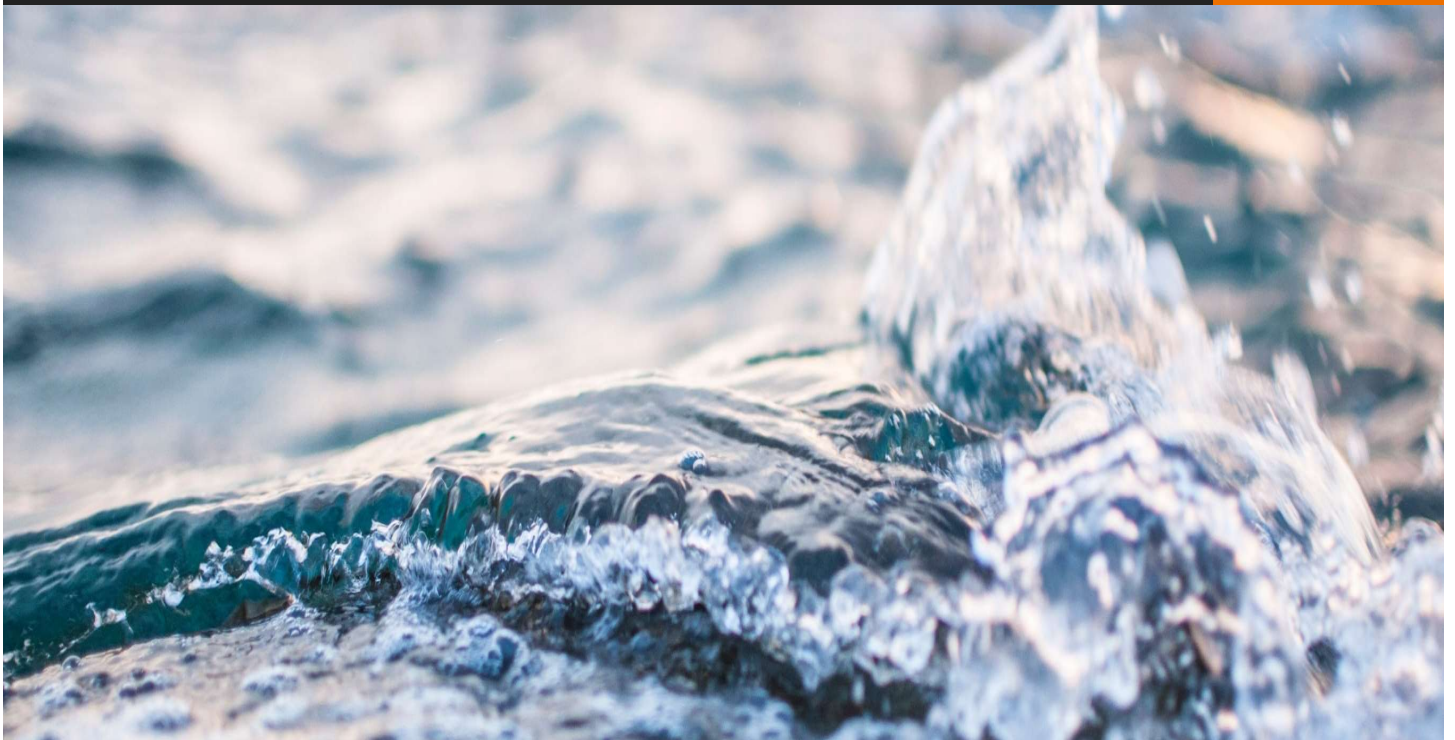




City of Mebane, NC

Water and Sewer System Development Fee Study

March 6, 2024





March 6, 2024

Franz Holt, PE
City Engineer
City of Mebane, NC
106 E Washington Street
Mebane, NC 27302

Re: Water and Sewer System
Development Fee Study

Dear Mr. Holt,

Stantec is pleased to present this Final Report on the Water and Sewer System Development Fee Study that we performed for the City of Mebane, North Carolina. We appreciate the professional assistance provided by you and all of the members of the City staff who participated in the Study.

If you have any questions, please do not hesitate to call us at (202) 585-6391. We appreciate the opportunity to be of service to the City and look forward to the possibility of doing so again in the near future.

Sincerely,

A handwritten signature in black ink, appearing to read "David A. Hyder".

David A. Hyder
Senior Principal

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Washington DC 20004
(202) 585-6391
David.hyder@stantec.com

Enclosure

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1. INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has conducted a Water and Sewer System Development Fee Study (Study) for the City of Mebane’s water and sewer systems (hereafter referred to as the “City” or “Utility”). This report presents the results of the comprehensive Study, including background information, legal requirements, an explanation of the calculation methodology employed, and the results of the analysis.

1.1 BACKGROUND

A system development fee is a one-time charge paid by a new customer to recover a portion the cost of constructing water and sewer system capacity. The fees are also often assessed to existing customers requiring increased system capacity. In general, system development fees are based upon the costs of utility infrastructure including, but not limited to, water supply facilities, treatment facilities, effluent disposal facilities, and transmission mains. System development fees serve as the mechanism by which growth can “pay its own way” and minimize the extent to which existing customers must bear the cost of facilities that will be used to serve new customers.

The City currently assesses water and sewer system development fees based on an analysis completed in June of 2021. The City has retained the services of Stantec to calculate updated system development fees for each system in accordance with the North Carolina Public Water and Sewer System Development Fee Act, set forth in North Carolina General Statute 162A, Article 8.

