



Recommendations:

1. The County transfers the water systems to the Town at a cost of \$1.
2. The County continues to pay off the current debt service (\$245,800 / per year) for next 11 years to retire the debt earlier and remove or modify the water tax district after debt retirement.
3. Based on the current tax rate, the County will have excess fund (difference between water district tax revenue and debt service fee, \$177,000 per year) after merger until the debt is retired. County will work in good faith with the Town utilizing these funds for upgrades and expansions to the system during the 11-years debt pay-down period. County may also continue to participate in extensions and upgrades beyond the 11 years, for specific county needs within the existing water district boundaries.
4. The Town will maintain the water rates for the special water district at a rate that is less than the County water rates at the merger date and can increase or decrease the rates in future by the same percentage change as the in-Town water rates.

Benefits for the Town:

1. Acquisition of \$12.3 million worth of infrastructure without any financial investment.
2. Expansion of Town's water system and customer base.
3. County's financial support for at least 11 years to address special capital and maintenance issues in the system previously owned by the County.
4. Potential opportunity for annexation.

The advantages of this potential merger outweigh the few economic and financial limitations. Prior to merger of these water systems, the County and Town will need to address all legal and financial aspects of the merger, which will require good-faith negotiations from both entities.

-- End of Section --



1.0 INTRODUCTION

Carteret County and the Town of Beaufort are interested in “merging” the water systems of the two entities – with the Town taking over ownership and operation of the County’s water system.

1.1 Objectives

The objective of this feasibility study is to determine the value of Carteret County’s water systems, understand the staffing needs to operate and maintain the County’s systems, evaluate the financial condition of the County’s water department, identify the potential impact of the proposed merger on the utilities, and develop recommendations to make the merger beneficial for the Town and the County. The findings and recommendations are documented in this DRAFT report for further discussions with the County and the Town staff. This report will be updated based on the discussions between the County and the Town to be facilitated by DAA.

1.2 Report Organization

This report is organized as outlined below:

- ◆ Chapter 2.0 (Carteret County Water System Assessment) describes the County’s water system including land, physical assets, maintenance programs, and near-term capital improvement program.
- ◆ Chapter 3.0 (Estimated Current Value of Carteret County’s Water System) describes the monetary value of the assets and how the values were calculated.
- ◆ Chapter 4.0 (Organization of Carteret County Water Department) describes the current staffing structure and responsibilities.
- ◆ Chapter 5.0 (Revenues and Expenses of Carteret County Water System) describes the water rates, debt service and current financial conditions.
- ◆ Chapter 6.0 (Feasibility of Merger) describes the Town of Beaufort system, advantages to the Town in taking over the Carteret County System, and recommendations to make the merger beneficial to both the County and the Town.
- ◆ Chapter 7.0 (Conclusion) describes the outcome of this feasibility study.

-- End of Section --



2.0 CARTERET COUNTY WATER SYSTEM ASSESSMENT

2.1 System Overview

Carteret County (the County) relies on two groundwater wells for water supply. Water from the first well is treated at the Laurel Road Water Treatment Plant before it is pumped to three (3) elevated storage tanks for distribution within the community. These storage tanks are located with water lines extending to the Craven County line along NC Highway 101 and into the Mill Creek area. There are also water lines extending from the Beaufort Town limits along Highway 70 to East Carteret High School and along Merrimon Road to Laurel Road. The system serves approximately 1,206 customers.

The County also owns and operates a small water system about 20 miles north of Laurel Rd and Merrimon Rd intersection. This small system known as Merrimon Water System (MWS), serves approximately 25 – 30 customers. MWS receives water from the Jonaquins Creek well that consists of a well and an above-ground storage tank.

A map showing Carteret County's water system (including its water district boundary) is shown in Figure 1 of Appendix A. The MWS is shown at the inset of Figure 1 and in Figure 2 of Appendix A.

MWS system is an integral part of the County's water system and should be included in any potential water system merger or transfer discussions. Legalities of such a merger / transfer will be agreed upon and processed by participating agencies prior to acceptance and completion of the merger process.

