

# ANNUAL BUDGET

**Fiscal Year 2018**

## **Orange Water and Sewer Authority**

**Carrboro - Chapel Hill, North Carolina**



*A public, non-profit agency providing water, sewer and reclaimed water services to the Carrboro-Chapel Hill community.*



# ORANGE WATER AND SEWER AUTHORITY

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GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
Award*

PRESENTED TO

**Orange Water & Sewer Authority  
North Carolina**

For the Fiscal Year Beginning

**July 1, 2016**

GOVERNMENT FINANCE OFFICERS ASSOCIATION

Executive Director

## BUDGET MESSAGE

### To the Board of Directors

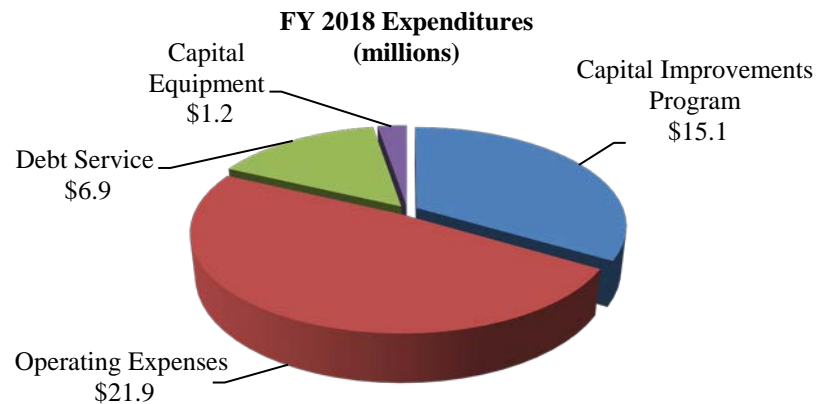
The Annual Budget for the fiscal year beginning July 1, 2017 and ending June 30, 2018 has been prepared in accordance with OWASA's *Financial Management Policy*, our *Amended and Restated Bond Order* adopted on September 13, 2001, and North Carolina's *Local Government Budget and Fiscal Control Act*.

The primary drivers of this budget include the capital improvements project needs identified in OWASA's five-year Capital Improvements Program (CIP); projected drinking and reclaimed water demands; wastewater management needs; operating expenses required to sustain service levels; debt obligations; and reserve funding.

Projected operating revenues for Fiscal Year (FY) 2018 reflect no increase in monthly rates. This was made possible by prior year rate increases, the stabilization of water sales, cost reduction efforts, and reserve levels.

The operating expense budget is about 4% greater than the FY 2017 budget. Consistent with our strategic objectives, the FY 2018 operating expense budget meets the needs and priorities of the organization. However, it has few provisions for contingencies.

The budget consists of projected revenues and other receipts of \$37 million, capital project costs of \$15.1 million, operating expenses of \$21.9 million, debt service payments of \$6.9 million, and capital equipment purchases of \$1.2 million.



### Highlights of the Budget

Key elements of this budget include:

- No increases in monthly water, sewer and reclaimed water rates.
- Continuation of the seasonal water conservation rate structure for customers other than individually-metered residential, multi-family master-metered, and irrigation-only customers. Under the seasonal water conservation rates, the water commodity charge will remain \$7.91 per thousand gallons of water consumed during the warmer peak water demand months of May through September 2017. The water commodity charge during the cooler, lower demand months of October 2017 through April 2018 will remain \$4.16 per thousand gallons.
- Irrigation-only meters are charged a year-round water commodity rate of \$8.51 per thousand gallons.
- On May 1, 2017, a new year-round water commodity rate of \$5.67 per thousand gallons went into effect for multi-family master-metered customers. Multi-family master-metered customers are properties served by one (or in some cases, more than one) OWASA meter

which provides water service to more than one residential unit. Based on a cost of service study and an analysis of water consumption patterns, it was determined that a year-round water commodity rate is more appropriate for this customer class.

- Continuation of the five-tiered increasing block water rate structure for individually-metered residential customers. The block rate structure is designed under cost-of-service principles to promote water conservation.

	<u>Monthly Volume of Use in Gallons</u>	<u>Rate per 1,000 Gallons</u>
Block 1	1,000 to 2,000	\$2.63
Block 2	3,000 to 5,000	\$6.39
Block 3	6,000 to 10,000	\$7.83
Block 4	11,000 to 15,000	\$10.94
Block 5	All use 16,000 and up	\$19.79

For an individually-metered residential customer using 4,000 gallons of water per month, the monthly water and sewer bill remains \$70.66. (Average monthly use for customers in this class is 4,000 gallons.)

- An annual operating budget of \$21.9 million, reflecting an increase of 4% from the FY 2017 budget. The FY 2018 budget includes funding for 135 personnel positions.
- The budget includes a provision for a 3.5% salary increase for employees. The Board typically approves a cost of labor adjustment based on market data and a merit adjustment based on market data and employee performance. These adjustments normally go into effect in November of each year. The Board has not yet set or approved salary adjustments for FY 2018 but is scheduled to do so in October 2017.
- Capital improvement spending of \$15.1 million for FY 2018, as identified in the five-year CIP. For the five-year period FY 2018-22, approximately 74% of capital spending is planned for water and sewer system rehabilitation and replacement projects.
- Capital improvements will be funded through a combination of debt and cash. The state of North Carolina has approved low interest loans of up to approximately \$15 million for six projects that will be completed over the next two years. If accepted, OWASA will pay no more than 1.53% interest on the loans.

**Strategic Planning**

OWASA’s Strategic Plan establishes the key goals and objectives for the next three to five years. It guides the organization’s work and funding priorities. The Board of Directors approved an updated Strategic Plan in June 2016; highlights are summarized below.

<b>Initiative</b>	<b>Goals</b>	<b>Status</b>
Provide reliable and high-quality supply of water for the next 50 years	<ul style="list-style-type: none"> <li>• Optimum mix of technically, environmentally, economically, and socially feasible water supply and demand management alternatives that meet projected demands and level-of-service objectives under a range of future conditions and uncertainties.</li> <li>• Enhanced water supply reliability, reduced energy use, and reduced long-term life-cycle costs of water and sewer service through cost-effective water use efficiency, conservation, and RCW strategies.</li> </ul>	<ul style="list-style-type: none"> <li>• We have begun the process of updating our Long-Range Water Supply Plan. It is expected that our water supply will be sufficient to meet the community’s needs for the next 50 years in most scenarios.</li> </ul>

	<ul style="list-style-type: none"> <li>• Maintain our Jordan Lake water supply allocation.</li> <li>• New or amended water transfer agreements with Town of Cary and City of Durham for OWASA to access our Jordan Lake water supply allocation through those entities when needed.</li> </ul>	<ul style="list-style-type: none"> <li>• On March 9, 2017, the North Carolina Environmental Management Commission approved OWASA’s request to maintain its allocation of 5% of Jordan Lake’s water supply pool.</li> </ul>
Engage the Community	<ul style="list-style-type: none"> <li>• Engage stakeholders to understand their perceptions and expectations so that we make well-informed decisions about our services and maintain their trust.</li> <li>• Empower stakeholders with information so they use water wisely and protect water quality through proper use of our wastewater system.</li> <li>• Provide stakeholders with timely information about projects, programs, and policies that are important to them and offer them meaningful opportunities to give feedback so that we can continue to improve.</li> </ul>	<ul style="list-style-type: none"> <li>• We have implemented a formalized community engagement process for use in conjunction with all of our major initiatives.</li> <li>• In FY 2016, we conducted a customer satisfaction survey, receiving over 800 responses. The feedback provided valuable information that has led to process and policy changes that we believe will improve customer satisfaction.</li> </ul>
Adopt financial management policies and budget decision processes to ensure affordable services and fiscal sustainability	<ul style="list-style-type: none"> <li>• Financial reserve funds set at appropriate level.</li> <li>• Efficient process which provides opportunities for stakeholder input and allows the Board of Directors to make well-informed budget and rate decisions.</li> <li>• Affordability target set at appropriate level.</li> <li>• The right investments at the right time to sustain the community’s essential water, wastewater, and reclaimed water assets.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board of Directors reviewed our <i>Financial Management Policy</i> in FY 2017, making no modifications.</li> <li>• The Board plans to further consider our policies regarding reserves in FY 2018.</li> </ul>
Implement an Energy Management Plan	<ul style="list-style-type: none"> <li>• Cost-effective measures to reduce our use of energy, related energy costs, and associated greenhouse gas (GHG) emissions.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board of Directors approved our Energy Management Plan on April 13, 2017 and implementation is underway.</li> </ul>
Implement Advanced Metering Infrastructure (AMI)	<ul style="list-style-type: none"> <li>• Cost-effective, accurate, reliable and timely water metering information for enhanced customer service.</li> </ul>	<ul style="list-style-type: none"> <li>• In May 2017, the Board approved awarding a contract to implement an AMI system. The project began in June 2017 and we estimate that the project will be completed in FY 2019.</li> </ul>
Develop a plan and policy framework for long-term management and disposition of OWASA lands	<ul style="list-style-type: none"> <li>• Land assets provide the expected value to fulfill OWASA’s mission and the assets are effectively managed.</li> </ul>	<ul style="list-style-type: none"> <li>• A time-frame for this initiative has not been determined.</li> </ul>

## **OWASA's Budget Process**

The budget for OWASA's operating services and capital projects is developed in accord with:

- OWASA's *Mission Statement*. The Board's adopted *Mission and Values Statement* establishes priorities for serving the community. These priorities focus on service excellence, environmental responsibility, employee development and well-being, fiscal and operational efficiencies, relationships with local governments, and sustainable operations. These priorities must be met within the constraints set by various statutory, regulatory, and contractual obligations and agreements.
- OWASA's *Strategic Plan* which identifies the organization's high-priority goals and objectives.
- OWASA's *Financial Management Policy*, strategic financial planning, related policy decisions, and measurements of financial performance.
- A regularly updated water and sewer master plan which includes reports and analyses of system needs.
- North Carolina General Statute Chapter 159: *The Local Government Budget and Fiscal Control Act*.
- A 15-year financial plan that takes into account economic assumptions, growth trends, operating and capital project costs, desired ratio of net income to debt service, projected water sales, growth in customer accounts, inflation factors, and the cost of borrowing.
- Strategic issues and policies as identified by the Board of Directors and staff.
- The five-year Capital Improvements Program.

The annual budget process begins early in each fiscal year and concludes with the adoption of an annual budget in June. Throughout the process, OWASA staff works closely with the Board of Directors in developing and refining information to submit for approval.

Public hearings on the proposed budget, CIP, and the schedule of rates and fees were held at the OWASA Board of Directors' regular meeting on May 25, 2017, and the budget and rate schedule were adopted by the Board on June 8, 2017.

In accord with state law, the adopted budget may be amended at any time to reflect changes in services, projects and costs. Such amendments can be made in any form by the Board of Directors' action, but the budget must remain balanced. A budget is considered balanced when the sum of net revenues and appropriated fund balance is equal to appropriations. In the state of North Carolina, the minimum legal budgetary level of control is at the departmental level. In addition to the departmental information presented in this document, compliance at this level is disclosed in OWASA's *Comprehensive Annual Financial Report*.

## **Priorities and Assumptions**

### **Legal/Regulatory Assumptions**

#### Federal, State, Local and Judicial

- OWASA must prepare and adopt a balanced budget in accord with the North Carolina Budget and Fiscal Control Act.
- Statutes governing purchasing and contracting require the development of and adherence to a Minority and Women-Owned Business Enterprise Program in soliciting and accepting bids for certain construction work.

- OWASA's primary source of income is customer rates and fees. The OWASA Board has sole authority to set and revise rates, fees and other charges for services. Rates, fees and charges are not subject to supervision or regulation by any bureau, board, commission, or other agency of the state, or by any political subdivision (N.C. General Statute 162A-9). Rates, fees and charges shall be set so that revenues, together with any other available funds, shall be sufficient at all times to pay (1) the cost of maintaining, repairing, and operating the water and sewer systems including reserves for such purposes, and (2) all of the principal and interest on bonds (N.C. General Statute 162A-9).
- Fees are applicable throughout the service area, and fees and charges may vary by customer class when discernable cost factors can be attributed to the varying classes.
- The Governmental Accounting Standards Board requires that the cost of post-employment benefits be recognized and recorded in OWASA's annual financial statements.

#### Intergovernmental Sale and Purchase Agreements

*Agreements of Sale and Purchase* with the University of North Carolina at Chapel Hill (UNC) and the Towns of Chapel Hill and Carrboro state:

- OWASA shall charge reasonable rates, based on cost of service, to all classes of users, serving all users within each class impartially and without unjust discrimination, with no differential in rates based on the location of a customer.
- OWASA shall operate the water and sewer system at the lowest rates possible consistent with its obligation to provide proper and efficient service.
- OWASA will furnish, for as long as UNC shall desire, drinking water, meeting acceptable purity standards, in such quantity as may be required to meet UNC's needs.
- UNC will purchase all its drinking water requirements from OWASA unless OWASA is unable to supply sufficient water.
- UNC will be provided, now and hereafter, reliable and adequate sewer services to meet its needs.
- If five-year cumulative rate revisions exceed 20%, UNC may request that a rate study be performed by a qualified consultant.
- OWASA agrees to meet the reasonable water and sewer needs of the Towns of Carrboro and Chapel Hill.

Additionally, Chapel Hill, Carrboro, and Orange County have adopted local water conservation ordinances as recommended by OWASA. The requirements of those ordinances have short- and long-term demand and revenue implications.

#### Bond Order (Series 2001 as amended and restated)

- Interest earnings are included in the debt service ratio calculation.
- OWASA shall not provide free service, and shall charge all users including public bodies based on established rates, except for water used in fire protection, washing and flushing streets, and testing water lines. The cost of these public benefit uses is recovered from all customers.
- The Bond Order requires a minimum debt service coverage ratio of 1.2. OWASA's *Financial Management Policy* sets the desired performance target as 2.0.
- In order to issue new debt, rates in any fiscal year must be sufficient to provide for debt service payments in the immediately succeeding fiscal year.



## Organizational Assumptions

### Financial Goals and Objectives

- The FY 2018 Budget assumes no changes in the levels of service delivered to customers.
- OWASA's *Financial Management Policy* requires maintaining a working capital reserve balance at least equal to the greater of four months of the annual operating expense budget or 20% of the total estimated cost of capital improvements projects identified for the succeeding three years.
  - Four months of estimated operating costs based on the FY 2018 budget is \$7.2 million.
  - 20% of planned capital improvements for FY 2019 through FY 2021 is \$11.6 million.
  - The General Fund ending balance for FY 2018 is projected to be \$21.5 million.
- The *Financial Management Policy* calls for funding a Capital Improvements Reserve fund and a Rate/Revenue Stabilization Reserve fund. The minimum balance in the Capital Improvements Reserve fund is 2% of net capital assets. The minimum balance in the Rate/Revenue Stabilization Reserve fund is 5% of projected water and sewer revenue.
- The *Financial Management Policy* specifies at least 30% cash funding of capital improvements. Our five-year financial plan reflects approximately 50% cash funding of capital projects during fiscal years 2018 through 2022.

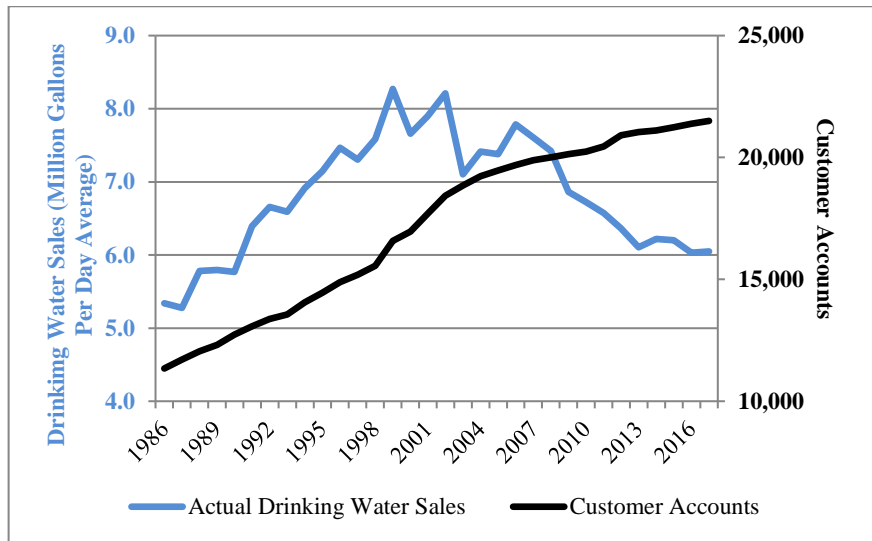
The debt service coverage ratio for FY 2018 is projected to be 2.2, and OWASA's financial plan indicates the following subsequent annual rate increases may be required in order to meet our financial obligations and maintain our financial measurement goals:

	<u>Projected Rate Increases</u>	
FY 2019	0% Water	0% Sewer
FY 2020	3% Water	3% Sewer
FY 2021	3% Water	3% Sewer

Projected rate adjustments are estimates and will be analyzed during each year's budget process.

### **Customer Demand and Service Levels**

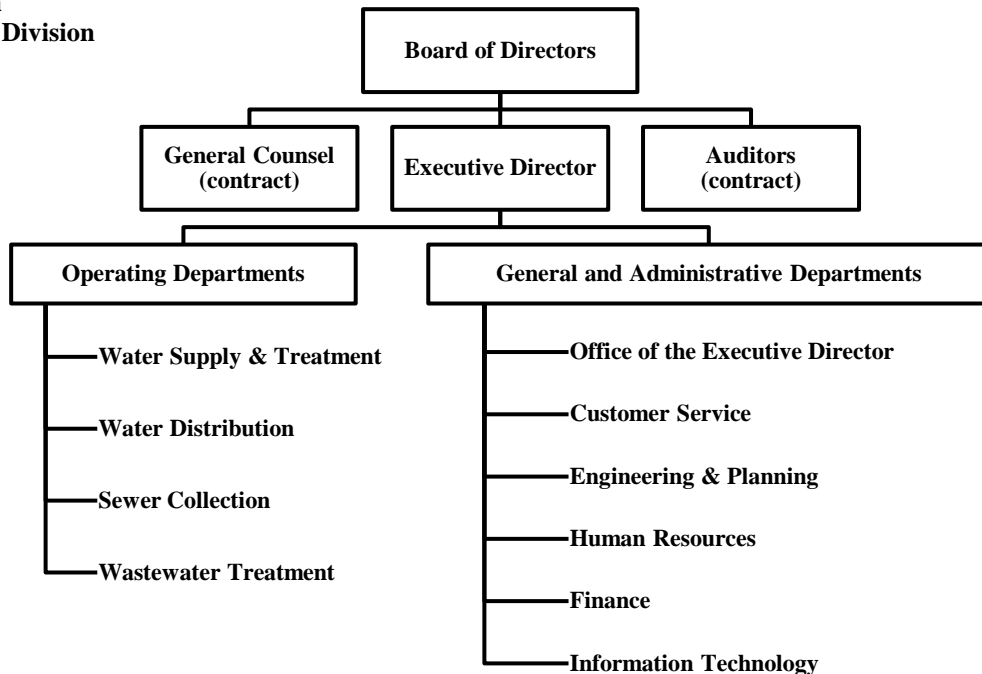
Over the last 15 years, drinking water demand in OWASA's service area has declined substantially even as the number of customers served has increased (see chart below). Projected water demand for FY 2018 is about the same as it was in the early 1990s while the number of customers served has increased over 65% during that time. Two droughts of record in the 2000s, the implementation of conservation rates in 2001 and 2007, and the completion of our reclaimed water system in 2009 contributed to the reduction in drinking water demand.



The following projections are based on historical trends.

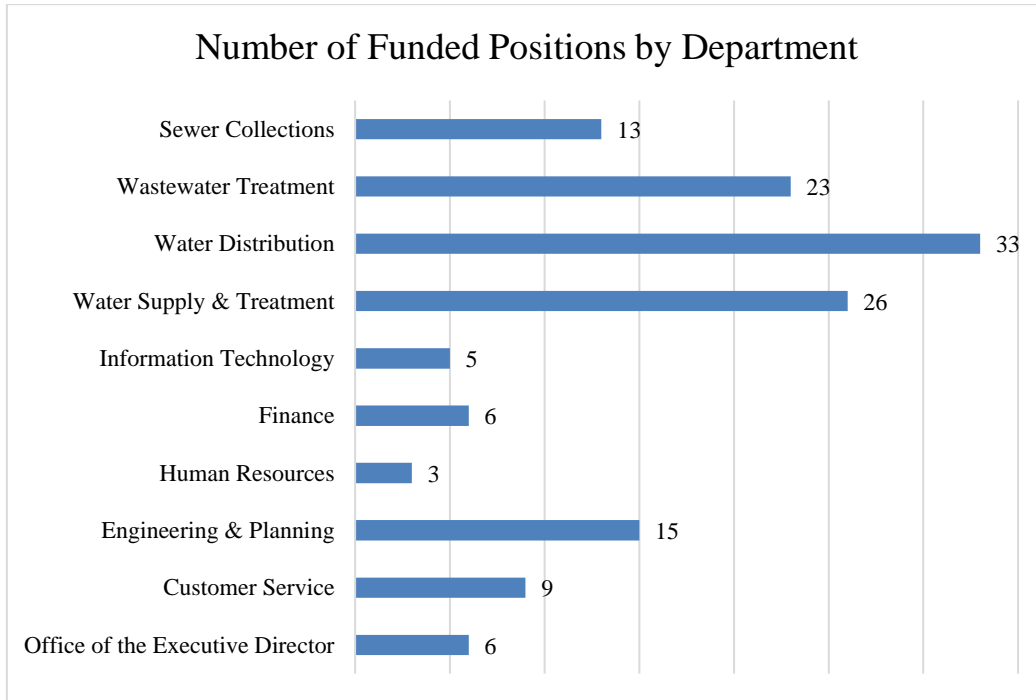
- FY 2018 projections for drinking water demand and new connections are affected by several factors including:
  - Drinking water sales in FY 2018 are expected to be approximately the same as FY 2017. Average daily drinking water demand in FY 2018 is projected to be approximately 6.15 million gallons per day MGD.
  - Reclaimed water (RCW) sales are also expected to be approximately the same as FY 2017. Estimated RCW use during FY 2018 is 0.74 MGD.
- Based on the development plans in OWASA’s service area, we expect to install 220 new 5/8” meter equivalents for the year.
- A construction cost inflation rate of 5.0% is assumed for FY 2019 and beyond.

**Organization  
Overview by Division**



**Staffing  
Summary**

The OWASA Board has authorized a total of 139 positions; 135 are funded for FY 2018. Authorized staffing levels (full-time equivalents) are allocated by department as follows:



**Summarized Annual Income and Expenses (Revenue Fund)**

Description	Resources	Expenses	Balance
<b>Total Operating Revenue</b>	\$35,891,292		
<b>Operating Expenses</b>			
Net Expenses, General and Administrative		\$7,177,861	
Net Expenses, Operating		<u>14,742,616</u>	
Net Total Operating Expenses		21,920,477	
<b>Net Operating Income</b>			\$13,970,815
Availability Fees and Interest Earned	1,455,098		
<b>Total Net Income</b>			15,425,913
<b>Total Debt Service</b>		6,949,537	
<b>Debt Coverage Ratio</b>			2.2

**Summarized Annual Capital/Non-operating Income and Expenses (General Fund)**

<b>Description</b>	<b>Resources</b>	<b>Expenses</b>	<b>Balance</b>
<b>General Fund Beginning Balance (7/1/17)</b>			\$26,661,000
Transfer From Revenue	\$8,476,376		
Loan proceeds	2,700,000		
Funds Available for Expenditures			37,837,376
Total Estimated Capital Expenditures		\$16,316,100	
<b>General Fund Ending Balance (6/30/2018)</b>			<b><u>\$21,521,276</u></b>

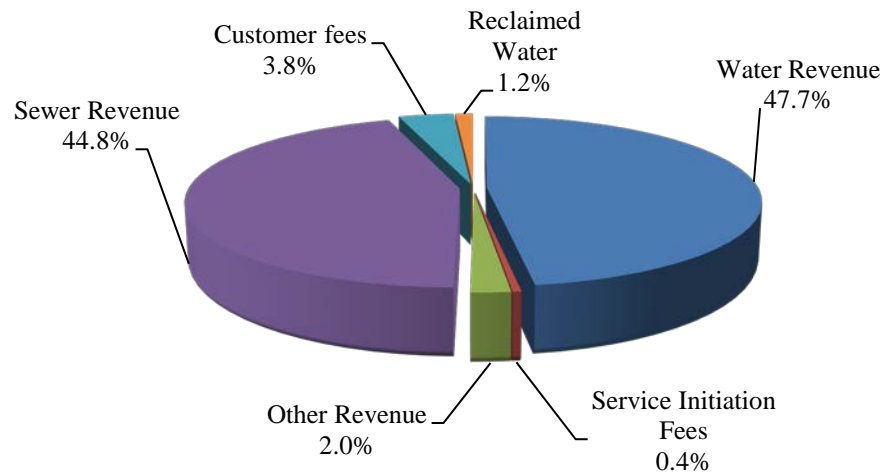
**Revenue  
Summary**

In providing essential public water, wastewater (sewer) and reclaimed water services to Carrboro, Chapel Hill and portions of southern Orange County and southwest Durham County, OWASA incurs substantial operating and capital costs. OWASA operates as a nonprofit enterprise fund and has no legislative authority to levy taxes nor does it receive tax revenues from local governments. Ongoing water, wastewater and reclaimed water operations and capital improvements are financed almost entirely through customer fees and charges with occasional grants from state or federal governments. OWASA establishes rates sufficient to generate revenue to meet operating costs, pay debt service, and provide at least 30% cash funding for the CIP. Rates and fees are periodically adjusted in response to resource needs as determined in OWASA's financial planning process.