1.2 LEGAL REQUIREMENTS

The Public Water and Sewer System Development Fee Act (“SDF Act”) was approved on July 20th, 2017 and grants local government entities that own or operate municipal water and sewer systems the authority to assess system development fees for the provision of utility service to new development.

The SDF Act defines new development as 1) subdivision of land, 2) construction or change to existing structure that increases service needs or 3) any use of land which increased service needs within 1 year (no longer than 12 months) of a development fee being adopted.

According to the SDF Act the following procedural requirements need to be followed in order to adopt a system development fee:

- **Requirement 1:** The fee should be calculated in a written analysis (“SDF Analysis”) prepared by a financial professional or licensed professional engineer (qualified by experience and training or education) who employs generally accepted accounting, engineering, and planning methodologies to calculate system development fees for water and sewer systems, including the buy-in, incremental cost or marginal cost, and combined costs methods for each service; and that (1) documents the facts and data used in the analysis and their sufficiency and reliability; (2) provides analysis regarding the selection of the appropriate method of analysis; (3) documents

and demonstrates reliable application of the methodology to the facts and data, including all reasoning, analysis, and interim calculations underlying each identifiable component of the system development fee; (4) identifies all assumptions and limiting conditions affecting the analysis and demonstrates that they do not materially undermine the reliability of the conclusions reached; (5) calculates a system development fee per service unit of new development and includes an equivalency or conversion table to use in determining the fees applicable for various categories of demand; and (6) covers a planning horizon of between 5 and 20 years.

- **Requirement 2:** The system development fee analysis must be posted on the City’s website, and the City must solicit comments and provide a means by which people can submit their comments, for a period of at least 45 days.
- **Requirement 3:** Comments received from the public must be considered by preparer of the system development fee analysis for possible adjustments to the analysis.
- **Requirement 4:** The City Council must hold a public hearing prior to considering adoption of the system development fees including any adjustments made as part of the comments received by the City.
- **Requirement 5:** The City must publish the system development fee schedule as part of its annual budget or fee ordinance.
- **Requirement 7:** The City cannot adopt a fee that is higher than the fee calculated by the professional analysis.
- **Requirement 6:** The City must update the system development fee analysis at least every five years.

In addition to the procedural requirements listed above, the SDF Act provides specific requirements pertaining to the calculation of the system development fees. These requirements are highlighted within the body of this report in concert with the calculation of the system development fees for the City. Further, the City must follow the SDF Act guidance when actually charging the system development fee: it may be charged only to “new development” and only at the time specified in the legislation; and new development must be given a credit for costs in excess of the development’s proportionate share of connecting facilities required to be oversized for use of others outside of the development.

1.3 GENERAL METHODOLOGY

There are three primary approaches to the calculation of system development fees, all of which are outlined within the SDF Act. Each of the approaches are discussed below.

Buy-In Method

This approach determines the system development fees solely on the existing utility system assets. Specifically, the replacement cost of each system’s major functional components serve as the cost basis for the system development fee calculation. This approach is most appropriate for a system with

considerable excess capacity, such that most new connections to the system will be served by that existing excess capacity and the customers are effectively “buying-in” to the existing system.

Incremental/Marginal Cost Method

The second approach is to use the portion of each system’s multi-year capital improvement program (CIP) associated with the provision of additional system capacity by functional system component as the cost basis for the development fee calculation. This approach is most appropriate where 1) the existing system has limited or no excess capacity to accommodate growth, and 2) the CIP contains a significant number of projects that provide additional system capacity for each functional system component representative of the cost of capacity for the entire system.

Combined Cost Method

The third approach is a combination of the two previous approaches described. This approach is most appropriate when 1) there is excess capacity in the current system that will accommodate some growth, but additional capacity is needed in the short-term as reflected in each system’s CIP, and 2) the CIP includes a significant number of projects that will provide additional system capacity but does not necessarily have a sufficient number of projects in each functional area to be reflective of a total system.

While the SDF Act allows for the use of any one of the three methodologies discussed above, it specifies restrictions on how the revenues generated by the fees calculated using each methodology may be utilized. Table 1-1 summarizes each of the three methodologies, their typical application, and restriction of how the revenues can be utilized for each.

Table 1-1 Description of Methodologies & Restriction to Proceeds

Methodology / Approach:	Description:	Fee Proceeds Allowed for:
Buy-In Method	New development shares in <u>capital costs previously incurred</u> which provided capacity for demand arriving with new development needs.	Expansion and/or rehabilitation projects. Since the buy-in method reimburses the system for certain past investments, proceeds can be utilized for all types of capital projects.
Incremental / Marginal Cost	New development share in <u>capital costs to be incurred in the future</u> which will provide capacity for demand arriving with new development needs.	Professional services costs in development of new fees and expansion costs (construction costs, debt service, capital, land purchase, other costs etc.) related to new development only. If no capital projects in next five years can be used for debt related to existing assets.

Methodology / Approach:	Description:	Fee Proceeds Allowed for:
Combined Cost	Combination of Buy-In and Incremental / Marginal Cost methods	May be expended for previously completed capital improvements for which capacity exists and for capital rehabilitation projects.

Given that the City has existing capacity within the water system and limited plans for expansion of the water system over the planning period, the Buy-In approach methodology was chosen for the calculation of the system development fee for the water system. For the sewer system the Combined approach methodology was selected since the sewer system has capacity to sell, while at the same time, significant sewer capital spending is planned over the next 10 years. To comply with the SDF Act, the City will revisit the methodology at least every five years to determine if the methodology for each system is still the most appropriate methodology to use.

