

Town of Coats, NC

Report

Water System Development Fee Study



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Executive Summary

Introduction

The Town of Coats (the “Town”) retained Willdan Financial Services (Willdan) to conduct a water System Development Fee (SDF) study. The primary objective of this study was to update the water SDF to reflect the cost of providing service to new or expanded development within the Town. The analysis developed herein calculates a cost-based capacity-related charge for new customers connecting to, or requesting additional capacity in, the Town’s water utility system. This Report details the assumptions, methodologies, and calculations upon which the SDF is developed. As documented in this Report, the calculated fees are equitable and represent the proportionate share of capital costs from which new development will directly benefit.

General

SDFs and other comparable charges are often referred to by various terms including impact fees, capacity fees, system expansion fees, availability fees, connection fees, capacity reservation charges, facility fees, capital connection charges or other such terminology. According to N.C.G.S. 162A-201(9) (2023), SDFs are a one-time charge imposed with respect to new development to fund costs of capital improvements necessitated by the development, to recoup costs of existing facilities which serve the new development, and to recoup costs to purchase capacity in the facilities of other local governments. Such capital costs include the construction of facilities as well as engineering, surveys, land, financing, professional fees, and administrative costs. It has become customary practice for water utility systems to implement SDFs (or other similar charges) to establish a source of funding for future capital projects. This practice helps to mitigate the need for existing customers to pay for system expansions entirely through increased user rates.

The objective of the SDF study is to calculate a cost-based fee for new customers connecting to, or requesting additional capacity to, the Town’s water utility system. By establishing a cost-based SDF, the Town is attempting to have new customers pay their equitable share of the system, so that new growth pays its way, and doesn’t negatively impact existing customers.

Use of System Development Fee Revenues

Revenue from the SDF for water facilities can be used to reimburse the Town for prior infrastructure investments and to fund planned future capital projects.

The study is based on the best available information at the time of the report; however, the Town cannot predict with certainty how and when development within the Town will occur during the planning horizon assumed in this study, the Town may need to update and revise the project lists funded by the fees documented in this study. Any substitute projects should

be funded within the same system, and the substitute projects must still benefit and have a relationship to new development. The Town could identify any changes to the projects funded by the fees when it updates the capital improvement plan (CIP). The fees could also be updated if significant changes to the projects funded by the fees are anticipated.

System Development Fee Summary

The water SDFs are based on the **combined cost** methodology since existing infrastructure has sufficient capacity to serve near-term future development but additional infrastructure is needed to add capacity to serve long-term development. The approach used to determine the fees are discussed in detail in **Section 1.3** of the report.

The calculated water SDFs are provided in **Table 1**.

Table 1 – Calculated Water SDFs

Description	Meter Factors ⁽¹⁾	Proposed Fees By Meter Size
Meter Size:		
5/8 x 3/4 Inch	1.00	\$ 2,320
1.0 Inch	2.50	\$ 5,800
1.5 Inch	5.00	\$ 11,600
2.0 Inch	8.00	\$ 18,560
3.0 Inch	16.00	\$ 37,120
4.0 Inch	25.00	\$ 58,000
6.0 Inch	50.00	\$ 116,000
8.0 Inch	80.00	\$ 185,600
Notes:		
(1) Meter-size equivalency factors established by the AWWA and identified in AWWA Standards C700, M1 and M22. Such factors are commonly applied for water fee calculations.		

Section 1 – Introduction

1.1 Criteria for System Development Fees

SDFs are one-time charges that reflect the demands and costs on Town facilities created by new development for additional capacity. The purpose of an SDF is to assign, to the practical extent possible, growth-related capital costs to those customers responsible for such additional costs. To the extent that new population growth imposes identifiable additional capital costs to municipal services, equity and prudent financial practice necessitate the assignment of such costs to those customers or system users responsible for the additional

costs rather than the existing user base. This practice has been labeled as “growth paying for growth” without placing the full cost burden on existing users.

It is important to note that a SDF is different than an assessment or tax. A special assessment is predicated upon an estimated increment in value to the property assessed by virtue of the improvement being constructed in the vicinity of the property. Further, the assessment must be directly and reasonably related to the benefit of which the property receives. SDFs are not related to the value of the improvement to the property but rather to the usage of the facilities required by the property. Until the property is put to purpose (i.e., developed), there is no burden placed upon the servicing facilities and the land use may be entirely unrelated to the value of the assessment basis of the underlying land. With respect to a comparison to taxes, SDFs are distinguishable primarily in the direct relationship between the amount charged and the measurable quantity of public facilities required. In the case of taxation, there is no requirement that the payment be in proportion to the quantity of public services consumed, and funds received by a municipality from taxes can be expended for any legitimate public purpose.

1.2 Legal Considerations

Court Proceedings - General

Courts throughout the United States have found that capacity-related fees associated with new customer connections to utility systems are legal provided they meet a Rational Nexus Test. In accordance with common court rulings, the rational nexus test requires that certain conditions be met to incorporate a valid capacity-related fee. Typically, the court decisions have found that such fees are valid if the following standards are met:

1. The required payment should primarily benefit those who must pay it because they receive a special benefit or service because of improvements made with the proceeds.
2. Proceeds from the required SDF payments are dedicated solely to the capital improvement projects (i.e., proceeds are not placed in a general fund to be spent on ongoing expenses and maintenance, which characterizes a tax, but are set aside in a restricted reserve fund).
3. The revenue generated by the required payment should not exceed the cost of capital improvements to the system.
4. The required payments are imposed uniformly and equitably on all new customers based on their anticipated usage (i.e., a relationship between the fees paid and the benefits received).

