



ORANGE WATER AND SEWER AUTHORITY

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

Agenda

Public Hearings and Meeting of the OWASA Board of Directors

Thursday, May 25, 2017, 7:00 P.M.

Chapel Hill Town Hall

In compliance with the "Americans with Disabilities Act," interpreter services are available with five days prior notice. If you need this assistance, please contact the Clerk to the Board at 919-537-4217 or aorbich@owasa.org.

The Board of Directors appreciates and invites the public to attend and observe its meetings. Public comment is invited either by petition upon topics not on the Board's agenda, or by comments upon items appearing on the Board's 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).

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.

Announcements

1. Announcements by the Chair
 - A. 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. Update on the May 25, 2017, Chapel Hill Town Council OWASA Committee and Chapel Hill Appointees to the OWASA Board of Directors Meeting
2. Announcements by Board Members
3. Announcements by Staff

PUBLIC HEARINGS

1. Concurrent Public Hearings on the Preliminary Annual Operating and Capital Improvements Budget and Proposed Rates, Fees and Charges (Ed Kerwin/Stephen Winters)
 - A. Staff Presentation
 - B. Public Comments
 - C. Motion to Close Public Hearings
 - D. Board Discussion

Petitions and Requests

2.
 - A. Public
 - B. Board
 - C. Staff

CONSENT AGENDA

Information and Reports

3. 12 Month Board Meeting Schedule (John Young/Ed Kerwin)

Action

4. Rogers Road Sewer Operating Agreement with Orange County (Mary Darr)
5. Resolution Awarding a Construction Contract for the Water Treatment Plant Filter Media and Backwash Improvements Project (Vishnu Gangadharan)
6. Minutes of the April 13, 2017 Work Session of the Board of Directors (Andrea Orbich)
7. Minutes of the April 27, 2017 Work Session of the Board of Directors (Andrea Orbich)
8. Minutes of the May 11, 2017 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter (Robert Morgan)

REGULAR AGENDA

Discussion

9. Televising OWASA Board of Directors' Meetings (John Young)
10. Overview of OWASA's Land Holdings and Past Management Discussions and Actions (Ruth Rouse)

Summary of Board Meeting Action Items

11. Executive Director will summarize the key action items from the Board meeting and note significant items for discussion and/or action expected at the next meeting

Agenda Item

- **Concurrent Public Hearings on the Preliminary Annual Operating and Capital Improvements Budget and Proposed Rates, Fees and Charges**

Background

- On March 9, 2017, the Board of Directors adopted resolutions setting May 25, 2017 as the date for concurrent public hearings on OWASA's proposed budget and rates for Fiscal Year (FY) 2018.
- The Board of Directors is considering no increase in monthly water, sewer and reclaimed water charges for FY 2018. If approved, FY 2018 will be the sixth consecutive year in which there has been no increase in monthly water, sewer and reclaimed water rates.
- Rates for service availability fees (for new service connections) have been adjusted based on an update of system costs and an analysis of customers' average daily water use.
- Certain other fees are proposed to be adjusted based on changes in the costs of providing the services.

Action Needed

- Receive and discuss input provided by the public at, or prior to the May 25, 2017 concurrent public hearings.
- Provide direction to staff regarding the proposed FY 2018 Budget and the Schedule of Rates, Fees and Charges that will be considered for adoption by the Board at its June 8, 2017 meeting.

May 25, 2017



ORANGE WATER AND SEWER AUTHORITY

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MEMORANDUM

TO: Board of Directors

THROUGH: Ed Kerwin *EK*

FROM: Stephen Winters, CPA

DATE: May 19, 2017

SUBJECT: Concurrent Public Hearings on the Preliminary Annual Operating and Capital Improvements Budget and Proposed Schedule of Rates, Fees and Charges

Purpose

This memorandum and attachments are provided to the Board of Directors as a basis for discussing the proposed Annual Operating and Capital Improvements Budget and Schedule of Rates, Fees and Charges for Fiscal Year (FY) 2018. This information is the subject of the concurrent public hearings that will be held on May 25, 2017.

Background

The Board of Directors has previously discussed the FY 2018 Budget and is considering no increase in monthly water, sewer and reclaimed water rates.

Attached are three documents:

- Attachment 1 - Summary information about the proposed Budget for FY 2018
- Attachment 2 - Information about the proposed Capital Improvements Program Budget
- Attachment 3 - Proposed Schedule of Rates, Fees and Charges

Proposed Budget Information

Expenditures in the proposed FY 2018 Budget are summarized below.

Category	Amount (in thousands)
Operating Expenses	\$21,920
Capital Improvements Program (CIP)	15,085
Capital Equipment Expenditures	1,231
Debt Service on Outstanding Bonds and Loans	6,950
Total	\$45,186

The proposed operating budget is about 4% higher than the adopted FY 2017 budget. The original FY 2018 draft budget previously reviewed by the Board has been reduced by \$24,830. The following adjustments have been made:

Expense and Explanation for Adjustment	Amount Increase (Decrease)
Health insurance expenses – reduced increase from 15% to 6.8%	(\$158,119)
Wages expense (increased cost of labor/merit increase budget allowance from 3% to 3.5%)	37,554
Payroll taxes associated with cost of labor/merit increase adjustment	5,735
Consulting fees – increased budget allowance for Diversity and Inclusion program from \$60,000 to \$150,000	90,000
Total adjustments	(\$24,830)

Budget assumptions and highlights

- Funding for 134 positions.
- 2.5% vacancy allowance – the personnel compensation budget has been reduced by about \$200,000, to allow for position vacancies.
- 6.8% increase in health insurance.
- Based on WorldatWork survey data as well as guidance from OWASA’s Board, a placeholder for a 3.5% cost of labor/merit increase is included. The Board is scheduled to make a decision on merit and cost of labor increases later this calendar year. Wage increases typically go into effect in November.
- The volumes of water, reclaimed water, and wastewater treated, and the revenue associated with those volumes, will remain essentially the same as in FY 2017.
- The CIP includes funds for implementing an Advanced Metering Infrastructure (AMI) system which will provide customers with detailed water use information and improve OWASA’s operating efficiency and customer service capabilities.

Capital Improvements Program

The proposed CIP budget has been revised downward slightly from the prior draft, and includes funding of \$15.1 million for FY 2018 and a total of \$96.3 million for the five-year period FY 2018-2022. The revised CIP budget reflects information from recent bids and awarded construction contracts, updated schedules for ongoing projects such as the AMI System, and

scope revisions for several future CIP projects. Attachment 2, Page 1 includes a listing of all projects funded for FY 2018 and brief project descriptions. Attachment 2, Page 2 lists all projects scheduled for FY 2018-22.

Proposed Schedule of Rates, Fees and Charges

The attached Proposed Schedule of Rates, Fees and Charges (Attachment 3) reflects no increase in monthly water, sewer and reclaimed water rates. If approved, FY 2018 will be the sixth consecutive year in which there has been no increase in monthly water, sewer and reclaimed water rates.

Adjustments are proposed for service availability fees. Service availability 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. Service availability fees are calculated separately for water and sewer connections. The proposed changes are based on cost of service principles and an update of the calculation of those costs.

Certain other fees are proposed to be adjusted based on changes in the costs of providing the services.

Water and sewer revenues of about \$35 million are projected to be generated under this schedule during FY 2018.

Key Elements in the Schedule

- The bill for a single-family individually-metered customer using 4,000 gallons per month remains \$70.66.
- Continuation of the block rate structure for individually-metered residential customers.
- The proposed rate schedule includes a new water rate for multi-family master-metered customers. In December 2016, the Board approved changing the water rates for multi-family master metered customers (such as apartments) from seasonal rates, which vary by time of year, to a year-round rate effective May 1, 2017. The year-round rate is designed to generate the same revenue as the seasonal rates.
- Continuation of the seasonal rate structure for non-residential customers.
- Conservation water commodity charges under declared water shortages (surcharges) remain in place for both residential and nonresidential customers with no change in the surcharge structure.
- Irrigation accounts remain subject to a year-round uniform charge and monthly service charge for irrigation use that is higher than the peak rate under the seasonal structure.
- No changes in the commodity rate or fixed monthly charge for reclaimed water as current rates are sufficient to cover costs.
- Lake fees are unchanged.

Next Steps

- The Board will consider input received during the public hearings and provide guidance to staff.
- Formal adoption of the Annual Budget and the Schedule of Rates, Fees and Charges is scheduled for June 8, 2017.



Stephen Winters, CPA
Director of Finance and Customer Service

Attachments:

- Summary information about the proposed Budget for FY 2018 (Attachment 1)
- Information about the proposed Capital Improvements Program Budget (Attachment 2)
- Proposed Schedule of Rates, Fees and Charges (Attachment 3)

**ORANGE WATER AND SEWER AUTHORITY
PROPOSED FISCAL YEAR 2018 OPERATING BUDGET**

Operating Revenue		
Water	\$17,824,170	
Sewer	16,734,274	
Reclaimed Water	450,060	
Service Initiation Fee	165,650	
Other	963,227	
Refunds and Adjustments	<u>(246,088)</u>	
Total Operating Revenue		\$35,891,292
Operating Expense		
General and Administrative	7,177,861	
Operations	<u>14,742,616</u>	
Total Operating Expense		<u>21,920,477</u>
Net Operating Income		13,970,815
Non-operating Revenue		
Customer Fees		1,416,657
Interest		<u>38,441</u>
Total Net Income		<u><u>\$15,425,913</u></u>
Debt Service		
Existing		\$6,949,537
New		<u>0</u>
Total Debt Service		<u>6,949,537</u>
Net Income Less Debt Service		<u><u>\$8,476,376</u></u>

DRAFT FY 2018 CIP

Required project or project underway

CIP No.	Project Name	FY '18 Funding	Comment
270-04	Jordan Lake Raw Water Supply Allocation	\$ 5,000	ongoing required payment
270-09	Quarry Reservoir Development	\$ 15,000	ongoing required payment
270-11	University Lake Pump Station Improvements	\$ 65,000	Preliminary engineering study is underway; funds are for completion of detailed design in FY '18
270-26	Cane Creek Permanganate Facility	\$ 20,000	Completion of construction started in FY '17
272-14	Water Facility Security Upgrades	\$ 110,000	Completion of construction started in FY '17
272-21	WTP Switchgear Upgrade	\$ 60,000	Completion of construction to be awarded in FY '17
272-31	WTP and Adjacent Facilities Paving	\$ 25,000	Completion of construction to be started in FY'17
272-34	WTP Generator Building Louver Replacement	\$ 40,000	Completion of construction to be awarded in FY '17
272-38	WTP Sedimentation Basin Rehabilitation	\$ 102,000	Study underway; funds are for initiation of detailed design
272-39	Concrete Condition Assessment	\$ 75,000	Condition assessment is underway; funds are for design and construction of priority rehabilitation needs identified by study.
272-40	WTP Filter Media and Backwash Improvements	\$ 880,000	Completion of construction to be awarded in FY '17
272-45	WTP Fluoride System Improvements	\$ 150,000	Completion of capital work as recommended by Action Plan
275-20	Lake Ellen Water Main Replacement	\$ 160,000	Design is underway; funds are for completion of construction
275-20	Brandywine Road WM	\$ 739,000	Completion of construction to be awarded in FY '17
275-46	Dobbins Drive Water Main	\$ 50,000	Study underway; funds are for initiation of detailed design
275-53	Water Distribution System Hydraulic Model	\$ 40,000	Minor modeling assistance periodically required to support CIP project needs
275-76	Advanced Meter Infrastructure (AMI) System	\$ 1,500,000	Funds are for initial implementation/installation efforts for system
275-77	Galvanized Water Main Replacements	\$ 96,000	Funds are for completion of design and start of construction for small water main replacements at multiple locations
275-87	Hillsborough St Water Main Replacement	\$ 1,700,000	Funds are for completion of construction
276-17	Sanitary Sewer Condition Evaluation	\$ 41,000	Funds are completion of prioritized sanitary sewer inspection (currently underway) and programming of rehabilitation
276-18	Sanitary Sewer Rehabilitation	\$ 1,249,000	Funds are for ongoing sewer rehabilitation under existing multi-year contract
276-45	Bolinwood Dr Interceptor	\$ 150,000	Completion of construction to be awarded in FY '17
276-47	Little Creek Interceptor	\$ 552,000	Completion of construction started in FY '16
276-48	Dobbins Drive Interceptor	\$ 55,000	Study underway; funds are for initiation of detailed design
276-53	Creek Crossing Access Improvements	\$ 20,000	vehicular creek crossing improvements at several locations; design is nearly complete
276-54	Rogers Road Gravity Sanitary Sewer Extension	\$ 357,000	Funds are for engineering consultant services during construction phase, which will be reimbursed by Orange County. The construction contract itself will be held directly by Orange County.
276-54	Credit for Rogers Road Gravity Sanitary Sewer Extension	\$ (357,000)	Reimbursement by Orange County of engineering consulting services during construction phase.
276-57	Sanitary Sewer Hydraulic Model	\$ 151,000	Funds for flow monitoring and analysis to verify need and timing of several capacity-based projects
276-60	Kenan Stadium Interceptor Replacement	\$ 575,000	Reimbursement to UNC for replacement/upsizing of sewer interceptors to be completed by their contractor
277-24	Eastowne, Eubanks, Meadowmont 1 Pump Station Rehab	\$ 790,000	Completion of construction to be awarded in FY '17
277-29	Rogerson Drive Force Main Redundancy Evaluation	\$ 45,000	Completion of study commenced in FY '17
277-31	Rogerson Drive Pump Station Rehabilitation	\$ 925,000	Completion of construction to be awarded in FY '17
277-37	Knolls PS Rehab	\$ 55,000	Study is underway; funds are for design of recommended improvements
277-38	Rogerson Drive Force Main Emergency Repair and Rehabilitation	\$ 1,250,000	Completion of construction to be awarded in FY '17
278-46	Comprehensive Coatings Program	\$ 200,000	Corrosion control of key facilities, components and structures (annual program)
278-51	WWTP Solids Thickening Improvements	\$ 300,000	Study is underway; funds are for completion of detailed design
278-52	WWTP Digesters #1 & #2 Rehabilitation	\$ 25,000	Completion of construction started in FY '16
278-54	WWTP IPS Rehabilitation	\$ 472,000	Completion of construction to be awarded in FY '17
278-58	WWTP Non Potable Water Pump Replacements	\$ 120,000	Completion of construction started in FY '17
278-61	WWTP Pavement Improvements	\$ 20,000	Completion of construction to be awarded in FY '17
278-68	Building Envelope Rehabilitation	\$ 236,000	Design is underway; funds are for completion of construction (roof replacements)
278-71	WWTP Main Potable Water Line – Backflow Prevention	\$ 25,000	Completion of construction to be awarded in FY '17
278-72	WWTP Secondary Clarifier Rehab	\$ 150,000	Completion of clarifier rehabilitation and improvements identified by ongoing FY '17 study
278-73	WWTP SCADA System Upgrade	\$ 150,000	Further rollout of system upgrades which were piloted in FY'17
280-06	Administration Building HVAC System Upgrade	\$ 900,000	Commencement of construction to be completed in FY '18 and '19
272-35	WTP Flash Mix Basins Isolation Valve Replacement	\$ 25,000	Funds are for preliminary study of alternatives to improve resiliency/redundancy
272-37	Belt Filter Press Rehab	\$ 65,000	Funds are for preliminary study of alternatives and completion of detailed design
272-47	WTP Risk Assessment	\$ 75,000	Analysis of failure modes and risk mitigation measures for plant
275-21	High Priority Water Main Replacement	\$ 107,000	Program of ten identified high priority water main replacements, mostly AC pipe and on the eastern side of 640-zone
275-52	Cameron Avenue Water Main	\$ 25,000	FY '18 funds are for updating the alternatives analysis and commencement of detailed design
277-39	WWPS Rehabilitation and Replacement FY18-20	\$ 90,000	FY '18 funds are for critical safety improvements identified at wastewater pump stations
278-50	WWTP Warehouse	\$ 25,000	FY'18 funds are for a planning/feasibility study
278-78	Digester/Fermenter Rehab and Mixing and Pumping Improvements	\$ 40,000	FY'18 funds are for a planning/feasibility study to evaluate potential digester mixing improvements
278-79	Primary Sludge PS Rehab and Old Lab Building Demo	\$ 50,000	FY '18 funds are for structural evaluation, alternatives analysis, and near-term electrical safety work
278-80	WWTP Rehabilitation and Replacement FY18-20	\$ 125,000	Funds are for initiation of design for chemical building and piping improvements
278-81	WWTP Risk Assessment	\$ 75,000	Analysis of failure modes and risk mitigation measures for plant
280-12	Admin Building LED Lighting Retrofit	\$ 95,000	Funds are for a retrofit of all interior incandescent lighting and fluorescent lighting fixtures at the Administration Building with light emitting diodes.
	TOTAL Draft CIP	\$ 15,085,000	