2.2 Special Water Tax District

The Board of Commissioners of Carteret County established the Special Water Tax District (SWTD) in 2010. Within this district, there is a special tax assessed to taxpayers for water supply and distribution services. The tax rate in the special water district has been 5.5 cents since 2012. In addition, sales tax revenues in the SWTD are used to support the water operations. Table 1 provides the revenue and expenditures for the SWTD for FY2018, FY2019 and FY2020.



Table 1. Revenue and Expenses for the Special Water Tax District

	FY 2018 (Actual) \$	FY 2019 (Amended Budget) \$	FY2020 (Budget) \$
Expenditure Category			
Fees	1,240	3,000	3,000
Transfer to Water Fund	433,600	400,000	420,000
Total	434,840	403,000	423,000
Revenue Sources			
Ad Valorem Taxes	299,136	292,000	292,000
Sales Tax	96,329	95,000	100,000
Interest	1,505	1,000	6,000
Appropriated Fund Balances	0	15,000	25,000
Total	396,969	403,000	423,000

2.3 Water System Assets

The County water system assets include water mains, valves, water meters, fire hydrants, tanks, booster pump stations, a Supervisory Control and Data Acquisition (SCADA) system and land parcels. These assets are listed in Table 2.

Table 2. Water System Assets of Carteret County

Items	Quantity		Description
Water Plant	1		
Land	8 Parcels	16.49 acres	
Pump Stations/Pump Houses	3		Booster Pumps 1, 2, and 3
Water Tanks	4		3 elevated tanks and one ground tank
Valves	599		
Water Meters	1,206		
Fire Hydrants	175		
Water Lines	5 miles	2 inches	
	0.25 miles	4 inches	



Items	Quantity	Description
	29.6 miles	6 inches
	20.4 miles	8 inches
	0.6 miles	10 inches
SCADA System	1	Management of elevated water tanks and Jonaquins Creek well house

2.3.1 Storage Tanks

Details for the three elevated storage tanks are provided in Table 3.

Table 3. Elevated Water Tanks

Types of Tanks	Capacity (gallons)	Manufacturer	Design Type	Year Constructed
Taylor Farm Road Tank	200,000	Caldwell	Torus Bottom	2012
Laurel Road Tank	200,000	Phoenix	Double Ellipsoidal	1988
Mayflower Drive Tank	200,000	Phoenix	Torus Bottom	2012

2.3.2 Pump Stations

The County has three booster pump stations. Details of these pump stations are shown in Table 4. Booster Pump 2 provides water at the emergency connection between the Town of Beaufort and the County.

Table 4. Pump Stations

Types of Pump	Cat No/Model Number	Manufacturer	Horsepower (HP)	Design Type (RPM)	Installation Date
Booster Pump #1	R5P 3D/H317	Emerson Motor Co.	5	1170	2012*
Booster Pump #2	EM3774T	Baldor Electric Co.	10	1760	2012
Booster Pump #3	EM3770T	Baldor Electric Co.	7.5	1770	2012

*Estimated, actual date of installation is not available.



2.3.3 Land

The total acreage utilized by the County’s water system is approximately 16.49 acres. Table 5 summarizes the properties, the street address and the acreage.

Table 5. Carteret County Water System Property

Property	Address	Total Acres
Laurel Road Aerial Tank	524 Laurel Road	2.04
Laurel Road Treatment Plant	526 Laurel Road	8.12
Jonaquins Creek Water House	150 Jonaquins Creek Road	0.82
Taylor Farm Elevated Tank	209 Taylor Farm Road	1.01
Booster Pump Station #1	142 Shell Landing Road	0.47
Booster Pump Station #2	1109 Hwy 101	0.60
Booster Pump Station #3	3510 Hwy 101	2.56
Mayflower Drive Elevated Tank	104 Mayflower Drive	0.87
Total		16.49

2.4 Asset Maintenance

2.4.1 Pipeline Maintenance

The County’s Public Works Department (PWD) performs system maintenance including, but limited to, the following:

- ◆ Detection and repair of leaks in the pipe lines
- ◆ Maintenance of booster pumps and other associated components of the water distribution system
- ◆ Maintenance and replacement of water meters, valves and fire hydrants
- ◆ Water service installations and / or inspections

