Agenda
Virtual Meeting of the OWASA Board of Directors
Thursday, October 22, 2020, 6:00 P.M.

Due to COVID-19 public health concerns, the Orange Water and Sewer Authority (OWASA) Board of Directors is conducting this meeting virtually utilizing Microsoft Teams software. Board Members, General Counsel and staff will be participating in the meeting remotely.

The Board of Directors appreciates and invites the public to attend and observe its virtual meetings online. Public comment is invited via written materials, ideally submitted at least two days in advance of the meeting to the Board of Directors by sending an email to board_and_leadership@owasa.org or via US Postal Service (Clerk to the Board, 400 Jones Ferry Road, Carrboro, NC 27510). Public comments are also invited during the Board Meeting via telephone, and members of the public will need to be available to call-in during the meeting. Please contact the Clerk to the Board at aorbich@owasa.org or 919-537-4217 to make arrangements by 3:00 p.m. the day of the meeting.

Public speakers are encouraged to organize their remarks for delivery within a four-minute time frame allowed each speaker, unless otherwise determined by the Board of Directors.
The Board may take action on any item on the agenda.

Announcements

1. Announcements by the Chair
   A. Any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
   B. Update on the October 15, 2020 Climate Council Meeting
2. Announcements by Board Members
3. Announcements by Staff
4. Additional Comments, Suggestions, and Information Items by Board Members (Ray DuBose)

Petitions and Requests

1. Public
2. Board
3. Staff

Consent Agenda

Information and Reports

1. 12 Month Board Meeting Schedule (Todd Taylor)

Action

2. Resolution Honoring the Service of Michael Wolfgang to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community (Todd Taylor)

3. Minutes of the September 24, 2020 Virtual Annual Meeting of the Board of Directors (Andrea Orbich)

Regular Agenda

Information and Reports

4. Update on OWASA's COVID-19 Information and Discussion by the Board (Todd Taylor)
5. Financial Report for the Three-Month Period Ended September 30, 2020 (Stephen Winters)
6. Reliability and Resiliency Improvements Update (Mary Darr)

Discussion

7. Update on the 2020 Board Self-Assessment (Ray DuBose)

Summary of Board Meeting Action Items

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

Closed Session

9. The Board of Directors will Meet in Closed Session for the Purpose of Discussing a Personnel Matter, as provided in N.C. General Statutes 143.318.11(6) (Jody Eimers)

OWASA Board of Directors – 12 Month Board Meeting Schedule (October 16, 2020)

Month	Board Meetings		Committee Meetings & Other Board Items
	Work Session	Business Meeting	
October 2020	**Strategic Trends Report** One-time Additional Employee Personal Leave Merit Bonuses Discuss Results of BOD Self-Assessment (Virtual Meeting) 10/8/2020	Q1 Financial Report Update on COVID-19 Reliability and Resiliency Improvements Update CS – ED Performance Review (Virtual Meeting) 10/22/2020	
November 2020	**Annual Update of the Energy Management Plan** **LRWSP – Drought Response Operating Protocol** (Tentative) Response to Petition to Modify WSMPBA Boundary 11/12/2020	*Holiday – no meeting*	*Possible welcome of new Board member(s)*
December 2020	**(Tentative) LRWSP – Drought Response Operating Protocol** Discuss Draft Plan for Developing Strategic Plan (Tentative) Sewer Use Ordinance and Sewer Policy Updates to Align with House Bill 873 12/10/2020	*Holiday – no meeting*	*Possible welcome of new Board member(s)*
January 2021	Appoint Audit Firm Employee Health and Dental Insurance Update for FY 22 Affordability Outreach Program Update D&I Update 1/14/2021	Annual Lakes Recreation Report CIP Semiannual Report Q2 Financial Report Discuss FY 22 Budget Calendar, Planning Assumptions, and New Budget Format 1/28/2021	*Meeting between the CHTC OWASA Committee & Chapel Hill Appointees to the BOD (TBD)*
February 2021	Department Managers FY 22 Budget Presentations CS – Prepare for GC Interim Review 2/11/2021	CS – GC Interim Review 2/25/2021	
March 2021	FY 22 Draft Budget and Rates 3/11/2021	Set date for Public Hearings – FY 22 Budget & Rates 3/25/2021	
April 2021	Review Employee Health and Dental Insurance Renewals FY 22 Draft Budget and Rate Adjustment BOD Eligible for Nominations to Election as Board Officers (include Officer descriptions) CS – Prepare for ED Interim Review 4/8/2021	Q3 Financial Report FY 22 Draft Budget and Rates Adjustment Information and Authorize Staff to Publish Proposed Rates CS – Prepare for ED Interim Review 4/22/2021	
May 2021	**(Tentative) LRWSP – Guiding Principles for Jordan Lake Alternatives** Approve Employee Health and Dental Insurance Renewals 5/13/2021	Public Hearings – FY 22 Budget and Rates 5/27/2021	
June 2021	**(Tentative) LRWSP – Guiding Principles for Jordan Lake Alternatives** Approve FY 22 Budget and Rates Election of Officers 6/10/2021	TBD 6/24/2021	
July 2021	D&I Update 7/8/2021	TBD 7/22/2021	

Current and Pending Key Projects and Strategic Initiatives– in **bold**

OWASA Board of Directors – 12 Month Board Meeting Schedule (October 16, 2020)

Month	Board Meetings		Committee Meetings & Other Board Items
	Work Session	Business Meeting	
August 2021	CS – Prepare for GC Annual Review ↻ 8/12/2021	Preliminary 12 Month Financial Report ↻ CIP Semiannual Report ↻ CS – GC Annual Review ↻ 8/26/2021	
September 2021	Annual Report on Disposal of Surplus Personal Property ↻ EEO/Affirmative Action Report and D&I Update ↻ 9/9/2021	Annual Report and Financial Audit ↻ Approve GC Engagement ↻ (Annual Meeting of the BOD) 9/23/2021	

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

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

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

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

- Development of a plan and policy framework for OWASA lands is considered a longer-term priority. The NRTS Committee discussed this issue in September 2017 and determined it was lower priority than Forest Management.
- Water Conservation Plan will be prepared concurrent with update of the Long-Range Water Supply Plan.
- Update of Strategic Plan. On October 24, 2019, the Board and staff agreed to begin updating the Strategic Plan in FY 2021.

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)
AV/AMI	Agua Vista/Advanced Metering Infrastructure
BOCC	Board of County Commissioners
BOD	Board of Directors
CE	Community Engagement
CEP	Community Engagement Plan
CHTC	Chapel Hill Town Council
CIP	Capital Improvements Program
COLA	Cost of Labor Adjustment
CS	Closed Session of the Board
CTC	Carrboro Town Council
CY	Calendar Year
D&I	Diversity and Inclusion

Current and Pending Key Projects and Strategic Initiatives– in **bold**

OWASA Board of Directors – 12 Month Board Meeting Schedule (October 16, 2020)

ED	Executive Director
EEO	Equal Employment Opportunity
EPA	Environmental Protection Agency
FY	Fiscal Year
GC	General Counsel
HR	Human Resources
JLP	Jordan Lake Partnership
KPI	Key Performance Indicator
LRWSP	Long-Range Water Supply Plan
MOA	Memorandum of Agreement
MWBE	Minority/Women-owned Business Enterprises
MST	Mountains-to-Sea Trail
MFMM	Multi-Family Master Meter
NCDOT	North Carolina Department of Transportation
NRTS	Natural Resources and Technical Services
OC	Orange County
Q	Quarter
RFP	Request for Proposals
SRF	State Revolving Fund
SOW	Scope of Work
TBD	To Be Determined
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

Current and Pending Key Projects and Strategic Initiatives– in **bold**

Agenda Item

Resolution Honoring the Service of Michael David Wolfgang to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community

Background

Mr. Michael Wolfgang, has retired effective October 2020, after 35 years of service as a Treatment Plant Operator at OWASA's Mason Farm Wastewater Treatment Plant.

Action Needed

Adoption of the Resolution Honoring the Service of Michael David Wolfgang to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community.

October 22, 2020

Resolution Honoring the Service of Michael David Wolfgang to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community

Whereas, Michael Wolfgang has worked dependably and faithfully for more than 35 years as a Treatment Plant Operator at Orange Water and Sewer Authority's (OWASA) Mason Farm Wastewater Treatment Plant, as an essential public employee in service to the people of the Carrboro-Chapel Hill-Orange County community, and the air and water resources upon which the community depends; and

Whereas, during Mr. Wolfgang's 35-year career at OWASA he was designated as Senior Treatment Plant Operator from December 2000 to July 2003, as Chief Plant Operator from July 2003 to August 2009, acting as the Operator in Responsible Charge of the Wastewater Treatment Plant from September 2007 through April 2008, and served as the Backup Operator in Responsible Charge for the duration of his career; and

Whereas, throughout Mr. Wolfgang's career, he was a key member in planning and executing numerous plant improvements including the plant expansion from 8 million gallons per day (MGD) to the current capacity of 14.5 MGD, enhanced nutrient removal and producing beneficially recyclable Class A Exceptional Quality biosolids, implementation of the rotary press for biosolids dewatering, and the implementation of the reclaimed water system; and

Whereas, by his leadership and example, Mr. Wolfgang has successfully trained and developed a generation of treatment plant operators, and his contribution as a hard-working, detail-oriented, dedicated, kind and generous person has enriched those fortunate enough to know and work with him; and

Whereas, Mr. Wolfgang has earned the admiration and respect of his coworkers at OWASA and has made many lasting contributions to OWASA and the community, and has retired from OWASA on October 10, 2020:

Now, Therefore, Be It Resolved:

That the Board of Directors of the Orange Water and Sewer Authority (OWASA) hereby honors and expresses its sincere appreciation for the distinguished public service of Michael David Wolfgang to OWASA and the people of Carrboro, Chapel Hill and Orange County, and the Board of Directors extends its best wishes to Mr. Wolfgang for good health and happiness in his retirement.

Adopted this 22nd day of October 2020.

_____
Raymond E. DuBose, P.E., Chair

ATTEST:

_____
Jo Leslie Eimers, Secretary

Orange Water and Sewer Authority

Virtual Annual Meeting of the Board of Directors

September 24, 2020

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held its duly noticed Annual Meeting of the Board of Directors all by virtual means in accordance with law, on Thursday, September 24, 2020, at 6:00 p.m. utilizing Microsoft Teams software.