2. BASIS OF ANALYSIS

The following section outlines the calculation of the system development fees using the Buy-In approach for the water system and the Combined approach for the sewer system. It should be noted that using the Combined approach, requires a Buy-in calculation and an Incremental Cost calculation. Therefore, the discussion regarding the Buy-In approach applies to both the water and sewer systems but the incremental component only applies to the sewer. The following outlines the process to determine the net value (cost basis) for each system.

- 1) The existing system assets are analyzed to determine the replacement cost new less depreciation (RCNLD) of the City's existing major water and sewer system components.
- 2) Any non-core system assets are excluded from the existing system value including items such as vehicles, meters, computer equipment and other non-core system assets.
- 3) Growth-related capital project spending over the next 10 years as identified in the City's official capital improvement plan is added to the analysis. This includes projects designated to add new capacity to the system, whether partially or entirely.
- 4) Any donated assets and/or assets not funded by the City (funded by grants, developers, etc.) are removed from the system assets (both existing assets and those to be funded by outside sources within the capital improvement plan).
- 5) The assets are further reduced by either the maximum of the outstanding principal on existing debt for each system or at least 25% of the cost of expansion related projects to provide a revenue credit as required by the SDF Act.

The resulting net system value is used in the determination of the system development fee.

The following section outlines the details of the analysis completed during the Study to calculate the water and sewer system development fees.

2.1 BUY-IN NET SYSTEM VALUE

The City provided an asset inventory which included description, asset category/class, year placed in service, original cost, and useful life for each asset through FY 2023 for both the water and sewer systems. These assets were classified by each major system function, and a replacement cost new less depreciation was calculated for each asset record using the data provided by the City and the Engineering News Record Construction Cost Index. Any assets determined to be administrative and serve all systems and functions were split based on the overall allocation of classified assets.

The SDF Act requires that the system development fee calculations include provisions for credits against the value of the system to account for assets that were not funded by the municipality. As such, those items were identified and therefore removed from the determinations of net asset value of each system.

In addition to donated asset, non-core system assets are excluded from the determination of the RCNLD. These include meters, vehicles, equipment, computers, and other. Results of the RCNLD for the City's existing water and sewer systems based upon the asset records provided by City staff are shown in Tables 2-1 and 2-2.

Table 2-1 Replacement Cost New, Less Depreciation: Water System

Asset Category	Source / Treatment	Transmission	Total
RCNLD Value	\$19,198,051	\$30,740,528	\$49,938,579
Allocated Administrative Costs	\$449,122	\$435,405	\$884,527
Total Costs	\$19,647,173	\$31,175,933	\$50,823,106
Less Contributed Assets / Non-Cost Assets	(\$18,748)	(\$12,146,978)	(\$12,165,725)
Net Asset Value	\$19,628,425	\$19,028,955	\$38,657,381

Table 2-2 Replacement Cost New, Less Depreciation: Sewer System

Asset Category	Treatment	Conveyance / Collection	Total
RCNLD Value	\$22,889,594	\$43,543,374	\$66,432,969
Allocated Administrative Costs	\$535,953	\$604,041	\$1,139,994
Total Costs	\$23,425,547	\$44,147,416	\$67,572,963
Less Contributed Assets / Non-Cost Assets	(\$2,265)	(\$17,748,383)	(\$17,750,648)
Net Asset Value	\$23,423,282	\$26,399,032	\$49,822,315

2.2 INCREMENTAL/EXPANSION NET SYSTEM VALUE

The City provided a 10-year capital improvements plan (CIP), which included the project description, total spending, and an indication of whether the project was designated for expansion or rehabilitation. The water system does not currently include capital projects that will provide additional capacity. To calculate the Incremental Cost approach all expansion related projects that would increase capacity were identified. Review of the sewer system CIP revealed that the City currently has four planned capital projects that will expand the capacity of the sewer system at a total cost of approximately \$78 million. A portion of these projects will be funded with grants or outside funding sources. The net portion included in the SDF analysis totals \$65.17 million. Table 2-3 identifies each of the projects that are included in the analysis for the sewer system, the grant funded portion and the net capital included in the analysis.

Table 2-3 Expansion Related Capital Projects for the Sewer System

Project	Function	Total Project Cost	Grant Funded Portion	Growth Related CIP Costs
GKN Force Main Reroute	Collection System	\$1,900,000	\$900,000	\$1,000,000
3 rd Pump at N Regional	Collection System	\$95,000	\$95,000	\$95,000
Jones Rd Outfall	Collection System	\$1,000,000	\$1,000,000	\$1,000,000
WRRF Expansion to 4.0 MGD	Treatment	\$75,000,000	\$11,925,000	\$63,075,000
Total Expansion Costs		\$77,995,000	\$13,920,000	\$65,170,000

The SDF Act requires that the total project costs be reduced by a revenue credit equal to a minimum of 25 percent of the cost of the capital projects included in the analysis when the Combined Cost is utilized. The SDF Act “Minimum Requirements” allow for the credit to be determined by “*either the outstanding debt principal or the present value of projected water and sewer revenues received by the local government unit for the capital improvements.*” For this Study, the revenue credit was determined by removing the net present value of debt principal for the cost of the future capital projects that the Town plans to finance over the 10-year CIP planning period. Specifically, of the \$65.17 million in expansion costs the City plans to finance approximately \$57.9 million. Table 2-4 presents the determination of the net system value of future capital investments given the revenue credit for future debt service.

