



## Orange Water and Sewer Authority

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.

**Agenda**  
**Meeting of the OWASA Board of Directors**  
**Thursday, August 22, 2019, 7:00 P.M.**  
**Chapel Hill Town Hall**

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

The Board of Directors appreciates and invites the public to attend and observe its meetings. Public comment is invited either by petition upon topics not on the Board's agenda, or by comments upon items appearing on the Board's agenda. Speakers are invited to submit more detailed comments via written materials, ideally submitted at least three days in advance of the meeting to the Clerk to the Board via email or US Postal Service ([aorbich@owasa.org](mailto:aorbich@owasa.org)/400 Jones Ferry Road, Carrboro, NC 27510).

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

### **Announcements**

1. Announcements by the Acting 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.
2. Announcements by Board Members
3. Announcements by Staff
4. Additional Comments, Suggestions, and Information Items by Board Members (Bruce Boehm)

### **Petitions and Requests**

1. Public
2. Board
3. Staff

### **Consent Agenda**

#### **Information and Reports**

1. 12 Month Board Meeting Schedule (Bruce Boehm/Ed Kerwin)

### **Action**

2. A Resolution Declaring the Official Intent of the Orange Water and Sewer Authority to Reimburse Itself for Certain Capital Expenditures Related to the Construction of Certain Projects with Proceeds of Debt (Stephen Winters)
3. Minutes of the June 13, 2019 Meeting of the Board of Directors (Andrea Orbich)
4. Minutes of the July 11, 2019 Meeting of the Board of Directors (Andrea Orbich)

**Regular Agenda**

**Discussion**

5. Draft Vision and Guiding Principles for Forest Management (Ed Kerwin)

**Information and Reports**

6. Capital Improvements Program Semiannual Report (Vishnu Gangadharan)
7. Preliminary Financial Report for the Twelve-Month Period Ended June 30, 2019 (Stephen Winters)

**Summary of Board Meeting Action Items**

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

**Closed Session**

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

## OWASA Board of Directors – 12 Month Board Meeting Schedule (August 16, 2019)

| Month          | Board Meetings                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                | Committee & Other Meetings                                                                                                                                                                                                                                                                                                                   |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | Work Session                                                                                                                                                                                                                                                                                                                                                      | Business Meeting                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                              |
| August 2019    | <i>Summer Recess</i><br><br><br><br><br><br><br><br><br><br>8/8/2019                                                                                                                                                                                                                                                                                              | Preliminary 12 Month Financial Report (C)<br>CIP Semiannual Report (C)<br><b>Draft Vision and Guiding Principles for Forest Management</b><br>Approve Reimbursement Resolution (related to planned revenue bond issuance)<br>CS – Prepare for GC Annual Review (C)<br><br>8/22/2019            | <i>Public Tour of Cane Creek Mitigation Tract (8/10/2019)</i>                                                                                                                                                                                                                                                                                |
| September 2019 | EEO/Affirmative Action Report & Diversity and Inclusion Update (C)<br>Annual Report on Disposal of Surplus Personal Property (C)<br>Position Reclassification<br><b>LRWSP – Final Water Supply and Demand Management Alternatives Project Update, Agua Vista (AMI) Metrics, Billing Increments, and Leak Alerts</b><br>CS – GC Annual Review (C)<br><br>9/12/2019 | Annual Report and Financial Audit (C)<br>Approve General Counsel Engagement (C)<br>(Tentative) Adopt Preliminary Resolution for Series 2019 Revenue Bonds<br><b>(Tentative) Forest Management – draft process to prioritize land</b><br>CS – Prepare for ED Annual Review (C)<br><br>9/26/2019 | <i>NRTS Committee Meeting to discuss forest management, if needed (9/17/2019)</i><br><br><i>OWASA’s Annual Update to the Carrboro BOA (9/17/2019)</i><br><br><i>(Tentative) HR Committee reviews Consultant Proposals for ED Search (TBD)</i><br><br><i>(Tentative) Chapel Hill OWASA Board Members meet with TOCH OWASA Committee (TBD)</i> |
| October 2019   | (Tentative) Approve New Banking Services Provider<br>CS – ED Annual Review (C)<br><br>10/10/2019                                                                                                                                                                                                                                                                  | Q1 Financial Report (C)<br><b>Strategic Trends Report and Strategic Plan Update</b> (C)<br>(Tentative) Adopt Series Resolution for Series 2019 Revenue Bonds<br>Water Main Break and WTP/WWTP Reliability and Risk Assessment Action Plans Progress Report<br><br>10/24/2019                   | <i>(Tentative) OC Appointees to the OWASA Board meet with Members of Orange County BOCC (TBD)</i>                                                                                                                                                                                                                                            |
| November 2019  | TBD<br><br>11/14/2019                                                                                                                                                                                                                                                                                                                                             | <i>Holiday – no meeting</i>                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                              |
| December 2019  | TBD<br><br>12/12/2019                                                                                                                                                                                                                                                                                                                                             | <i>Holiday – no meeting</i>                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                              |
| January 2020   | Appoint Audit Firm (C)<br>Employee Health and Dental Insurance Update for FY 21 (C)<br>Affordability Outreach Program Update<br>Update on Water Main Prioritization Model<br><b>(Tentative) LRWSP – Draft Evaluation of Water Supply and Demand Management Alternatives</b><br><br>1/9/2020                                                                       | Annual Lakes Recreation Report (C)<br>CIP Semiannual Report (C)<br>Q2 Financial Report (C)<br>FY 21 Budget Calendar and Assumptions (C)<br><br>1/23/2020                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                              |
| February 2020  | CS – Prepare for GC Interim Review (C)<br><br>2/13/2020                                                                                                                                                                                                                                                                                                           | CS – GC Interim Review (C)<br><br>2/27/2020                                                                                                                                                                                                                                                    | <i>(Tentative) OC Appointees to the OWASA Board meet with Members of Orange County BOCC (TBD)</i>                                                                                                                                                                                                                                            |

## OWASA Board of Directors – 12 Month Board Meeting Schedule (August 16, 2019)

| Month      | Board Meetings                                                                                                                                                                          |                                                                                                                                                                                                                                                  | Committee & Other Meetings |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
|            | Work Session                                                                                                                                                                            | Business Meeting                                                                                                                                                                                                                                 |                            |
| March 2020 | FY 21 Draft Budget & Rates (C)<br><b>(Tentative) LRWSP – Final Evaluation of Water Supply and Demand Management Alternatives</b><br>CS – Prepare for ED Interim Review (C)<br>3/12/2020 | Set date for Public Hearings – FY 21 Budget & Rates (C)<br><b>Annual Update of the Energy Management Plan</b> (C)<br>FY 21 Draft Budget & Rates and Proposed Staff Rate Adjustment Recommendation (C)<br>CS – ED Interim Review (C)<br>3/26/2020 |                            |
| April 2020 | Review Employee Health and Dental Insurance Renewals (C)<br>FY 21 Draft Budget and Rate Adjustment Information (C)<br><b>(Tentative) LRWSP – draft LRWSP</b><br>4/9/2020                | Q3 Financial Report (C)<br>4/23/2020                                                                                                                                                                                                             |                            |
| May 2020   | Approve Employee Health and Dental Insurance Renewals (C)<br>Discuss Employee Merit Pay for FY 21 (C)<br>5/14/2020                                                                      | Public Hearings – FY 21 Budget and Rates (C)<br>5/28/2020                                                                                                                                                                                        |                            |
| June 2020  | Approve FY 21 Budget and Rates, including merit pay decision (C)<br>Election of Officers (C)<br>6/11/2020                                                                               | TBD<br>6/25/2020                                                                                                                                                                                                                                 |                            |
| July 2020  | TBD<br>7/9/2020                                                                                                                                                                         | TBD<br>7/23/2020                                                                                                                                                                                                                                 |                            |

**Note: Additional Board Meetings will include matters related to improving reliability and resiliency on OWASA’s services.**

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 November 15, 2018, the Board and staff agreed to defer update of the Strategic Plan to a date to be determined.

## OWASA Board of Directors – 12 Month Board Meeting Schedule (August 16, 2019)

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) | HR    | Human Resources                             |
| AV/AMI | Agua Vista/Advanced Metering Infrastructure                  | JLP   | Jordan Lake Partnership                     |
| BOCC   | Board of County Commissioners                                | KPI   | Key Performance Indicator                   |
| CBOA   | Carrboro Board of Aldermen                                   | LRWSP | Long-Range Water Supply Plan                |
| CE     | Community Engagement                                         | MOA   | Memorandum of Agreement                     |
| CEP    | Community Engagement Plan                                    | MST   | Mountains-to-Sea Trail                      |
| CHTC   | Chapel Hill Town Council                                     | MFMM  | Multi-Family Master Meter                   |
| CIP    | Capital Improvements Program                                 | NCDOT | North Carolina Department of Transportation |
| COLA   | Cost of Labor Adjustment                                     | NRTS  | Natural Resources and Technical Services    |
| CS     | Closed Session of the Board                                  | OC    | Orange County                               |
| CY     | Calendar Year                                                | Q     | Quarter                                     |
| D&I    | Diversity and Inclusion                                      | RFP   | Request for Proposals                       |
| ED     | Executive Director                                           | SRF   | State Revolving Fund                        |
| EEO    | Equal Employment Opportunity                                 | SOW   | Scope of Work                               |
| FY     | Fiscal Year                                                  | TBD   | To Be Determined                            |
| GC     | General Counsel                                              | WTP   | Water Treatment Plant                       |
|        |                                                              | WWTP  | Wastewater Treatment Plant                  |

**Agenda Item**

- A Resolution Declaring the Official Intent of the Orange Water and Sewer Authority to Reimburse Itself for Certain Capital Expenditures Related to the Construction of Certain Projects with Proceeds of Debt

**Background**

- During the development of the Fiscal Year (FY) 2020 budget and the annual update to our long-term financial plan, we determined the need for issuing revenue bonds to finance part of our capital improvements program (CIP).
- Staff is in the process of identifying CIP projects to be funded with revenue bonds.
- Adopting the resolution will allow OWASA to begin work and expend funds on projects and be reimbursed with bond proceeds once bonds are issued.
- To authorize issuing revenue bonds, we will ask the Board to adopt resolutions at its September 26, 2019 and October 24, 2019 meetings.

**Action Needed**

- Adopt the resolution declaring the official intent of the Orange Water and Sewer Authority to reimburse itself for certain capital expenditures related to the construction of certain projects with proceeds of debt.

August 22, 2019



## Orange Water and Sewer Authority

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.

### MEMORANDUM

**TO:** Board of Directors

**THROUGH:** Ed Kerwin *EK*

**FROM:** Stephen Winters, CPA

**DATE:** August 16, 2019

**SUBJECT:** A Resolution Declaring the Official Intent of the Orange Water and Sewer Authority to Reimburse Itself for Certain Capital Expenditures Related to the Construction of Certain Projects with Proceeds of Debt

#### Purpose

During the development of the Fiscal Year (FY) 2020 budget and the annual update to our long-term financial plan, we determined the need for issuing revenue bonds to finance part of our capital improvements program (CIP). Staff is in the process of identifying CIP projects that have a scope and timing suitable for financing with revenue bonds. Some of these projects will likely begin before bonds are issued. The attached resolution will allow us to begin work and expend funds on projects and be reimbursed with bond proceeds once bonds are issued. The Board approved the projects when it adopted the FY 2020 CIP budget.

The Board will have two resolutions to adopt regarding issuing the bonds. We have tentatively set September 26, 2019 for the Board to adopt the "preliminary resolution" and October 24, 2019 to adopt the "series resolution." Both are steps the Board must take to authorize the transaction.

The attached resolution was prepared by bond counsel and reviewed by OWASA's general counsel. As the resolution states, we expect the bond issue not to exceed \$20 million.

#### Action Requested

Adopt the resolution declaring the official intent of the Orange Water and Sewer Authority to reimburse itself for certain capital expenditures related to the construction of certain projects with proceeds of debt.

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Stephen Winters, CPA  
Director of Finance and Customer Service

**A Resolution Declaring the Official Intent of the Orange Water and Sewer Authority to Reimburse Itself for Certain Capital Expenditures Related to the Construction of Certain Projects with Proceeds of Debt**

**Whereas**, the Orange Water and Sewer Authority, a public body and body politic and corporate of the State of North Carolina (the “Issuer”), intends (i) to undertake certain capital projects described in Exhibit A hereto (collectively, the “Project”), (ii) to pay costs of the Project from available funds of the Issuer prior to the issuance of bonds (the “Bonds”) to finance the Project, and (iii) to reimburse itself for such original expenditures (the “Expenditures”) from the proceeds of the Bonds; and

**Whereas**, bond counsel has advised the Issuer that Treasury Regulation § 1.150-2 requires the Issuer to adopt a resolution in the form set forth below to preserve the Issuer’s ability to use portions of the proceeds of an upcoming issue of Bonds to reimburse itself for the Expenditures; and

**Whereas**, after careful consideration and to further the public purposes for which the Issuer was created;

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

**Section 1.** The Issuer intends to finance the Project through the issuance of one or more series of Bonds. The principal amount of the Bonds attributable to the Project is not expected to exceed \$20,000,000.

**Section 2.** This Resolution represents a declaration of “official intent” under Treasury Regulation § 1.150-2.

**Section 3.** Prior to the issuance of the Bonds, the Issuer expects to pay the costs of the Project from its available funds.

**Section 4.** On the date each Expenditure is paid, it will be a capital expenditure (or would be with a proper election) under general federal income tax principles or will otherwise comply with the requirements of Treasury Regulation § 1.150-2(d)(3).

**Section 5.** The Issuer reasonably expects to reimburse the Expenditures made prior to the issuance of the Bonds to finance the Project from the proceeds of the Bonds and the adoption of this Resolution is consistent with the budgetary and financial circumstances of the Issuer.

**Section 6.** This Resolution shall be in effect from and after its adoption.



A Resolution Declaring the Official Intent of the Orange Water and Sewer Authority to  
Reimburse Itself for Certain Capital Expenditures Related to the Construction of Certain  
Projects with Proceeds of Debt

August 22, 2019

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Adopted this 22<sup>nd</sup> day of August 2019.

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Bruce Boehm, Acting Chair

ATTEST:

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Andrea Orbich, Assistant Secretary

### **Exhibit A**

1. Replacement of water mains (Fordham Service Road, Manning Drive (East), Country Club Road, Barclay Road, Scarlett-Cooper Neighborhood, Foxcroft Drive, Kensington Drive, and Jones Ferry Road);
2. Replacement and rehabilitation of water and wastewater pumping stations (University Lake and Rogerson Drive-Phase 2);
3. Chemical facility improvements and upgrades at the Jones Ferry Road Water Treatment Plant;
4. Replacement of sewer interceptor (Bolinwood Drive); and
5. Improvements to and rehabilitation of facilities and equipment at the Mason Farm Wastewater Treatment Plant.

Orange Water and Sewer Authority  
Meeting of the Board of Directors

June 13, 2019

The Board of Directors of the Orange Water and Sewer Authority (OWASA) met in a work session on Thursday, June 13, 2019, at 6:00 p.m. in OWASA's Community Room, 400 Jones Ferry Road, Carrboro.

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

OWASA staff present: Kelly Belcher, Mary Darr, Monica Dodson, Robert Epting, Esq., (Epting and Hackney), Vishnu Gangadharan, Stephanie Glasgow, Tiffanie Hawley, Katie Harrold, Ed Kerwin, Simon Lobdell, Kenneth Loflin, Linda Low, Coleman Olinger, Andrea Orbich, Ruth Rouse, Kelly Satterfield, Todd Taylor, Stephen Winters and Richard Wyatt.

Others present: Meg Holton (UNC Water Resources Manager) and Ben Poulson (UNC Associate Director of Energy Services).

Motions

1. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Awarding a Construction Contract for the Dobbins Drive Water and Sewer Main Replacements Project. (Motion by Robert Morgan, second by Bruce Boehm and unanimously approved.)
2. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Honoring the Service of John A. Young to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors. (Motion by Robert Morgan, second by Bruce Boehm and unanimously approved.)
3. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution to Authorize the Executive Director to Execute the Wester Intake Partnership Memorandum of Agreement. (Motion by Robert Morgan, second by Bruce Boehm and unanimously approved.)
4. Robert Morgan made a motion to approve the Minutes of the April 25, 2019 Meeting of the Board of Directors; second by Bruce Boehm and unanimously approved.
5. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Adopting the Schedule of Rates, Fees and Charges Effective on or after October 1, 2019. (Motion by Bruce Boehm, second by Ray DuBose and unanimously approved.)
6. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Adopting the Annual Budget for Orange Water and Sewer Authority for Fiscal Year July 1, 2019 through June 30, 2020. (Motion by Robert Morgan, second by Jody Eimers and unanimously approved.)

7. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Approving the Capital Improvements Program and Budget for Fiscal Years 2020-2024. (Motion by Ray DuBose, second by Robert Morgan and unanimously approved.)

8. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts Capital Project Resolution for Fiscal Year 2020 Infrastructure Improvements. (Motion by Ray DuBose, second by Bruce Boehm and unanimously approved.)

9. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Updating the Schedule of Employee Classification and Authorized Compensation; Adjusting Affected Employees' Compensation to the Minimum of the Pay Range; and Authorizing Cost of Labor and Merit Pay Increases for Eligible Employees including: a 1.75% Cost of Labor increase, 2.3% merit increase to employees earning a performance review rating during the October 2019 annual review process of Meets Expectations, 3.45% to employees earning a performance review rating of Exceeds Expectations, and 4.6% to employees earning a performance review rating of Exceptional. (Motion by Robert Morgan; second by John Morris and the motion passed with a vote of eight to one with Yinka Ayankoya opposed.)

10. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Authorizing the Executive Director to Execute Contract with International City/County Management Association (ICMA-RC) and Amend Retiree Health Insurance Benefits for New Hires including amending the Resolution so each of the fixed dollar amounts be adjusted by the annual cost of labor adjustment; second by Ray DuBose and unanimously approved. (Motion by John Young, second by Ray DuBose and unanimously approved.)

11. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution to Amend the Deferred Compensation Benefit for Employees including amending the Resolution to read, "Whereas, employees hired before September 1, 2019 shall have until 60 days after (date, to be provided) to choose to participate in the new plan or remain on the 457 Plan in-place prior to September 1, 2019." (Motion by Robert Morgan, second by Jody Eimers and unanimously approved.)

12. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Updating the Human Resources Policy; Changes to Retiree Health Benefits for New Hires and Deferred Compensation (457) Plan. (Motion by Robert Morgan, second by John Young and unanimously approved.)

\* \* \* \* \*

#### Announcements

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

Ms. Ayankoya announced a change to the agenda, without objection, a Closed Session to discuss a personnel matter has been added to the end of the agenda.

Ms. Ayankoya announced a New Board Member Orientation Meeting #1 has been scheduled for Friday, June 21, 2019 at 8:00 a.m. in the OWASA Boardroom for John Cooley and Bruce Runberg.

Ed Kerwin announced a Cane Creek Community Engagement meeting for forest management on Thursday, June 20, 2019, at 6:00 p.m. at the Maple View Agricultural Education Center in Orange County.

Vishnu Gangadharan introduced Coleman Olinger, P.E., OWASA's new Utilities Engineer.

Item One: Award the Dobbins Drive Water and Sewer Replacements Construction Contract

Robert Morgan made a motion to adopt the Resolution Awarding a Construction Contract for the Dobbins Drive Water and Sewer Main Replacements Project; second by Bruce Boehm and unanimously approved. Please see Motion 1.

Item Two: Resolution Honoring the Service of John A. Young to the Chapel Hill-Carrboro-Orange County Community as a Member of the Orange Water and Sewer Authority's Board of Directors

Robert Morgan made a motion to approve the resolution; second by Bruce Boehm and unanimously approved. Please see Motion 2.

Item Three: Resolution to Authorize the Executive Director to Executive the Western Intake Partnership Memorandum of Agreement

Robert Morgan made a motion to adopt the resolution; second by Bruce Boehm and unanimously approved. Please see Motion 3.

Item Four: Minutes

Robert Morgan made a motion to approve the Minutes of the April 25, 2019 Meeting of the Board of Directors; second by Bruce Boehm and unanimously approved. Please see Motion 4.

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

Robert Morgan said he will support the Resolution Adopting the Schedule of Rates, Fees and Changes Effective on or after October 1, 2019 but he has reservations about changing the rate for the two or three OWASA customers where their meters are manually read; he feels it is a cost of switching to Advanced Metering Infrastructure. John Morris said he has the same reservations.

Bruce Boehm made a motion to adopt the Resolution Adopting the Schedule of Rates, Fees and Charges Effective on or after October 1, 2019; second by Ray DuBose and unanimously approved. Please see Motion No. 5.

Robert Morgan made a motion to adopt the Resolution Adopting the Annual Budget for Orange Water and Sewer Authority for the Fiscal Year July 1, 2019 through June 30, 2020; second by Jody Eimers and unanimously approved. Please see Motion No. 6.

Ray DuBose made a motion to adopt the Resolution Approving the Capital Improvements Program and Budget for Fiscal Years 2020-2024; second by Robert Morgan and unanimously approved. Please see Motion No. 7.

Ray DuBose made a motion to adopt the Capital Project Resolution for Fiscal Year 2020 Infrastructure Improvements; second by Bruce Boehm and unanimously approved. Please see Motion 8.

Robert Morgan made a motion to adopt the Resolution Updating the Schedule of Employee Classification and Authorized Compensation; Adjusting Affected Employees' Compensation to the Minimum of the Pay Range; and Authorizing Cost of Labor and Merit Pay Increases for Eligible Employees including: a 1.75% Cost of Labor increase, 2.3% merit increase to employees earning a performance review rating during the October 2019 annual review process of Meets Expectations, 3.45% to employees earning a performance review rating of Exceeds Expectations, and 4.6% to employees earning a performance review rating of Exceptional. Second by John Morris and the motion passed with a vote of eight to one with Yinka Ayankoya opposed. Please see Motion 9.

Item Six: Human Resources Committee Recommendations on the Retiree Health Insurance Benefit and Deferred Compensation (457) Plan

Ray DuBose suggested the resolution include adjusting the annual fixed dollar amounts for employees and OWASA contributions be adjusted annually when the Board approves a cost of labor adjustment.

John Young made a motion to adopt the Resolution Authorizing the Executive Director to Execute Contract with International City/County Management Association (ICMA-RC) and Amend Retiree Health Insurance Benefits for New Hires including amending the Resolution so each of the fixed dollar amounts be adjusted by the annual cost of labor adjustment; second by Ray DuBose and unanimously approved. Please see Motion 10.

Robert Morgan made a motion to adopt the Resolution to Amend the Deferred Compensation Benefit for Employees including amending the Resolution to read, "Whereas, employees hired before September 1, 2019 shall have until 60 days after (date, to be provided) to choose to participate in the new plan or remain on the 457 Plan in-place prior to September 1, 2019"; second by Jody Eimers and unanimously approved. Please see Motion 11.

Robert Morgan made a motion to adopt the Resolution to Updating the Human Resources Policy; Changes to Retiree Health Benefits for New Hires and Deferred Compensation (457) Plan; second by John Young and unanimously approved. Please see Motion 12.

Item Seven: Monitoring of Compounds of Emerging Concern Update and Discussion

Katie Harrold and Monica Dodson provided an update on the monitoring, ongoing State and Federal research, regulatory interest, on compounds of emerging concern in drinking water and wastewater. OWASA's water is safe and maintains full compliance with all Federal and State regulations and health advisory levels.

Board questions and comments included: will the N.C. Division of Water Resources reanalyze the samples collected in 2018; is Orange County billed for the landfill leachate; and update OWASA's website on this topic.

Item Eight: Review Board Work Schedule

The Board agreed to cancel the Board's June 27, July 25 and August 8, 2019 Board meetings.

The Board requested a summary of Agua Vista savings, active users and key performance metrics.

Item Nine: Report of the Nominating Committee for Election of Officers

Robert Epting said at the May 23, 2019 meeting, eligible nominations were made and seconded for Board Members who are available for election to Office of Chair, Vice Chair and Secretary. Mr. Epting noted each Office is elected annually at the Board's first regular meeting in June, and the Bylaws provide Officers hold their Offices for one year or until their successors are elected and qualified. Terms for Officers elected tonight begin July 1, 2019 and five (5) votes are necessary to elect an Officer. Mr. Epting said voting will proceed separately by paper ballot for each Office until a Board member is elected by receiving five or more votes; and, in the event any round of voting ends in a tie, or if no person receives five votes in subsequent rounds of voting, balloting may be continued to the next Board meeting, and the present Officer will continue to serve until the new Officer is elected in the unfilled Office(s).

The Board Clerk distributed the ballots for the election of the Chair of the Board of Directors; the candidates considered for Board Chair are Yinka Ayankoya, Ray DuBose and Ruchir Vora.

Board Members cast their votes and Ray DuBose was elected as Chair of the Board of Directors with a vote of seven to two.

The Board Clerk distributed the ballots for the election of Vice Chair of the Board of Directors; the candidates considered for Vice Chair are Yinka Ayankoya, Robert Morgan and Ruchir Vora.

Board Members cast their votes and Ruchir Vora was elected as Vice Chair of the Board of Directors with a vote of five to two to one.

The Board Clerk distributed the ballots for the election of Secretary of the Board of Directors; the candidates considered for Secretary are Bruce Boehm, Robert Morgan and Ruchir Vora.

Board Members cast their votes and Bruce Boehm was elected as Secretary of the Board of Directors with a vote of eight to one.

Item Ten: Executive Director's Summary of Key Staff Action Items from the Work Session

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

- Provide a summary of Agua Vista savings, active users and key performance metrics; and
- Provide response to the comments and questions raised during the discussion of compounds of emerging concern.

Item Eleven: Closed Session for the Purpose of Discussing a Personnel Matter

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

The Board meeting was adjourned at 9:00 p.m.

Respectfully submitted by:

Andrea Orbich  
Executive Assistant/Clerk to the Board

Attachments



## Orange Water and Sewer Authority

## Meeting of the Board of Directors

July 11, 2019

The Board of Directors of the Orange Water and Sewer Authority (OWASA) met in a work session on Thursday, July 11, 2019, at 6:00 p.m. in OWASA's Community Room, 400 Jones Ferry Road, Carrboro.

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

OWASA staff present: Kelly Belcher, Mary Darr, Monica Dodson, Robert Epting, Esq., (Epting and Hackney), Ed Kerwin, Keondra Jenkins, Linda Low, Andrea Orbich, Ruth Rouse, Kelly Satterfield, Allison Spinelli, Todd Taylor, Mary Tiger, Stephen Winters and Richard Wyatt.

Others present: Terri Buckner, Linda Cooper, Phil Duckwall, Braxton Foushee, Barbara Foushee, Alma Gaudette, Tammy Grubb (News and Observer), Ken Hardy, Nancy Hardy, Carl Hoffmann, Kathleen Hoffmann, Meg Holton (UNC Water Resources Manager), Bonnie Houser, Linda Jens, Cheryl Junk, Daryl Junk, Brenda McCall, Marilee McTigue, Ben Poulson (UNC Associate Director of Energy Services), Lester Ray, Adam Sharpe (HDR) and Susan Walsen.

Motions

1. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Awarding a Construction Contract for the Kensington Drive-Barclay Road Water Main Replacements Project. (Motion by Robert Morgan, second by Yinka Ayankoya and unanimously approved.)
2. Robert Morgan made a motion to approve the Minutes of the May 9, 2019 Meeting of the Board of Directors; second by Yinka Ayankoya and unanimously approved.
3. Robert Morgan made a motion to approve the Minutes of the May 23, 2019 Public Hearings and Meeting of the Board of Directors; second by Yinka Ayankoya and unanimously approved.
4. Robert Morgan made a motion to approve the Minutes of the June 13, 2019 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter; second by Yinka Ayankoya and unanimously approved.
5. Jody Eimers made a motion that the Board of Directors approves the next steps for Forest Management and authorizes staff to begin implementing the actions outlined in the July 11, 2019 agenda package (provide a tour of the Cane Creek Mitigation Tract to interested community members; presents a draft Vision and revised Guiding Principles for OWASA's Forest Management Program for the Board's consideration; provides a draft process for prioritizing OWASA's land for management based on the Vision and Guiding Principles; staff selects two to three sites based on the prioritization process and input from the partner agencies; staff develops

forest management plans for the sites, with partner agency and public input, and prepare a community engagement plan for each site); second by Yinka Ayankoya and unanimously approved.

6. Robert Morgan made a motion that the Board authorizes the Human Resources Committee to prepare and send out a Request for Proposals, with the Board Member input, to hire a consultant to assist the Board in the recruitment and selection for OWASA's next Executive Director; second by Yinka Ayankoya and unanimously approved.

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### Announcements

Mr. DuBose welcomed new Board Member, Bruce Runberg (Chapel Hill Appointee), to the Board of Directors who took his Oath of Office on July 8, 2019. Mr. DuBose noted several Board Members held a new Board Member orientation on June 21<sup>st</sup> with John Cooley and Mr. Runberg.

Ray 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.

Robert Morgan wanted the Board to know he is under contract with Developmental Associates, a recruitment and assessment company, and should the Board decide to use a recruitment firm to hire a new Executive Director, he will recuse himself from the discussion on the comparison of firms.

Mr. DuBose said on June 18, 2019, the Carrboro Board of Aldermen reappointed Yinka Ayankoya to the OWASA Board of Directors for a second three-year term.

Mr. DuBose announced the Standing Committees of the Board of Directors as follows: Community Engagement is Yinka Ayankoya (Chair), John Cooley, Jody Eimers and John Morris; Finance Committee is Bruce Boehm (Chair), John Cooley, Bob Morgan and Bruce Runberg; Human Resources is Bob Morgan (Chair), Ruchir Vora, Yinka Ayankoya and Bruce Runberg; and Natural Resources and Technical Services is Jody Eimers (Chair), Ruchir Vora, Bruce Boehm and John Morris.

Mary Tiger introduced Keondra Jenkins, a summer intern from the UNC School of Government's Environmental Finance Center (EFC) Leaders in Environment and Finance Fellowship Program

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

The Board received this as an information item.

Item Two: Award the Construction Contract for the Kensington Drive-Barclay Road Water Main Replacement Project

Robert Morgan made a motion to approve the Resolution Awarding a Construction Contract for the Kensington Drive-Barclay Road Water Main Replacements Project; second by Yinka Ayankoya and unanimously approved. Please see Motion 1.

Item Three: Minutes

Robert Morgan made a motion to approve the Minutes of the May 9, 2019 Meeting of the Board of Directors; second by Yinka Ayankoya and unanimously approved. Please see Motion 2.

Item Four: Minutes

Robert Morgan made a motion to approve the Minutes of the May 23, 2019 Public Hearings and Meeting of the Board of Directors; second by Yinka Ayankoya and unanimously approved. Please see Motion 3.

Item Five: Minutes

Robert Morgan made a motion to approve the Minutes of the June 13, 2019 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter; second by Yinka Ayankoya and unanimously approved. Please see Motion 4.

Item Six: Feedback from the June 20, 2019 Community Meeting on Forest Management and Possible Next Steps

The Board received an update on forest management including possible next steps. Ray DuBose said the Board received four (4) comments via e-mail (Brenda McCall, Cheryl Junk and Jill & Connor Blakeney) and three members of the public (Brenda McCall, Carl Hoffman and Lester Ray) provided comments at the meeting.

John Morris provided the Board written comments and recommended initial forest management program components might begin and be completed in parallel with further discussion and development of the draft vision and guiding principles.

Jody Eimers suggested, and the Board agreed to schedule a placeholder meeting of the Natural Resources and Technical Services (NRTS) Committee to provide guidance on forest management work before the September 26, 2019 Board meeting.

After considerable discussion, the Board expressed appreciation to the public for feedback, agreed to authorize staff to proceed with the proposed next steps of the schedule of forest management activities for calendar year 2019, review of UNC's forest management plans and consider alternatives for the use of herbicides.

Jody Eimers made a motion that the Board of Directors approves the next steps for Forest Management and authorizes staff to begin implementing the actions outlined in the July 11, 2019 agenda package (provide a tour of the Cane Creek Mitigation Tract to interested community members; presents a draft Vision and revised Guiding Principles for OWASA's Forest

Management Program for the Board's consideration; provides a draft process for prioritizing OWASA's land for management based on the Vision and Guiding Principles; staff selects two to three sites based on the prioritization process and input from the partner agencies; staff develops forest management plans for the sites, with partner agency and public input, and prepare a community engagement plan for each site); second by Yinka Ayankoya and unanimously approved. Please see Motion 5.

Item Seven: Diversity and Inclusion Program Update

The Board received a report on OWASA's Diversity and Inclusion Program from the Diversity Recruitment Group on the implemented recruitment and selection process recommendations. Kelly Satterfield (Finance and Procurement Manager) and Kelly Belcher (Human Resource Generalist) provided an update on their work to date.

The Board expressed an interest in the September update and metrics for diversity and inclusion.

Item Eight: Update on Water Main Prioritization Model

Mary Darr (Director of Engineering and Planning) and Adam Sharpe (HDR Utility Planning Practice Lead) provided the Board a presentation on the progress of the new Water Main Prioritization Model. The model will use OWASA-specific data to prioritize water main replacement projects and guide infrastructure investment and operational strategies to mitigate the occurrence and impact of water main breaks. Another update on the Water Main Prioritization Model will be provided in early 2020.

