



# ORANGE WATER AND SEWER AUTHORITY

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

## **Agenda**

### **Meeting of the OWASA Board of Directors**

**Thursday, October 25, 2018, 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](mailto: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](mailto: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. Members of the OWASA Board will convene for a Diversity and Inclusion Session with VISIONS, Inc. on Tuesday, November 13, 2018, at 5:00 p.m. in OWASA's Boardroom
  - C. Canceled October 11, 2018 OWASA Board Work Session is Rescheduled for Thursday, November 15, 2018 at 6:00 p.m. in OWASA's Community Room
2. Announcements by Board Members
  - A. Update on the October 8, 2018 Finance Committee Meeting (Ray DuBose)
  - B. Tour of Forested Watershed Lands on Friday, October 26, 2018 at 1:00 p.m. at Cane Creek Reservoir (John Young)
  - C. Natural Resources and Technical Services Committee Will Meet on Tuesday, October 30, 2018 at 4:30 p.m. to discuss Source Water Protection (John Young)
  - D. Natural Resources and Technical Services Committee Will Meet on Thursday, November 8, 2018 at 4:00 p.m. to Discuss Overall Approach for Managing Forested Watershed Lands (John Young)
  - E. Chapel Hill Town Council OWASA Committee and Chapel Hill Appointees to the OWASA Board of Directors will meet on Thursday, November 15, 2018 at 8:30 a.m. in OWASA's Boardroom (Ruchir Vora)
3. Announcements by Staff
  - A. OWASA Employee Service Awards (Ed Kerwin)
  - B. Update on the October 10, 2018 Carrboro Citizen's Academy – OWASA Session (Ed Kerwin)
  - C. Update on the October 20, 2018 Chapel Hill Peoples Academy – OWASA Session (Ed Kerwin)
4. Additional Comments, Suggestions, and Information Items by Board Members (Yinka Ayankoya)

**Petitions and Requests**

1. Public
2. Board
3. Staff

**Consent Agenda**

**Information and Reports**

1. 12 Month Board Meeting Schedule (Yinka Ayankoya/Ed Kerwin)
2. Quarterly Report on Attendance at Board and Committee Meetings (Andrea Orbich)

**Action**

3. Position Reclassification for Distribution and Collection Departments (Todd Taylor)
4. Approve Agua Vista-Related (Advanced Metering Infrastructure) Policies (Stephen Winters)
5. Minutes of the September 27, 2018 Annual Meeting of the Board of Directors (Andrea Orbich)
6. Minutes of the September 27, 2018 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter (Robert Morgan)

**Regular Agenda**

**Discussion**

7. Review Draft Water Treatment Plant and Wastewater Treatment Plant Reliability and Risk Assessment Action Plan (Mary Darr)
8. Discuss Recreational Fees for Out-of-County Visitors (Johnny Riley)

**Information and Reports**

9. Financial Report for the Three-Month Period Ended September 30, 2018 (Stephen Winters)

**Summary of Board Meeting Action Items**

10. 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

**Closed Session**

11. The Board of Directors will convene in a Closed Session for the Purpose of Discussing a Personnel Matter (Robert Morgan)



## OWASA Board of Directors – 12 Month Board Meeting Schedule (October 19, 2018)

Month	Board Meetings		Committee & Other Meetings
	Work Session	Business Meeting	
January 2019	Employee Health and Dental Insurance Update Appoint Audit Firm Affordability Outreach Program Plan Update (Tentative) Authorize Applying for SRF Loans 1/10/2019	Annual Lakes Recreation Report CIP Semiannual Report Q2 Financial Report FY 20 Budget Calendar and Assumptions (Tentative) Award the WWTP Solids Thickening Improvements Construction Contract 1/24/2019	
February 2019	<b>(Tentative) LRWSP Final Demands and Yield</b> CS – Prepare for General Counsel Interim Review 2/14/2019	CS – General Counsel Interim Review 2/28/2019	
March 2019	FY 20 Draft Budget & Rates Review AMI Manual Read <b>(Tentative) LRWSP – Discuss Water Supply and Demand Management Alternatives</b> CS – Prepare for ED Interim Review 3/14/2019	Annual Update of the Energy Management Plan FY 20 Draft Budget & Rates and Proposed Staff Rate Adjustment Recommendation Set date for Public Hearings – FY 20 Budget & Rates CS – ED Interim Review 3/28/2019	
April 2019	Review Employee Health and Dental Insurance Renewals FY 20 Draft Budget and Rate Adjustment Information Appointment of the Nominating Committee 4/11/2019	Q3 Financial Report FY 20 Budget and Rates Discussion and Authorize Staff to Publish Proposed Rates 4/25/2019	
May 2019	Approve Employee Health and Dental Insurance Renewals Discuss Employee Merit Pay for FY 2020 5/10/2019	Public Hearings – FY 20 Budget and Rates (Tentative) Approve New Banking Services Provider 5/23/2019	
June 2019	Approve FY 20 Budget and Rates, including merit pay decision <b>(Tentative) LRWSP – Final Water Supply and Demand Management Alternatives</b> Election of Officers 6/13/2019	TBD 6/27/2019	
July 2019	TBD 7/11/2019	TBD 7/25/2019	
August 2018	TBD 8/8/2019	Preliminary 12 Month Financial Report CIP Semiannual Report CS – Prepare for General Counsel Review 8/22/2019	
September 2018	EEO/Affirmative Action Report Annual Report on Disposal of Surplus Personal Property CS – General Counsel Review 9/12/2019	Annual Report and Financial Audit Approve General Counsel Engagement Strategic Trends Report and Strategic Plan Update CS – Prepare for ED Review 9/26/2019	

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

## OWASA Board of Directors – 12 Month Board Meeting Schedule (October 19, 2018)

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

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

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

- Development of a plan and policy framework for OWASA lands is considered a longer-term priority. The NRTS Committee discussed this issue in September 2017 and determined it was lower priority than Forestry Management. Staff presented an overall approach for Forestry Management to the Board in May 2018, and this was referred to the NRTS Committee for further discussion; NRTS is scheduled to discuss later this year.
- 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.

### Abbreviations Used in Draft Schedule:

☺	Recurring agenda item (generally these are “required” items)	KPI	Key Performance Indicator
AMI	Advanced Metering Infrastructure	LRWSP	Long-Range Water Supply Plan
CE	Community Engagement	MOA	Memorandum of Agreement
CEP	Community Engagement Plan	MST	Mountains-to-Sea Trail
CIP	Capital Improvements Program	MFMM	Multi-Family Master Meter
COLA	Cost of Labor Adjustment	NCDOT	North Carolina Department of Transportation
CS	Closed Session of the Board	NRTS	Natural Resources and Technical Services
CY	Calendar Year	Q	Quarter
D&I	Diversity and Inclusion	RFP	Request for Proposals
ED	Executive Director	SRF	State Revolving Fund
EEO	Equal Employment Opportunity	SOW	Scope of Work
FY	Fiscal Year	TBD	To Be Determined
HR	Human Resources	WTP	Water Treatment Plant
JLP	Jordan Lake Partnership	WWTP	Wastewater Treatment Plant

## ORANGE WATER AND SEWER AUTHORITY - QUARTERLY REPORT

### ATTENDANCE AT BOARD AND COMMITTEE MEETINGS

<b>BOARD OF DIRECTORS</b>	<b>JULY 2018</b>	<b>AUGUST 2018</b>	<b>SEPTEMBER 2018</b>
<b>YINKA AYANKOYA, CHAIR</b>	July 12 WS (Meeting) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Meeting)	September 13 WS (Canceled) September 27 Annual (Meeting)
<b>JEFF DANNER, VICE CHAIR</b>	July 12 WS (Meeting) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Meeting)	September 13 WS (Canceled) September 27 Annual (Absent)
<b>RAY DUBOSE, SECRETARY</b>	July 12 WS (Meeting) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Absent)	September 13 WS (Canceled) September 27 Annual (Meeting)
<b>BRUCE BOEHM</b>	July 12 WS (Meeting) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Meeting)	September 13 WS (Canceled) September 27 Annual (Meeting)
<b>JODY EIMERS</b>	July 12 WS (Meeting) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Meeting)	September 13 WS (Canceled) September 27 Annual (Meeting)
<b>ROBERT MORGAN</b>	July 12 WS (Meeting) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Meeting)	September 13 WS (Canceled) September 27 Annual (Meeting)
<b>JOHN N. MORRIS</b>	July 12 WS (Meeting) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Meeting)	September 13 WS (Canceled) September 27 Annual (Meeting)
<b>RUCHIR VORA</b>	July 12 WS (Absent) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Meeting)	September 13 WS (Canceled) September 27 Annual (Meeting)

**OCTOBER 25, 2018**

<b>BOARD OF DIRECTORS</b>	<b>JULY 2018</b>	<b>AUGUST 2018</b>	<b>SEPTEMBER 2018</b>
<b>JOHN A. YOUNG</b>	July 12 WS (Meeting) July 26 Board (Canceled)	August 9 WS (Canceled) August 23 Board (Meeting)	September 13 WS (Canceled) September 27 Annual (Meeting)
<b>TOTAL MEETINGS HELD:</b>	<b>1</b>	<b>1</b>	<b>1</b>

Board – Board of Directors  
WS – Work Session

**OCTOBER 25, 2018**

**Agenda Item**

- Position Reclassification for Distribution and Collection Departments

**Purpose**

- To obtain Board approval to amend the Schedule of Employee Classification and Authorized Compensation to reclassify a vacant Administrative Assistant position to a proposed Distribution and Collection Systems Coordinator position.

**Background**

- OWASA continues to seek opportunities to improve the efficiency and effectiveness of the organization. When a position becomes vacant, it is our practice to reassess our needs before deciding to fill the position.
- Staff conferred with Robert Morgan, Chair of the Human Resources (HR) Committee and a draft of this memorandum was shared with the Board's HR Committee on October 10, 2018.

**Recommendation**

- Staff recommends amending the Schedule of Employee Classification and Authorized Compensation to reclassify the vacant Administrative Assistant position (Salary Grade 610, \$33,957 - \$52,295) to the proposed Distribution and Collection Systems Coordinator position (Salary Grade 614, \$41,276 - \$63,564).

October 25, 2018






# 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:** Todd Taylor, P.E.

**DATE:** October 19, 2018

**SUBJECT:** Position Reclassification for Distribution and Collection Department

### **Purpose:**

To obtain Board approval to amend the Schedule of Employee Classification and Authorized Compensation to reclassify the vacant Administrative Assistant position to the position of Distribution and Collection Systems Coordinator.

### **Background:**

OWASA continually seeks opportunities to improve the efficiency and effectiveness of our organization. When a position becomes vacant, it is our practice to reassess our needs before filling the vacancy.

In March 2017, the Administrative Assistant position was vacated while the employee filling that role served in an interim position in the Information Technology (IT) Department and was subsequently promoted to that position on a permanent basis. The position has not been refilled since that time while we assessed the Department's needs.

Our assessment has revealed that additional skills and abilities would be a benefit to OWASA and our customers. Knowledge and experience in water distribution and wastewater collection system construction methods as well as policies and regulations would provide better service to our customers and private contractors. The technical acumen to not only enter data into our work order management system but leverage that data to create more efficient workflows and effective work plans would be a great benefit to the department. The Department is also lacking

a “Super User” for our work order management system and having an individual who was intimately familiar with this system would alleviate some of the IT service requests associated with it and ensure that OWASA is receiving maximum benefit from the system.

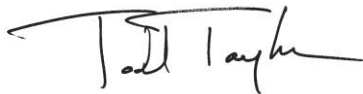
**Information:**

The proposed job description for the Distribution and Collection Systems Coordinator is attached. Please note that, per our Pay Administration Guidelines, we applied our Job Evaluation procedure which assigns a salary range utilizing a “point factor evaluation” methodology.

**Recommendation:**

Staff recommends amending the Schedule of Employee Classification and Authorized Compensation to reclassify the vacant Administrative Assistant position (Salary Grade 610, \$33,957 - \$52,295) to the proposed Distribution and Collection Systems Coordinator position (Salary Grade 614, \$41,276 - \$63,564).

Sincerely,



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Todd Taylor, P.E.  
General Manager of Operations

Attachments:

- Proposed Distribution & Collection Systems Coordinator Job Description
- Resolution

**Distribution and Collection Systems Coordinator**

FLSA Status: Non-Exempt

Pay Grade 614: \$41,276 - \$63,564



**BRIEF DESCRIPTION:**

The purpose of this position is to provide a well-organized, planned and scheduled approach to the operating procedures of the Distribution and Collection (D&C) Department. This is accomplished by creating work orders and service requests; testing new releases of Cityworks and determining any needed training or Standard Operating Procedures (SOP) changes; on-boarding new staff to Cityworks to include training staff on new features and updates; basic Cityworks Support and user updates as changes in staffing occur; provide quality assurance for inventory transactions; work with the Information Technology Department to provide monthly reporting on crew work metrics; generating reports on open/closed work orders; understand basics of Multi-Vendor reading system to help with basic troubleshooting, assist with equally allocating routes to meter readers as routes shrink; assist GIS Coordinator with D&C related GIS system updates, assist with data integrity for valve inspection program, assist with data integrity with fire department hydrant inspections; creating/updating SOPs; directing the cross-connection and backflow program partnership, assisting with plumbers and customers reporting test results for the cross connection and backflow program; and dispatching crews to repair sites. Other duties include reviewing and approving purchase orders; stocking office and facility supplies; documenting accident reports; maintaining OSHA compliance by ensuring all chemical information is accurate; handling on-call communication duties on a rotational basis; provide notification data for the easement program; providing clarity for customer inquiries; and performing administrative and technical support for departments and departmental activities. Manages daily office operations by answering telephones, greeting/helping visitors, maintaining and reviewing calendars. Organize, schedule and prepare for meetings, travel and special events. Position creates memos, documents, reports and correspondence. Gathers, secures and verifies information for use in preparing documents and presentations. Conducts data entry of information by developing and maintaining spreadsheets, databases and various computer files. Maintain filing systems for department. Prepares and executes mass mailings and special mailings.

