47,217	49,946	52,828
26	Sludge Land Apply	20,000	Infl/Flow	21,130	22,328	23,603	24,967	26,408
27	Dues, Travel, Training	12,000	General	12,360	12,731	13,113	13,506	13,911
28	Pretreatment	5,000	Customer	5,170	5,343	5,523	5,712	5,906
29	Plant Insurance	5,000	Infl/Cust	5,320	5,663	6,029	6,422	6,839
30	Contingency	5,000	Customer	5,170	5,343	5,523	5,712	5,906
31	Water	4,500	Utilities/Fuel	4,860	5,249	5,669	6,123	6,613
32	DHEC Dues	3,200	Billable Flow	3,280	3,365	3,453	3,546	3,641
33	Bank Service Fees	1,800	General	1,850	1,906	1,963	2,022	2,083
34	PUPS	600	General	620	639	658	678	698
35	Total	<u>\$ 627,700</u>		<u>\$ 661,540</u>	<u>\$ 697,421</u>	<u>\$ 735,594</u>	<u>\$ 776,394</u>	<u>\$ 819,591</u>
36	TOTAL O&M	<u>\$ 1,064,427</u>		<u>\$ 1,120,110</u>	<u>\$ 1,178,920</u>	<u>\$ 1,241,168</u>	<u>\$ 1,307,247</u>	<u>\$ 1,376,987</u>

**EXHIBIT 2
PROJECTED REVENUE REQUIREMENTS
WASTEWATER SYSTEM**

Line	Description	Budget 2018	Escalation Reference	Test Year 2019	Projected For Fiscal Year Ending June 30:			
					2020	2021	2022	2023
NON-OPERATING								
Debt Service:								
37	Sewer System Refunding Bond, Serie	\$ 100,527	<i>Debt</i>	\$ 100,527	\$ 100,527	\$ 100,527	\$ 100,527	\$ 100,527
38	USDA Loan 1	152,124	<i>Debt</i>	152,124	152,124	152,124	152,124	152,124
39	USDA Loan 2	51,984	<i>Debt</i>	51,984	51,984	51,984	51,984	51,984
40	USDA Loan 3	51,504	<i>Debt</i>	51,504	51,504	51,504	51,504	51,504
41	Future Debt	0	<i>Debt</i>	0	0	200,349	400,698	400,698
42	Total Debt Service	<u>\$ 356,139</u>		<u>\$ 356,139</u>	<u>\$ 356,139</u>	<u>\$ 556,488</u>	<u>\$ 756,837</u>	<u>\$ 756,837</u>
Other Expenditures & Transfers:								
43	Lines & Pumps	\$ 90,000	O&M	\$ 94,730	\$ 99,703	\$ 104,967	\$ 110,551	\$ 116,443
44	New Equipment-CAPITAL	80,000	O&M	84,200	88,621	93,300	98,264	103,501
45	General Fund Transfer	60,000	O&M	63,150	66,465	69,974	73,697	77,625
46	Total	<u>\$ 230,000</u>		<u>\$ 242,080</u>	<u>\$ 254,789</u>	<u>\$ 268,241</u>	<u>\$ 282,512</u>	<u>\$ 297,569</u>
47	TOTAL NON-OPERATING	<u>\$ 586,139</u>		<u>\$ 598,219</u>	<u>\$ 610,928</u>	<u>\$ 824,729</u>	<u>\$ 1,039,349</u>	<u>\$ 1,054,406</u>
48	TOTAL EXPENDITURES	<u>\$ 1,650,566</u>		<u>\$ 1,718,329</u>	<u>\$ 1,789,848</u>	<u>\$ 2,065,897</u>	<u>\$ 2,346,596</u>	<u>\$ 2,431,393</u>
OTHER REVENUES								
49	Connection Fees	\$ 22,000	Constant	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000
50	Interest Income	3,600	Constant	3,600	3,600	3,600	3,600	3,600
51	Milliken	2,000	Constant	2,000	2,000	2,000	2,000	2,000
52	Misc Income	1,000	Customer	1,030	1,064	1,100	1,138	1,177
53	Total Other Revenues	<u>\$ 28,600</u>		<u>\$ 28,630</u>	<u>\$ 28,664</u>	<u>\$ 28,700</u>	<u>\$ 28,738</u>	<u>\$ 28,777</u>
NET REVENUE REQUIREMENT								
Net Revenue Requirement For Projection Period:								
54	O&M Expenses	\$ 1,064,427		\$ 1,120,110	\$ 1,178,920	\$ 1,241,168	\$ 1,307,247	\$ 1,376,987
55	Non-Operating Expenses	586,139		598,219	610,928	824,729	1,039,349	1,054,406
56	Total Expenditures	<u>\$ 1,650,566</u>		<u>\$ 1,718,329</u>	<u>\$ 1,789,848</u>	<u>\$ 2,065,897</u>	<u>\$ 2,346,596</u>	<u>\$ 2,431,393</u>
57	Less Other Revenues	(28,600)		(28,630)	(28,664)	(28,700)	(28,738)	(28,777)
58	Net Requirement	<u>\$ 1,621,966</u>		<u>\$ 1,689,699</u>	<u>\$ 1,761,184</u>	<u>\$ 2,037,197</u>	<u>\$ 2,317,858</u>	<u>\$ 2,402,616</u>