OWASA's gross receipts, with minor exceptions, are restricted by bond indenture. All revenues except grants, reimbursements and assessments must be deposited to the credit of the Revenue Fund. Monies in the Revenue Fund are pledged to the repayment of outstanding debt and must be expended first for current expenses and then debt service. Any funds remaining after current expenses and debt payments may be transferred to the General Fund and may be used for any lawful purpose: generally for capital improvements and reserves.

The majority of OWASA's revenues are generated by the sale of drinking water and the collection and treatment of wastewater, and related services. Fees for water and wastewater services include charges for service initiation, line tapping, meter installation, monthly service charges, and a commodity charge for each 1,000 gallons of drinking water or reclaimed water used or wastewater processed. As depicted in the following graph, in FY 2018, 48.9% of total budgeted revenue is anticipated from water and reclaimed water services while wastewater services are expected to generate 44.8%. Service availability (new connection) fees, plan review and construction observation fees, rents, royalties, administrative fees, and interest income contribute the remaining 6.3% of total projected revenues.

## FY 2018 Sources of Revenue



OWASA collects fees for delivery of reclaimed water services through a reclaimed water utility that became operational in 2009. The system primarily serves UNC for non-drinking purposes such as irrigation and cooling tower make-up water on campus.

OWASA's primary revenue-generating fees are summarized below.

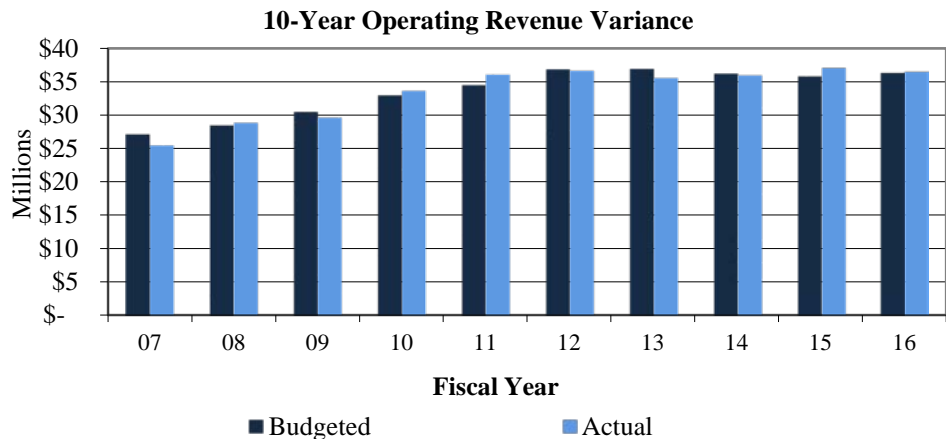
Fixed monthly charge	Calculated to recover costs related to certain direct and indirect customer service efforts, meter and lateral maintenance, and capital costs associated with supplying drinking and reclaimed water to, and collecting sewage from a customer's property. Charges are based on meter size.
Commodity charge	Calculated to recover the remaining direct and indirect costs of water supply and treatment, water distribution, sewage collection and treatment, general administration, and water and sewer capital costs not recovered by the monthly service charge. This charge is applicable to all water, sewer and reclaimed water accounts based on meter readings and is billed in thousand gallon increments of water use.
Water and sewer availability fees	Calculated to recover a portion of the capital costs of providing water and wastewater system capacity. The availability fee applies to each new connection to a drinking or reclaimed water main or sewer main, regardless of who may have paid for the installation of the main to which the connection is to be made. For the purpose of availability fees, customer accounts are divided into four categories: (1) single-family residential, (2) multi-family, individually-metered residential, (3) non-residential (including multi-family master-metered apartment complexes and all commercial, UNC, and institutional accounts) and (4) RCW service to UNC and non-UNC customers. The use of these categories is justified by distinct patterns of water and sewer consumption.

A key assumption in developing the budget is the amount of expected growth. Revenue projections are calculated combining this assumption with the number of customer accounts, and applying the various rates to the assumed demand levels. The growth projection for FY 2018 is approximately 220, 5/8" meter equivalent residential units.

Service initiation fees	The purpose of this charge is to defray the labor and administrative costs associated with establishing a water, sewer or reclaimed water account. This includes establishing service and account records for billing. The fee is applicable to all accounts requiring work to set a meter, reconnect service or read a meter.
Tapping fees	This charge is for making a tap into a water main and/or a sewer main or manhole. The charge recovers the cost for time and equipment plus an allowance for overhead.
Service installation	This charge is to recover costs of installing a service connection from a water or reclaimed water main to the curb or property line and setting a meter.
Plan review and construction observation fees	This charge is to recover the cost of reviewing plans for the extension of water and sewer facilities, and for field observation of the installation of these facilities. The plan review and construction observation fees apply to all extensions of the public water and/or sewer system regardless of the party which undertakes the improvements. The fees apply separately to water and sewer main extensions.
Operating revenue	In addition to recovering the cost of operations, rates and fees must be set at a level sufficient to fund future capital improvements costs and debt. Debt is issued to spread capital costs to future customers who will benefit from infrastructure improvements that have long useful lives.

As shown in the graph on page ix, beginning with a drought in 2001-2002, water demand began to decline in OWASA’s service area. A second drought in 2007-2008 put further downward pressure on the demand for water. In 2009, our reclaimed water system came online and the University of North Carolina at Chapel Hill, OWASA’s largest customer, began using less expensive reclaimed water for about 30% of its needs. Rate increases during these years helped offset the declines in water and sewer service revenue.

The following graph summarizes the historical trend of OWASA’s primary revenue stream compared to our budget for those revenues.



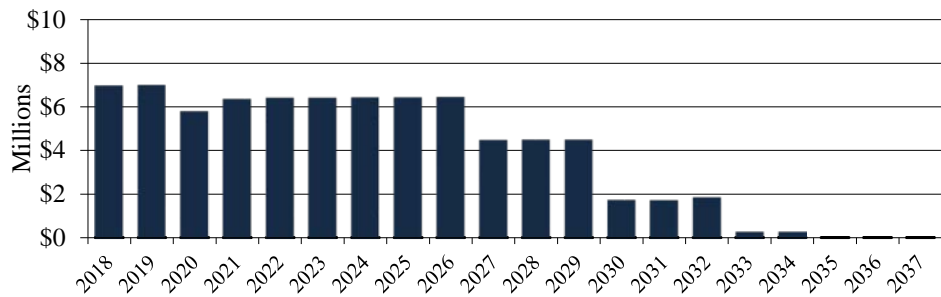
**Debt and Debt Policy**

Revenue Bonds have been used to finance a significant portion of OWASA's capital improvements. The remainder has been funded with annual revenues, grants and fund balance.

Outstanding debt is \$67.4 million as of June 30, 2017. The debt outstanding for each bond issue or loan is: Series 2004B - \$20 million, Series 2010 refunding bonds - \$17.2 million, Series 2014 refunding bonds - \$15.7 million, Series 2015 refunding bonds - \$8.9 million, and an interest-free loan from the state of North Carolina - \$5.6 million. Principal and interest payments will be approximately \$6.9 million in FY 2018. The graph of debt service payments below reflects future annual debt service for these outstanding issues. Because OWASA issues revenue bonds, there is no statutory limit on the amount of debt.

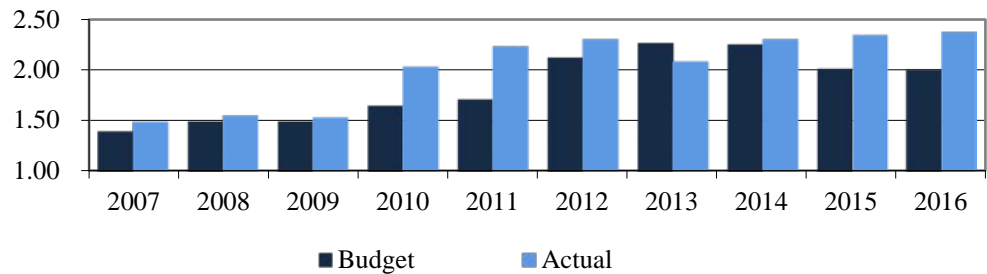
The following schedule of debt service for existing debt shows a decline in the amount of debt principal and interest payments.

**Annual Debt Service (Existing Debt) FY 2018-2037**



The ratio of net income to debt payments is an important measure of OWASA's financial performance. OWASA's Bond Order sets the minimum required debt coverage ratio at 1.2. The OWASA Board of Directors has set a goal of 2.0.

**10 Year Debt Service Coverage Ratio - Budget to Actual**



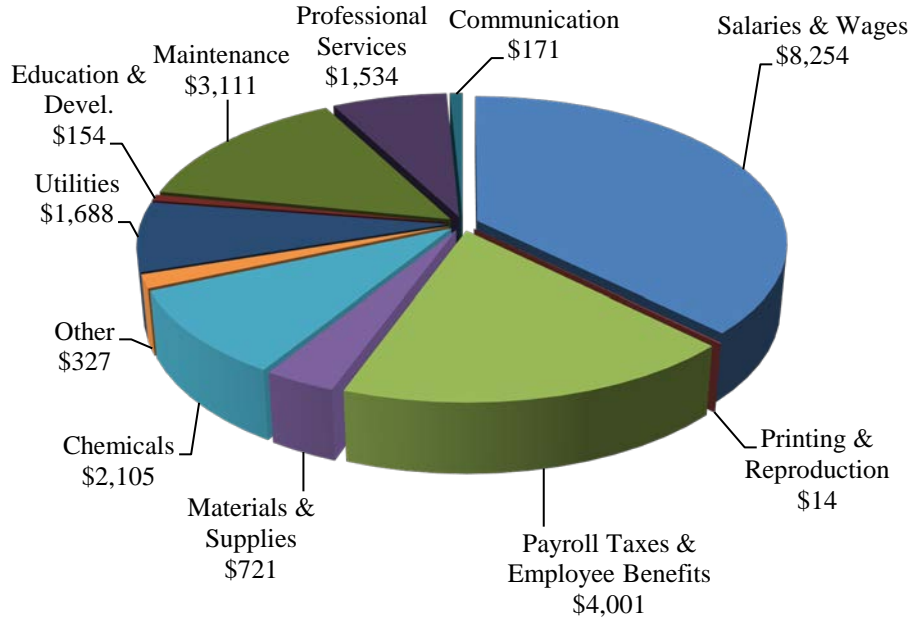
**Planned  
Operating  
Expenses  
Summary**

The chart below shows the planned operating expenses for FY 2018. The graph illustrates the relative proportions of the total costs by each category of expense.

**Orange Water and Sewer Authority  
Operating Expenses by Division/by Category  
Fiscal Year 2018**

	<b>General and Administrative</b>	<b>Operating Departments</b>	<b>Total Budget</b>
Salaries & Wages	\$3,327,127	\$4,926,390	\$8,253,517
Payroll Taxes & Employee Benefits	1,539,967	2,460,614	4,000,581
Materials & Supplies	144,890	575,889	720,779
Chemicals	-	2,104,897	2,104,897
Utilities	191,300	1,497,175	1,688,475
Maintenance	312,205	2,798,994	3,111,199
Professional Services	1,303,480	230,968	1,534,448
Communication	153,687	17,400	171,087
Printing & Reproduction	7,000	7,000	14,000
Education & Development	86,320	68,155	154,475
Other	<u>181,885</u>	<u>145,134</u>	<u>327,019</u>
<b>Total</b>	<b><u>\$7,247,861</u></b>	<b><u>\$14,832,616</u></b>	<b><u>\$22,080,477</u></b>
Construction Credits	(70,000)	(90,000)	(160,000)
<b>Total After Construction Credits</b>	<b><u>\$7,177,861</u></b>	<b><u>\$14,742,616</u></b>	<b><u>\$21,920,477</u></b>

**Operating Expenses**  
(numbers in thousands)

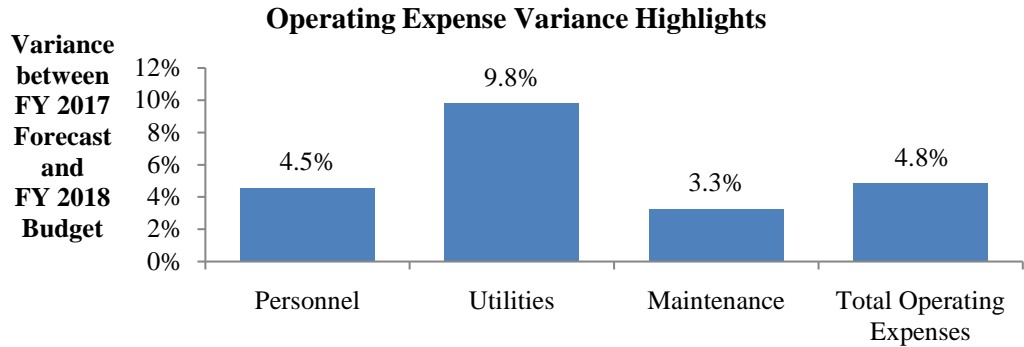


Construction credits are offsets against operating expenses for capital improvement projects performed by OWASA operations personnel. The amount of capitalized labor, equipment, and overhead costs for these in-house projects is credited to the appropriate departmental budget in the form of construction credits. Material costs are charged directly to each project from an inventory account and are not included in the construction credit amount.



## Operating Expense Variances

The chart below highlights Operating Expenses that represent some of the more significant variances between the FY 2018 Budget and FY 2017 Forecast.



### Personnel

The budget for personnel costs, which includes employee health insurance, payroll taxes, uniforms, etc. is approximately 4.5% higher than the amount forecast for FY 2017. The FY 2018 budget includes an increase of 6.8% in health insurance costs and a 3.5% merit increase for eligible employees.

### Utilities

The FY 2018 budget includes an increase in the cost of utilities of about 9.8%. Waste disposal costs are included in this line and this expense is increasing due to an increase in subcontractor fees associated with our biosolids recycling program.

### Maintenance

The budget for maintenance is about 3.3% higher than the forecast for FY 2017 and is based on anticipated preventive and corrective maintenance measures.

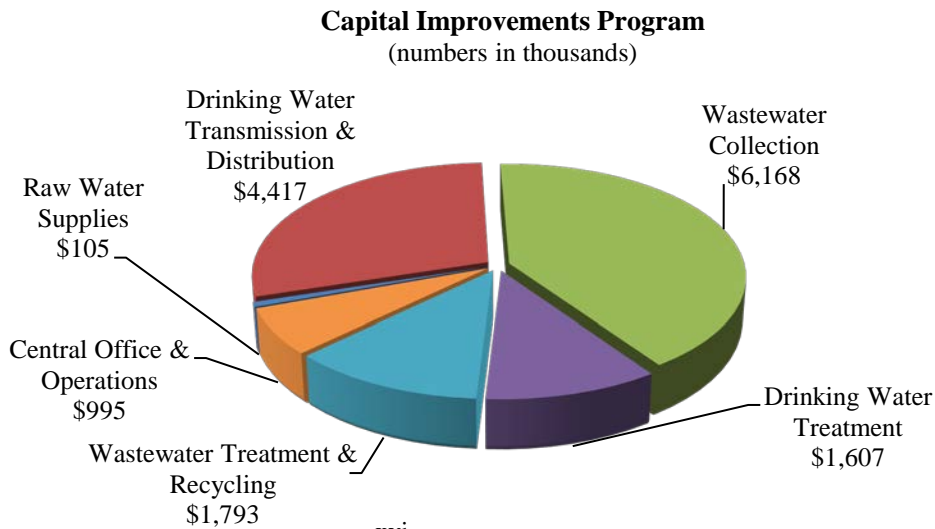
## Capital Equipment

OWASA replaces capital equipment items that has exceeded its useful life and purchases equipment to meet operational needs. Purchases planned for FY 2018 total \$1.2 million (see schedule on page 17).

## Capital Improvements Program Summary

Capital improvements are necessary to renew, replace, and improve infrastructure, and to provide safe, reliable, high-quality water, sewer and reclaimed water services to current and future customers. Capital expenditures are recorded as capital assets and are depreciated over the economic useful lives of the assets.

A five-year planning period is used to develop the CIP. Only the first year of the CIP is included in each fiscal year's budget ordinance. For FY 2018, capital improvements projects total \$15.1 million, as shown below.



**Strategic  
Issues and  
Policies**

OWASA must maintain a budget that continues to ensure high-quality and reliable services to our customers while minimizing rate increases.

A summary of some of the more significant budget issues include:

1. Drinking water and reclaimed water sales in FY 2018 are expected to be about the same as projected for FY 2017.
2. FY 2018 forecast for new construction and system growth is about 220 meter equivalents.
3. The existing seasonal rate fee structure remains in place for non-residential customers and the increasing block rate structure remains in place for individually-metered residential customers. A new year-round water commodity rate for master-metered multi-family customers went into effect in May 2017.
4. The CIP budget for FY 2018 is adequate to meet the needs of OWASA's customers today and in the future.

The organization's strategic plan and the financial management objectives set forth in OWASA's *Financial Management Policy* help us remain focused on mission-critical services, greater operational efficiency, accurate and sustainable asset management and capital improvements priorities, and opportunities for further reductions in operating expenses. We must accomplish this while balancing service levels with operating risks associated with distinct levels of service.

This budget reflects OWASA's continuing commitment to maintain, replace and renew water, wastewater, and reclaimed water system components to ensure high-quality and reliable services to our customers.

We believe the FY 2018 Budget reflects the OWASA Board of Directors' guidance and priorities, provides the appropriate level of funding for strategic initiatives, is responsive to community needs, and meets OWASA's contractual responsibilities and regulatory requirements.

**Conclusion**



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**Ed Kerwin**  
Executive Director



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**Stephen Winters, CPA**  
Director of Finance and Customer Service

**SECTION I**

**ORANGE WATER AND SEWER AUTHORITY OVERVIEW**

Orange Water and Sewer Authority Board of Directors Mission and Vision..... 1

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## ORANGE WATER AND SEWER AUTHORITY MISSION AND VISION

We are a community-owned utility providing our customers high quality and reliable water, wastewater, and reclaimed water services through responsible and creative stewardship of the resources we manage.

We provide excellent service so that if our customers could choose their water utility, they would always select OWASA. We are a trusted steward of the community, environmental, and financial resources we manage.

### OUR VALUES

- **Quality Drinking Water**  
We provide high quality drinking water through effective management and operation of our water supply, treatment, and distribution system.
- **Environmental Responsibility**  
We protect the environment through effective management and operation of our wastewater collection, treatment, water reuse, and resource recovery systems. We manage our resources in an environmentally responsible manner.
- **Excellence in Customer Service**  
We provide excellent service to our customers. We are leaders in engaging our customers and stakeholders and provide them meaningful opportunities to participate in decisions that are important to them.
- **Employees**  
We value our employees as our most important resource and we provide them competitive compensation and a safe and rewarding work environment which promotes diversity and equal opportunity for all.
- **Affordability and Value**  
We provide affordable and high-value services and we are committed to continuous improvement.
- **Sustainability**  
We embrace the principles of environmental, social, and economic sustainability. We strive to make the highest and best use of our local water resources and to promote conservation of water, energy, and other natural resources.
- **Support for the Community We Serve**  
We provide services consistent with the growth management and land use plans of the Town of Carrboro, the Town of Chapel Hill, and Orange County. We maintain open and positive communications with our governments and neighboring water utilities and cooperate in regional initiatives where appropriate and consistent with OWASA's commitment to our member governments.
- **Innovation and Creativity**  
We seek innovation and creativity in accomplishing our mission and enhancing our services.

**ORANGE WATER AND SEWER AUTHORITY**  
**BOARD OF DIRECTORS**

**CHAIR**

John Young  
124 Meadowmont Village Circle  
Chapel Hill, NC 27517  
Appointed by Chapel Hill; Term Expires 6/30/19

**VICE CHAIR**

Jeff Danner  
423 New Parkside Drive  
Chapel Hill, NC 27516  
Appointed by Chapel Hill; Term Expires 6/30/18

**SECRETARY**

Barbara Middleton-Foushee  
100 Williams Road  
Carrboro, NC 27510  
Appointed by Carrboro; Term Expires 6/30/18

**MEMBERS**

Yinka Ayankoya  
200 Gary Road  
Carrboro, NC 27510  
Appointed by Carrboro; Term Expires 6/30/19

Terri Buckner  
306 Yorktown Drive  
Chapel Hill, NC 27516  
Appointed by Orange County; Term Expires 6/30/17

Dave Moreau  
16 Kendall Drive  
Chapel Hill, NC 27517  
Appointed by Chapel Hill; Term Expires 6/30/17

Robert Morgan  
16 Kendall Drive  
Carrboro, NC 27510  
Appointed by Orange County; Term Expires 6/30/18

Heather Payne  
1300 Mason Farm Road  
Chapel Hill, NC 27514  
Appointed by Chapel Hill; Term Expires 6/30/19

Ruchir Vora  
522 Dogwood Drive  
Chapel Hill, NC 27516  
Appointed by Chapel Hill; Term Expires 6/30/20

**ORANGE WATER AND SEWER AUTHORITY**  
**MANAGEMENT TEAM**

Denise Battle, Customer Service Manager  
Mary Darr, P.E., Director of Engineering and Planning  
Greg Feller, Public Affairs Administrator  
Vishnu Gangadharan, P.E., Engineering Manager (Capital Projects)  
Stephanie Glasgow, M.E.S.H., P.H.R., Director of Human Resources and Safety  
Randy Horton, Water Distribution and Wastewater Collection Systems Manager  
Ed Kerwin, Executive Director  
John Kiviniemi, Wastewater Treatment and Biosolids Recycling Manager  
Kenneth Loflin, Water Supply and Treatment Manager  
Andrea Orbich, Executive Assistant  
Dan Przybyl, Director of Information Technology  
Ruth Rouse, A.I.C.P., Planning and Development Manager  
Kelly Satterfield, CPA, Finance and Procurement Manager  
Todd Spencer, P.E., Engineering Manager (System Development)  
Todd Taylor, P.E., General Manager of Operations  
Mary Tiger, Sustainability Manager  
Stephen Winters, CPA, Director of Finance and Customer Service

**GENERAL COUNSEL**

Robert Epting, Esquire  
Epting and Hackney, Attorneys at Law

## BUDGET PREPARATION AND CALENDAR FOR FY 2018

OWASA's budget process begins in the fall of each year. Many key elements are prescribed in the *Financial Management Policy* and major milestones are published in a budget calendar. The operating expense and capital improvements program budgets are prepared by the staff with guidance and review by the Board of Directors.

OWASA maintains its financial records and presents its financial reports as an *enterprise fund* and uses the *accrual method* for financial reporting; generally, revenue is recognized when earned and expenses are recognized when incurred. The annual budget is prepared using the *modified accrual method*. The primary differences between the two accounting methods are shown below.

<b>Transaction Type</b>	<b>Financial Reporting (Accrual)</b>	<b>Budgetary (Modified Accrual)</b>
Depreciation expense	<i>Included</i> as an expense	<i>Excluded</i> as an expense
Principal portion of debt payments	<i>Excluded</i> as an expense	<i>Included</i> as an expense
Vacation accrual expense	<i>Included</i> as an expense	<i>Excluded</i> as an expense
Assessment income	Recognized in year assessed	Recognized in year collected

The budget development process begins with preparation of line-item budget requests by each of OWASA's departments and includes estimates for any new initiatives or cost reduction strategies. A 15-year financial plan is used to develop alternatives including possible rate adjustments and debt financing arrangements to achieve full cost recovery and meet OWASA's financial obligations. The following calendar reflects the timeframe for the preparation of this budget.

### **FY 2018 Budget Calendar**

December, 2016	Distribute templates for the preparation of operating expense appropriations, capital equipment requests and departmental budget narratives.
January 20, 2017	Submission of Capital Equipment Request Forms, Budget Narratives and Departmental Operating Budget Requests to Budget Officer.
January 26, 2017	Board of Directors Work Session – review FY 2017 financial report for the six month period ended December 31, 2016.
March 9, 2017	Board of Directors Work Session – discussion of <i>Draft Annual Budget</i> and approve date of public hearings on the FY 2018 budget and rates.
March 23, 2017	Board of Directors Meeting – discussion of <i>Draft Annual Budget</i> and staff recommendation of rate adjustment and authorize staff to publicize proposal of no increase in monthly drinking water, reclaimed water and sewer rates.
April 27, 2017	Board of Directors Work Session – Board of Directors Meeting. Discussion of <i>Draft Annual Budget</i> and staff recommendation of rate adjustment.
May 25, 2017	Board of Directors Meeting – Public Hearing on the <i>Draft Final Annual Budget, Capital Improvements Budget</i> and Public Hearing on the proposed adjustments to rates, fees, and charges.
June 8, 2017	Board of Directors Work Session – adoption of <i>FY 2018 Annual Budget</i> and adoption of <i>Schedule of Rates, Fees and Other Charges</i> .
July 2017	Distribution of <i>FY 2018 Annual Budget</i> .

### Rate Projections and Budgetary Forecast

OWASA’s annual financial planning and budget development process includes a 15-year projection of revenues, expenditures, borrowing needs, and rate adjustments. Revenue projections are based on estimates of customer water demand and service area growth. Operating expenses are projected to increase based on a combination of anticipated inflation rates and specific expected cost increases or decreases.

Annual rate increases over the 15-year planning horizon are expected to be between 0% and 7%. However, because conditions change, OWASA updates its financial plan each year and actual rate increases could vary from the projection.

The following summarizes projections for the next ten years. Revenue is projected based on assumptions of per-customer water use and estimates of system growth. Operating expense projections are based on assumptions about the rate of inflation and specific anticipated expense increases or decreases. Future capital improvement investment projections are based on system growth expectations and our ongoing processes for identifying assets that are nearing the end of their useful lives.

