

FISCAL YEAR 2009
ADOPTED BUDGET





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May 31, 2008

Members of the Authority Board
Cape Fear Public Utility Authority
127 Racine Drive
Wilmington, NC 28403

Subject: FY08-09 Budget

Dear Members of the Authority Board:

I am pleased to submit the first full year budget request for the Cape Fear Public Utility Authority for your consideration.

We have developed the FY08-09 Budget to advance the organization's mission "*to provide high-quality water and sewer service in an environmentally responsible manner, while maintaining the lowest practical cost*".

The following operational and capital budget, prepared in accordance with *The Local Government Fiscal Control Act*, is designed to provide services meeting or exceeding all state regulations and Rate Covenants with which the Authority must comply, with any rate changes to be at the lowest responsible level.

Goals and Objectives:

The challenge of the initial year's budget is to make sure adequate funding is available to meet the operational and capital needs and objectives of the Authority which include:

- 1) Begin the development of an asset management program to insure the sustainability of the Authority's infrastructure and to provide a financial plan to address future capital needs.
- 2) Initiate the implementation of an ISO 14001 Environmental Management System to improve compliance and promote environmental stewardship and continual improvement.
- 3) Meet our customers' expectations for highly responsive customer service at the call center and throughout the service area.
- 4) Provide for managed system growth through master planning in cooperation with the City, County and other stakeholders.
- 5) Establish a compensation plan which will attract and retain quality employees to be implemented as funding is identified.
- 6) Provide training and continuing education necessary for employee development and growth opportunities as well as to maintain professional certifications.
- 7) Implement an employee evaluation system and related pay adjustments.
- 8) Provide funding for planned capital needs.

Current Year Highlights

- **Initial Year.** Estimates are based on prior year water and sewer expenditures for the City of Wilmington and the New Hanover County Water and Sewer District, with input from interagency working groups and consultants. Rather than simply add the two prior budgets together, management has reviewed all allocation requests and adjusted them accordingly based on actual current and projected expenditures. As the year progresses, management anticipates opportunities will arise where there will be a need to transfer funds between accounts to respond to changing circumstances and/or emergency situations. Management will evaluate these issues and will respond appropriately. If necessary, funds will be transferred between accounts and/or line items to facilitate the continued prompt and efficient operation of the system.
- **Increase in Sales.** The Authority's budget incorporates the expectation that overall water and sewer sales will increase about 2% and 1.4%, respectively over the coming year. This reflects the weighted average growth rate of both the City of Wilmington and the New Hanover County Water and Sewer District. In recent years the County has experienced a higher rate of growth and this trend is expected to continue as the County has significantly more available land to accommodate growth.
- **Moratorium Lifted.** The City moratorium on building permits resulting from a Special Order of Consent (SOC) agreement with the North Carolina Department of Environment and Natural Resources (NCDENR) instituted in May of 2006 was lifted in March 2008. The FY 08-09 budget has been adjusted to reflect anticipated increases in building activity.
- **Water Restrictions.** Over the last few years the Wilmington area has experienced a significant drought. The City and County both had responded with mandatory water restrictions. However, these restrictions have since been lifted, and the proposed budget does not incorporate any anticipated reinstatement.
- **Debt.** The Authority is anticipating issuing \$131 million of debt in August of 2008 to provide for capital projects as described in a following section of this message. The interest expense resulting from this debt is included in the budget.

Operating Budget

The proposed \$37.6 million operating budget represents routine expenditures and capital equipment acquisitions needed for the day-to-day functioning of the Authority. The budget is divided into six primary functional categories of expenses which include: administration, lines maintenance, water operations, wastewater operations,

environmental and safety, and miscellaneous. Highlights of significant components and changes include:

- **Human Resources:** This budget includes the benefit package that was approved by the Authority Board on November 14, 2007. We will be developing an employee performance appraisal process which will include goal setting and job performance feedback to employees. We will also be evaluating the need and implementing, as necessary, career path programs for certain positions conducive to progressive development that will enhance the quality of our service delivery.
- **Environment:** During the first year of operations the Authority will begin the implementation of an ISO 14001 Environmental Management System (EMS). The EMS is a management system based on the Plan-Do-Check-Act management model. This system will help to establish and drive a culture of compliance, continual improvement, and prevention of pollution. Through the effective implementation and management of this system it is anticipated that CFPUA will see many additional benefits including more efficient use of all resources both human and monetary. An EMS that is effectively developed, implemented, maintained and supported by management typically results in both cost savings and cost avoidances. All of these are opportunities Staff will continue to work to identify.
- **Safety:** Over the last several months Staff has been developing a CFPUA Safety Policies and Procedures Manual and a Safety Orientation Handbook. This program will address all safety training requirements for CFPUA and will work to create a safety culture that looks to identify potential accidents and to focus on accident prevention. As with the EMS, safety will be managed on the Plan-Do-Check-Act management principle and the goal is a well informed and trained staff which results in a safe and healthy work environment.
- **Asset Management:** As the Authority begins its first year of operation, staff will begin the development of an asset management program which will be used to more effectively and efficiently manage the existing and future infrastructure of the water and sewer system. A formal Asset Management Program includes many components that are designed to protect both buried and facility assets. This program will be practiced at all levels of the organization for the purpose of safely and efficiently providing the level of service expected by customers while minimizing risk, controlling costs, and satisfying requirements of all stakeholders over the life cycle of the water and sewer infrastructure.
- **Operating Revenues:** Operating revenues from water and sewer charges represent an increase of approximately 9% over the combined City and County revenue base. Revenues from system development charges are estimated at \$4.8 million for FY 2009 and reflect a slower rate of construction activity as compared to the prior two fiscal years.