Subtotal - Required Projects and Projects Underway	\$ 14,288,000
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DRAFT FY 2018 - 2022 CIP

Required project or project underway

CIP No.	Project Name	FY '18 Funding	FY '19 Funding	FY '20 Funding	FY '21 Funding	FY '22 Funding	Total Funding FY '18-'22
270-04	Jordan Lake Raw Water Supply Allocation	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000
270-09	Quarry Reservoir Development	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 300,000	\$ 360,000
270-11	University Lake Pump Station Improvements	\$ 65,000	\$ 700,000	\$ -	\$ -	\$ -	\$ 765,000
270-26	Cane Creek Permanganate Facility	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 20,000
272-14	Water Facility Security Upgrades	\$ 110,000	\$ -	\$ -	\$ -	\$ -	\$ 110,000
272-21	WTP Switchgear Upgrade	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ 60,000
272-31	WTP and Adjacent Facilities Paving	\$ 25,000					\$ 25,000
272-34	WTP Generator Building Louver Replacement	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 40,000
272-38	WTP Sedimentation Basin Rehabilitation	\$ 102,000	\$ 1,648,000	\$ 1,546,000	\$ -	\$ -	\$ 3,296,000
272-39	Concrete Condition Assessment	\$ 75,000	\$ 200,000	\$ -	\$ -	\$ -	\$ 275,000
272-40	WTP Filter Media and Backwash Improvements	\$ 880,000	\$ -	\$ -	\$ -	\$ -	\$ 880,000
272-45	WTP Fluoride System Improvements	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
275-20	Lake Ellen Water Main Replacement	\$ 160,000	\$ -	\$ -	\$ -	\$ -	\$ 160,000
275-20	Brandywine Road WM	\$ 739,000	\$ 246,000	\$ -	\$ -	\$ -	\$ 985,000
275-46	Dobbins Drive Water Main	\$ 50,000	\$ 1,438,000	\$ -	\$ -	\$ -	\$ 1,488,000
275-53	Water Distribution System Hydraulic Model	\$ 40,000	\$ 40,000	\$ 40,000	\$ 150,000	\$ -	\$ 270,000
275-76	Advanced Meter Infrastructure (AMI) System	\$ 1,500,000	\$ 3,325,000	\$ 500,000	\$ -	\$ -	\$ 5,325,000
275-77	Galvanized Water Main Replacements	\$ 96,000	\$ 584,000	\$ 485,000	\$ -	\$ -	\$ 1,165,000
275-87	Hillsborough St Water Main Replacement	\$ 1,700,000	\$ -	\$ -	\$ -	\$ -	\$ 1,700,000
276-17	Sanitary Sewer Condition Evaluation	\$ 41,000	\$ -	\$ 744,000	\$ 780,000	\$ 906,000	\$ 2,471,000
276-18	Sanitary Sewer Rehabilitation	\$ 1,249,000	\$ 2,465,000	\$ 70,000	\$ 1,267,000	\$ 1,372,000	\$ 6,423,000
276-45	Bolinwood Dr Interceptor	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
276-47	Little Creek Interceptor	\$ 552,000	\$ -	\$ -	\$ -	\$ -	\$ 552,000
276-48	Dobbins Drive Interceptor	\$ 55,000	\$ 1,574,000	\$ -	\$ -	\$ -	\$ 1,629,000
276-53	Creek Crossing Access Improvements	\$ 20,000	\$ 393,000	\$ 250,000	\$ -	\$ -	\$ 663,000
276-54	Rogers Road Gravity Sanitary Sewer Extension	\$ 357,000	\$ -	\$ -	\$ -	\$ -	\$ 357,000
276-54	Credit for Rogers Road Gravity Sanitary Sewer Extension	\$ (357,000)	\$ -	\$ -	\$ -	\$ -	\$ (357,000)
276-57	Sanitary Sewer Hydraulic Model	\$ 151,000	\$ 40,000	\$ -	\$ -	\$ -	\$ 191,000
276-60	Kenan Stadium Interceptor Replacement	\$ 575,000	\$ -	\$ -	\$ -	\$ -	\$ 575,000
277-24	Eastowne, Eubanks, Meadowmont 1 Pump Station Rehab	\$ 790,000	\$ -	\$ -	\$ -	\$ -	\$ 790,000
277-29	Rogerson Drive Force Main Redundancy Evaluation	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ 45,000
277-31	Rogerson Drive Pump Station Rehabilitation	\$ 925,000	\$ 1,300,000	\$ -	\$ -	\$ -	\$ 2,225,000
277-37	Knolls PS Rehab	\$ 55,000	\$ 400,000	\$ -	\$ -	\$ -	\$ 455,000
277-38	Rogerson Drive Force Main Emergency Repair and Rehabilitation	\$ 1,250,000	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000
278-46	Comprehensive Coatings Program	\$ 200,000	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ 500,000
278-51	WWTP Solids Thickening Improvements	\$ 300,000	\$ 2,025,000	\$ 1,925,000	\$ -	\$ -	\$ 4,250,000
278-52	WWTP Digesters #1 & #2 Rehabilitation	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ 25,000
278-54	WWTP IPS Rehabilitation	\$ 472,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 572,000
278-58	WWTP Non Potable Water Pump Replacements	\$ 120,000	\$ -	\$ -	\$ -	\$ -	\$ 120,000
278-61	WWTP Pavement Improvements	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 20,000
278-68	Building Envelope Rehabilitation	\$ 236,000	\$ 68,000	\$ 271,000	\$ 83,000	\$ 151,000	\$ 809,000
278-71	WWTP Main Potable Water Line – Backflow Prevention	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ 25,000
278-72	WWTP Secondary Clarifier Rehab	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
278-73	WWTP SCADA System Upgrade	\$ 150,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 250,000
280-06	Administration Building HVAC System Upgrade	\$ 900,000	\$ 1,050,000	\$ -	\$ -	\$ -	\$ 1,950,000
270-16	Cane Creek Pumping Improvements	\$ -	\$ 100,000	\$ 700,000	\$ -	\$ -	\$ 800,000
270-28	University Lake Permanganate Facility	\$ -	\$ 100,000	\$ 1,100,000	\$ -	\$ -	\$ 1,200,000
270-29	University Lake Fishing Pier and Boat Launch	\$ -	\$ 65,000	\$ -	\$ -	\$ -	\$ 65,000
270-30	Cane Creek Dam Spillway Horizontal Caulking	\$ -	\$ 40,000	\$ 250,000	\$ -	\$ -	\$ 290,000
270-31	Cane Creek Resurfacing	\$ -	\$ 70,000	\$ -	\$ -	\$ -	\$ 70,000
271-05	Cane Creek Raw Water Transmission Main Capacity Study	\$ -	\$ 40,000	\$ -	\$ -	\$ -	\$ 40,000

DRAFT FY 2018 - 2022 CIP

Required project or project underway

CIP No.	Project Name	FY '18 Funding	FY ' 19 Funding	FY ' 20 Funding	FY ' 21 Funding	FY '22 Funding	Total Funding FY '18-'22
272-10	Water Facility Recapitalization	\$ -	\$ -	\$ -	\$ 2,460,000	\$ 1,979,000	\$ 4,439,000
272-35	WTP Flash Mix Basins Isolation Valve Replacement	\$ 25,000	\$ 70,000	\$ 215,000	\$ -	\$ -	\$ 310,000
272-37	Belt Filter Press Rehab	\$ 65,000	\$ 743,000	\$ -	\$ -	\$ -	\$ 808,000
272-41	WTP Process, Sedimentation Basin, and Pulsator Turbidimeters	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ 150,000
272-42	WTP Finished Water Pump Rehabilitation/Replacement	\$ -	\$ -	\$ -	\$ 125,000	\$ 750,000	\$ 875,000
272-43	WTP Track Vac System Rehab	\$ -	\$ -	\$ 116,000	\$ -	\$ -	\$ 116,000
272-46	WTP Alum Storage and Containment Area	\$ -	\$ 25,000	\$ -	\$ -	\$ -	\$ 25,000
272-47	WTP Risk Assessment	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ 75,000
273-09	Barbee Chapel Road Booster Pump Station	\$ -	\$ 75,000	\$ -	\$ -	\$ -	\$ 75,000
275-15	Water Main - Road Improvement Projects		\$ 246,000				\$ 246,000
275-20	Fordham Service Road	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000
275-20	Water Distribution System Recapitalization	\$ -	\$ -	\$ -	\$ 2,282,000	\$ 5,535,000	\$ 7,817,000
275-21	High Priority Water Main Replacement	\$ 107,000	\$ 1,644,000	\$ 3,882,000	\$ 2,633,000	\$ -	\$ 8,266,000
275-52	Cameron Avenue Water Main	\$ 25,000	\$ 1,050,000	\$ 900,000	\$ -	\$ -	\$ 1,975,000
275-67	Operational Evaluation of Future 740-Foot Zone	\$ -	\$ -	\$ 46,000	\$ -	\$ -	\$ 46,000
275-88	Stancell Drive Water Main	\$ -	\$ -	\$ -	\$ -	\$ 75,000	\$ 75,000
275-89	Abandon 6" CI in Main Street	\$ -	\$ 50,000	\$ 200,000	\$ -	\$ -	\$ 250,000
276-01	Bolin Creek Interceptor - Estes to Pathway	\$ -	\$ -	\$ 390,000	\$ 2,200,000	\$ 2,000,000	\$ 4,590,000
276-18	Collection System Recapitalization	\$ -	\$ -	\$ -	\$ -	\$ 1,283,000	\$ 1,283,000
276-46	Willow Drive Interceptor	\$ -	\$ 50,000	\$ 225,000	\$ -	\$ -	\$ 275,000
276-52	Rocky Branch Interceptor Upgrade (Phase 1)	\$ -	\$ 62,000	\$ 706,000	\$ -	\$ -	\$ 768,000
276-58	Prince St common service replacement	\$ -	\$ 30,000	\$ 50,000	\$ -	\$ -	\$ 80,000
277-01	Pump Station Recapitalization	\$ -	\$ -	\$ -	\$ 326,000	\$ 343,000	\$ 669,000
277-13	Lake Ellen Force Main Replacement	\$ -	\$ 35,000	\$ 100,000	\$ -	\$ -	\$ 135,000
277-21	Force Main Condition Evaluation	\$ -	\$ -	\$ 338,000	\$ -	\$ -	\$ 338,000
277-23	Eubanks Road Force Main	\$ -	\$ -	\$ -	\$ -	\$ 55,000	\$ 55,000
277-39	WWPS Rehabilitation and Replacement FY18-20	\$ 90,000	\$ 105,000	\$ 608,000	\$ -	\$ -	\$ 803,000
278-11	WWTP Recapitalization	\$ -	\$ -	\$ -	\$ 3,774,000	\$ 4,760,000	\$ 8,534,000
278-43	WWTP Biogas-to-Energy Combined Heat and Power		\$ 100,000	\$ -	\$ 250,000	\$ 3,000,000	\$ 3,350,000
278-50	WWTP Warehouse	\$ 25,000	\$ 50,000	\$ 450,000	\$ -	\$ -	\$ 525,000
278-75	WWTP Capacity Upgrade	\$ -	\$ -	\$ 100,000	\$ 100,000	\$ -	\$ 200,000
278-77	Bar Screen Rehab	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000
278-78	Digester/Fermenter Rehab and Mixing and Pumping Improvements	\$ 40,000	\$ 35,000	\$ 70,000	\$ 750,000	\$ -	\$ 895,000
278-79	Primary Sludge PS Rehab and Old Lab Building Demo	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
278-80	WWTP Rehabilitation and Replacement FY18-20	\$ 125,000	\$ 475,000	\$ 300,000	\$ -	\$ -	\$ 900,000
278-81	WWTP Risk Assessment	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ 75,000
279-01	Reclaimed Water Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ 162,000	\$ 162,000
280-09	Administration Building Recapitalization	\$ -	\$ -	\$ -	\$ 186,000	\$ 195,000	\$ 381,000
280-10	Operations Center Recapitalization	\$ -	\$ -	\$ -	\$ 288,000	\$ 303,000	\$ 591,000
280-12	Admin Building LED Lighting Retrofit	\$ 95,000	\$ -	\$ -	\$ -	\$ -	\$ 95,000
280-13	Remodeling of the Men's and Women's Locker Rooms at the Administration Building	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 30,000
	TOTAL Draft CIP	\$ 15,085,000	\$ 23,456,000	\$ 16,897,000	\$ 17,674,000	\$ 23,174,000	\$ 96,286,000

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

APPLICABLE TO ALL BILLINGS AND SERVICES ON AND AFTER OCTOBER 1, 2017

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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 9, 2016, which became effective on October 1, 2016.

**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 **No Change**

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	Monthly Service Charge
5/8"	\$14.70
3/4" Combination Fire and Domestic Service Meter	\$15.20
1"	\$29.53
1" Combination Fire and Domestic Service Meter	\$30.03
1-1/2"	\$63.86
2"	\$96.38
3"	\$198.22
4"	\$323.58
6"	\$704.66
8"	\$1,002.06

Water Irrigation Service Charge **No Change**

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	Monthly Service Charge
5/8"	\$23.54
1"	\$47.05
1-1/2"	\$87.10
2"	\$133.96
3"	\$265.15
4"	\$407.02
6"	\$800.67
8"	\$1,273.30

Monthly service charges for compound meter arrangements are based on the largest meter in the

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

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 **No Change**

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)	Commodity Rate per 1,000 Gallons
Block 1	1,000 to 2,000	\$2.63
Block 2	3,000 to 5,000	\$6.39
Block 3	6,000 to 10,000	\$7.83
Block 4	11,000 to 15,000	\$10.94
Block 5	All use 16,000 and up	\$19.79

Multi-family Master-metered Residential Accounts **No Change**

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.

\$5.67 per thousand gallons

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Non-residential Accounts Except Irrigation Accounts **No Change**

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).

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

Irrigation-only Accounts **No Change**

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.

\$8.51 per thousand gallons

WATER COMMODITY SURCHARGES APPLICABLE UNDER WATER SHORTAGE
DECLARATION STAGES

Conservation Water Commodity Charges Under Mandatory Water Use Restrictions **No Change**

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.

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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

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 \$300.00 (**\$320 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

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

exceed the amount of the Security Deposit. Any credit balance will be refunded within thirty (30) days.

WATER AVAILABILITY FEE

Water availability fees are calculated to recover a portion of the capital costs of providing water system facility capacity. The availability 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 availability 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 Fee
5/8" Meter or 3/4" Combination Fire and Domestic Service, Single-family Residential:		
<1300 square feet	\$1,265	\$1,033
1300-1700 square feet	\$1,545	\$1,207
1701-2400 square feet	\$1,956	\$1,552
2401-3100 square feet	\$3,344	\$2,470
3101-3800 square feet	\$4,546	\$3,429
>3800 square feet	\$7,631	\$5,406
1" Meter, Single-Family Residential (all square footages)	\$9,260	\$8,143
5/8" Meter or 3/4" Combination Fire and Domestic Service Meter, Multi-family Residential	\$1,363	\$1,112
5/8" Meter or 3/4" Combination Fire and Domestic Service Meter, Nonresidential*	\$3,704	\$3,255
1" Meter, Multi-Family Residential and Nonresidential*	\$9,260	\$8,143
1-1/2" Meter, Multi-Family Residential and Nonresidential*	\$18,519	\$16,275
2" Meter, Multi-Family Residential and Nonresidential*	\$29,631	\$26,040
3" Meter, Multi-Family Residential and Nonresidential*	\$59,262	\$52,081
4" Meter, Multi-Family Residential and Nonresidential*	\$92,596	\$81,376
6" Meter, Multi-Family Residential and Nonresidential*	\$185,192	\$162,752
8" Meter, Multi-Family Residential and Nonresidential*	\$296,308	\$260,403

* 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 Availability 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 Availability 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 Water

**ORANGE WATER AND SEWER AUTHORITY
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Availability Fees that would otherwise apply to the development or re-development project. Availability 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 Availability 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	\$3,570	\$3,650
Complete Water Service Installation, 3/4" Combination Fire and Domestic Service Meter	\$3,650	\$3,860
Complete Water Service Installation, 1" meter	\$3,790	\$3,770
Meter Only Installation, 5/8" meter	\$260	\$270
Meter Only Installation, 3/4" Combination Fire and Domestic Service Meter	\$360	\$400
Meter Only Installation, 1" Combination Fire and Domestic Service Meter	\$360	No change
Meter Only Installation, 1" meter	\$360	No change
Meter Only Installation, 1-1/2" meter	\$600	\$810
Meter Only Installation, 1-1/2" Combination Fire and Domestic Service Meter	\$610	\$840
Meter Only Installation, 2" meter	\$790	\$810
Meter Only Installation, 2" Combination Fire and Domestic Service Meter	\$720	\$740
Remote Read Box with 5/8" Detector Meter	\$470	\$420

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 \$140.00 (**\$110 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.

