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COST- JUSTIFIED WATER AND SEWER SYSTEM DEVELOPMENT FEES

TOWN OF LIBERTY, NORTH CAROLINA

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House Bill 436 Session Law 2017-138
NC Administrative Code 15A NCAC 02T .0114
NC Administrative Code 15A NCAC 18C .0409

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 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 – Cost per Unit Volume and Cost per Service Unit

Liberty: Equivalent Residential Unit Calculation				
Item	System Development Fee Calculation	Cost of Capacity $/GPD	Customer Demand GPD	Cost per Unit Capacity
1	Water System	$ 9.87	400	$ 3,948
2	Sewer System	$ 14.40	225	$ 3,240
	Total ERU			$ 7,188

The fee for other types of development can be determined by applying the calculated cost of capacity per gallon of flow per day for various uses as defined by NC Administrative Code 15A NCAC 02T.0114 using the above cost of capacity values for the water system.

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Purpose Statement:

This report documents the results of the approach, methods and calculations for updating the system development fee analysis. In accordance with North Carolina General Statue 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.

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

The overall 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, who is most knowledgeable of the water and sewer systems, its finances, etc., and has not independently verified the accuracy of the information provided by the City. Such sources have therefore been deemed reliable and the information obtained to be reasonable and appropriate for the analysis undertaken and the conclusions reached. Liberty 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. Liberty has full authority to charge any fee amount, up to the maximum calculated herein, provided it is applied proportionally to the relative demands of new development. Evaluation of local factors, preferences, etc., may influence Liberty's decision. The final SDF fee amount is required to be determined by the Town of Liberty and adopted in accordance with applicable State and local regulations and policies prior to implementation.

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1.0 APPROACH

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 reviewed the information and filled in data gaps to complete the 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 water source of supply, production capacity, storage and transmission, sewer collection, treatment and disposal compared to historical and projected system demands.

Using the annual water demand and sewer treatment data Liberty reports to the NC Department of Environmental Quality Division of Water Resources for Local Water Supply Planning (LWSP), Liberty's water system has adequate capacity to support new development at present and into the future. Water system capacity was reported at 0.559 million gallons per day (MGD) in 2024 which exceeded the average day demand by 52%. Forecasts indicate

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available capacity will exceed projected demand by 47% in 2040. Sewer treatment and disposal capacity was reported at 0.550 MGD in 2024 which exceeded treated flow by 33%. Forecasted sewer treatment capacity will exceed projected treated flow by 21% in 2040. Table 1.01 summarizes current and projected capacities and availabilities for water supply and wastewater treatment/disposal.

Table 1.0.1 – Liberty Water and Sewer Capacities: Availability Projection

Liberty: Treatment Capacity Availability Projection (MGD)				
Item	Existing Water and Sewer System Infrastructure	2024	2030	2040
WC1	Water Capacity	0.559	0.559	0.559
WC2	Water Average Day Demand	0.271	0.287	0.294
	Available Water Capacity	0.288	0.272	0.317
SC1	Sewer Capacity	0.550	0.550	0.550
SC2	Sewer Average Day Flow	0.370	0.392	0.433
	Available Sewer Capacity	0.180	0.158	0.117

Source: Liberty 2024 NC Division of Water Resources, Local Water Supply Planing data

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

The above projections are based on the 2024 Local Water Supply Plan that assumes the customer base growth rate of approximately 1% per year. This anticipated rate of growth was checked against the 2024 Town of Liberty Land Development Plan and found to be consistent with the population projections through 2040 of approximately 0.5% annually. However, the Land Development Plan further states "…many other factors could change this population projection including development of nearby megasites, infrastructure capacity, land use densities and school capacity."

To this end, the Town is actively exploring alternatives for future water supply and wastewater treatment that will align with the potential for much higher rates of growth than the current planning projections. These efforts include completing an engineering study of long-term wastewater treatment alternatives, and preliminary discussions with larger utilities in the area that can provide levels of service that will adequately address the Town's future needs, to potentially purchase water supply and wastewater treatment capacity.

The costs associated with these future capacity-related water and sewer assets could be incorporated into the system development calculation using the Incremental Method (definition presented in the next section); however, several factors will need development and/or further refinement. These include, but are not limited to determining future system

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demands, developing capital projects that will address future capacity needs and associated capital costs, construction timing, funding, rate impacts, affordability, etc. These factors and others that may develop along the way will need further definition before the value of future capacity-related assets can be incorporated into the system development fee calculation.