**EXHIBIT 2
PROJECTED REVENUE REQUIREMENTS
WASTEWATER SYSTEM**

Line	Description	Budget 2018	Escalation Reference	Test Year 2019	Projected For Fiscal Year Ending June 30:			
					2020	2021	2022	2023
ESCALATION REFERENCES								
59	Constant Factor		Constant	1.0000	1.0000	1.0000	1.0000	1.0000
60	Labor Escalator Factor		Labor	1.0500	1.0500	1.0500	1.0500	1.0500
61	General Inflation Factor		General	1.0300	1.0300	1.0300	1.0300	1.0300
62	Customer Growth Factor		Customer	1.0330	1.0334	1.0336	1.0342	1.0339
63	Billable Flow Factor		Billable Flow	1.0511	1.0259	1.0263	1.0270	1.0269
64	Inflation/Customer Growth Factor		Infl/Cust	1.0640	1.0644	1.0646	1.0652	1.0649
65	Inflation/Metered Flow Factor		Infl/Flow	1.0826	1.0567	1.0571	1.0578	1.0577
66	Materials & Supplies		M&S	1.0250	1.0250	1.0250	1.0250	1.0250
67	Utilities & Fuel Expense Factor		Utilities/Fuel	1.0800	1.0800	1.0800	1.0800	1.0800
68	O&M Expense Factor		O&M	1.0523	1.0525	1.0528	1.0532	1.0533

EXHIBIT 3
ALLOCATION OF PROJECTED REVENUE REQUIREMENTS
WASTEWATER SYSTEM

Line	Description	Test Year 2019	Percentage Allocation			Allocation Amount		
			Availability	Volumetric	Customer	Availability	Volumetric	Customer
PERSONNEL SERVICES								
1	Salaries	\$ 324,960	75.00%	20.00%	5.00%	\$ 243,720	\$ 64,992	\$ 16,248
2	Retirement	36,690	75.00%	20.00%	5.00%	27,517	7,338	1,835
3	FICA Taxes	25,260	75.00%	20.00%	5.00%	18,945	5,052	1,263
4	Health Insurance	59,060	75.00%	20.00%	5.00%	44,295	11,812	2,953
5	Workers' Comp.	12,600	75.00%	20.00%	5.00%	9,450	2,520	630
6	Total	\$ 458,570				\$ 343,927	\$ 91,714	\$ 22,929
OPERATING EXPENSES								
7	Electricity	\$ 118,800	0.00%	100.00%	0.00%	\$ 0	\$ 118,800	\$ 0
8	Billing Charge	110,570	0.00%	0.00%	100.00%	0	0	110,570
9	Chemicals	45,440	0.00%	100.00%	0.00%	0	45,440	0
10	Vehicle Insurance	13,390	100.00%	0.00%	0.00%	13,390	0	0
11	Supplies & Printing	12,360	50.00%	0.00%	50.00%	6,180	0	6,180
12	Uniforms	10,300	100.00%	0.00%	0.00%	10,300	0	0
13	Vehicles Gasoline	10,800	0.00%	100.00%	0.00%	0	10,800	0
14	Telephone	10,330	50.00%	0.00%	50.00%	5,165	0	5,165
15	Building Maintenance	8,240	75.00%	25.00%	0.00%	6,180	2,060	0
16	Vehicle Repairs	7,980	50.00%	50.00%	0.00%	3,990	3,990	0
17	Lab Supplies	7,400	0.00%	100.00%	0.00%	0	7,400	0
18	Tort Liab. Insurance	6,180	100.00%	0.00%	0.00%	6,180	0	0
19	Misc. Supplies	5,130	100.00%	0.00%	0.00%	5,130	0	0
20	Postage	1,280	25.00%	0.00%	75.00%	320	0	960
21	Cleaning Service	930	100.00%	0.00%	0.00%	930	0	0
22	Accounting & Legal Fees	25,750	100.00%	0.00%	0.00%	25,750	0	0
23	Engineering Fees	117,080	50.00%	50.00%	0.00%	58,540	58,540	0
24	Equipment Repairs	47,550	25.00%	75.00%	0.00%	11,887	35,663	0
25	Contract Lab Testing	42,270	0.00%	100.00%	0.00%	0	42,270	0
26	Sludge Land Apply	21,130	0.00%	100.00%	0.00%	0	21,130	0
27	Dues, Travel, Training	12,360	100.00%	0.00%	0.00%	12,360	0	0
28	Pretreatment	5,170	0.00%	100.00%	0.00%	0	5,170	0
29	Plant Insurance	5,320	50.00%	50.00%	0.00%	2,660	2,660	0
30	Contingency	5,170	100.00%	0.00%	0.00%	5,170	0	0
31	Water	4,860	0.00%	100.00%	0.00%	0	4,860	0
32	DHEC Dues	3,280	0.00%	100.00%	0.00%	0	3,280	0
33	Bank Service Fees	1,850	50.00%	0.00%	50.00%	925	0	925
34	PUPS	620	100.00%	0.00%	0.00%	620	0	0
35	Total	\$ 661,540				\$ 175,677	\$ 362,063	\$ 123,800
36	TOTAL O&M	\$1,120,110				\$ 519,604	\$ 453,777	\$ 146,729
DEPARTMENTAL O&M ALLOCATION						46.40%	40.50%	13.10%