**ESSENTIAL FUNCTIONS:**

Note: This information is intended to be descriptive of the key responsibilities of the position. The list of essential functions below does not identify all duties performed by any single incumbent in this position. Additionally, please be aware of the legend below when referring to the physical demands of each essential function.

(S) Sedentary	(L) Light	(M) Medium	(H) Heavy	(V) Very Heavy
Exerting up to 10 lbs. occasionally or negligible weights frequently; sitting most of the time.	Exerting up to 20 lbs. occasionally; 10 lbs. frequently; or negligible amounts constantly; OR requires walking or standing to a significant degree.	Exerting 20-50 lbs. occasionally; 10-25 lbs. frequently; or up to 10 lbs. constantly.	Exerting 50-100 lbs. occasionally; 10-25 lbs. frequently; or up to 10-20 lbs. constantly.	Exerting over 100 lbs. occasionally; 50-100 lbs. frequently; or up to 20-50 lbs. constantly.

# Orange Water and Sewer Authority

#	Code	Essential Functions
1	S	Scheduling and issuing work service requests for staff; handling customer inquiries related to the distribution and collection system; reviewing and approving purchase orders for equipment and materials; assuring appropriate parts and equipment are available/supplied for the job; maintaining/updating online SDS database for OSHA compliancy; coordinating closely with Customer Service Department; generating reports on open/closed work orders using Cityworks. Performing on-call communication duties in emergency repair events on a rotational basis.
2	S	Directing the Cross-Connection and Backflow Prevention program and partnership with Backflow Solution Inc. Responsible for customer outreach for non-compliant devices and ensuring all backflow device information is accurate. Synchronize device updates with the GIS Coordinator; working with UNC and Town officials; providing reports to the General Manager of Operations; work with D&C management to improve operational efficiencies.
3	S	Collects and analyzes data from new automated metering initiative; Mass mailings of customer notifications concerning OWASA easements; Notifying customers of any violations related to the system; developing and maintaining D&C management benchmarks; documenting monthly safety meetings.
4	S	Manages daily office operations by answering telephones, greeting/helping visitors, maintaining and reviewing calendars. Organize, schedule and prepare for meetings, travel and special events.

## JOB REQUIREMENT

-Description of Minimum Job Requirements-	
Formal Education	Work requires knowledge of a specific vocational, administrative, or technical nature which may be obtained with a two year associate's degree, diploma or equivalent from a college, technical, business, vocational, or correspondence school. Appropriate certification may be awarded upon satisfactory completion of advanced study or training.
Experience	Over three years up to and including five years.
Supervision	Work requires supervising worker performance directed by dispatch call or upper management and includes overseeing work quality and prioritizing work.

## Orange Water and Sewer Authority

Human Collaboration Skills	Work will require providing advice to others outside direct reporting relationships on specific problems or general policies. Contacts may require the consideration of different points of view to reach agreement. Elements of persuasion may be necessary to gain cooperation and acceptance of ideas.
Freedom to Act	Receives General Direction: The employee normally performs the job by following established standard operating procedures and/or policies. There is a choice of the appropriate procedure or policy to apply to duties. Performance reviewed periodically.
Technical Skills	Skilled: Work requires a comprehensive, practical knowledge of a technical field with use of analytical judgment and decision-making abilities appropriate to the work environment of the organization.
Fiscal Responsibility	The job title prepares accounting, budget, employment actions, purchasing documents; and does research to justify language used in documents for a unit or division of a department. May recommend budget allocations.
Reading	Intermediate - Ability to read papers, periodicals, journals, manuals, dictionaries, thesauruses, and encyclopedias. Ordinarily, such education is obtained in high school up to college. However, it may be obtained from experience and self-study.
Math	Intermediate - Ability to deal with system of real numbers; practical application of fractions, percentages, ratios/proportions and measurement. Ordinarily, such education is obtained in high school up to college. However, it may be obtained from experience and self-study.
Writing	Intermediate - Ability to write reports, prepare business letters, expositions, and summaries with proper format, punctuation, spelling, and grammar, using all parts of speech. Ordinarily, such education is obtained in high school up to college. However, it may be obtained from experience and self-study.
Certification & Other Requirements	Valid Class C Driver's License

### OVERALL PHYSICAL STRENGTH DEMANDS:

-Physical strength for this position is indicated below with "X"-					
Sedentary	Light	<b>X</b>	Medium	Heavy	Very Heavy
Exerting up to 10 lbs. occasionally or negligible weights frequently; sitting most of the time.	Exerting up to 20 lbs. occasionally, 10 lbs. frequently, or negligible amounts constantly OR requires walking or standing to a significant degree.		Exerting 20-50 lbs. occasionally, 10-25 lbs. frequently, or up to 10 lbs. constantly.	Exerting 50-100 lbs. occasionally, 10-25 lbs. frequently, or up to 10-20 lbs. constantly.	Exerting over 100 lbs. occasionally, 50-100 lbs. frequently, or up to 20-50 lbs. constantly.

# Orange Water and Sewer Authority

## PHYSICAL DEMANDS:

<b>C</b> Constantly <small>2/3 or more of the time.</small>	<b>F</b> Frequently <small>From 1/3 to 2/3 of the time.</small>	<b>O</b> Occasionally <small>Up to 1/3 of the time.</small>	<b>R</b> Rarely <small>Less than 1 hour per week.</small>	<b>N</b> Never <small>Never occurs.</small>
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Note: This is intended as a description of the way the job is currently performed. It does not address the potential for accommodation.

-Physical Demand-	-Frequency-	-Brief Description-
Standing	O	communicating with co-workers, observing work duties, observing work site
Sitting	F	Desk work, meetings, driving
Walking	O	around work site, to other departments/offices/office equipment
Lifting	O	files, supplies
Carrying	R	files, supplies
Pushing/Pulling	R	file drawers, tables and chairs
Reaching	O	for supplies, for files
Handling	F	paperwork
Fine Dexterity	F	calculator, computer keyboard, telephone pad
Kneeling	R	filing in lower drawers, retrieving items from lower shelves/ground
Crouching	R	filing in lower drawers, retrieving items from lower shelves/ground
Crawling	R	
Bending	R	filing in lower drawers, retrieving items from lower shelves/ground
Twisting	R	from computer to telephone, getting inside vehicle
Climbing	O	stairs
Balancing	R	
Vision	F	reading, computer screen
Hearing	F	communicating with co-workers and public and on telephone
Talking	F	communicating with co-workers and public and on telephone
Foot Controls	R	
Other (specified if applicable)		

## MACHINES, TOOLS, EQUIPMENT, SOFTWARE, AND HARDWARE:

Telephone, calculator, two-way radio, copier, scanner, computer, monitor, printer, CMMS software, Microsoft Office

# Orange Water and Sewer Authority

## ENVIRONMENTAL FACTORS:

<b>C</b> Continuously	<b>F</b> Frequently	<b>O</b> Occasionally	<b>R</b> Rarely	<b>N</b> Never
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<b>D</b> Daily	<b>W</b> Several Times Per Week	<b>M</b> Several Times Per Month	<b>S</b> Seasonally	<b>N</b> Never
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<b>-Health and Safety Factors-</b>	
Mechanical Hazards	R
Chemical Hazards	O
Electrical Hazards	R
Fire Hazards	R
Explosives	R
Communicable Diseases	N
Physical Danger or Abuse	N
Other (see 1 below)	

<b>-Environmental Factors-</b>	
Respiratory Hazards	N
Extreme Temperatures	S
Noise and Vibration	W
Wetness/Humidity	S
Physical Hazards	M

## PROTECTIVE EQUIPMENT REQUIRED:

Safety glasses, hard hat, traffic vest, safety shoes, etc. as needed for in-field visits.

## NON-PHYSICAL DEMANDS:

<b>F Frequently</b> From 1/3 to 2/3 of the time	<b>O Occasionally</b> Up to 1/3 of the time	<b>R Rarely</b> Less than 1 hour per week	<b>N Never</b> Never occurs
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<b>-Description of Non-Physical Demands-</b>	<b>-Frequency-</b>
Time Pressure	O
Emergency Situation	O
Frequent Change of Tasks	O
Irregular Work Schedule/Overtime	O
Performing Multiple Tasks Simultaneously	F
Working Closely with Others as Part of a Team	F
Tedious or Exacting Work	F
Noisy/Distracting Environment	O
Other	

## PRIMARY WORK LOCATION:

Office Environment	X	Vehicle	
Warehouse		Outdoors	
Shop		Other	
Recreation/Neighborhood Center			

The above statements are intended to describe the general nature and level of work being performed by individuals assigned to this position. They are not intended to be an exhaustive list of all responsibilities, duties, and skills required. This description is subject to modification as the needs and requirements of the position change.



**Resolution to Amend the Schedule of Employee Classification and Authorized Compensation to Reclassify an Administrative Assistant position to a Distribution and Collection Systems Coordinator position**

**Whereas**, the Executive Director has reviewed the duties, functions and responsibilities for the Distribution and Collection department; and

**Whereas**, the Executive Director has determined that OWASA would be better served by reclassifying the Administrative Assistant (Grade 610) position to a Distribution and Collection Systems Coordinator (Grade 614) position.

**Now Therefore, Be It Resolved:**

1. That one Administrative Assistant (Grade 610) position be reclassified to a Distribution and Collection Systems Coordinator (Grade 614) position, and that the Schedule of Employee Classification and Authorized Compensation shall be amended to reflect this change effective upon adoption of this Resolution.

Adopted this 25<sup>th</sup> day of October, 2018.

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Yinka Ayankoya, Chair

ATTEST:

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Raymond E. DuBose, Secretary

**Agenda Item**

- Approve Agua Vista-Related (Advanced Metering Infrastructure) Policies

**Purpose**

- To formally approve changes to two Board-policies: one related to information privacy and one related to adjustments to customer accounts for emergency water-loss situations.

**Background**

- On August 23, 2018, the Board discussed proposed changes to policies and procedures related to the implementation of Agua Vista (OWASA's advanced metering infrastructure system). To take advantage of opportunities to improve efficiencies and customer service, the Board has agreed to make changes to certain business practices and Board-approved policies. No public comments were received prior to or at the August 23, 2018 meeting.

**Action Needed**

- Approve resolutions adopting the revised policies shown in Appendix A and B.
  - Appendix A - Policy on Confidentiality of Individual Customers' Billing and Water-Consumption Records and Data
  - Appendix B - Policy for Adjustment of Customer Accounts for Emergency Situations Involving Loss of Metered Water


October 25, 2018



# 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:** Stephen Winters, CPA  
**DATE:** October 19, 2018  
**SUBJECT:** Approve Agua Vista-Related (Advanced Metering Infrastructure) Policies

### **Background:**

On August 23, 2018, the Board discussed proposed changes to policies and procedures related to the implementation of Agua Vista (OWASA's advanced metering infrastructure system). The new metering system gives OWASA many opportunities to improve efficiencies and customer service. To take advantage of the opportunities, the Board has agreed to make changes to certain business practices and Board-approved policies.

The purpose of this agenda item is to formally approve changes to two Board-policies: one related to information privacy and one related to adjustments to customer accounts for emergency water-loss situations.

### **Policy on Confidentiality of Individual Customers' Billing and Water-Consumption Records and Data**

Existing OWASA policy and state statute protect the confidentiality of individual customers' billing information. The proposed policy changes clarify that OWASA will not share individual customers' billing or water-consumption records or data. For water-supply planning, water consumption analysis, and other business purposes, OWASA is permitted to share aggregated billing and water-consumption information with the Board, consultants, regulators, and other appropriate parties.

Attachment A includes a resolution and a draft of the proposed new policy.

### **Policy for Adjustment of Customer Accounts for Emergency Situations Involving Loss of Metered Water**

Under current policy, OWASA may extend short-term emergency water loss adjustments for leaks or high-use situations. Before implementing Agua Vista (when meters were read only once per month), the water-loss adjustment period included billing for usage for the entire month in which the water-loss occurred. With the Agua Vista system, by analyzing per-customer hourly water-use on a daily basis, the new system allows for customer notification of suspected leaks within days, rather than months. Under the proposed new policy, adjustments are based on water lost during the time-period from when the leak begins to when it is repaired and will not be made for water used more than seven days after the first successful notification OWASA makes to the customer. A successful notification includes an in-person or via-phone conversation, voice mail, email or text message.

To be eligible, customers must have an Agua Vista meter, provide and ensure that OWASA has current and accurate contact information, including email address, cell phone number or other phone number, and must properly apply for the adjustment.

Attachment B includes a resolution and a draft of the proposed new policy.

### **Changes in Practices Not Requiring Board Action**

At its August 23, 2018 meeting, the Board agreed to the following proposed changes in practices related to Agua Vista that do not require changes to a Board-approved policy.

#### **1. Access to Meter Box and Meter**

To be able to obtain meter readings each day and provide enhanced services to our customers such as leak detection, we must be able to receive transmissions from customers' meters. Therefore, it is essential for meters and other network equipment to remain accessible. The customer shall ensure that OWASA's meter box is always accessible and shall not impede access to it, nor cover it (e.g., with mulch). Customer shall not block the radio signal emanating from the AMI radio. For maintenance purposes, an area approximately two feet in each direction around the meter box shall be kept clear of bushes, shrubs, trees, rocks, and other obstructions.

Notice of this requirement will be provided to customers when a new account is opened, we will periodically publicize this to all customers, and it will be posted on OWASA's website.

#### **2. Visiting a Customer's Location / On-site Customer Consultation**

Data generated and compiled by the Agua Vista system allows for efficient and effective desktop, online and telephone notification and consultation regarding leaks and high bills. We proactively contact customers when their water-use seems unusual. With Agua Vista, we are able to identify these situations within days rather than weeks or months. We can perform a consumption analysis remotely using hourly water-use data and guide the customer through how to check for toilet leaks, etc. based on what the data show. Once the customer web portal is deployed, the detailed consumption history will also be accessible online by the customer, as well as step-by-step instructions on where and how to look for leaks. Additionally, OWASA will consider options to communicate detailed consumption history and leak detection instructions to customers without web connection or computer skills (e.g. mailed leak reports).

