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Water and Wastewater System Development Fee Report

June 2020

Prepared for:



Town of Southern Pines

Prepared by:

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Water and Wastewater System Development Fee Report June 2020

TOWN OF SOUTHERN PINES
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1.0 EXECUTIVE SUMMARY

The purpose of this report is to address the methodology used in the development and calculation of water and wastewater system development fees (SDF) for the Town of Southern Pines. The Town originally went through the process and adopted a system development fee in 2017. Since that time, the Town has updated their Water, Wastewater and Water Treatment Plant (WTP) Capital Improvements Plan (CIP) to address future needs. In addition, several rehabilitation and modernization projects have been identified prompting a re-evaluation of the current SDF in accordance with the methodology described in the North Carolina General Statutes (NCGS) Chapter 162A Article 8, as amended by House Bill 436, for the establishment of water and wastewater SDF (see section 2.0 below for more detail). Also, in accordance with the statute, the Town has retained Freese and Nichols, Inc. (FNI) to perform the analysis. The maximum SDF per Service Unit (SU) utilizing each of the allowable calculation methods are shown in Table ES-1 below:

Table ES-1 Maximum Allowable System Development Fees per SU

Method	Water SDF	Wastewater SDF	Total SDF
Incremental/Marginal	\$911.63	\$1,054.12	\$1,965.75
Buy-In	\$1,654.59	\$556.34	\$2,210.93
Combined	\$2,566.22	\$1,610.46	\$4,176.68

2.0 BACKGROUND OF NCGS 162A – ARTICLE 8

House Bill 436 (HB 436) regarding SDF was passed by the General Assembly of North Carolina in 2017. This bill amended Chapter 162A, Article 8 of the NCGS and defines a SDF as “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.” The statute requires that should a municipality desire to implement a SDF, an analysis must be performed and fee adoption by the corresponding local government unit occur and this fee be re-evaluated and updated every five years or less. NCGS Chapter 162A, Article 8 allows the calculation of fees based on the following methods:

Town of Southern Pines

- Incremental/Marginal Cost – This method requires new development to pay the proportional share of new capital costs that are attributable to new development.
- Buy-In – This method requires new development to pay a proportional share of the capital costs previously incurred by the local government unit that allow sufficient capacity to serve the new development.
- Combined – This method uses a combination of the incremental/marginal cost and the buy-in method.

Further, the statute allows fees to be calculated based on a planning horizon of not less than 10-years and not more than 20-year planning horizon. NCGS 162A, Article 8, Section 211 as shown below defines SDF eligible costs:

§ 162A-211. Use and administration of revenue.

(a) Revenue from system development fees calculated using the incremental cost method or marginal cost method, exclusively or as part of the combined cost method, shall be expended only to pay:

(1) Costs of constructing capital improvements including, and limited to, any of the following:

- a. Construction contract prices.*
- b. Surveying and engineering fees.*
- c. Land acquisition cost.*
- d. Principal and interest on bonds, notes, or other obligations issued by or on behalf of the local governmental unit to finance any costs for an item listed in sub-subdivisions a. through c. of this subdivision.*

(2) Professional fees incurred by the local governmental unit for preparation of the system development fee analysis.

(3) If no capital improvements are planned for construction within five years or the foregoing costs are otherwise paid or provided for, then principal and interest on bonds, notes, or other obligations issued by or on behalf of a local governmental unit to finance the construction or acquisition of existing capital improvements.

(b) Revenue from system development fees calculated using the buy-in method may be expended for previously completed capital improvements for which capacity exists and for capital rehabilitation projects. The basis for the buy-in calculation for previously completed capital improvements shall be determined by using a generally accepted method of valuing the actual

or replacement costs of the capital improvement for which the buy-in fee is being collected less depreciation, debt credits, grants, and other generally accepted valuation adjustments.

(c) A local governmental unit may pledge a system development fee as security for the payment of debt service on a bond, note, or other obligation subject to compliance with this section.