Table 2-4 New System Value including Revenue Credits

Sewer System	
Total Expansion Costs	\$65,170,000
Net Present Value of Principal Over Planning Period ¹	(\$21,287,111)
Additional Credit to Achieve 25%	(\$-)
Net Incremental Value	\$43,882,889
Revenue Credit (% of Projects)	32.66%

¹Assumes a 20-year term with 5% discount rate

2.3 SYSTEM CAPACITY

2.3.1 Existing System Capacity

The City’s water and sewer systems consist of numerous functional components such as water treatment, source of supply, transmission and storage. Each of the functional components have a physical or regulatory permitted capacity. While treatment, supply, and disposal capacities are readily available and

generally accepted to be the physical or regulatory permitted capacity of such facilities, transmission system capacities are more difficult to quantify.

As such, it is common to define the capacity for all functional components (including the transmission facilities) based on the system's total treatment capacity. This approach was utilized for the determination of the system capacities of the City's utility systems. The rationale behind this decision is that even if the transmission and pumping portion of either system is larger than that system's treatment capacity, the maximum capacity the system can offer to its connections is its total treatment capacity.

The City retains 50% ownership and capacity allocation in the 12.0 million gallon per day ("MGD") Graham-Mebane Lake Water Treatment Facility. However, based on discussions with City staff, the City is only able to deliver 5.2 MGD given finished water pumping capacity. As a result, this capacity of 5.2 MGD was assumed to be the water system capacity for the system development fee analysis.

The City owns and operates the 2.5 MGD Mebane Water Resource and Recovery Facility. Additionally, the City retains a 21.4% capacity allocation (0.75 MGD) in the 3.5 MGD City of Graham Wastewater Treatment Plant, providing a combined sewer system treatment capacity of 3.25 MGD. This combined capacity was used as the existing sewer system capacity for the system development fee analysis.

2.3.2 Added System Capacity

The expansion related capital improvement projects identified in the City's capital plan will all add capacity to the City's sewer system. The sewer projects include the expansion of the City's WRRF by 1.5 MGD. Additionally, the conveyance main projects will allow the City to fully utilize all of the sewer system capacity within the system flowing to the Mebane WRRF and the system flowing to the Graham WWTP. Table 2-5 summarizes the capacity by function used in the combined system development fee calculations.

Table 2-5 System Capacity by Function

	Water Capacity (MGD)		Sewer Capacity (MGD)	
	Source of Supply/ Treatment	Transmission/ Distribution	Treatment	Conveyance / Collection
Current Capacity	5.20	5.20	3.25	3.25
Capacity Expansion	-	-	1.50	1.50
Total System Capacity	5.20	5.20	4.75	4.75

2.4 COST CALCULATION

Table 2-6 summarizes the Buy-In Cost for the water system and the Combined Cost calculation for both the sewer system to allow for the determination of development fee calculation and provides the cost per gallon per day for system capacity based on the total capacity within each system.

Table 2-6 Calculation of Cost per Gallon

	Water	Sewer
Replacement Value of Existing Depreciated Assets	\$50,823,106	\$67,572,963
Expansion Capital Projects	-	\$65,170,000
Total Value	\$50,823,106	\$132,742,963
<i>Less Credits</i>		
Outstanding Debt Principal	(\$7,174,433)	(\$13,035,492)
Donated Assets / Non-Core Assets	(\$12,165,725)	(\$17,750,648)
Revenue Credit (NPV of future debt principal over planning period)	-	(\$21,287,111)
Additional credit to meet 25% requirement ¹	-	-
Net System Value	\$31,482,948	\$80,669,712
System Capacity - Gallons per Day	5,200,000	4,750,000
Cost Gallons Per Day	\$6.05	\$16.98

¹Additional credit not required as shown in Table 2-4

2.5 LEVEL OF SERVICE STANDARDS

The SDF Act requires that system development fees be assessed based on a “Service Unit” which represents a unit of measure of system capacity, typically defined as an equivalent residential unit (ERU). Utilizing this approach, it is possible to define the City’s capacity in units of capacity or ERUs. Expressing the system capacities in terms of ERUs allows for the development of the unit pricing of capacity which is essential for the determination of system development fees. The basis for the determination of the ERU needs to be related to a specific level of service standard utilized by the local government for system engineering and planning purposes. The total system capacity (treatment capacity in million gallons per day for each system) divided by the level of service in gallons per day is equal to the total number of ERUs the City can serve with the system capacity.

The City’s current level of service for the water system is defined as 250 gallons per day per equivalent residential unit (equivalent to a 3-bedroom residential dwelling) or 83 gallons per day per bedroom. The City’s current level of service is defined as 75 gallons per day per bedroom for a typical 3-bedroom unit flowing to the Mebane WRRF as permitted by the North Carolina Department of Environmental Quality (NCDEQ), resulting an ERU level of service of 225 gallons per day. For residential connections flowing to the Graham WWTP the City has used the NCDEQ permitted capacity of 120 gallon per day per bedroom, which has resulted in a differentiated system development fees between the two service areas when assessing the fees to single family development. Given the recent legislation passed by the North Carolina General Assembly that allows for a planning standard of 75 gallons per day per bedroom, Stantec recommends that this standard be used for the determination of system development fees regardless of where the wastewater is treated. This will result in consistent water and sewer system development fees for all new connections. Table 2-7 presents the total ERUs within the water and sewer systems based on

the existing and additional capacity added with the City's capital improvement plan based on the discussed level of service standards.