2.4.2 Tank Maintenance

Southern Corrosion Inc (SCI) has an existing water tank management addendum to contract with the County until year 2030. Per contract, the tanks will be inspected every year and will be washed-out at five (5) year intervals. The tank interior will be recoated at fifteen (15) year intervals, and the exterior will be recoated at five (5) year intervals. The next wash-out is scheduled for year eight (8) of the service



(year 2023), repainting of the tank exterior is scheduled for year twelve (12) of the service (year 2027) repainting of tank interior is scheduled for year twelve (12) of the service (2027).

The contract does not include the complete abrasive blasting of tank exterior nor the pressure washing of tank exterior as a stand-alone apart from a surface preparation for painting.

SCI provides the following services to the County in accordance with the tank's maintenance program:

- ◆ Emergency services (tank leaks, tank failures, etc.)
- ◆ Scheduled cleaning/washout of tanks interiors
- ◆ Inspection of interior and exterior surfaces of tanks
- ◆ Application of protective coatings
- ◆ Maintenance, upkeep and long-term maintenance needs

Table 6 below indicates the scheduled maintenance activities that have taken place under this contract for the last four years. Based on the 2018 inspection results as shown in Table 6, all three tanks are in good condition without any serious deficiencies that require immediate attention.

2.5 Carteret County Water System Capital Improvement Plan

In 2013, the County completed a \$3.51 million water system improvement project. Since 2013, there has been little need for significant capital projects; there were no capital projects scheduled in FY2019 and the FY2020 budget does not include any. The County continues to fund "pay as you go" capital projects, as needed. Recent capital investments include:

- ◆ Fiscal Year 2011: WTP Telemetry Base Upgrade, Addition of 10-inch Color MMI, Replace Tank Level Meter/Digital DSP-MMI, Use Existing Probe Relays-Raw Well Control, and Replace Remotes /Upgrade Phone Line and Radio. Total cost for upgrade was \$27,998.
- ◆ Fiscal Year 2016: BPS Flow Meter and RTU Repair. Total cost for repair was \$4,697.
- ◆ Fiscal Year 2017: Discharge Pump Station SCADA TIE-IN. Total cost for this implementation was \$3,309.
- ◆ Fiscal Year 2018: Softener and filter refurbishment. The total cost was \$121,446

Overall, the water system is in good condition and the County is not expecting any major capital investment in the near future.



Table 6. Tank Maintenance Report (2015-2018)

Tank	Year Constructed	Year-2015	Year-2016	Year-2017	Year-2018
Taylor Farm Road Tank	2012	The tank, its components, and coating systems are in good condition. The interior coating system deficiencies ranged between 0% and 10%, whereas, the exterior coating deficiencies ranged between 0%-2%. Some of the exterior deficiencies included; Pin Point Rust, and Irregular Surface Deterioration. No visual deficiencies were observed pertaining to internal coating system. The safety inspection yielded satisfactory and compliant results pertaining to structural integrity of exterior, storage, safety, and other associated components	The tank, its components, and coating systems are in good condition. The interior coating system is free of any premature failure and provides adequate protection to the structure. The upper portions of the leg ladder, sway rods, and shell wall ladder are showing signs of premature coating failure causing surface corrosion. Repair and scheduled maintenance maybe required	There was no maintenance required during this time. The coating in the exterior and interior are in excellent condition	No deficiencies or touchups were noted, and the overall visual appearance of the water tank is satisfactory
Laurel Road Tank	1988	The tank, its components, and coating systems are in good condition. The interior coating system deficiencies ranged between 0% and 10%, whereas, the exterior coating deficiencies ranged between 0%-2%. Some of the exterior deficiencies included; Irregular Surface Deterioration, Mildew, Peeling Multiple Coats, and Undercutting. Deficiencies pertaining to internal coating system included Pin Point Rust, and Irregular Surface	There were no deficiencies or touch ups noted and the overall visual appearance of the water tank (internal and external) is satisfactory. The obstruction light on tank roof was repaired	Both exterior and interior protective coating seems to be in excellent condition. The interior and exterior coating systems are free of any serious deficiencies and provides adequate protection to the structure.	The water tank, its components, and coating systems are in good condition. The interior and exterior coating systems are free of any serious deficiencies and provides adequate protection to the structure.