OWASA will endeavor to provide assistance to the customer without traveling to the customer's location but this may not be possible in all circumstances. The proposed practice is to continue the current practice of making customer site visits at no charge. Staff will monitor the effectiveness of these site-visits and make recommended changes to our practice as appropriate.

#### **3. Final Read/Transfer of Service**

Post-Agua Vista implementation, when a customer discontinues service, OWASA will read the meter remotely on the date the service is to be discontinued, then issue a bill to the outgoing customer. In certain circumstances, we may also physically shut-off the service at the meter. When a customer wishes to initiate service at a location where service has been shut-off, a service initiation fee covering the cost of a field visit to turn on the service will be charged.

However, OWASA will endeavor to leave the service on. If left on, when an incoming customer establishes an account and requests that service be turned on, no site visit will be necessary and no fee will be charged.

#### **4. High Consumption (“Broken Pipe”) Notification**

The Agua Vista system informs OWASA staff if a customer’s usage appears to be excessively high. Once informed, OWASA notifies the customer using contact information the customer has provided to us.

If OWASA is unable to contact the customer successfully or if the high-use condition does not abate, OWASA may, at its option, attempt to contact the customer in-person or turn the service off and leave a tag at the customer’s premises notifying them of the condition and the action taken.

#### **5. Low-Flow Continuous-Use (“Leak”) Notification**

The AMI system notifies OWASA staff if a customer’s meter shows continuous consumption indicative of a low-flow, continuous leak. Once notified, OWASA, using commercially reasonable efforts, will notify the customer using contact information the customer has provided to us.

#### **6. Contact Information**

To receive high-use and leak notifications, the customer is responsible for providing and ensuring that OWASA has their current and accurate contact information, including email address, cell phone number or other phone number.

OWASA will make commercially reasonable efforts to notify the customer of possible leaks or high-use. However, if the customer has not provided OWASA with current and accurate email address, cell phone number or other phone number, OWASA cannot provide timely leak or high use notification.

#### **7. Tampering with Meter or AMI Device**

Tampering with the meter or other AMI device may result in a fine in accordance with North Carolina General Statutes. OWASA may also assess charges for damaged equipment. Tampering includes disconnecting the radio from the meter.

No changes to the current tampering policy are necessary.

#### **8. Vacant Account Monitoring**

At locations where a customer vacates the premises and asks OWASA to close the account, we may not physically shut-off the meter. In cases where we do not physically shut-off the service, we will monitor the accounts for water-use. If there is use above a certain number of gallons, we will physically shut-off the service and may lock the shut-off valve.

#### **9. Billing increments**

We currently bill water and sewer services in increments of 1,000 gallons. Based on customer feedback, the Board and staff would like to bill in smaller increments. Until the Agua Vista implementation is complete, some portion of our meters will be read using our current methods (manual or drive-by). Staff plans to present billing increment options to the Board subsequent to full-implementation of the AMI system.

**Communicating Revised Policies and Practices with New and Existing Customers**

In order to make sure that our customers are informed of the revisions to our policies and practices and that they take action to comply, we will undertake the following:

- Summarize changes in policy and practice on our website and notify customers of the online information on their next bill.
- Revise our new customer service agreement and welcome email with revised policies and practices.
- Develop an edition of the Blue Thumb summarizing OWASA customer stewardship responsibilities such as water conservation and watering restrictions, meter stewardship, what not to flush, keeping contact information up-to-date, signing up for OC Alerts, etc.
- Frequently remind customers to update contact information held by OWASA. During Agua Vista implementation, customers are being reminded to call OWASA with updated contact information via the door hanger that is left when a meter is upgraded. We will also include a reminder on the web portal invitation letter and bill messages, along with a link to a secure on-line form.

**Action Requested:**

Approve resolutions adopting the revised policies shown in Appendix A and B.



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Stephen Winters, CPA  
Director of Finance and Customer Service

**Resolution of the OWASA Board of Directors Adopting a Policy on Confidentiality of Individual Customers' Billing and Water-Consumption Records and Data**

**Whereas**, the OWASA Board of Directors desires to adopt a formal policy on the confidentiality of individual customers' billing and water-consumption records and data; and

**Whereas**, General Statute 132-1.1, Public Enterprise Billing Information, states that billing information compiled and maintained by a city or county or other public entity providing utility services in connection with the ownership or operation of a public enterprise is not a public record as defined in General Statute 132-1 unless the city or county determines it will be useful or necessary to assist bond counsel, bond underwriters, underwriters' counsel, rating agencies, investors or potential investors, the city, county, or State, law enforcement, public safety, fire protection, rescue, emergency management, or judicial officers.

**Now, Therefore, Be It Resolved:**

1. That the Board of Directors of Orange Water and Sewer Authority hereby adopts the attached Policy on Confidentiality of Individual Customers Billing and Water-Consumption Records and Data.
2. That said policy is effective upon adoption.
3. That the Executive Director be, and he hereby is, authorized and directed to interpret and implement said policy.

Adopted this 25<sup>th</sup> day of October, 2018.

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Yinka Ayankoya, Chair

ATTEST:

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Raymond E. DuBose, Secretary

ORANGE WATER AND SEWER AUTHORITY  
POLICY ON CONFIDENTIALITY OF INDIVIDUAL CUSTOMERS' BILLING AND WATER-  
CONSUMPTION RECORDS AND DATA

PURPOSE

To adopt a formal policy to maintain the confidentiality of individual customers' billing and water-consumption records and data.

BACKGROUND

OWASA is a public entity and most of its records are open to the public under the General Statutes, with some exceptions. However, records of individual customer accounts, including but not limited to use, consumption, and billing records, are maintained as confidential records.

North Carolina General Statute 132-1.1 specifically allows public entities to classify and keep as confidential billing information compiled and maintained in connection with the ownership or operation of a public enterprise, such as water and sewer services. Furthermore, that statute declares that such records are not public records, and do not have to be disclosed under public records requests.

Nevertheless, that statute permits public entities to use and disclose such records in certain limited instances, such as may be useful or necessary to assist bond counsel, bond underwriters, underwriters' counsel, rating agencies, investors or potential investors, the city, county, or state, law enforcement, public safety, fire protection, rescue, emergency management, or judicial officers.

In order to protect the privacy of individual customers' billing and water-consumption records and data, OWASA does not disclose information unless otherwise approved by the Executive Director for one of the limited purposes permitted by the statute.

AUTHORIZATION

The Executive Director shall interpret and implement on behalf of Orange Water and Sewer Authority this Policy on Confidentiality of Individual Customers' Billing and Water-Consumption Records and Data. Such administrative actions may be taken without further authorization by the Board of Directors.



**Resolution of the OWASA Board of Directors Adopting an Amended  
Policy for Adjustment of Customer Accounts for Emergency Situations Involving  
Loss of Metered Water**

**Whereas**, implementation of OWASA’s Agua Vista automated metering infrastructure will create new opportunities for earlier intervention to reduce and water loss through leaks and accidental breakages, to save customers’ money, and to reduce water consumption by reducing such water losses; and

**Whereas**, these additional tools and procedures require modifications and amendments to OWASA’s existing policies pertaining to Adjustment of Customer Accounts for Emergency Situations Involving Loss of Metered Water; and

**Whereas**, the Board of Directors has determined that the attached Amended Policy is necessary to serve the forgoing purposes;

**Now, Therefore, Be It Resolved:**

1. That the Board of Directors of Orange Water and Sewer Authority hereby adopts the attached Policy for Adjustment of Customer Accounts for Emergency Situations Involving Loss of Metered Water, amended and effective October 25, 2018.
2. That the Executive Director is, authorized and directed to interpret and implement said policy.

Adopted this 25<sup>th</sup> day of October, 2018.

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Yinka Ayankoya, Chair

ATTEST:

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Raymond E. DuBose, Secretary

ORANGE WATER AND SEWER AUTHORITY  
POLICY FOR ADJUSTMENT OF CUSTOMER ACCOUNTS FOR EMERGENCY SITUATIONS  
INVOLVING LOSS OF METERED WATER  
Amended and effective October 25, 2018

PURPOSE

The purpose of this policy is to provide a credit adjustment to the water and/or sewer account of a customer who has experienced an emergency situation involving the loss of metered water. The excess water metered will have occurred as a result of conditions beyond normal and reasonable control of the customer or other parties responsible for the use, care and maintenance of fixtures and devices that are a part of the customer's water service system.

Customers are responsible for paying for all water that passes through the meter serving the customer's location. However, for water-use caused by a leak that exceeds the customer's average use (explained below), this policy allows OWASA to reduce the volumetric rate of the excess water-use.

CONDITIONS

It is the customer's responsibility to promptly discover leaks and stop the loss of water; however, by analyzing per-customer hourly water-use data available through the Agua Vista metering system, OWASA has the ability, but not the obligation to notify customers of suspected leaks in the customer's plumbing system.

A customer who has chosen not to have an OWASA Agua Vista meter installed at their location is not eligible for this credit.

At a customer location served by an OWASA Agua Vista meter, to be eligible for a credit adjustment the customer must have provided accurate contact information that OWASA can use to notify the customer of a suspected leak.

LEAK ADJUSTMENT PERIOD

The credit adjustment will cover excess water-use from the date OWASA notifies the customer of the leak until the leak is repaired up to a maximum of seven (7) days.

For those locations that OWASA has not yet upgraded the meter to an Agua Vista meter, the billing period adjustment is limited to one (1) month.

If a customer who has provided OWASA with accurate contact information experiences an emergency situation involving the loss of metered water and did not receive notification from OWASA, the billing period adjustment is limited to one (1) month.

With the exception of the annual sewer adjustment for pool filling (see below), not more than one (1) credit adjustment for an emergency situation involving the loss of metered water will be made for any given 36-month period per location.

The customer is responsible for repairing the fixture or device causing the water loss. Although there is no obligation for OWASA to adjust accounts when the water has been metered properly, it is OWASA's desire to encourage customers to make prompt and permanent repairs and to show consideration for the unusual circumstance by sharing the cost of the excessive billing charges.

#### CUSTOMER RESPONSIBILITY

The customer must provide information describing the emergency situation or circumstances that resulted in the loss of water. Emails and phone calls are an acceptable form of notification. This should include the cause of the water loss, when the problem was discovered, what action was taken to stop the loss of water, and any arrangements made for repairs.

If a repair is completed, the customer must provide a copy of the plumber's bill or a statement of materials purchased if the repair was performed by the customer.

#### ADJUSTMENT PROCEDURE

Upon receipt of the customer's verbal or written statement describing the water-loss and copies of invoices or receipts documenting repair, the OWASA Customer Service Department will evaluate the circumstances surrounding the water loss.

1. For leaks, other than those resulting from any portion or component of an irrigation system:

The Customer Service Department, upon determination that an adjustment is appropriate under the policy, may adjust charges for water-use over the customer's previous 12-months' daily average water-use, excluding the days of excessive consumption for which the adjustment is requested, to OWASA's lowest retail commodity rate. Additionally, the adjustment will include:

- a) 100% of the amount in excess of the previous 12-months' daily average water-use for wastewater, excluding the days of consumption for which the adjustment is requested, for the following conditions or similar situations where the water has not returned to the sewer system:
  - Leaks underground not associated with irrigation systems, or in walls,
  - Frozen and burst pipes not associated with irrigation systems,
  - Outdoor spigot and hose leaks,
  - Faulty water heaters or pressure reducing valves where such appliances and devices are not easily accessible or visible, and
  - Vandalism to plumbing that is documented with a police report.
- b) 50% of the amount in excess of the previous 12-months' daily average billings for wastewater excluding the days of excessive consumption for which the adjustment is requested, for the following conditions or similar situations where the water has returned to the sewer system:
  - Malfunctioning toilets, and
  - Leaking indoor faucets.
- c) No adjustment shall be made for the following:

- Losses that occurred within one (1) year of construction, and
  - Unoccupied dwellings listed as “vacant” in OWASA’s billing system.
- d) If a full 12-month period daily average is not available (such as with a new customer), the average will be based on 65 gallons of use per day per person in the household, or the rate of consumption after repairs, whichever is greater.
- e) For users billed under OWASA’s seasonal rate structure, the adjustment will be based on the corresponding days from the year immediately preceding, where no emergency water loss or meter malfunction was recorded during the corresponding days.
2. For leaks resulting from any portion or component of an irrigation system that is not served by an irrigation meter:
- a) OWASA may adjust charges for water-use that exceeds the customer’s previous 24-month period’s highest average daily water-use. The adjustment will be the difference between the amount billed for the excess use, using the customer’s applicable rate structure less charges for the excess use calculated using OWASA’s irrigation commodity rate. If the calculation using the irrigation commodity rate results in an increase in the charges for water-use, then there will be no adjustment for water charges.
- b) Additionally, the adjustment will include 100% of the amount of charges for wastewater that exceeds customer’s previous 24-month period’s highest average daily water-use.
- c) No adjustment shall be made that reduces a customer’s bill to an amount less than the customer’s previous 24-month period’s highest average daily water-use.
- d) If a customer has less than 24 months of history for the location at which the loss of water occurred (such as with a new customer), the maximum adjustments for water and wastewater will be based on the customer’s previous highest average daily water-use.

In the case of an active customer, no adjustment shall be made when the request for the adjustment is received more than 90 days after the billing date of the bill to be adjusted. If the customer has closed their account and the bill to be adjusted is the customer’s “final” bill, no adjustment shall be made when the request for the adjustment is received more than 30 days after the billing date of the bill to be adjusted. Exceptions will only be made if there is proof of extraordinary circumstances.

Adjustments will not normally be allowed for water loss arising from carelessness, negligence or lack of due diligence on the part of the customer.

