Town of Boiling Springs

System Development Fee Study

Draft Report
April 2023

THE TOWN OF
BOILING SPRINGS
NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 049898 ENGINEER ERIC A. MEDARIS

4/28/23

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Celebrating 20 Years of Service to the Carolinas

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Executive Summary

This System Development Fee Analysis was completed by utilizing the buy-in (equity) method described in the American Water Works Association Manual of Water Supply Practices and in conjunction with House Bill (HB) 344. The first step was to determine the system equity of both the water and wastewater infrastructure by identifying the assets and liabilities of each system. System equity was calculated using the current value to construct the existing infrastructure with depreciation. Liabilities were calculated from the value of future repairs/improvements outlined in the Town's Capital Improvement Plan and outstanding debts/loans associated with each system. Total system equity is a result of subtracting the liabilities of each system from the asset value of each system. The total system equity of the water infrastructure was found to be $1,900.00 and the total system equity of the wastewater infrastructure was found to be $2,590.00.

Once the total equity of each system was calculated, the maximum capacity of each system and an assumed daily usage measured in gallons per day (GPD) was used to calculate number of equivalent dwelling units (EDU) the system could serve. The Town of Boiling Springs has a contract with the City of Shelby, NC that provides 1.0 million gallons per day (MGD) of potable water to the Town. The Town has its own wastewater treatment facility that can treat up to 0.6 MGD. Assuming 1 MGD for water the Town could supply up to 4,167 EDU (1,000,000 GPD/240 GPD = 4,167 EDU) and assuming 0.6 MGD for wastewater the Town could treat sewer for 2,500 EDU (600,000/240=2,500 EDU). Using these capacities, a recommended system development fee (SDF) was calculated.

The SDF for both water and sewer is calculated by dividing the equity of each system by the number of EDUs that each system could serve. This results in a standard base rate of $1,900 for water and $2,590 for sewer. The base rate for both water and sewer is for a standard ¾-inch potable water connection. The water connection is the driver for both water and sewer. From that base cost, SDFs for larger meter connections were calculated using standard maximum meter-flow capacity ratios. A complete list of the results can be found in ***Tables 2-4*** below.

Background

North Carolina General Statute 162A Article 8 provides for the uniform authority to implement system development fees for public water and sewer systems in North Carolina and was passed by the North Carolina General Assembly and signed into law on July 20, 2017. House bill 344, which was approved on July 2, 2021, modified Statute 162A Article 8. A copy of HB 344 can be found in **Appendix A.** This report documents the results of the calculation of water and sewer system development fees for the 2023 fiscal year in accordance with these requirements. In general, system development fees are calculated based on (1) a cost analysis of the existing or planned infrastructure that is in place, or will be constructed, to serve new capacity demands, and (2) the existing or additional capacity associated with these assets.

Methodology

The SDF's were calculated using principles and practices set by the American Water Works Association (AWWA) Manual of Water Supply Practices, Principles of Water Rates, Fees, and Charges, System Development Charges. The legislation defines three methods for calculating SDFs. These are briefly summarized as follows:

- Buy-in Method (Equity Method) - Under this method, new development bears a proportional share of the capital costs previously incurred by the municipal entity that allow for sufficient capacity to serve the new development.
- Incremental/Marginal Cost -This method requires new development to pay the proportional share of new capital costs that are attributable to the new development.
- Combined Cost - This method uses a combination of the buy-in and incremental/marginal cost methods.

The SDFs for the Town of Boiling Springs were calculated using the Equity or (Buy-in) Method, as it is best suited for the data available for the Town. The goal of this method is to achieve an equity position between new and existing customers of the system. The method assumes that the existing customers have provided equity in the existing system and that built-up equity should accrue to benefit existing customers. The base level of the SDF is established at the current level of the system equity related to the capacity used to serve an existing equivalent residential customer.

System Equity

The major components of the system's equity include the valuation of the system assets, accumulated depreciation, system liabilities, source of equity, and system capacity.

