



ORANGE WATER AND SEWER AUTHORITY

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

Agenda

Work Session of the OWASA Board of Directors

Thursday, June 14, 2018, 6:00 P.M.

OWASA Community Room

The Board of Directors appreciates and invites the public to attend and observe its meetings. For the Board's Work Session, public comments are invited on only items appearing on this agenda. Speakers are invited to submit more detailed comments via written materials, ideally submitted at least three days in advance of the meeting to the Clerk to the Board via email or US Postal Service (aorbich@owasa.org/400 Jones Ferry Road, Carrboro, NC 27510).

For items on the agenda, public speakers are encouraged to organize their remarks for delivery within a four-minute time frame allowed each speaker, unless otherwise determined by the Board of Directors.

The Board may take action on any item on the agenda.

Announcements

- A. Announcements by the Vice Chair
 - Any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
 - June 5, 2018, the Carrboro Board of Aldermen reappointed Robert Morgan to the OWASA Board of Directors
 - Update on the May 30, 2018 Board Diversity and Inclusion Training Session
- B. Announcements by Board Members
 - Human Resources Committee will meet on Monday, June 25, 2018 at 5:00 p.m. in the OWASA Boardroom (Barbara Foushee)
- C. Announcements by Staff
- D. Additional Comments, Suggestions, and Information Items by Board Members (Heather Payne)

Consent Agenda

Action

1. Approve Local Water Supply Plan and Water Shortage Response Plan (Ruth Rouse)*
2. Resolution Approving Sole Source Procurement of a Gas Chromatograph/Mass Spectrometer for the Analysis of Malodorous Compounds (Kenneth Loflin)
3. Resolution Honoring the Service of Kelly Thompson to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community (Heather Payne)
4. Minutes of the May 10, 2018 Work Session of the Board of Directors (Andrea Orbich)
5. Minutes of the May 24, 2018 Public Hearings and Meeting of the Board of Directors (Andrea Orbich)

Regular Agenda

Discussion and Action

6. Approval of the Schedule of Rates, Fees and Charges; Annual Budget; Five-Year Capital Improvements Program (CIP); and Cost of Living and Merit Pay Increases (Stephen Winters/Vishnu Gangadharan/Stephanie Glasgow)

AGENDA

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- A. Resolution Adopting the Schedule of Rates, Fees and Charges Effective on or after July 1, 2018 for System Development Fees and on or after October 1, 2018 for all other Rates, Fees and Charges
 - B. Resolution Adopting the Budget for Orange Water and Sewer Authority for Fiscal Year (FY) 2019
 - C. Resolution Approving the CIP for FY 2019-2023 and the Accompanying FY 2019 Capital Project Resolution
 - D. Resolution Updating the Schedule of Employee Classification and Authorized Compensation; Adjusting Affected Employees' Compensation to the Minimum of the Pay Range; and Authorizing Cost of Labor and Merit Pay Increases for Eligible Employees
7. Resolution Honoring the Service of Barbara M. Foushee to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors (Yinka Ayankoya)
 8. Resolution Honoring the Service of Heather Payne to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors (John Young)

Discussion

9. Review Board Work Schedule (Heather Payne/Ed Kerwin)
 - A. Request(s) by Board Committees, Board Members and Staff
 - B. July 12, 2018 Work Session
 - C. 12 Month Board Meeting Schedule
 - D. Pending Key Staff Action Items

Election of Officers (Effective July 1, 2018)

10. Report of the Nominating Committee for Election of Officers (Barbara Foushee, Chair of the Nominating Committee)
 - A. Chair of the Board
 - B. Vice Chair of the Board
 - C. Secretary of the Board

Summary of Work Session Items

11. Executive Director will summarize the key staff action items from the Work Session

Agenda Item 1:

Approve Local Water Supply Plan and Water Shortage Response Plan

Purpose:

To approve OWASA's 2017 Local Water Supply Plan (LWSP) and 2018 update to its Water Shortage Response Plan (WSRP).

Background:

North Carolina General Statute 143-355(l) requires that local water systems prepare a local water supply plan (LWSP) that meets State requirements, and to update that plan every five years (or more frequently as may be required by the North Carolina Division of Water Resources (DWR)). Session Law 2008-143 ("2008 Drought Bill") ratified in July 2008 requires public water supplies to develop a water shortage response plan (WSRP), and that the WSRP is to be submitted and updated at five-year intervals. The intention is that the WSRP be incorporated into the LWSP.

The purpose of the LWSP is to ensure that present and proposed water supplies will meet projected water demands. Demand projections included in OWASA's LWSP report to DWR are consistent with those included in our Long-Range Water Supply Plan. The existing data included in the 2017 LWSP is based on data from the 2017 calendar year (January 1, 2017 through December 31, 2017) and must be submitted to DWR by April 1, 2018 for their review and approval. OWASA submitted its LWSP on March 20, 2018 and received approval from DWR on April 18, 2018.

The WSRP describes the actions OWASA will take during a water shortage condition due to drought or operational emergency. The WSRP was most recently updated and approved by the Board of Directors in January 2015 to include the [Drought Response Operating Protocol](#). Staff recently made minor changes to the WSRP to reflect the revised rate structure for multi-family, master-metered residential customers (Table 4-1 of the WSRP). DWR approved the updates to the WSRP (Attachment 2) on May 17, 2018. Staff recommends that the Board also approve the WSRP at this time in order to provide for concurrent review and approval of these two plans as intended by the general statute.

Staff Recommendation:

Staff recommends that the Board of Directors adopt the Resolution to approve OWASA'S 2017 Local Water Supply Plan and Water Shortage Response Plan Update Submitted to the NC Department of Environmental Quality, Division of Water Resources.

June 14, 2018

Information:

- Attachment 1: OWASA 2017 Local Water Supply Plan
- Attachment 2: OWASA Water Shortage Response Plan
- Attachment 3: Draft Resolution Approving OWASA's 2017 Local Water Supply Plan and (Revised) Water Shortage Response Plan as Approved by the NC Department of Environmental Quality, Division of Water Resources

Orange Water and Sewer Authority

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

1. System Information

Contact Information

Water System Name: Orange Water and Sewer Authority PWSID: 03-68-010
 Mailing Address: 400 Jones Ferry Road Carrboro, NC 27510 Ownership: Authority
 Contact Person: Ruth Rouse Title: Planning & Development Manager
 Phone: 919-537-4214 Fax: 919-968-4464

Complete

Distribution System

Line Type	Size Range (Inches)	Estimated % of lines
Asbestos Cement	6-12	28.00 %
Cast Iron	4-20	3.00 %
Ductile Iron	2-42	63.00 %
Other	1-20	1.00 %
Polyvinyl Chloride	1-8	5.00 %

What are the estimated total miles of distribution system lines? 380 Miles
 How many feet of distribution lines were replaced during 2017? 6,742 Feet
 How many feet of new water mains were added during 2017? 8,863 Feet
 How many meters were replaced in 2017? 496
 How old are the oldest meters in this system? 64 Year(s)
 How many meters for outdoor water use, such as irrigation, are not billed for sewer services? 288
 What is this system's finished water storage capacity? 8.0000 Million Gallons
 Has water pressure been inadequate in any part of the system since last update? No

Some large meters are rebuilt periodically rather than replaced. OWASA is moving toward Advanced Metering Infrastructure and recently completed our field readiness test and will be starting full deployment soon. We anticipate replacing approximately 1/3 of our meters in the next 18 months. Approximately 1/4 of our meters will have the register changed and a transmitter added, and the remaining meters will have their transmitter changed (convert from AMR to AMI).

Programs

Does this system have a program to work or flush hydrants? Yes, 2 Years or More
 Does this system have a valve exercise program? Yes, 2 Years or More
 Does this system have a cross-connection program? Yes
 Does this system have a program to replace meters? Yes
 Does this system have a plumbing retrofit program? No
 Does this system have an active water conservation public education program? Yes
 Does this system have a leak detection program? No

Valves are exercised periodically; some of this is done in conjunction with unidirectional flushing. OWASA has a multi-year program to ensure our hydrants and valves are routinely exercised. While OWASA has no formal leak detection program, we use AWWA's Water Audit software to evaluate water loss in our system. In 2016, we looked at 2012-2016, and in 2017 began updating the report on an annual basis and reporting results to our Board of Directors. Our gallons lost per connection per day ranged from 22.3 - 26.9 over FY13 through FY17, which indicates a low level of leakage. As part of our affordability program, we perform water audits as requested and resources allow.

Water Conservation

What type of rate structure is used? Increasing Block, Seasonal, Uniform
 How much reclaimed water does this system use? 0.6500 MGD For how many connections? 12

Does this system have an interconnection with another system capable of providing water in an emergency? **Yes**

Single family residential rates are increasing block, multi-family master-metered rates are uniform based on analysis which indicated that group does not exhibit a traditional peaking pattr, and all other rates are seasonal.
 Reclaimed water is used mainly by UNC-Chapel Hill and UNC Health Care in cooling towers and for chilled water. Some reclaimed water is also used to irrigate athletic fields. Our peak day use of reclaimed water was in August 2015 (2.4 MGD); reclaimed water has helped reduce our peaking factor for potable and raw water demands.

2. Water Use Information

Service Area

Sub-Basin(s)	% of Service Population	County(s)	% of Service Population
Haw River (02-1)	100 %	Orange	99 %
		Durham	1 %

What was the year-round population served in 2017? **83,000**

Has this system acquired another system since last report? **No**

Water Use by Type

Type of Use	Metered Connections	Metered Average Use (MGD)	Non-Metered Connections	Non-Metered Estimated Use (MGD)
Residential	19,238	3.5390	0	0.0000
Commercial	883	0.8740	0	0.0000
Industrial	0	0.0000	0	0.0000
Institutional	550	1.6370	0	0.0000

How much water was used for system processes (backwash, line cleaning, flushing, etc.)? **0.0700 MGD**

Institutional water use is dominated by UNC.
 WTP process water (filter backwash) is treated in midstream process and recycled back through the WTP. In 2017, we recycled approximately 0.44 mgd through the system and discharged approximately 0.04 mgd to the sewer system. During our February 2017 water emergency, we sent approximately 1 million gallons of water from the clearwell to the sewer system.
 Increase in process water amount may be due to this item being more closely tracked.

Water Sales

Purchaser	PWSID	Average Daily Sold (MGD)	Days Used	MGD	Contract Expiration	Recurring	Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
Chatham County - North	03-19-126	0.0000	0	0.0000		No	No	16	Emergency
City of Durham	03-32-010	3.3100	40	0.0000	2029	No	Yes	16	Emergency
Town of Cary	03-92-020	0.0000	0	0.0000	2029	No	Yes		Emergency
Town of Hillsborough	03-68-015	0.0000	0	2.0000		Yes	Yes	16	Emergency

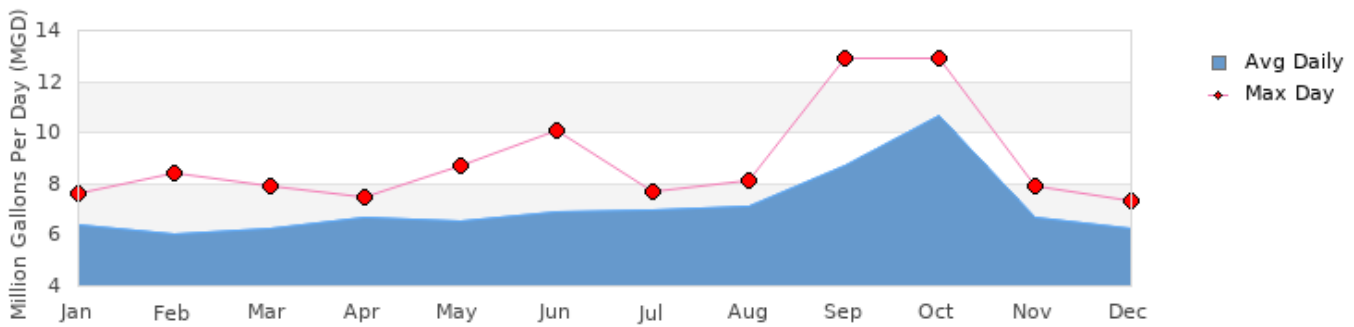
Transfers to Durham this year were not typical. Durham currently has one WTP offline for improvements and is also doing some improvements at its other WTP.
 Mutual aid agreement between OWASA and Hillsborough signed in 1988. There is a section which indicates that once Cane Creek Reservoir completed, OWASA expects to be able to provide maximum of 2 mgd during original term of agreement (5 years; renews automatically each year unless terminated).
 Mutual aid agreements with Cary and Durham have expiration dates and would need new agreements to extend those dates. OWASA and Cary are not directly connected, but can provide water to each other by wheeling water through Durham.

3. Water Supply Sources

Monthly Withdrawals & Purchases

	Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)
Jan	6.3500	7.6300	May	6.5200	8.6600	Sep	8.6800	12.9100
Feb	5.9700	8.4000	Jun	6.9000	10.1000	Oct	10.6400	12.9400
Mar	6.2300	7.9100	Jul	6.9600	7.6700	Nov	6.6500	7.9200
Apr	6.6300	7.4700	Aug	7.0700	8.1000	Dec	6.1900	7.3100

Orange Water and Sewer Authority's 2017 Monthly Withdrawals & Purchases



Surface Water Sources

Stream	Reservoir	Average Daily Withdrawal		Maximum Day Withdrawal (MGD)	Available Raw Water Supply		Usable On-Stream Raw Water Supply Storage (MG)
		MGD	Days Used		MGD	* Qualifier	
Cane Creek	Cane Creek Reservoir	5.3990	313	9.6890	8.5000	SY50	2,909.0000
Haw River	Jordan Lake	0.0000	0	0.0000	5.0000	C	0.0000
Morgan Creek	University Lake	2.6220	340	7.6300	2.0000	SY50	449.0000

* Qualifier: C=Contract Amount, SY20=20-year Safe Yield, SY50=50-year Safe Yield, F=20% of 7Q10 or other instream flow requirement, CUA=Capacity Use Area Permit

Surface Water Sources (continued)

Stream	Reservoir	Drainage Area (sq mi)	Metered?	Sub-Basin	County	Year Offline	Use Type
Cane Creek	Cane Creek Reservoir	31	Yes	Haw River (02-1)	Orange		Regular
Haw River	Jordan Lake	1,690	Yes	Haw River (02-1)	Wake		Emergency
Morgan Creek	University Lake	30	Yes	Haw River (02-1)	Orange		Regular

What is this system's off-stream raw water supply storage capacity? 200 Million gallons

Are surface water sources monitored? Yes, Weekly

Are you required to maintain minimum flows downstream of its intake or dam? Yes

Does this system anticipate transferring surface water between river basins? No

Yield calculations for Cane Creek Reservoir (CCR), University Lake (UL), and the offline quarry do not reflect 50-year recurrence frequency for these individual reservoirs. Yield is based on the system of these 3 impoundments assuming: drought of record (2001-02), expected 2060 storage capacity (adjusted for sediment accumulation), 20% of storage held in reserve for extreme drought or other emergency conditions (i.e., yield based on 80% of actual storage projected in 2060), and minimum release required downstream of CCR per 404 permit (2.78 cfs at all times when inflow to reservoir is 3 cfs or greater and minimum release equal to inflow when inflow less than 3 cfs).

Jordan Lake - OWASA has Level I allocation of 5% of water supply pool (approx. 5 mgd). We can access this allocation through our mutual aid agreements with Cary and Durham and through the Cary/Durham and Durham/OWASA interconnections. OWASA plans to use the allocation during extended drought and operational emergencies.

Water Purchases From Other Systems

Seller	PWSID	Average Daily	Days Used	Contract		Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type	
		Purchased (MGD)		MGD	Expiration				Recurring
Chatham County - North	03-19-126	0.2200	2	0.0000		No	No	16	Emergency
City of Durham	03-32-010	4.1320	3	0.0000	2029	No	Yes	16	Emergency
Town of Cary	03-92-020	0.0000	0	0.0000	2029	No	Yes		Emergency
Town of Hillsborough	03-68-015	0.3400	2	0.0000		Yes	Yes	16	Emergency

Water from Durham received during February 2017 water emergency.

OWASA received 441,000 gallons of water from Chatham County during February 2017 water emergency. OWASA used 679,000 gallons of water from

Hillsborough during February 2017 water emergency, but all water used for flushing. Due to length of line and flushing time, no water from Hillsborough entered our distribution system.
 Water received has been tracked; OWASA has not paid for water, but has sent water back to Durham while it is working on its WTPs. Similarly, we would send water back to Chatham County and Hillsborough.

Water Treatment Plants

Plant Name	Permitted Capacity (MGD)	Is Raw Water Metered?	Is Finished Water Output Metered?	Source
Jones Ferry Road WTP	20.0000	Yes	Yes	Cane Creek Reservoir and University Lake

Did average daily water production exceed 80% of approved plant capacity for five consecutive days during 2017? **No**
 If yes, was any water conservation implemented?

Did average daily water production exceed 90% of approved plant capacity for five consecutive days during 2017? **No**
 If yes, was any water conservation implemented?

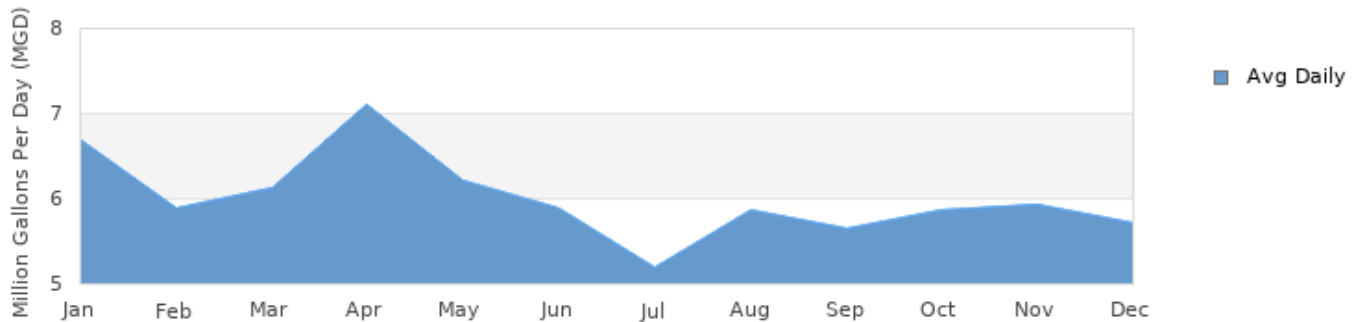
Are peak day demands expected to exceed the water treatment plant capacity in the next 10 years? **No**

4. Wastewater Information

Monthly Discharges

	Average Daily Discharge (MGD)		Average Daily Discharge (MGD)		Average Daily Discharge (MGD)
Jan	6.6820	May	6.2160	Sep	5.6540
Feb	5.8750	Jun	5.8820	Oct	5.8640
Mar	6.1180	Jul	5.1910	Nov	5.9230
Apr	7.1110	Aug	5.8680	Dec	5.7050

Orange Water and Sewer Authority's 2017 Monthly Discharges



How many sewer connections does this system have? **19,808**
 How many water service connections with septic systems does this system have? **940**
 Are there plans to build or expand wastewater treatment facilities in the next 10 years? **No**

The number of water service connections with septic systems is estimated based on water meter data without a sewer account. However, this method likely overestimates the number of water connections with septic.

Wastewater Permits

Permit Number	Permitted Capacity (MGD)	Design Capacity (MGD)	Average Annual Daily Discharge (MGD)	Maximum Day Discharge (MGD)	Receiving Stream	Receiving Basin
NC0025241	14.5000	14.5000	6.0070	27.3540	Morgan Creek	Haw River (02-1)

5. Planning

Projections

	2017	2020	2030	2040	2050	2060
Year-Round Population	83,000	92,700	107,000	121,200	135,500	149,700
Seasonal Population	0	0	0	0	0	0

Residential	3.5390	4.2300	4.9300	5.4900	6.0300	6.5700
Commercial	0.8740	1.2400	1.4400	1.6100	1.7700	1.9200
Industrial	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Institutional	1.6370	2.0100	2.3400	2.6100	2.8700	3.1200
System Process	0.0700	0.1000	0.1100	0.1200	0.1400	0.1500
Unaccounted-for	0.6266	0.7400	0.8600	0.9600	1.0500	1.1500

Demand projections derived from assumptions detailed in OWASA's 2010 Long-Range Water Supply Plan (demand projections are not a direct function of population estimates). Projections are consistent with those presented in the 2010 Triangle Regional Water Supply Plan, Vol 1 - Regional Needs Assessment, 2014 Triangle Regional Water Supply Plan, and OWASA's Round 4 Jordan Lake allocation application. All work was completed with the Jordan Lake Partnership.

OWASA is beginning the process to update its demand projections as part of update to its Long-Range Water Supply Plan.

Future Supply Sources

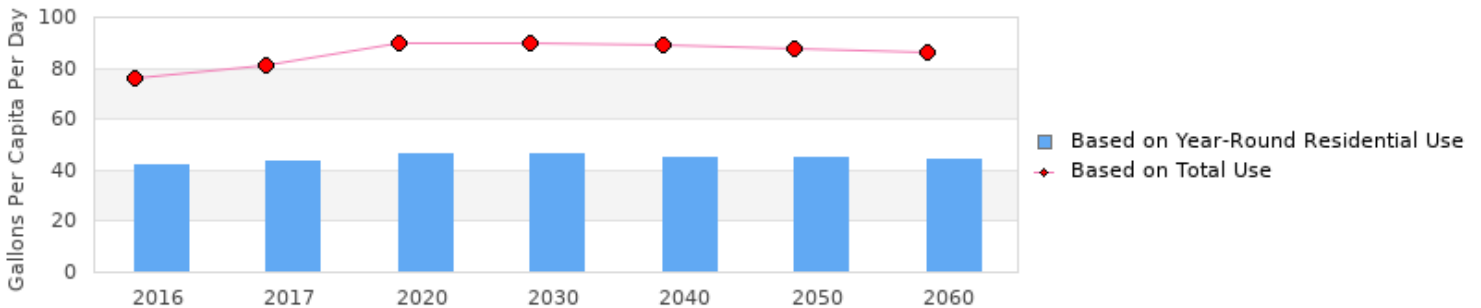
Source Name	PWSID	Source Type	Additional Supply	Year Online	Year Offline	Type
Expanded Quarry Reservoir	03-68-010	Surface	2.1000	2035		Regular
Jordan Lake	03-68-010	Surface	5.0000	2025		Regular

OWASA currently has an allocation of 5% of Jordan Lake's water supply, but does not have permanent access to it. OWASA can access it on an emergency basis by purchasing finished water from Cary and wheeling water through Durham. At this time, OWASA plans to use its Jordan Lake allocation during emergencies and drought. OWASA will evaluate options to access its allocation when it updates its Long-Range Water Supply Plan (updated projections are underway).

 Demand v/s Percent of Supply

	2017	2020	2030	2040	2050	2060
Surface Water Supply	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000
Ground Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Purchases	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Supplies		0.0000	5.0000	7.1000	7.1000	7.1000
Total Available Supply (MGD)	10.5000	10.5000	15.5000	17.6000	17.6000	17.6000
Service Area Demand	6.7466	8.3200	9.6800	10.7900	11.8600	12.9100
Sales	0.3627	0.0000	0.0000	0.0000	0.0000	0.0000
Future Sales		0.0000	0.0000	0.0000	0.0000	0.0000
Total Demand (MGD)	7.1093	8.3200	9.6800	10.7900	11.8600	12.9100
Demand as Percent of Supply	68%	79%	62%	61%	67%	73%

Orange Water and Sewer Authority's Projected Gallons Per Capita Per Day (GPCD) Over Time



The purpose of the above chart is to show a general indication of how the long-term per capita water demand changes over time. The per capita water demand may actually be different than indicated due to seasonal populations and the accuracy of data submitted. Water systems that have calculated long-term per capita water demand based on a methodology that produces different results may submit their information in the notes field.

Your long-term water demand is 43 gallons per capita per day. What demand management practices do you plan to implement to reduce the per capita water demand (i.e. conduct regular water audits, implement a plumbing retrofit program, employ practices such as rainwater harvesting or reclaimed water)? If these practices are covered elsewhere in your plan, indicate where the practices are discussed here.

Are there other demand management practices you will implement to reduce your future supply needs? As we update the Long-Range Water Supply Plan, we will evaluate demand management alternatives to meet our long-term water needs. We will continue our use of increasing block rates, seasonal rates, and drought surcharges to send a pricing signal. We will also continue with public education; details of these items are included in our Water Shortage Response Plan, which was updated in January 2015. As part of the Long-Range Water Supply Plan, we will also develop a Conservation Plan as a companion document.

What supplies other than the ones listed in future supplies are being considered to meet your future supply needs? As we update the Long-Range Water Supply Plan, we will evaluate supply alternatives. We do not anticipate using future new supplies, but will evaluate increasing our use of reclaimed water and potential other interconnections.

How does the water system intend to implement the demand management and supply planning components above? We will develop an Implementation Plan for supply and demand management alternatives selected to meet our long-term water supply needs during our update of the Long-Range Water Supply Plan. This implementation plan will include schedule, funding, permitting, and other resource needs.

Additional Information

Has this system participated in regional water supply or water use planning? Yes, OWASA is an active participant in the Jordan Lake Partnership. We have also worked with Dr. Greg Characklis on regional water supply planning with the Town of Cary, City of Durham, and City of Raleigh.

What major water supply reports or studies were used for planning? The OWASA 2010 Long-Range Water Supply Plan evaluated demands and potential sources and demand management alternatives to meet future demands. Final report and appendices are available at <http://www.owasa.org/2010-long-range-water-supply-plan>. Information in this plan is consistent with information provided to the Jordan Lake Partnership (www.jordanlakepartnership.org) and used in their Triangle Regional Water Supply Plan.

Please describe any other needs or issues regarding your water supply sources, any water system deficiencies or needed improvements (storage, treatment, etc.) or your ability to meet present and future water needs. Include both quantity and quality considerations, as well as financial, technical, managerial, permitting, and compliance issues: No other issues or concerns are identified.

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

WATER SHORTAGE RESPONSE PLAN

June 14, 2018

Orange Water and Sewer Authority
Carrboro, 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
WATER SHORTAGE RESPONSE PLAN

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SECTION 1.

PURPOSE AND BACKGROUND

This Water Shortage Response Plan (WSRP) describes the actions Orange Water and Sewer Authority (OWASA) will take during a water shortage condition due to drought or special operational constraints, including the measures that OWASA will implement to reduce potable water use during such shortage conditions. This plan has been prepared as required by North Carolina General Statute (NCGS) 143-355(l).

That statute requires most public water systems in the State to have a State-approved WSRP as a component of their Local Water Supply Plan. State regulations governing water use during droughts and water emergencies (15A NCAC 02E .0607) and Session Law 2008-143 passed in July 2008 set forth specific items that must be included in local WSRPs.

OWASA's WSRP is generally organized along the lines of the North Carolina Division of Water Resources' (DWR) *Water Shortage Response Plan (WSRP) Guidelines* issued in January 2009. This plan meets the following criteria as required by the State, including:

- ✓ tiered levels of water conservation measures or other response actions based on the severity of a water shortage condition;
- ✓ each tier is based on increased severity of drought or water shortage condition and represents increasingly stringent conservation measures;
- ✓ specific measurements of available water supply, water demand and system conditions that OWASA *must use* to determine the severity of water shortage conditions and to initiate water use reduction measures and the movement between various water shortage stages;
- ✓ procedures that will be followed to ensure compliance with the provisions of the plan;
- ✓ procedures for affected parties to review and comment on the plan prior to final adoption;
- ✓ procedures to receive and review applications for variances from specific requirements, and the criteria that will be used to evaluate such requests;
- ✓ general method for evaluating the effectiveness of the plan; and
- ✓ procedures for reviewing and revising the plan, which must be done at a minimum of every five years concurrent with the update of the state-required Local Water Supply Plan.

DWR is responsible for reviewing all Water Shortage Response Plans to ensure they meet the State's minimum requirements.

This plan is only one part of OWASA's long-term water conservation and demand management efforts. The OWASA Board of Directors approved a Long-Range Water Conservation and Demand Management Goal and Objectives in April, 2005. OWASA's primary strategies for

achieving its long-term conservation goals and objectives, and which are complementary to this WSRP but not described in this document, are:

- ✓ implementing aggressive conservation pricing structures, including increasing block water rates for residential customers, year-round water rates for all irrigation use, and seasonal water rates applicable to all other customers;
- ✓ promoting the use of reclaimed water for non-drinking purposes;
- ✓ treating and recycling drinking water treatment plant process water back to the head of the water plant; and
- ✓ providing education and awareness, including targeted water use audits for customers, technical assistance to developers, etc.

Additionally, water demands by OWASA's existing and future customers will be shaped by factors outside the control of OWASA, including but not limited to:

- ✓ Session Law 2007-546 (Senate Bill 668), "*An Act to Promote the Conservation of Energy and Water Use in State, University, and Community College Buildings;*"
- ✓ changes in water use efficiency standards of the NC Plumbing Code, as suggested in the North Carolina Department of Environment and Natural Resources' report titled "*Recommendations for Water Efficiency Standards for Water-Using Fixtures in Residential and Commercial Buildings*" (January 2009); and
- ✓ changes in climate, precipitation, and/or land use, which would affect rates and patterns of inflows into OWASA's water supply reservoirs, as well as customer demands.

Additional information about OWASA's comprehensive water conservation efforts is available on OWASA's website at www.owasa.org; by e-mail to info@owasa.org; by phone at 919-968-4421; by fax to 919-968-4464; or by mail to OWASA, 400 Jones Ferry Road, Carrboro, NC 27510.

SECTION 2.
AUTHORIZATION

OWASA's Executive Director is responsible for: (a) declaring a Water Shortage as described in this Plan; (2) enacting the applicable provisions of this WSRP; and (3) overseeing implementation of the Plan. In the Executive Director's absence, OWASA's General Manager of Operations is responsible for such actions.

As required by NCGS 143-355, OWASA will implement the provisions of this Plan whenever the trigger conditions established herein (and/or as they may be revised from time to time in accordance with Section 10 of this plan) occur.

Following is the contact information for the above-listed individuals as of the date of this plan:

PRIMARY RESPONSIBILITY

Ed Kerwin, or Successor
Executive Director
Orange Water and Sewer Authority
400 Jones Ferry Road
Carrboro, NC 27510

Telephone: 919-537-4211
E-Mail: ekerwin@owasa.org

ALTERNATE

Todd Taylor, or Successor
General Manager of Operations
Orange Water and Sewer Authority
400 Jones Ferry Road
Carrboro, NC 27510

Telephone: 919-537-4216
E-Mail: ttaylor@owasa.org

SECTION 3.

NOTIFICATION OF EMPLOYEES AND CUSTOMERS

OWASA will, as soon as possible, notify its employees, customers, and the public if and when a Water Shortage declaration is issued as described in Sections 4 and 5. Such notification will be provided via several methods, including but not limited to the following:

1. OWASA's Executive Director (or designee) will notify the following officials and agencies:
 - ✓ OWASA Board of Directors;
 - ✓ OWASA General Counsel;
 - ✓ Managers of the Towns of Carrboro and Chapel Hill, and Orange County; and
 - ✓ Division of Water Resources and the Public Water Supply Section within the NC Department of Environment and Natural Resources.

2. The Executive Director (or designee) will inform all OWASA employees of changes in Water Shortage stages and conservation requirements applicable to OWASA customers. This will be communicated via one or more methods, including but not limited to:
 - ✓ e-mail through the OWASA Local Area Network;
 - ✓ presentations at staff and crew meetings; and
 - ✓ memoranda or other written materials.