Customers with pools qualify for a once per year adjustment to their sewer charges if they completely empty and refill their pool. The customer must supply OWASA, in writing, with the total capacity of the pool in gallons and the date it was filled. OWASA will then compare the pool’s total capacity to the total consumption for the month in question. Assuming the customer’s total consumption increased above their average by the approximate volume of the pool, the sewer portion of the bill shall be adjusted by the amount of water it took to fill the pool. No adjustment will be given if the total volume of the pool exceeds the total consumption for the month.

All emergency water loss calculations shall be documented by OWASA and shall include a complete and adequate description of the problem and justification for the adjustment.

A proposed adjustment in excess of \$300 will be reviewed and approved or denied by the Customer Service Manager before an adjustment is made to the customer's account. A proposed adjustment in excess of \$2,000 will be reviewed and approved or denied by the Director of Finance and Customer Service before an adjustment is made to the customer's account.

IMPLEMENTATION

The Executive Director, or his or her designee, shall be responsible for implementing and interpreting this policy, and is authorized to exercise discretion in determining its applicability.

EFFECTIVE DATE

This policy is effective as of October 25, 2018.

Reviewed by General Counsel: \_\_\_\_\_  
Date Robert Epting, General Counsel

Adopted by the Board: \_\_\_\_\_  
Date Andrea Orbich, Clerk to the Board

Orange Water and Sewer Authority  
Annual Meeting of the Board of Directors  
September 27, 2018

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held its annual meeting on Thursday, September 27, 2018, at 7:00 p.m. in Chapel Hill Town Hall Council Chamber.

Board Members present: Yinka Ayankoya (Chair), Raymond (Ray) DuBose (Secretary), Bruce Boehm, Jody Eimers, John N. Morris, Robert Morgan, Ruchir Vora and John A. Young. Board Members absent: Jeff Danner (Vice Chair).

OWASA staff present: Denise Battle, Mary Darr, Monica Dodson, Robert Epting Esq. (Epting and Hackney), Stephanie Glasgow, Robin Jacobs (Epting and Hackney), Ed Kerwin, Simon Lobdell, Linda Low, Andrea Orbich, Ruth Rouse, Kelly Satterfield, Todd Taylor, Mary Tiger and Stephen Winters.

Others present: Terri Battle, Meg Blue (Audit Manager, Martin, Starnes & Associates), Barbara Foushee (Town of Carrboro), Margaret Holton (University of North Carolina Water Resources Manager) and Ben Poulson (UNC Associate Director of Energy Services).

There being a quorum present, Chair Yinka Ayankoya called the meeting to order.

Motions

1. Robert Morgan made a motion to approve the Minutes August 23, 2018 Meeting of the Board of Directors; second by Ruchir Vora and unanimously approved.
2. Robert Morgan made a motion to approve the Minutes August 23, 2018 Closed Session of the Board of Directors for the purpose of discussing potential litigation and a personnel matter; second by Ruchir Vora and unanimously approved.
3. BE IT RESOLVED THAT the Board of Directors adopts the Resolution Awarding a Construction Contract for the Jones Ferry Road Water Treatment Plant Sedimentation Basin Rehabilitation Project. (Motion by John Young, second by Robert Morgan and unanimously approved.)
4. BE IT RESOLVED THAT the Board of Directors adopts the Resolution Reappoint the Firm of Epting and Hackney as General Counsel to Orange Water and Sewer Authority. (Motion by Robert Morgan, second by John Morris and unanimously approved.)

\* \* \* \* \*

### Announcements

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

Ms. Ayankoya announced that our consultant, VISIONS, Inc., is working to schedule two Diversity and Inclusion training sessions. The first session will be for new Board Members, the Chair of the Board and few other Members; and the second session will be scheduled for the full Board.

John Young announced the Chatham-Orange Joint Planning Task Force Meeting on Thursday, October 4, 2018 at 12:00 noon at the offices of Clarion Associates in Southern Village, Chapel Hill. The topic of interest for OWASA is a presentation and discussion on the Jordan Lake Western Intake Partnership.

Mr. Young said that due to preparations for Hurricane Florence, the Natural Resources and Technical Services (NRTS) Committee meeting scheduled in September was canceled. The NRTS Committee is currently scheduled to meet on Wednesday, November 14, 2018 at 5:00 p.m. and Tuesday, December 4, 2018 at 4:00 p.m., both in the OWASA Boardroom. Mr. Young requested Board Member feedback on a plan for each meeting and to reschedule the September meeting to a date in October to discuss source water protection; the Board agreed.

Mr. Young suggested that staff work to schedule a tour of Cane Creek Reservoir watershed lands in October for new Board Members and other interested Board Members to inform discussions about source water protection and forestry management; the Board agreed.

Mr. Young suggested that the October 11, 2018 Work Session, regarding the discussion on the Long-Range Water Supply Plan (LRWSP) on demand and yield also include information about the LRWSP's overall scope and schedule for discussion; the Board agreed.

Mr. Young suggested moving the November 14, 2018 NRTS meeting regarding forestry management up one week in advance of the November 8, 2018 Work Session to inform the Board discussion regarding strategic trends and strategic plan update. Mr. Young said that the December 4, 2018 NRTS meeting will remain as scheduled and that the topic will be determined at a later date.

Ray DuBose announced a Finance Committee meeting on Monday, October 8, 2018 to discuss longer-term approach/strategy for operating cost management at 4:00 p.m. in the OWASA Boardroom.

Ed Kerwin announced the October 10, 2018 OWASA Session for the Town of Carrboro Citizen's Academy which will be held at Carrboro Fire Station #1 at 6:00 p.m.

Item One: Presentation of Annual Report

In presenting OWASA's Annual Report for Fiscal Year (FY) 2018, Mary Darr, Director of Engineering and Planning, stated that OWASA has the important responsibility to effectively manage and maintain all the resources, facilities and infrastructure that the community depends on for high-quality and reliable service. She said that OWASA is a community owned utility providing water, sewer and reclaimed water service to the Carrboro and Chapel Hill community.

Ms. Darr stated that OWASA continues to operate in full compliance with all federal and state standards for treating the community's drinking water and for recycling highly-treated wastewater back to the environment. Important investments are made to renew and replace the complex system of water and wastewater infrastructure to ensure that essential services continue for our customers and the community.

Ms. Darr said that about 50 cents of every dollar collected from our customers is reinvested in our infrastructure. The Agua Vista (Advanced Metering Infrastructure) program is an important improvement for our customers and is more than half-way complete. She reiterated the Team's responsibility to effectively manage and maintain all the resources, facilities and infrastructure that our community depends for high-quality and reliable service. There are about 750 miles of water and wastewater pipes as well as reservoirs, several pumping stations and two complex treatment plants.

Ms. Darr said it is essential to continue making smart investments in our infrastructure. She said that an asset management program guides investment decisions and that in FY 2018, \$19.2 million was invested in capital improvements for OWASA's system, nearly 70 percent towards renewing/replacing aging infrastructure. Ms. Darr noted that over the next five years, almost \$100 million will be invested in capital improvements.

Denise Battle, Customer Service Manager, said that Agua Vista is an important resource in communicating actionable information to our customers. The information that this technology provides will help our customers save money. She noted that about 60 percent of the meters have been upgraded with Agua Vista meters. Staff is proactively reaching out to customers to notify them of potential leaks and the response has been very positive. Ms. Battle said that in 2019, an online water management tool will be available to OWASA customers so that they can monitor their water use.

Ms. Battle said that while many customers can pay their water and sewer bills, some customers in our community cannot. She encouraged customers to sign up to donate to OWASA's Care to Share program to assist those in the community that have difficulty paying their bill.

Stephen Winters, Director of Finance and Customer Service, said that agenda information was updated today to include a draft of OWASA's Comprehensive Annual Financial Report (CAFR). The CAFR will be finalized within the next few weeks. He said the independent audit for FY 2018 was performed by Martin, Starnes & Associates



Mr. Winters said OWASA received an unmodified opinion from our auditor. OWASA's financial situation is stable and sustainable, an indicator is that Standard and Poor's upgraded OWASA's bond rating to AAA. The success of this audit is a testament to the entire OWASA team and is a positive reflection on the Finance and Customer Service staff for a job well done.

Meg Blue, Audit Manager with Martin, Starnes & Associates, said OWASA received an unmodified opinion that the financial statements fairly present OWASA's financial position and results from operations. OWASA's CAFR can be relied upon by third parties, citizens, underwriters and bondholders. Ms. Blue stated that no significant deficiencies in internal control were identified.

Item Two: Petitions and Requests

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

Item Three: 12 Month Board Meeting Schedule

The Board received the 12 Month Board Meeting Schedule as an information item.

Item Four: Annual Report on Disposal of Surplus Personal Property

The Board received the Annual Report on Disposal of Surplus Personal Property as an information item.

Item Five: Minutes

Robert Morgan made a motion to approve the Minutes August 23, 2018 Meeting of the Board of Directors; second by Ruchir Vora and unanimously approved. Please see Motion 1 above.

Item Six: Minutes

Robert Morgan made a motion to approve the Minutes August 23, 2018 Closed Session of the Board of Directors for the purpose of discussing potential litigation and a personnel matter; second by Ruchir Vora and unanimously approved. Please see Motion 2 above.

Item Seven: Update on Hurricane Florence Impact on OWASA

Ed Kerwin, Executive Director, began a staff presentation on OWASA's preparation, response and initial recovery to Hurricane Florence. He stated that OWASA's essential services were maintained throughout the storm and infrastructure damages were minimal except for a water main break that left about 90 customers without water for a few hours. No damage to critical infrastructure was reported and an initial estimate of \$500,000 was the cost to prepare for and repair damages.

Todd Taylor, General Manager of Operations, presented objectives for the storm including: maintenance of water and sewer services; communications; safety; and financial documentation. He reviewed the damage sustained and noted that the storm set a record at University Lake Dam as the highest water level above the spillway (54 inches) recorded since 1986.

Monica Dodson, Wastewater Treatment and Biosolids Recycling Manager, reviewed the flooding and recovery that occurred at the Mason Farm Wastewater Treatment Plant during the storm. She also noted that the Plant successfully treated a record high of 29.8 million gallons on September 17, 2018.

Linda Low, Communications and Community Relations Manager, discussed the communications in preparation of and during the event by getting key messages out to the community with the assistance of community partners.

Mary Tiger, Sustainability Manager, said that throughout the storm, staff remained in communications with Orange County Emergency Operations Center, direct communication with local partners, and offered services to the neighboring communities. OWASA is also a member of NC WaterWARN, a statewide water utility network that assists utilities during emergencies. She stated that staff will hold a series of After Action Reviews and any updates will be reflected Comprehensive Emergency Management Plan.

The Board expressed appreciation to staff for their hard work and dedication maintaining OWASA services to the Carrboro-Chapel Hill community throughout the storm. The Board requested a summary of the After Action Reviews.

Item Eight: Resolution Awarding a Construction Contract for the Jones Ferry Road Water Treatment Plant Sedimentation Basin Rehabilitation Project

John Young expressed appreciation for showing major alternatives for the project.

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

Item Nine: Resolution Reappointing the Firm of Epting and Hackney as General Counsel to the Orange Water and Sewer Authority

Robert Morgan made a motion to approve the resolution; second by John Morris and unanimously approved. Please see Motion No. 4 above.

Item Ten: Diversity and Inclusion Program Progress Report and Equal Employment Opportunity/Affirmative Action Report for Fiscal Year 2018

The Board received a progress report on OWASA's Diversity and Inclusion Program including an equal employment opportunity/affirmative action report for Fiscal Year 2018.

John Young offered advice to move the Diversity and Inclusion Program along and suggested the use of a project manager to support the execution of the plan.

Item Eleven: Summary of Board Meeting Action Items

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

- Schedule Natural Resources and Technical Services Committee Meeting in October 2018 to discuss source water protection;
- Schedule tour of OWASA's Cane Creek Reservoir watershed lands in October 2018 for new and interested Board Members;
- Provide summary information on the After Action Reviews of Hurricane Florence preparations and response;
- October 11, 2018 Board Work Session agenda will include:
  - Discuss Communications and Community Engagement; and
  - Discuss overall scope and schedule for the Long-Range Water Supply Plan – Demand and Yields

Item Twelve: Closed Session

Without objection, the Board convened in a Closed Session to discuss a personnel matter.

The Board came out of closed session and the meeting was adjourned at 9:30 p.m.

Respectfully submitted by:

Andrea Orbich  
Executive Assistant/Clerk to the Board

Attachments

Orange Water and Sewer Authority

Closed Session of the Board of Directors

September 27, 2018

The Board of Directors of Orange Water and Sewer Authority met in Closed Session on Thursday, September 27, 2018, following the Board meeting.

Board Members present: Yinka Ayankoya (Chair), Ray DuBose (Secretary), Bruce Boehm, Jody Eimers, Robert Morgan, John Morris, Ruchir Vora and John A. Young.  
Board Member absent: Jeff Danner (Vice Chair).

Other present: Robert Epting (General Counsel) and Robin Jacobs.

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ITEM ONE

The Board of Directors met in Closed Session with staff to evaluate General Counsel's annual performance review.

No official action was taken at the meeting.

The meeting was adjourned at 9:30 p.m.

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Robert Morgan, Chair  
Human Resources Committee

**Agenda Item**

- Review Draft Water Treatment Plant (WTP) and Wastewater Treatment Plant (WWTP) Reliability and Risk Assessment Action Plan

**Purpose**

- To obtain the Board's feedback regarding the Action Plan developed by staff from the findings of the Reliability and Risk Assessment Evaluation.

