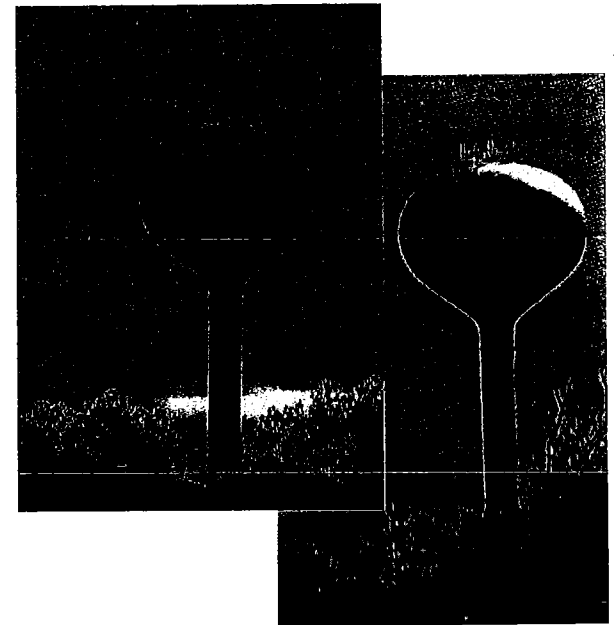


# ***Water Operations Division***

## **Division Overview**

The Water Operations staff is responsible for monitoring water quality leaving the plant and in the distribution system for the residents and visitors of Nags Head. The water plant is staffed two shifts per day, seven days a week and serves as an after-hours contact for Nags Head citizens wishing to report water problems or seeking information concerning other Town departmental activities.

Water Operations consists of the 8<sup>th</sup> Street Water Treatment Plant and storage tank, the Gull Street Pump Station and storage tank, and two 500,000-gallon elevated water storage tanks, one in south Nags Head and the other behind the Public Works complex on Lark Avenue. In addition, Water Operations maintains a state certified laboratory for bacteriological testing to ensure that water quality is in compliance with all state and federal regulations.



**Goals**

To operate a public water system in a manner that provides Nags Head citizens an adequate quantity of potable water and fire protection, and ensures the compliance of the water system with all federal and state regulations.

**Objectives**

- Provide effective customer service response to every Nags Head citizen in a timely manner and satisfactorily resolve any needs, questions, or problems that may be presented.
- Update the schedule for replacing equipment and installing new equipment in a time frame consistent with the Water Master Plan. Review water treatment methods and new treatment technologies to ensure safe, cost effective, good tasting potable drinking water.
- Provide a safe work environment for staff and visitors to the water facilities and ensure all water facilities meet or exceed the standards required by the North Carolina Department of Labor, Occupational Safety and Health.
- Provide water at adequate flows and pressures for the Town's fire protection service.
- Constantly review department goals and operations and institute changes when warranted to ensure a more cost effective and efficient operation.
- Continue to work toward meeting EPA requirements of the Stage 2 Disinfection/Disinfection By-Product Rule that becomes effective in December 2013.

**Performance Measures and Workload Indicators**

	<b>FY 07-08</b> <u>Actual</u>	<b>FY 08-09</b> <u>Actual</u>	<b>FY 09-10</b> <u>Actual</u>
Water Pumped to Nags Head (million gallons - MG)	425.424	439.077	429.640
Water Purchased from Dare County Regional Water System	425.424	439.077	429.640
Total hours of operation	4,208.09	4,341.45	4,185.3