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

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2.0 METHODOLOGY

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), etc., tied 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 infrastructure that addresses future growth and capacity needs.

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3.0 CALCULATION of SYSTEM DEVELOPMENT FEES

The **Buy-In Method** is the appropriate approach to calculate Liberty's system development fees at this time. Water and sewer system capacities are available to provide service to new customers in the near term and may be adequate for the 10-year planning period.

However, given the possibility that the need for additional capacity may escalate quickly, the Town can adjust the system development fee accordingly by applying the incremental method to those future needs and amending the fee calculation accordingly. Furthermore, the statutory requirement for 5-year updates will ensure the Town will have the opportunity to make timely adjustments.

3.1 Existing System Capacity Availability

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

The water and sewer systems have current available permitted treatment capacities as follows:

Table 3.1.1– LIBERTY Available Capacities

Liberty: Water and Sewer System Available Treatment Capacities				
Item	System Capacity - Million Gallons Per Day (MGD)	System Capacity	System Demand	Available Capacity
1	Water System	0.56	0.271	0.288
2	Sewer System	0.55	0.370	0.180

Source: Records provided by the Town of Liberty.

Liberty's water system has 52% of its capacity available to provide serivce to new development. Liberty's sewer system has 33% of its capcaity available to provide service to new development.

3.2 System Development Fee Calculation – Buy-In Method

After demonstrating that capacity is available, the overall value of existing assets providing that capacity can be calculated on a cost per gallon per day ($/gpd) basis using the Buy-In Method.

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Assets included in the buy-in component of the valuation process are the existing capacity-related backbone components of the utility. These assets are responsible for the available capacity in the system that are necessary in providing service 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.

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

Liberty: Water System Development Fee Buy-In Valuation			
Item	System Asset Description		Amount
	Water System Assets - SDF Eligible		
W1	Water Source, Pumping and Storage	$	2,168,231
W2	Water Transmission Infrastructure	$	3,349,728
	Subtotal - Water System Assets	$	5,517,960
	Less Grants and Donated Assets	$	-
	Less Outstanding Debt Principal	$	-
	Equals: Net Water System Value	$	5,517,960
	Divide by: Water System Capacity (MGD)		0.56
	Equals: Unit Valuation of Water System ($/MGD)	$	9,871,126
	Divide by: 1,000,000 gallons ($/GPD)	$	9.87

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

Liberty: Sewer System Development Fee Buy-In Valuation			
Item	System Asset Description		Amount
	Sewer System Assets - SDF Eligible		
S1	Sewer Treatment	$	-
S2	Sewer Conveyance Infrastructure	$	7,229,850
	Subtotal - Sewer System Assets	$	7,229,850
	Less Grants and Donated Assets	$	-
	Less Outstanding Debt Principal	$	(36,384)
	Equals: Net Sewer System Value	$	7,193,466
	Divide by: Sewer System Capacity (MGD)		0.55
	Equals: Unit Valuation of Sewer System ($/MGD)	$	13,079,028
	Divide by: 1,000,000 gallons ($/GPD)	$	13.08

The above SDF-eligible system asset valuations exclude funding provided by outside sources including grants, donated infrastructure, principal forgiveness, etc. Credit is assigned for the remaining value of decommissioned assets and outstanding principal on existing debt obligation(s). Excluding outstanding debt principal from the SDF calculation prevents a double charge for debt principal, once as part of the fee and again as part of the user charges applied to retire the debt.

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Note the value assigned to sewer treatment is zero. This is result of the treatment plant being constructed in 1935 and remaining in service to the present, well beyond its projected 45-year useful life. This asset has continued to function through ongoing maintenance and repair efforts rather than more substantial rehabilitation/upgrade work that would have been undertaken as capital improvement projects, which would be added to the Town's asset inventory and therefore eligible to be considered in the SDF calculation.

3.2.1 Cost per Unit Volume

The cost per unit volume is the value that can be applied uniformly to all potential customers.

Following determination of net water and sewer system values, 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 each gallon of capacity that is available for new development.

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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

Liberty: Equivalent Residential Unit Calculation				
Item	System Development Fee Calculation	Cost of Capacity $/GPD	Customer Demand GPD	Cost per Unit Capacity
1	Water System	$ 9.87	400	$ 3,948
2	Sewer System	$ 14.40	225	$ 3,240
	Total ERU			$ 7,188

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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. NC Administrative Code 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 define other service connection types and the associated water system demands 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.