		<p>Deterioration. The safety inspection yielded satisfactory and compliant results pertaining to structural integrity of exterior, safety, and other associated components. The side wall coating of the storage exterior needs to be monitored as per the report.</p>			
Mayflower Drive Tank	2010	<p>The tank, its components, and coating systems are in good condition. The interior coating system deficiencies ranged between 0% and 10%, whereas, the exterior coating deficiencies ranged between 0%-2%. Some of the exterior deficiencies included; Pin Point Rust, Irregular Surface Deterioration, etc. No visual deficiencies were observed pertaining to internal coating system. The safety inspection yielded satisfactory and compliant results pertaining to structural integrity of exterior, storage, safety, and other associated components</p>	<p>The tank, its components, and coating systems are in good condition. The interior coating system is free of any premature failure and provides adequate protection to the structure. On the exterior, such as the ladder and sway/spider rods, are showing signs of premature failure and surface corrosion. Repair and a scheduled maintenance may be required.</p>	<p>Exterior deficiencies included Mildew, Fading, Chalking, Irregular Surface Deterioration, Undercutting, Peeling Paint to Substrate. Adhesion failures and surface corrosion present on 20% of the surfaces. 10% Adhesion failures and surface corrosion observed on the rods and struts. And close to 2% adhesion failure and surface corrosion observed on the catwalk and handrails. The interior protective coating system seems to be in excellent condition</p>	<p>Structural wise, the tank is in good condition, but a planned renovation needs to be scheduled by the County Officials. A weathered and weakened coating system is nearing the end of its protective cycle</p>

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3.0 ESTIMATED CURRENT VALUE OF THE CARTERET COUNTY WATER SYSTEM

3.1 Theory of Asset Valuation

DAA estimated the value of the County's water system using an asset evaluation approach as described below.

Book Value (BV) approach was used in estimating the value of the fixed assets. The BV approach uses equation (1) to estimate the present worth of an asset as stated below:

$$\text{Present BV of Asset (\$)} = \text{Historical Cost (\$)} - ((\text{Accumulated Depreciation (\$)} + \text{Current Depreciation (\$)}) \quad (1)$$

Traditionally, straight line depreciation (SLD) technique is used to estimate depreciated value of water system assets. Historical cost represents the cost of the assets on the day of acquisition. DAA was able to locate financial records pertaining to purchase prices on some of these assets from the County's finance department.

Accumulated depreciation is calculated using equation (2), and incorporates useful life of the water distribution system component:

$$\text{Accumulated depreciation (\$)} = (\text{Net Amount to be depreciated} / \text{Total useful life in months}) \times ((\text{Fiscal year beginning date-date of acquisition}) / 30.4167) \quad (2)$$

The value of 30.4167 is used for converting days to months.

Depreciation value (\$) for each asset for the current year is estimated using the following equation:

$$\text{Current Depreciation (\$)} = \text{Net amount to be depreciated (\$)} / \text{Total useful life (months)} \quad (3)$$

The equation (3) may be modified if the depreciation amount (\$) in equation (3) exceeds the difference of net amount to be depreciated and accumulated depreciation. The revised equation for Current Depreciation is stated below:

$$\text{Depreciation Current Year (\$)} = \text{Net Amount to be depreciated (\$)} - \text{Accumulated depreciation (\$)} \quad (4)$$



The Net amount to be depreciated (\$) is calculated using the equation (5)

$$\text{Net Amount to be depreciated (\$)} = \text{Historical Cost (\$)} - \text{Salvage Value (\$)} \quad (5)$$

For purpose of estimation, the salvage value of each system component was assumed at zero dollar (\$0). With this assumption, the net amount to be depreciated was equaled to the historical cost of the asset.