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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 \$340 (**Proposed \$350**).

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 \$125.00 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.

\$290 per test (**\$300 proposed**)

**ORANGE WATER AND SEWER AUTHORITY
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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 **No Change**

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 or not 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	Monthly Service Charge
5/8” or 3/4” Combination Fire and Domestic Service	\$12.00
1”	\$20.61
1-1/2”	\$35.53
2”	\$53.72
3”	\$101.58
4”	\$155.28
6”	\$284.70
8”	\$485.82

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 **No Change**

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 or not 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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\$6.48 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

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 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 6,000 (4,000 proposed) gallons per month (based on the current average household water use).

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 AVAILABILITY FEE

The purpose of this fee is to recover a portion of the capital costs of providing sewer system facility capacity. The availability 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. For the purpose of the availability fee, customer accounts are divided into three categories: (1) Single-family Residential;

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(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 Fee
5/8" Meter or 3/4" Combination Fire and Domestic Service, Single-family Residential:		
<1300 square feet	\$2,938	\$2,829
1301-1700 square feet	\$3,549	\$3,270
1701-2400 square feet	\$3,611	\$3,384
2401-3100 square feet	\$4,425	\$3,859
3101-3800 square feet	\$4,781	\$4,256
>3800 square feet	\$5,431	\$4,541
1" Meter, Single-Family Residential (all square footages)	\$12,301	\$13,088
5/8" Meter or 3/4" Combination Fire and Domestic Service, Multi-family Residential	\$3,183	\$3,064
1" Meter, Multi-Family Residential	\$12,301	\$13,088
5/8" Meter or 3/4" Combination Fire and Domestic Service, Nonresidential	\$6,317	\$6,553
1" Meter, Nonresidential	\$15,792	\$16,392
1-1/2" Meter, Multi-family Residential and Nonresidential	\$31,584	\$32,763
2" Meter, Multi-family Residential and Nonresidential	\$50,535	\$52,421
3" Meter, Multi-family Residential and Nonresidential	\$101,070	\$104,842
4" Meter, Multi-family Residential and Nonresidential	\$157,922	\$163,816
6" Meter, Multi-family Residential and Nonresidential	\$315,844	\$327,632
8" Meter, Multi-family Residential and Nonresidential	\$505,350	\$524,211

In addition to the sewer availability fee, an excess sewer capacity fee of four percent (4%) of the applicable sewer availability 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 Availability 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 Availability 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 Availability Fees that would otherwise apply to the development or re-development project. Availability Fee credits are not transferrable to any other project or property.

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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 Availability Fees.

SEWER TAP CHARGE No Change

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.

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 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 No Change

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

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

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

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SECTION III: RECLAIMED WATER RATES AND CHARGES

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 **No Change**

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 **No Change**

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

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

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.

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

RECLAIMED WATER SERVICE AVAILABILITY AND CONNECTION FEES

Reclaimed Water Availability Fees No Change

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 availability 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 availability 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 availability 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 availability 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
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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

**ORANGE WATER AND SEWER AUTHORITY
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the customer.

BULK WASTEWATER CHARGES No Change

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	\$140/ 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:

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

TANK SALES OR BULK WATER SALES No Change

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	\$6.02 per thousand gallons or portion thereof

Bulk sales are subject to administrative regulations and controls for protection of the

**ORANGE WATER AND SEWER AUTHORITY
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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

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%.

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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
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FIELD TEST OF 5/8" METER OR 3/4" COMBINATION FIRE AND DOMESTIC SERVICE METER No Change

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 for the meter test.

SHOP TESTING OF METER No Change

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 for the shop meter test.

FIELD TEST OF LARGE METERS No Change

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.

REINSPECTION FEE No Change

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

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

CHARGES FOR MISCELLANEOUS SERVICES

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

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.

OWASA Board of Directors – 12 Month Board Meeting Schedule (May 19, 2017)

Month	Board Meetings		Committee & Other Meetings and Reports
	Work Session	Business Meeting	
May 2017	<p><i>Discuss AMI System Procurement</i> Discuss Employee Health and Dental Insurance Renewal () Discuss Employee Merit Pay for FY 18 () Award the Rogerson Drive Pump Station Rehabilitation Contract () CS – ED Interim Review ()</p> <p style="text-align: right;"><i>5/11/2017</i></p>	<p><i>Overview of OWASA's Land Holdings and Past Management Discussions and Actions</i> Public Hearings – FY 18 Budget and Rates () Award the Water Treatment Plant Filter Media and Backwash Improvements Contract Approve Rogers Road Sewer Operating Agreement with Orange County Discuss Televising Board Meetings</p> <p style="text-align: right;"><i>5/25/2017</i></p>	<p><i>HR Committee Meeting on Employee Compensation (TBD)</i></p>
June 2017	<p>Diversity and Inclusion Progress Report with staff and VISIONS, Inc. () Approve FY 18 Budget and Rates () Award the Hillsborough Street Water Main Replacement Contract () Election of Officers () Propose Date for Financial Reserves Discussion Approve minor changes to Water and Sewer Management, Planning and Boundary Agreement</p> <p style="text-align: right;"><i>6/8/2017</i></p>	TBD	
July 2017	TBD	TBD	
August 2017	<p>Award the Brandywine Drive Water Main Replacement Contract () Swear in new Board Member(s) () CS – General Counsel Review ()</p> <p style="text-align: right;"><i>8/10/2017</i></p>	<p>Preliminary 12 Month Financial Report () CIP Semiannual Report () EEO/Affirmative Action Report () Award the Administration Building HVAC Replacement Contract () CS – General Counsel Review ()</p> <p style="text-align: right;"><i>8/24/2017</i></p>	
September 2017	<p><i>Discuss LRWSP – Demands & Yield</i> Diversity and Inclusion Progress Report Discuss KPI Trends (Tentative) Discuss Employee Merit Pay for FY 2018 CS – ED Review ()</p> <p style="text-align: right;"><i>9/14/2017</i></p>	<p>Annual Report and Financial Audit () Approve General Counsel Engagement () CS – ED Review ()</p> <p style="text-align: right;"><i>9/28/2016</i></p>	<p><i>NRTS Committee Meeting on Biogas-to-Energy (TBD)</i></p>
October 2017	<p><i>Discuss AMI Policies and Manual Read Charge</i> Discussion of impact on MFMM rate change (Tentative) Approve Employee Merit Pay for FY 2018 CS – ED Review ()</p> <p style="text-align: right;"><i>10/12/2017</i></p>	<p><i>Approve AMI Policies and Manual Read Charge</i> Q1 Financial Report () Strategic Trends Report () CS – ED Review ()</p> <p style="text-align: right;"><i>10/26/2017</i></p>	
November 2017	<p>Status of Action Items on Communications during Emergencies</p> <p style="text-align: right;"><i>11/9/2017</i></p>	<i>Holiday - no meeting</i>	
December 2017	<p>Discuss KPI Trends Affordability Outreach Program Update</p> <p style="text-align: right;"><i>12/14/2017</i></p>	<i>Holiday - no meeting</i>	
January 2018	<p>FY 19 Budget Calendar and Assumptions () Employee Health and Dental Insurance Update () CY 17 Biosolids Report</p> <p style="text-align: right;"><i>1/11/2018</i></p>	<p>Annual Lakes Recreation Report (regular agenda) () Q2 Financial Report () CIP Semiannual Report ()</p> <p style="text-align: right;"><i>1/25/2018</i></p>	

OWASA Board of Directors – 12 Month Board Meeting Schedule (May 19, 2017)

February 2018	Energy Management Plan Update CS - General Counsel Interim Review (C) <i>2/8/2018</i>	CS - General Counsel Interim Review (C) <i>2/22/2018</i>	
March 2018	FY 19 Draft Budget & Rates (C) Set date for Public Hearings – FY 19 Budget & Rates (C) CS - ED Interim Review (C) <i>3/8/2018</i>	FY 19 Draft Budget & Rates (C) CS – ED Interim Review (C) <i>3/22/2018</i>	
April 2018	Review Employee Health and Dental Insurance Renewal (C) FY 19 Draft Budget and Rates (C) Authorize staff to publish proposed rates (C) Appointment of the Nominating Committee(?) (C) <i>4/12/2018</i>	Q3 Financial Report (C) Appoint Audit Firm (C) <i>4/26/2018</i>	

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.
- 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 (May 19, 2017)

Abbreviations Used in Draft Schedule:

☐	Recurring agenda item (generally these are “required” items)	JLP	Jordan Lake Partnership
AMI	Advanced Metering Infrastructure	LRWSP	Long-Range Water Supply Plan
CE	Community Engagement	MST	Mountains-to-Sea Trail
CEP	Community Engagement Plan	MFMM	Multi-Family Master Meter
CIP	Capital Improvements Program	NRTS	Natural Resources/Technical Services
COLA	Cost of Labor Adjustment	Q	Quarter
CS	Closed Session of the Board	SOW	Scope of Work
CY	Calendar Year	TBD	To Be Determined
ED	Executive Director	WTP	Water Treatment Plant
FY	Fiscal Year	WWTP	Wastewater Treatment Plant

Current and Pending Key Projects and Stages

Project	Strategic Initiative	Project Lead	May-17	Jun-16	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18
AMI	6	Taylor	Contract											
Total Compensation Study		Glasgow	<i>Schedule To Be Determined</i>											
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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Agenda Item**• Rogers Road Sewer Operating Agreement with Orange County****Purpose**

- To approve an interlocal agreement between Orange Water and Sewer Authority and Orange County relating to operation of a sewer main extension project in the Rogers Road area.

Background

- In June 2014 and May 2015 at the request of Orange County, OWASA and the County entered into Interlocal Agreements relating to OWASA's assistance to the County in planning and design of the extension of the sewer system to serve the Rogers Road area.
- In December 2016, OWASA and Orange County entered into an interlocal agreement outlining the terms of OWASA's assistance to the County for the bidding and construction phases of the Rogers Road area sewer extension.
- Once constructed, Orange County will retain ownership of the pipes that connect to OWASA's wastewater system for a period of time as payment is made on the system's financing.
- Orange County and OWASA staff have developed the attached Interlocal Agreement outlining the terms of OWASA's assistance to Orange County for the operation of the Rogers Road area sewer extension. This Agreement was reviewed and approved by the County Attorney and OWASA's General Counsel.

Action Needed

- Approval for the Chair of the OWASA Board of Directors to execute the Interlocal Agreement Relating to Operation of a Sewer Main Extension Project in the Rogers Road Area with Orange County.

May 25, 2017




ORANGE WATER AND SEWER AUTHORITY

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

MEMORANDUM

TO: Board of Directors

THROUGH: Ed Kerwin 

FROM: Mary Darr, P.E.

DATE: May 19, 2017

SUBJECT: **Rogers Road Sewer Operating Agreement with Orange County**

Background

OWASA has been providing technical support for matters related to providing sewer service for the Historic Rogers Road area since 2007.

In June 2014 and May 2015 at the request of Orange County (County), OWASA and the County entered into Interlocal Agreements relating to OWASA's assistance to the County in planning and design of extension of the sewer system to serve the Rogers Road area. OWASA hired the consulting engineering firm URS Corporation (now part of AECOM) to design the extension of the sewer system.

In December 2016, OWASA and the County entered into an Interlocal Agreement relating to construction of the sewers to serve the Rogers Road area. OWASA staff is assisting the County with project management and oversight during bidding and construction. We anticipate the County will award a construction contract in June 2017. It will take about one year to complete construction. Through phased construction, some segments of the sewer system may be complete and available for connection before the entire project is finished in the summer of 2018.

These agreements stipulate that the County is responsible for payment of all costs of the project and will reimburse OWASA all reasonable engineering staff costs associated with overseeing and managing the project.

The County will maintain ownership of the sewer system being installed for the Rogers Road area until the debt has been retired. The County has requested OWASA operate and maintain the system on their behalf until such time system ownership is turned over to OWASA. County and OWASA staff drafted an Interlocal Agreement outlining the terms of OWASA's assistance to the County for the operation of the Rogers Road area sewer extension (Attachment 2). The Interlocal Agreement was reviewed and approved by the County Attorney and OWASA's General Counsel (Attachment 1).

Interlocal Agreement for Operating the Sewer System


The attached Interlocal Agreement stipulates the terms, provisions and conditions for OWASA to operate the Rogers Road area sewers. Key provisions of the Interlocal Agreement include:

- The sewer system will be constructed to OWASA standards and specifications.
- The wastewater will meet pretreatment standards (OWASA's Sewer Use Ordinance).
- OWASA's standard availability and connection fees will be paid to OWASA prior to making connection to the Rogers Road sewer system. Connections will be treated the same as OWASA customers and have same duties and responsibilities as OWASA customers.
- Connections to the Rogers Road sewer system will be considered OWASA customers and OWASA will bill the same rates as for all sewer customers.
- OWASA will have unrestricted use of revenue from connections.
- OWASA will operate, maintain, replace the sewer system and be responsible for cost of operation, maintenance and replacement.
- The sewer system can be extended in accordance with OWASA policies; standards and specifications; rates, fees and charges; etc.
- The sewer system, easements, rights, and privileges will be turned over to OWASA at a future date, not to exceed twenty years.

Recommendation

Staff and General Counsel recommend approval of the Agreement between Orange County and OWASA and authorizing the Chair of the OWASA Board of Directors to execute the Agreement.

Please let me know if you need additional information.



Mary Darr, P.E.
Operations Engineer

Attachment 1 - Letter from Robert Epting, OWASA General Counsel
Attachment 2 - Interlocal Agreement between Orange Water and Sewer Authority and Orange County Relating to Operation of a Sewer Main Extension Project in the Rogers Road Area

EPTING AND HACKNEY
ATTORNEYS AND COUNSELLORS AT LAW
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STEVE LACKEY
HATHAWAY S. PENDERGRASS

TELEPHONE 919-929-0323
FACSIMILE 919-929-3960

May 19, 2017

OF COUNSEL:
ELLEN B. SCOUTEN

Board of Directors
Orange Water and Sewer Authority
400 Jones Ferry Road
Carrboro, NC 27519

Re: Interlocal Agreement for Phase Three Services by OWASA to Orange County for
Operation and Maintenance of Historic Rogers Road Sewer Extension Project

Dear Board Members:

We are pleased to present for your approval the attached draft Interlocal Agreement between Orange County and OWASA, which describes the respective expectations and duties of Orange County and OWASA with respect to OWASA's operation and maintenance of the Rogers Road sewer main project being constructed by Orange County.

OWASA and County staff, and their respective Counsel, have been engaged for several months in the negotiation of this Agreement, which follows the format of the earlier Interlocal Agreement for Phase One, (preliminary engineering and planning phase), and Phase Two, (construction phase). The intent of this Third Phase of the Interlocal Agreements is to describe the terms and conditions upon which OWASA will accept, transfer, and treat wastewater being generated from the Project Area, to accept the owners and tenants of those properties served as OWASA customers, to charge and collect from those customers OWASA's regular rates as applicable to all other customers, and to bind the County to convey the Project improvements to OWASA once any debt incurred by the County to finance construction of the Project is paid off.

OWASA staff and General Counsel request your approval of this Agreement, and your authorization for its execution.

Sincerely,



Robert Epting
OWASA General Counsel

NORTH CAROLINA

ORANGE COUNTY

INTERLOCAL AGREEMENT

BETWEEN ORANGE WATER AND SEWER AUTHORITY AND ORANGE COUNTY
RELATING TO OPERATION OF A SEWER MAIN EXTENSION PROJECT IN THE ROGERS
ROAD AREA

This Interlocal Agreement is entered into by and between Orange Water and Sewer Authority (hereinafter "OWASA"), a special purpose entity of local government organized under Chapter 162A, North Carolina General Statutes, and the County of Orange (hereinafter "County"), organized under Chapter 153A of the North Carolina General Statutes.

WHEREAS, the County desires OWASA to operate the newly constructed sewer main extension Project ("Project") that the County will cause to be constructed and that this sewer main must serve certain properties located in the Rogers Road Service Area (hereinafter "RRSA"), and OWASA has agreed to do so, in accordance with the terms, conditions and provisions contained herein; and

WHEREAS, the RRSA, including the properties therein to be served in accordance with this Interlocal Agreement, are shown on Exhibit A, attached, which is hereby incorporated; the original residential lots and parcels to be served by this Project are sometimes referred to herein as the "Legacy Lots." Other lots or parcels which may be served by the Project improvements are also shown thereon.