**Background**

- The Reliability and Risk Assessment project identified and assessed risks that would prevent OWASA from providing water, wastewater, and reclaimed water services that meet or exceed federal, state, and local quality requirements.
- A cross-functional team of OWASA staff worked with experts from the consulting firm CH2M using a risk assessment methodology to evaluate risk identification, analysis, evaluation, and treatment.
- A project overview and update, followed by a discussion between the Board, staff and our consultant, was provided at the Board's January 11, 2018 Work Session.
- The Draft Reliability and Risk Assessment Evaluation Report was presented and discussed at the at the Board's July 13, 2018 Work Session.
- An Action Plan developed by staff assigns responsibilities for recommendations from the Reliability and Risk Assessment Evaluation Report.

**Action Needed**

- Review and provide feedback on the WTP and WWTP Reliability and Risk Assessment Action Plan.




# 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

**DATE:** October 18, 2018

**SUBJECT:** Review Draft Water Treatment Plant (WTP) and Wastewater Treatment Plant (WWTP) Reliability and Risk Assessment Action Plan

### Purpose

The purpose of this agenda item is to obtain the Board's feedback regarding the Action Plan developed by staff from the findings of the Reliability and Risk Assessment Evaluation.

### Background

The Reliability and Risk Assessment project identified and assessed risks that would prevent OWASA from providing water, wastewater, and reclaimed water services that meet or exceed federal, state, and local quality requirements.

A cross-functional team of OWASA staff worked with experts from the consulting firm CH2M to perform the evaluation using a risk assessment methodology based on the International Organization for Standardization (ISO) 31000 framework. The four main components of the process were risk identification, analysis, evaluation, and treatment. The eight most critical systems at the WTP and ten most critical systems at the WWTP were evaluated.

A project overview and update, followed by a discussion between the Board, staff and our consultant, was provided at the Board's January 11, 2018 Work Session. The Draft Reliability and Risk Assessment Evaluation Report was presented and discussed at the at the Board's July 13, 2018 Work Session.

### Action Plan

The attached action plan prepared by staff assigns responsibilities for recommendations from the Reliability and Risk Assessment Evaluation Report. Tasks have been assigned to a variety of

staff including managers, treatment plant operations, maintenance, engineering, and safety and risk management. Target completion dates are identified for each item.

Several of the activities are included in the Fiscal Year (FY) 2019-2023 Capital Improvements Program (CIP). Since CIP projects can take several years to design, permit, bid and construct, staff will monitor these systems until they are replaced or upgraded. Projects identified in the Action Plan that are not currently in the CIP will be included in the upcoming CIP development process that is part of the FY 2020 budget process. Other activities, such as new or increased preventive maintenance activities and installing level sensors will be incorporated into departmental annual operating budgets.

Many of the action plan items involve activities that are focused on employee development and training, maintaining standard operating procedures, communication, and evaluation of risk during the design process. As the Board noted at the July 13, 2018 Work Session, a robust and continuous employee training program is essential to identifying and mitigating risks.

We believe current staffing levels can manage and complete the activities identified in the Action Plan. However, it is important that key vacancies including the Maintenance Coordinator, Safety and Risk Manager, and Asset Management and Facilities Engineer are filled and the new staff trained on risk management. The need for additional resources may be identified as we work through the Action Plan.

As we work through the action plan, we will evaluate its impact and assess the need to conduct additional risk analysis workshops for the next prioritized group of water and wastewater systems.

### **Other Related Activities**

There are two CIP projects starting in FY 2019 that are focused on improving the reliability and reducing the risk of the water distribution system.

- Distribution System Water Main Replacement Prioritization Model (CIP 275-89) will use a risk framework to identify and prioritize water mains for rehabilitation and replacement.
- Barbee Chapel Road Pump Station Study (CIP 273-09) will evaluate construction of a new drinking water pump station along the NC Highway 54 corridor near the service area boundary with the City of Durham.

We will evaluate installing additional pressure monitors in the water distribution system that could alert staff to leaks and help locate leaks when the Agua Vista advanced metering infrastructure project is complete.

Review Draft Water Treatment Plant and Wastewater Treatment Plant Reliability and Risk  
Assessment Action Plan

October 18, 2018

Page 3

**Next Steps**

Staff throughout the organization are eager to continue to use the risk assessment process to evaluate other facilities and identify additional opportunities to reduce risk. Staff will update the Action Plan as the status of tasks change.

**Action Requested**

Review and provide feedback on the attached WTP and WWTP Reliability and Risk Assessment Action Plan.

A handwritten signature in cursive script that reads "Mary Darr". The signature is written in black ink and is positioned above a horizontal line.

Mary Darr, P.E.

Director of Engineering and Planning

Attachment: Draft Reliability and Risk Assessment Acton Plan



**Draft WTP and WWTP Reliability and Risk Assessment Action Plan - October 25, 2018**

**Abbreviations**

CIP	Capital Improvements Program	PM	Preventive Maintenance
FMEA	Failure Modes and Effects Analysis	SCADA	Supervisory Control and Data Acquisition
FY	Fiscal Year	SOP	Standard Operating Procedure
IT	Information Technology	UV	Ultraviolet
KF	Key Findings	VFD	Variable Frequency Drive
MCPS	Morgan Creek Pump Station	W	Water
O&M	Operation and Maintenance	WTP	Jones Ferry Road Water Treatment Plant
OT	Operations Technology	WW	Wastewater
PLC	Programmable Logic Controller	WWTP	Mason Farm Wastewater Treatment Plant

**Jones Ferry Road Water Treatment Plant**

Risk No.	System	Risk Description	Treatment Plan	Target Completion Date	Responsible Person	Notes/Status
W-R1	Clearwell	WTP Clearwell – Condition of the canvas curtain, which ensures adequate disinfectant contact time required by regulations, is unknown. Failure of drain line valve could drain the Clearwell. Failure of overflow standpipe could significantly reduce storage capacity of Clearwell.	Perform Clearwell inspection by diver to assess the condition of the following: joints between the clear well’s concrete walls and floors, surface of concrete walls, expansion joints in the Clearwell floor, areas of sediment buildup, concrete roof support columns, stainless steel influent baffle plate, canvas curtain, mechanism supporting curtain, 12-inch overflow pipe, 12-inch drain line located under Clearwell and the associated valve, 30-inch effluent pipe to old Clearwell, and 60-inch influent pipe under generator (including valve and surrounding grout). Consider also including old Clearwell located in main building and two suction pipes associated with the old Clearwell.  Address deficiencies identified by the condition assessments. Evaluate abandoning (filling) or replacing drain line and valve; relocating the overflow standpipe to outside of the Clearwell; and Clearwell redundancy.	Timing will be determined as part of FY 2020-2024 CIP development process.	Gangadharan	A project to assess and inspect the Clearwell will be added to the CIP.
W-R2	Post Filter Mix Tank and piping located between Filters and Clearwell	WTP Post-filter pipeline - This system is a single point of failure. Procedures for temporarily bypassing this system are not well known by staff nor formally documented.	Formally document bypass procedure used during prior construction project using archived as-builts. Also, prepare contact time calculations for bypass.	November 2018	Loflin	

**Draft WTP and WWTP Reliability and Risk Assessment Action Plan - October 25, 2018**

Risk No.	System	Risk Description	Treatment Plan	Target Completion Date	Responsible Person	Notes/Status
W-R3	Electrical Distribution System	WTP electrical system - Configuration of the electrical power distribution system is complex due to the existence of both 2300 and 480 voltage systems.	Phased capital project to eliminate 2300 voltage system, which would involve converting finished water pump no.5 to 480 voltage.	FY 2020	Gangadharan	A. The conversion of finished water pump no.5 to 480 voltage is being completed as part of CIP 272-42.  B. A project to convert the remaining 2300 voltage distribution system at WTP will be evaluated as part of the FY 2020-2024 CIP development process.
W-R4	Electrical Distribution System	WTP electrical system - Various single-points of failure	Conduct component level PM identified in FMEA (gas in oil testing, thermographic survey, insulation test, turns ratio test, etc.)	June 2019	J. Dodson	
W-R5	Finished Water Flow Meter	WTP finished water meter-Finished water flow meter is single point of failure. There is no finished water flow meter downstream of alternate chemical application vault, which is activated if primary chemical application vault fails.	Evaluate options for meter redundancy. Develop mitigation plan for failure of meter.	December 2018	Loflin	Review with our SCADA systems integrator. Temporary metering may be a possible option to mitigate risk.
W-R6	Hypochlorite, Caustic, and Ammonia Chemical Feed Pumps	WTP chemical feed pumps - Chemical feed pumps were identified as a high risk due to condition and criticality. Difficult to maintain a wide variety of pumps (manufacturer, type, and capacity). Ancillary pumping equipment (check valves, pressure relief valve, etc.) and piping configuration may be inadequate.	CIP and O&M projects to replace hypochlorite, caustic, and ammonia chemical feed pumps. Undergo standardization process for chemical feed pumps.	FY 2020	Gangadharan	Caustic, hypochlorite, and ammonia chemical feed system improvements are part of CIP 272-46.
W-R7	Various Locations	WTP VFD - Difficult to repair and replace VFDs due to equipment obsolescence and no bypass.	Upgrade VFDs as parts become obsolete.  Evaluate VFD redundancy on critical equipment.	Ongoing  Ongoing	J. Dodson  Gangadharan	Critical system VFDs will be evaluated for redundancy/bypass as systems are assessed for replacement.

**Draft WTP and WWTP Reliability and Risk Assessment Action Plan - October 25, 2018**

Risk No.	System	Risk Description	Treatment Plan	Target Completion Date	Responsible Person	Notes/Status
W-R8	SCADA	SCADA miscellaneous improvements and SOP Development - Inadequate feedback loops for pump on/off and remote/local signals, equipment obsolescence, inadequate historical backup, various single points of failure, and other miscellaneous issues.	Prepare SCADA Master Plan for both WTP and WWTP.	FY 2020	Gangadharan	Water Facilities SCADA Master Plan is part of CIP 272-49. Wastewater Facilities SCADA Master Plan (WW-R11) will be added to this scope.
W-R9	SCADA	Firewall for SCADA system may be inadequate. Overlap and coordination between Information Technology (IT) and Operations Technology (OT).	Initiate Homeland Security Network Cybersecurity Audit	FY 2020	Taylor	Coordinate Audit with WWTP WW-R12.
W-R10	Various Locations	Reliance on services conducted by key third-party vendors/contractors.	Prioritize and review key contracts (CITI, Electric Motor Shop, etc.) using information from Comprehensive Emergency Management Plan	October 2018	Loflin M. Dodson	
W-R11	Various Locations	Training and Standard Operating Procedures need to be improved.	Chemical unloading SOP for Bulk Delivery Drivers; flushing of chemicals annually, valve exercise to avoid overtightening, etc.	November 2018	Loflin	
W-R12	Various Locations	Critical Spare & Job Safety Analysis	Perform Critical Spare Analysis (Identified in FMEA)  Perform Job Safety Analysis on critical tasks.	December 2019  Determine timing when Safety & Risk Manager is hired.	Maintenance Coordinator  Safety & Risk Manager	

**Mason Farm Wastewater Treatment Plant**

Risk No.	System	Risk Description	Treatment Plan	Target Completion Date	Responsible Person	Notes/Status
WW-R1	Rogerson Drive Pump Station	WWTP Rogerson Drive pump station- Various single points of failure. Single electrical feed. Generator fuel storage is inadequate. Bypass is difficult.	Diesel fuel storage assessment.  Upgrade pump station so that it can easily be bypassed if there is a catastrophic equipment failure. Install a generator access point, bare connection for a temporary electrical connection, and bypass connection point.	December 2018  June 2019	Gangadharan	Diesel fuel assessment will be completed in advance of FY 2020-2024 CIP development.  Bypass improvements are expected to be completed as part of CIP 277-31.

**Draft WTP and WWTP Reliability and Risk Assessment Action Plan - October 25, 2018**

<b>Risk No.</b>	<b>System</b>	<b>Risk Description</b>	<b>Treatment Plan</b>	<b>Target Completion Date</b>	<b>Responsible Person</b>	<b>Notes/Status</b>
WW-R2	Morgan Creek Pump Station	WWTP MCPS Wet Well Stairs - Stair fasteners located in wet well may deteriorate rapidly due to corrosive environment and incompatible material.	Proactively replace wet well stair fasteners. Modify air intakes and dampers for better air turnover.	October 2018 FY 2021	Johnson Gangadharan	Modifications will be assessed and implemented as part of CIP 278-82
WW-R3	Morgan Creek Pump Station	WWTP MCPS Influent Pump - No backup level control for Precision Digital level instrument	Install backup capacitance probe level sensor.	December 2018	Johnson	
WW-R4	Morgan Creek Pump Station	WWTP MCPS Influent Sluice Gates - Influent sluice gate could accidentally close due to human error or equipment failure	Remove sluice gate.	Complete	Johnson	
WW-R5	Headworks	WWTP Headworks - Concrete located near the effluent of structure is in poor condition	Build bypass structure, rehabilitate concrete, and improve odor control system.	TBD	Gangadharan	This scope for CIP 278-82 will address this treatment plan. A target completion date will be established at the start of detailed design this fall.
WW-R6	Electrical Distribution	WWTP Electrical System - Transformer A is single point of failure for electrical power to plant. Main Breaker A and B are single points of failure.  Components of backup power system are located in same building as main power.	Conduct component level PM identified in FMEA (gas in oil testing, thermographic survey, insulation test, turns ratio test, etc.)  Redesign of backup power system or installation of generator access point for critical systems.	December 2019 Ongoing	Johnson Gangadharan	Critical system generator access points will be evaluated as systems are assessed for upgrade/replacement.
WW-R7	Electrical Distribution	WWTP Electrical System - Penetration where electrical cables exit building and enter conduit tray.	Seal penetration in building and install screen below bus bar.	TBD	Gangadharan	A project will be added to the CIP to assess this risk in more detail and to develop and implement the appropriate treatment plan. Target completion date will be established prior to detailed design.
WW-R8	Various Locations	WWTP VFD - Difficult to repair and replace VFDs due to equipment obsolesces and no bypass.	Upgrade VFDs as parts become obsolete Evaluate VFD redundancy on critical equipment.	Ongoing Ongoing	Johnson Gangadharan	Critical system VFDs will be evaluated for redundancy/bypass as systems are assessed for replacement.