In general, most courts have found that it is reasonable for utility systems to take steps to ensure that there are adequate funds for capital projects, and to set aside collected fees in a special account for that purpose. Additionally, new customers are treated alike in that all must pay a fee based on anticipated usage and/or potential demand. Finally, courts have reasoned that it is rational for a utility system to prepare to pay for future capital projects

and, while imposing a capacity-related fee may not be the only way to raise such funds, it is a reasonable and legitimate method of accruing funds.

Court Proceedings – North Carolina

In 1990, a precedent was set in the State of North Carolina in a decision by the United States Court of Appeals, Fourth District for the case of *Shell Island Investment v. Town of Wrightsville Beach North Carolina* (900 F.2d 255), regarding the right of the Town of Wrightsville Beach to impose utility system impact fees to fund the expansion of the water and sewer facilities. The Court of Appeals upheld the decision of the United States District Court for the Eastern District of North Carolina that the Town of Wrightsville Beach had “authority to impose impact and tap fees under the Public Enterprise statute and that no specific enabling legislation is necessary.”

Pursuant to the ruling of the District Court and the Court of Appeals, it was concluded that “despite the absence of any express authorization in the Public Enterprise Statute for municipalities to establish or increase utility fees in order to offset future capital improvements to their sewer and water infrastructures, general authority to do so is implicit in relevant state law, limited only by the requirement that any discrimination among users be not based on arbitrary or unreasonable classifications.”

Court Proceedings – Town of Carthage Case

On April 8, 2016, in the case of *Quality Built Homes, Inc. v. Town of Carthage*, (766 S.E. 2d 897) the North Carolina Court of Appeals held that the Town of Carthage possessed authority to charge “impact fees” for water and sewer services. However, on August 16, 2016, the North Carolina Supreme Court reversed the North Carolina Court of Appeals’ decision and held that the Town did not possess authority to charge impact fees for water and sewer services. Although there were many distinct factors influencing this decision, the result generated a significant amount of confusion and concern for governmental utility systems within the State.

House Bill 436

The General Assembly of North Carolina recently enacted House Bill 436, which included a general statute under Section 1, Chapter 162A, Article 8 for the development of “System Development Fees” (herein referred to as “Chapter 162A”) that impacts all governmental entities in North Carolina who currently assess fees for the recovery of capital costs associated with new development and system growth. As defined in Chapter 162A, a system development fee is a charge or assessment for service imposed with respect to new development to fund costs of capital improvements necessitated by and attributable to such new development, to recoup costs of existing facilities which serve such new development, or a combination of those costs. Based on requirements of Chapter 162A, the calculation of the SDFs must employ generally accepted accounting, engineering, and planning methodologies. Defined methodologies include the buy-in method, incremental or marginal cost method, and combined cost method. A brief description of each of these

methods as defined in American Water Works Association (AWWA) Manual M1 is provided below.

- **Buy-in Method:** Based on the value of the existing system's capacity. Under this method, new development "buys" a proportionate share of capacity at the cost (value) of the existing facilities.
- **Incremental/Marginal Cost Method:** Based on the value or cost to expand the existing system's capacity. This method assigns to new development the incremental cost of future system expansion needed to serve new development.
- **Combined Cost Method:** Based on blended value of both the existing and expanded system capacity. This method uses a combination of both the buy-in and incremental/marginal cost methods.

Chapter 162A allows a governmental unit to utilize any of the three methods described above depending on the availability of information from the governmental unit, i.e., a detailed listing of asset data (buy-in method) or a ten to twenty-year capital improvement plan (incremental method). The combined method includes both existing assets and future capital projects required to serve growth.

Chapter 162A states that SDFs shall be calculated based on a written analysis, which may constitute or be included in a capital plan, that:

1. Is prepared by a financial professional or a licensed professional engineer qualified by experience and training or education to employ generally accepted accounting, engineering, and planning methodologies to calculate system development fees for the public water system.
2. Documents in reasonable detail the facts and data used in the analysis and their sufficiency and reliability.
3. Employs generally accepted accounting, engineering, and planning methodologies, including the buy-in, incremental cost or marginal cost, and combined cost methods for each service, setting forth appropriate analysis as to the consideration and selection of a method appropriate to the circumstances and adapted as necessary to satisfy all requirements of this Article.
4. Documents and demonstrates the reliable application of the methodologies to the facts and data, including all reasoning, analysis, and interim calculations underlying each identifiable component of the system development fee and the aggregate thereof.
5. Identifies all assumptions and limiting conditions affecting the analysis and demonstrates that they do not materially undermine the reliability of conclusions reached.

6. Calculates a final system development fee per service unit of new development and includes an equivalency or conversion table for use in determining the fees applicable for various categories of demand.
7. Covers a planning horizon of not less than 5 years nor more than 20 years.
8. Is adopted by resolution or ordinance of the local governmental unit in accordance with N.C.G.S. 162A-209.
9. Applies the gallons per day per service unit that the local governmental unit applies to its water system engineering or planning purposes for water, as appropriate, in calculating the system development fee.
10. Includes any purchased capacity in, or reserved capacity supplied by, capital improvements or facilities owned by another local government unit as part of the local government unit's overall capacity in capital improvements. (2017-138, S. L.; 2018-34, s. 1(a); 2021-76, S. 2; S.L. 2023-55, § 2(b), eff. June 23, 2023.)

Further, Chapter 162A includes certain other minimum requirements as follows:

1. The fees shall not exceed that calculated based on the SDF analysis.
2. Credits must be included no matter which methodology is used. A more detailed discussion on the applicable credits will be included in later sections of this Report.
3. A construction or contribution credit shall be given with respect to new development such that the governmental unit will credit the value of costs in excess of a development's proportionate share of connecting facilities required to be oversized for the use of others outside the development.

As such, this Report is intended to assess SDFs that meet the legal requirements set forth above to develop fees in accordance with Chapter 162A. The development of the calculated SDFs and applicable analysis assumptions are described throughout the Report.