EXHIBIT 3
ALLOCATION OF PROJECTED REVENUE REQUIREMENTS
WASTEWATER SYSTEM

Line	Description	Test Year 2019	Percentage Allocation			Allocation Amount		
			Availability	Volumetric	Customer	Availability	Volumetric	Customer
NON-OPERATING								
Debt Service:								
37	Sewer System Refunding Bond, S	\$ 100,527	100.00%	0.00%	0.00%	\$ 100,527	\$ 0	\$ 0
38	USDA Loan 1	152,124	100.00%	0.00%	0.00%	152,124	0	0
39	USDA Loan 2	51,984	100.00%	0.00%	0.00%	51,984	0	0
40	USDA Loan 3	51,504	100.00%	0.00%	0.00%	51,504	0	0
41	Other Future Debt	0	100.00%	0.00%	0.00%	0	0	0
42	Total Debt Service	\$ 356,139				\$ 356,139	\$ 0	\$ 0
Other Expenditures & Transfers:								
43	Lines & Pumps	\$ 94,730	46.40%	40.50%	13.10%	\$ 43,954	38,366	12,410
44	New Equipment-CAPITAL	84,200	46.40%	40.50%	13.10%	39,069	34,101	11,030
45	General Fund Transfer	63,150	46.40%	40.50%	13.10%	29,302	25,576	8,273
46	Total	\$ 242,080				\$ 112,325	\$ 98,043	\$ 31,713
47	TOTAL NON-OPERATING	\$ 598,219				\$ 468,464	\$ 98,043	\$ 31,713
48	TOTAL EXPENDITURES	\$1,718,329	57.50%	32.10%	10.40%	\$ 988,068	\$ 551,820	\$ 178,442
OTHER REVENUES								
49	Connection Fees	22,000	100.00%	0.00%	0.00%	22,000	0	0
50	Interest Income	3,600	57.50%	32.10%	10.40%	2,070	1,156	374
51	Milliken	2,000	57.50%	32.10%	10.40%	1,150	642	208
52	Misc Income	1,030	46.40%	40.50%	13.10%	478	417	135
53	Total Other Revenues	\$ 28,630				\$ 25,698	\$ 2,215	\$ 717
Net Revenue Requirement:								
54	O&M Expenses	\$1,120,110				\$ 519,604	\$ 453,777	\$ 146,729
55	Non-Operating Expenses	598,219				468,464	98,043	31,713
56	Total Expenditures	\$1,718,329				\$ 988,068	\$ 551,820	\$ 178,442
57	Less Other Revenues	(28,630)				(25,698)	(2,215)	(717)
58	Net Requirement	\$1,689,699				\$ 962,370	\$ 549,605	\$ 177,725

**EXHIBIT 4
PROJECTED CUSTOMERS & FLOWS
WASTEWATER SYSTEM**

Line	Description	Existing 2017	Estimated 2018	Projected For Fiscal Year Ending June 30:				
				2019	2020	2021	2022	2023
Customer Accounts:								
1	710 - ICWD Inside Residential	877	921	967	1,015	1,066	1,119	1,175
2	711 - ICWD Inside Commercial	127	127	127	127	127	127	127
3	715 - ICWD School District 1	9	9	9	9	9	9	9
4	720 - ICWD Outside Residential	812	837	862	888	915	942	970
5	721 - ICWD Outside Commercial	27	26	26	26	26	26	26
6	SJWD Outside Residential	259	262	264	266	268	270	272
7	SJWD Outside Commercial	5	5	5	5	5	5	5
8	Total	2,117	2,187	2,260	2,336	2,416	2,498	2,584
Billable Flows:								
9	710 - ICWD Inside Residential	35,942,300	38,172,600	40,052,100	42,013,400	44,097,300	46,262,900	48,551,000
10	711 - ICWD Inside Commercial	12,928,900	13,325,500	13,325,500	13,325,500	13,325,500	13,325,500	13,325,500
11	715 - ICWD School District 1	7,056,200	6,848,600	6,848,600	6,848,600	6,848,600	6,848,600	6,848,600
12	720 - ICWD Outside Residential	35,985,500	38,275,400	39,386,000	40,541,000	41,740,500	42,939,900	44,183,800
13	721 - ICWD Outside Commercial	10,465,500	10,983,200	10,983,200	10,983,200	10,983,200	10,983,200	10,983,200
14	SJWD Outside Residential	10,036,447	10,556,092	10,636,673	10,717,254	10,797,835	10,878,416	10,958,996
15	SJWD Outside Commercial	296,369	311,563	311,563	311,563	311,563	311,563	311,563
16	Total	112,711,216	118,472,955	121,543,636	124,740,517	128,104,498	131,550,079	135,162,659