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

OWASA staff present: Mary Darr, Monica Dodson, Jesse DuClau, Vishnu Gangadharan, Robert Epting, Esq. (Epting and Hackney), Stephanie Glasgow, Robin Jacobs, Esq. (Epting and Hackney), Ken Loflin, Andrea Orbich, Johnny Riley, Kelly Satterfield, Allison Spinelli, Todd Taylor, Mary Tiger, Stephen Winters and Richard Wyatt.

Others present: Meg Holton (UNC Water Resources Manager) and Elsa Watts (Martin Starnes & Associates).

Motions

1. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Reappointing the Firm of Epting and Hackney as General Counsel to the Orange Water and Sewer Authority. (Motion by Jody Eimers, second by Ruchir Vora and unanimously approved.)

* * * * * * *

Announcements

Ray DuBose announced that due to COVID-19 public health concerns, the OWASA Board of Directors held this meeting virtually utilizing Microsoft Teams software. Mr. DuBose stated that Board Members, General Counsel, and staff participated in the meeting remotely.

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

Mr. DuBose announced that Mary Tiger and he virtually attended the September 17, 2020, Orange County Climate Council meeting. The Climate Council was requested by members of the Citizens Climate Lobby to support the Federal Energy Innovation and Carbon Dividend Act. A sub-committee of the Climate Council will research this request. Mr. DuBose said that on October 22, 2020 at 7:00 p.m. the Climate Council will hold a virtual public event to provide an update the Climate Council's progress. The next meeting is scheduled for October 15, 2020.

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Ruchir Vora said the Chapel Hill Town Council OWASA Committee and the Chapel Hill Appointees to the OWASA Board of Directors held a virtual meeting on September 17, 2020. Updates were provided on: OWASA's Response to COVID-19; Chapel Hill Appointments/ Reappointments; OWASA's Diversity and Inclusion (D&I) Program; OWASA's Investments in System Resiliency; and Energy Management. Mr. Vora said the group is targeting January 2021 to meet again and potential topics are: update on Agua Vista regarding goals and accomplishments; methods for engaging with residents of multifamily housing properties regarding water conservation; and how OWASA ensures sufficient capacity for meeting the water and sewer needs of new development.

Yinka Ayankoya said along with Ray DuBose and Andrea Orbich, a planning meeting was held with Peg Carlson, Director of the School of Government's Center for Public Leadership and Governance. Ms. Carlson will facilitate the Board's 2020 Self-Assessment as part of the October 8th Board Work Session. Ms. Ayankoya said the meeting was positive and productive and reminded Board Member to please complete and turn in their self-assessment by Tuesday, September 29, 2020.

Petitions and Requests

Ray DuBose said no petitions or requests were received from the public.

Mr. DuBose asked for petitions and requests from the Board and staff; none were received.

Item One: Presentation of Annual Report

Stephen Winters, Director of Finance and Customer Service, provided a presentation of the preliminary financial report for the 12-month period ending June 30, 2020. He stated OWASA is a community owned utility providing water, wastewater and reclaimed water service to the Carrboro and Chapel Hill community. OWASA has the responsibility to effectively manage and maintain all the resources, facilities and infrastructure that the community depends on for high-quality and reliable service.

Mr. Winters 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. He noted OWASA continues to participate in accordance with best industry standards and practices, and so is recognized by the Partnership for Safe Water's Excellence in Water Treatment and National Association of Clean Water Agencies' Peak Performance Award for the Mason Farm Wastewater Treatment Plant.

Mr. Winters said it is essential to continue making smart investments in our infrastructure and about 81% of the FY 2020 capital improvement budget went toward rehabilitation or replacement of existing assets, 15% went toward projects that added substantial enhancements and 4% toward projects that increased system capacity. Due to the COVID-19 pandemic, water volume demand is down about 12% since March 2020 when compared with the prior year. Water and sewer revenue for the year was about $2.3 million less than original projections and non-

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essential operating expense were deferred where possible. For the year, OWASA met all but one financial performance measurement target. He noted that due to lower than expected revenue, the balance in the working capital reserve was about $1.4 million less than the target.

Mr. Winters noted the independent audit for FY 2020 was performed by Martin, Starnes & Associates. He said OWASA received an unmodified opinion from our auditor. OWASA's financial condition is stable and sustainable. The success of this audit is a testament to the entire OWASA team and is a positive reflection on the Finance staff for a job well done.

Elsa Watts, 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 Comprehensive Annual Financial Report can be relied upon by third parties, citizens, underwriters and bondholders. Ms. Watts stated that no significant deficiencies in internal control were identified.

The Board expressed appreciation to the staff for a job well done during this difficult time.

Item Two: 12 Month Board Meeting Schedule

The Board received this as an information item.

Item Three: Update on OWASA's COVID-19 Information and Discussion by the Board

Todd Taylor, Executive Director, said OWASA continues to take proactive measures to ensure we are providing and continue to provide the community with high-quality and reliable water, wastewater, and reclaimed water services during the COVID-19 pandemic. He also noted that field crews have returned to work and maintained safety measures.

Mary Tiger, Sustainability Manager, said a temporary moratorium on service disconnection for non-payment remains in-place since March 12, 2020. She provided an update on the extent and severity of past due accounts and staff's work to contact those customers who are in arrears to provide information on where customers may apply for financial assistance. Ms. Tiger noted a letter was prepared in support for Orange County's application for Community Development Block Grant, the use of those funds would provide financial assistance for rent, utilities, and other housing-related costs to County residents through the Orange County Emergency Housing Assistance program.

Item Four: Forest Management Program Update

Johnny Riley, Reservoir and Land Resources Supervisor, provide a verbal update on OWASA's Forest Management Program since March 12, 2020. Mr. Riley noted a prescribed burn for OWASA's Mitigation Tract scheduled for May 2020 was delayed due to COVID-19 restrictions.

John Morris requested funding the Teer Road West Forest Management Plan this fiscal year if possible and provide an update to the Board.

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Jody Eimers asked if the use of herbicides is documented whenever it is used.

Mr. Riley said the forester documents the use of herbicides but that OWASA staff has not. He said staff will begin the process of documenting the use of herbicides.

Ruchir Vora requested information on additional invasive species control on all managed tracts; staff will follow up.

Item Five: Update on the New Water Main Prioritization Model

Vishnu Gangadharan (Engineering Manager – Capital Projects) and Allison Spinelli (Asset Manager) provided a presentation on the new Water Main Prioritization Model which provides additional analysis and decision-support tools to guide infrastructure investment decisions and operational strategies for managing the community's water distribution system.

Mr. Gangadharan presented the study's core objectives, including determining the risk of failure of any given distribution system pipe, which pipes should be replaced, the long-term rate of pipe replacement, the best use of condition assessment, as well as how to improve our ability to prepare for and respond to water main brakes.

Ms. Spinelli presented opportunistic and proactive condition assessment information and how that information will be monitored for decision improvement opportunities. She also discussed the recommendations about future pressure monitoring within the distribution system.

After discussion, the Board agreed not to revise the Water Main Break Key Performance Indicator (KPI) to a staff recommended target range of 8 to 13 breaks per 100 miles and adjusting the KPI target range only after a period of five to seven years. The Board expressed appreciation to staff for the report and requested staff continue: to evaluate/track condition assessment and system monitoring opportunities; provide updates; and reconsider a recommendation on internal and external metrics of the Water Main Break KPI.

Item Six: Discuss Process to Update the Strategic Plan

Todd Taylor, Executive Director, and Mary Tiger, Sustainability Manager, provided a process to update OWASA's strategic plan noting the current strategic plan was adopted in 2014, and the strategic initiatives have been completed or are underway.

The Board agreed to begin the process to update the strategic plan with input from staff, the community, and other stakeholders. Staff will develop a draft process for the Board's review and feedback at a future meeting.

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

Jody Eimers made a motion to approve the resolution; second by Ruchir Vora and unanimously approved. Please see Motion No. 1 above.

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Item Eight: Summary of Board Meeting Action Items

Todd Taylor noted the following pending staff action items and provided an overview of the next two Board meetings;

- Provide update via email to the Board regarding possible funding for the Teer Road West Forest Management Plan this fiscal year; and
- Provide information via email on additional invasive species control on all managed tracts; and
- Provide an update on condition assessment efforts; and
- Evaluate options and provide recommendations to update the Water Main Break Key Performance Indicator (KPI) as internal and external metrics; and
- Provide an update on the Water Main Prioritization program; and
- Agenda items for October 8, 2020 virtual Work Session:
    - New item - one-time additional employee Personal Leave merit bonuses
    - Annual Review and Update of Strategic Trends and Utility Planning Issues for Fiscal Year 2020
    - 2020 Board Self-Assessment
- Agenda items for the October 22, 2020 virtual Meeting:
    - Quarterly Financial Report for the period ending September 30, 2020
    - Update on OWASA COVID-19 Information
    - Reliability and Resiliency Improvements Update
    - (Tentative) Sewer Use Ordinance and Service Lateral Policy Updates to Align with House Bill 873
    - Closed Session to review the performance of the Executive Director

Without objection, the Board meeting was adjourned at 8:51 p.m.

Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachment

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Agenda Item

- Update on OWASA's COVID-19 Information and Discussion by the Board

Purpose

- To provide the Board of Directors and public an update on OWASA's response to COVID-19 to ensure we continue to provide the Carrboro and Chapel Hill communities with high-quality and reliable water, wastewater, and reclaimed water services during the pandemic.

- Staff will provide a verbal update on activities since September 24, 2020.

Action Needed

- Discussion and questions by the Board of Directors.

October 22, 2020

Agenda Item

- Financial Report for the Three-Month Period Ended September 30, 2020

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. The report is considered preliminary until the annual audit of our financial statements is complete.

- Highlights of the report include:

    - All but one of our financial performance targets were met.

    - Total revenue for the period was about $791,000 greater than the budget.

    - System development fees were about $584,000 greater than budget.

    - Operating Expenses were about $448,000 less than budget.

    - Net Income less Debt Service was about $1.5 million greater 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 expenditures for the three-month period were approximately $4 million. FY 2021 expenditures are currently projected to be approximately $22.8 million or 112% of budget.

Action Needed

- Receive and discuss the financial report for the three-month period ended September 30, 2020.

October 22, 2020

MEMORANDUM

To: Board of Directors

Through: Todd Taylor, P.E.