**Draft WTP and WWTP Reliability and Risk Assessment Action Plan - October 25, 2018**

<b>Risk No.</b>	<b>System</b>	<b>Risk Description</b>	<b>Treatment Plan</b>	<b>Target Completion Date</b>	<b>Responsible Person</b>	<b>Notes/Status</b>
WW-R9	Chemical Tank Farm	WWTP Chemical Tank Farm - Incompatible chemicals could mix inside of the sodium hydroxide tank's secondary containment if there was a failure of both a sodium hydroxide tank/piping and acetic acid piping that passes through this containment area.	Address this issue as part of WWTP Chemical Building and Bulk Tank Piping Rehab.	FY 2020	Gangadharan	Piping is being replaced as part of CIP 278-80.
WW-R10	Ultraviolet (UV) Disinfection	WWTP UV Disinfection – The breaker serving the UV disinfection system is a single point of failure. This breaker has not been tested because the UV disinfection system is continuously operated.  The programmable logic controller (PLC) that controls the UV disinfection system is a single point of failure and proprietary technology.	Coordinate temporarily stopping discharge of effluent, shutting off UV disinfection system, and testing breaker. Consider installing a generator access point.  Sign a service contract with PLC manufacturer. Either develop a mitigation plan for failure of PLC or purchase a spare PLC.	December 2019  October 2018	Johnson  M. Dodson	
WW-R11	SCADA	SCADA miscellaneous improvements and SOP Development - Inadequate feedback loops for pump on/off and remote/local signals, equipment obsolescence, inadequate historical backup, various single points of failure, and other miscellaneous issues.	Prepare SCADA Master Plan for both WTP and WWTP.	FY 2020	Gangadharan	Water Facilities SCADA Master Plan is part of CIP 272-49. Wastewater Facilities SCADA Master Plan will be added to this scope.
WW-R12	SCADA	SCADA - Firewall for SCADA system may be inadequate. Overlap and coordination between Information Technology (IT) and Operations Technology (OT).	Initiate Homeland Security Network Cybersecurity Audit	FY 2020	Taylor	Coordinate Audit with WTP W-R9.
WW-R13	Various Locations	Reliance on services conducted by key third-party vendors/contractors	Prioritize and review key contracts (CITI, Electric Motor Shop, etc.) using information from Comprehensive Emergency Management Plan.	October 2018	Loflin M. Dodson	
WW-R14	Various Locations	Training and Standard Operating Procedures need to be improved	Combine SOP & Process Control Procedures into single document; prepare a chemical unloading SOP for bulk delivery drivers; biosolids driver procedure; etc.	December 2019	M. Dodson	

**Draft WTP and WWTP Reliability and Risk Assessment Action Plan - October 25, 2018**

Risk No.	System	Risk Description	Treatment Plan	Target Completion Date	Responsible Person	Notes/Status
WW-R15	Various Locations	Critical Spare & Job Safety Analysis	Perform Critical Spare Analysis (identified in FMEA)  Perform Job Safety Analysis on critical tasks.	December 2019  Determine timing when Safety & Risk Manager is hired.	Maintenance Coordinator  Safety & Risk Manager	

**Additional Key Findings**

Risk No.	Group	Other Findings	Target Completion Date	Responsible Person	Notes/Status
KF-1	Engineering	Perform cross-disciplinary reviews during the design phase of projects.	Ongoing	Gangadharan	Cross-disciplinary reviews are already utilized on most projects; this process will be extended to the scoping and pre-design phases for appropriate projects.
KF-2	Engineering	While standardizing equipment provides value, continue to evaluate the entire system before applying a “one size fits all” approach—a pump that is appropriate in one operating context may not be appropriate in another.	Ongoing	Gangadharan	
KF-3	Engineering	Consider the system of systems, as some processes impact others and should be reviewed holistically.	Ongoing	Gangadharan	
KF-4	Engineering	Avoid relying solely on O&M to manage risk and instead consider how operators interact with the system and the ongoing maintenance in the design phase to minimize or ideally eliminate risk.	Ongoing	Gangadharan	
KF-5	Operations & Maintenance	Communicate maintenance and operability concerns to the engineering staff so risk can be designed out of the systems.	Ongoing	Loflin M. Dodson	
KF-6	Operations & Maintenance	Communicate between plants so that lessons learned at one can be applied to the other.	Ongoing	Loflin M. Dodson	
KF-7	Operations & Maintenance	Maintain updated SOPs and Process Control Protocols.	Ongoing	Loflin M. Dodson	
KF-8	Operations & Maintenance	Formalize relationships with third-party vendors and contractors to establish clearly defined roles and responsibilities.		Loflin M. Dodson	See W-R10 and WW-R13
KF-9	Senior Leadership	Conduct risk analysis workshops of the remaining plant subsystems not included as part of this assessment. This will support detailed reviews of the current subsystems and designs.	TBD	Asset Management and Facilities Engineer	Evaluate impact of current action plan to inform need and timing for additional evaluations.
KF-10	Senior Leadership	Teach all staff members about risk and facilitate greater participation in risk analysis workshops.	Ongoing	Asset Management and Facilities Engineer	

**Draft WTP and WWTP Reliability and Risk Assessment Action Plan - October 25, 2018**

<b>Risk No.</b>	<b>Group</b>	<b>Other Findings</b>	<b>Target Completion Date</b>	<b>Responsible Person</b>	<b>Notes/Status</b>
KF-11	Senior Leadership	Encourage cross-departmental communication because it takes an entire team to understand the OWASA subsystems in enough detail to evaluate risk.	Ongoing	Taylor Darr	
KF-12	Senior Leadership	Provide specialized training in electrical and SCADA systems.	Ongoing	Loflin M. Dodson	
KF-13	Senior Leadership	Support knowledge transfer between employees and in succession planning.	Ongoing	Loflin M. Dodson	
KF-14	Senior Leadership	Emphasize risk reduction across all departments.	Ongoing	Taylor	
KF-15	Industry Best Practice	Review risk and reliability assessment evaluation every 5-years and/or whenever a change in operating context occurs.	FY 2024	Asset Management and Facilities Engineer	

**Agenda Item**

- Discuss Recreational Fees for Out-of-County Visitors

**Purpose**

- Provide the Board of Directors options for consideration regarding fees for out-of-county visitors to OWASA's lakes

**Background**

- On January 25, 2018, the OWASA Board of Directors directed staff to provide options for recovering a greater proportion of revenues from out-of-county visitors.

**Options and Recommendation**

- Staff conducted a high-level financial and market analysis nearby lakes to inform the Board's consideration of the following options:
  - A. Increase Lake Use Fees to Recover 25% of the Shortfall from Out-of-County Visitors
  - B. Increase Lake Use Fees to Recover 10% of the Shortfall from Out-of-County Visitors
  - C. Maintain the Current Schedule of Fees and Charges for Both Lakes
- Staff recommends Option C. We believe our total rental prices are reasonable and in line with other area lakes.

**Action Needed**

- Board feedback and comments on the staff recommendations to determine if recreational fees for out-of-county visitors should be amended.

October 25, 2018





# 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 *EK*

**From:** Johnny Riley

**Date:** October 19, 2018

**Subject:** Discuss Recreational Fees for Out-of-County Visitors

At their January 25, 2018 meeting, the OWASA Board of Directors requested that staff provide options and recommendations for increasing revenue from out-of-county visitors to OWASA's lakes. The request was made in response to the [2017 Annual Lakes Recreation Report](#), which reported a \$82,090 shortfall between recreation revenues and recreation expenses.

OWASA has not increased lake use fees, nor boat and motor rental rates since 2011. Over the past six seasons, total visitors to both lakes and have steadily increased.

In 2017, 63% of the visitors to the Cane Creek Reservoir were from outside Orange County. (Conversely, only 18% of visitors to University Lake were from outside the county.) In total, we had 3,163 out-of-county visitors to both lakes in 2017.

In order to fully recover recreational revenue shortfalls like the one realized in 2017, we would need to increase the fees paid from each out-of-county visitor by \$26. Although we do not know the elasticity of demand for lake recreation, staff believes that an increase from \$5.50 to \$31.50 per visitor would significantly discourage out-of-county visitors to OWASA's lakes. As such, staff has not proposed an option that recovers 100% of the shortfall from out-of-county residents.

For ease of administration, staff recommends that if any adjustment is made to increase cost recovery from out-of-county visitors that it is made to lake use fees and not boat rental fees.

Staff conducted a market study to provide insight to the impact of increasing rates on visitation, as well as perceived equity and value. The attached table compares the total cost for visiting and renting a comparable boat from OWASA, Durham, Raleigh, Greensboro, and Burlington. Currently, our rates and fees are comparable to this market.

Staff proposes the following options for the Board's consideration:

**Option A: Increase Lake Use Fees to Recover 25% of the Shortfall from Out-of-County Visitors**

Using 2017 visitor levels and finances as a basis, this option would increase lake use fees \$6.50 per out-of-county visitor for a total of \$12 per person. In addition, visitors pay boat fees. This option would price access and use of OWASA's lakes above all other regional lakes for parties of two or more. Assuming no price elasticity to such a significant increase, this option would result in about \$20,000 (25%) more revenue from out-of-county visitors. However, staff believe that increasing lake use fees to this level would reduce visitation from out-of-county residents.

**Option B: Increase Lake Use Fees to Recover 10% of the Shortfall from Out-of-County Visitors**

This option would increase lake use fees for out-of-county visitors by \$2.50 for a total of \$8 per person plus boat fees. This option would price access and use of OWASA's lakes at a comparable level to the City of Raleigh's Lake Johnson. Assuming no price elasticity to this increase, this option would increase revenue from out-of-county visitors by about \$8,200 (10%). Staff believes that this would have a minimal impact on out-of-county visitation, as well as revenue.


**Option C: Maintain the Current Schedule of Fees and Charges for Both Lakes**

This option maintains status quo.

Staff recommends leaving the out-of-county rates at the current level for both lakes for the 2019 recreational season. We believe our total rental prices are fair and in line with other area lakes and that a significant increase would decrease out-of-county visitation, and potentially, revenue.

**Action Requested**

Review information and provide feedback.

  
Johnny Riley  
Senior Lake Warden

Attachment: Total Cost for Groups of Different Sizes to Rent a Boat and Trolling Motor at Five Regional Lakes

**Total Cost for Groups of Different Sizes to Rent a Boat and Trolling Motor (if available)**

		OWASA*	Option A	Option B	Durham*	Raleigh*	Greensboro**	Burlington**
		Current	25%	10%				
1 person	in-county	\$ 24.00	\$ 24.00	\$ 24.00	\$ 17.00	\$ 50.00	\$ 10.00	\$ 15.00
	out-county	\$ 35.50	\$ 42.00	\$ 38.00	\$ 21.00	\$ 50.00	\$ 10.00	\$ 15.00
2 people	in-county	\$ 28.50	\$ 28.50	\$ 28.50	\$ 17.00	\$ 50.00	\$ 10.00	\$ 15.00
	out-county	\$ 41.00	\$ 54.00	\$ 46.00	\$ 21.00	\$ 50.00	\$ 10.00	\$ 15.00
3 people	in-county	\$ 33.00	\$ 33.00	\$ 33.00	\$ 17.00	\$ 50.00	\$ 10.00	\$ 15.00
	out-county	\$ 46.50	\$ 66.00	\$ 54.00	\$ 21.00	\$ 50.00	\$ 10.00	\$ 15.00

\*includes lake use, boat and trolling motor fees

\*\*boat only

**Agenda Item**

- Financial Report for the Three-Month Period Ended September 30, 2018

**Purpose**

- To inform the Board of Directors of OWASA's financial performance and fiscal position.

**Background**

- The financial report consists of a Statement of Net Position, an Income Statement that includes a budget to actual comparison, graphical presentations of financial performance indicators and a Financial Management Policy Report Card.
- Highlights of the report include:
  - All but the working capital reserves financial performance target was met.
  - Operating Revenues for the period were about \$414,000 or 3.9% under budget.
  - System Development Fees were about \$133,000 or 44.5% over budget.
  - Operating Expenses were about \$323,000 or 6.1% under budget.
  - Net Income less Debt Service was about \$37,000 or 1% under budget. OWASA is a nonprofit entity. Net Income less Debt Service is used to fund investments in capital improvement projects and reserves.
  - Capital Improvements Program expenditures were approximately \$378,000 lower than projected for the period.

**Action Needed**

- Receive and discuss the Financial Report for the three-month period ended September 30, 2018.

October 25, 2018



# 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 *EK*  
**From:** Stephen Winters, CPA  
**Date:** October 19, 2018  
**Subject:** Financial Report for the three-month period ended September 30, 2018

### Purpose

The financial report for the three-month period ended September 30, 2018 is presented to inform the Board of Directors of OWASA's financial position and financial performance in relation to budget.

### Contents

- Statement of Net Position
- Income Statement
- Graphs of Key Performance Indicators
- Financial Management Policy Report Card

### Fiscal Performance

- As shown on page 10 of the financial report, all financial performance measurement targets were met for the period except for meeting the target balance in the working capital reserve. At the end of the period, the balance was about \$3.9 million less than the target. We have expended approximately \$5.4 million on Capital Improvements Program (CIP) projects which are being financed with low-interest loans from the state and we have not yet drawn funds against the loans.
- Average drinking water sales for the period was 6.17 million gallons per day (MGD), 6.73 was projected. Combined drinking and reclaimed water sales for the period averaged 7.30 MGD versus a projection of 8.10.
- Total Operating Revenue was 3.9% or about \$414,000 under budget. Included as a reduction in this number are approximately \$35,000 of expenses related to Hurricane Florence preparation and recovery.
- Revenue from new system connections (system development fees) was over budget by about \$133,000 due to a difference between the allocation of the budget across the months of the year and when the meters were actually installed.
- Total Operating Expenses for the period were 6.1% or about \$323,000 under budget.
  - General and Administrative expenses were under budget by about \$179,000 due primarily to not yet incurring budgeted consulting and professional fees and staff vacancies in the Engineering and Planning and Human Resources Departments.
  - The Water Supply and Treatment department was over budget by about \$95,000 primarily due to higher than expected chemical use and costs.