(d) Except as otherwise provided in subsection (e) of this section, system development fee revenues shall be accounted for by means of a capital reserve fund established pursuant to Part 2 of Article 3 of Chapter 159 of the General Statutes and limited as to expenditure of funds in accordance with this section. NC General Statutes - Chapter 162A Article 8 5

(e) If and to the extent that revenues derived from system development fees are pledged to secure revenue bonds or notes issued by a local government unit under the provisions of Article 5 of Chapter 159 of the General Statutes, such revenues may be deposited in such funds, accounts or subaccounts, and applied in such manner, as set forth in the bond order, resolution, trust agreement or similar instrument authorizing and securing such bonds or notes until all such revenue bonds or notes are no longer outstanding. (2017-138, s. 1; 2018-34, s. 2(a).)

The Town evaluated and adopted an SDF in 2017 which utilized the incremental/marginal methodology. As a result of the recent CIP update and evaluation of the existing system, it was determined that an evaluation of the current fee was necessary. As part of the evaluation of the current system, its capacity and ability to support future growth with rehabilitation and modernization improvements, all methods allowed by the statute were evaluated as part of this study. The combined method has been determined to be appropriate for this update.

3.0 CAPITAL IMPROVEMENTS PLAN

The 2020 Town of Southern Pines Water and Wastewater Capital Improvements Plan was developed for the Town of Southern Pines to facilitate quality water and wastewater service that supports existing and promotes new residential and commercial development. The plan was adopted in April 2020. Throughout this CIP process, additional needs were identified and costs for projects previously identified were adjusted in the context of the current bidding climate, based on recently bid local projects and industry trends. Additionally, an inflation factor was applied to the costs of future projects based on their anticipated date of initiation. The recommended improvements will provide the required capacity and reliability to meet projected water demands and wastewater flows through year 2030 and beyond.

3.1 Water and Wastewater Load Projections

As part of the 2020 Town of Southern Pines Water and Wastewater Capital Improvements Plan historical water and wastewater demands were evaluated and future demands projected. That information was used as the basis of this report. It should be noted that the Town provides wholesale water service to some neighboring communities and jurisdictions. For purposes of the Town specific load projections presented herein, the wholesale demands were removed from the totals prior to developing water demand design criteria. Table 3-1, Table 3-2 and Table 3-3 present the historical water demands, water demand criteria and projected water demands for the Town respectively. Table 3-4, Table 3-5 and Table 3-6 present the historical wastewater flows, wastewater flow criteria and projected wastewater flows for the Town respectively.

Table 3-1 Historical Water Usage

Year	Water Service Area Population	Average Day Demand (MGD)	Average Day Demand (gpcd)	Maximum Day Demand ⁽¹⁾ (MGD)	Maximum Day to Average Day Peaking Factor
2015 ⁽¹⁾	13,405	2.8	208	4.6	1.6
2016 ⁽¹⁾	13,651	3.4	247	5.5	1.6
2017 ⁽¹⁾	14,027	2.4	172	3.5	1.5
2018 ⁽¹⁾	14,277	2.8	196	5.2	1.9
Average	-	2.8	206	4.7	1.6
Maximum	-	3.4	247	5.5	1.9

⁽¹⁾ Water Service Area Population from American Fact Finder.

Table 3-2 Water Demand Design Criteria

Gallons per Capita per Day	Maximum Day to Average Day Peaking Factor	Peak Hour to Maximum Day Peaking Factor
206	1.6	1.5

Table 3-3 Projected Water Demands

Year	Projected Water Service Area Population	Average Day Demand			Maximum Day Demand			Peak Hour Demand		
		Wholesale Demand (MGD)	Non-Wholesale Demand (MGD)	Total (MGD)	Wholesale Demand (MGD)	Non-Wholesale Demand (MGD)	Total (MGD)	Wholesale Demand (MGD)	Peak Hour Demand (MGD)	Total (MGD)
2020	14,854	0.87	3.06	3.9	1.40	4.9	6.3	1.40	7.3	8.7
2025	16,400	0.87	3.38	4.3	1.40	5.4	6.8	1.40	8.1	9.5
2030	18,107	0.87	3.73	4.6	1.40	6.0	7.4	1.40	9.0	10.3

Table 3-4 Historical Wastewater Flows

Year	Service Area Population	Average Daily Flow (MGD)	Average Daily Flow (gpcd)	Peak Wet Weather Flow (MGD)*
2011	9,828	1.33	135	3.33
2012	10,051	1.31	130	3.28
2013	10,275	1.36	132	3.40
2014	10,465	1.44	138	3.60
2015	10,675	1.41	132	3.53
2016	11,921	1.47	123	3.68
2017	11,297	1.52	135	3.80
2018	11,547	1.62	140	4.05
2019	11,832	1.67	141	4.18

*Assumed peaking factor of 2.5.