- **Operating Expenditures:** The submitted budget reflects substantial increases in the cost of petroleum products and other commodities. In particular the cost of chemicals used at the water and wastewater plants increased over 50%, adding \$600,000 to those operations. Resources were also increased in sewer lines maintenance to enhance the lines cleaning program and to improve the clearing of outfalls and easements. An additional \$500,000 in operating funding was allocated for these activities along with almost \$500,000 in capital equipment.

Capital Improvement Program

The Authority budgets for recurring annual capital outlays within the operating budget. The Fiscal Year 2009 budget includes approximately \$2.0 million for annual capital outlays.

The Authority also has developed a ten-year capital improvement program, a portion of which is dedicated to providing capacity for new customers with the remainder earmarked to repair and rehabilitate the current system and to upgrade the system to ensure compliance with environmental regulations. The Authority will fund these projects with a combination of bonds and current operating revenues.

In 2007 a sewer system master plan was updated for the City and County. Major capital projects being planned are described in more detail below.

- **Sweeney Water Treatment Plant Expansion** - A 2005 master plan indicated projected water demands required an expansion of the Sweeney Treatment Plant from its current capacity of 27.5MGD to a 35 MGD capacity. The current design of the plant will permit a future up rating of the facility to 40 MGD without any additional capital expense. The project will include the demolition of the 1943 South plant (containing the Administration Building and lab) and replacing it with a new plant with a separate lab facility. There are also improvements planned for the North plant that was constructed in 1993. The total project is estimated at \$79.9 million including the construction of laboratory facility at a different site. The total cost of the plant expansion will be included in the 2008 Bonds.
- **Southeast Elevated Storage Tank** - This project includes the design and construction of a three million gallon storage tank located in the City at the intersection of College and 17th. The total cost of construction of the tank is estimated to be approximately \$4.4 million. The 2008 Bonds will reimburse prior City expenditures of \$900,000 for the purchase of the tower site. The construction of the storage tank will be funded with proceeds from the 2010 bond issue.
- **Southside Wastewater Treatment Plant Expansion (SSWWTP Upgrade)** - The Authority's SSWWTP was built in 1973 and is currently operating at an average of 78% of capacity and has exceeded the 80% mark in the past year. In the recent sewer system master plan update (2007) prepared for the City and County system(s) it was recommended that in addition to needed renovations the plant be

- expanded from 12 MGD to 16 MGD. The current schedule calls for design to begin this spring with construction starting in 2011 and completion in 2014. The estimated full cost for the upgrade/expansion is \$114 million, with the design portion of the upgrade and expansion being approximately \$8 million. The 2008 Bonds will fund only the design portion of the upgrade and expansion.
- **Northeast Interceptor Rehabilitation** - The repairs and upgrades to the Northeast Interceptor were completed in February 2008, ahead of the June 2008 deadline in the SOC. Beyond the interim repairs required in the SOC, a number of other improvements were recommended. Originally it was recommended that the City construct a parallel interceptor to the Southside Treatment Plant for both event management and for increased capacity. It was later recommended that a new interceptor be constructed to the Northside Wastewater Treatment Plant (NSWWTP), which will have treatment capacity of 16 MGD (currently 8 MGD) by the end of 2009. The projected total cost of additional work on the interceptor is approximately \$34.3 million over the next two fiscal years. The 2008 Bonds will fund approximately \$31.6 million worth of this construction.
- **Northside Wastewater Treatment Plant Forcemain** - In late 2009, a new effluent main from NSWWTP to the downtown discharge point will be required to fully utilize the expansion of the plant (8 to 16MGD). This main will run from the NSWWTP to 3rd Street in downtown Wilmington and tie into an existing discharge line that flows into the Cape Fear River. In light of capacity issues at the Southside Wastewater Treatment and the Northeast Interceptor (NEI), redirecting flows to the NSWWTP is planned as soon as the expansion is completed. The cost of this project is \$4.3 million and will be funded entirely from the 2008 Bonds.
- **Collector System Rehabilitation** - A number of projects are planned for FY 2009 and beyond that will address needs within the sewer collection system. A total of \$11.4 million is programmed for FY 2009. These projects include Downtown Sewer Rehab, Barnards Creek Outfall Line Rehab, Burnt Mill Creek Outfall Repairs, Odgen Interceptor Manhole Rehab, and the Infiltration/Inflow Elimination Program. Over the ten year CIP a total of \$63.3 million is planned for collector system rehabilitation, not including the NEI work.
- **System Management** - The ten-year CIP includes several projects to improve the management and operations of the sewer system. These include Hydraulic Modeling and Capacity Study, GIS As-Built Entry and Mapping, Computerized Maintenance Management System (CMMS), and the Asset Management Implementation Study. A total of \$1.1 million is programmed for this work in FY 2009. These studies represent a multi-year effort to have a comprehensive capacity management and maintenance program for the Authority.
- **CMOM Update** - Along with the above referenced rehabilitation and system management programs, the Authority is updating its CMOM program to reduce line

blockages, to minimize and ultimately eliminate sewer spills and to optimize spill responses when they occur. This update will be a combined effort of all staff and will include an evaluation of impacts on the system capacity associated with growth and existing customers including those entities where service is provided through inter-local agreements.

Water and Sewer Rates

In April of 2008, the Authority Board approved water and sewer rates composed of both a fixed fee based on meter size and consumption charge based on metered consumption. For the purposes of billing sewer charges, residential metered consumption per bi-monthly period will be capped at 30,000 gallons for calculation of the usage portion of the sewer bill. Non-residential metered consumption will not be capped. Those customers that do not have a metered water service will be charged for 24,000 gallons of usage each billing period.

