

DRAFT REPORT

**COST- JUSTIFIED WATER AND SEWER
SYSTEM DEVELOPMENT FEES**

TOWN OF SPRING LAKE, NORTH CAROLINA

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EXECUTIVE SUMMARY and PURPOSE STATEMENT

Executive Summary:

The North Carolina General Assembly passed Session Law 2017-138 House Bill 436 (HB 436) in July 2017 amending Chapter 162A of the General Statutes by adding “Article 8, System Development Fees.” This amendment was enacted as “An Act to Provide for Uniform Authority to Implement System Development Fees for Public Water and Sewer Systems in North Carolina and to Clarify the Applicable Statute of Limitations” which requires compliance with designated calculation methodology. Article 8 requires an update to the System Development Fee (SDF) analysis to be performed at least every 5 years.

The SDF analysis is based on the calculated cost per unit volume of utility assets that provide available capacity to supply new development, both now and in the future. Fees are required to be calculated based on the consumption need per Service Unit, which is defined as the level of demand associated with the typical residential customer. A three-bedroom single family residence fits this definition and is referred to as an Equivalent Residential Unit (ERU). The associated level of demand for this customer type can therefore be assigned 400 gallons per day (gpd) for water and 225 gpd for sewer based on standard design flow rates for water and wastewater specified in NC Administrative Code 15A NCAC 18C .0409 and 15A NCAC 02T.0114, as amended, respectively.

Table 0.0.1 – System Development Fee Calculation: Cost per Gallon per Day (\$/GPD)

Spring Lake: Cost per Unit Volume and Cost per Service Unit		Cost of Capacity	
Item	Cost-Justified System Development Fee Calculation	\$ / GPD	
1	Water System	\$	1.89
2	Sewer System	\$	4.26

The fee for other types of development for the Town of Spring Lake can be determined by applying the calculated cost of capacity per gallon of demand per day for various uses as defined by NC Administrative Code 15A NCAC 02T.0114 using the cost of capacity values shown above in Table 0.0.1 for the Town’s water and sewer systems.

Purpose Statement:

This report documents the results of the approach, methods and calculations for establishing system development fees. In accordance with North Carolina General Statute 162A, Article 8, system development fees must be determined by a qualified engineer or financial professional using industry standard practices. McGill Associates, PA (McGill) is qualified in engineering disciplines and financial analysis, with experience and expertise in determining system development fees. For more than 40 years, the firm has provided professional services and guidance to hundreds of local government units, water authorities and special districts in developing and implementing utility master plans, capital improvement programs, user rates, charges and other fees, including capacity charges. The approach, methodology and calculations are based on American Water Works Association (AWWA) Manual of Water Supply Practices – M1, Principles of Water Rates, Fees, and Charges, Seventh Edition.

Spring Lake has made significant investments in the Town's water and sewer system assets that will continue to provide available capacity for new connections and future development. Spring Lake desires to use System Development Fees to recover a reasonable portion of the costs associated with providing capacity.

The result of this effort will establish the maximum cost-justified System Development Fee using common industry practices and industry standards. McGill has relied on information and assumptions provided by the Town of Spring Lake, as the Town is the most reliable and knowledgeable source of information regarding the water and sewer systems, the Utility's finances, funding sources, etc. McGill has not independently verified the accuracy of information provided by the Town and has deemed the information to be reasonable for the purposes of this analysis and appropriate for supporting the conclusions reached. Spring Lake may elect to implement fees of lesser value; however, any adjustment must be calculated on a cost per unit volume basis.

This report does not constitute a recommendation of an SDF amount. Spring Lake has full authority to charge any fee up to the maximum amount calculated herein, provided it is applied proportionally to the relative demands of new development. Evaluation of local factors, preferences, etc., may influence Spring Lake's decision. The final SDF fee amount is required to be determined by the Town and adopted in accordance with applicable State and local regulations and policies prior to implementation.

System Development Fees are defined as a charge imposed on each new customer or development that generally offsets the incremental cost of replacing existing and/or constructing new capital assets to provide capacity that will continue to meet the demands placed on the system by each new customer or development. Since system capacity must, without exception, exceed customer demands, the major infrastructure components providing this capacity must be planned and constructed well in advance and in large enough increments to keep pace with the anticipated demands of new development on the available system capacity.

By definition, SDFs are based on the costs for capacity-related infrastructure that provide a general benefit to all customers, typically referred to as major backbone infrastructure components. Eligible asset types include source-of-supply, water treatment, pumping, storage transmission and major sewer collection mains, sewer treatment, solids processing and disposal. McGill engineers identified assets that function as backbone components using asset registries, water and sewer maps, GIS attributes and other records provided by the Town. Town Staff then reviewed the information and filled in data gaps to complete a list of assets eligible for inclusion in the SDF calculation.

AWWA methodology cites a Rational Nexus, or reasonable relationship, must be established between the fee charged and the cost associated with providing capacity to new customers. The Rational Nexus Test consists of three elements: 1) a review of historical development patterns and available planning documents to verify general alignment between capacity demands driven by development and capital improvements that are, and will be needed to provide the required capacity; 2) a determination of the proportionate share of costs to be borne by new development through appropriate methodology and calculation and 3) establishing a reasonable allocation of costs associated with new development in relation to the service benefits received by the new development through appropriate methodology and calculations.

The first element of the Rational Nexus Test was determined to be favorable for the Town's water and sewer systems based on the capacities of water supply, production, storage and transmission, sewer collection, treatment and disposal, which were compared to historical and projected system demands. Water and sewer system characteristics were reviewed using the annual water demand and sewer treatment data reported by the Town of Spring Lake to the NC Department of Environmental Quality Division of Water Resources for Local Water Supply Planning (LWSP) that verified Spring Lake's water and sewer systems have adequate capacity to support new development presently and into the future.

Water system demand in 2023 was reported to be 0.887 million gallons per day (MGD). Compared to the system capacity of 1.200 MGD (established by water purchase agreements with the City of Fayetteville and Harnett County), this translates into an existing available capacity of 0.313MGD, or approximately 26%. Sewer system flow in 2023 was reported to be 0.900 MGD. Compared to the permitted system capacity of 1.500 MGD (NPDES permit NC0030970), this translates into an existing available capacity of 0.600 MGD, or approximately 40%. Water system demand assigned to this forecast is 0.14% per year through 2030, and 0.10% thereafter. Sewer system demand assigned to this forecast is 0.02% through 2030, and 0.01% thereafter.

To anticipate the rate of population growth potentially exceeding projections due to possible changes in customer types and usage patterns, a more conservative value of 1.0% was used for system demand through 2040 to determine if adequate capacity can be reasonably expected throughout the 10-year Planning Period. Using an annual rate of 1%, the available system capacities anticipated in 2030 are 0.249 MGD (21%) for water and 0.535 MGD (36%) for sewer.

The reasonableness of this projection was reviewed in light of the “Cumberland County 2030 Joint Growth Vision Plan, Policies and Actions” and the accompanying “Growth Factors Analysis”. Policy statements in these planning documents recommend centralized water and sewer service extensions to be limited to urban areas, which should keep the District’s rate of growth well below the 1.0% projection.

Table 1.01 summarizes current and projected capacities, along with water supply availability and wastewater treatment/disposal.

Table 1.0.1 – Spring Lake Water and Sewer Capacities: Availability Projection

Spring Lake: Treatment Capacity Availability Projection (MGD)				
Item	Existing Water and Sewer System Infrastructure	2023	2030	2040
WC1	Water Capacity	1.200	1.200	1.200
WC2	Water Average Day Demand	0.887	0.896	0.905
	Available Water Capacity	0.313	0.304	0.295
SC1	Sewer Capacity	1.500	1.500	1.500
SC2	Sewer Average Day Flow	0.900	0.901	0.902
	Available Sewer Capacity	0.600	0.599	0.598

Therefore, existing water supply and wastewater treatment capacities appear to be adequate to meet projected demands without the need to purchase additional water supply or construct wastewater treatment capacity during the 10-year planning period.

The remaining elements of the Rational Nexus Test are demonstrated through appropriate methodology and calculations in the following sections.

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Three methods for calculating system development charges are recognized in the industry as cost justified (AWWA, M1 Manual, 7th Edition, Chapter VII.2). Each of these methods meet the requirement of the Rational Nexus standard, and as set forth in North Carolina General Statute 162A Article 8 “System Development Fees”. An explanation of each method and its general application to calculating system development fees are presented as follows:

Buy-In Method

The Buy-In Method is used where existing system capacity is available to provide service to new development. This includes capacity-related assets that are classified as construction work in progress. New customers essentially “buy” their proportionate share of system capacity from the current customer base (“system owners”) at the current cost or value of the existing facilities. HB 436 requires appropriate adjustments to replacement cost such as “debt credits, grants, and other generally accepted valuation adjustments.”

Incremental Cost Method

The Incremental Cost Method is used to assign incremental costs of the capital assets required for providing additional system capacity to new development. Generally, this method is considered most appropriate when the existing system does not have sufficient available capacity, and a significant portion of the capacity required to serve new customers must be provided by the construction of new facilities. This method should include supporting details that identify construction costs, scheduling, financing, funding source(s), and other related items that correspond to a capital improvements plan (CIP), utilities master plan, and/or other approved planning document(s) that cover a planning horizon of 10 to 20 years.

Combined Method

The Combined Method is a combination of the Buy-In and Incremental Cost Methods. It is used when existing assets provide a portion of system capacity to accommodate new development and applicable capital planning identifies significant investments that will be needed to add necessary infrastructure that addresses future growth and capacity needs.

3.0

CALCULATION of SYSTEM DEVELOPMENT FEES

The **Buy-In Method** is the appropriate approach to calculate the Town of Spring Lake’s system development fees. Water and sewer system capacities are sufficient and available to provide service to new customers, both now and through the 10-year planning period.

3.1 Existing System Capacity Availability

Case law following HB 436 legislation establishes that available system capacity must be provided contemporaneously with the acceptance and collection of system development fees. Therefore, availability of adequate system capacity must be demonstrated and maintained.

The current available capacities for the water and sewer systems are as follows:

Table 3.1.1– SPRING LAKE Available Capacities

Spring Lake: Water and Sewer System Available Treatment Capacities				
Item	System Capacity - Million Gallons Per Day (MGD)	System Capacity	System Demand	Available Capacity
1	Water System	1.20	0.887	0.313
2	Sewer System	1.50	0.900	0.600

Source: Records provided by the Town of Spring Lake.

Spring Lake’s water system has 26% of its capacity available to provide service to new development, and the sewer system has 40% of its capacity available to provide service to new development.

3.2 System Development Fee Calculation – Buy-In Method

After demonstrating that capacity is available, the value of existing assets that provide available capacity is calculated on a cost per gallon basis. This cost can then be applied to the volume anticipated by each new connection or development. This approach generally represents reimbursement to existing customers for constructing and maintaining available capacity in advance of new development.

Assets included in the buy-in valuation are existing system components that generally provide benefit to the entire customer base. These components serve as the backbone of the system and are responsible for delivering available capacity to both existing and potential customers. Water and sewer assets functioning as system backbone components were identified by McGill's engineering staff under the direction of licensed professional engineers experienced in water and sewer utility system design and performance to be included in the SDF calculation.