Employees will be reminded of their role and responsibility and applicable procedures for monitoring and responding to potential or actual violations of applicable water use restrictions. If an employee observes such an event, he/she will be instructed to attempt to inform the customer of the restrictions in effect, the observed violation, the need for corrective action by the customer, and consequences of repeat violations.

3. OWASA's Communications and Community Relations Officer (or designee) will contact the news media (including newspapers, television, and radio) and provide them with information about the applicable declaration, associated requirements, water rate surcharges if applicable, etc. Such notifications may be made by e-mail, website postings, news releases, telephone, etc. News releases will include the name(s) and contact information of the OWASA staff member(s) that will be primarily responsible for addressing media inquiries.

As in the past, OWASA will make extensive use of e-mail, the media, the OWASA website, etc. to provide information to its customers about the need to conserve water, the use restrictions in effect, and water rate surcharges if applicable.

4. The Communications and Community Relations Officer (or designee) will be responsible for updating the OWASA website in a timely manner regarding current information on the status of local water supply and demands, Water Shortage declarations, conservation requirements, and water rate surcharges if applicable.

5. The Communications and Community Relations Officer (or designee) will assist OWASA staff in responding to customer inquiries.
6. The Communications and Community Relations Officer (or designee) will contact local law enforcement personnel about the applicable water conservation requirements in effect during the declared Water Shortage.
7. If feasible, OWASA will notify residential and non-residential customers of water restrictions via media and e-mail. In addition, OWASA staff may provide targeted information to the following customers:
 - ✓ The University of North Carolina at Chapel Hill;
 - ✓ UNC Hospitals;
 - ✓ Chapel Hill-Carrboro City Schools;
 - ✓ multi-family residential property owners/managers/residents;
 - ✓ irrigation customers;
 - ✓ hotels, motels, and restaurants; and
 - ✓ others as appropriate.
8. OWASA may place informational signs at high-visibility locations, such as the OWASA Administration Building, local town halls, entranceways to Carrboro and Chapel Hill, etc.

SECTION 4.

WATER SHORTAGE RESPONSE PROGRAM

The cornerstones of OWASA's water shortage response strategy are:

1. Water Conservation Standards, including year-round water use restrictions;
2. OWASA's water rate surcharges that are implemented during a declared water shortage and increase as the severity of the shortage increases; and
3. Public education and awareness, including provisions for voluntary issuance of a water shortage advisory by OWASA during unusually dry periods.

Water Conservation Standards

OWASA has established Water Conservation Standards that apply to the use of OWASA drinking water by all customers. The current Standards, which went into effect in June 2009, include year-round water use restrictions and four tiers of increasingly strict requirements depending on the severity of water shortage conditions.

The Water Conservation Standards are summarized in Table 4-1. The full text of the current Standards is included as Appendix A.

To complement and support OWASA's water shortage response program, the Town of Carrboro, Town of Chapel Hill, and Orange County enacted local water conservation ordinances which incorporate all of OWASA's Water Conservation Standards. The applicable provisions of the local ordinances go into effect upon a request by OWASA and subsequent proclamation by the chief elected official of each jurisdiction.

(The implementation and associated enforcement actions under the local water conservation ordinances is outside the direct control of OWASA. OWASA works very closely with the local governments to coordinate monitoring and enforcement efforts to promote compliance with applicable use restrictions.)

Table 4-1.

SUMMARY OF KEY CONSERVATION STANDARDS FOR OWASA DRINKING WATER *

Effective June, 2009

Water Use	Year-Round	Stage 1	Stage 2	Stage 3	Emergency
Spray Irrigation of Turf / Grass (on designated days of the week as noted)	3 days per week, up to 1 inch per week, 6 pm - 10 am only ** Odd Addresses: Tu/Th/Sat Even Addresses: Sun/W/F	1 day per week, up to 1/2 inch per week, 6 pm - 10 am only ** Odd Addresses: Tues. Even Addresses: Thurs.	X**	X**	X
Spray Irrigation of Non-Turf Plant Materials (on designated days of the week as noted)	3 days per week, up to 1 inch per week, 6 pm - 10 am only ** Odd Addresses: Tu/Th/Sat Even Addresses: Sun/W/F	3 days per week, up to 1 inch per week, 6 pm - 10 am only ** Odd Addresses: Tu/Th/Sat Even Addresses: Sun/W/F	1 day per week, up to 1/2 inch per week, 6 pm - 10 am only ** Odd Addresses: Tues. Even Addresses: Thurs.	X***	X
Drip irrigation, underground drip emitters, soaker hose, hand-watering, and other non-spray methods allowed <i>at any time</i> or frequency	✓	✓	✓	✓	X
Washing of Building Exteriors Before Painting	✓	✓	✓	X	X
General Cleaning of Building Exteriors, Paved Areas, Etc.	✓	✓	X	X	X
Filling, Refilling, or Topping Off Ornamental Ponds, Fountains, etc.	✓	✓	X	X	X
Vehicle Washing	✓	✓	Only at commercial or institutional facilities where at least 50% of the water is being recycled, or is from a non-potable source or well	X	X
Filling, Refilling, or Topping Off of Swimming Pools and Backyard-Scale Facilities to Support Wildlife	✓	✓	✓	✓	X
Flushing or Pressure Testing New Water Lines	✓	✓	✓	✓	Only if captured and returned to system
Year-Round Requirements, Regardless of Water Shortage Condition					
<ul style="list-style-type: none"> > Automatic controllers and rainfall or soil moisture sensors required on all irrigation systems > "Wasteful" water use* prohibited at all times > Water leaks must be repaired within 10 days of discovery and/or notification by OWASA > Water may be served in restaurants and other dining facilities only at customer's request > Hotel/motel linens may only be changed upon customer changeover, every 5 days, or upon customer request 					
Symbols and Notes					
* For the actual text of OWASA's Water Conservations Standards, please use the following link: http://www.owasa.org/conservationstandardsmarch26_2009					
✓ Water use is allowed.					
X Water use is not allowed.					
** Restrictions may not apply to public purpose athletic fields, recreational fields, or public purpose botanical sites operated in compliance with OWASA-approved Water Conservation Plans.					
*** Restrictions may not apply to public purpose botanical sites operated in compliance with OWASA-approved Water Conservation Plans.					

Water Rate Surcharges During Declared Water Shortages

In 2007, OWASA adopted water rate surcharges to be imposed during declared water shortages. The surcharges were implemented during the 2007-2008 drought and resulted in a substantial reduction in water use.

Based on that experience, OWASA refined the surcharges in 2008 to apply more equitably to all customer classes throughout all drought stages.

Table 4-2 summarizes the water rate surcharges included in OWASA's October 1, 2017 schedule of rates and fees. When the surcharges are implemented, the applicable water rates in effect are increased by the factors shown in the table. The OWASA Board of Directors, at its discretion, may from time to time revise the water rate surcharges following a public hearing on OWASA's rates, fees and charges.

Table 4-2.

WATER RATE SURCHARGES IN DECLARED WATER SHORTAGES

Individually-Metered Residential						Multi-family Master-metered Residential	Non-Residential and Irrigation- Only
Block:	Res. Block 1	Res. Block 2	Res. Block 3	Res. Block 4	Res. Block 5		
Use Level: (gallons)	1,000 to 2,000	3,000 to 5,000	6,000 to 10,000	11,000 to 15,000	16,000 and up		
Stage 1	No surcharge	No surcharge	1.25 times normal Block 3 rate	1.5 times normal Block 4 rate	2 times normal Block 5 rate	1.15 times year- round rate	1.15 times seasonal and irrigation-only rate
Stage 2	No surcharge	1.25 times normal Block 2 rate	1.5 times normal Block 3 rate	2 times normal Block 4 rate	3 times normal Block 5 rate	1.25 times year- round rate	1.25 times seasonal and irrigation-only rate
Stage 3 and Emergency	No surcharge	1.5 times normal Block 2 rate	2 times normal Block 3 rate	3 times normal Block 4 rate	4 times normal Block 5 rate	1.5 times year- round rate	1.5 times seasonal and irrigation- only rate

Calculating OWASA's Water Rates With Water Shortage Surcharges in Effect

Based on the water rates in effect as of October 1, 2017 (and which will be revised at the discretion of the OWASA Board of Directors), here are a couple illustrations of how OWASA's water rates change when water rate surcharges are in effect.

Example 1: *The Block 3 water rate for individually-metered residences is \$7.83 per 1,000 gallons of water use (use between 6,000 and 10,000 gallons). When the Stage 1 water rate surcharge is in effect, the Block 3 rate would increase to \$9.7875 per 1,000 gallons (an increase of 25%).*

Example 2: *The Peak Season (May – October) water rate for all non-residential and non-irrigation customers is \$7.91 per 1,000 gallons of water use. Under Stage 3 surcharges, the Peak Season water rate would increase to \$11.865 per 1,000 gallons (an increase of 50%).*

Major Water Conservation Initiatives of OWASA

Following the extreme droughts of 2001-2002 and 2007-2008, OWASA implemented a number of important strategies to reduce and manage customer demands throughout the year, including:

1. Implementing a permanent process water recycling system at the Jones Ferry Road Water Treatment Plant. This has reduced average daily raw water withdrawals by about 7% since the fall of 2002.
2. Establishing seasonal water rates for all customers beginning in 2002 and subsequently implemented a five-tiered increasing block rate structure for all individually-metered residential customers beginning in 2007.
3. Implementing a new reclaimed water system to initially serve the University of North Carolina at Chapel Hill. This system reduces drinking water demands by approximately 0.65 million gallons a day (mgd).
4. Continuing water conservation education and awareness efforts for OWASA customers, including information and technical assistance for customers interested in implementing cost-effective conservation measures.

As a result of these strategies and the conservation efforts by OWASA customers, average day water sales in the OWASA service area are about the same now as they were in 1991 despite about a 60% increase in OWASA's customer base during that period.

Together, these measures have reduced the community's risk to droughts and other water shortage conditions, thereby reducing the need for additional restrictions during such events. It is, however, essential that OWASA have a water shortage response program in place to respond to such events because the potential for a water shortage due to drought or other event always exists.

SECTION 5.

MANDATORY WATER SHORTAGE RESPONSE TRIGGERS

As required by NCGS 143-355, OWASA has established a set of specific measurements of available water supply and demand conditions to: assess the severity of water shortage conditions during extended droughts; guide the initiation of water use reduction measures; and guide the transition between the various water shortage stages described in this Plan. The measurements and rationale are explained below.

From time to time, it may be necessary to implement water use restrictions in response to certain drinking water system emergencies, such as water main breaks, water quality problems, planned and unplanned maintenance events, natural disasters, etc. OWASA's water shortage response strategy for operational emergencies is also described below.

OWASA staff continually monitors and evaluates the operational status of water supply, treatment, and distribution system components to ensure that customer demands can be met at any given time. Staff also tracks customer demands and the amount of raw water supply remaining in each supply source on a daily basis. USGS streamflow gaging data are monitored closely to determine conditions and trends in inflows to the reservoirs. This and other information is used to guide OWASA's water shortage response strategy.

Triggers for Implementing Water Shortage Response Stages During Extended Droughts

OWASA's drought management decisions are guided primarily by the estimated level of risk that usable reservoir storage will decline to 20 percent (approximately 700 million gallons [MG]) or less during the next 12 months. At a raw water demand level of 7.5 mgd, 700 MG of raw water supply on-hand would meet customer needs for approximately three months during an extreme drought, thus providing time to implement emergency water supply augmentation and conservation measures.

Water supply risk is determined from OWASA's Reservoir Optimization Model (OWASA-ROM), which includes a statistical analysis of 82 years of actual and simulated streamflow records (1926-2007) for the Cane Creek/University Lake/Quarry Reservoir supply system. The model simulates what reservoir storage levels would be under various levels of annual average-day demand, storage volume remaining at a given time of the year, and historical streamflows and evaporation rates.

The average-day demand for the year is adjusted to reflect historical monthly demand ratios for the OWASA system. The model reflects OWASA's operating protocols and the capacities of existing raw water pumping and transmission facilities. It simulates reservoir inflows, levels and demands on a daily time-step, and evaluates the reliability of the system to meet demands while maintaining a minimum emergency storage reserve target of 20% of total capacity as a margin of safety.

OWASA-ROM has been used to estimate the total reservoir storage volumes (percent remaining) that correspond to approximately 2% (2 years in 82), 10% (8 years in 82) and 20% (16 years in 82) probabilities that reservoir storage will be drawn down to 20% or less of storage during the

following 12 months under various annual average-day demand levels and assuming no other action taken to reduce demands and/or augment the supply.

In the late fall, winter and early spring, when inflows are typically higher and demand lower, reservoir storage can drop to relatively low levels before the risk of drawdown to 20% or less during the following 12 months becomes significant. From late spring through fall, when demand rises and inflows decline, the level of risk for a given demand increases.

This analysis has been used to establish the trigger levels that will automatically result in OWASA's implementation of the various Water Shortage stages and associated restrictions.

Figures 5-1 through 5-4 show the trigger levels that will apply to the implementation of successive Water Shortage response stages under annual average-day demands of 7.0, 8.0, 9.0, and 10.0 mgd, respectively. (OWASA projects average-day raw water withdrawals will be about 7 mgd in Fiscal Year 2018.)

OWASA's Executive Director will declare the appropriate Water Shortage stage within five (5) working days after the trigger has been reached (assuming storage remains at or below the applicable level). However, OWASA may declare a Water Shortage or implement stages before the specific trigger is reached (sooner than the applicable Figure would indicate) if other factors indicate such an action is appropriate or required upon approval by the Board of Directors.

Staff will provide regular informational reports to the Board during extended droughts. Other factors that will be considered when determining whether to declare a Water Shortage before a specific trigger is reached include but are not be limited to:

- regional water supply and demand conditions and forecasts;
- likelihood of obtaining raw or finished water from other utilities;
- Drought Advisory issued by the NC Drought Management Advisory Council; and
- long-term weather forecasts.

It is also possible that Water Shortage response stages may not necessarily be implemented sequentially if water supply and/or demand conditions change rapidly.

If and when OWASA determines a Water Shortage stage is in effect, it will clearly explain to its customers and the public the basis for the decision, including the estimated risk that the local water supply could be drawn down to very low levels (at or below 20% of total storage) over the following 12 months.

Figure 5-1
OWASA Water Shortage Trigger Levels for
Average Annual Demand of 7.0 MGD

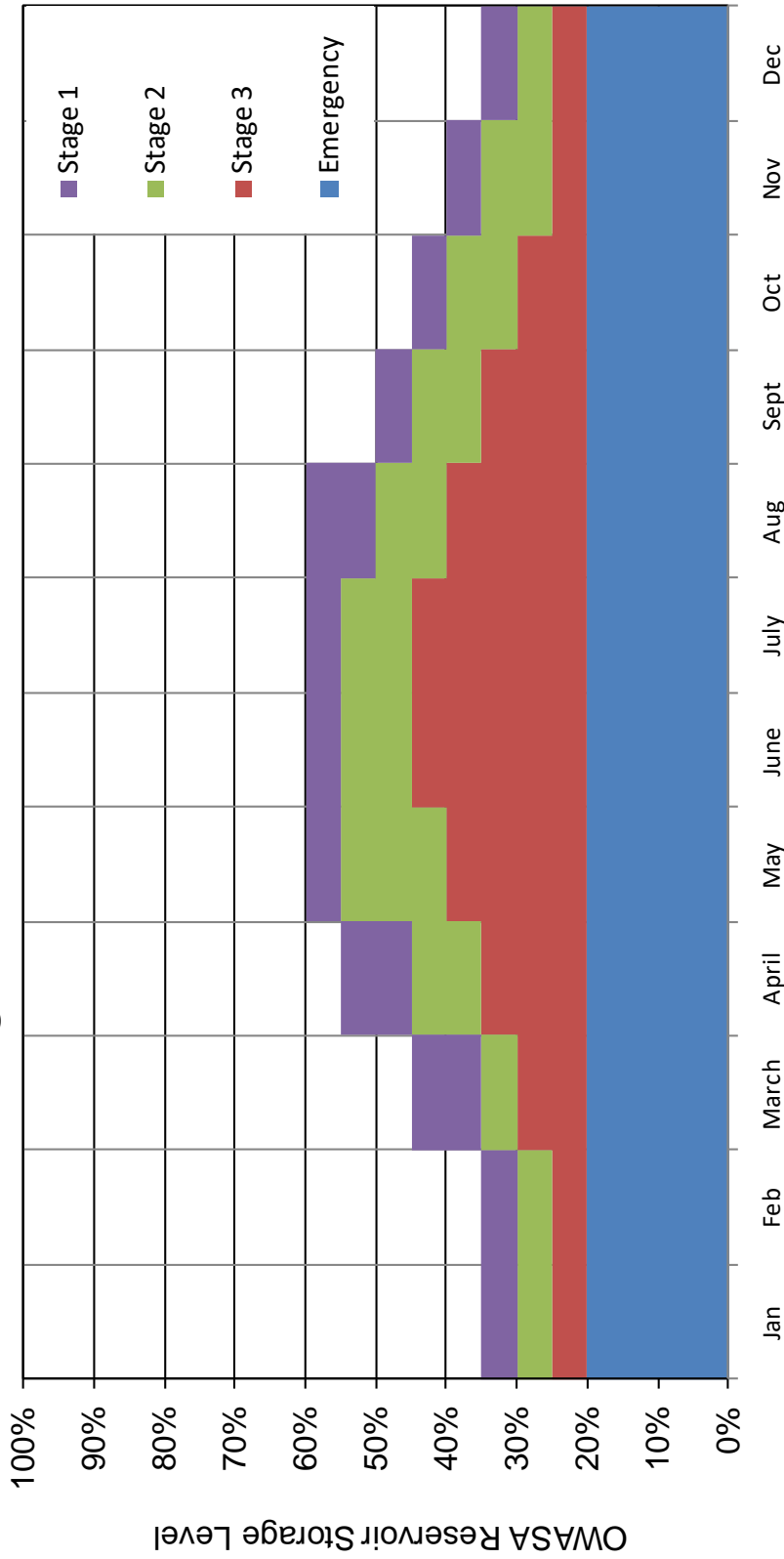


Figure 5-2

OWASA Water Shortage Trigger Levels for Average Annual Demand of 8.0 MGD

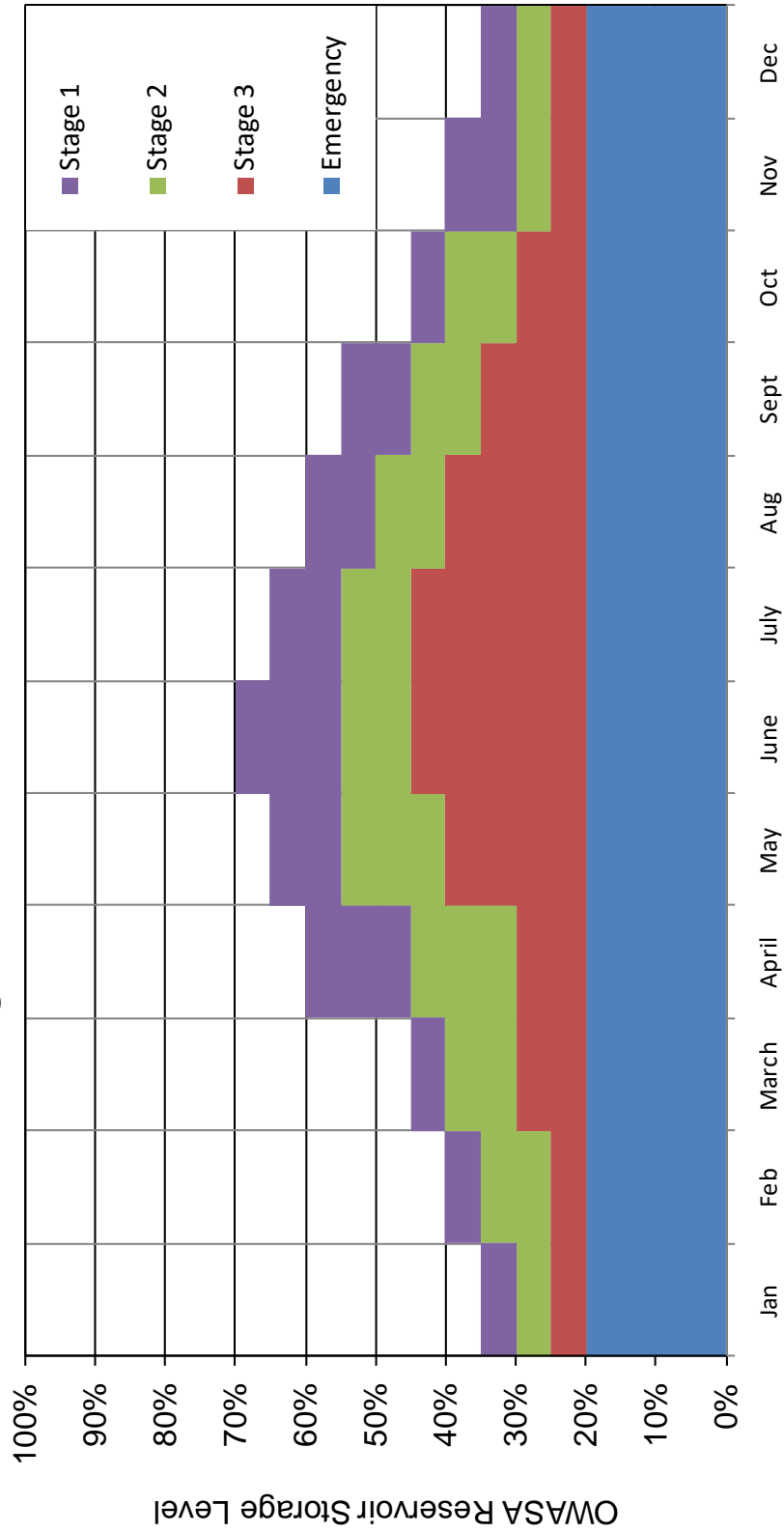


Figure 5-3
OWASA Water Shortage Trigger Levels for
Average Annual Demand of 9.0 MGD

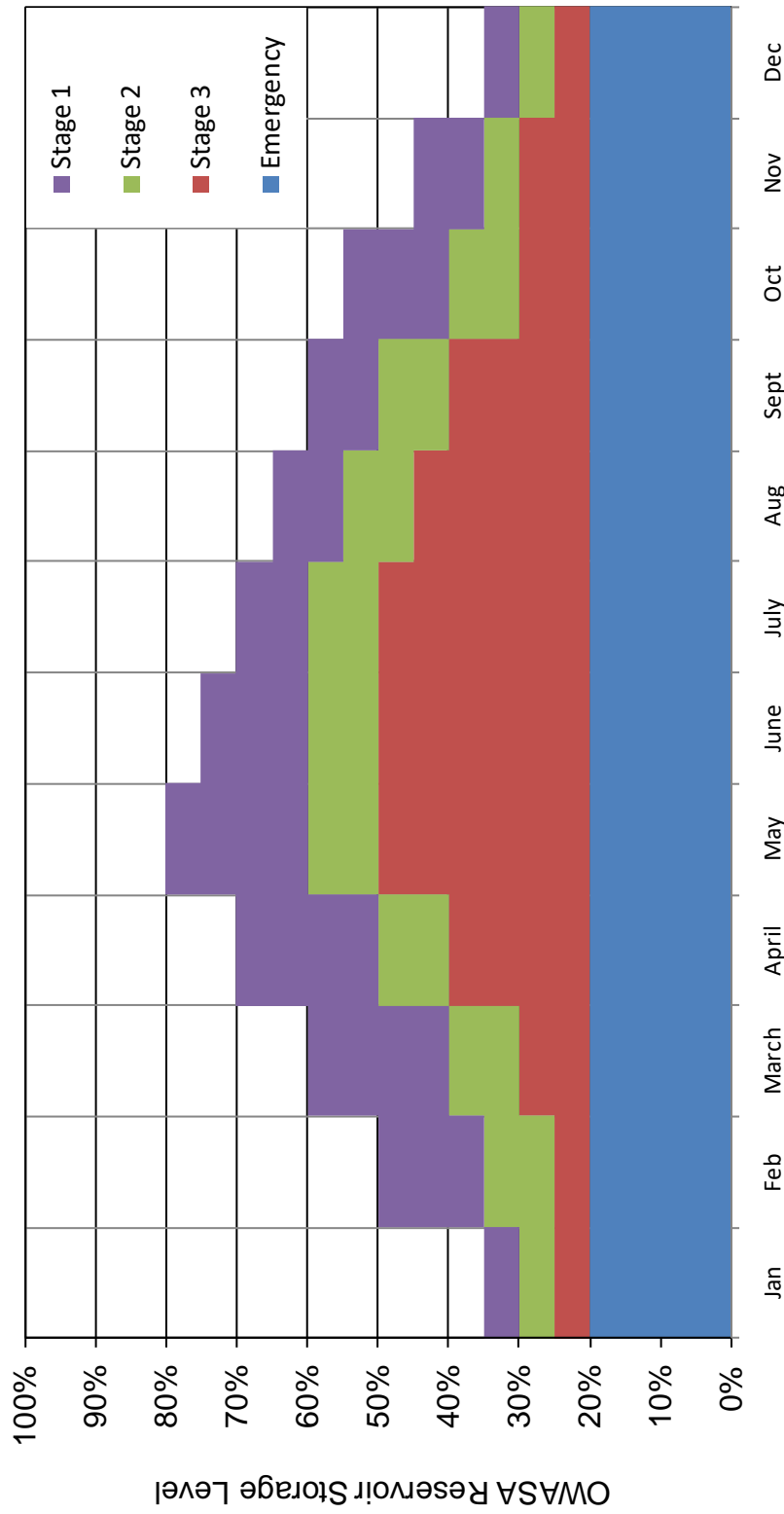
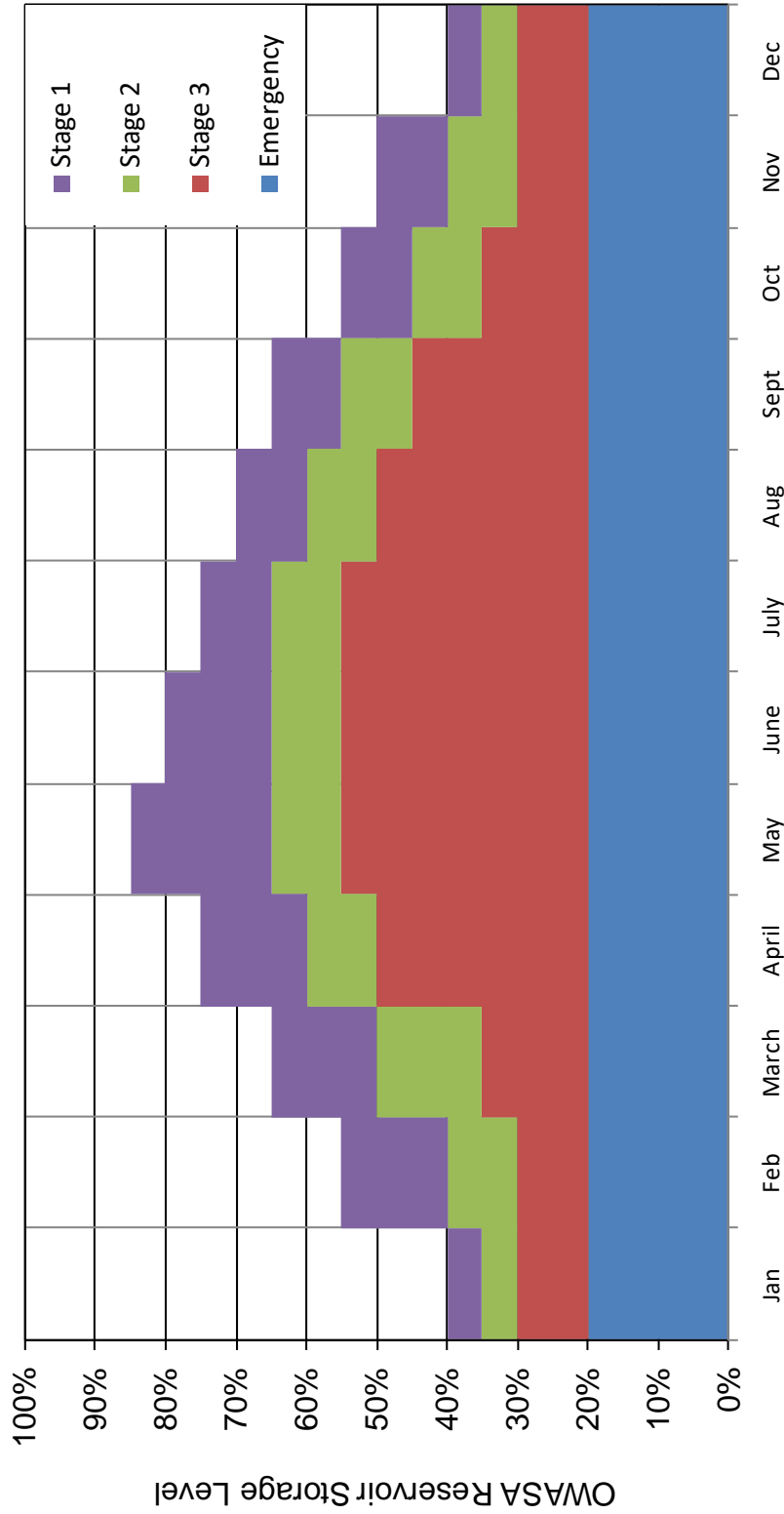


Figure 5-4

OWASA Water Shortage Trigger Levels for Average Annual Demand of 10.0 MGD



Triggers for Rescinding Water Shortage Response Stages During Extended Droughts

For a Water Shortage stage to be rescinded, the water supply storage volume must be at least ten percent (10%) above the specified Water Shortage initiation trigger for the applicable stage. However, OWASA's Executive Director may delay the rescission of a Water Shortage stage depending on water supply and demand conditions, extended weather forecast, regional water supply conditions and outlook, and other factors.

As with initiation, rescission of Water Shortage stages may not always occur sequentially, depending on how quickly supply and/or demand conditions change.

Water Shortage Response Triggers for Operational Emergencies

OWASA may occasionally need to implement mandatory water use restriction to address abnormal operating conditions – other than extended droughts – when current demand cannot be met. Such events include, but are not limited to:

- production problems at the Jones Ferry Road Water Treatment Plant;
- pump, tank, or pipeline failures;
- raw or treated drinking water quality problems;
- planned or unplanned maintenance events; and
- natural disasters.

OWASA may declare a Water Supply Shortage or Emergency whenever customer demand – as averaged over three consecutive days – exceeds 85 percent of OWASA's capability of treating and delivering water. The stage and duration of such a Water Supply Shortage or Emergency shall be guided by the degree to which customer demands approach or exceed OWASA's capacity to meet those demands, and by the degree to which conservation efforts successfully reduce short-term demands.

Operational emergencies are typically characterized by the need for rapid response by OWASA and its customers, and may require major curtailment of water use in a short period of time.

Non-drought water emergencies are unique because of the potential lack of preparation time and the need for immediate and potentially large-scale demand reductions. Because each emergency scenario is different, no single strategy can meet OWASA's needs during all emergency scenarios.

If OWASA's Executive Director determines that an emergency operating condition exists, he/she may implement a Water Shortage response stage and associated mandatory water use restrictions that he/she deems necessary and appropriate given the nature, extent, and expected duration of the emergency condition.