Table 2-7 System ERUs

	Water	Sewer
System Capacity (gallons)	5,200,000	4,750,000
Level of Service (gpd)	250	225
Total ERUs	20,800	21,111

To determine the system fees for non-residential connections, the City currently scales the fees based on meter size. This approach is consistent with industry standards and is an acceptable means of determining the fees based on potential use of the system as defined by the maximum flow rate of the water meter. Table 2-8 presents the basis for the scaling factors and the resulting ERUs by meter size.

Table 2-8 Equivalent Residential Unit Scaling

Meter Size	Maximum Flow Rate (GPM)	Equivalent Residential Units
3/4"	30	1.00
1"	50	1.67
1 1/2"	100	3.33
2"	160	5.33
3"	350	11.67
4"	630	21.00
6"	1,300	43.33

To determine the system fees for residential connections, the City currently scales the fees based on the number of bedrooms associated with the connection. The proposed scaling based on the discussed level of service standards are shown in Table 2-9.

Table 2-9 Residential Scaling

Bedrooms	Water (Gallons per Day)	Sewer (Gallons per Day)
2 - Bedroom	167	150
3 - Bedroom	250	225
4 - Bedroom	333	300
5 - Bedroom	417	375

3. RESULTS

This section summarizes the results of the Study, the existing and calculated system development fees, and conclusions and recommendations.

3.1 EXISTING WATER AND SEWER SYSTEM DEVELOPMENT FEES

The City currently charges system development by meter size for non-residential customers and by number of bedrooms for residential connections. Additionally, the system development fees are differentiated for residential connections between those served by the Mebane WRRF and those served by the Graham WWTP. The tables below summarize the existing system development fees collected by the City.

Table 3-1 Existing System Fees

Meter Size	Water	Sewer
3/4"	\$1,151	\$2,679
1"	\$1,918	\$4,465
1.5"	\$3,837	\$8,930
2"	\$6,139	\$14,288
4"	\$13,428	\$31,255
6"	\$24,171	\$56,259

Table 3-2 Existing Residential System Development Fees (permitted to Mebane WRRF)

Bedrooms	Water	Sewer
2 - Bedroom	\$760	\$1,768
3 - Bedroom	\$1,151	\$2,679
4 - Bedroom	\$1,531	\$3,563
5 - Bedroom	\$1,911	\$4,447

Table 3-3 Existing Residential System Development Fees (permitted to Graham WWTP)

Bedrooms	Water	Sewer
2 - Bedroom	\$1,151	\$2,679
3 - Bedroom	\$1,727	\$4,019
4 - Bedroom	\$2,302	\$5,358
5 - Bedroom	\$2,878	\$6,698

3.2 CALCULATED WATER AND SEWER SYSTEM DEVELOPMENT FEES

To calculate the system development fees, the total unit cost per gallon for capacity described in Section 2 is multiplied by the level of service standard for an ERU of 250 and 225 gallons per day as demonstrated in Table 3-4.

Table 3-4 System Development Charge per EDU

	Water	Sewer
Cost per Gallon	\$6.05	\$16.98
Per ERU Level of Service (gpd)	250	225
SDF per ERU	\$1,513	\$3,821
Escalation Factor to Effective Year	3%	3%
SDF per ERU	\$1,558	\$3,936

Tables 3-5 and 3-6 provide a schedule of the existing and calculated non-residential water, sewer and combined system development fees respectively based upon the cost and capacity information discussed herein by meter size. The scaling of the system development fee by meter size is intended to reflect the potential demand associated with each meter as described in Section 2.

Table 3-5 Non-Residential Water System Development Fees

Meter size	Current Water SDF	Maximum Allowable Water SDF	Change
3/4" (1 ERU)	\$1,151	\$1,558	\$407
1"	\$1,918	\$2,597	\$679
1 1/2"	\$3,837	\$5,195	\$1,358
2"	\$6,139	\$8,311	\$2,173
3"	\$13,428	\$18,181	\$4,753
4"	\$24,171	\$32,726	\$8,555
6"	\$49,877	\$67,530	\$17,654

Table 3-6 Non-Residential Sewer System Development Fees

Meter size	Current Sewer SDF	Maximum Allowable Sewer SDF	Change
3/4" (1 ERU)	\$2,679	\$3,936	\$1,257
1"	\$4,465	\$6,559	\$2,094
1 1/2"	\$8,930	\$13,119	\$4,189
2"	\$14,288	\$20,990	\$6,702
3"	\$31,255	\$45,916	\$14,661
4"	\$56,259	\$82,648	\$26,389
6"	\$116,090	\$170,544	\$54,454

As mentioned previously, the City currently differentiates system development fees for single family connections based on which wastewater treatment plant serves the connection. The basis for this differentiation is due to the permitted flows per bedroom as defined the NCDEQ. Given the recent legislative changes which allow for the use of a lower planning standard and the fact that the system development fees are based on a system-wide approach (costs are not tracked and determined by system), we would recommend that use of a consistent level of service for all single-family residential connections at 225 gallons per day per ERU for determination of the fees for residential connections. The calculated existing and calculated fees for residential connections by bedrooms are shown in Table 3-7 through 3-10.

