

**HARKERS ISLAND SANITARY DISTRICT
ANALYSIS OF SYSTEM DEVELOPMENT FEE**

To: Governing Board of Harkers Island Sanitary District
From: G. Lee Carroll, Certified Public Accountant
Re: System Development Fee
Date: April 5, 2018

You have commissioned me to analyze a proposed “system development fee” as defined in the Public Water and Sewer System Development Fee Act (the “Act”) specifically defined in North Carolina General Statute §162A-201 (9). I am a certified public accountant, licensed to practice by the State of North Carolina. I have been a CPA for over 40 years. During my career, I have prepared financial statements for, and/or audited multiple water system utilities, whether operated by local governments or other entities. I am qualified by experience, training and education to employ generally accepted accounting methodologies in calculating system development fees for public water systems as described in the Act. In preparing this analysis, I have consulted with senior executives at Carteret Craven Electric Membership Cooperative (“CCEC”) including Jake Joplin, Jerry Eborn and Tara Alderman. I will refer to these individuals as “Senior Management.” Jake Joplin is a professional engineer. Jerry Eborn is an accountant. Tara Alderman is an accountant and has responsibility for the District's financial statements. CCEC serves as the managing entity for the Harker's Island Sanitary District and has developed considerable experience and skill with the District's water system operations over the last decade or so. I have taken into account comments and views of Senior Management with respect to engineering matters and planning methodologies that are involved in my analysis. From my direct observation, management of the District's water system under CCEC is sound in all areas including planning, engineering, and finance. I am fully confident the information I have received from Senior Management is accurate and well supports this analysis.

North Carolina General Statute §162A-201 (9) defines “system development fee” as:

- (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).

Based on my experience, and considering the information I have received from Senior Management, I am satisfied that the system development fee most appropriate for the District is “A charge or assessment for service imposed with respect to new development... to recoup costs of existing facilities which serve such new development... per the statutory definition. I have considered “incremental costs” or “marginal costs,” but because the existing water system facility was designed and built with considerable excess capacity, no significant improvement to the system itself is necessary to provide water service to new customers on account of demand for additional capacity for up to twenty years in the future. Therefore, in my opinion, the “buy-in” methodology is most appropriate. This I equate with the phrase “to recoup costs of existing facilities which serve such new development” which is contained in the statutory definition of “system development fee.”

In my own analysis and my discussions with Senior Management, I have given consideration to “depreciation” that is shown on the financial statements of the District, and whether accumulated depreciation should be deducted from the original costs of the existing facilities in determining an appropriate development fee. Depreciation is an accounting term that serves many purposes, but it often is a tax concept used to permit a business owner to deduct the costs of an asset from income over a time period. In more of a general accounting sense, depreciation is designed to track the useful life of an asset so that as the life of the asset diminishes over time, the value of the asset on an owner's financial statements is reduced for book value purposes. While depreciation is useful and indispensable for tax and general accounting, in reality the time period for depreciation may have no correlation with the actual useful life of the asset. For example, a commercial refrigerator may be depreciated over a five year period, such that its value on the books of the owner after five years is zero, but it may have a life expectancy and a useful life of 20 or more years. Life expectancy of equipment is a factor of many components which include maintenance and service.

From my personal observation of the condition of the District's water system infrastructure, and reports of Senior Management, the condition of the District's assets is generally excellent and has considerable remaining useful life even though on the District's books they may have been completely or significantly “depreciated.” For this reason, it is my recommendation that the District not consider depreciation as it determines an appropriate development fee. To do so would likely undervalue the existing facilities which are available to serve new customers and would therefore produce a development fee that was arbitrarily, and unfairly, low. Therefore, I recommend that the District's Board not reduce the costs of the systems assets by accumulated depreciation in determining the system development fee.

Attached as Exhibit A is a spreadsheet that describes the District's “Existing Assets and the Value of those Assets” based on historical cost figures. These figures are taken from other financial information of the District which I have read. The total costs of the District's water system utility assets are \$2,997,961.92. There are 925 residential units within the District. Residential units are by far the predominant consumers of existing water service and can serve as the standard for determining a fair “buy-in” price, or development fee. Residential water line connections are 3/4 of an inch in size and are the smallest lines connected to the District water system. By dividing the total costs of the water system utility assets by the 925 residential units, the per residential unit

investment in the existing assets is \$3,241.00. From this base figure we can extrapolate system development fees for customers that need larger water service than a typical residential unit.