Town staff identified backbone components contributed by or paid for by others through (developer) donated assets, contributed capital, grants, loan principal forgiveness, etc. These assets are ineligible since the cost of these assets were not "paid for" by the utility's existing customers. Present value of assets partially funded by others were adjusted by the present value of grants, principal forgiveness and other contributions that offset original project costs to the Town. Also, non-capacity related assets such as vehicles, computers, software, etc., were excluded from the calculation.

The preferred AWWA method to determine asset value is taking the original value of an asset and adjusting the cost to meet current-day prices less depreciation, this is known as Replacement Cost New Less Depreciation (RCNLD). This method is based on the premise that SDFs reflect the value of providing a given amount of new capacity at the cost of constructing those assets responsible for providing capacity at the time new customers are connected. This reasonably compensates existing customers for carrying the costs of constructing capital assets in advance to provide the necessary capacity for new development.

RCNLD is determined by using several types of records and resources including the utility's current fixed asset records, GIS data, construction records, previous studies and analyses, operations staff, engineers and financial analysts. Records and asset-related databases that provide adequate details on original cost, date of acquisition and depreciation rate of eligible assets can be used to determine replacement cost new (RCN) using an accepted construction cost index such as the Handy-Whitman Index of Construction Costs for the South Atlantic Region. Depreciation can then be deducted based on each asset type to reach RCNLD.

For eligible assets lacking sufficient inventory record details of cost and date of acquisition, McGill determined replacement cost new (RCN) based on the best judgement of qualified and experienced professional engineers using historical information, specific project conditions and other cost factors associated with the local construction market. Applicable rates of depreciation are then applied to reach RCNLD.

The value of available system capacity can then be calculated by dividing the current value (RCNLD) of assets that provide capacity for new development (eligible assets) by the system capacity. In general, RCNLD will be lower on older systems that have more eligible assets depreciated beyond useful life assignments. Such is the case with Spring Lake.

Table 3.2.1– Water System Cost per GPD of Existing Assets Providing Available Capacity

Spring Lake: Water System Development Fee Buy-In Valuation		
Item	System Asset Description	Amount
Water System Assets - SDF Eligible		
W1	Water Source, Pumping and Storage	\$ 1,452,347
W2	Water Transmission Infrastructure	\$ 1,773,898
Subtotal - Water System Assets		\$ 3,226,244
Less Grants and Donated Assets		\$ -
Less Outstanding Debt Principal		\$ (962,260)
Equals: Net Water System Value		\$ 2,263,984
Divide by: Water System Capacity (MGD)		1.20
Equals: Unit Valuation of Water System (\$/MGD)		\$ 1,886,653
Divide by: 1,000,000 gallons (\$/GPD)		\$ 1.89

Table 3.2.2– Sewer System Cost per GPD of Existing Utility Assets Providing Available Capacity

Spring Lake: Sewer System Development Fee Buy-In Valuation		
Item	System Asset Description	Amount
Sewer System Assets - SDF Eligible		
S1	Sewer Treatment	\$ 4,819,978
S2	Sewer Conveyance Infrastructure	\$ 2,588,866
Subtotal - Sewer System Assets		\$ 7,408,844
Less Grants and Donated Assets		\$ -
Less Outstanding Debt Principal		\$ (1,014,787)
Equals: Net Sewer System Value		\$ 6,394,056
Divide by: Sewer System Capacity (MGD)		1.50
Equals: Unit Valuation of Sewer System (\$/MGD)		\$ 4,262,704
Divide by: 1,000,000 gallons (\$/GPD)		\$ 4.26

3.3 Valuation Adjustments

The above system valuations include applicable credit adjustments for revenues anticipated from user charges, donated infrastructure, grants, funding from other (non-rate payer) sources and outstanding principal on existing any debt obligation(s).

HB 436 requires revenue credits to be applied to the SDF calculation to deduct assets contributed by or paid for (in part or in whole) by others. This includes but is not limited to grants, loan principal forgiveness and capital assets contributed by developers. These investments are deducted from the calculation since these costs were not “paid” by the existing customers.

Outstanding debt principal is also excluded from the SDF calculation because if it were included, new customers would bear this obligation twice. Once as part of the system development fee, and again as part of customer rates and user charges that apply to debt maturity.

3.4 Cost per Unit Volume

Dollar value that can be applied uniformly to all potential customers.

Following determination of the net water system value, system capacity is divided into the net system value to produce the cost per unit volume, expressed as dollars-per-gallons-per-day (\$/GPD).

This measure becomes the starting point by establishing the cost of capacity for each gallon of usage. Using the NC Administrative Code 15A NCAC 1815A NCAC 02T .0114 Water Design Flow Rate, the cost can be calculated for 3-bedroom dwelling unit, which is the unit of measure required by HB436, typically referred to as an equivalent residential unit (ERU).

4.0 SERVICE UNIT CALCULATIONS: EQUIVALENT RESIDENTIAL UNITS

HB 436 requires SDF calculations to be applied to various categories of customer demands based on service units or ERU's. An ERU is defined as the water and sewer capacities required to serve the most typical user type which is a three-bedroom single-family dwelling. North Carolina Division of Water Resources (DWR) design standards for constructing water and sewer systems, NC Administrative Code 15A NCAC 18C .0409 and 15A NCAC 02T .0114 respectively, assign 400 gallons per day for water demand and 225 gallons per day for wastewater.

Table 4.0.1– System Development Fees: Equivalent Residential Unit, Water and Sewer

Spring Lake: Equivalent Residential Unit Calculation					
Item	System Development Fee Calculation	Cost of Capacity \$/GPD	Customer Demand GPD	Cost per Unit Capacity	
1	Water System	\$ 1.89	400	\$ 756	
2	Sewer System	\$ 4.26	225	\$ 959	
Total ERU				\$ 1,715	

5.0 APPLICATION of SYSTEM DEVELOPMENT FEES and SERVICE UNIT EQUIVALENCY

North Carolina General Statutes Chapter 162A-205 requires the development of an equivalency or conversion table to determine fees applicable to various categories of demand. North Carolina Administrative Codes 15A NCAC 18C .0409 and 15A NCAC 02T .0114, included in the Appendix, in addition to establishing system demands for engineering and planning purposes, further defines other service connection types and the associated water demands and sewer system flows on a per gallon per day basis. Therefore, these tables serve as an equivalency or conversion for use in determining applicable SDFs for various categories of demand and types of establishments.

Using NC Administrative Code Codes 15A NCAC 18C .0409 and 15A NCAC 02T .0114 further supports the requirement to maintain a rational nexus between the cost of capacity and the system development fee charged to new development since the same standard used to plan, design and construct capacity is the same basis for determining the system development fee amount.

Appendix

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NC General Sessions Law 2017-138 (House Bill 436) with Amendments
NC Administrative Code 15A NCAC 02T .0114
Wastewater Design Flow Rate Modifications (House Bill 600) pp. 16-17
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2030 Growth Vision Plan: Growth Factors Analysis

NC General Sessions Law 2017-138
(House Bill 436) with Amendments

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GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2017

SESSION LAW 2017-138
HOUSE BILL 436

AN ACT TO PROVIDE FOR UNIFORM AUTHORITY TO IMPLEMENT SYSTEM DEVELOPMENT FEES FOR PUBLIC WATER AND SEWER SYSTEMS IN NORTH CAROLINA AND TO CLARIFY THE APPLICABLE STATUTE OF LIMITATIONS.

The General Assembly of North Carolina enacts:

SECTION 1. Chapter 162A of the General Statutes is amended by adding a new Article to read:

"Article 8.

"System Development Fees.

"§ 162A-200. Short title.

This Article shall be known and may be cited as the "Public Water and Sewer System Development Fee Act."

"§ 162A-201. Definitions.

The following definitions apply in this Article:

- (1) Capital improvement. – A planned facility or expansion of capacity of an existing facility other than a capital rehabilitation project necessitated by and attributable to new development.
- (2) Capital rehabilitation project. – Any repair, maintenance, modernization, upgrade, update, replacement, or correction of deficiencies of a facility, including any expansion or other undertaking to increase the preexisting level of service for existing development.
- (3) Existing development. – Land subdivisions, structures, and land uses in existence at the start of the written analysis process required by G.S. 162A-205, no more than one year prior to the adoption of a system development fee.
- (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, owned or operated, or to be owned or operated, by a local governmental unit and land associated with such facility.
- (5) Local governmental unit. – Any political subdivision of the State that owns or operates a facility, including those owned or operated pursuant to local act of the General Assembly or pursuant to Part 2 of Article 2 of Chapter 130A, Article 15 of Chapter 153A, Article 16 of Chapter 160A, or Articles 1, 4, 5, 5A, or 6 of Chapter 162A of the General Statutes.
- (6) New development. – Any of the following occurring after the date a local government begins the written analysis process required by G.S. 162A-205, no more than one year prior to the adoption of a system development fee, which increases the capacity necessary to serve that development:
 - a. The subdivision of land.



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- b. The construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure which increases the number of service units.
 - c. Any use or extension of the use of land which increases the number of service units.
- (7) Service. – Water or sewer service, or water and sewer service, provided by a local governmental unit.
- (8) Service unit. – A unit of measure, typically an equivalent residential unit, calculated in accordance with generally accepted engineering or planning standards.
- (9) System development fee. – 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, 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).
- (10) System development fee analysis. – An analysis meeting the requirements of G.S. 162A-205.

"§ 162A-202. Reserved.

"§ 162A-203. Authorization of system development fee.

(a) A local governmental unit may adopt a system development fee for water or sewer service only in accordance with the conditions and limitations of this Article.

(b) A system development fee adopted by a local governmental unit under any lawful authority other than this Article and in effect on October 1, 2017, shall be conformed to the requirements of this Article not later than July 1, 2018.

"§ 162A-204. Reserved.

"§ 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 10 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.

"§ 162A-206. Reserved.

"§ 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.

"§ 162A-208. Reserved.

"§ 162A-209. Adoption and periodic review.

(a) For not less than 45 days prior to considering the adoption of a system development fee analysis, the local governmental unit shall post the analysis on its Web site and solicit and furnish a means to submit written comments, which shall be considered by the preparer of the analysis for possible modifications or revisions.

(b) After expiration of the period for posting, the governing body of the local governmental unit shall conduct a public hearing prior to considering adoption of the analysis with any modifications or revisions.

(c) The local governmental unit shall publish the system development fee in its annual budget or rate plan or ordinance. The local governmental unit shall update the system development fee analysis at least every five years.

"§ 162A-210. Reserved.

"§ 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 the foregoing limitations.

(d) 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.

"§ 162A-212. Reserved.

"§ 162A-213. Time for collection of system development fees.

For new development involving the subdivision of land, the system development fee shall be collected by a local governmental unit either at the time of plat recordation or when water or sewer service for the subdivision or other development is committed by the local governmental unit. For all other new development, the local governmental unit shall collect the system development fee at the time of application for connection of the individual unit of development to the service or facilities.