From: Stephen Winters, CPA

Date: October 16, 2020

Subject: Financial Report for the three-month period ended September 30, 2020

Purpose

The financial report for the three-month period ended September 30, 2020 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

- In March 2020, the COVID-19 pandemic began impacting our service area. The University of North Carolina and many businesses were closed or significantly scaled back their operations. For the period from March 16 through September 30, 2020, water volume demand was down about 12% as compared to the same period in 2019. The budget for revenue for the first six months of FY 2021 was reduced from original projections by 12%.
- As shown on page 10 of the report, all but one of our financial performance measurement targets were met for the period. Our working capital reserve fund was about $2.9 million less than our target of $12.2 million.
- Average drinking water sales for the period was 5.92 million gallons per day (MGD), 6.49 MGD was projected. Combined drinking and reclaimed water sales for the period averaged 7.42 MGD versus a projection of 7.94 MGD.
- Total income was over budget by 7.8% or about $791,000 greater than the budget. Water and sewer sales were over budget by 2.5% or about $241,000.
- System development fees were over budget by about $584,000. Several large meters that were scheduled to be set in FY 2020 were instead set in the first quarter of FY 2021.
- Total operating expenses for the period were about $448,000 less than the budget. Due to the impact of the pandemic, staff is limiting non-essential operating expenses.
    - General and administrative expenses were under budget by 2.1% or about $38,000. The

difference is made up of a number of small variances.

- The Water Supply and Treatment department expenses were under budget by 8.0% or about $107,000. Energy, chemicals and supplies, and maintenance were all under budget by about $40,000 each.
- Water distribution expenses were under budget by about $90,000. Position vacancies made up most of the variance and maintenance was under budget by about $29,000.
- Wastewater treatment expenses were under budget by about $152,000. The variance is due to being under budget in energy and maintenance.
- Wastewater collection expenses were under budget by about $62,000. Position vacancies and most expense categories were under budget.

- Net Income less Debt Service for the period was approximately $1.5 million more 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) Summary**

  During the first quarter of FY 2021, approximately $4.0 million (20% of the CIP budget) was invested in capital projects to rehabilitate, replace or improve various components of OWASA's water and wastewater infrastructure. Approximately $3.4 million of this spending total is attributable to several construction projects to improve or replace assets:

  - equipment used to thicken or concentrate the solids produced in various parts of the Wastewater Treatment Plant (WWTP) process;
  - water mains along West Cameron Avenue and South Columbia Street (the first phase of work in this two-phase project), Kensington Drive, and Barclay Road;
  - water and sewer mains along Dobbins Drive;
  - secondary clarifier tanks at the WWTP; and
  - pipes and manholes throughout the wastewater collection system.

  Other notable project activity this quarter includes the start of construction for two important resiliency projects at the Jones Ferry Road Water Treatment Plant (WTP): the WTP Finished Water Pumping Improvements and the WTP Chemical Facilities Improvements. Another important resiliency project, the Jones Ferry Road Finished Water Mains Resiliency Improvements is expected to begin construction in November.

  Projected FY 2021 CIP expenditures of $22.8 million are about $2.4 million (or 12%) above the FY 2021 CIP budget. This is due primarily to two factors:

  - Roughly $2.1 million in expenditures due to faster than expected completion of the three major construction projects at the WTP noted in the paragraph above. The projects are currently within budget, but some work budgeted and anticipated to be complete in FY 2022 will be complete this fiscal year.
  - Cost growth of nearly $350,000 on the WWTP Fermenter Mixing Improvements, due to higher than expected equipment costs and additional scope needs discovered during design.

Action Requested

Receive and discuss the financial report.



Stephen Winters, CPA
Director of Finance and Customer Service

Attachment

Orange Water and Sewer Authority

Financial Report
For the Three-Month Period Ended
September 30, 2020

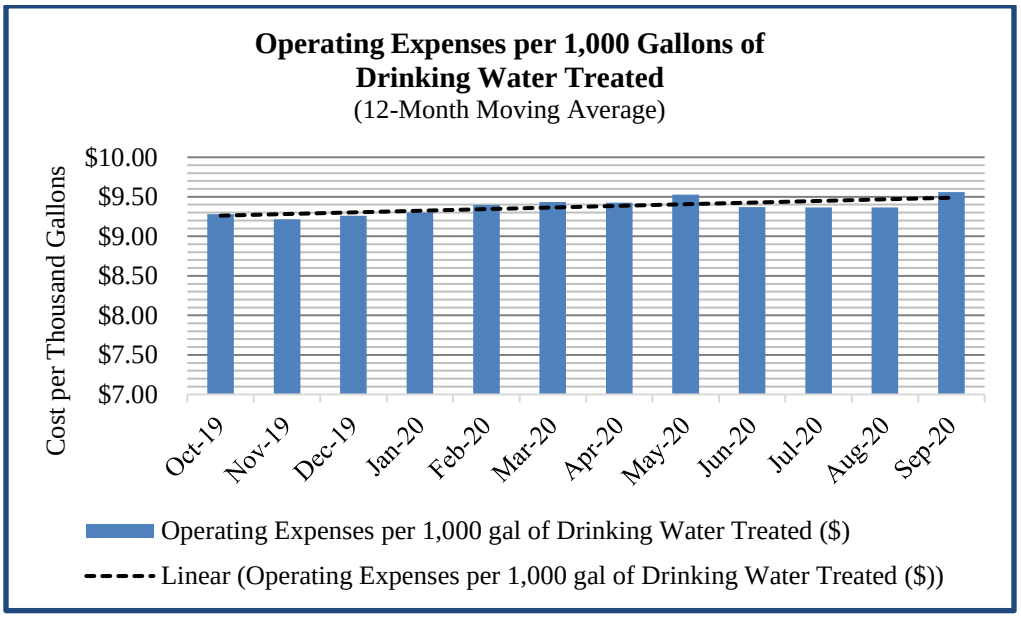
Orange Water and Sewer Authority
Statement of Net Position
September 30, 2020
(unaudited)

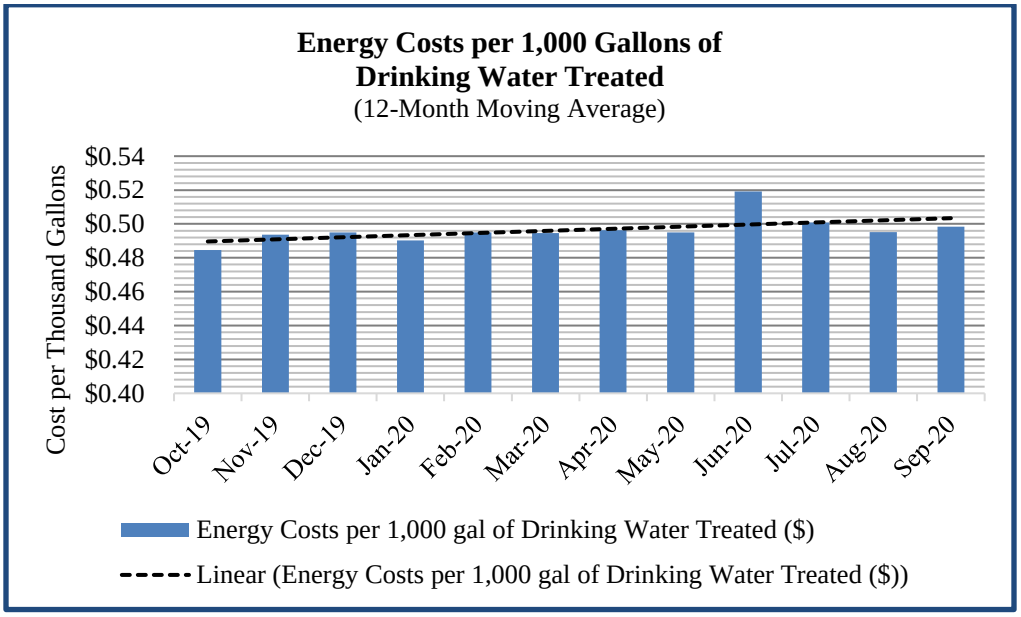
Assets	
Current Assets	
Cash	$15,814,678
Receivables	5,264,786
Inventory	1,310,265
Prepaid expenses	542,076
Restricted cash	1,518,585
Total Current Assets	24,450,390
Noncurrent Assets	
Capital assets (net of depreciation)	288,991,274
Other noncurrent assets	55,678,908
Total Noncurrent Assets	344,670,182
Total Assets	$369,120,572
Liabilities and Net Position	
Current Liabilities	
Accounts payable and accrued expenses	$2,435,852
Unearned income	187,521
Customer deposits	1,227,766
Total Current Liabilities	3,851,139
Noncurrent Liabilities	
Bonds payable	71,403,647
Other noncurrent liabilities	14,626,203
Total Noncurrent Liabilities	86,029,850
Net Position	
Contributed capital	124,238,355
Net position at the beginning of the year	152,025,895
Year-to-date accrual basis net income	2,975,333
Total Liabilities and Net Position	$369,120,572
Net income reconciliation:	
Accrual basis net income	$2,975,333
Depreciation, interest, other post-employment benefits expenses	3,073,378
Modified accrual basis net income	$6,048,711

Orange Water and Sewer Authority
Income Statement
For the Three-Month Period Ended September 30, 2020
(unaudited)