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Rate increase</b>	0%	3%	3%	5%	7%	6%	6%	6%	0%	2%
	(numbers below in thousands)									
<b>Revenue</b>	\$37,763	\$38,933	\$40,387	\$42,454	\$45,140	\$48,150	\$51,247	\$54,504	\$55,764	\$57,118
<b>Operating expenses</b>	22,612	23,218	23,993	24,863	25,770	27,214	28,217	29,262	30,350	31,484
<b>Capital Improvements Projects</b>	23,456	16,897	17,674	23,174	20,081	20,292	22,040	26,208	26,824	27,322
<b>Debt service coverage ratio</b>	2.5	2.5	2.4	2.0	2.2	2.0	2.2	2.0	2.4	2.0



**STATEMENT OF INCOME, EXPENSE AND DEBT SERVICE (OPERATING)**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY 2017 Forecast</b>	<b>FY 2017 Forecast to FY 2017 Budget</b>	<b>FY 2018 Budget</b>	<b>FY 2018 Budget to FY 2017 Forecast</b>
<b>Operating Revenue</b>						
Water	\$17,894,907	\$17,923,072	\$17,751,188	-0.96%	\$17,824,170	0.41%
Sewer	16,514,394	16,578,878	16,766,524	1.13%	16,734,274	-0.19%
Reclaimed Water	442,785	439,110	433,859	-1.20%	450,060	3.73%
Service Initiation Fee	169,660	168,898	158,092	-6.40%	165,650	4.78%
Other	1,591,921	1,069,578	1,037,248	-3.02%	963,227	-7.14%
Refunds and Adjustments	<u>(244,297)</u>	<u>(325,766)</u>	<u>(224,010)</u>	-31.24%	<u>(246,089)</u>	9.86%
<b>Total Operating Revenue</b>	<u>36,369,370</u>	<u>35,853,770</u>	<u>35,922,901</u>	0.19%	<u>35,891,292</u>	-0.09%
<b>Operating Expense</b>						
General and Administrative	6,403,637	6,924,545	6,619,401	-4.41%	7,177,860	8.44%
Operations	<u>13,221,265</u>	<u>14,083,038</u>	<u>14,322,067</u>	1.70%	<u>14,742,617</u>	2.94%
<b>Total Operating Expense</b>	<u>19,624,902</u>	<u>21,007,583</u>	<u>20,941,468</u>	-0.31%	<u>21,920,477</u>	4.67%
<b>Net Operating Income</b>	16,744,468	14,846,187	14,981,433	0.91%	13,970,815	-6.75%
<b>Non-operating Revenue</b>						
Customer Fees	1,397,652	995,950	1,805,534	81.29%	1,416,657	-21.54%
Interest	<u>20,663</u>	<u>14,708</u>	<u>28,111</u>	91.13%	<u>38,441</u>	36.75%
<b>Total Net Income</b>	<u>18,162,783</u>	<u>15,856,845</u>	<u>16,815,078</u>	6.04%	<u>15,425,913</u>	-8.26%
<b>Debt Service</b>						
Existing	8,254,272	6,932,059	6,910,000	-0.32%	6,949,537	0.57%
New	<u>-</u>	<u>-</u>	<u>-</u>		<u>-</u>	
<b>Total Debt Service</b>	<u>8,254,272</u>	<u>6,932,059</u>	<u>6,910,000</u>	-0.32%	<u>6,949,537</u>	0.57%
<b>Net Income Less Debt Service</b>	<u>\$9,908,511</u>	<u>\$8,924,786</u>	<u>\$9,905,078</u>	10.98%	<u>\$8,476,376</u>	-14.42%
<b>Debt Coverage Ratio</b>	2.2	2.3	2.4		2.2	

This income statement discloses the source and application of OWASA's revenues and reflects the adequacy of operating revenues to meet the costs of operations and to satisfy debt service requirements. As presented in the Statement of Income and Expense (Capital/Non-Operating), excess revenues are available for transfer to the General Fund, the established funding mechanism for capital expenditures.

**STATEMENT OF INCOME AND EXPENSE (CAPITAL/NON-OPERATING)**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY 2017 Forecast</b>	<b>FY 2017 Forecast to FY 2017 Budget</b>	<b>FY 2018 Budget</b>	<b>FY 2018 Budget to FY 2017 Forecast</b>
General Fund						
Resources						
Transfer From Revenue	\$9,908,511	\$8,924,786	\$9,905,078	10.98%	\$8,476,376	-14.42%
Assessments	-	-	-		-	0.00%
Grants and Contributions	-	-	-		-	0.00%
Annual Income Available for Capital	9,908,511	8,924,786	9,905,078	10.98%	8,476,376	-14.42%
Transfer from Construction Fund (Loan Proceeds)	-	-	-	0.00%	2,700,000	0.00%
Total Available for Capital	9,908,511	8,924,786	9,905,078	10.98%	11,176,376	12.83%
Capital Expenditures						
Project Ordinances						
General Fund Contribution	7,538,017	13,648,000	9,513,000	-30.30%	12,385,000	30.19%
Funded by Bond Proceeds	0	0	0	0.00%	2,700,000	0.00%
Total Project Resolutions	7,538,017	13,648,000	9,513,000	-30.30%	15,085,000	58.57%
Capital Equipment	332,252	1,727,000	1,608,000	-6.89%	1,231,100	-23.44%
Total Capital Outlay	7,870,269	15,375,000	11,121,000	-27.67%	16,316,100	46.71%
Annual General Fund Balance	\$2,038,242	(\$6,450,214)	(\$1,215,922)	-81.15%	(\$5,139,724)	322.70%
General Fund Beginning Balance		25,108,579	27,872,710	11.01%	26,661,000	-4.35%
General Fund Ending Balance	27,872,710	19,158,365	26,661,000	39.16%	21,521,276	-19.28%
Project Funding	13,114,510	3,111,268	10,613,903	241.14%	4,566,276	-56.98%
Reserves						
Rate/Revenue Stabilization	1,750,000	1,725,097	1,725,097	0.00%	1,750,000	1.44%
Capital Improvements	2,800,000	3,200,000	3,200,000	0.00%	3,600,000	12.50%
Working Capital	10,208,200	11,122,000	11,122,000	0.00%	11,605,000	4.34%
<b>Unallocated General Fund Balance</b>	<u>-</u>	<u>-</u>	<u>-</u>		<u>-</u>	

**FUND BALANCE STATEMENTS**

**CONSOLIDATED SUMMARY - INTRAGOVERNMENTAL SERVICE FUNDS**

	<b>Beginning Balance</b>	<b>Revenues</b>	<b>Expenditures</b>	<b>Ending Balance</b>	<b>Change in Balance</b>
Revenue Fund	-	\$37,346,390	(\$37,346,390)	-	-
Bond Service Fund	0	6,949,537	(6,949,537)	0	-
General Fund	<u>26,661,000</u>	<u>11,176,376</u>	<u>(16,316,100)</u>	<u>21,521,276</u>	<u>(5,139,724)</u>
<b>Total</b>	<b><u>\$26,661,000</u></b>	<b><u>\$55,472,303</u></b>	<b><u>(\$60,612,027)</u></b>	<b><u>\$21,521,276</u></b>	<b><u>(\$5,139,724)</u></b>

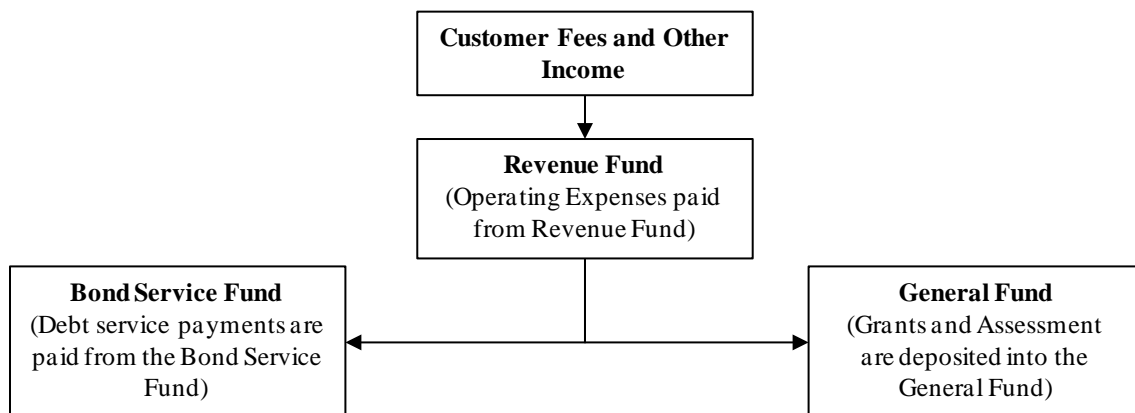
**OWASA's Fund Accounting Structure**

The Budget Ordinance reflects inflows and outflows of economic resources that represent activities related to the General Fund. Other funds presented here are either required contractually or are sub-accounts of the General Fund. Because of the close relationship of these funds to the General Fund, the following Fund Statements are included as attachments to the Budget Ordinance and are adopted as such. All funds, unrestricted and restricted, are treated as a part of the General Fund in OWASA's audited financial statements.

In accordance with OWASA's Amended and Restated Bond Order, Series 2001, all revenues from the operation of the water and sewer system are deposited into the Revenue Fund except for grants and assessment proceeds which are earmarked for other purposes. Revenues are first applied to the payment of current expenses and then to the repayment of outstanding debt. Any excess amounts above the cost of current operations and debt service are available for capital improvements and may be transferred, upon certification to the Trustee, to the General Fund. The Revenue Fund is administered by OWASA.

The Bond Service Fund is established by the Amended and Restated Bond Order, Series 2001 and serves as the mechanism for repaying the current portion of long-term debt. The Bond Order requires that the total of any principal and interest payments on long-term debt be transferred to the Bond Service Fund no later than 45 working days prior to the due date of such payments. This Fund is comprised of restricted assets and is administered by the Bond Trustee.

Establishment of the General Fund is required by statute and is administered by OWASA. Monies in the General Fund may be used for any lawful purpose and, in addition to bond proceeds, are OWASA's primary source to pay for capital improvements. Interest earnings in the General Fund are considered debt-pledged revenue and are to be transferred to the credit of the Revenue Fund. The following flowchart shows the interrelationship of the funds.



## Financial Reserves

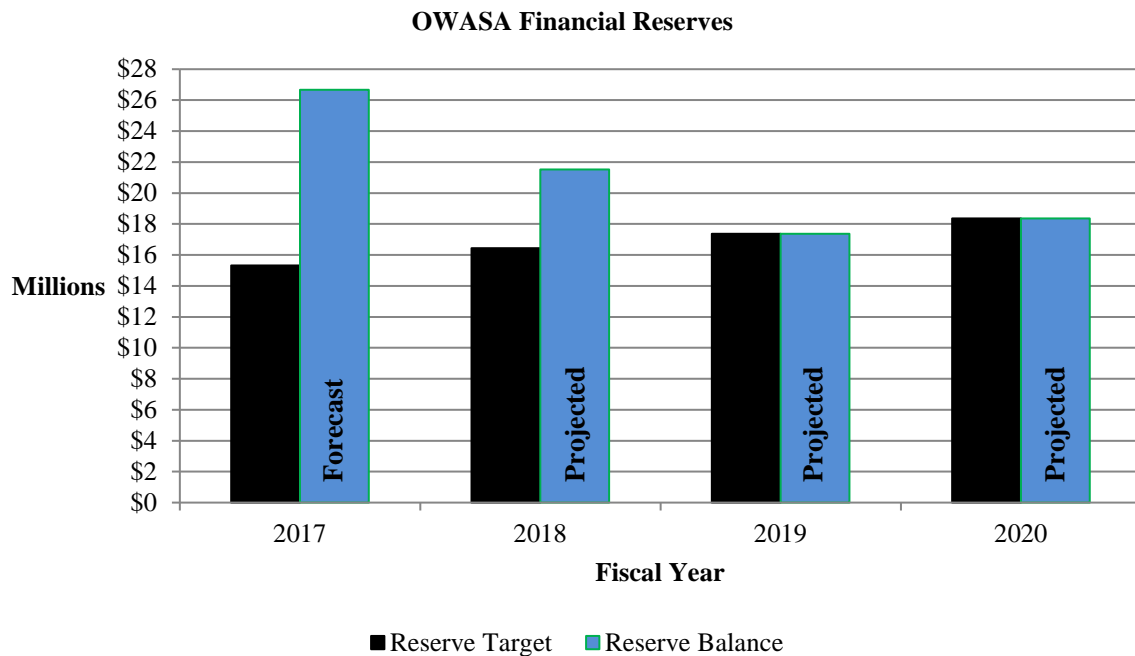
OWASA's *Financial Management Policy* (see Section III) includes certain financial performance objectives which are intended to help management and other stakeholders monitor the organization's financial condition. One of the objectives is to maintain adequate financial reserves and OWASA has established a minimum financial reserve target consisting of the following:

**Working Capital Reserve** – The greater of four months of Operating Expenses or 20% of the succeeding three years CIP budget.

**Capital Improvements Reserve** – At least 2% of depreciated capital assets. As of the end of FY 2016, 2% of depreciated capital assets was about \$5 million. We are contributing \$400,000 per year to this reserve until the target is met. This fund was established in FY 2009 and is projected to have a balance of \$3.6 million at the end of FY 2018.

**Rate/Revenue Stabilization** – At least 5% of projected water and sewer revenue. The balance in this reserve is projected to be about \$1.8 million at the end of FY 2018.

The graph below depicts the combined balance of the Working Capital, Capital Improvements, and Rate/Revenue Stabilization Reserve funds compared to the target.



OWASA implemented significant rate increases in fiscal years 2007 through 2010. These increases were necessary to fund expenditures in those years as well as to be in a better position to meet projected future years' funding requirements. Consistent with our plan, this strategy has resulted in a near-term balance in our reserves that is above our minimum target which we expect to draw down over the next few years. Future rate increases are projected to be at or near the rate of inflation.

**FUND BALANCE STATEMENTS**

**REVENUE FUND**

	<u>Water</u>	<u>Sewer</u>	<u>Total</u>
<b>Fund Balance July 1, 2017</b>			-
<b>Receipts</b>			
<b>Operating Revenue</b>			
Customer Billings	\$17,824,170	\$16,734,273	\$34,558,443
Reclaimed Water	450,060	-	450,060
Service Initiation Fee	82,825	82,825	165,650
Other	481,614	481,613	963,227
Refunds and Adjustments	(123,044)	(123,044)	(246,088)
<b>Total Operating Revenue</b>	18,715,625	17,175,667	35,891,292
<b>Non-Operating Revenue</b>			
Customer Fees	615,387	801,270	1,416,657
Interest Income	19,221	19,220	38,441
<b>Total Non-Operating Revenue</b>	634,608	820,490	1,455,098
<b>Total Receipts</b>	19,350,233	17,996,157	37,346,390
<b>Expenditures</b>			
Current Expense	(11,306,582)	(10,613,895)	(21,920,477)
Debt Service	(5,661,649)	(1,287,888)	(6,949,537)
<b>Total Expenditures</b>	(16,968,231)	(11,901,783)	(28,870,014)
<b>Net Revenue</b>			8,476,376
<b>To General Fund</b>			(8,476,376)
<b>Fund Balance June 30, 2018</b>			-
<b>Change in Available Balance</b>			-

**FUND BALANCE STATEMENTS**

**BOND SERVICE FUND**

<b>Fund Balance July 1, 2017</b>		-
<b>Receipts</b>		
Transfers from Revenue Fund	\$6,949,537	
Interest		
	<hr/>	
<b>Total Receipts</b>		6,949,537
<b>Expenditures</b>		
Debt Service	6,949,537	
	<hr/>	
<b>Total Expenditures</b>		<hr/> (6,949,537)
<b>Fund Balance June 30, 2018</b>		<hr/> -
<b>Change in Available Balance</b>		<hr/> <hr/> -

**FUND BALANCE STATEMENTS**

**GENERAL FUND**

<b>Fund Balance July 1, 2017</b>		\$26,661,000
<b>Receipts</b>		
Transfer From Revenue fund	8,476,376	
Transfer From Construction Fund (Loan Proceeds)	2,700,000	
Interest	-	
Assessments	-	
Grants and contributions	-	
<b>Total Receipts</b>		<u>11,176,376</u>
<b>Total Balance Before Expenditures</b>		37,837,376
<b>Expenditures</b>		
Capital Equipment/Leases	1,231,100	
Project Resolutions	15,085,000	
Transfer to Revenue Fund	0	
<b>Total Expenditures</b>		<u>(16,316,100)</u>
<b>Fund Balance June 30, 2018</b>		<u><u>\$21,521,276</u></u>
<b>Allocation of Fund Balance June 30, 2018</b>		
Project Funding	4,566,276	
Capital Reserves	16,955,000	
<b>Total Allocation</b>		<u><u>\$21,521,276</u></u>
<b>Unallocated General Fund Balance June 30, 2018</b>		<u>-</u>
<b>Change in Available Balance</b>		<u><u>(\$5,139,724)</u></u>

The Fund is projected to decrease by approximately \$5.1 million in FY 2018 as a result of a planned draw-down of reserves.

## FUNDS FLOW STATEMENT

### Revenue Fund

Operating Revenue	\$35,891,292	
Customer Fees	1,416,657	
Interest Income	38,441	
Total Revenues		37,346,390
Operating and Maintenance Expense	(21,920,477)	
<b>Bond Service Fund</b> (transfers to)	(6,949,537)	
Total Expenditures		(28,870,014)
Excess operating revenue (to be transferred to the General Fund)		8,476,376

### General Fund

Beginning Balance July 1, 2017	26,661,000	
Transfer from Revenue Fund	8,476,376	
Assessments	-	
Grants and Contributions	-	
Total General Fund Balance (available for allocation)		35,137,376
<b>Construction Fund</b> - Loan Proceeds		2,700,000
Total General Fund and Loan Proceeds		37,837,376
Project Resolutions	15,085,000	
Capital Equipment and Leases	1,231,100	
Total General Fund Expenditures		16,316,100
General Fund Ending Balance June 30, 2018		\$21,521,276
Project Resolutions	4,566,276	
Reserves	16,955,000	
Total Allocation of General Fund Balance		\$21,521,276



**PLANNED OPERATING EXPENDITURES**

**EXPENDITURES BY CATEGORY**

<b>Category</b>	<b>FY16 Actual</b>	<b>FY17 Budget</b>	<b>FY17 Forecast</b>	<b>FY17 Forecast to FY17 Budget Variance</b>	<b>FY18 Budget</b>	<b>FY18 Budget to FY17 Forecast Variance</b>
Personnel	\$11,234,312	\$11,618,534	\$11,720,817	0.9%	\$12,254,098	4.5%
Chemicals	1,888,609	2,009,458	2,082,502	3.6%	2,104,897	1.1%
Materials & Supplies	594,082	643,355	656,756	2.1%	720,779	9.7%
Utilities	1,863,243	1,544,210	1,537,607	-0.4%	1,688,475	9.8%
Maintenance	2,547,061	3,030,431	3,012,952	-0.6%	3,111,199	3.3%
Professional Services	1,394,992	1,781,279	1,542,912	-13.4%	1,534,448	-0.5%
Communication	170,089	169,047	164,465	-2.7%	171,087	4.0%
Printing & Reproduction	7,293	10,000	9,546	-4.5%	14,000	46.7%
Education and Development	105,541	145,520	133,314	-8.4%	154,475	15.9%
Other	221,217	222,749	220,594	-1.0%	327,019	48.2%
<b>Total</b>	<b>20,026,439</b>	<b>21,174,583</b>	<b>21,081,465</b>	<b>-0.4%</b>	<b>22,080,477</b>	<b>4.7%</b>
Construction Credits	(232,621)	(167,000)	(173,522)	3.9%	(160,000)	-7.8%
<b>Net Expense</b>	<b>\$19,793,818</b>	<b>\$21,007,583</b>	<b>\$20,907,943</b>	<b>-0.5%</b>	<b>\$21,920,477</b>	<b>4.8%</b>

**EXPENDITURES BY DIVISION  
FISCAL YEAR 2018**

	<b>General and Administrative</b>	<b>Operating Departments</b>	<b>Total Budget</b>
Personnel	\$4,867,095	\$7,387,004	\$12,254,099
Chemicals		2,104,896	2,104,896
Materials & Supplies	144,890	575,890	720,780
Utilities	191,300	1,497,174	1,688,474
Maintenance	312,205	2,798,994	3,111,199
Professional Services	1,303,480	230,968	1,534,448
Communication	153,687	17,400	171,087
Printing & Reproduction	7,000	7,000	14,000
Education and Development	86,320	68,155	154,475
Other	181,885	145,134	327,019
<b>Total</b>	<b>7,247,862</b>	<b>14,832,615</b>	<b>22,080,477</b>
Construction Credits	(70,000)	(90,000)	(160,000)
<b>Net Expense</b>	<b>\$7,177,862</b>	<b>\$14,742,615</b>	<b>\$21,920,477</b>

**PLANNED OPERATING EXPENDITURES**

**GENERAL AND ADMINISTRATIVE**

<b>Category</b>	<b>FY16 Actual</b>	<b>FY17 Budget</b>	<b>FY17 Forecast</b>	<b>FY17 Forecast to FY17 Budget Variance</b>	<b>FY18 Budget</b>	<b>FY18 Budget to FY17 Forecast Variance</b>
<b>Executive Director</b>						
Personnel Costs	\$819,182	\$791,523	\$810,305	2.4%	\$865,985	6.9%
Operating Expenditures	434,167	476,021	469,717	-1.3%	597,809	27.3%
Total Expenditures	1,253,349	1,267,544	1,280,022	1.0%	1,463,794	14.4%
<b>Customer Service</b>						
Personnel Costs	568,447	607,729	614,028	1.0%	637,563	3.8%
Operating Expenditures	168,666	161,000	164,112	1.9%	156,500	-4.6%
Total Expenditures	737,113	768,729	778,140	1.2%	794,063	2.0%
<b>Engineering</b>						
Personnel Costs	1,485,966	1,503,570	1,508,056	0.3%	1,573,933	4.4%
Operating Expenditures	115,825	200,328	85,796	-57.2%	172,330	100.9%
Total Expenditures	1,601,791	1,703,898	1,593,852	-6.5%	1,746,263	9.6%
<b>Human Resources</b>						
Personnel Costs	528,235	576,121	557,999	-3.1%	566,886	1.6%
Operating Expenditures	202,982	421,750	320,269	-24.1%	304,750	-4.8%
Total Expenditures	731,217	997,871	878,268	-12.0%	871,636	-0.8%
<b>Finance</b>						
Personnel Costs	630,661	647,575	652,497	0.8%	652,533	0.0%
Operating Expenditures	432,248	444,750	449,886	1.2%	444,005	-1.3%
Total Expenditures	1,062,909	1,092,325	1,102,383	0.9%	1,096,538	-0.5%
<b>Information Technology</b>						
Personnel Costs	444,543	455,056	494,102	8.6%	570,194	15.4%
Operating Expenditures	640,279	712,622	655,709	-8.0%	705,373	7.6%
Total Expenditures	1,084,822	1,167,678	1,149,811	-1.5%	1,275,567	10.9%
<b>Total G&amp;A</b>	6,471,201	6,998,045	6,782,475	-3.1%	7,247,861	6.9%
Construction Credit	(\$91,632)	(\$73,500)	(\$73,500)	0.0%	(\$70,000)	-4.8%
<b>Net Expense</b>	<b>\$6,379,569</b>	<b>\$6,924,545</b>	<b>\$6,708,975</b>	<b>-3.1%</b>	<b>\$7,177,861</b>	<b>7.0%</b>

**PLANNED OPERATING EXPENDITURES**

**OPERATING DEPARTMENTS**

<b>Category</b>	<b>FY16 Actual</b>	<b>FY17 Budget</b>	<b>FY17 Forecast</b>	<b>FY17 Forecast to FY17 Budget Variance</b>	<b>FY18 Budget</b>	<b>FY18 Budget to FY17 Forecast Variance</b>
<b>Water Supply &amp; Treatment</b>						
Personnel Costs	\$2,062,193	\$2,027,554	\$2,053,020	1.3%	\$2,108,642	2.7%
Operating Expenditures	2,820,630	2,846,404	2,955,484	3.8%	3,098,101	4.8%
Total Expenditures	4,882,823	4,873,958	5,008,504	2.8%	5,206,743	4.0%
<b>Water Distribution</b>						
Personnel Costs	2,098,859	2,183,668	2,225,722	1.9%	2,427,547	9.1%
Operating Expenditures	783,914	860,666	914,552	6.3%	897,413	-1.9%
Total Expenditures	2,882,773	3,044,334	3,140,274	3.2%	3,324,960	5.9%
<b>Wastewater Treatment</b>						
Personnel Costs	1,904,400	1,975,113	2,007,822	1.7%	2,046,367	1.9%
Operating Expenditures	2,671,753	2,849,981	2,762,275	-3.1%	2,845,259	3.0%
Total Expenditures	4,576,153	4,825,094	4,770,097	-1.1%	4,891,626	2.5%
<b>Sewer Collection</b>						
Personnel Costs	691,826	850,624	797,265	-6.3%	804,448	0.9%
Operating Expenditures	521,663	582,527	582,848	0.1%	604,838	3.8%
Total Expenditures	1,213,489	1,433,151	1,380,113	-3.7%	1,409,286	2.1%
<b>Total Operating Departments</b>	13,555,238	14,176,537	14,298,988	0.9%	14,832,615	3.7%
Construction Credit	(140,989)	(93,500)	(100,022)	7.0%	(90,000)	-10.0%
<b>Net Expense</b>	<b>\$13,414,249</b>	<b>\$14,083,037</b>	<b>\$14,198,966</b>	<b>0.8%</b>	<b>\$14,742,615</b>	<b>3.8%</b>

**PLANNED CAPITAL EQUIPMENT EXPENDITURES**

**FISCAL YEAR 2018**

**Capital Equipment Summary**

Vehicles	\$237,300
Computer hardware	26,000
Mower	15,600
Tapping machine	28,000
Backhoe	108,800
Dump truck	125,000
Boom truck	275,000
Tractor	42,500
Emergency backup pump	30,000
Laboratory equipment	50,000
Tractor and tank trailer	195,000
Skid steer	65,000
Tripod	23,500
Bush hogs (2)	9,400
	<hr/>
Total	<u>\$1,231,100</u>

**Definition of Capital Equipment Expenditures**

Expenditures budgeted to purchase or add to fixed assets with an estimated useful life greater than one year and costing \$5,000 or more

**DEBT SERVICE FOR FISCAL YEARS 2018-2037**

**Schedule of Existing Long-term Bonds and Loans**

	<b>Issue Dates</b>	<b>Interest Rates (Coupon)</b>	<b>Outstanding at 06/30/16</b>
Series 2004B Revenue Bonds	6/17/2004	Variable	20,000,000
Series 2010 Revenue Refunding Bonds	9/30/2010	3.0% to 5.0%	17,225,000
Series 2014 Revenue Refunding Bonds	12/18/2014	3.0% to 5.0%	15,695,000
Series 2015 Revenue Refunding Bonds	7/1/2015	1.96%	8,915,000
Total Bonded Debt			<u>\$61,835,000</u>
Loan from the State of North Carolina	10/4/2014	0%	<u>\$5,576,000</u>

**Schedule of Existing and Potential Annual Debt Service**

<b>Fiscal Year Ending June 30</b>	<b>Existing Debt Service</b>	<b>Potential Debt Service (Estimated)</b>	<b>Total Existing and Potential Debt Service</b>
2018	\$6,949,537	\$0	\$6,949,537
2019	6,968,385	795,883	7,764,268
2020	5,782,207	1,517,004	7,299,211
2021	6,345,125	1,517,004	7,862,129
2022	6,399,375	3,441,471	9,840,846
2023	6,400,075	3,441,471	9,841,546
2024	6,412,150	5,667,953	12,080,103
2025	6,419,675	5,667,953	12,087,628
2026	6,432,475	8,466,777	14,899,252
2027	4,480,500	8,769,766	13,250,266
2028	4,486,325	11,814,517	16,300,842
2029	4,495,250	11,814,517	16,309,767
2030	1,771,800	15,065,147	16,836,947
2031	1,768,400	15,065,147	16,833,547
2032	1,892,500	22,166,688	24,059,188
2033	328,000	22,166,688	22,494,688
2034	328,000	22,166,688	22,494,688
2035		22,166,688	22,166,688
2036		22,166,688	22,166,688
2037		22,166,688	22,166,688
<b>Total</b>	<u><b>\$77,659,779</b></u>	<u><b>\$226,044,738</b></u>	<u><b>\$303,704,517</b></u>

**Potential Debt**

Based on OWASA's long-range financial plan, there is a potential need for bond financing of capital improvements in future years. The "potential debt service" shown above relates to this potential need.