Table 3-7 Residential Water System Development Fees - Wastewater Permitted to WRRF

Bedrooms	Current Water SDF	Maximum Allowable Water SDF	Change
2-Bedroom	\$760	\$1,029	\$269
3-Bedroom	\$1,151	\$1,558	\$407
4-Bedroom	\$1,531	\$2,073	\$542
5-Bedroom	\$1,911	\$2,587	\$676

Table 3-8 Residential Water System Development Fees - Wastewater Permitted to Graham

Bedrooms	Current Water SDF	Maximum Allowable Water SDF	Change
2-Bedroom	\$1,151	\$1,029	(\$122)
3-Bedroom	\$1,727	\$1,558	(\$168)
4-Bedroom	\$2,302	\$2,073	(\$229)
5-Bedroom	\$2,878	\$2,587	(\$291)

Table 3-9 Residential Sewer System Development Fees - Wastewater Permitted to WRRF

Bedrooms	Current Sewer SDF	Maximum Allowable Sewer SDF	Change
2-Bedroom	\$1,768	\$2,598	\$829
3-Bedroom	\$2,679	\$3,936	\$1,257
4-Bedroom	\$3,563	\$5,234	\$1,671
5-Bedroom	\$4,447	\$6,533	\$2,086

Table 3-10 Residential Sewer System Development Fees - Wastewater Permitted to Graham

Bedrooms	Current Sewer SDF	Maximum Allowable Sewer SDF	Change
2-Bedroom	\$2,679	\$2,598	(\$81)
3-Bedroom	\$4,019	\$3,936	(\$83)
4-Bedroom	\$5,358	\$5,234	(\$124)
5-Bedroom	\$6,698	\$6,533	(\$164)

It is important to note that the City has discretion regarding the percentage of cost recovery utilized in the establishment of the system development fees. The system development fees can recover any amount up to, but not in excess of, the full cost recovery amounts identified herein.

3.3 CONCLUSIONS AND RECOMMENDATIONS

Based upon the analysis presented herein, we have developed the following conclusions and recommendations:

- 1) We recommend that the City consider the water and sewer system development fees as demonstrated in Tables 3-5, 3-6, 3-7 and 3-9 for adoption. This recommendation includes the adoption of consistent system development fees for all residential connections regardless of service area.
- 2) We recommend that the City review its development fees at least every five years to ensure that it follows requirements established by the SDF Act and to ensure that they remain fair and equitable and continue to reflect its current cost of capacity. As the City continues to expand its facilities, future changes in technology, demands, development patterns, or other factors may necessitate additional adjustments to its development fees.
- 3) We recommend that as part of any system development fee update, the City also evaluates the most appropriate accepted methodology for calculating its system unit cost of capacity as system capacity may change over time.

Disclaimer

This document was produced by Stantec Consulting Services, Inc. (“Stantec”) for the City of Mebane and is based on a specific scope agreed upon by both parties. Stantec’s scope of work and services do not include serving as a “municipal advisor” for purposes of the registration requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission. Stantec is not advising the City of Mebane, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, terms, or other similar matters concerning such products or issuances.

In preparing this report, Stantec utilized information and data obtained from the City of Mebane or public and/or industry sources. Stantec has relied on the information and data without independent verification, except only to the extent such verification is expressly described in this document. Any projections of future conditions presented in the document are not intended as predictions, as there may be differences between forecasted and actual results, and those differences may be material.

Additionally, the purpose of this document is to summarize Stantec’s analysis and findings related to this project, and it is not intended to address all aspects that may surround the subject area. Therefore, this document may have limitations, assumptions, or reliance on data that are not readily apparent on the face of it. Moreover, the reader should understand that Stantec was called on to provide judgments on a variety of critical factors which are incapable of precise measurement. As such, the use of this document and its findings by the City of Mebane should only occur after consultation with Stantec, and any use of this document and findings by any other person is done so entirely at their own risk.

APPENDIX: SUPPORTING SCHEDULES

Schedule 1: Summary of System Fixed Assets & Administration Cost Allocation

Function		Gross RCNLD Asset Value	Contributed Assets	Net RCNLD Asset Value	% of Total	Allocated Admin Costs	Net Asset Value + Allocated Admin
Water	Source/Treatment	\$ 19,198,051	\$ 18,748	\$ 19,179,304	22.18%	\$ 449,122	\$ 19,628,425
Water	Transmission/ Distribution	\$ 30,740,528	\$ 12,146,978	\$ 18,593,550	21.51%	\$ 435,405	\$ 19,028,955
Sewer	Treatment	\$ 22,889,594	\$ 2,265	\$ 22,887,330	26.47%	\$ 535,953	\$ 23,423,282
Sewer	Conyenance/ Collection	\$ 43,543,374	\$ 17,748,383	\$ 25,794,991	29.84%	\$ 604,041	\$ 26,399,032
Total		\$ 116,371,548	\$ 29,916,373	\$ 86,455,175	100%	\$ 2,024,521	\$ 88,479,695