"§ 162A-214. Reserved.

"§ 162A-215. Narrow construction.

Notwithstanding G.S. 153A-4 and G.S. 160A-4, in any judicial action interpreting this Article, all powers conferred by this Article shall be narrowly construed to ensure that system development fees do not unduly burden new development."

SECTION 2. G.S. 130A-64 reads as rewritten:

"§ 130A-64. Service charges and rates.

(a) A sanitary district board shall apply service charges and rates based upon the exact benefits derived. These service charges and rates shall be sufficient to provide funds for the maintenance, adequate depreciation and operation of the work of the district. If reasonable, the service charges and rates may include an amount sufficient to pay the principal and interest maturing on the outstanding bonds and, to the extent not otherwise provided for, bond anticipation notes of the district. Any surplus from operating revenues shall be set aside as a separate fund to be applied to the payment of interest on or to the retirement of bonds or bond anticipation notes. The sanitary district board may modify and adjust these service charges and rates.

(b) The district board may require system development fees only in accordance with Article 8 of Chapter 162A of the General Statutes."

SECTION 3. G.S. 153A-277 reads as rewritten:

"§ 153A-277. Authority to fix and enforce rates.

(a) A county may establish and revise from time to time schedules of rents, rates, fees, charges, and penalties for the use of or the services furnished or to be furnished by a public enterprise. Schedules of rents, rates, fees, charges, and penalties may vary for the same class of service in different areas of the county and may vary according to classes of service, and different schedules may be adopted for services provided outside of the county. A county may include a fee relating to subsurface discharge wastewater management systems and services on the property tax bill for the real property where the system for which the fee is imposed is located.

...

(a2) A county may require system development fees only in accordance with Article 8 of Chapter 162A of the General Statutes.

...."

SECTION 4.(a) G.S. 160A-314 reads as rewritten:

"§ 160A-314. Authority to fix and enforce rates.

(a) A city may establish and revise from time to time schedules of rents, rates, fees, charges, and penalties for the use of or the services furnished or to be furnished by any public enterprise. Schedules of rents, rates, fees, charges, and penalties may vary according to classes of service, and different schedules may be adopted for services provided outside the corporate limits of the city.

...

(e) A city may require system development fees only in accordance with Article 8 of Chapter 162A of the General Statutes."

SECTION 4.(b) G.S. 160A-317 is amended by adding a new subsection to read:

"(a4) System Development Fees. – A city may require system development fees only in accordance with Article 8 of Chapter 162A of the General Statutes."

SECTION 5.(a) G.S. 162A-6(a) is amended by adding a new subdivision to read:

"(9a) To impose and require system development fees only in accordance with Article 8 of this Chapter."

SECTION 5.(b) G.S. 162A-9 is amended by adding a new subsection to read:

"(a5) An authority may require system development fees only in accordance with Article 8 of this Chapter."

SECTION 6.(a) G.S. 162A-36(a) is amended by adding a new subdivision to read:

"(8a) To impose and require system development fees only in accordance with Article 8 of this Chapter."

SECTION 6.(b) G.S. 162A-49 reads as rewritten:

"§ 162A-49. Rates and charges for services.

(a) The district board may fix, and may revise from time to time, rents, rates, fees and other charges for the use of land for the services furnished or to be furnished by any water system or sewerage system or both. Such rents, rates, fees and charges shall not be subject to supervision or regulation by any bureau, board, commission, or other agency of the State or of any political subdivision. Any such rents, rates, fees and charges pledged to the payment of revenue bonds of the district shall be fixed and revised so that the revenues of the water system or sewerage system or both, together with any other available funds, shall be sufficient at all times to pay the cost of maintaining, repairing and operating the water system or the sewerage system or both, the revenues of which are pledged to the payment of such revenue bonds, including reserves for such purposes, and to pay the interest on and the principal of such revenue bonds as the same shall become due and payable and to provide reserves therefor. If any such rents, rates, fees and charges are pledged to the payment of any general obligation bonds issued under this Article, such rents, rates, fees and charges shall be fixed and revised so as to comply with the requirements of such pledge. The district board may provide methods for collection of such rents, rates, fees and charges and measures for enforcement of collection thereof, including penalties and the denial or discontinuance of service.

(b) The district board may require system development fees only in accordance with Article 8 of this Chapter."

SECTION 7.(a) G.S. 162A-69 is amended by adding a new subdivision to read:

"(8a) To impose and require system development fees only in accordance with Article 8 of this Chapter."

SECTION 7.(b) G.S. 162A-72 reads as rewritten:

"§ 162A-72. Rates and charges for services.

(a) The district board may fix, and may revise from time to time, rents, rates, fees and other charges for the use of and for the services furnished or to be furnished by any sewerage system. Such rents, rates, fees and charges shall not be subject to supervision or regulation by any bureau, board, commission, or other agency of the State or of any political subdivision. Any such rents, rates, fees and charges pledged to the payment of revenue bonds of the district shall be fixed and revised so that the revenues of the sewerage system, together with any other available funds, shall be sufficient at all times to pay the cost of maintaining, repairing and operating the sewerage system the revenues of which are pledged to the payment of such revenue bonds, including reserves for such purposes, and to pay the interest on and the principal of such revenue bonds as the same shall become due and payable and to provide reserves therefor. If any such rents, rates, fees and charges are pledged to the payment of any general obligation bonds issued under this Article, such rents, rates, fees and charges shall be fixed and revised so as to comply with the requirements of such pledge. The district board may provide methods for collection of such rents, rates, fees and charges and measures for enforcement of collection thereof, including penalties and the denial or discontinuance of service.

(b) The district board may require system development fees only in accordance with Article 8 of this Chapter."

SECTION 8. G.S. 162A-85.13 is amended by adding a new subsection to read:

"(a1) The district board may require system development fees only in accordance with Article 8 of this Chapter."

SECTION 9. G.S. 162A-88 reads as rewritten:

"§ 162A-88. District is a municipal corporation.

(a) The inhabitants of a county water and sewer district created pursuant to this Article are a body corporate and politic by the name specified by the board of commissioners. Under that name they are vested with all the property and rights of property belonging to the corporation; have perpetual succession; may sue and be sued; may contract and be contracted with; may acquire and hold any property, real and personal, devised, sold, or in any manner conveyed, dedicated to, or otherwise acquired by them, and from time to time may hold, invest, sell, or dispose of the same; may have a common seal and alter and renew it at will; may establish, revise and collect rates, fees or other charges and penalties for the use of or the services furnished or to be furnished by any sanitary sewer system, water system or sanitary sewer and water system of the district; and may exercise those powers conferred on them by this Article.

(b) The district board may require system development fees only in accordance with Article 8 of this Chapter."

SECTION 10.(a) G.S. 1-52(15) reads as rewritten:

"(15) For the recovery of taxes paid as provided in ~~G.S. 105-381~~.G.S. 105-381 or for the recovery of an unlawful fee, charge, or exaction collected by a county, municipality, or other unit of local government for water or sewer service or water and sewer service."

SECTION 10.(b) This section is to clarify and not alter G.S. 1-52.

SECTION 11. Sections 1 through 9 of this act become effective October 1, 2017, and apply to system development fees imposed on or after that date. Section 10 of this act, being a clarifying amendment, has retroactive effect and applies to claims accrued or pending prior to and after the date that section becomes law. Nothing in this act provides retroactive authority for any system development fee, or any similar fee for water or sewer services to be furnished, collected by a local governmental unit prior to October 1, 2017. The remainder of this act is effective when it becomes law and applies to claims accrued or pending prior to and after that date.

In the General Assembly read three times and ratified this the 29th day of June, 2017.

s/ Daniel J. Forest
President of the Senate

s/ Tim Moore
Speaker of the House of Representatives

s/ Roy Cooper
Governor

Approved 4:13 p.m. this 20th day of July, 2017



HOUSE BILL 344: System Development Fees Update.

2021-2022 General Assembly

Committee:	Senate Agriculture, Energy, and Environment.	Date:	June 8, 2021
	If favorable, re-refer to Finance. If favorable, re-refer to Rules and Operations of the Senate		
Introduced by:	Reps. Arp, Hardister, Hanig, Meyer	Prepared by:	Chris Saunders
Analysis of:	Second Edition		Committee Counsel

OVERVIEW: House Bill 344 would do the following:

- Clarify certain minimum standards incorporated into the generally accepted accounting, engineering, and planning methodologies used to calculate system development fees imposed by local governments for public water and sewer systems.
- Provide that the fee also applies to service provided under a wholesale arrangement between a water and sewer authority and a local governmental unit.

CURRENT LAW: A local governmental unit¹ may impose a system development fee on the owner of a new development within its territorial jurisdiction to fund the cost of water and sewer infrastructure necessitated by the new development, to recoup the costs of existing facilities serving the new development, or a combination of the two. A new development is defined as (1) the subdivision of land; (2) construction, or any change to an existing structure, that causes an increase in the need for service; or (3) any use or extension of the use of land which increases the need for service. The fee may not be assessed on an existing development.

A system development fee must be calculated based upon a written analysis prepared by either a qualified financial professional or professional engineer using either the buy-in, incremental cost, marginal cost, or combined cost methodology that calculates a final system development fee per service unit of new development covering a planning horizon of not less than 10 years nor more than 20 years. The local governmental unit must accept public comment on the written analysis and conduct a public hearing prior to adoption of the system development fee. Fees involving the subdivision of land are collected either at the time of plat recording or when the local government unit commits to providing water and sewer service; fees for any other type of development are collected at the time of service connection. A local governmental unit must update the system development fee analysis at least every five years.

BILL ANALYSIS:

Section 1 of House Bill 344 would clarify two things:

¹ For purposes of this fee, local governmental units are counties, cities, sanitary districts, water and sewer authorities, metropolitan water districts, metropolitan sewerage districts, metropolitan water and sewerage districts, and county water and sewer districts.

Jeffrey Hudson
Director



Legislative Analysis
Division
919-733-2578

House Bill 344

Page 2

- That for purposes of assessing a system development fee, the term "facility" is limited to a facility that provides a general benefit to the area that it serves and would not extend, for example, to infrastructure that is unrelated to or not required for making the water and sewer services available in the area. This would include facilities for the reuse or reclamation of water and any land associated with the facility.
- That the type of water and sewer service for which a system development fee may be assessed would include 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.

Section 2 would require that the written analysis that serves as the basis for calculating a system development fee incorporate 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. In other words, the amount of gallons per day per service unit that is used to determine the system's capacity must be the same amount used for purposes of establishing the fee.

Section 3 would make a technical change by deleting the phrase "water and sewer." The phrase is unnecessary because it is incorporated into the term "capital improvements" via the term "facility."

EFFECTIVE DATE: This act would become effective when it becomes law.

Trina Griffin, counsel to the House Finance Committee, substantially contributed to this summary.