1.3 Calculation Methodologies

There are three basic methodologies that are used to calculate the various components of SDFs. The methodologies are used to determine the best measure of demand created by new development for each component of the SDFs. The methodologies can be classified as looking at the past, present, and future capacities of infrastructure. The three basic methodologies are described below:

Buy-In Methodology

The **buy-in** methodology considers infrastructure that has been built in advance of new development and excess capacity is available to serve new development. Under this methodology, new development reimburses the community for previous capacity investments via the SDF. The funds are then available for future expansion of the system. It is important to note that while this methodology is labeled as buy-in, payment of SDFs does

not transfer any ownership of the assets to the customer. Rather, such payment provides access to capacity at a status equal to that of existing customers of the system.

Incremental/Marginal Cost Methodology

The **incremental/marginal cost** methodology considers the recovery of future asset costs, where the general concept is to assign to new development the incremental cost of future system expansion needed to serve the new development. When using this methodology, Chapter 162A requires a minimum 5-year and maximum 20-year capital improvements program (CIP) that identifies the costs associated with new capacity and the timing of the expenditures. Only projects that increase system capacity are included in the analysis, while costs associated with maintenance, repair, or replacement of existing facilities are excluded. It is also important to consider the planned funding sources for the projects identified in the CIP. For example, projects that are funded from grants or developer contributions are excluded from the SDF calculation as these are costs that are not incurred by the utility.

Combined (Hybrid) Cost Methodology

The **combined (hybrid) cost** methodology is used when there is available capacity in the existing system, but there are also future improvements that require additional upgrades or expansion to serve new development. This method assumes that the utility has capacity within the existing system sufficient to serve near-term growth but will require additional capacity to meet future growth needs. Using this method, new development pays SDFs that reflect the value of both (1) a proportionate share of the value of existing infrastructure and (2) the cost of future capital improvements necessary to provide additional capacity. This methodology provides a balanced and equitable allocation of costs by recognizing both past and future investments in system capacity.

Table 2 provided a comparison of the three basic SDF methodologies mentioned above.

Table 2 – Comparison of SDF Methodologies

Description	Buy-In Method	Incremental/Marginal Cost Methodology	Combined (Hybrid) Cost Methodology
Facility/Asset Focus	Existing Facilities	Future Growth-Related Capital Assets	Existing Facilities + Future Capital Assets
Best Used When	System has sufficient excess capacity to serve new connections	System is at or near capacity and requires expansion to serve growth	System has available capacity for near-term growth but requires future expansion
Calculation Basis	Replacement Cost New Less Depreciation (RCNLD) of existing facilities	Cost of planned growth-related capital projects	Weighted blend of buy-in and marginal costs
Cost per Gallon of Capacity	Existing recoverable assets / existing capacity	Future capital costs / future growth-related capacity	Combined existing + future facility costs / combined total capacity (existing + future)
Methodology	New users "buy into" the equity of existing facilities and available capacity	New users fund the expansion required to serve their demand	Allocates costs across both existing and future users

1.4 Existing System Development Fees

The Town currently does not impose SDFs on new customers requiring water utility service. As such, the fees developed herein will be new to the Town.

Section 2 – Recoverable Facility Costs

2.1 Introduction

The analysis developed herein for calculation of the SDFs proposes the **combined cost** methodology as defined previously in **Section 1.3**. The combined cost methodology includes the cost/value of both the existing facilities currently providing service, as well as the planned facilities required to perpetuate or expand service. This methodology assumes that the utility currently has capacity within the existing system sufficient to serve near-term growth but will require additional capacity to meet future growth needs. The information and assumptions that went into the development of the recoverable facility costs resulting in the calculated water SDFs will be discussed, thoroughly, throughout the remainder of this **Section**.

2.2 Buy-In System Value

The current value of the Town's water assets were brought forward to present-day dollars using the Handy-Whitman Index of Public Utility Construction Costs for the South Atlantic Region. Using this index attempts to value the Town's assets at an amount that represents what it would cost to purchase or construct those assets today. It is important to recognize, however, that these assets are not new and are not being purchased today, but rather have been depreciated over time. Therefore, the accumulated depreciation, which is also adjusted, is subtracted from the present-day value of the assets to determine what is referred to as the Replacement Cost New Less Depreciation (RCNLD) fixed asset value. This results in a replacement cost valuation that reflects the remaining depreciable life of the facilities.

In performing the RCNLD analysis, the Town provided a detailed listing of the current water system facilities (the Asset Listing). The Asset Listing contained the original cost of each asset, along with the date placed in service, and the accumulated depreciation for each asset. The replacement cost of each asset is estimated by using the Handy-Whitman Index of Public Utility Construction Costs for the South Atlantic Region, which is used by regulatory bodies, operating entities, utility systems, service companies, valuation experts, and insurance companies. The Handy-Whitman Index values are widely used to trend earlier valuations and original cost records to estimate replacement costs at prices prevailing at a certain date or at the present. While other construction cost indices are available, the Handy-Whitman Index is used in this analysis because it is specifically tailored to the utility industry.

After the replacement cost is calculated for each individual asset item, the adjusted accumulated depreciation is deducted for each asset item, which results in the RCNLD. A summary of the fixed assets by asset classification is shown in **Table 3**. A full list of the Town's fixed assets and applicable recoverable cost allocations can be found in **Exhibit 1**.