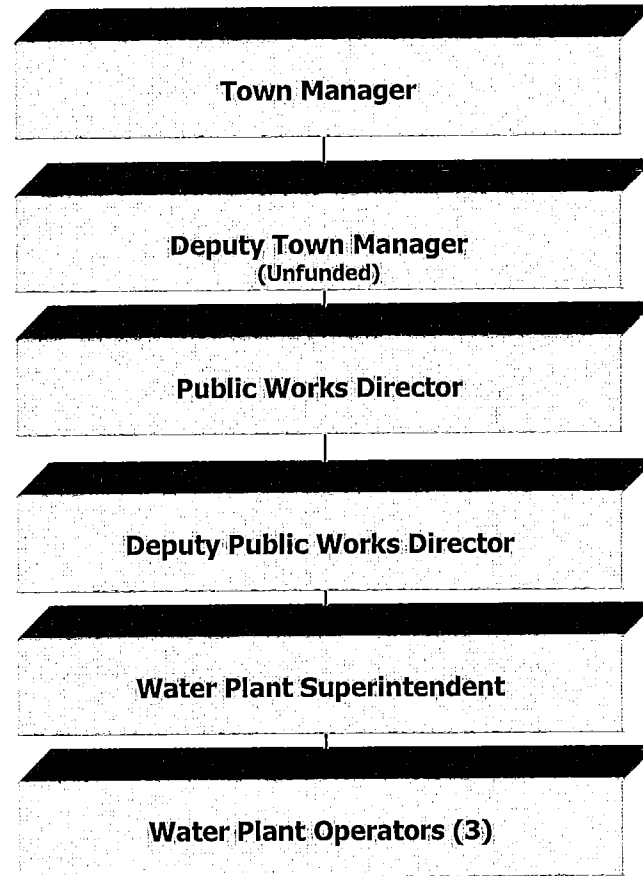
	<b>FY 07-08 Actual</b>	<b>FY 08-09 Actual</b>	<b>FY 09-10 Actual</b>
Distribution water samples reported negative versus positive North Carolina requires 15 monthly distribution system bacteriological samples. There were 180 samples collected from July 1, 2009 to June 30, 2010.	100%	100%	100%
Number of major equipment breakdowns due to equipment failure	0	0	0
Estimate number of customers who have called about disagreeable tastes, color, and odors	6	5	6
Chemical cost per million gallons of water treated (Fresh Pond)	\$878.00	\$0.00	\$0.00
Average kWh per total million gallons pumped	1186.80	1140.64	1063.25
Overall fire protection rating for Nags Head, 4 (Scale of 1-10, ISO Rating)	4	4	4

Major Accomplishments in FY 2009-2010

- 1) Diehl and Phillips began work to update the Water Master plan with Phase 1- System Hydraulic Modeling
- 2) Completed Individual Distribution Site Evaluation (IDSE) for THM/Haa5 compliance mandated by EPA for Stage 2 of the DBP Rule in December 2013
- 3) Gull Street cl-valves on #1 and #2 pumps rebuilt
- 4) Original SCADA computer at 8<sup>th</sup> Street water plant replaced
- 5) Gull Street pump #2 motor was rebuilt by Pearson Pumps
- 6) 8<sup>th</sup> Street distribution pump #3 motor was rebuilt by Pearson Pumps
- 7) Final Division of Water Quality (DWQ) inspection for Fresh Pond shut down

# Water Operations Department

# Departmental Organization and Staffing



<u>Position</u>	<u>Grade</u>	<u>Adopted Positions FY 10-11</u>	<u>Existing Positions</u>	<u>Requested Positions FY 11-12</u>	<u>Recommended Positions FY 11-12</u>
Water Plant Superintendent	17	1	1	1	1
Water Plant Operator	11	3	3	3	3
<b>TOTAL:</b>		<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

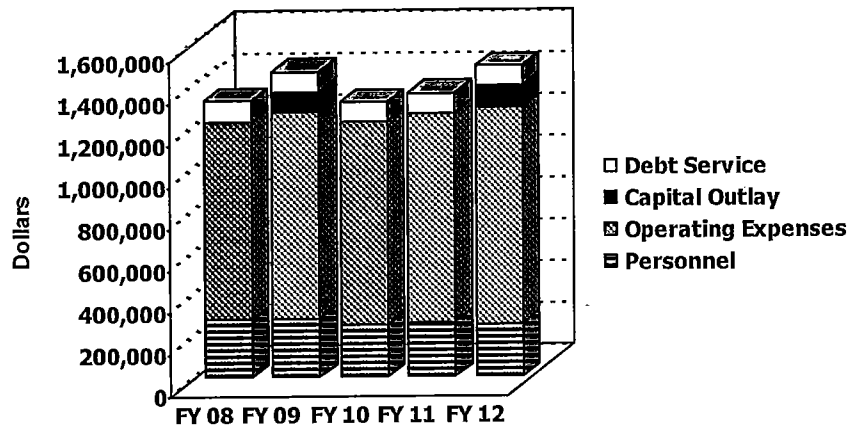
## Highlights

- Debt Service includes the 8<sup>th</sup> year payment of a loan, financed over 15 years, for the new Eighth Street water tower.
- Capital outlay funds of \$100,000, which include engineering costs, are included for Gull Street water flow improvements.
- Additional capital outlay funds include \$6,500 for a smart valve for chlorine levels at the Gull Street site.