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2019

SESSION LAW 2020-61
HOUSE BILL 873

AN ACT TO CLARIFY THE TIMING OF COLLECTION OF SYSTEM DEVELOPMENT FEES AND TO REQUIRE THE DEPARTMENT OF ENVIRONMENTAL QUALITY TO AMEND A RULE THAT CURRENTLY ALLOWS A SEWER THAT SERVES A SINGLE BUILDING TO BE DEEMED PERMITTED, TO ALLOW A SEWER SHARED WITH AN ACCESSORY BUILDING ON THE SAME PROPERTY TO BE DEEMED PERMITTED AS WELL.

The General Assembly of North Carolina enacts:

SECTION 1.(a) G.S. 162A-213(a)a. is recodified as G.S. 162A-213(a)(1).

SECTION 1.(b) G.S. 162A-213(a)b. is recodified as G.S. 162A-213(a)(2).

SECTION 1.(c) G.S. 162A-213(b)a. is recodified as G.S. 162A-213(b)(1).

SECTION 1.(d) G.S. 162A-213(b)b. is recodified as G.S. 162A-213(b)(2).

SECTION 2.(a) G.S. 162A-213, as amended by Section 1 of this act, reads as

rewritten:

"§ 162A-213. Time for collection of system development fees.

(a) Land Subdivision. – For new development involving the subdivision of land, the system development fee shall be collected by a local governmental unit at the later of either of the following:

(1) The time of ~~plat recordation~~ application for a building permit.

(2) When water or sewer service is committed by the local governmental unit.

(b) Other New Development. – For all other new development, the local governmental unit shall collect the system development fee at the earlier of either of the following:

(1) The time of application for connection of the individual unit of development to the service or facilities.

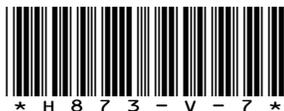
(2) When water or sewer service is committed by the local governmental unit.

(c) If the system development fee is collected under subdivision (a)(1) of this section and the local governmental unit that charges or assesses the system development fee is different from the local governmental unit that issues the building permit, the local governmental unit issuing the building permit shall require proof of collection of the system development fee prior to issuance of the building permit.

(d) No system development fee shall be charged or assessed with respect to any new development for which a system development fee under this Article has been collected at the time of plat recordation involving the subdivision of land and the amount of capacity associated with that payment of the system development fee has not increased at the time of application for the building permit. If the amount of capacity is increased at the time of application for a building permit, then a system development fee may be charged for the difference in the amount of the increased capacity minus the system development fee previously paid under this Article."

SECTION 2.(b) This section becomes effective January 1, 2021, and applies to system development fees collected on or after that date.

SECTION 3.(a) G.S. 162A-211 is amended by adding a new subsection to read:



"(a1) Revenue from system development fees calculated using the combined cost method may be expended for previously completed capital improvements for which capacity exists and for capital rehabilitation projects."

SECTION 3.(b) This section becomes effective July 1, 2020, and applies to system development fees expended or encumbered on or after that date.

SECTION 4.(a) Definitions. – For purposes of this section and its implementation, the following definitions apply:

- (1) "Permitting by Regulation for Building Sewer Systems Rule " means 15A NCAC 02T .0303 (Permitting by Regulation).
- (2) "Accessory building" means in one- and two-family dwellings not more than three stories above grade plane in height with a separate means of egress, a building, the use of which is incidental to that of the main building and which is detached and located on the same lot. An accessory building is a building that is roofed over and more than fifty percent (50%) of its exterior walls are enclosed. Examples of accessory buildings are garages, storage buildings, workshops, boat houses, treehouses, and dwelling units, etc. For purposes of this section, "main building" shall only include one- and two-family dwellings.
- (3) "Building sewer" means that part of the drainage system that extends from the end of the building drain and conveys the discharge by gravity or under pressure to a public sewer, private sewer, individual sewage disposal system, or other point of disposal.
- (4) "Lot" means a portion or parcel of land considered as a unit.

SECTION 4.(b) Permitting by Regulation for Building Sewer Systems Rule. – Until the effective date of the revised permanent rule that the Environmental Management Commission is required to adopt pursuant to subsection (d) of this section, the Commission shall implement the Permitting by Regulation for Building Sewer Systems Rule as provided in subsection (c) of this section.

SECTION 4.(c) Implementation. – Notwithstanding the requirements of General Permit No. WQG100000 and the limitation on applicability of 15A NCAC 02T .0303(a)(1), (a)(2), and (a)(3) to a building sewer that serves a single building, if a building sewer that serves a main building is deemed permitted pursuant to 15A NCAC 02T .0113, then a building sewer that serves an accessory building on the same lot that is connected to the building sewer for the main building, and a sewer shared between a main building and an accessory building, shall also be deemed permitted if the building sewer that serves the accessory building, and the sewer shared between the main building and the accessory building, meet the criteria in 15A NCAC 02T .0113 and all criteria required for that system in 15A NCAC 02T .0303, and no additional permit shall be required. This section shall only apply to sewers that serve one main building and one accessory building on the same lot.

SECTION 4.(d) Additional Rule-Making Authority. – The Commission shall adopt a rule to amend the Permitting by Regulation for Building Sewer Systems Rule consistent with subsection (c) of this section. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of subsection (c) of this section. Rules adopted pursuant to this section are not subject to Part 3 of Article 2A of Chapter 150B of the General Statutes. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1), as though 10 or more written objections had been received as provided in G.S. 150B-21.3(b2).

SECTION 4.(e) Applicability and Sunset. – This section and rules adopted pursuant to this section shall apply to common sewer lines in existence on, or constructed on or after, the effective date of this act, which are shared by accessory dwelling units or accessory residential

buildings and a primary residence. This section expires when permanent rules adopted as required by subsection (d) of this section become effective.

SECTION 5. Except as otherwise provided, this act is effective when it becomes law.

In the General Assembly read three times and ratified this the 24th day of June, 2020.

s/ Philip E. Berger
President Pro Tempore of the Senate

s/ Tim Moore
Speaker of the House of Representatives

s/ Roy Cooper
Governor

Approved 12:23 p.m. this 30th day of June, 2020

NC Administrative Code 15A NCAC 02T .0114

DRAFT

15A NCAC 02T .0114 WASTEWATER DESIGN FLOW RATES

(a) This Rule shall be used to determine wastewater flow rates for all systems covered by this Subchapter unless alternate criteria are provided by a program specific rule and for flow used for the purposes of 15A NCAC 02H .0105. These are minimum design daily flow rates for normal use and occupancy situations. Higher flow rates may be required where usage and occupancy are atypical, including, those in Paragraph (e) of this Rule. Wastewater flow calculations must take hours of operation and anticipated maximum occupancies/usage into account when calculating peak flows for design.

(b) In determining the volume of sewage from dwelling units, the flow rate shall be 120 gallons per day per bedroom. The minimum volume of sewage from each dwelling unit shall be 240 gallons per day and each additional bedroom above two bedrooms shall increase the volume by 120 gallons per day. Each bedroom or any other room or addition that can reasonably be expected to function as a bedroom shall be considered a bedroom for design purposes. When the occupancy of a dwelling unit exceeds two persons per bedroom, the volume of sewage shall be determined by the maximum occupancy at a rate of 60 gallons per person per day.

(c) The following table shall be used to determine the minimum allowable design daily flow of wastewater facilities. Design flow rates for establishments not identified below shall be determined using available flow data, water-using fixtures, occupancy or operation patterns, and other measured data.

Type of Establishments	Daily Flow For Design
Barber and beauty shops	
Barber Shops	50 gal/chair
Beauty Shops	125 gal/booth or bowl
Businesses, offices and factories	
General business and office facilities	25 gal/employee/shift
Factories, excluding industrial waste	25 gal/employee/shift
Factories or businesses with showers or food preparation	35 gal/employee/shift
Warehouse	100 gal/loading bay
Warehouse – self storage (not including caretaker residence)	1 gal/unit
Churches	
Churches without kitchens, day care or camps	3 gal/seat
Churches with kitchen	5 gal/seat
Churches providing day care or camps	25 gal/person (child & employee)
Fire, rescue and emergency response facilities	
Fire or rescue stations without on site staff	25 gal/person
Fire or rescue stations with on-site staff	50 gal/person/shift
Food and drink facilities	
Banquet, dining hall	30 gal/seat
Bars, cocktail lounges	20 gal/seat
Caterers	50 gal/100 sq ft floor space
Restaurant, full Service	40 gal/seat
Restaurant, single service articles	20 gal/seat
Restaurant, drive-in	50 gal/car space
Restaurant, carry out only	50 gal/100 sq ft floor space
Institutions, dining halls	5 gal/meal
Deli	40 gal/100 sq ft floor space
Bakery	10 gal/100 sq ft floor space
Meat department, butcher shop or fish market	75 gal/100 sq ft floor space
Specialty food stand or kiosk	50 gal/100 sq ft floor space
Hotels and Motels	
Hotels, motels and bed & breakfast facilities, without in-room cooking facilities	120 gal/room
Hotels and motels, with in-room cooking facilities	175 gal/room
Resort hotels	200 gal/room
Cottages, cabins	200 gal/unit
Self service laundry facilities	500 gal/machine
Medical, dental, veterinary facilities	
Medical or dental offices	250 gal/practitioner/shift

Veterinary offices (not including boarding)	250 gal/practitioner/shift
Veterinary hospitals, kennels, animal boarding facilities	20 gal/pen, cage, kennel or stall
Hospitals, medical	300 gal/bed
Hospitals, mental	150 gal/bed
Convalescent, nursing, rest homes without laundry facilities	60 gal/bed
Convalescent, nursing, rest homes with laundry facilities	120 gal/bed
Residential care facilities	60 gal/person
Parks, recreation, camp grounds, R-V parks and other outdoor activity facilities	
Campgrounds with comfort station, without water or sewer hookups	75 gal/campsite
Campgrounds with water and sewer hookups	100 gal/campsite
Campground dump station facility	50 gal/space
Construction, hunting or work camps with flush toilets	60 gal/person
Construction, hunting or work camps with chemical or portable toilets	40 gal/person
Parks with restroom facilities	250 gal/plumbing fixture
Summer camps without food preparation or laundry facilities	30 gal/person
Summer camps with food preparation and laundry facilities	60 gal/person
Swimming pools, bathhouses and spas	10 gal/person
Public access restrooms	325 gal/plumbing fixture
Schools, preschools and day care	
Day care and preschool facilities	25 gal/person (child & employee)
Schools with cafeteria, gym and showers	15 gal/student
Schools with cafeteria	12 gal/student
Schools without cafeteria, gym or showers	10 gal/student
Boarding schools	60 gal/person (student & employee)
Service stations, car wash facilities	
Service stations, gas stations	250 gal/plumbing fixture
Car wash facilities (if recycling water see Rule .0235)	1200 gal/bay
Sports centers	
Bowling center	50 gal/lane
Fitness, exercise, karate or dance center	50 gal/100 sq ft
Tennis, racquet ball	50 gal/court
Gymnasium	50 gal/100 sq ft
Golf course with only minimal food service	250 gal/plumbing fixture
Country clubs	60 gal/member or patron
Mini golf, putt-putt	250 gal/plumbing fixture
Go-kart, motocross	250 gal/plumbing fixture
Batting cages, driving ranges	250 gal/plumbing fixture
Marinas without bathhouse	10 gal/slip
Marinas with bathhouse	30 gal/slip
Video game arcades, pool halls	250 gal/plumbing fixture
Stadiums, auditoriums, theaters, community centers	5 gal/seat
Stores, shopping centers, malls and flea markets	
Auto, boat, recreational vehicle dealerships/showrooms with restrooms	125 gal/plumbing fixture
Convenience stores, with food preparation	60 gal/100 sq ft
Convenience stores, without food preparation	250 gal/plumbing fixture
Flea markets	30 gal/stall
Shopping centers and malls with food service	130 gal/1000 sq ft
Stores and shopping centers without food service	100 gal/1000 sq ft
Transportation terminals – air, bus, train, ferry, port and dock	5 gal/passenger

(d) Design daily flow rates for proposed non-residential developments where the types of use and occupancy are not known shall be designed for a minimum of 880 gallons per acre or the applicant shall specify an anticipated flow based upon anticipated or potential uses.