**EXHIBIT 5
TYPICAL MONTHLY BILL COMPARISON
WASTEWATER SYSTEM**

Line	Meter Size	Monthly Flow (Gal)	Monthly Charges		Difference	
			Existing	Proposed	\$Amount	Percent
WASTEWATER						
Residential:						
1	3/4 Inch	0	\$ 14.96	\$ 15.70	\$ 0.74	4.95%
2	3/4 Inch	1,000	\$ 18.76	\$ 19.69	\$ 0.93	4.96%
3	3/4 Inch	2,000	\$ 22.56	\$ 23.68	\$ 1.12	4.96%
4	3/4 Inch	3,000	\$ 26.36	\$ 27.67	\$ 1.31	4.97%
5	3/4 Inch	4,000	\$ 30.16	\$ 31.66	\$ 1.50	4.97%
6	3/4 Inch	5,000	\$ 33.96	\$ 35.65	\$ 1.69	4.98%
7	3/4 Inch	6,000	\$ 37.76	\$ 39.64	\$ 1.88	4.98%
8	3/4 Inch	7,000	\$ 41.56	\$ 43.63	\$ 2.07	4.98%
9	3/4 Inch	8,000	\$ 45.36	\$ 47.62	\$ 2.26	4.98%
10	3/4 Inch	10,000	\$ 52.96	\$ 55.60	\$ 2.64	4.98%
11	3/4 Inch	12,000	\$ 60.56	\$ 63.58	\$ 3.02	4.99%
12	3/4 Inch	14,000	\$ 68.16	\$ 71.56	\$ 3.40	4.99%
13	3/4 Inch	16,000	\$ 75.76	\$ 79.54	\$ 3.78	4.99%
14	3/4 Inch	18,000	\$ 83.36	\$ 87.52	\$ 4.16	4.99%
15	3/4 Inch	20,000	\$ 90.96	\$ 95.50	\$ 4.54	4.99%
Commercial:						
16	5/8 Inch	10,000	\$ 61.76	\$ 55.60	\$ (6.16)	-9.97%
17	5/8 Inch	20,000	\$ 99.76	\$ 95.50	\$ (4.26)	-4.27%
18	5/8 Inch	30,000	\$ 137.76	\$ 135.40	\$ (2.36)	-1.71%
19	1.0 Inch	40,000	\$ 175.76	\$ 175.30	\$ (0.46)	-0.26%
20	1.0 Inch	50,000	\$ 213.76	\$ 215.20	\$ 1.44	0.67%
21	1.0 Inch	75,000	\$ 308.76	\$ 314.95	\$ 6.19	2.00%
22	2.0 Inch	100,000	\$ 403.76	\$ 414.70	\$ 10.94	2.71%
23	2.0 Inch	125,000	\$ 498.76	\$ 514.45	\$ 15.69	3.15%
24	2.0 Inch	150,000	\$ 593.76	\$ 614.20	\$ 20.44	3.44%
25	3.0 Inch	200,000	\$ 783.76	\$ 813.70	\$ 29.94	3.82%
26	3.0 Inch	250,000	\$ 973.76	\$ 1,013.20	\$ 39.44	4.05%
27	3.0 Inch	300,000	\$ 1,163.76	\$ 1,212.70	\$ 48.94	4.21%
28	4.0 Inch	400,000	\$ 1,543.76	\$ 1,611.70	\$ 67.94	4.40%
29	4.0 Inch	500,000	\$ 1,923.76	\$ 2,010.70	\$ 86.94	4.52%
30	4.0 Inch	600,000	\$ 2,303.76	\$ 2,409.70	\$ 105.94	4.60%

