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
Virtual Meeting of the OWASA Board of Directors
Thursday, January 28, 2021, 6:00 P.M.

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

In compliance with the "Americans with Disabilities Act," interpreter services for non-English speakers and for individuals who are deaf or hard of hearing are available with five days prior notice. If you need this assistance, please contact the Clerk to the Board at 919-537-4217 or aorbich@owasa.org.

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

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

Announcements

1. Announcements by the Chair
   - A. Any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
   - B. February 4, 2021 Virtual Special Meeting of the OWASA Board of Directors on to Discuss the Process to Develop a Strategic Plan from 5:00 to 6:30 p.m.
2. Announcements by Board Members
   - A. On-boarding Update for OWASA's Executive Director (Jody Eimers)
3. Announcements by Staff
   - A. Update on the January 21, 2021 Orange County Climate Council Meeting (Mary Tiger)
4. Additional Comments, Suggestions, and Information Items by Board Members (Ray DuBose)
   - A. Discuss Whether to Schedule Board Discussion at a future Meeting of the Feedback Received from Staff and Counsel on the Board Assessment Survey (Bruce Boehm)

Petitions and Requests

1. Public

2. Board
3. Staff

Consent Agenda

Information and Reports

1. 12 Month Board Meeting Schedule (Todd Taylor)
2. Capital Improvements Program Semiannual Report (Vishnu Gangadharan)

Action

3. Resolution Honoring the Service of Melvin Markley to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community (Ray DuBose)
4. Adoption of Preliminary Resolution for Revenue Bonds (Stephen Winters)
5. Minutes of the January 14, 2021 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter (Jody Eimers)

Regular Agenda

Information and Reports

6. Update on OWASA's COVID-19 Information and Discussion by the Board (Todd Taylor/ Monica Dodson/Mary Tiger)
7. 2020 Annual Lakes Recreation Report (Johnny Riley)
8. Financial Report for the Six-Month Period Ended December 31, 2020 (Stephen Winters)

Discussion

9. Fiscal Year 2022 Budget Calendar and Assumptions (Stephen Winters)

Summary of Board Meeting Action Items

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

OWASA Board of Directors – 12 Month Board Meeting Schedule (January 22, 2021)

