

# TOWN OF ATLANTIC BEACH NORTH CAROLINA



## System Development Fee Analysis

May 2018  
Stroud Project #P1627~001

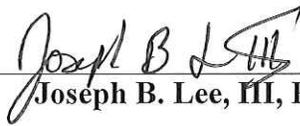
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Project Manager



5/14/18

Date

**Town of Atlantic Beach, North Carolina**

**System Development Fee Analysis**

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## 1.0 Executive Summary

The North Carolina General Assembly passed House Bill 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.”<sup>1</sup> As a requirement of the amended General Statute, the Town of Atlantic Beach employed Stroud Engineering, P.A. a professional engineering consulting firm, to complete a system development fee analysis. The statute specifies that a written analysis be performed to calculate a system development fee, based upon prescriptive criteria.

For this Analysis, the buy-in method of alternatives to calculate System Development Fees was utilized. This method essentially recoups the costs of the existing facilities to serve new developments, with new development paying its proportionate share of the system value. The fee is calculated based upon the actual cost of non-depreciable and depreciable capital assets for each system less depreciation, less long-term debt and grant funds that were utilized to fund the capital projects.

The formula for calculation of the System Development Fee (SDF) is:

$$\text{SDF} = \frac{\text{Capital Asset Value} - \text{Debt Credit} - \text{Grants} + \text{Depreciated Grants}}{\text{Total System Capacity}}$$

By utilizing the above formula for each system, the resultant System Development Fees calculate to be:

$$\$6,825,478.65/2,500,000 \text{ GPD}^* = \mathbf{\$2.73/\text{GPD}^*}$$

\*Total permitted water treatment plant capacity expressed in Gallons per Day (GPD).

Once flow for a new establishment has been estimated in accordance with North Carolina Administrative Code (NCAC) Subchapter 2T .0114 (b) and (c), the flow may be converted to Equivalent Residential Units (ERUs) by dividing the design flow by 360 gpd, which is the design flow associated with an ERU. The State currently defines an ERU as a single family residential customer with a 5/8" x 3/4" meter size connection. The unit cost per ERU or system development fee per a 5/8" x 3/4" meter connection is then scaled by the AWWA meter equivalency factors to develop Capacity Use Fees. The formula for calculation of the ERU is presented as:

$$\text{ERU} = \text{SDF} \times 360 \text{ GPD}$$

$$\text{ERU} = \$2.73/\text{GPD} \times 360 \text{ GPD} = \$983$$

## **2.0 Background**

In 2016, the North Carolina Supreme Court ruled that municipalities did not have the authority under general law to assess “Water and Sewer Impact Fees” for developments seeking to connect to the municipality’s infrastructure. These fees, as defined by some municipalities and counties, are often assessed for future infrastructure improvements such as water treatment and wastewater treatment capacity that may be required to serve new developments. This ruling was followed by the North Carolina General Assembly passing House Bill 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.”<sup>1</sup> A copy of HB436 is included with this analysis as Appendix A.

As a requirement of the amended General Statute, the Town of Atlantic Beach employed Stroud Engineering, P.A. a professional engineering consulting firm, to complete a SDF analysis. The statute specifies that a written analysis be performed to calculate a system development fee, based upon prescriptive criteria. This analysis must then be posted and made available to the public for a period of not less than 45 days, soliciting comments on the analysis, and modifying or revising the analysis based on those comments. Following this period, the local government unit must hold a public hearing on the system development fee, prior to consideration for adoption by the unit. An additional stipulation requires that the analysis be updated at least every five years.

## **3.0 Description of the Analysis**

A SDF, as defined in the statute, is “...a charge or assessment for service imposed with respect to new development to fund costs of capital improvements necessitated by and attributable to such new development, to recoup costs of existing facilities which serve such new developments, or a combination of those costs,...”<sup>1</sup>

The SDF may be derived utilizing one of several methods to establish the fee. These methods include the buy-in method, incremental or marginal cost method, or a combined cost method. The buy-in method essentially recoups the costs of the existing facilities to serve new developments, with new development paying its proportionate share of the system capacity. The incremental/marginal cost method is utilized if the local government unit desires to recoup the cost of expanding the water or sewer system to serve a new development. The new development would pay its proportionate share of the expansion. The combined cost method utilizes a combination of the buy-in and incremental cost methods to derive the fee.