3.2 Estimated Value of the County’s Water Systems

The County provided detailed asset data and historical costs for the pump stations and the water tanks. Book Value (BV) of these assets was calculated and is documented in Table 7. Historical cost data for other assets such as fire hydrants, the water treatment plant, water mains, and the SCADA system installed at Booster Pump 1 were not available, but the County provided financial data that detailed the present book value of the assets as listed in Table 8. Adding the total book values listed in the Tables 7 and 8, the net worth of the water system assets owned by the County was calculated to be approximately \$12,335,392.



Table 7. Estimated Book Value of Carteret County Water System

Assets	Date of Acquisition	Design Life (yrs)	Historical Cost (\$)	Total Useful life (months)	Net Amount to Be Depreciated (\$)	Accumulated Depreciation (\$)	Current Depreciation (\$)	Total Depreciation (\$)	Present Book value of Asset (\$)
Booster Pump 1	2012	50	174,284	600	174,284	19,462	3,486	22,947	151,337
Booster Pump 2	2012	50	253,111	600	253,111	28,264	5,062	33,326	219,785
Booster Pump 3	2012	50	<u>253,111</u>	600	253,111	28,264	5,062	<u>33,326</u>	<u>219,785</u>
Subtotal			680,507				Subtotal	89,600	590,907
Water Tank 1	1988	50	619,263	600	619,263	366,397	12,385	378,783	240,480
Water Tank 2	2012	50	689,091	600	689,091	76,949	13,782	90,730	598,361
Water Tank 3	2012	50	<u>765,262</u>	600	765,262	85,454	15,305	<u>100,759</u>	<u>664,502</u>
Subtotal			2,073,616				Subtotal	570,272	1,503,344
Total			2,754,123				Total	659,872	2,094,250

See Section 3.1 for the equations used in BV calculations



Table 8. Present Book Value of Carteret County Water System

System No	Description	Present Book value of Asset (\$)
SCADA		
Booster Pump House1	SCADA System*	280,000
Land		
Laurel Road Aerial Tank	Land Property	25,428
Laurel Road Treatment Plant	Land Property	57,220
Jonaquins Creek Water House	Land Property	26,097
Aerial Tank	Land Property	130,312
Booster Pump Station-1	Land Property	40,578
Booster Pump Station-2	Land Property	35,312
Booster Pump Station-3	Land Property	34,160
Elevated Tank	Land Property	20,615
	Sub Total	369,722
Well House	Water withdrawal house*	200,000
Jonaquins Creek Well House and Storage	Merrimon Water System*	400,000
Fire Hydrants	Fire rescue purposes	300,000
Water Treatment Plants	Supply/Distribution*	1,500,000
Piping System		
2" PVC	(26,400 ft, \$10/ft)	264,000
4" PVC	(1,320 ft, \$16/ft)	21,120
6" PVC	(151,588 ft, \$24/ft)	3,638,112
6" Ductile	(4,700 ft, \$28/ft)	131,600
8 " PVC	(104,477 ft, \$28/ft)	2,925,356
8" Ductile	(3,235 ft, \$32/ft)	103,520
10" PVC	(3,168 ft, \$34/ft)	107,712
	Sub Total	7,191,420
	Total (\$)	10,241,142

*Estimated value

--End of Section --



4.0 ORGANIZATION OF CARTERET COUNTY WATER DEPARTMENT

The County's water system is managed by the Public Works Department (PWD) Director. Water operations are managed by a lead water plant operator and utilities technician who report to the PWD Director. The PWD Director reports to General Service Director who in turn is managed by the Assistant Manager of the County. The Assistant Manager reports to the County Manager. Billing and collection responsibilities for the systems are provided by the County Finance Office. An organizational chart for the Water Department is shown in Figure 1.