The Town of Boiling Springs currently purchases their water from the City of Shelby at a negotiated rate and owns/operates a wastewater treatment facility that the Town maintains. The Town also has an emergency use water connection with Cleveland County Water, which it has not historically used. The Town of Boiling Springs also has an agreement with the Town of Lattimore to maintain their collection system and treat their sewer. Because of this agreement, it should be considered that new connections in the Town of Lattimore also be subject to SDF's. It would be our recommendation that they would, as all existing customers regardless of town, have borne the cost of the existing system and share in the equity of the collection system as well as the wastewater treatment plant.

Currently, the Town of Boiling Springs has a contract with the City of Shelby to provide the Town with 1 MGD of potable water. On average, the Town is currently using approximately 0.4 MGD of potable water and treats approximately 0.35 MGD of wastewater. These values were taken from the Local Water Supply Plan for the Town of Boiling Springs. A copy of this plan can be found in in **Appendix B**.

The equity of the Town's collection and distribution systems is calculated based on the value of the existing infrastructure to include collection piping, distribution piping, pump stations, elevated storage tank, and treatment plant. The cost to provide potable water is also considered. This is calculated based on the approximate cost that would be required to construct a water treatment facility capable of serving the current needs using current construction cost. To provide enough capacity for the current needs of the Town and to account for peaking factors, the Town would have to provide facilities capable of producing approximately 1 MGD of potable water.

The valuation for a water treatment plant can vary significantly due to new technologies and different methods of treatment. It is not feasible to design a plant for this valuation. However, through research and recent experience we can estimate that the cost for building a new water treatment plant today would be around $5.00 per gallon per day. Therefore, the cost to build a treatment facility capable of providing enough capacity to meet the needs of the Town has been estimated to be approximately $5 million.

The Town of Boiling Springs currently owns and maintains approximately 227,000 linear feet (LF) of waterline ranging from 2-inch to 16-inch diameter pipe. Additionally, they own and maintain approximately 150,000 LF of gravity sewer mains and 46,000 LF of sanitary sewer force mains. The Town also owns and maintains (1), 200,000-gallon elevated potable water storage tank and a booster pump station. The Town also owns 6 sanitary sewer pump stations, but operates and maintains 7 pump stations. The value of these assets is calculated, with depreciation, at $9.27 million for the water assets and $7.8 million for the wastewater assets. The valuation of the assets is further explained below.

Valuation

The valuation of the Town's water and wastewater assets is based on the actual assets in place today. The length of water and sewer mains was calculated using data from the Town's GIS. To determine the value of the pipe, we multiplied the linear footage by unit costs of $45 per linear foot for water and $60 per linear foot of sewer line. These numbers are an estimate based on our experience with similar projects in the area and considering the varying types and sizes of pipe installed. The pump station values were based on lump sum pricing compared to similar pump station construction in the region. The cost of each pump station was estimated individually based on its size, then an average per pump station was calculated for simplicity and entered into Table 1 below. The values of each asset were then adjusted to show depreciation. This was done using straight line depreciation over a 50-year expected life span, given a salvage value of $0. This depreciation was based on an assumed average age of 30-years for all assets.

Table 1 Valuation of Assets

Asset	Length of Pipe (ft.)	Cost (per)	Unit	Total	Depreciated Value (40%)
Distribution Lines	227,000	$ 45.00	LF	$ 10,215,000.00	$ 4,086,000.00
Tank	1	$ 300,000.00	EA	$ 300,000.00	$ 120,000.00
Booster PS	1	$ 150,000.00	EA	$ 150,000.00	$ 60,000.00
			Water Total	**$ 10,215,000.00**	**$ 4,266,000.00**
Treatment Plant	1	$ 5,500,000.00	EA	$ 5,500,000.00	$ 2,200,000.00
Sewer Line	196,000	$ 60.00	LF	$ 11,760,000.00	$ 4,704,000.00
Pump Station	7	$ 318,500.00	EA	$ 2,230,000.00	$ 892,030.00
			Wastewater Total	**$ 19,490,000.00**	**$ 7,796,000.00**