The Water Shortage response stage initially selected may be quickly modified as operating conditions are further assessed and there is a better understanding of the length of time that may be needed to restore normal operating and/or demand conditions.

SECTION 6.
ENFORCEMENT

OWASA does not have statutory authority to establish water conservation ordinances; therefore, as described in Section 4, it has established Water Conservation Standards applicable to all OWASA customers. The Standards include year-round mandatory water use restrictions as well as a system of increasingly stringent restrictions for different stages of a declared water shortage.

OWASA does not have statutory authority to directly impose civil or criminal penalty provisions for violations of its Conservation Standards. The Standards provide for the temporary disconnection of water service to any customer that repeatedly violates the Standards.

Upon learning of an actual, reported, or suspected violation, OWASA staff will contact the customer by phone, in person, and/or in writing to inform them of:

- ✓ the restrictions in effect;
- ✓ the nature of the actual, reported, or suspected violation;
- ✓ the need for corrective action by the customer; and
- ✓ the potential consequences of continued violations, including temporary disconnection of service for non-compliance with the Standards and the potential for citation by local government law enforcement officers.

In addition to OWASA's authority and approach to enforcing its Standards, the Carrboro, Chapel Hill and Orange County ordinances include civil penalty provisions for violations of their respective conservation ordinances, which, as noted before, are based on the OWASA Standards.

SECTION 7.

PROCEDURES FOR REVIEW OF VARIANCE REQUESTS

OWASA's Water Conservation Standards allow exemptions only for the following water uses during declared Water Shortages:

- ✓ Public purpose athletic fields and public purpose botanical sites are exempt from certain irrigation restrictions provided that an OWASA-approved site-specific Water Conservation Plan is in place.
- ✓ Car washes are exempt from certain restrictions provided that at least 50% of their water has been recycled, is from a non-potable water source, or is supplied from a well.

(Exemptions from water use restrictions do not include exemptions for water rate surcharges.)

Customers may request a variance from the Water Conservation Standards by submitting a letter or e-mail to OWASA's Executive Director (or designee) specifically describing the nature and reason for the requested variance and the customer's specific plan to reduce water use or to maintain a high level of water use efficiency during the declared shortage.

A decision to approve or deny individual variance requests will be provided to the customer within two weeks of receipt of the request, after careful consideration of the following criteria:

- ✓ purpose and necessity for use of drinking water;
- ✓ social and economic importance/hardship imposed by compliance with the Standards;
- ✓ the prevention of structural damage impact;
- ✓ expected duration of the use for which the variance is requested;
- ✓ expected direct and indirect impact on water demands; and
- ✓ practicality of options for alternative water sources.

Required Water Conservation Plans may be submitted at any time and will be reviewed and either approved or denied by OWASA within six weeks of receipt. To be considered for approval, a Water Conservation Plan must include:

1. Estimated amount of water use per day during both an average winter month and an average summer month for various purposes, including drinking water, basic sanitation, process water, irrigation, and other major uses specific to the customer
2. Description of alternate water sources available
3. Description of existing measures or high-efficiency fixtures in place to reduce water use
4. Measures that could be taken during each Water Shortage Response Stage for which a variance is requested in order to meet the percentage reductions in Table 8-1.

5. Description of the impact to the customer (e.g. reduced production, reduction of business hours, employment impacts, structural damage, etc.) of meeting the Table 8-1 water use reduction percentages during each Water Shortage Response Stage for which a variance is requested.
6. Proposed alternative measures to be taken during each Water Shortage Response Stage for which a variance is requested, and the resulting expected percentage reduction in water use for the categories listed in item 1, under both average winter and average summer conditions.

SECTION 8.

EXPECTED AND ACTUAL EFFECTIVENESS OF THIS PLAN

Because OWASA revised its Water Conservation Standards in June 2009 and no drought has occurred subsequent to that date, there is no actual data or experience regarding the effectiveness of these Standards. However, based on customer response to water use restrictions and other measures in place during the 2001-2002 and 2007-2008 droughts, OWASA has the following water use reduction objectives associated with the Water Shortage Response Stages in the Standards:

Table 8-1.

Expected/Targeted Water Use Reductions for OWASA’s Water Shortage Stages

Water Shortage Response Stage	Target Reductions Relative to Normal* Water Use
Stage 1	10%
Stage 2	15%
Stage 3	20%
Emergency	To be Determined

* Normal Water Use is the level of customer demands that would be expected to occur during the time of the year that the Water Shortage Response Stage is in effect.

OWASA will periodically evaluate the effectiveness of its Water Shortage response actions through several methods, including but not limited to:

- ✓ comparing actual demand reductions achieved to the objectives of the Water Conservation Standards, as well as demand information for the same period for prior years;
- ✓ monitoring the frequency, severity, and duration of declared Water Shortage conditions;
- ✓ identifying any situations where action should have been taken but was not required under this plan;
- ✓ monitoring the number, type and recurrence of violations of applicable water use restrictions, and any required enforcement actions; and
- ✓ reviewing the inquiries and feedback received from customers during declared Water Shortages.

SECTION 9.

PUBLIC REVIEW AND COMMENT

In accordance with State law, OWASA's draft 2010 WSRP was issued for public review and comment and all comments received were considered prior to the OWASA Board of Directors' formal approval of the WSRP.

The core components of this Plan – OWASA's Water Conservation Standards, Water Shortage response stages, and associated water use restrictions – were adopted by OWASA in June 2009 following an extensive public review and comment process that included stakeholder meetings, review and comments from local governments and the Chapel Hill–Carrboro Chamber of Commerce, and a formal public hearing. Notice of the proposed Standards and restrictions was provided in the local newspaper and on OWASA's website.

The draft 2010 WSRP was made available for public review and comment for two weeks in advance of final consideration by the OWASA Board of Directors. Public review and comment was invited by:

- ✓ posting the draft on OWASA's website (www.owasa.org);
- ✓ providing copies for public review at OWASA's main office and the Chapel Hill Public Library;
- ✓ providing notice in the local newspaper of the draft plan's availability and the deadline for submitting written and/or verbal comments; and
- ✓ issuing electronic news releases announcing the availability of, and inviting comments on, the draft plan.

OWASA invited interested persons to submit written comments via e-mail or letter, and/or verbal comments at the public meeting when the draft was considered by the OWASA Board of Directors. Following consideration of the public comments, the OWASA Board of Directors formally approved OWASA's WSRP on November 11, 2010 (Appendix D).

The 2015 update of the WSRP included minor updates such as contact information changes. It also included a summary of OWASA's Drought Response Operating Protocol which was approved by the Board of Directors on January 10, 2013, which was developed to align with the 2010 WSRP. The DROP made no modifications to the trigger graphs included in Section 5 of this Plan. This version of the WSRP was presented to the Board at a work session on December 11, 2014 and approved by the Board of Directors along with OWASA's Local Water Supply Plan at its January 22, 2015 meeting (Appendix D).

This update of the WSRP includes minor updates (Table 4-2 is updated to reflect the change in multi-family, master-metered residential rates, the reclassification of our Public Affairs Administrator to Communications and Community Relations Officer, and other minor formatting changes. This version of the WSRP was presented to the Board of Directors at a work session on June 14, 2018 along with OWASA's 2017 Local Water Supply Plan (Appendix D).

SECTION 10.

FUTURE REVIEW AND REVISION OF OWASA'S WSRP

In accordance with State requirements, OWASA will review the local WSRP, and revise it where necessary, as follows:

- ✓ concurrent with the update of OWASA's Local Water Supply Plan as required per NCGS 143-355(1), which occurs a minimum of once every five years;
- ✓ following the rescission of all mandatory water use restrictions that were imposed during an event that required declaration of a Stage 1, Stage 2, Stage 3, or Emergency Water Shortage condition; and/or
- ✓ at any time as deemed necessary to reflect changes in water supply and demand conditions, new information regarding the effectiveness of conservation management practices including the water use restrictions in OWASA's Water Conservation Standards, experience gained with implementation of the plan, and other factors.

Prior to the OWASA Board's final consideration of any proposed major revisions to the local WSRP, OWASA will provide its customers and the public an opportunity to review and comment on the proposed revisions. Information about proposed revisions and requests for comments on such proposals will be provided via OWASA's website, e-mail communications, news releases, notices of availability published in the local newspaper, etc. The draft plan will be available at OWASA's main office building and on our website (www.owasa.org) for public review.

The Executive Director (or designee) will be responsible for initiating all major WSRP updates, and for ensuring that OWASA customers and the public have the opportunity to comment on the plan and any proposed changes prior to final approval by the OWASA Board of Directors.

It has been OWASA's practice to meet with representatives of organizations such as the Chamber of Commerce, green industry, and local governments to receive information, comments, and suggestions regarding the effectiveness of existing water use restrictions and potential changes to those restrictions. OWASA will continue this practice as part of future evaluations and major updates of this plan.

APPENDIX A

OWASA WATER CONSERVATION STANDARDS

Orange Water and Sewer Authority
Water Conservation Standards
(Approved March 26, 2009)

Article I – Purpose and Definitions

I. A. Purpose

These Water Conservation Standards are enacted by the Orange Water and Sewer Authority (OWASA) for the purposes of:

1. Reducing the rate of increase in overall water use through year-round water conservation practices that will help maximize the community's existing and planned water supply sources and help reduce seasonal peak day demands that result in the need for costly expansion of water treatment, storage, and transmission facilities. Such year-round practices shall include:
 - a. Reducing indoor water waste by encouraging the installation and maintenance of ultra-low flow toilets, faucet aerators, low-flow showerheads and similar devices, as well as other creative and commonsense indoor conservation practices.
 - b. Reducing irrigation and irrigation-related water waste without sacrificing landscape quality through the cultivation of lower water use plants; improved landscape design and planting practices; more efficient watering practices; and improved irrigation system design and maintenance.
 - c. Increasing the use of non-potable water, as permitted by appropriate public health regulations, for irrigation and other uses that do not require water of potable quality.
2. Providing an orderly process for reducing community-wide water demands during periods of drought or other naturally occurring causes of water shortages.
3. Providing an orderly process for reducing community-wide water demands during periods of water shortages due to natural disaster (other than drought), major OWASA facilities failure, or other unexpected and sudden loss of water supply, treatment, or distribution capacity that constitutes a water supply emergency.

I. B. Definitions

For the purpose of these Standards, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

AUTOMATIC CONTROLLER. A mechanical or electronic device capable of operating an irrigation system and its component valve stations according to a pre-determined schedule of irrigation frequency and duration.

CISTERN. A tank or container, typically located underground, for the storage and subsequent reuse of rainwater collected from rooftops or other impervious surfaces that would have otherwise evaporated or drained off the premises.

DRIP IRRIGATION. The application of irrigation water through drip emitter devices at low pressure, volume, and velocity near or at ground level in order to minimize runoff and evaporative losses. Drip irrigation emitters are typically used for irrigating non-turf vegetation and release water in the range of 0.04 to 0.40 gallons per minute.

EVEN-NUMBERED PROPERTIES. Properties with street addresses that end in even-numbered digits, or other properties so designated for the purposes of these Standards through special arrangements with OWASA.

GRAYWATER. Wastewater removed from household wash basins, bathtubs, or showers. Graywater may only be reused in accordance with practices approved by applicable regulatory agencies.

HAND WATERING. The application of water for irrigation purposes through a hand-held hose or watering container.

HARVESTED WATER. Precipitation or irrigation runoff collected, stored and available for reuse for irrigation purposes.

IRRIGATION SYSTEM. Any permanently installed system of pipes, hoses, or other conveyance devices and appurtenances that provides water to living plant material through spray heads or other emission devices located at, above, or below the ground surface. For the purposes of these Standards, a sprinkler, soaker hose, or other device connected to its water source via a moveable above-ground garden hose is not considered to be an irrigation system.

LANDSCAPE AREA. That portion of a parcel that contains turf or non-turf vegetation.

LOW-PRECIPIATION BUBBLER. An irrigation head which typically operates within six inches of ground level and delivers water at a rate of less than 0.45 gallons per minute within a radius of less than two feet of the head. Low-precipitation bubblers are typically used for irrigating non-turf vegetation.

MICRO SPRAY. The application of irrigation water through small, low volume sprayer heads in order to minimize runoff losses. Micro sprays are typically used for irrigating non-turf vegetation. Individual micro spray heads typically operate less than 12 inches above ground level and typically deliver water in the range of 0.10 to 0.50 gallons per minute within a radius of five feet or less of the head.

MULCH. A protective covering of organic material, such as sawdust, wood chips, compost, or other vegetative matter, spread on the ground to reduce evaporation and increase water retention.

ODD-NUMBERED PROPERTIES. Properties with street addresses that end in odd-numbered digits, or other properties so designated for the purposes of these Standards through special arrangements with OWASA.

OVERALL WATER DEMAND. The total water demand for any given month, as projected by OWASA.

OWASA. The Orange Water and Sewer Authority.

POTABLE WATER. Treated water provided by OWASA that is suitable for drinking, cooking, and other domestic use. Water that is collected indoors in containers from indoor faucets or spigots that would otherwise be discharged into drainpipes while a user awaits the warming of the water for dishwashing, other washing, shaving, bathing, or showering is not considered to be potable water for the purposes of these Standards.

PRECIPITATION RATE. The amount of water applied per unit of time, usually expressed in inches per hour.

PUBLIC PURPOSE ATHLETIC OR RECREATIONAL FIELD. An athletic or recreational field owned or leased by a public or not-for-profit entity and which is (a) operated for the use of the public pursuant to general invitation, and (b) not operated for the purpose of profit. For purposes of this definition, a golf course is not considered to be a public purpose athletic field or recreational field.

PUBLIC PURPOSE BOTANICAL SITE. A landscaped area which is owned or leased by a public or not-for-profit entity in which a variety of plants are grown to be categorized and documented for scientific purposes and/or which may also be open to the public for entertainment and educational purposes.

PUBLIC RIGHT-OF-WAY. The area of land owned or maintained by municipal, county, or state government primarily for the use of the public for the movement of people, goods, vehicles, or storm water. For the purposes of these Standards, the public right-of-way shall include curbs, streets, sidewalks, and storm water drainage inlets, but shall not include adjacent landscaped areas that also may be located within the legally delineated public right-of-way.

RAIN BARREL: A tank or container, typically located on the ground beneath a roof drainage system, that captures and stores rainwater for subsequent reuse.

RAW WATER. Water drawn from a reservoir or other water source before treatment.

RECLAIMED WATER. Highly treated effluent from a wastewater treatment plant that can be safely used for non-potable purposes approved by applicable regulatory agencies.

RUNOFF. Water that is not absorbed by the soil or landscape to which it is applied. Runoff occurs when water is applied too quickly (application rate exceeds infiltration rate), particularly if there is a severe slope. These Standards do not apply to stormwater runoff which is created by natural precipitation rather than human-caused or applied water use.

SERVICE AREA. The geographic area in which OWASA provides or is authorized to provide water and/or sewer service.

SHUT-OFF NOZZLE. A device attached to the end of a hose that completely shuts off the flow, even if left unattended.

SOAKER HOSE. A flexible hose designed to emit a trickle of water along its entire length, either through numerous small-diameter (less than 1/32-inch) perforations or through the permeable material of its composition.

SPRAY IRRIGATION. The application of water to landscaping by means of a device, other than a hand-held hose or watering container, that projects water through the air in the form of small particles or droplets.

SPRINKLER HEAD. A device that projects water through the air in the form of small particles or droplets.

UNDERGROUND SYSTEM. An irrigation system with emitters installed beneath the ground surface.

WATER CONSERVATION PLAN (OWASA-APPROVED). A written document submitted by the owner or operator of a public purpose athletic field, recreational field, and/or a public purpose botanical site and approved by OWASA's Executive Director or his/her designee that specifies the conservation measures and irrigation operating modes that will be employed year-round at those public purpose facilities and the specific practices that will be employed to achieve Stage 1, 2, and 3 Water Shortage conservation goals enumerated in these Standards.

WATER WASTE. The non-beneficial use of OWASA potable water. Non-beneficial uses include but are not restricted to:

- a. Landscape water applied in such a manner, rate and/or quantity that it overflows the landscaped area being watered and runs onto adjacent property or public right-of-way; or landscape water applied during periods of rainfall or when soil moisture is already adequate.
- b. The use of water for washing vehicles, equipment, or hard surfaces, such as parking lots, aprons, pads, and driveways in such quantities to flow onto adjacent property or the public right-of-way.

- c. Water applied in sufficient quantity to cause ponding on impervious surfaces.
- d. Water lost through plumbing leaks that can be readily identified and corrected.

WATERING BAG. A container used to hold and slowly dispense water around the base of a tree or shrub. These are commonly called “Gators.”

XERISCAPING. An approach to landscape design and maintenance that uses small amounts of water but sustains a traditional look through the proper conditioning of soil, the selection of appropriate drought-tolerant plants, generous use of mulch, efficient use of water, and other proven techniques.

Article II – Water Waste Prohibited, Penalties for Violating Standards

II. A. Water Waste Prohibited

No person, party, or entity shall use, cause, waste, or permit to be wasted any OWASA-supplied potable water in violation of the Standards set out herein.

II. B. Penalties

OWASA may discontinue water service to any customer where, after notice of a prohibited use is delivered to the service address, OWASA-supplied potable water continues to be used or wasted in violation of the Water Conservation Standards set out herein.

Article III – Year-Round Requirements, Policy and Practice

III. A. Exterior Use

1. The following outdoor or exterior use requirements shall apply to all customers using OWASA-supplied potable water:
 - a. Spray irrigation shall not occur more than three days per week. Even-numbered properties may be irrigated with spray systems only on Sundays, Wednesdays, and/or Fridays. Odd-numbered properties may be irrigated with spray systems only on Tuesdays, Thursdays, and/or Saturdays. All spray irrigation shall occur only between the hours of 6:00 p.m. and 10:00 a.m., and shall apply no more than one inch of water in any given week. These restrictions shall not apply to properties using underground, drip irrigation, micro spray, low precipitation bubblers, soaker hoses, hand watering, tree or shrub watering bags, or where watering of containerized plants and commercial plant stock in trade is maintained for resale.

- b. All irrigation systems shall be equipped with automatic controllers that activate the system according to a desired frequency and duration, and shall also be equipped with rain or soil moisture sensors that will prevent irrigation during periods of rainfall or when there is sufficient moisture in the ground for plant health and survival.
 - c. All hoses used for hand watering, vehicle washing, or other allowable outdoor uses shall be equipped with shutoff nozzles.
 - d. No exterior use of OWASA-supplied potable water shall result in the flow of water onto adjacent property or public right-of-way, and all irrigation systems shall be designed and maintained to prevent to the extent practicable water from flowing onto paved or other impervious surfaces.
 - e. Outdoor water leaks on property or facilities of OWASA customers shall be repaired within ten (10) days of discovery by the customer and/or notification by OWASA.
2. Owners of public purpose athletic fields, recreational fields, and/or public purpose botanical sites shall not be subject to the year-round limitations of III.A.1.a-e if those facilities are operated in compliance with an OWASA-approved Water Conservation Plan that specifies the conservation measures and irrigation operating modes to be employed at that facility year-round and during successive stages of a declared water shortage.
 3. Unless superseded by the declaration of a Water Supply Shortage or Emergency, the year-round requirements of III.A.1.a and III.A.1.b above shall not apply to the following:
 - a. Outdoor irrigation necessary for the establishment of newly sodded or seeded lawns and for the establishment of new non-turf plant materials within the first 45 days of planting, provided that such irrigation occurs only between the hours of 6:00 p.m. and 10:00 a.m.
 - b. Irrigation necessary for one day only where treatment with an application of chemicals requires immediate watering to preserve an existing landscape or to establish a new landscape, provided that such irrigation occurs only between the hours of 6:00 p.m. and 10:00 a.m.
 - c. Water used to control dust or to compact soil when alternate methods are not available.
 - d. Visually supervised operation of watering systems for short periods of time to check system condition and effectiveness.
 - e. Water used for construction or maintenance activities where the application of water is the appropriate methodology and where no other practical alternative exists.

- f. Water used for firefighting, firefighter training, fire hose testing, fire pumper testing, and other emergency situation mitigation purposes.
- g. For situations in which there is no practical alternative, OWASA-supplied potable water may be used for other special purposes, such as washing out garbage trucks, cleaning up hazardous or unsanitary materials, etc., or for other purposes necessary to protect public health, safety, and welfare – provided that such water is used in the least quantity needed to accomplish the task.

III. B. Interior Use

- 1. The following indoor or interior use requirements shall apply to all customers using OWASA-supplied potable water:
 - a. Restaurants and dining facilities shall serve water only upon request of the customer.
 - b. Hotels, motels, and other facilities providing sleeping accommodations shall change bed linens only upon request of the customer, or upon customer changeover, or every five days for long-term customers.
 - c. Indoor water leaks on property or facilities of OWASA customers shall be repaired within ten (10) days of discovery by the customer and/or notification by OWASA.
- 2. Unless superseded by the declaration of a Water Supply Shortage or Emergency, the year-round requirements of III.B.1. above shall not apply to the following:
 - a. Visually supervised operation and flushing of plumbing systems for short periods of time to check system condition and effectiveness.
 - b. Water used for construction or maintenance activities where the use of water is the appropriate methodology and where no other practical alternative exists.

III. C. Year-Round Policy and Practice

- 1. It shall be OWASA's policy and practice to publicize periodically water conservation methods, including but not limited to, methods of conserving water both indoors and outdoors; methods of collecting and storing harvested water in appropriate devices, such as rain barrels and cisterns; as well as information about the availability, feasibility and allowable uses of reclaimed water from OWASA. It shall be OWASA's policy to strongly encourage and promote the following voluntary conservation measures year-round, regardless of water supply conditions:

- a. Operate dishwashers and clothes washers only when loaded to their maximum capacity or at water level settings appropriate for the size of the load.
- b. Where not otherwise required, install ultra-low flow toilets, tank dams, flow restrictors (aerators) and low-flow showerheads.
- c. Repair and maintain plumbing systems to prevent water leaks.
- d. Use harvested rainwater and/or reclaimed water for indoor and outdoor purposes where allowable and practical.

Article IV – Determination of a Water Supply Shortage or Emergency

IV. A. Drought Condition Shortage

OWASA's drought response strategy and Water Supply Shortage declarations will be guided primarily by the risk that OWASA's water supplies will decline to 20 percent or less of total storage capacity within the next 12-month period. A Stage One Water Shortage declaration will generally correspond to a two percent (or greater) risk that reservoir levels will decline to 20 percent or less of total storage capacity within the next 12 months; provided, however, that in making such a determination, OWASA will also consider the actual and projected severity of the ongoing drought relative to historical droughts included in OWASA's water supply simulation models; existing and anticipated demand, including expected customer response to water use restrictions; availability of supplemental supplies, including water purchases from neighboring communities; regional water supply conditions, including, but not limited to, the concurrent drought response status of neighboring jurisdictions; guidance or directives from the State of North Carolina; and other elements of reasonable professional judgment and management.

More severe Water Supply Shortage Stages will subsequently be declared if the risk level increases and/or if other factors indicate that further action is needed. Similarly, OWASA will reduce the severity of, or rescind, a Water Supply Shortage declaration as the risk level and related factors improve.

IV. B. Water Treatment, Storage, or Distribution Capacity Shortage

In addition to conditions caused by drought, OWASA may declare a Water Supply Shortage or Emergency whenever customer demand – as averaged over three consecutive days – exceeds 85 percent of OWASA's capability of treating and delivering water. The stage and duration of such a Water Supply Shortage or Emergency shall be guided by the degree to which customer demands approach or exceed OWASA's capacity to meet those demands, and by the degree to which conservation efforts successfully reduce short-term demands.

IV. C. Disasters and Catastrophic Equipment or Plant Failure Shortage

Any other circumstances, including service losses caused by equipment or facility failure, human error, deliberate act, weather, or other natural disaster, which constrain OWASA's water supply, treatment, or distribution capacity to less than that reasonably needed by its customers, shall constitute a Water Supply Shortage up to and including a Water Supply Emergency, requiring immediate action by OWASA.

Article V – Required Actions Under Water Supply Shortage or Emergency Conditions

In the event of a water supply shortage, OWASA shall, using its best professional judgment, determine which of the following stages is the most appropriate response to the estimated level of risk considering factors in IV.A above.

V. A. Stage One (1) Water Shortage

In the event that OWASA declares a Stage One Water Shortage, OWASA shall advise the Mayors of Carrboro and Chapel Hill and the Chair of the Orange County Board of Commissioners of its declaration and shall request that they issue Proclamations of a Stage One Water Supply Shortage. Upon OWASA's declaration of a Stage One Water Shortage, the following actions shall be taken with the goal of reducing overall water demand by ten (10) percent:

1. Spray irrigation of turf grass using OWASA-supplied potable water shall not occur more than one day per week with a maximum of one-half inch of water applied to plant material in any given week. Odd-numbered properties shall be allowed to spray irrigate only on Tuesdays; even-numbered properties shall be allowed to spray irrigate only on Thursdays. Spray irrigation of turf grass shall occur only between the hours of 6:00 p.m. and 10:00 a.m. Owners of public purpose athletic fields, recreational fields, and/or public purpose botanical sites shall not be subject to the limitations of this subsection V.A.1 if those facilities are operated in compliance with an OWASA-approved Water Conservation Plan.
2. Spray irrigation of non-turf plant materials may occur up to three days per week as provided under the year-round requirements specified in Section III.A.1.a.
3. Irrigation of non-turf plant materials by underground, drip irrigation, micro spray, low precipitation bubblers, soaker hose systems with automatic shutoffs, or by hand held hoses or watering cans may occur at any time or frequency.

Notwithstanding the restrictions specified in Sections V.A.1 through V.A.3, the protection of public health, safety, and welfare may, under special circumstances, require the use of limited amounts of OWASA-supplied potable water for such purposes as washing out garbage trucks, cleaning up hazardous or other materials. Such uses shall be permitted during declared Water

Shortages or Emergencies, provided that other practical alternatives are not available and water is used in the least practical amount.

V. B. Stage Two (2) Water Shortage

In the event that OWASA declares a Stage Two Water Shortage, OWASA shall advise the Mayors of Carrboro and Chapel Hill and the Chair of the Orange County Board of Commissioners of its declaration and shall request that they issue Proclamations of a Stage Two Water Supply Shortage, if not already issued. Upon OWASA's declaration of a Stage Two Water Shortage, the following actions shall be taken with the goal of reducing overall water demand by fifteen (15) percent:

1. Spray irrigation of turf grass with OWASA-supplied potable water shall not be permitted, except at public purpose athletic and recreational fields and public purpose botanical sites operating under OWASA-approved Water Conservation Plans.
2. Spray irrigation of non-turf plant materials shall not occur more than one day per week according to the schedule specified in Section V.A.1 and in quantities of no more than ½ inch per week, except at public purpose botanical sites operating under OWASA-approved Water Conservation Plans.
3. Irrigation of non-turf plant material by underground, drip irrigation, micro spray, low precipitation bubblers, soaker hose systems with automatic shutoffs, tree or shrub watering bags, or by hand held hoses or watering cans may occur at any time or frequency.
4. No OWASA-supplied potable water shall be used to re-fill ornamental fountains, ponds, and like devices; provided, however, that OWASA water may be used to fill and re-fill bird baths and other backyard-scale facilities used to support wildlife.
5. No OWASA-supplied potable water shall be used for washing vehicles, except at commercial or institutional car washes in which at least 50 percent of the water has either been recycled, is from a non- potable source, or is supplied by a well.
6. No OWASA-supplied potable water shall be used for cleaning or washing exterior building surfaces, decks, or paved areas, such as sidewalks, driveways, roadways, and parking lots. This restriction shall not apply to the cleaning of exterior building surfaces or decks prior to painting or re-painting.
7. No OWASA-supplied potable water shall be used for fire department training or equipment testing unless required by State or Federal regulations.

Notwithstanding the restrictions specified in Sections V.B.1 through V.B.7, the protection of public health, safety, and welfare may, under special circumstances, require the use of limited amounts of OWASA-supplied potable water for such purposes as washing out garbage trucks, cleaning up hazardous or other materials. Such uses shall be permitted during declared Water

Shortages or Emergencies, provided that other practical alternatives are not available and water is used in the least practical amount.

V. C. Stage Three (3) Water Shortage

In the event that OWASA declares a Stage Three Water Shortage, OWASA shall advise the Mayors of Carrboro and Chapel Hill and the Chair of the Orange County Board of Commissioners of its declaration and shall request that they issue Proclamations of a Stage Three Water Supply Shortage, if not already issued. Upon OWASA's declaration of a Stage Three Water Shortage, the following actions shall be taken with the goal of reducing overall water demand by twenty (20) percent:

1. The use of OWASA-supplied potable water for heating and/or cooling purposes shall be reduced in all but the most essential facilities to the extent practical in consideration of indoor air quality standards, weather conditions, and health and safety requirements.
2. No OWASA-supplied potable water shall be used for irrigation of turf grass, except for public purpose athletic and/or recreational fields and public purpose botanical sites operating under water conservation plans that have been approved by OWASA's Executive Director or by his/her designee.
3. No OWASA-supplied potable water shall be used for irrigating non-turf plant material unless applied (a) via hand held hoses or watering cans, watering bags, drip irrigation or soaker hoses, or (b) at public purpose botanical sites operating under OWASA-approved Water Conservation Plans.
4. OWASA-supplied potable water may be used to fill, re-fill, or top off swimming pools, or to fill or re-fill bird baths and other backyard-scale facilities used to support wildlife. OWASA supplied potable water shall not be used for any other outdoor purposes, except for emergency fire suppression or other activities necessary to maintain public health, safety, or welfare.
5. No bulk sale of potable OWASA water shall occur except for the wholesale transmission of potable OWASA water to neighboring communities, or for other purposes necessary to maintain public health, safety, or welfare.
6. No OWASA-supplied potable water may be used for washing any vehicles.
7. No OWASA-supplied potable water may be used for pressure washing building exteriors.
8. No OWASA-supplied potable water may be used for fire department training or equipment testing.

Notwithstanding the restrictions specified in Sections V.C.1 through V.C.8, the protection of public health, safety, and welfare may, under special circumstances, require the use of limited amounts of OWASA-supplied potable water for such purposes as washing out garbage trucks,

cleaning up hazardous or other materials. Such uses shall be permitted during declared Water Shortages or Emergencies, provided that other practical alternatives are not available and water is used in the least practical amount.

V. D. Water Supply Emergency

In the event that OWASA declares a Water Supply Emergency, OWASA shall so advise the Mayors of Carrboro and Chapel Hill and the Chair of the Orange County Board of Commissioners and shall request the issuance of a Proclamation of a Water Supply Emergency. In addition to those applicable measures listed above for a Stage Three Water Shortage, the following actions shall be taken upon OWASA's declaration of a Water Supply Emergency:

1. No OWASA-supplied potable water may be used for any outdoor purposes other than emergency fire suppression or other activities necessary to maintain public health, safety, or welfare.
2. No OWASA-supplied potable water shall be used to fill, refill or top off the water level in any private or public purpose swimming pool.
3. No OWASA-supplied potable water shall be used for the flushing or pressure testing of new distribution lines unless that water is returned to the OWASA water supply system through methods approved by OWASA. This restriction shall not apply to the testing of in-building fire control sprinkler systems
4. The use of OWASA-supplied potable water for heating and/or cooling purposes shall be reduced in all but the most essential facilities to the extent practical in consideration of indoor air quality standards, weather conditions, and health and safety requirements.
5. Water service may be discontinued or reduced to designated users or in designated portions of the OWASA service area in order to preserve the availability of water for essential public health and safety requirements, such as fire protection, hospitals, clinics, and other critical community needs.