Month	Board Meetings		Committee Meetings & Other Board Items
	Work Session	Business Meeting	
January 2021	Appoint Audit Firm ↻ Employee Health and Dental Insurance Update for FY 22 ↻ D&I Update ↻ Discuss Reclassification of Sustainability Manager Position to Strategic Initiatives Manager CS – Check-in on ED Performance (w/o ED) 1/14/2021	Resolution Honoring the Service of Melvin Markley Adopt Preliminary Resolution for Revenue Bonds Update on COVID-19 2020 Annual Lakes Recreation Report ↻ Discuss FY 22 Budget Calendar and Planning Assumptions ↻ CIP Semiannual Report ↻ Q2 Financial Report ↻ 1/28/2021	*LRWSP staff update to the CTC & CHTC (1-12-2021 & 1-13-2021)* *OWASA Orientation for new BOCC Members (1-26-2021)*
February 2021	Department Managers FY 22 Budget Presentations ↻ Affordability Outreach Program Update ↻ Apprentice Program Update CS – Prepare for GC Interim Review ↻ 2/11/2021	Update on COVID-19 Adopt Series Resolution for Series 2021 Revenue Bonds Sewer Use Ordinance and Sewer Policy Updates to Align with House Bill 873 (Tentative) Potential to Restore Streams and Wetlands on Biosolids Property (Tentative) Approve conservation easement on private land CS – GC Interim Review ↻ 2/25/2021	*Annual Update and LRWSP staff update to the BOCC (2-16-2021)* *BOD Strategic Plan Special Meeting (TBD)* *Meeting between the CHTC OWASA Committee & Chapel Hill Appointees to the BOD (TBD)*
March 2021	FY 22 Draft Budget and Rates ↻ (Tentative) Award of Fermenter Mixing Improvements Construction Contract **LRWSP – Summary of Community Engagement** 3/11/2021	Update on COVID-19 Set date for Public Hearings – FY 22 Budget & Rates ↻ 3/25/2021	*Carrboro Appointees Update to CTC (TBD)*
April 2021	Review Employee Health and Dental Insurance Renewals ↻ FY 22 Draft Budget and Rate Adjustment ↻ BOD Eligible for Nominations to Election as Board Officers (include Officer descriptions) ↻ Award of West Cameron Avenue Water Main Replacement Phase 2 Construction Contract Planning for BOD Self-Assessment ↻ CS – Prepare for ED Interim Review ↻ 4/8/2021	Q3 Financial Report ↻ FY 22 Draft Budget and Rates Adjustment Information and Authorize Staff to Publish Proposed Rates ↻ CS – ED Interim Review ↻ 4/22/2021	
May 2021	**(Tentative) LRWSP – Guiding Principles for Jordan Lake Alternatives** Approve Employee Health and Dental Insurance Renewals ↻ 5/13/2021	Public Hearings – FY 22 Budget and Rates ↻ Approve Employee Health and Dental Insurance Renewals (if needed) ↻ 5/27/2021	*(Tentative) BOD Self-Assessment in Special Meeting*
June 2021	**(Tentative) LRWSP – Guiding Principles for Jordan Lake Alternatives** Approve FY 22 Budget and Rates ↻ Election of Officers ↻ 6/10/2021	TBD 6/24/2021	*(Tentative) BOD Self-Assessment in Special Meeting*
July 2021	D&I Update ↻ 7/8/2021	TBD 7/22/2021	*Possible welcome of new Board member(s)*
August 2021	CS – Prepare for GC Annual Review ↻ 8/12/2021	Preliminary 12 Month Financial Report ↻ CIP Semiannual Report ↻ CS – GC Annual Review ↻ 8/26/2021	

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

OWASA Board of Directors – 12 Month Board Meeting Schedule (January 22, 2021)

Month	Board Meetings		Committee Meetings & Other Board Items
	Work Session	Business Meeting	
September 2021	Annual Report on Disposal of Surplus Personal Property ↻ EEO/Affirmative Action Report and D&I Update ↻ 9/9/2021	Annual Report and Financial Audit ↻ Approve GC Engagement ↻ Forest Management Program Update (Annual Meeting of the BOD) 9/23/2021	
October 2021	CS – Prepare for ED Annual Review ↻ 10/14/2021	**Strategic Trends Report** ↻ **Annual Update of the Energy Management Plan** ↻ Reliability and Resiliency Improvements Update ↻ CS – ED Annual Performance Review ↻ 10/28/2021	
November 2021	TBD 11/11/2021	*Holiday – no meeting*	
December 2021	TBD 12/9/2021	*Holiday – no meeting*	

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 OWASA's Strategic Plan will continue with a Special Meeting of the Board in February 2021.

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

Abbreviations Used in Draft Schedule:

↻	Recurring agenda item (generally these are "required" items)	AV/AMI	Agua Vista/Advanced Metering Infrastructure
		BOCC	Orange County Board of County Commissioners

OWASA Board of Directors – 12 Month Board Meeting Schedule (January 22, 2021)

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

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

Agenda Item

- Capital Improvements Program (CIP) Semiannual Report

Purpose

- To summarize project and program performance for OWASA's Capital Improvements Program (CIP) for the first two quarters of Fiscal Year (FY) 2021

Background

- The report details overall CIP performance during the reporting period, provides status updates for projects active during the reporting period, and information on Minority and Women Business Enterprise (MWBE) participation and outreach measures.

- Highlights of the report include:

    - Approximately $9.3 million was invested in a total of 56 capital projects active during the reporting period. Nearly all of this total was spent in construction.

    - Staff expects FY 2021 expenditures to total $19.9 million, or 98% of the budgeted funds. (The Board-adopted target is to execute between 90% to 105% of budget).