System Development Fee

SDF's were calculated based on the capacities the Town would have to provide to maintain the current level of service using the Equity/Buy-in method. The number of EDUs the Town could serve is based on an assumed 240 GPD per EDU based on guidelines from North Carolina Administrative Code 15A NCAC 02T.0114. Assuming 1 MGD for water the Town could supply up to 4,167 EDU (1,000,000 GPD/240 GPD = 4,167 EDU) and assuming 0.6 MGD for wastewater the Town could treat sewer for 2,500 EDU (600,000/240=2,500 EDU). Liabilities, such as outstanding debt, loans and costs associated with identified CIP projects were then deducted from the total asset value to determine a net value for each of the systems. Using this value, a recommended fee was calculated. A breakdown of each of this evaluation can be found in Tables 2 and 3.

Table 2 Water SDF Evaluation

Water	Original Cost	Depreciation	Net Cost
Plant	-	-	$ 5,000,000.00
Distribution Lines	$ 10,215,000.00	$ 4,086,000.00	$ 4,086,000.00
Elevated Storage Tank	$ 300,000.00	$ 120,000.00	$ 120,000.00
Booster PS	$ 150,000.00	$ 60,000.00	$ 60,000.00
		Subtotal	**$ 9,266,000.00**
Less Net Cost of			
		Distribution Main Repairs per CIP	$ 1,249,549.00
		Outstanding Debt/Loans	$ 85,891.69
		Total	$ 7,930,600.00
		System Development Fees (Total/4,167)	**$ 1,900.00**

Table 3 Sanitary Sewer SDF Evaluation

Wastewater	Original Cost	Depreciation	Net Cost
Plant	$ 5,500,000.00	$ 2,200,000.00	$ 2,200,000.00
Distribution Lines	$ 11,760,000.00	$ 4,704,000.00	$ 4,704,000.00
Pump Stations	$ 2,230,000.00	$ 892,000.00	$ 892,000.00
		Subtotal	**$ 7,796,000.00**
Less Net Cost of			
		Distribution Main Repairs per CIP	$ 1,053,000.00
		Outstanding Debt/Loans	$ 262,837.00
		Total	$ 6,480,163.00
		System Development Fees (Total/2,500)	**$ 2,590.00**

The SDF's above are calculated per EDU as noted in the first paragraph of this section. However, some properties will have a greater demand for water and sewer and therefore should be charged accordingly. A single EDU is based on a 3/4-inch water service and assumes 240 GPD as described above. Properties with a greater demand should be charged based on the water demand and service. In cases where a larger service is needed, we recommend rates as shown in Table 4. This table is based on the maximum meter-flow capacity ratios.

Table 4 Rates Based on Service Size

Service Size	Water	Sewer
3/4"	$1,900.00	$2,590.00
1"	$3,166.67	$4,316.67
1.5"	$8,946.00	$9,198.00
2"	$10,133.33	$13,813.33
3"	$22,166.67	$30,216.67
4"	$38,000.00	$51,800.00
6"	$88,666.67	$120,866.67
8"	$152,000.00	$207,200.00
10"	$240,666.67	$328,066.67

Table 4 Rates Based on Service Size

Service Size	Water	Sewer
12"	$316,666.67	$431,666.67

Conclusion

Based on the system assets, accumulate depreciation, system liabilities, source of equity and system capacity we conclude that a base rate system development fee of up to $1,900.00 for water and $2,590.00 for wastewater should be assessed. Larger connections should be implemented based on Table 4.