To encourage water conservation yet provide affordable rates for essential domestic use, the Authority Board adopted an inclining block rate structure. The first 9,000 gallons in a two-month billing period, representing what is needed for basic household use, are charged at the lowest rates. Use in excess of 18,000 gallons is charged at the highest rates, as it is believed to represent entirely discretionary usage. Irrigation meters will be billed at the highest level, but will not include any charges for sewer service. As this is the initial year of this inclining block structure, management will monitor revenues and consumption closely to determine future optimum modifications to rates and tiers.

In Closing

This Budget represents the combined efforts and guidance of the Authority Board, its Committees and Staff. We are very appreciative of the countless hours of diligent work added by the consultants with the Municipal and Financial Services Group and by the many dedicated City of Wilmington and New Hanover County Water and Sewer District employees who will be transferring to the Authority on July 1st.

We pledge to be faithful stewards of these allocated resources and will strive to employ these funds to build a strong team which will effectively and efficiently deliver water and wastewater service to the customers and community we serve.

Respectfully submitted,



Matthew W. Jordan, P.E.
General Manager
Cape Fear Public Utility Authority

Sustainability.Stewardship.Service.

Purpose and Background

For a number of years the City and the County have been discussing the possibility of consolidating each entity's water and sewer utility in the form of a regional authority. The City and the County took specific action in July of 2006 by commencing a formal study of the feasibility of the formation of the Authority. More specifically, the City and County jointly hired a consultant to assist with assessing the feasibility of creating such an authority. In November of 2006, a Citizens Advisory Committee was formed to review the feasibility analysis developed by the consultants. The Advisory Committee presented its findings to the City and County governing bodies in February of 2007, which concluded that the regional authority would be appropriate for the City and County. On July 2, 2007 the Cape Fear Public Utility Authority was incorporated in the State of North Carolina as a new single purpose water and sewer authority as permitted by the North Carolina Authorities Act. At the same time the City and County began development of an inter-local agreement (the "Inter-local Agreement"), which provides the guidelines for the transfer of assets to the Authority along with details pertaining to how the Authority will function in relation to the City and the County. Following review of the Inter-local Agreement by the City, the County and the Authority, the governing bodies of each entity approved the Agreement on December 12, 2007. The Agreement was executed on January 30, 2008 after which on July 1, 2008 the City and County convey the water and sewer systems to the Authority and will begin operating the System. The following section provides a brief outline of the Agreement.

The Agreement consists of four key sections, which include;

- **Conveyance of the System** - This section of the Agreement outlines the details of the conveyance of the System from the City and County to the Authority. This includes how assets will be conveyed to the Authority, the operation of the System prior to and after closing, transfer of permits, assumption of claims and liabilities, assignment of prior agreements and how outstanding indebtedness will be handled.
- **Representations and Warranties of the City, the County and the Authority** - This section of the Agreement presents the representations and warranties of the City and the County to the Authority and of the representations and warranties of Authority to the City and the County. Simply stated, this section states that each entity is in good standing with the governing bodies and discloses any outstanding orders, decrees and litigation.
- **Covenants of the City, the County and the Authority** – This section of the Agreement details the manner in which the City, the County and the Authority will function in relation to on another. The section outlines the agreed upon services that the Authority will provide to the water and sewer customers in the City and the County and to what extent the City and the County will assist as necessary in facilitating a smooth transition for the Authority. The section also provides the agreements on how the Authority will compensate employees of the Authority.

- Closing and Effective Date - This section of the Agreement details the closing of the Agreement which includes the execution and delivery by the City and the County to the Authority of non-warranty deeds for the transfer of real property, leases for the use of real property and other documents necessary for the transfer of the remainder of the System to the Authority.

Organization

The Authority is governed by an eleven-member Board, which includes two elected officials from the City and two elected officials from the County. The members of the Authority serve staggered 3 to 1 year terms and are appointed by the City and the County governing bodies with one member appointed jointly. The Authority is responsible for the adoption of the annual budget, setting water and sewer rates and fees, setting policy for the Authority, appointment of various officers (General Manager, Clerk to the Board and Authority Attorney) and the enactment of local ordinances. The Authority Board has been meeting on a monthly basis since July of 2007.

The Authority has adopted a working organizational chart that identifies 309 positions. The City and County will transfer approximately 279 positions from their respective entities to the Authority, of which 259 positions are currently occupied. The Authority is managed by a General Manager with six department heads who oversee the day-to-day operations of the Authority. The department heads include: Chief Operating Officer /Deputy General Manager, Chief Financial Officer /Administrative Services Director, Human Resources Director, Customer Service Director, Environmental Health and Safety Director and Director of Engineering. The Chief Operating Officer oversees the operations of the water and sewer systems, which are functionally grouped into drinking water, utility lines and maintenance and wastewater treatment.

Water and Sewer System

The details of the System are included in the following section broken out between the City of Wilmington and New Hanover County. The Authority System is comprised of these two utilities.

City of Wilmington

The portion of the Authority's System that was developed by the City of Wilmington is relatively mature. The City water system was started in 1881 as the Clarendon Water Works Company in order to provide better fire protection throughout the City. The water system was not initially a potable system. In 1909 the City bought Clarendon and the Wilmington Sewage Company to form the City of Wilmington Water and Sewage Department. In 1910, the first water treatment plant was constructed on the banks of the Northeast Cape Fear River adjacent to the current Sweeney plant. More recently, in 1999, the City purchased two private water systems consisting of 23 ground water wells and the accompanying distribution system. In 2002, the two systems were connected to the surface water supply. This system, known as the groundwater system, is accounted for by the City in a separate enterprise fund, known as the Groundwater Fund. All customers not located within the

groundwater system service area are part of the surface water system and are accounted for in the City's Water and Sewer Fund. The separate enterprise funds were maintained to comply with certain federal tax law requirements related to purchase of the groundwater system by the City. There are currently no interconnections between the City and County portions of the Authority's water system. The Authority is actively examining the potential for interconnections, which would provide redundancy and a more reliable source of water for all Authority customers.