Table 3-5 Wastewater Flow Design Criteria

Gallons per Capita per Day	Average Day Peaking Factor
135	2.5

Table 3-6 Projected Wastewater Flows

Year	Service Area Population	Average Daily Flow (MGD)	Peak Wet Weather Flow (MGD)
2020 ⁽¹⁾	12,124	1.64	4.10
2025 ⁽¹⁾	13,670	1.85	4.63
2030 ⁽¹⁾	15,377	2.08	5.20

⁽¹⁾ Assumption/Projection

3.2 Water and Wastewater System Improvements

Proposed water and wastewater system projects were developed as part of the *2020 Town of Southern Pines Water and Wastewater Capital Improvement Plan*.

A summary of each project and associated cost is shown in Table 3-7, Table 3-8, and Table 3-9. Detail pertaining to the cost of each proposed water and wastewater system projects is included in the *2020 Town of Southern Pines Water and Wastewater Capital Improvement Plan Appendix*.

Table 3-7 Water Distribution CIP

	Proj. No.	Project Description	Project Cost (2020 Value)
2020	1	East Morganton Road Waterline Replacement- Replace existing 6-inch waterline with 12-inch waterline along Morganton Road from Ridge Street to Valley Road. (Currently under design)	\$ 468,000
2020	2	Pennsylvania Ave/Pee Dee Road Water Line Replacement: Replace Existing 10-inch Water Line with 16-inch Water Line along Pennsylvania Ave/Pee Dee Rd from Connecticut Ave to Central Drive (Currently under design)	\$ 1,957,800
2023	3	Midland Road Water Line Replacement: Replace Existing 6-inch Water Line and Existing 8-inch Water Line with 12-inch Water Line along Midland Rd from Knoll Rd to Pee Dee Rd	\$ 1,237,600
2023	4	North Pressure Zone: Install 180-ft 1.0 MG North Elevated Storage Tank, 12" water line and Associated Valves	\$ 4,749,400
2024	5	US 1 Parallel Transmission Main: Install a 20" water line parallel to the existing 18" transmission main from the US1 BPS to the intersection of US 1 and Saunders Blvd. Replace existing 6" water along the west side of Old US 1 from Murray Hill Rd to Shaw Ave, continuing along S. Bennet St. to the intersection with Morganton Rd.	\$ 1,658,700
2025	6	US 1 Booster Pump Station Pump Addition: Addition of 4,500 gpm Pumping Capacity to the US 1 Booster Pump Station	\$ 627,600
Total 2020-2025			\$ 10,699,900
2027	7	Water Treatment Plant Expansion: Application for Expansion of Licensed Water Treatment Plant Capacity to Plant Design Capacity of 11.0 MGD	\$ 137,600
Total 2025 - 2030			\$ 137,600
GRAND TOTAL			\$ 10,837,500