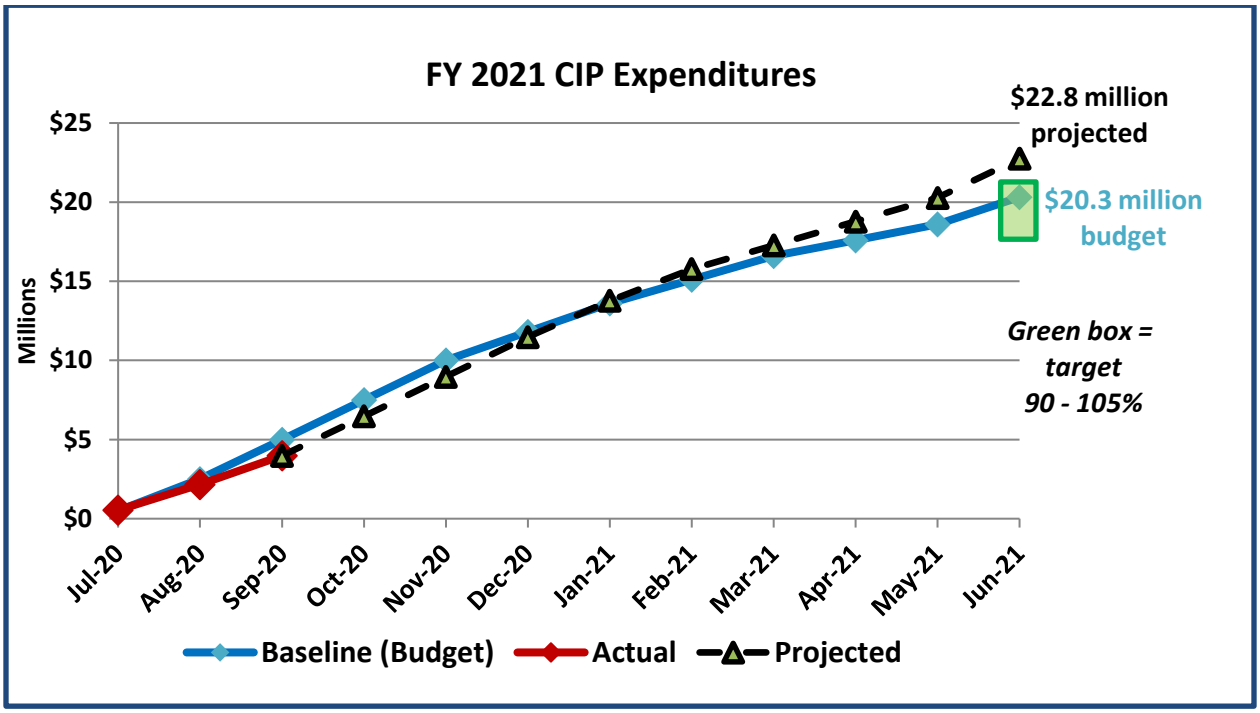
	Actual through September 30, 2020	Budget through September 30, 2020	Variance (effect on net change in Fund Balance)	Percent Variance
Operating Revenue				
Water	$5,216,049	$4,806,245	$409,804	8.5%
Sewer	4,500,684	4,620,904	(120,220)	(2.6)
Reclaimed Water	162,023	210,593	(48,570)	(23.1)
Service Initiation Fees	5,720	4,704	1,016	21.6
Other	208,224	240,942	(32,718)	(13.6)
Refunds and Allowances	(32,643)	(49,530)	16,887	34.1
Total Operating Revenue	10,060,057	9,833,858	226,199	2.3
Non-Operating Income (Expense)				
System Development Fees	854,546	270,372	584,174	216.1
Interest and Other Non-Operating Income	815	20,325	(19,510)	(96.0)
Total Non-Operating Income	855,361	290,697	564,664	194.2
Total Income	10,915,418	10,124,555	790,863	7.8
Operating Expense				
General and Administrative	1,723,029	1,760,684	37,655	2.1
Water Supply and Treatment	1,227,684	1,334,691	107,007	8.0
Water Distribution	643,525	733,458	89,933	12.3
Wastewater Treatment	1,051,028	1,203,265	152,237	12.7
Wastewater Collection	221,441	283,050	61,609	21.8
Total Operating Expense	4,866,707	5,315,148	448,441	8.4
Net Income (modified accrual)	6,048,711	4,809,407	1,239,304	25.8
Debt Service	1,672,516	1,952,023	279,507	14.3
Net Income less Debt Service	4,376,195	2,857,384	1,518,811	53.2
CIP Expenditures	3,976,039	5,000,000	1,023,961	20.5
Capital Equipment Expenditures	390,073	704,500	314,427	44.6
Net Change in Fund Balance	$10,083	($2,847,116)	$2,857,199	

Orange Water and Sewer Authority
Select Financial Data
For the Three-Month Period Ended September 30, 2020





Orange Water and Sewer Authority
Select Financial Data
For the Three-Month Period Ended September 30, 2020

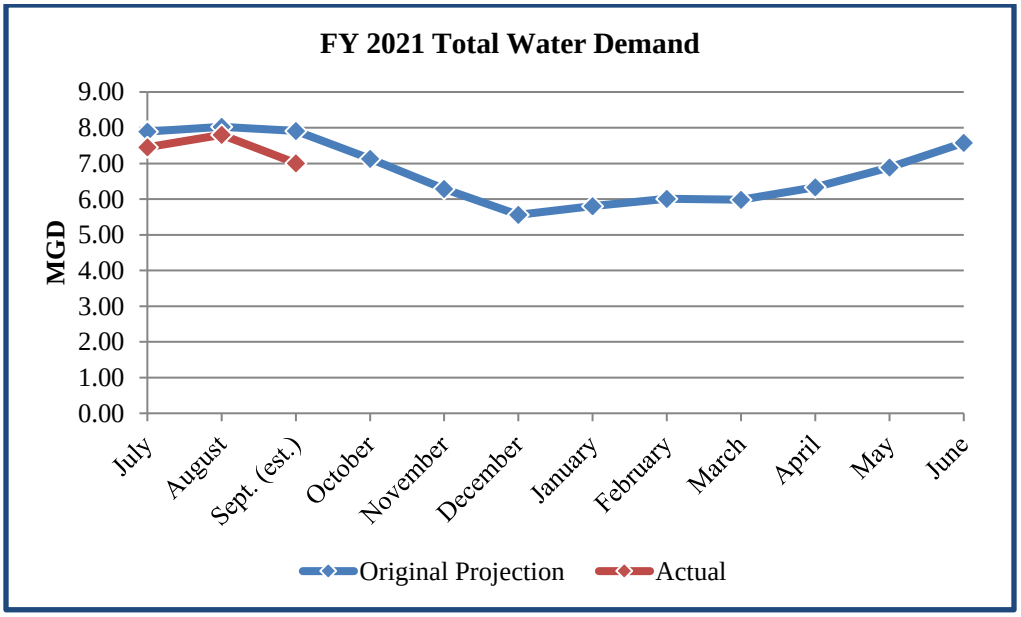


Orange Water and Sewer Authority
Select Financial Data
For the Three-Month Period Ended September 30, 2020

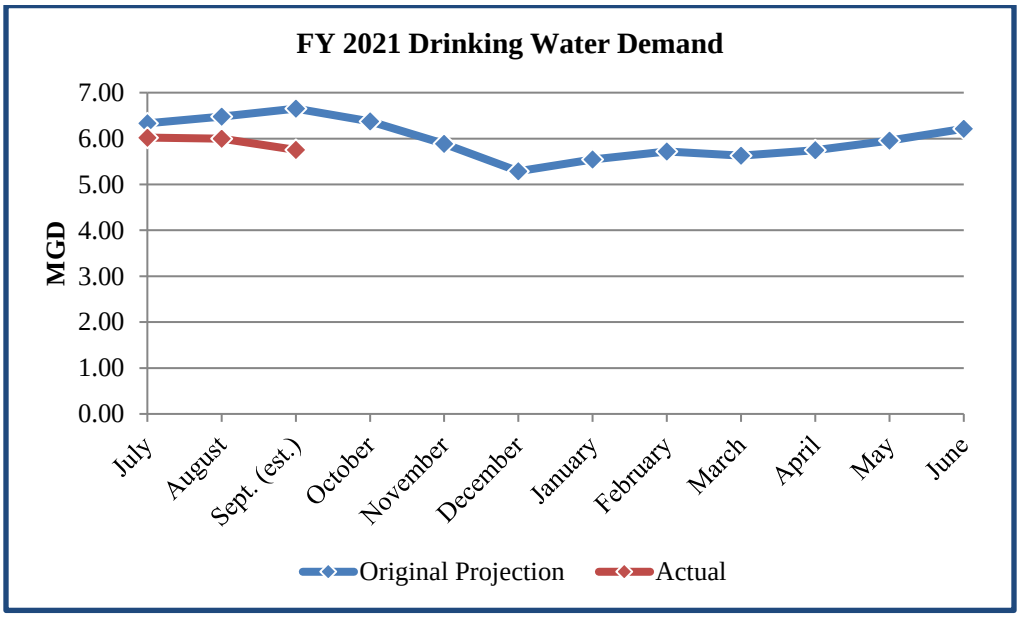
FY 2021 Water Sales Projection (Average Day)

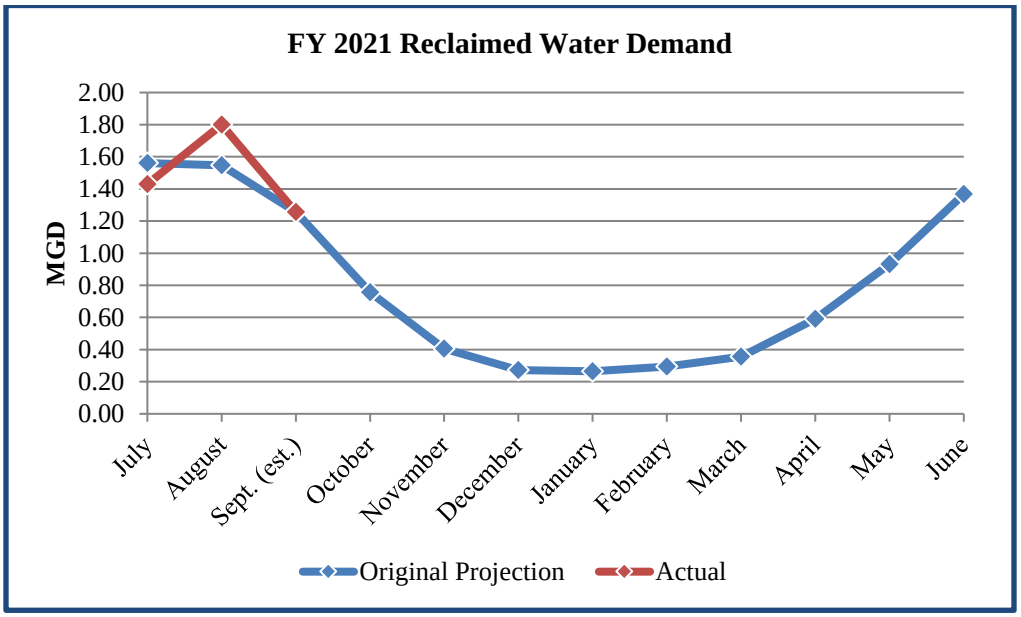
	Original Projections		Actual Water Sales		Revised Projections	
	DW	RCW	DW	RCW	DW	RCW
July	6.33	1.56	6.02	1.43	6.02	1.43
August	6.48	1.55	6.00	1.80	6.00	1.80
September	6.65	1.26	5.75	1.26	6.65	1.26
October	6.37	0.76			6.37	0.76
November	5.88	0.41			5.88	0.41
December	5.29	0.27			5.29	0.27
January	5.54	0.26			5.54	0.26
February	5.72	0.29			5.72	0.29
March	5.62	0.35			5.62	0.35
April	5.75	0.59			5.75	0.59
May	5.96	0.93			5.96	0.93
June	6.22	1.37			6.22	1.37
Average	5.98	0.80	5.92	1.50	5.92	0.81