Item Nine: Recruitment and Selection Approach for New Executive Director

Robert Morgan made a motion that the Board authorizes the Human Resources Committee to prepare and send out a Request for Proposals, with the Board Member input, to hire a consultant to assist the Board in the recruitment and selection for OWASA's next Executive Director; second by Yinka Ayankoya and unanimously approved. Please see Motion 6.

Item Ten: Review Board Work Schedule

The Board agreed to schedule a Human Resources Committee meeting in July 2019 to prepare a draft Request for Proposals for consultant assistant for the recruitment and selection of new Executive Director.

A placeholder Natural Resources and Technical Services Committee meeting will be scheduled to provide guidance on forest management work prior to the September 26, 2019 meeting.

Staff will provide an update on the Water Main Prioritization Model in early 2020 and new revenue bond agenda items will be added to the 12 Month Board Meeting Schedule.

Item Eleven: Executive Director's Summary of Key Staff Action Items from the Work Session

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

- Schedule a placeholder Natural Resources and Technical Services Committee meeting to provide guidance on forest management work;
- Schedule Human Resources Committee meeting to review draft Request for Proposals for consultant assistant for recruitment and selection of new Executive Director; and
- Proceed with forest management activities as outlined in the agenda package.

The Board meeting was adjourned at 8:40 p.m.

Respectfully submitted by:

Andrea Orbich  
Executive Assistant/Clerk to the Board

Attachments

DRAFT

**Agenda Item**

- Draft Vision and Guiding Principles for Forest Management

**Purpose**

- To receive feedback from the OWASA Board of Directors on a draft Vision Statement and Guiding Principles for OWASA's forest management program.

**Background**

- OWASA owns approximately 2,400 acres of forested lands to help meet its mission of providing high quality and reliable water, wastewater and reclaimed water service through responsible and creative stewardship of the resources we manage.
- Approximately 1,900 acres of OWASA's forested lands have not been managed; some of these forested stands are poor quality, damaged, or pose a wildfire risk.
- On January 10, 2019, the Board of Directors supported a new incremental approach to forest management and on April 11, 2019, the Board approved a Community Engagement Plan for the approach.
- On June 20, 2019, OWASA held a community meeting to hear feedback from the community about the proposed forest management program and included six draft Guiding Principles.
- On July 11, 2019, the Board of Directors discussed feedback received at the June 20, 2019 community meeting and agreed with staff's recommendation that staff will present a draft Vision Statement and revised Guiding Principles for OWASA's Forest Management Program for the Board's consideration at their August 22, 2019 meeting.

**Action Needed**

- No formal resolution is needed; however, staff recommends that when the Board supports moving forward with the draft Vision Statement and Guiding Principles, it consider acting on the matter in the form of a motion, similar to the following:

*“Motion that the Board of Directors approves the Vision Statement and Guiding Principles as provided (or amended) in the agenda package”*

August 22, 2019



## Orange Water and Sewer Authority

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.

### Memorandum

**To:** Board of Directors

**Through:** Ed Kerwin, Executive Director *EK*

**From:** Ruth Rouse, Planning and Development Manager

**Date:** August 16, 2019

**Subject:** Draft Vision and Guiding Principles for Forest Management

#### Purpose:

To receive feedback from the Board of Directors on a draft Vision Statement and revised Guiding Principles (with strategies) for OWASA's forest management program.

#### Background:

- OWASA owns approximately 2,400 acres of forested lands to help meet its mission of providing high quality and reliable water, wastewater and reclaimed water service through responsible and creative stewardship of the resources we manage.
- Approximately 1,900 acres of OWASA's forested lands have not been managed; some of these forested stands are poor quality, damaged, or pose a wildfire risk.
- On [January 10, 2019](#), the Board of Directors supported a new incremental approach to forest management and on April 11, 2019, the Board approved a Community Engagement Plan for the approach.
- On June 20, 2019, OWASA held a community meeting to hear feedback from the community about the proposed forest management program. Forty-one (41) people participated in the meeting. Also, in attendance were 11 representatives from professional agencies, seven moderators, eight OWASA staff and four OWASA Board Members.
- As part of the community meeting, OWASA staff presented six draft guiding principles:
  - Protect water quality, OWASA's highest priority
  - Improve ecological health of forested land through science-based principles
  - Reduce the risk of wildfire

- Improve wildlife habitat and species diversity
- Promote beneficial impacts of forestry management on the environment
- Sustainably manage OWASA’s resources
- Comments from the community regarding forest management aligned with the following themes:
  - Guiding Principles – the community generally supported staff’s guiding principles, but made suggestions for consideration.
  - Community Engagement – the community wants to continue to be engaged.
  - Holistic Land Management Approach – the community was not opposed to the approach and expressed appreciation for OWASA’s new land management process. The community also wants OWASA to think about its land from a holistic approach.
  - Partnership – the participants expressed appreciation for OWASA’s partnership with expert agencies.
  - Accountability and Transparency – OWASA should work with partner agencies to better define the guiding principles and develop mechanisms for monitoring and measuring success.
- On [July 11, 2019](#), the Board of Directors discussed feedback received at the June 20, 2019 community meeting and agreed with staff’s recommendation that staff will present a draft Vision Statement and revised Guiding Principles for OWASA’s Forest Management Program for the Board’s consideration at their August 22, 2019 meeting.

### **Draft Vision Statement:**

Staff’s Vision for our Forest Management Program is:

*“Protect water quality now and for future generations by managing our forest lands so they are healthy, diverse, resilient, and sustainable.”*

### **Revised Guiding Principles and New Strategies:**

Based on public feedback, staff proposes two new guiding principles:

- Engage the Community and Partner Agencies
- Minimize Adverse Impacts on Neighbors and Surrounding Community

In addition, staff recommends deleting the guiding principle “Promote Beneficial Impacts of Forest Management on the Environment” as we believe the two new guiding principles captures the intention of this former guiding principle.



Revised Guiding Principles for OWASA's Forest Management (shown in revision mode):

- Protect Water Quality, OWASA's Highest Priority
- Improve Ecological Health of Forested Land through Science-Based Principles
- Reduce the Risk of Wildfire
- Improve Wildlife Habitat and Species Diversity
- Sustainably Manage OWASA's Resources
- Engage the Community and Partner Agencies
- Minimize Adverse Impacts on Neighbors and Surrounding Community
- ~~Promote Beneficial Impacts of Forest Management on the Environment~~

For each guiding principle, staff developed, with input and guidance from partners, strategies to provide the detail and transparency for how the principles will be applied in the development of individual forest stewardship plans (attachment). Understanding each forest is unique, the guiding principles and their strategies may be modified for a given site, consistent with our overall Vision Statement.

#### **Action Needed Next:**

When the Board is ready to act on the staff proposed Vision Statement and Guiding Principles with strategies (on August 22, 2019 or at a subsequent meeting), staff suggests Board action by motion as follows:

*“Motion that the Board of Directors approves the Vision Statement and Guiding Principles with strategies as provided (or amended) in the agenda package”.*

#### **Future Actions:**

Staff is developing a process for prioritizing OWASA's forest land to identify sites in greatest need of management activities. Staff is working to have a draft prioritization process (not list) ready for discussion at the Board's September 26, 2019 meeting.

Once the Board approves the Vision Statement, Guiding Principles with strategies, and the process to prioritize forest lands, staff will proceed to identify two or three priority sites for management activities to be conducted during the next 12 months or so.

Once those sites are identified by staff, we will prepare draft forest stewardship plans in accordance with the Guiding Principles. We will then share those plans with adjacent land owners and invite their feedback. We will then finalize our plans and inform adjacent land owners accordingly.

We will keep the Board of Directors and the public informed about our forest management work and we will continue to invite public feedback. We will also report annually about our work.



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Ruth Rouse, AICP

Planning and Development Manager

Attachment: OWASA's Draft Vision and Guiding Principles for its Forest Management Program

# OWASA's Draft Vision and Guiding Principles for its Forest Management Program

## Forest Management Vision Statement

*Protect water quality now and for future generations by managing our forest lands so they are healthy, diverse, resilient, and sustainable.*

## Guiding Principles

### Background

OWASA plans to achieve its Vision through the application of seven guiding principles for our forest management program, forest stewardship plans, decisions, and actions:

- Protect Water Quality, OWASA's Highest Priority
- Improve Ecological Health of Forested Land through Science-Based Principles
- Reduce the Risk of Wildfire
- Improve Wildlife Habitat and Species Diversity
- Sustainably Manage OWASA's Resources
- Engage the Community and Partner Agencies
- Minimize Adverse Impacts on Neighbors and Surrounding Community

These principles are mostly complementary with protection of water quality as our first and foremost objective. Any actions taken to achieve the strategies listed under any Principles must not impair or jeopardize water quality.

Several of these strategies are cross-cutting as they help achieve multiple guiding principles as summarized in Table 1.

Our various forest lands have evolved over many decades, and their composition, health, and condition are the result of individual land ownership patterns and land management decisions, combined with natural conditions and processes, such as forest succession and regeneration. As we develop forest stewardship plans for these various tracts, the strategies and management actions we select for each specific tract will be different depending on a number of factors, such as the type, composition, age, and quality of the existing forest and vegetation; underlying site conditions (soils, slope, orientation, etc.); and hydrology (presence of streams and riparian areas). Since each forest site is unique, OWASA may modify a strategy listed under a given Guiding Principle in order to achieve the long-term objective and strategy for a given forest stand or its forest land as a whole or to protect water quality. Thus the Guiding Principles serve as a compass to achieve the Vision, but may be modified as needed.

Sustainable management of our forest land is a major challenge and commitment, and it will take many decades to really see the results. Healthy, diverse forests are more resistant and

resilient to stresses from drought, infestation, wildfire, storms, and the challenges associated with a changing climate. By following the proposed science-based principles and strategies where practicable, the long-term health, vitality, and resiliency of our forest land will be better than if we do not take any action. As a result, we will better protect long-term water quality conditions.

### **Guiding Principles and Strategies**

#### **Guiding Principle: Protect Water Quality, OWASA's Highest Priority**

##### *Strategies*

1. We will maintain a network of riparian buffers that is more protective than required under local, state, or federal regulations. We recommend that these riparian buffers be excluded from forest management and that no timber harvesting occur within the boundaries of these buffers. We will strive to meet the following riparian buffers:
  - a. 300 feet from the normal pool elevation of Cane Creek Reservoir
  - b. 150 feet on either side of perennial stream (regardless of watershed)
  - c. 100 feet on either side of intermittent stream (regardless of watershed).
  - d. Additional buffer around ephemeral channels (regardless of watershed) and other areas such as other wetlands and groundwater recharge areas.
  - e. Exceptions may be made for reasons such as: to remove invasive species; remove trees that present a major fire risk, may damage structures or endanger human life; or remove trees necessary to construct road crossings.
2. We will reduce the potential for concentrated overland flow through our riparian buffers.
3. We avoid crossing streams where practicable. Where stream crossings are needed, we design, construct, and maintain crossings to minimize erosion.
4. We avoid cutting trees and building roads on steep slopes and highly erodible soils.
5. We follow or exceed North Carolina Forest Service Forest Practices Guidelines Related to Water Quality.
6. We mark and protect the boundaries of conservation easements protected by Clean Water Management Trust Fund during active forest management on areas near them.
7. Logging roads, logging decks, and other major areas where soil is disturbed will be graded, stabilized to prevent erosion, and reseeded with grass or other appropriate vegetative cover.
8. Our contracts with contractors will include requirements for best practices to minimize the impact from potential petroleum spills and erosion and sedimentation.
9. We minimize the use of herbicides to the extent practicable. Where feasible, we use prescribed burns and other practices to achieve our objectives. When we must use herbicides (to control invasive species or to promote a certain type of tree in accordance

with a forest stewardship plan's goals and objectives), we use certified herbicide applicators who have been trained in best practices. We will select herbicides labeled for forestry use, use application methods that target the species we are trying to control, apply when there is low wind and little or no risk of rainfall. We avoid using herbicide in riparian buffers and when we must use them (such as for invasive species control), we select herbicides that are appropriate for use in an aquatic environment.

Guiding Principle: Improve Ecological Health of Forested Land through Science-Based Principles

*Strategies*

1. Our individual Forest Stewardship Plans are based on achieving ecological value for the applicable tract considering existing vegetation, soils, slopes, and other conditions.
2. We recognize that natural forests provide a model for sustainable resource management; therefore, responsible forest management should imitate nature's dynamic processes and minimize impacts when harvesting trees and other products.
3. Our forest stewardship plans include methods to control, minimize, and eradicate where practical invasive species while we are implementing the plans. In high ecological value areas, we may also manage invasive species at times when we are not actively managing other forest resources on the tract.
4. We maintain, manage and restore our hardwood forests to remain in hardwood forests.
5. We recognize active management of all forest lands on OWASA lands is not necessary to sustain ecosystem health. Some forest areas on OWASA land will be more appropriately reserved from active management (in addition to lands set aside for buffers). OWASA will monitor these lands to ensure they remain healthy.
6. Forest management best practices will be selected and implemented so as to maintain the continuity of the forest structure, complexity, and diversity, over time. We recognize that natural and assisted regeneration is one of these practices.
7. We use practices that promote soil productivity.

Guiding Principle: Reduce the Risk of Wildfire

*Strategies*

1. We manage accumulated debris from storm damaged areas and areas where dead trees and branches form "ladders" to the overstory that pose increased risk or consequences from a wildfire where and when practical.
2. We periodically inspect our forested land to identify potential hazards like pests, parasites, or storm damage that could lead to unhealthy or diseased trees and greater wildfire risk.
3. We thin overstocked pine stands to reduce the risk of wildfires damaging trees or producing hazardous crowning fires.

4. We conduct periodic prescribed burns to reduce the understory fuel levels that will reduce the impact and intensity of a wildfire.
5. We partner with the North Carolina Forest Service and County fire agencies to identify weather conditions that will ensure prescribed burns can be completed in a safe manner, to perform the prescribed burn following their safety practices, and to monitor the site after the burn is completed.
6. Our network of access roads within our forest lands will be designed and located to complement our wildfire risk management objective, such as maintenance of fire breaks, ensuring timely access for fire-fighting equipment, etc. A network of roads and firebreaks will also serve as another line of defense against wildfire spread.

Guiding Principle: Improve Wildlife Habitat and Species Diversity

*Strategies*

1. We provide a variety of wildlife habitats and tree species; this may include providing early successional habitats such as meadows we create following clear cuts.
2. We adopt practices such as prescribed burning, thinning, and small group openings which promote understory growth and habitat.
3. We will maintain, protect, or create snags (standing dead trees) for wildlife.
4. We protect 300 foot riparian wildlife corridors on perennial streams identified by NC Wildlife Resources Commission or NC Audubon as important wildlife corridors.
5. We create conditions for native plant species to thrive.
6. We manage our upland hardwood stands to promote oak and hickory to provide forage for wildlife.
7. We look to create wildlife habitat that may be limited in a particular area.
8. We recognize that pine monocultures by themselves do not provide the biological diversity that is needed to support diverse wildlife populations. Therefore, rotational pine management and harvesting is used only where there is a compelling need.

Guiding Principle: Sustainably Manage OWASA's Resources

*Strategies*

1. We proactively manage our lands using forestry best management practices to prevent ecological decline.
2. We will ensure that OWASA's land holdings are managed to protect water quality and promote healthy forest ecosystems and diverse wildlife habitat.
3. We seek to limit timber removal to the level necessary to achieve our water quality, ecological health, and wildfire risk minimization goals.

4. We consider environmental conditions and impacts, community impacts, and economic efficiency when selecting stands to manage; for example, we may manage a lower priority stand concurrently with a nearby higher priority stand.
5. We reinvest any revenue we receive from commercial harvests back into managing our land and to further protect water quality. We will not sacrifice long-term benefits for short-term financial gain.

Guiding Principle: Engage the Community and Partner Agencies

*Strategies*

1. We will share information with neighboring landowners, the general public, and others about why and how we manage our forest land. We will do this through a variety of methods that may include meetings, tours, website updates, and email.
2. We provide meaningful and varied opportunities for the community to provide feedback on our Forest Management Program, Forest Stewardship Plans, and the implementation of those plans (see also next Guiding Principle).
3. We will continue to work closely with partner agencies in all aspects of our forest management program. We will: request their expert guidance as we develop and implement our plans; partner with them to use our land for demonstration, education, and training opportunities, and work with them to evaluate the ecological and cultural resources on our land and to study and document the outcomes of our forest management program.
4. We provide notice to neighboring landowners prior to performing land management activities.
5. We protect important natural heritage areas identified by the North Carolina Natural Heritage Program (NHP) and work with NHP to register them or protect them through conservation easements or NHP registry agreements where appropriate.
6. We work with NC Wildlife Resources Commission and NC Audubon to perform before and after species surveys where they deem the surveys an effective use of their staff time.
7. Where neighboring landowners also wish to manage lands, we work with them to coordinate our respective plans and management activities. (Note: we will not develop plans for neighboring landowners, but account for their plans when developing our plans).