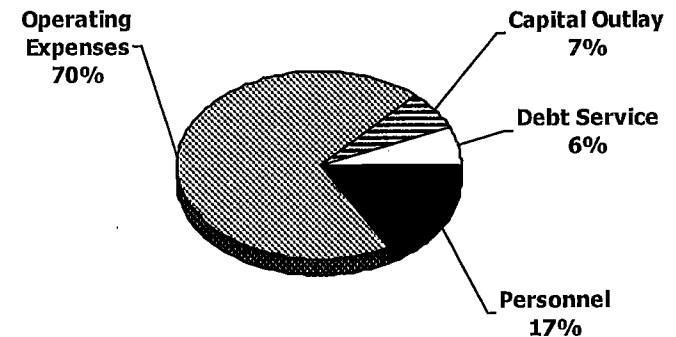
## Expenditures by Function

	<b>FY 2010-2011 Adopted</b>	<b>FY 2011-2012 Recommended</b>	<b>Percent Change</b>
<b>Personnel Services</b>	\$ 260,426	\$ 251,487	-3.43%
<b>Operating Expenses</b>	\$ 1,003,645	\$ 1,036,494	3.27%
<b>Capital Outlay</b>	\$ 0	\$ 106,500	100.00%
<b>Debt Service</b>	\$ 93,874	\$ 93,875	0%
<b>Total</b>	<b>\$ 1,357,945</b>	<b>\$ 1,488,356</b>	<b>9.60%</b>

## Adopted Expenditure History



## Recommended FY 2011-2012 Expenditures by Function



TOWN OF NAGS HEAD  
EXPENDITURE BUDGET FY 2011-2012

WATER FUND	FY 10/11 ADOPTED BUDGET	FY 10/11 AMENDED BUDGET	UNAUDITED YTD ACTUAL @ 04/30/2011	FY 11/12 REQUESTED BUDGET	FY 11/12 RECOMMENDED BUDGET	FY 11/12 ADOPTED BUDGET
<b>WATER OPERATIONS</b>						
<b>SALARIES</b>						
810 510200 SALARIES/WAGES - REGULAR	173,002.00	173,349.00	141,134.93	129,646.00	169,700.00	.00
810 510200 1 SALARIES/WAGES - REGULAR	.00	.00	.00	.00	.00	.00
810 510200 2 SALARIES/WAGES - REGULAR	.00	.00	.00	.00	.00	.00
810 510201 SALARIES - LONGEVITY PAY	5,297.00	5,297.00	2,706.44	3,694.00	5,296.00	.00
810 510300 SALARIES/WAGES - PARTTIME	.00	.00	.00	.00	.00	.00
810 510400 OVERTIME PAY	2,000.00	2,000.00	138.77	2,000.00	2,000.00	.00
810 510400 1 OVERTIME PAY	.00	.00	.00	.00	.00	.00
810 510400 2 OVERTIME PAY	.00	.00	.00	.00	.00	.00
810 510500 HOLIDAY PAY	4,800.00	4,800.00	3,102.07	4,800.00	4,800.00	.00
810 510500 1 HOLIDAY PAY	.00	.00	.00	.00	.00	.00
810 510500 2 HOLIDAY PAY	.00	.00	.00	.00	.00	.00
<b>TOTAL SALARIES</b>	<b>185,099.00</b>	<b>185,446.00</b>	<b>147,082.21</b>	<b>140,140.00</b>	<b>181,796.00</b>	<b>.00</b>
<b>BENEFITS</b>						
810 520600 FICA TAX	14,162.00	14,189.00	10,708.32	10,722.00	13,909.00	.00
810 520600 1 FICA TAX	.00	.00	.00	.00	.00	.00
810 520600 2 FICA TAX	.00	.00	.00	.00	.00	.00
810 520700 GROUP HEALTH INSURANCE	39,389.00	39,389.00	31,812.70	43,808.00	41,309.00	.00
810 520701 RETIREE'S GROUP HEALTH INSUR	8,022.00	1,564.00	1,563.38	.00	.00	.00
810 520710 EMPLOYEE DENTAL	.00	.00	.00	.00	.00	.00
810 520720 EMPLOYEE LIFE	.00	.00	.00	.00	.00	.00
810 520800 RETIREMENT	11,903.00	11,925.00	9,457.33	9,754.00	12,653.00	.00
810 520800 1 RETIREMENT	.00	.00	.00	.00	.00	.00
810 520800 2 RETIREMENT	.00	.00	.00	.00	.00	.00
810 521000 401 K	1,851.00	1,855.00	1,508.20	1,403.00	1,820.00	.00
810 521000 1 401 K	.00	.00	.00	.00	.00	.00
810 521000 2 401 K	.00	.00	.00	.00	.00	.00
<b>TOTAL BENEFITS</b>	<b>75,327.00</b>	<b>68,922.00</b>	<b>55,049.93</b>	<b>65,687.00</b>	<b>69,691.00</b>	<b>.00</b>
<b>OPERATIONS</b>						
810 522011 CAREER DEVELOPMENT OTHER COSTS	.00	.00	.00	.00	.00	.00
810 532000 TRAINING	915.00	915.00	339.00	915.00	915.00	.00
810 532002 SAFETY TRAINING	.00	.00	.00	.00	.00	.00
810 532100 BUILDING/EQUIPMENT RENTAL	1,260.00	1,260.00	753.72	1,260.00	800.00	.00
810 532100 1 BUILDING/EQUIPMENT RENTAL	.00	.00	.00	.00	.00	.00