APPENDIX B

EXAMPLE OF MAILINGS TO CUSTOMERS

As discussed in Section 4 of the WSRP, during a declared Water Shortage OWASA uses several methods to inform its customers of the consideration and implementation of water use restrictions in a shortage, including but not limited to:

- paid media advertising;
- e-mails using our distribution list for local and University officials, customers who have shared their e-mail addresses, etc.;
- news releases (by e-mail);
- reports and announcements in televised and other public meetings of the OWASA Board;
- posters in public facilities such as municipal offices; and
- website postings including water supply/demand/rain data that are updated on weekdays (and e-mailed to interested parties)

Following are examples of two information brochures that OWASA mailed directly to its customers during the 2007/2008 drought, and an example of an ad that was placed in a local newspaper during that drought.

(The water use restrictions and water rate surcharges have been revised since that drought.)

IMPORTANT NOTICE



ADDITIONAL WATER USE RESTRICTIONS IN EFFECT DUE TO STAGE ONE WATER SHORTAGE

IMPORTANTE BOLETÍN INFORMATIVO SOBRE RESTRICCIONES EN EL USO DEL AGUA (NIVEL I); PARA SOLICITAR UNA TRADUCCIÓN EN ESPAÑOL, LLAME AL 537-4221 O ENVIE UN CORREO ELECTRÓNICO A WEBMASTER@OWASA.ORG.

On September 27th, the OWASA Board of Directors declared a Stage One Water Shortage with the goal of reducing the community's water demand by at least 10%. We request and very much appreciate your help in conserving our drinking water during this extreme drought and throughout the year.

The extended dry weather has resulted in steady declines in our reservoir levels, and there has been essentially no water flow since early August in the creeks and streams that drain to the Cane Creek Reservoir and University Lake. Drinking water demand in September averaged about 11 million gallons per day (MGD), compared to the previously projected demand of about 9.6 MGD for September.

The Stage One mandatory water use restrictions listed below will be in effect until further notice.

Stage One Water Shortage Use Restrictions for OWASA Customers

- **Spray irrigation is limited to one day per week, and is allowed only before 9:00 AM and after 8:00 PM. Irrigation is limited to 1/2 inch per week. At even-numbered addresses, spray irrigation is allowed only on Tuesdays; at odd-numbered addresses, only on Thursdays.** These restrictions do not apply to watering of containerized plants and commercial plants for sale at local nurseries and businesses.
- Spray irrigation is defined as "The application of water to landscaping by means of a device that projects water through the air in the form of small particles or droplets." You can measure irrigation with a small container such as a tuna can. If you have an irrigation system, you may wish to have the control system adjusted and soil and rain sensors checked by a company that installs or maintains irrigation systems.
- Spray irrigation systems are required to have automatic timer systems and rain or soil moisture sensors, and hoses for outdoor use are required to have automatic shut-offs.
- Water waste is prohibited. Water waste includes using so much water that it runs onto adjacent properties or street rights-of-way or causes ponding on impervious surfaces; failing to fix leaks; and irrigation during rainfall or when soil moisture is already adequate.
- **If water use by an individually-metered residential customer or by an individually-metered single family residential irrigation-only customer exceeds an average of 1,000 gallons per day during any monthly billing cycle, OWASA MAY TERMINATE SERVICE.**
- The previous exemption for watering new plants, sod, seeding and reseeding of lawns is no longer in effect. That means the maximum amount of water that can be applied to a new lawn or landscaped area is limited to a total of one-half inch per week.
- Watering with a hand-held hose or watering can or with underground, drip irrigation, micro spray, soaker hose or low precipitation "bubbler" watering systems is allowed on any day of the week and at any time of day, but is limited to the maximum of one-half inch of water per week.
- No OWASA water may be used to re-fill ornamental fountains, ponds, and like devices.
- No OWASA water may be used for routine cleaning or washing of paved areas such as sidewalks, decks, driveways, roadways, or parking lots. (However, pressure cleaning of exterior building surfaces is allowed under the Stage One restrictions.)
- Hotels, motels, etc. shall change bed linens only upon request of the customer, upon customer changeover or every five days for long-term customers.
- Restaurants shall serve water only upon request.

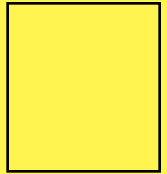
OWASA customers are strongly encouraged to conserve in other ways, such as:

- Taking shorter showers, not letting faucets run unnecessarily, and flushing the toilet only when necessary.
- Installing low-flush toilets and low-flow showerheads and faucet aerators where they are not already in place as required by current plumbing codes.
- Using rain barrels, cisterns, etc. to store rainwater for irrigation and other suitable purposes. Rain barrels are available at some retail outlets and local Boy Scout Troop #42 (telephone: 942-4830).
- Dishwashers and clothes washers should be used only with full loads or with water level settings appropriate for the load size.



400 Jones Ferry Road
Carrboro, NC 27510

IMPORTANT NOTICE: WATER USE RESTRICTIONS



WATER RATE SURCHARGES TO BEGIN IN NOVEMBER FOR HIGH RESIDENTIAL WATER USE (11,000 OR MORE GALLONS PER MONTH)

In addition to declaring the Stage One Water Shortage, the OWASA Board decided that surcharges for high residential water use will go into effect on November 1st. The surcharges are set forth in OWASA's schedule of rates and fees for water and sewer service as approved in June, 2007.

As previously announced, OWASA's new rates effective on October 1st will include increasing block water rates for individually-metered residential customers:

	Volume of Use	Water Rate
Block 1	1 – 2,999 gallons per month	\$1.98 per 1,000 gallons
Block 2	3,000 – 5,999 gallons per month	\$4.70 per 1,000 gallons
Block 3	6,000 – 10,999 gallons per month	\$5.53 per 1,000 gallons
Block 4	11,000 – 15,999 gallons per month	\$7.46 per 1,000 gallons
Block 5	16,000 or more gallons per month	\$13.05 per 1,000 gallons

(The typical residential OWASA customer uses about 6,000 gallons per month; water use over 10,000 gallons per month is very likely for outdoor purposes such as irrigation)

On November 1st, under the Stage One Water Shortage surcharges, the Block 4 water rate will increase to \$11.19 per 1,000 gallons (1.5 times the normal Block 4 rate) and the Block 5 water rate will increase to \$26.10 per 1,000 gallons (2 times the normal Block 5 rate). The surcharges are intended to strongly discourage high water use.

During a Stage One Water Shortage, there are no surcharges on water rate blocks 1 through 3 and there are no surcharges for non-residential and multi-family master-metered customers, who will pay seasonal water conservation rates rather than block rates. Additional and higher surcharges would apply if the OWASA Board declares a more severe water shortage.

THANK YOU VERY MUCH FOR YOUR HELP!

We sincerely appreciate your assistance in helping to conserve our essential drinking water supply during this extended drought and throughout the year. We welcome and encourage you to contact us for information about ways to conserve water, or to report actual or possible water leaks, water waste or water use that is not consistent with the conservation requirements.

Your conservation efforts now will help to reduce our community's risk in the event the current drought continues in the months ahead.

TO CONTACT OWASA

Please call us at 968-4421; send e-mail to webmaster@owasa.org; visit our website, www.owasa.org; send a fax to 968-4464 or visit or write to us at 400 Jones Ferry Road, PO Box 366, Carrboro, NC 27510

OWASA is the community-owned, non-profit public water and sewer agency serving the Carrboro-Chapel Hill community.

WATER CONSERVATION:

part of our community's **SUSTAINABLE** quality of life



STAGE 2 WATER SHORTAGE DECLARED; WATER USE RESTRICTIONS TIGHTENED

IMPORTANTE BOLETÍN INFORMATIVO SOBRE RESTRICCIONES EN EL USO DEL AGUA (NIVEL 2); PARA SOLICITAR UNA TRADUCCIÓN EN ESPAÑOL, LLAME AL 537-4221 O ENVIE UN CORREO ELECTRÓNICO A WEBMASTER@OWASA.ORG.

On October 18th, the OWASA Board declared a Stage Two Water Shortage with the goal of reducing water demand by at least 15%. The decision to declare the Stage Two Water Shortage was due to factors including:

As a result of the ongoing exceptional drought, reservoir levels and total water storage on hand have continued to decline and there has been no inflow to OWASA's reservoirs for more than two months.

The U.S. Drought Monitor rates the drought as "Exceptional," and continuation of the drought into 2008 is forecast.

The Cane Creek Reservoir and University Lake, which are the Carrboro-Chapel Hill-southeast Orange County community's primary public water sources, were about 50% full as of October 22, 2007.

Water demand in early and mid-October was well above the Stage One Water Shortage goal of 8.2 million gallons per day or less.

STAGE TWO WATER USE RESTRICTIONS

Spray irrigation with OWASA drinking water is not permitted, except by people regularly engaged in the sale of plants, who are allowed to irrigate their commercial stock in trade.

Irrigation by underground, drip irrigation, micro-spray, low precipitation bubblers, soaker hose systems with automatic shutoffs, or by hand held hoses or watering cans is limited to a maximum of one-half inch of water applied to plant material in any given week.

Water waste, which includes the following, is prohibited.

- Landscape watering applied in such a manner, rate and/or quantity that it overflows the landscaped area being watered and runs onto adjacent property or public right-of-way; or landscape water applied during periods of rainfall or when soil moisture is already adequate.
- The use of water for washing vehicles, equipment, or hard surfaces, such as parking lots, aprons, pads, driveways, or other surfaced areas, in such quantities to flow onto adjacent property or the public right-of-way.
- Water applied in sufficient quantity to cause ponding on impervious surfaces.
- Water lost through plumbing leaks that can be readily identified and corrected.

Water use by individually metered residential customer accounts and by individually metered single-family residential irrigation-only accounts is limited to no more than an average of 800 gallons per day during any monthly billing cycle beginning after the declaration of the Stage Two Water Shortage and ending while such restrictions are still in effect. **OWASA MAY TERMINATE SERVICE FOR WATER USE OVER THE 800 GALLON PER DAY LIMIT.**

Water shall not be used for washing vehicles, except at commercial or institutional car washes where at least 50 percent of the water is recycled.

Water shall not be used for filling or re-filling empty swimming pools. OWASA drinking water may be used to top off operating swimming pools.

Water shall not be used to re-fill ornamental fountains, ponds, and like devices.

Water shall not be used for the routine cleaning or washing of exterior building surfaces, decks or paved areas such as sidewalks, driveways, roadways, and parking lots. This restriction shall not apply to the pressure cleaning of exterior building surfaces or decks before painting or re-painting that is necessary to protect or maintain the physical integrity of the structure.



400 Jones Ferry Road
Carrboro, NC 27510

IMPORTANT NOTICE: STAGE TWO WATER SHORTAGE AND WATER USE RESTRICTIONS

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Permit #251

(continued from other side)

Restaurants and dining facilities shall serve water only on request of the customer.

Hotels, motels, and other facilities providing sleeping accommodations shall change bed linens only upon request of the customer, or upon customer changeover, or every five days for long-term customers.

The operation of dishwashers and clothes washers only when loaded to their maximum capacity, or at water level settings appropriate for the size of the load being washed; and installation of ultra-low flush toilets, tank dams, faucet aerators and low-flow shower heads are strongly encouraged if not already required.

Water leaks must be repaired within 10 days of notification by OWASA.

STAGE TWO SURCHARGES TO BEGIN IN NOVEMBER FOR HIGH RESIDENTIAL WATER USE

Stage Two surcharges for high water use by individually-metered residential customers will go into effect on November 1st. (Previously, Stage One water surcharges had been approved to go into effect on November 1st.)

OWASA's current block water rates are:

OCTOBER 1 BLOCK WATER RATES

Block 1	1 – 2,999 gallons per month	\$1.98 per 1,000 gallons
Block 2	3,000 – 5,999 gallons per month	\$4.70 per 1,000 gallons
Block 3	6,000 – 10,999 gallons per month	\$5.53 per 1,000 gallons
Block 4	11,000 – 15,999 gallons per month	\$7.46 per 1,000 gallons
Block 5	16,000 or more gallons per month	\$13.05 per 1,000 gallons

A typical residential OWASA customer uses about 5,500 gallons per month.

ON NOVEMBER 1:

- The block 3 water rate will increase to \$8.295 per 1,000 gallons.
- The block 4 water rate will increase to \$14.92 to per 1,000 gallons.
- The block 5 water rate will increase to \$39.15 per 1,000 gallons.

The surcharges are intended to strongly discourage high water use. During a Stage Two Water Shortage, there are no surcharges on water rate blocks 1 and 2 and there are no surcharges for non-residential and multi-family master-metered customers, who will pay seasonal water conservation rates rather than block rates. Additional and higher surcharges would apply in more severe water shortage conditions.

THANK YOU VERY MUCH FOR YOUR HELP!

We sincerely appreciate your assistance in helping to conserve our essential drinking water supply during this extended drought and throughout the year. We welcome and encourage you to contact us for information about ways to conserve water, or to report actual or possible water leaks, water waste or water use that is not consistent with the conservation requirements. Your conservation efforts now will help to reduce our community's risk in the event the current drought continues in the months ahead.

TO CONTACT OWASA

Please call us at 968-4421; send e-mail to webmaster@owasa.org; visit our website, www.owasa.org; send a fax to 968-4464 or visit or write to us at 400 Jones Ferry Road, PO Box 366, Carrboro, NC 27510.

OWASA is the community-owned, non-profit public water and sewer agency serving the Carrboro-Chapel Hill community.



THE DROUGHT AND OUR WATER SUPPLIES

How much water do we have now?

As of Thursday, November 29th, our Cane Creek Reservoir, University Lake and Stone Quarry Reservoir were about 47% full with a total of 1.665 billion gallons. Based on average water demand of 7.6 million gallons per day in the last 30 days, we have an estimated 6 to 7 months of supply assuming no rainfall.

Since we have several months of supply on hand, why is conservation important?

- We are in a severe drought as is much of the southeast U.S. and rainfall continues to be well below normal. There is essentially no water flow in the streams and creeks that feed our reservoirs.
- The National Weather Service has forecast that the drought will continue into 2008 due to La Niña conditions in the Pacific.
- Although winter and early spring rains would refill our reservoirs under normal conditions, we cannot assume that will happen in 2008. We need to continue conserving to help ensure that we will have an adequate supply in 2008.

What are the current water use restrictions?

Stage Two restrictions on use of OWASA drinking water include a ban on spray irrigation (except by businesses that regularly sell plants, which may water their inventory). However, we strongly recommend using water only for essential purposes.

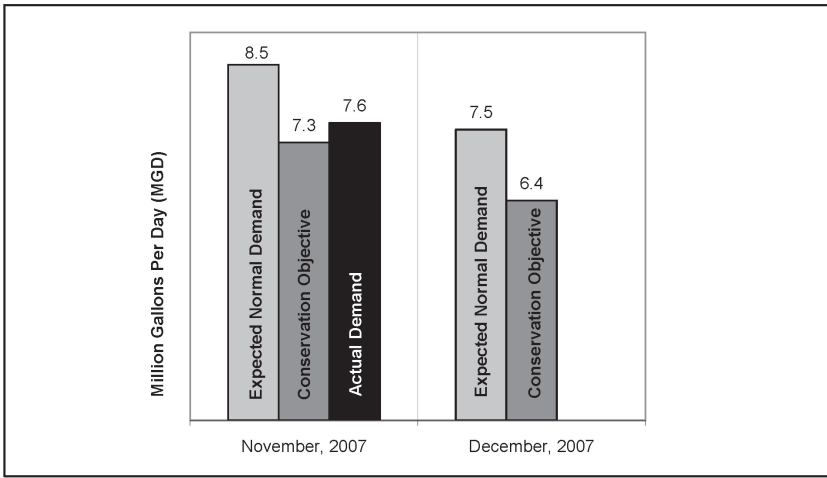
For a complete list of current restrictions or if you have any questions or comments, please contact OWASA at 968-4421 or webmaster@owasa.org, or visit our website, www.owasa.org.

Are water rate surcharges in effect?

Yes. Stage Two water rate surcharges have been in effect since November 1 for water use at or above 6,000 gallons per month at individually-metered residences. The average single-family residential customer in our community uses about 5,500 gallons per month. (The current surcharges do not apply to non-residential customers or master-metered multi-family locations.) For more detailed information, please contact OWASA at 968-4421 or by e-mail to webmaster@owasa.org, or visit our website, www.owasa.org.

What is our present water conservation objective?

Our objective for December is 6.4 million (or fewer) gallons per day or 15% below normal demand for December. Demand in November averaged about 7.6 million gallons per day, so more conservation is needed.



What are the most important conservation opportunities?

- Based on a national study of water use, about 31% of indoor residential water use is for toilet flushing. Therefore, flush less often and reduce an old toilet's flush volume by putting a container of water in the tank or installing a quick-closing flapper available free from OWASA at 400 Jones Ferry Road, Carrboro. Consider replacing old toilets with one that uses only 1.28 gallons (a "high efficiency" toilet) or 1.6 gallons (the plumbing code standard since 1994) per flush. Toilets installed before 1980 typically use 5 or more gallons per flush and toilets installed in the 1980s and early 1990s likely use 3.5 gallons per flush. New toilets may pay for themselves in a few years!
- About 25% of indoor residential water use is for clothes washing and 2% is for washing dishes. Wash clothes and dishes only when there is a full load. If you are ready to replace your clothes washer, choose a water- and energy-efficient front-loading model. Water-efficient dishwashers are also available. Please visit the EPA's WaterSense website, www.epa.gov/owm/water-efficiency/pp/het.htm, for information on independently certified water-saving fixtures, appliances, etc.
- Showers and baths account for 21% of indoor residential water use. Take short showers and install water-saving showerheads if you do not already have them. We give away low flow showerheads at our office in Carrboro.
- Faucet use totals about 18% of indoor residential water use. Don't leave the water running when it is not needed while you wash your hands, etc.
- Regularly check plumbing pipes, hoses and fixtures for leaks. Toilets are a very common place for leaks. To check a toilet, put food dye in the tank and do not flush for 15 to 20 minutes. If dye appears in the bowl, there is a leak, probably at the flapper.
- Cease non-essential outdoor use of OWASA drinking water if you have not already.

Questions or comments?

If you have questions or comments, or to report water waste, please call us at 968-4421, send e-mail to webmaster@owasa.org or visit our website, www.owasa.org.

Orange Water and Sewer Authority

400 Jones Ferry Road, Carrboro, NC
968-4421; webmaster@owasa.org; www.owasa.org



**WATER CONSERVATION: part of our community's
SUSTAINABLE quality of life**

APPENDIX C

DROUGHT RESPONSE OPERATING PROTOCOL

DROUGHT RESPONSE OPERATING PROTOCOL

JANUARY 10, 2013

Purpose

To describe the procedures and criteria that OWASA will use for making water supply and demand management decisions during an extended drought, including provisions for public notice of potential Water Supply Shortage declarations, water purchases, and/or use of OWASA's Jordan Lake water supply storage allocation. The protocol outlined below will provide OWASA's customers, local elected boards, and the overall Carrboro-Chapel Hill-UNC community with timely notice of a potential water shortage due to extended drought and the opportunity to reduce water consumption in order to avoid and/or minimize the need for more severe water use restrictions or emergency actions.

The statistically derived drought responses described below were based on the risk of depleting OWASA's existing Cane Creek/University Lake/Quarry Reservoir system to the Emergency Storage level. Those risks do not assume that Jordan Lake is part of OWASA's existing or primary water supply portfolio (University Lake, Cane Creek Reservoir, and Quarry Reservoir); instead, Jordan Lake is only an "insurance policy" for use during extended drought or operational emergencies.

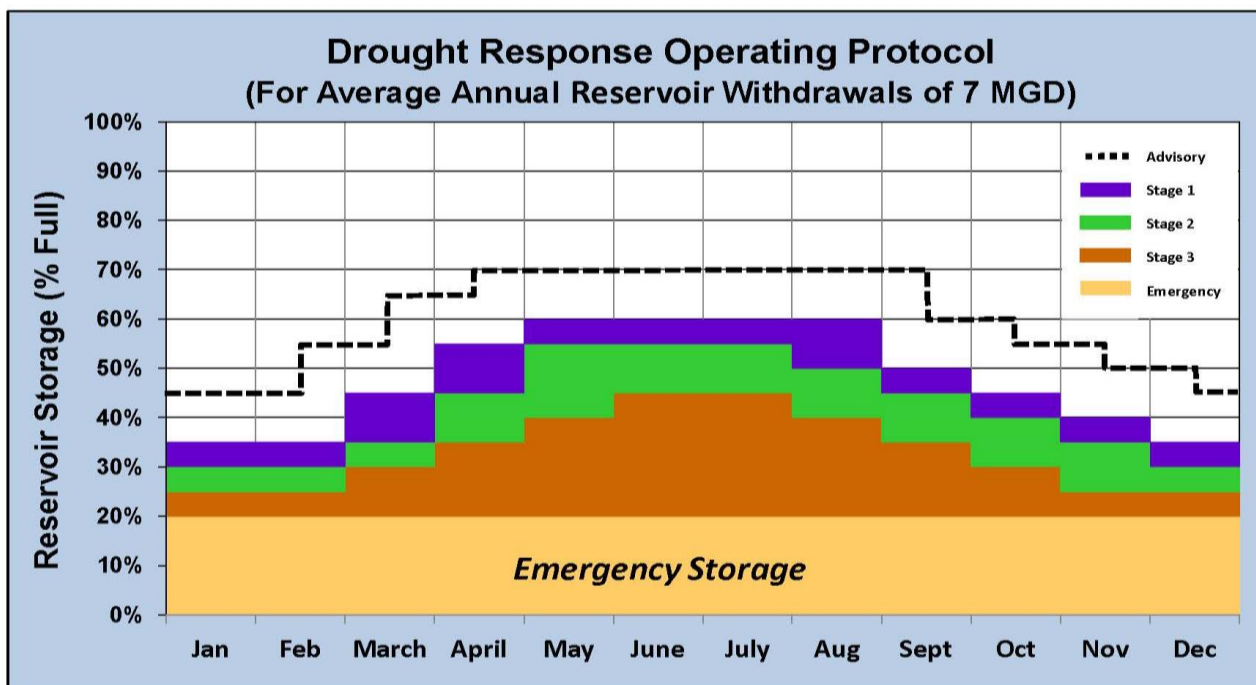
Protocol

1. OWASA shall monitor OWASA's water supply and demand conditions, short-and long-term weather forecasts, regional water supply conditions, and other factors which may affect the risk of a water supply shortage due to drought.
2. The attached graph, which is a modified version of the 7 million gallon per day (mgd) "trigger table"* in OWASA's State-approved *Water Shortage Response Plan*, shall guide OWASA's drought response decisions when raw water demands are at an annual average of 7 mgd. (When annual average demands are greater than 7 mgd, the corresponding trigger table graphs from the *Water Shortage Response Plan* shall be used.) Any drought-related Water Supply Shortage declaration at storage levels above those indicated on the trigger table, and/or any decision to purchase water from a neighboring jurisdiction (and/or to use OWASA's Jordan Lake allocation) during a drought, shall be made only upon approval by the OWASA Board of Directors.
3. OWASA shall declare a Water Shortage Advisory no later than when the total water stored in the reservoirs drops to within 10% of the mandatory Stage 1 trigger. (This Advisory stage is represented by the black dashed line on the attached graph). At or around that time, OWASA will initiate communications with the Carrboro Board of Aldermen, Chapel Hill Town Council, Orange County Board of Commissioners, and the University of North Carolina at Chapel Hill – and shall give public notice to customers and other stakeholders – regarding the likelihood that Stage 1 water use restrictions will go into effect, and that it may be necessary to begin purchasing water from the City of Durham and/or Town of Cary if current drought conditions continue or worsen. OWASA will carefully consider the advice and feedback from the elected boards. The OWASA Board of Directors will continue to exercise its sole responsibility and authority for decisions about water shortage declarations and water purchases, consistent with this Protocol. As in the past, OWASA will expand its standard conservation messaging before declaring the Water Shortage Advisory in order to encourage

* *The graph is based on an average daily raw water demand of 7 mgd. Trigger levels for greater or lesser demands will be correspondingly higher or lower than those depicted here.*

and to give the community as much opportunity as possible to intensify its water saving practices.

4. When total water storage in OWASA's reservoirs system declines to the purple block on the attached graph, OWASA must declare a Stage 1 Shortage as required by its State-approved *Water Shortage Response Plan*. OWASA may, at its own discretion, initiate Stage 1 use restrictions – with or without corresponding drought rate surcharges – earlier than indicated on the graph, but not later. The OWASA Board may authorize purchases from other utilities and/or obtain water through its Jordan Lake allocation only when total water storage in University Lake, Cane Creek Reservoir, and the Quarry Reservoir is below the Mandatory Stage 1 Shortage trigger, but no sooner. Board approval for such a declaration or purchase decision shall not be required, however, during an operational emergency as determined by OWASA's Executive Director per OWASA's *Water Shortage Response Plan*. Operational emergencies are typically characterized by the need for rapid response and may require the curtailment of water use and/or purchases in a short period of time. Examples of such emergencies include, but are not limited to:
 - Production problems at the Jones Ferry Road Water Treatment Plant
 - Failure of pumps, storage tanks, or pipelines
 - Raw or treated drinking water quality problems
 - Planned or unplanned maintenance events
 - Natural disasters.
5. During an extended drought, OWASA staff will initiate discussions with the Board of Directors regarding the need and timing of commencing water purchases or other prudent actions as total water in storage approaches the mandatory Stage 1 trigger levels shown on the attached graph; however, no purchase or use of OWASA's Jordan Lake allocation shall be made without explicit approval by the Board of Directors (except during Operational Emergencies as described above in Paragraph 4). Restrictions shall, and purchases may, continue until storage returns to levels above the mandatory Stage 1 trigger. Water use restrictions shall continue until storage returns to the "rescission" levels specified in the *Water Supply Shortage Response Plan*.
6. OWASA shall provide regular updates to the community and to the local elected boards throughout the drought as described in Paragraph 3 above. The OWASA Board and staff shall be available to attend meetings of the local governments to provide information about supply and demand conditions and to provide any information or answer questions elected officials may have.
7. The OWASA Board shall review this protocol (a) concurrently with its review of OWASA's State-approved *Water Shortage Response Plan* (as required in conjunction with Local Water Supply Plan updates that must be submitted to the NC Division of Water Resources at least once every five years); (b) following any drought during which mandatory water use restrictions were implemented; and/or (c) at any time deemed necessary to reflect changes in water supply and demand conditions or other new information, such as when the expanded Quarry Reservoir comes on line.



These responses are based on the risk of depleting OWASA's existing Cane Creek/ University Lake/Quarry Reservoir system to the Emergency Storage level and are consistent with the Response Triggers of OWASA's State-approved Water Shortage Response Plan. Those risks do not consider Jordan Lake to be part of OWASA's existing or primary water supply (University Lake, Cane Creek, and Quarry Reservoirs), but only as an "insurance policy" for use during extended drought or emergency conditions.

Water Shortage Advisory: Aggressive public awareness/education effort, including direct communication with the Carrboro, Chapel Hill, and Orange County elected boards and the University of North Carolina at Chapel Hill. A Water Shortage Advisory may be initiated earlier at OWASA's discretion.

Stage 1 Shortage: Mandatory use restrictions -- with or without rate surcharges -- may be initiated earlier at OWASA's discretion, but not later. The OWASA Board may authorize purchases of water from other utilities and/or obtain water through its Jordan Lake allocation only when total water storage in University Lake, Cane Creek Reservoir, and the Quarry Reservoir is below this Mandatory Stage 1 trigger, but not sooner. Board approval for such a declaration or purchase decision shall not be required, however, during an operational emergency as determined by the Executive Director per OWASA's *Water Shortage Response Plan*.

Stage 2 Shortage: May be initiated earlier at OWASA's discretion, but not later.

Stage 3 Shortage: May be initiated earlier at OWASA's discretion, but not later.

Water Supply Emergency: Emergency actions will be taken to obtain supplemental water to ensure the protection of public health, safety and welfare. If Cane Creek/University Lake/Quarry Reservoir storage declines to this level, such actions would likely include the installation of temporary facilities to pump water from the Haw River to the Cane Creek Reservoir.

RESOLUTION ADOPTING A DROUGHT RESPONSE OPERATING PROTOCOL

WHEREAS, OWASA is responsible for providing current and future customers with a reliable, sustainable, and cost-effective supply of high quality drinking water at all times and is committed to making the highest and best use of our local water resources; and

WHEREAS, OWASA’s role with respect to growth is explicitly addressed in its *Mission Statement*: “We will manage our responsibilities in a manner consistent and compatible with the adopted growth management policies and land use plans of the Town of Carrboro, the Town of Chapel Hill, and Orange County”; and

WHEREAS, OWASA's water use efficiency, conservation, and reclaimed water programs, which are key components of its sustainable resource management strategy, have successfully and consistently reduced water consumption during the past ten years among all customer groups; and

WHEREAS, notwithstanding these significant community-wide achievements in water use reduction, OWASA’s University Lake, Cane Creek, and Quarry Reservoir supplies will be increasingly susceptible to shortages during extended periods of severe drought, especially until the expanded Quarry Reservoir is available in the mid 2030s; and

WHEREAS, it is OWASA’s duty to proactively plan and prepare for water supply shortages due to extended periods of severe drought; and

WHEREAS, OWASA’s *Water Shortage Response Plan* (November 11, 2010), as approved by the North Carolina Division of Water Resources, includes Response Triggers for a range of supply and demand conditions and describes the actions that OWASA will take during periods of water shortages; and

WHEREAS, community members and elected officials from Carrboro and Chapel Hill have requested clarification of the procedures and criteria that OWASA will use for making water supply and demand management decisions during extended periods of severe drought, including provisions to assure prompt and complete public notice of potential Water Supply Shortage declarations, water purchases, and/or the use of OWASA’s Jordan Lake water supply storage allocation.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF ORANGE WATER AND SEWER AUTHORITY THAT:


OWASA shall use the *Drought Response Operating Protocol* text and graph attached hereto as its procedures and criteria for making water supply and demand management decisions during periods of extended drought, including provisions for public notice of potential Water Supply Shortage declarations, water purchases, and/or use of OWASA’s Jordan Lake water supply storage allocation.

Adopted this 10th day of January 2013.