APPENDIX A

HB 344

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2021

SESSION LAW 2021-76
HOUSE BILL 344

AN ACT TO CLARIFY THE PROCESS WITH WHICH A LOCAL GOVERNMENTAL UNIT MAY IMPOSE AND COLLECT SYSTEM DEVELOPMENT FEES AND TO PROVIDE THAT A WATER OR WASTEWATER PUBLIC UTILITY IS SOLELY RESPONSIBLE FOR INCOME TAXES DUE ON TAXABLE CONTRIBUTIONS IN AID OF CONSTRUCTION.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 162A-201 reads as rewritten:

"**§ 162A-201. Definitions.**

The following definitions apply in this Article:

…

(4) Facility. – A water supply, treatment, storage, or distribution facility, or a wastewater collection, treatment, or disposal ~~facility, including for reuse or reclamation of water,~~ facility providing a general benefit to the area that facility serves and is owned or operated, or to be owned or operated, by a local governmental ~~unit and land associated with such facility.~~unit. This shall include facilities for the reuse or reclamation of water and any land associated with the facility.

…

(7) Service. – Water or sewer service, or water and sewer service, provided by a local governmental ~~unit.~~unit, including water or sewer service provided pursuant to a wholesale arrangement between a water and sewer authority organized under Article 1 of Chapter 162A of the General Statutes and a local governmental unit.

…

(9) System development fee. – A charge or assessment for ~~service~~ service, including service provided pursuant to a wholesale arrangement between a water and sewer authority organized under Article 1 of Chapter 162A of the General Statutes and a local governmental unit, 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, as provided in this Article. The term includes amortized charges, lump-sum charges, and any other fee that functions as described by this definition regardless of terminology. The term does not include any of the following:

a. A charge or fee to pay the administrative, plan review, or inspection costs associated with permits required for development.
b. Tap or hookup charges for the purpose of reimbursing the local governmental unit for the actual cost of connecting the service unit to the system.
c. Availability charges.

d. Dedication of capital improvements on-site, adjacent, or ancillary to a development absent a written agreement providing for credit or reimbursement to the developer pursuant to G.S. 153A-280, 153A-451, 160A-320, 160A-499 or Part 3A of Article 18, Chapter 153A or Part 3D of Article 19, Chapter 160A of the General Statutes.

e. Reimbursement to the local governmental unit for its expenses in constructing or providing for water or sewer utility capital improvements adjacent or ancillary to the development if the owner or developer has agreed to be financially responsible for such expenses; however, such reimbursement shall be credited to any system development fee charged as set forth in G.S. 162A-207(c).

…."

SECTION 2. G.S. 162A-205 reads as rewritten:

"**§ 162A-205. Supporting analysis.**

A system development fee shall be calculated based on a written analysis, which may constitute or be included in a capital improvements 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 public water and sewer systems.

(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 five years nor more than 20 years.

(8) Is adopted by resolution or ordinance of the local governmental unit in accordance with G.S. 162A-209.

(9) Uses the gallons per day per service unit that the local governmental unit applies to its water or sewer system engineering or planning purposes for water or sewer, as appropriate, in calculating the system development fee."

SECTION 3. G.S. 162A-207 reads as rewritten:

"**§ 162A-207. Minimum requirements.**

(a) Maximum. – A system development fee shall not exceed that calculated based on the system development fee analysis.

(b) Revenue Credit. – In applying the incremental cost or marginal cost, or the combined cost, method to calculate a system development fee with respect to ~~water or sewer~~ capital improvements, the system development fee analysis must include as part of that methodology a

credit against the projected aggregate cost of ~~water or sewer~~ capital improvements. That credit shall be determined based upon generally accepted calculations and shall reflect a deduction of either the outstanding debt principal or the present value of projected water and sewer revenues received by the local governmental unit for the capital improvements necessitated by and attributable to such new development, anticipated over the course of the planning horizon. In no case shall the credit be less than twenty-five percent (25%) of the aggregate cost of capital improvements.

(c) Construction or Contributions Credit. – In calculating the system development fee with respect to new development, the local governmental unit shall credit the value of costs in excess of the development's proportionate share of connecting facilities required to be oversized for use of others outside of the development. No credit shall be applied, however, for ~~water or sewer~~ capital improvements on-site or to connect new development to ~~water or sewer~~ facilities."