**Debt Coverage**

OWASA's Bond Order requires a minimum annual required Debt Service Coverage Ratio of 1.2. The minimum annual debt service coverage ratio shall be 2.0; provided, however, that the minimum coverage ratio for any single year when severe weather anomalies or other unforeseen circumstances occur which negatively impact revenues and/or expenses shall not be less than 1.5 during the Fiscal Year.

## CAPITAL IMPROVEMENTS PROGRAM BUDGET

Capital Improvements Program (CIP) expenditures are defined as those that pay for the addition, rehabilitation, and replacement of OWASA-owned water, sewer, and reclaimed water system infrastructure and other depreciable assets. In general, CIP projects are identified as those projects that exceed \$10,000 in value and provide a system component that has an expected service life of at least five years. The five-year CIP is reviewed and updated annually.

CIP needs are identified by hydraulic models, risk/prioritization models, OWASA's Energy Management Program, master planning studies, condition assessment, staff observations, regulatory or contractual requirements, repair and maintenance work order evaluation, community feedback, and strategic planning. After CIP projects are identified, a staff team prioritizes projects using a weighted criteria model. In addition to the results of this project prioritization, staff accounts for project interrelationships, coordination with other entities (Towns, Department of Transportation, etc.), project urgency, implementation considerations, and other external schedule constraints.

The FY 2018-2022 CIP budget totals approximately \$96 million.

In FY 2017, we began a project to implement an Advanced Meter Infrastructure (AMI) system; installation is expected to begin in FY 2018. The project is expected to provide more detailed water use information that will enhance our ability to deliver customer service. It will also improve our operations, maintenance, and planning efforts.

The Board has approved a CIP budget for FY 2018 for over 50 projects, including construction of sanitary sewer infrastructure to serve the Historic Rogers Road Area (HRR) for which OWASA will be reimbursed by the Towns of Carrboro and Chapel Hill, and Orange County. The total FY 2018 budget, not including the HRR project, is \$15,085,000.

We are confident that the level of investment presented in this CIP leaves OWASA well-positioned to remain the sustainable, responsible, and environmentally focused organization that our community expects.

The projects listed below have been identified for funding in FY 2018.

### **CAPITAL IMPROVEMENTS PROJECTS FUNDED IN FY 2018**

<b>Project Description</b>	<b>Purpose of Project</b>	<b>Amount</b>
<b>Raw Water Supplies</b>		
Annual payment to preserve OWASA's Level II Jordan Lake storage allocation	Our Jordan Lake storage allocation serves as insurance against future water shortages	\$5,000
Quarry Reservoir Development – annual contribution to a no-fault well repair fund	Required by Special Use Permit	15,000
Cane Creek sodium permanganate feed systems	Replace aging assets and reduce operational and safety risk	20,000
University Lake pump station improvements	Replacement of system due to age and condition	65,000
<b>Water Transmission and Distribution</b>		
Advanced Metering Infrastructure (AMI) System	Implementation of a fixed data collection network that will replace/retrofit all drinking water meters (approximately 21,000 meters). Construction will begin in FY 2018	1,500,000
Galvanized water main replacements	Programmatic replacement of most of the galvanized water mains in our system due to frequent breaks	96,000

<b>Project Description</b>	<b>Purpose of Project</b>	<b>Amount</b>
Dobbins Drive water main condition assessment	Inspection and analysis of the water main	50,000
Hillsborough Street water main replacement	Replacement due to age and condition	1,700,000
Water distribution system hydraulic model	Analysis of the water distribution system	40,000
Lake Ellen water main replacement	Replacement due to age and condition	160,000
Brandywine Road water main replacement	Replacement due to age and condition	739,000
High priority water main replacement	Replacement due to age and condition	107,000
Cameron Avenue water main design alternatives assessment	Analyze alternatives for rehabilitating or replacing water main in high-traffic area	25,000
<b>Water Treatment and Supply</b>		
WTP generator building louvers replacement	Selection and installation of new louvers to replace existing inoperable equipment	40,000
WTP facility security upgrades	Improve the security of the WTP	110,000
WTP and adjacent facilities paving	Rehabilitation due to age and condition	25,000
WTP switchgear upgrade	Reduce safety risk and increase operational efficiency, reliability, and flexibility	60,000
WTP flash mix basins isolation valve replacement	Replacement due to age and condition	25,000
WTP sedimentation basin rehabilitation	Rehabilitation due to age and condition	102,000
WTP concrete condition assessment	Comprehensive and prioritized evaluation of concrete facilities	75,000
WTP filter media and backwash pump replacement	Replacement due to age and condition	880,000
WTP belt press rehabilitation	Replacement due to age and condition	65,000
WTP risk assessment	Analyze and identify the plant's risk exposure	75,000
WTP fluoride feed system improvements	Enhance system reliability	150,000
<b>Wastewater Collection</b>		
Sanitary sewer rehabilitation	Design and rehabilitation of deteriorated sewer mains and manholes	1,249,000
Sanitary sewer condition assessment	Inspection and analysis of the wastewater collection system	41,000
Replacement of Bolinwood Drive sewer interceptor	Replacement due to age and condition	150,000
Replacement of the Little Creek interceptor	Replacement due to age, condition, and capacity limitations	552,000

<b>Project Description</b>	<b>Purpose of Project</b>	<b>Amount</b>
Sanitary sewer easement creek crossings upgrades	Design and construction of upgraded crossings to limit damage to creek banks	20,000
Rogers Road sanitary sewer extension	Gravity sanitary sewer system for an area not previously served. Project is part of an effort by the county and local towns to provide sewer service to this area.	357,000
Rogers Road sanitary sewer extension reimbursement	Project costs will be reimbursed by the county and towns	(357,000)
Eastowne, Eubanks and Meadowmont I pump stations rehabilitation	Rehabilitation due to age and condition	790,000
Rogerson Drive pump station rehabilitation	Rehabilitation due to age and condition	925,000
Knolls pump station rehabilitation	Rehabilitation due to age and condition	55,000
Dobbins Drive interceptor replacement	Replacement due to age, condition, and capacity limitations	55,000
Sanitary sewer hydraulic model	Analysis of the wastewater collection system	151,000
Rogerson Drive force main redundancy evaluation	Analysis of redundancy in the system	45,000
Kenan Stadium interceptor replacement	Rehabilitation due to age and condition	575,000
Rogerson Drive force main emergency repair and rehabilitation	Rehabilitation due to age and condition	1,250,000
<b>Wastewater Treatment and Disposal</b>		
Coatings program	Corrosion control of key facility components and structures	200,000
WWTP digester rehabilitation	Rehabilitation due to age and condition	25,000
WWTP intermediate pump stations rehabilitation/replacement	Rehabilitation due to age and condition	472,000
WWTP secondary clarifier rehabilitation	Evaluation of the condition of aging assets	150,000
WWTP main potable water line backflow preventer installation	Protect public water system	25,000
WWTP non-drinking water pump replacements	Replace three pumps which are at the end of their useful lives	120,000
WWTP solids thickening system improvements	Replacement of equipment due to age and condition	300,000
WWTP pump stations rehabilitation and replacement	Rehabilitation and replacement due to age and condition	90,000
WWTP supervisory control and data acquisition system (SCADA) upgrade	Increase operational efficiency	150,000
WWTP warehouse improvements	Increase safety and operational efficiency	25,000
WWTP digester/fermenter rehabilitation and mixing and pumping improvements	Rehabilitation due to age and condition and improvements to enhance operability	40,000



<b>Project Description</b>	<b>Purpose of Project</b>	<b>Amount</b>
WWTP primary sludge pump station rehabilitation and old lab building demo	Rehabilitation due to age and condition	50,000
WWTP rehabilitation and replacement of chemical building and piping	Rehabilitation and replacement due to age and condition	125,000
WWTP risk assessment	Analyze and identify the plant's risk exposure	75,000
WWTP pavement improvements	Rehabilitation due to age and condition	20,000
Building envelope rehabilitation	Extend the useful life of aging assets and reduce energy use	236,000
<b>Central Office and Administration</b>		
Administration building HVAC system	Replacement of HVAC system due to age and condition	900,000
Administration building LED lighting retrofit	Reduce energy use and improvement performance	95,000
<b>Total Capital Improvements Projects Funded in FY 2018</b>		
		\$15,085,000

**OWASA CAPITAL IMPROVEMENTS PROGRAM FIVE-YEAR OVERVIEW FOR FY 2018-2022**

<b>Project Category:</b>	<b>Annual Totals</b>					<b>5-Year Total</b>
	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2018-22</b>
Raw Water Supply Sources	105,000	1,095,000	2,070,000	20,000	305,000	3,595,000
Raw Water Transmission	0	40,000	0	0	0	40,000
Water Treatment Facilities	1,607,000	2,686,000	2,027,000	2,585,000	2,729,000	11,634,000
Finished Water Pumping	0	75,000	0	0	0	75,000
Finished Water Storage	0	0	0	0	0	0
Water Transmission and Distribution	4,417,000	8,773,000	6,053,000	5,065,000	5,610,000	29,918,000
Wastewater Collection Lines	2,793,000	4,614,000	2,435,000	4,247,000	5,561,000	19,650,000
Wastewater Pump Stations	3,155,000	1,840,000	1,046,000	326,000	398,000	6,765,000
Wastewater Treatment and Disposal	2,013,000	3,253,000	3,266,000	4,957,000	7,911,000	21,400,000
Reclaimed Water Facility Rehabilitation	0	0	0	0	162,000	162,000
Central Office and Operations	995,000	1,080,000	0	474,000	498,000	3,047,000
<b>FY 2018 - 2022 CIP</b>	<b>\$15,085,000</b>	<b>\$23,456,000</b>	<b>\$16,897,000</b>	<b>\$17,674,000</b>	<b>\$23,174,000</b>	<b>\$96,286,000</b>

**SECTION II**

**OVERVIEW OF OWASA DEPARTMENTS**

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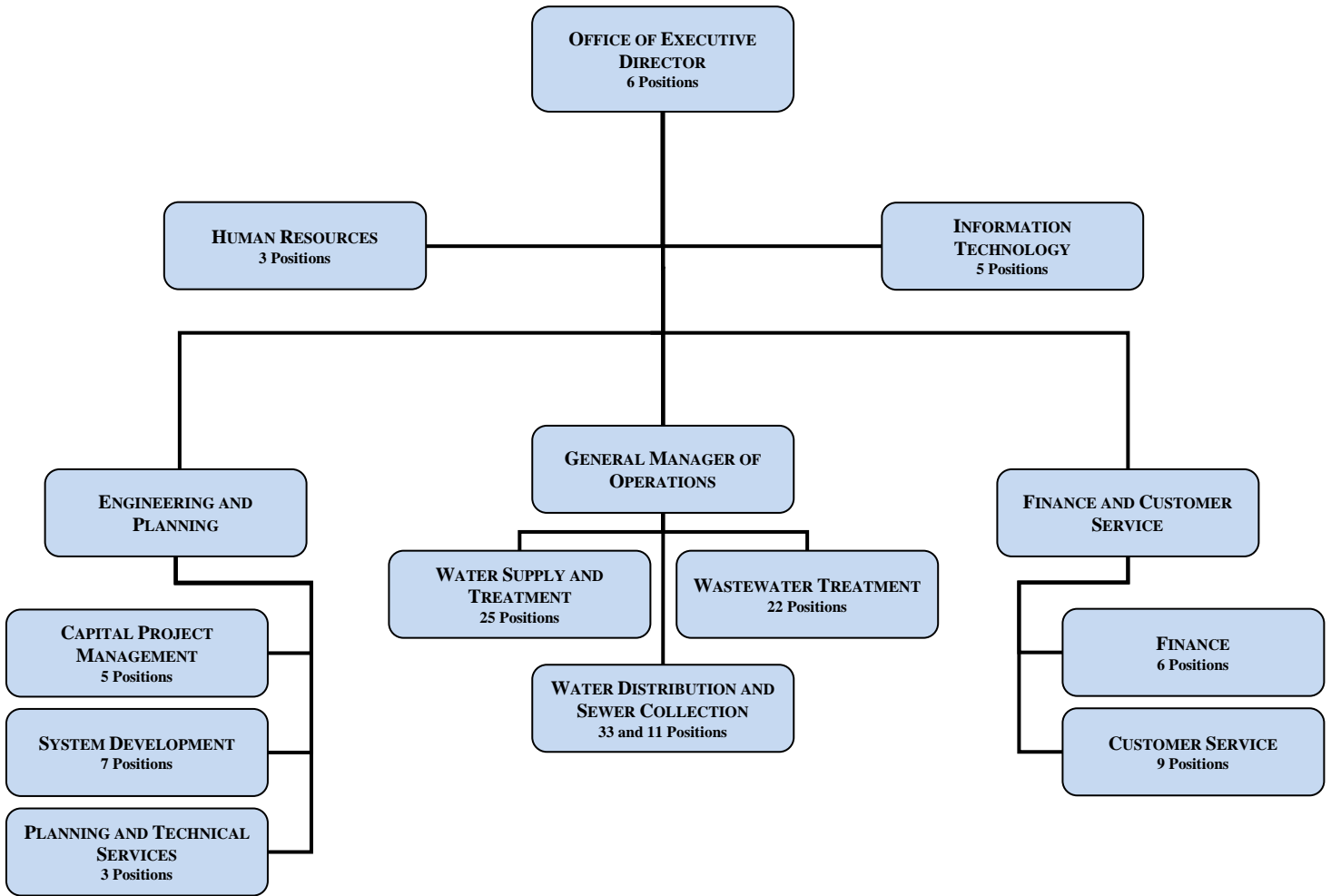
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**ORANGE WATER AND SEWER AUTHORITY STAFF / DEPARTMENT STRUCTURE**  
 (Number of Positions Funded for FY 2018 Shown)



**OFFICE OF EXECUTIVE DIRECTOR**  
(General and Administrative)

**MISSION**

Administrative functions include the Board of Directors, Executive Director, and support personnel involved in the general management of OWASA.

The Board of Directors is responsible for managing and operating OWASA in accordance with authority derived from the North Carolina General Statutes, OWASA’s Bond Order, OWASA’s Bylaws, the 1976 Agreements of Sale and Purchase with the University of North Carolina at Chapel Hill, the Town of Carrboro, and the Town of Chapel Hill, and other legal and organizational documents. The Board sets the overall mission and policies of the organization, appoints the Executive Director, General Counsel, and auditors, and provides oversight and monitoring of OWASA’s activities.

The Executive Director is the Chief Administrative Officer responsible for the overall management and supervision of OWASA’s services. The Executive Director employs and organizes the staff, assigns responsibilities, and is responsible for carrying out the policies and directives of OWASA. A small support staff provides direct assistance to the Executive Director, including Public Affairs, Sustainability and Administrative Support.

**SUMMARY OF ACTIVITIES**

- Provide leadership to ensure that the organization's overall mission is accomplished.
- Promote and maintain outstanding service and communications with OWASA’s customers.
- Provide the Board of Directors timely support and information.
- Ensure that all water, wastewater, and reclaimed water facilities and programs are operated in compliance with all applicable standards.
- Develop, implement, and maintain effective long-term financial, operational and environmental sustainability plans.
- Implement sound fiscal policies, budgets, and controls.
- Provide high-level technical and administrative direction and support for the sustainability and resource management activities throughout the organization.
- Maintain effective coordination, cooperation, and communication with local governments, the University of North Carolina at Chapel Hill, State and Federal agencies, and continue involvement in civic, professional, and community affairs activities.
- Promote continued innovation and creativity in providing services in a more effective, cost-efficient and sustainable manner.
- Promote training and development of all employees to improve OWASA's services.
- Motivate employees and encourage teamwork throughout the organization.

**KEY FOCUS AREAS FOR FY 2018**

<b>Strategic Initiative</b>	<b>Objective</b>
Provide High Quality and Reliable Services	<ul style="list-style-type: none"> <li>• Engage the community and stakeholders to ensure the public’s trust and confidence and to establish actions needed for water and wastewater improvements</li> </ul>
Implement Advanced Metering Infrastructure	<ul style="list-style-type: none"> <li>• Provide executive support on process, performance and resources</li> </ul>
Implement an Energy Management Plan	<ul style="list-style-type: none"> <li>• Provide resources to implement plan as approved by the Board</li> <li>• Update plan to meet Board-established objectives</li> </ul>
Implement Diversity and Inclusion Program	<ul style="list-style-type: none"> <li>• Diversity of OWASA’s workforce reflects the communities it serves</li> <li>• Inclusive work environment for everyone that encourages and supports each team member to contribute to their full ability towards OWASA’s mission</li> </ul>

**OFFICE OF THE EXECUTIVE DIRECTOR**

**Three-year Comparison  
Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$615,978	\$605,426		\$615,999		\$653,322	
Payroll Taxes & Employee Benefits	<u>203,204</u>	<u>186,098</u>		<u>194,306</u>		<u>212,663</u>	
Total Personnel Costs	819,182	791,524	-3%	810,305	2%	865,985	7%
<b>Other Operating Expense</b>							
Materials and Supplies	4,232	11,440		11,440		7,310	
Utilities	59,254	56,750		57,778		55,000	
Maintenance	0	0		0		0	
Professional Services	294,225	314,329		311,830		441,830	
Communication	41,333	50,212		41,664		45,287	
Printing and Reproduction	232	1,100		88		1,100	
Education and Development	6,935	14,880		14,880		14,580	
Other	<u>27,956</u>	<u>27,310</u>		<u>32,037</u>		<u>32,702</u>	
Total Operating Expenditures	434,167	476,021	10%	469,717	-1%	597,809	27%
Total Expenditures	<u>1,253,349</u>	<u>1,267,545</u>	1%	<u>1,280,022</u>	1%	<u>1,463,794</u>	14%
Construction Credit	(91,632)	(73,500)		(73,500)		(70,000)	
<b>Net Expense</b>	<u>\$1,161,717</u>	<u>\$1,194,045</u>	3%	<u>\$1,206,522</u>	1%	<u>\$1,393,794</u>	16%

<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	5.5	5.5	6

**CUSTOMER SERVICE**  
(General and Administrative)

**MISSION**

The Customer Service Department is responsible for establishing and promoting quality service for OWASA customers. Areas of responsibility include greeting callers and visitors; billing and collecting water and sewer accounts, septage accounts, and special assessments; accounting for accounts receivable; investigating water theft; responding to inquiries and requests from customers and others; investigating special circumstances that might account for high consumption or billing irregularities; and support of other departments with analyses and information.

**SUMMARY OF ACTIVITIES**

- Courteously greet all callers and visitors to OWASA, identifying their needs and providing service.
- Operate and maintain the customer billing system to produce accurate and timely bills.
- Collect payments and deposit revenues.
- Develop, interpret and administer OWASA policies relating to customer service and billing and collecting accounts.
- Provide reports and technical assistance to the organization regarding sales, collections, accounts and other customer service information.
- Develop the knowledge and skills of employees by providing training in computer software, telephone etiquette and workshops in customer service techniques.
- Enforce OWASA policies concerning customer service related matters.
- Oversee OWASA's participation in the North Carolina Debt Setoff Program.

**KEY FOCUS AREAS FOR FY 2018**

<b>Strategic Initiative</b>	<b>Objective</b>
Implement Advanced Metering Infrastructure	<ul style="list-style-type: none"><li>• Provide key support for implementing system</li><li>• Improve business processes</li><li>• Transition to using new tools and functionality</li><li>• Enhance service to customers</li></ul>

**CUSTOMER SERVICE**

**Three-year Budget Comparison  
Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$395,630	\$410,698		\$416,100		\$430,178	
Payroll Taxes & Employee Benefits	<u>172,817</u>	<u>197,031</u>		<u>197,928</u>		<u>207,385</u>	
Total Personnel Costs	568,447	607,729	7%	614,028	1%	637,563	-1%
<b>Other Operating Expense</b>							
Materials and Supplies	4,304	3,500		3,883		3,000	
Utilities	1,500	1,500		1,500		1,500	
Maintenance	1,180	0		0		0	
Professional Services	55,513	45,000		44,872		40,000	
Communication	79,553	75,000		75,000		75,000	
Printing and Reproduction	1,063	1,000		1,000		1,000	
Education and Development	2,150	5,000		7,772		6,000	
Other	<u>23,403</u>	<u>30,000</u>		<u>30,085</u>		<u>30,000</u>	
Total Operating Expenditures	168,666	161,000	-5%	164,112	2%	156,500	-4%
Total Expenditures	<u>737,113</u>	<u>768,729</u>	4%	<u>778,140</u>	1%	<u>794,063</u>	-2%
Construction Credit	0	0		0		0	
<b>Net Expense</b>	<u>\$737,113</u>	<u>\$768,729</u>	4%	<u>\$778,140</u>	1%	<u>\$794,063</u>	-2%

<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	9	9	9

<b>Key Performance Measurements</b>				
	<b>Goal</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Workload</b>				
Customer accounts	N/A	21,239	21,385	21,526
Number of calls received	N/A	29,423	29,210	30,092
<b>Effectiveness</b>				
Percentage of bills issued on time	100%	100%	100%	95%
Average length of call (minutes)	<2.0	2.3	2.3	1.31



## **ENGINEERING AND PLANNING**

(General and Administrative)

### **MISSION**

The Engineering and Planning Department is responsible for four primary functions: Management of system development projects, which includes the review of construction plans and inspection of construction to ensure that water and sewer work accomplished by outside entities (private developers, etc.) is accomplished in accordance with OWASA's Standards and Specifications prior to OWASA taking ownership and assuming operations/maintenance responsibility for these systems; Management of the Capital Improvement Program, which includes execution of design and construction for large-scale repair, renovation, replacement and upgrade projects as necessary to maintain the reliability and efficient operations of OWASA's water, sewer and reclaimed water infrastructure; Asset management, which includes assessing and prioritizing infrastructure improvements needed to achieve desired customer and environmental service levels, minimizing asset failure, and ensuring long-term viability of water, sewer and reclaimed water facilities and systems; and Planning, which includes long-range and strategic master planning functions such as demand forecasting, land management and the use of various modeling tools that guide policy and capital investment decisions to ensure OWASA remains capable of meeting the community's current and future utility needs. Planning functions also include the ongoing management and improvement of OWASA's Geographic Information System (GIS) data, especially the location and attribute details of underground water, sewer and reclaimed water infrastructure.

### **SUMMARY OF ACTIVITIES**

- Review construction drawings and inspect construction work performed by third party entities.
- Provide regular updates and revisions of OWASA's standard engineering specifications and procedures.
- Maintain as-built and record drawings for all water, sewer and reclaimed water facilities, support facilities, and utility work accomplished in the service area.
- Produce small-scale in-house designs, primarily for use by OWASA crews.
- Complete studies and modeling efforts to determine the engineering and economic feasibility of various approaches to the repair and upgrade of OWASA's infrastructure.
- Manage and direct consultant efforts for developing project designs and biddable contract documents and management of contract administrative requirements.
- Develop the five-year Capital Improvements Program.
- Maintain and update the Long-Range Water Supply Plan to ensure a reliable and high-quality supply of water for the community for the next 50 years.
- Direct land management issues including acquisition of necessary utility easements, forestry management and efforts to protect OWASA watersheds.
- Provide engineering support for the operation and maintenance of water, wastewater and reclaimed water facilities and infrastructure.
- Maintain the Asset Management Program to assess and prioritize water, wastewater, reclaimed water and support facility infrastructure improvements using system models, renewal/replacement model and prioritization tools.
- Manage and maintain OWASA's GIS that integrates GIS technology with the many operating and business functions of the organization.