Alan E. Rimer, P.E., Chair

ATTEST:



Amy Witsil, Secretary

APPENDIX D

RESOLUTIONS APPROVING OWASA'S WATER SHORTAGE RESPONSE PLAN

RESOLUTION APPROVING OWASA'S WATER SHORTAGE RESPONSE PLAN

WHEREAS, North Carolina General Statute 143-355(l) requires that each unit of local government that provides public water services or plans to provide such services shall, either individually or together with other such units of local government, prepare and submit a Water Shortage Response Plan; and

WHEREAS, as required by said statute and in the interest of sound local water supply planning and management, OWASA has developed a Water Shortage Response Plan; and

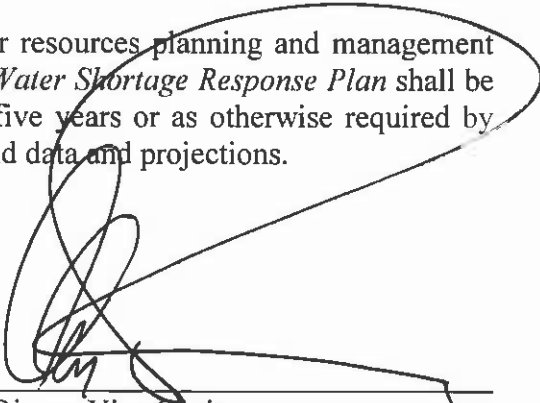
WHEREAS, the proposed Plan incorporates the Water Conservation Standards approved by OWASA in 2009 following an extensive public input process; and

WHEREAS, the OWASA Board of Directors finds that the Water Shortage Response Plan meets the requirements of North Carolina General Statute 143-355(l) and that said Plan will provide appropriate guidance for the future management of OWASA's water supplies, as well as useful information to the North Carolina Department of Environment and Natural Resources (NCDENR) for the development of a State water supply plan as required by statute;

NOW, THEREFORE, BE IT RESOLVED:

1. The Board of Directors hereby approves and adopts the *OWASA Water Shortage Response Plan* dated November 11, 2010 and attached hereto and made part of this Resolution.
2. The Executive Director shall submit OWASA's plan to NCDENR's Division of Water Resources, and copies shall be provided to the managers of the Town of Carrboro, Town of Chapel Hill, and Orange County.
3. In accordance with State law and sound water resources planning and management practice, the Board of Directors intends that the *OWASA Water Shortage Response Plan* shall be reviewed and revised, as necessary, at least once every five years or as otherwise required by law, to reflect changes in relevant water supply and demand data and projections.

Adopted this 11th day of November, 2010.



Alan Rimer, Vice Chair

ATTEST:



Braxton Foushee, Secretary

**RESOLUTION APPROVING OWASA'S 2012 LOCAL WATER SUPPLY PLAN AND
WATER SHORTAGE RESPONSE PLAN UPDATE SUBMITTED TO THE NC
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF
WATER RESOURCES**

WHEREAS, North Carolina General Statute (NCGS) 143-355(1) requires that each unit of local government that provides public water services or plans to provide such services shall, either individually or together with other such units of local government, prepare and submit a Local Water Supply Plan that must be revised at least once every five years; and,

WHEREAS, 15A NCAC 02E 0.0606 requires each such unit of local government to develop a Water Shortage Response Plan for incorporation into its Local Water Supply Plan; and,

WHEREAS, in March 2013 Orange Water and Sewer Authority (OWASA) staff submitted a draft 2012 Local Water Supply Plan to the Department of Environment and Natural Resources, Division of Water Resources (DWR) in accordance with NCGS 143-355(1); and,

WHEREAS, on November 20, 2014, DWR approved OWASA's 2012 Local Water Supply Plan; and,

WHEREAS, on April 8, 2010 the OWASA Board of Directors adopted a *Long-Range Water Supply Plan, Final Report* (subsequently revised through January 25, 2013) that was developed by OWASA staff and consultants to serve as the Board's principal guide for future water supply policy and investment decisions; and,

WHEREAS, said *Long-Range Water Supply Plan* (as revised through January 25, 2013) is consistent with OWASA's 2012 Local Water Supply Plan originally submitted to DWR in March 2013 (as updated annually through April 2014); and,

WHEREAS, the 2012 Local Water Supply Plan cannot be considered compliant with NCGS 143-355(1) until DWR receives a Resolution of Approval by the OWASA Board of Directors; and

WHEREAS, OWASA submitted and DWR approved OWASA's Water Shortage Response Plan in September 2012; and

WHEREAS, in November 2010, the OWASA Board of Directors approved OWASA's Water Shortage Response Plan; and

WHEREAS, the OWASA Board of Directors adopted a Drought Response Operating Protocol in January 2013 to describe procedures and criteria OWASA will follow for making water supply and demand management decisions; and

WHEREAS, the Drought Response Operating Protocol is consistent with the Water Shortage Response Plan; and

WHEREAS, OWASA would like to update its Water Shortage Response Plan to include the Drought Response Operating Protocol; and

WHEREAS, OWASA desires to update its Water Shortage Response Plan on the same schedule as obtaining a Resolution of Approval for the Local Water Supply Plan by the OWASA Board of Directors and has accordingly updated its Water Shortage Response Plan to include the Drought Response Operating Protocol.

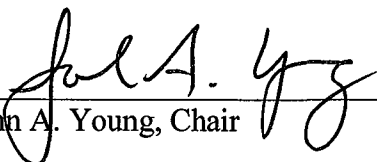
NOW, THEREFORE, BE IT RESOLVED BY THE OWASA BOARD OF DIRECTORS THAT:

1. OWASA's 2012 Local Water Supply Plan as submitted to DWR in March 2013 is hereby approved for the purposes of NCGS 143-355(l) and the OWASA Board intends that this plan shall be revised to reflect changes in relevant data and projections at least once every five years or as otherwise requested by DWR, in accordance with the statute and sound planning practice; and,

2. OWASA's Water Shortage Response Plan as updated in January 2015 is hereby approved for the purposes of NCGS 143-355(l) and the OWASA Board of Directors intends that this plan shall be reviewed and revised as needed, which will be at least once every five years; and,


3. Not inconsistent with the requirements of NCGS 143-355(l) and 15A NCAC 02E 0.0600 OWASA's 2010 *Long-Range Water Supply Plan Final Report* (as revised through January 25, 2013) or its update remains the principal guide for future water supply policy and investment decisions of the Orange Water and Sewer Authority.

Adopted this 22nd day of January, 2015.



John A. Young, Chair

ATTEST:



Heather Payne, Secretary

Resolution Approving OWASA's 2017 Local Water Supply Plan and (Revised) Water Shortage Response Plan as Approved by the NC Department of Environmental Quality, Division of Water Resources

Whereas, North Carolina General Statute (NCGS) 143-355(1) requires that each unit of local government that provides public water services shall, prepare and submit a Local Water Supply Plan, and that such Plans be revised at least once every five years; and

Whereas, NCGS 143-355(1) also requires each such unit of local government to develop a Water Shortage Response Plan for incorporation into its Local Water Supply Plan; and

Whereas, in March 2018 Orange Water and Sewer Authority (OWASA) staff submitted a draft 2017 Local Water Supply Plan to the Department of Environmental Quality, Division of Water Resources (DWR) for its review and approval, in accordance with NCGS 143-355(1); and

Whereas, on April 18, 2018, DWR approved OWASA's 2017 Local Water Supply Plan; and

Whereas, the 2017 Local Water Supply Plan must be approved and adopted by the OWASA Board of Directors after DWR approval in order to be compliant with NCGS 143-355(1); and

Whereas, OWASA has concurrently updated, and DWR has approved, its Water Shortage Response Plan; and

Whereas, OWASA desires to update and obtain approvals for its Water Shortage Response Plan on the same schedule of five-year renewals as that exercised for obtaining updates and approvals for its Local Water Supply Plan, and accordingly, has updated and requested approval of its Water Shortage Response Plan, and DWR has approved this update as of May 2018;

Now, Therefore, Be It Resolved By the OWASA Board of Directors That:

1. OWASA's 2017 draft of its Local Water Supply Plan as approved by DWR in April 2018, is hereby approved and adopted for the purposes of NCGS 143-355(1), and the OWASA Board intends and directs that this plan should be revised to reflect changes in relevant data and projections at least once every five years or as otherwise requested by DWR, in accordance with the statute and sound planning practice.

2. OWASA's Water Shortage Response Plan as approved by DWR in May 2018 is hereby approved and adopted for the purposes of NCGS 143-355(1), and the OWASA Board of Directors intends and directs that this plan shall be reviewed and revised as needed, which will be at least once every five years; or otherwise as requested by DWR, in accordance with the statute and sound planning practice.

Adopted this 14th day of June 2018.

Resolution Approving OWASA's 2017 Local Water Supply Plan and (Revised) Water Shortage Response Plan
Page 2 of 2
June 14, 2018

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

Agenda Item 2:

Resolution Approving Sole Source Procurement of a Gas Chromatograph/Mass Spectrometer for the Analysis of Malodorous Compounds

Purpose:

To request Board approval for OWASA staff to proceed with a sole source procurement (meaning there will be no competitive bidding) of the GERSTEL MPS Robotic XL/ATEX-Twister® Desorption Automation Bundle into the Agilent 5977B Performance Turbo EI GC/MS Platform.

Background:

- Taste and odor compounds in drinking water, while not harmful, are unpleasant and noticeable by the general public at very low levels (parts per trillion). Therefore, timely measurements and treatment changes are necessary to minimize the likelihood of drinking water containing elevated levels entering the distribution system. Currently, OWASA utilizes a contract laboratory for analysis of taste and odor compounds and receives results 3-4 days after collection.
- This instrument will allow us to monitor for taste and odor compounds in-house and have actionable results the same day samples are collected rather than several days later from a contract laboratory. Having in-house capabilities will also allow us to test the effectiveness of treatment options.
- This instrument could also be used to screen for many hazardous compounds and compounds of emerging concern.
- This system has been used extensively by other utilities for similar purposes and is considered a valuable and effective tool.
- OWASA has determined that because the instrument package is the only system which can measure these compounds at lower levels without requiring extractions, derivatization, and use of solvents necessary in other technologies, the GERSTEL system is preferred because:
 - It's ability to measure at lower levels than methods that rely on extraction because a larger volume of sample can be used and because it does not rely on getting the analyte into the gas phase (headspace). This instrument uses a proprietary stir-bar sorptive extraction – analytes sorb onto the stirbar and are then released during analysis instead of getting extracted into the headspace.
 - Since extraction is not necessary, staff will not need to use dangerous chemicals, thereby improving safety and reducing chemical costs.
 - Less staff time is needed prepping samples since extraction is not necessary.
- GERSTEL's system is the only practical and proven technology capable of meeting OWASA's needs as noted above.

June 14, 2018

- Pursuant to GS 143-129, the OWASA Board of Directors must approve purchases made through the sole source process prior to the award of the contract.

Staff Recommendation:

Staff recommends that the Board of Directors adopt the attached resolution of the sole source procurement of the GERSTEL's MPS Robotic XL/ATEX-Twister® Desorption Automation Bundle into the Agilent 5977B Performance Turbo EI GC/MS Platform for the analysis of malodorous compounds and authorizes and directs the Executive Director to proceed to negotiate and successfully conclude said purchase upon approval of OWASA's General Counsel.

Information:

- Resolution Approving Sole Source Procurement of a Gas Chromatograph/Mass Spectrometer for the Analysis of Malodorous Compounds
- Letter from Michael Riley with Gerstel detailing the unique attributes of their system

Resolution Approving Sole Source Procurement of a Gas Chromatograph/Mass Spectrometer for the Analysis of Malodorous Compounds

Whereas, North Carolina General Statute (GS) 143-129 allows a governing board to approve purchases of apparatus, supplies, materials or equipment through a non-competitive, or “sole source,” process when: (i) performance or price competition are not available; (ii) a needed product is available from only one source of supply; or (iii) standardization or compatibility is the overriding consideration; and

Whereas, OWASA has determined that it is necessary to acquire a Gas Chromatograph/Mass Spectrometer to perform analyses of the water supply and finished drinking water, and especially to determine the nature, composition and concentrations of certain malodorous compounds; and

Whereas, the GERSTEL system Gas Chromatograph/Mass Spectrometer is safer and is the only source for a Gas Chromatograph/Mass Spectrometer capable of meeting OWASA’s particular needs; and

Whereas, pursuant to GS 143-129, the OWASA Board of Directors must approve purchases made through the sole source process prior to the award of the contract;

Now, Therefore, Be It Resolved:

1. That the Board of Directors finds and concludes from the information supplied by staff in the materials supporting this request that the GERSTEL MPS Robotic XL/ATEX-Twister® Desorption Automation Bundle into the Agilent 5977B Performance Turbo EI GC/MS Platform is uniquely suited to meet OWASA’s needs, that it is only available through purchase from the manufacturer as the sole source, and that its sole source acquisition is appropriate in this instance.

2. That the Board of Directors hereby approves the sole source procurement of the GERSTEL MPS Robotic XL/ATEX-Twister® Desorption Automation Bundle into the Agilent 5977B Performance Turbo EI GC/MS Platform, and authorizes and directs the Executive Director to proceed to negotiate and successfully conclude said purchase.

3. This resolution shall take effect immediately upon its passage.

Adopted this the 14th day of June 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary


GERSTEL

June 7, 2018

Orange Water & Sewer Authority
400 Jones Ferry Rd
Carrboro, NC 27510-2001
(919) 537-4227

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Linthicum, MD 21090

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Dear Sir/Madam:

GERSTEL, Inc. is the sole-source vendor for the referenced analytical system GERSTEL Quotation for Katie Harrold dated June 8, 2018. This system integrates GERSTEL's MPS Robotic XL/ ATEX-Twister[®] Desorption Automation Bundle into the Agilent 5977B Performance Turbo EI GC/MS Platform. The GERSTEL TDU component incorporated into this bundle has a temperature operating range of 30°C to 350°C which makes it ideal for desorption studies. The transfer interface temperature is also controllable to 350°C. The sample refocusing and introduction point is the GERSTEL CIS 4 which is temperature programmable from -180°C to 450°C. This low temperature is critical when trying to effectively trap variable analyte concentrations. The GERSTEL TDU Twister component is a patented technology and GERSTEL is the only manufacturer and source for this solution. Coupling this capability with the GERSTEL SPME accessory results in a research oriented tool which has been demonstrated to provide significant value in many areas of applied use.

The GERSTEL solution provides several very distinct and exclusive capabilities in its value proposition. Capabilities such as:

- Prep Ahead/Multiple Sample Overlap for all applications designed to save hours of analysis time
- Automated liquid handling within standard software enables easy programming without difficult macros for those actions such as derivatization, dilution, automated additions of internal standards, etc.
- Ability to easily control up to 4 separate MPS/GC systems from one PC saving on both bench space and capital cost with full software integration
- Automated stirring (optional) of the sample during SPME without physical fiber manipulation enables analysis with minimized strain on the SPME fiber resulting in longer application usefulness as well as significant analytical advantages in both analysis time and analyte response when used for immersion SPME studies. This is a GERSTEL exclusive.
- GERSTEL is the only manufacturer to offer the Universal Syringe Holder design which incorporates the use of multiple syringe sizes without the necessity of changing the holder which is both time saving and more economical than other solutions
- Automated thermal control of sample sets (optional) from groups of 6 to 32 at one set temperature with ability to handle multiple such sample incubator platforms
- The only platform with an upgrade path for dynamic headspace concentration, SPE, dispersive SPE (dpx), thermal desorption, automated pyrolysis, filtration, weighing, vortexing, centrifugation, multi-position evaporative concentration, stir-bar sorptive extraction (Twister), membrane assisted solvent extraction, etc
- Available sample platforms to include 1, 2, 4, 10, 20, 40, 100mL vials and others upon request
- Full operational integration with Agilent OpenLab ChemStation and MassHunter software packages so that the user can easily program for all operations of the system using the same control PC while taking advantage of exclusive functionality of GERSTEL MAESTRO software control
- Priority Sample interrupt to allow the user to introduce a priority sample within a sequence without stopping or reprogramming

GERSTEL, Inc. is the only vendor that can configure and deliver such a system encompassing these analytical capabilities with complete integrated software control of the GERSTEL components. The software control of this system is based on Proprietary Design and is exclusively available from GERSTEL. As with all GERSTEL solutions, future expandability is a given so that you may benefit from other unique GERSTEL only solutions designed for this device.



GERSTEL

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All Service and Support activities are managed from GERSTEL's US Headquarters in Linthicum, MD. Billing and Order Fulfillment will also be administered from GERSTEL Linthicum. Manufacturing activities are managed from GERSTEL Corporate which is located in Mülheim an der Ruhr, Germany.

GERSTEL's Federal ID Number is 51-0356386. The DUNS is 87-796-4346.

Thank you for your interest in this truly unique Patented product and the opportunity to provide a truly unique analytical solution. The pricing provided in this quotation is as good, or better than, the pricing afforded to GERSTEL's other customers for the same product, at the same quantity and during a similar period of time.

With kindest regard,

Michael Riley
Southeast Regional Sales Manager
GERSTEL, Inc.

Agenda Item 3:

Resolution Honoring the Service of Kelly Thompson to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community

Background:

Ms. Kelly Thompson, Administrative Assistant, was employed with OWASA from May 1988 until June 2018.

Action Needed:

Staff recommends Adoption of a Resolution Honoring the Service of Kelly Thompson to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community.

June 14, 2018

**Resolution Honoring the Service of Kelly Thompson
to the Orange Water and Sewer Authority and
the Carrboro-Chapel Hill-Orange County Community**

Whereas, Ms. Kelly Thompson has served the Orange Water and Sewer Authority (OWASA) and the people of the Carrboro-Chapel Hill-Orange County community for 30 years, from May 1988 through June 2018; and

Whereas, throughout Ms. Thompson’s 30-year career, she capably served as Clerk/Cashier for the Customer Service Department; Secretary for the Wastewater Treatment and Biosolids Recycling Department; and Administrative Assistant for the Human Resources, Finance and Customer Service Departments; and

Whereas, through Ms. Thompson’s work as Clerk/Cashier in the early 1990s, she served with the Public Utilities Relations Employees (PURE) Association and held Board Officer positions of Secretary-Treasurer, Chair Person Elect and Chair Person; and

Whereas, Ms. Thompson successfully planned and organized OWASA’s Red Cross blood drive program and Veteran’s Day Luncheons since 2010; she assisted in many other events such as Employee Appreciation Day and Holiday Luncheons;

Whereas, Ms. Thompson is well liked for her good cheer and sense of humor; and

Whereas, Ms. Thompson will retire from OWASA on July 1, 2018;

Now, Therefore, Be It Resolved:

That the Board of Directors of the Orange Water and Sewer Authority (OWASA) hereby honors the distinguished public service of Ms. Kelly Thompson to OWASA and the people of Chapel Hill, Carrboro and Orange County; and the Board of Directors expresses its appreciation and best wishes to Ms. Thompson for success in all her future endeavors.

Adopted and presented this 14th day of June 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

Agenda Item 4

Orange Water and Sewer Authority

Meeting of the Board of Directors

May 10, 2018

The Board of Directors of the Orange Water and Sewer Authority (OWASA) met in a work session on Thursday, May 10, 2018, at 6:00 p.m. in OWASA's Community Room, 400 Jones Ferry Road, Carrboro.

Board Members present: Robert Morgan (Chair), Heather Payne (Vice Chair), Yinka Ayankoya (Secretary), Ray DuBose, Barbara Foushee, John N. Morris, Ruchir Vora and John A. Young. Board Member absent: Jeff Danner.

OWASA staff present: Mary Darr, Robert Epting, Esq., (Epting and Hackney), Stephanie Glasgow, Ed Kerwin, Andrea Orbich, Ruth Rouse, Todd Taylor, Stephen Winters and Richard Wyatt.

Others present: Margaret Holton (University of North Carolina Water Resources Manager) and Ben Poulson (UNC Associate Director of Energy Services).

Motions

1. Yinka Ayankoya made a motion to approve the Minutes of the April 12, 2018 Work Session of the Board of Directors; second by Barbara Foushee and unanimously approved.
2. BE IT RESOLVED THAT the Board of Directors of Orange Water and Sewer Authority Adopts the Resolution Authorizing the Executive Director to Execute Contracts with Blue Cross and Blue Shield of North Carolina for Employee Health and Dental Insurance Plans, and The Hartford for Employee Life, Dependent Life, Accidental Death and Dismemberment and Long-Term Disability Insurance Plans. (Motion by Yinka Ayankoya, second by Barbara Foushee, and unanimously approved.)

* * * * *

Announcements

Robert Morgan asked if any Board Member knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight to disclose the same at this time; none were disclosed.

Heather Payne said that the Chapel Hill Town Council OWASA Committee (Jessica Anderson, Mayor pro tem; Nancy Oates; and Michael Parker) and all the Chapel Hill Appointees to the OWASA Board as well as Robert Morgan met on May 7, 2018. The group discussed reappointments/appointments to the OWASA Board; the Agua Vista Metering Initiative; OWASA's draft budget and rates for Fiscal Year 2019 that includes a 2% increase in monthly

water and sewer rates; OWASA's partnerships on affordability outreach, including the Care to Share Customer Assistance Program; and Rogers Road Sewer Project update. Council Members encouraged continued work on affordability outreach and offered their assistance. The group agreed to schedule the next meeting in the fall of 2018.

John Young said that the Natural Resources and Technical Services (NRTS) Committee met on May 8, 2018, to discuss source water protection efforts in which a majority of the discussion focused on perfluorinated compounds and biosolids as a potential carrier of those compounds. The NRTS Committee requested the development of two items: collect information on the locations, magnitude, and timing of application of biosolids applied in the Cane Creek Reservoir watershed; and draft a plan for sampling to characterize perfluorinated compounds in creeks feeding Cane Creek Reservoir. The NRTS Committee requested that staff provide the Board a map showing biosolids application sites in the Cane Creek Watershed that was discussed at the Committee meeting.

Barbara Foushee said that the Human Resources (HR) Committee met on May 9, 2018, to continue discussing retiree health benefits for new hires and OWASA's deferred compensation (457) plan. The HR Committee agreed to meet in June to continue their work to thoughtfully balance the Board's desire to fairly and competitively compensate employees while being mindful of fiscal responsibilities.

Ed Kerwin said that he attended the Joint Chatham-Orange Task Force meeting on May 10, 2018, where Chatham Park, Obey Creek, 15-501 Corridor Study, and Bus Transit connectivity between Chatham and Orange County were discussed. The next meeting is scheduled for October 4, 2018 and suggested topics are: update on Jordan Lake Western Intake; Light Rail; affordable housing; solid waste; and Orange County Lands Legacy Program.

Mr. Kerwin said that the Board will receive an update from staff on a water transfer to the City of Durham which is necessary due to renovation improvements at both of their water treatment plants. Mr. Kerwin said that initially the emergency transfer of drinking water was expected to be needed until the end of May. However, unanticipated construction delays have extended Durham's need for assistance until around the end of June to ensure their customers have an adequate supply while major construction activities are underway.

Todd Taylor announced that Monica Dodson has been offered and has accepted the Wastewater Treatment and Biosolids Recycling Manager position at OWASA.

Item One: Minutes

Yinka Ayankoya made a motion to approve the Minutes of the April 12, 2018 Work Session of the Board of Directors; second by Barbara Foushee and unanimously approved. Please see Motion No. 1 above.

Item Two: Resolution Authorizing the Executive Director to Execute Contracts with Blue Cross and Blue Shield of North Carolina for Employee Health and Dental Plans.

and The Hartford for Employee Life, Dependent Life, Accidental Death and Dismemberment and Long-Term Disability Insurance Plans

Motion by Yinka Ayankoya; second by Barbara Foushee and unanimously approved. Please see Motion No. 2 above.

Item Three: Employee Merit Pay for Fiscal Year 2019

After discussion, the Board requested information regarding the timing of the next review of the Employee Pay Administration Guidelines for discussion at a future meeting. The Board also agreed to consider approval of the Resolution (Schedule of Employee Classification and Authorized Compensation; Adjusting Affective Employees' Compensation to the Minimum of the Pay Range; and Authorizing Cost of Labor and Merit Pay Increases for Eligible Employees) on June 14, 2018.

Item Four: Draft Approach for Managing Forested Watershed Lands and its Community Engagement Process

After discussion, the Board concurred that sustainable forestry management is desired on OWASA's watershed land. The Board agreed to refer this topic to the Natural Resources and Technical Services (NRTS) Committee to discuss an approach for Forestry Management and an associated community engagement process.

Staff will provide the Board the 2010 Forestry Management Plan and a summary of public comments on the 2010 Forestry Management Plan as well as schedule this topic for a NRTS Committee meeting in the fall.

Item Five: Review Board Work Schedule

The Board agreed that staff will develop a list of key tasks for recurring Board action items over the next five years.

The Board agreed to schedule a Natural Resources and Technical Services Committee meeting to continue discussing source water protection in the fall.

The Board agreed to schedule a Finance Committee meeting to discuss a longer-term strategy for cost management in September or October 2018.

The Board agreed to continue to schedule time on its meeting agendas when Board Members may make Additional Comments, Suggestions, and Requests for Agenda Topics of interest to them.

Robert Morgan, Ruchir Vora and Ray DuBose said they would be absent from the June 14, 2018 Board work session.

The Board agreed that the nominations for the Election of Board Officers for Fiscal Year 2019, pending Jeff Danner's concurrence: Chair are Yinka Ayankoya, Jeff Danner and Ray DuBose; Vice Chair are Yinka Ayankoya, Jeff Danner and Ray DuBose; and Secretary are Jeff Danner, Ray DuBose and John Young. Staff will follow up with Mr. Danner.

Item Six: Executive Director Will Summarize the Key Staff Action Items from the Work Session

Ed Kerwin noted the following items for staff follow-up:

- Provide the Board a map showing biosolids application sites in the Cane Creek Watershed;
- Provide the Board information for discussion at a future meeting regarding the timing of the next review of the Employee Pay Administration Guidelines.
- Provide the Board a summary of public comments on the 2010 Forestry Management Plan and the 2010 Forestry Management Plan.
- Provide the Board a list of key tasks/actions for recurring Board attention over the next five years.
- Schedule a Natural Resources and Technical Services (NRTS) Committee meeting to continue discussing source water protection.
- Schedule a NRTS Committee meeting to discuss overall approach for managing OWASA's forested watershed lands.
- Schedule a Finance Committee meeting in the fall of 2018 to discuss longer-term approach/strategy for cost management.

The Board Work Session was adjourned at 7:45 p.m.

Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachment

Agenda Item 5

Orange Water and Sewer Authority
Public Hearings and Meeting of the Board of Directors
May 24, 2018

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held public hearings and a regular meeting on Thursday, May 24, 2018, at 7:00 p.m. in Chapel Hill Town Hall Council Chamber.

Board Members present: Robert Morgan (Chair), Heather Payne (Vice Chair), Yinka Ayankoya (Secretary), Jeff Danner, Ray DuBose, Barbara Foushee, John N. Morris and Ruchir Vora. Board Members absent: John A. Young.

OWASA staff present: Denise Battle, Mary Darr, Robert Epting Esq. (Epting and Hackney), Kate Fialko (OWASA intern), Vishnu Gangadharan, Robin Jacobs (Epting and Hackney), Ed Kerwin, Andrea Orbich, Kelly Satterfield, Todd Taylor, Mary Tiger and Stephen Winters.

Others present: Terry Battle and Margaret Holton (University of North Carolina Water Resources Manager).

Motions

1. Heather Payne made a motion to close the Concurrent Public Hearings on the Preliminary Annual Operating and Capital Improvements Budgets and Proposed Rates, Fees and Charges for Fiscal Year 2019 that begins on July 1, 2018; the motion was seconded by Yinka Ayankoya and unanimously approved.
2. BE IT RESOLVED THAT the Board of Directors adopts the Resolution of Orange Water and Sewer Authority Amending the Fiscal Year 2018 Annual Budget for Capital Improvements Program Expenditures. (Motion by Yinka Ayankoya, second by Barbara Foushee and unanimously approved.)
3. Yinka Ayankoya made a motion to approve the Minutes April 26, 2018 Meeting of the Board of Directors; second by Barbara Foushee and unanimously approved.

* * * * *

Announcements

Chair Robert Morgan asked that if any Board Member knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight to please disclose the same at this time; none were disclosed.

Mr. Morgan announced that the OWASA Board will convene for a Diversity and Inclusion Session with VISIONS, Inc. on Wednesday, May 30, 2018 at 6:00 p.m. in the OWASA Boardroom.

Mr. Morgan announced that on May 23, 2018, the Chapel Hill Town Council reappointed Jeff Danner to the OWASA Board of Directors and appointed Bruce Boehm to fulfill Heather Payne's remaining term beginning July 1, 2018 and ending June 30, 2019.

Barbara Foushee announced that on April 12, 2018, the Board agreed that the Nominating Committee will consist of the full Board and to continue the practice of limiting Board Members successive terms as Chair, Vice Chair and Secretary to one one-year term for each office beginning July 1, 2018. On May 10, 2018, the OWASA Board reviewed these procedures and determined that the Board Members eligible as nominees for this year's election are: Nominees for Chair of the Board are Yinka Ayankoya, Jeff Danner and Ray DuBose; Nominees for Vice Chair are Yinka Ayankoya, Jeff Danner and Ray DuBose; and Nominees for Secretary to the Board are Ray DuBose and John Young. Ms. Foushee said that the annual election for officers will be conducted this year at the June 14, 2018 Board meeting. Ms. Foushee said that five (5) votes are necessary to elect an Officer and those Board Members absent from the June 14th meeting may vote by written proxy ballot.

Ed Kerwin announced that Linda Low, OWASA's new Communications and Community Relations Officer, will begin work with OWASA on May 29, 2018.

Jeff Danner said that he attended the New Jersey Water Environmental Association meeting and received information that he will share with staff regarding water treatment processes.

Item One: Concurrent Public Hearings on the Proposed Annual Operating and Capital Improvements Budget and Proposed Rates, Fees and Charges

Robert Morgan opened the concurrent Public Hearings on the Proposed Annual Operating and Capital Improvements Budget and the proposed Schedule of Rates, Fees and Charges for Fiscal Year (FY) 2019.

Todd Taylor, General Manager of Operations, said OWASA is a public, non-profit agency providing water, sewer and reclaimed water services to the community. The organization's revenue comes solely from customer fees; OWASA is required to charge customers the full cost of providing water and wastewater services. Mr. Taylor said that it is OWASA's responsibility to operate at the lowest rates possible while providing high quality, reliable and sustainable services.

Mary Darr, Director of Engineering and Planning, said that the proposed Capital Improvements Program (CIP) budget is used to rehabilitate/replace the infrastructure that is used to maintain the day-to-day high-quality services OWASA provides. Staff uses an asset management program to prioritize CIP projects that are planned years in advance. The CIP investment for FY 2019 is \$22.6 million and over the next five years, total CIP spending is expected to be about \$97.7 million. About 85% of the 5-year CIP will be spent on infrastructure rehabilitation and

replacement, about 3% on expanding system capacity, and approximately 12% for system enhancement. Ms. Darr provided information on a few recent CIP projects including: Sedimentation Basin Rehabilitation Project at the Jones Ferry Road Water Treatment Plant; Heating Ventilation and Air Conditioning Improvement Project at the Jones Ferry Road Administration Building; Brandywine Water Line Replacement which is funded by a low-interest loan from the State; and the Rogerson Drive Force Main Rehabilitation Project.

Mary Tiger, Sustainability Manager, said that the affordability of OWASA's services is critical to our community's public health and economic vitality. The Board-approved financial management policy holds the organization to a goal of keeping the cost of the average water and wastewater bill below 1.5% of the community's Median Household Income (MHI). Despite this goal, there are customers whose income falls below the MHI and have difficulty paying their OWASA bill. Ms. Tiger said that the Affordability Outreach Program is designed to empower low-income customers and the agencies that serve them with information and programming to help reduce water use and water and sewer bills. An important resource in providing customers with actionable information is the Agua Vista Metering Initiative. The information that Agua Vista provides will help us save our customers money. With over 25% of meters upgraded so far, staff has already started proactively reaching out to customers to notify them of potential water leaks and help to avoid unexpected high water bills.

Denise Battle, Customer Service Manager, provided information about OWASA's Care to Share Customer Assistance Program and how customers can sign up to help families who have difficulties paying their water and sewer bills.