NOW, THEREFORE, the parties agree as follows:

1. Construction of the Project to OWASA standards and specifications and payment of the costs of that system construction are the responsibility of County. OWASA will assist as requested by the County in construction inspection, and shall have the right of final approval for the completed construction, or to require final adjustments to the work, before any discharge is allowed into the existing OWASA collection system. The County represents and warrants that at the time the completed system is turned over to and accepted by OWASA for operation and maintenance, County will have paid, or made

provision for financing the payment of, all costs and expenses related to its construction, and County will hold OWASA harmless and indemnify it from any and all claims, demands, liens and judgments, including any costs or expenses incurred by OWASA in defense of any claims arising out of completion of construction of the Project. OWASA will hold County harmless and indemnify it from any and all claims, demands, liens and judgments, including any costs or expenses incurred by County in defense of any claims for damages caused by the negligence of OWASA employees, or any contractors or agents for whom it may be responsible, in OWASA's operation or maintenance of the Project.

2. After OWASA's approval and acceptance of the completed construction Project for operation and maintenance, OWASA agrees to accept wastewater meeting the requirements of its pretreatment standards and generated by customers within the RRSA that will be collected through the Project, and thence transferred by way of interconnects to the existing OWASA Sewer Collection System for conveyance to and treatment at OWASA's wastewater treatment facilities. After OWASA approves and begins to operate the new system, OWASA shall have the right to alter, maintain, and operate the Project Facilities (all sewer infrastructure constructed as part of the Project) in any manner it deems necessary to provide sewer collection service in this area, and in connection with its existing system. And, OWASA shall have the right, without cost to OWASA, to use the Project Facilities as part of its larger sewage collection system, including any extensions thereof to serve areas outside the RRSA. OWASA's design and review rules and processes, including the costs, fees and charges therefor, shall apply to any future development to be served through the Project Facilities. OWASA shall ensure the Project Facilities are not damaged by connection to or operation with the existing OWASA Sewer Collection System. OWASA shall be responsible for the costs of repair or restoration of Project Facilities if damage thereto is caused by connection to or operation with existing OWASA Sewer Collection System. OWASA shall own and be responsible for the wastewater collected through the Project Facilities, and shall have the right to use, re-use, treat, and dispose of that effluent as a part of OWASA's regular wastewater stream, in accordance with applicable laws, and regulation.

3. OWASA's regular availability and connection fees must be paid for each lot or parcel within the Project area, and any extensions thereto, before any such lot or parcel is connected and service is initiated. OWASA will permit connection of individual sewer services within the RRSA and permit and provide for continuation of sanitary sewer collection service by way of those individual connections for so long as OWASA's monthly service charges are paid, subject to OWASA's right to disconnect individual service connections upon the same conditions as are applied to OWASA customers throughout OWASA's existing customer service area. The customer accounts created throughout the RRSA shall be deemed regular OWASA customers, and the same service charges applicable to other OWASA customers shall apply to the customers connected in the RRSA.

4. Customers connecting properties located within the RRSA shall be entitled to the residential sanitary sewer collection services and benefits provided to customers in OWASA's existing customer service area. Customers connected within the RRSA shall have the same duties and obligations to obtain and maintain continuing service as are required of customers in OWASA's existing customer service area. No discrimination in rates, charges, or service shall be made with respect to whether OWASA customers are located within the RRSA as opposed to the rest of OWASA's existing customer service area.

5. After OWASA's final approval of the Project as constructed, OWASA will operate, maintain and replace, and be responsible for the costs of operation, including insurance, maintenance, and replacement of all of the components of that system, which costs shall be paid from OWASA's revenues. To the extent any claims may arise against third parties regarding warranty issues, or to the extent any insurance proceeds may become payable to the County for damages to the collection system, such funds shall first be made available to OWASA to be applied to the costs of repair or restoration of Project Facilities within the RRSA. After restoration of Project Facilities is achieved any remaining insurance proceeds shall be used for the sole purpose of paying Project debt. County shall insure the Project Facilities during the construction phase of the Project, and, if necessary as the Owner, thereafter until ownership of the Project Facilities is transferred to OWASA. County shall assign to OWASA all warranties it may acquire

arising out of the services and equipment provided as a result of planning, design and construction of the Project Facilities. To the extent any insurance proceeds or disaster relief funds may be payable for damages to the Project Facilities after acceptance for operation by OWASA, those proceeds shall be made available to OWASA, and shall be used by OWASA for expenses incurred in repairing and restoring operation of the Project Facilities. After repair and restoration of Project Facilities is achieved any remaining insurance proceeds shall be used for the sole purpose of paying Project debt.

6. Each party desiring to connect to the Project Facilities, including any further extensions thereof, shall make application to OWASA upon terms and conditions, and fees and charges, and using forms supplied by OWASA, to become a regular OWASA customer. OWASA shall bill and collect for that sewer service treating those connected within the RRSA as regular OWASA customers. Each such customer shall pay OWASA's usual fees and charges for such sewer connection and service, and shall otherwise be afforded the privileges afforded other OWASA customers, subject to the obligations imposed upon OWASA customers within the existing OWASA service area. OWASA shall receive and have the unrestricted use of all such revenues.

7. The foregoing conditions of service shall apply to all the original "Legacy" parcels within the existing residential area of the Rogers Road neighborhood, as shown on Exhibit A. Other fees, charges, and other conditions of service may be applied by Orange County, Chapel Hill, or Carrboro, for extensions which may be permitted to serve parcels other than the Legacy parcels. Nothing in this Agreement shall be construed to limit the authority of those local elected local bodies with respect to further extension of the system being constructed to serve the Legacy Parcels. And, OWASA has agreed that, upon payment to OWASA of its applicable fees, rates and charges, future extensions and connections as may be permitted by Carrboro, Chapel Hill, and Orange County may be made to the Project Facilities so as to provide service to properties beyond the boundaries of the original RRSA described in Exhibit A. Provided, however, that no further extensions shall be made or connected to the Project Facilities except after not less than sixty (60) days written notice to OWASA, and payment to

OWASA of all fees, rates and charges due OWASA under its then current schedule of fees, rates and charges.

8. It is presumed that County will finance the costs of construction of the Project, and that County will maintain ownership of the Project Facilities paid for from such financing until that indebtedness is satisfied, not to exceed twenty years. County shall convey the Project Facilities, including all easements, rights, and privileges related thereto, to OWASA when that indebtedness is paid and satisfied, and the Project Facilities shall be owned and continue to be operated as a part of the OWASA Sewer Collection System thereafter. If the County does not finance the cost of the Project Facilities, the County will convey all of its rights, title, and interests therein, including easements for such Project Facilities, to OWASA when OWASA approves and accepts them as constructed, and before OWASA begins to operate the Project Facilities.

9. All amendments to this agreement shall be approved by both parties and must be in writing.

The parties have entered into this Interlocal Agreement this _____ day of _____, 2017.

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ORANGE COUNTY

ORANGE WATER AND SEWER AUTHORITY

Mark Dorosin, Chair
Board of County Commissioners

John A. Young, Chair
Board of Directors

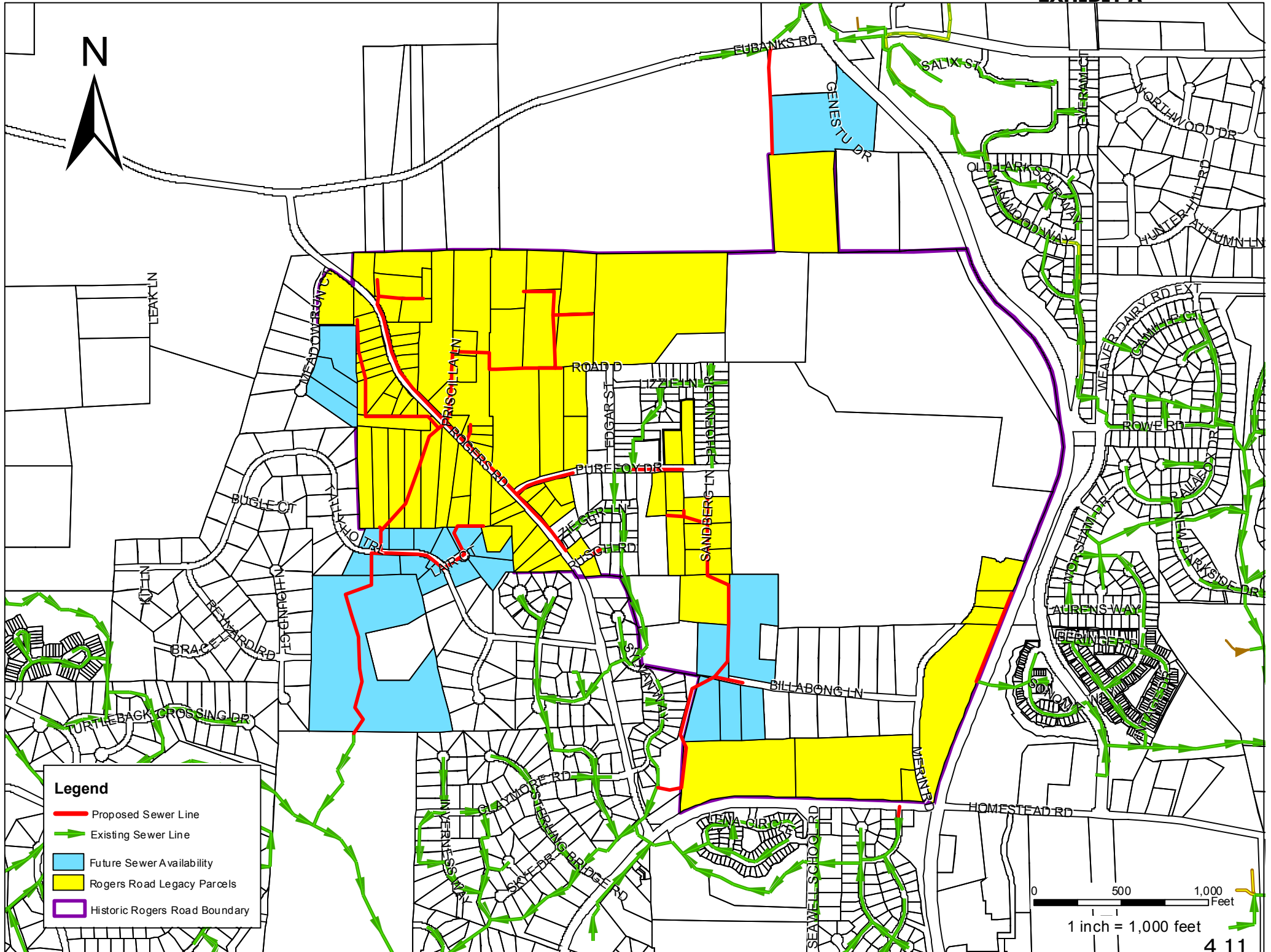
Pre-audit Certification by
County Finance Officer:

Pre-audit Certification by
OWASA Finance Officer:






Approved as to form and legality:

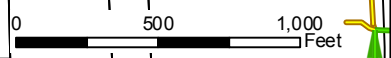
Orange County Attorney

OWASA General Counsel



Legend

-  Proposed Sewer Line
-  Existing Sewer Line
-  Future Sewer Availability
-  Rogers Road Legacy Parcels
-  Historic Rogers Road Boundary



1 inch = 1,000 feet

Agenda Item

- **Resolution Awarding a Construction Contract for the Water Treatment Plant Filter Media and Backwash Improvements Project**

Purpose

- To request the Board's approval to award a construction contract for the Water Treatment Plant (WTP) Filter Media and Backwash Improvements Project.

Background

- The Project consists of replacement of sand and anthracite media in ten filters and piping modifications for backwash system improvements at the WTP.
- Plans and specifications for the construction of this project were prepared by Hazen and Sawyer ("Engineer").
- Prospective bidders for the construction contract were screened through a prequalification process. Minority outreach was performed for the prequalification process in accordance with standard practice. Eight bidders were prequalified.
- Bids from five prequalified contractors were received and opened on May 11, 2017. The apparent low bidder was Dellinger, Inc. (Dellinger) with a bid of \$770,180.00. The Engineer's estimate was \$1,024,842.00.
- The Engineer evaluated bids and recommended award of the construction contract to Dellinger.

Staff Recommendation

- Staff recommends that the Board of Directors adopt the attached resolution awarding the construction contract for the Water Treatment Plant Filter Media and Backwash Improvements Project to Dellinger.

May 25, 2017




ORANGE WATER AND SEWER AUTHORITY

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

MEMORANDUM

TO: Board of Directors

THROUGH: Ed Kerwin 

FROM: Vishnu Gangadharan, P. E.

DATE: May 17, 2017

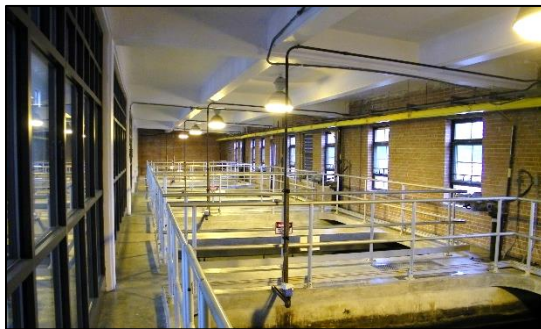
SUBJECT: Award of a Construction Contract for the Water Treatment Plant Filter Media and Backwash Improvements Project

Purpose

This memorandum recommends that OWASA Board award a construction contract to Dellinger, Inc. (“Dellinger”) for the construction of the Water Treatment Plant (WTP) Filter Media and Backwash Improvements Project (“Project”).

Background

Following a sedimentation or clarification process at the WTP, water is filtered through ten dual-media (sand and anthracite) filters which have a total surface area of 3,880 square feet with a capacity of 20 million gallons per day. Particles captured by the sand media in the filters are flushed several times a week through a backwashing process which restores most of the filtration capacity of the media. Testing determined that the sand media, originally installed in the early 2000’s, was nearing the end of its useful life and recommended replacement. The Project provides for replacement of media in all ten filters as well as redundancy improvements for the backwashing process.



Filters 1 through 4



Existing Backwash Pump

The need for replacement of media in all ten filters was firmly established by the FY 2016 testing. With respect to the backwash process improvements, OWASA staff and its consultant Hazen and Sawyer reviewed several conceptual improvement alternatives including pump replacement, installation of an additional backwash pump, and piping modifications to increase system redundancy. Detailed testing of the existing backwash pump demonstrated its ability to meet required performance, and the evaluation determined the piping modifications to be the best alternative. In April 2017, Hazen and Sawyer completed the design for the project to include filter media replacement and piping modifications for backwash improvements.

Advertising and Bidding

Prospective bidders were screened through our standard prequalification process, which involved having interested contractors submit a package outlining their qualifications, including past performance on similar projects, credentials of their management team, safety record, etc. Only those firms that clearly demonstrated the capability to adequately perform the project work were invited to submit bids.

To screen prospective bidders, staff posted a Request for Qualifications (RFQ) in February 2017. After review, eight contractors were prequalified to bid on the project. The invitation for bids was issued to the prequalified contractors on April 20, 2017. A total of five bids were received on May 11, 2017 and opened publicly. Dellinger was the low, responsive and responsible bidder for the project with a bid of \$770,180.00. A copy of the certified bid tabulation is attached with the Engineer's recommendation to award (Attachment 1), and the results are summarized below:

Dellinger, Inc.	\$770,180.00
Turner Murphy Co., Inc	\$870,019.00
English Construction Company, Inc.	\$906,000.00
RTD Construction, Inc.	\$992,275.00
Haren Construction Company, Inc.	\$1,017,000.00
<i>Engineer's Final Estimate</i>	<i>\$1,024,842.00</i>

Minority and Women Business Enterprise (MWBE) Participation

OWASA's Minority Business Participation Outreach Plan and Guidelines include all of the statutory requirements from the State of North Carolina, and specifies a 10% goal for participation by minority businesses. In keeping with standard practice, OWASA staff took several actions to solicit minority participation in this contract, including advertising the RFQ in the Greater Diversity News, North Carolina Institute of Minority Economic Development, North Carolina Department of Administration Historically Underutilized Businesses, OWASA's website, and plan rooms, and requiring bidders to follow "good

faith” efforts to solicit participation by minority subcontractors.

The apparent low bidder (Dellinger) provided documentation of good faith efforts and identified MWBE participation of \$144,530 (18.8% of the total bid amount).