(e) Conditions applicable to the use of the above design daily flow rates:

- (1) For restaurants, convenience stores, service stations and public access restroom facilities, higher design daily flow rates shall be required based on higher expected usage where use is increased because of its proximity to highways, malls, beaches, or other similar high use areas.
- (2) Residential property on barrier islands and similar communities located south or east of the Atlantic Intracoastal Waterway used as vacation rental as defined in G.S. 42A-4 shall use 120 gallons per day per habitable room. Habitable room shall mean a room or enclosed floor space used or intended to be used for living or sleeping, excluding kitchens and dining areas, bathrooms, shower rooms, water closet compartments, laundries, pantries, foyers, connecting corridors, closets, and storage spaces.

(f) An adjusted daily sewage flow design rate shall be granted for permitted but not yet tributary connections and future connections tributary to the system upon showing that a sewage system is adequate to meet actual daily wastewater flows from a facility included in Paragraph (b) or (c) of this Rule without causing flow violations at the receiving wastewater treatment plant or capacity related sanitary sewer overflows within the collection system as follows:

- (1) Documented, representative data from that facility or a comparable facility shall be submitted by an authorized signing official in accordance with Rule .0106 of this Section to the Division as follows for all flow reduction request:
 - (A) Dates of flow meter calibrations during the time frame evaluated and indication if any adjustments were necessary.
 - (B) A breakdown of the type of connections (e.g. two bedroom units, three bedroom units) and number of customers for each month of submitted data as applicable. Identification of any non-residential connections including subdivision clubhouses/pools, restaurants, schools, churches and businesses. For each non-residential connection, information as identified in Paragraph (c) of this Rule (e.g. 200 seat church, 40 seat restaurant, 35 person pool bathhouse).
 - (C) Owner of the collection system.
 - (D) Age of the collection system.
 - (E) Analysis of inflow and infiltration within the collection system or receiving treatment plant, as applicable.
 - (F) Where a dedicated wastewater treatment plant serves the specific area and is representative of the residential wastewater usage, at least the 12 most recent consecutive monthly average wastewater flow readings and the daily total wastewater flow readings for the highest average wastewater flow month per customers as reported to the Division.
 - (G) Where daily data from a wastewater treatment plant cannot be utilized or is not representative of the project area: at least 12 months worth of monthly average wastewater flows from the receiving treatment plant shall be evaluated to determine the peak sewage month. Daily wastewater flows shall then be taken from a flow meter installed at the most downstream point of the collection area for the peak month selected that is representative of the project area. Justification for the selected placement of the flow meter shall also be provided.
 - (H) An estimated minimum design daily sewage flow rate shall be taken by calculating the numerical average of the top three daily readings for the highest average flow month. The calculations shall also account for seasonal variations, excessive inflow and infiltration, age and suspected meter reading/recording errors.
- (2) The Division shall evaluate all data submitted but shall also consider other factors in granting, with or without adjustment, or denying a flow reduction request including: applicable weather conditions during the data period (i.e. rainy or drought), other historical monitoring data for the particular facility or other similar facilities available to the Division, the general accuracy of monitoring reports and flow meter readings, and facility usage (i.e., resort area).
- (3) Flow increases shall be required if the calculations in Subparagraph (f)(1) of this Rule yield design flows higher than that specified in Paragraphs (b) or (c) of this Rule.
- (4) The applicant/owner shall retain the letter of any approved adjusted daily design flow rate for the life of the facility and shall transfer such letter to any new system owner.

Wastewater Design Flow Rate Modifications

(House Bill 600) pp. 16-17

DRAFT

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2023**

**HOUSE BILL 600
RATIFIED BILL**

AN ACT TO PROVIDE FURTHER REGULATORY RELIEF TO THE CITIZENS OF NORTH CAROLINA.

The General Assembly of North Carolina enacts:

**PART I. AGRICULTURE, ENERGY, ENVIRONMENT, AND NATURAL RESOURCES
PROVISIONS**

...."

WASTEWATER DESIGN FLOW RATE MODIFICATIONS

SECTION 18. G.S. 143-215.1(f3) reads as rewritten:

"(f3) The permittee for a wastewater ~~treatment system~~ may system:

- (1) May calculate its wastewater flows for new dwelling units, including units discharging to wastewater systems serving two or more dwelling units that have yet to be connected and for which the permittee has allocated capacity, at 75 gallons per day per bedroom, or at a lower rate approved by the Department. If wastewater flows are calculated pursuant to this subdivision, the minimum volume of sewage from each dwelling unit is 75 gallons per day and each additional bedroom above one bedroom increases the volume by 75 gallons per day.
- (2) Shall calculate its wastewater flows for new dwelling units discharging to wastewater systems serving two or more dwelling units that have yet to be connected and for which the permittee has not allocated capacity at 75 gallons per day per bedroom, or at a lower rate approved by the Department. For wastewater flows calculated pursuant to this subdivision, the minimum volume of sewage from each dwelling unit is 75 gallons per day and each additional bedroom above one bedroom increases the volume by 75 gallons per day."

SECTION 18.1.(a) Definitions. – For purposes of this section and its implementation:

- (1) "Dwelling Wastewater Design Flow Rate Rule" means 15A NCAC 02T .0114 (Wastewater Design Flow Rates) as it applies to dwelling units.

- (2) "Demonstration of Future Wastewater Treatment Capacities Rule" means 15A NCAC 02T .0118 (Demonstration of Future Wastewater Treatment Capacities).

SECTION 18.1.(b) Dwelling Wastewater Design Flow Rate Rule and Demonstration of Future Wastewater Treatment Capacities Rule. – Until the effective date of the revised permanent rules that the Environmental Management Commission is required to adopt pursuant to subsection (d) of this section, the Commission shall implement the Dwelling Wastewater Design Flow Rate Rule and the Demonstration of Future Wastewater Treatment Capacities Rule as provided in subsection (c) of this section.

SECTION 18.1.(c) Implementation. – The Environmental Management Commission shall amend:

- (1) The Wastewater Design Flow Rate Rule as it applies to the determination of the volume of sewage from dwelling units under subsection (b) of that rule to be consistent with flow rates established pursuant to G.S. 143-215.1(f3), as amended by Section 18 of this act.
- (2) The Demonstration of Future Wastewater Treatment Capacities Rule as it applies to be consistent with G.S. 143-215.1(f4) and G.S. 143-215.1(f5), as enacted by Section 1 of S.L. 2023-55.

SECTION 18.1.(d) Additional Rulemaking Authority. – The Commission shall adopt rules to amend the Dwelling Wastewater Design Flow Rate Rule and the Demonstration of Future Wastewater Treatment Capacities Rule consistent with subsection (c) of this section. Notwithstanding G.S. 150B-19(4), the rules adopted by the Commission pursuant to this section shall be substantively identical to the provisions of subsection (c) of this section. Rules adopted pursuant to this section are not subject to Part 3 of Article 2A of Chapter 150B of the General Statutes. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1), as though 10 or more written objections had been received as provided in G.S. 150B-21.3(b2).

SECTION 18.1.(e) Applicability and Sunset. – Rules adopted pursuant to subdivision (1) of subsection (c) of this section apply to all permits for dwelling units issued on or after November 1, 2023. This section expires when permanent rules adopted as required by subsection (d) of this section become effective.

SECTION 18.2. The Environmental Management Commission shall study whether to amend the flow rates established pursuant to 15A NCAC 02T .0114(c) for schools, charter schools, boarding schools, preschools, and day care facilities, including schools with or without cafeterias, gyms, and showers, to consider reduced water consumption associated with new plumbing fixtures and appliances.

NC Administrative Code 15A NCAC 18C .0409

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15A NCAC 18C .0409 SERVICE CONNECTIONS

(a) Local Water Supply Plan. Units of local government which are operating under a local water supply plan in accordance with G.S. 143-355(l) shall not be limited in the number of service connections.

(b) No local water supply plan. A public water system which does not have a local water supply plan as stated in Paragraph (a) shall limit its number of service connections as follows:

- (1) A public water system shall meet the daily flow requirements specified in Table 1:

Table 1: Daily Flow Requirements

Type of Service Connection	Daily Flow for Design
Residential	400 gallon/connection
Mobile Home Parks	250 gallon/connection
Campgrounds and Travel Trailer Parks	100 gallon/space
Marina	10 gallon/boat slip
Marina with bathhouse	30 gallon/boat slip
Rest Homes and Nursing Homes	
with laundry	120 gallon/bed
without laundry	60 gallon/bed
Schools	15 gallon/student
Day Care Facilities	15 gallon/student
Construction, work, or summer camps	60 gallon/person
Business, office, factory (exclusive of industrial use)	
without showers	25 gallon/person/shift
with showers	35 gallon/person/shift
Hospitals	300 gallon/bed

or;

- (2) A public water system serving different types of service connections shall meet the maximum daily demand calculated as follows:
 - (A) Where records of the previous year are available that reflect daily usage, the average of the two highest consecutive days of record of the water treated shall be the value used to determine if there is capacity to serve additional service connections (unusual events such as massive line breaks or line flushings shall not be considered).
 - (B) Where complete daily records of water treated are not available, the public water system shall multiply the daily average use based on the amount of water treated during the previous year of record by the appropriate factor to determine maximum daily demand, as follows:
 - (i) A system serving a population of 10,000 or less shall multiply the daily average use by 2.5; or
 - (ii) A system serving a population greater than 10,000 shall multiply the daily average use by 2.0.

History Note: Authority G.S. 130A-315; 103A-317; P.L. 93-523; Eff. July 1, 1994.