SECTION 4. Article 7 of Chapter 62 of the General Statutes is amended by adding a new section to read:

"**§ 62-133.12B. Computation of income tax expense for rate-making purposes; taxable contributions.**

A water or wastewater public utility is solely responsible for funding the income taxes on taxable contributions in aid of construction and customer advances for construction and shall record the income taxes the water or wastewater utility pays in accumulated deferred income taxes for accounting and rate-making purposes."

SECTION 5. This act is effective when it becomes law and clarifies existing law with minimum standards employed by all generally accepted accounting, engineering, and planning methodologies used to calculate system development fees for public water and sewer systems.

In the General Assembly read three times and ratified this the 24th day of June, 2021.

s/ Mark Robinson
President of the Senate

s/ Tim Moore
Speaker of the House of Representatives

s/ Roy Cooper
Governor

Approved 12:03 p.m. this 2nd day of July, 2021

APPENDIX B

Local Water Supply Plan

Boiling Springs

2022

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

1. System Information

Contact Information

Water System Name:	Boiling Springs	PWSID:	01-23-025
Mailing Address:	PO Box 1014 Boiling Springs, NC 28017	Ownership:	Municipality
Contact Person:	Mike Gibert	Title:	Public Works Director
Phone:	704-434-2357	Cell/Mobile:	--
Secondary Contact:	Justin Longino	Phone:	704-434-2357
Mailing Address:	PO Box 1014 Boiling Springs, NC 28017	Cell/Mobile:	--

Complete

Distribution System

Line Type	Size Range (Inches)	Estimated % of lines
Asbestos Cement	6	2.00 %
Cast Iron	6	5.00 %
Ductile Iron	6-16	10.00 %
Polyvinyl Chloride	2-12	83.00 %

What are the estimated total miles of distribution system lines? 43 Miles

How many feet of distribution lines were replaced during 2022? 1,430 Feet

How many feet of new water mains were added during 2022? 0 Feet

How many meters were replaced in 2022? 12

How old are the oldest meters in this system? 20 Year(s)

How many meters for outdoor water use, such as irrigation, are not billed for sewer services? 123

What is this system's finished water storage capacity? 0.2000 Million Gallons

Has water pressure been inadequate in any part of the system since last update? *Line breaks that were repaired quickly should not be included.* No

The Town plans to start replacing the oldest water meters in the system starting this year 2023.

Programs

Does this system have a program to work or flush hydrants? Yes, Monthly

Does this system have a valve exercise program? Yes, As Needed

Does this system have a cross-connection program? Yes

Does this system have a program to replace meters? Yes

Does this system have a plumbing retrofit program? Yes

Does this system have an active water conservation public education program? Yes

Does this system have a leak detection program? Yes

Water Conservation

What type of rate structure is used? Increasing Block

How much reclaimed water does this system use? 0.0000 MGD For how many connections? 0

Does this system have an interconnection with another system capable of providing water in an emergency? Yes

2. Water Use Information

Service Area

Sub-Basin(s)	% of Service Population	County(s)	% of Service Population
Broad River (01-1)	100 %	Cleveland	100 %

What was the year-round population served in 2022? 4,769

Has this system acquired another system since last report? No

Water Use by Type

Type of Use	Metered Connections	Metered Average Use (MGD)	Non-Metered Connections	Non-Metered Estimated Use (MGD)
Residential	1,784	0.2323	0	0.0000
Commercial	148	0.0420	0	0.0001
Industrial	1	0.0011	0	0.0000
Institutional	47	0.0770	0	0.0000

How much water was used for system processes (backwash, line cleaning, flushing, etc.)? 0.0052 MGD

System processes = estimated water main flushing, fire department training and usage.
Non-metered usage = bulk water purchased.

Water Sales

Purchaser	PWSID	Average Daily Sold (MGD)	Days Used	Contract			Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
				MGD	Expiration	Recurring			
Cleveland County SD	01-23-055	0.0000	0			Yes	Yes	6	Emergency

3. Water Supply Sources

Monthly Withdrawals & Purchases

	Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)
Jan	0.3350	0.4420	May	0.3780	0.5010	Sep	0.4030	0.4990
Feb	0.3490	0.4150	Jun	0.4370	0.5750	Oct	0.3710	0.4800
Mar	0.3160	0.3780	Jul	0.5100	0.7650	Nov	0.3230	0.4220
Apr	0.3690	0.6900	Aug	0.4290	0.5620	Dec	0.3170	0.5370

All water purchased from the City of Shelby. PWS ID # 01-23-010.