### **KEY FOCUS AREAS FOR FY 2018**

<b>Strategic Initiative</b>	<b>Objective</b>
Provide reliable and high-quality supply of water for the next 50 years	<ul style="list-style-type: none"><li>• Update Long-Range Water Supply Plan</li></ul>
Maintain water, wastewater, and reclaimed water systems to ensure service levels are sustained	<ul style="list-style-type: none"><li>• Execute capital improvements program</li></ul>
Implement Advanced Metering Infrastructure	<ul style="list-style-type: none"><li>• Provide key support for implementing system</li></ul>
Management of OWASA lands	<ul style="list-style-type: none"><li>• Develop a community engagement plan for Forestry Management</li></ul>

**ENGINEERING AND PLANNING**

**Three-year Budget Comparison**

**Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$1,117,448	\$1,098,057		\$1,098,500		\$1,139,753	
Payroll Taxes & Employee Benefits	<u>368,518</u>	<u>405,513</u>		<u>409,556</u>		<u>434,180</u>	
Total Personnel Costs	1,485,966	1,503,570	1%	1,508,056	0%	1,573,933	-2%
<b>Other Operating Expense</b>							
Materials and Supplies	8,700	17,365		12,722		19,080	
Utilities	8,571	8,900		8,900		8,900	
Maintenance	1,377	2,500		2,500		2,500	
Professional Services	36,577	135,700		40,756		105,000	
Communication	422	400		297		400	
Printing and Reproduction	13,681	22,005		14,207		24,860	
Education and Development	0	0		0		0	
Other	<u>46,497</u>	<u>13,458</u>		<u>6,415</u>		<u>11,590</u>	
Total Operating Expenditures	115,825	200,328	73%	85,797	-57%	172,330	-2%
Total Expenditures	<u>1,601,791</u>	<u>1,703,898</u>	6%	<u>1,593,853</u>	-6%	<u>1,746,263</u>	-2%
Construction Credit	0	0		0		0	
<b>Net Expense</b>	<u>\$1,601,791</u>	<u>\$1,703,898</u>	6%	<u>\$1,593,853</u>	-6%	<u>\$1,746,263</u>	-2%

<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	14	14	15

<b>Key Performance Measurements</b>				
	<b>Goal</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
Actual capital project expenditures as a percentage of budget	>90%	76%	71%	71%
Average plan review time (working days)	<15.0	7.0	6.5	7.5
Capital projects communication plans' effectiveness rating (on a scale of 1 to 5 with 5 the highest)	>4.0	4.0	4.2	4.1

**HUMAN RESOURCES**  
(General and Administrative)

**MISSION**

The Human Resources Department is responsible for the management, creation and administration of Human Resources and Safety initiatives. This includes recruitment and selection of new hires; policy compliance and development; benefits administration; compensation and classification policies; employee discipline and rewards; workers' compensation; employee insurance management; and employee records management.

The Human Resources Department monitors changes in state and federal human resource and safety regulations and laws to assure the timely updates and compliance of OWASA's Human Resource and Safety policies and practices.

The Human Resources Department reviews and proposes revisions to employee benefits, classification and pay plans to assure that OWASA remains in a competitive compensation relationship with the labor market.

The role of the Department is to assure both management and employees that human resources matters are being handled both fairly, equitably, and without discrimination in accordance with good human resource practices and in compliance with applicable policies, regulations, and laws.

**SUMMARY OF ACTIVITIES**

- Promote responsive and courteous customer service in all activities.
- Administer the Compensation and Classification Plan for the organization and ensure the compensation and benefits package is competitive in the market place.
- Provide a safety program to enhance safety awareness, prevent worker injuries, and promote safe work practices. Manage the workers' compensation and return to work programs.
- Manage the recruitment and selection process to ensure capable candidates for vacant positions.
- Process employee benefit and insurance plans tasks in a timely and appropriate manner.
- Review employee training and development programs.
- Review human resource policies and practices and make recommendations for revisions.
- Encourage uniformity and timeliness in processing performance appraisals.
- Actively promote equal employment/affirmative action objectives.
- Promote good employee relations and a positive working environment.
- Promote the general well-being of the work force through counseling, special personal need assistance, and advice to employees and managers through available resources.
- Ensure that job applicants are evaluated in accordance with the Americans with Disabilities Act.

**KEY FOCUS AREAS FOR FY 2018**

<b>Strategic Initiative</b>	<b>Objective</b>
Evaluate employee compensation, benefits, and performance evaluation systems and implement improvements	<ul style="list-style-type: none"> <li>• Enhance OWASA's pay for performance system</li> </ul>
Implement Advanced Metering Infrastructure	<ul style="list-style-type: none"> <li>• Provide key human resource support for implementing of system</li> </ul>
Diversity and Inclusion	<ul style="list-style-type: none"> <li>• Establish OWASA as an employer that values Diversity and Inclusion.</li> </ul>

**HUMAN RESOURCES**

**Three-year Budget Comparison  
Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$202,018	\$201,758		\$201,527		\$208,813	
Payroll Taxes & Employee Benefits	<u>326,217</u>	<u>374,363</u>		<u>356,472</u>		<u>358,073</u>	
Total Personnel Costs	528,235	576,121	9%	557,999	-3%	566,886	-2%
<b>Other Operating Expense</b>							
Materials and Supplies	1,940	5,700		5,699		5,800	
Utilities	1,641	1,750		1,750		1,750	
Maintenance	0	0		0		0	
Professional Services	141,051	336,500		234,000		199,200	
Communication	31,450	24,000		25,021		29,000	
Printing and Reproduction	536	800		800		1,000	
Education and Development	2,298	9,000		9,000		9,000	
Other	<u>24,066</u>	<u>44,000</u>		<u>44,000</u>		<u>59,000</u>	
Total Operating Expenditures	202,982	421,750	108%	320,270	-24%	304,750	-2%
Total Expenditures	<u>731,217</u>	<u>997,871</u>	36%	<u>878,269</u>	-12%	<u>871,636</u>	-2%
Construction Credit	0	0		0		0	
<b>Net Expense</b>	<u>\$731,217</u>	<u>\$997,871</u>	36%	<u>\$878,269</u>	-12%	<u>\$871,636</u>	-2%

<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	3	3	3

<b>Key Performance Measurements</b>				
	<b>Goal</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
Vacancies as a percentage of total authorized positions	<8.0%	5.9%	7.3%	9.3%
At fault EEOC complaints	0	0	0	0
Diversity percentages				
Racial minorities	25-30%	20%	21%	26%
Female gender	25-30%	21%	23%	22%
Number of injuries, illnesses or lost workdays compared to a common exposure base of 100 full-time workers	<3.0	2.3	2.3	1.5

**FINANCE**

(General and Administrative)

**MISSION**

The Finance Department is responsible for maintaining the fiscal affairs of OWASA in a professional manner and consistent with generally accepted accounting principles and statutory requirements. Areas of responsibility include accounts payable, accounts receivable, general ledger, asset records, cash investment, payroll, cost accounting, purchasing, budget development, revenue and expenditure forecasting, grants management, and financial reporting. The Finance Department is also responsible for oversight and coordination of studies of rates and fees, and the issuance of revenue bonds.

Data recorded and maintained by the Finance Department provides decision-support for the Board of Directors, Executive Director, and department managers.

**SUMMARY OF ACTIVITIES**

- Promote responsive and courteous customer service in all activities.
- Manage OWASA’s cash and investments to optimize return while maintaining adequate liquidity to meet expenditures in a timely manner.
- Process invoices timely and accurately taking advantage of discounts for payments and maintaining effective relationships with vendors.
- Process payroll accurately and timely.
- Provide prompt and accurate management reports.
- Monitor budget performance.
- Develop budget for subsequent fiscal year.
- Maintain general ledger and related subsidiary ledgers.
- Maintain a reliable and timely cost accounting system.
- Administer the *Financial Management Policy*.
- Review adequacy of rates and fees to generate necessary revenues to support a fiscally sound organization.

**KEY FOCUS AREAS FOR FY 2018**

<b>Strategic Initiative</b>	<b>Objective</b>
Implement Advanced Metering Infrastructure	<ul style="list-style-type: none"><li>• Provide key support for implementing system including related policies and processes</li></ul>
Adopt financial management policies and budget decision processes to ensure affordable services and fiscal sustainability	<ul style="list-style-type: none"><li>• Help manage the organization to achieve financial stability and sustainability without the need for a rate increase to support the FY 2019 budget</li></ul>

**FINANCE**

**Three-year Comparison  
Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$478,479	\$477,517		\$488,071		\$478,189	
Payroll Taxes & Employee Benefits	<u>152,182</u>	<u>170,057</u>		<u>164,426</u>		<u>174,344</u>	
Total Personnel Costs	630,661	647,574	3%	652,497	1%	652,533	-2%
<b>Other Operating Expense</b>							
Materials and Supplies	14,768	12,000		11,989		12,000	
Utilities	5,103	5,500		6,448		5,500	
Maintenance	0	0		0		0	
Professional Services	394,596	402,200		402,854		402,450	
Communication	4,833	4,000		8,461		4,000	
Printing and Reproduction	2,940	3,000		1,938		2,000	
Education and Development	4,962	11,895		11,840		11,900	
Other	<u>5,046</u>	<u>6,155</u>		<u>6,357</u>		<u>6,155</u>	
Total Operating Expenditures	432,248	444,750	3%	449,887	1%	444,005	-2%
Total Expenditures	<u>1,062,909</u>	<u>1,092,324</u>	3%	<u>1,102,384</u>	1%	<u>1,096,538</u>	-2%
Construction Credit	0	0		0		0	
<b>Net Expense</b>	<u>\$1,062,909</u>	<u>\$1,092,324</u>	3%	<u>\$1,102,384</u>	1%	<u>\$1,096,538</u>	-2%

<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	6	6	6

<b>Key Performance Measurements</b>				
	<b>Goal</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
Working capital reserve	\$11.1M (FY17)	\$21.0M	\$21.0M	\$19.5M
Debt service coverage ratio	2.0	2.0	2.1	2.4
Debt to asset value	≤50	26	25	23
Service affordability	1.5	1.4	1.4	1.4

M = million

**INFORMATION TECHNOLOGY**

(General and Administrative)

**MISSION**

The Information Technology (IT) Department is responsible for developing and supporting OWASA's computer, telecommunications, and office systems through high quality service to internal and external customers; improved coordination, productivity, and efficiency among OWASA departments and work groups; and reliable access to high quality information that supports decision-making at all levels of the organization.

**SUMMARY OF ACTIVITIES**

- Promote responsive and courteous customer service in all activities.
- IT functions are carried out through planning, procurement, installation, maintenance, and staff training in the following areas: Local Area Network (LAN) management, office and business process automation, personal computing, data transmission, radio communication, telephone, voicemail, mobile phones, office equipment (fax, copiers, and printers).
- Develop, maintain, and implement a long-range plan for the effective and efficient use of technology for information systems throughout the organization.
- IT serves as OWASA's clearinghouse for assessing organization-wide information service needs and priorities, and allocates technology resources accordingly through the acquisition, modification, and/or re-assignment of hardware and software, and through recommendations for staff training. IT establishes appropriate technology standards, specifications, security levels, and procedures for OWASA's information system.

**KEY FOCUS AREAS FOR FY 2018**

<b>Strategic Initiative</b>	<b>Objective</b>
Implement Advanced Metering Infrastructure (AMI)	• Supporting the implementation of AMI is anticipated to be the major focus of the IT Department for FY 2018.
Reduce Complexity	• Replace VMware server virtualization platform with Microsoft Hyper-V technology.
Everything-as-a-Service	• Develop requirements for cloud-based telecommunications solution as replacement for on-premise VoIP architecture.
Security	• Conduct a network security assessment and remediation

**INFORMATION TECHNOLOGY**

**Three-year Comparison  
Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$331,146	\$333,652		\$372,786		\$416,872	
Payroll Taxes & Employee Benefits	<u>113,397</u>	<u>121,404</u>		<u>121,317</u>		<u>153,323</u>	
Total Personnel Costs	444,543	455,056	2%	494,103	9%	570,195	-2%
<b>Other Operating Expense</b>							
Materials and Supplies	81,858	91,680		91,647		97,700	
Utilities	116,979	116,260		106,537		118,650	
Maintenance	238,457	310,795		294,971		309,705	
Professional Services	138,569	135,000		104,335		115,000	
Communication	0	0		0		0	
Printing and Reproduction	0	0		0		0	
Education and Development	18,097	17,685		17,685		21,880	
Other	<u>46,319</u>	<u>41,202</u>		<u>40,536</u>		<u>42,438</u>	
Total Operating Expenditures	640,279	712,622	11%	655,711	-8%	705,373	-2%
Total Expenditures	<u>1,084,822</u>	<u>1,167,678</u>	8%	<u>1,149,814</u>	-2%	<u>1,275,568</u>	-2%
Construction Credit	0	0		0		0	
<b>Net Expense</b>	<u>\$1,084,822</u>	<u>\$1,167,678</u>	8%	<u>\$1,149,814</u>	-2%	<u>\$1,275,568</u>	-2%

<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	4	5	5



## WATER SUPPLY AND TREATMENT

(Operating)

### MISSION

The Water Supply and Treatment Department is responsible for providing high quality drinking water to OWASA customers. Departmental functions include operation and maintenance of three water supply reservoirs, public recreation facilities at two lakes, the Jones Ferry Road Water Treatment Plant, water treatment solids processing and recycling facilities, and five elevated storage tanks. The department also administers watershed protection programs.

### SUMMARY OF ACTIVITIES

- Efficiently and effectively operate the water treatment, laboratory, and maintenance programs in compliance with all federal and state regulations and requirements while providing high quality drinking water to OWASA customers.
- Provide timely analytical monitoring data for process control and regulatory reporting.
- Maintain a computerized maintenance management program to facilitate work scheduling, track equipment history and reliability, and maintain a database of suppliers and parts for installed equipment to support asset management.
- Respond to weekend and after-hours water and sewer emergency calls from OWASA customers in a courteous and timely fashion and dispatch appropriate personnel to resolve customer problems.
- Provide responsive and courteous service to address water quality concerns raised by customers.
- Enhance customer awareness of watershed protection and water treatment by conducting facility tours and providing general information relating to water quality and treatment.
- Operate and maintain the recreational facilities at University Lake and Cane Creek Reservoir in a courteous and friendly manner.
- Reinforce the teamwork approach required by department employees to accomplish the Department's objectives.
- Oversee and manage OWASA-owned land and conservation easements in the University Lake and Cane Creek watersheds.

### KEY FOCUS AREAS FOR FY 2018

<b>Strategic Initiative</b>	<b>Objective</b>
Provide reliable and high-quality supply of water for the next 50 years	<ul style="list-style-type: none"><li>• Maintain Partnership for Safe Water Phase IV objectives</li><li>• Continue strong emphasis on the development and training of employees to improve their knowledge, skills, and abilities</li><li>• Maintain continuous compliance with state and federal drinking water standards</li><li>• Upgrade the fluoride feed system to optimize the addition of fluoride.</li><li>• Research monitoring options for taste and odor compounds.</li></ul>

**WATER SUPPLY AND TREATMENT**

**Three-year Comparison  
Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$1,418,195	\$1,377,064		\$1,391,324		\$1,422,170	
Payroll Taxes & Employee Benefits	<u>643,998</u>	<u>650,490</u>		<u>661,697</u>		<u>686,471</u>	
Total Personnel Costs	2,062,193	2,027,554	-2%	2,053,021	1%	2,108,641	-2%
<b>Other Operating Expense</b>							
Materials and Supplies	168,009	163,265		157,779		198,394	
Chemicals	1,076,107	1,098,778		1,243,914		1,249,647	
Utilities	344,797	346,927		335,051		363,020	
Maintenance	995,980	1,050,173		1,038,508		1,072,495	
Professional Services	201,896	152,287		148,610		120,886	
Communication	2,401	4,000		2,732		4,000	
Printing and Reproduction	0	0		0		0	
Education and Development	22,403	17,900		16,721		16,050	
Other	<u>9,037</u>	<u>13,075</u>		<u>12,168</u>		<u>73,609</u>	
Total Operating Expenditures	2,820,630	2,846,405	1%	2,955,483	4%	3,098,101	-2%
<b>Total Expenditures</b>	<u>4,882,823</u>	<u>4,873,959</u>	0%	<u>5,008,504</u>	3%	<u>5,206,742</u>	-2%
Construction Credits	.	0		0		0	
<b>Net Expense</b>	<u>\$4,882,823</u>	<u>\$4,873,959</u>	0%	<u>\$5,008,504</u>	3%	<u>\$5,206,742</u>	-2%

<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	25.5	25.5	25

<b>Key Performance Measurements</b>				
	<b>Goal</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Workload</b>				
Finished water pumped to the distribution system	N/A	2.5B	2.4B	2.4B
Percent of solids removed from treatment process and recycled for beneficial use	100%	100%	100%	100%
<b>Effectiveness</b>				
Primary drinking water standards non-compliances	0	0	0	0
Secondary drinking water standards non-compliances	0	0	0	0
Average finished water turbidity (Nephelometric Turbidity Units)	<0.10	0.04	0.04	0.04

B = billion

## **WATER DISTRIBUTION**

(Operating)

### **MISSION**

The Water Distribution Department is responsible for maintaining the drinking water distribution system from the water treatment plant to the meters at customers' premises with exception of the system's storage tanks and booster pumping stations. The Department also develops and implements efficient and effective measures for the maintenance and repair of all components of the water distribution infrastructure and is responsible for accurately and efficiently reading meters and replacing certain water mains to maintain the integrity and capacity of the system.

### **SUMMARY OF ACTIVITIES**

- Provide responsive and courteous customer service in all activities.
- Conduct regular flushing of water mains to ensure water quality throughout the distribution system.
- Maintain ongoing valve and fire hydrant maintenance and repair programs to help ensure reliable operation of the distribution system.
- Accurately and efficiently read water meters to ensure correct consumption is billed to customers.
- Investigate distribution system for sources of unaccounted water (water pumped to system but not metered or billed).
- Administer a backflow prevention program to ensure water quality.
- Coordinate the repair and replacement of water meters.
- Maintain integrity of water distribution lines by continuing rehabilitation program.
- Install service connections.
- Repair and replace water mains and appurtenances.

### **KEY FOCUS AREAS FOR FY 2018**

<b>Strategic Initiative</b>	<b>Objective</b>
Implement Advanced Metering Infrastructure	<ul style="list-style-type: none"><li>• Continue to read meters during implementation</li><li>• Install and activate new meters</li><li>• Inspect 3<sup>rd</sup> party installations</li><li>• Provide construction services when needed</li><li>• Troubleshoot system and meter issues</li></ul>
Backflow testing notices	<ul style="list-style-type: none"><li>• Determine and implement appropriate method for distributing testing notifications.</li></ul>

**WATER DISTRIBUTION**

**Three-year Comparison  
Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$1,402,127	\$1,421,839		\$1,452,059		\$1,583,841	
Payroll Taxes & Employee Benefits	<u>696,732</u>	<u>761,829</u>		<u>773,663</u>		<u>843,706</u>	
Total Personnel Costs	2,098,859	2,183,668	4%	2,225,722	2%	2,427,547	-2%
<b>Other Operating Expense</b>							
Materials and Supplies	70,975	82,979		88,496		79,227	
Utilities	181,755	196,586		187,187		194,245	
Maintenance	509,689	550,087		605,895		594,699	
Professional Services	7,124	8,019		9,142		5,247	
Communication	2,377	1,500		1,500		1,500	
Printing and Reproduction	1,233	2,000		2,000		3,000	
Education and Development	8,834	17,595		17,595		17,595	
Other	<u>1,927</u>	<u>1,900</u>		<u>2,737</u>		<u>1,900</u>	
Total Operating Expenditures	783,914	860,666	10%	914,552	6%	897,413	-2%
Total Expenditures	<u>2,882,773</u>	<u>3,044,334</u>	6%	<u>3,140,274</u>	3%	<u>3,324,960</u>	-2%
Construction Credits	(127,713)	(93,500)		(96,747)		(90,000)	
<b>Net Expense</b>	<u>\$2,755,060</u>	<u>\$2,950,834</u>	7%	<u>\$3,043,527</u>	3%	<u>\$3,234,960</u>	-2%

<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	32	32	33

<b>Key Performance Measurements</b>				
	<b>Goal</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Workload</b>				
Miles of finished water pipe maintained	N/A	379	380	380
<b>Effectiveness</b>				
Volume of water billed vs. volume pumped to the system	90.0%	90.6%	90.7%	91.6%
Number of main breaks per 100 miles of pipe	<7.00	9.1	6.9	6.8

## WASTEWATER TREATMENT

(Operating)

### MISSION

The Mason Farm Wastewater Treatment Plant is responsible for reliably providing efficient and effective treatment of wastewater, reclaimed water, and the resulting biosolids. The Department complies with various local, state, and federal regulations that pertain to all discharges from OWASA's facilities, plus the general operation requirements to meet all applicable standards. These include; National Pollutant Discharge Elimination System (NPDES) Permit, the Land Application Permit (Water Quality, Non-Discharge), the Stormwater Discharge Permit and Reclaimed Water Permit.

### SUMMARY OF ACTIVITIES

- Provide responsive and courteous customer service in all activities.
- Maintain plant, maintenance, and laboratory programs to ensure that all discharges are in compliance with their operating permits.
- Operate plant, laboratory, and maintenance areas in compliance with all applicable state and federal requirements.
- Eliminate offsite odors and provide prompt response to public inquires.
- Maintain all equipment necessary to provide reliable pumping of wastewater without spillage or overflow.
- Provide timely analytical monitoring data for process control and regulatory reporting.
- Maintain a computerized maintenance management program to facilitate work scheduling, track equipment history and reliability, and maintain a database of suppliers and parts for installed equipment to support asset management.
- Manage all programs in an environmentally and operationally sound manner.

### KEY FOCUS AREAS FOR FY 2018

<b>Strategic Initiative</b>	<b>Objective</b>
Complete Phase 3 Assessment - American Water Works Association's Partnership for Clean Water program for Mason Farm WWTP	<ul style="list-style-type: none"><li>• Optimization and efficiency efforts will include assessments of chemical &amp; energy use, unit process capacity &amp; performance, administrative controls to identify and prioritize factors limiting performance</li></ul>
Transition existing Supervisory Control and Data Acquisition (SCADA) system over to High Performance using Inductive Automation Ignition Platform	<ul style="list-style-type: none"><li>• Implement transition to high performance SCADA for WWTP process control and pump station telemetry; which incorporates data trending to provide real-time situational awareness for process control and asset management; including mobile field applications for operator rounds, lab data entry and report generation.</li></ul>

**WASTEWATER TREATMENT**

**Three-year Comparison  
Fiscal Years 2016 - 2018**

	<b>FY 2016 Actual</b>	<b>FY 2017 Budget</b>	<b>FY17 Budget to FY16 Actual</b>	<b>FY 2017 Forecast</b>	<b>FY17 Forecast to FY17 Budget</b>	<b>FY 2018 Budget</b>	<b>FY18 Budget to FY17 Forecast</b>
<b>Personnel Costs</b>							
Salaries and Wages	\$1,332,897	\$1,341,954		\$1,378,714		\$1,396,772	
Payroll Taxes & Employee Benefits	<u>571,503</u>	<u>633,159</u>		<u>629,108</u>		<u>649,595</u>	
Total Personnel Costs	1,904,400	1,975,113	4%	2,007,822	2%	2,046,367	-2%
<b>Other Operating Expense</b>							
Materials and Supplies	809,716	916,470		862,053		906,103	
Chemicals	0	0		0		0	
Utilities	993,034	682,850		712,088		799,680	
Maintenance	687,815	935,876		882,601		941,800	
Professional Services	119,213	244,225		240,330		98,652	
Communication	7,114	8,935		8,791		11,400	
Printing and Reproduction	0	0		0		0	
Education and Development	20,062	20,000		14,176		20,000	
Other	<u>34,799</u>	<u>41,625</u>		<u>42,235</u>		<u>67,625</u>	
Total Operating Expenditures	2,671,753	2,849,981	7%	2,762,275	-3%	2,845,259	-2%
<b>Total Expenditures</b>	<u>4,576,153</u>	<u>4,825,094</u>	5%	<u>4,770,097</u>	-1%	<u>4,891,627</u>	-2%
Construction Credits	0	0		0		0	
<b>Net Expense</b>	<u>\$4,576,153</u>	<u>\$4,825,094</u>	5%	<u>\$4,770,097</u>	-1%	<u>\$4,891,627</u>	-2%