- Water Distribution expenses were under budget by about \$111,000, Wastewater Treatment expenses were under budget by about \$25,000, and Wastewater Collection expenses were under budget by about \$104,000. Maintenance costs in all three departments were less than projected for the period.
- Net Income less Debt Service for the period was approximately 1% or \$37,000 less than budget. OWASA is a nonprofit entity. Net Income less Debt Service is used to fund investments in capital improvement projects and reserves.
- Capital Improvements Program (CIP) expenses for the first quarter of FY 2019 totaled \$1.9 million, approximately \$378,000 lower than the projected \$2.3 million reflected in the baseline budget for this period. For the fiscal year, CIP expenses are projected to total \$17.5 million, or 83% of budgeted funds.

The majority of the planned large projects are on track for construction later this fiscal year, including the Water Treatment Plant Sedimentation Basin Rehabilitation, Wastewater Plant Intermediate Pump Station Rehabilitation, University Lake Pump Station Rehabilitation, University Lake Flashboard Replacement, the Manning Drive and Country Club Water Main Replacements (both part of High Priority Water Main Program), the Rogerson Drive Pump Station Rehabilitation Phase 2, and the next phase of the Gravity Sewer Rehabilitation project. A few large projects which were expected to enter construction this year are currently behind schedule, including Galvanized Water Main Phase 1 and the Dobbins Drive Water and Sewer Main Replacement project.



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Stephen Winters, CPA

Director of Finance and Customer Service

# **Orange Water and Sewer Authority**

**Financial Report  
For the Three-Month Period Ended  
September 30, 2018**

**Orange Water and Sewer Authority**  
**Statement of Net Position**  
**September 30, 2018**  
(unaudited)

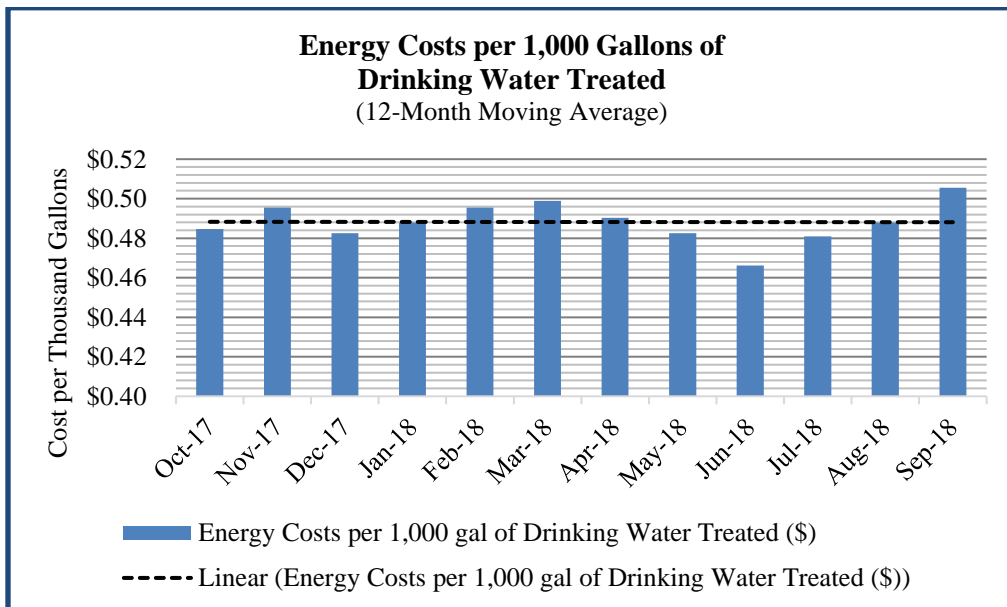
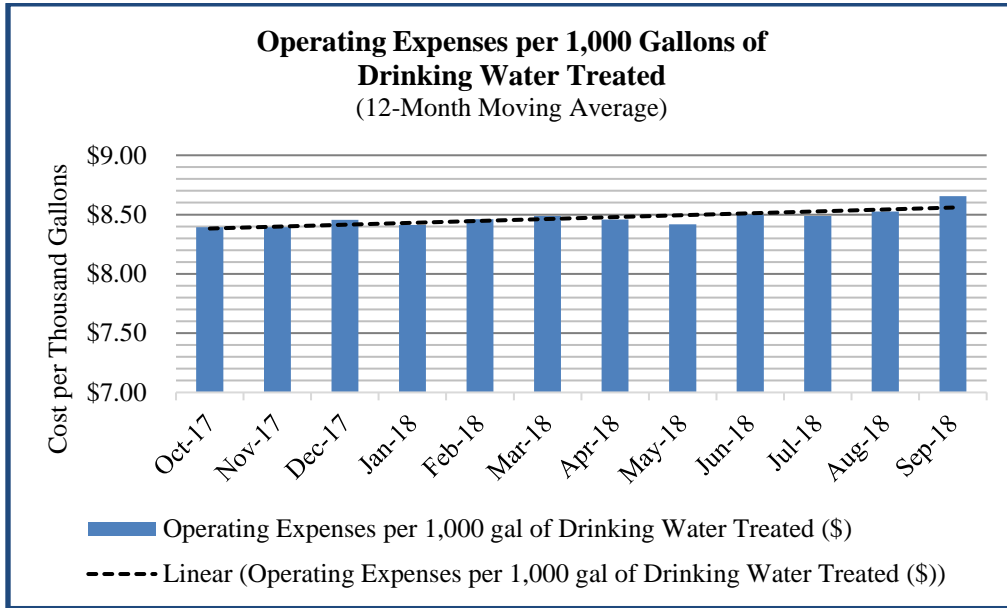
<b>Assets</b>	
Current Assets	
Cash	\$14,694,820
Receivables	6,206,121
Inventory	1,433,370
Prepaid expenses	275,142
Restricted cash	2,043,885
	<hr/>
Total Current Assets	24,653,338
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Noncurrent Assets	
Capital assets (net of depreciation)	276,826,435
Other noncurrent assets	38,956,180
	<hr/>
Total Noncurrent Assets	315,782,615
	<hr/>
<b>Total Assets</b>	<b>\$340,435,953</b>
	<hr/> <hr/>
<b>Liabilities and Net Position</b>	
Current Liabilities	
Accounts payable and accrued expenses	\$1,153,734
Unearned income	142,574
Customer deposits	1,090,069
	<hr/>
Total Current Liabilities	2,386,377
	<hr/>
Noncurrent Liabilities	
Bonds payable	55,433,000
Other noncurrent liabilities	13,907,668
	<hr/>
Total Noncurrent Liabilities	69,340,668
	<hr/>
Net Position	
Contributed capital	119,179,628
Net position at the beginning of the year	146,731,581
Year-to-date accrual basis net income	2,797,699
	<hr/>
<b>Total Liabilities and Net Position</b>	<b>\$340,435,953</b>
	<hr/> <hr/>
<b>Net income reconciliation:</b>	
Accrual basis net income	\$2,797,699
Depreciation and interest expense	2,757,041
	<hr/>
<b>Modified accrual basis net income</b>	<b>\$5,554,740</b>
	<hr/> <hr/>



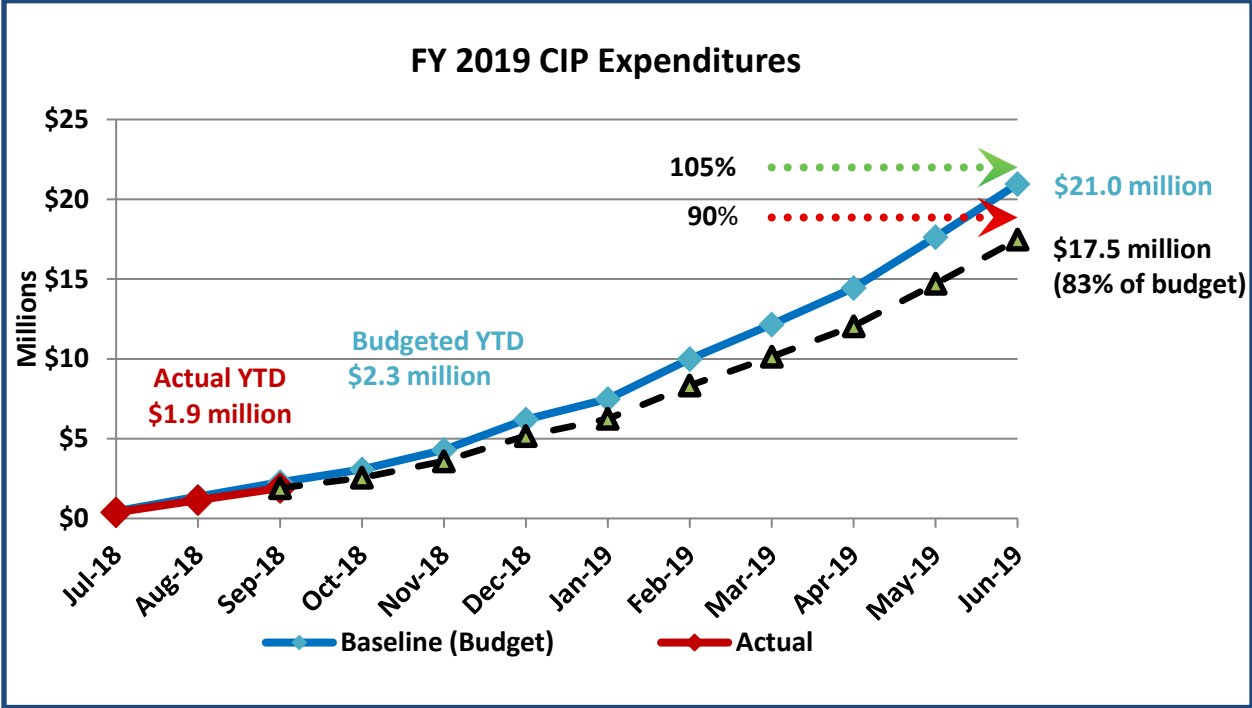
**Orange Water and Sewer Authority**  
**Income Statement**  
**For the Three-Month Period Ended September 30, 2018**  
(unaudited)

	Actual through September 30, 2018	Budget through September 30, 2018	Variance (effect on net change in Fund Balance)	Percent Variance
<b>Operating Revenue</b>				
Water	\$5,298,418	\$5,704,217	(\$405,799)	(7.1%)
Sewer	4,489,051	4,402,590	86,461	2.0
Reclaimed Water	139,885	146,960	(7,075)	(4.8)
Service Initiation Fees	60,035	38,586	21,449	55.6
Other	147,281	261,921	(114,640)	(43.8)
Refunds and Allowances	(52,092)	(57,501)	5,409	9.4
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Total Operating Revenue</b>	10,082,578	10,496,773	(414,195)	(3.9)
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Non-Operating Income</b>				
System Development Fees	431,542	298,587	132,955	44.5
Interest	3,729	5,919	(2,190)	(37.0)
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Total Non-Operating Income</b>	435,271	304,506	130,765	42.9
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Total Income</b>	10,517,849	10,801,279	(283,430)	(2.6)
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Operating Expense</b>				
General and Administrative	1,520,096	1,698,961	178,865	10.5
Water Supply and Treatment	1,435,489	1,340,503	(94,986)	(7.1)
Water Distribution	710,249	821,563	111,314	13.5
Wastewater Treatment	1,137,927	1,162,600	24,673	2.1
Wastewater Collection	159,348	262,964	103,616	39.4
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Total Operating Expense</b>	4,963,109	5,286,591	323,482	6.1
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Net Income (modified accrual)</b>	5,554,740	5,514,688	40,052	0.7
Debt Service	1,783,818	1,706,889	(76,929)	(4.5)
	<hr/>	<hr/>	<hr/>	<hr/>
Net Income less Debt Service	3,770,922	3,807,799	(36,877)	(1.0)
Less: CIP Expenditures	1,902,000	2,280,000	378,000	16.6
Capital Equipment				
Expenditures	173,701	871,135	697,434	80.1
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Net Change in Fund Balance</b>	\$1,695,221	\$656,665	\$1,038,556	
	=====	=====	=====	

**Orange Water and Sewer Authority**  
**Select Financial Data**  
**For the Three-Month Period Ended September 30, 2018**



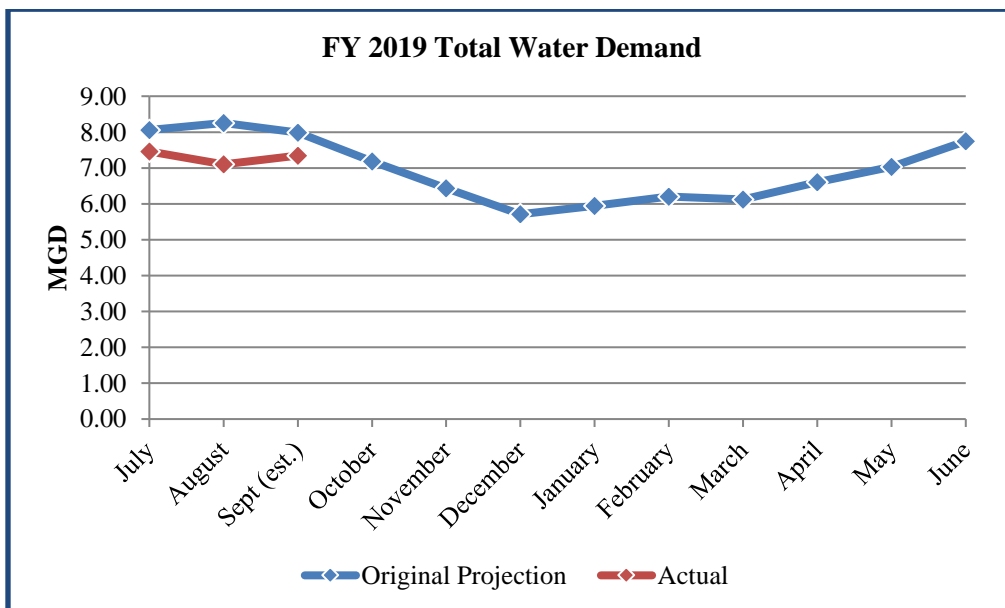
**Orange Water and Sewer Authority  
 Select Financial Data  
 For the Three-Month Period Ended September 30, 2018**