Table 3-8 Wastewater SDF Eligible Projects

	Proj. No.	Project Description	Project Cost (2020 Value)
2020	1	Warrior Woods Pump Station Upgrades Phase IA: Install new generator and parallel 12" DI force main (1,481 LF); Replace Ex. 10" FM with 12" DI FM (5,250 LF); Replace portion of existing 14" FM with new 14" DI FM (784 LF)	\$650,900
2021	2	Warrior Woods Pump Station Upgrades Phase IB: Install Parallel 12" DI FM (3,769 LF), Parallel 14" DI FM (166 LF), Replace 10" PVC FM with 12" DI FM (5,250 LF)	\$1,108,700
2024	3	Warrior Woods Pump Station Upgrade Phase II: Construct new 1,500 gpm wet pit/ dry pit pump station (expandable to 2,850 gpm)	\$3,220,000
Total 2020-2025			\$4,979,600
2026	4	Warrior Woods PS Upgrade Phase III: Expand pump station from 1,500 gpm to 2,850 gpm; Install parallel 12" DI force main (9,400 LF)	3,036,300
Total 2025 - 2030			\$3,036,300
Capacity CIP Total			\$8,015,900
2020-2030	5	Annual Rehabilitation of Existing Gravity Sewer	\$4,585,600
2020	6	ARO Lift Station Sewer Replacement: Upgrade the lift station design to bring the station into compliance with modern regulatory requirements and correct the station deficiencies.	\$410,000
2020	7	Sewer Lift Station SCADA: This project will help identify operational issues, areas of high I&I, verify sewer volumes at billing locations, and facilitate future projects related to identified problems and growth.	\$300,000
2020	8	West New York Aerial Sewer Repair: Replacement of a Town 10" gravity sewer currently installed adjacent to McDeeds Creek running along W. New York Ave.	\$350,000
2020	9	Sewer Lift Station Emergency Backups: This project will expand the emergency backups to 4 additional permanent installations, replace 2 old gas powered generators, and purchase 2 new portable emergency station backups	\$435,000
2021	10	Longleaf Dam Sewer Rehabilitation: Replacement of a Town aerial sewer main currently installed in the face of a private dam located on the Longleaf Golf Course.	\$420,000
Rehabilitation CIP Total			\$6,500,600
CIP Grand Total			\$14,516,500

Table 3-9 Water Treatment Plant Projects/Improvements

Project Name	Ongoing	2020-21	2021-22	2022-23	2023-24	2024-25	25-26 thru 29-30	Project Totals
Raw Water Pump Station Improvements	\$490,000	--	-	-	-	-	-	\$490,000
Raw Water Reservoir Generator	\$175,000	-	-	-	-	-	-	\$175,000
Chlorine and Ammonia Conversions	\$300,000	-	-	-	-	-	-	\$300,000
Chemical Feed Improvements	\$100,000	-	-	-	-	-	-	\$100,000
Clarifier #2 Improvements	\$60,000	-	-	-	-	-	-	\$60,000
SCADA Improvements	\$20,000	-	-	-	-	-	-	\$20,000
Upflow Clarifier Blower Replacement	-	\$28,000	-	-	-	-	-	\$28,000
Sludge Dewatering Expansion	-	-	-	\$200,000	\$1,313,000	-	-	\$1,513,000
Filter Improvements	-	\$490,000	\$50,000	\$537,000	-	-	-	\$1,077,000
Raw Water Main Replacement	-	-	-	-	\$250,000	\$250,000	\$5,250,000	\$5,750,000
Yearly Totals	\$1,145,000	\$518,000	\$50,000	\$737,000	\$1,563,000	\$250,000	\$5,250,000	\$9,513,000

Note: Projects included in this table are from the SUEZ evaluation.

4.0 SYSTEM DEVELOPMENT FEE ANALYSIS

The system development fee was analyzed utilizing the three statutorily allowable methods:

- Incremental/Marginal
- Buy In
- Combined

A discussion on the process is included herein.

4.1 Service Units (SU)

A critical factor used to determine the maximum SDF is a service unit. A service unit (SU), is defined as the service equivalent to a domestic water connection for a single-family residence. It is used to calculate both water and wastewater SDF.

The allowable flow associated with residential, commercial, and industrial connections is converted into SU based upon the capacity of the meter used or planned for the location. The number of equivalent residential SU required to represent each meter size is based on the maximum continuous operating capacity of the appropriate meter type. The Town primarily uses Badger disc meters for meter sizes 2-inch and smaller. Badger compound meters are typically used for meter sizes greater than 2-inches. Badger specification sheets for these meter types were used to determine the maximum continuous operating capacity. The SU equivalent for each meter size used by the Town is listed in Table 4-1.