EXHIBIT 6
RATE COMPARISON WITH NEIGHBORING UTILITY SYSTEMS ⁽¹⁾
WASTEWATER SYSTEM

Line	Description	Wastewater	Proposed is Higher/(Lower)	
			\$ Amount	Percent
City of Inman:				
1	Existing Rates	\$ 37.76		
2	Proposed Rates	\$ 39.64		
Difference:				
3	Amount	\$ 1.88		
4	Percent	4.98%		
Neighboring Utility Systems: ⁽²⁾				
5	City of Pickens	\$ 30.10	\$ 9.54	31.69%
6	Abbeville	\$ 38.96	\$ 0.68	1.75%
7	City of Anderson	\$ 40.45	\$ (0.81)	-2.00%
8	City of Lancaster	\$ 40.71	\$ (1.07)	-2.63%
9	City of Rock Hill	\$ 41.74	\$ (2.10)	-5.03%
10	Town of Winnsboro	\$ 42.48	\$ (2.84)	-6.69%
11	City of Clemson	\$ 42.82	\$ (3.18)	-7.43%
12	Town of Clover	\$ 47.92	\$ (8.28)	-17.28%
13	Chester Metropolitan District	\$ 47.92	\$ (8.28)	-17.28%
14	Average of Neighboring Systems	\$ 41.46	\$ (1.82)	-4.39%

(1) Assumes an inside single-family residential customer with a 5/8 X 3/4-inch water meter using 6,000 gallons of service per month.

(2) The rates utilized for the other neighboring utilities shown were in effect as of January 2018 as reported by each respective local government.

**EXHIBIT 7
PROJECTED USER RATE REVENUES
WASTEWATER SYSTEM**

Line	Description	Existing 2018	Existing 2019	Proposed 2019	Projected For Fiscal Year Ending June 30:			
					2020	2021	2022	2023
SEWER REVENUES								
Monthly Base Charge Revenues:								
1	710 - ICWD Inside Residential	\$ 165,338	\$ 173,596	\$ 182,767	\$ 202,198	\$ 223,232	\$ 247,097	\$ 272,862
2	711 - ICWD Inside Commercial	36,210	36,210	27,016	31,640	36,579	42,064	47,903
3	715 - ICWD School District 1	2,566	2,566	3,843	6,297	8,969	11,925	15,127
4	720 - ICWD Outside Residential	315,985	325,423	342,342	368,961	397,211	430,990	469,172
5	721 - ICWD Outside Commercial	11,875	11,875	10,585	14,614	19,253	24,105	28,880
6	SJWD Outside Residential	98,910	99,665	103,562	107,922	112,399	118,163	124,685
7	SJWD Outside Commercial	2,283	2,283	1,775	2,221	2,716	3,209	3,667
8	Total	\$ 633,167	\$ 651,618	\$ 671,890	\$ 733,853	\$ 800,359	\$ 877,553	\$ 962,296
Volumetric Rates Revenues:								
9	710 - ICWD Inside Residential	\$ 145,060	\$ 152,200	\$ 159,800	\$ 176,040	\$ 194,020	\$ 213,730	\$ 235,480
10	711 - ICWD Inside Commercial	50,640	50,640	53,170	55,840	58,630	61,560	64,630
11	715 - ICWD School District 1	26,020	26,020	27,330	28,700	30,140	31,640	33,210
12	720 - ICWD Outside Residential	204,400	210,330	239,470	291,080	346,450	392,040	428,580
13	721 - ICWD Outside Commercial	58,650	58,650	66,780	78,850	91,160	100,280	106,540
14	SJWD Outside Residential	56,370	56,800	64,670	76,950	89,620	99,320	106,300
15	SJWD Outside Commercial	1,670	1,670	1,900	2,240	2,590	2,840	3,020
16	Total	\$ 542,810	\$ 556,310	\$ 613,120	\$ 709,700	\$ 812,610	\$ 901,410	\$ 977,760
Combined Revenues:								
17	710 - ICWD Inside Residential	\$ 310,398	\$ 325,796	\$ 342,567	\$ 378,238	\$ 417,252	\$ 460,827	\$ 508,342
18	711 - ICWD Inside Commercial	86,850	86,850	80,186	87,480	95,209	103,624	112,533
19	715 - ICWD School District 1	28,586	28,586	31,173	34,997	39,109	43,565	48,337
20	720 - ICWD Outside Residential	520,385	535,753	581,812	660,041	743,661	823,030	897,752
21	721 - ICWD Outside Commercial	70,525	70,525	77,365	93,464	110,413	124,385	135,420
22	SJWD Outside Residential	155,280	156,465	168,232	184,872	202,019	217,483	230,985
23	SJWD Outside Commercial	3,953	3,953	3,675	4,461	5,306	6,049	6,687
24	Total	\$1,175,977	\$1,207,928	\$1,285,010	\$1,443,553	\$1,612,969	\$1,778,963	\$1,940,056