Table 3 – Current Asset Valuation

Description	Original Cost	Replacement Cost New	Accumulated Depreciation	RCNLD
Water Asset Category:				
Buildings	\$ 13,150	\$ 36,557	\$ (36,557)	\$ 0
Computer Equipment	4,620	20,081	(20,081)	0
Furniture & Equipment	204,058	516,295	(493,092)	23,203
Upgraded Metering Technology	504,612	610,581	(60,199)	550,382
Land	18,338	18,338	0	18,338
Water Distribution System	979,609	6,235,196	(5,840,062)	395,134
Water Distribution System - Town Funded	167,634	167,634	0	167,634
Water Distribution System - Grant Funded	1,000,000	1,000,000	0	1,000,000
Total Existing Facilities	\$ 2,892,021	\$ 8,604,682	\$ (6,449,991)	\$ 2,154,691

Since localized distribution and collection facilities are oftentimes contributed by developers or funded by other sources (i.e., assessments and direct customer payments), these facilities are not included for recovery through the SDFs. Also, any assets that were funded through grants are also excluded from the SDF calculation as these are costs that were not incurred by the utility. Additionally, a cost limit or threshold is set as a condition of inclusion of the asset items in the SDF calculation. Based on discussions with Town staff, for the purposes of this analysis, the cost threshold is set at \$50,000. The cost threshold assumes that any asset item that costs less than the limit amount is not a major facility that provides a system-wide benefit and is therefore removed from the SDF calculation. A final adjustment is made to exclude certain asset items that were identified as projects that only restored existing capacity rather than provided system upgrades or additional system capacity (e.g., equipment and vehicles). The existing recoverable water capital costs included in the analysis are summarized in **Table 4**.

Table 4 – Recoverable Existing Facilities

Description	Recoverable RCNLD
Total Recoverable Assets:	
Buildings	\$ 0
Computer Equipment	0
Furniture & Equipment	0
Upgraded Metering Technology	530,954
Land	0
Water Distribution System	215,743
Water Distribution System - Town Funded	167,634
Water Distribution System - Grant Funded	0
Total	\$ 914,331

2.3 Incremental/Marginal Cost System Value

The Town has developed a CIP that provides a listing of individual projects and anticipated construction costs from fiscal years (FY) 2026/2027 through FY 2030/2031. Like the rationale for excluding certain existing assets from recovery through SDFs, the CIP project costs included for capital recovery in the analysis consist of only those projects associated with system-wide upgrades or expansions. As such, projects related to general maintenance (i.e., renewal and replacement of existing facilities) or localized facilities that benefit only certain customers are excluded from recovery through the SDFs. The full CIP included in the SDF analysis and the resulting identification of assumed growth-related projects (i.e., project costs recoverable from SDFs) are provided in **Exhibits 2 and 3**. The projected growth-related projects and capital costs included in the analysis are summarized in **Table 5**.

Table 5 – Summary of the CIP & Recoverable Capital Costs

Description	Water Capital
Capital Improvement Program:	
Total Capital Projects	\$ 1,202,500
Unrecoverable Capital Projects	(332,500)
Total Growth Related Capital Projects	\$ 870,000

2.4 Recoverable Facility Costs

Since the analysis developed herein for calculation of the water SDF is based upon the **combined cost** methodology. Both existing facilities that are currently providing service

(Section 2.2), as well as the planned facilities required to perpetuate or expand service (Section 2.3) are included in the total recoverable facility costs. The combined system costs included for recovery are summarized in **Table 6**.

Table 6 – Combined Recoverable Facility Costs

Description	Water System
Existing Recoverable Assets:	
Buildings	\$ 0
Computer Equipment	0
Furniture & Equipment	0
Upgraded Metering Technology	530,954
Land	0
Water Distribution System	215,743
Water Distribution System - Town Funded	167,634
Water Distribution System - Grant Funded	0
Total Recoverable Existing Facilities	\$ 914,331
Capital Improvement Program:	
Total Capital Projects	\$ 1,202,500
Unrecoverable Capital Projects	(332,500)
Total Growth Related Capital Projects	\$ 870,000
Total Recoverable Facilities	\$ 1,784,331

2.5 System Development Fee Credits Applied

It is customary practice for utilities to fund major capital improvements and expansion projects with debt (e.g., bond issues). Typically, debt service payments associated with bond issues are recovered through the monthly user rates and charges applied to all system customers, as well as from other available revenue sources (including SDFs). To mitigate the potential of new customers paying for capital facilities twice (i.e., paying an SDF for facilities that may have been debt funded, and then paying for debt service in their monthly user rates), the SDF analysis developed herein applies a debt service credit against the value of the existing facilities to account for assets with outstanding debt liabilities. The credit on the existing facilities is equal to the outstanding principal remaining on all utility-related debt.

The Town does not currently have any existing debt.

In addition to the credit on the existing facilities, the analysis developed herein applies a credit as required by statute to the planned future facilities provided in the CIP. The credit

for the future facilities is no less than 25% of the recoverable CIP, which meets the requirements of Chapter 162A. The total debt service and CIP credit amounts are provided in **Table 7**.

Table 7 – SDF Credits Applied to Recoverable Facility Costs

Description	Water System
Debt Service Credit	
Outstanding Principal on Existing Debt	\$ 0
Capital Improvement Program:	
Growth-Related 25.00% CIP Adjustment	217,500
Total Credits Applied	\$ 217,500

2.6 Net Recoverable Facilities

Once the recoverable facility costs are developed (**Section 2.4**) along with the SDF credits to be applied to the total recoverable facility costs (**Section 2.5**), the net recoverable facility costs to be recovered from the SDFs can be determined. A summary of the combined recoverable capital facilities as adjusted for the applicable credits is provided in **Table 8**.