NC Office of State Budget and Management

Population Projection

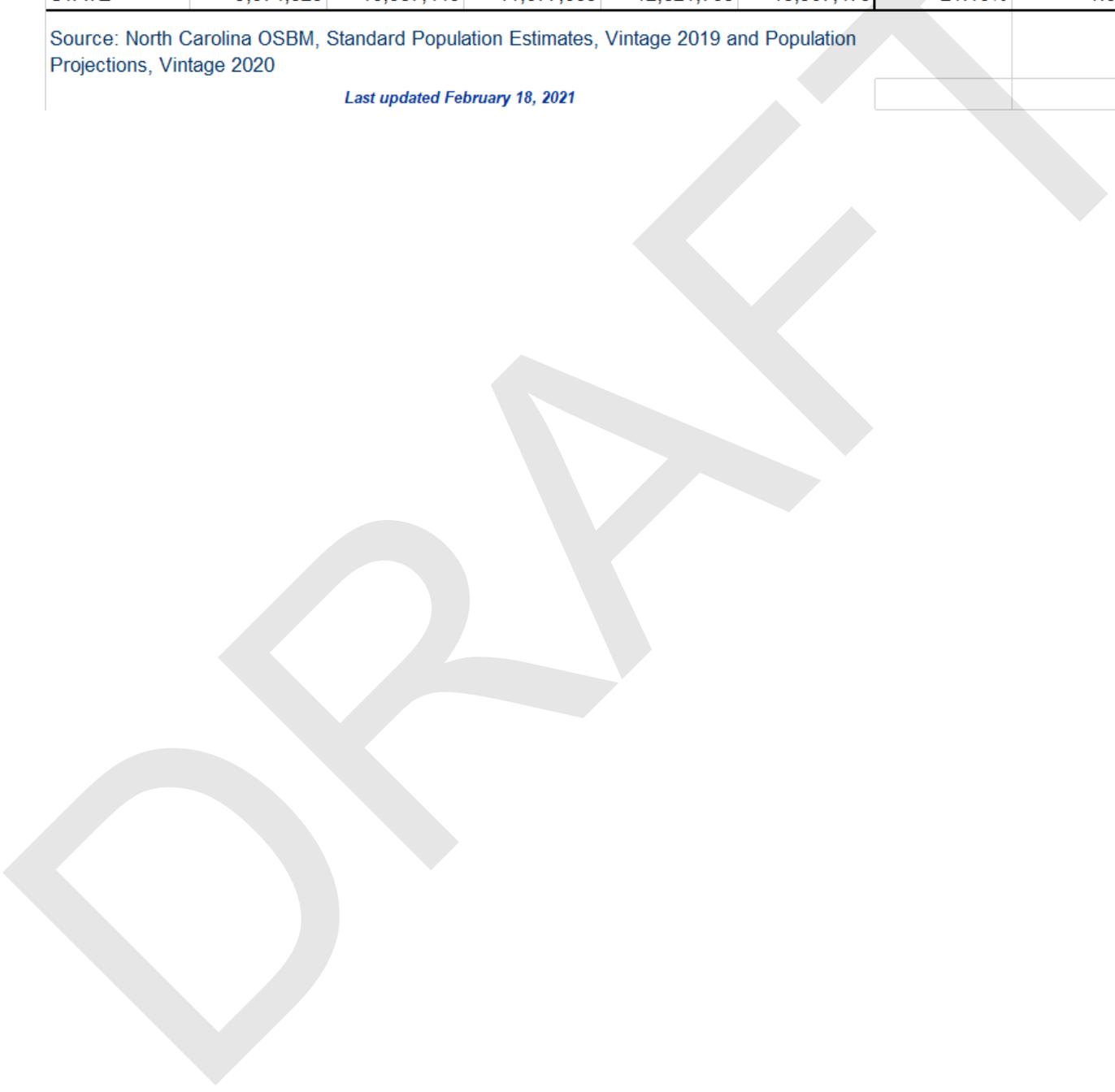
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Population Overview, 2010-2050

County	Population					2020 through 2040	
	July 2010	July 2020	July 2030	July 2040	July 2050	Total %	Annual %
Cumberland	327,197	333,531	334,709	334,831	334,835	0.39%	0.02%
STATE	9,574,323	10,587,440	11,677,603	12,821,708	13,967,473	21.10%	1.06%

Source: North Carolina OSBM, Standard Population Estimates, Vintage 2019 and Population Projections, Vintage 2020

Last updated February 18, 2021



Cumberland County 2030 Growth Vision Plan

Policies and Action - select pages

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2030 Growth Vision Plan Policies and Actions

Cumberland County

City of Fayetteville

Town of Hope Mills

Town of Eastover

Town of Falcon

Town of Godwin

Town of Linden

Town of Spring Lake

Town of Stedman

Town of Wade



November, 2008

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Introduction

Overview of the 2030 Plan

Need for Planning

During the past several decades, Cumberland County and its municipalities have faced a number of challenges as the region has undergone considerable change. Areas of new growth and development have continued their shift from urban to suburban and rural locations. As new development moves farther into the countryside, greater demands are being placed on area roads, utilities, parks and other local government services. Resource issues are also coming to the forefront, including sprawling development, farmland losses, drainage issues, and environmental degradation.

At the same time, Cumberland County and the surrounding area appear to be poised for significant new growth. The latest round of BRAC (Base Realignment and Closure) Commission decisions will significantly boost the military and civilian population of Fort Bragg, resulting in new economic development in the region and greater demands for housing, infrastructure and services. Downtown Fayetteville has seen considerable new investment in preserving the historic and cultural heart of the region. The area's park system, though aging, offers a diverse range of facilities for the recreation needs of local residents. And, compared to many parts of the state, Cumberland County is blessed with good water and sewer capacities-- available for new industry and new growth.

Authorization for Planning

As the region continues to change, local elected leaders must make difficult decisions about how to manage growth and about how to allocate the area's finite financial resources to deal with these many growth-related issues. In response to these pressures, elected officials from Cumberland County, the City of Fayetteville, and the Town of Hope Mills came together in 2005 to authorize and jointly fund a new comprehensive planning initiative for the area. The *2030 Joint Growth Vision Plan* is intended to help guide and coordinate those difficult decisions—about future development and redevelopment, and about priorities for local government in response to the demands brought about by this constant change.

Leadership and Coordination

Strong leadership and coordination is critical to the success of an effective planning program. Fortunately, Cumberland County, its several communities, and Fort Bragg are well stocked with dedicated, experienced leaders. From successful business people, to farmers, to educators, to military personnel, to fully engaged political leaders and public servants, to citizens with a special appreciation for the area's quality of life, Cumberland County is blessed with more than its share of capable people. Preparation of the 2030 Plan involved an informed and active group of leaders representing every local government in Cumberland County. Members of the 20-person *Growth Vision Task Force* were appointed from each local government in Cumberland County by their respective elected bodies. Research, writing, and technical/logistical support for preparation of the Plan was facilitated by a local government staff *Support Team* working in coordination with a professional planning consultant, Glenn R. Harbeck, AICP.

Community Involvement

A critical part of plan development is the involvement of property owners, residents, business owners, and other stakeholders in the community. The development of the *Growth Vision Plan* started 'from the ground up'; i.e., community involvement was the foundation of the plan. The following summarizes several significant stages in the development of the Plan:

- **County-Wide Summit Meeting** Starting early in the process, the City of Fayetteville, Cumberland County and the Town of Hope Mills hosted a *County-Wide Summit Meeting* for the 2030

Plan. On June 28, 2005, over 100 elected officials and planning board members, representing every local government in the county, met to identify and assign priorities to the most important growth issues facing the area. These issues were duly recorded, sorted and ranked for further study.

- **Future of Cumberland Month** Soon after the successful *Summit Meeting*, the 20-person *Growth Vision Task Force* was appointed and began its work. In September of 2005, the *Task Force* sponsored "*Future of Cumberland Month*" hosting a series of town meetings at eleven locations around the county. These meetings involved a county-wide growth issue and visioning exercise. Again, all comments were recorded word for word, sorted, and ranked in accordance with the input received. When compiled in a report, this information became a benchmark document for reference by the Task Force during policy development.
- **Task Force Work Sessions.** Subsequent *Task Force* meetings proceeded from the foundation of input received from the *Summit Meeting* and *Future of Cumberland Month*. All input gleaned from these meetings was reviewed during monthly work sessions of the *Task Force*. Every policy and action proposed for inclusion in the Plan was reviewed, approved, modified or discarded by the consensus of the Task Force.
- **County-Wide Open Houses.** With draft vision statements, policies and proposed implementation actions in hand, the Task Force then hosted a series of "open houses" in every part of the county, in which the draft Plan was presented for public comment. A walk around survey was employed to elicit detailed comments in an efficient manner. Eleven open houses for the 2030 Plan were held during the month of March 2007.
- **Additional Task Force Work Sessions.** Following the open houses, citizen input was reviewed during several more work sessions of the Task Force in 2007 and early 2008. In addition to citizen perspectives, many other stakeholders and stakeholder groups submitted written comments or sat in on the monthly Task Force meetings. Also during this period of time, City of Fayetteville and Cumberland County officials undertook a special initiative to address issues concerning extensions of water and sewer services, MIA's, and the incorporation of the Town of Eastover.
- **Concluding County-Wide Summit Meeting.** As intended, the planning process concluded by coming full circle back to the elected officials and planning board members most involved in growth and development decisions in their respective communities. At the *Concluding County-Wide Summit Meeting*, held on September 30, 2008, the proposed 2030 Growth Vision Plan was presented as to its key features, benefits and usefulness. Procedures for plan adoption were suggested.

In general, the planning process proceeded from the broad to the specific, and from idealistic visions to pragmatic actions. Citizen and stakeholder input was welcomed and valued throughout the duration. Following each round of public meetings and the receipt of other comments, the Task Force authorized further revisions to the plan. The process was both initiated and concluded with input from the broadest geographic spectrum of elected officials and planning board members throughout the county.

Functions of the 2030 Plan

The Growth Vision Plan serves the following primary purposes:

- ***Guidance for Local Government Decisions***

The Vision Statements, Policies, Growth Strategy Map, and Implementation Actions of the Plan give direction to area local governments in reviewing development proposals, planning growth-related facilities and services, preparing standards and regulations, working with other local government jurisdictions on growth management issues, and establishing applicable budget and work program priorities.

- **Source of Information**

The Plan and supporting technical research, especially the various white papers of the *Growth Factors Analysis*, provide useful information on a number of topics, including the local population and economy, transportation, housing, community facilities and other factors.

- **Public Participation and Input**

Public input meetings, Task Force meetings, publication and review of documents, written comments, and other means seek to ensure that the Plan reflects, as accurately as possible, the attitudes and perspectives of the majority of citizens of the area.

Major Parts of the Growth Vision Plan

- **Growth Factors Analysis**

The *Growth Factors Analysis* includes primarily statistical measures concerning the area's population, housing, economy and infrastructure capabilities. The purpose of the *Growth Factors Analysis* is to provide a factual basis for understanding the social, economic, and environmental context for growth in Cumberland County. The Growth Factors Analysis is published under separate cover.

- **Vision Statements**

The *Vision Statements* establish a clear picture of where the County would like to be some 20 years from now. *Vision Statements* lay the foundation for policies and actions. *Vision Statements* are written as if it is now 20 years in the future and we are looking back at what has come about as a result of policies and actions identified in the Growth Vision Plan. One of the best ways to determine whether a proposed development or action is consistent with the Plan is to understand the intent of the *Vision Statements* and see what they might say about the proposal.