For this Analysis, the buy-in method of alternatives to calculate SDF was utilized. Although the method name might imply that the new development purchases a proportionate share of the water system, no ownership of the system by the new development is granted.

In addition to selecting a generally accepted accounting, engineering, and planning methodology for the analysis, the General Statute also requires:

- 1) Documenting the facts and data used in the analysis in reasonable detail for their reliability and sufficiency;
- 2) Demonstrating and documenting the reliable application of the methodology to the facts and data;
- 3) Identifying the assumptions and limiting conditions of the analysis and demonstrating that these conditions do not materially undermine the reliability of the conclusions reached from the analysis;
- 4) Calculating a final system development fee per service unit of new development, including an equivalency or conversion table to determine fees applicable to various categories of demand;
- 5) Covering a planning period of not less than 10 years nor more than 20 years; and
- 6) Adoption by resolution or ordinance of the local government unit as outlined in GS 162A-209.<sup>1</sup>

#### 4.0 Methodology

##### Buy-In Method

The buy-in method utilizes the value of the existing system’s capacity as a basis and is generally utilized when the existing system has sufficient capacity to serve new development at present and in the future. According to the 2017 “Local Water Supply Plan” report to the North Carolina Department of Environmental Quality, Atlantic Beach utilized approximately 27% of its water production capacity on an average daily basis in 2017. In utilizing the buy-in methodology, new development pays its proportionate cost share of capacity in the existing system assets. This method meets the requirements outlined in GS 162A-205. The method is a well-established method for accounting practices in the water and sewer industry, and well documented in AWWA’s M1 Manual – “Principles of Water Rates, Fees, and Charges” (AWWA, 2017).<sup>2</sup> The basis for calculating the costs associated with previously completed capital improvements according to the statute “*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.*”<sup>3</sup>

The following paragraphs from “Principles of Water Rates, Fees and Charges” describe various methods to establish values to be used for the “buy-in method”:

**“Validation and system equity.** There are different methods used to establish a value to the existing assets under the buy-in methodology. If the existing assets are valued at their original cost or depreciated original cost, this is often the existing assets at a replacement cost or a depreciated replacement cost. This is commonly referred to as the replacement cost method. According to the replacement cost method, the existing system components are valued at the current-day cost of replicating the existing assets. This is typically accomplished through the use of a construction cost index or other comparable valuation method to bring the historical costs up to current-day value. In summary form the four valuation approaches for system assets under the buy-in method are as follows:

1. **Original cost (OC)** is the cost of construction in the year of construction.
2. **Original cost less accumulated depreciation(OCLD)** is also known as the net book value of the system assets.
3. **Replacement cost new (RCN)** is the original cost escalated to current-day dollars, providing an estimate of the current-day cost of replicating the existing facilities that is then adjusted by an estimate of the replacement cost depreciation, resulting in a replacement cost valuation that reflects the remaining depreciable life of the facility.

4. **Replacement cost new less depreciation (RCNLD)** is the original cost escalated to current-day dollars, less accumulated replacement cost depreciation. This provides an estimate of the current-day cost of replicating the existing facilities that is then adjusted by an estimate of the replacement cost depreciation, resulting in a replacement cost valuation that reflects the remaining depreciable life of the facility.

A combination of the approaches may also be used. Using the OC and OCLD valuations, the SDC reflects the original investment in the existing capacity. The new customer “buys in” to the capacity at the OC or the net book value cost (OCLD) for the facilities and as a result pays an amount similar to what the existing customers paid for the capacity (OC) or the remaining value of the original investment (OCLD).

Using the RCN and the RCNLD valuations, the SDC reasonably reflects the cost of providing new expansion capacity to customers as if the capacity was added at the time the new customers connected to the water system. It may also be thought of as a valuation method to fairly compensate the existing customers for the carrying costs of the excess capacity built into the system in advance of when the new customers connect to the system. This is because, up to the point of the new customers connecting to the system, the existing customers have been financially responsible for the carrying costs of that excess capacity that is available for development.