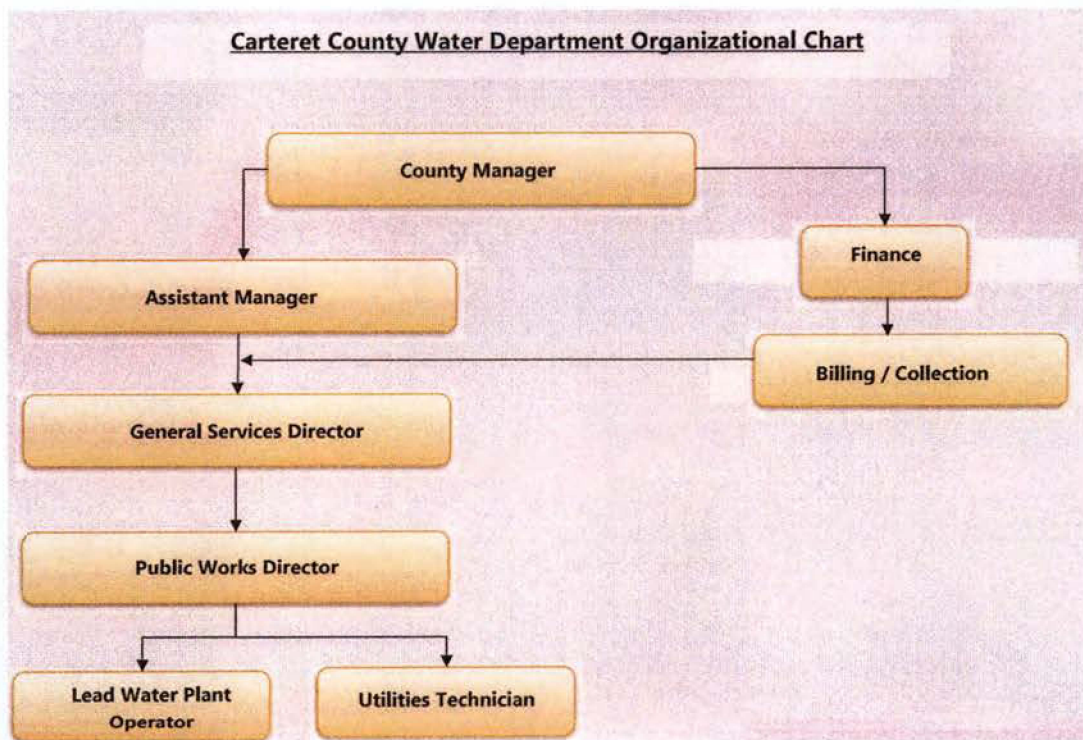


Figure 1. Carteret County Organizational Chart



5.0 REVENUES AND EXPENSES OF CARTERET COUNTY WATER SYSTEM

5.1 Water Rates

Currently, the County charges \$55.10 for every 5,000 gallons of water to customers who are billed per measurements recorded on a three-fourth (3/4) inch meter (See the County's Water Rate Sheet in Appendix B). There is a separate water rate structure for customers served by 1, 2, and 4-inch meters. The County has also developed a specific readiness to serve rate for the Merrimon water system customers. For this study, only three-fourth (3/4) inch meter is used to conduct comparative analysis of the water rates for both the County and the Town system.

The Town charges \$35.72 for every 5,000 gallons to in-town customers using three fourth (3/4) inch meters (See the Town's Water Rate Schedule in Appendix C). The comparative out-of-town water rate is \$58.79.

5.2 Outstanding Debts and Repayment Schedule

Current utility debt for the County is at \$2,066,128 with an estimated interest of \$619,319 until the loan amount is retired by the year 2052. Table 9 and Figure 2 below show the debt payment schedule for each year. The debt payment amount for each year will significantly lower after FY 2025-26 and the debt amount per year will remain relatively constant until the loans are completely retired.

Table 9. Water Utility Debt Payment Schedule for Carteret County

FY Year	Principal (\$)	Interest (\$)	Total Utility Debt (\$)	Years
FY 19-20	\$189,032	\$55,202	\$244,234	1
FY 20-21	\$190,032	\$49,835	\$239,867	2
FY 21-22	\$190,032	\$44,442	\$234,474	3
FY 22-23	\$191,032	\$39,047	\$230,079	4
FY 23-24	\$160,000	\$33,626	\$193,626	5
FY 24-25	\$161,000	\$29,989	\$190,989	6
FY 25-26	\$161,000	\$26,322	\$187,322	7
FY 26-27	\$22,000	\$22,660	\$44,660	8
FY 27-28	\$23,000	\$22,055	\$45,055	9
FY 28-29	\$23,000	\$21,423	\$44,423	10