    - The COVID-19 pandemic had some impacts on construction progress and other aspects of the CIP program. The most significant impacts on the program are expected to be its ramifications on upcoming budget deliberations this spring.

    - The only construction contract awarded during the period was a small roofing contract. As such, MWBE participation is essentially the same as the averages reported in the August 2020 Semiannual Report and includes 30% MWBE participation on formal and informal contracts, with 55% of the awarded contracts meeting the 10% participation goal.

Action Needed

- Receive and discuss the report.

To: Board of Directors

Through: Todd Taylor

From: Vishnu Gangadharan, P.E., PMP

Date: January 22, 2021

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 first two quarters of Fiscal Year (FY) 2021.

Discussion

Program Summary

During the first half of FY 2021, approximately $9.3 million (45% of the planned CIP budget) was invested in 56 capital projects to rehabilitate, replace or improve various components of OWASA's water and wastewater infrastructure, most notably:

- equipment used to thicken or concentrate the solids produced in various parts of the Wastewater Treatment Plant (WWTP) process;
- concrete tanks used for secondary clarification of the treated wastewater stream at the WWTP;
- several chemical storage and pumping facilities at the Water Treatment Plant (WTP);
- water mains along Barclay Road, Kensington Drive, and the intersection of Cameron Avenue and Columbia Street;
- water and sewer mains along Dobbins Drive;
- pipes and manholes throughout the wastewater collection system.

As foreshadowed in the August 2020 report, construction activity was heavy for the first two quarters of FY 2021. Projects in construction account for close to 98% of the $9.3 million spent this reporting period. Also of note was the near completion of design for the largest standalone project currently funded in the five-year CIP: the $6 million project to convert the remainder of the WTP electrical distribution system to an updated voltage standard.

The COVID-19 pandemic continued to impact the progression, monitoring, and communication aspects of construction and other projects, as CIP staff continue to operate primarily in a remote-work environment. However, the most significant impacts of COVID-19 on the program are expected to be its ramifications on upcoming budget deliberations this spring.

Most of the large construction projects listed above will be closed out early in the third quarter, but final billing on these projects as well as an increased period of construction activity at the WTP (Chemical Improvements, Finished Water Pumping, Finished Water Mains Resiliency projects) is reflected in a FY 2021 forecast generally in alignment with budget assumptions. Figure 1 below shows the actual and forecast FY 2021 CIP expenses against the monthly baseline, as well as the expenditure target of 90% to 105% of budgeted funds. The forecast FY 2021 expenditures of $19.9 million represents 98% of the budgeted funds, which falls within the Board-adopted target of executing between 90 to 105% of the CIP budget.