**EXHIBIT 8
PROJECTED USER RATES & CHARGES
WASTEWATER SYSTEM**

Line	Description	Existing 2018	Proposed 2019	Projected For Fiscal Year Ending June 30:			
				2020	2021	2022	2023
Inside Residential Monthly Base Charge							
1	5/8 or 3/4 Inch	\$ 14.96	\$ 15.70	\$ 16.50	\$ 17.30	\$ 18.20	\$ 19.10
2	1.0 Inch	\$ 14.96	\$ 20.41	\$ 26.40	\$ 32.87	\$ 40.04	\$ 47.75
3	1.5 Inch	\$ 14.96	\$ 28.26	\$ 42.90	\$ 58.82	\$ 76.44	\$ 95.50
4	2.0 Inch	\$ 14.96	\$ 37.68	\$ 62.70	\$ 89.96	\$ 120.12	\$ 152.80
5	3.0 Inch	\$ 14.96	\$ 62.80	\$ 115.50	\$ 173.00	\$ 236.60	\$ 305.60
6	4.0 Inch	\$ 14.96	\$ 91.06	\$ 174.90	\$ 266.42	\$ 367.64	\$ 477.50
7	6.0 Inch	\$ 14.96	\$ 169.56	\$ 339.90	\$ 525.92	\$ 731.64	\$ 955.00
8	8.0 Inch	\$ 14.96	\$ 263.76	\$ 537.90	\$ 837.32	\$1,168.44	\$1,528.00
9	10.0 Inch	\$ 14.96	\$ 405.06	\$ 834.90	\$1,304.42	\$1,823.64	\$2,387.50
Meter Factors Inside Residential:							
10	5/8 or 3/4 Inch	1.00	1.00	1.00	1.00	1.00	1.00
11	1.0 Inch	1.00	1.30	1.60	1.90	2.20	2.50
12	1.5 Inch	1.00	1.80	2.60	3.40	4.20	5.00
13	2.0 Inch	1.00	2.40	3.80	5.20	6.60	8.00
14	3.0 Inch	1.00	4.00	7.00	10.00	13.00	16.00
15	4.0 Inch	1.00	5.80	10.60	15.40	20.20	25.00
16	6.0 Inch	1.00	10.80	20.60	30.40	40.20	50.00
17	8.0 Inch	1.00	16.80	32.60	48.40	64.20	80.00
18	10.0 Inch	1.00	25.80	50.60	75.40	100.20	125.00
Outside Residential Monthly Base Charge							
19	5/8 or 3/4 Inch	\$ 31.46	\$ 32.69	\$ 33.81	\$ 34.95	\$ 36.47	\$ 38.20
20	1.0 Inch	\$ 31.46	\$ 42.49	\$ 54.09	\$ 66.40	\$ 80.24	\$ 95.50
21	1.5 Inch	\$ 31.46	\$ 58.84	\$ 87.90	\$ 118.82	\$ 153.19	\$ 191.00
22	2.0 Inch	\$ 31.46	\$ 78.45	\$ 128.47	\$ 181.72	\$ 240.72	\$ 305.60
23	3.0 Inch	\$ 31.46	\$ 130.75	\$ 236.66	\$ 349.46	\$ 474.15	\$ 611.20
24	4.0 Inch	\$ 31.46	\$ 189.59	\$ 358.37	\$ 538.17	\$ 736.75	\$ 955.00
25	6.0 Inch	\$ 31.46	\$ 353.02	\$ 696.46	\$1,062.36	\$1,466.21	\$1,910.00
26	8.0 Inch	\$ 31.46	\$ 549.15	\$1,102.16	\$1,691.39	\$2,341.55	\$3,056.00
27	10.0 Inch	\$ 31.46	\$ 843.33	\$1,710.71	\$2,634.93	\$3,654.57	\$4,775.00