Water Purchases From Other Systems

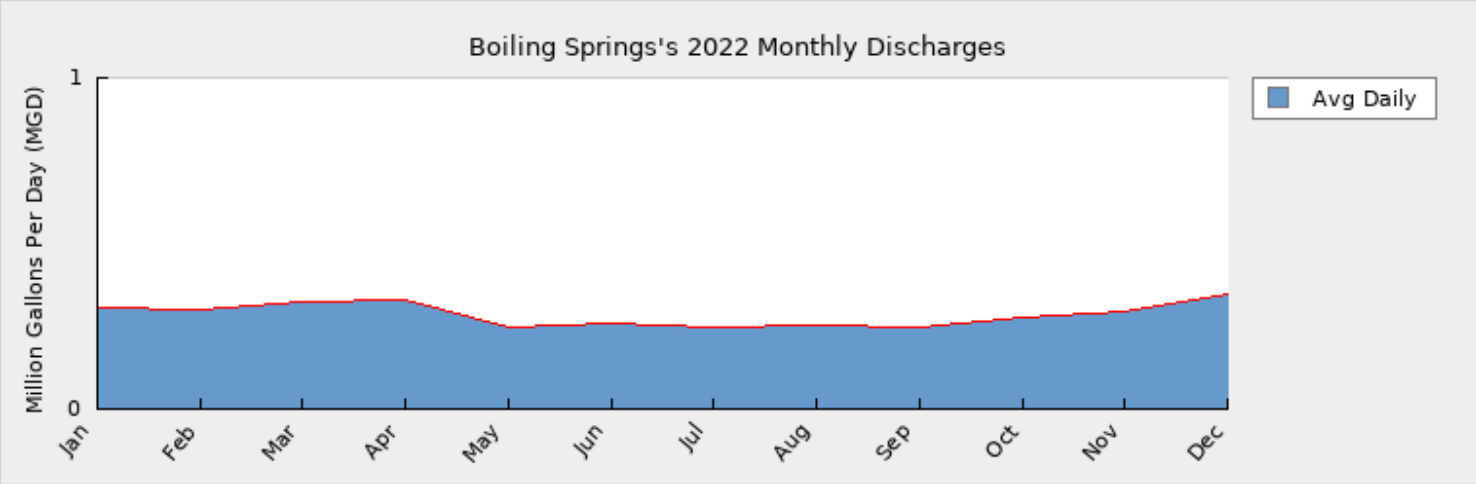
Seller	PWSID	Average Daily Purchased (MGD)	Days Used	Contract			Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
				MGD	Expiration	Recurring			
CLEVELAND COUNTY SD	01-23-055	0.0000	0			Yes	Yes	6	Emergency
SHELBY	01-23-010	0.3800	365	1.0000	2034	Yes	Yes	16	Regular

Cleveland County Water installed a new larger 6" receiving interconnect to the Town of Boiling Springs water system. Currently the interconnect is for emergency use.

4. Wastewater Information

Monthly Discharges

	Average Daily Discharge (MGD)		Average Daily Discharge (MGD)		Average Daily Discharge (MGD)
Jan	0.3040	May	0.2490	Sep	0.2480
Feb	0.3020	Jun	0.2560	Oct	0.2760
Mar	0.3260	Jul	0.2470	Nov	0.2920
Apr	0.3300	Aug	0.2510	Dec	0.3460



How many sewer connections does this system have? 1,066

How many water service connections with septic systems does this system have? 779

Are there plans to build or expand wastewater treatment facilities in the next 10 years? Yes

The Town W/S CIP recommends plans to upgrade the electric power from 208 volts 3 phase to 480 volts 3 phase and build a new residuals digester in the next 5 years at the wastewater treatment plant.