- **Policy Statements**

The *Policy Statements* are the heart of the plan. Policies on land use, various forms of development, water and sewer, transportation facilities, parks and open space, and community appearance, are among those addressed in the plan. Policies are officially adopted positions of local government with regard to preferred or required courses of action. Their primary purpose is to provide guidance to decisions and actions today. When a policy is applied, it does not go away. Policies can and should be used over and over again in support of the Vision Statements. There are typically several policy statements for each vision area.

- **Growth Strategy Map**

The *Growth Strategy Map* identifies various parts of the planning area as to their suitability for development and urban services. The map shows where development and redevelopment might best occur, and where natural and cultural resources should be conserved. The Growth Strategy Map is to be supported and complemented by zoning, subdivision regulations, infrastructure investments and other local growth management tools.

- **Implementation Actions**

Implementation Actions serve as a "to do list" for local government in support of the Growth Vision Plan policies. Unlike the vision and policy statements, which should remain relatively constant over time, implementation actions should be updated each year to keep up with changing needs and priorities. Also, once an action is completed, it goes away; it gets checked off the list. Actions may be considered as potential work program items for implementation by local governments in the coming fiscal year or subsequent fiscal years. It should not be expected that all implementation items can be completed in the first fiscal year. Priorities must be chosen. There are typically several implementation actions for each vision area.

Policy Area 2: Well-Managed Growth and Development

Not all land is equally suited for development. Development on land that is “high and dry” avoids future problems related to poor drainage and flooding. Development that is convenient to existing public facilities maximizes taxpayer investments and minimizes local government service costs. Consistent development standards result in more predictable and higher quality growth.

Vision Statement

Working from the 2030 Plan, area local governments and service providers have been able to coordinate their policies and actions to direct new growth where it can best be served. As a result, new developments generate fewer land use conflicts, less sprawl, and less traffic congestion. There are also more planned open spaces, and a cleaner, healthier environment. By facilitating more efficient, clustered and mixed use development patterns, local governments have been able to deliver public services for tax rates below state averages. Better, more quality-conscious development standards are applied consistently throughout the county, resulting in higher quality developments. At the same time, such standards respect the differences found in development practices for rural versus urban areas, small towns versus large city areas, and historic versus “modern” areas.

POLICIES FOR VISION 2. WELL-MANAGED GROWTH AND DEVELOPMENT



Policy 2.1: An **URBAN AREA** shall be identified and mapped where urban level development and redevelopment (averaging 4 units or more per acre) is to be especially encouraged and where a full range of urban services, including centralized water and sewer, as well as stormwater management services, are already available or can be provided in a timely, cost effective manner.



Policy 2.2: An **URBAN FRINGE AREA** shall be identified and mapped where urban level development and redevelopment (averaging 3 units or more per acre) is to be accommodated and where a full range of urban services, including centralized water and sewer, as well as stormwater management services, can be provided within the next 10 to 15 years.



Policy 2.3: A **RURAL AREA** shall be identified and mapped where development at a non-urban density (2.2 units per acre allowed but much lower densities preferred) is to be encouraged and where on-site sewer services (i.e. septic tanks) are most appropriate.

Policy 2.4: **COMMUNITY AREAS** shall be identified and mapped to include small towns where a mixture of community level land uses is to be encouraged to help meet the housing, shopping and employment needs of area residents.

Policy 2.5: **CONSERVATION AREAS** shall be identified and mapped to include 100 year floodplains, riparian buffers along streams,

Natural Heritage Areas, critical wildlife habitat, public parks, and other significant, limited or irreplaceable natural areas. Development, if any, should be limited and attentive to the protection of environmental features.

Policy 2.6: URBAN LEVEL DEVELOPMENT STANDARDS shall be developed and applied within the URBAN and URBAN FRINGE AREAS (e.g. sidewalks, streetlights, storm water improvements, etc.). Such standards may be modified when site-specific conditions warrant a more environmentally sensitive, low impact approach. Allowances may also be made for historic areas

Policy 2.7: RURAL LEVEL DEVELOPMENT STANDARDS shall be developed and applied within the RURAL AREAS of the county (e.g. no curb and gutter, no streetlights, etc.).

Policy 2.8: Regardless of location on the GROWTH STRATEGY MAP, new development should occur at DENSITIES APPROPRIATE FOR THE SITE. Density factors shall include whether the site is within an environmentally sensitive area, the type of sewage treatment available, the topography and drainage of the site, the capacity of transportation facilities serving the site, the proximity of the site to other existing services, and other relevant factors.

Policy 2.9: NEW DEVELOPMENT AND INFILL DEVELOPMENT shall be especially encouraged in locations where a full range of urban services and infrastructure (i.e. schools, fire stations, water and sewer facilities, parks, and roads) is already in place, and where the public sector will not incur the full cost for building new facilities to serve the area.

Policy 2.10: Local governments shall encourage patterns of development and community growth that respect the training and operational mission of the military, while also allowing for reasonable, appropriate USES OF PROPERTIES NEAR FORT BRAGG.



Actions for Vision 2. Well-Managed Growth and Development

Action 2.1: Create development standards for application within all local government jurisdictions in Cumberland County. Involve all interested public and private sector interests in the creation of the standards as follows:

- Urban Development Standards for existing urban areas and properties within the Urban and Urban Fringe Areas. Include exceptions for environmentally sensitive or constrained sites.
- Rural Development Standards for properties not in an incorporated area and not within the Urban or Urban Fringe Areas.
- Small Town Development Standards as may be necessary to accommodate particular small town areas.
- Historic Area Development Standards for exceptions to more modern standards that would destroy the character of older areas.



Action 2.2. Jointly adopt and print a development standards booklet describing in both text and illustrations, the standards established under Action 2.1 above.

Action 2.3: Establish specific criteria in area zoning ordinances for approving higher density development. At the same time, create one or more large lot zoning districts as well as a density CUD within the City of Fayetteville's zoning ordinance for application where environmental constraints or other conditions may warrant their use.

Action 2.4: Identify and adopt incentives for encouraging infill development on sites where urban services are already in place.

Action 2.5: Continue to work with Fort Bragg on the development of land use policies and requirements for the use of properties abutting the base. Begin with the Joint Land Use Study (.i.e. buffers) and move forward from that study.

Policy Area 3: Infrastructure That Keeps Pace

The location, timing and capacity of infrastructure such as roads, water and sewer utilities, schools, parks and drainage are among the most influential factors affecting growth and development. 2030 policies and actions suggest that local governments should become more proactive in using these features to direct growth and development intelligently and to protect taxpayer investments in these facilities.

Vision Statement

The location of new development has been carefully coordinated with area plans for infrastructure, including transportation, water and sewer services, stormwater management, schools, parks and open space. Utilities must be shown to be adequate and in place prior to the occupancy of the new developments they serve. Sewer services have been strategically employed to encourage urban level growth where it can best be accommodated. Advanced planning has allowed future school and park sites to be located and acquired ahead of their need. Planned highway corridors have been identified and mapped to ensure their protection during the development process. Similarly, future greenway corridors have been identified so that they may be incorporated into the design of new developments. A countywide stormwater management plan has anticipated necessary drainage and retention facilities as various areas have been developed.



Note: Because this policy area is quite broad, the plan user should also consult the following plan sections for additional policy direction on specific infrastructure elements:

- *Policy Area 2: Well-Managed Growth (includes urban services)*
- *Policy Area 4: A Balanced Transportation System*
- *Policy Area 5: Community-Oriented Schools*
- *Policy Area 6: Expanded Parks and Recreation*
- *Policy Area 11: A Healthy, Sustainable Environment (includes stormwater management)*

POLICIES FOR VISION 3. INFRASTRUCTURE THAT KEEPS PACE

Policy 3.1: Recognizing that infrastructure has a powerful influence on growth and development, the availability of infrastructure (along with other factors) should determine WHERE DEVELOPMENT WILL OCCUR in the region, rather than the other way around.

Policy 3.2: ADVANCED PLANNING FOR ALL INFRASTRUCTURE facilities shall be supported and routinely updated on a countywide basis. Facilities benefited by advanced planning shall include, at a minimum, schools, roads, water, sewer, stormwater management, parks and greenways.

Policy 3.3: DEVELOPMENT INTENSITY should be matched, generally, with the availability of infrastructure. There will be locations, however, where infrastructure alone cannot make up for poor soils, inadequate topography (drainage), or other overriding factors.

Policy 3.4: Local governments in Cumberland County support the provision of CENTRALIZED WATER SERVICES throughout the county.

Policy 3.5: Due to the high expense involved and number of customers required per given area, “county-wide sewer” must be acknowledged as untenable for the foreseeable future. Rather, CENTRALIZED SEWAGE COLLECTION AND TREATMENT should be focused on a DESIGNATED SERVICE AREA where sewer lines can be properly located and sized to serve a carefully projected customer base.

Policy 3.6: Generally, INFRASTRUCTURE WITH EXCESS CAPACITY should be utilized first before spending additional monies to install and maintain new infrastructure elsewhere. INCENTIVES may be necessary to direct new development and redevelopment to locations with excess infrastructure capacity.

Policy 3.7: ADEQUATE UTILITIES INFRASTRUCTURE (water supply, sewage collection and treatment capacity, stormwater management, etc.) must be in place before the new development it serves may be occupied.

Policy 3.8: New infrastructure shall not be placed in areas where it would encourage DEVELOPMENT INCOMPATIBLE WITH THE MISSION OF THE FORT BRAGG/POPE military complex, thereby jeopardizing this important economic driver in the region.

Policy 3.9: New infrastructure shall not be placed in areas where it would encourage SPRAWLING OR SCATTERED DEVELOPMENT in outlying rural areas. Exceptions may be made for major economic development initiatives, or a need to address an imminent public health emergency.



Policy 3.10: FORT BRAGG SHALL BE INCLUDED in all major infrastructure planning locally. This will be especially important as Fort Bragg and surrounding local communities seek mutually beneficial opportunities to enhance services.

Policy 3.11: Local governments in Cumberland County are unified in their opposition to INTERBASIN TRANSFERS OF WATER between the Cape Fear and Neuse River basins. (Repeated in the Cape Fear River Section.)

Policy 3.12: Additional RAW WATER STORAGE RESERVES shall be developed by utilizing existing lakes on Rockfish Creek. The restoration of HOPE MILLS LAKES NOS. 1 AND 2 shall be encouraged.



Actions for Vision 3: Infrastructure That Keeps Pace

Action 3.1: Continue to support the Cumberland County Public School Master Plan; offer input on future school locations relative to area growth and development objectives.

Action 3.2: Continue to support the Joint Cumberland County Transportation Plan; lobby for implementation of key transportation projects.

Action 3.3: (Do not include this action, or some version of it, until the outcome of the Policy Initiative may be evaluated.)

Action 3.4: Continue to support area plans for the provision of Water Services throughout the county.

Action 3.5: Prepare a Joint Cumberland County Stormwater Master Plan.

Action 3.6: Continue to support the Cumberland County Parks Master Plan.

Action 3.7: Prepare a Joint Cumberland County Greenway Master Plan.

Action 3.8: Based on information contained in each of the various infrastructure master plans noted above, prepare a Summary Needs Assessment For Infrastructure throughout the county. Review capital improvement plans (CIP's) from the county, county schools, PWC and all municipalities in light of the needs assessment. Update all CIP's as appropriate.