Table 4-1 SU Equivalencies

Meter Size	Maximum Continuous Operating Capacity (gpm) ⁽¹⁾	Service Unit Equivalent
3/4"	15	1.0
1"	40	2.7
1-1/2"	50	3.3
2"	100	6.7
3"	400	26.7
4"	800	53.3
6"	1,500	100.0
8"	3500	233.3

⁽¹⁾Maximum continuous operating capacity is based on Badger meter specification sheets.

Typically, in Southern Pines, single-family residences are served with 3/4-inch water meters. Larger meters serve multi-family, commercial, and industrial water users. The Town provided data that included the meter size of each active water meter as of the end of calendar year 2019. Table 4-2 shows the water SU for calendar year 2020.

Table 4-2 Water SU

Meter Size	2020 Meters	2020 Service Units
3/4"	9,142	9,142
1"	616	1,663
1 1/2"	98	323
2"	179	1,199
3"	43	1,148
4"	9	478
6"	15	1,500
8"	1	233
Total	10,103	15,686

The Town has water customers that are not currently wastewater customers. This impacts the number of wastewater SU. The Town provided data that included the meter size of each active water meter for each of the wastewater customers as of the end of calendar year 2019. Table 4-3 shows the wastewater SU for calendar year 2020.

Table 4-3 Wastewater SU

Meter Size	2020 Meters	2020 Service Units
3/4"	5,936	5,936
1"	291	786
1 1/2"	67	221
2"	138	925
3"	34	908
4"	8	426
6"	6	600
8"	0	0
Total	6,480	9,802

4.2 Gallons per SU

Calculation of maximum allowable SDF will be based on gallons of water and wastewater used by each SU on a daily basis multiplied by the calculated cost per gallons per day per SU (gpd/SU). For purposes of this study, the gpd/SU is shown in Tables 4-4 and 4-5 below:

Table 4-4 Water Gallons per day per SU

Component	Value
2020 SU	15,689
2020 Max Day Demand (MGD)	6.3
gpd/SU	401.6

Table 4-5 Wastewater Gallons per day per SU

Component	Value
2020 SU	9,802
2020 Peak Wet Weather Flows (MGD)	4.1
gpd/SU	418.3

4.3 Credit Calculation

NCGS 162A Article 8 outlines the procedures and requirements for calculating maximum allowable SDF to recover costs associated with capital improvement projects needed due to growth over the planning horizon. NCGS 162A Article 8 also requires a plan that addresses possible duplication of payments for capital improvements. This plan must provide a credit for the portion of revenues generated by new development that is used for the payment of eligible improvements, including payment of debt. This credit must not be any less than twenty-five percent (25%) of the cost of capital improvements. Per the statutory requirements, the credit is only to be applied to the proposed capital improvement projects used in the incremental/marginal method.

Funding sources for the capital improvement projects listed in this report are unknown at this time. For purposes of this report as applicable, a minimum credit of 25% was applied for both the calculated water and wastewater system development fees.

4.4 Assets

Based on the 2019 Town of Southern Pines Comprehensive Annual Financial Report (CAFR), the total combined water and wastewater system is valued at \$54,394,670 and has a depreciation of \$26,774,377 for a total depreciated value of \$27,620,293. This information was used as the basis for the Buy In and Combined Methods and is depicted in Table 4-6 below:

Table 4-6 Water and Wastewater Assets

Asset	Value	Depreciation	Depreciated Total
Water Treatment Plant	\$ 35,356,536	\$ 17,403,345	\$ 17,953,190
Water Distribution System	\$ 10,878,934	\$ 5,354,875	\$ 5,524,059
Wastewater System	\$ 8,159,201	\$ 4,016,157	\$ 4,143,044
WTP, Water Distribution and Sewer System	\$ 54,394,670	\$ 26,774,377	\$ 27,620,293