Estimates shown in red

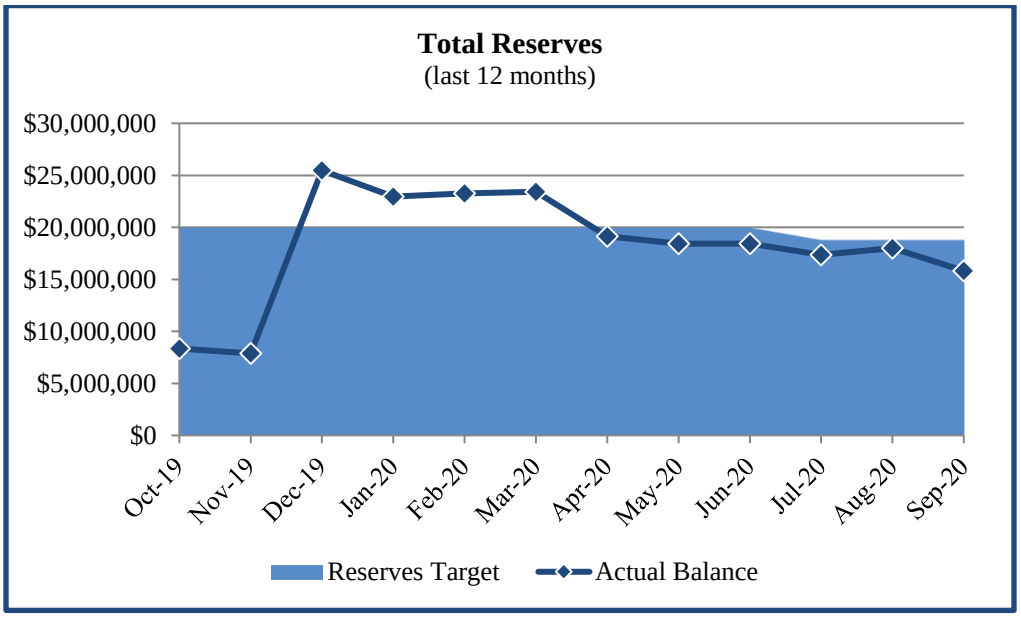


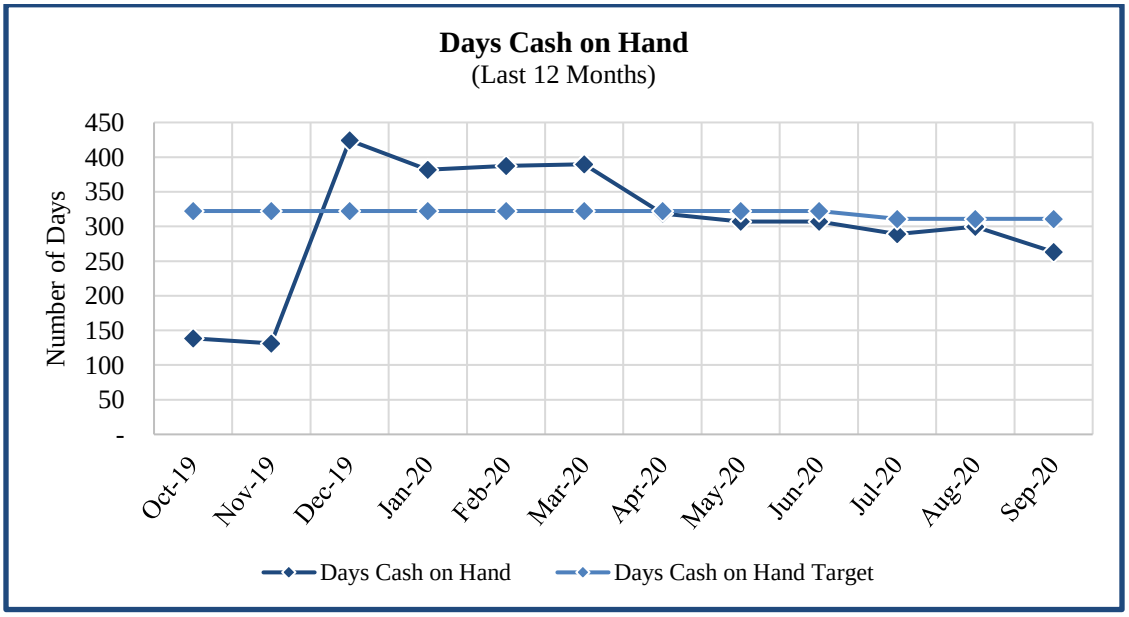
Orange Water and Sewer Authority
Select Financial Data
For the Three-Month Period Ended September 30, 2020



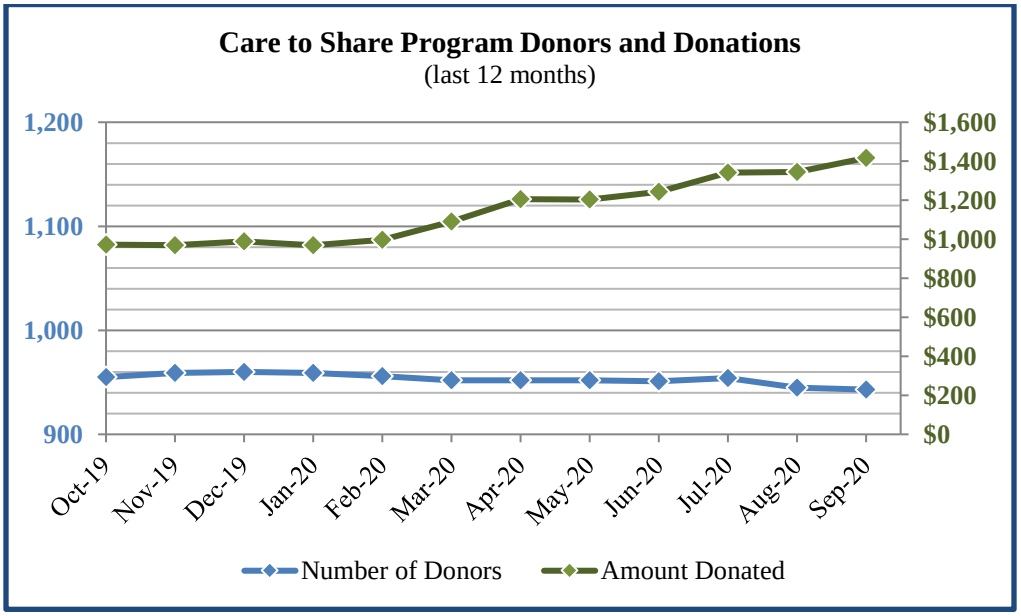


Orange Water and Sewer Authority
Select Financial Data
For the Three-Month Period Ended September 30, 2020





Orange Water and Sewer Authority
Select Financial Data
For the Three-Month Period Ended September 30, 2020



Orange Water and Sewer Authority
Financial Management Policy Report Card
For the Three-Month Period Ended September 30, 2020

Measurement	Objective	FY20 Results	FY21 Goal	YTD FY21 Results
Working Capital Reserves	Greater of four months Operating Expenses or 20% of succeeding three years CIP	$12.1M	$12.2M	$9.3M
Capital Improvements Reserve	2% of Net Capital Assets (Funding $400,000 per year until reach goal of approximately $6M)	$4.4M	$4.8M	$4.8M
Rate/Revenue Stabilization Reserve	5% of annual Water and Sewer Revenue	$1.9M	$1.7M	$1.7M
Debt Burden to Asset Value	Total Debt not more than 50% of Total Assets	26%	≤ 50%	24%
Sufficiency of Revenues above Debt Requirements[3]	Annual Debt Service no more than 35% of Gross Revenue	19%	≤ 35%	24%
Cash Financing of Capital[1]	Annual revenues and reserves provide at least 30% of CIP funding	32%	≥ 30%	32%
Debt Service Coverage Ratio[3]	Annual Net Income not less than two times Annual Debt Service	2.1	2.0	1.5[4]
Service Affordability Ratio[2]	Average annual OWASA bill not more than 1.5% of area median household income	1.33%	1.5%	1.31%

M = million

[1] Cash Financing of Capital based on 5-Year CIP Budget and potential borrowing during the same period.
[2] FY 2021 calculation based on median household income of $69,308 (weighted average of 2020 median household income of Carrboro and Chapel Hill) and average monthly household water use of 4,000 gallons.
[3] Calculation based on the FY 2021 Annual Budget until full-year results are available.
[4] Revenue for FY 2021 is projected to be lower than normal due to the impact of the COVID-19 pandemic. Per our Financial Management Policy, the minimum coverage ratio for any single year when severe weather anomalies or other unforeseen circumstances occur which negatively impact revenues and/or expenses shall not be less than 1.5 during the fiscal year.

Agenda Item

- Reliability and Resiliency Improvements Update

Purpose

- To update the OWASA Board of Directors on the ongoing efforts to improve the reliability of the services we provide to customers by reducing the risk of service interruptions.

Background

- Two system-wide water service disruptions in 2017 and 2018 resulted in the development of extensive action plans to improve the reliability of OWASA's service delivery.

- *November 5, 2018 Water Main Break Action Plan* - Key activities include significant improvements in our valve inspection and maintenance program, water treatment plant piping upgrades starting construction in November, and water main replacement prioritization model completion.

- *Water Treatment Plant and Wastewater Treatment Plant Reliability and Risk Assessment Action Plan* - Key activities include completing the wastewater treatment plant headworks concrete repair, starting construction on the water treatment plant chemical facility improvements, and starting construction on finished water pump number 5 replacement. Remaining capital improvements program (CIP) projects identified in the action plan are scheduled in the Fiscal Year 2021-2025 CIP.

- *Rogerson Drive Pump Station Resiliency and Force Main Repair* - Key activities include completing the force main repair in spring 2020, completing pump station electrical improvements, and developing a pump station/force main system model.

- Nearly all the activities in the action plans are complete, programed in our CIP, or integrated into our day-to-day work practices.

- For the October 2021 update, staff recommends removing the two action plans from the Reliability and Resiliency Project Improvements Update and replacing them with the distribution system prioritization model update and pipe condition assessment update requested at the Board's September 24, 2020 meeting, as well as other reliability and resiliency activities undertaken during the year.

Action Needed

- Information item. No action is required.

October 22, 2020

TO: Board of Directors

THROUGH: Todd Taylor, P.E.

FROM: Mary Darr, P.E.