Table 8 – Net Recoverable Facility Costs

Description	Water System
Existing Recoverable Assets:	
Buildings	\$ 0
Computer Equipment	0
Furniture & Equipment	0
Upgraded Metering Technology	530,954
Land	0
Water Distribution System	215,743
Water Distribution System - Town Funded	167,634
Water Distribution System - Grant Funded	0
Total Recoverable Facilities	\$ 914,331
Capital Improvement Program:	
Total Capital Projects	\$ 1,202,500
Unrecoverable Capital Projects	(332,500)
Total Growth Related Capital Projects	\$ 870,000
Total Recoverable Facilities	\$ 1,784,331
Less Credits:	
Outstanding Principal on Existing Debt	\$ 0
Growth-Related 25.00% CIP Adjustment	(217,500)
Total Credits Applied	\$ (217,500)
Total Net Recoverable Facilities	\$ 1,566,831

Section 3 – System Capacities

3.1 Introduction

As previously addressed, the purpose of the SDF is to have new customers pay for their proportionate share of system capacity. This concept implies that the fee is based on a unit cost of capacity. To apply a fee based on the unit cost of capacity, it is necessary to identify the capacities of the facilities for which cost recovery is assigned. As such, the methodology applied herein relies upon identifying the existing and anticipated water facility capacities. In developing the amount of capacity that the utility system can provide, the analysis relies on information provided by the Town, as well as assumptions based on industry standards.

The Town's water system consists of various assets such as storage, pumping, and transmission and distribution. Each of these assets typically have a physical limiting capacity or a regulatory permitted capacity. While treatment, supply, and disposal capacities are typically readily available and generally accepted to be the physical or regulatory permitted capacity of such assets, transmission system capacities are more difficult to quantify.

3.2 Water System Capacity

The Town does not own any water or treatment facilities. Rather, it has allocated treatment capacity in facilities that are owned and operated by Harnett Regional Water (HRW). Based on information provided by staff of both the Town and the Division of Water Resources daily treatment capacity report (Local Water Supply Planning document for 2025), the Town has 0.30 million gallons per day (MGD) of allocated water treatment capacity. An adjustment is then made to the total treatment capacity (0.300 MGD) based on the assumed amount of unaccounted-for water (i.e., system flushing and backwashing, testing, line loss, etc.). The unaccounted-for water reduces the amount of capacity available to existing and future customers. The analysis performed herein assumes an average line-loss factor of 10.0% to adjust for the unaccounted-for water flows in the Town's system. This adjustment results in an assumed max daily treatment plant capacity of 0.270 MGD (0.300 MGD x 90% capacity adjustment = 0.270 MGD of capacity).

Section 4 – Level of Service per ERU

4.1 Introduction

The analysis developed herein relies upon determining a standard Level of Service (LOS), which is typically defined as an Equivalent Residential Unit (ERU). The standard LOS per ERU forms the basis for applying the unit cost per gallon of capacity, further detailed in **Section 5**, to determine the applicable SDF per ERU. Clearly defined water LOS standards identify the amount of system capacity required to serve each ERU, which is essential for the determination of SDFs. This ensures that new development pays its proportionate share and promotes transparency in how the SDFs are derived.

4.2 Water System LOS per ERU

For purposes of applying the LOS, an ERU is representative of a single-family residential dwelling unit receiving water service from a 5/8-inch x 3/4-inch metered connection and discharging normal domestic-strength wastewater through a comparably sized sewer connection. Based on industry standards for the development and application of capacity-related charges, a typical residential water connection is widely assumed to require average service availability in the range of 350 to 450 gallons per day (gpd) of system capacity. The State of North Carolina (the State) has established flow standards for purposes of planning and engineering design. In accordance with daily water flow capacity design standards defined in the North Carolina Administrative Codes (15A NCAC 18C .0409), the LOS requirement for a residential connection is 400 gpd. In accordance with the Town's existing planning methodology, it is assumed that one ERU requires a standard LOS of 400 gpd of water system capacity.

Section 5 – System Development Fee Results

5.1 Development of System Development Fees

The methodology utilized herein for developing the water SDF relies upon the cost of existing and planned major system facilities as well as the existing and expanded system capacities (no capacity expansions are anticipated in the near future) to calculate an estimated cost per unit (gallon) of capacity. Based on this methodology, it is estimated that the water facilities cost \$5.80 per gallon of capacity. The calculated cost per gallon of capacity are summarized in **Table 9**.

Table 9 – Cost per Gallon of Capacity

Description	Water System
Total Net Recoverable Facilities	\$ 1,566,831
Estimated Capacity (MGD)	0.270
Cost Per Gallon of Capacity	\$ 5.80

Applying the standard LOS previously identified in **Section 4** to the estimated unit cost per gallon of capacity results in the calculated water SDF of \$2,320, as rounded down to the nearest ten dollars, for a typical single-family residential connection (i.e., per ERU). In this case, no rounding adjustment was required). A summary of how the SDF was calculated is provided in **Table 10**. The development of the SDF is detailed in **Exhibit 4**.

Table 10 – SDF Calculation per ERU

Description	Water System
Cost per Gallon of Capacity	\$ 5.80
Level of Service per ERU (gpd)	400
Calculated SDF per ERU	\$ 2,320
Less Rounding Adjustment	0
Calculated SDF per ERU (Rounded)	\$ 2,320

A summary of the existing and calculated water SDF for a new residential connection is provided in **Table 11**. As previously addressed, the Town does not currently have a water SDF for new connections.

Table 11 – Comparison of Fee per ERU

Description	Existing Fee	Calculated Fee	Difference
Water System Development Fee	\$ 0	\$ 2,320	\$ 2,320

5.2 Application of System Development Fees

For developing SDFs, the standard daily flow number is established as one ERU. An ERU provides a standard unit of measure such that fees for connections with larger than average demand requirements can be calculated on an equivalency basis. As previously addressed, one ERU is equal to the flow capacity for a single-family dwelling unit with a standard 5/8-inch x 3/4-inch water meter. New connections with larger water meters have the potential of placing more demand on the system (i.e., require more capacity) and are assessed ERU factors accordingly. The Town's existing methodology for increasing the water SDF for larger connection sizes is based on standardized demand criteria established by the American Water Works Association (AWWA) pursuant to the size of the water meter. Utilizing the AWWA demand criteria, the applicable ERU factors for larger water meters are based on the incremental increase in potential demand as compared to the standard meter size. The calculated water SDFs for the various water meter sizes are developed in **Exhibit 5** and provided in **Table 12**.