The City was responsible for operation of two wastewater treatment plants and 31 wastewater pumping stations. The sewage collection system is comprised of 370 miles of gravity line, 10,400 manholes, and 25 miles of pressurized sewage force main.

There are approximately 25,300 service connections through which an average of 14.7 million gallons of wastewater travels each day. This waste is collected, treated, and then discharged back into the Cape Fear River. The City also treated wastewater from the New Hanover County Water and Sewer District and from the Town of Wrightsville Beach (the "Town").

Wastewater is treated at either of two facilities. The James A. Loughlin Plant (Northside Plant) is permitted to treat up to 8 million gallons of wastewater daily while the M'Kean Maffitt Plant (Southside Plant) is permitted to treat up to 12 million gallons daily. Both wastewater treatment plants use physical, chemical and biological processes to clean the wastewater. Screening and settling processes help remove most suspended materials. Biological processes, utilizing bacteria, aid with removing the remainder of the suspended materials and the dissolved substances. Organic material left after the treatment process undergoes further treatment at each plant. These solids are nutrient rich and are utilized locally for farming operations.

The Authority's sewer system developed by the City and County are interconnected. The City and County first entered into an agreement in 1981 to construct a force main, known as the Northeast Interceptor, to transport wastewater to the Southside Plant for treatment. Upon completion of the Interceptor, ownership was shared between the City and County with each having a one-half interest. Based on an agreement established in 1985 the City currently operates and owns two-thirds of the Southside Plant with the County retaining a one-third interest in the Southside Plant. The Northside Plant is currently under construction, which will expand the plant capacity from 8 million gallons daily capacity to 16 million gallons.

New Hanover County

The portion of the Authority's System developed by New Hanover County is relatively young and has experienced rapid growth. The County operated the water and sewer system through a separate political division of the County government termed the New Hanover County Water and Sewer District. The District included all unincorporated areas within the County. Therefore the County and the District have the same boundaries except the District does not include incorporated areas such as the City of Wilmington. The County Commissioners served as the governing body for the District.

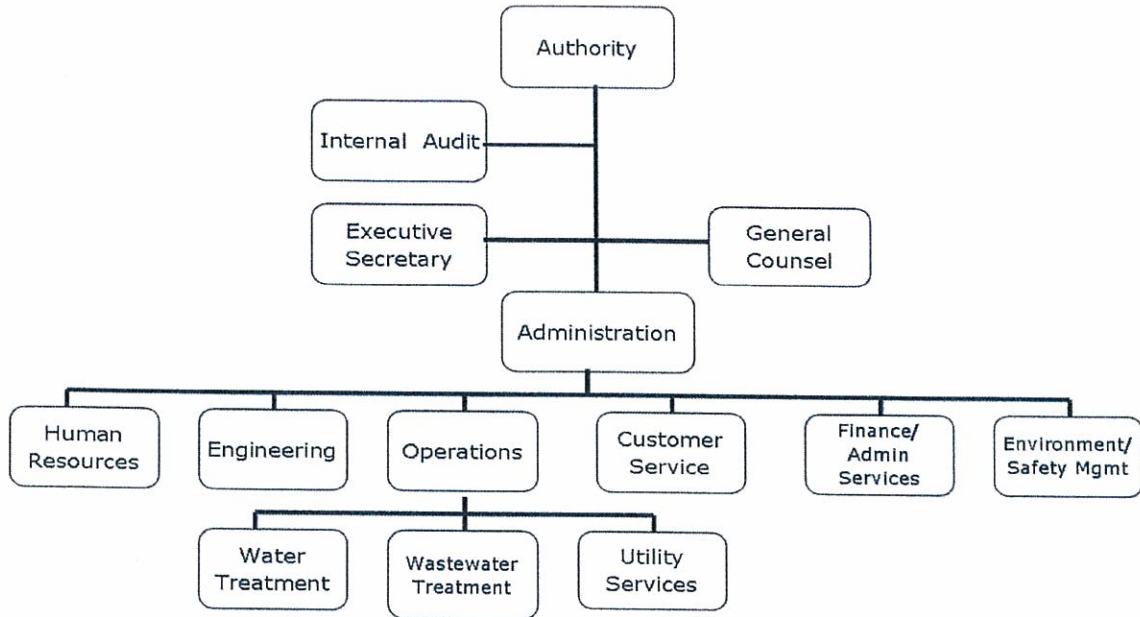


The District was formed by the County in 1983 to provide sewer service to residents in the County. The District was responsible for providing water and sewer service to areas currently served in the County. The needs of this growing utility are immediate and costly in order to continue serving its former existing customers while growing to meet the needs of the County and new customers.

The District was responsible for the operation and maintenance of the County's water and sewer system, which currently serves over 32,000 customers. The District operated one small wastewater treatment plant, 29 drinking water wells, 139 miles of water distribution piping, 109 sewage pumping stations, 83 miles of sewer force main and about 500 miles of sewer collection lines.

The District currently utilized groundwater wells located throughout the County as the source of water for distribution to its customers. The District provides minimal treatment to the groundwater prior to distribution. The District is currently overseeing the design, development and construction of an 8 million gallon daily capacity water treatment plant. The District has secured financing for the new plant in the amount of \$42 million. As mentioned previously the Authority's water system is not currently interconnected between the City and County.

Other than the small wastewater treatment plant located in the County, all wastewater is transported to the either the Northside or Southside Plant.