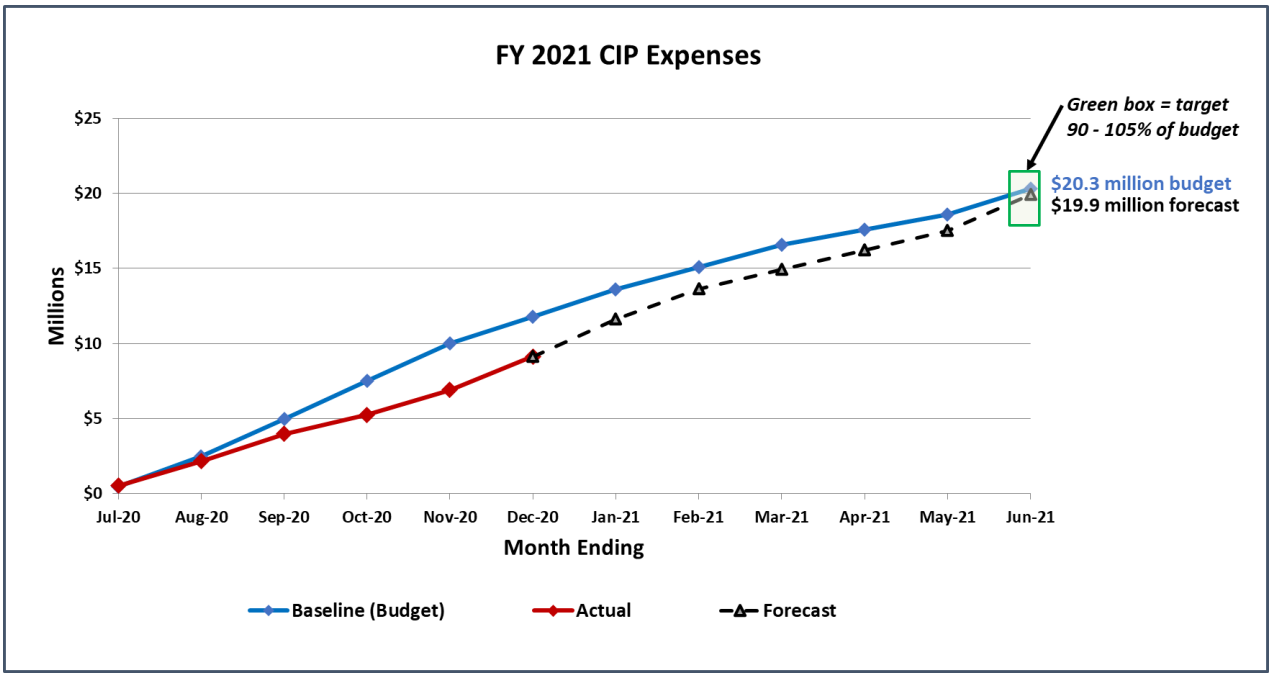


Figure 1 – FY 2020 CIP Expenses

Table 1 (attached) contains summaries of project performance for all active projects during this reporting period, including projections for the second half of FY 2021. The projects in the table are arranged according to the primary reason for the projected fiscal year cost variance (cost, schedule, or scope). For the majority of the projects, variances to FY 2021 budget - whether under or over - are due to schedule related changes. Project schedules which have been re-baselined primarily due to the COVID-19 pandemic are highlighted in yellow.

Minority and Women Business Enterprise (MWBE) Participation

OWASA's goal for minority participation in public building construction projects (vertical buildings & other structures over $300,000) is 10%. Due to the dramatic dropoff in construction opportunities procured this period (there was only a single contract awarded during this

reporting period: a roofing contract well under the formal threshold), the historical averages for the CIP program reported in Table 2 below are nearly the same as what was reported in the August 2020 Semiannual Report and include 30% MWBE participation on formal and informal contracts, with 55% of the awarded contracts meeting the 10% participation goal. In situations where the participation goal was not met, bidders met good faith effort requirements to solicit MWBE participation or else did not have any subcontracts.

Table 2
OWASA MWBE Participation Summary, FY 2016 through FY 2021, Second Quarter

	Black	Hispanic	Asian American	American Indian	Female	Total MWBE
Dollar amounts in MWBE categories	$ 91,193	$ 1,396,707	$ 0	$ 0	$ 14,143,882	$ 15,631,782
% of sum of contract value ($52,452,935)	0.2%	2.7%	0%	0%	27.0%	29.8%**

**overall goal is 10%

Additional Information

Customers may visit our website (www.owasa.org) for information about our current major CIP projects and our FY 2021 - 2025 CIP book which provides additional information about the CIP. Please feel free to contact me at (919) 537-4248 or vgangadharan@owasa.org if you have any questions regarding the CIP program or projects.