**System liabilities and equity.** Balance-sheet liabilities and equity that are recognized in the valuation method should equitably address the issue of the outstanding principal portion of long-term debt. When debt is issued to finance a growth- or expansion-related project, the principal portion of the debt service will be repaid over time, possibly through a customer’s rates after connection to the system and payment of an SDC. Given that, a debt credit may be applicable to avoid the potential double-charging of these debt costs through both the SDC and user rates. In a situation where the SDC is separated into functional components (source of supply, treatment, pumping, transmission, etc.), the analysis may provide these debt credits at the functional level or on a combined system level at the end of the analysis.

**SDC calculations adjustment.** Valuation adjustments may be necessary if grants or other contributions were used to develop the capacity-related facilities or if a facility is replaced and the resulting replacement provides additional capacity to accommodate future customers. This may be addressed within the valuation process by determining the percentage of the asset eligible for the SDC (i.e., percent SDC eligible). For example, if grants were provided specifically for the water treatment facilities, these grant contributions should be credited to the value (cost) of those specific facilities, and the grant-related portion of the water treatment plant’s value should not be included in the SDC.”

The value of the cost of capital assets of the water system was determined utilizing asset and depreciation information from the Town’s Depreciation Schedule Report. The asset value of the water system equipment and distribution, and buildings were calculated as RCNLD using Cost Index values from R.S. Means<sup>3</sup> to determine RCN. Based on conversations with the Town, 50 percent of the asset

value of the Public Works buildings and land are considered SDF eligible. The asset value of vehicles and miscellaneous equipment was calculated as OCLD. The values assigned are based upon generally accepted accounting principles and practices, in accordance with governmental accounting standards and the *Policy Manual for Local Governments in North Carolina* (Department of State Treasurer, 2014).<sup>4</sup>

The Town uses the straight-line method to depreciate their capital assets over the assets' useful life, at a uniform rate of depreciation per period. A depreciation schedule report for assets of the water system, including OC, RCN, RCNLD, useful life and Cost Index is included as Appendix B. In accordance with standard accounting practices, land and construction in progress are considered as non-depreciable assets. Since the owner does not receive the benefit of use and risk of ownership of the asset, construction in progress is not depreciable.

The Governmental Accounting Standards Board (GASB) Statement No. 34 defines capital assets as *"land, improvements to land, easements, buildings, building improvements, vehicles, machinery, equipment, ..., infrastructure, and all other tangible or intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period."*<sup>4</sup> This definition is also presented in the Executive Summary of the North Carolina Department of the Treasurer's Policy Manual for Local Governments, Section 20, Capital Assets. The Policy Manual further states that the capital assets and the related depreciation expense should be recorded in the accounts of proprietary funds.

The SDF is calculated using non-depreciable and depreciable assets of land, buildings, treatment equipment, distribution, and miscellaneous equipment and vehicles. These assets are the backbone of the system, and necessary to provide capacity to customers. The system values are calculated as the depreciated asset value, less depreciation, less debt credits and less grant funds that may have been used to fund a particular capital asset project.

The formula utilized to calculate the SDF is:

$$\text{SDF} = \frac{\text{Capital Asset Value} - \text{Depreciation} - \text{Debt Credit} - \text{Grants} + \text{Depreciated Grants}}{\text{Total System Capacity}}$$

## **5.0 Current Treatment Facilities and Capacity**

The Town of Atlantic Beach operates its own water supply system, drawn from groundwater of the Yorktown and Castle Hayne Aquifers underlying the Town. The system is supplied by six deep wells, located at sites throughout the Town. Water storage is provided by two elevated and one below ground storage tanks which have a total storage capacity of 1,500,000 gallons.

The water supply is of good quality and the supply has been consistent. Treatment provides softened fluoridated water. Based on the Town's 2002 Local Water Supply Plan submitted to the North Carolina Division of Water Resources, the system can produce 1.74 million gallons in a 12-hour period. The system's water treatment capacity is 2.5 million gallons per day.<sup>5</sup>

## 6.0 System Development Fee Calculation

The value of the water system was calculated based upon the actual cost of capital assets for each system less depreciation. Using the buy-in method, net depreciated asset value is divided by the total treatment capacity for water treatment. The previously shown formula for calculation of the SDF is presented as:

$$\text{SDF} = \frac{\text{Capital Asset Value} - \text{Debt Credit} - \text{Grant Credits} + \text{Grant Depreciation}}{\text{Total System Capacity}}$$