Schedule 2: Capital Improvement Program Listing and Allocations

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Project Name	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Cost	Admin Allocation	Water Allocation	Sewer Allocation	% Growth	Growth Related CIP Cost
2 Meters (8100)	180,000	170,000	180,000	190,000	190,000	200,000	200,000	200,000	200,000	200,000	210,000	\$ 2,120,000	0%	100%	0%	0%	\$ -
3 Utility Oversizing	200,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	\$ 1,200,000	0%	100%	0%	0%	\$ -
4 Replace Sewer By-Pass Hoses	0	6,500	0	0	0	0	0	0	0	0	0	\$ 6,500	0%	100%	0%	0%	\$ -
5 Water Line Replacements	0	234,000	0	0	0	0	200,000	0	0	200,000	0	\$ 634,000	0%	100%	0%	0%	\$ -
6 Bowman - West Ten Road Connector & OAWs Intercon	135,000	0	692,500	93,750	750,000	0	0	0	0	0	0	\$ 1,671,250	0%	100%	0%	0%	\$ -
8 Water Line Rehab	92,377	17,000	250,000	0	0	200,000	0	200,000	200,000	200,000	0	\$ 1,159,377	0%	100%	0%	0%	\$ -
12 NCIC Loop	0	0	0	0	0	0	0	2,000,000	0	0	0	\$ 2,000,000	0%	100%	0%	0%	\$ -
13 Water Plant Capital	375,000	140,750	57,500	240,000	25,000	1,000,000	9,110,750	42,500	38,000	102,500	200,000	\$ 11,332,000	0%	100%	0%	0%	\$ -
14 Pump & Line Upgrades	0	0	0	0	0	0	2,460,000	0	0	0	0	\$ 2,460,000	0%	100%	0%	100%	\$ 2,460,000
15 GKN Force Main Reroute	1,000,000	0	0	0	0	0	0	0	0	0	0	\$ 1,000,000	0%	0%	100%	100%	\$ 1,000,000
16 3rd Pump at N Regional	0	95,000	0	0	0	0	0	0	0	0	0	\$ 95,000	0%	0%	100%	100%	\$ 95,000
17 J & I Repair - Manhole Rehab & Sliplining	0	3,150,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	\$ 7,650,000	0%	0%	100%	0%	\$ -
18 Jones Rd Outfall	0	0	112,500	887,500	0	0	0	0	0	0	0	\$ 1,000,000	0%	0%	100%	100%	\$ 1,000,000
19 Utility Oversizing	150,000	50,000	150,000	150,000	150,000	150,000	50,000	50,000	50,000	50,000	50,000	\$ 1,050,000	0%	0%	100%	0%	\$ -
20 Gravelly Hill Force Main Reroute	0	0	0	798,000	0	0	0	0	0	0	0	\$ 798,000	0%	0%	100%	0%	\$ -
21 GE Pump Station & Force Main Rebuild	50,000	0	0	0	1,250,000	2,000,000	0	0	0	0	0	\$ 3,300,000	0%	0%	100%	0%	\$ -
22 Wal-Mart Pump Station Abandonment	0	0	0	0	500,000	0	0	0	0	0	0	\$ 500,000	0%	0%	100%	0%	\$ -
23 Third Street Outfall	50,000	0	0	0	0	0	1,000,000	0	0	0	0	\$ 1,050,000	0%	0%	100%	0%	\$ -
24 Terrell Street Pump Station Rehab	0	0	0	0	0	0	0	0	1,000,000	0	0	\$ 1,000,000	0%	0%	100%	0%	\$ -
25 Fieldstone Pump Station Rehab	0	0	0	0	0	1,000,000	0	0	0	0	0	\$ 1,000,000	0%	0%	100%	0%	\$ -
27 WRRF Expansion to 4.0 MGD	0	0	63,075,000	0	0	0	0	0	0	0	0	\$ 63,075,000	0%	0%	100%	100%	\$ 63,075,000
28 Graham WWTP Capital Improvements	27,859	86,135	75,440	465,750	23,575	59,800	5,700	10,350	54,050	16,100	50,149	\$ 874,908	0%	0%	100%	0%	\$ -
29 AB Electrical Upgrade - Aerator	11,000	0	0	0	0	0	0	0	0	0	0	\$ 11,000	0%	0%	100%	0%	\$ -
30 Phosphorus Analyzer	0	30,000	0	0	0	0	0	0	0	0	0	\$ 30,000	0%	0%	100%	0%	\$ -
31 Aeration basin nutrient analyzer	0	0	25,000	0	0	0	0	0	0	0	0	\$ 25,000	0%	0%	100%	0%	\$ -
32 Polymer skid	0	0	35,000	0	0	0	0	0	0	0	0	\$ 35,000	0%	0%	100%	0%	\$ -
35 Rotary Drum Thickener Rehab	0	100,000	0	0	0	0	0	0	0	0	0	\$ 100,000	0%	0%	100%	0%	\$ -
36 Aqua Guard Influent Screen Rehab	0	0	0	100,000	0	0	0	0	0	0	0	\$ 100,000	0%	0%	100%	0%	\$ -
37 WAS Pump Replacement	0	0	0	0	0	0	30,000	30,000	0	0	0	\$ 60,000	0%	0%	100%	0%	\$ -
38 Insite IG Online Monitoring Equipment - Aeration Basin # 2	12,720	0	0	0	0	0	0	0	0	0	0	\$ 12,720	0%	0%	100%	0%	\$ -
39 ProMInent Chlorine Analyzer	13,342	0	0	0	0	0	0	0	0	0	0	\$ 13,342	0%	0%	100%	0%	\$ -
40 John Deer Mower	0	12,069	0	0	0	0	0	0	0	0	0	\$ 12,069	0%	0%	100%	0%	\$ -
41 Roof Repair - Thickener Building	40,000	0	0	0	0	0	0	0	0	0	0	\$ 40,000	0%	0%	100%	0%	\$ -
43 Biosolids Planning study	0	0	0	0	0	0	100,000	0	0	0	0	\$ 100,000	0%	0%	100%	0%	\$ -
44 Aqua Aerobics Aerator (2)	0	0	0	0	0	0	0	0	50,000	50,000	50,000	\$ 150,000	0%	0%	100%	0%	\$ -
45 Flow equalization	0	0	0	0	0	0	3,000,000	0	0	0	0	\$ 3,000,000	0%	0%	100%	0%	\$ -
46A Vehicles and Equipment	272,884	155,000	50,000	185,000	80,000	65,000	50,000	50,000	50,000	50,000	50,000	\$ 1,057,884	0%	0%	100%	0%	\$ -
46B Vehicles and Equipment	15,974	653,848	35,000	0	0	0	50,000	150,000	50,000	50,000	100,000	\$ 1,104,822	0%	100%	0%	0%	\$ -
												\$ -				50%	\$ -
Total	\$ 2,626,156	\$ 5,000,302	\$ 65,337,940	\$ 3,710,000	\$ 3,568,575	\$ 5,274,800	\$ 16,856,450	\$ 3,332,850	\$ 2,292,050	\$ 1,518,600	\$ 1,310,149	\$110,827,872					\$ 67,630,000