Bid Analysis and Recommendation

The five bids received were spread over a moderate range (the high bid was 32% higher than the low bid). The low bid was about 25% below the Engineer's final estimate, which included a 10% contingency. We believe that the low bid represents a reasonable and competitive cost for the construction of the Project.

Dellinger’s ability to complete this project successfully was evaluated thoroughly during the prequalification process, and they demonstrated sufficient qualifications in past project performance, personnel qualifications/experience, reference checks, and all other rated categories. OWASA staff also determined that Dellinger’s safety performance, relevant project experience, bonding capacity, and other non-rated categories met our requirements.

Hazen and Sawyer’s recommendation that the construction contract for this project be awarded to Dellinger is attached along with the certified bid tabulation (Attachment 1). OWASA staff strongly concurs with this recommendation, and requests the Board’s adoption of the attached resolution (Attachment 2) awarding the construction contract to Dellinger.

Please let me know if you have any questions or need additional information. I can be reached at 919-537-4248 or vgangadharan@owasa.org. Thank you.



Vishnu Gangadharan, P.E.
Engineering Manager – Capital Projects

Attachment 1 Engineer’s Recommendation for Award and Certified Bid Tabulation
Attachment 2 Resolution

May 12, 2017

Jeremy Rivenbark, PE
Orange Water and Sewer Authority
400 Jones Ferry Road
Carrboro, NC 27510

Re: Recommendation of Award for the Jones Ferry Road WTP Filter Media Replacement and Backwash Improvements

Dear Mr. Rivenbark:

On May 11, 2017, the Orange Water and Sewer Authority (OWASA) received and opened five bids for the Filter Media Replacement and Backwash Improvements Project. All bids are believed to be both responsive and competitive as set forth in the attached Bid Tabulation. The lowest responsive bid was submitted by Dellinger Incorporated with a Total Base Bid Amount of \$770,180.

Dellinger Incorporated was pre-qualified for this bid. We have reviewed the bid documentation submitted by Dellinger Incorporated and find they complied with the Instructions to Bidders. Therefore, we recommend that the OWASA award the Project to Dellinger in the amount of \$770,180.

If you have any questions or require additional information, please contact me at 919-863-9258 or via email at dbriley@hazenandsawyer.com.

Very Truly Yours,



David S. Briley, PE
Senior Associate

Enclosure: Certified Bid Tabulation

cc: Tom Tant, Hazen
Catherine Keenan, Hazen

BID TABULATION

ORANGE WATER AND SEWER AUTHORITY - JONES FERRY ROAD WATER TREATMENT PLANT - FILTER MEDIA REPLACEMENT AND BACKWASH IMPROVEMENTS

Bid Opening: Thursday May 11, 2017 at 2:00 pm

				Dellinger, Inc. P.O. Box 929 2631 Old Charlotte Hwy Monroe, NC 28110		Turner Murphy Co., Inc. P.O. Box 3490 Rock Hill, SC 29732		English Construction Company, Inc. 615 Church Street Lynchburg, VA 24505		RTD Construction, Inc. 38038 North Avenue Zephyrhills, FL 33542		Haren Construction Company, Inc. P.O. Box 350 1715 Highway 411 North Etowah, TN 37331	
Bid Bond				5%		5%		5%		5%		5%	
Addenda Acknowledged				1-2		1-2		1-2		1-2		1-2	
SINGLE-PRIME CONTRACT BID													
No.	Description	Unit	QTY	Unit Price	Extended Total	Unit Price	Extended Total	Unit Price	Extended Total	Unit Price	Extended Total	Unit Price	Extended Total
1	Lump Sum Base Bid Price	-	-	---	\$686,395.00	---	\$791,519.00	---	\$823,460.00	---	\$878,675.00	---	\$934,500.00
2	Solids Removal from Filter Flume, Backwash Tank 1 and 2, and Solids Equalization Tanks	CY	100	\$337.85	\$33,785.00	\$285.00	\$28,500.00	\$325.40 ^A	\$32,540.00	\$636.00	\$63,600.00	\$325.00	\$32,500.00
3	Contingency Allowance	----	---		\$50,000	---	\$50,000	---	\$50,000	---	\$50,000	---	\$50,000
TOTAL BASE BID PRICE				\$770,180.00		\$870,019.00		\$906,000.00		\$992,275.00		\$1,017,000.00	

A The submitted unit price of \$325.00 was adjusted to match the submitted extended total for Item 2 and the submitted Total Base Bid Price in accordance with Specification Section 00 21 15 Article 13 Section 13.01.B.

CERTIFICATION

The Bids tabulated herein were opened and read aloud at 2:00 p.m. on the 11th day of May 2017, in the Administrative Offices of the Orange Water and Sewer Authority at 400 Jones Ferry Road, Carrboro, NC 27510. The tabulation is correct in that it contains the bid prices as presented on the original Bid Form of each Bidder.



[Signature]
 David S. Briley, PE
 Senior Associate

RESOLUTION AWARDING A CONSTRUCTION CONTRACT FOR THE FILTER MEDIA AND BACKWASH IMPROVEMENTS PROJECT

WHEREAS, there is a need to replace the filter media and improve the filter backwash system at the Jones Ferry Road Water Treatment Plant; and

WHEREAS, plans and specifications for the construction of this project have been prepared by Hazen and Sawyer; and

WHEREAS, advertisement for contractor qualifications was published in February 2017 on the websites of McGraw-Hill/Dodge, Construction Connect, the North Carolina Institute of Minority Economic Development, North Carolina Department of Administration, Greater Diversity News, and OWASA, and eight contractors were qualified to bid; and

WHEREAS, on April 20, 2017, the prequalified contractors were formally invited to submit construction bids for the project, and five bids were received; and

WHEREAS, Dellinger, Inc. of Monroe, North Carolina has been determined to be the low responsive, responsible bidder for the project; and

WHEREAS, on June 9, 2016 the Board approved a resolution authorizing funds for Capital Improvement Projects, including funds for this project;

NOW, THEREFORE, BE IT RESOLVED:

1. That the Orange Water and Sewer Authority Board of Directors awards the construction contract to Dellinger, Inc., the low responsive, responsible bidder for the Filter Media and Backwash Improvements Project, in accordance with the approved plans and specifications, in the amount of \$770,180.00, subject to such change orders as may apply.

2. That the Executive Director be, and hereby is, authorized to execute said contract, subject to prior approval of legal counsel, and to approve and execute change orders and such documents as may be required in connection with the construction contract.

Adopted this 25th day of May 2017.

John A. Young, Chair

ATTEST:

Barbara M. Foushee, Secretary

Orange Water and Sewer Authority

Work Session of the Board of Directors

April 13, 2017

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held a work session on Thursday, April 13, 2017 at 6:00 p.m. in the Community Room in OWASA's Administration Building, 400 Jones Ferry Road, Carrboro.

Board Members present: John A. Young, Chair; Barbara Foushee, Secretary; Yinka Ayankoya; Terri Buckner; David Moreau; Bob Morgan; and Heather Payne. Board Members absent: Jeff Danner, Vice Chair; and Ruchir Vora.

OWASA staff present: Ed Kerwin; Mary Darr; Monica Dodson; Greg Feller; Alicia Grey; Stephanie Glasgow; Katie Harrold; Simon Lobdell; Kenneth Loflin; Andrea Orbich; Ruth Rouse; Todd Taylor; Stephen Winters; and Robert Epting, Esq., Epting and Hackney.

Others present: Daria Barazandeh; Margaret Holton, Water, Sewer and Reclaimed Water Coordinator, University of North Carolina at Chapel Hill; Rebecca King; Debbye Krueger, NC Department of Health and Human Services; James Ostick; Wendy Schwade; Rhonda Stephens, NC Oral Health Section; Claire Viadro; Tim Wright; and Tanner Anderson, Callie Badu, Jackson Boone, Ivy Brisbin, Brittney Ciszek, Don DiMichele, Marc Gonzalez, Fred Harris, Melanie Hebert, Brittany Klein, Kelsey Knight, Lew Lampirus, Jordan Mays, Alexander Nicopoulos, Yuri Oh, Kenen Sanchez, Avie Smith, Sarah Spaitenstein, Annetta Streater, Darby Stroud, Meghan Valdes, Darryn Weinstein, and Andrea Zandona, UNC School of Dentistry.

There being a quorum present, Chair John Young called the meeting to order.

* * * * *

Motions

1. Robert Morgan made a motion to approve the Minutes of the March 9, 2017 Work Session of the Board of Directors; second by Heather Payne and unanimously approved.
2. Robert Morgan made a motion to approve the Minutes of the March 23, 2017 Meeting of the Board of Directors; second by Heather Payne and unanimously approved.
3. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Awarding a Construction Contract for the Eastowne, Eubanks and Meadowmont 1 Pump Station Rehabilitation Project. (Motion by Robert Morgan, second by Heather Payne and unanimously approved.)
4. Terri Buckner made a motion that Board direct the Executive Director to implement staff's Action Plan to improve the safety and reliability of the fluoride feed system at the Jones Ferry

Road Water Treatment Plant; to keep the Board and public advised as to staff's progress towards completion of the improvements; and to announce in advance the date fluoridation of OWASA drinking water will resume. The motion was seconded by Barbara Foushee and the passed with a vote of six to one with Yinka Ayankoya opposed because of the plan cost and she does not want fluoride in the drinking water.

5. Terri Buckner made a motion that the Board of Directors approve the Energy Management Plan and authorize the Executive Director to proceed with the projects, studies, and strategies described in the Plan, including incorporation of the proposed projects and studies in the Fiscal Year 2018 Operating Budget and Capital Improvements Budget excluding \$50,000 to engage a consulting firm to conduct a technical review of biogas-to-energy options; the Executive Director will provide for, at least, an annual update of the Plan, and inform the Board if and when significant changes occur in underlying assumptions, funding and partnership opportunities, etc. Second by Dave Moreau and unanimously approved.

6. Heather Payne made a motion that the Natural Resources and Technical Services Committee meet in the fall of 2017 to discuss options for converting biogas at the Mason Farm Wastewater Treatment Plant to useable fuel; second by Barbara Foushee and unanimously approved.

7. Robert Morgan made a motion that staff assimilate information regarding the resources and time commitment needed to issue a Request for Proposal for banking services; second by Terri Buckner and unanimously approved.

Announcements

John Young said that 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; none were disclosed.

Mr. Young said that the full Board will serve as the Nominating Committee in accord with the Board's recent decision, and that Yinka Ayankoya will Chair the Committee.

Terri Buckner reminded the Board that a new OWASA appointment to Orange County's Intergovernmental Parks Work Group will be necessary when her term ends in June 2017. The Board agreed to appoint a new member later this year.

David Moreau said that he will no longer be a Chapel Hill resident in August 2017 and that he will withdraw his application to the Town of Chapel Hill for reappointment to the OWASA Board of Directors.

Item One: Quarterly Report on Attendance at Board and Committee Meetings

The Board accepted the Quarterly Report on Attendance at Board and Committee meetings as an information item.

Item Two: Minutes

Robert Morgan made a motion to approve the Minutes of the March 9, 2017 Work Session of the Board of Directors; second by Heather Payne and unanimously approved. Please see Motion No. 1 above.

Item Three: Minutes

Robert Morgan made a motion to approve the Minutes of the March 23, 2017 Meeting of the Board of Directors; second by Heather Payne and unanimously approved. Please see Motion No. 2 above.

Item Four: Resolution Awarding a Construction Contract for the Eastowne, Eubanks and Meadowmont 1 Pump Station Rehabilitation Project

Robert Morgan made a motion to approve the resolution; second by Heather Payne and unanimously approved. Please see Motion No. 3 above.

Item Six: Action Plan to Improve the Fluoride Feed System

The Board agreed to discuss this item sooner because of the large number of people attending the meeting for this item.

Annetta Streater, Tim Wright, Don DiMichele and Frederick Harris expressed support for fluoridating OWASA's drinking water.

Claire Viadro opposed fluoridation and wondered if there was an opt out choice for fluoride.

After discussion, the Board agreed and approved the Action Plan proposed by staff.

Terri Buckner made a motion that Board direct the Executive Director to implement staff's Action Plan to improve the safety and reliability of the fluoride feed system at the Jones Ferry Road Water Treatment Plant; to keep the Board and public advised as to staff's progress towards completion of the improvements; and to announce in advance the date fluoridation of OWASA drinking water will resume. Second by Barbara Foushee and the passed with a vote of six to one with Yinka Ayankoya opposed because of the plan cost and she does not want fluoride in the drinking water. Please see Motion No. 4 above.

Item Five: Review Employee Health and Dental Insurance

The Board received a status report on discussions with Blue Cross Blue Shield of North Carolina regarding renewal of health and dental insurance with currently negotiated cost increases of 9.0 percent and 6.8 percent respectively.

After discussion, the Board requested evaluation of additional options for employee health insurance for the May 11, 2017 Board meeting and that staff provide the cost detail for employee health insurance in advance of the meeting.

Item Seven: Discuss Draft Energy Management Plan

After discussion, the Board approved the Energy Management Plan with strategies to reduce OWASA's use of electricity and natural gas (with the exception of the proposal to engage an outside consultant to assist with evaluating options for a biogas-to-energy project at the Mason Farm Wastewater Treatment Plant).

Terri Buckner made a motion that the Board of Directors approve the Energy Management Plan and authorize the Executive Director to proceed with the projects, studies, and strategies described in the Plan, including incorporation of the proposed projects and studies in the Fiscal Year 2018 Operating Budget and Capital Improvements Budget excluding \$50,000 to engage a consulting firm to conduct a technical review of biogas-to-energy options; the Executive Director will provide for, at least, an annual update of the Plan, and inform the Board if and when significant changes occur in underlying assumptions, funding and partnership opportunities, etc. Second by Dave Moreau and unanimously approved. Please see Motion No. 5. above.

Heather Payne made a motion that the Natural Resources and Technical Services Committee meet in the fall of 2017 to discuss options for converting biogas at the Mason Farm Wastewater Treatment Plant to useable fuel; second by Barbara Foushee and unanimously approved. Please see Motion No. 6 above.

Item Eight: Review Board Work Schedule

Robert Morgan made a motion that staff estimate the resources and time commitment needed to issue a Request for Proposals for banking services; second by Terri Buckner and unanimously approved. Please see Motion 7 above.

The Board agreed to defer the discussion of Advanced Metering Infrastructure (AMI) manual read option and to bundle it with other AMI-related policies to be considered by the Board later in the year.

The Board agreed to discuss the Land Management Overview on May 25, 2017.

Item Nine: Executive Director will Summarize the Key Staff Action Items from the Work Session

Ed Kerwin said the items for staff follow-up are:

- Remind the Board to make an appointment to Orange County's Intergovernmental Parks Work Group this summer;
- Implement the fluoride feed system improvement Action Plan and keep the Board and public informed;
- Provide the Board cost detail for employee health insurance;

- Prepare an evaluation of options for employee health insurance;
- Implement the Energy Management Plan as approved;
- Schedule a Natural Resources and Technical Services Committee meeting in the fall of 2017 discuss options for converting biogas at the Mason Farm Wastewater Treatment Plant to useable fuel;
- Staff will provide the Board information about the resources and time commitment needed to issue a request for proposals (RFP) for banking services;
- Reschedule and bundle the AMI manual read option with other AMI-related policies for consideration by the Board later in the year; and
- Reschedule the Land Management Overview discuss for the May 25, 2017 Board meeting.

Item Ten: Closed Session

Without objection, the Board of Directors convened a Closed Session for the purpose of discussing a personnel matter.

The meeting was adjourned at 9:20 p.m.

Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachments

Orange Water and Sewer Authority

Meeting of the Board of Directors

April 27, 2017

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held a regular meeting on Thursday, April 27, 2017 at 7:00 p.m. in the Council Chamber in the Chapel Hill Town Hall, 405 Martin Luther King Jr. Boulevard, Chapel Hill.

Board Members present: John A. Young (Chair), Jeff Danner (Vice Chair), Barbara Foushee (Secretary), Yinka Ayankoya, Terri Buckner, David Moreau and Ruchir Vora. Board Members absent: Robert Morgan and Heather Payne.

OWASA staff present: Ed Kerwin, Mary Darr, Greg Feller, Vishnu Gangadharan, Stephanie Glasgow, Robin Jacobs (Epting and Hackney), Andrea Orbich, Ruth Rouse, Mary Tiger, Todd Taylor, Stephen Winters and Robert Epting (Epting and Hackney).

Others present: Elijah Ayankoya, Alice Boyle, Zachary Davidson, Eleanor Dillon, Parker Emmerson, Braxton Foushee, Margaret Holton (Water, Sewer and Reclaimed Water Coordinator, University of North Carolina at Chapel Hill), Micah Intrator, Sharon Reese, Lisa Stauffer, Corey Sturmer, Claire Viadro and Lamont Wilkins.