By utilizing the above formula, the resultant System Development Fee calculates to be:

$$\text{SDF} = \frac{\$6,825,478.65 - \$0 - \$0 + \$0}{2,500,000 \text{ GPD}} = \$2.73/\text{GPD}$$

## 7.0 Equivalent Residential Unit Calculation

Atlantic Beach must have the capability to convert different types of users into Equivalent Residential Units (ERUs) as specified in House Bill 436. Chapter 15A of the North Carolina Administrative Code (NCAC), Subchapter 18C .0409 (b) (1) provides a table for daily design flow requirements for public water systems. The data provided therein is limited.

Conversely, Chapter 15A of the NCAC, Subchapter 2T .0114(b) and (c), included as Appendix C, provides very detailed design daily flow rates for normal use and occupancy situations. Although created specifically for application in determining wastewater flow rates from various categories of users, its applicability to water demand is a reasonable extension of its use for determination of System Development Fees for the water system as generation of wastewater is typically created directly through the consumptive use of water.

The information provided in 15A 2T.0114(b) and (c) is very explicit in the application of flow rates to be assigned to various uses and occupancies, including various size residential units where the number of bedrooms per units may vary by a significant margin.

Thus, flow rates for water shall be determined in accordance with those rates established in Chapter 15A of the North Carolina Administrative Code, Subchapter 2T .0114(b) and (c), included in this document as Appendix C.

Once flow for a new establishment has been estimated in accordance with 15A NCAC 2T .0114, the flow may be converted to ERUs by dividing the design flow by 360 gpd, which is the design flow associated with an ERU. The State currently defines an ERU as a single family residential customer with a 5/8" x 3/4" meter size connection. The unit cost per ERU or system development fee per a 5/8" x 3/4" meter connection is then scaled by the AWWA meter equivalency factors<sup>2</sup> to develop Capacity Use Fees. The formula for calculation of the ERU is presented as:

$$\text{ERU} = \text{SDF} \times 360 \text{ GPD}$$

$$\text{ERU} = \$2.73/\text{GPD} \times 360 \text{ GPD} = \$983$$

Atlantic Beach currently charges new connections to the water system based on meter size. A comparison of the current Capacity Use Fees and the calculated Capacity Use Fees based on this analysis is presented as Appendix D.

## **8.0 References**

<sup>1</sup> General Assembly of North Carolina – Session 2017; Session Law 2017-138; House Bill 436; (Pg. 2, 3) §162A-205. Supporting analysis; 2), 4), 5), 6), 7), 8).

<sup>2</sup> American Water Works Association, 7<sup>th</sup> Edition 2017; M1 Manual; Chapter VII.2, System Development Charges; APPROACHES TO CALCULATING SDCs; Basic Approaches; pp. 321-347.

<sup>3</sup> [www.rsmeansonline.com/references/unit/refpdf/hci.pdf](http://www.rsmeansonline.com/references/unit/refpdf/hci.pdf)

<sup>4</sup> North Carolina Department of State Treasurer; Policy Manual for Local Governments; Section 20: August 2014

<sup>5</sup> Town of Atlantic Beach Core Land Use Plan; August 2006; p. 109.

## **APPENDIX A**

House Bill 436

**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 29<sup>th</sup> 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 20<sup>th</sup> day of July, 2017