A typical residential unit is served by a 3/4 inch water line which provides a capacity of 30 gallons per minute. Generally, commercial users and multi-family users will need a larger water service line than 3/4 of an inch. By using the capacity of the service line a customer needs for sufficient water service, keyed to the capacity of the typical 3/4 inch service line, the ratio of capacities between the lines can be determined and development fees for larger service lines can be calculated by applying that ratio to the base development fee for the typical single family residential customer. For example, a one inch service line has a capacity of 1.67 times the 3/4-inch line capacity, and a 1½-inch line a 3.33 multiple of the 3/4-inch line. Thus the development fee for the one inch service line would fairly be 1.67 times the fee for the single family 3/4-line and the fee for a one and a half inch line would be a multiple of 3.33 times the 3/4-inch line fee.

In my opinion, the maximum system development fee the Board can charge for a 3/4 inch service line would be the \$3,241.00 figure calculated above. If the Board accepts this method as the formula for the District's development fees, then by applying the capacity ratio formulas, a one inch service line would have a system development fee of \$5,412.00 and a one and a half inch line would have a system development fee of \$10,792.00. For service lines larger than an inch and a half, Senior Management can calculate the capacity of those lines and determine the ratio compared to the 3/4 inch service line and then determine the development fee based on capacity. For multiple unit projects served by a "master" water, where the units are expected to consume significantly less water than a typical single family dwelling, for example recreational vehicle parks and marinas, the District should estimate the average consumption of water in those units and determine a ratio compared to typical single family homes. For example, current capacity use fees for recreational vehicle parks assume that a recreational vehicle will consume 1/4 as much water as a typical residential dwelling and boat slips in marinas 1/40 as much water. These ratios are reasonable based on the District's past experience.

There is nothing the Act that prevents a utility from setting a development fee lower than what the formulas produce. Therefore the District can round the figures down.

Based on the condition of the Districts assets, I am satisfied that this analysis will remain applicable for a planning horizon of between 10 years and 20 years. The Act does, however, require the Board to reexamine the development fee every five years. In the event of unexpected development and demands within 10 years or beyond that requires an expansion of capacity and capital expenditures in such expansion, the Board will need to reexamine the system development fee for adequacy.

In conclusion, it is my recommendation that the District's system development fee be based on a recoupment of costs of existing facilities – known as the "buy-in" method. Based on the predominant 3/4 inch service line for residential units and the 925 existing service lines for residential customers, the maximum develop fee for a 3/4 inch service line should be \$3,241.00. Larger service lines should have a development fee charged based on a capacity ratio keyed to the 3/4 inch service line. The Board has the authority to round those figures down.

System Development Fee Analysis			
The purpose of the System Development Fee is to recover capital costs associated with developing and maintaining system capacity to ensure the continued operation of the water system. New developments reimburse the utility for their share of system assets at historical cost.			
EQUITY PER UNIT METHOD: CHARGE BASED ON EXISTING ASSET VALUE, EXISTING RESIDENTIAL UNITS, AND METER SIZE			
EXISTING ASSETS AND THE VALUE OF THOSE ASSETS			
Land		265,153.50	
Water System (Infrastructure, Storage Facilities, Treatment Plant, Wells, Pumps)		1,995,795.84	
Meters		342,415.50	
Software		5,660.25	
Equipment		388,936.83	
TOTAL VALUE OF UTILITY PLANT ASSETS		\$ 2,997,961.92	
Allowable Water Capacity Use Fee			
Description		Total	
Existing assets per existing residential units (2,997,961.92/925)		\$3,241	
Water Capacity Service Charge by Meter Size The recommended charge for one residential unit is \$3,241. The development fees are then "weighted" by meter size to reflect potential capacity use of the larger sized meters. This "weighting" by meter size is based upon the safe operating capacity of the meter			
Allowable Water Impact Fees by Meter Size			
Meter Size	Capacity (gpm)	Capacity Ratio	Water Capacity Service Charge
Residential Unit - 3/4"	30	1.00	\$3,241
1"	50	1.67	\$5,412
1-1/2"	100	3.33	\$10,792
2"			Calculated
3"			Calculated
4"			Calculated
* Calculations of larger meters will be based on type of use and maximum demand			