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

Attachment – Table 1 Project Performance Summary Table

Table 1: Project Performance Summary - FY 2021 through Second Quarter

FY 2021 Cost Variance due to cost/pricing

FY 2021 Cost Variance due to schedule changes

FY 2021 Cost Variance due to scope changes

✓ FY 2021 (or overall project) costs within 5% of FY 2021 (or overall project) budget; completion within 2 months of baselined completion

✗ FY 2021 (or overall project) costs more than 5% above FY 2021 (or overall project) budget; completion more than 2 months beyond baselined completion

Schedule re-baselined as a result of COVID-19 pandemic

All costs listed in $1000's

			FY 2021 Performance			Overall Project Performance						
CIP No.	Project	Active Phase (at 12/31/20)	FY 2021 Budget	FY 2021 Cost	FY 2021 Cost Status	Baseline Budget	Forecasted Cost	Cost Status	Baseline Completion	Forecasted Completion	Schedule Status	Comments
270-04	Jordan Lake Raw Water Supply Allocation	N/A	$ 5	$ 5	✓	$ 5	$ 5	✓	Jun 21	Jun 21	✓	
270-09	Quarry Reservoir Development	N/A	$ 15	$ 15	✓	$ 15	$ 15	✓	Jun 21	Jun 21	✓	
270-11	University Lake Pump Station Improvements	Closeout	$ 80	$ 40	✓	$ 2,105	$ 2,046	✓	Jul 20	Aug 20	✓	
270-28	University Lake Permanganate Facility	Design	$ -	$ 35	✗	$ 2,242	$ 2,231	✓	Dec 22	Dec 22	✓	Additional permitting effort and delayed billing from FY 2020
270-29	University Lake Fishing Pier and Boat Launch	Pending	$ 70	$ -	✓	$ 70	$ 70	✓	Dec 22	Dec 22	✓	
270-34	Western Intake Partnership Projects	Pending	$ 50	$ -	✓	$ 918	TBD	-	-	-	-	
271-05	Cane Creek Raw Water Transmission Main Study	Pending	$ 100	$ -	✓	$ 100	$ 100	✓	Dec 22	Dec 22	✓	
272-37	WTP Belt Filter Press Replacement	Design	$ 43	$ 10	✓	$ 3,587	$ 4,171	✗	Oct 22	Oct 22	✓	Bidding and construction to be postponed to accommodate other higher priority construction projects at WTP. Final cost estimate higher due to pricing and scope increases; project is funded by SRF loan).
272-39	Water and Wastewater Facilities Concrete Condition Assessment	Study	$ 50	$ -	✓	$ 50	$ 39	✓	Jun 23	Jun 23	✓	
272-42	WTP Finished Water Pump Improvements	Bidding	$ 550	$ 888	✗	$ 1,231	$ 1,033	✓	Dec 21	Apr 21	✓	Construction expected to be completed in FY 2021 ahead of schedule
272-46	WTP Chemical Facility Improvements	Bidding	$ 2,200	$ 3,321	✗	$ 3,550	$ 3,640	✓	Dec 21	Apr 21	✓	Construction expected to be completed in FY 2021 ahead of schedule
272-49	WTP and WWTP Supervisory Control and Data Acquisition (SCADA) Master Plan	Study	$ 150	$ 155	✓	$ 150	$ 155	✓	Jun 21	Jun 21	✓	
272-51	HVAC Replacement Program	Construction	$ 130	$ -	✓	$ 130	$ 130	✓	Jul 23	Jul 23	✓	
272-52	WTP Electrical Distribution Improvements	Study	$ 150	$ 270	✗	$ 5,950	$ 6,004	✓	Jun 23	Jun 23	✓	Design and planning efforts cost more and completed earlier than budgeted
275-15	Reimbursement for Distribution System Improvements	Construction	$ 204	$ 244	✗	$ 251	$ 244	✓	Jun 21	Jun 21	✓	Delayed billing
275-20	Water Distribution System Rehabilitation - vaults	Design	$ 465	$ 481	✓	$ 465	$ 481	✓	Jun 22	Jun 22	✓	
275-21	Foxcroft Dr Water Main	Design	$ 324	$ 120	✓	$ 324	$ 322	✓	Dec 21	Dec 21	✓	
275-21	Scarlett-Cooper Neighborhood Water Mains	Design	$ 125	$ -	✓	$ 749	$ 764	✓	Jun 23	Jun 23	✓	Design completed in FY 2020 ahead of schedule