Staffing Summary

The Authority has authorized a total of 309 positions. Staffing level (full-time equivalents) by department is as follows:

Administration	6
Finance/Administrative Services	15
Human Resources	4
Engineering	25
Operations	185
Environment/Safety Management	32
Customer Service	42
	309

Statement of Revenues, Expenditures and Debt Service

	CFPUA FY 08-09 Submitted
OPERATING REVENUE	
Water	24,307,324
Sewer	26,414,260
Other Charges for Service	2,318,030
Total Operating Revenue	53,039,614
OPERATING EXPENDITURES	
Authority Board	85,675
Administration	975,335
Human Resources	400,338
Engineering	2,282,565
Finance/Administrative Services	2,149,742
Total General and Administrative	5,893,655
Operations - Administration	210,791
Operations - Water Treatment	6,639,305
Operations - Wastewater Treatment	7,283,685
Operations - Utility Services	11,204,680
Environment/Safety Management	2,334,265
Customer Service	2,589,854
Nondepartmental	1,448,000
Total Operations	31,710,580
Total Operating Expenditures	37,604,235
EXCESS OF OPERATING REVENUES OVER EXPENDITURES	15,435,379
NON-OPERATING REVENUES	
Proceeds from Bonded Debt	3,441,638
Interest Earnings	1,315,000
System Development Charges	4,800,000
Transfers from Other Funds	1,180,000
EXCESS OF REVENUES OVER EXPENDITURES	26,172,017
DEBT SERVICE	18,916,359
CONTINGENCY	500,000
EXCESS OF REVENUES OVER EXPENDITURES LESS DEBT SERVICE	7,255,658
DEBT SERVICE COVERAGE - TOTAL INDEBTEDNESS	<u>1.49</u>

BUDGET SUMMARY

		CFPUA FY 08-09 Submitted
REVENUES		
Water Revenues		24,307,324
Wastewater Revenues		26,414,260
Interest Earnings		1,315,000
Other Charges for Service		2,318,030
System Development Charges		4,800,000
Transfers from Other Funds		1,180,000
Bond Proceeds		3,441,638
TOTAL REVENUES		63,776,252
EXPENDITURES		
Authority Board		85,675
Administrative		975,335
Finance/Administrative Services		2,149,742
Human Resources		400,338
Engineering		2,282,565
Operations - Administration		210,791
Operations - Water Treatment		6,639,305
Operations - Wastewater Treatment		7,283,685
Operations - Utility Services		11,204,680
Environment/Safety Management		2,334,265
Customer Service		2,589,854
Nondepartmental		1,448,000
Debt Service		18,916,359
Contingency		500,000
TOTAL EXPENDITURES		57,020,594
RENEWAL AND REPLACEMENT RESERVE		6,755,658

EXPENDITURE SUMMARY

CFPUA
FY 08-09
Submitted

EXPENDITURES BY DEPARTMENT

Authority Board	85,675
Administration	975,335
Finance/Administrative Services	2,149,742
Human Resources	400,338
Engineering	2,282,565
Operations - Administration	210,791
Operations - Water Treatment	6,639,305
Operations - Wastewater Treatment	7,283,685
Operations - Utility Services	11,204,680
Environment/Safety Management	2,334,265
Customer Service	2,589,854
Nondepartmental	1,448,000
Debt Service	18,916,359
Contingency	500,000

TOTAL	57,020,594
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EXPENDITURES BY CATEGORY

Personnel	13,677,490
Benefits	4,458,915
Operating	15,998,507
Capital Outlay	2,021,323
Nondepartmental	1,448,000
Debt Service	18,916,359
Contingency	500,000

TOTAL	57,020,594
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FY 2009 Water and Sewer Capital Improvement Program Budget

Project	Project Cost	COV - NHC Projects	Spending By Year																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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FY 2009 Water and Sewer Capital Improvement Program Budget