Guiding Principle: Mitigate Adverse Impacts on Neighbors and Surrounding Community

*Strategies*

1. We meet with neighbors to our forest stands after providing them with the draft Forest Stewardship Plan for our adjacent property. We listen to their concerns and where

applicable, we develop measures that enable OWASA to meet its management needs while mitigating adverse impacts to our neighbors.

2. Where practical and site conditions allow, we maintain an aesthetic buffer of 100 feet from viewsheds and public roads. Where unique site conditions exist, OWASA will strive to provide a wider viewshed buffer.
3. OWASA will not access its forest land through another landowner's property unless a formal access agreement has first been developed and approved by OWASA and the landowner. The agreement will specify the terms and conditions under which OWASA can access the property.
4. Where we access our land through a common gravel road that serves OWASA property and private property, OWASA will restore the road to at least the condition it was in prior to our use for forest management activities.
5. We minimize noise impacts by limiting equipment operations within our forest lands to daytime hours, Monday through Saturday. We avoid having major equipment operate on our forest land on Sundays.
6. Where practicable, we will protect any unique or locally important cultural features on our property. This will be done by maintaining forested buffers, and using low impact methods if any active forest management is done in close proximity to such cultural features. Such sites will be clearly marked to indicate where equipment is not allowed.

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Table 1. Proposed Strategies to Achieve Draft Guiding Principles Are Cross-Cutting

| DRAFT LIST OF PROPOSED STRATEGIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | DRAFT GUIDING PRINCIPLES |                                                                             |                         |                                                |                                      |                                           |                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------|-------------------------|------------------------------------------------|--------------------------------------|-------------------------------------------|-----------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Protect Water Quality    | Improve Ecological Health of Forested Land through Science-Based Principles | Reduce Risk of Wildfire | Improve Wildlife Habitat and Species Diversity | Sustainably Manage OWASA's Resources | Engage the Community and Partner Agencies | Mitigate Adverse Impacts on Neighbors and Surrounding Community |
| Protect riparian buffers (graduated system where larger buffers are provided along perennial streams).                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Minimize potential for overland flow through riparian buffer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ✓                        |                                                                             |                         |                                                |                                      |                                           |                                                                 |
| Avoid stream crossings where practicable. Design, construct, and maintain crossings to minimize erosion.                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ✓                        | ✓                                                                           | ✓                       |                                                | ✓                                    |                                           | ✓                                                               |
| Avoid cutting trees and building roads on steep slopes and highly erodible soils.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Follow or exceed North Carolina Forest Service <i>Forest Practices Guidelines Related to Water Quality</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                               | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |
| Mark and protect boundaries of conservation easements protected by Clean Water Mangement Trust Fund                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |
| Grade, stabilize, and re-establish vegetative cover on logging roads, logging decks, and other major areas where soil is disturbed.                                                                                                                                                                                                                                                                                                                                                                                                                        | ✓                        |                                                                             |                         | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Contracts include requirements for best practices to minimize impact from potential petroleum spill, erosion and sedimentation.                                                                                                                                                                                                                                                                                                                                                                                                                            | ✓                        |                                                                             |                         |                                                | ✓                                    |                                           | ✓                                                               |
| Minimize the use of herbicides to the extent practicable. Where feasible, use prescribed burns and other practices. When we must use herbicides (to control invasive species or to promote a certain type of tree in accordance with a forest stewardship plan's goals and objectives), we select certified applicators who have been trained in best practices, select herbicides appropriate for use in aquatic environments where feasible, apply when there is low wind, and use application methods that target the species we are trying to control. | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Base our individual Forest Stewardship Plans on achieving ecological value for that tract considering existing vegetation, soils, slopes, and other conditions.                                                                                                                                                                                                                                                                                                                                                                                            | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Recognize that natural forests provide a model for sustainable resource management; forest management should imitate nature's dynamic processes and minimize impacts when harvesting trees and other products.                                                                                                                                                                                                                                                                                                                                             | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Control, minimize, and eradicate where possible invasive species while we are implementing the plans. In high ecological value areas, we may also manage invasive species at times we are not actively managing the forest resources on the tract.                                                                                                                                                                                                                                                                                                         | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Maintain, manage, and restore our hardwood forests to remain in hardwood forests.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Recognize that active forest management on all OWASA forest lands is not necessary to sustain ecological health. Some forest lands will be more appropriately reserved from active management and monitored to ensure they remain healthy.                                                                                                                                                                                                                                                                                                                 | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Select and implement forest management best practices to maintain the continuity of the forest structure, complexity, and diversity over time. Recognize that natural and assisted regeneration is one of these practices.                                                                                                                                                                                                                                                                                                                                 | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Use practices that promote soil productivity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Manage accumulated debris from storm damaged areas and areas where dead trees and branches form "ladders" to the overstory that pose increased risk or consequences from a wildfire where and when practical.                                                                                                                                                                                                                                                                                                                                              | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |

| DRAFT LIST OF PROPOSED STRATEGIES                                                                                                                                                                                                                                                                 | DRAFT GUIDING PRINCIPLES |                                                                             |                         |                                                |                                      |                                           |                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------|-------------------------|------------------------------------------------|--------------------------------------|-------------------------------------------|-----------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                   | Protect Water Quality    | Improve Ecological Health of Forested Land through Science-Based Principles | Reduce Risk of Wildfire | Improve Wildlife Habitat and Species Diversity | Sustainably Manage OWASA's Resources | Engage the Community and Partner Agencies | Mitigate Adverse Impacts on Neighbors and Surrounding Community |
| Periodically inspect our forested land to identify potential hazards like pests or parasites that could lead to unhealthy or diseased trees and greater wildfire risk.                                                                                                                            | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |
| Thin overstocked pine stands to reduce the risk of wildfires damaging trees or producing hazardous crowning fires.                                                                                                                                                                                | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Conduct periodic prescribed burns to reduce the understory fuel levels that will reduce the impact and intensity of a wildfire.                                                                                                                                                                   | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Partner with the North Carolina Forest Service and County fire agencies to identify weather conditions that will assure prescribed burns can be completed in a safe manner, to perform the prescribed burn following their safety practices, and to monitor the site after the burn is completed. | ✓                        |                                                                             | ✓                       |                                                | ✓                                    | ✓                                         | ✓                                                               |
| Design and locate our network of access roads within our forest lands to complement our fire risk management objectives, such as maintenance of fire breaks, ensuring timely access for fire-fighting equipment, etc.                                                                             | ✓                        |                                                                             | ✓                       |                                                | ✓                                    | ✓                                         | ✓                                                               |
| Provide a variety of habitats and forest species including some snags (dead trees); this may include providing early successional habitats such as meadows following final harvests.                                                                                                              | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Adopt practices which promote understory growth and habitat.                                                                                                                                                                                                                                      | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Maintain, protect, or create snags (standing dead trees) for wildlife.                                                                                                                                                                                                                            |                          | ✓                                                                           |                         | ✓                                              |                                      |                                           |                                                                 |
| Protect 300 foot riparian wildlife corridors on both sides of perennial streams identified by NC Wildlife Resources Commission or NC Audubon as important wildlife corridors.                                                                                                                     | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |
| Create conditions for native plant species to thrive.                                                                                                                                                                                                                                             | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Manage our hardwood stands to promote oak and hickory to provide forage for wildlife.                                                                                                                                                                                                             |                          | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           |                                                                 |
| Create wildlife habitat that may be limited in an area.                                                                                                                                                                                                                                           |                          | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           |                                                                 |
| Recognize that pine monocultures by themselves do not provide biological habitat needed to support diverse wildlife populations. Rotational pine management and harvesting is used only where there is a compelling need.                                                                         |                          | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Proactively manage our lands using forestry best management practices to prevent ecological decline.                                                                                                                                                                                              | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Manage our landholdings to protect water quality, healthy forest ecosystems, and wildlife habitat.                                                                                                                                                                                                | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Seek to limit timber removal to the level necessary to achieve our water quality, ecological health, and wildfire risk minimization goals.                                                                                                                                                        | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |
| Consider economic efficiency when selecting stands to manage; for example, we may manage a lower priority stand concurrently with a nearby higher priority stand.                                                                                                                                 |                          |                                                                             |                         |                                                | ✓                                    |                                           | ✓                                                               |
| Reinvest any revenue we receive from forest management in managing our land and to further protect drinking water quality. We will not sacrifice long-term benefits for short-term financial gain.                                                                                                | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    |                                           | ✓                                                               |
| Share information with landowners, the general public, and others about why and how we manage our forest land. Use a variety of methods to accomplish this.                                                                                                                                       |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |
| Provide meaningful and varied opportunities for the community to provide feedback on our Forest Management Program, Forest Stewardship Plans, and the implementation of those plans.                                                                                                              |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |

| DRAFT LIST OF PROPOSED STRATEGIES                                                                                                                                                                                                                                                                                                                                                                                       | DRAFT GUIDING PRINCIPLES |                                                                             |                         |                                                |                                      |                                           |                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------|-------------------------|------------------------------------------------|--------------------------------------|-------------------------------------------|-----------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                         | Protect Water Quality    | Improve Ecological Health of Forested Land through Science-Based Principles | Reduce Risk of Wildfire | Improve Wildlife Habitat and Species Diversity | Sustainably Manage OWASA's Resources | Engage the Community and Partner Agencies | Mitigate Adverse Impacts on Neighbors and Surrounding Community |
| Work closely with partner agencies in all aspects of our forest management program. We will: request their expert guidance as we develop and implement our plans; partner with them to use our land for demonstration, education, and training opportunities, and work with them to evaluate the ecological and cultural resources on our land and to study and document the outcomes of our forest management program. | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |
| Provide notice to neighboring landowners prior to performing land management activities.                                                                                                                                                                                                                                                                                                                                |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |
| Protect important natural heritage areas identified by the North Carolina Natural Heritage Program (NHP) and work with NHP to register them or protect them through conservation easements or NHP registry agreements where appropriate.                                                                                                                                                                                | ✓                        | ✓                                                                           |                         | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |
| Work with NC Wildlife Resources Commission and NC Audubon to perform before and after species surveys where they deem the surveys an effective use of their staff time.                                                                                                                                                                                                                                                 |                          | ✓                                                                           |                         | ✓                                              | ✓                                    | ✓                                         |                                                                 |
| Where neighboring landowners also wish to manage their lands, we work with them to coordinate our respective plans and management activities.                                                                                                                                                                                                                                                                           | ✓                        | ✓                                                                           | ✓                       | ✓                                              | ✓                                    | ✓                                         | ✓                                                               |
| Meet with neighbors to our forest stands after providing them with the draft Forest Stewardship Plan for our adjacent property. We listen to their concerns and work collaboratively to develop measures that enable OWASA to meet its management needs while mitigating adverse impacts to them.                                                                                                                       |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |
| Where practical and site conditions allow, we maintain an aesthetic buffer of 100 feet from viewsheds and public roads. Where unique site conditions exist, OWASA will strive to provide a wider viewshed buffer.                                                                                                                                                                                                       |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |
| OWASA will not access its forest land through another landowner's property unless a formal access agreement has first been developed and approved by OWASA and the landowner. The agreement will specify the terms and conditions under which OWASA can access the property.                                                                                                                                            |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |
| Where we access our land through a common gravel road that serves OWASA property and private property, OWASA will restore the road to at least the condition it was in prior to our use.                                                                                                                                                                                                                                |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |
| Minimize noise impacts by limiting management to daytime hours Monday through Saturday.                                                                                                                                                                                                                                                                                                                                 |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |
| Where practicable, protect any unique or locally important cultural features on our property. This will be done by maintaining forested buffers, and using low impact methods if any active forest management is done in close proximity to such cultural features. Such sites will be clearly marked to indicate where equipment is not allowed.                                                                       |                          |                                                                             |                         |                                                | ✓                                    | ✓                                         | ✓                                                               |

**Agenda Item**

- Capital Improvements Program (CIP) Semiannual Report

**Purpose**

- To summarize project and program performance for OWASA's Capital Improvements Program (CIP) for the Fiscal Year (FY) 2019 reporting period (July 2018 through June 2019).

**Background**

- The report details overall CIP performance during FY 2019, status updates for projects active during the reporting period, and Minority and Women Business Enterprise (MWBE) participation information.
- Highlights of the report include:
  - OWASA's CIP continues to see heavy activity; taken together, FY 2018 and 2019 represent the two largest annual investments in CIP in the past 13 years. Approximately \$17.3 million was invested in a total of 66 capital projects which were active during FY 2019.
  - The FY 2019 CIP expenditure total is about \$3.6 million less than the originally budgeted funds (approximately 83% of budget), composed of \$5.9 million in unspent FY 2019 funds due to schedule or timing of expenses, and \$2.3 million in additional spending due to additional scope or project needs.
  - FY 2019 MWBE participation included nearly \$5.9 million of CIP construction contracts awarded, or about 20% of the total awarded construction value for this reporting period.
  - Over the past five fiscal years, the CIP program has achieved 29% MWBE participation on formal and informal contracts, and has met the 10% MWBE participation goal on 54% of awarded contracts. Additional outreach to MWBE firms (beyond typical procedures) has been underway but with no noticeable participation change in recent bids, which is reflective of the overall bid environment.

**Action Needed**

- Receive and discuss the report.


August 22, 2019



## Orange Water and Sewer Authority

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.

**To:** Board of Directors

**Through:** Ed Kerwin 

**From:** Vishnu Gangadharan, P.E., PMP

**Date:** August 14, 2019

**Subject:** **Capital Improvements Program (CIP) Semiannual Report**

### Purpose

This semiannual report summarizes project and program performance for OWASA's Capital Improvements Program (CIP) for the Fiscal Year (FY) 2019 reporting period (July 2018 through June 2019).

### Discussion

#### **Program Summary**

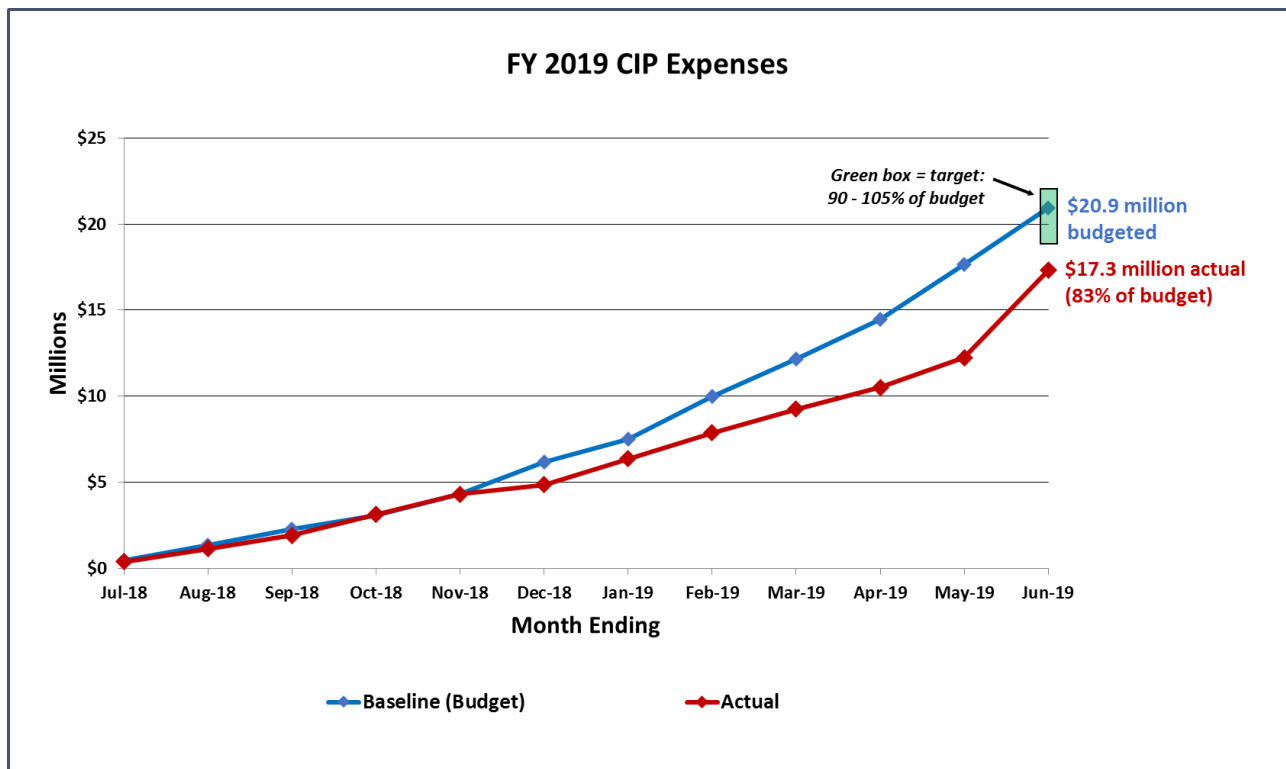
Fiscal Year 2019 witnessed a continued trend of heavy activity in OWASA's CIP, with approximately \$17.3 million invested in a total of 66 capital projects active during the reporting period. Taken together, FY 2018 and 2019 represent the two largest annual investments in CIP since the completion of the last major wastewater treatment plant (WWTP) upgrade in FY 2007. FY 2019 projects included (as of the end of the reporting period): eighteen projects in a planning phase, eighteen projects in design or bidding, nineteen projects in construction, and eleven projects completed or in closeout.