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			FY 2021 Performance			Overall Project Performance						
CIP No.	Project	Active Phase (at 12/31/20)	FY 2021 Budget	FY 2021 Cost	FY 2021 Cost Status	Baseline Budget	Forecasted Cost	Cost Status	Baseline Completion	Forecasted Completion	Schedule Status	Comments
275-21	Barclay Road Water Main	Construction	$ -	$ 138	✗	$ 1,690	$ 1,627	✓	Jun 20	Sep 20	✗	Construction work completed in FY 2021 behind schedule
275-21	Oakwood-Rogerson Neighborhood Water Mains	Design	$ 310	$ 35	✓	$ 4,471	$ 3,330	✓	Jun 23	Jun 23	✓	Scope reduction and completion of some design in FY 2020 ahead of schedule
275-46	Dobbins Drive Water Main Replacement	Construction	$ 312	$ 401	✗	$ 2,275	$ 1,767	✓	Dec 20	Nov 20	✓	Delayed billing
275-52	West Cameron Avenue Water Main Replacement	Study	$ 1,085	$ 799	✓	$ 3,700	$ 4,587	✗	Mar 22	Mar 22	✓	Construction cost estimate increased at final design; project is funded by SRF loan
275-53	Distribution System Hydraulic Model	Study	$ 30	$ 20	✓	$ 30	$ 20	-	Jun 21	Jun 21	✓	
275-88	Kensington Drive Water Main Replacement	Construction	$ 1,453	$ 1,465	✓	$ 1,640	$ 1,652	✓	Dec 20	Jan 21	✓	
275-92	Jones Ferry Rd Water Main Replacements	Construction	$ 1,500	$ 1,114	✓	$ 3,042	$ 2,980	✓	Sep 21	Sep 21	✓	
275-93	Bolinwood Bridge Water Main Replacement	Design	$ 250	$ 172	✓	$ 250	$ 172	✓	Jun 21	Jun 21	✓	
275-94	Legion Road Water Main	Pending	$ 25	$ -	✓	$ 2,544	$ 2,544	✓	Jun 23	Jun 23	✓	
275-96	Manning Drive valve insertion	Design	$ 60	$ 30	✓	$ 60	$ 30	✓	Jun 21	Mar 21	✓	
275-99	Distribution System Asset Management	Study	$ 100	$ 30	✓	$ 100	$ 30	✓	Jun 21	Jun 21	✓	
276-18	Gravity Sewer Rehabilitation Program	Construction	$ 1,235	$ 2,037	✗	$ 3,462	$ 4,062	✗	Dec 20	Jun 21	✗	Construction progress in FY 2020 slowed initially due to higher priority projects, then due to pandemic response. Some added scope based on encountered conditions downstream of UNC Cogen. Some added schedule due to easement acquisition process.
276-45	Bolinwood Interceptor Replacement	Design	$ 200	$ 15	✓	$ 1,130	$ 1,220	✗	Mar 22	Jun 23	✗	Postponing project to accommodate higher priority projects; cost increase due to construction cost escalation.
276-48	Dobbins Drive Interceptor Replacement	Construction	$ 1,390	$ 1,564	✗	$ 2,415	$ 2,599	✗	Dec 20	Jan 21	✓	Cost increase due to encountered conditions (increased quantities of select backfill, adjacent sewer repair)
276-52	Rocky Branch Interceptor Replacement	Design	$ 62	$ 48	✓	$ 762	$ 762	✓	Jun 22	Dec 21	✓	
276-53	Creek Crossing Access Improvements	Design	$ 50	$ -	-	$ 914	$ 702	✓	Jun 22	Jun 22	✓	
276-58	Prince Street Service Replacement	Construction	$ 25	$ 50	✗	$ 67	$ 92	✗	Jun 21	Jan 21	✓	Design and construction costs greater than anticipated
276-99	Collection System Asset Management	Study	$ 60	$ 30	✓	$ 60	$ 30	✓	Jun 21	Jun 21	✓	