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Appendix

House Bill 436 Session Law 2017-138
NC Administrative Code 15A NCAC 02T .0114
NC Administrative Code 15A NCAC 18C .0409

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House Bill 436 Session Law 2017-138

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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.

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

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 governed by this Subchapter unless alternate criteria are provided by a program-specific rule or for flow used for the purposes of 15A NCAC 02H .0105. Higher flow rates shall be required where usage and occupancy are atypical, including those in Paragraph (e) of this Rule. Wastewater flow calculations shall take hours of operation and anticipated maximum occupancies and 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 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	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) Design daily flow rates for residential property on barrier islands and similar communities located south or east of the Atlantic Intracoastal Waterway and used as vacation rental as defined in G.S. 42A-4 shall be 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 the capacity of 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 for all flow reduction requests, as follows:

(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 and pools, restaurants, schools, churches and businesses. For each non-residential connection, information identified in Paragraph (c) of this Rule (e.g. 200 seat church, 40 seat restaurant, 35 person pool bathhouse);

(C) a letter of agreement from the owner or an official, meeting the criteria of Rule .0106 of this Section, of the receiving collection system or treatment works accepting the wastewater and agreeing with the adjusted design rate;

(D) age of the collection system;

(E) analysis of inflow and infiltration within the collection system or receiving treatment plant, as applicable;

(F) if 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) if daily data from a wastewater treatment plant cannot be used or is not representative of the project area: 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; and

(H) an estimated design daily sewage flow rate shall be determined 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 and 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, such as whether the facility is in a resort area.

(3) Flow increases shall be required if the calculations required by Subparagraph (f)(1) of this Rule yield design flows higher than that specified in Paragraphs (b) or (c) of this Rule.

(4) The permittee shall retain the letter of any approved adjusted daily design flow rate for the life of the facility and shall transfer such letter to a future permittee.

History Note: *Authority G.S. 143-215.1; 143-215.3(a)(1);*
Eff. September 1, 2006;
Readopted Eff. September 1, 2018.

SHORTEN SEPTAGE MANAGEMENT PERMITTING REVIEW AND CLARIFY PUMPER TRUCK FEE

SECTION 17. G.S. 130A-291.1 reads as rewritten:

"**§ 130A-291.1. Septage management program; permit fees.**

…

(c) No septage management firm shall commence or continue operation that does not have a permit issued by the Department. The permit shall be issued only when the septage management firm satisfies all of the requirements of the rules adopted by the Commission. Within ~~90~~ 60 business days of receiving a complete permit application, the Department shall grant or deny the permit in accordance with G.S. 130A-294(a)(4). If the permit application is denied, the Department shall return the permit application citing the reasons for the denial in writing. If the Department does not act on a complete permit application for a new septage management firm within 60 business days, the septage management firm is deemed permitted and may begin operation if all other applicable requirements of this section, G.S. 130A-291.3, and the rules adopted by the Commission are met. A septage management firm that commences operation without first having obtained a permit shall cease to operate until the firm obtains a permit under this section and shall pay an initial annual fee equal to twice the amount of the annual fee that would otherwise be applicable under subsection (e) of this section.

…

(e) A septage management firm that operates one pumper truck shall pay an annual fee of five hundred fifty dollars ($550.00) to the Department. A septage management firm that operates two or more pumper trucks shall pay an annual fee of eight hundred dollars ($800.00) to the Department. For the purposes of determining the fee assessed pursuant to this subsection, the number of trucks operated by a septage management firm shall be limited to only those pumper trucks and vehicles used in the transportation, containment, or consolidation of liquid septage that transport septage on State-maintained roads.

…."

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.

PROHIBIT DISPOSAL OF LITHIUM-ION BATTERIES IN LANDFILLS; LIMIT DISPOSAL OF SOLAR PANELS TO LINED LANDFILLS AND OTHER APPROVED FACILITIES

SECTION 19.(a) G.S. 130A-309.10 reads as rewritten:

"**§ 130A-309.10. Prohibited acts relating to packaging; coded labeling of plastic containers required; disposal of certain solid wastes in landfills or by incineration prohibited.**

…

(f) No person shall knowingly dispose of the following solid wastes in landfills:

(1) Repealed by Session Laws 1991, c. 375, s. 1.

(2) Used oil.

(3) Yard trash, except in landfills approved for the disposal of yard trash under rules adopted by the Commission. Yard trash that is source separated from

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.