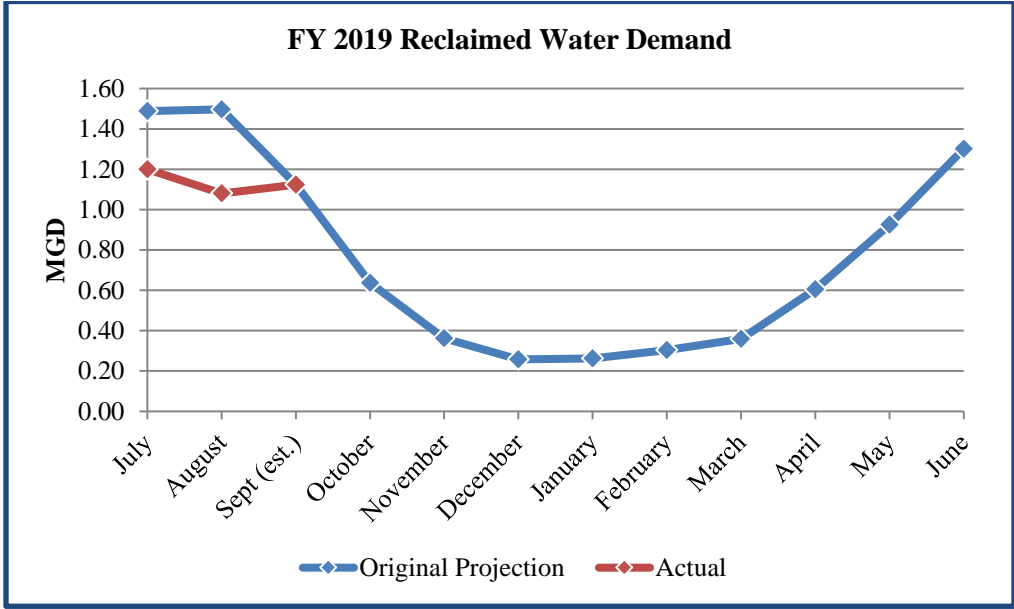
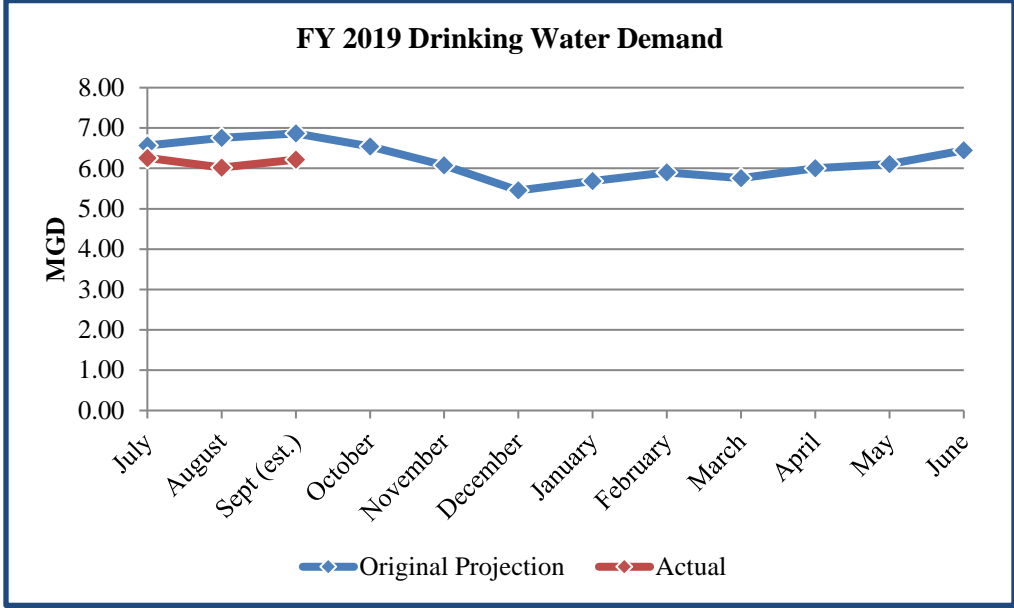
**Orange Water and Sewer Authority  
Select Financial Data  
For the Three-Month Period Ended September 30, 2018**

<b>FY 2019 Water Sales Projection (Average Day)</b>						
	<b>Original FY 2019 Sales Projections</b>		<b>Actual FY 2019 Water Sales</b>		<b>Revised FY 2019 Sales Projections</b>	
	<b>DW</b>	<b>RCW</b>	<b>DW</b>	<b>RCW</b>	<b>DW</b>	<b>RCW</b>
July	6.57	1.49	6.26	1.20	6.26	1.20
August	6.76	1.50	6.02	1.08	6.02	1.08
September	6.87	1.12	6.22	1.12	6.87	1.12
October	6.54	0.64			6.54	0.64
November	6.07	0.36			6.07	0.36
December	5.45	0.26			5.45	0.26
January	5.69	0.26			5.69	0.26
February	5.90	0.30			5.90	0.30
March	5.76	0.36			5.76	0.36
April	6.00	0.61			6.00	0.61
May	6.10	0.93			6.10	0.93
June	6.45	1.30			6.45	1.30
Average	6.18	0.76	6.17	1.13	6.09	0.74

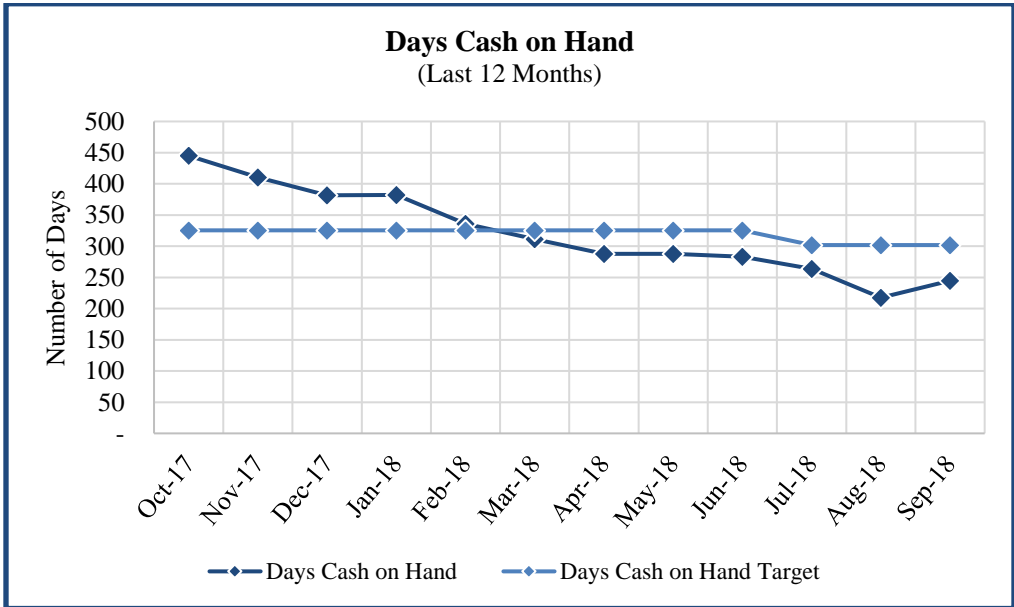
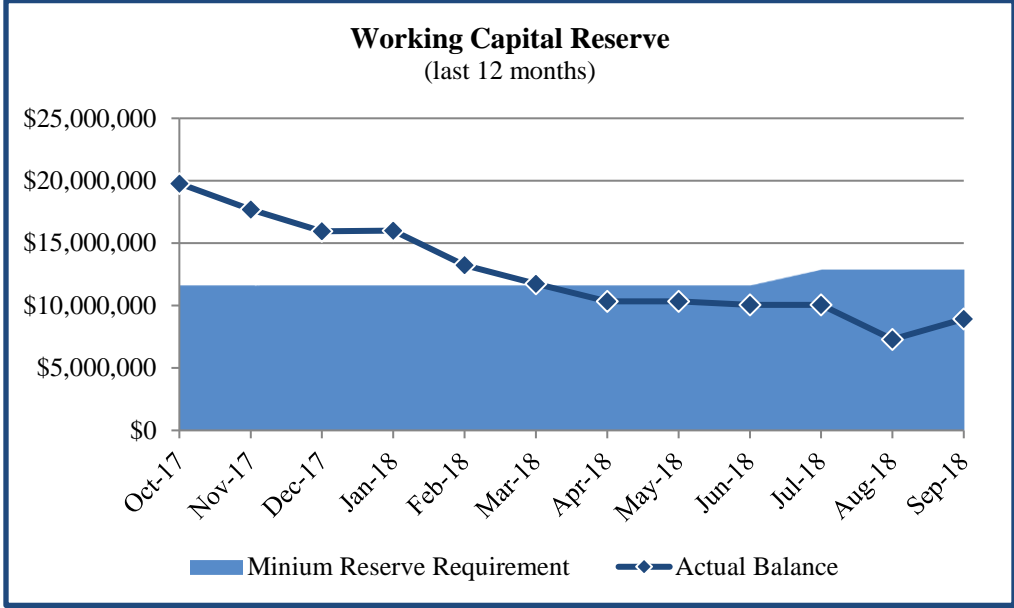
Estimates shown in red



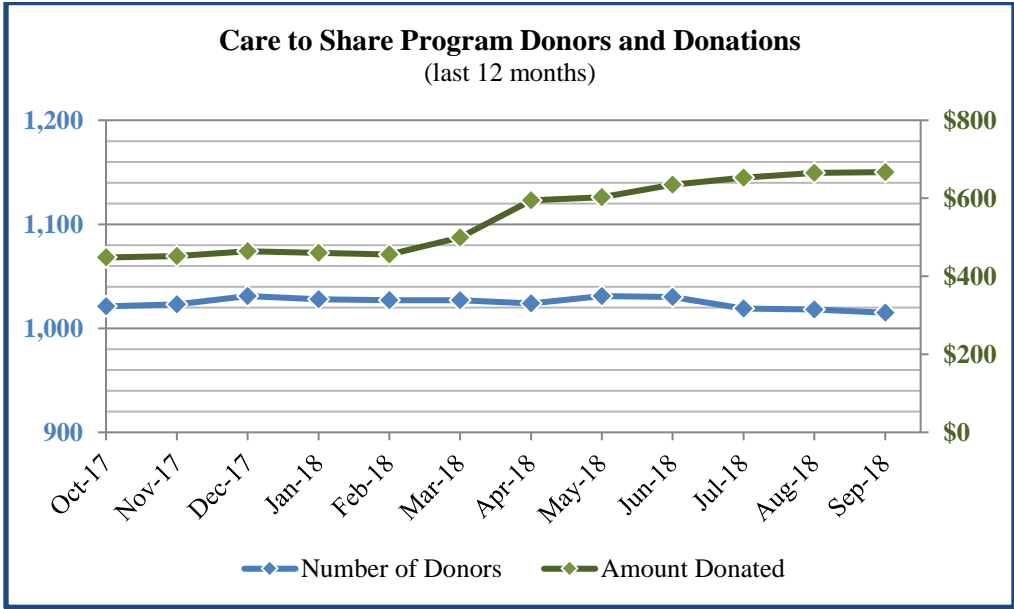
**Orange Water and Sewer Authority  
 Select Financial Data  
 For the Three-Month Period Ended September 30, 2018**



**Orange Water and Sewer Authority**  
**Select Financial Data**  
**For the Three-Month Period Ended September 30, 2018**



**Orange Water and Sewer Authority  
 Select Financial Data  
 For the Three-Month Period Ended September 30, 2018**



**Orange Water and Sewer Authority  
Financial Management Policy Report Card  
For the Three-Month Period Ended September 30, 2018**

Measurement	Objective	FY18 Results	FY19 Goal	YTD FY19 Results
Working Capital Reserves	Greater of four months Operating Expenses or 20% of succeeding three years CIP	\$10.1M	\$12.9M	\$9.0M
Capital Improvements Reserve	2% of Net Capital Assets (Funding \$400,000 per year until reach goal of approximately \$6M)	\$3.6M	\$4.0M	\$4.0M
Rate/Revenue Stabilization Reserve	5% of annual Water and Sewer Revenue	\$1.7M	\$1.8M	\$1.8M
Debt Burden to Asset Value	Total Debt not more than 50% of Total Assets	24%	≤ 50%	20%
Sufficiency of Revenues above Debt Requirements <sup>1</sup>	Annual Debt Service no more than 35% of Gross Revenue	17%	≤ 35%	19%
Cash Financing of Capital <sup>2</sup>	Annual revenues and reserves provide at least 30% of CIP funding	49%	≥ 30%	44%
Debt Service Coverage Ratio <sup>1</sup>	Annual Net Income not less than two times Annual Debt Service	2.6	2.0	2.2
Service Affordability Ratio <sup>3</sup>	Average annual OWASA bill not more than 1.5% of area median household income	1.35%	1.5%	1.35%

M = million

i

<sup>1</sup> Calculation based on the FY 2019 Annual Budget until full-year results are available.

<sup>2</sup> Cash Financing of Capital based on 5-Year CIP Budget and potential borrowing during the same period.

<sup>3</sup> FY 2019 Calculation based on median household income of \$62,620 (per 2015 U.S. Census Bureau, American Community Survey, 5-Year Estimates) and average monthly household water use of 4,000 gallons.