## **APPENDIX B**

### Water Fund Asset and Depreciation Schedule

**TOWN OF ATLANTIC BEACH  
DEPRECIATION SCHEDULE REPORT**

<b>EQUIPMENT</b>	<b>Cost</b>	<b>Depreciation</b>	<b>Year Built</b>	<b>Useful Life, Years</b>	<b>Percent Depreciated</b>	<b>Cost Index</b>	<b>Replacement Cost Value</b>	<b>Depreciated Value of Replacement Cost</b>
<u>Description</u>	<u>Cost</u>	<u>Depreciation</u>	<u>Year Built</u>	<u>Life, Years</u>	<u>Depreciated</u>	<u>Cost Index</u>	<u>Cost Value</u>	<u>Replacement Cost</u>
Water Treatment Plant	\$519,400.40	\$373,968.29	1981	50	72.00%	3.05	\$1,584,913.22	\$443,775.70
Water Towers	\$334,900.00	\$334,900.00	1981	25	100.00%	3.05	\$1,021,923.43	\$0.00
Wells #1,2 and 3	\$380,436.00	\$332,881.50	1981	40	87.50%	3.05	\$1,160,873.28	\$145,109.16
Storage Tank #2	\$666,242.70	\$666,242.70	1991	25	100.00%	2.21	\$1,470,138.85	\$0.00
Water Pumping Facilities	\$659,309.00	\$659,309.00	1981	30	100.00%	3.05	\$2,011,834.32	\$0.00
Well #4	\$249,840.00	\$242,900.00	1987	30	97.22%	2.44	\$608,504.26	\$16,902.90
Water Plant Renovations	\$30,000.00	\$30,000.00	1989	20	100.00%	2.32	\$69,576.55	\$0.00
Wells #2,3,4-improvements	\$83,205.51	\$43,405.54	1990	50	52.17%	2.27	\$188,469.74	\$90,151.36
Well #5	\$218,232.00	\$189,134.40	1990	30	86.67%	2.27	\$494,319.78	\$65,909.30
Well #2-improvements	\$30,481.21	\$30,481.21	1991	15	100.00%	2.21	\$67,260.19	\$0.00
Well #2-improvements	\$31,042.08	\$31,042.08	1992	15	100.00%	2.15	\$66,706.12	\$0.00
Well #6	\$194,157.40	\$146,157.33	1993	30	75.28%	2.10	\$407,787.81	\$100,814.31
Water Plant Expansion Complete	\$600,193.94	\$572,685.09	1997	20	95.42%	1.89	\$1,136,537.46	\$52,091.23
Water Softener	\$656,179.21	\$395,074.56	1992	40	60.21%	2.15	\$1,410,059.15	\$561,086.05
Water Softener-improvements	\$16,841.50	\$10,104.93	1992	40	60.00%	2.15	\$36,190.59	\$14,476.17
Diaphragm Valves	\$21,165.00	\$14,639.13	1995	30	69.17%	1.99	\$42,015.28	\$12,954.70
Fluoridation System	\$8,711.76	\$8,711.76	1992	7	100.00%	2.15	\$18,720.64	\$0.00
Pump & Installation	\$16,054.77	\$16,054.77	1994	7	100.00%	2.05	\$32,847.69	\$0.00
Suction Pumps (2)	\$9,126.14	\$9,126.14	1992	7	100.00%	2.15	\$19,611.10	\$0.00
Tower 1 Enclosure	\$11,700.00	\$6,708.00	2002	25	57.33%	1.66	\$19,418.18	\$8,285.09
Andover Training & Alarm System	\$8,116.04	\$8,116.02	2003	7	100.00%	1.62	\$13,133.23	\$0.03
Chlorinator W/Duples Pumps	\$39,502.00	\$39,501.98	2007	7	100.00%	1.26	\$49,808.90	\$0.03
Material/Labor to place chlorinator on line	\$16,661.22	\$16,661.20	2008	7	100.00%	1.18	\$19,727.48	\$0.02
Well #4 improvement-pump/controls	\$27,975.00	\$3,869.88	2009	50	13.83%	1.19	\$33,178.57	\$28,588.86
Chlorinator System/Pump	\$41,062.15	\$9,170.57	2010	25	22.33%	1.16	\$47,797.69	\$37,122.84
Submersible pump-well #2	\$24,355.00	\$5,764.02	2010	25	23.67%	1.16	\$28,350.02	\$21,640.51
Repeater-Water/PW	\$5,811.40	\$4,635.28	2010	7	79.76%	1.16	\$6,764.66	\$1,369.04
Well 2 Test Well	\$64,036.97	\$5,549.87	2012	50	8.67%	1.10	\$70,289.29	\$64,197.56
AMR TGB Gateway Tower and RNI System	\$120,000.00	\$65,714.29	2012	7	54.76%	1.10	\$131,716.34	\$59,585.96
<b>TOTAL</b>	<b>\$5,084,738.40</b>	<b>\$4,272,509.54</b>					<b>\$12,268,473.82</b>	<b>\$1,724,060.81</b>