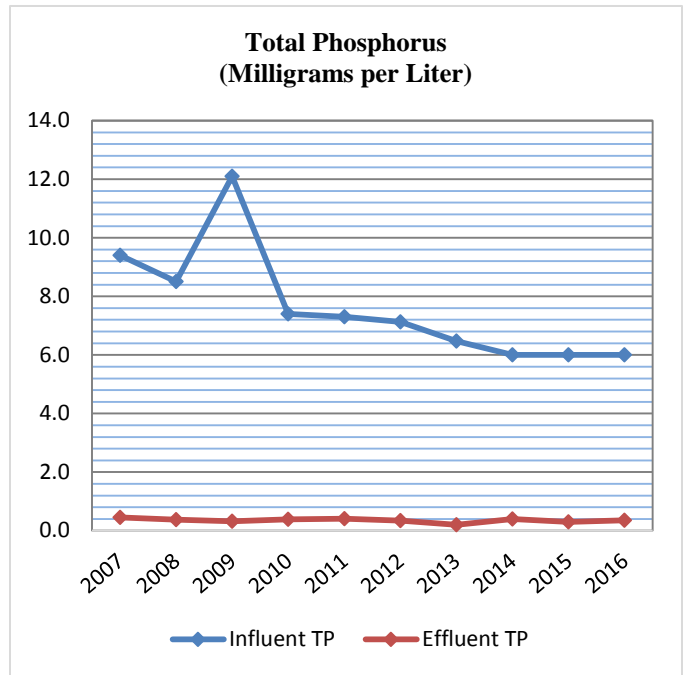
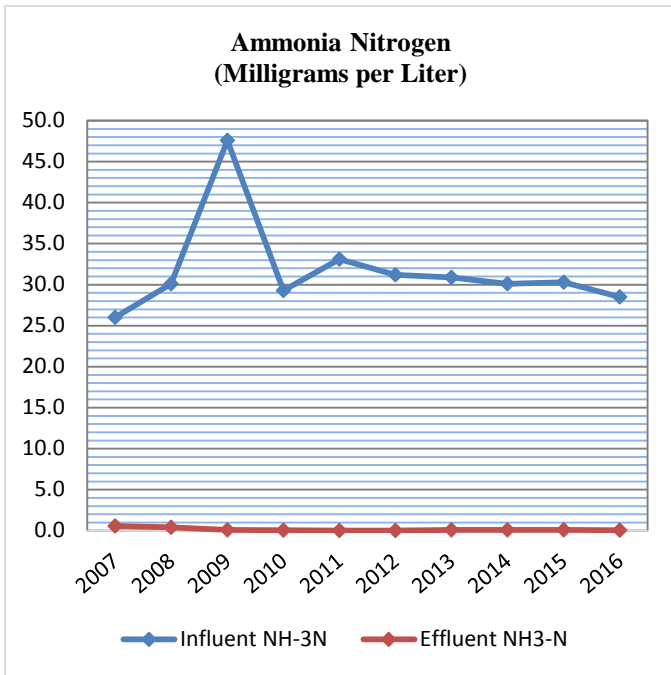
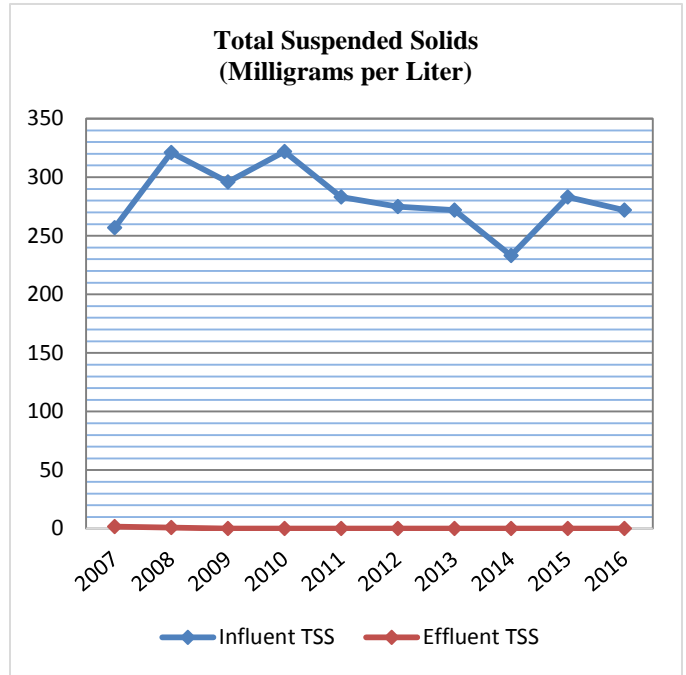
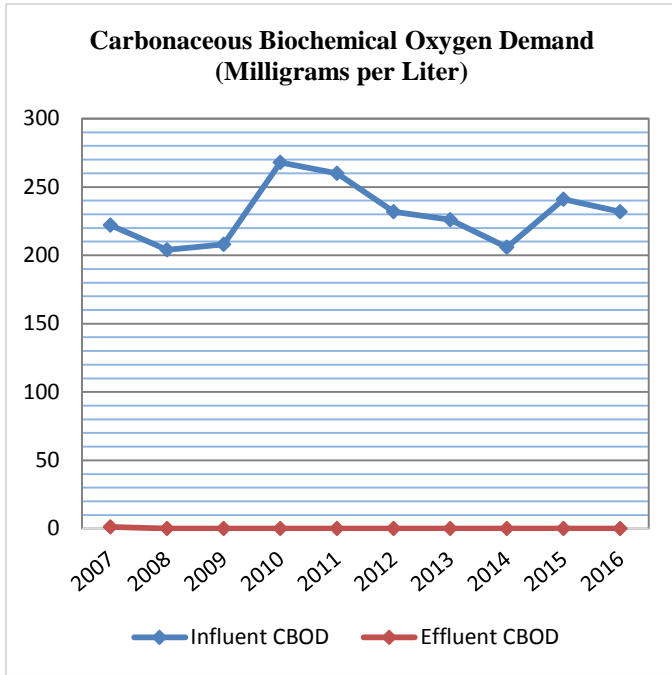
<b>Personnel Summary</b>			
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Positions	22.5	22.5	22

<b>Key Performance Measurements</b>				
	<b>Goal</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Workload</b>				
Number of gallons of wastewater treated	N/A	3.0B	3.0B	3.1B
<b>Effectiveness</b>				
Events of permit noncompliance	0	0	0	0
Wastewater overflows	0	0	0	0
Odor events	0	11	2	1

B = billion

## Mason Farm Wastewater Treatment Plant Loading and Performance Last 10 Years

The following graphs show the loading and performance of the Mason Farm Wastewater Treatment Plant annually for the past ten years. This information is also shown in a table on page 60.



## **SEWER COLLECTION**

(Operating)

### **MISSION**

The Sewer Collection Department is responsible for maintaining the public sewer collection system which carries wastewater to the Mason Farm Wastewater Treatment Plant except for the pumping stations. The Department uses precise and systematic approaches to minimize and prevent overflows of sewage to local creeks and streams. The Department also operates ongoing programs to clear and mow easements and inspect and clean sewer mains.

### **SUMMARY OF ACTIVITIES**

- Provide responsive and courteous customer service in all activities.
- Manage an efficient and effective predictive, preventive, and corrective maintenance program for the wastewater collection infrastructure.
- Maintain an ongoing program to reduce inflow/infiltration into the sewer collections system.
- Regularly mow and clear easements and clean sewer mains.
- Maintain a computerized maintenance management program for all aspects of the Department's operation.
- Ensure proper employee training and development in new methods of maintaining sewer lines and using related equipment. Enhance knowledge and skills of employees to increase proficiency through participation in education and training workshops and in-house programs.
- Administer fats, oils and grease monitoring program.

### **KEY FOCUS AREAS FOR FY 2018**

<b>Strategic Initiative</b>	<b>Objective</b>
Improve performance in cleaning and video inspections.	<ul style="list-style-type: none"><li>• Inspect at least ten miles of sewer lines with video equipment</li><li>• Clean at least 20% of sewer system</li></ul>



## SEWER COLLECTIONS

### Three-year Comparison Fiscal Years 2016 - 2018

	FY 2016 Actual	FY 2017 Budget	FY17 Budget to FY16 Actual	FY 2017 Forecast	FY17 Forecast to FY17 Budget	FY 2018 Budget	FY18 Budget to FY17 Forecast
<b>Personnel Costs</b>							
Salaries and Wages	\$454,610	\$548,800		\$516,316		\$523,607	
Payroll Taxes & Employee Benefits	<u>237,216</u>	<u>301,824</u>		<u>280,949</u>		<u>280,841</u>	
Total Personnel Costs	691,826	850,624	23%	797,265	-6%	804,448	-2%
<b>Other Operating Expense</b>							
Materials and Supplies	242,082	249,636		249,636		247,415	
Chemicals	0	0		0		0	
Utilities	150,609	127,188		120,367		140,230	
Maintenance	112,563	181,000		188,478		190,000	
Professional Services	6,228	8,019		6,184		6,184	
Communication	606	1,000		1,000		500	
Printing and Reproduction	743	500		2,000		4,000	
Education and Development	6,665	11,160		11,160		14,510	
Other	<u>2,167</u>	<u>4,024</u>		<u>4,024</u>		<u>2,000</u>	
Total Operating Expenditures	521,663	582,527	12%	582,848	0%	604,839	-2%
<b>Total Expenditures</b>	<u>1,213,489</u>	<u>1,433,151</u>	18%	<u>1,380,113</u>	-4%	<u>1,409,287</u>	-2%
Construction Credits	(13,276)	0		(3,275)		0	
<b>Net Expense</b>	<u>\$1,200,213</u>	<u>\$1,433,151</u>	19%	<u>\$1,376,838</u>	-4%	<u>\$1,409,287</u>	-2%

Personnel Summary			
	FY 2016	FY 2017	FY 2018
Positions	14	15	11

Key Performance Measurements				
	Goal	FY 2015	FY 2016	FY 2017
<b>Workload</b>				
Miles of gravity wastewater collection piping maintained	N/A	326	328	329
<b>Effectiveness</b>				
Number of reportable wastewater overflows	0	4	1	2
Total number of reportable overflows per 100 miles of sewer pipe	0.0	1.2	0.3	0.6

**Section III**

**SUPPLEMENTAL INFORMATION**

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**BUDGET RESOLUTION AND ORDINANCE**

**RESOLUTION ADOPTING THE ANNUAL BUDGET FOR  
ORANGE WATER AND SEWER AUTHORITY FOR THE FISCAL YEAR  
JULY 1, 2017 THROUGH JUNE 30, 2018**

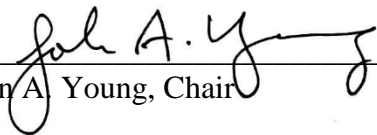
**WHEREAS**, Section 7.05 of the Bond Order and North Carolina G.S. Chapter 159 require that on or before the first day of July in each fiscal year the Authority will adopt a Budget for the ensuing fiscal year; and

**WHEREAS**, such budget is to include estimates of revenues of the water, sewer and reclaimed water systems, current operations expenses, interest income, debt service costs, and disbursements from the general fund for capital improvements and equipment purchases.

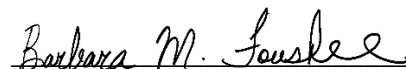
**NOW, THEREFORE, BE IT RESOLVED:**

1. That pursuant to the provisions of North Carolina G.S. Chapter 159-13 the attached pages marked 2 through 6 be, and they hereby are, adopted as the official budget of Orange Water and Sewer Authority of the Fiscal Year beginning July 1, 2017 through June 30, 2018.
2. That the appropriations for departments, functions, and projects as shown in the attached budget for the respective purposes and in the respective amounts therein specified are hereby made.
3. That the Executive Director shall administer the budget, and is hereby authorized to expend the funds for the purposes set forth therein.

Adopted this 8th day of June 2017.

  
\_\_\_\_\_  
John A. Young, Chair

ATTEST:

  
\_\_\_\_\_  
Barbara Middleton-Foushee, Secretary

**BUDGET RESOLUTION AND ORDINANCE**

**ORANGE WATER AND SEWER AUTHORITY  
STATEMENT OF INCOME, EXPENSE AND DEBT SERVICE  
(OPERATING)**

		<b>FY 2018</b>
		<b><u>Annual Budget</u></b>
<b>Operating Revenue</b>		
Water	\$17,824,170	
Sewer	16,734,273	
Reclaimed Water	450,060	
Service Initiation Fee	165,650	
Other	963,227	
Refunds and Adjustments	<u>(246,088)</u>	
<b>Total Operating Revenue</b>		\$35,891,292
<b>Operating Expense</b>		
General and Administrative	7,177,861	
Operations	<u>14,742,616</u>	
<b>Total Operating Expense</b>		<u>21,920,477</u>
<b>Net Operating Income</b>		13,970,815
<b>Non-operating Revenue</b>		
Customer Fees		1,416,657
Interest		<u>38,441</u>
<b>Total Net Income</b>		<u><u>\$15,425,913</u></u>
<b>Debt Service</b>		
Existing		\$6,949,537
New		<u>0</u>
<b>Total Debt Service</b>		<u>6,949,537</u>
<b>Net Income Less Debt Service</b>		<u><u>\$8,476,376</u></u>

**BUDGET RESOLUTION AND ORDINANCE**

**ORANGE WATER AND SEWER AUTHORITY  
STATEMENT OF INCOME AND EXPENSE  
(CAPITAL/NON-OPERATING)**

		<b><u>FY 2018</u></b> <b><u>Annual Budget</u></b>
<b>General Fund</b>		
Resources		
Transfer From Revenue	\$8,476,376	
Bond/Loan Proceeds	<u>2,700,000</u>	
<b>Annual Income Available for Capital</b>		\$11,176,376
Transfer from Construction Fund (Bond Proceeds)		<u>0</u>
<b>Total Available for Capital</b>		<u>11,176,376</u>
<b>Capital Expenditures</b>		
Project ordinances		
General Fund Contribution	12,385,000	
Funded by Bond Proceeds	<u>2,700,000</u>	
Total Project Resolutions		15,085,000
Capital Equipment		<u>1,231,000</u>
<b>Total Capital Outlay</b>		<u>16,316,100</u>
<b>Annual General Fund Balance</b>		(5,139,724)
<b>General Fund Beginning Balance</b>		<u>26,661,000</u>
<b>General Fund Ending Balance</b>		21,,521,276
Project Funding	4,566,276	
Reserves		
Rate/Revenue Stabilization	1,728,000	
Capital Improvements	3,600,000	
Working Capital	<u>11,605,000</u>	<u>21,521,276</u>
<b>Unallocated General Fund Balance</b>		<u><u>\$0</u></u>

**BUDGET RESOLUTION AND ORDINANCE**

**REVENUE FUND**

	<u>Water</u>	<u>Sewer</u>	<u>Total</u>
<b>Fund Balance July 1, 2017</b>			\$0
<b>Receipts</b>			
<b>Operating Revenue</b>			
Customer Billings	\$17,824,170	\$16,734,273	34,558,443
Reclaimed Water	450,060	-	450,060
Service Initiation Fee	82,825	82,825	165,650
Other	481,614	481,613	963,227
Refunds and Adjustments	(123,044)	(123,044)	(246,088)
<b>Total Operating Revenue</b>	18,715,625	17,175,667	35,891,292
<b>Non-operating Revenue</b>			
Customer Fees	615,387	801,270	1,416,657
Interest Income	19,221	19,220	38,441
<b>Total Non-operating Revenue</b>	634,608	820,490	1,455,098
<b>Total Receipts</b>	19,350,233	17,996,157	37,346,390
<b>Expenditures</b>			
Current Expense	(11,305,900)	(10,614,577)	(21,920,477)
Debt Service	(4,517,199)	(2,432,338)	(6,949,537)
<b>Total Expenditures</b>	(15,823,099)	(13,046,915)	(28,870,014)
<b>Net Revenue</b>			8,476,376
<b>To General Fund</b>			(8,476,376)
<b>Fund Balance June 30, 2018</b>			<u>0</u>
<b>Change in Available Balance</b>			<u><u>\$0</u></u>

**BUDGET RESOLUTION AND ORDINANCE**

**BOND SERVICE FUND**

<b>Fund Balance July 1, 2017</b>		\$0
<b>Receipts</b>		
Transfers from Revenue Fund	\$6,949,537	
Interest	<u>                    </u>	
<b>Total Receipts</b>		6,949,537
<b>Expenditures</b>		
Debt Service	<u>6,949,537</u>	
<b>Total Expenditures</b>		<u>(6,949,537)</u>
<b>Fund Balance June 30, 2018</b>		<u>0</u>
<b>Change in Available Balance</b>		<u><u>\$0</u></u>

**BUDGET RESOLUTION AND ORDINANCE**

**GENERAL FUND**

<b>Fund Balance July 1, 2017</b>		\$26,661,000
<b>Receipts</b>		
Transfer from Revenue fund	8,476,376	
Transfer from Construction Fund (Loan Proceeds)	2,700,000	
Interest	0	
Assessments	0	
Grants and contributions	<u>0</u>	
<b>Total Receipts</b>		<u>11,176,376</u>
<b>Total Balance Before Expenditures</b>		37,837,376
<b>Expenditures</b>		
Capital Equipment/Leases	1,231,100	
Project Resolutions	15,085,000	
Transfer to Revenue Fund	<u>0</u>	
<b>Total Expenditures</b>		<u>(16,316,100)</u>
<b>Fund Balance June 30, 2018</b>		<u><u>\$21,521,276</u></u>
<b>Allocation of Fund Balance June 30, 2018</b>		
Project Funding	4,566,276	
Capital Reserves	<u>16,955,000</u>	
<b>Total Allocation</b>		<u><u>\$21,521,276</u></u>
<b>Unallocated General Fund Balance June 30, 2018</b>		<u>0</u>
<b>Change in Available Balance</b>		<u><u>(\$5,139,724)</u></u>



**PERSONNEL AUTHORIZATIONS BY DEPARTMENT**

<b>Office of the Executive Director</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Executive Director	1	1	1
General Manager of Operations	1	1	1
Sustainability Manager	1	1	1
Executive Assistant	1	1	1
Public Affairs Administrator	1	1	1
Administrative Assistant	0.5	0.5	1
<b>Totals</b>	<b>5.5</b>	<b>5.5</b>	<b>6</b>

**Customer Service**

Customer Service Manager	1	1	1
Billing Supervisor	1	1	1
Senior Customer Service Representative	1	1	1
Customer Service Representative	3	3	3
Clerk/Cashier	2	2	2
Administrative Assistant/Reception	1	1	1
<b>Totals</b>	<b>9</b>	<b>9</b>	<b>9</b>

**Engineering and Planning**

Director of Engineering and Planning	1	1	1
Planning and Development Manager	1	1	1
Engineering Manager	2	2	2
Utilities Engineer	2	2	3
Geographic Information Systems Coordinator	1	1	1
Construction Inspector	2	2	2
Engineering Associate	2	2	2
Engineering Technician	2	2	2
Asset Management and Facilities Engineer	0	1	1
Operations Engineer	1	0	0
<b>Totals</b>	<b>14</b>	<b>14</b>	<b>15</b>

**Human Resources**

Director of Human Resources and Safety	1	1	1
Human Resources Generalist	1	1	1
Administrative Assistant	1	1	1
<b>Totals</b>	<b>3</b>	<b>3</b>	<b>3</b>

**PERSONNEL AUTHORIZATIONS BY DEPARTMENT**

<b>Finance</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Director of Finance and Customer Service	1	1	1
Finance and Procurement Manager	1	1	1
Financial Analyst	1	1	1
Accounting Technician II	3	3	3
<b>Totals</b>	<b>6</b>	<b>6</b>	<b>6</b>

**Information Technology**

Director of Information Technology	1	1	1
Network/Database Administrator	2	2	2
Business Systems Analyst	0	0	1
Information Services Technical Specialist	1	1	1
<b>Totals</b>	<b>4</b>	<b>4</b>	<b>5</b>

**Water Supply and Treatment**

Water Supply and Treatment Manager	1	1	1
Operations Supervisor	1	1	1
Treatment Plant Operator	8	8	8
Lake Warden	1	1	1
Senior Lake Warden	1	1	1
Assistant Lake Warden	2	2	2
Maintenance Supervisor	1	1	1
Senior Maintenance Mechanic	2	2	2
Maintenance Coordinator	1	1	1
Maintenance Mechanic	4	4	4
Laboratory Supervisor	1	1	1
Laboratory Analyst	2	2	2
Administrative Assistant	0.5	0.5	1
<b>Totals</b>	<b>25.5</b>	<b>25.5</b>	<b>26</b>

**Water Distribution**

Distribution and Collections Systems Manager	1	1	1
Assistant Distribution & Collection System Manager	1	1	1
Crew Leader	3	3	4
Utility Mechanic I/II/III	25	25	25
Administrative Assistant	1	1	1
Warehouse-Cross Connection Coordinator	1	1	1
<b>Totals</b>	<b>32</b>	<b>32</b>	<b>33</b>

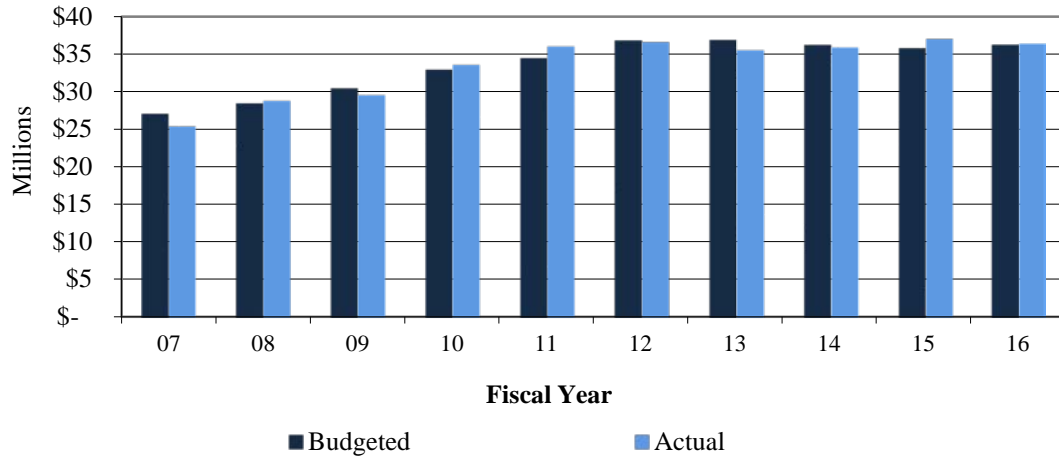
**PERSONNEL AUTHORIZATIONS BY DEPARTMENT**

<b>Wastewater Treatment</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
Wastewater Treatment and Biosolids Recycling Manager	1	1	1
Operations Supervisor	1	1	1
Treatment Plant Operator	7	8	8
Solids Handling Supervisor	1	1	1
Solids Handler	3	3	3
Maintenance Supervisor	1	1	1
Senior Maintenance Mechanic	4	4	4
Laboratory Supervisor	1	1	1
Laboratory Analyst	3	2	3
Administrative Assistant	0.5	0.5	0
<b>Totals</b>	<b>22.5</b>	<b>22.5</b>	<b>23</b>
<b>Sewer Collections</b>			
Crew Leader	3	3	2
Utility Mechanic I/II/III	11	12	11
<b>Totals</b>	<b>14</b>	<b>15</b>	<b>13</b>
<b>Total Positions</b>	<b><u>135</u></b>	<b><u>136.5</u></b>	<b><u>139</u></b>

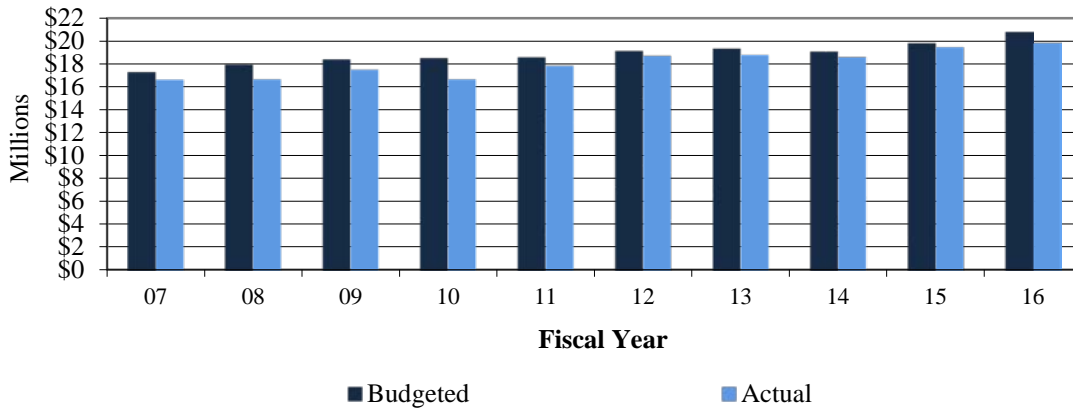
Authorized positions have been increased by 2.5 full-time equivalents. The position of Business Systems Analyst in the Information Technology department has been added to manage the implementation and ongoing operation of our Advanced Metering Infrastructure system. In the Engineering and Planning department, a Utilities Engineer position has been added to help manage projects in our Capital Improvements Program. An Administrative Assistant position in the Office of the Executive Director has been converted from part-time to full-time.