Stephen Winters presented the proposed Annual Operating, Capital Improvements Budget, and Schedule of Rates Fees and Charges and mentioned that tonight's public hearing is another opportunity for customers and stakeholders to provide input on the proposed budget and rates. He said the Board is scheduled to make a decision on the proposed FY 2019 budget and rates on June 14, 2018.

Mr. Winters noted that OWASA's system development fees have been reduced by 10% to 40% and are in compliance with a new North Carolina Statute; the newly revised system development fees will go into effect on July 1, 2018. Other miscellaneous fees have been adjusted based on the cost of providing the services. The Board is considering a 2% increase in monthly water and sewer rates which will add \$1.41 to a monthly bill for customers using 4,000 gallons of water. The reason for the increase is to provide funding for operating expenses, capital investments, and debt service payments. A 2% increase in FY 2019 will also help avoid the need for larger future rate increases.

Mr. Winters noted that projected total revenue under the proposed FY 2019 Budget is about \$38 million. The proposed Budget includes \$22.5 million for operating expenses and \$7.2 million for debt service payments. The proposed CIP Budget is projected to be \$22.6 million for FY 2019 and about \$97.7 million over the next five years.

Mr. Winters said that long-term planning indicates that OWASA is sustainable and that water resources will meet expected demand for the next 50 years under most circumstances. Current

planning also indicates that water and wastewater treatment plant capacity is expected to meet projected needs through 2030. Staff will continue to work to reduce costs and improve efficiencies without compromising services.

Mr. Morgan then opened the floor of the concurrent Public Hearings for public comments. No person offered any comments at the meeting. The Board received six comments via e-mail in advance of tonight's meeting.

Heather Payne made a motion to close the Concurrent Public Hearings on the Preliminary Annual Operating and Capital Improvements Budgets and Proposed Rates, Fees and Charges for Fiscal Year 2019 that begins on July 1, 2018; the motion was seconded by Yinka Ayankoya and unanimously approved. Please see Motion No. 1 above.

Mr. Morgan opened the discussion for Board comments.

Jeff Danner commented that in proposing a 2% increase in monthly water and sewer rates for FY 2019, the Board considered the financial needs of the organization over the next five years. Mr. Danner stated that it might be helpful to emphasize the Board's long-term focus when communicating information about OWASA's budget and rates.

The Board expressed appreciation to the staff for their hard work to keep customer rates affordable and for a job well done.

Item Two: Petitions and Requests

Robert Morgan asked for petitions and requests from the public, Board and staff; there were none.

Item Three: 12 Month Board Meeting Schedule

The Board received this as an information item.

Item Four: Budget Amendment for Fiscal Year 2018 Capital Improvements Program

Yinka Ayankoya made a motion to approve the resolution; second by Barbara Foushee and unanimously approved. Please see Motion 2 above.

Item Five: Minutes

Yinka Ayankoya made a motion to approve the Minutes April 26, 2018 Meeting of the Board of Directors; second by Barbara Foushee and unanimously approved. Please see Motion 3 above.

Item Six: Summary of Board Meeting Action Items

Ed Kerwin noted the following items for staff follow-up:

- June 14, 2018 Board Work Session agenda will include:

- Approve the Fiscal Year 2019 Budget and Rates;
- Review Draft Reliability and Risk Assessment Report for the water and wastewater treatment plants; and
- Election of Officers.

The Board meeting was adjourned at 7:35 p.m.

Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachment

DRAFT

Agenda Item 6:

Approval of Schedule of Rates, Fees and Charges; Annual Budget; Five-Year Capital Improvements Program (CIP); and Cost of Living and Merit Pay Increases:

- A. Resolution Adopting the Schedule of Rates, Fees and Charges Effective on or after July 1, 2018 for System Development Fees and on or after October 1, 2018 for all other Rates, Fees and Charges
- B. Resolution Adopting the Budget for Orange Water and Sewer Authority for Fiscal Year (FY) 2019
- C. Resolution Approving the CIP for FY 2019-2023 and the Accompanying FY 2019 Capital Project Resolution
- D. Resolution Updating the Schedule of Employee Classification and Authorized Compensation; Adjusting Affected Employees' Compensation to the Minimum of the Pay Range; and Authorizing Cost of Labor and Merit Pay Increases for Eligible Employees

Background:

North Carolina General Statutes and OWASA's Bond Order require that on or before July 1 of each fiscal year, OWASA must adopt an Annual Budget for the ensuing year.

The Board of Directors held public hearings on May 24, 2018 to receive stakeholder input on the proposed FY 2019 Budget and Schedule of Rates, Fees and Charges; no member of the public spoke at the meeting. (Prior to the meeting, the Board received email messages from six stakeholders.) After the close of the public hearings and subsequent discussion, the Board of Directors directed staff to present for adoption at the June 14, 2018 board meeting an Annual Budget for FY 2019 that provides funding for \$22.5 million in operating expenses, \$7.2 million in debt service payments, \$21.0 million for capital improvements and \$0.9 million for equipment expenditures.

Increased workload in our water treatment plant laboratory has led to the need for an additional staff member and the budget includes funding for the addition of a lab analyst. Board approval of this addition is part of the resolution to adopt the FY 2019 budget.

The proposed Annual Budget includes projected operating revenues which are based on a two percent increase in OWASA's monthly water and sewer rates. Certain other fees have been adjusted based on changes in the costs of providing the services.

In July 2017, the North Carolina General Assembly passed a law (NC House Bill 436/Session Law 2017-138) that requires a change to the way water and sewer utilities calculate system development fees. The statute requires that the new fees be effective as of July 1, 2018 and also required a public comment period and a public hearing; the latter was held on May 24, 2018.

Rationale for an Increase in Monthly Water and Sewer Rates:

OWASA is committed to providing high-quality, safe, and reliable water and wastewater services, and our rates reflect the true cost of providing these services. We are a non-profit, community-owned water and wastewater utility and our investments in water and wastewater infrastructure are not supported by taxes nor federal grants. We reinvest the rates and fees paid by our customers directly into the treatment plants, pipes, and people that will serve our community for years to come.

The investments we make in our infrastructure help prevent water main breaks and sewer overflows. They allow us to maintain, replace and upgrade the equipment, facilities and resources we need to make sure that water is available, safe, and good-tasting and that recycled treated wastewater is safe for the environment. They allow us to provide our employees a fair and competitive wage.

Our capital improvements program is a necessary investment in the long-term sustainability of our community. Delivering safe drinking water and recycling clean wastewater is very capital intensive. Each year we take a long-term look at what is needed to sustain the essential services we provide and we prioritize those projects based on their criticality.

We also take a long-term approach to operating expenses and invest in projects like the Agua Vista Metering Initiative and Energy Management Program that will provide the community financial returns in years to come.

The five-year capital improvements program projects nearly \$100 million of capital spending needed to maintain nearly 800 miles of underground pipe; invest in the renewal or replacement of existing equipment at our treatment plants, pump stations, and reservoirs; and mitigate operational expenses in future years. This year, about three-quarters of our capital improvements budget will be spent on repairing and rehabilitating existing infrastructure. No individual project is driving the need for a rate increase; rather it is attributable to an increase in the true costs to provide high-quality, safe, and reliable water and wastewater services, so as not to short-change future generations.

Increasing rates this year by two percent better-prepares the organization to fund the five-year capital improvements program budget and, hopefully, avoid higher future rate increases. While rate adjustment decisions are made annually, we use our long-range financial planning to project future financial needs and how they may impact future rate adjustments. During our development of the proposed FY 2019 budget, the Board considered a number of rate adjustment options. The table below shows some of the options the Board contemplated.

Rate Increase Options – % Increase and Average Bill Impact												
	FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		5-Year Cumulative	
	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$
Option 1	0.0	0.00	3.0	2.10	3.0	2.18	4.5	3.37	6.0	4.70	17.5	12.35
Option 2	2.0	1.41	2.0	1.44	3.0	2.21	4.0	3.03	4.0	3.15	15.9	11.24
Option 3	2.75	1.95	2.75	1.98	2.75	2.05	2.75	2.11	2.75	2.17	14.5	10.26
Option 4	2.5	1.77	2.5	1.81	2.5	1.86	3.5	2.66	3.5	2.75	15.4	10.85

OWASA’s residential customers average about 4,000 gallons of water use per month and the cost for that level of use is \$70.66. OWASA’s rates remain competitive in our state and region. The median monthly bill of other area water utilities for 4,000 gallons of water use is \$65.60; the highest is \$114.23.

A two percent increase in our monthly water and sewer rates will increase the average OWASA family’s bill by \$1.41 per month. The majority of water and wastewater utilities in the state increased their rates within the last two years. The median rate increase for these utilities was four percent.

We appreciate our customers for their partnership. Beyond paying their OWASA bill every month, the cost and commitment borne by our community to use water wisely and protect the wastewater system pays dividends, ecologically and economically.

System Development Fees:

System development fees are one-time amounts charged for new connections (development) to OWASA's system. They are calculated to recover a portion of the capital costs of providing water and sewer system capacity. System development fees are calculated separately for water and sewer connections.

On January 25, 2018, the Board approved a new method for calculating system development fees, in compliance with the new law. A [report on the new fees](#) was posted on our website on March 16, 2018 and the public was invited to comment. A public hearing was held on May 24, 2018. To date, we have not received any comments or questions from the public. The new system development fee calculation method results in a decrease in the amount of the fees as shown in the resolution to approve the Schedule of Rates, Fees and Charges.

Schedule of Rates, Fees and Charges:

Resolution A is presented for the Board to adopt the proposed Schedule of Rates, Fees and Charges that would become effective on or after July 1, 2018 for system development fees and on or after October 1, 2018 for all other rates, fees and charges.

Annual Budget:

Resolution B is presented for the Board to adopt the FY 2019 Annual Budget, the budget ordinance and accompanying fund schedules.

Capital Improvements Program:

The total five-year CIP for FY 2019-2023 is approximately \$99 million and FY 2019 spending is budgeted to be about \$21 million. Board approval of the CIP indicates the Board's endorsement of the proposed projects and identified needs, and funding for the first year of the CIP is adopted as part of the annual budget ordinance.

Employee Cost of Labor and Merit Pay Increases for Fiscal Year (FY) 2019:

On December 14, 2017 the Board received information from staff regarding compensation strategies. The Board adopted a resolution updating the Pay Administration Guidelines establishing:

- Four rating categories for employees: Exceptional, Exceeds Expectations, Meets Expectations, and Below Expectations
- A salary increase will be provided to the top three categories
- Up to 40% of the high-performing employees may be rated as Exceptional or Exceeds Expectations with no more than 15% in the Exceptional category
- Employees rated as Exceeds Expectations or Exceptional earn a higher salary increase than employees rated as Meets Expectations

- It is the Board’s desire for employees meeting the expectations of their position to move from the entry point to the mid-point of their pay range in approximately seven to nine years. To accomplish this, annual merit increases for ratings of Meets Expectations and above should be no less than 2.9 percentage points greater than the annual cost of labor adjustment (COLA).
- The Schedule of Classification and Compensation pay ranges shall increase by the same percentage as the COLA.
- Merit increase percentages are provided based on the performance rating received. Unless otherwise determined by the Board, meets Expectations are eligible for one times (1x) the Board approved merit increase, Exceeds Expectations are eligible for 1.5 times (1.5x) the merit increase amount, and Exceptional are eligible for two times (2x) the merit increase amount.
- The Board will approve implementation of the COLA and merit increases, annually. The Pay Administration Guidelines may be modified for any reason, including if it deems that available resources and labor market conditions do not support implementation as prescribed by the policy.

The merit pay increases are illustrated below.

Rating	COLA Increase	Merit Increase
Exceptional	1x	2x
Exceeds Expectations	1x	1.5x
Meets Expectations	1x	1x
Below Expectations	Not Applicable	Not Applicable

Market Analysis:

The table below displays planned employee compensation increases for local entities (subject to change).

Entity	Merit	Cost of Labor/Living
City of Durham	4% Budgeted	N/A
Town of Cary	Averaging 4% - discussion is taking place to increase to 5%	Undecided
Town of Hillsborough	3.25% Average (0 – 4.25%)	N/A Market adjustments will be given as needed
Cape Fear Public Utility	Up to 2.5%	1.5% Market Adjustment
Town of Chapel Hill	N/A	3% of Market
Town of Carrboro	N/A	3%
Orange County	\$500, \$750 or \$1,000	Proposed 2%

Based on the most recent World at Work survey data projected for 2018, cost of labor increases are projected to be from 0.6% to 2.2% and merit pay increases are projected to be from 2.4% to 3.0%. See World at Work data below.

WORLD AT WORK SALARY SURVEY DATA								
	2017				2018 projected			
	COLA	Merit	Other	Total ⁴	COLA	Merit	Other	Total ⁴
1-499 Employees, \$30M-\$100M revenue								
All Industries								
National	1.4	3.0	1.2	3.3	1.8	3.0	1.4	3.5
Southern ¹	1.9	2.9	0.9	3.2	2.0	2.9	0.9	3.2
NC	2.1	2.5	0.4	3.2	2.2	2.3	0.6	3.1
Public Administration ²								
National	*	2.1	*	3.7	*	2.5	-	3.5
Southern ¹	*	2.1	*	3.7	*	2.5	-	3.5
NC	-	-	-	-	-	-	-	-
Utilities ³								
National	-	3.3	-	3.3	-	3.0	-	3.0
Southern ¹	-	-	-	-	-	-	-	-
NC	-	-	-	-	-	-	-	-
All Size Employees, All Size Revenue								
All Industries								
National	1.4	2.8	0.9	3.0	1.6	2.9	0.9	3.1
Southern ¹	1.3	2.7	0.8	3.0	1.4	2.9	0.8	3.1
NC	1.2	2.7	0.7	3.0	1.3	2.9	0.9	3.2
Public Administration ²								
National	1.4	2.2	0.9	2.7	1.7	2.4	0.9	2.9
Southern ¹	1.4	2.5	0.7	3.0	1.7	2.5	0.5	3.0
NC	-	*	*	*	-	*	*	*
Utilities ³								
National	1.7	2.8	1.0	2.9	1.7	2.9	0.9	3.0
Southern ¹	0.9	2.8	0.7	2.9	0.6	2.8	0.7	2.9
NC	-	2.8	-	2.8	-	2.8	-	2.8

(-) Fewer than 5 responses
 (*) This data may represent a small sample size of less than 30 response
¹ Southern includes these states: AL, AR, FL, GA, LA, MS, NC, OK, SC, TN, TX
² Public Administration includes cities, states, port authorities, retirement systems, airport authorities, etc.
³ Utilities include organizations such as Alliant Energy, Black Hills Corp, City Utilities of Springfield, MO, Entergy, NY Power Authority, TN Valley Authority, Westinghouse Electric
⁴ "General Increase/COLA," "Merit" and "Other" do not add to the "Total Increase" because not every organization provides all three types of increase.

Staff Recommendation:

Based on market data, the Board-approved Pay Administration Guidelines, and the Board's support for moving employees meeting expectations through their pay ranges in seven to nine years, staff recommends that the Board:

1. Approve a 1% COLA for all eligible employees who earn a Meets Expectations, Exceeds Expectations or Exceptional rating at their October 2018 annual performance review and implement the same percentage increase to salary ranges in the Schedule of Employee Classification and Authorized Compensation effective October 29, 2018.

2. Approve a merit pay increase of 3% effective October 29, 2018 for all Employees rated as Meets Expectations at their October 2018 annual performance review;
3. Approve a merit pay increase of 4.5% effective October 29, 2018 for Employees rated as Exceeds Expectations at their October 2018 annual performance review;
4. Approve a merit pay increase of 6% effective October 29, 2018 for Employees rated as Exceptional at their October 2018 annual performance review.

Implementing this recommendation would result in employees receiving wage increases as shown below.

		Staff Recommended Adjustments			
	Components of Employee Pay Adjustments	World at Work	Meets Expectations Rating	Exceeds Expectations Rating	Exceptional Rating
	Cost of Labor	.6% -2.2%	1.0%	1.0%	1.0%
+	Merit Pay	2.4% - 3.0%	3.0%	4.5%	6.0%
=	Total Pay Increase	2.8% - 3.5%	4.0%	5.5%	7.0%
Approximate Budget Impact including payroll taxes			\$416,000		
Amount in draft FY 2019 Budget			\$398,000		
Difference			\$18,000		

These calculations are based on current employee wage rates and assume no more than 40% of the workforce will receive a rating of Exceptional or Exceeds Expectations with no more than 15% in the Exceptional category.

If approved, pay range adjustments and pay increases normally go into effect the first pay period in November.

Action Needed:

Approval of the resolutions adopting: (A) the Schedule of Rates, Fees and Charges; (B) the Annual Budget for FY 2019; (C) the CIP for FY 2019-2023 and the accompanying capital project resolution; (D) cost of labor and merit pay increases for FY 2019.

Information:

- Resolutions and supporting documents relating to approval of the rates schedule, annual budget, five-year CIP, and cost of living and merit pay increases.

Resolution Adopting the Schedule of Rates, Fees and Charges Effective on or after July 1, 2018 for System Development Fees and on or after October 1, 2018 for all other Rates, Fees and Charges

Whereas, Orange Water and Sewer Authority has an adopted Schedule of Rates, Fees, and Charges as permitted under North Carolina General Statute 162A-9 and Section 7.04 of OWASA's Amended and Restated Bond Order (Bond Order); and

Whereas, General Statute 162A-6(9) and Section 7.04 of OWASA's Bond Order empower and direct the Authority to fix and revise from time to time and to collect rates, fees and other charges for the use of or for the services and facilities furnished by any system operated by the Authority; and

Whereas, In July 2017, the North Carolina General Assembly passed a law (NC House Bill 436/Session Law 2017-138) that requires a change to the way water and sewer utilities calculate system development fees; that fees based on the new calculation method must be in place and effective as of July 1, 2018; that the utility must provide a public comment period of not less than 45 days prior to considering adoption; and must hold a public hearing prior to considering adoption; and

Whereas, OWASA has complied with the requirements of NC House Bill 436/Session Law 2017-138; and

Whereas, the OWASA Board of Directors held a public hearing on May 24, 2018 on the attached, proposed Schedule of Rates, Fees, and Charges, including the new system development fees.

Now, Therefore, Be It Resolved:

1. That the attached Schedule of Rates, Fees, and Charges is hereby adopted by the Board of Directors of Orange Water and Sewer Authority.
2. That the rates shown on the attached schedule shall become effective for system development fees on or after July 1, 2018, and for all other rates, fees and charges on or after October 1, 2018.
3. That the Executive Director is authorized in his discretion to make findings and determinations as necessary in the application of the Schedule of Rates Fees and Charges, and otherwise as necessary to resolve customer inquiries or appeals arising thereunder, subject to the customer's right of appeal to the Board of Directors.
4. That the Executive Director is hereby directed to implement the Schedule of Rates, Fees, and Charges.

Adopted this 14th day of June 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

APPLICABLE TO ALL BILLINGS AND SERVICES ON AND AFTER JULY 1, 2018 FOR SYSTEM DEVELOPMENT FEES AND ON OR AFTER OCTOBER 1, 2018 FOR ALL OTHER BILLINGS AND SERVICES

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Background and Authorization

In providing essential public water, sewer and reclaimed water services to Chapel Hill, Carrboro and portions of southern Orange County, Orange Water and Sewer Authority (OWASA) incurs substantial operating and capital expenses. As a community-owned non-profit public utility, OWASA has no authority to levy taxes, nor does it receive tax revenues from local governments for ongoing operations. OWASA finances its water, sewer and reclaimed water operations and extensive capital improvements almost entirely through customer paid fees and charges.

North Carolina G.S. 162A-9 requires that OWASA's "rates, fees and charges shall be fixed and revised so that the revenues of the Authority, together with any other available funds, will be sufficient at all times" to fund operating and maintenance expenses and to pay the principal and interest on all debt issued or assumed by OWASA. OWASA's rates are established under cost-of-service rate-making methodology. OWASA's customers pay for the cost of providing the services and/or facility capacity required to meet customer demand.

The OWASA Board of Directors has determined that the provisions in this Schedule of Rates, Fees, and Charges are necessary to adequately sustain OWASA's near-term and long-range utility operations. Revenues generated by these rate adjustments will provide OWASA with the financial resources necessary to: (1) fund operating costs; (2) adequately maintain existing water, sewer, and reclaimed water facilities; (3) fully comply with increasingly stringent environmental and public health standards; (4) meet debt service requirements; (5) create additional facility capacity to stay abreast of water, reclaimed water and sewer service demand in a growing, dynamic community; and (6) maintain adequate reserves.

The attached Schedule of Rates, Fees, and Charges will replace the schedule adopted on June 8, 2017, which became effective on October 1, 2017. All fees other than system development fees, shown on pages 6 and 11, go into effect on October 1, 2018. By statute (NC House Bill 436/Session Law 2017-138), the new system development fees go into effect on July 1, 2018.

The proposed monthly water and sewer rates shown in this schedule reflect an increase of two percent.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

SECTION I: WATER RATES AND FEES

MONTHLY WATER RATES

Water charges are billed monthly at approximately 30-day intervals. Charges are due upon receipt of the bill, and become delinquent 25 days after the billing date. Monthly water rates consist of two components; a monthly service charge and a commodity (volume) charge.

Water Service Charge

This charge recovers costs related to certain direct and indirect customer service efforts, meter and lateral maintenance, and capital costs associated with supplying water to the customer's property. Applicable to all metered water accounts, independent of the quantity of water consumed, the monthly charge is based on meter size as follows:

Meter Size	Current Monthly Service Charge	Proposed
5/8"	\$14.70	\$14.99
3/4" Combination Fire and Domestic Service Meter	\$15.20	\$15.50
1"	\$29.53	\$30.12
1" Combination Fire and Domestic Service Meter	\$30.03	\$30.63
1-1/2"	\$63.86	\$65.14
2"	\$96.38	\$98.31
3"	\$198.22	\$202.18
4"	\$323.58	\$330.05
6"	\$704.66	\$718.75
8"	\$1,002.06	\$1,022.10

Water Irrigation Service Charge

This charge is calculated to recover certain direct and indirect customer service, meter and lateral maintenance, and capital costs associated with supplying water for irrigation through irrigation-only meters. Applicable to all metered irrigation water accounts, regardless of the quantity of water consumed, the monthly charge is based on meter size as follows:

Meter Size	Current Monthly Service Charge	Proposed
5/8"	\$23.54	\$24.01
1"	\$47.05	\$47.99
1-1/2"	\$87.10	\$88.84
2"	\$133.96	\$136.64
3"	\$265.15	\$270.45
4"	\$407.02	\$415.16
6"	\$800.67	\$816.68
8"	\$1,273.30	\$1,298.77

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

Monthly service charges for compound meter arrangements are based on the largest meter in the grouping. In addition to the applicable charge for the primary meter, existing OWASA-owned sub-meters are billed according to the above schedule. OWASA-owned sub-meters are no longer available and no additional sub-meters will be installed. Meter readings and service charges for first and final bills are prorated based on days of service.

(NOTE: In accordance with State law, all new in-ground irrigation systems installed on lots platted and recorded in the office of the register of deeds in the county or counties in which the real property is located after July 1, 2009 and supplied by a public drinking water system are required to have a separate meter to measure the volume of water used through the irrigation system.)

Water Commodity Charge

This charge recovers the direct and indirect costs of water supply and treatment, water distribution, general administration and capital costs not recovered by the monthly service charge. This charge is applicable to all water accounts based on meter readings of water consumed. When a billing period includes a change in commodity rates, the charges are prorated based on the ratio of days in the billing period at the old and new rates. Metered monthly consumption will be billed in thousand-gallon increments rounded down to the nearest thousand gallons. Unbilled consumption due to rounding will be carried forward and billed in the month when the next thousand-gallon increment is registered by the meter.

When no meter reading is available due to an inoperative, damaged or inaccessible meter, consumption will be estimated based on prior usage at the location.

Individually Metered Residential Accounts Except Irrigation-only Accounts

Individually metered residential accounts will be billed under an increasing block rate structure designed to encourage efficient water use by applying increasing commodity charges (rate per thousand gallons) to incremental increases in water use.

	Volume of Use (Gallons)	Current Commodity Rate per 1,000 Gallons	Proposed
Block 1	1,000 to 2,000	\$2.63	\$2.68
Block 2	3,000 to 5,000	\$6.39	\$6.52
Block 3	6,000 to 10,000	\$7.83	\$7.99
Block 4	11,000 to 15,000	\$10.94	\$11.16
Block 5	All use 16,000 and up	\$19.79	\$20.19

Multi-family Master-metered Residential Accounts

Multi-family master-metered residential accounts have one (or more) OWASA meter that serves more than one residential dwelling. Examples include apartment complexes, duplexes and condominiums. Multi-family master-metered residential accounts shall be charged the following year-round commodity rate.

Current – \$5.67 per thousand gallons
Proposed – **\$5.78 per thousand gallons**

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

Non-residential Accounts Except Irrigation Accounts

To achieve demand reduction during peak water use periods, a seasonal conservation rate structure will be applied to all non-residential accounts other than irrigation-only accounts. A reduced water commodity charge is in effect during lower demand months (October through April), and a higher commodity charge is in effect during high demand months (May through September).

	Current	Proposed
Off-peak seasonal rate per 1,000 gallons (October through April)	\$4.16	\$4.24
Peak seasonal rate per 1,000 gallons (May through September)	\$7.91	\$8.07

Irrigation-only Accounts

To promote conservation of water used for irrigation and to achieve greater equity between rates for irrigation-only use and irrigation use through a domestic meter, irrigation-only accounts shall be charged the following year-round commodity rate.

Current charge - \$8.51 per thousand gallons
Proposed - \$8.68 per thousand gallons

WATER COMMODITY SURCHARGES APPLICABLE UNDER WATER SHORTAGE
DECLARATION STAGES (no change)

Conservation Water Commodity Charges Under Mandatory Water Use Restrictions

Water commodity charges will be temporarily increased during periods of declared Water Shortages and mandatory water use restrictions regardless of the time of year. These applicable surcharges are summarized in the following table.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

Individually-Metered Residential						Multi-family Master-metered Residential	Non-Residential and Irrigation- Only
Block:	Res. Block 1	Res. Block 2	Res. Block 3	Res. Block 4	Res. Block 5		
Use Level: (gallons)	1,000 to 2,000	3,000 to 5,000	6,000 to 10,000	11,000 to 15,000	16,000 and up		
Stage 1	No surcharge	No surcharge	1.25 times normal Block 3 rate	1.5 times normal Block 4 rate	2 times normal Block 5 rate	1.15 times year- round rate	1.15 times seasonal and irrigation-only rate
Stage 2	No surcharge	1.25 times normal Block 2 rate	1.5 times normal Block 3 rate	2 times normal Block 4 rate	3 times normal Block 5 rate	1.25 times year- round rate	1.25 times seasonal and irrigation-only rate
Stage 3 and Emergency	No surcharge	1.5 times normal Block 2 rate	2 times normal Block 3 rate	3 times normal Block 4 rate	4 times normal Block 5 rate	1.5 times year- round rate	1.5 times seasonal and irrigation- only rate

INTERLOCAL WATER TRANSFER CHARGES (no change)

The purpose of this charge is to recover costs associated with the provision of supplemental water supply under contractual agreement with other water purveyors. The specific rates to be charged will be negotiated with the other party based upon specific conditions using the cost-of-service rate-making approach and approved by OWASA.

TEMPORARY HYDRANT METER CHARGE

Subject to availability, a Customer may obtain a temporary hydrant meter from OWASA for a period of up to 60 days. A customer may submit a written request to use the hydrant meter for one additional 60-day period but granting said request will be subject to availability and is at OWASA's sole discretion. Service from a fire hydrant is subject to interruption when the hydrant is needed for fire protection, compliance with water conservation standards, and other applicable law. For situations where temporary water service is needed for a period longer than 120 days, the user can purchase a metering device of a size, make and model specified by OWASA. A \$320 (\$290 proposed) service charge, payable in advance, shall be collected for setting and removing the meter. In addition, a security deposit shall be required in accordance with the following schedule:

Security Deposit
\$1,000

Monthly billings for temporary hydrant meters consist of two charges: (1) a service charge for that size meter, and (2) the seasonal commodity charge, including surcharges where applicable, based on monthly readings of the meter. When the hydrant meter is returned, the security deposit shall be applied to the final bill plus any damages. The Customer is responsible for paying OWASA for damages that exceed the amount of the Security Deposit. Any credit balance will be refunded within thirty (30) days.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

WATER SYSTEM DEVELOPMENT FEE

Water system development Fees are calculated to recover a portion of the capital costs of providing water system facility capacity. The system development fee is applicable to each new connection to a water main, regardless of who may have paid for the installation of the water main to which the connection is to be made. For the purpose of system development fees, customer accounts are divided into three categories: (1) Single-family Residential, (2) Multi-family Residential, Individually-metered; and (3) Non-residential. The Non-residential category includes master-metered multi-family customers and all commercial, University, and other institutional accounts. The use of these categories is justified by distinctive patterns of water and sewer consumption.

Property Description	Current Fee	Proposed
5/8" Meter or 3/4" Combination Fire and Domestic Service, Single-family Residential:		
<800 square feet	\$1,033	\$620
801-1300 square feet	\$1,033	\$770
1301-1700 square feet	\$1,207	\$864
1701-2400 square feet	\$1,552	\$1,142
2401-3100 square feet	\$2,470	\$1,767
3101-3800 square feet	\$3,429	\$2,442
>3800 square feet	\$5,406	\$4,295
1" Meter, Single-Family Residential (all square footages)	\$8,143	\$7,338
5/8" Meter or 3/4" Combination Fire and Domestic Service Meter, Multi-family Residential	\$1,112	\$830
1" Meter, Multi-Family Residential (all square footages)	\$8,143	\$7,338
5/8" Meter or 3/4" Combination Fire and Domestic Service Meter, Non-residential*	\$3,255	\$2,933
1" Meter, Non-residential*	\$8,143	\$7,338
1-1/2" Meter, Multi-Family Residential and Non-residential*	\$16,275	\$14,666
2" Meter, Multi-Family Residential and Non-residential*	\$26,040	\$23,466
3" Meter, Multi-Family Residential and Non-residential*	\$52,081	\$46,933
4" Meter, Multi-Family Residential and Non-residential*	\$81,376	\$73,332
6" Meter, Multi-Family Residential and Non-residential*	\$162,752	\$146,664
8" Meter, Multi-Family Residential and Non-residential*	\$260,403	\$234,663

* Same fee for Irrigation-Only accounts.

A person or party completing a development or re-development project may be eligible to request and receive a credit on the water system development Fees due if their project directly results in the permanent abandonment of previously existing water meters which were connected to residences, buildings or facilities connected to and having a documented demand on the OWASA water system.

If OWASA determines that a credit is due, the amount of the credit shall be based on the current water system development Fees that would apply to the size of the water meters that are permanently abandoned as a direct result of the project. However, the credit due shall not exceed the amount of the

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

water system development Fees that would otherwise apply to the development or re-development project. System development fee credits are not transferrable to any other project or property.

If an existing water meter is removed from service and/or is replaced with a smaller meter, OWASA will not issue any credit or refund to the customer for any previously paid system development fees.