Major construction activity during the reporting period included substantial work to rehabilitate the water treatment plant (WTP) sedimentation basins and upgrade the WWTP Intermediate Pump Station and the Rogerson Drive Pump Station. Considerable work during FY 2019 was focused on the water distribution and wastewater collection systems in particular, including the completion of water main replacement on Brandywine Road, the rehabilitation of about 2.5 miles of sewer mains throughout the service area, replacement of water mains in Pritchard Avenue and Noble Street, and substantial design completion and/or award of construction for the replacement of over 5 miles of water mains to be commenced within the next year.

CIP funds supported the implementation of the Advanced Metering Infrastructure System (Agua Vista) as well as the ongoing emergency repairs to the Rogerson Drive force main. In addition, OWASA provided project management support for the completion of the Rogers Road Sewer Extension project, also substantially completed during the reporting period.

The water distribution and wastewater collection systems are also the focus of two important master planning studies: the ongoing gravity sewer hydraulic modeling study and the update to the distribution system replacement prioritization model. Both of these studies are expected to be complete in FY 2020 and will substantially inform our future investments in these systems.

Figure 1 shows the actual FY 2019 CIP expenses (in red) against the monthly baseline projection (in blue), as well as the expenditure target of 90% to 105% of budgeted funds.



**Figure 1 – FY 2019 CIP Expenses**

Actual expenditures of \$17.3 million represent 83% of the originally budgeted funds, which is outside of the target expenditure range. This is primarily attributable to project delays due to the staffing shortage between November 2018 and June 2019, during which time the CIP group retained two Utilities Engineers. In June, two additional Utilities Engineers were hired to serve as project managers for capital projects.

Overall, the \$3.6 million variance between actual and originally budgeted expenditures during the period is composed of \$5.9 million in unspent FY 2019 funds due to schedule or timing of expenses, and \$2.3 million in additional spending due to additional scope or project needs. Variances in expenditures related to timing do not represent true cost growth on a project. These instances tend to be deviations of a few months from the schedule assumptions that were current at time of budget approval. On the other hand, variances in expenditures related to additional project scope do reflect actual cost increases on a project, and are in large part due to unforeseen site conditions encountered during construction, or unplanned urgent needs such as the emergency repair to the Rogerson Drive force main. It is worth noting that this last example, while adding an additional \$2.3 million in FY 2019 expenditures also delayed approximately

\$1.5 million in spending due to the emergency repair's impacts to other ongoing construction projects.

### *Project Performance Summary*

Table 1 (attached) contains summaries of project performance for all active projects during this reporting period. This reporting table has been expanded and reformatted from prior reports in order to provide information not only on the Fiscal Year variances, but also visibility on overall project schedule and budget status. The projects in the table are shown in four sections, categorized according to the primary reason for the fiscal year cost variance:

1. FY 2019 variance is primarily due to scope changes;
2. FY 2019 variance is primarily due to schedule changes (e.g., work accelerated out of FY 2019 into FY 2018 or deferred into FY 2020);
3. Unplanned projects not originally funded for FY 2019; and
4. Projects still in planning stages and not yet baselined for schedule and budget.

### *Minority and Women Business Enterprise (MWBE) Participation*

Formal and informal construction contracts awarded during this reporting period included \$5.9 million participation by MWBE businesses (or 20% of the total awarded contract value), with 8 out of 16 awarded contracts meeting the 10% participation goal. The contracts which fell below the goal either provided evidence of Good Faith Efforts to secure MWBE participation or else did not utilize subcontracts on the project.

The five-year averages for the CIP program include 29% MWBE participation on formal and informal contracts, with 54% of the awarded contracts meeting the 10% participation goal. A review of contract information available since FY 2015 shows the following MWBE breakdown during that time period (out of total MWBE participation of \$14.4 million): Woman-Owned (89.8%), Hispanic-owned (8.3%), and Black/African American-owned (1.9%).

Rising construction costs and other construction procurement challenges continue to be an area of concern for the CIP program. The large quantity of public and private construction work has made it increasingly difficult to solicit bidding interest from contractors; this issue is also reflected in results from recent MWBE outreach efforts. Despite recent MWBE outreach efforts (beyond our standard MWBE advertising practices) including online posting, email solicitation and direct contact with MWBE contractors and subcontractors about our capital project contracting opportunities, recent bid results have not shown any change in the makeup of MWBE prime contractors and subcontractors bidding our projects. Follow-up discussion reveals that, just as is the case with non-MWBE contractors, MWBE contractors are extremely busy and are extremely selective with the projects that they choose to bid.

### *Additional Information*

Customers may visit our website ([www.owasa.org](http://www.owasa.org)) for information about our current major CIP projects and our [FY 2019 - 2023 CIP book](#) which provides additional information about the CIP. Please feel free to contact me at (919) 537-4248 or [vgangadharan@owasa.org](mailto:vgangadharan@owasa.org) if you have any questions regarding the CIP program or projects.



























































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Vishnu Gangadharan, P.E., PMP  
Engineering Manager - Capital Improvements

Attachment – Table 1 Project Performance Summary Table





**Table 1: Project Performance Summary - FY 2019**

 FY 2019 (or overall project) costs within 5% of FY 2019 (or overall project) budget; completion within 2 months of baselined completion  
 FY 2019 (or overall project) costs more than 5% above FY 2019 (or overall project) budget; completion more than 2 months beyond baselined completion



| CIP No.                                                                                       | Project                                                    | Active Phase<br>(at 6/30/19) | FY 2019 Performance |              |                                                                                       | Overall Project Performance |                 |                                                                                       |                     |                       |                                                                                       | All costs listed in \$1000's                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------|---------------------|--------------|---------------------------------------------------------------------------------------|-----------------------------|-----------------|---------------------------------------------------------------------------------------|---------------------|-----------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                               |                                                            |                              | FY 2019 Budget      | FY 2019 Cost | FY 2019 Cost Status                                                                   | Baseline Budget             | Forecasted Cost | Cost Status                                                                           | Baseline Completion | Forecasted Completion | Schedule Status                                                                       |                                                                                                                                                                                            |
| <b>1. Projects where FY 2019 cost variance is primarily due to scope (not timing) changes</b> |                                                            |                              |                     |              |                                                                                       |                             |                 |                                                                                       |                     |                       |                                                                                       |                                                                                                                                                                                            |
| 275-21                                                                                        | Bartram Drive Water Main                                   | Design                       | \$ 15               | \$ 40        |    | \$ 198                      | \$ 241          |    | Jun 20              | Aug 20                |    | Preparation of bid package was added to design scope; originally planned as a OWASA construction crew project                                                                              |
| 278-80                                                                                        | WWTP Chemical Building and Bulk Tank Piping Rehabilitation | Design                       | \$ 75               | \$ 100       |    | \$ 400                      | \$ 539          |    | Jun 20              | Jul 20                |    | Anticipated design and construction costs greater than planning estimates.                                                                                                                 |
| 278-83                                                                                        | WWTP Server Room                                           | Design                       | \$ 50               | \$ 66        |    | \$ 350                      | \$ 317          |    | Jun 19              | Aug 19                |    | Design costs greater than expected. Project cost rebaselined following preliminary design.                                                                                                 |
| 278-78                                                                                        | WWTP Fermenter Improvements                                | Design                       | \$ 200              | \$ 386       |    | \$ 994                      | \$ 756          |    | Dec 21              | Dec 21                |    | Cleaning/inspection of fermenter required more effort than expected and resulted in a different project recommendation than originally funded; rebaselined budget and schedule data shown. |
| 275-88                                                                                        | Kensington Drive Water Main                                | Design                       | \$ 105              | \$ 103       |    | \$ 1,375                    | \$ 2,039        |    | Jun 20              | Aug 20                |    | Bids received higher than baselined construction budget                                                                                                                                    |
| 278-72                                                                                        | WWTP Secondary Clarifier Rehabilitation                    | Construction                 | \$ 800              | \$ 20        |    | \$ 900                      | \$ 1,194        |    | Jun 19              | Sep 20                |    | Bids received higher than baselined construction budget; major equipment fabrication and delivery time is considerably longer than anticipated                                             |
| 278-72                                                                                        | WWTP Secondary Clarifier Pumping Improvements              | Closeout                     | \$ 100              | \$ 25        |    | \$ 102                      | \$ 161          |    | Jun 20              | Jun 20                |    | Cost of study above planning estimate; some additional study scope included                                                                                                                |
| 278-80                                                                                        | WWTP Aeration Basin Spray Water System                     | Design                       | \$ 30               | \$ 26        |    | \$ 85                       | \$ 97           |    | Jun 20              | Jul 20                |    | Revised construction estimate due to higher material costs.                                                                                                                                |
| 270-09                                                                                        | Quarry Reservoir Development                               | N/A                          | \$ 15               | \$ 15        |  | \$ 15                       | \$ 15           |  | Jun 19              | Jun 19                |  |                                                                                                                                                                                            |
| 270-32                                                                                        | University Lake Flashboard Replacement                     | Closeout                     | \$ 500              | \$ 330       |  | \$ 500                      | \$ 330          |  | Jun 19              | May 19                |  |                                                                                                                                                                                            |
| 272-41                                                                                        | WTP Turbidimeter Replacements                              | Closeout                     | \$ 90               | \$ 49        |  | \$ 90                       | \$ 49           |  | Jun 19              | Aug 19                |  |                                                                                                                                                                                            |
| 275-21                                                                                        | Pritchard Avenue Water Main                                | Closeout                     | \$ 1,125            | \$ 1,014     |  | \$ 1,218                    | \$ 1,134        |  | Jun 19              | Jan 19                |  |                                                                                                                                                                                            |
| 275-53                                                                                        | Distribution System Hydraulic Model                        | Study                        | \$ 30               | \$ 18        |  | \$ 30                       | \$ 18           |  | Jun 19              | Jun 19                |  |                                                                                                                                                                                            |
| 276-58                                                                                        | Prince Street Service Replacement                          | Design                       | \$ 30               | \$ 24        |  | \$ 80                       | \$ 69           |  | May 20              | Jun 20                |  |                                                                                                                                                                                            |
| 278-77                                                                                        | WWTP Bar Screen Rehabilitation                             | Construction                 | \$ 150              | \$ 133       |  | \$ 150                      | \$ 139          |  | Jun 19              | Apr 19                |  |                                                                                                                                                                                            |
| 278-82                                                                                        | WWTP Headworks Rehabilitation                              | Construction                 | \$ 360              | \$ -         |  | \$ 1,456                    | \$ 1,415        |  | Jun 20              | Jun 20                |  |                                                                                                                                                                                            |
| <b>2. Projects where FY 2019 cost variance is primarily due to schedule changes</b>           |                                                            |                              |                     |              |                                                                                       |                             |                 |                                                                                       |                     |                       |                                                                                       |                                                                                                                                                                                            |
| 270-11                                                                                        | University Lake Pump Station Improvements                  | Bidding                      | \$ 250              | \$ 264       |  | \$ 2,105                    | \$ 2,200        |  | Jun 20              | Oct 20                |  | Fiscal year variance due to construction work progressing faster than expected. Completion delay due to longer than expected delivery for certain major components.                        |
| 272-38                                                                                        | WTP Sedimentation Basin Rehabilitation                     | Construction                 | \$ 1,255            | \$ 1,538     |  | \$ 3,296                    | \$ 2,905        |  | Jun 20              | Apr 20                |  | Construction is progressing ahead of schedule                                                                                                                                              |


















































**Table 1: Project Performance Summary - FY 2019**

 FY 2019 (or overall project) costs within 5% of FY 2019 (or overall project) budget; completion within 2 months of baselined completion  
 FY 2019 (or overall project) costs more than 5% above FY 2019 (or overall project) budget; completion more than 2 months beyond baselined completion

| CIP No. | Project                                                    | Active Phase (at 6/30/19) | FY 2019 Performance |              |                                                                                       | Overall Project Performance |                 |                                                                                       |                     |                       |                                                                                       | Comments                                                                                                                                                                                                                                                     |
|---------|------------------------------------------------------------|---------------------------|---------------------|--------------|---------------------------------------------------------------------------------------|-----------------------------|-----------------|---------------------------------------------------------------------------------------|---------------------|-----------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                                                            |                           | FY 2019 Budget      | FY 2019 Cost | FY 2019 Cost Status                                                                   | Baseline Budget             | Forecasted Cost | Cost Status                                                                           | Baseline Completion | Forecasted Completion | Schedule Status                                                                       |                                                                                                                                                                                                                                                              |
| 272-40  | WTP Filter Media and Backwash Improvements                 | Closeout                  | \$ 200              | \$ 300       |    | \$ 850                      | \$ 1,331        |    | Jun 19              | Feb 19                |    | Fiscal year cost overrun due to delay in work expected to be complete in FY 2018. Construction costs increased due to unforeseen deteriorated components within the older filter basins. Additional rehabilitation of deteriorating concrete added to scope. |
| 275-21  | Barclay Road Water Main                                    | Design                    | \$ 61               | \$ 110       |    | \$ 1,660                    | \$ 1,960        |    | Jun 20              | Mar 20                |    | Accelerated design, permitting, and bidding due to increased risk of line failure; bids received higher than baselined construction budget                                                                                                                   |
| 275-76  | Advanced Metering Infrastructure (AMI) System              | Construction              | \$ 1,675            | \$ 2,096     |    | \$ 6,060                    | \$ 5,539        |    | Jun 20              | Mar 19                |    | Some installation work expected to occur towards the end of FY 2018 occurred instead in FY 2019.                                                                                                                                                             |
| 275-87  | Hillsborough Street Water Main                             | Closeout                  | \$ -                | \$ 106       |    | \$ 2,160                    | \$ 2,193        |    | Feb 18              | May 18                |    | Construction was complete in May 2018 but final invoicing not processed until FY 2019.                                                                                                                                                                       |
| 277-38  | Rogerson Drive Force Main Rehabilitation (FY 2018 project) | Closeout                  | \$ -                | \$ 15        |    | \$ 1,650                    | \$ 1,708        |    | Mar 18              | Mar 19                |    | Construction was substantially complete in May 2018 but final paving of Prestwick Rd has been coordinated to occur following completion of adjacent development.                                                                                             |
| 277-40  | Pump Station Operational Assessments                       | Study                     | \$ 25               | \$ 34        |    | \$ 50                       | \$ 50           |    | Jun 20              | Jun 20                |    | Some assessment work completed ahead of schedule.                                                                                                                                                                                                            |
| 278-68  | Roofing / Building Envelope Rehabilitation Program         | Various                   | \$ 75               | \$ 94        |    | \$ 266                      | \$ 266          |    | Jun 19              | Jun 19                |    | Fiscal year variance due to some delayed construction invoicing from work completed toward the end of FY 2018. Planning study pending                                                                                                                        |
| 278-73  | WWTP SCADA Upgrades                                        | Closeout                  | \$ 60               | \$ 68        |   | \$ 389                      | \$ 426          |   | Dec 18              | Jan 19                |   | Fiscal year variance due to minor delay of work expected to be complete in FY 2018. Overall budget variance due to additional scope items identified during system commissioning                                                                             |
| 278-58  | WWTP Non-Potable Water Pump Replacements                   | Construction              | \$ 50               | \$ 180       |  | \$ 275                      | \$ 308          |  | Dec 17              | Feb 19                |  | Considerable delay with pump fabrication and delivery; additional contracted installation services required.                                                                                                                                                 |
| 280-06  | Administration Building HVAC System Upgrade                | Construction              | \$ 150              | \$ 405       |  | \$ 1,685                    | \$ 2,110        |  | Mar 19              | Feb 19                |  | Some work planned for FY 2018 completion was delayed to FY 2019; project cost overrun due to higher bids than expected.                                                                                                                                      |
| 270-28  | University Lake Permanganate Facility                      | Design                    | \$ 312              | \$ 135       |  | \$ 1,540                    | \$ 2,231        |  | Jun 21              | May 21                |  | Project costs increased due to additional requirements discovered during permitting, construction cost increases, addition of maintenance storage area, and some additional design effort                                                                    |
| 272-14  | Water Facility Security Upgrades                           | Closeout                  | \$ 129              | \$ 103       |  | \$ 325                      | \$ 606          |  | Jun 18              | Dec 18                |  | Additional security options and scope identified during system design                                                                                                                                                                                        |
| 272-37  | WTP Belt Filter Press Replacement                          | Design                    | \$ 350              | \$ 154       |  | \$ 1,567                    | \$ 3,669        |  | Jun 21              | Jun 22                |  | Additional controls integration scope/cost, general construction cost increases, added scope to rehabilitate second press for redundancy; some additional design effort. Project approved for state loan funding; will be re-baselined next report.          |
| 272-47  | WTP and WWTP Risk Assessment                               | Closeout                  | \$ 36               | \$ 14        |  | \$ 150                      | \$ 243          |  | Jun 18              | Aug 18                |  | Cost of study above initial planning estimate                                                                                                                                                                                                                |
| 272-51  | HVAC Replacement Program                                   | Construction              | \$ 45               | \$ -         |  | \$ 205                      | \$ 410          |  | Jun 22              | Jun 22                |  | Actual timing of needs differs from planning assumptions; cost of HVAC unit for the WWTP switchgear building considerably higher than planning estimate                                                                                                      |
| 275-20  | Fordham Service Road Water Main                            | Design                    | \$ 900              | \$ 24        |  | \$ 955                      | \$ 943          |  | Jun 19              | Mar 20                |  | Delay to allow for coordination with adjacent construction work                                                                                                                                                                                              |
| 275-77  | Galvanized Water Main Replacement Program                  | Construction              | \$ 726              | \$ 272       |  | \$ 1,165                    | \$ 745          |  | Jun 20              | Jun 22                |  | Large contract was bid early FY 2019 but not awarded due to excessive cost; the galvanized water main sites are now planned to be completed by operations staff and/or through smaller scope contracts                                                       |
| 275-90  | Distribution System Sampling Stations                      | Construction              | \$ 125              | \$ 2         |  | \$ 125                      | \$ 85           |  | Mar 19              | Mar 20                |  | Project construction originally planned to be contracted; work will be completed by operations staff                                                                                                                                                         |
| 276-18  | Gravity Sewer Rehabilitation Program                       | Various                   | \$ 2,305            | \$ 1,680     |  | \$ 3,509                    | \$ 3,925        |  | Jun 19              | Aug 20                |  | Additional rehab needs were identified; bid costs exceeded budgetary estimate; time delay primarily due to contractor availability as a result of the emergency repair work for Rogerson Drive Force Main                                                    |