**TOWN OF ATLANTIC BEACH  
DEPRECIATION SCHEDULE REPORT**

<b>DISTRIBUTION</b>	<b>Useful</b>	<b>Percent</b>	<b>Replacement</b>	<b>Depreciated Value of</b>
<u>Description</u>	<u>Life, Years</u>	<u>Depreciated</u>	<u>Cost Value</u>	<u>Replacement Cost</u>
<u>Cost</u>	<u>Year Built</u>	<u>Cost Index</u>		
Waterlines	40	87.50%	\$3,180,119.52	\$397,514.94
Waterline Ext.-To Coast Guard	40	67.71%	\$279,131.83	\$90,136.32
Waterline Ext.-Causeway/DOT	40	70.00%	\$22,025.27	\$6,607.58
Waterline Ext.-N Ft Macon	40	69.79%	\$34,451.61	\$10,407.26
Waterline Ext.-Salter Path Rd	40	65.21%	\$258,381.52	\$89,895.32
Waterline Ext.-West End	40	56.46%	\$1,568,766.09	\$683,067.01
Fire Hydrant Valve	7	100.00%	\$21,703.72	\$0.00
Fire Hydrant Valves	7	100.00%	\$18,064.68	\$0.00
Fire Hydrant Valve	7	100.00%	\$20,303.63	\$0.00
Fire Hydrant Valve	7	100.00%	\$19,286.49	\$0.00
Fire Hydrant Project	7	100.00%	\$30,869.93	\$0.02
Water line Tie-In/AB/PKS	50	11.50%	\$65,069.14	\$57,586.15
10" Water Line/Hydrant-East Side,AB Causeway	50	11.50%	\$31,653.51	\$28,013.35
<b>TOTAL</b>			<b>\$5,549,826.95</b>	<b>\$1,363,227.96</b>

**TOWN OF ATLANTIC BEACH  
DEPRECIATION SCHEDULE REPORT**

<b>MISC EQUIPMENT</b>			<b>Useful</b>	<b>Year</b>
<u>Description</u>	<u>Cost</u>	<u>Depreciation</u>	<u>Life, Years</u>	<u>Purchased</u>
Generator & Hookup	\$6,517.82	\$6,517.82	7	1994
300 GW Generator	\$8,700.00	\$8,700.00	7	1995
35KW Trailer Mounted Generator	\$16,650.00	\$16,650.00	7	2002
Mini Backhoe	\$35,847.00	\$35,847.00	7	2002
Generac 100 KW Generator	\$22,036.00	\$22,036.00	7	2006
Magnum MMG55 50 KW Diesel Generator	\$22,965.00	\$22,965.00	7	2007
Terex Backhoe Loader	\$59,080.00	\$59,080.00	6	2008
150KW Generator-Water Plant	\$42,425.00	\$24,242.86	7	2012
50 KW Generator Tower 2 & Well 5	\$29,321.00	\$16,754.86	7	2012
50 KW Generator-State Park Well 6	\$27,849.00	\$15,913.71	7	2012
Sensus 5501 Handheld AMR Reader	\$9,500.00	\$2,714.29	7	2014
1988 Freightliner Unimog Backhoe	\$15,850.00	\$2,264.29	7	2015
<b>TOTAL</b>	<b>\$296,740.82</b>	<b>\$233,685.82</b>		

**TOWN OF ATLANTIC BEACH  
DEPRECIATION SCHEDULE REPORT**

**BUILDINGS**

<u>Description</u>	<u>Cost</u>	<u>Depreciation</u>	<u>Year Built</u>	<u>Useful Life, Years</u>	<u>Percent Depreciated</u>	<u>Cost Index</u>	<u>Replacement Cost Value</u>	<u>Depreciated Value of Replacement Cost</u>
Pole Building	\$14,072.00	\$6,684.20	1998	40	47.50%	1.86	\$26,114.50	\$13,710.11
Public Works Building - 112 W Bogue <sup>1</sup>	\$139,485.07	\$72,532.24	1991	50	52.00%	2.21	\$307,789.37	\$147,738.90
<b>TOTAL</b>	<b>\$153,557.07</b>	<b>\$79,216.44</b>					<b>\$333,903.87</b>	<b>\$161,449.01</b>
<b>Total Eligible SDF</b>	<b>\$83,814.54</b>	<b>\$42,950.32</b>						<b>\$87,579.56</b>