Schedule 3: Capital Improvement Summary and Funding

Function		Capital Improvement Costs	% of Total	Allocated Admin Cost	Function Costs + Allocated Admin
Water	Source/Treatment	\$ 2,460,000	3.64%	\$ -	\$ 2,460,000
Water	Transmission/ Distribution	\$ -	0.00%	\$ -	\$ -
Sewer	Treatment	\$ 63,075,000	93.26%	\$ -	\$ 63,075,000
Sewer	Conyenance/ Collection	\$ 2,095,000	3.10%	\$ -	\$ 2,095,000
Total Expansion CIP		\$ 67,630,000		\$ -	\$ 67,630,000
Excluded Non-Expansion CIP		\$ 43,197,872			\$ 43,197,872
Total System CIP		\$ 110,827,872			\$ 110,827,872

Schedule 4: Capacity Summaries

Water System Capacity

Source/Treatment		
Water Treatment Plants	Existing Capacity (MGD)	Incremental Capacity (MGD)
Existing Capacity	5.20	0.00
	5.20	0.00

Transmission/ Distribution		
	Capacity (MGD)	Incremental Capacity (MGD)
Transmission Lines	5.20	0.00
	5.20	0.00

Sewer System Capacity

Treatment		
Wastewater Treatment Plants	Capacity (MGD)	Incremental Capacity (MGD)
Existing Capacity	3.25	
Expansion to 4.0		1.50
	3.25	1.50

Conveyance/ Collection		
	Capacity (MGD)	Incremental Capacity (MGD)
Transmission Lines	3.25	1.50
	3.25	1.50

Schedule 5: Water System Development Fee - Buy-In Approach

Functional Component:	Source/Treatment	Transmission/ Distribution	Total
Gross Plant in Service Value	\$ 19,647,173	\$ 31,175,933	\$ 50,823,106
Gross System Value	\$ 19,647,173	\$ 31,175,933	\$ 50,823,106
Less:			
Principal Credit	\$ 2,773,489	\$ 4,400,944	\$ 7,174,433
Specific Asset Contributions/Exclusions	18,748	12,146,978	12,165,725
General Allowance for Asset Contributions/Exclusions	-	-	-
Grants	-	-	-
Net System Value	\$ 16,854,936	\$ 14,628,011	\$ 31,482,948
<i>Fee Calculation:</i>			
Capacity			
Million Gallons Per Day (MGD)	5.20	5.20	
Level of Service (gpd)	250	250	
Equivalent Residential Units	20,800	20,800	
Cost per Gallon	\$ 3.24	\$ 2.81	\$ 6.05
Initial Capacity Cost per ERU	\$ 810	\$ 703	\$ 1,513
Allowance for Contingency	0.00%	\$ 810	\$ 1,513
Percentage of Full Cost Recovery			100.00%
Escalation Factor to Effective Year			3.00%
Calculated Fee per ERU	\$ 834	\$ 724	\$ 1,558
Current Fee per ERU	-	-	1,151
Dollar Change			\$ 407
Percent Change			35%

Schedule 6: Sewer System Development Fee - Combined Approach

Functional Component:	Treatment	Conyenance/ Collection	Total
Gross Plant in Service Value	\$23,425,547	\$44,147,416	\$67,572,963
Total Expansion Capital Projects	\$63,075,000	\$2,095,000	\$65,170,000
Gross System Value	\$86,500,547	\$46,242,416	\$132,742,963
Less:			
Principal Credit	\$4,519,019	\$8,516,473	\$13,035,492
Specific Asset Contributions/Exclusions	\$2,265	\$17,748,383	\$17,750,648
General Allowance for Asset Contributions/Exclusions	-	-	-
Grants (Historical and Future)	-	-	-
Revenue Credit (Principal Future Debt during Planning Period)	21,287,111	-	21,287,111
Additional credit to meet 25% requirement	-	-	-
Net System Value	\$ 60,692,152	\$ 19,977,560	\$ 80,669,712
Revenue Credit % Used in Fee Calculation			32.66%
<i>Fee Calculation:</i>			
Capacity			
Million Gallons Per Day (MGD)	4.75	4.75	
Level of Service (gpd)	225	225	
Equivalent Residential Units	21,111	21,111	
Cost per Gallon	\$ 12.78	\$ 4.21	\$ 16.98
Initial Capacity Cost per ERU	\$ 2,875	\$ 946	\$ 3,821
Allowance for Contingency	0.00%		
Percentage of Full Cost Recovery			100.00%
Escalation Factor to Effective Year			3.00%
Calculated Fee per ERU	\$ 2,961	\$ 974	\$ 3,936
Current Fee per ERU			2,679
Change			\$ 1,257
Percent Change			47%