FY Year	Principal (\$)	Interest (\$)	Total Utility Debt (\$)	Years
FY 29-30	\$24,000	\$20,790	\$44,790	11
FY 30-31	\$25,000	\$20,130	\$45,130	12
FY 31-32	\$25,000	\$19,443	\$44,443	13
FY 32-33	\$26,000	\$18,755	\$44,755	14
FY 33-34	\$27,000	\$18,040	\$45,040	15
FY 34-35	\$27,000	\$17,298	\$44,298	16
FY 35-36	\$28,000	\$16,555	\$44,555	17
FY 36-37	\$29,000	\$15,785	\$44,785	18
FY 37-38	\$30,000	\$14,988	\$44,988	19
FY 38-39	\$31,000	\$14,163	\$45,163	20
FY 39-40	\$31,000	\$13,310	\$44,310	21
FY 40-41	\$32,000	\$12,458	\$44,458	22
FY 41-42	\$33,000	\$11,578	\$44,578	23
FY 42-43	\$34,000	\$10,670	\$44,670	24
FY 43-44	\$35,000	\$9,735	\$44,735	25
FY 44-45	\$36,000	\$8,773	\$44,773	26
FY 45-46	\$37,000	\$7,783	\$44,783	27
FY 46-47	\$38,000	\$6,765	\$44,765	28
FY 47-48	\$39,000	\$5,720	\$44,720	29
FY 48-49	\$40,000	\$4,648	\$44,648	30
FY 49-50	\$42,000	\$3,548	\$45,548	31
FY 50-51	\$43,000	\$2,393	\$45,393	32
FY 51-52	\$44,000	\$1,210	\$45,210	33
Total	\$2,066,128	\$619,139	\$2,685,267	