Table 12 – Meter-Based System Development Fees

Description	Meter Factors ⁽¹⁾	Proposed Fees By Meter Size
Meter Size:		
5/8 x 3/4 Inch	1.00	\$ 2,320
1.0 Inch	2.50	\$ 5,800
1.5 Inch	5.00	\$ 11,600
2.0 Inch	8.00	\$ 18,560
3.0 Inch	16.00	\$ 37,120
4.0 Inch	25.00	\$ 58,000
6.0 Inch	50.00	\$ 116,000
8.0 Inch	80.00	\$ 185,600
Notes:		
(1) Meter-size equivalency factors established by the AWWA and identified in AWWA Standards C700, M1 and M22. Such factors are commonly applied for water fee calculations.		

In situations where the application of the meter-based fees will result in the collection of fees being significantly different than the potential demand requirement of a new customer requesting service, a special calculation methodology may be applied by the Town's Public Utilities Department. For such situations, it is important for the utility to have the flexibility to utilize an ERU methodology for individual accounts based on specific capacity requirements. This alternative methodology is to apply the calculated unit costs per gallon of capacity as provided in **Exhibit 5** times the capacity requirement for the customer. This type of situation will be uncommon and will typically only involve larger commercial and industrial connections. It is anticipated that, in such situations, the Town will require certified engineering documentation defining the capacity utilization needs for the new customer.

5.3 Comparison with Neighboring Utilities

To provide the Town with additional insight regarding the development and application of the water SDF, a comparison is included to show the level of such fees as imposed by several other utility systems in North Carolina, including neighboring governments. The comparison shows the capacity-related fees for a new residential water connection that receives service (from the subject utility or other local provider) through a standard residential-sized water meter (representative of 1 ERU) calculated under the existing and proposed fees of the Town, and those of the other utility systems. The comparison is provided in **Exhibit 6**.

Section 6 – Implementation & Review

6.1 Adoption and Periodic Review of System Development Fee Analysis

Upon completion of the SDF analysis, Chapter 162A sets forth certain criteria regarding the adoption and periodic review of SDFs. These include the following:

1. For not less than 45 days prior to consideration for adoption of the SDF analysis, the governmental unit shall post the analysis on its website and solicit and furnish a means to submit written comments which shall be considered by the preparer for potential modifications or revisions to the analysis.
2. Following expiration of the 45-day posting period, the governing body shall conduct a public hearing prior to considering adopting the analysis with any modifications.
3. The governmental unit shall publish the SDFs in its annual budget, rate plan or ordinance. Further, the SDF analysis should be updated at least every five years.

Section 7 – Conclusions & Recommendations

7.1 General Assumptions & Considerations

In the preparation of this Report, certain information has been used and relied upon that was provided to Willdan by other entities. Such information includes, but is not limited to, audited financial statements, annual operating budgets, capital information, asset listings, cost data, system capacities, and other information provided during the study. While the sources and applicable information are believed to be reliable, no independent verification of the information has been made, and no assurances are offered with respect to the accuracy of the applicable information. To the extent that the information used to develop the assumptions applied in the Report differs from the actual results, the analyses developed herein could be impacted accordingly.

7.2 Conclusions

This study has found a need for the Town to establish a mechanism for recovering the capital costs associated with facilitating system growth and expansion. Based on the reviews, analyses and assumptions provided herein, it is concluded that:

1. The application of capital recovery fees for new system connections is common for public utility systems in North Carolina. As growth continues to impact the region, and as state and federal funding programs are reduced or eliminated, it is prudent management practice to adopt mechanisms to recover capital costs incurred by the utility for making service available to future customers.
2. Through Chapter 162A, the North Carolina legislature has found that it is prudent to require new customers to bear a portion of the costs of current capacity and future expansions their presence will demand. It should be noted that Willdan is not attempting to issue a legal opinion regarding Chapter 162A or any court proceedings leading to the enactment of Chapter 162A. The summary discussion of the bill and any prior court rulings is intended for informational purposes only. Any questions regarding the legal consideration provided herein should be directed to the Town's legal counsel.
3. The SDFs developed herein are equitable and provide for reasonable recovery of the capital costs associated with providing service to new customers.
4. The SDFs developed herein are calculated in accordance with the requirements of Chapter 162A and utilize methodologies that are consistent with industry standards.
5. The calculated SDFs are based on a listing of existing system assets as provided by the Town, as well as the CIP adopted by the Town. After considering the calculation options addressed herein, the Town selected the **combined cost** methodology as explained in **Section 1.3** of this Report. The selected methodology is common for

public utility systems in North Carolina and is consistent with common industry standards.

6. The water LOS standard proposed herein for establishing an ERU basis is based on the Town's existing planning methodology and is consistent with the North Carolina Administrative Code and common industry practice.
7. The Town currently imposes meter fees, tap fees and other related operational or material charges for new customer connections. Since these other charges are intended to recover operating or material costs for providing incident-specific services, the SDFs developed herein will have no impact on the level or application methodology for these other connection-related charges.

7.3 Recommendations

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

- Adopt the calculated water SDFs and application methodology as developed in this Report, or other such SDF amounts as determined appropriate by the Town but not to exceed the fee amounts calculated herein.
- Enact the new SDFs to become effective on November 1, 2026, or other such date as determined appropriate by the Town Council; and
- Readdress the SDF study at least within the next 5 years, or at such times as future capital budgets are developed and additional capital costs are incurred that may result in material adjustments to the SDFs as adopted.

We appreciate the opportunity to be of service to the Town in this matter. In addition, we would like to thank members of the Town staff for the valuable assistance and cooperation provided during the preparation of the Report. We look forward to collaborating on future projects and continuing a successful professional relationship.