DATE: October 15, 2020

SUBJECT: Reliability and Resiliency Improvements Update

Purpose:

To update the OWASA Board of Directors on the ongoing efforts to improve the reliability of the services we provide to customers by reducing the risk of service interruptions.

Action Needed:

This update is provided for informational purposes and no action is required.

Background:

Two system-wide water service disruptions in 2017 and 2018 resulted in the development of extensive action plans (see attachments) to improve the reliability of OWASA's service delivery. The plans were developed by staff with the assistance of engineering consultants subsequent to the water service disruption events. These plans utilize capital investments in our infrastructure as well as operational and emergency response improvements to mitigate potential risks in our water distribution system, water treatment plant (WTP) and wastewater treatment plant (WWTP).

The Board requested annual updates on our reliability and resiliency work. This report also includes an update requested by the Board at the October 10, 2019 work session on lessons learned from the Rogerson Drive force main repair.

Reliability and Resiliency Updates:

The attachments provide a detailed status update of each item within the plans. Attachment 1 is the action plan for the November 5, 2018 water main break. Attachment 2 is the action plan for the WTP and WWTP Reliability and Risk Assessment conducted after the February 2017 water emergency.

We are happy to report that most activities in these action plans are complete, scheduled in our capital improvements program (CIP), or integrated into our day-to-day work practices. The

following summary highlights a few key initiatives either completed or underway since the October 24, 2019 update.

November 5, 2018 Water Main Break Action Plan:

- Valve Inspection and Maintenance: In 2018, the Board approved additional resources (personnel and equipment) to establish a dedicated valve maintenance crew to improve our valve inspection and maintenance program to ensure isolation valves were both accessible and properly maintained to improve our response to water main breaks thereby minimizing the impacts to our customers. A second valve truck was purchased in FY 2020 improving the valve crew's efficiency and allowing the older valve trailer to be used as a back-up for the two valve trucks.

  Over the past 12 months, the five-member valve crew consisting of a crew leader and two 2-person teams operated 1,319 of the critical valves (12-inch and larger) and 2,524 non-critical valves. The goal is to inspect all critical valves annually (about 1,200 per year) and non-critical valves every four years (about 3,000 per year). During our COVID-19 response, the valve crew prioritized inspecting the critical valves first.

  Crews performed maintenance activities such as repairing valves, replacing valves, adjusting (raising/lowering) valve boxes, cleaning debris from valve boxes, and uncovering buried valve boxes on 265 valves over the past 12 months. Currently, there are 12 valve work orders remaining from the system-wide inspection conducted in response to the action plan. Work orders were prioritized for criticality. Most of the remaining work orders are for locating valves. Two work orders are to repair smaller valves that require coordination with several customers due to service interruption.

  Crews also inspected 268 air-release valves that are important to system operation. Air release valves eliminate small pockets of air that form at high points in the pipes reducing capacity.

- WTP Piping Replacement: A project to provide additional redundancy and replace aging water pipes at the WTP into Jones Ferry Road, including the pipe that failed in November 2018, will start construction in November 2020. Project completion is expected in summer 2021.

- Water Main Prioritization Model: This project was completed in 2020 with an update provided at the Board's September 24, 2020 meeting. The new model is used to prioritize water main replacement projects. This project also provided additional analysis and decision support tools, including a planning tool to forecast long-term system performance, used to guide infrastructure investment decisions and operational strategies to manage the water distribution system.

- Break Response Preparedness: As mentioned in the previous bullet, the Water Main Prioritization Model project provided operational strategies to improve our response to water main breaks including development of response plans for several high consequence

of failure pipe segments; development of a web-based visual isolation tool, which is now used by operations staff, that allows for immediate identification of the necessary valves to close (both primary and, if needed, secondary) when isolation of a pipe segment is needed; identification of several opportunities for addition of isolation valves (subsequently programmed into the CIP budget); and review of spare parts inventory needed to respond to water main breaks.

WTP and WWTP Reliability and Risk Assessment Action Plan:

- WWTP Headworks Concrete Rehabilitation: This project to repair deteriorated concrete at the headworks effluent channel was completed in March 2020. The project included bypassing all WWTP flow around the headworks effluent channel to perform the rehabilitation work. Piping was left in place to make future bypasses easier.

- WTP Finished Water Pump Improvements: Active construction will start in November 2020 to replace finished water pump number 5. Replacing this pump is one of the final steps in eliminating the 2300-volt components of the WTP electrical system. The current pump is rarely utilized because it can only be operated at one flow set point. Replacing this pump and adding a variable frequency drive will allow staff to utilize this pump at various flow set points, providing operational flexibility and resiliency. The new equipment will also be more energy efficient than the existing pump. Project completion is expected in spring 2021.

- WTP Chemical Facility Improvements: Construction started in summer 2020 to upgrade several aging chemical feed systems at the WTP. In addition to replacing aging equipment, this project will increase operational efficiency and reduce risks by updating control systems, standardizing on equipment, and increasing chemical storage capacity. Project completion is expected in spring 2021.

Rogerson Drive Pump Station Resiliency and Force Main Repair Update:

The Rogerson Drive pump station is the largest wastewater pump station outside of the WWTP. Since the pump station and force main function together as a unit, we have combined resiliency work for both in this section.

As part of our culture of continuous improvement, our standard practice is to conduct an After Action Review (AAR) following an event. The purpose of an AAR is to evaluate our performance to identify and learn from our successes and opportunities for improvement. (i.e. lessons learned). The AAR for the Rogerson Drive force main failure was held in May 2019. The following summary highlights key initiatives from the AAR and the Reliability and Risk Action Plan (Attachment 2) completed or underway since the October 10, 2019 update.

- Force Main Repair: Repair and site restoration of the Rogerson Drive force main was completed in spring 2020. Parallel piping remains installed in a casing under Raleigh Road and is available for emergency bypass as well as use by a future parallel force main.

- Pump Station Improvements: Work completed at the pump station included electrical improvements to replace obsolescent equipment, roof replacement to protect the structure and electrical equipment, and piping improvements should we ever need to bypass the station's pumps.

- System Model: Development of a pump station and force main system model is underway. The model will inform operation of the system, be the basis for system improvement recommendations, and identify locations for further force main condition assessment. Evaluation of redundant force main alternatives will occur following model development. Model development and risk evaluation of the existing force main are expected to be complete in Fiscal Year (FY) 2021.

- Force Main Construction Material: Force main material standards will be evaluated as part of the overall Standards and Specifications review planned to begin in FY 2021 and be completed in FY 2022. There are no force main construction projects in the FY 2021-2025 CIP.

Other Reliability and Resiliency Activities:

In addition to items listed in the Action Plans, other reliability and resiliency activities include:

- Continuity of Operations During COVID: One of our key objectives during the pandemic has been to protect the health and safety of our staff while meeting our mission of providing safe and reliable water, wastewater, and reclaimed water services to the community. One of the resiliency tasks that has been invaluable during this time was the installation of sampling stations (Attachment 1 #24) throughout the distribution system. Since many of our sample collection sites were in businesses that closed during the pandemic, these sampling stations have allowed our staff to maintain regulatory compliance sampling. The use of these stations allowed staff to collect samples without entering buildings.

- Backup Power Evaluation and Fuel Management Strategy Study: The purpose of this study was to identify risks and opportunities for improvement for 26 water and wastewater facilities with backup power generators. Backup power systems were evaluated to ensure they were adequately sized and had appropriate fuel storage. This project was completed in summer 2020. None of the generators showed any immediate deficiency or limitations in size. We identified opportunities to increase fuel storage at some of our sites. Recommendations will be incorporated in the FY 2022-2026 CIP.

- WWTP Backup Generator Testing and Upgrades: All wastewater backup generators were load bank tested. Generator load bank testing is an examination and assessment of the generators. It verifies that the generators are in proper working conditions.

  The WWTP has two plant generators. In the past, normal operations of the generators have been to operate half the plant on each generator. Due to energy improvements over the years, we have greatly reduced the load on these generators. In summer 2020, we

completed a control system upgrade to allow the entire WWTP to run off one generator with the other serving as backup providing redundancy, improving our resiliency.

- WWTP Maintenance Mechanic: The Board approved the addition a Maintenance Mechanic position at the WWTP to increase the completion rate of preventive maintenance activities at the WWTP and our 21 wastewater pump stations. Preventive maintenance assures optimal working conditions for equipment, extends the life of equipment, and avoids unplanned down-time. We are currently recruiting for the position.

- Water Storage Tank Inspection and Maintenance: The five water storage tanks located in the distribution system are critical to system operation allowing staff to operate the WTP at a steady rate, maintaining pressure in the distribution system, and holding water reserves for main breaks and fire protection. Because maintenance of these critical assets is highly specialized, OWASA has contracted tank inspection and maintenance with Utility Services (now SUEZ) since the early 1990's. Each tank is inspected annually and ever three years each tank is drained, cleaned and inspected. Internal and external coating touch-ups are completed as needed. Each tank receives a complete internal and external coating every 12 to 15 years, depending on the coatings assessment.

Look ahead to 2021 Update:

We are excited about the progress made on the tasks identified in the action plans even with the complications of a pandemic for two-thirds of the reporting period. Nearly all the activities in the attached action plans are complete, programed in the CIP, or integrated into our day-to-day work practices. For the October 2021 Reliability and Resiliency Improvements Update, staff recommends removing the two action plans from the report and replacing them with the distribution system prioritization model update and pipe condition assessment update requested at the Board's September 24, 2020 meeting, as well as other reliability and resiliency activities undertaken during the year.

We appreciate the Board and community's continued support in improving the reliability and resiliency of the essential services we provide to the community.