Notes:

<sup>1</sup> 50% Eligible SDF

**TOWN OF ATLANTIC BEACH  
DEPRECIATION SCHEDULE REPORT**

<b>VEHICLES</b>			<b>Useful</b>	
	<u>Description</u>	<u>Cost</u>	<u>Depreciation</u>	<u>Life, Years</u> <u>Year Built</u>
	2007 Ford F-150	\$12,751.00	\$12,751.00	6 2007
	2007 Ford F-150	\$12,751.00	\$12,751.00	6 2007
	2004 Ford E-350 Van	\$15,671.00	\$15,670.98	7 2009
	2016 Ford F150	\$33,659.89	\$935.00	6 2016
	2017 Ford F150 Crew Cab 4X4	\$33,153.46	\$0.00	5 2017
<b>TOTAL</b>		<b>\$107,986.35</b>	<b>\$42,107.98</b>	

**TOWN OF ATLANTIC BEACH  
DEPRECIATION SCHEDULE REPORT**

**Nondepreciable Capital Assets (Land)**

<u>Description</u>	<u>Asset Value<sup>1</sup></u>
Well 1 & Tower 1	\$494,500.00
Well 2	\$27,888.00
Well 3	\$719,040.00
Public Works Facility - 112 W Bogue <sup>2</sup>	\$289,188.00
Public Works Facility - 1400 W Fort Macon <sup>2,3</sup>	\$2,333,380.00

**Nondepreciable Capital Assets (Construction in Progress)**

<u>Description</u>	<u>Asset Value</u>
SCADA Software	\$33,000.00
Well #2A	\$399,224.00
Public Works Building - 1400 W Fort Macon <sup>2</sup>	\$1,073,481.90

**Total** **\$5,369,701.90**

**Total Eligible SDF** **\$3,521,676.95**

Notes:

<sup>1</sup> Carteret County Tax Value

<sup>2</sup> 50% Eligible SDF

<sup>3</sup> Well 5 and Water Tower 2 are located on this property.

**TOWN OF ATLANTIC BEACH  
SYSTEM DEVELOPMENT FEE CALCULATION**

$$\text{SDF} = \frac{\text{Capital Asset Value} - \text{Debt Credit} - \text{Grant Credits} - \text{Grant Depreciation}}{\text{Total System Capacity}}$$

$$\text{SDF} = \frac{\$6,825,478.65 - \$0.00 - \$0.00 - \$0.00}{\$2,500,000.00 \text{ gallons per day (GPD)}}$$

**SDF = \$2.73**

## **APPENDIX C**

Flow Rate Determination, 15A NCAC Subchapter 2T .0114

**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

## **APPENDIX D**

### **CAPACITY USE FEES BY METER SIZE**

**TOWN OF ATLANTIC BEACH  
CAPACITY USE FEES BY METER SIZE**

Meter Size	AWWA Meter Equivalents	Current Capacity Use Fee	Calculated Capacity Use Fee	Variance
5/8" x 3/4"	1	N/A	\$983	N/A
1"	2.5	\$4,000	\$2,458	-\$1,542.00
2"	8.0	\$10,000	\$7,864	-\$2,136.00
3"	15.0	\$15,000	\$14,745	-\$255.00
4"	25.0	\$25,000	\$24,575	-\$425.00
6"	50.0	\$50,000	\$49,150	-\$850.00

System Development Fee

$$\text{SDF} = \frac{\text{Capital Asset Value} - \text{Debt Credit} - \text{Grant Credits} - \text{Grant Depreciation}}{\text{Total System Capacity}}$$

$$\text{SDF} = \frac{\$6,825,478.65 - \$0 - \$0 - \$0}{\$2,500,000.00 \text{ gallons per day (GPD)}}$$

$$\text{SDF} = \$2.73/\text{GPD}$$

Equivalent Residential Unit

$$\text{ERU} = \text{SDF} * \text{New Customer Demand (GPD)}$$

$$\text{ERU} = \$2.73/\text{GPD} * 360 \text{ GPD}$$

$$\text{ERU} = \$983$$