There being a quorum present, Chair John Young called the meeting to order.

* * * * *

Motions

1. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Awarding Audit Contract to Martin Starnes & Associates, CPAs, P.A. and Authorizing Chair of the Board of Directors and the Finance Officer to Execute Said Contract. Resolution so titled attached hereto and made a part of these minutes. (Motion by Dave Moreau, second by Barbara Foushee and unanimously approved.)
2. Dave Moreau made a Motion to approve the Minutes of the February 17, 2017 Special Work Session of the Board of Directors; second by Barbara Foushee and unanimously approved.
3. Dave Moreau made a Motion to approve the Minutes of the April 13, 2017 Closed Session of the Board of Directors; second by Barbara Foushee and unanimously approved.
4. Terri Buckner made a motion to approve in advance of public hearings scheduled for May 25, 2017, the Board of Directors hereby authorizes staff of the Orange Water and Sewer Authority to publish information about the FY 2018 proposed Budget and Schedule of Rates, Fees and Charges; second by Jeff Danner and unanimously approved.
5. Terri Buckner made a motion to support staff's proposal to accept the low-interest loans from the State of North Carolina; second by Barbara Foushee and unanimously approved.

* * * * *

Announcements

Conflict of Interest

John Young said 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 at this time; none were disclosed.

Wastewater Management Video

Ed Kerwin said OWASA has developed with Digital P Media in Cary a video which explains wastewater collection, treatment and recycling in simple terms. The video will be posted on the OWASA website and publicized to customers.

Petitions and Requests

John Young reminded the public that on March 9, 2017, the OWASA Board of Directors decided to continue the current policy of fluoridating drinking water and that on April 13, 2017, the Board approved the Action Plan for improvements to the safety and reliability of the fluoride feed system at the Jones Ferry Road Water Treatment Plant.

Corey Sturmer opposed fluoridation of drinking water.

Micah Intrator opposed fluoridation of drinking water.

Lamont Wilkins opposed fluoridation of drinking water.

Parker Emmerson opposed fluoridation of drinking water.

Zachary Davidson opposed fluoridation of drinking water.

Eleanor Dillon opposed fluoridation of drinking water.

Claire Viadro opposed fluoridation of drinking water.

The Board heard the petitions and took no action.

Item One: 12 Month Board Meeting Schedule

The Board received this as an information item.

Item Two: Resolution Awarding Audit Contract to Martin Starnes & Associates, CPAs, P.A. and Authorizing Chair of the Board of Directors and the Finance Officer to Execute Said Contract

Dave Moreau made a motion to approve the resolution, second by Barbara Foushee and unanimously approved. Please see Motion No. 1 above.

Item Three: Minutes

Dave Moreau made a motion to approve the Minutes of the February 17, 2017 Special Work Session of the Board of Directors; second by Barbara Foushee and unanimously approved. Please see Motion No. 2 above.

Item Four: Minutes

Dave Moreau made a motion to approve the Minutes of the April 13, 2017 Closed Session of the Board of Directors; second by Barbara Foushee and unanimously approved. Please see Motion No. 3 above.

Item Five: Review Draft Fiscal Year 2018 Budget, Rates, and Reserves and Authorize Staff to Publish Draft Fiscal 2018 Budget and Rates Information

Stephen Winters, Director of Finance and Customer Service, provided a presentation on the draft Fiscal Year (FY) 2018 budget and proposed rate changes, and information related to OWASA's financial reserve policy and the opportunity to receive low-interest loans from the State.

After discussion, the Board requested follow-up responses via e-mail regarding residential sewer only customers and the low-interest State loans; authorized staff to publicize proposed budget and rate information; and agreed to schedule a discussion of the reserves policy later this year.

Terri Buckner made a motion to approve in advance of public hearings scheduled for May 25, 2017, the Board of Directors hereby authorizes staff of the Orange Water and Sewer Authority to publish information about the FY 2018 proposed Budget and Schedule of Rates, Fees and Charges; second by Jeff Danner and unanimously approved. Please see Motion No. 4 above.

The proposed FY 2018 Budget includes no increase in monthly water, sewer and reclaimed water rates. If approved, FY 2018 will be sixth consecutive year for which the monthly rates remain unchanged.

Adjustments are proposed for service availability fees. The proposed changes are based on cost of service principles and an updated calculation of those costs. Reductions are proposed for all water service availability fees. Reductions are also proposed for most residential sewer availability fees and increases are proposed for all non-residential customers and multi-family properties that are served by large meters.

Adjustments are also proposed for charges for miscellaneous services; the adjustments are based on changes in the costs of providing the services.

Terri Buckner made a motion to support staff's proposal to accept the low-interest loans from the State of North Carolina; second by Barbara Foushee and unanimously approved. Please see Motion No. 5 above.

Item Six: Approach to Advance Employee Compensation Based on Performance

Stephanie Glasgow, Director of Human Resources and Safety, presented a proposed approach to move employees' compensation more quickly within pay ranges based on performance.

After discussion, the Board agreed that additional discussion is needed and that as the next step, the Human Resources Committee will meet to discuss long-term approach to employee compensation.

Item Seven: Opportunities to Improve Strategic Communications During OWASA-Related Emergencies

The Board accepted staff's Action Plan to improve strategic communications and agreed that staff will provide a status report in the fall of 2017.

Item Eight: Financial Report for the Nine Month Period Ended March 31, 2017

The Board received this as an information item.

Item Nine: Executive Director Will Summarize the Key Action Items from the Board Meeting and Note Significant Items for Discussion and/or Action Expected at the Next Meeting

Ed Kerwin summarized the meeting as follows:

- May 11, 2017 Work Session will include the following items:
 - o Review Advanced Metering Infrastructure System Procurement Contract;
 - o Discuss employee health and dental insurance renewal;
 - o Discuss employee merit pay for Fiscal Year 2018;
 - o Award the Rogerson Drive Pump Station Rehabilitation Contract;
 - o Schedule a discussion of the reserves policy later this year;
- Provide answers to questions regarding the low-interest loans and sewer only customers via e-mail;
- Schedule Human Resources Committee to discuss long-term approach to employee compensation; and
- Schedule status report on action items to improve strategic communication during OWASA-related emergencies in the fall.

The meeting was adjourned at 9:33 p.m.

Respectfully submitted,

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachment

Orange Water and Sewer Authority

Closed Session of the Board of Directors

May 11, 2017

The Board of Directors of Orange Water and Sewer Authority met in Closed Session on Thursday, May 11, 2017, following the Board meeting.

Board Members present: John A. Young, Chair; Barbara M. Foushee, Secretary; Yinka Ayankoya; Terri Buckner; David (Dave) Moreau; Robert Morgan; and Heather Payne.
Board Members absent: Jeff Danner, Vice Chair; and Ruchir Vora.

Staff present: Ed Kerwin, Executive Director.

Item One

The Board of Directors met in Closed Session with the Executive Director to discuss his semiannual performance review.

No official action was taken at the meeting.

The meeting was adjourned at 8:42 P.M.

Robert Morgan, Chair
Human Resources Committee

Agenda Item

- **Televising OWASA Board of Directors' Meetings**

Purpose

- In response to a petition from Mr. Braxton Foushee at the March 9, 2017, OWASA Board meeting, the Board asked staff to evaluate options for live viewing and videoing all OWASA Board meetings as part of the Fiscal Year 2018 budget review process.

Background

- The Board discussed televising all Board meetings previously in 2012. On February 23, 2012, the Board deferred the item to the Outreach and Education Committee to solicit feedback from customers. The Outreach and Education Committee agreed on March 22, 2012, that no further action would be taken until receiving the results of the 2012 customer satisfaction survey which included a question about how often customers watch televised Board meetings.
- The OWASA Board meets on the second Thursday of the month at 6:00 p.m. and on the fourth Thursday of the month at 7:00 p.m. The first meeting of the month is held in the OWASA Community Room in Carrboro and is not televised. The second meeting of the month is held in the Council Chambers at Chapel Hill Town Hall and is televised locally on Time Warner Cable (Spectrum), AT&T U-Verse, and live streamed on the Town of Chapel Hill website's Board Videos Page.
- The Board discussed this topic on May 11, 2017 and requested that Mr. Foushee be invited to the May 25, 2017 meeting to receive his comments.
- Review options to televise the first Board meeting of the month and provide direction to staff.

Action Needed

- Receive input from Mr. Foushee, Board discussion and direction to staff.

May 25, 2017



ORANGE WATER AND SEWER AUTHORITY

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

MEMORANDUM

TO: OWASA Board of Directors

Through: Ed Kerwin *EKL*

From: Andrea Orbich

Date: May 18, 2017

Subject: Televising OWASA Board of Directors' Meetings

Purpose

In response to a petition from Mr. Braxton Foushee at the March 9, 2017, OWASA Board meeting, the Board asked staff to evaluate options for live viewing and videoing all OWASA Board meetings as part of the Fiscal Year 2018 budget review process.

Background

The Board discussed televising all Board meetings previously in 2012. On February 23, 2012, the Board deferred the item to the Outreach and Education Committee to solicit feedback from customers. The Outreach and Education Committee agreed on March 22, 2012, that no further action would be taken until receiving the results of the 2012 customer satisfaction survey which included a question about how often customers watch televised Board meetings.

The results of the survey may be found [here](#) ([comments here](#)). The Board took no further action.

The OWASA Board meets on the second Thursday of the month at 6:00 p.m. and on the fourth Thursday of the month at 7:00 p.m. The first meeting of the month is held in the OWASA Community Room in Carrboro and is not televised. The second meeting of the month is held in the Council Chambers at Chapel Hill Town Hall and is televised locally on Time Warner Cable (Spectrum), AT&T U-Verse, and live streamed on the Town of Chapel Hill website's Board Videos Page (<http://www.townofchapelhill.org/town-hall/government/boards-commissions/board-videos>) at a cost of \$450 per meeting.

Videos of the Board meetings held at Chapel Hill since March 2010 can be viewed on the OWASA website Board of Directors' Meetings webpage (<http://www.owasa.org/board-of-directors-meetings>).

Possible options to televise the first Board meeting of the month are below:

Option 1 – Meet at Chapel Hill Town Hall Council Chambers

- Room is available in FY2018 at no cost, and the meetings can be televised for local cable viewing at a cost of \$450 (\$450 when meetings end prior to 8:30 p.m./\$620 when meetings end after 8:30 p.m.).
- Board Committee meetings held prior to the Board meeting can be held in the first-floor conference room.

Option 2 – Meet at Carrboro Town Hall Board Room

- Room is available in FY2018 at no cost, and the meetings can be televised for local cable viewing at a cost of \$450 (\$450 when meetings end prior to 8:30 p.m./\$620 when meetings end after 8:30 p.m.).
- Currently, there are seven chairs and microphones for the Board of Aldermen, but a folding table and two additional chairs with microphones can be added to accommodate the full OWASA Board (see picture #1 [here](#)).
- Board Committee meetings held prior to Board meetings could be held in one of two conference rooms at Town Hall (pictures #2 and #3 [here](#)). However, these conference rooms cannot comfortably accommodate a large crowd (>12 in attendance). Committee meetings could also be held in the Board Room, though the room is not well suited for this purpose.

Option 3 – Meet at the Southern Human Services Center (SHCS) Board Room

- At this time, the SHCS Board Room is available for the July, August and October 2017 meetings and all meetings in 2018 through June.
- Cost to reserve the Board Room per meeting is about \$250 (*other fees may apply*).
- Cost to televise from SHSC is of \$450 (\$450 when meetings end prior to 8:30 p.m./\$620 when meetings end after 8:30 p.m.).
- Board Committee meetings held prior to the Board meeting can be held in the SHCS Board Room.

Option 4 – Televise Board Meetings from the OWASA Community Room

Option 4.a – Contract Broadcasting Equipment and Services

- Cost to televise and record each meeting with Velasquez Digital Media's equipment is about \$1,200 (includes a crew, two cameras, and tricaster for livestream).
- Cost to install a cable data line from Time Warner Cable is to be determined.

Option 4.b – OWASA Purchases Broadcasting Equipment

- Construct a small room in the Community Room for recording equipment, cameras and other equipment is about \$100,000 (2012 estimate, updated amount is to be determined).
- Cost to televise is \$450 per meeting (\$450 when meetings end prior to 8:30 p.m./\$620 when meetings end after 8:30 p.m.).
- Cost to install a cable data line from Time Warner Cable is to be determined.

Option 4.c – Webcast Board Meetings

- Using Microsoft Skype, OWASA could broadcast Board meetings from the OWASA Community Room.
- Costs are TBD but would be minimal.
- OWASA already owns the software licenses necessary to enable Skype broadcast.
- Meetings can be recorded in Skype and viewed from the website on demand.
- Functionality needs to be tested and a planned test broadcast is scheduled for the June 8, 2017 Board work session.

The Board discussed this topic on May 11, 2017 and requested that Mr. Foushee be invited to the May 25, 2017 meeting to receive his comments.

Thank you,



Andrea Orbich
Executive Assistant

Agenda Item

- **Overview of OWASA's Land Holdings and Past Management Discussions and Actions**

Purpose

- Provide background information on OWASA's land holdings, their purpose, and past discussions and actions regarding OWASA land. Receive guidance from the Board of Directors on priorities and timing for land management activities outlined in the [2016 Strategic Plan](#).

Background

- OWASA owns approximately 3,700 acres of land to meet our core mission of providing water, wastewater, and reclaimed water services.
- Strategic Initiative 6 included in the Strategic Plan updated in June 2016 is to develop a plan and policy framework for long-term management and disposition of OWASA lands. Specific actions include developing a long-term plan for sustainable forest management of OWASA forest lands and to evaluate land assets to determine whether the asset is needed and whether the asset should be sold.
- The Board of Directors has developed policies concerning land management with regard to protecting our water supplies including *Policy to Resell Watershed Land Under Certain Conditions*.
- OWASA has developed draft Forest Stewardship Plans for its forested properties. There was a public meeting on the draft Plans in 2010 that was well-attended. Staff developed a summary of the comments and responses that has not been shared with the public. The only tract where the Forest Stewardship Plan was implemented was on the Cane Creek Mitigation Tract where we are required to manage the land to enhance wildlife as a condition the US Army Corps of Engineers 404 permit issued to construct Cane Creek Reservoir.
- Land management is also related to OWASA's Energy Management Program (land could be used for solar photovoltaic installations) and its biosolids management program. Decisions regarding land management should consider these programs.

Action Requested

- While no formal action is needed from the Board of Directors, staff requests guidance on priorities and timing for addressing Strategic Initiative 6 of the Strategic plan to develop a plan and policy framework for long-term management and disposition of OWASA lands.




ORANGE WATER AND SEWER AUTHORITY

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

MEMORANDUM

TO: Board of Directors

THROUGH: Ed Kerwin 

FROM: Ruth Rouse

DATE: May 19, 2017

SUBJECT: Overview of OWASA’s Land Holdings and Past Management Discussions and Actions

Purpose

The purpose of this memo is to provide background information on OWASA’s land holdings, their function, past discussions and actions concerning OWASA’s land, and staff recommendations for managing OWASA lands.

Summary of OWASA-Owned Land

OWASA owns approximately 3,700 acres of land to support our core mission of providing water, wastewater, and reclaimed water services for the Chapel Hill-Carrboro community. Those land holdings are summarized in Table 1 and mapped in Figure 1. These lands include Cane Creek Reservoir and watershed protection lands; the Quarry Reservoir; land which contains existing and planned buildings, treatment facilities, pump stations, and drinking water storage tanks; and land for our biosolids management program.