**10-YEAR HISTORICAL PERFORMANCE**

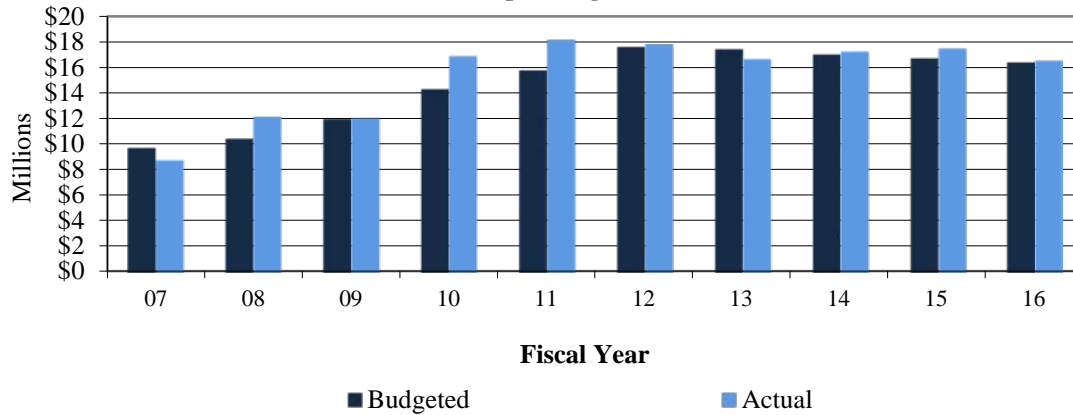
**10-Year Operating Revenue Variance**



**10-Year Operating Expense Variance**



**10-Year Net Operating Income Variance**

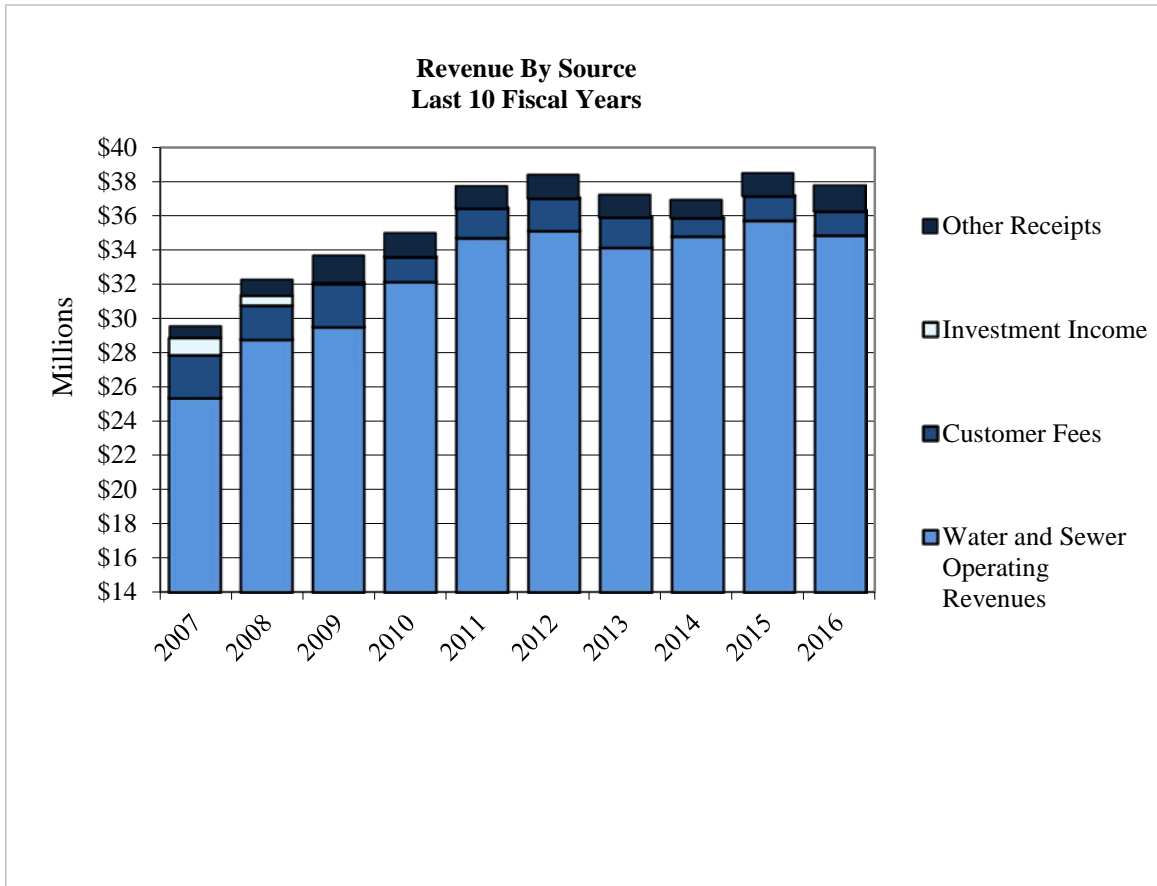


**10-YEAR HISTORICAL PERFORMANCE**

**ORANGE WATER AND SEWER AUTHORITY**

**Revenues By Source  
Last 10 Fiscal Years**

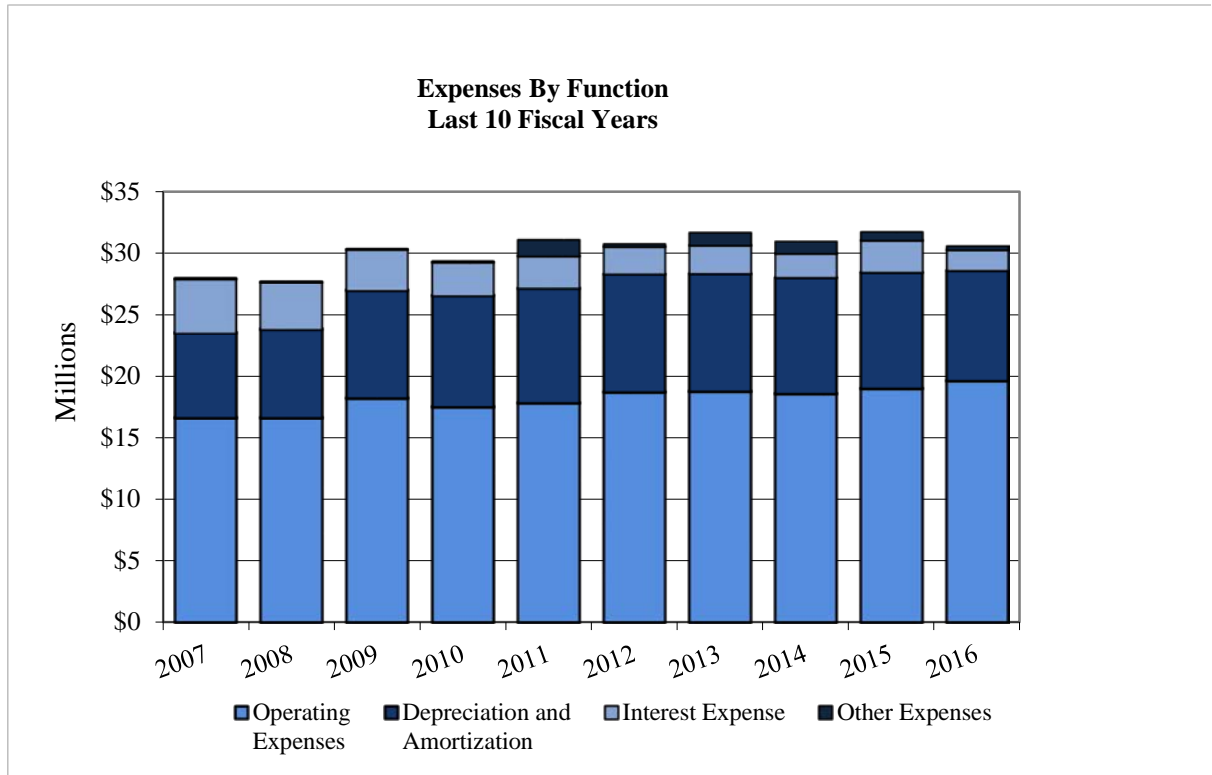
<b>Fiscal Year</b>	<b>Water and Sewer Operating Revenues</b>	<b>Customer Fees</b>	<b>Investment Income</b>	<b>Other Receipts</b>	<b>Total</b>
2007	25,413,571	2,514,450	995,354	666,528	29,589,903
2008	28,794,093	1,995,415	584,031	929,369	32,302,908
2009	29,537,290	2,498,459	80,343	1,582,736	33,698,828
2010	32,153,848	1,436,564	29,169	1,404,924	35,024,505
2011	34,701,751	1,713,417	29,261	1,302,079	37,746,508
2012	35,107,350	1,899,056	17,964	1,381,799	38,406,169
2013	34,133,521	1,769,883	15,664	1,324,092	37,243,160
2014	34,789,219	1,069,551	14,756	1,076,285	36,949,811
2015	35,705,629	1,429,242	15,133	1,351,139	38,501,143
2016	34,852,086	1,397,652	20,663	1,517,284	37,787,685



**10-YEAR HISTORICAL PERFORMANCE**

**ORANGE WATER AND SEWER AUTHORITY  
Expenses By Function  
Last 10 Fiscal Years**

<b>Fiscal Year</b>	<b>Operating Expenses</b>	<b>Depreciation and Amortization</b>	<b>Interest Expense</b>	<b>Other Expenses</b>	<b>Total</b>
2007	16,635,917	6,950,774	4,361,911	96,898	28,045,500
2008	16,643,471	7,215,175	3,832,320	69,940	27,760,906
2009	18,225,142	8,765,924	3,305,193	83,338	30,379,597
2010	17,532,938	9,053,691	2,702,687	92,613	29,381,929
2011	17,836,397	9,310,159	2,623,208	1,320,156	31,089,920
2012	18,713,083	9,539,846	2,274,113	235,552	30,762,594
2013	18,781,423	9,514,909	2,334,944	1,033,149	31,664,425
2014	18,597,655	9,393,739	1,979,647	1,012,532	30,983,573
2015	18,999,642	9,384,310	2,637,681	695,287	31,716,920
2016	19,624,902	8,919,124	1,729,871	345,792	30,619,689

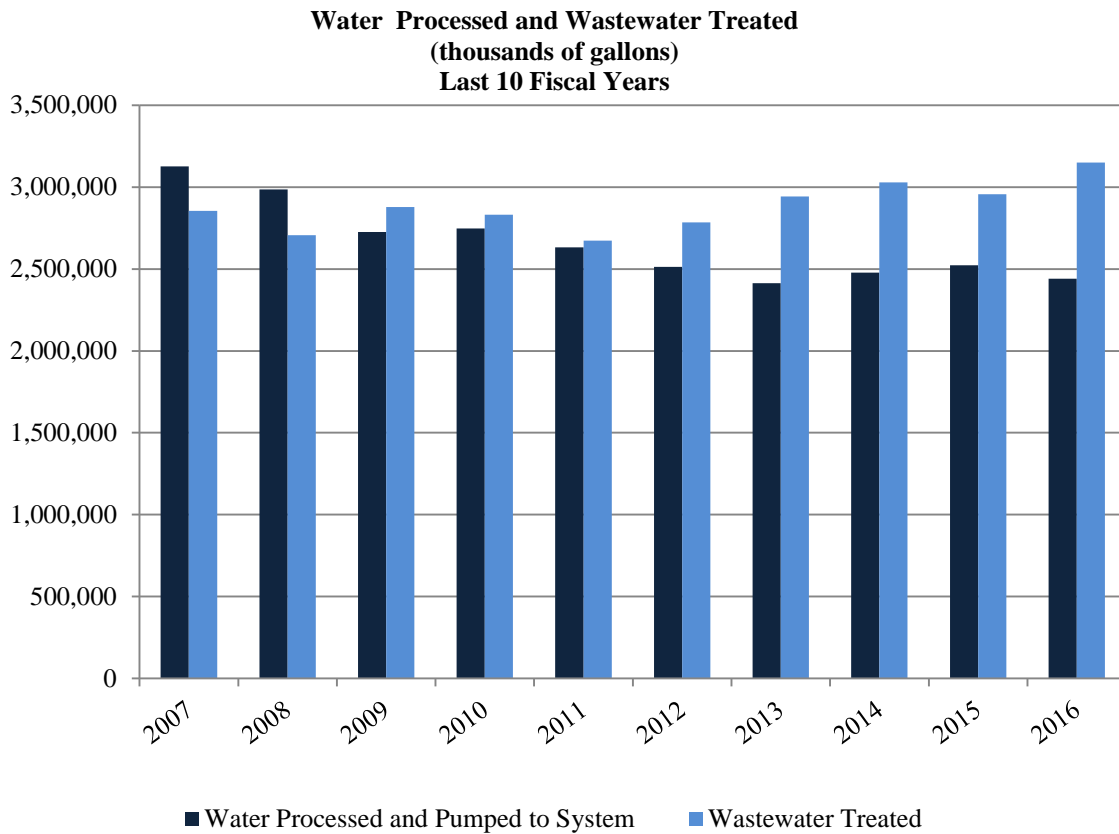


**10-YEAR HISTORICAL PERFORMANCE**

**ORANGE WATER AND SEWER AUTHORITY**

**Water Processed and Wastewater Treated  
(thousands of gallons)  
Last 10 Fiscal Years**

<b>Fiscal Year</b>	<b>Water Processed and Pumped to System</b>	<b>Wastewater Treated</b>
2007	3,126,916	2,855,000
2008	2,986,150	2,707,000
2009	2,726,421	2,879,000
2010	2,747,719	2,832,000
2011	2,631,963	2,673,000
2012	2,513,230	2,784,000
2013	2,412,966	2,942,000
2014	2,476,834	3,028,000
2015	2,522,099	2,956,000
2016	2,440,937	3,149,000



**10-YEAR HISTORICAL PERFORMANCE**

**ORANGE WATER AND SEWER AUTHORITY**

**Mason Farm Wastewater Treatment Plant  
Plant Loading and Performance  
Last 10 Years**

Fiscal Year	Average Daily Flow (million gallons)	Influent Measurements				Effluent Measurements			
		CBOD	TSS	NH3-N	TP	CBOD	TSS	NH3-N	TP
		(Milligram per Liter)				(Milligram per Liter)			
2007	7.8	222	257	26.0	9.4	1.2	2	0.6	0.5
2008	7.4	204	321	30.1	8.5	<2.0	1	0.4	0.4
2009	7.9	208	296	47.6	12.1	<2.0	0	0.1	0.3
2010	7.8	268	322	29.3	7.4	<2.0	0	0.1	0.4
2011	7.2	260	283	33.1	7.3	<2.0	0	0.0	0.4
2012	7.6	232	275	31.2	7.1	<2.0	0	0.0	0.3
2013	8.1	226	272	30.9	6.5	<2.0	0	0.1	0.2
2014	8.3	206	233	30.1	6.0	<2.0	0	0.1	0.4
2015	8.1	241	283	30.3	6.0	<2.0	0	0.1	0.3
2016	8.6	232	272	28.5	6.0	<2.0	<2.5	0.1	0.4

Effluent Maximum Limits Set in NPDES Permit

	Winter (Nov. - March)	Summer (April - Oct.)
CBOD5 (Carbonaceous Biochemical Oxygen Demand)	8 mg/l	4 mg/l
TSS (Total Suspended Solids)	30 mg/l	30 mg/l
NH3-N (Ammonia Nitrogen)	2.0 mg/l	1.0 mg/l
TP (Total Phosphorus - Mass Load Limit)	10,188 pounds per year	

mg/l=Milligrams per Liter

This information is shown in graphs on page 44.



**MISCELLANEOUS STATISTICAL DATA**

**ORANGE WATER AND SEWER AUTHORITY  
For the Fiscal Year Ended June 30, 2017**

Year Incorporated	1975
Size of Service Area:	
Square miles	31
Miles of Water Pipe (includes 14 miles of raw water and 5 miles of reclaimed water pipe)	400
Miles of Wastewater Collection Pipe (includes 14 miles of force main)	343
Customer Accounts	21,385
Full-time Equivalent Employees:	
Approved Positions	139
Budgeted Positions	135
Water Treatment Plant Capacity (millions of gallons per day (MGD)):	
Capacity	20.0
Production Average Day	6.5
Production Peak Day	8.5
Wastewater Treatment Plant Capacity (MGD):	
Capacity	14.5
Average Daily Flow	8.5
Number of Water Supply Resources	4
Total Capacity of Water Supply Resources (millions of gallons):	
Cane Creek Reservoir	3,000
University Lake	450
Quarry Reservoir	200
Jordan Lake Allocation (approximate MGD)	5 MGD

## SERVICE AREA

General. OWASA provides water and sewer services to the residents, businesses and institutions in the Chapel Hill-Carrboro community and outlying areas. The term “service area” refers to the area presently being served and those proximate areas that may reasonably be served by extensions of the water and sewer system in the future (refer to back cover). The present service area lies almost wholly within Chapel Hill and Carrboro in Orange County; however, there are contiguous extensions of the water and sewer system into southwestern Durham County.

The developed portions of the service area are composed of the University of North Carolina at Chapel Hill (UNC) campus, UNC Healthcare, commercial downtown areas and shopping centers, and residential areas comprised of single family residences and apartment complexes. Most of the development in the service area to date has consisted of residential development, including single-family residences, townhouses, condominiums, apartments, and related commercial development, including office buildings, shopping facilities, restaurants and motels. Industrial development in the service area is limited in extent and is generally light manufacturing in nature.

Relative Location and Features of the Service Area. The area served by OWASA’s water and sewer system is located predominantly within the southeastern portion of Orange County. Orange County is located in the north central part of the state. Originally formed in 1752, Orange County covers an area of approximately 400 square miles. There are four incorporated towns in Orange County. Hillsborough, the county seat, is located near the center of the County; Chapel Hill and Carrboro, adjoining communities which comprise the major urbanized area of Orange County, are located in the southeast corner of Orange County; and Mebane is located on the western boundary. The remainder of Orange County is rural in nature and largely agriculturally-oriented.

Located on a plateau approximately 500 feet above sea level, the Chapel Hill-Carrboro area is surrounded by gently rolling land. The climate is mild, with an average January temperature of approximately 41 degrees and an average temperature in July of approximately 79 degrees. The area receives an average of approximately 46 inches of rainfall per year.

The Towns of Chapel Hill and Carrboro are located southwest of Durham and approximately 25 miles northwest of Raleigh. The regional transportation system connects the area with the major North Carolina population centers of Charlotte, Durham, Raleigh, Greensboro, Winston-Salem and Wilmington. U.S. and state highways connect Chapel Hill-Carrboro with Durham, the Research Triangle Park (“RTP”), Cary, Raleigh and Raleigh-Durham International Airport. The region is served by Interstate 85 extending northeasterly from Durham to Petersburg, Virginia where it intersects Interstate 95, and southwesterly through Greensboro to Charlotte and Atlanta, Georgia. Interstate 40, which extends from Raleigh through Orange County, connects the region directly to both the Atlantic and Pacific coasts of the United States. Rail service is provided by a branch of the Norfolk Southern Railway which extends north from Carrboro to a connection with the railroad west of Durham. Amtrak passenger rail service is available in Durham. Commercial air service is provided by Raleigh-Durham International Airport, located 16 miles from Chapel Hill. The area is also served by Horace Williams Airport, which is owned and operated by UNC.

The Chapel Hill-Carrboro area comprises one portion of the metropolitan area which includes the City of Durham, Town of Cary, and the City of Raleigh and is commonly known as the “Research Triangle.” Major universities located in these communities include UNC, Duke University, North Carolina Central University, and North Carolina State University. The proximity of these universities makes the RTP area suited for many types of academic research and advanced research-oriented industrial activities. There are many other colleges and universities in the area.

The dominant economic sectors in the Chapel Hill-Carrboro area are education and medical services, including research activities, primarily through UNC and UNC Healthcare. The RTP, located ten miles east of Chapel Hill, contains approximately 7,000 acres which have been reserved for research and research-oriented manufacturing. Since its inception in the 1950s, over 200 private and governmental organizations have located facilities in the RTP. The RTP is not served by OWASA; however, its impact on OWASA and the economy of the surrounding area is significant because of the companies and residents brought into the area directly and indirectly by the RTP.

Demographic Characteristics. The United States Department of Commerce, Bureau of the Census has recorded the populations of the Town of Chapel Hill, the Town of Carrboro and Orange County to be as follows:

<u>Year</u>	<u>Chapel Hill</u>	<u>Carrboro</u>	<u>Orange County</u>
1980	32,421	8,118	77,055
1990	38,711	12,134	93,622
2000	48,715	16,782	118,227
2010	57,233	19,891	132,951

The growth in population during this period reflects several factors, including the growth of student enrollment at UNC, increased economic activity in the area and the relocation of retirees attracted by the climate and amenities of the area.

Education. An important factor in the economy and growth characteristics of OWASA’s service area and the immediately surrounding area is UNC. Fall enrollment at UNC is shown in the following table:

<u>Fall</u>	<u>UNC Enrollment</u>
2007	28,136
2008	28,567
2009	28,916
2010	29,390
2011	29,137
2012	29,278
2013	29,197
2014	29,135
2015	29,084
2016	29,479

UNC is among the most comprehensive educational institutions in the nation and belongs to the select group of research campuses that form the Association of American Universities. UNC offers 77 bachelor’s, 110 master’s, and 64 doctorate programs.

Together, UNC’s health-related schools form one of the nation’s major academic medical centers. Among the specialized medical programs are the Health Services Research Center, the Hand Rehabilitation Center, the Child Development and Mental Retardation Institute, and the North Carolina Jaycees Burn Center. The Schools of Government, Cancer Research, Environmental Studies, Urban Studies, Marine Sciences, and Social Sciences conduct multi-disciplinary research and public service programs.

Employment. The North Carolina Employment Security Commission has estimated the percentage of unemployment in Orange County to be as follows:

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
January	3.2%	3.4%	5.8%	7.1%	6.4%	6.2%	6.2%	4.6%	4.5%	4.4%
February	3.3	3.6	6.5	7.1	6.3	6.2	5.7	4.4	4.4	4.3
March	3.0	3.2	6.1	6.8	6.1	5.9	5.4	4.6	4.3	4.3
April	2.9	3.2	6.0	6.4	5.9	5.7	5.0	4.0	4.1	3.9
May	3.1	4.0	6.9	6.5	6.2	6.2	5.5	4.9	5.0	4.1
June	3.7	4.5	7.3	6.9	7.3	7.1	6.0	4.8	5.1	4.7
July	3.6	4.8	7.4	6.9	7.2	7.2	5.9	5.3	5.3	4.6
August	3.3	4.3	7.2	6.7	7.5	6.6	5.5	5.4	5.0	4.8
September	3.0	4.0	6.6	5.9	6.8	5.7	4.7	4.5	4.2	4.1
October	3.1	4.0	6.5	5.7	6.2	5.9	4.8	4.0	4.5	4.1
November	3.1	4.7	6.6	6.0	5.8	5.8	4.4	3.9	4.3	3.9
December	3.0	4.4	6.6	5.9	6.1	5.9	4.2	3.9	4.3	4.0

UNC is the largest employer in Orange County. UNC Healthcare System, a major medical facility located adjacent to UNC; and the Chapel Hill/Carrboro City Schools (both located in Chapel Hill) are the second and third

largest employers, respectively. The following table lists the ten largest employers in Orange County for 2016 and 10 years prior:

Company or Institution	Service or Product	Number of Employees 2016	Number of Employees 2007
UNC	Education and Health Services	1,000+	1,000+
UNC Healthcare System	Education and Health Services	1,000+	1,000+
Chapel Hill/Carrboro City Schools	Education and Health Services	1,000+	1,000+
Orange County Schools	Education and Health Services	1,000+	1,000+
Orange County Government	Public Administration	1,000+	500-999
UNC Physician's Network	Education and Health Services	500-999	
Town of Chapel Hill	Public Administration	500-999	500-999
Sports Endeavors (dba Eurosport)	Trade	500-999	500-999
Wal-Mart Associates, Inc.	Trade	500-999	
General Electric	Trade	500-999	
Hr Prime	Professional Business Services		500-999
A Southern Season	Trade		500-999
Aramark	Leisure and Hospitality		500-999

Source: Orange County Economic Development Commission.

Retail Sales. Total retail sales in Orange County for 2006 through 2015 are shown in the following table:

Fiscal Year	Total Retail Sales	Change from Previous Year (%)
2006	907,564,000	(36.8)
2007	948,303,000	4.5
2008	971,592,000	2.5
2009	926,654,000	(4.6)
2010	984,599,000	6.3
2011	1,017,355,000	3.2
2012	949,577,608	(6.6)
2013	1,175,757,132	23.8
2014	952,800,000	(19.0)
2015	1,476,943,491	55.0

Source: Orange County Economic Development Commission

**CHAPEL HILL STATISTICAL DATA**

**Town of Chapel Hill  
Property Tax Levies and Collections  
Last 10 Fiscal Years**

Fiscal Year	Taxes Levied for the Fiscal Year	Collected within the Fiscal Year of the Levy			Total Collections to Date		Outstanding Delinquent Taxes
		Amount	Percentage of Original Levy	Collections in Subsequent Years	Amount	Percentage of Adjusted Levy	
2007	28,558,565	28,409,166	99.48%	111,769	28,520,935	99.87%	*
2008	30,412,485	30,240,782	99.44%	145,619	30,368,401	99.91%	115,177 (1)
2009	33,972,050	33,779,873	99.43%	139,190	33,918,874	99.84%	53,716
2010	35,119,150	34,836,717	99.20%	254,454	35,091,171	99.92%	27,979
2011	35,604,158	35,284,111	99.10%	258,936	35,543,047	99.83%	61,111
2012	35,887,926	35,604,067	99.21%	-	35,604,067	99.21%	283,859
2013	36,084,217	35,809,148	99.24%	-	35,809,148	99.24%	275,069
2014	38,361,125	38,115,148	99.36%	-	38,115,148	99.36%	245,977
2015	39,009,200	38,849,950	99.59%	-	38,849,550	99.59%	159,250
2016	39,789,825	39,638,269	99.62%	-	39,638,269	99.62%	151,556

\* Data not available. The Town contracts with the counties to maintain tax records and must rely on the information provided.

(1) Amount represents the cumulative delinquent taxes for years 2008 and prior.

**CHAPEL HILL STATISTICAL DATA**

**Town of Chapel Hill  
Assessed Value and Actual Value of Taxable Property  
Last 10 Fiscal Years**

Fiscal Year	Residential Property	Commercial Property	Combined Real Property	Personal Property	Public Service Companies	Total Taxable Assessed Value	Total Direct Tax Rate	Estimated Actual Taxable Value	Ratio of Assessed Value to Estimated Actual Value
					(2)	(3)	(4)	(5)	(6)
2007	3,640,445,489	1,249,997,134	4,890,442,623	520,961,320	61,554,945	5,472,958,888	0.522	6,582,822,815	83.14%
2008	3,825,506,198	1,313,540,280	5,139,046,478	460,567,284	60,142,623	5,659,756,385	0.522	6,807,501,064	83.14%
2009	3,945,477,182	1,354,733,971	5,300,211,153	471,708,077	63,678,158	5,835,597,388	0.581	5,896,329,583	98.97%
2010	(1) 4,855,643,567	1,667,252,143	6,522,895,710	455,030,840	67,647,776	7,045,574,326	0.494	7,141,991,207	98.65%
2011	5,133,443,183	1,762,638,471	6,896,081,654	452,486,487	62,491,249	7,411,059,390	0.494	7,477,610,120	99.11%
2012	*	*	6,730,528,993	471,001,413	63,232,013	7,264,762,419	0.049	7,200,106,033	99.11%
2013	*	*	6,701,285,738	536,958,587	66,253,143	7,304,497,468	0.494	7,583,529,271	103.82%
2014	*	*	6,823,181,920	573,309,679	66,762,306	7,463,253,905	0.514	7,188,606,161	96.32%
2015	*	*	6,862,387,124	519,383,543	65,246,662	7,447,017,329	0.524	7,290,629,965	97.90%
2016	*	*	6,893,114,610	541,047,846	85,443,691	7,519,606,147	0.524	7,894,665,291	99.01%

\* The breakdown between residential and commercial property is not available for fiscal years after 2011.