**EXHIBIT 8
PROJECTED USER RATES & CHARGES
WASTEWATER SYSTEM**

Line	Description	Existing 2018	Proposed 2019	Projected For Fiscal Year Ending June 30:			
				2020	2021	2022	2023
Inside Commercial Monthly Base Charge							
28	5/8 or 3/4 Inch	\$ 23.76	\$ 15.70	\$ 16.50	\$ 17.30	\$ 18.20	\$ 19.10
29	1.0 Inch	\$ 23.76	\$ 20.41	\$ 26.40	\$ 32.87	\$ 40.04	\$ 47.75
30	1.5 Inch	\$ 23.76	\$ 28.26	\$ 42.90	\$ 58.82	\$ 76.44	\$ 95.50
31	2.0 Inch	\$ 23.76	\$ 37.68	\$ 62.70	\$ 89.96	\$ 120.12	\$ 152.80
32	3.0 Inch	\$ 23.76	\$ 62.80	\$ 115.50	\$ 173.00	\$ 236.60	\$ 305.60
33	4.0 Inch	\$ 23.76	\$ 91.06	\$ 174.90	\$ 266.42	\$ 367.64	\$ 477.50
34	6.0 Inch	\$ 23.76	\$ 169.56	\$ 339.90	\$ 525.92	\$ 731.64	\$ 955.00
35	8.0 Inch	\$ 23.76	\$ 263.76	\$ 537.90	\$ 837.32	\$1,168.44	\$1,528.00
36	10.0 Inch	\$ 23.76	\$ 405.06	\$ 834.90	\$1,304.42	\$1,823.64	\$2,387.50
Outside Commercial Monthly Base Charge							
37	5/8 or 3/4 Inch	\$ 38.06	\$ 26.41	\$ 29.85	\$ 33.29	\$ 36.13	\$ 38.20
38	1.0 Inch	\$ 38.06	\$ 34.33	\$ 47.76	\$ 63.24	\$ 79.48	\$ 95.50
39	1.5 Inch	\$ 38.06	\$ 47.53	\$ 77.61	\$ 113.17	\$ 151.73	\$ 191.00
40	2.0 Inch	\$ 38.06	\$ 63.38	\$ 113.42	\$ 173.08	\$ 238.44	\$ 305.60
41	3.0 Inch	\$ 38.06	\$ 105.63	\$ 208.94	\$ 332.85	\$ 469.65	\$ 611.20
42	4.0 Inch	\$ 38.06	\$ 153.16	\$ 316.39	\$ 512.59	\$ 729.77	\$ 955.00
43	6.0 Inch	\$ 38.06	\$ 285.20	\$ 614.88	\$1,011.87	\$1,452.31	\$1,910.00
44	8.0 Inch	\$ 38.06	\$ 443.64	\$ 973.06	\$1,611.00	\$2,319.35	\$3,056.00
45	10.0 Inch	\$ 38.06	\$ 681.31	\$1,510.33	\$2,509.70	\$3,619.93	\$4,775.00
Surcharge Factors:							
46	Outside Residential	2.103	2.082	2.049	2.020	2.004	2.000
47	Inside Commercial	1.588	1.000	1.000	1.000	1.000	1.000
48	Outside Commercial	1.602	1.682	1.809	1.924	1.985	2.000
49	AWWA Meter Factors	Yes					
50	Phase In Term - 5 Years	5.00	20.00%	40.00%	60.00%	80.00%	100.00%
51	Target Outside City Surcharge Factor	2.00					
Volumetric Rates Per 1,000 Gallons:							
52	Inside City Residential	\$ 3.80	\$ 3.99	\$ 4.19	\$ 4.40	\$ 4.62	\$ 4.85
53	Outside City Residential	\$ 5.34	\$ 6.08	\$ 7.18	\$ 8.30	\$ 9.13	\$ 9.70
54	Inside City Commercial	\$ 3.80	\$ 3.99	\$ 4.19	\$ 4.40	\$ 4.62	\$ 4.85
55	Outside City Commercial	\$ 5.34	\$ 6.08	\$ 7.18	\$ 8.30	\$ 9.13	\$ 9.70
56	Industries Outside City	\$ 5.12	\$ 5.38	\$ 5.65	\$ 5.94	\$ 6.24	\$ 6.55
57	School District One	\$ 3.80	\$ 3.99	\$ 4.19	\$ 4.40	\$ 4.62	\$ 4.85

**EXHIBIT 8
PROJECTED USER RATES & CHARGES
WASTEWATER SYSTEM**

Line	Description	Existing 2018	Proposed 2019	Projected For Fiscal Year Ending June 30:			
				2020	2021	2022	2023
Volumetric Rate Factors:							
58	Inside City Residential	1.000	1.000	1.000	1.000	1.000	1.000
59	Outside City Residential	1.405	1.524	1.714	1.886	1.977	2.000
60	Inside City Commercial	1.000	1.000	1.000	1.000	1.000	1.000
61	Outside City Commercial	1.405	1.524	1.714	1.886	1.977	2.000
62	Industries Outside City	1.347	1.348	1.349	1.350	1.350	1.350
63	School District One	1.000	1.000	1.000	1.000	1.000	1.000
64	Outside City Phase-Up Decision (Y/N)	Yes					
65	Phase In Term - 5 Years	5.00	20.00%	40.00%	60.00%	80.00%	100.00%
TYPICAL MONTHLY BILL							
66	Average Monthly Flow (Gallons)	6,000	6,000	6,000	6,000	6,000	6,000
Monthly Sewer Bill - General:							
67	Monthly Base Charge	\$ 14.96	\$ 15.70	\$ 16.50	\$ 17.30	\$ 18.20	\$ 19.10
68	Volumetric Charge	22.80	23.94	25.14	26.40	27.72	29.10
69	Total	\$ 37.76	\$ 39.64	\$ 41.64	\$ 43.70	\$ 45.92	\$ 48.20
Change From the Prior Year:							
	\$ Amount		\$ 1.88	\$ 2.00	\$ 2.06	\$ 2.22	\$ 2.28
	Percentage		4.98%	5.05%	4.95%	5.08%	4.97%

Notes:

- (1) The projected user rates provided herein for the periods beyond the Test Year are intended for strategic planning purposes only. The rates were developed pursuant to the customer, usage, expenditure and revenue estimates projected in the rate study. It is not currently proposed that the County adopt any of the rates beyond those developed for the Test Year as defined in the Report. Although it is necessary to utilize assumed future rates to develop the projected operating results, to the extent that actual customers, usage and/or system expenditures differ from those assumed herein, additional rate adjustments may be required.