4.5 System Development Fee – Incremental/Marginal Method

The SDF analysis for the Incremental / Marginal method requires the determination of the utilization of proposed projects as defined by the *2020 Town of Southern Pines Water and Wastewater Capital Improvement Plan* to serve new development over the planning horizon. In this case, the planning horizon is defined as 10-years. For proposed projects, the SDF is calculated as a percentage of the project cost, based upon the percentage of the project’s capacity required to serve development projected to occur between 2020 and 2030. Capacity serving development projected beyond the planning period cannot be included in the calculation of SDF. Based on the CIP defined water system projects, considering their respective capacities and projected use over the next 10-year planning horizon and the required credit, a cost of \$2.27 per gpd/SU has been calculated as shown in Table 4-7 below:

Table 4-7 Water System SDF Projects for Incremental/Marginal Method

#	Project	Capital Cost	% Applicable to SDF	Adjusted Cost	Capacity (MGD)	\$/gpd/SU
1	East Morganton Road Water Line Replacement	\$468,800	38%	\$178,144	2.1	\$0.08
2	Pennsylvania Ave/Pee Dee Road Water Line Replacement	\$1,957,800	51%	\$998,478	3.3	\$0.30
3	Midland Road Water Line Replacement	\$1,237,600	19%	\$235,144	2.1	\$0.11
4	North Pressure Zone	\$4,749,400	47%	\$2,232,218	1.0	\$2.23
5	US 1 Parallel Transmission Main	\$1,658,700	79%	\$1,310,373	6.2	\$0.21
6	US 1 Booster Pump Station Addition	\$627,600	42%	\$263,592	6.5	\$0.04
7	WTP Expansion	\$137,600	21%	\$28,896	3.0	\$0.01
8	US 15-501 Water Line Replacement	\$682,200	9%	\$61,398	2.1	\$0.03
9	System Development Fee Analysis	\$10,000	50%	\$5,000	8.0	\$0.00
	Subtotal					\$3.02
	Credit (25%)					(\$0.75)
	Total	\$11,519,700		\$5,308,243		\$2.27

Similarly, the wastewater system projects were evaluated and a cost of \$2.52 per gpd/SU, including the required credit was calculated as shown in Table 4-8 below:

Table 4-8 Wastewater System SDF Projects for Incremental/Marginal Method

#	Name of Project	Capital Cost	% Applicable to SDF	Adjusted Cost	Capacity (MGD)	\$/gpd/SU
1	Warrior Woods Pump Station Improvements Phase IA	\$650,900	100%	\$650,900	1.6	\$0.41
2	Warrior Woods Pump Station Improvements Phase IB	\$1,108,700	100%	\$1,108,700	1.6	\$0.69
3	Warrior Woods Pump Station Improvements Phase II	\$3,220,000	100%	\$3,220,000	2.2	\$1.46
4	Warrior Woods Pump Station Improvements Phase III	\$3,036,300	50%	\$1,518,150	1.9	\$0.80
5	System Development Fees	\$10,000	100%	\$10,000	3.3	\$0.00
	Subtotal	\$8,025,900		\$6,507,750		\$3.36
	Credit (25%)					(\$0.84)
	Total	\$8,025,900		\$13,015,500		\$2.52

4.6 System Development Fee – Buy-In Method

The Buy-In method requires new development to pay a proportional share of capital costs previously incurred by the Town that allow sufficient capacity to serve the new development. The analysis for the Buy-In method utilizes a depreciated value of the assets to determine an appropriate cost per service unit to utilize the asset. This is typically expressed in dollars per gallons per day. The current WTP has a capacity of 8.0 MGD with projected 2020 maximum day demands of 6.3 MGD leaving capacity in the system for new development to buy in. Additionally, the Town is planning a series of rehabilitation and modernization projects at the plant. Based on the 2019 Town of Southern Pines CAFR, the WTP, transmission and main wastewater collection system has a value as shown in Table 4-5. Utilizing this information, a cost of \$4.12 per gpd/SU was calculated to be applied to the Buy-In method as shown in Table 4-9 below:

Table 4-9 Water System Buy-In Costs

Asset	Depreciated Total	Planned Rehab Projects	Total Cost	Capacity (MGD)	\$/gpd/SU
Water Treatment Plant	\$17,953,190	\$9,513,000	\$27,466,190	8.0	\$3.43
Water Distribution System	\$5,524,059	\$0	\$5,524,059	8.0	\$0.69
Total	\$23,477,249	\$10,732,500	\$34,209,749		\$4.12