- (1) Revaluation year.
- (2) Public service companies' valuations are provided by the North Carolina Department of Revenue. These amounts include both real and personal property.
- (3) Source is the State Department of Revenue final report of assessed valuations of NC Municipalities for the 2010-2011 fiscal year.
- (4) Per \$100 of value. Includes taxes for general fund, debt service fund, and transit fund.
- (5) The estimated market value is calculated by dividing the assessed value by an assessment-to-sales ratio determined by the NC Department of Revenue. The ratio is based on actual property sales which took place during the fiscal year.
- (6) Source is the Property Tax Division of the North Carolina Department of Revenue.

**CHAPEL HILL STATISTICAL DATA**

**Town of Chapel Hill  
NC Demographic and Economic Statistics  
Last 10 Fiscal Years**

Calendar Year	Population (1)	Personal Income (in thousands) (2)	Per Capita Personal Income (3)	Median Age (3)	Education Level in Years of Schooling (4)	School Enrollment (4)	Unemployment Rate % (5)
2007	53,416	5,060,894	41,435	24.2	15.82	38,718	2.9
2008	54,903	5,060,894	41,435	24.2	15.82	39,864	3.1
2009	55,616	5,450,187	43,844	24.2	15.82	40,316	4.5
2010	56,778	5,976,341	47,063	25.6	15.82	39,428	5.6
2011	57,233	6,186,352	47,925	25.6	15.82	41,139	5.4
2012	57,757	6,268,886	46,713	25.6	15.82	41,059	5.6
2013	58,424	6,608,945	48,683	25.6	15.82	41,402	5.6
2014	59,271	7,131,776	51,702	25.3	15.82	41,242	4.4
2015	59,653	7,345,876	52,339	25.3	15.82	41,176	4.9
2016	59,753	7,440,708	52,989	25.8	15.82	41,490	5.2

- (1) Town of Chapel Hill Department of Planning, Office of State Budget and Management.
- (2) U.S. Department of Commerce, Bureau of Economic Analysis. Data available for Orange County only. Most recent available census data.
- (3) U.S. Department of Commerce, most recent available census data.
- (4) Chapel Hill-Carrboro City Schools and the University of North Carolina at Chapel Hill.
- (5) N.C. Employment Security Commission, Local Area Unemployment Statistics.

## FINANCIAL MANAGEMENT POLICY

### ORANGE WATER AND SEWER AUTHORITY

#### SUMMARY

*The purpose of this document is to describe a comprehensive and systematic approach to strategic financial planning, related policy decisions, and measurements of financial performance that collectively guide Orange Water and Sewer Authority (OWASA) in its ongoing efforts to provide its customers with high quality water, wastewater and reclaimed water services through responsible, sustainable and creative stewardship of the resources and assets it manages.*

The following excerpt from OWASA's *Mission Statement* provides the framework for development of this approach and related policies.

- *Efficiency and Value - we will perform all services in a financially sound and responsible manner with sufficient revenues to properly operate and fully maintain the water and wastewater system. As OWASA relies solely on user fees, we will continue to be guided by cost-of-service principles with regards to our rates, fees, and charges, and operate the water and sewer system at the lowest rates consistent with our obligation to provide proper and efficient services, now and in the future. We remain committed to continuous improvement in all of our services and will provide high value to our customers.*
- *Sustainability - we will proactively plan, construct, operate, maintain, and finance the water and wastewater system in a manner consistent with the principles of environmental, social and economic sustainability.*

<b>FINANCIAL PERFORMANCE OBJECTIVES</b>		
<b>Measurement</b>	<b>Objective</b>	<b>Section</b>
Working Capital Reserves	The greater of 4 months of O&M budget or 20% of the succeeding 3 years of CIP budget	A.1
Capital Improvements Reserve Fund	Minimum fund balance target of 2% of annual depreciated capital costs	B.1
Debt Service Coverage Ratio	≥ 2.0	D.1
Debt Burden to Asset Value	≤ 50%	D.2
Sufficiency of Revenues Above Debt Requirements	Annual Debt service shall not exceed 35% of annual gross revenues	D.3
Credit Ratings	Aa2 – Moody's; AA+ – Standard & Poor's; AA+ – Fitch	D.4
Cash Financing of Capital	Annual revenues and cash reserves shall provide not less than 30% of CIP funding	E.1
Rate/Revenue Stabilization Fund	Minimum fund balance target of 5% of projected water and sewer revenue	E.2
Service Affordability	Average annual residential bill divided by real median household income shall be ≤ 1.5%.	F.2

In recognition of the dynamic environment in which OWASA operates, the desired results of policy decisions identified in the *Financial Management Policy* may not always be achievable within short-term operating cycles. These policy decisions should be viewed as guidance for long-term sustainable fiscal performance, with success measured against the entire planning horizon rather than to individual reporting periods.

Although not necessarily explicitly expressed in this document, the *Financial Management Policy* recognizes OWASA's major legal requirements and obligations arising from State laws and regulations, contractual agreements with bondholders and other stakeholders and OWASA's Sale and Purchase Agreements under which the organization was formed. If not specifically addressed herein, adherence to such requirements is mandated elsewhere.



This document categorizes policy considerations for sound, sustainable financial policies into the categories of general financial; asset management; investment management; debt management; rates, fees and charges; customer care; and annual budgeting process.

#### **SECTION A. GENERAL FINANCIAL POLICIES**

- A.1. ***Working Capital Reserves:*** OWASA shall maintain a fund balance at a level to sufficiently provide cash flow for daily financial needs in addition to adequate reserves to counter revenue instability and unanticipated expenses. The budgeted minimum reserve balance shall be equal to the larger of the following: a) 33% (four months) of the Operations & Maintenance (O&M) Budget, or b) 20% of the total estimated cost of the Capital Improvements Program (CIP) identified for the succeeding three years.
- A.2. OWASA shall make conservative, but reasonable estimates of revenues and costs.
- A.3. To the extent practical, the cost of system expansion shall be recovered from parties responsible for the expansion (“growth should pay for growth”).
- A.4. If the Executive Director deems it necessary at any time to submit any Budget or other proposal to the Board that does not comply with the parameters set forth in this document, he/she shall seek specific approval from the Board for such a proposal.

#### **SECTION B. ASSET MANAGEMENT POLICIES**

- B.1. ***Capital Improvements Reserve Fund:*** OWASA shall maintain a Capital Improvements Reserve Fund with a minimum fund balance target of 2% of the annual depreciated capital costs. The Capital Improvements Reserve Fund shall be an unrestricted reserve that is a component of the General Fund balance. The purpose of this reserve fund is to: ensure more sustainable funding for rehabilitation and replacement of the water and sewer systems and capital equipment; cover major unplanned increases in capital project costs; pay for previously unplanned capital needs; and provide funding flexibility needed in the Annual Budget to adjust for CIP costs carry-over adjustments.
- B.2. The annual budget shall provide 100% funding for maintenance activities required to ensure the operational integrity and safety of facilities and facility components.
- B.3. OWASA shall use a comprehensive approach to properly maintain all capital facilities, equipment, vehicles, etc.
- B.4. An amortization schedule shall be established for each physical asset to reflect the reasonable useful life of the asset.
- B.5. The costs of this comprehensive maintenance and rehabilitation program shall be reflected in OWASA’s annual budget and five-year CIP budget.

#### **SECTION C. INVESTMENT MANAGEMENT POLICIES**

- C.1. Cash management and treasury activities shall be managed in a manner that reflects efficient use of interest rates and maximizes fund performance balanced against investment risk and cash flow needs.
- C.2. OWASA shall attempt to reduce investment risk and maximize return on investments by participating in a variety of authorized investment instruments and financial institutions.
- C.3. Investment of OWASA funds shall not expose the assets to undue or unreasonable risk.

#### **SECTION D. DEBT MANAGEMENT POLICIES**

- D.1. ***Debt Service Coverage Ratio:*** OWASA’s Bond Order requires a minimum annual required Debt Service Coverage Ratio of 1.2. The minimum annual debt service coverage ratio shall be 2.0; provided, however, that the minimum coverage ratio for any single year when severe weather anomalies or other unforeseen

circumstances occur which negatively impact revenues and/or expenses shall not be less than 1.5 during the Fiscal Year.

- D.2. ***Debt Burden to Asset Value:*** The comparison of outstanding debt to infrastructure value is a reasonable indicator of debt capacity. OWASA's debt to plant ratio (outstanding debt divided by the book value of fixed assets) shall not exceed 0.5 (50%).
- D.3. ***Sufficiency of Revenues above Debt Requirements:*** OWASA shall maintain debt service as a percent of revenue at or below 35% of revenues.
- D.4. ***Credit Ratings:*** OWASA shall maintain Credit Ratings of at least Aa2, AA+ and AA+ from Moody's, Standard & Poor's and Fitch, respectively.
- D.5. Debt issuance shall be limited to financing the costs of capital asset project planning and design, land acquisition, buildings, permanent structures, attached fixtures and equipment, and the cost of debt issuance and capital reserves as may be required by creditors.
- D.6. The repayment of debt shall be structured in such a manner that the repayment period does not exceed the expected useful life of the assets acquired with the debt proceeds.

#### **SECTION E. RATES, FEES AND CHARGES POLICIES**

- E.1. ***Cash Financing of Capital:*** Annual revenues and cash reserves shall provide not less than 30% of the funds required for OWASA's CIP.
- E.2. ***Rate/Revenue Stabilization Fund:*** OWASA shall maintain a Rate/Revenue Stabilization Fund with a minimum fund balance target of 5% of the projected water and sewer revenue for the applicable year. The Rate/Revenue Stabilization Fund shall be an unrestricted reserve that is a component of the General Fund balance. The purpose of this reserve fund is to provide sufficient funding for the cost of maintaining, repairing and operating the water, wastewater and reclaimed water systems during extended periods when expenditures are higher and/or revenues are lower than budgeted while offsetting the need for rate increases and spending changes during the fiscal year.
- E.3. OWASA shall maintain a system of rates, fees and charges that effectively recovers allocated costs to customers and customer classes in reasonable proportion to their differing service requirements and their responsibility for the costs incurred by the utility. Adherence to the cost-of-service principle (benefiting party pays) as mandated by the Sale and Purchase Agreements and Bond Order shall be a primary guiding philosophy.
- E.4. OWASA's rates, fees, and charges shall be reviewed on an annual basis, and adjusted as necessary, to ensure that rate and revenue levels are adequately funding OWASA's financial, capital and operational goals, objectives and requirements.
- E.5. Rates shall be sufficient to generate income necessary to meet OWASA's revenue requirements. Revenue recovery from rates shall ensure financial stability as measured by adequate fund balance, operating reserves, debt service ratio, specified reserves and other measures established by OWASA.
- E.6. Rates should provide incentives for cost-effective use of facilities, conservation of water and efficient use and reuse of water resources, including rate surcharges during periods of water shortage.
- E.7. When OWASA determines that a rate increase is required, OWASA will strive to have such an increase be no higher than the general rate of inflation. However, OWASA shall set rates so that revenues will be sufficient at all times to provide for the cost of maintaining, repairing and operating the water, wastewater and reclaimed water systems, to pay the principal and interest on all issued or assumed debt, and to ensure the organization remains fiscally sound and financially sustainable.

- E.8. Although at times, operational or fiscal constraints may necessitate more aggressive or accelerated rate adjustments, rate levels and structures should be implemented through gradual programmed implementation of rate adjustments if possible.
- E.9. OWASA shall consider using the services of a qualified independent consultant to conduct a comprehensive rate study at approximately five-year intervals.

**SECTION F. CUSTOMER CARE**

- F.1. OWASA shall operate the water and sewer system at the lowest rates consistent with its obligation to provide proper and efficient services, now and in the future.
- F.2. *Service Affordability* is an important consideration for OWASA. The target for average annual residential water and sewer bill divided by real median household income is  $\leq 1.5\%$ .
- F.3. When setting rates and evaluating rate structures, OWASA will carefully consider the impact such rates and rate structures will have on low income customers, while ensuring that cost-of-service principles are met.
- F.4. OWASA endorses and will promote the Care to Share customer assistance program. Donations made to the program by OWASA customers shall be provided to the Inter-Faith Council to help customers in need to pay their OWASA bill.
- F.5. Customers, citizens, and elected officials shall be provided timely, clear and understandable information and opportunities for constructive citizen participation in OWASA’s rate decisions.

**SECTION G. ANNUAL BUDGETING PROCESS**

The preparation of the following documents on an annual basis is a key component of OWASA’s annual budgeting and rate setting process. Those documents followed by an asterisk (\*) shall be presented for Board of Directors adoption.

**Budget Calendar**: The budget calendar shall include the proposed dates of all Board meetings and work sessions at which budget matters are to be discussed, and shall list the dates by which major budget tasks have been or are to be completed by staff.

**Statement of Strategic Issues and Policies (SIP)**: The SIP shall identify the major issues, policies, and concerns that should be addressed in the upcoming annual budget and capital improvements deliberations.

**Financial Planning Assumptions and Background Information Document**: This document lists the major assumptions upon which the financial plans and budgets are to be based.

**Five-Year CIP\***: The CIP provides for the orderly repair and replacement of existing facilities, helps identify lead time for project planning, regulatory approvals, land acquisition, design, and construction, and provides a framework for strategically analyzing a wider range of acceptable alternatives, and for identifying, ranking, and executing projects.

**15-Year Financial Planning Report**: The planning report provides a long-term perspective for assessing the adequacy of rates and fees and the timing and amount of anticipated debt financing. It also provides a means of evaluating the economic feasibility of implementing the long-range CIP.

**Annual Budget\***: The annual budget provides the appropriation necessary to operate during the ensuing fiscal year.

The specific process and timeline for completing key components of OWASA’s annual budgeting and rate setting process will vary from year-to-year; however, the following table sets forth guidelines to which OWASA should generally adhere.

Task	Time Frame	Rationale
Review Strategic Issues, Policies and Economic Assumptions	November/December	Staff, the Finance Committee and Board shall review strategic issues, policies, and economic assumptions that are expected to impact and the preparation of budgets (O&M and CIP) and rates. The identification of these key issues will help shape the annual budgeting process.
Capital Improvements Program Review	February/March	The CIP provides for the orderly repair and replacement of existing facilities, lead time for project planning, regulatory approvals, land acquisition, design and construction, a framework for strategically analyzing a wider range of acceptable alternatives, and a framework for identifying, ranking, and executing projects. The Finance Committee and Board will review and comment on the draft CIP.
Operations and Maintenance Budget Review	March/April	The O&M budget provides funding for properly operating and maintaining OWASA's services and programs. The Finance Committee and Board will review the draft O&M budget to include cost containment and / or efficiency opportunities that may impact the O&M and CIP budgets.
Financial Planning and Rate Review	April	Upon completion of CIP and O&M budgets, this information and other planning assumptions shall inform OWASA's 15-year financial plan. Staff will review the financial plan with the Board and recommend increases or decreases in rates.
Conduct Public Hearings	May	The OWASA Board shall hold public hearings on the draft O&M budget; CIP budget; and proposed rates, fees and charges for the coming year.
Adopt Budgets and Rates	June	The OWASA Board shall adopt the O&M budget, CIP budget and rate schedule for the coming year.

## GLOSSARY

**ACCRUAL BASIS OF ACCOUNTING** – A basis of accounting under which increases and decreases in economic resources are recognized as soon as the underlying event or transaction occurs. Revenues are recognized when earned and expenses are recognized when incurred, regardless of the timing of related cash flows.

**ALLOCATE** – To set apart portions of budgeted expenditures which are specifically designated for special purposes.

**ANNUAL BUDGET** – A budget covering a single fiscal year (July 1 - June 30).

**APPROPRIATION** – A legal authorization to make expenditures and to incur obligations for specific purposes. An appropriation usually is limited in amount and the time it may be expended.

**APPROPRIATION RESOLUTION** – A resolution through which appropriations are given legal effect.

**AUTHORITY** – A public agency which performs a specified range of services that are usually financed from fees or service charges.

**BALANCED BUDGET** – A budget in which the sum of net revenues and appropriated fund balance is equal to appropriations.

**BOND** – A written promise to pay a specific amount of money with interest within a specific time period, usually long-term.

**BUDGET** – A financial plan containing projected expenditures and resources for a specified number of years.

**BUDGET DOCUMENT** – A formal document containing the organization's financial plan for a fiscal year. The budget document is divided into two major parts - the budget message and an operating budget. The operating budget section contains summaries of expenditures and resources. The budget document is presented in two phases, preliminary and final.

**BUDGET MESSAGE** – An overview of the proposed budget which discusses the major budget items and the organization's present and future financial condition.

**BUDGETARY CONTROL** – The control or management of a government or enterprise in accordance with an approved budget to keep expenditures within the limitations of available appropriations and available revenues.

**CAPITAL IMPROVEMENT PROGRAM (CIP)** – Capital projects that include construction, equipment purchases, major renovation of buildings, water and sewer lines, or other structures.

**CAPITAL OUTLAYS** – Expenditures budgeted to purchase or add to fixed assets with an estimated useful life greater than one year and costing \$5,000 or more.

**CAPITAL PROJECT** – A project expected to have a useful life of at least five years and an estimated total cost of \$10,000 or more. Capital projects include the construction, purchase, or major renovation of buildings, water and sewer lines, or other structures.

**DEBT SERVICE** – The payment of principal and interest on long-term debt.

**DEBT SERVICE RATIO** – A ratio that expresses the relationship of total net revenue to debt service.

**DEFICIT** – An excess of expenditures over revenues or expense over income.

**DEPRECIATION** – The allocation of the cost of a tangible asset over its useful life.

**ENTERPRISE FUND** – An accounting entity for reporting financial activity where a fee is charged to external customers for goods and services. Reporting of activities through an enterprise fund is required when the reporting entity's debt is backed solely by fees, or if a legal or policy requirement exists to recover costs through fees.

**EXPENSE** – Costs that occur as part of the organization's operating activities during a specified accounting period.

**FINANCIAL MANAGEMENT POLICY** – A Board adopted policy document describing a comprehensive and systematic approach to strategic financial planning, related policy decisions, and measurements of financial performance.

**FISCAL YEAR** – A 12-month period (July 1 - June 30) to which the annual operating budget applies and at the end of which an assessment is made of the organization's financial condition and performance of its operations.

**FUND** – An accounting entity created to record the financial activity for a selected financial grouping. A fund is set up to carry out a special function or attain certain objectives in accordance with set laws and regulations.

**FUND BALANCE** – An amount of resources set aside within a fund to provide adequate cash flow and reserves.

**FUND TYPE** – Any one of seven categories into which all funds are classified in governmental accounting. The seven fund types include; general, special revenue, debt service, capital projects, enterprise, internal service, and trust and agency.

**GENERAL FUND** – A fund which provides for the accounting of all financial resources except those designated to other funds.

**GRANTS** – A contribution or gift in cash or other assets from another government to be used for a specified purpose.

**LONG-TERM DEBT** – Debt with a maturity of more than one year after the date of issuance.

**MGD** – Millions of gallons per day. Used in measuring volume of water and wastewater flow. One (1) MGD = 1.5 cubic feet per second.

**MODIFIED ACCRUAL BASIS OF ACCOUNTING** – A basis of accounting under which increases and decreases in financial resources are recognized only to the extent that they reflect near-term inflows and outflows of cash. Revenues are recognized only if available to finance expenditures during the accounting period, and expenses are recognized when due and paid.

**NONOPERATING EXPENSES** – Expenses which are not directly related to the organization's primary activities.

**NPDES** – National Pollution Discharge Elimination System. Regulations that protect effluent receiving water (e.g., Morgan Creek) for swimming and fishing by limiting the amount of oxygen-consuming pollutants, primarily carbon and nitrogen, which can be discharged into the stream.

**PUMP STATION** – Structure containing pumps and accessory piping, valves and other mechanical and electrical equipment for pumping water, wastewater or other liquids. A pump station is used to pump wastewater from a sewer of lower elevation to a sewer of higher elevation.

**PURCHASE AND SALE AGREEMENT** – An agreement between the State of North Carolina on behalf of the University of North Carolina and the Orange Water and Sewer Authority that conveyed the water and wastewater treatment facilities previously owned by UNC to OWASA as of February 15, 1977. Similar and separate agreements were also executed with the Towns of Chapel Hill and Carrboro.

**OPERATING BUDGET** – A budget that applies to all outlays other than capital outlays and debt service.

**OPERATING EXPENSE** – Expenses which are directly related to the organization's primary activities other than capital outlays and debt service.

**PERFORMANCE MEASURE** – A measurement unit produced as a result of the activities carried out by a program (i.e., miles of pipe inspected, feet of water and sewer lines rehabilitated).

**PROGRAM BUDGET** – A plan whereby expenditures are budgeted by programs of work and grouped into specific service areas.

**PROGRAM PERFORMANCE MEASURE** – An indicator that reflects how effectively and efficiently a program is being carried out.

**PROGRAM OBJECTIVE** – A specific statement about what is to be accomplished or achieved (result) for a particular program during the fiscal year.

**RECLAIMED WATER** – wastewater that has gone through advanced treatment, such as occurs at OWASA's Mason Farm Wastewater Treatment Plant (WWTP), so that the water can be recycled back into the natural environment or used for allowable non-drinking purposes.

**RESERVE** – An account designated for a portion of the fund balance which is to be used for a specific purpose (e.g., maintenance reserve).

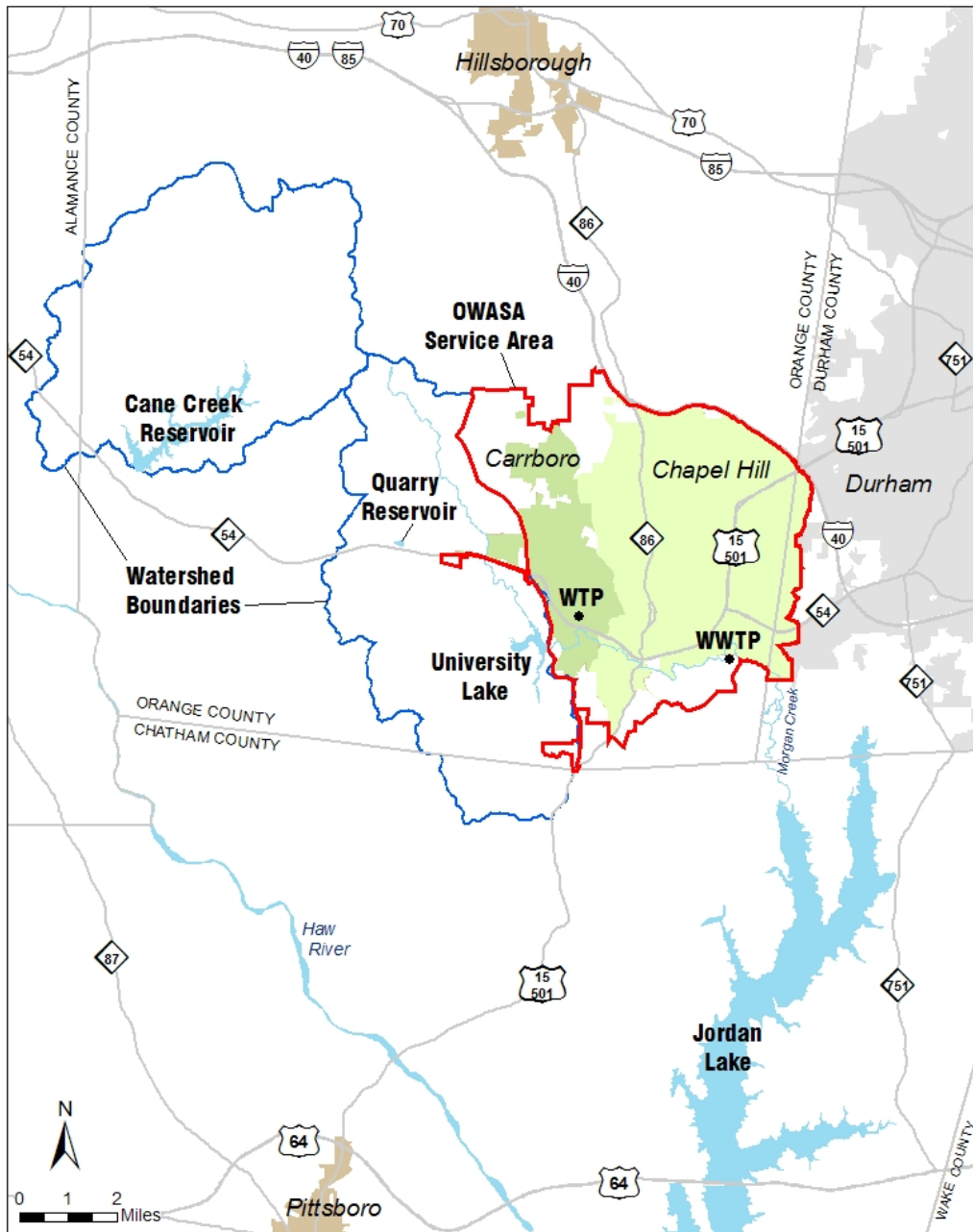
**REVENUE BONDS** – The primary method used by OWASA for long-term debt; they are repaid from user fees over the life of the assets. In general, these bonds have no claim on money derived from property taxes or special assessments.

**REVENUES** – Financial resources other than from bond issue proceeds.

**SPECIAL ASSESSMENT** – A levy on certain properties to defray part or all of the costs associated with improvements or services which will benefit those properties. For instance, a special assessment would be levied on property benefitting from the construction of water and sewer lines to serve a particular area.

**SPECIAL REVENUE FUND** – A fund used to account for the revenues from specific sources which are to be used for legally specified expenditures.

**WORKING CAPITAL** – The ratio of current assets to current liabilities. A measure of an organization's efficiency and short-term financial health.



**ORANGE WATER AND SEWER AUTHORITY**

*A public, non-profit agency providing water, sewer and reclaimed water services to the Carrboro-Chapel Hill community.*