Project	Sewer	Project Cost	COW - NHC Spending By Year										FY 18
			Projects	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
01	Northside Heat Exchanger (SST20)		184,350										
02	System Wide Flow Monitoring		73,200										
03	Downtown Sewer Rehab & Sewer Assessment	51,450,035	450,035	5,000,000	7,000,000	7,000,000	7,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	
04	Capacity Management Operations Maintenance Update	250,000		250,000									
05	General Water and Sewer Project (NHC)	1,501,900	1,501,900										
06	Middle Sound Sewer (NHC)	1,540,117	1,540,117										
07	North School Site Sewer Pump Station and Lines	3,247,200		3,247,200									
08	Barnards Creek Outfall Line Rehab	2,400,000		2,400,000									
09	Heritage Park / Airport Phase I Sewer	2,280,000		2,280,000									
10	Torchwood Boulevard Force Main	100,000		100,000									
11	Equipment Purchases - Sewer Maintenance (07WS10)	1,428,118	248,118	1,180,000		100,000							
12	Pump 14 Grit Removal	100,000											
13	Pump Station 12, 26 & 27 Site Work	350,000		350,000									
14	Pump Station 13 Improvements	360,000		360,000									
15	Pump Station 2 Improvements	1,080,505	80,505	1,000,000									
16	Pump Renewal Project	778,014	78,014	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	
17	Dystor Structure Fabric Replacement	257,000		257,000									
18	Relocation of Utility Lines per NCIOT Agreements	2,400,000		2,050,000	350,000								
19	Pump Station 3, 6, 13, 14, 15 Interceptor Improvements	130,000		130,000									
20	Hydraulic Model and Capacity Study	400,000		400,000									
21	Burnt Mill Creek Outfall Repair	4,400,000		2,200,000	2,200,000								
22	Thickened Alum Sludge Storage at WWTP	538,000				538,000							
23	Pump Station VFD Replacements	200,000			250,000	100,000	100,000						
24	Greenfield Lake Outfall Rehabilitation	2,250,000											
25	Infiltration Inflow Investigation and Elimination Program	2,750,000		500,000	500,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	
26	GIS As-built entry and mapping maintenance contract	1,100,000		200,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
27	Annexation 98 - Completion of Sewer Extensions	2,649,110	149,110	2,500,000									
28	Rehab of Bradley Creek Outfall	819,750		819,750									
29	Ogden Interceptor Manhole Rehab	750,000		750,000									
30	Pump Stations 64-65.66 Master Study Repair, Upgrades	858,000		858,000									
31	Pump Station Replacement/Removal	800,000			800,000								
32	NSWWTTP Force Main	4,250,000		4,250,000									
33	NSWWTTP Expansion and Upgrade (16 MGD)	7,331,205	7,331,205										
34	NSWWTTP Expansion (24 MGD)	42,131,239									42,131,239		
35	NEI Rehab Project - including PS 34/35	5,337,113	2,043,013	576,000	2,110,000	608,000							
36	Northern Route Force Main (NEI Project)	29,000,000		15,000,000	14,000,000								
37	Southside WWTP Rehabilitation and Upgrade	102,845,384		3,250,000	3,250,000	1,500,000	18,615,128	34,615,128	30,615,128	11,000,000		24,000,000	
38	421 Sewer Project - plant construction	24,000,000			10,000,000	10,000,000	5,000,000	5,000,000	5,000,000	5,000,000			
39	Const of collector systems/participation with developers in interceptor const	45,000,000		200,000	400,000								
40	GIS and CMMMS Updates	600,000		250,000									
41	Asset Management Implementation Study	250,000		1,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	
42	Wastewater Pump Station Replacement Projects (sewer master plan)	46,000,000		1,000,000									
43	Sewer Emergency Repair	1,000,000		1,000,000									
44	Total Sewer CIP	\$ 394,912,690	\$ 13,422,017	\$ 48,390,050	\$ 49,328,000	\$ 28,096,400	\$ 36,165,128	\$ 49,965,128	\$ 45,965,128	\$ 26,450,000	\$ 57,581,239	\$ 34,450,000	\$ 5,100,000
Total Capital Improvement Projects			\$ 67,214,098	\$ 83,828,875	\$ 76,043,900	\$ 65,320,400	\$ 64,049,128	\$ 55,140,128	\$ 51,140,128	\$ 33,800,000	\$ 62,756,239	\$ 41,201,000	\$ 5,700,000

Following are brief descriptions of existing and FY 09 capital improvement projects with budgets that exceed \$1 million. Descriptions of lower budget and future year projects are not included for clarity. Projects are numbered to correspond with *FY 2009 Water and Sewer Capital Improvement Program Budget* worksheets.

Water Projects		Description
1	Downtown Water Line Rehabilitation	Repairs to and replacement of distribution system in City's central business district. Many systems are aging and need rehabilitation, which will be coordinated with City street construction projects.
4	Water System Enhancements	Construction of water projects is substantially complete: Porters Neck Interconnect along Market St and Porters Neck Rd, Scotts Hill Village water line upsizing from 8-inch to 16-inch, Gordon Rd 16-inch water line from Ogden Park to I-40 area.
5	Well Field and Water Treatment Plant	Construction of a 6 MGD membrane water treatment plant in the Porters Neck area that will provide water to existing and new customers. With water quality declining in area wells, treatment of ground water is needed. Project also includes developing new well fields.
9	Sweeney Water Treatment Plant Expansion	Expansion of existing plant from 27.5 MGD to 40 MGD. Includes filtering and capacity enhancements, as well as security upgrades. Plant will stay in operation during construction.
10	Environmental Services Laboratory Building	Construction of new Environment and Safety Management Department administrative offices, and lab for testing finished water and waste water effluent. Existing facility is being displaced by Sweeney Water Treatment Plant construction.
17	30-inch Raw Water Main Rehabilitation	Repairs to existing raw water line that carries untreated water from Kings Bluff to the water treatment plant. Portions of the line are aging and need repairs.
22	Aquifer Storage & Recovery (ASR)	Construction of wells for storing treated water in aquifers and pumps for recovering water. This system will provide additional storage capacity for peak shaving and emergency supply.
28	Kerr Ave Water Main	Construction of this 16-inch, 3-mile interconnect between Gordon Road and Castle Hayne Road will improve flows in developing northern area.
33	Northern School Site - Water	Joint project with school board for water and sewer services to 2 new schools and surrounding area near Holly Shelter Rd. Construction includes regional pump station and 0.5 MG elevated water tank.
34	Emergency Repairs - Water	This fund will be used for unexpected repairs to the water system.