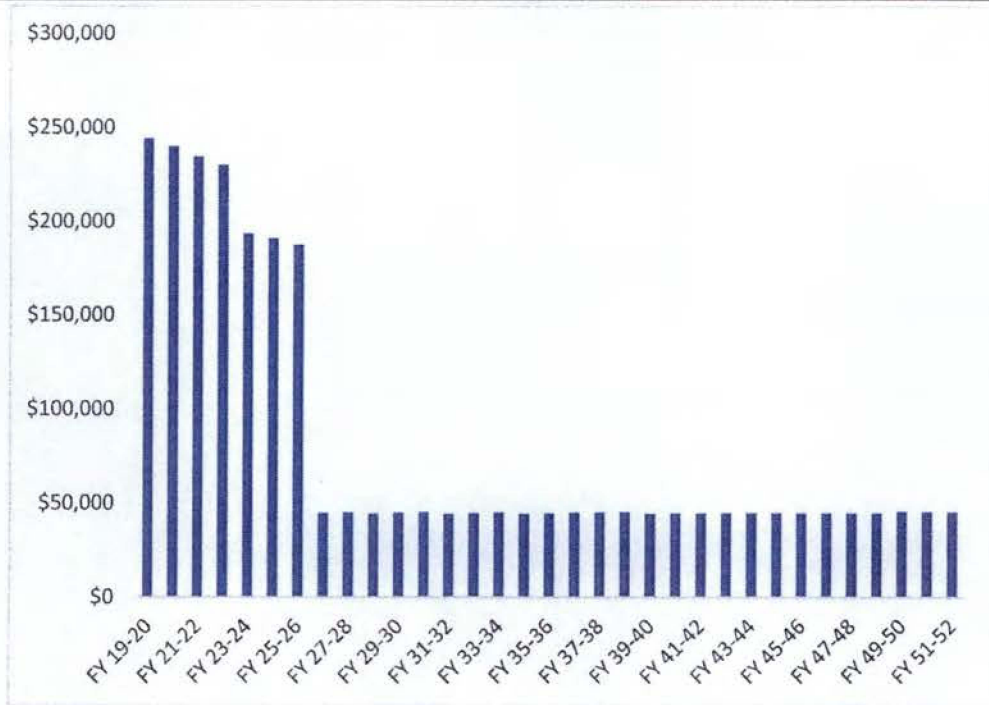


Figure 2. Carteret County Water Utility Debt Payment Schedule

5.3 Revenue and Expenses

5.3.1 Review of Historical Revenue and Expenses

A review of the County’s historical water system budget (including the debt services) between FY 2016 and FY 2019 listed in Table 10 shows significant water system operating expenses beyond the revenue earned. This data indicates that the County has been losing money with the water system and needed to subsidize the system with the SWTD funds to keep the system solvent. The deficit margin widened in 2018 considering the additional capital improvement expense for that year. However, for 2019, there was a marginal decline in the water system operating expense which lead to the deficit being similar to that of 2016 and 2017 respectively.



Table 10. Budget for F2016-FY2019

Year	Water System Revenue	Water System Operating Expense	Water System Debt Service Fee	Water System Capital Outlay	Net Income (Deficit)
2016	\$576,598	\$554,733	\$263,589	-	(\$241,724)
2017	\$584,344	\$668,215	\$259,277	-	(\$343,148)
2018	\$678,879	\$828,412	\$253,939	\$37,898	(\$441,370)
2019	\$711,732	\$726,384	\$249,600	\$25,500	(\$289,752)
Total	\$2,551,553.00	\$2,777,744.00	\$1,026,405.00	\$63,398.00	(\$1,315,994)

5.3.2 Review of FY 2020 Finances

The projected fiscal budget for the County in the year 2020 is presented in Table 11. Per projected water fund revenue and water fund expenses for FY 2020, there is a net fiscal deficit of \$162,990. This deficit may be eliminated by using revenue generated from the SWTD. Using this fund to eliminate the deficit leaves a net balance of \$14,130 that may be used for other operational expenses.

Table 11. Projected Fiscal Budget for year 2020

Items Description	Budget
Water Distribution System Value ¹	\$12,335,392
Total Utility Debt (including interests) ²	\$2,685,267
Debt Pay Off Period	2051-2052
FY 2020 Debt Service Fee ³	\$245,880
Water Tax District Revenue (FY 2020 Projected) ⁴	\$423,000
Water Fund Revenue (FY 2020 Budget) ⁴	\$710,400
Water Fund Expense (FY 2020 Budget) ⁴	\$873,390
Water Fund Loss ⁵	(\$162,990)
Water Tax District Revenue Balance ⁶	\$14,130

Notes:

1. See Section 3.2 for reference
2. See Table 9 for reference
3. See Tables 9 for reference. The difference between the monetary value of \$245,880 in Table 11 compared to the fiscal value of \$244,234 in Table 9 for FY2020 may due to budgetary discretion
4. Projected FY 2020 Budget
5. Water Fund Loss/Deficit is estimated using the equation: Water Fund Revenue (\$710,400) - Water Fund Expense (\$873,390)
6. Water Tax District Revenue Balance is estimated using the equation: Water Tax District Revenue – (FY20 Debt Service Fee + Water Fund Loss)



5.4 Opportunity to Eliminate Deficit

The expense in 2019 shows significant reduction over the previous years and is expected to be the norm as the County's system does not anticipate significant capital investment in near future.

A moderate projection of 2% yearly increase in both water district tax revenue and water system expense may be adequate to run the system sustainably. Table 12 lists the yearly revenue and expenses from 2020 to 2025 using 2019 as the base year for projection. This projection shows a positive yearly cash flow. Thus, if the water system in its current condition (with a value of \$12.3 million) can be separated from the debt services, it would offer an attractive acquisition option for any utility.

Table 12. Fiscal and Projected Budget for FY 2019-FY 2025

Year	Water Tax District Revenue	Water System Expense	Cash Flow
2019	\$711,555	\$704,255	\$7,300
2020	\$725,786	\$718,340	\$7,446
2021	\$740,302	\$732,707	\$7,595
2022	\$755,108	\$747,361	\$7,747
2023	\$770,210	\$762,308	\$7,902
2024	\$785,614	\$777,554	\$8,060
2025	\$801,327	\$793,106	\$8,221

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