The average daily discharge includes the wastewater from the Town of Lattimore collection system permit # WQCSD0717.

Wastewater Permits

Permit Number	Type	Permitted Capacity (MGD)	Design Capacity (MGD)	Average Annual Daily Discharge (MGD)	Maximum Day Discharge (MGD)	Receiving Stream	Receiving Basin
NC0071943	WWTP	0.6000	0.6000	0.2860	1.0000	SANDY RUN CREEK	Broad River (01-1)
WQCS00222	CS	0.0000	0.0000	0.0000		COLLECTION SYSTEM	Broad River (01-1)

Wastewater Interconnections

Water System	PWSID	Type	Average Daily Amount		Contract Maximum (MGD)
			MGD	Days Used	
Cleveland County SD	01-23-055	Receiving	0.0170	365	0.0750

The Town of Boiling Springs operates the sewer collection system and treats the wastewater from the Town of Lattimore. The water provider for the Town of Lattimore is Cleveland County Water.

5. Planning

Projections

	2022	2030	2040	2050	2060	2070
Year-Round Population	4,769	4,800	4,850	4,900	4,950	5,000
Seasonal Population	0	0	0	0	0	0
Residential	0.2323	0.2370	0.2390	0.2410	0.2430	0.2450
Commercial	0.0421	0.0426	0.0431	0.0436	0.0441	0.0446
Industrial	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022
Institutional	0.0770	0.0775	0.0780	0.0785	0.0790	0.0795
System Process	0.0052	0.0053	0.0054	0.0055	0.0056	0.0057
Unaccounted-for	0.0223	0.0225	0.0230	0.0235	0.0240	0.0245

Demand v/s Percent of Supply

	2022	2030	2040	2050	2060	2070
Surface Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ground Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Purchases	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Future Supplies		0.0000	0.0000	0.0000	0.0000	0.0000
Total Available Supply (MGD)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Service Area Demand	0.3800	0.3862	0.3900	0.3938	0.3976	0.4015
Sales	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Sales		0.0000	0.0000	0.0000	0.0000	0.0000
Total Demand (MGD)	0.3800	0.3862	0.3900	0.3938	0.3976	0.4015
Demand as Percent of Supply	38%	39%	39%	39%	40%	40%

The purpose of the above chart is to show a general indication of how the long-term per capita water demand changes over time. The per capita water demand may actually be different than indicated due to seasonal populations and the accuracy of data submitted. Water systems that have calculated long-term per capita water demand based on a methodology that produces different results may submit their information in the notes field.

Your long-term water demand is 49 gallons per capita per day. What demand management practices do you plan to implement to reduce the per capita water demand (i.e. conduct regular water audits, implement a plumbing retrofit program, employ practices such as rainwater harvesting or reclaimed water)? If these practices are covered elsewhere in your plan, indicate where the practices are discussed here. No changes

Are there other demand management practices you will implement to reduce your future supply needs? The Town of Boiling Springs will work to reduce the per capita water use by continuing our active water conservation public education program, a plumbing retrofit program, a rate structure that encourages water conservation, and a water meter replacement program.

What supplies other than the ones listed in future supplies are being considered to meet your future supply needs? The Town of Boiling Springs future per capita demand will be evaluated annually and additional measures will be implemented as needed to ensure that the per capita usage is being maintained or reduced.

How does the water system intend to implement the demand management and supply planning components above? With continued technical assistance from engineering and NCRWA. The Town recently recieved funding from an AIA grant $150,000 for updating the Town Distibution System GIS Mapping, Distribution System Hydraulic Modeling, CIP, and Revenue Modeling.

Additional Information

Has this system participated in regional water supply or water use planning? No

What major water supply reports or studies were used for planning?

Please describe any other needs or issues regarding your water supply sources, any water system deficiencies or needed improvements (storage, treatment, etc.) or your ability to meet present and future water needs. Include both quantity and quality considerations, as well as financial, technical, managerial, permitting, and compliance issues:

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR

staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.