Sewer Projects		Description
3	Downtown Sewer Rehab & Assessment	Repairs to and replacement of collection system in City's central business district. Many systems are aging and need rehabilitation, which will be coordinated with City street construction projects.
5	General Water & Sewer Projects	This includes finalizing the Wastewater Master Plan (McKim&Creed) as well as rehabilitation of Pump Station 77 (near Arboretum Dr) and construction of a new force main to reduce flow through the NEI.
6	Middle Sound Sewer	Construction of sewer system in Middle Sound area is substantially complete, with some additional line and paving work remaining.
7	Northern School Site – Sewer	Joint project with school board for water and sewer services to 2 new schools and surrounding area near Holly Shelter Rd. Construction includes regional pump station and 0.5 MG elevated water tank.
8	Barnards Creek Outfall Rehab	Repairs and rehabilitation to existing 36-inch gravity outfall along River Rd. Portions of the pipe are deteriorating and need repair.
9	Heritage Park / Airport Phase I Sewer	Construction of water and sewer in Heritage Park area where many septic systems are failing. Also includes airport in service area.
11	Equipment Purchases – Sewer Maintenance	Purchase of heavy equipment (e.g. Vactors, excavators) needed for operations and maintenance.
15	Pump Station 2 Improvements	Upgrade existing pump station at Greenfield Lake. Includes structural changes to meet current codes and replacement of aging VFD systems.
18	Relocate Utility Lines per NCDOT Agreements	Funding for relocating utility systems for NCDOT road widening projects such as Wrightsville Ave, Military Cutoff Rd, and M.L. King Parkway. Agreements were entered into by the City.
22	Burnt Mill Creek Outfall Repairs	Repairs to existing 48-inch gravity line along Burnt Mill Creek. Portions of the pipe and certain structures are deteriorating and need repair or replacement.
33	NSWWTP Force Main	Construction of additional 30-inch effluent line to accommodate increased flow from Northside Wastewater Treatment Plant.
34	NSWWTP Expansion	Expansion of the Northside Wastewater Treatment plant from 8 MGD to 16 MGD. Includes upgrading equipment and processes to meet current environmental effluent standards.
36	NEI Rehab Project	Ongoing repairs to Northeast Interceptor (NEI).
37	Northern Route Force Main	Construction of a 24-inch force main from PS 35 approximately 10 miles to Northside Wastewater Treatment Plant. This will allow flows to be diverted from Southside Plant as needed for management of system capacity and for repairs/maintenance.
38	Southside WWTP Rehabilitation and Upgrade	Expansion of the Southside Wastewater Treatment plant from 12 MGD to 16 MGD. Includes upgrading equipment and processes to meet current environmental effluent standards.
43	Wastewater Pump Station Replacement Projects	Various pump stations are identified for improvements in the Wastewater Master Plan Update. Projects will be selected based on need as funding is programmed.
44	Emergency Repairs – Sewer	This fund will be used for unexpected repairs to the sewer system.

Revenues

The Authority operates the System as an independent business enterprise. The Authority does not have any taxing authority and therefore must cover the full cost of constructing, maintaining and operating the System through user fees, rates and charges. The revenues of the Authority are comprised of operating revenues (user charges) and other revenues of the System such as facility fees and interest income.

Operating Revenues

Operating revenues are derived from the rates and fees charged to customers for water and sewer services provided by the Authority. The Authority sets water and sewer rates, fees and charges to fully cover the cost of operating the System. The Authority's user rate structure for water and sewer services include the following:

- Fixed bi-monthly minimum charges for water and sewer based on water meter size;
- An inclining block volume rates for residential water accounts
- Uniform water volume rates for non-residential water accounts;
- Uniform sewer volume rates based on metered quantities of water capped at 30,000 gallon per bi-monthly period for residential sewer accounts; and
- Uniform sewer volume rates based on metered quantities of water for non-residential sewer accounts.

The Authority fee schedule was adopted by the Authority on April 9, 2008 and became effective July 1, 2008. Revenues are subject to future economic events and other conditions, which are unpredictable. The rate structure adopted by the Authority is intended to allocate costs to the Authority's customers based on the costs that they cause the Authority to incur. The inclining block volume rates may cause residential customers to alter their usage thereby reducing the annual billable quantities of water sold. To account for this possibility the projected billed quantities of water sales were reduced by ten percent in the highest block. The Authority will annually review customer user rates as part of the Authority's budget process, so that customer rates may be timely revised to ensure sufficient revenues to provide for operating costs, debt service and other obligations.

All customers are billed on a bi-monthly basis. Previously collected data on water demand for residential customers, based on a review of a sample of single family and multi-family residences water consumption, estimated an average consumption rate of 200 gallons per day per equivalent dwelling unit (EDU) or 12,000 gallons per bi-monthly period.

The projected water and sewer rates present "across the board" annual increases. The allocations of costs between the various components of the rates are not altered over the projection period. The projected water and sewer volumetric user rates are shown in the following tables.

Projected Water User Rates

	Fiscal Year				
	2009	2010	2011	2012	2013
Residential (per 1,000 gallons)					
Block 1 (0 – 9,000 gallons)	\$1.95	\$2.15	\$2.30	\$2.43	\$2.55
Block 2 (9,001 – 18,000 gallons)	\$2.95	\$3.20	\$3.45	\$3.65	\$3.82
Block 3 (Over 18,000 gallons)	\$3.95	\$4.30	\$4.60	\$4.86	\$5.10
Non-Residential (per 1,000 gallons)	\$2.95	\$3.20	\$3.45	\$3.65	\$3.82
Irrigation (per 1,000 gallons)	\$3.95	\$4.30	\$4.60	\$4.86	\$5.10
<i>Annual Increase</i>	9%	9%	7%	6%	5%

Projected Sewer User Rates

	Fiscal Year				
	2009	2010	2011	2012	2013
Usage Rate (per 1,000 gallons)	\$2.75	\$3.00	\$3.20	\$3.42	\$3.66
Bi-Monthly Flat Rate	\$82.50	\$90.00	\$96.10	\$102.83	\$110.02
<i>Annual Increase</i>	9%	9%	7%	7%	7%

The Authority provides sewer service to approximately 4,000 accounts that receive water from a private well or a private water system. These customers are charged a bi-monthly flat rate charge for sewer service as shown in the table above.