WATER SERVICE AND METER INSTALLATION CHARGE

This charge is to recover costs of extending service from the OWASA distribution system to individual properties, and includes the installation of a service connection from the water main to the meter and the setting of the meter to serve the customer’s premises, subject to satisfactory easement or license being provided by the applicant. Where a suitable OWASA stub-out for service has been made and is available, the "meter-only" charge shall apply. Customer requested meter/water service relocations shall be performed on a time and materials basis. Complete new and/or additional water service installation and meter-only charges are as follows:

Service Description	Fee	
	Existing	Proposed
Complete Water Service Installation, 5/8” meter	\$3,650	\$4,110
Complete Water Service Installation, 3/4” Combination Fire and Domestic Service Meter	\$3,860	\$4,350
Complete Water Service Installation, 1” meter	\$3,770	\$4,280
Meter Only Installation, 5/8” meter	\$270	\$260
Meter Only Installation, 3/4” Combination Fire and Domestic Service Meter	\$400	\$500
Meter Only Installation, 1” Combination Fire and Domestic Service Meter	\$360	\$540
Meter Only Installation, 1” meter	\$360	\$340
Meter Only Installation, 1-1/2” meter	\$810	\$660
Meter Only Installation, 1-1/2” Combination Fire and Domestic Service Meter	\$840	\$830
Meter Only Installation, 2” meter	\$810	\$890
Meter Only Installation, 2” Combination Fire and Domestic Service Meter	\$740	\$1,000
Remote Read Box with 5/8” Detector Meter	\$420	\$500

Complete installation costs are determined on a time and materials basis for 1-1/2 inch and 2-inch meters. For 3-inch and larger meters, the applicant shall be responsible for providing a meter box or vault constructed to OWASA standards. All meters, regardless of size, shall be purchased from OWASA at cost plus 10%. A \$110 (\$150 proposed) delivery fee for 3-inch and larger meters shall also apply.

A remote read box and 5/8” detector meter shall be required on all private fire protection service connections. The remote read box shall be purchased from OWASA and installed by the applicant. OWASA shall install the 5/8” detector meter at the applicant’s expense.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

WATER MAIN TAPPING FEE

This charge is for making a tap into an OWASA water main. The tap fee shall be paid in advance of OWASA performing the work, with a minimum of 48 hours advance notice given to OWASA.

The applicant shall be responsible for opening the ditch, providing adequate working clearance at the point of tap, adequately shoring the trench sidewalls, dewatering and such other associated activities as may be needed to provide a suitable and safe condition for OWASA personnel to complete the tap. Additionally, the applicant shall be responsible for providing an appropriate size tapping sleeve and tapping valve, and a backhoe or similar device shall be available on-site for lowering the tapping unit into the ditch line. All permits, bonds and paving shall be the responsibility of the applicant. The charge shall be for time and equipment plus an allowance for overhead, but not less than \$350 (Proposed \$430).

The base fee noted above includes one (1) site visit by OWASA to determine if the applicant is ready for OWASA to perform the tap. A re-inspection fee of \$125 (Proposed \$150) will be charged for each additional site visit required to determine if the water main is accessible and all required material and safety measures are in place. The tap will not be performed until any applicable reinspection fees are paid in full.

HYDRAULIC FIRE FLOW TESTING

This charge is calculated to recover the cost of hydrant ‘fire flow’ testing of the water distribution system. Test results provide data to developers and engineers to determine available flows and pressures in the systems they are designing for new developments.

\$300 per test (\$230 proposed)

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

SECTION II: SEWER RATES AND FEES

MONTHLY SEWER RATES

Sewer charges are billed monthly at approximately 30-day intervals. Charges are due upon receipt of the bill, and become delinquent 25 days after the billing date. Monthly sewer rates consist of two components: a monthly service charge and a sewer commodity (volume) charge.

Sewer Service Charge

This charge is calculated to recover the direct and indirect customer service, service and inspection maintenance, and capital costs associated with providing sewer service to the customer's property. Meter readings and service charges for first and final bills are prorated based on days of service. Applicable to all sewer accounts, regardless of whether there is a commodity charge, the monthly service charge is based on the size of the meter where sewer usage is measured as follows:

Meter Size	Current Monthly Service Charge	Proposed
5/8" or 3/4" Combination Fire and Domestic Service	\$12.00	\$12.24
1"	\$20.61	\$21.02
1-1/2"	\$35.53	\$36.24
2"	\$53.72	\$54.79
3"	\$101.58	\$103.61
4"	\$155.28	\$158.39
6"	\$284.70	\$290.39
8"	\$485.82	\$495.54

The monthly sewer service charge shall apply to any meter(s) used to directly or indirectly measure the volume of wastewater discharged from a customer's premises, regardless of whether the water source to the customer is from OWASA's drinking water and/or reclaimed water system, or a non-OWASA water source including but not limited to harvested rainwater or groundwater.

Sewer Commodity Charge

This charge is calculated to recover the remaining direct and indirect costs of wastewater treatment and collection, maintenance, inspection, customer service and administration and sewer capital costs not recovered by the monthly service charge. When a billing period includes a change in commodity rates, the charges are prorated based on the ratio of days in the billing period at the old and new rates. Metered monthly consumption will be billed in thousand-gallon increments rounded down to the nearest thousand gallons. Unbilled consumption due to rounding will be carried forward and billed in the month when the next thousand-gallon increment is registered by the meter. This charge is applicable to all accounts receiving sewer service based on the water meter reading, sewer meter reading if applicable, or estimated volume of discharge as determined by OWASA.

The sewer commodity charge is applicable to all customers discharging wastewater into the OWASA sewer system, regardless of whether that discharge results from the customer's use of OWASA's drinking water or reclaimed water, or their use of a non-OWASA water source, including but not limited to harvested rainwater or groundwater.

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Current – \$6.48 per thousand gallons
Proposed – \$6.61 per thousand gallons

Individually-metered residential customers will not be charged for monthly sewer use in excess of 15,000 gallons.

INTERLOCAL WASTEWATER COLLECTION, TREATMENT AND DISPOSAL CHARGES (no change)

The purpose of this charge is to recover costs associated with the provision of wastewater collection, treatment and disposal services under contractual agreements with other wastewater service providers. The specific rates to be charged will be negotiated with the other party based upon specific conditions using the cost-of-service rate-making approach and approved by OWASA.

MONTHLY RATES FOR SEWER-ONLY ACCOUNTS

For sewer-only accounts where there is no OWASA meter for directly or indirectly measuring the volume of wastewater discharged by the customer, the monthly sewer service and commodity charges shall be fixed and be the total of:

- (1) a monthly service charge which shall be determined by the water meter size which would be required to supply water service to the property,

plus

- (2) a sewer commodity charge of \$6.48 (\$6.61 proposed) per 1,000 gallons times the estimated volume of wastewater expected to be discharged by the customer (using national engineering standards as the basis); provided however, that in no case shall the billable quantity be less than 4,000 gallons per month.

For special commercial and industrial customer classifications where the proportion of water consumed to wastewater discharged is extremely large, a metered sewer account may be approved. Metered sewer accounts must also pay the appropriate monthly sewer service charge based on the sewer meter size.

If a customer that has a standard metered water and sewer service (sewer gallons billed are based on the water gallons billed) also discharges wastewater resulting from the use of OWASA reclaimed water, harvested rainwater, groundwater, or sources other than OWASA drinking water, that customer shall be billed a monthly service charge and commodity charges calculated in accordance the *OWASA Rainwater Harvesting Systems Requirements and Charges Policy* for said additional discharge; provided, however, that the minimum threshold for which the charges shall apply is 3,000 gallons per month. For this purpose, such systems serving single-family residential customers are deemed to fall below this threshold, provided there is also a standard metered water and sewer service.

SEWER SYSTEM DEVELOPMENT FEE

The purpose of this fee is to recover a portion of the capital costs of providing sewer system facility capacity. The system development fee is applicable to each new connection to a sewer main, regardless of who may have paid for the installation of the main to which the connection is to be made.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

For the purpose of the system development fee, customer accounts are divided into three categories: (1) Single-family Residential; (2) Multi-family Residential, Individually-metered; and (3) Non-residential. The Non-residential category includes master-metered Multi-family customers plus all other commercial, University, and other institutional accounts. The use of these categories is justified by distinctive patterns of water and sewer consumption.

Property Description	Current Fee	Proposed
5/8" Meter or 3/4" Combination Fire and Domestic Service, Single-family Residential:		
<800 square feet	\$2,829	\$1,632
801-1300 square feet	\$2,829	\$2,207
1301-1700 square feet	\$3,270	\$2,251
1701-2400 square feet	\$3,384	\$2,391
2401-3100 square feet	\$3,859	\$2,652
3101-3800 square feet	\$4,256	\$2,912
>3800 square feet	\$4,541	\$3,466
1" Meter, Single-Family Residential (all square footages)	\$13,088	\$11,329
5/8" Meter or 3/4" Combination Fire and Domestic Service, Multi-family Residential	\$3,064	\$2,196
1" Meter, Multi-Family Residential (all square footages)	\$13,088	\$11,329
5/8" Meter or 3/4" Combination Fire and Domestic Service, Nonresidential	\$6,553	\$5,673
1" Meter, Nonresidential	\$16,392	\$14,192
1-1/2" Meter, Multi-family Residential and Nonresidential	\$32,763	\$28,366
2" Meter, Multi-family Residential and Nonresidential	\$52,421	\$45,386
3" Meter, Multi-family Residential and Nonresidential	\$104,842	\$90,773
4" Meter, Multi-family Residential and Nonresidential	\$163,816	\$141,832
6" Meter, Multi-family Residential and Nonresidential	\$327,632	\$283,664
8" Meter, Multi-family Residential and Nonresidential	\$524,211	\$453,863

In addition to the sewer system development fee, an excess sewer capacity fee of four percent (4%) of the applicable sewer system development fee shall be charged to recover the costs of excess sewer capacity installed in an area covered by an agreement between OWASA and a developer for credit payments to the constructing developer. This fee shall apply to residential and non-residential customers.

A person or party completing a development or re-development project may be eligible to request and receive a credit on the sewer system development fees due if their project directly results in the permanent abandonment of previously existing water meters and sewer services which were connected to residences, buildings or facilities connected to and having a documented demand on the OWASA sanitary sewer system.

If OWASA determines that a credit is due, the amount of the credit shall be based on the current sewer system development fees that would apply to the size water meters that are permanently abandoned as a direct result of the project. However, the credit due shall not exceed the amount of the sewer system development fees that would otherwise apply to the development or re-development project. System development fee credits are not transferrable to any other project or property.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

If an existing water or sewer meter upon which consumption is based is removed from service and/or is replaced with a smaller meter, OWASA will not issue any credit or refund to the customer for any previously paid system development fees.

SEWER TAP CHARGE

This charge is for making a tap of the applicant's private sewer lateral into the main sewer line or sewer manhole of OWASA. The tap fee must be paid in advance of OWASA performing the work, with a minimum of 48 hours advance notice given to OWASA.

The applicant shall be responsible for opening the ditch, providing adequate working clearance at the point of tap, adequately shoring the trench sidewalls, dewatering and such other associated activities as may be needed to provide a suitable and safe condition for OWASA to connect the service lateral of the applicant into the facilities of OWASA. The minimum charge is based on a standard 4" service tap to the OWASA sewer line. All lines 6" in diameter and larger must be tapped into a manhole. All permits, bonds and pavement repairs are the responsibility of the applicant.

The charge shall be for time and equipment plus an allowance for overhead, but not less than \$340 (**\$520 proposed**).

The base fee noted above includes one (1) site visit by OWASA to determine if the applicant is ready for OWASA to perform the tap. A re-inspection fee of \$125 (**\$150 proposed**) will be charged for each additional site visit required to determine if the sewer main is accessible and all required material and safety measures are in place. The tap will not be performed until any applicable reinspection fees are paid in full.

HIGH STRENGTH WASTE SURCHARGE

The purpose of this charge is to recover operation and maintenance costs from customers whose wastewater discharge into the system is in excess of certain parameters for normal strength domestic wastewater as determined by OWASA. Based on local sampling and analysis, normal strength domestic wastewater has been determined to have the following pollutant characteristics.

Normal Strength Domestic Wastewater	
Carbonaceous Biochemical Oxygen Demand (CBOD)	205 mg/l
Suspended Solids (SS)	235 mg/l
Ammonia Nitrogen (NH ₃ -N)	25 mg/l
Phosphorus (P)	6.5 mg/l

High Strength Waste Surcharges shall apply at the following rates to all wastes exceeding the above concentrations:

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Current	
Carbonaceous Biochemical Oxygen Demand (CBOD)	\$0.43 per pound for all CBOD in excess of 205 mg/l
Suspended Solids (SS)	\$0.52 per pound for all SS in excess of 235 mg/l
Ammonia Nitrogen (NH ₃ -N)	\$3.04 per pound for all NH ₃ -N in excess of 25 mg/l
Phosphorus (P)	\$12.26 per pound for all P excess of 6.5 mg/l

Proposed	
Carbonaceous Biochemical Oxygen Demand (CBOD)	\$0.44 per pound for all CBOD in excess of 205 mg/l
Suspended Solids (SS)	\$0.53 per pound for all SS in excess of 235 mg/l
Ammonia Nitrogen (NH ₃ -N)	\$3.10 per pound for all NH₃-N in excess of 25 mg/l
Phosphorus (P)	\$12.51 per pound for all P excess of 6.5 mg/l

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

SECTION III: RECLAIMED WATER RATES AND CHARGES (no change)

MONTHLY RECLAIMED WATER RATES

Reclaimed water (RCW) charges will be billed monthly at approximately 30-day intervals. Charges are due upon receipt of the bill, and become delinquent 21 days after the original billing date. Monthly reclaimed water rates consist of two components: a monthly service charge and a commodity (volume) charge.

The University of North Carolina at Chapel Hill (UNC) funded the construction of the first phase of the reclaimed water system, and the methodology for determining reclaimed water charges applicable to UNC is stipulated by a contract between OWASA and UNC. For this reason, reclaimed water charges have been established for two major customer classes: UNC uses and non-UNC uses. As determined necessary by OWASA, and in accord with OWASA’s contractual obligations to UNC, reclaimed water service to non-UNC customers may be temporarily interrupted to ensure the UNC’s reclaimed water demand can be met from the facilities and capacity paid for by UNC.

Reclaimed Water Service Charge

This fixed monthly charge is calculated to recover direct and indirect costs including but not limited to customer service and billing, meter and lateral maintenance, general and administrative services, and fixed costs associated with supplying reclaimed water to the customer’s property. The Reclaimed Water service charge is applicable to all metered reclaimed water accounts, independent of the quantity of reclaimed water consumed. Meter readings and service charges for first and final bills are prorated based on days of service.

UNC Reclaimed Water Use (covers all UNC reclaimed water uses served by the facilities paid for by UNC) \$24,000 per month.

Non-UNC RCW Customers	
Meter Size	Per Month
5/8”	\$8.37
1”	\$16.74
1.5”	\$30.96
2”	\$47.62

Service charges for non-UNC reclaimed water meters larger than 2” will be determined on a case-by-case basis following an evaluation of the reclaimed water demands of the customer.

Reclaimed Water Commodity Charge

This charge is calculated to recover the direct costs for reclaimed water treatment and distribution and all other direct and indirect costs not recovered by fixed monthly service charges. This charge is applicable to all reclaimed water accounts based on meter readings of reclaimed water consumed.

When a billing period includes a change in commodity rates, the charges are prorated based on the ratio of days in the billing period at the old and new rates. Metered monthly consumption will be billed in thousand-gallon increments rounded down to the nearest thousand gallons. Unbilled

**ORANGE WATER AND SEWER AUTHORITY
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consumption due to rounding will be carried forward and billed in the month when the next thousand-gallon increment is registered by the meter.

Customer Type	Rate per 1,000 gallons
UNC Accounts	\$0.60
Non-UNC Accounts	\$2.18
Bulk (tanker) Sales	\$0.00

RECLAIMED WATER SYSTEM DEVELOPMENT AND CONNECTION FEES

Reclaimed Water System Development Fees

The purpose of this fee is to recover the capital costs of providing reclaimed water system facility capacity and to fund future expansion of that capacity. Since the University (UNC) has paid to construct the reclaimed water system, UNC will not be required to pay a reclaimed water system development fee for UNC facilities that are connected to and can be served by capacity available in the reclaimed water facilities paid for by the UNC.

Reclaimed water system development fees are applicable to each non-UNC connection to the reclaimed water system, regardless of who may have paid for the installation of the main to which the connection is to be made. Reclaimed water system development fees for non-UNC customers are as follows:

Meter Size	Fee
5/8"	\$1,229
1"	\$3,073
1-1/2"	\$6,146
2"	\$9,833

Reclaimed water system development fees for connections to be served by meters larger than 2 inches shall be determined on a case-by-case basis following an evaluation of the reclaimed water demands of the customer.

Reclaimed Water Service Connection Fees

Reclaimed water service connection fees, including meter installation and meter fees, shall be the same as the fees applicable to potable water system service connections, as specified in Section I of this schedule.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

SECTION IV: MISCELLANEOUS CHARGES

SERVICE INITIATION FEE (no change)

The purpose of this charge is to defray the labor and administrative costs associated with the establishment of a water and/or sewer account. This includes establishing service and account records for billing and is applicable to all accounts.

\$45 per event
\$80 per event, outside of normal business hours of OWASA

RETURNED CHECK CHARGE (no change)

Checks or automatic bank drafts made payable to OWASA are accepted as payment on account subject to collection. When a check or bank draft is not honored for payment by the bank or other institution on which it is drawn, a Returned Check Charge will be applied to the customer's account as follows:

Returned Check:	\$25
Dishonored Draft:	\$25

The customer will be notified of the returned check charge and instructed to pay the amount due immediately. Failure to respond within the time allowed will result in disconnection of water service and an additional charge for reconnection. The customer may also be required to pay a security deposit or an additional security deposit.

CHARGE FOR DELINQUENT ACCOUNTS (no change)

The purpose of this charge is to offset the costs of special handling of delinquent accounts, which may include, but is not limited to, the disconnection and reconnection of service due to nonpayment of the customer's bill. This charge applies to all accounts scheduled for disconnection for nonpayment and is applicable on or after the specified disconnect date, regardless of whether the service was disconnected or not. Reconnection resulting from disconnection due to nonpayment will be made within 24 hours of receipt of full payment of the balance due plus the delinquency charge and applicable security deposit.

\$45 per event, during OWASA's normal business hours
\$80 per event, outside OWASA's normal business hours

CHARGE FOR TEMPORARY DISCONNECTION/SUBSEQUENT RECONNECTION AT CUSTOMER'S REQUEST (no change)

OWASA customers may request to have their service temporarily disconnected and subsequently reconnected. In emergency conditions, there will be no charge to the customer for this service. Additionally, no more than once in any twelve-month period, a customer may request to have their service temporarily disconnected and subsequently reconnected at no charge for routine plumbing system maintenance. For requests to temporarily disconnect and subsequently reconnect service in any situation other than those listed above, the charges listed below will apply.

ORANGE WATER AND SEWER AUTHORITY SCHEDULE OF RATES, FEES, AND CHARGES

The purpose of this charge is to recover the cost to temporarily disconnect and subsequently reconnect water service at the request of a customer. In situations where charges apply, the charge may be waived if the customer provides documentation that a master cutoff valve has been installed within thirty (30) days of the date of the temporary service disconnection.

\$45 per event, during OWASA's normal business hours
\$80 per event, outside OWASA's normal business hours

LATE PAYMENT FEE (no change)

This fee is designed to recover a portion of the cost of delinquent payment collection efforts that arise prior to service termination and are not recovered by charges for reconnection of delinquent accounts, and to encourage customers to make timely payments, thereby reducing the overall cost of a delinquent account to the customer base. The late payment fee applies when a customer's account is delinquent as defined above.

Late Payment Fee: For past due balances of \$10.00 or more, \$2.40 plus 0.42% a month (5% APR) of the outstanding balance.

SECURITY DEPOSITS (no change)

OWASA requires security deposits from customers to ensure payment of the final bill. To offset administrative costs in handling these monies, no interest is paid on security deposits.

Security deposits shall be required on all accounts other than those of (1) residential customers, whether detached or attached units, who have a satisfactory credit history as determined by a credit check, and (2) local, State and Federal governments or agencies thereof. Security deposits shall be required for accounts other than those in (1) and (2) above and shall be \$50 or \$100 depending on credit worthiness for residential customers. All security deposits must be paid at the time application for service is made and in advance of service initiation.

Any residential customer whose service has been disconnected for non-payment of billing charges twice within a six-month period and for whom OWASA does not have a security deposit will be required to pay a \$50 or \$100 deposit depending on credit worthiness prior to reconnection of service.

Non-residential security deposits are required based on credit worthiness and will be computed as one or two times the average monthly bill of the previous customer at the same location over the past calendar year. If there is no previous customer at the service location, the security deposit will be determined by OWASA based on the best information available, such as OWASA's experience with similar types, sizes, etc. of businesses.

Repeated disconnections will require additional security deposits until the customer has accumulated a security deposit balance, which will cover an average of three months' billing charges.

Security deposits may be refunded upon written request after the customer has established a satisfactory payment history for twelve (12) consecutive months. Otherwise, security deposits will be applied to the final bill when a customer's account is terminated with any remaining balance refunded to the customer.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

BULK WASTEWATER CHARGES

Normal Domestic Septage

The purpose of these charges is to recover the costs associated with the service rendered by OWASA to those customers who discharge normal domestic septic tank wastes into the wastewater treatment facilities of OWASA. Applicable to those customers who have an account established at OWASA's Customer Service Office, charges for handling normal domestic septage will be billed to the customer on a monthly basis. The monthly bill will include two components: (1) an administrative charge for special services required to receive this type waste and rendering the monthly bill; and (2) a charge for the treatment of the septage as determined by OWASA. This charge is calculated as follows:

Administrative Charge	\$30/ trip, plus
Volume Charge and High Strength Surcharge	Current – \$140/ thousand gallons Proposed - \$142.80/ thousand gallons

Other High Strength Waste

Other wastes may be discharged to OWASA's septage facilities only with prior approval by OWASA and upon OWASA's direct inspection of the actual discharge. The costs associated with these services will be as follows:

- NH₃-N = Ammonia Nitrogen
- CBOD = Carbonaceous Biochemical Oxygen Demand
- TSS = Total Suspended Solids
- P = Phosphorus

Administrative Charge of \$30 / trip, plus Volume and High Strength Surcharge calculated as follows:

Current
A + B + C + D + E = Calculated Dollars per Thousand Gallons, where:
A = pounds of NH ₃ -N/thousand gallons in waste x \$3.04/pound
B = pounds of CBOD/thousand gallons in waste x \$0.43/pound
C = pounds of TSS/thousand gallons in waste x \$0.52/pound
D = \$6.48/per 1,000 gallons Sewer Commodity Charge
E = pounds of P/thousand gallons in waste x \$12.26/pound
Waste concentrations shall be determined by OWASA

Proposed
A + B + C + D + E = Calculated Dollars per Thousand Gallons, where:
A = pounds of NH₃-N/thousand gallons in waste x \$3.10/pound
B = pounds of CBOD/thousand gallons in waste x \$0.44/pound
C = pounds of TSS/thousand gallons in waste x \$0.53/pound
D = \$6.61/per 1,000 gallons Sewer Commodity Charge
E = pounds of P/thousand gallons in waste x \$12.51/pound
Waste concentrations shall be determined by OWASA

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

TANK SALES OR BULK WATER SALES

The purpose of this charge is to recover the labor and administrative costs associated with the supply of bulk quantities of water to tank trucks or trailers from a metering point on the premises of OWASA. Applicable to all tank or bulk water sales, the following charges apply for each loading.

Administrative Charge	\$25 per trip, plus
Commodity Charge	Current – \$6.02 per thousand gallons or portion thereof Proposed - \$6.14 per thousand gallons or portion thereof

Bulk sales are subject to administrative regulations and controls for protection of the wastewater system and efficient operation. Water tank trucks or trailers are only authorized to withdraw water from locations approved by OWASA and for which adequate usage monitoring measures are provided. Charges for bulk sales are not subject to seasonal adjustments.

DIRECT SALES OF SUPPLIES (no change)

Applicable to the direct sale of supplies from inventory to municipalities or contractors, the supplies will be billed at the most recent cost plus a handling charge of 10%.

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

BOAT RENTAL AND LAKE USE FEES (no change)

Fees are applicable to all persons using row boats and canoes on University Lake and Cane Creek Reservoir during scheduled hours of operation as established by OWASA. Boat rental and lake user charges are:

OWASA Customers and Orange County Residents	
Charge for each flat-bottomed boat or canoe rental	\$4.50 for one-half day plus the applicable lake use fee for each person
Trolling motor rental	\$15.00 for one-half day
Kayak rental	\$15.00 for one-half day plus the applicable lake use fee for each person
Private Boat Launching Fee	\$3.50 per boat plus the applicable lake use fee for each person
Lake Use Fee, Under 12 Years Old	\$2.00 per person
Lake Use Fee, 12-64 Years	\$4.50 per person
Lake Use Fee, 65 Years and over	No charge

Individual Season Pass	
Boat or canoe rental	\$82.00 per person. Each additional person pays appropriate lake use fee.
Lake Use Pass – Adult	\$46.00
Boat with trolling motor rental	\$163.00 per person. Each additional person pays appropriate lake use fee.

Group Season Pass	
Boat or canoe rental	\$163.00 (maximum of 3 people per pass.) Each additional person pays appropriate lake use fee.
Boat with trolling motor rental	\$245.00 (maximum of 3 people per pass.) Each additional person pays appropriate lake use fee.

For visitors who are not OWASA Customers or Orange County Residents	
Charge for each flat-bottomed boat or canoe rental	\$8.00 for one-half day plus the applicable lake use fee for each person
Trolling motor rental	\$22.00 for one-half day
Kayak rental	\$20.00 for one-half day plus the applicable lake use fee for each person
Private Boat Launching Fee	\$7.00 per boat plus the applicable lake use fee for each person
Lake Use Fee, Under 12 years old	\$2.50 per person
Lake Use Fee, 12-64 Years	\$5.50 per person
Lake Use Fee, 65 Years and over	\$2.50 per person
UNC Men’s Crew Club and Women’s Rowing Team	By agreement between UNC-Chapel Hill and OWASA

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

FIELD TEST OF 5/8" METER OR 3/4" COMBINATION FIRE AND DOMESTIC SERVICE METER

Upon a customer's written request, OWASA will conduct a special field test of the customer's 5/8" water meter or 3/4" combination fire and domestic service meter. There will be no charge for testing meters (1) which have not been tested during the past five years, or (2) which are found to be over-registering. Over-registering meters will be replaced by OWASA at no charge to the customer.

If, however, the meter has been tested within the past five years and the results of the meter test indicate proper or under-registering, the customer will be charged \$100 (**\$90 proposed**) for the meter test.

SHOP TESTING OF METER

Upon a customer's written request, OWASA will conduct a special shop test of water meters that are larger than 3/4 inches. There will be no charge for testing meters (1) which have not been tested during the past five years, or (2) which are found to be over-registering. Over-registering meters will be replaced by OWASA at no charge to the customer.

If, however, the meter has been tested within the past five years and the results of the meter test indicate proper or under-registering, the customer will be charged \$160 (**\$200 proposed**) for the shop meter test.

FIELD TEST OF LARGE METERS

Upon a customer's written request, OWASA will conduct a special field test of water meters that are larger than 5/8 inches. There will be no charge for testing meters (1) which have not been tested during the past five years, or (2) which are found to be over-registering. Over-registering meters will be replaced by OWASA at no charge to the customer.

If, however, the meter has been tested within the past five years and the results of the meter test indicate proper or under-registering, the customer will be charged a meter test fee based on the actual time and equipment required to complete the field test. This charge shall not be less than \$260 (**\$170 proposed**).

REINSPECTION FEE

OWASA will initially inspect grease traps, cross connections and water and sewer taps at no cost to the customer. Should a subsequent reinspection be required for any of these fixtures, a \$125 (**\$150 proposed**) fee will apply to each reinspection.

PLAN REVIEW AND CONSTRUCTION OBSERVATION FEES (no change)

The purpose of this charge is to recover the operating cost for providing review of construction plans for the extension of water and sewer facilities. The charge also recovers the operating cost for providing field observation, water sampling, laboratory testing, video inspection, pressure testing, etc. associated with the installation of these facilities. The plan review and construction observation fees are applicable to all extensions of the public water and/or sewer system regardless of the party which may be undertaking the improvements. The fees will be applied separately to water main and sewer main

**ORANGE WATER AND SEWER AUTHORITY
SCHEDULE OF RATES, FEES, AND CHARGES**

extensions, but in no case, shall the fee be less than \$100.

Service	Water	Sewer
Plan Review	\$3.63/lf	\$3.63/lf
Construction Observation	\$3.69/lf	\$3.69/lf

CHARGES FOR MISCELLANEOUS SERVICES (no change)

Charges for miscellaneous services provided by OWASA shall be on a time and materials basis and include out-of-pocket expenses, cost of materials and services supplied by third parties, and overhead. Typical applications would be for repair of damages to water and sewer lines by outside parties, relocation of mains, services and meters, special services for billing information, expenses related to spill containment responses, etc.

TRANSFER OF CHARGES (no change)

Any unpaid balance from past due charges for water and/or sewer services of terminated accounts or Charges for Miscellaneous Services will be transferred to any available active account(s) through which the customer is receiving services. The payment status of the active account through which the customer is receiving service will be determined by the payment status of transferred accounts.

OWASA may temporarily withhold service from a customer, or refuse service to a customer when such a customer (including but not limited to individuals, corporations, or partnerships), owes OWASA any past due balance.

Accounts or portions of accounts, including charges for material or damaged property that are disputed and delinquent fees and delinquent assessment charges, may be submitted to the courts by the Executive Director, upon approval by General Counsel, for collection if such amounts do not exceed \$1,500. For amounts exceeding \$1,500, approval of the Board of Directors shall also be required prior to filing an action for collection.

**Resolution Adopting the Annual Budget For
Orange Water and Sewer Authority (OWASA) for the Fiscal Year
July 1, 2018 Through June 30, 2019**

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 OWASA will adopt a Budget for the ensuing fiscal year;

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; and

Whereas, during the preparation of the Fiscal Year (FY) 2019 Budget, and after holding public hearings on May 24, 2018 concerning the FY 2019 Budget, the Board of Directors determined that it is necessary to increase the rates OWASA's charges for monthly water and sewer services by two percent in order to provide sufficient revenues to fund ongoing operations, debt service and the Capital Improvements Program; and

Whereas, the adoption of NC House Bill 436/Session Law 2017-138 requires a change to the way water and sewer utilities calculate system development fees, and as a consequence, OWASA has reduced its system development fees by between 10% and 40%, to comply with all aspects of the new law; and

Whereas, certain other fees have been adjusted based on changes in the costs of providing the services; and

Whereas, due to increased workload in the laboratory at the Jones Ferry Road Water Treatment Plant, the budget also includes increased funding for an additional laboratory analyst;

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, 2018 through June 30, 2019.
2. That an additional laboratory analyst position, Salary Grade 615, shall be added to the Schedule of Employee Classification and Authorized Compensation.
3. 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.
4. That the Executive Director shall administer the budget, and is hereby authorized to expend the funds for the purposes set forth therein.