Table 1: Project Performance Summary - FY 2021 through Second Quarter

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			FY 2021 Performance			Overall Project Performance						
CIP No.	Project	Active Phase (at 12/31/20)	FY 2021 Budget	FY 2021 Cost	FY 2021 Cost Status	Baseline Budget	Forecasted Cost	Cost Status	Baseline Completion	Forecasted Completion	Schedule Status	Comments
277-31	Rogerson Drive Pump Station Rehabilitation Phase 2	Construction	$ -	$ 52	✗	$ 2,169	$ 2,349	✗	Jun 19	Dec 19	✗	Additional scope added for pipe redundancy improvement at pump station. Some construction delay required to accommodate the emergency repair of the Rogerson Drive Force Main. Final billing delayed.
277-40	Wastewater Pump Station Operational and Needs Assessments	Study	$ 35	$ 15	✓	$ 85	$ 80	✓	Jun 21	Jun 21	✓	
277-43	Rogerson Drive Force Main and Pump Station Program Services	Study	$ 147	$ 49	✓	$ 307	$ 283	✓	Jun 22	Dec 22	✗	Some assessment work delayed due to necessary pump station maintenance
277-45	Wastewater Pump Station Rehabilitation	Study	$ 280	$ 185	✓	$ 800	$ 800	✓	Jun 23	Jun 23	✓	Design effort for FY 2021 is behind schedule; overall project on track.
278-11	Wastewater Facility Asset Rehabilitation	Construction	$ 150	$ 130	✓	$ 150	$ 130	✓	Jun 21	Jun 21	✓	
278-20	WWTP Clarifier #4 Conversion	Pending	$ 125	$ 50	✓	$ 1,907	$ 1,823	✓	Jun 22	Aug 22	✓	
278-51	WWTP Solids Thickening Improvements	Construction	$ 3,879	$ 3,261	✓	$ 6,023	$ 6,365	✗	Apr 21	Mar 21	✓	Additional costs associated with contract suspension (COVID) and unforeseen site conditions
278-68	Water and Wastewater Facilities Building Envelope Rehabilitation	Design	$ 450	$ 247	✓	$ 450	$ 350	✓	Jun 21	Feb 21	✓	
278-72	WWTP Secondary Clarifier 2 and 3 Rehabilitation	Construction	$ 1,017	$ 1,078	✗	$ 1,164	$ 1,168	✓	Apr 21	Apr 21	✓	Delayed construction progress at end of FY 2020
278-75	WWTP Facilities Planning	Pending	$ 100	$ 50	✓	$ 300	$ 300	✓	Jun 23	Dec 22	✓	
278-78	WWTP Fermenter Improvements	Design	$ 540	$ 890	✗	$ 994	$ 1,395	✗	Jun 21	Aug 21	✓	Cost includes FY 2018 cleaning effort. Additional rehab, electrical, and controls needs determined during final design. Equipment bids more expensive than expected.
278-80	WWTP Miscellaneous Rehabilitation	Construction	$ 400	$ 288	✓	$ 900	$ 788	✓	Jun 23	Jun 23	✓	Project consists of several construction packages; chemical storage rehab package has been deferred to FY 2023
278-82	WWTP Headworks Rehabilitation	Construction	$ 113	$ 10	✓	$ 1,466	$ 1,496	✓	Dec 20	May 20	✓	
278-84	WWTP Security Improvements	Study	$ 50	$ -	✓	$ 225	$ 100	✓	Jun 23	Jun 23	✓	Scope reduction
278-88	Offsite Biosolids Storage Improvements	Study	$ 75	$ 55	✓	$ 75	$ 55	✓	Jun 21	Jun 21	✓	
278-90	WWTP Administration Building Rehabilitation	Pending	$ 25	$ -	✓	$ 55	$ 55	✓	Jun 22	Jun 22	✓	
279-13	Reclaimed Water Valve/Coupling Investigation	Study	$ 75	$ 25	✓	$ 350	$ 350	✓	Jun 23	Jun 23	✓	

Total FY 2021 Active Projects	FY 2021 Budget	FY 2021 Cost
	$ 20,319	$ 19,917

Agenda Item

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

Background

- Mr. Melvin Markley will retire effective February 1, 2021, with 35 years of service as a Utility Mechanic in OWASA's Distribution and Collection System Department.