Town of Coats, NC

Water System Development Fee Study

Exhibits

1	Detailed Asset Data & Existing Recoverable Costs
2&3	Capital Improvement Plan & Growth-Related Capital Costs
4	Water System Development Fee Calculation
5	Summary of Calculated System Development Fees
6	Comparison with Neighboring Utilities



Town of Coats, NC

Water System Development Fee Study

Exhibit 1	Detailed Asset Data & Existing Recoverable Costs
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Exhibit 1
System Development Fee Analysis
Existing Recoverable Capital Costs
Water System

Line	Description	Original Cost	Replacement Cost New	Accumulated Depreciation	RCNLD
UTILITY ASSETS					
Total Assets by Category:					
1	Buildings	\$ 13,150	\$ 36,557	\$ (36,557)	\$ 0
2	Computer Equipment	4,620	20,081	(20,081)	0
3	Furniture & Equipment	204,058	516,295	(493,092)	23,203
4	Upgraded Metering Technology	504,612	610,581	(60,199)	550,382
5	Land	18,338	18,338	0	18,338
6	Water Distribution System	979,609	6,235,196	(5,840,062)	395,134
7	Water Distribution System - Town Funded	167,634	167,634	0	167,634
8	Water Distribution System - Grant Funded	1,000,000	1,000,000	0	1,000,000
9	Total	\$ 2,892,021	\$ 8,604,682	\$ (6,449,991)	\$ 2,154,691
Adjusted For Assumed Cost Limit (\$):					
10	Buildings	\$ 0	\$ 0	\$ 0	\$ 0
11	Computer Equipment	0	0	0	0
12	Furniture & Equipment	72,237	215,988	(215,988)	0
13	Upgraded Metering Technology	487,561	589,949	(58,995)	530,954
14	Land	0	0	0	0
15	Water Distribution System	455,917	3,436,898	(3,221,155)	215,743
16	Water Distribution System - Town Funded	167,634	167,634	0	167,634
17	Water Distribution System - Grant Funded	1,000,000	1,000,000	0	1,000,000
18	Total	\$ 2,183,349	\$ 5,410,469	\$ (3,496,138)	\$ 1,914,331
Recoverable Allocation - Water (%):					
19	Buildings				100%
20	Computer Equipment				0%
21	Furniture & Equipment				0%
22	Upgraded Metering Technology				100%
23	Land				100%
24	Water Distribution System				100%
25	Water Distribution System - Town Funded				100%
26	Water Distribution System - Grant Funded				0%

Exhibit 1
System Development Fee Analysis
Existing Recoverable Capital Costs
Water System

Line	Description	Original Cost	Replacement Cost New	Accumulated Depreciation	RCNLD
System Allocation - Water (\$):					
27	Buildings				\$ 0
28	Computer Equipment				0
29	Furniture & Equipment				0
30	Upgraded Metering Technology				530,954
31	Land				0
32	Water Distribution System				215,743
33	Water Distribution System - Town Funded				167,634
34	Water Distribution System - Grant Funded				0
35	Total				<u>\$ 914,331</u>

Town of Coats, NC

Water System Development Fee Study

Exhibits 2 & 3

Capital Improvement Plan &
Growth-Related Capital Costs



Exhibit 2**System Development Fee Analysis****Current Capital Improvement Program for FY 2027 - FY 2031****Water System**

Line	Description	Total	2027	2028	2029	2030	2031
PROJECTS & COSTS							
Capital Projects							
1	Aspen Energreen ROW Mower	\$ 265,000	\$ -	\$ 265,000	\$ -	\$ -	\$ -
2	Pavement Conditions Survey	15,000	-	15,000	-	-	-
3	Asbestos Water Line Replacement Ph. 1	385,000	-	-	385,000	-	-
4	Inline Valves Replacement/Gate Valves Replacement	100,000	-	-	100,000	-	-
5	Asbestos Water Line Replacement Ph. 2	385,000	-	-	-	385,000	-
6	Water Meter Replacement (2" and Above)	52,500	-	-	-	-	52,500
7	Total Water CIP	\$1,202,500	\$ 0	\$280,000	\$485,000	\$385,000	\$ 52,500

Exhibit 3
System Development Fee Analysis
Allocation of Capital Improvements Program
Water System

Line	Description	Total	Percentage Allocation ⁽¹⁾			Allocation Amount		
			Expand/ Upgrade	R&R	Other	Expand/ Upgrade	R&R	Other
PROJECTS								
Capital Projects								
1	Aspen Energreen ROW Mower	\$ 265,000	0.00%	0.00%	100.00%	\$ 0	\$ 0	\$ 265,000
2	Pavement Conditions Survey	15,000	0.00%	0.00%	100.00%	0	0	15,000
3	Asbestos Water Line Replacement Ph. 1	(2) 385,000	100.00%	0.00%	0.00%	385,000	0	0
4	Inline Valves Replacement/Gate Valves Replacement	(2) 100,000	100.00%	0.00%	0.00%	100,000	0	0
5	Asbestos Water Line Replacement Ph. 2	(2) 385,000	100.00%	0.00%	0.00%	385,000	0	0
6	Water Meter Replacement (2" and Above)	52,500	0.00%	100.00%	0.00%	0	52,500	0
7	Total - All Capital Projects	\$ 1,202,500				\$ 870,000	\$ 52,500	\$ 280,000

Notes:

- (1) The capital costs are allocated to determine the costs that are recoverable from a capacity-related fee. The costs allocated as expansion and/or upgrade projects are assumed to be recoverable from such fees. All other capital costs are assumed to either be maintenance-related (R&R) projects, localized projects that do not provide system-wide capacity benefits, or projects funded from outside sources (e.g. grants, developers).
- (2) Although the project is identified as "Replacement", based on discussions with staff the projects include increasing the line size and utilizing improved construction materials.