TOWN OF NAGS HEAD  
EXPENDITURE BUDGET FY 2011-2012

WATER FUND	FY 10/11 ADOPTED BUDGET	FY 10/11 AMENDED BUDGET	UNAUDITED YTD ACTUAL @ 04/30/2011	FY 11/12 REQUESTED BUDGET	FY 11/12 RECOMMENDED BUDGET	FY 11/12 ADOPTED BUDGET
810 532100 2 BUILDING/EQUIPMENT RENTAL	.00	.00	.00	.00	.00	.00
810 532200 TELEPHONE	5,604.00	5,604.00	3,832.16	5,688.00	5,688.00	.00
810 532200 1 TELEPHONE	.00	.00	.00	.00	.00	.00
810 532200 2 TELEPHONE	.00	.00	.00	.00	.00	.00
810 532300 UTILITIES	45,000.00	45,000.00	35,043.72	50,609.00	45,000.00	.00
810 532400 TRAVEL	1,800.00	1,800.00	1,224.29	1,800.00	1,200.00	.00
810 532500 POSTAGE	2,700.00	2,208.00	1,524.93	2,750.00	2,000.00	.00
810 532600 ADVERTISING	260.00	60.00	.00	260.00	260.00	.00
810 532700 PRINTING	2,893.00	2,568.00	2,567.01	2,944.00	2,944.00	.00
810 543100 FUEL COSTS	5,304.00	5,304.00	4,732.52	7,920.00	7,920.00	.00
810 543300 DEPARTMENT SUPPLIES	17,000.00	18,500.00	15,708.02	28,887.00	20,000.00	.00
810 543300 1 DEPARTMENT SUPPLIES	.00	.00	.00	.00	.00	.00
810 543300 2 DEPARTMENT SUPPLIES	.00	.00	.00	.00	.00	.00
810 543400 OTHER SUPPLIES	4,675.00	3,675.00	2,664.00	4,675.00	4,675.00	.00
810 543400 1 OTHER SUPPLIES	.00	.00	.00	.00	.00	.00
810 543400 2 OTHER SUPPLIES	.00	.00	.00	.00	.00	.00
810 543405 OTHER SUPPLIES - COMPUTER	.00	.00	.00	.00	.00	.00
810 543500 MAINT/REPAIR BUILDINGS	2,000.00	125.00	.00	2,000.00	1,500.00	.00
810 543500 1 MAINT/REPAIR BUILDINGS	.00	.00	.00	.00	.00	.00
810 543500 2 MAINT/REPAIR BUILDINGS	.00	.00	.00	.00	.00	.00
810 543600 MAINT/REPAIR EQUIPMENT	16,500.00	24,600.00	22,799.26	215,800.00	29,300.00	.00
810 543600 1 MAINT/REPAIR EQUIPMENT	.00	.00	.00	.00	.00	.00
810 543600 2 MAINT/REPAIR EQUIPMENT	.00	.00	.00	.00	.00	.00
810 543700 MAINT/REPAIR VEHICLES	1,400.00	1,400.00	763.20	1,400.00	1,400.00	.00
810 543700 1 MAINT/REPAIR VEHICLES	.00	.00	.00	.00	.00	.00
810 543700 2 MAINT/REPAIR VEHICLES	.00	.00	.00	.00	.00	.00
810 543701 VEHICLE REPAIRS	.00	.00	.00	.00	.00	.00
810 543900 UNIFORMS	1,500.00	1,500.00	1,103.47	1,500.00	1,600.00	.00
810 544000 PROFESSIONAL FEES	19,600.00	36,260.00	34,313.00	32,720.00	8,720.00	.00
810 544500 CONTRACTED SERVICES	9,285.00	8,285.00	6,637.12	12,725.00	3,440.00	.00
810 544500 1 CONTRACTED SERVICES	.00	.00	.00	.00	.00	.00
810 544500 2 CONTRACTED SERVICES	.00	.00	.00	.00	.00	.00
810 544800 PURCHASES FOR RESALE	816,314.00	816,314.00	615,861.56	879,840.00	840,000.00	.00
810 555000 DEPRECIATION EXPENSE	.00	.00	.00	.00	.00	.00
810 555200 OPEB Funding	.00	.00	.00	.00	.00	.00
810 555300 DUES AND SUBSCRIPTIONS	2,278.00	2,278.00	2,277.36	2,328.00	2,328.00	.00
810 555400 INSURANCE	47,357.00	47,357.00	45,813.00	47,357.00	56,804.00	.00
810 555400 1 INSURANCE	.00	.00	.00	.00	.00	.00
810 555400 2 INSURANCE	.00	.00	.00	.00	.00	.00
810 569900 COST REIMBURSEMENT	.00	190,077.00	190,077.00	.00	.00	.00
810 577433 CAPITAL OUTLAY BUDGETARY	.00	.00	.00	.00	.00	.00
<b>TOTAL OPERATIONS</b>	<b>1,003,645.00</b>	<b>1,215,090.00</b>	<b>988,034.34</b>	<b>1,303,378.00</b>	<b>1,036,494.00</b>	<b>.00</b>
<b>CAPITAL OUTLAY</b>						
810 577200 CAPITAL OUTLAY BUILDINGS	.00	.00	.00	.00	.00	.00