Table 1: Summary of OWASA-Owned Property *(Acres rounded to nearest tens)*

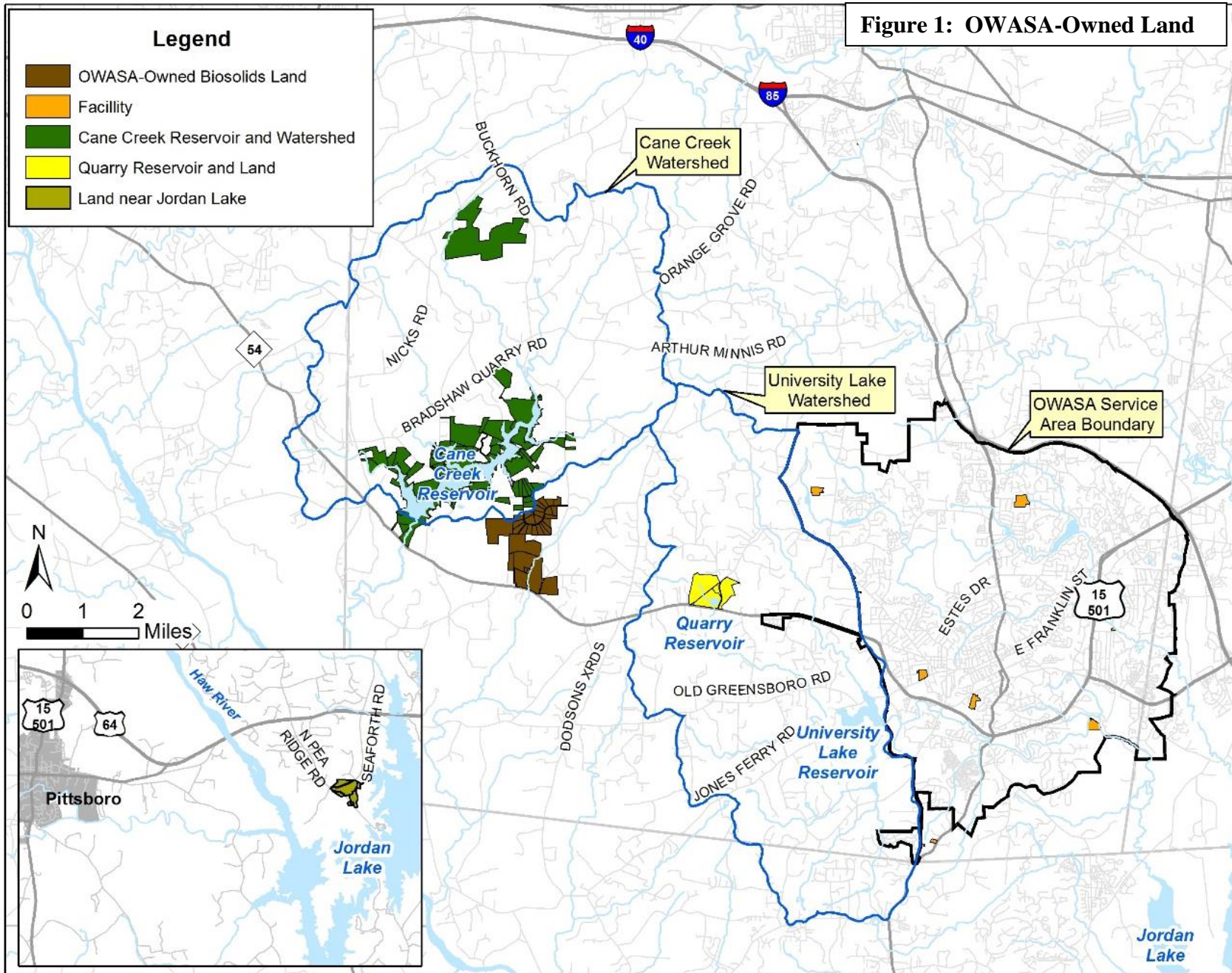
Purpose	Acres
OWASA Facilities	110
Cane Creek Reservoir and Watershed	2,540
Quarry Reservoir and Quarry Land	250
Biosolids Management	710
Jordan Lake – Potential Water Facilities	130
Total	3,740

(This table does not include OWASA's easements for conservation and utility facilities. OWASA has conservation easements on approximately 660 acres of private land in the Cane Creek watershed and approximately 120 acres of private land in the University Lake watershed. University Lake is not listed because it is owned by the University and leased long-term to OWASA.)

OVERVIEW OF OWASA'S LAND HOLDINGS

May 19, 2017

Page 2



Land Management Initiative in Strategic Plan

Strategic Initiative 6 of the OWASA Board of Directors' [Strategic Plan](#) (originally adopted in 2014 and updated June 2016) is to develop a plan and policy framework for long-term management and disposition of OWASA lands. Specific actions include developing a long-term plan for sustainable management of OWASA forest lands and to evaluate land assets to determine whether the asset is needed and whether the asset should be sold.

OWASA Policies on Land Management

The Board of Directors has developed policies concerning land management with regard to protecting our water supplies:

1. Land Policy for the Cane Creek Dam and Reservoir (Attachment 1; adopted Feb 13, 1980) – outlines policies to acquire lands for the Cane Creek project and efforts by OWASA to preserve and maintain a rural community in the watershed.
2. Policy Establishing a Water Supply Watershed Management Program (Attachment 2; adopted Feb 28, 1991) – includes a statement that lands closest to the reservoirs or deemed critical for water supply protection would be acquired in fee simple or through conservation easements.
3. Policy to Resell Watershed Land Under Certain Conditions (Attachment 3; adopted Oct 23, 1997) – OWASA should use voluntary negotiation with willing landowners to acquire land or partial interest in lands for watershed protection purposes; sets conditions for when the Board may consider selling lands acquired for watershed protection; and requires revenue from resale of property purchased to protect water supplies to be reserved for future water supply protection efforts.

Watershed Protection

Watershed protection is a cornerstone of OWASA's efforts to ensure high-quality drinking water for our customers. A key method we have used to protect our drinking water supplies is the strategic purchase of property and conservation easements in areas determined to be critical for water quality protection. OWASA completed a study in 1996 (*Cane Creek Reservoir Watershed Study, the Cadmus Group, August 1996*) to develop a watershed protection strategy for Cane Creek Reservoir. The primary recommendations from that study included large lot (5 acres or greater) residential rezoning and the permanent protection of 1,265 additional acres of watershed land either through fee simple purchase or conservation easements. OWASA adopted that goal and subsequently protected an estimated 1,075 acres of additional Cane Creek watershed land through purchase or through conservation easements. Since 1997, Orange County, through its Land Legacy Program, has also acquired protective conservation easements on 678 acres in the Cane Creek watershed. Together, OWASA and Orange County's land protection efforts have exceeded the land protection goal set for the Cane Creek watershed management program.

Similar studies were also done for the University Lake watershed, but concluded that preserving land in the University Lake watershed would have minimal water quality benefit and not justify the cost. (This is primarily due to the fact that University Lake has a much smaller storage

volume and much shorter residence time than Cane Creek Reservoir.) The possible exception was that undeveloped land near the lake and protected riparian buffers on streams near the lake may provide water quality benefit. Further details on OWASA's land conservation efforts are found in Attachment 4.

Staff Recommendation Regarding Land for Watershed Protection

Staff recommends that we retain lands that were acquired for watershed protection as ownership provides greater control over the water quality in our reservoirs, one of our core missions.

Biosolids Management

OWASA's Mason Farm Wastewater Treatment Plant produces approximately 3.5 dry tons of biosolids per day. Most of this is applied in liquid form as a soil amendment to agricultural land in Orange, Chatham, and Alamance Counties, and a portion is dewatered to the texture and consistency of moist soil and transported to a private composting facility in Chatham County. The Board of Directors established a goal to land apply 75 percent of our biosolids in liquid form and to dewater 25 percent of our biosolids for composting. OWASA has access to approximately 755 acres of private farmland and owns approximately 160 acres of cleared land for biosolids application. In addition, OWASA owns approximately 550 acres of forested land for future biosolids application, if needed.

Safe and reliable recycling of biosolids is an essential function. Factors such as weather and private farmer participation in the land application program affect when and what we can do with our biosolids. OWASA-owned land in the program provides us more control over land application of biosolids especially if access to private farm land becomes more difficult in the future.

Staff Recommendation Regarding Biosolids

Staff recommends that we keep our 710 acres of land for our biosolids program.

Although we are currently using only 160 acres of it for biosolids, keeping the land will provide OWASA flexibility in its biosolids management program. Once a long-term strategy for biosolids is determined, which may include regional strategies, staff could evaluate the potential to sell some of this land or use it for energy management or other purposes.

Land for Essential OWASA Facilities

OWASA owns approximately 240 acres of land for treatment plants, pump stations, drinking water storage tanks, and our administrative buildings. From this total, there are only three sites that are currently undeveloped:

1. Old NC 86 North Tank site – A hydraulic study completed in fiscal year (FY) 2011 recommended a new 0.75 million gallon drinking water storage tank by FY 2030 be constructed on this approximately 17-acre site. This tank is included in our Capital Improvements Program (CIP) in FY25 and is essential.

2. Starpoint Tank site – This site was acquired for a new drinking water storage tank in the southern part of our service area. The need for this tank was eliminated when Chapel Hill contracted its urban services boundary in 2000. Should this boundary be extended in the future, this site may be needed. Therefore staff recommends keeping this property.
3. Jordan Lake site – This site (approximately 130 acres) was purchased for a future water intake and/or treatment plant near Jordan Lake. Staff will evaluate how to best access our Jordan Lake water while updating the Long-Range Water Supply Plan.

Staff Recommendation Regarding Land for Facilities

Staff recommends that we retain the three undeveloped properties for potential future infrastructure to provide flexibility in meeting our mission of providing a reliable supply of water to our customers.

Forestry Stewardship

OWASA owns approximately 2,400 acres of forested land to protect our watersheds, for future biosolids application, and for a future potential intake and/or water treatment plant near Jordan Lake. OWASA implemented a Forest Management Plan for the Cane Creek Mitigation Tract (approximately 500 acres) and further information on that tract is provided in Attachment 5. We have drafted (but not implemented) Forest Stewardship Plans for other forested land we own (approximately 1,900 acres).

OWASA developed the following goals which were presented to the Board of Directors in 2010 for its forest stewardship program:

- To protect water quality (including, at a minimum, compliance with the riparian buffer protection requirements in the Jordan Lake Rules (50 foot riparian buffer with the inner 20 feet being forested)).
- To establish and maintain adequate riparian forest buffers to serve as an effective filter for runoff and prevent sedimentation of streams and other surface waters.
- To enhance forest conditions for wildlife health and species diversity and abundance by creating a forest of diverse habitat types and conditions.
- To minimize impacts of forestry management activities on adjacent properties.
- To improve, restore and enhance the overall quality of OWASA-owned woodlands through a long-range program of managing the forests in accordance with sound, science-based silvicultural practices.
- To generate revenue through the sustainable harvesting of timber to meet the above objectives, with the goal of having long-term forestry program revenues equal or exceed the costs to develop, implement and maintain OWASA's Forest Stewardship Plan.

Draft Forest Stewardship Plans for approximately 1,900 acres of OWASA's other forest lands were prepared and issued for public review and comment in late 2010; however, the draft plans

were withdrawn for further consideration due to extensive public concern and the Board and staff's need to address higher priority matters.

OWASA informed the public that it would complete the following activities prior to making final decisions regarding implementation of forest stewardship activities on any tract of land other than the Cane Creek Reservoir Mitigation Tract:

1. Issue a document responding to questions and comments received from the public in response to OWASA's prior draft Forest Stewardship Plans.
2. Revise the draft Forest Stewardship Plans based on consideration of the comments received and responses to the public.
3. Issue revised draft Forest Stewardship Plans for public review and comment and conduct at least one public meeting at which questions and comments will be received.

Staff Recommendations for Forestry Stewardship

Staff recommends that we proceed with forestry stewardship on all our forested land. While there will likely be opposition to adopting and implementing Forest Stewardship Plans that involve active timber management on our lands – especially watershed land – staff believes we have an obligation to be good stewards and to follow best practices for managing our lands in perpetuity. Properly managing our land assets will promote healthy forests, prevent disease and infestation, and reduce fire risk, thereby assuring long-term water quality protection. OWASA is committed to providing the public meaningful opportunities for review and comment on future draft Forest Stewardship Plans prepared for any OWASA lands, and we will consider that feedback before final adoption and implementation of such plans.

Based on what we promised the public, and to ensure we address concerns that were raised by the public in 2010, we propose the following steps if authorized by the Board of Directors:

1. Draft a community engagement plan for forestry management which would guide the other activities listed here.
2. Issue a document responding to questions and comments received from the public in response to OWASA's prior draft Forest Stewardship Plans.
3. Revise the draft Forest Stewardship Plans based on consideration of the comments received and responses to the public.
4. Issue revised draft Forest Stewardship Plans for public review and comment and conduct at least one public meeting at which questions and comments will be received.
5. For areas for which plans are approved, hold smaller meetings with neighboring land owners on specific sites prior to managing forests on those lands. This would enable us to tailor information to the specific site and receive feedback on a specific site, with the opportunity to further refine a plan as needed before implementation.

Given other OWASA projects that will include extensive stakeholder involvement (Advanced Metering Infrastructure and Long-Range Water Supply Plan update), staff recommends that we defer active public engagement work on this initiative until 2019.

Energy Management

Objective 5 of OWASA's Energy Management Program is to seek proposals for third-party development of renewable energy projects on OWASA property. The [Energy Management Plan](#) includes an early step to evaluate the feasibility and implications of converting one or more sites for solar photovoltaic (PV) development. Feasible sites should then be evaluated against the value of other land uses.

Staff Recommendations for Energy Management

Staff recommends the following steps to seek proposals for third-party development of renewable energy projects on OWASA land:

1. In the context of current and future land uses, as well as stakeholder feedback, identify one or more potential OWASA sites for a large scale (1-5 megawatt) solar PV development. A 5MW system would require about 30 acres of land.
2. Seek qualifications from private solar PV developers to evaluate the technical and economic feasibility of solar PV development on the identified site(s).
3. If feasible, engage stakeholders (including neighboring landowners) in a site development plan and agreement with the solar developer.

Staff recognizes that individual Forest Stewardship Plans and individual solar PV sites could be on the same location or in overlapping locations. If this occurred, staff would work to develop an overall land management plan for the site and hold one meeting with neighboring landowners that would address any forest management and solar PV development on the site.

Educational Opportunities at Cane Creek Mitigation Tract

Staff has discussed potential educational opportunities at the Cane Creek Mitigation Tract with the North Carolina Wildlife Resources Commission and the North Carolina Forest Service (NCFS). One idea for the Board's consideration is to develop educational materials for self-guided tours of the Mitigation Tract, which staff estimate would require approximately \$5,000 to implement (without grant funds) plus staff time. An overall map of the Mitigation Tract and information about each forest and habitat management area could be provided at a kiosk at the end of Martin Road. The NCFS does not support providing brochures given the potential for littering and the need to restock them. However, they would support QR codes on signs in different areas of the Mitigation Tract which would take the user to a webpage that describes the forest management practices and goals for that area, plus a linked map viewable on a mobile device (note: staff would need to confirm that cell service is available on the Mitigation Tract). Staff would have True North Forest Management Services (or another expert) help develop the information for such webpages. The NCFS also indicated that OWASA could apply for

matching funds for this; grant funds have historically been available on an annual basis, and applications are typically due by March 31 each year.

Staff Recommendation for Educational Opportunities at the Cane Creek Mitigation Tract


Staff recommend we pursue grant funding in 2019 to develop educational materials for the Cane Creek Mitigation Tract provided that reliable cell service is available. We recommend this timing due to the higher priority public engagement process in late 2017/early 2018 regarding the planned prescribed burn on the Mitigation Tract.

Summary of Recommendations

Staff recommends the following land management activities:

1. Retain our watershed protection land, biosolids management land, and sites for future infrastructure.
2. Continue implementing forest management activities on the Cane Creek Mitigation Tract as recommended by the Wildlife Resources Commission and our forest management consultant. We recommend moving forward with a planned prescribed burn in spring 2018, following a public information meeting.
3. Move forward with forestry stewardship on our lands with active public engagement beginning in 2019. The following steps are proposed:
 - a. Draft a community engagement plan for forestry management which would guide the other activities listed here.
 - b. Issue a document responding to questions and comments received from the public in response to OWASA's prior draft Forest Stewardship Plans.
 - c. Revise the draft Forest Stewardship Plans based on consideration of the comments received and responses to the public.
 - d. Issue revised draft Forest Stewardship Plans for public review and comment and conduct at least one public meeting at which questions and comments will be received.
 - e. For areas for which plans are approved, hold smaller meetings with neighboring land owners on specific sites prior to managing forests on those lands. This would enable us to tailor information to the specific site and receive feedback on a specific site, with the opportunity to further refine a plan as needed before implementation.
4. Implement the following steps to seek proposals for third-party development of renewable energy projects on our land:
 - a. In the context of current and future land uses, as well as stakeholder feedback, identify one or more potential OWASA sites for a large scale (1-5 megawatt) solar PV development.
 - b. Seek qualifications from private solar PV developers to evaluate the technical and economic feasibility of solar PV development on the identified site(s).
 - c. If feasible, engage stakeholders (including neighboring landowners) in a site development plan and agreement with the solar developer.

5. Seek grant funds in 2019 to develop educational materials for a self-guided walking tour of the Cane Creek Mitigation Tract.