**EXHIBIT 9
PROJECTED OPERATING RESULTS
WASTEWATER SYSTEM**

Line	Description	Existing Rates 2019	Projected For Fiscal Year Ending June 30:				
			2019	2020	2021	2022	2023
USER RATE REVENUES							
1	Base Charges	\$ 651,618	\$ 671,890	\$ 733,853	\$ 800,359	\$ 877,553	\$ 962,296
2	Volumetric Rates	556,310	613,120	709,700	812,610	901,410	977,760
3	Subtotal Retail Revenues	\$ 1,207,928	\$ 1,285,010	\$ 1,443,553	\$ 1,612,969	\$ 1,778,963	\$ 1,940,056
4	Milliken Industrial	371,547	391,207	411,792	433,918	456,887	480,684
5	Phelps Dodge	38,507	41,256	44,277	47,541	50,995	54,627
6	Chesnee WWTP	46,671	47,111	47,569	48,060	48,568	49,093
	Subtotal Industrial Revenues	\$ 456,725	\$ 479,574	\$ 503,638	\$ 529,519	\$ 556,449	\$ 584,404
7	Total User Rate Revenues	\$ 1,664,653	\$ 1,764,584	\$ 1,947,191	\$ 2,142,488	\$ 2,335,412	\$ 2,524,460
PERCENTAGE RATE ADJUSTMENT							
8	Base Charges		5.00%	5.00%	5.00%	5.00%	5.00%
9	Volumetric Rates		5.00%	5.00%	5.00%	5.00%	5.00%
OTHER REVENUES							
10	Connection Fees	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000
11	Interest Income	3,600	3,600	3,600	3,600	3,600	3,600
12	Milliken	2,000	2,000	2,000	2,000	2,000	2,000
13	Misc Income	1,030	1,030	1,064	1,100	1,138	1,177
14	Total Other Revenues	\$ 28,630	\$ 28,630	\$ 28,664	\$ 28,700	\$ 28,738	\$ 28,777
15	TOTAL REVENUES	\$ 1,693,283	\$ 1,793,214	\$ 1,975,855	\$ 2,171,188	\$ 2,364,150	\$ 2,553,237
O&M EXPENSES							
16	Personnel Services	\$ 458,570	\$ 458,570	\$ 481,499	\$ 505,574	\$ 530,853	\$ 557,396
17	Operating Expenses	661,540	661,540	697,421	735,594	776,394	819,591
18	Total O&M	\$ 1,120,110	\$ 1,120,110	\$ 1,178,920	\$ 1,241,168	\$ 1,307,247	\$ 1,376,987
19	Net Revenues	\$ 573,173	\$ 673,104	\$ 796,935	\$ 930,020	\$ 1,056,903	\$ 1,176,250
DEBT SERVICE							
20	Sewer System Refunding Bond, Se	\$ 100,527	\$ 100,527	\$ 100,527	\$ 100,527	\$ 100,527	\$ 100,527
21	USDA Loan 1	152,124	152,124	152,124	152,124	152,124	152,124
22	USDA Loan 2	51,984	51,984	51,984	51,984	51,984	51,984
23	USDA Loan 3	51,504	51,504	51,504	51,504	51,504	51,504
24	Future Debt	0	0	0	200,349	400,698	400,698
25	Total Debt Service	\$ 356,139	\$ 356,139	\$ 356,139	\$ 556,488	\$ 756,837	\$ 756,837
26	REMAINING BALANCE	\$ 217,034	\$ 316,965	\$ 440,796	\$ 373,532	\$ 300,066	\$ 419,413
OTHER EXPENDITURES & TRANSFERS							
27	Lines & Pumps	\$ 94,730	\$ 94,730	\$ 99,703	\$ 104,967	\$ 110,551	\$ 116,443
28	New Equipment-CAPITAL	84,200	84,200	88,621	93,300	98,264	103,501
29	General Fund Transfer	63,150	63,150	66,465	69,974	73,697	77,625
30	Transfer (From) Reserves	0	0	0	0	0	0
31	Total Other Expenditures	\$ 242,080	\$ 242,080	\$ 254,789	\$ 268,241	\$ 282,512	\$ 297,569
32	FINAL BALANCE	\$ (25,046)	\$ 74,885	\$ 186,007	\$ 105,291	\$ 17,554	\$ 121,844
33	DEBT SERVICE COVERAGE	1.61	1.89	2.24	1.67	1.40	1.55
RESERVE BALANCES							
Unrestricted Reserves:							
34	Beginning Fund Balance		\$ 939,205	\$ 570,157	\$ 756,164	\$ 732,815	\$ 750,369
35	Less Capital Expenditures		(443,933)	0	(128,640)	0	0
36	Remaining Operating Balance		74,885	186,007	105,291	17,554	121,844
37	Ending Fund Balance		\$ 570,157	\$ 756,164	\$ 732,815	\$ 750,369	\$ 872,213