Action 3.9: Based on information contained in each of the various infrastructure master plans noted above, prepare maps showing the adequacy of infrastructure facilities throughout the county. Update them continuously. Develop an Adequate Public Facilities Ordinance, linking development approvals to the adequacy of infrastructure by location.

Action 3.10: Prepare an in-house study evaluating various development incentives (both financial and non-financial) that might be employed to encourage growth to locate where existing infrastructure has excess capacity.

Action 3.11: Include representatives of Fort Bragg in all local advanced planning initiatives for infrastructure development. Continue their presence on the 2030 Long Range Planning Committee.

Action 3.12: The installation of infrastructure and determination of land use types near Fort Bragg should be reviewed for consistency with the Fort Bragg Small Area Plan.

Policy Area 4: A Balanced Transportation System

Transportation facilities are the essential corridors of commerce and mobility. 2030 policies call for an efficient system of streets and roads, improved mass transit services, as well as more sidewalks, trails and bicycling facilities. The policies also recognize that the way in which we choose to lay out new roads and developments can have a profound impact in reducing automobile dependency and traffic congestion.

Vision Statement

Local governments in Cumberland County have worked proactively with the State DOT toward a balanced, multi-modal transportation system. Advanced planning and follow-through has resulted in an efficient system of streets and highways, and a well-connected network of sidewalks, trails and bike paths. It has become common practice for new road improvements to include bike lanes and well-designed cross walks. New public and private developments routinely include sidewalks and bikeway connections. Mixed use and urban level developments have been employed to encourage walkability. A rural transit system has joined the area public transportation system in serving the needs of senior citizens and others who cannot or choose not to drive a car. Nearly all roads have been paved; existing roads are well maintained. The outer loop and other important connectors have been completed.



POLICIES FOR VISION 4. A BALANCED TRANSPORTATION SYSTEM

Policy 4.1: Opportunities to ENHANCE REGIONAL TRANSPORTATION CONNECTIONS between Fayetteville and other parts of the state and region shall be supported; such opportunities may include not only roadways but also **COMMUTER RAIL PASSENGER SERVICE** between Cumberland County and other metropolitan areas within the State.

Policy 4.2: The completion of the OUTER LOOP AROUND FAYETTEVILLE shall be supported as the highest priority highway improvement project in Cumberland County.

Policy 4.3: PEDESTRIAN AND BIKEWAY FACILITIES shall be encouraged as energy-efficient, healthful, and environmentally sound alternatives to the automobile. All future road construction and expansion within the region shall consider opportunities for bikeways and pedestrian ways within the project.

Cumberland County 2030 Growth Vision Plan

Growth Factors Analysis; select pages

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2030 Growth Vision Plan
Growth Factors Analysis

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Policies & Actions Document Under Separate Cover

Cumberland County 2030 Growth Vision Plan

Growth Factors Analysis

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Introduction

This **Growth Factors Analysis** and the accompanying **Policies and Actions** are two companion documents that together form the **2030 Growth Vision Plan**. The Growth Factors Analysis includes a number of white papers that provide a factual basis for understanding the context for growth and change in Cumberland County. This understanding was then employed, in part, to assist in the development of informed growth policies and actions.

The analysis leads off with a statistical assessment of Cumberland County's population, housing, and local economy, following immediately by a paper on the significant influence of the military on the area. Information is then presented on a number of infrastructure elements critical to the continued positive growth of the region. These infrastructure elements include transportation, school facilities, stormwater management, parks and recreation, and water and sewer utilities.

It should be noted that the white papers which comprise the Growth Factors Analysis were researched and written early (during 2006) in the process of preparing the 2030 Plan. It may be observed, therefore, that some of the information cited in this report will not be the most recently available at the time of plan adoption. Even so, the Growth Factors Analysis provides a useful evaluation of various conditions in Cumberland County during the early 2000's. While some information has undoubtedly changed, the most significant facts and trends will not show remarkable changes in direction over a relatively short period of time.

Water and Sewer Services

Introduction

This section provides an overview of water and sewer services in Cumberland County. The City of Fayetteville Public Works Commission (PWC) is the primary provider of water and sewer service in Cumberland County. In addition to PWC service, American Water, a private water company, provides water service in the western area of the county. Harnett County Water System provides water service in the northern area of the county. The Town of Spring of Lake provides water and sewer service for the Town of Spring Lake and some outlying areas. Eastover Sanitary District provides water service for their district and plans include expansions to that district. The Town of Linden provides water for their jurisdiction and Robeson County provides water to an area in the southwestern portion of the county.

Eastover Sanitary District

In June, 2006 Congressman Mike McIntyre announced that the Eastover Sanitary District would receive \$5,971,000 in federal funds to help build a new water system. Funds appropriated by Congress and disbursed by the United States Department of Agriculture, Rural Development would be used to construct Phase 2 of a district-wide water distribution system. The \$4,971,000 loan and \$1,000,000 grant will help construct approximately 63 miles of water distribution lines and a 250,000 gallon water storage tank. This will provide potable water to 1,092 residential users.¹

Water and Sewer Capacities of the Public Works Commission

The City of Fayetteville Public Works Commission water distribution system currently provides water to approximately 77,000 customers. There are two water treatment facilities that have a combined capacity of 50 million gallons per day. Plans are in place to boost that total to 57 million gallons per day. The water treatment plants are the Glenville Plant located on Little Cross Creek and the Hoffer Plant located adjacent to the Cape Fear River. The primary water source for both plants is the Cape Fear River, with additional supplies available from lakes and dams located along Little Cross Creek and a pumping station located on Big Cross Creek. The average daily water demand in 2005 was 24 million gallons per day.

The recent Water Master Plan, done by PWC, projected adequate water supply beyond 2030. Infrastructure improvements will be necessary to meet demand, but supply will be available. Currently, PWC has the capability to provide water to Fort Bragg, Spring Lake, Stedman and Hoke County while expanding its water system countywide. This requires coordinating with the County, towns and rural water districts.

The sewer system currently provides service to approximately 64,000 customers. The system includes seventy lift stations and two wastewater treatment plants with a total capacity of 41 million gallons per day. The Cross Creek plant located on the Cape Fear River has a capacity of 25 million gallons per day; the average daily flow in 2005 was 12 million gallons per day. The Rockfish Creek plant, located on Rockfish Creek, has a capacity of 16 million gallons per day with the current average daily flow of 13 million gallons per day in 2005. At the time of this writing, construction is underway to increase the capacity of the Rockfish Creek plant to 21 million gallons per day.

There is an ample supply of water and wastewater capacity with the PWC system. The abundant supply of water, coupled with the current treatment plants, provides the opportunity for expansion of water and sewer services. It is critical that any future expansions be done in a well-planned and effective manner.

¹ Source: [US Fed News Service, Including US State News](#) Jun 28, 2006

System Growth

County-Wide Water

There is general agreement among the governing entities that a countywide water system be implemented in Cumberland County. In the 1980's and 1990's the counties surrounding Cumberland developed countywide water systems within their jurisdictions. An important goal for the Cumberland County Commissioners is the development of a countywide water system.

Efforts are underway to provide water in areas of the county lacking a water system. Recent projects include a water extension to Stedman that will eliminate that community's need for individual wells and the agreement with the Eastover Sanitary District and the City of Fayetteville for PWC to provide water to for that area.

Existing service providers and their service areas must be considered in the development of a countywide water system. As mentioned, private water companies, adjacent county water systems and water and sewer sanitary districts, as well as PWC, are involved in the delivery of water. A plan utilizing these entities in a cooperative manner to implement a countywide water system, rather than duplicating service, should be an element of any water system plan.

The installation of a countywide water system discontinues the reliance on individual wells for a clean and reliable water source. This factor is a greater impact than potential changes to development patterns. Although a community water system may allow the reduction of individual lots, the preferred size of residential lots served by a septic tank is one acre in size or more. It is not uncommon for an area served by a community water system to remain rural or suburban, but an area served by sanitary sewer will eventually become urban.

Centralized Sewer Services

The installation of sanitary sewer is often lumped together in the discussion of countywide water. However, the cost, distribution and the impact of sanitary sewer is very different from the installation of a water system.

Sanitary sewer provides an impetus to the developer to maximize investment in the property either through higher density residential development or a non-residential development. Such added economic benefit is needed to justify the extension of sanitary sewer. Although the extension of water is expensive, sanitary sewer is more expensive and complicated to extend service than water. A sanitary sewer system, unlike a water system, relies primarily on gravity to move the effluents through the pipeline. As sanitary sewer systems are expanded, it becomes more difficult to rely solely on gravity. The need for lift stations to pump the effluents is necessary, raising the cost of expanding the sewer system.

The extension of sanitary sewer should generally be limited to areas designated as urban. A growth boundary area identifying the urban area to receive sanitary service should be a key element of the 2030 Growth Vision Plan. In absence of such a plan, uncontrolled growth will continue making the cost of development more expensive.

System Extensions

The extension of PWC water and sewer service is straightforward within the corporate limits of Fayetteville, but it is less clear for areas outside the city's boundaries.

In November 2003, the Fayetteville City Council adopted a policy outlining a petition zone area whereby anyone developing property within that area requesting PWC water or sewer must petition for annexation. The logic of this policy is that PWC water and sewer service is provided by the City of Fayetteville,

therefore the property served should be within the corporate limits of Fayetteville. Should the City Council choose not to annex the property, the developer still receives the water and sewer service.

This approach accomplishes some of the concerns associated with water and sewer extensions, but fails to address the overall lack of planning and direction with regard to growth.

The current system typically has a developer wishing to develop land in the unincorporated area of the county contacting PWC on the cost and availability of water and sewer service. This may result in water and sewer expansion in a desired area for growth or spur growth in an area not designated for this type of development. This system is haphazard in terms of planning for orderly growth.

A proposal to change this approach entails designating specific areas designated for sewer expansion and urban development. As mentioned earlier, sanitary sewer is the key element in determining whether an area will develop as an urban or rural setting. A plan involving the county, municipalities, school board and utility providers designating the urban area appropriate for sanitary sewer extension would go a long way in planning and serving developed areas and protecting areas designated as rural. The plan would not only encompass the area designated by the City of Fayetteville, but each municipality could have an urban area outside their municipal borders designated as urban. This is especially helpful given the NORCRESS sanitary sewer project for Wade, Falcon and Godwin as well the sewer service to the Town of Stedman. Other areas several miles beyond municipal boundaries now slated or currently having sanitary sewer could also be included.

The benefits of having such a plan include:

- Avoids utility providers and local governments having to react to individual requests that are outside the proposed urban area;
- Promotes orderly growth;
- Maximizes the investment made by the utility providers and local government regarding sanitary sewer outfalls and needed plant capacity;
- Informs the development community as to where urban growth is to occur and where areas are to remain rural;
- In addition to sanitary service, the urban area identifies the needs for other urban services and the necessary expenditures from the local governments.

A sewer service area plan should not be a static document. It must be reviewed periodically so it remains relevant and addresses ongoing factors in the community.