**Table 1: Project Performance Summary - FY 2019**

 FY 2019 (or overall project) costs within 5% of FY 2019 (or overall project) budget; completion within 2 months of baselined completion  
 FY 2019 (or overall project) costs more than 5% above FY 2019 (or overall project) budget; completion more than 2 months beyond baselined completion

| CIP No.                                              | Project                                              | Active Phase (at 6/30/19) | FY 2019 Performance |              |                                                                                       | Overall Project Performance |                 |                                                                                       |                     |                       |                                                                                       | Comments                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------|------------------------------------------------------|---------------------------|---------------------|--------------|---------------------------------------------------------------------------------------|-----------------------------|-----------------|---------------------------------------------------------------------------------------|---------------------|-----------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      |                                                      |                           | FY 2019 Budget      | FY 2019 Cost | FY 2019 Cost Status                                                                   | Baseline Budget             | Forecasted Cost | Cost Status                                                                           | Baseline Completion | Forecasted Completion | Schedule Status                                                                       |                                                                                                                                                                                                                                                                                          |
| 276-47                                               | Little Creek Interceptor                             | Closeout                  | \$ 462              | \$ 432       |    | \$ 1,185                    | \$ 2,623        |    | Jun 16              | Oct 18                |    | Construction was significantly delayed twice due to issues related to unusual soil conditions. Cost overrun due primarily to an extensive support structure required for a portion of the interceptor. Additional background about the project provided in prior CIP Semiannual Reports. |
| 276-57                                               | Gravity Sewer Hydraulic Model                        | Study                     | \$ 428              | \$ 167       |    | \$ 579                      | \$ 660          |    | Jun 19              | Jun 20                |    | Cost variance due to additional project objective (evaluation of system inflow/infiltration). Model calibration has been delayed pending refinement of future demand projections for the service area.                                                                                   |
| 277-31                                               | Rogerson Drive Pump Station Rehabilitation           | Construction              | \$ 1,935            | \$ 1,228     |    | \$ 2,169                    | \$ 2,336        |    | Jun 19              | Oct 19                |    | Additional costs primarily due to additional resiliency improvements and extended equipment rental costs during initial phases of the force main emergency repair work.                                                                                                                  |
| 278-46                                               | Comprehensive Coatings Program                       | Construction              | \$ 333              | \$ 185       |    | \$ 333                      | \$ 325          |    | Jun 19              | Sep 19                |    | Ongoing contract with annual funding reauthorization through Sep 2019                                                                                                                                                                                                                    |
| 278-51                                               | WWTP Solids Thickening Improvements                  | Construction              | \$ 730              | \$ 83        |    | \$ 4,250                    | \$ 6,080        |    | Jun 20              | Jun 21                |    | Projected cost overrun due primarily to general construction cost increases, and to lesser extent by additional scope requirements. Bids received considerably higher than budgetary estimate. Delay due to packaging of this project with the urgent rehabilitation of WWTP             |
| 278-54                                               | WWTP Intermediate Pump Station Rehabilitation        | Construction              | \$ 900              | \$ 718       |    | \$ 1,004                    | \$ 853          |    | Dec 18              | Oct 19                |    | Delays in procurement; also, some delay due to project approval process as part of low interest loan funding                                                                                                                                                                             |
| 278-85                                               | WWTP Gas Monitoring Systems                          | Planning                  | \$ 100              | \$ -         |    | \$ 100                      | \$ 90           |    | Jun 19              | Oct 19                |    | Delay in equipment procurement                                                                                                                                                                                                                                                           |
| 270-04                                               | Jordan Lake Raw Water Supply Allocation              | N/A                       | \$ 5                | \$ -         |  | \$ 5                        | \$ 5            |  | Jun 19              | Jun 19                |  | Delay in annual invoicing from North Carolina Department of Environmental Quality                                                                                                                                                                                                        |
| 272-39                                               | Concrete Condition Assessment                        | Study                     | \$ 50               | \$ -         |  | \$ 500                      | \$ 225          |  | Jun 20              | Jun 20                |  | Work deferred into FY 2020                                                                                                                                                                                                                                                               |
| 275-15                                               | Reimbursement for Distribution System Improvements   | Construction              | \$ 231              | \$ 176       |  | \$ 283                      | \$ 283          |  | Jun 19              | Jun 19                |  |                                                                                                                                                                                                                                                                                          |
| 275-20                                               | Brandywine Road Water Main                           | Construction              | \$ 897              | \$ 307       |  | \$ 1,098                    | \$ 1,112        |  | Aug 18              | Sep 18                |  |                                                                                                                                                                                                                                                                                          |
| 275-21                                               | Manning Drive & Country Club Water Main Replacements | Design                    | \$ 850              | \$ 630       |  | \$ 4,158                    | \$ 4,158        |  | Mar 20              | Mar 20                |  |                                                                                                                                                                                                                                                                                          |
| 275-46<br>276-48                                     | Dobbins Drive Water and Sewer Main Replacement       | Design                    | \$ 800              | \$ 133       |  | \$ 4,690                    | \$ 4,690        |  | Mar 20              | Mar 20                |  | Delay due to re-evaluation of upstream flow demand projections, easement acquisition; project cost/schedule were re-baselined at last report                                                                                                                                             |
| 275-89                                               | Distribution System Prioritization Model             | Study                     | \$ 150              | \$ 124       |  | \$ 425                      | \$ 445          |  | Feb 20              | Feb 20                |  |                                                                                                                                                                                                                                                                                          |
| 277-29                                               | Rogerson Drive Force Main - Northern Routing Study   | Study                     | \$ 50               | \$ -         |  | -                           | -               | -                                                                                     | -                   | -                     | -                                                                                     | Initially scoped as a routing study for parallel force main, the program scope was expanded following the force main failure and emergency repair and included in the FY 2020 budget.                                                                                                    |
| 278-84                                               | WWTP Security Improvements                           | Study                     | \$ 100              | \$ 32        |  | \$ 100                      | \$ 95           |  | Mar 20              | Mar 20                |  |                                                                                                                                                                                                                                                                                          |
| <b>3. Unfunded FY 2019 projects added to the CIP</b> |                                                      |                           |                     |              |                                                                                       |                             |                 |                                                                                       |                     |                       |                                                                                       |                                                                                                                                                                                                                                                                                          |
| 272-10                                               | WTP Rehabilitation - SCADA server replacement        | Construction              | \$ -                | \$ 57        |  | \$ 90                       | \$ 90           |  | Sep 19              | Sep 19                |  | Urgent need to replace obsolete equipment experiencing frequent failure                                                                                                                                                                                                                  |

**Table 1: Project Performance Summary - FY 2019**



FY 2019 (or overall project) costs within 5% of FY 2019 (or overall project) budget; completion within 2 months of baselined completion



FY 2019 (or overall project) costs more than 5% above FY 2019 (or overall project) budget; completion more than 2 months beyond baselined completion

| CIP No.                              | Project                                                         | Active Phase<br>(at 6/30/19) | FY 2019 Performance |              |                     | Overall Project Performance |                 |             |                     |                       |                 | Comments |                                                                                                                                               |
|--------------------------------------|-----------------------------------------------------------------|------------------------------|---------------------|--------------|---------------------|-----------------------------|-----------------|-------------|---------------------|-----------------------|-----------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|                                      |                                                                 |                              | FY 2019 Budget      | FY 2019 Cost | FY 2019 Cost Status | Baseline Budget             | Forecasted Cost | Cost Status | Baseline Completion | Forecasted Completion | Schedule Status |          |                                                                                                                                               |
| 275-92                               | Jones Ferry Road Water Main Replacements                        | Design                       | \$ -                | \$ 62        | ⊗                   | \$ -                        | -               |             |                     |                       |                 |          | Rapid assessment, scoping, and design of replacements of several critical large diameter water mains near the Jones Ferry Road WTP            |
| 278-11                               | Wastewater Treatment Rehabilitation                             | Construction                 | \$ -                | \$ 255       | ⊗                   | \$ 360                      | \$ 327          | ✓           | Sep 19              | Aug 19                | ✓               |          | Unanticipated urgent rehabilitation needs include grit removal system equipment and substantial component rehabilitation of dewatering press. |
| 279-13                               | Reclaimed Water Valve and Coupling Investigation                | Study                        | \$ -                | \$ 3         | ⊗                   | \$ 25                       | \$ 25           | ✓           | Oct 19              | Oct 19                | ✓               |          | Coupling failure along the reclaimed water main warranted additional investigation of cause and failure risk at other locations               |
| 278-11                               | Administration Building Locker Room Improvements Planning Study | Study                        | \$ -                | \$ 5         | ⊗                   | \$ 25                       | \$ 5            | ✓           | Jun 21              | Jun 19                | ✓               |          | Planning study included in five-year CIP was completed ahead of schedule in FY 2019                                                           |
| 277-42                               | Rogerson Drive Force Main Emergency Repair                      | Construction                 | \$ -                | \$ 2,323     | ⊗                   | \$ -                        | \$ 3,280        | ⊗           | Oct 19              | Oct 19                | ✓               |          | Failure of 24" force main along Rogerson Drive and Raleigh Road necessitated emergency repair work                                            |
| <b>4. Projects not yet baselined</b> |                                                                 |                              |                     |              |                     |                             |                 |             |                     |                       |                 |          |                                                                                                                                               |
| 270-11                               | Cane Creek Pump Station Improvements                            | Planning                     | \$ 25               | \$ -         | ✓                   | -                           | -               | -           | -                   | -                     | -               | -        | Planning efforts postponed due to deferral of related investigation of Cane Creek Raw Water Main                                              |
| 271-05                               | Cane Creek Raw Water Transmission Main Capacity Study           | Study                        | \$ 50               | \$ -         | ✓                   | -                           | -               | -           | -                   | -                     | -               | -        | Evaluation not yet initiated due to timing of related construction                                                                            |
| 272-42                               | WTP Finished Water Pump Improvements                            | Study                        | \$ 50               | \$ 65        | ⊗                   | -                           | -               | -           | -                   | -                     | -               | -        | Additional evaluation into pumping configuration and energy efficiency beyond what was expected                                               |
| 272-46                               | WTP Chemical Facility Improvements                              | Study                        | \$ 100              | \$ 144       | ⊗                   | -                           | -               | -           | -                   | -                     | -               | -        | Some design work accelerated into planning phase                                                                                              |
| 273-09                               | Barbee Chapel Road Booster Pump Station Study                   | Study                        | \$ 75               | \$ -         | ✓                   | -                           | -               | -           | -                   | -                     | -               | -        | Planning study not yet initiated; will be included as part of the upcoming distribution system hydraulic modeling effort                      |
| 275-21                               | Fordham Boulevard at Ephesus Church Road Water Main             | Study                        | \$ 50               | \$ 10        | ✓                   | -                           | -               | -           | -                   | -                     | -               | -        | Planning study in progress                                                                                                                    |
| 275-21                               | Scarlett-Cooper Neighborhood Water Mains                        | Design                       | \$ 52               | \$ 40        | ✓                   | -                           | -               | -           | -                   | -                     | -               | -        | Preliminary design underway                                                                                                                   |
| 275-52                               | West Cameron Avenue Water Main                                  | Study                        | \$ 25               | \$ -         | ✓                   | -                           | -               | -           | -                   | -                     | -               | -        | Planning study in progress                                                                                                                    |
| 276-45                               | Bolinwood Drive Interceptor                                     | Study                        | \$ 50               | \$ 60        | ⊗                   | -                           | -               | -           | -                   | -                     | -               | -        | Planning study in progress                                                                                                                    |
| 276-53                               | Creek Crossing Access Improvements                              | Study                        | \$ 50               | \$ -         | ✓                   | -                           | -               | -           | -                   | -                     | -               | -        | Planning study in progress                                                                                                                    |

|                                      |                |              |
|--------------------------------------|----------------|--------------|
| <b>Total FY 2019 Active Projects</b> | FY 2019 Budget | FY 2019 Cost |
|                                      | \$ 20,952      | \$ 17,299    |

**Agenda Item**

- Preliminary Financial Report for the Twelve-Month Period Ended June 30, 2019

**Purpose**

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

**Background**

- The preliminary financial report consists of a Statement of Net Position, an Income Statement that includes a budget to actual comparison, graphical presentations of financial performance indicators and a Financial Management Policy Report Card.
- Highlights of the report include:
  - All but one of our financial performance targets were met.
  - Operating Revenues for the period were about equal to the amended budget.
  - System Development Fees were about \$399,000 over budget.
  - Operating Expenses were about \$400,000 or 1.8% under the amended budget.
  - Net Income less Debt Service was about \$529,000 or 7.1% over the amended budget. OWASA is a nonprofit entity. Net Income less Debt Service is used to fund investments in capital improvement projects and reserves.
  - Capital Improvements Program expenditures were approximately \$2.7 million less than the amended budgeted.

**Action Needed**

- Receive and discuss the Preliminary Financial Report for the twelve-month period ended June 30, 2019.


August 22, 2019



## Orange Water and Sewer Authority

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.

### MEMORANDUM

**To:** Board of Directors  
**Through:** Ed Kerwin   
**From:** Stephen Winters, CPA  
**Date:** August 16, 2019  
**Subject:** Preliminary Financial Report for the twelve-month period ended June 30, 2019

#### Purpose

The preliminary financial report for the twelve-month period ended June 30, 2019 is presented to inform the Board of Directors of OWASA's financial position and financial performance in relation to budget. The report is considered preliminary until the annual audit of our financial statements is complete; the audited financial report is scheduled to be presented to the Board on September 26, 2019.