As shown in Table 4-5 above, the total depreciated value of the wastewater collection system is \$4,134,044. In addition, the Town intends to spend \$400,000 per year, with inflation added, over the 10-year planning horizon on rehabilitation projects. Utilizing this information, a cost of \$1.33 per gpd/SU was calculated to be applied to the wastewater Buy-In method as shown in Table 4-10 below:

Table 4-10 Wastewater System Buy In Costs

Asset	Depreciated Total	Planned Rehab Projects	Total Cost	Capacity (MGD)	\$/gpd/SU
Wastewater Collection System	\$4,143,044	\$6,500,600	\$10,643,644	8.0	\$1.33
Total	\$4,143,044	\$6,500,600	\$10,643,644	8.0	\$1.33

4.7 System Development Fee – Combined Method

Because there is sufficient capacity in the system to provide service to future development and additional projects are needed in the future, the Combined method was considered. This method combines fees calculated by both the Buy-In and Incremental/Marginal methods. Based on information developed for the Incremental/Marginal and Buy-In costs, the combined costs for water and wastewater are as shown in Tables 4-11 and 4-12 below:

Table 4-11 Water SDF Costs – Combined Method

Method	\$/gpd/SU
Water System Buy In	\$ 4.12
Water System Incremental	\$ 2.27
Total	\$ 6.39

Table 4-12 Wastewater SDF Costs – Combined Method

Method	\$/gpd/SU
Wastewater System Buy In	\$ 1.33
Wastewater System Incremental	\$ 2.52
Total	\$ 3.85

4.8 Maximum Allowable System Development Fees

Based on the calculations for both water and wastewater system development fees for the Incremental/Marginal, Buy-In and Combined method, the maximum allowable fees are as shown in Table 4-13 below:

Table 4-13 Maximum Allowable SDF per SU

Method	Water SDF	Wastewater SDF	Total SDF
Incremental/Marginal	\$911.63	\$1,054.12	\$1,965.75
Buy-In	\$1,654.59	\$556.34	\$2,210.93
Combined	\$2,566.22	\$1,610.46	\$4,176.68

Utilizing the SU Equivalencies as shown in Table 4-1, and the maximum SDF as shown in Table 4-13, the maximum allowable fee per meter size and method is shown in Table 4-14 below:

Table 4-14 Maximum Allowable SDF per Meter Size

Meter Size	Service Unit Equivalent	Incremental/ Marginal	Buy-In	Combined
3/4"	1.0	\$1,965.75	\$2,210.93	\$4,176.68
1"	2.7	\$5,307.53	\$5,969.51	\$11,277.04
1-1/2"	3.3	\$6,486.97	\$7,296.07	\$13,783.04
2"	6.7	\$13,170.53	\$14,813.23	\$27,983.76
3"	26.7	\$52,485.53	\$59,031.83	\$111,517.36
4"	53.3	\$104,774.47	\$117,842.57	\$222,617.04
6"	100.0	\$196,575.00	\$221,093.00	\$417,668.00
8"	233.3	\$458,609.47	\$515,809.97	\$974,419.44

5.0 CONCLUSION AND NEXT STEPS

As stated in the Executive Summary, the purpose of this report is to address the methodology used in the development and calculation of water and wastewater system development fees (SDF) for the Town of Southern Pines in accordance with NCGS 162A, Article 8. This report shall be posted for public inspection for a period of no less than 45 days prior to adoption of the SDF analysis to allow for written comments. After the 45-day posting period, the Town of Southern Pines Town Council shall conduct a public hearing prior to considering the adoption of a modified SDF based on the analysis with consideration of any comments received during the posting period. The Town Council may adopt an SDF based on and up to the maximum SDF per service unit (SU) and per meter size utilizing any of the allowable calculation methods, shown in Table 4-13 and Table 4-14 above. A maximum SDF shall not exceed that calculated in the analysis. The Town Council will select a fee amount to be adopted for the Town's official fee schedule. The adopted SDF will be published in the code of ordinances and included in the Town's annual budget ordinance.