Ruth C. Rouse, AICP
Planning and Development Manager

Attachment 1 - *Land Policy for the Cane Creek Dam and Reservoir*

Attachment 2 - *Policy Establishing a Water Supply Watershed Management Program*

Attachment 3 - *Policy to Resell Watershed Land Under Certain Conditions*

Attachment 4 - *Land and Easement Purchases for Water Supply Protection*

Attachment 5 - *Forest Management Activities on Cane Creek Mitigation Tract*

RESOLUTION ADOPTING LAND POLICY
FOR CANE CREEK RESERVOIR PROJECT

WHEREAS, in the development of the Cane Creek Water Supply Reservoir project it will be necessary to acquire 758 acres, more or less, of land within the project boundaries; and,

WHEREAS, an undetermined amount of land in the vicinity of the project may also be acquired to provide for wildlife habitat mitigation; and,

WHEREAS, the Board of Directors is of the opinion that the construction of said reservoir should not necessarily be unduly disruptive of the rural, agricultural character of the area; and,

WHEREAS, maintaining the rural, agricultural character of the land on the watershed in the vicinity of the reservoir is compatible with the operation of the water supply reservoir.

NOW, THEREFORE, BE IT RESOLVED:

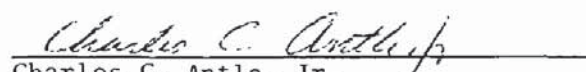
1. That the attached Land Policy for the Cane Creek Dam and Reservoir be, and the same hereby is, adopted.

Adopted this 13th day of February, 1980.



Flora R. Garrett, Chairman

ATTEST:



Charles C. Antle, Jr.
Secretary-Treasurer

ORANGE WATER AND SEWER AUTHORITY

LAND POLICY FOR THE CANE CREEK DAM AND RESERVOIR

The Board of Directors of the Orange Water and Sewer Authority (OWASA) adopts the following policy regarding the acquisition, use, and disposition of lands that it will acquire for purposes related to the construction and operation of the Cane Creek Dam and Reservoir. The Board of Directors believes that the presence of the dam and reservoir need not disrupt the life of the surrounding community nor cause economic hardship to landowners for which they will not be compensated.

The OWASA Board is concerned that the proposed dam and reservoir not lead to the destruction of the rural community that presently exists, nor to the elimination of viable farming operations nor to increased residential development. The OWASA Board believes that the concerns of most landowners in the Cane Creek area are very similar to the concerns of OWASA. Conditions that preserve and maintain a stable farming community would also protect and enhance a clean watershed and public water supply.

For these reasons, the Board of Directors of OWASA has promulgated the following policies:

1. OWASA's purpose in acquiring and utilizing land in the Cane Creek area is for construction and operation of the Cane Creek Reservoir as a necessary augmented supply of pure drinking water for the OWASA service area. In so doing, OWASA intends to do in good faith what it can to promote the maintenance and preservation of the low-density agricultural and forestry land use surrounding the site of the reservoir. OWASA adopts this policy not only because it believes it will lead to the further protection of the Cane Creek watershed but also because OWASA respects the wishes expressed by citizens in the vicinity of the project to maintain the rural character of the area.

2. Lands within the project boundaries will be appraised in accordance with generally accepted procedures for establishing fair market values and good faith offers for purchase tendered to each owner.

3. To facilitate property transfers and promote agricultural stability in the community, OWASA may purchase lands proximate or contiguous to the project, apply protective covenants, and offer such lands

to landowners in exchange for property of comparable value lying within the project boundaries of the project.

4. OWASA may negotiate for the purchase of development rights of lands contiguous to lands required for the project or otherwise related to its purposes.

5. Where feasible and desirable as a part of a negotiated settlement, OWASA will undertake to remove and relocate buildings within the project site.

6. OWASA will support the zoning of the Cane Creek watershed in order to protect the watershed, for agricultural uses, low-density development, and public water supply purposes.

7. OWASA will support county tax policies that will encourage continued agricultural use of lands in the Cane Creek watershed.

8. Access will be permitted, upon reasonable terms, over lands acquired by OWASA outside the project boundary in order that farmers may reach other lands farmed by them, where lack of such access may be detrimental to the farmer.

RESOLUTION ADOPTING A POLICY ESTABLISHING A WATER SUPPLY
WATERSHED MANAGEMENT PROGRAM

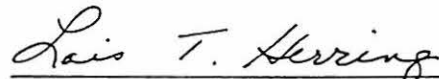
WHEREAS, the Orange Water and Sewer Authority is committed to providing high quality drinking water through a combination of source protection and treatment technology; and

WHEREAS, the Authority has adopted specific resolutions and administered a broad range of activities to protect its water supply sources from contamination.

NOW, THEREFORE, BE IT RESOLVED:

1. That the Board of Directors of Orange Water and Sewer Authority finds it necessary and desirable to sustain the balance, adequacy, and continuity of these water supply protection efforts, and hereby adopts the attached Policy Establishing a Water Supply Watershed Management Program.
2. That said Policy is effective upon adoption.
3. That the Executive Director is authorized and directed to carry out said Policy.

Adopted this 28th day of February, 1991.



Lois T. Herring, Chairman

ATTEST:



Riley Wilson
Secretary-Treasurer

ORANGE WATER AND SEWER AUTHORITY

POLICY ESTABLISHING A WATER SUPPLY WATERSHED MANAGEMENT PROGRAM

Purpose

This policy establishes the Authority's commitment to a comprehensive watershed management program aimed at minimizing contamination of OWASA's water supply sources.

Background

The established policy of the Orange Water and Sewer Authority is to provide high quality drinking water through a combination of source protection and water treatment technology. Since its inception, the Authority has adopted specific resolutions and administered a broad range of activities to protect its water supply sources from contamination. In order to sustain the balance, adequacy, and continuity of these efforts, it is necessary to establish an identifiable Watershed Management Program and provide for its support.

Policy

The Orange Water and Sewer Authority's commitment to protect its water supply sources shall be implemented through a Watershed Management Program.

Funds to carry out the Program shall be appropriated by the Board of Directors through the annual Operation & Maintenance and Capital Improvements budgets. Administrative details may be developed by the Executive Director as needed.

The Watershed Management Program shall consist of a range of activities including, but not limited to, the following:

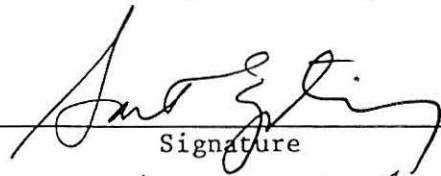
1. Utility Extension Policies - Consistent with local zoning and land use ordinances, OWASA will sustain its present policy, as adopted April 26, 1990, not to extend water or sewer services into the University Lake watershed.
2. Local Zoning and Land Use - The Authority will work cooperatively with other public bodies to promote land use controls and other methods to minimize point and nonpoint source pollution from residential development, highway runoff, agricultural, and other activities.
3. In-Lake Activities and Uses - Consistent with the policy adopted June 28, 1990, OWASA will only permit activities at the Authority's reservoirs that are compatible with, and subordinate to, their protection as public water supply sources.
4. Land Stewardship - Ongoing reforestation activities, visual monitoring, litter control, and routine surveillance of the watersheds will be conducted by OWASA staff.

5. Critical Lands Acquisition - Land closest to the reservoirs, or otherwise identified as critical for water quality protection, will be acquired in fee simple or through the conveyance of conservation easements, as determined by the availability of land and appropriation of necessary funds.
6. Agricultural Conservation Practices - Financial support will be continued for stripcropping, sediment ponds, grassed waterways, animal waste facilities, and so forth, when installed under supervision by appropriate State and County agencies.
7. Hazardous Spill Control - The Authority will continue to operate and maintain an emergency trailer and equipment for containing and cleaning up hazardous materials spilled in the watersheds.
8. Water Quality Monitoring - The Authority will continue financial and resource support for monitoring tributary and inlake water quality.
9. Special Technical Studies - Support will be provided, as needed, for special technical investigations, such as watershed and sedimentation studies.
10. Educational Activities - Billing inserts and pamphlets, public service announcements, library displays, school programs, audio-visual presentations, public lectures, and other methods of promoting water supply protection will be a continuing operational activity of the Authority.

Authorization

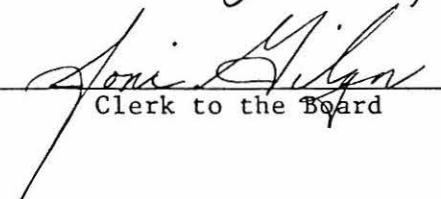
The Executive Director is authorized and directed to carry out this policy.

Reviewed by General Counsel: 2-28-91
Date


Signature

Adopted by Board:

2/28/91
Date


Clerk to the Board

**RESOLUTION ESTABLISHING POLICY TO RESELL WATERSHED LAND UNDER CERTAIN
CONDITIONS**

WHEREAS, one of the high priority recommendations for protecting the long-term water quality of the Cane Creek Reservoir is permanent preservation of undeveloped open space; and

WHEREAS, Orange Water and Sewer Authority has acquired title to, and intends to acquire title to, additional lands within the University Lake and Cane Creek watersheds for the purpose of protecting these primary supply sources; and

WHEREAS, it has historically been the practice of Orange Water and Sewer Authority to use voluntary negotiation to acquire land or partial interest in land for watershed protection purposes; and

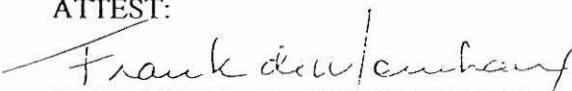
WHEREAS, the Board of Directors has determined to its satisfaction that water quality protection may be assured by placing additional development restrictions on some of those lands, and by making them available for acquisition and use subject to such restrictions.

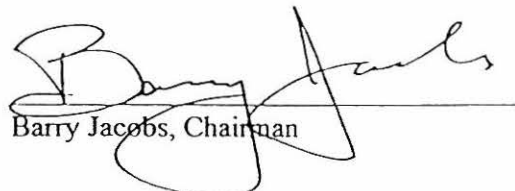
NOW, THEREFORE, be it resolved by the Board of Directors:

1. It shall be the policy of Orange Water and Sewer Authority to use voluntary negotiation with willing sellers to acquire land or partial interest in land for watershed protection purposes.
2. The Executive Director may recommend to the Board of Directors that lands acquired by the Authority for the protection of the University Lake or Cane Creek water supply watersheds be offered for sale to the public, subject to such permanent restrictions as will afford certain protection assuring the quality of those watersheds as public supply sources.
3. No lands shall be sold by the Authority from those acquired for watershed protection, except after the Board of Directors has satisfied itself and expressly found and determined:
 - a. That the parcel proposed for sale was originally acquired by OWASA through voluntary negotiation with a willing seller, rather than through eminent domain; and
 - b. That continued OWASA ownership of the specific parcel being considered is not necessary to provide for appropriate protection of the water supply; and
 - c. That adequate and appropriate restrictions are placed in the deed of conveyance and will run with the land in perpetuity in order to assure that no use deleterious to the water supply may be made of the land sold.
4. If the Board of Directors determines to offer for resale, within one year after its acquisition, any parcel acquired for the purpose of watershed protection, OWASA shall first provide a 30-day written notice to the party (or parties) from whom it was originally acquired before listing that property for sale .
5. All revenues from the resale of property acquired for the purpose of watershed protection shall be reserved for future water supply protection efforts.

Adopted this 23rd day of October, 1997.

ATTEST:


Frank de Monchaux, Secretary-Treasurer


Barry Jacobs, Chairman

ORANGE WATER AND SEWER AUTHORITY
LAND AND EASEMENT PURCHASES FOR WATER SUPPLY PROTECTION
April 2016

PURPOSE: To provide information about OWASA’s efforts to protect drinking water quality by selectively purchasing land and conservation easements in the Cane Creek and University Lake watersheds.

BACKGROUND: OWASA’s policy is “to provide high quality drinking water through a combination of source protection and water treatment technology.” Source protection efforts to date have included limits on the extension of water/sewer service into the Cane Creek and University Lake watersheds; support for stringent zoning and land use controls; restrictions on in-lake recreational activities; financial support for agricultural Best Management Practices; special technical studies and educational activities; and the strategic purchase of property or conservation easements in areas determined to be critical for water quality protection – which is the focus of this information brief.

University Lake: Land acquisition was among the options evaluated in the University Lake watershed management plan commissioned in the late 1980s (*University Lake Watershed Study, CDM, 1989*). Water quality modeling indicated that permanently protecting 2,900 acres (approximately 15%) of the watershed would have only slight water quality benefits and not justify the multi-million dollar cost, but that “selected land acquisition in critical areas of the watershed may be appropriate.” This recommendation was later confirmed in a follow-up analysis (*A Planning and Land Acquisition Model for University Lake Watershed – Scoping Analysis, Revised Draft, Tetra Tech, May 12, 2002*), which found that land acquisition would probably not be effective, but “a possible exception may apply to undeveloped land very near the lake,” and that conservation easements along stream buffers “would be particularly valuable near the downstream ends of tributaries as they approach University Lake.”

Based on these technical recommendations, OWASA elected not to pursue a program of land or easement acquisition in the University Lake watershed, but in 2006 purchased (with the help of a \$1.2 million NC Clean Water Management Trust Fund grant) the 73-acre Ray Heirs property along Morgan Creek immediately upstream of University Lake. This property was placed under a perpetual restrictive conservation easement that protects all riparian areas and severely restricts future development; subdivided into two large tracts; and re-sold on the open market in 2011 – with all restrictions in place.

Cane Creek Reservoir: The primary recommendations of a 1996 study (*Cane Creek Reservoir Watershed Study, the Cadmus Group, August 1996*) included large lot (5 acres or greater) residential re-zoning and the permanent protection of 1,265 additional acres of watershed land either through fee simple purchase or conservation easements. OWASA adopted that goal and subsequently protected an estimated 1075 acres of additional Cane Creek watershed land based on land records data through purchase or through conservation easements. Since 1997, Orange County’s Land Legacy Program also acquired protective conservation easements on 678 acres in the Cane Creek watershed. Together, OWASA and Orange County’s land protection efforts have exceeded OWASA’s original goal. OWASA and Orange County staff continue to work closely in coordinating the needs of our respective programs as the County protects additional land in the watershed and elsewhere.

STATUS: Because the land acquisition recommendations of OWASA’s previous technical studies have been achieved, no further investments are budgeted for future years except for additional land acquisition.

Forest Management Activities on Cane Creek Mitigation Tract

OWASA purchased the Cane Creek Reservoir Mitigation Tract in fulfillment of the conditions of the US Army Corps of Engineers' 404 permit issued to construct Cane Creek Reservoir. The permit requires OWASA to manage the land to enhance wildlife habitat. The North Carolina Wildlife Resources Commission (WRC) developed a Forest Management Plan for the tract in 2009; OWASA hired True North Forest Management Services to implement the Plan. A summary of activities completed to date on the tract is provided on OWASA's [website](#). Ongoing management of the forest at this tract will be required.

In carrying out the WRC plan, OWASA protected water quality on the tract by preserving wide riparian buffers (approximately 30 percent of the site is in protected stream buffers); carefully designing, constructing and managing the road to gain access on the south side of the stream; and complying with *North Carolina Best Practices Guidelines Related to Water Quality* and recommendations in the *North Carolina Forestry Best Management Practices (BMP) Manual to Protect Water Quality* as amended in September 2006. Data collected by the US Forest Service in 2013-2015 showed that there was no significant difference in total suspended solids collected upstream and downstream of timber harvest activities on the site.

Wildlife on the tract was enhanced by providing a mosaic of different types of habitat; diverse habitats allow for a greater diversity of species. Both the WRC and the North Carolina Audubon Society have commended OWASA for the care taken to implement the plan; greater diversity of species has been noted on the tract by the WRC. OWASA was recognized for the improved diversity by being designated by five state and federal agencies as a Certified Forest Landbird Legacy Habitat.

While the initial recommendations from the Mitigation Tract Forest Management Plan have been implemented, several less intensive activities are planned over the next ten years. The next planned activity at the Mitigation Tract is a prescribed controlled burn during spring 2018 in the first Hardwood Improvement Cut (24 acres) that was completed in 2010. As was planned, natural hardwood regeneration has occurred beneath the overstory of this thinned stand near the entrance to the property, but it is a mix of many different hardwood and some pine species. The purpose of the understory burn is to promote the development and survival of more oak and hickory seedlings. The controlled burn will knock back the faster growing species such as yellow poplar, red maple, pine and sweetgum in favor of the more fire-resistant, slower growing oak and hickory seedlings. Without the prescribed burn, most of the existing oak and hickory seedlings will be crowded and shaded out by other species. Prescribed fire will help tip the scales in favor of oak and hickory seedlings establishing prominence in the understory. This management practice is done by others, including the NC Botanical Garden and Duke Forest.