Town of Coats, NC

Water System Development Fee Study

Exhibit 4	Water System Development Fee Calculation
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Exhibit 4
System Development Fee Analysis
Calculation of Fee Per ERU
Water System

Line	Description	Total
Recoverable Capital Costs		
Combined Facilities:		
1	Existing Facilities	\$ 914,331 ⁽¹⁾
2	Recoverable Capital Improvement Program	870,000 ⁽²⁾
3	Total	\$ 1,784,331
4	Less Debt Service Principal	0 ⁽³⁾
5	Less 25% CIP Adjustment 25%	(217,500) ⁽⁴⁾
6	Net Recoverable Costs	\$ 1,566,831
Available System Capacity (MGD)		
<u>Daily Treatment Capacity (MGD):</u>		
7	Harnett County Regional Water System	0.300 ⁽⁵⁾
8	Additional Capacity From CIP	0.000
9	Combined Capacity of Treatment Facilities	0.300
<u>Treatment Capacity:</u>		
10	Average Day Treatment Capacity (MGD)	0.300
11	Unaccounted for Water Capacity Adjustment	10.0% ⁽⁶⁾
12	Adjusted Average Day Treatment Capacity	0.270
Estimated Cost Per Gallon of Capacity		
13	Total Cost Per Gallon of Capacity	\$ 5.80
14	Assumed Standard Level of Service Per ERU (GPD of Capacity)	400 ⁽⁷⁾

Exhibit 4
System Development Fee Analysis
Calculation of Fee Per ERU
Water System

Line	Description	Total
Calculation of Proposed Fee Per ERU		
Calculation of Fee Per ERU:		
15	Fee Per ERU	\$ 2,320
16	Less Rounding Adjustment	0
17	Total Fee Per ERU	\$ 2,320

Notes

- (1) See **Exhibit 1** for the development of the existing asset costs identified for capital recovery.
- (2) See **Exhibit 3** for the development of the CIP costs identified for capital recovery.
- (3) In an effort to account for the facility costs that may be recovered from user rates as part of the normal budgetary process, a debt service credit is applied to the applicable fee calculation. The credit is equal to outstanding principal amount on existing utility-related debt. However, the Town currently has no utility-related debt.
- (4) This adjustment is made in accordance with House Bill 436, § 162A-207. Minimum requirements.
- (5) Obtained from the daily treatment capacity report provided by the Division of Water Resources - Local Water Supply Planning document for 2025.
- (6) The percentage of unaccounted-for water is based on discussions with staff.
- (7) The system development charges are to be applied on an equivalent residential unit (ERU) basis such that 1 ERU is equal to the estimated capacity requirements for a typical single family residential connection with a 5/8-inch X 3/4-inch water meter. In accordance with daily water flow capacity design standards adopted by the State of North Carolina and defined the North Carolina Administrative Codes (15A NCAC 18C .0409), the level of service requirement for a residential connection is 400 gallons per day (gpd).

Town of Coats, NC

Water System Development Fee Study

Exhibit 5	Summary of Calculated System Development Fees
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Exhibit 5
System Development Fee Analysis
Summary of Calculated Fees
Water System

Line	Description	ERU Factor	Water Fee
RESIDENTIAL			
<u>Fee Per Equivalent Residential Unit:</u>			
1	Existing	1.00	\$ -
2	Proposed/Calculated	1.00	\$ 2,320
3	Difference		\$ 2,320
NON-RESIDENTIAL ⁽¹⁾			
<u>Meter Size:</u>			
4	5/8 x 3/4 Inch	1.00	\$ 2,320
5	1.0 Inch	2.50	\$ 5,800
6	1.5 Inch	5.00	\$ 11,600
7	2.0 Inch	8.00	\$ 18,560
8	3.0 Inch	16.00	\$ 37,120
9	4.0 Inch	25.00	\$ 58,000
10	6.0 Inch	50.00	\$ 116,000
11	8.0 Inch	80.00	\$ 185,600
Special Case Unit Cost ⁽²⁾			
12	Charge Per GPD of Capacity:		\$ 5.80

Notes:

- (1) The proposed system development fees are based on the calculated fee per ERU as applied to the respective ERU factor. The proposed ERU factors for the fees are based on meter equivalency factors established by the AWWA.
- (2) In situations where the application of the meter-based fees will result in the collection of fees significantly different than the potential demand requirement of a new high-use customer, a special fee calculation methodology may be applied based on the unit cost of capacity and the estimated daily capacity needs of the new service connection. The estimated capacity needs will be based on the amount determined by the utility's engineering staff or licensed professional engineer.

Town of Coats, NC

Water System Development Fee Study

Exhibit 6	Comparison with Neighboring Utilities
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Exhibit 6
System Development Fee Analysis
Comparison With Other Utility Systems
Water System

Line	Description	Water
<u>Town of Coats, NC:</u>		
1	Existing Fee Per ERU	\$ 0
2	Calculated Fee Per ERU	\$ 2,320
<u>Other Utilities:</u>		
		(1)
3	OWASA	(2) \$ 1,360
4	Raleigh, NC	\$ 1,447
5	Apex, NC	\$ 1,788
6	South Granville WSA, NC	\$ 1,800
7	Town of Cary, NC	\$ 2,548
8	Harnett Regional Water, NC	\$ 3,000
9	Rocky Point - Topsail WSD, NC	\$ 3,432
10	Clayton, NC	\$ 3,904
11	Fuquay-Varina, NC	\$ 4,929
12	Holly Springs, NC	\$ 6,162
13	Average of Other Utilities	\$ 3,037

Notes:

- (1) Developed from fee information made available by the other utilities included. This study has attempted to ensure that fees included for comparison are applicable capital recovery fees consistent with the intent of the proposed fees developed herein. However, due to differences in terminology, fee structure and method of applying fees, such a direct comparison is often difficult to establish.
- (2) The fee above is for a 1,701-2,400 square foot single family residence.



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