Mary Darr, P.E.
Director of Engineering and Planning

Attachments:
Attachment 1 - November 5, 2018 Water Main Break Action Plan
Attachment 2 - WTP and WWTP Reliability and Risk Assessment Action Plan

November 5, 2018 Water Main Break Action Plan - Updated October 15, 2020			
No.	**Action Item**	**Status**	**Notes**
1	OC Alerts - Additional staffing needed	Complete	Additional staff has been trained and added to the on-call list.
2	Critical spare parts inventory maintenance	Complete	Immediate needs have been addressed. However, ongoing maintenance is required. A review of our inventory to respond to water main breaks was conducted by the consultant as part of the Water Main Prioritization work.
3	Obtain approval from Durham to activate their valves at interconnections	Complete	No longer pursuing due to concerns about liabilities.
4	Repair valve box on 16-inch main	Complete	Repaired by contractor.
5	Investigate delay in Boil Water Advisory for Club Nova Apartments	Complete	This was an oversight and the issue has been addressed.
6	Reduce waste associated with expired bottled water inventory	Complete	We will donate bottled water to IFC one month before it is set to expire.
7	Accelerate our valve maintenance program, particularly on large transmission lines and critical areas. Determine what additional resources may be needed.	Complete	Additional staffing and equipment provided. The goal to inspect all critical and previously uninspected valves by the end of 2019 has be met.
8	Develop an interconnection inspection and testing protocol	Complete	An automated reminder has been placed in the CMMS to perform monthly inspections.
9	Research contracted resources for traffic control	Complete	A contract is not warranted due to lack of utilization on a routine basis. We are familiar with several traffic control companies and can utilize these contractors on short notice if needed.
10	Purchase updated couplings for 16-inch cast iron pipe	Complete	Couplings purchased.
11	Routinely train all D&C staff on mapping and how to safely and quickly isolate leaks from main breaks, especially in critical areas.	Ongoing	Routine training for employees will continue to be provided. In September 2019, a tabletop exercise was held with crew leaders and the prioritization model consultant to discuss the process.
12	Review the training and number of on-call staff for afterhours emergencies.	Complete	Training is complete and on-call staffing has been reviewed.
13	Develop multiple "playbook" SOPs to focus EOC on different scenarios, such as major water main break versus WTP out of service, and consider establishing specialty cells to outline prioritization of limited resources and time sensitive activities, such as isolating the largest main first, or prioritizing isolation over establishing interconnects	Complete	Water Main Prioritization project provided operational strategies to improve break response including development of response plans for several high consequence of failure pipe segments and development of a web-based mapping tool that allows for immediate identification of the necessary valves to close when isolation of a pipe segment is needed.
14	Abandon 70-year old 16-inch cast iron piping	Underway	Will be abandoned as part of the Finished Water Piping Improvement Project that starts in November 2020.

November 5, 2018 Water Main Break Action Plan - Updated October 15, 2020			
No.	**Action Item**	**Status**	**Notes**
15	Review key valves to ensure they are readily identifiable in the field and in GIS, and that GIS matches field condition	Ongoing	GIS data requires regular maintenance.
16	Purchase and stage concrete barriers for water diversion to OWASA's emergency response package	Complete	12 concrete barriers and a specialized clamp to assist in moving them have been purchased.
17	Update Unplanned Water Main Repair SOP to address procedures for more complex multiple concurrent isolation activities and the role of interconnects	Complete	Water Main Prioritization project provided operational strategies to improve break response including development of response plans for several high consequence of failure pipe segments and development of a web-based mapping tool that allows for immediate identification of the necessary valves to close when isolation of a pipe segment is needed.
18	Update Finished Water Pumping SOP to include finished water pumping actions during unplanned water main breaks	Complete	SOP has been updated.
19	Flow test on hydrant at intersection of E. Main St and Roberson St	Complete	Completed by crews.
20	Review reporting procedures to ensure failed valves are captured in GIS for water main repair planning, and by the asset management program for repair prioritization	Complete	Improvements made in handheld data collector.
21	Evaluate emergency mapping capabilities	Complete	All employees have access to the WebGIS (24/7) map and can print. Staff training has been provided and can be scheduled as needed. Engineering Technicians can assist with mapping.
22	Update Interconnect SOPs for Hillsborough	Partially Complete	Updated the portion of the SOP related to receiving water from Hillsborough. Waiting on Hillsborough to complete improvements for sending water to them. Pending Hillsborough installing infrastructure or developing isolation procedure to allow OWASA to supply water.
23	Valve mapping issues at intersection of E. Poplar and Oak Ave	Complete	GIS updated.
24	Identify and install sampling sites throughout the service area.	Partially Complete	6 left on original plan, additional locations added to list recently.
25	Emergency Contact for American Stone	Complete	Contact identified.

November 5, 2018 Water Main Break Action Plan - Updated October 15, 2020			
No.	**Action Item**	**Status**	**Notes**
26	Conduct tabletop exercises with a goal of achieving effective isolation at the secondary level, if necessary, within two hours	Complete	Tabletop exercises were held in June and December 2019.
27	Evaluate response if similar event occurred outside of normal working hours.	Complete	SOPs have been added to the on-call toolkit and reviewed with the on-call personnel.
28	Provide each of the major water mains leaving the WTP with an above ground operator in a secure location on the WTP site	Complete	Evaluated as part of the Finished Water Piping Improvement Project. Most on-site valves are in paved areas where maintenance vehicles travel.
29	Assess vulnerability of existing valves 8 inches and larger with buried operators in public locations for access and operation	Ongoing	The Valve Crew will identify opportunities as they inspect and exercise valves. Info can be entered in the crew's data loggers and then linked to GIS.
30	Repair 20-inch valve in front of WTP	Underway	Will be abandoned as a result of the Finished Water Piping Improvement Project that starts in November 2020.
31	Investigate issues with transferring water from the 740-pressure zone into the 640-pressure zone.	Complete	This instance was hydraulically unique due to the location of the break and the WTP finished water pumps being used in an attempt to maintain system pressures. This forced water towards the 740-pressure zone not allowing it to flow back into the 640-zone.
32	Consider additional pressure monitoring points and alarms to improve reliability and ensure adequate pressure throughout the system	Complete	Notification alarms have been added to the existing pressure readings. Additional sites and monitoring options were evaluated as part of the Water Main Prioritization project.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

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.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
W-R1	75	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 Clearwell'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.	Complete FY 2023	Inspection was completed and informed the scope and timing of a rehabilitation project included in the FY 2021-2025 CIP. Programmed in CIP

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
W-R2	75	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.	Complete	Complete. A file in the Water Supply and Treatment SharePoint site contains these documents.
W-R3	75	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 2021 FY 2022	A. The conversion of finished water pump no.5 to 480 voltage is being completed as part of CIP 272-42 and is under construction through Spring 2021. B. A project to convert the remaining 2300 voltage distribution system at WTP is under design and expected to be under construction by Winter 2021/2022.
W-R4	125	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.).	Complete	Testing of OWASA-owned transformers was completed. A regularly scheduled PM task has been added to the workorder management system.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
W-R5	75	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 the primary chemical application vault fails.	Evaluate options for meter redundancy. Develop mitigation plan for failure of meter.	FY 2021	Reviewed with our SCADA systems integrator. A temporary meter is an option to mitigate risk. A second finished water flow meter will be installed as part of the Distribution Resiliency project, which will start in November 2020.
W-R6	75	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 2021	Caustic, hypochlorite, and ammonia chemical feed system improvements are part of CIP 272-46. Construction is underway and expected to be complete in Spring 2021.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
W-R7	125	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	VFDs are being standardized as they are replaced. We have a CIP project for the replacement of finished water pump no.6. Upgrading finished water pump no.5 is currently in progress. Critical system VFDs will be evaluated for redundancy/bypass as systems are assessed for replacement.
W-R8	75	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 2021	Water Facilities SCADA Master Plan is part of CIP 272-49. Wastewater Facilities SCADA Master Plan (WW-R11) was added to this scope. Work is underway, completion expected in FY 2021.
W-R9	75	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.	Complete	WTP audit complete.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
W-R10	75	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.	Complete	Complete.
W-R11	75	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.	Complete	Complete. The chemical delivery SOP was updated to include these action items.
W-R12	75	Various Locations	Critical Spare & Job Safety Analysis	Perform Critical Spare Analysis (Identified in FMEA) Perform Job Safety Analysis (JSA) on critical tasks.	December 2020 Ongoing	This is currently in progress. This is currently in progress with an expected completion date of March 2021.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Mason Farm Wastewater Treatment Plant

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
WW-R1	75	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.	Complete Complete	Diesel fuel assessment, including fuel management strategy and redundancy evaluation, was completed in Summer 2020. Bypass improvements were completed as part of CIP 277-31.
WW-R2	125	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.	Complete FY 2021	Complete. Assessment is in the final stages of completion.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
WW-R3	75	Morgan Creek Pump Station	WWTP MCPS Influent Pump - No backup level control for Precision Digital level instrument.	Install backup capacitance probe level sensor.	December 2020	Backup probe turned out not to be the most resilient option. Staff is working to install a float system that will provide backup to the current level instrument and would provide a backup for operation should there be a PLC failure.
WW-R4	75	Morgan Creek Pump Station	WWTP MCPS Influent Sluice Gates - Influent sluice gate could accidently close due to human error or equipment failure.	Remove sluice gate.	Complete	Complete.
WW-R5	75	Headworks	WWTP Headworks - Concrete located near the effluent of structure is in poor condition.	Build bypass structure, rehabilitate concrete, and improve odor control system.	Complete	WWTP Headworks concrete rehabilitation and odor control improvements are complete.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
WW-R6	125	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.	Conduct component level PM identified in FMEA (gas in oil testing, thermographic survey, insulation test, turns ratio test, etc.).	Ongoing	Duke Energy was not willing to open up these transformers for testing. Duke Energy confirmed they can have the transformer replaced within 8-12 hours. Working with Nixon to perform breaker and thermal testing on OWASA equipment.
			Components of backup power system are located in same building as main power.	Redesign of backup power system or installation of generator access point for critical systems.	Ongoing	Critical system generator access points will be evaluated as systems are assessed for upgrade/replacement. Addressing opportunistically.
WW-R7	125	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.	Complete	Complete.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
WW-R8	75	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	Up to date key spare VFDs in stock. Continuing to standardize to Schneider Square D drives. Investigating PM services with Schneider. Critical system VFDs will be evaluated for redundancy/bypass as systems are assessed for replacement.
WW-R9	75	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 2023	Design is complete; construction planned for completion in FY 2023.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
WW-R10	75	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 2020 Complete	We are developing a plan to install a spare breaker, while service breaker is being tested. Complete.
WW-R11	75	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 2021	Wastewater Facilities SCADA Master Plan will be completed in conjunction with Water Facilities SCADA Master Plan (CIP 272-49), planned for completion in FY 2021.
WW-R12	75	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.	TBD. Timing uncertain due to COVID	Coordinate Audit with WTP W-R9. WTP audit complete. Awaiting WWTP to be scheduled.

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Risk Priority Number	System	Risk Description	Treatment Plan	Target Completion Date	Notes/Status
WW-R13	75	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.	Complete	Complete.
WW-R14	75	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.	June 2021	Combine SOP with Process Control Procedures still underway. Other SOPs have been addressed.
WW-R15	75	Various Locations	Critical Spare & Job Safety Analysis.	Perform Critical Spare Analysis (identified in FMEA). Perform Job Safety Analysis on critical tasks.	December 2020 Ongoing	Underway. OWASA's Maintenance Coordinator started this process in March 2020. This is currently in progress with and expected completion date of March 2021.