TOWN OF NAGS HEAD  
EXPENDITURE BUDGET FY 2011-2012

WATER FUND	FY 10/11 ADOPTED BUDGET	FY 10/11 AMENDED BUDGET	UNAUDITED YTD ACTUAL @ 04/30/2011	FY 11/12 REQUESTED BUDGET	FY 11/12 RECOMMENDED BUDGET	FY 11/12 ADOPTED BUDGET
810 577300 CAPITAL OUTLAY OTHER	.00	.00	.00	.00	100,000.00	.00
810 577400 CAPITAL OUTLAY EQUIPMENT	.00	.00	.00	6,500.00	6,500.00	.00
TOTAL CAPITAL OUTLAY	.00	.00	.00	6,500.00	106,500.00	.00
DEBT SERVICE						
810 578100 L/P PRINCIPAL	66,817.00	66,817.00	.00	69,390.00	69,390.00	.00
810 578200 LEASE PURCHASE INTEREST	27,057.00	27,057.00	.00	24,485.00	24,485.00	.00
TOTAL DEBT SERVICE	93,874.00	93,874.00	.00	93,875.00	93,875.00	.00
TOTAL WATER OPERATIONS	1,357,945.00	1,563,332.00	1,190,166.48	1,609,580.00	1,488,356.00	.00



BUDGET PROJECTION 2012 FY 2011-2012

ORG	OBJECT PROJ	ACCOUNT DESCRIPTION	CURRENT ADJ BUDGET	PROJECTED ACTUAL	Recommend	PERCENT CHANGE
810	577400	CAPITAL OUTLAY EQUIPMENT	.00	.00	6,500.00	.00
	630 -6-810-577400-	REGAL CHLORINE SMART VALVE FOR GULL ST PUMP STATION VALVE AND INSTALLATION ENABLES TO REGULATE THE CL2 DOSAGE LEAVING GULL ST TO HELP REDUCE THM FORMATION POTENTIAL IN SYSTEM	1.00	6,500.00	6,500.00	

ORG	OBJECT PROJ	ACCOUNT DESCRIPTION	CURRENT ADJ BUDGET	PROJECTED ACTUAL	Recommend	PERCENT CHANGE
810	577300	CAPITAL OUTLAY OTHER	.00	.00	100,000.00	.00
	630 -6-810-577300-	REPIPING GULL STREET GROUND STORAGE TANK TO INCREASE WATER CIRCULATION PARTICULARLY IN OFFSEASON TO REDUCE THM BUILD UP INCL 80,000 PROJECT AND 20,0000 ENGINEERING	1.00	100,000.00	100,000.00	