Adopted this 14th day of June 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

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

		<u>FY 2019</u> <u>Annual Budget</u>
Operating Revenue		
Water	\$18,224,334	
Sewer	17,265,060	
Reclaimed Water	454,440	
Service Initiation Fee	154,345	
Other	1,006,078	
Refunds and Adjustments	<u>(230,007)</u>	
 Total Operating Revenue		 \$36,874,250
 Operating Expense		
General and Administrative	7,527,991	
Operations	<u>14,995,990</u>	
 Total Operating Expense		 <u>22,523,981</u>
 Net Operating Income		 14,350,269
 Non-operating Revenue		
Customer Fees		1,194,353
Interest		<u>23,678</u>
 Total Net Income		 <u><u>\$15,568,300</u></u>
 Debt Service		
Existing		\$7,155,554
New		<u>0</u>
 Total Debt Service		 <u>7,155,554</u>
 Net Income Less Debt Service		 <u><u>\$8,412,746</u></u>

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

**FY 2019
Annual Budget**

General Fund		
Resources		
Transfer from Revenue	\$8,412,746	
Transfer from Construction Fund (Loan Proceeds)	<u>14,900,000</u>	
Annual Income Available for Capital		\$23,312,746
Transfer from Construction Fund (Bond Proceeds)		<u>0</u>
Total Available for Capital		<u>23,312,746</u>
Capital Expenditures		
Project ordinances		
General Fund Contribution	6,052,000	
Funded by Bond Proceeds	<u>14,900,000</u>	
Total Project Resolutions		20,952,000
Capital Equipment		<u>871,135</u>
Total Capital Outlay		<u>21,823,135</u>
Annual General Fund Balance		1,489,611
General Fund Beginning Balance		<u>17,600,000</u>
General Fund Ending Balance		19,089,611
Project Funding	35,819	
Reserves		
Rate/Revenue Stabilization	1,797,192	
Capital Improvements	4,000,000	
Working Capital	<u>13,256,600</u>	<u>19,089,611</u>
Unallocated General Fund Balance		<u><u>\$0</u></u>

REVENUE FUND

	<u>Water</u>	<u>Sewer</u>	<u>Total</u>
Beginning Fund Balance			\$0
Receipts			
Operating Revenue			
Customer Billings	\$18,224,334	\$17,265,060	\$35,489,394
Reclaimed Water	454,440	-	454,440
Service Initiation Fee	77,173	77,172	154,345
Other	503,039	503,039	1,006,078
Refunds and Adjustments	(115,004)	(115,003)	(230,007)
Total Operating Revenue	19,143,982	17,730,268	36,874,250
Non-operating Revenue			
Customer Fees	527,419	666,934	1,194,353
Interest Income	11,839	11,839	23,678
Total Non-Operating Revenue	539,258	678,773	1,218,031
Total Receipts	19,683,240	18,409,041	38,092,281
Expenditures			
Current Expense	(11,566,064)	(10,957,917)	(22,523,981)
Debt Service	(4,511,823)	(2,643,731)	(7,155,554)
Total Expenditures	(16,077,887)	(13,601,648)	(29,679,535)
Net Revenue			8,412,746
To General Fund			(8,412,746)
Ending Fund Balance			<u>0</u>
Change in Available Balance			<u><u>\$0</u></u>

BOND SERVICE FUND

Beginning Fund Balance		\$0
Receipts		
Transfers from Revenue Fund	\$7,155,554	
Interest	<u> </u>	
Total Receipts		7,155,554
Expenditures		
Debt Service	<u>7,155,554</u>	
Total Expenditures		<u>(7,155,554)</u>
Ending Fund Balance		<u>0</u>
Change in Available Balance		<u><u>\$0</u></u>

GENERAL FUND

Beginning Fund Balance		\$17,600,000
Receipts		
Transfer from Revenue fund	8,412,746	
Transfer from Construction Fund (Loan Proceeds)	14,900,000	
Interest	0	
Assessments	0	
Grants and contributions	0	
Total Receipts		<u>23,312,746</u>
Total Balance Before Expenditures		40,912,746
Expenditures		
Capital Equipment/Leases	871,135	
Project Resolutions	20,952,000	
Transfer to Revenue Fund	0	
Total Expenditures		<u>(21,823,135)</u>
Ending Fund Balance		<u><u>\$19,089,611</u></u>
Allocation of Ending Fund Balance		
Project Funding	35,819	
Capital Reserves	19,053,792	
Total Allocation		<u><u>\$19,089,611</u></u>
Unallocated General Fund Balance		<u>0</u>
Change in Available Balance		<u><u>\$1,489,611</u></u>

**Resolution Approving the Capital Improvements Program and Budget
For Fiscal Years 2019-2023**

Whereas, a Five-Year Capital Improvements Program and budget enables Orange Water and Sewer Authority to identify, assess, and project the water and sewer systems’ capital projects in an orderly, coordinated, and fiscally sound manner, and to plan for the replacement and repair of existing facilities; and

Whereas, the Capital Improvements Program and budget for Fiscal Years 2019-2023 have been developed by the staff, reviewed by the Board of Directors, and revisions incorporated therein; and

Whereas, a Public Hearing on the Capital Improvements Program was held on May 24, 2018;

Now, Therefore, Be It Resolved:

1. The Board of Directors of Orange Water and Sewer Authority approves the Capital Improvements Program and budget for Fiscal Years 2019-2023 as required by the Financial Management Policy.
2. That the Executive Director be, and is hereby, authorized to administer the planning, studies, design, and financing, and make recommendations to the Board of Directors for award of contracts, as appropriate, for the projects in the Capital Improvements Budget.
3. The Five-Year Capital Improvements Program Budget for Fiscal Years 2019-2023 is as follows:

<u>Fiscal Year</u>	<u>Amount</u>
2019	\$20,952,000
2020	27,287,000
2021	18,044,000
2022	18,938,000
2023	<u>13,698,000</u>
Total	<u>\$98,919,000</u>

Adopted this 14th day of June 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

**Capital Project Resolution for
Fiscal Year 2019 Infrastructure Improvements**

Whereas, present infrastructure must be maintained and additional infrastructure developed to meet future needs; and

Whereas, Orange Water and Sewer Authority (OWASA) has determined that certain additional infrastructure improvements are needed, including improvements to the water supply system; water treatment and distribution system; wastewater collection, treatment and disposal system; reclaimed water system; and support services facilities; and

Whereas, adequate funds will be available for the completion of these improvements;

Now, Therefore, Be It Resolved:

1. A project fund of \$20,952,000 is hereby established and expenditures therefrom authorized for the following improvements:

Expenditures

Water Supply Improvements:

Jordan Lake Raw Water Supply Allocation	\$5,000
Quarry Reservoir Development	15,000
University Lake Pump Station Improvements	250,000
Cane Creek Pump Station Improvements	25,000
University Lake Permanganate Facility	312,000
University Lake Flashboard Replacement	500,000
Cane Creek Raw Water Transmission Main Capacity Study	50,000

Subtotal	1,157,000
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Water Treatment and Distribution Improvements:

Water Facility Security Upgrades	129,000
Water Treatment Plant Belt Filter Press Replacement	350,000
Water Treatment Plant Concrete Condition Assessment	50,000
Water Treatment Plant Sedimentation Basin Rehabilitation	1,255,000
Water Treatment Plant Filter Media and Backwash Improvements	200,000
Water Treatment Plant Turbidimeter Replacements	90,000
Water Treatment Plant Finished Water Pump Improvements	50,000
Water Treatment Plant Chemical Facility Upgrades	100,000
Water Treatment Plant Risk Assessment	18,000
Water Treatment Plant SCADA Obsolete Equipment Replacement	15,000
HVAC Replacement Program	45,000
Barbee Chapel Road Booster Pump Station	75,000
Water Main Upgrades – Development Projects	231,000
Fordham Service Road Water Main Replacement	900,000
Brandywine Road Water Main Replacement	897,000
High Priority Water Main Replacement Program	2,153,000
Dobbins Drive Water Main Replacement	385,000
West Cameron Avenue Water Main Replacement	25,000
Water Distribution System Hydraulic Model	30,000
Advanced Metering Infrastructure (AMI) System (Agua Vista)	1,675,000
Galvanized Water Main Replacement Program	726,000
Distribution System Prioritization Model	150,000

Distribution System Sampling Stations	125,000
Kensington Drive Water Main Replacement	105,000

Subtotal	9,779,000
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Wastewater Collection, Treatment and Disposal Improvements:

Sanitary Sewer Rehabilitation	2,305,000
Bolinwood Drive Interceptor Replacement	50,000
Willow Drive Interceptor Replacement	25,000
Little Creek Interceptor Replacement	462,000
Dobbins Drive Interceptor Replacement	415,000
Creek Crossing Access Improvements	50,000
Sanitary Sewer Hydraulic Model	403,000
Prince Street Common Service Replacement	30,000
Rogerson Drive Force Main Routing Study	50,000
Rogerson Drive Pump Station Rehabilitation	1,935,000
Pump Station Operational Assessments	25,000
WWTP Bar Screen Replacement	150,000
Comprehensive Coatings Program	333,000
WWTP Solids Thickening Improvements	730,000
WWTP IPS Rehabilitation	900,000
WWTP Non Potable Water Pump Replacements	50,000
Building Envelope Rehabilitation Program	75,000
WWTP Secondary Clarifier Rehabilitation and Pumping Improvements	900,000
WWTP SCADA System Upgrade	60,000
WWTP Fermenter Tank and Pumping Rehabilitation	200,000
WWTP Primary Sludge and Old Lab Building Rehabilitation	25,000
WWTP Miscellaneous Rehabilitation FY 2018-2020	65,000
WWTP Risk Assessment	18,000
WWTP Headworks Rehabilitation	360,000
WWTP Gas Monitoring Systems	100,000
WWTP Security Improvements	100,000
WWTP Server Room Improvements	50,000

Subtotal	9,866,000
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Support Services Facilities Improvements:

Administration Building HVAC System Upgrade	150,000
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Subtotal	150,000
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Total Expenditures	\$20,952,000
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Revenues

Transfers from the General Fund, Bond or Loan Proceeds, and Grants	\$20,952,000
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2. That supplementary funds will be appropriated in future years for completion of the projects.
3. That this Resolution shall take effect upon its passage.

4. That this Resolution shall be entered in the Minutes of OWASA and within five (5) days after its adoption copies thereof shall be filed with the Finance Officer, the Budget Officer, and the Clerk to the Board of Directors as required by General Statute 159-13.2(d).

Adopted this 14th day of June 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

Resolution Updating the Schedule of Employee Classification and Authorized Compensation; Adjusting Affected Employees' Compensation to the Minimum of the Pay Range; and Authorizing Cost of Labor and Merit Pay Increases for Eligible Employees

Whereas, the Orange Water and Sewer Authority maintains a Schedule of Employee Classification and Authorized Compensation which provides the appropriate number of properly classified and compensated employees to efficiently and effectively fulfill the organization's duties and responsibilities; and

Whereas, the Board of Directors has determined that it is reasonable and prudent in achieving and maintaining competitiveness in the market to increase the pay ranges in the Schedule of Employee Classification and Authorized Compensation; and

Whereas, the Board of Directors has determined that it is reasonable and prudent to provide Merit Increases to provide fair and equitable compensation so that qualified employees may be retained to do the work necessary for the operation of the OWASA service system:

Now Therefore, Be It Resolved:

1. That the Board of Directors hereby approves a _____% Cost of Labor increase for eligible employees who have earned a Meets Expectations, Exceeds Expectations or Exceptional Performance review during the October 2018 annual review process and the Executive Director is directed to adjust and implement the same percentage increase in salary ranges in the Schedule of Employee Classification and Authorized Compensation.
2. That the Board of Directors hereby approves a Merit increase to employees earning a performance review rating of Meets Expectations during the October 2018 annual review process by increasing base pay _____%.
3. That the Board of Directors hereby approves a Merit increase to employees earning a performance review rating of Exceeds Expectations during the October 2018 annual review process by increasing base pay _____%.
4. That the Board of Directors hereby approves a Merit increase to employees earning a performance review rating of Exceptional during the October 2018 annual review process by increasing base pay _____%.
5. That employees whose salaries fall below the minimum amount of the new pay ranges shall be brought up to the minimum of the respective pay range regardless of the performance rating earned.
6. That the pay adjustments will be effective October 29, 2018.

Adopted this 14th day of June 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

Agenda Item 7:

Resolution Honoring the Service of Barbara M. Foushee to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors

Background:

Since inception of Orange Water and Sewer Authority, the Board of Directors has adopted Resolutions of Appreciation for the service of a retiring member of the Board.

The adopted resolution would be specially printed for presentation to Barbara M. Foushee.

Staff Recommendation:

Adopt the Resolution Honoring the Service of Barbara M. Foushee to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors.

June 14, 2018

Resolution Honoring the Service of Barbara M. Foushee to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors

Whereas, on September 15, 2015, the Orange County Board of County Commissioners appointed Barbara M. Foushee to serve on the Board of Directors of the Orange Water and Sewer Authority (OWASA); and

Whereas, Ms. Foushee served on the OWASA Board from September 28, 2015, to June 30, 2018, including a term as Secretary of the Board of Directors from July 1, 2016, to June 30, 2017; and

Whereas, Ms. Foushee served on the Board's Community Engagement, Finance and Human Resources Committees during her service, and Chaired the Human Resources Committee from August 2017 to June 2018; and

Whereas, Ms. Foushee gave freely of her time, energy, and talent in serving the community and OWASA customers with unselfish dedication and compassionate concern; and

Whereas, Ms. Foushee's insistence and guidance for fairness and human kindness to all was instrumental in OWASA's establishment of a Diversity and Inclusion program which will benefit its employees and our community long after the end of her service as a Board Member;

Now, Therefore, Be It Resolved By the Orange Water and Sewer Authority Board of Directors That:

1. The Board expresses its sincere appreciation and deep gratitude to Barbara M. Foushee for her outstanding service, leadership and stewardship as a Member of the OWASA Board; and the Board wishes for her much happiness in the years ahead.
2. This resolution be recorded in the minutes of the OWASA Board of Directors and be part of the permanent records of OWASA, and that a copy of this resolution be transmitted to the Orange County Board of County Commissioners.

Adopted and presented this 14th day of June, 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

Agenda Item 8:

Resolution Honoring the Service of Heather Payne to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors

Background:

Since inception of Orange Water and Sewer Authority, the Board of Directors has adopted Resolutions of Appreciation for the service of a retiring member of the Board.

The adopted resolution would be specially printed for presentation to Heather Payne.

Staff Recommendation:

Adopt the Resolution Honoring the Service of Heather Payne to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors.

June 14, 2018

Resolution Honoring the Service of Heather Payne to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors

Whereas, on May 29, 2013, the Chapel Hill Town Council appointed Heather Payne to serve on the Board of Directors of the Orange Water and Sewer Authority (OWASA); and

Whereas, Ms. Payne served on the OWASA Board from July 11, 2013, to June 30, 2018, including terms as Secretary of the Board of Directors from July 1, 2014, to June 30, 2016 and as Vice Chair of the Board of Directors from July 1, 2017, to June 30, 2018; and

Whereas, Ms. Payne served on the Board's Finance, Human Resources and Natural Resources and Technical Services Committees during her service, during which she served as Chair of the Finance Committee from August 2014 to July 2016, and as Chair of the Natural Resources and Technical Services Committee from July 2016 to August 2017; and

Whereas, Ms. Payne, always mindful of her fiduciary role to the whole service community, and of OWASA's unique responsibilities among its governing authorities, gave freely of her energy and talent, and served with unselfish dedication and compassion; and

Whereas, Ms. Payne was a strong proponent of OWASA employees and for providing competitive salaries and benefits, planning adequately for costs of construction, maintenance and reconstruction of the water and wastewater facilities serving our community, and prudent fiscal management of the revenues and expenditures of OWASA; and, OWASA has benefitted greatly from her valuable combination of technical and legal experience and expertise;

Now, Therefore, Be It Resolved By the Orange Water and Sewer Authority Board of Directors That:

1. The Board expresses its sincere appreciation and deep gratitude to Heather Payne for her outstanding service, leadership and stewardship as a Member of the OWASA Board; and the Board wishes for her much happiness in the years ahead.
2. This resolution be recorded in the minutes of the OWASA Board of Directors and be part of the permanent records of OWASA, and that a copy of this resolution be transmitted to the Town of Chapel Hill.

Adopted and presented this 14th day of June, 2018.

Heather Payne, Vice Chair

ATTEST:

Yinka Ayankoya, Secretary

Agenda Item 9:

Review Board Work Schedule

Purpose:

- a) Request(s) by Board Committees, Board Members and Staff
- b) July 12, 2018 Work Session
- c) Review and update the 12 Month Board Meeting Schedule
 - Does the Board agree to cancel the June 28th Board Meeting, July 26th Work Session and August 9th Work Session?
- d) Review Pending Key Staff Action Items

Information:

- Draft agenda for the July 12, 2018 meeting
- 12 Month Board Meeting Schedule
- Pending Key Staff Action Items from Board Meetings

June 14, 2018

Agenda
Work Session of the OWASA Board of Directors
Thursday, July 12, 2018, 6:00 P.M.
OWASA Community Room

The Board of Directors appreciates and invites the public to attend and observe its meetings. For the Board's Work Session, public comments are invited on only items appearing on this agenda. Speakers are invited to submit more detailed comments via written materials, ideally submitted at least three days in advance of the meeting to the Clerk to the Board via email or US Postal Service (aorbich@owasa.org/400 Jones Ferry Road, Carrboro, NC 27510).

For items on the agenda, public speakers are encouraged to organize their remarks for delivery within a four-minute time frame allowed each speaker, unless otherwise determined by the Board of Directors.

The Board may take action on any item on the agenda.

Administer Oath of Office to Mr. Bruce Boehm, Town of Chapel Hill Appointee and XX, Orange County Appointee

Announcements

- a. Announcements by the Chair
 - Any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
- b. Announcements by Board Members
 - Update on the June 25, 2018 Human Resources Committee Meeting (TBD)
- c. Announcements by Staff
- d. Additional Comments, Suggestions, and Information Items by Board Members (Chair)

Consent Agenda

Information and Reports

1. Quarterly Report on Attendance at Board and Committee Meetings (Andrea Orbich)

Action

2. Resolution Awarding a Construction Contract for the Wastewater Treatment Plant Intermediate Pump Stations Rehabilitation (Simon Lobdell)
3. Resolution Awarding a Construction Contract for the Pritchard Avenue Water Main Construction (Allison Reinert)
4. (Tentative) Approve NCDOT Right-of-Way Acquisition for Road Improvements at the Intersection of Highway 54 and Orange Grove Road (Todd Spencer)
5. Minutes of the June 14, 2018 Work Session of the Board of Directors (Andrea Orbich)

Regular Agenda

Discussion

6. Review Draft Water Treatment Plant and Wastewater Treatment Plant Reliability and Risk Assessment Report (Adam Haggerty)
7. (Tentative) Status of Action Items on Communications During OWASA-Related Emergencies (TBD)

8. Review Draft of Weights Assigned to Decision-Criteria of a Request for Proposals for Banking Services (Stephen Winters)
9. Review Board Work Schedule (Chair/Ed Kerwin)
 - a. Request(s) by Board Committees, Board Members and Staff
 - b. August 23, 2018 Board Meeting
 - c. September 13, 2018 Work Session
 - d. 12 Month Board Meeting Schedule
 - e. Pending Key Staff Action Items

Summary of Work Session Items

10. Executive Director will summarize the key staff action items from the Work Session

DRAFT

OWASA Board of Directors – 12 Month Board Meeting Schedule (June 8, 2018)

Month	Board Meetings		Committee & Other Meetings and Reports
	Work Session	Business Meeting	
June 2018	Approve Local Water Supply Plan and Water Shortage Response Plan Resolution to approve Sole Sourcing the Gas Chromatograph-Mass Spectrometer Approve FY 19 Budget and Rates, including merit pay decision (C) Election of Officers (C) 6/14/2018	TBD 6/28/2018	<i>Human Resources Committee Meeting (6-25-2018)</i>
July 2018	Welcome and Swear in New Board Member(s) Review Draft WTP & WWTP Reliability and Risk Assessment Report Award the Pritchard Avenue Water Main Construction Contract Award the WWTP Intermediate Pump Stations Rehabilitation Contract Assigning weights to Banking RFP Criteria (Tentative) Status of Action Items on Communications During OWASA-Related Emergencies (Tentative) NCDOT right-of-way acquisition for Orange Grove Road 7/12/2018	TBD 7/26/2018	
August 2018	TBD 8/9/2018	Award the Galvanized Water Main Replacement Contract Preliminary 12 Month Financial Report (C) CIP Semiannual Report (C) Discuss AMI Policies (other than manual read) CS – General Counsel Review (C) 8/23/2018	<i>NRTS Committee Meeting to continue discussion of source water protection (TBD)</i>
September 2018	EEO/Affirmative Action Report (C) Annual Report on Disposal of Surplus Personal Property (C) Review Updated Implementation Plan for D&I Program Discuss Action Plan from WTP & WWTP Reliability and Risk Assessment Project (Tentative) MOA for Triangle Water Supply Partnership <i>(Tentative) Discuss LRWSP – Demands & Yield</i> CS – General Counsel Review (C) 9/13/2018	Annual Report and Financial Audit (C) Approve General Counsel Engagement (C) Strategic Trends Report and Strategic Plan Update (C) Award the WTP Sedimentation Basin Rehabilitation Construction Contract CS – ED Review (C) 9/27/2018	<i>Finance Committee Meeting to discuss longer-term approach/strategy for cost management (TBD)</i> <i>NRTS Committee Meeting to discuss overall approach for managing forested watershed lands (TBD)</i>
October 2018	Discuss Recreational Fees for Out-of-County Visitors Discuss KPI Deep Dive on Water Loss and Non-Revenue Water CS – ED Review (C) 10/11/2018	Q1 Financial Report (C) Award the WWTP Solids Thickening Construction Contract 10/25/2018	<i>Chatham-Orange Joint Planning Task Force Meeting (10/4/2018)</i> <i>Chapel Hill Peoples Academy – OWASA Session (10/20/2018)</i>
November 2018	TBD 11/8/2018	<i>Holiday - no meeting</i>	

OWASA Board of Directors – 12 Month Board Meeting Schedule (June 8, 2018)

Month	Board Meetings		Committee & Other Meetings and Reports
	Work Session	Business Meeting	
December 2018	Award the Dobbins Drive Water and Sewer Construction Contract 12/13/2018	<i>Holiday - no meeting</i>	
January 2019	Employee Health and Dental Insurance Update (C) Appoint Audit Firm (C) Affordability Outreach Program Plan Update 1/10/2019	Annual Lakes Recreation Report (C) CIP Semiannual Report (C) Q2 Financial Report (C) FY 20 Budget Calendar and Assumptions (C) 1/24/2019	
February 2019	CS - General Counsel Interim Review (C) 2/14/2019	CS - General Counsel Interim Review (C) 2/28/2019	
March 2019	FY 20 Draft Budget & Rates (C) CS - ED Interim Review (C) 3/14/2019	Annual Update of the Energy Management Plan (C) FY 20 Draft Budget & Rates and Proposed Staff Rate Adjustment Recommendation (C) Set date for Public Hearings – FY 20 Budget & Rates (C) CS – ED Interim Review (C) 3/28/2019	
April 2019	Review Employee Health and Dental Insurance Renewals (C) FY 20 Draft Budget and Rate Adjustment Information (C) Appointment of the Nominating Committee (C) 4/11/2019	Q3 Financial Report (C) FY 20 Budget and Rates Discussion and Authorize Staff to Publish Proposed Rates (C) 4/25/2019	
May 2019	Approve Employee Health and Dental Insurance Renewals (C) Discuss Employee Merit Pay for FY 2020 (C) 5/10/2019	Public Hearings – FY 20 Budget and Rates (C) 5/23/2019	

The 12 Month Board Meeting Schedule shows Strategic Plan initiatives and other priority efforts that the Board and staff plan to give greatest consideration to during the next twelve months. The schedule also shows major recurring agenda items that require Board action, or items that have been scheduled in response to the Board's prior standing request. This schedule does not show all the items the Board may consider in a work session or business meeting. It also does not reflect meetings at which the Board will discuss and act on the update of the Strategic Plan.

The 12 Month Board Meeting Schedule will be reviewed and updated at each monthly work session and may also be discussed and updated at the Board's business meetings.

In addition to the initiatives shown in this schedule, staff will be working on other Strategic Plan and organizational priorities that are not expected to require major additional discussion with the Board except as part of budget deliberations.

The schedule implies that the following Strategic Plan initiatives would be addressed beyond the 12-month period. The Board may conclude that one or more of the following initiatives are higher priority. The schedule will be revised as needed to reflect the Board's priorities, and any additional initiatives that the Board may decide to address.

- Development of a plan and policy framework for OWASA lands is considered a longer-term priority. The NRTS Committee discussed this issue in September 2017 and determined it was lower

OWASA Board of Directors – 12 Month Board Meeting Schedule (June 8, 2018)

priority than Forestry Management. Staff presented an overall approach for Forestry Management to the Board in May 2018, and this was referred to the NRTS Committee for further discussion.

- Improve effectiveness as a learning organization is considered a longer-term priority.
- Water Conservation Plan will be prepared concurrent with update of the Long-Range Water Supply Plan.

The OWASA Board determines which topics it wants to explore as a full Board (potentially in a work session format) and which topics it wants to assign to Board committees or committee chairs for further analysis and development of recommendations. Board also determines priorities and desired timeframes for addressing topics. Committee meetings will be updated on the schedule routinely.

OWASA Board of Directors – 12 Month Board Meeting Schedule (June 8, 2018)

Abbreviations Used in Draft Schedule:

- ☐ Recurring agenda item (generally these are “required” items)
- AMI Advanced Metering Infrastructure
- CE Community Engagement
- CEP Community Engagement Plan
- CIP Capital Improvements Program
- COLA Cost of Labor Adjustment
- CS Closed Session of the Board
- CY Calendar Year
- D&I Diversity and Inclusion
- ED Executive Director
- FY Fiscal Year

- JLP Jordan Lake Partnership
- LRWSP Long-Range Water Supply Plan
- MOA Memorandum of Agreement
- MST Mountains-to-Sea Trail
- MFMM Multi-Family Master Meter
- NRTS Natural Resources and Technical Services
- Q Quarter
- SOW Scope of Work
- TBD To Be Determined
- WTP Water Treatment Plant
- WWTP Wastewater Treatment Plant

Current and Pending Key Projects and Stages

Project	Strategic Initiative	Project Lead	June-18	July-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19
AMI	6	Taylor												
LRWSP	1	Rouse				Demand & Yield								
Energy Plan	5	Tiger												

Stages	Committee Discussion	Feasibility Study	Board Review	Community Engagement	Action	Procurement	Implementation
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Pending Key Staff Action Items from Board Meetings

No.	Date	Action Item	Target Board Meeting Date	Person(s) Responsible	Status
1.	5-10-2018	Provide the Board a map showing biosolids application sites in the Cane Creek Watershed that was discussed at the May 8, 2018 NRTS Committee meeting.	NA	Rouse	Complete – emailed on 5-11-2018
2.	5-10-2018	Provide the Board information for discussion at a future meeting regarding the timing of the next review of the Employee Pay Administration Guidelines.	TBD	Glasgow	
3.	5-10-2018	Provide the Board a summary of public comments on the 2010 Forestry Management Plan and a link to the 2010 Forestry Management Plan.	NA	Rouse	Complete – emailed on 5-16-2018
4.	5-10-2018	Provide the Board a list of key tasks/actions for recurring Board attention over the next five years.	TBD	Kerwin	
5.	5-10-2018	Schedule a NRTS Committee meeting to continue discussing source water protection.	NA	Rouse	
6.	5-10-2018	Schedule a NRTS Committee meeting to discuss overall approach for managing OWASA's forested watershed lands.	NA	Rouse	
7.	5-10-2018	Schedule a Finance Committee meeting in the fall of 2018 to discuss longer-term approach/strategy for cost management.	NA	Winters	
8.	4-26-2018	Provide Board via email information about renewal and replacement reserves for the reclaimed water system to include an outlook for future capital investment.	NA	Winters Taylor M. Dodson Gangadharan	
9.	4-26-2018	Discuss out-of-County fees for lake use for the next recreation season.	10-11-2018	Taylor Loflin	
10.	1-25-2018	Incorporate Board Members suggestions in the next CIP report.	8-23-2018	Gangadharan	
11.	1-25-2018	Consider an Open House and other opportunities to attract greater MWBE participation in bidding construction projects.	NA	Gangadharan	Outreach for new and upcoming bidding opportunities to be conducted by June 22, 2018

Pending Key Staff Action Items from Board Meetings

No.	Date	Action Item	Target Board Meeting Date	Person(s) Responsible	Status
12.	11-9-2017	Address Board member feedback on Strategic Trends Report for next year.	9-27-2018	Rouse	
13.	10-12-2017	Schedule future Board discussion about low-flow benchmarks to be used once AMI is implemented.	8-23-2018	Winters Taylor	
14.	10-12-2017	Schedule Board discussion of strategic communications action items when the County's After Action Review has been completed and issued.	7-12-2018	Kerwin	AAR completed - discussion to be scheduled after coordinated release of information
15.	9-14-2017	Issue request for proposals in the spring of 2018 for banking services and seek the Board's input on the criteria to be considered in selecting the best-qualified bank.	7-12-2018	Winters	<ul style="list-style-type: none"> • Board agreed with staff's suggestions regarding social responsibility criteria to include in a banking services RFP on April 26, 2018 • Staff to obtain Board input/approval regarding assigning weights to RFP criteria on July 12, 2018

Agenda Item 10:

Report of the Nominating Committee for Election of Officers

Background:

The Bylaws of Orange and Sewer Authority state that officers shall be elected annually at the Board's first regular meeting in June and shall hold office for one year or until their successors are elected and qualified.

At the April 12, 2018 meeting, the Board agreed that as a practice for the next Election of Officers of the Board, the full Board of Directors would serve on the Nominating Committee, and that each Board Member will be considered nominated for each office, except those who specifically indicate (for each office) before the election that he or she wishes not to be nominated. Barbara Foushee agreed to Chair the Nominating Committee.

For the current year, the Board has agreed to observe the one-year term limits, such that none of the persons currently serving in the offices of Chair, Vice Chair and Secretary, would be eligible for election to succeed himself or herself. (The Board agreed not to amend the Bylaws to provide for these changes, but rather, agreed that these procedures would be followed as current practice for this year's election of officers.)

The Chair of the Nominating Committee has received information from those Board Members who are available for election to office, and from any who wish not to be nominated for election as one of the Officers. In accordance with this information, and the current practice not to allow succession of officers, Board Members were advised on May 24, 2018, that the persons eligible for election as Chair are:

- Yinka Ayankoya
- Jeff Danner
- Ray DuBose

And that those eligible for election as Vice Chair are:

- Yinka Ayankoya
- Jeff Danner
- Ray DuBose

And that those eligible for election as Secretary are:

- Ray DuBose
- John Young

Board Members are reminded that ballots will be prepared, distributed, and counted by the Clerk to the Board, with assistance from General Counsel. Voting will proceed in rounds, until a candidate receives five votes. In each subsequent round, the person(s) receiving the fewest votes in the preceding round will be dropped from the next ballot. Proxy ballots will only be counted

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in the first round and any subsequent round in which the person named on the proxy ballot is still eligible for election. Each Board Member will place his or her initials on each ballot he or she marks during the election. The ballots are preserved as public records of OWASA.

In order to accommodate Board Members who must be absent at the June 14, 2018 meeting, the Board is reminded that the Bylaws do permit proxy voting in the Election of Officers, provided the vote is in writing and submitted to the Board Chair prior to the meeting. The Board Chair has delegated to the Clerk to the Board the receipt of proxy ballots and these must be received by the Clerk before the meeting in order to be counted in the election of officers.

Action Needed:

Election of Officers by the Board of Directors.