Additional Key Findings

Risk No.	Group	Other Findings	Target Completion Date	Notes/Status
KF-1	Engineering	Perform cross-disciplinary reviews during the design phase of projects.	Ongoing	Cross-disciplinary reviews are utilized on most projects, beginning at project initiation.
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	

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Group	Other Findings	Target Completion Date	Notes/Status
KF-3	Engineering	Consider the system of systems, as some processes impact others and should be reviewed holistically.	Ongoing	
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	
KF-5	Operations & Maintenance	Communicate maintenance and operability concerns to the engineering staff so risk can be designed out of the systems.	Ongoing	Concerns are addressed during project design meetings.
KF-6	Operations & Maintenance	Communicate between plants so that lessons learned at one can be applied to the other.	Ongoing	Staff from both plants are included in AAR meetings.
KF-7	Operations & Maintenance	Maintain updated SOPs and Process Control Protocols.	Ongoing	WTP: various SOPs are reviewed monthly and process protocols are reviewed as they are updated.
KF-8	Operations & Maintenance	Formalize relationships with third-party vendors and contractors to establish clearly defined roles and responsibilities.	Complete	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.	Ongoing	Underway, completed through AWIA Risk and Reliability Assessment workshops and additional efforts will be completed through the development of emergency response plans for identified risks throughout the organization. (To be reviewed and updated every 5 years)

WTP and WWTP Reliability and Risk Assessment Action Plan – Updated October 15, 2020

Risk No.	Group	Other Findings	Target Completion Date	Notes/Status
KF-10	Senior Leadership	Teach all staff members about risk and facilitate greater participation in risk analysis workshops.	Ongoing	Underway, completed for water treatment and distribution through the AWIA Risk and Reliability Assessment workshops. Workshops were attended by staff from all departments including wastewater. Additional workshops are in discussion for wastewater and collection and may be led by internal staff or consultants.
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	
KF-12	Senior Leadership	Provide specialized training in electrical and SCADA systems.	Ongoing	
KF-13	Senior Leadership	Support knowledge transfer between employees and in succession planning.	Ongoing	
KF-14	Senior Leadership	Emphasize risk reduction across all departments.	Ongoing	
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	Conducted as part of the AWIA work for water treatment and distribution.

Agenda Item

- Update on 2020 Board Self-Assessment

Background

- As part the October 8, 2020 Board Self-Assessment discussion, the following list of next steps was established by the Board of Directors:
    - Clarify how issues/topics are assigned to various Board committees.
    - Evaluate/revisit the purpose and process for Board Work Sessions and committee structures.
    - Board Members agree to speak up if they did not hear an action item recorded.
    - Ask Community Engagement Committee to define the nature and types of public comments that require responses from the Board.
    - Determine if the Board wants to solicit staff and general counsel input on how the Board is functioning.
    - Create methods for addressing and tracking Board-only issues; i.e., those not assigned to staff.
- For additional information, see documents attached:
    - Framework for OWASA Board and Committee Roles (accepted September 11, 2014)
    - Work Session Purpose and Format (accepted and updated January 22, 2015).

Action Needed

- Discussion and action by the Board of Directors.

FRAMEWORK FOR OWASA BOARD AND COMMITTEE ROLES

Board Accepted on September 11, 2014

Purpose of the document

This document describes the boundaries between the roles of the full Board, Board committees, committee chairs, and individual Board members. Its intent is to complement the current OWASA bylaws, rather than alter or duplicate them. The document is intended as clarification of the select boundary areas only, not a complete description of roles and responsibilities.

Relationship between full Board and standing Board Committees

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.

Implementation:

1. Full Board regularly reviews proposed agenda topics for both Board work sessions and regular meetings

2. Board committees and committee chairs may propose additional topics for analysis and development of recommendations; Board determines (1) whether to invest Board, committee, and staff resources, and (2) which topics it prefers to explore as a full board

3. To facilitate Board decision-making, Board chair may propose how and when the Board and Board committees will address a particular topic

Relationship between full Board and the Executive Committee

The Executive Committee provides input to Board chair and Executive Director concerning draft agendas and 12-month calendar for the Board work sessions and regular meetings. With such input, Board chair approves the agenda for near-term Board meetings. The goal is to achieve alignment with Board consensus on the desired long-term agenda and to incorporate actions and discussion topics proposed by staff members.

The Executive Committee will also review Board practices, and opportunities for improving them, and provide relevant advice or recommendations for consideration by the chair or the full Board. (The full Board can also review Board practices.)

The Executive Committee also acts as a proxy for the full Board in situations where urgent and significant policy or operating decisions must be made AND when it is not feasible to convene a quorum of the Board.

Role of Board Committee Chairs

Committee chairs facilitate deliberation by their respective committees on topics referred to committees by the full Board. The chairs communicate committee analysis, meeting summaries, and recommendations to the full Board.

Committee chairs approve agendas for committee meetings. The goal is to achieve alignment with Board consensus on the desired long-term committee agenda and to incorporate discussion topics proposed by staff members. The committee chairs also consult with the Executive Director and members of staff to ensure satisfactory preparation of information and analysis for committee deliberations.

The Board chair may assign responsibility to a committee chair to consult directly with the Executive Director and members of staff to ensure satisfactory preparation for a full Board work session on a topic that is consistent with the committee's domain. The Board chair may also assign responsibility to a committee chair to guide and facilitate deliberation of the topic at the full Board's work session.

Committee chairs will survey their respective committee members to identify additional Board topics related to the domain of the committee; committee members may also recommend topics for consideration. Before investing Board, committee, or staff resources, the committee chair will review proposed topics with the full Board.

The Board chair may also establish an ad hoc committee of Board members to address a topic that does not fit the domain of standing Board committees.

Relationship Between Individual Board Members and Staff Members

Board members and OWASA staff are encouraged to maintain collaborative relationships each with the others, to share suggestions for problem solving, and to maintain positive working relationships.

Individual members of the Board, including members of the Executive Committee and committee chairs, are encouraged to make inquiries to or request information directly from the Executive Director or OWASA staff. Such requests should be made through the Executive Director if responding is likely to require substantial resources or staff time, in which case the Executive Director may ask that the request be made and coordinated through the Board Chair in order to assure it is consistent with the Board's adopted work plan and strategic goals.

Individual Board members including committee chairs should take care to be sure individual requests of the Executive Director or staff are necessary and appropriate to understanding or accomplishing the Board's adopted work plan.

The Board Chair may assign responsibility to an individual Board Member to address a particular topic that lies outside the domain of the standing committees. Example: partnering with Executive Director on facilitating development of a Board-approved strategic plan.

WORK SESSION PURPOSE AND FORMAT

Accepted and Updated January 22, 2015

Introduction

On July 10, 2014, the Board agreed to change the structure of the first Board meeting of the month to a work session to facilitate open discussions about matters of importance. The work session format provides an efficient means to share information and for the Board to engage in meaningful dialogue on matters the full Board determines appropriate. The second Board meeting of the month will continue to be a business meeting where the Board considers an action item agenda for such things as approval of plans, awarding contracts, approving policies, receiving petitions and feedback from stakeholders, etc.

It is understood that the Board and staff will periodically evaluate the effectiveness of this approach and will consider further changes to ensure the Board has the information and time it needs to effectively govern the organization.

Purpose

Purposes of the work sessions may include:

1) Review the 12 month schedule of agenda items for the Board work sessions and business meetings.
2) Review in detail the agenda items scheduled for the next business meeting and the next work session to ensure expectations for information are clear.
3) Discussion by the Board and staff of issues (opportunities) on which there may be decision(s) in a future business meeting.
4) Information and/or status reports on initiatives, events, and projects.
5) Assignment of action items/tasks for Board committee(s) and/or staff.
6) A forum for Board Members and staff to suggest new initiatives for the Board's consideration.
7) Discussion and setting of priorities. Discussion of process and timetable for a given issue.
8) Evaluation and feedback on matters as may be determined by the Board.
9) When deemed appropriate by the Board members in attendance at the Work Session, the Board of Directors may adopt resolutions or take other formal actions in Work Sessions, provided notice of the subject matter of such action is given on the Work Session agenda made available to the public before the meeting.
10) Other as determined by the Chair or majority of the Board.

Date, Time and Location

Second Thursday of the month starting at 6:00 PM in the OWASA Community Room. The meeting start time may be adjusted.

Public Attendance and Comments

Work sessions are open to the public. The Board will receive relevant public comments on the Work Session agenda items and in accordance with its usual time limit on public comments.

Work Session Summary and Recordings

A summary of the work session will be prepared by staff and will include the Board's direction to committee(s) and/or staff, decisions about future meeting agendas, etc. The work session summary will be on the consent agenda for Board approval at a business meeting.

An audio recording will be made. The Board approved work session summary and audio recording will be posted on the OWASA website.

Agenda Preparation

Staff will provide the Executive Committee the draft agenda for the work session for their review and approval 10 days in advance.

Staff will provide the agenda materials electronically to the Board six days in advance. Staff will notify the public that the agenda materials are on OWASA's website at least three days in advance.

Work Session Agenda

1) Welcome and call to order by Chair
2) Announcements by the Chair and other Board Members and staff
3) Specific agenda item(s) for discussion:
    a. Presentation of information
    b. Open discussion
    c. Board direction to committee(s) and/or staff about issue scope; process; information needed; next steps; etc. (if applicable)
4) Request(s) to the full Board by Board committees, Board Members and staff for information, guidance, and/or to suggest initiatives for consideration by the Board. These requests will be discussed at current or future work sessions (or business meeting) as determined by the Chair or a majority of the Board.
5) Review the 12 month schedule of agenda items for Board work sessions and business meetings. Discuss in detail the expectations and information needed from staff, etc. for the agenda items for the next business meeting and the next work session.
6) (Optional) Discussion by Board and staff about the effectiveness of the work session.
7) Chair or Executive Director summarizes work session and resulting action items.

NOTE: Occasionally, the Board will hold only one meeting during the month, and it may occur on the date for the standing work session meeting (such as during November and December, when the second meeting of the month is cancelled due to the holidays). In such cases, the

Board work sessions may be preceded by a brief business meeting (7:00 PM) to allow petitions from the public and to obtain Board decisions on action items that are time sensitive. Should a closed session of the Board be needed at such meetings, the Chair will determine when it will be scheduled.