#### Contents

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

#### Fiscal Performance

- As shown on page 10 of the report, all financial performance measurement targets were met for the period except for meeting the target balance in the working capital reserve. At the end of the period, the balance was about \$1.4 million less than the target. Near the end of the fiscal year, we expended about \$2 million on the project to repair the Rogerson Drive force main which was not in the original FY 2019 budget.
- Average drinking water sales for the period was 5.98 million gallons per day (MGD), 6.18 was projected. Combined drinking and reclaimed water sales for the period averaged 6.87 MGD versus a projection of 6.94.
- Total Operating Revenue was about equal to the amended budget. Due to a projected shortfall in revenue from drinking water sales, on May 9, 2019, the Board approved a budget amendment which reduced the amount budgeted for drinking water sales by \$700,000.
- Revenue from new system connections (system development fees) was over budget by about \$399,000. The average revenue-per-meter amount used for budgeting is less than the revenue-per-meter we have received.
- Total Operating Expenses for the period were 1.8% or about \$400,000 less than the amended budget. Due to unit price increases, chemicals expense was projected to be over the original budget. The May 9, 2019 amendment increased the budget for chemicals expense by \$300,000.
  - General and Administrative expenses were under budget by about \$350,000. The variance is

made-up of a number of relatively small line items. Two of the more significant variances include:

- Greater than budgeted construction work performed by OWASA staff. The costs of construction work performed by staff is capitalized as part of the resulting asset and, therefore, reduces expenses.
- Lower than budgeted consulting and professional fees.
- The Water Supply and Treatment department was under budget by about \$165,000. While chemicals expense was over budget by about \$67,000, maintenance expense was under budget by about \$59,000; wages and professional fees were under budget by almost \$50,000 in total; and we were able to save \$50,000 in funds budgeted for equipment rental related to cleaning the Nunn Mountain elevated drinking water tank by using our connection to Hillsborough's water system to provide pressure to our system instead of renting pumps.
- Water Distribution expenses were over budget by 0.8% or about \$27,000.
- Wastewater Treatment expenses exceeded the amended budget by about \$179,000. Chemicals expense was about equal to the amended budget. Supplemental biosolids dewatering expenses were over budget by about \$127,000 and maintenance costs were over budget by about \$45,000.
- Wastewater Collection expenses were under budget by about \$280,000.
  - Wages and personnel expenses were under budget by about \$56,000 due to position vacancies.
  - Maintenance costs were about \$91,000 lower than expected.
  - Construction work performed by OWASA staff was about \$94,000 greater than projected.
  - Material and supplies and electricity were under budget by about \$28,000 in total.
- We incurred about \$189,000 of expenses related to preparing for two hurricane events and dealing with their aftermaths. We are working with the Federal Emergency Management Agency (FEMA) to be reimbursed for some or all of these costs; we received about \$5,000 in reimbursements from FEMA in FY 2019.
- Net Income less Debt Service for the period was approximately 7.1% or \$529,000 greater than the amended 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

Fiscal Year 2019 witnessed a continued trend of heavy activity in OWASA's CIP, with approximately \$17.3 million invested in a total of 66 capital projects during the reporting period. Taken together, FY 2018 and 2019 represent the two largest annual investments in CIP since the completion of the last major wastewater treatment plant (WWTP) upgrade in FY 2007. FY 2019 projects included (as of the end of the reporting period): 18 projects in a planning phase, 18 projects in design or bidding, 19 projects in construction, and 11 projects completed or in closeout.

Actual expenditures of \$17.3 million represent 83% of the originally budgeted funds, which is outside of the target expenditure range. This is primarily attributable to project delays due to the staffing shortage between November 2018 and June 2019, during which time the CIP group retained two Utilities Engineers. In June, two additional Utilities Engineers were hired to serve as project managers for capital projects.

Overall, the \$3.6 million variance between actual and originally budgeted expenditures during the period is composed of \$5.9 million in unspent FY 2019 funds due to schedule or timing of expenses, and \$2.3 million in additional spending due to additional scope or project needs. Variances in expenditures related to timing do not represent true cost growth on a project. These instances tend to be deviations of a few months from the schedule assumptions that were current at time of budget approval. On the other hand, variances in expenditures related to additional project scope reflect actual cost increases on a project and are in large part due to unforeseen site conditions encountered during construction, or unplanned urgent needs such as the emergency repair to the Rogerson Drive force main. It is worth noting that this last example, while adding an additional \$2.3 million in FY 2019 expenditures also delayed approximately \$1.5 million in spending due to the emergency repair's impacts to other ongoing construction projects.

Agenda item 6 in this August 22, 2019 Board meeting agenda package is the "Capital Improvements Program Semiannual Report" which includes additional information about the FY 2019 program.



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Stephen Winters, CPA  
Director of Finance and Customer Service

Attachment



# **Orange Water and Sewer Authority**

**Preliminary Financial Report  
For the Twelve-Month Period Ended  
June 30, 2019**

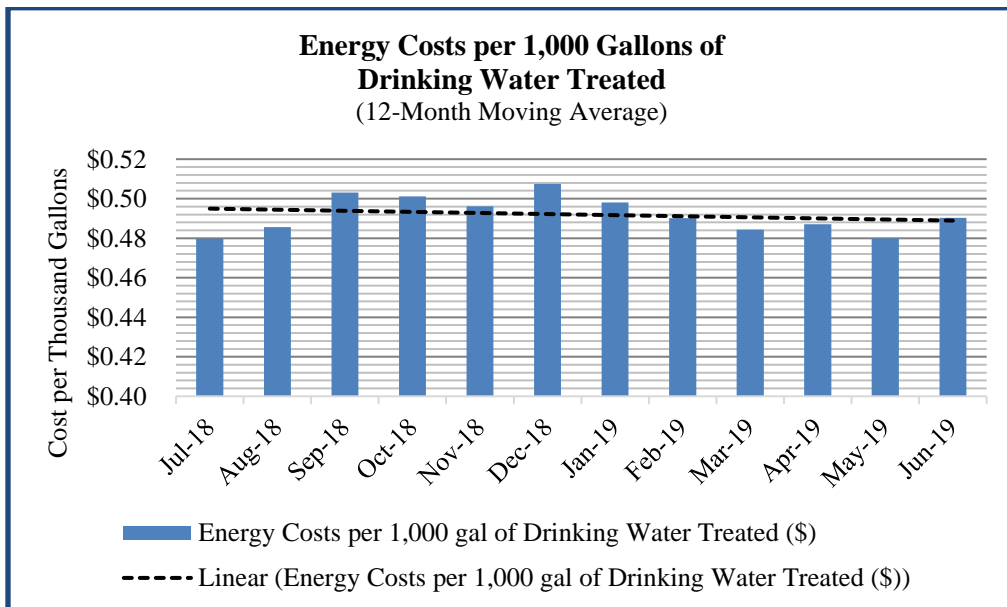
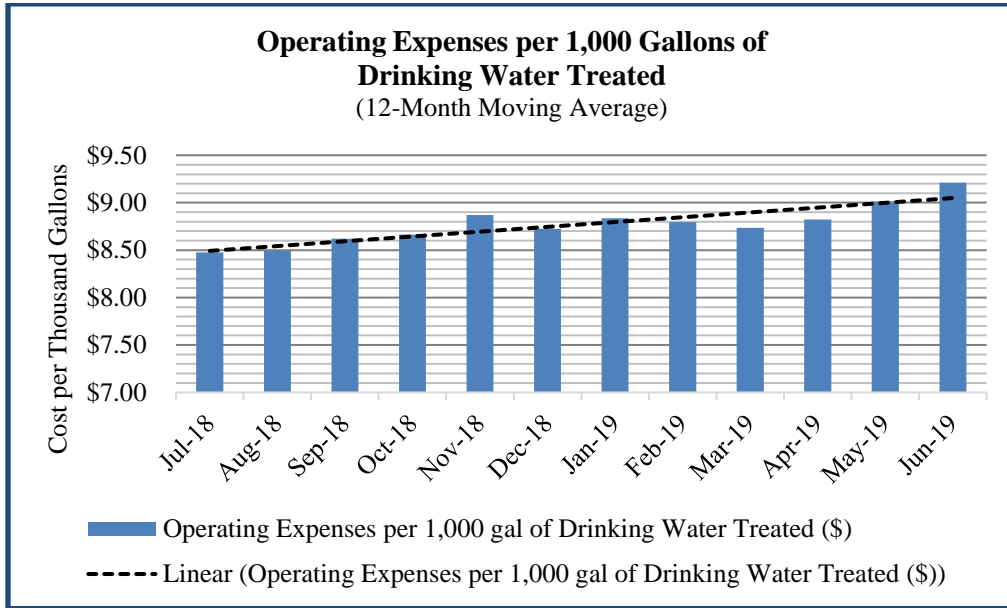
**Orange Water and Sewer Authority**  
**Statement of Net Position**  
**June 30, 2019**  
(unaudited)

|                                                                 |                      |
|-----------------------------------------------------------------|----------------------|
| <b>Assets</b>                                                   |                      |
| Current Assets                                                  |                      |
| Cash                                                            | \$17,284,220         |
| Receivables                                                     | 4,362,250            |
| Inventory                                                       | 1,396,185            |
| Prepaid expenses                                                | 182,894              |
| Restricted cash                                                 | 6,514,776            |
|                                                                 | <hr/>                |
| Total Current Assets                                            | 29,740,325           |
|                                                                 | <hr/>                |
| Noncurrent Assets                                               |                      |
| Capital assets (net of depreciation)                            | 281,119,853          |
| Other noncurrent assets                                         | 45,867,474           |
|                                                                 | <hr/>                |
| Total Noncurrent Assets                                         | 326,987,327          |
|                                                                 | <hr/>                |
| <b>Total Assets</b>                                             | <b>\$356,727,652</b> |
|                                                                 | <hr/> <hr/>          |
| <b>Liabilities and Net Position</b>                             |                      |
| Current Liabilities                                             |                      |
| Accounts payable and accrued expenses                           | \$7,203,656          |
| Unearned income                                                 | 196,611              |
| Customer deposits                                               | 1,166,182            |
|                                                                 | <hr/>                |
| Total Current Liabilities                                       | 8,566,449            |
|                                                                 | <hr/>                |
| Noncurrent Liabilities                                          |                      |
| Bonds payable                                                   | 62,429,218           |
| Other noncurrent liabilities                                    | 14,302,693           |
|                                                                 | <hr/>                |
| Total Noncurrent Liabilities                                    | 76,731,911           |
|                                                                 | <hr/>                |
| Net Position                                                    |                      |
| Contributed capital                                             | 122,140,622          |
| Net position at the beginning of the year                       | 146,731,581          |
| Year-to-date accrual basis net income                           | 2,557,089            |
|                                                                 | <hr/>                |
| <b>Total Liabilities and Net Position</b>                       | <b>\$356,727,652</b> |
|                                                                 | <hr/> <hr/>          |
| <b>Net income reconciliation:</b>                               |                      |
| Accrual basis net income                                        | \$2,557,089          |
| Depreciation, interest, other post-employment benefits expenses | 12,614,283           |
|                                                                 | <hr/>                |
| <b>Modified accrual basis net income</b>                        | <b>\$15,171,372</b>  |
|                                                                 | <hr/> <hr/>          |

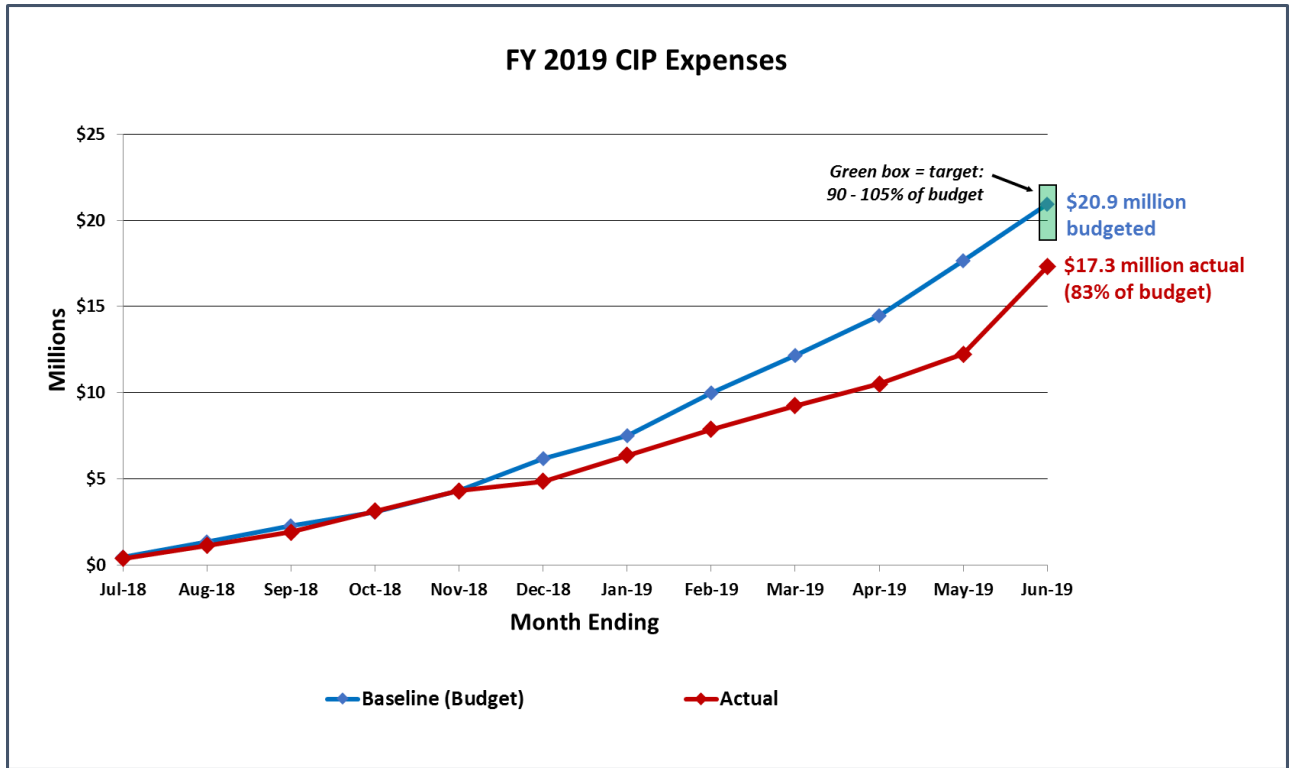
**Orange Water and Sewer Authority**  
**Income Statement**  
**For the Twelve-Month Period Ended June 30, 2019**  
(unaudited)

|                                       | Actual through<br>June 30, 2019 | Budget (as<br>amended) through<br>June 30, 2019 | Variance<br>(effect on net<br>change in<br>Fund Balance) | Percent<br>Variance |
|---------------------------------------|---------------------------------|-------------------------------------------------|----------------------------------------------------------|---------------------|
| <b>Operating Revenue</b>              |                                 |                                                 |                                                          |                     |
| Water                                 | \$17,666,257                    | \$17,524,334                                    | \$141,923                                                | 0.8%                |
| Sewer                                 | 17,289,359                      | 17,265,060                                      | 24,299                                                   | 0.1                 |
| Reclaimed Water                       | 456,926                         | 454,440                                         | 2,486                                                    | 0.5                 |
| Service Initiation Fees               | 98,625                          | 154,344                                         | (55,719)                                                 | (36.1)              |
| Other                                 | 905,997                         | 1,006,079                                       | (100,082)                                                | (9.9)               |
| Refunds and Allowances                | (231,323)                       | (230,007)                                       | (1,316)                                                  | (0.6)               |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| <b>Total Operating Revenue</b>        | 36,185,841                      | 36,174,250                                      | 11,591                                                   | 0.0                 |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| <b>Non-Operating Income (Expense)</b> |                                 |                                                 |                                                          |                     |
| System Development Fees               | 1,593,210                       | 1,194,353                                       | 398,857                                                  | 33.4                |
| Interest                              | 64,843                          | 23,678                                          | 41,165                                                   | 173.9               |
| Loan Fees                             | (248,287)                       | 0                                               | (248,287)                                                |                     |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| <b>Total Non-Operating Income</b>     | 1,409,766                       | 1,218,031                                       | 191,735                                                  | 15.7                |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| <b>Total Income</b>                   | 37,595,607                      | 37,392,281                                      | 203,326                                                  | 0.5                 |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| <b>Operating Expense</b>              |                                 |                                                 |                                                          |                     |
| General and Administrative            | 7,177,547                       | 7,527,991                                       | 350,444                                                  | 4.7                 |
| Water Supply and Treatment            | 5,077,688                       | 5,242,321                                       | 164,633                                                  | 3.1                 |
| Water Distribution                    | 3,351,764                       | 3,324,715                                       | (27,049)                                                 | (0.8)               |
| Wastewater Treatment                  | 5,523,492                       | 5,344,472                                       | (179,020)                                                | (3.3)               |
| Wastewater Collection                 | 1,104,307                       | 1,384,482                                       | 280,175                                                  | 20.2                |
| Hurricane-Related Expenses            | 189,437                         | 0                                               | (189,437)                                                |                     |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| <b>Total Operating Expense</b>        | 22,424,235                      | 22,823,981                                      | 399,746                                                  | 1.8                 |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| <b>Net Income (modified accrual)</b>  | 15,171,372                      | 14,568,300                                      | 603,072                                                  | 4.1                 |
| Debt Service                          | 7,229,279                       | 7,155,554                                       | (73,725)                                                 | (1.0)               |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| Net Income less Debt Service          | 7,942,093                       | 7,412,746                                       | 529,347                                                  | 7.1                 |
| CIP Expenditures                      | 17,299,150                      | 19,952,000                                      | 2,652,850                                                | 13.3                |
| Capital Equipment Expenditures        | 899,487                         | 1,001,135                                       | 101,648                                                  | 10.2                |
|                                       | <hr/>                           | <hr/>                                           | <hr/>                                                    | <hr/>               |
| <b>Net Change in Fund Balance</b>     | (\$10,256,544)                  | (\$13,540,389)                                  | \$3,283,845                                              |                     |
|                                       | =====                           | =====                                           | =====                                                    |                     |

**Orange Water and Sewer Authority**  
**Select Financial Data**  
**For the Twelve-Month Period Ended June 30, 2019**



**Orange Water and Sewer Authority  
Select Financial Data  
For the Twelve-Month Period Ended June 30, 2019**

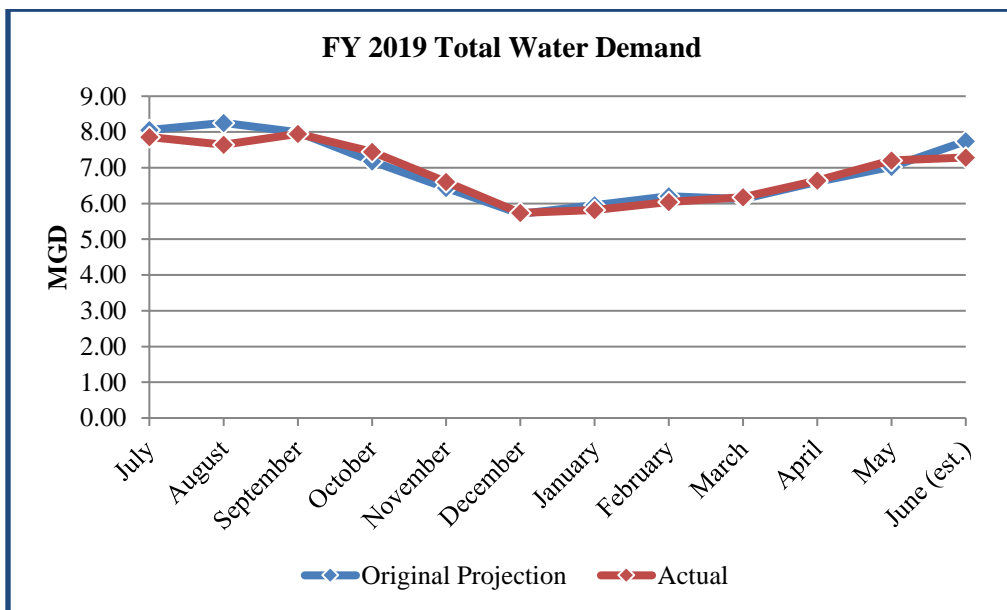


The original budget of \$20.9 million is shown in the graph above. The amendment approved by the Board of Directors on May 9, 2019 reduced the CIP budget by \$1,000,000 and allocated it to the operating budget to cover an anticipated short-fall in revenue and overage in chemicals expense.