Projected Bi-Monthly Fixed Charges by Meter Size (Combined Water and Sewer)

Water Meter Size	2009	2010	2011	2012	2013
5/8"	\$31.70	\$34.56	\$36.98	\$39.04	\$41.04
3/4"	\$31.70	\$34.56	\$36.98	\$39.04	\$41.04
1"	\$79.25	\$86.41	\$92.46	\$97.61	\$102.60
1 1/2"	\$158.50	\$172.82	\$184.92	\$195.21	\$205.19
2"	\$253.60	\$276.52	\$295.88	\$312.34	\$328.30
3"	\$475.50	\$518.47	\$554.77	\$585.63	\$615.57
4"	\$792.50	\$864.12	\$924.61	\$976.05	\$1,025.95
6"	\$1,585.00	\$1,728.25	\$1,849.22	\$1,952.10	\$2,051.90
8"	\$2,536.00	\$2,765.20	\$2,958.76	\$3,123.36	\$3,283.04
10"	\$3,962.50	\$4,320.62	\$4,623.06	\$4,880.25	\$5,129.76
<i>Annual Increase</i>	9%	9%	7%	6%	5%

The annual adjustments to the water and sewer rates are based on the requirements to meet the operating and capital costs anticipated over the projection period for the Authority. The Authority has adopted the FY 2009 water and sewer rates but has not taken action to increase rates over the remainder of the period. However, the Authority has been briefed on the needs for subsequent rate increases with full understanding that additional rate increases will be required to maintain the fiscal health of the Authority.

Other Operating Revenues

Other operating revenue sources consist of fees and charges other than water and sewer user rates. These revenues include fire line charges, service turn-on, water line repair, connection fees, collection of bad debt, service applications, sewer line repair, other water charges, permit fees, penalty fees and Northeast Interceptor charges. The Northeast Interceptor charges represent charges to the Town of Wrightsville Beach based on the Town's metered wastewater flow into the Northeast Interceptor.

Non-Operating Revenues

Non-operating revenues consist of interest earned on investments and system development charges. System development charges are a form of impact fee that are intended to pay for the amount of capacity in the Authority systems which will be used by a new customers. The current system development charges for the Authority are shown in the following table. In the Forecast Statement it is assumed that the Authority will increase the system development charges by 5% per year over the forecast period. The following table presents the system development charges adopted by the Authority for Fiscal Year 2009.

Water and Sewer System Development Charges

Water Meter Size	Water System Development Charge	Sewer System Development Charge
5/8"	\$2,000	\$2,500
3/4"	\$3,000	\$3,750
1"	\$5,000	\$6,250
1 1/2"	\$10,000	\$12,500
2"	\$16,000	\$20,000
3"	\$30,000	\$37,500
4"	\$50,000	\$62,500
6"	\$100,000	\$125,000
8"	\$160,000	\$200,000
10"	\$250,000	\$312,500

The projected revenue from system development charges is estimated to be \$4.8 million annually in the City and (when combined with the estimated revenue for the County) the Authority facility fee revenues are estimated to be \$5.8 million annually over the forecast period.



CAPE FEAR PUBLIC UTILITY AUTHORITY DEBT SERVICE NEXT FIVE YEARS

	Par Amount	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13
Cape Fear Public Utility Authority Revenue Bonds						
Series 1999 Water & Sewer Revenue Bonds	1,525,000	822,030	819,780	0	0	0
Series 2003B Water & Sewer Refunding Revenue Bonds	4,603,686	531,758	531,758	531,758	531,758	531,758
Series 2005 Water & Sewer Refunding Revenue Bonds	61,080,000	4,044,128	4,047,728	4,862,128	4,871,603	4,868,040
Series 2008 Water & Sewer Revenue Bonds	174,860,000	4,526,157	9,052,313	9,052,313	12,382,538	12,388,000
Total Cape Fear Public Utility Authority Revenue Bonds	242,068,686	9,924,073	14,451,579	14,446,199	17,785,899	17,787,798
Principal portion of Cape Fear Public Utility Authority Revenue Bonds		2,232,043	2,320,562	2,409,579	5,924,113	6,204,182
Interest portion of Cape Fear Public Utility Authority Revenue Bonds		7,692,030	12,131,017	12,036,619	11,861,786	11,583,617
		9,924,073	14,451,579	14,446,199	17,785,899	17,787,798
City of Wilmington GO Debt						
Par Amount		FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13
Principal portion of City of Wilmington Bonded Debt	21,085,147	3,268,615	3,606,532	3,025,000	2,985,000	2,945,000
Interest portion of City of Wilmington Bonded Debt		813,820	686,118	542,112	426,708	312,830
		4,082,435	4,292,649	3,567,112	3,411,708	3,257,830
City of Wilmington Installment Debt						
Par Amount		FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13
Principal portion of City of Wilmington Installment Debt	17,875,000	790,000	820,000	850,000	885,000	925,000
Interest portion of City of Wilmington Installment Debt		829,625	791,120	758,320	724,320	688,920
		1,619,625	1,611,120	1,608,320	1,609,320	1,613,920
New Hanover County GO Debt						
Par Amount		FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13
Principal portion of New Hanover County Bonded Debt	6,565,000	1,820,000	1,815,000	1,805,000	1,125,000	
Interest portion of New Hanover County Bonded Debt		175,148	133,288	85,644	33,750	0
		1,995,148	1,948,288	1,890,644	1,158,750	
New Hanover County Installment Debt						
Par Amount		FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13
Principal portion of New Hanover County Installment Debt	71,894,270	1,777,080	1,818,189	1,804,000	1,827,400	1,856,000
Interest portion of New Hanover County Installment Debt		1,671,161	1,194,351	1,136,418	1,075,656	1,012,590
New Hanover County Debt Payment Reduction		(1,900,000)	(1,900,000)	(1,900,000)	(1,900,000)	(1,900,000)
		1,548,241	1,112,540	1,040,418	1,003,056	968,590
Total Debt Service	359,488,103	18,750,292	23,416,176	22,552,692	24,968,733	23,628,138