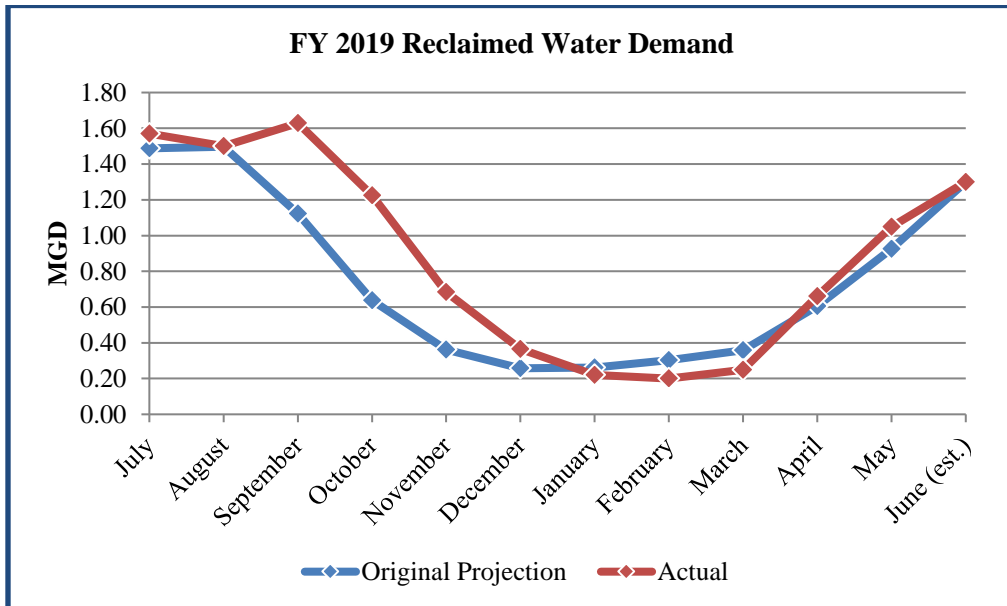
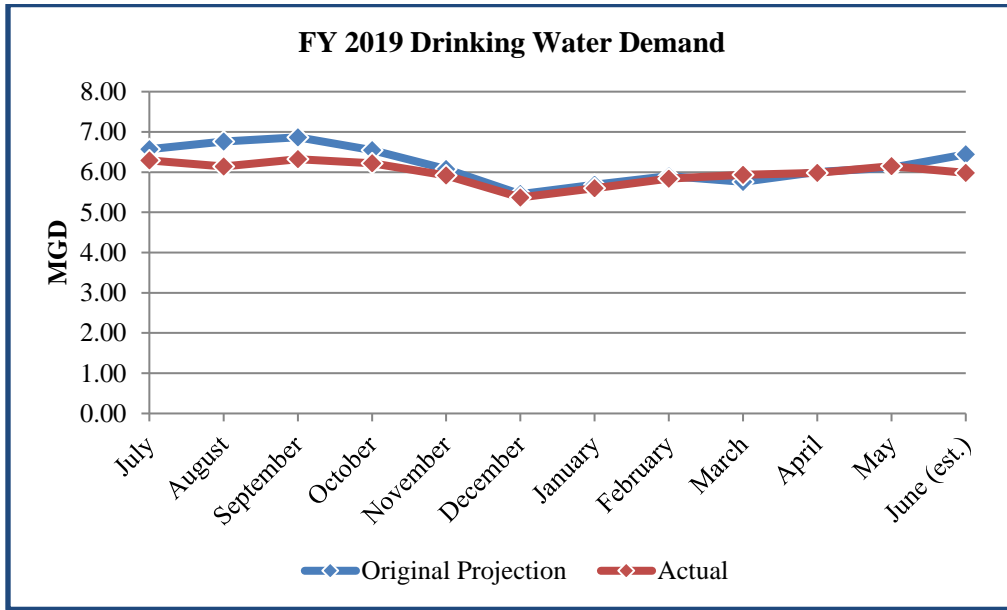
**Orange Water and Sewer Authority  
Select Financial Data  
For the Twelve-Month Period Ended June 30, 2019**

| <b>FY 2019 Water Sales Projection (Average Day)</b> |                                               |            |                                       |            |                                              |            |
|-----------------------------------------------------|-----------------------------------------------|------------|---------------------------------------|------------|----------------------------------------------|------------|
|                                                     | <b>Original FY 2019<br/>Sales Projections</b> |            | <b>Actual FY 2019<br/>Water Sales</b> |            | <b>Revised FY 2019<br/>Sales Projections</b> |            |
|                                                     | <b>DW</b>                                     | <b>RCW</b> | <b>DW</b>                             | <b>RCW</b> | <b>DW</b>                                    | <b>RCW</b> |
| July                                                | 6.57                                          | 1.49       | 6.29                                  | 1.57       | 6.29                                         | 1.57       |
| August                                              | 6.76                                          | 1.50       | 6.14                                  | 1.50       | 6.14                                         | 1.50       |
| September                                           | 6.87                                          | 1.12       | 6.32                                  | 1.63       | 6.32                                         | 1.63       |
| October                                             | 6.54                                          | 0.64       | 6.22                                  | 1.22       | 6.22                                         | 1.22       |
| November                                            | 6.07                                          | 0.36       | 5.92                                  | 0.68       | 5.92                                         | 0.68       |
| December                                            | 5.45                                          | 0.26       | 5.37                                  | 0.37       | 5.37                                         | 0.37       |
| January                                             | 5.69                                          | 0.26       | 5.60                                  | 0.22       | 5.60                                         | 0.22       |
| February                                            | 5.90                                          | 0.30       | 5.84                                  | 0.20       | 5.84                                         | 0.20       |
| March                                               | 5.76                                          | 0.36       | 5.93                                  | 0.25       | 5.93                                         | 0.25       |
| April                                               | 6.00                                          | 0.61       | 5.98                                  | 0.66       | 5.98                                         | 0.66       |
| May                                                 | 6.10                                          | 0.93       | 6.15                                  | 1.05       | 6.15                                         | 1.05       |
| June                                                | 6.45                                          | 1.30       | 5.98                                  | 1.30       | 6.45                                         | 1.30       |
| Average                                             | 6.18                                          | 0.76       | 5.98                                  | 0.89       | 6.02                                         | 0.89       |

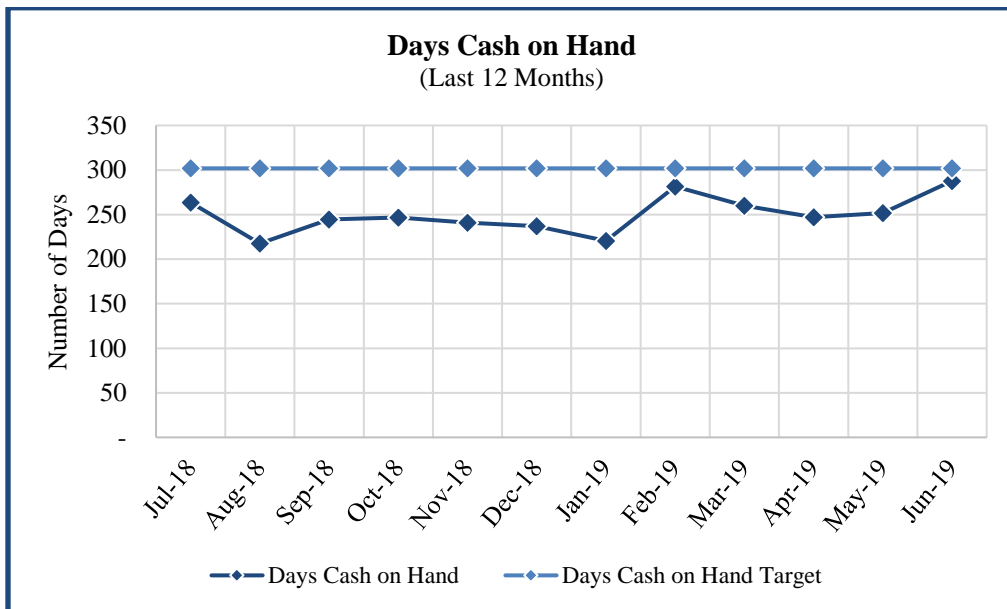
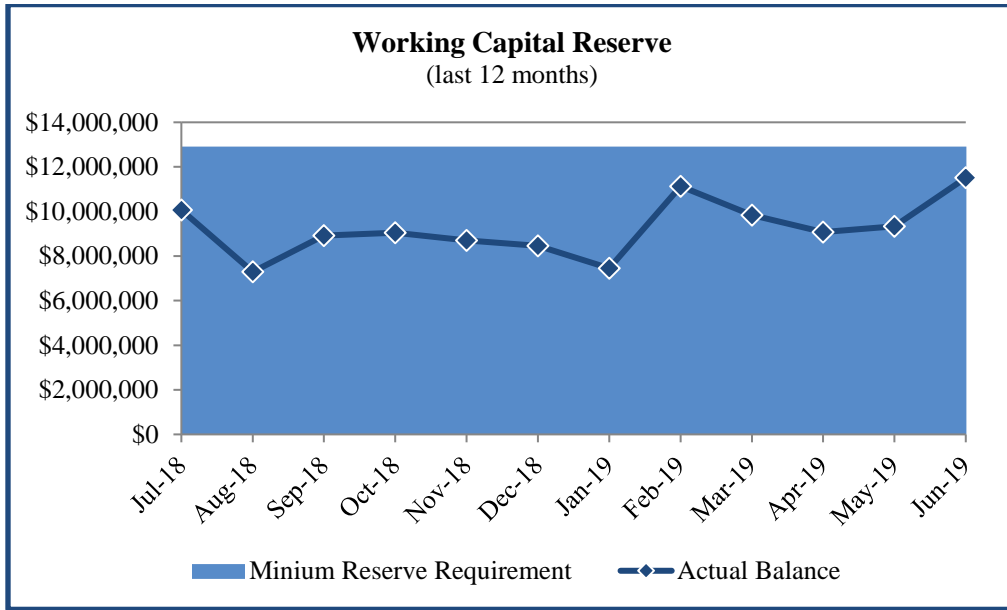
Estimates shown in red



**Orange Water and Sewer Authority  
 Select Financial Data  
 For the Twelve-Month Period Ended June 30, 2019**

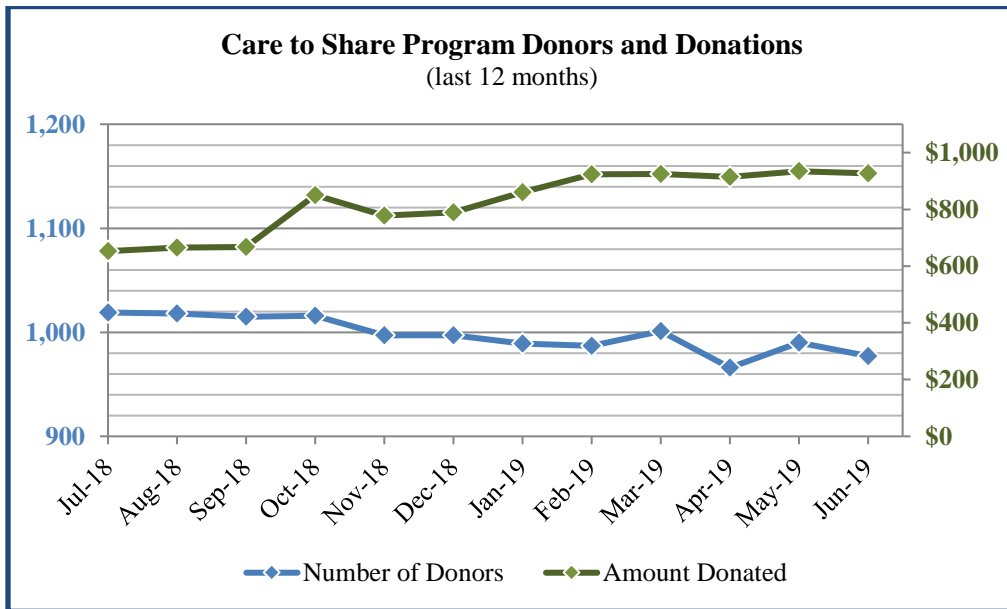


**Orange Water and Sewer Authority**  
**Select Financial Data**  
**For the Twelve-Month Period Ended June 30, 2019**





**Orange Water and Sewer Authority  
 Select Financial Data  
 For the Twelve-Month Period Ended June 30, 2019**



**Orange Water and Sewer Authority  
Financial Management Policy Report Card  
For the Twelve-Month Period Ended June 30, 2019**

| Measurement                                     | Objective                                                                                    | FY18 Results | FY19 Goal | YTD FY19 Results |
|-------------------------------------------------|----------------------------------------------------------------------------------------------|--------------|-----------|------------------|
| Working Capital Reserves                        | Greater of four months Operating Expenses or 20% of succeeding three years CIP               | \$10.1M      | \$12.9M   | \$11.5M          |
| Capital Improvements Reserve                    | 2% of Net Capital Assets (Funding \$400,000 per year until reach goal of approximately \$6M) | \$3.6M       | \$4.0M    | \$4.0M           |
| Rate/Revenue Stabilization Reserve              | 5% of annual Water and Sewer Revenue                                                         | \$1.7M       | \$1.8M    | \$1.8M           |
| Debt Burden to Asset Value                      | Total Debt not more than 50% of Total Assets                                                 | 24%          | ≤ 50%     | 24%              |
| Sufficiency of Revenues above Debt Requirements | Annual Debt Service no more than 35% of Gross Revenue                                        | 17%          | ≤ 35%     | 19%              |
| Cash Financing of Capital <sup>1</sup>          | Annual revenues and reserves provide at least 30% of CIP funding                             | 49%          | ≥ 30%     | 44%              |
| Debt Service Coverage Ratio                     | Annual Net Income not less than two times Annual Debt Service                                | 2.6          | 2.0       | 2.1              |
| Service Affordability Ratio <sup>2</sup>        | Average annual OWASA bill not more than 1.5% of area median household income                 | 1.35%        | 1.5%      | 1.38%            |

M = million

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<sup>1</sup> Cash Financing of Capital based on 5-Year CIP Budget and potential borrowing during the same period.

<sup>2</sup> FY 2019 Calculation based on median household income of \$62,620 (per 2015 U.S. Census Bureau, American Community Survey, 5-Year Estimates) and average monthly household water use of 4,000 gallons.