Action Needed

- Adoption of the Resolution Honoring the Service of Melvin Markley to the Orange Water and Sewer Authority and the Carrboro-Chapel Hill-Orange County Community.

January 28, 2021

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

Whereas, Melvin Markley has worked dependably and faithfully for 35 years as a Utility Mechanic in the Orange Water and Sewer Authority's (OWASA) Distribution and Collection System Department, as an essential public employee in service to the people of the Carrboro-Chapel Hill-Orange County community; and

Whereas, during Mr. Markley's career at OWASA he worked in all aspects of the Distribution and Collection Systems. He spent a large part of his career on the Water Service and Hydrant Crew, known as the "Hydrant Man," due to his wealth of knowledge and experience with maintenance and repair of fire hydrants. Mr. Markley is a dedicated employee and team player who was always willing to answer a call around the clock to assist his team with emergency repairs; and

Whereas, throughout Mr. Markley's career, he was a key member in planning and executing numerous initiatives in the Distribution and Collection System Department. Most recently he was an essential member of the Collection System Preventative Maintenance Program where he utilized his years of experience and knowledge of the system to improve and expand the sewer cleaning program; and

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

Whereas, Mr. Markley has earned the admiration and respect of his co-workers at OWASA and has made many lasting contributions to OWASA and the community, and retires from OWASA on February 1, 2021;

Now, Therefore, Be It Resolved:

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

Adopted this 28th day of January 2021.

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

ATTEST:

_____
Jo Leslie Eimers, Secretary

Agenda Item

- Adopt Preliminary Resolutions for Revenue Bonds

Background

- The Board of Directors and staff have identified the need to issue revenue bonds to help fund investments to maintain OWASA's water and sewer system and our ability to deliver high-quality services to our customers.

- Staff has identified approximately $20 million in Capital Improvements Program (CIP) projects to be funded by revenue bonds.

- The next step in the process of issuing bonds is for the OWASA Board of Directors to approve resolutions directing staff to file an application with the North Carolina Local Government Commission (LGC) and a resolution asking the LGC to approve the financing team.

Action Needed

Approve the following resolutions:

Resolution A Resolution directing the filing of an application with the LGC for approval of the issuance and private sale of Orange Water and Sewer Authority Water and Sewer System Revenue Bonds, Series 2021

Resolution B Resolution requesting the North Carolina Local Government Commission to approve the financing team to be used in connection with the issuance and sale of Orange Water and Sewer Authority Water and Sewer System Revenue Bonds, Series 2021

January 28, 2021

MEMORANDUM

TO: Board of Directors

THROUGH: Todd Taylor, P.E.

FROM: Stephen Winters, CPA

DATE: January 22, 2021

SUBJECT: Adopt Preliminary Resolutions for Revenue Bonds

Background

The Board of Directors and staff have identified the need to issue revenue bonds to help fund investments to maintain OWASA's water and sewer system and our ability to deliver high-quality services to our customers.

Series 2021 Water and Sewer Revenue Bonds

Our long-term financial planning indicates the need to borrow about $20 million in FY 2021 and we have identified approximately $20 million in Capital Improvements Program (CIP) projects to be funded by the Series 2021 Water and Sewer Revenue Bonds (Series 2021 Bonds).

North Carolina Local Government Commission Approval

As with any financing transaction such as this, we are working with the North Carolina Local Government Commission (LGC). The transaction must be approved by the LGC.

Bond Resolutions

Two required preliminary resolutions must be adopted for the borrowing process to proceed.

- Resolution directing the filing of an application with the LGC for approval of the issuance and public sale of Orange Water and Sewer Authority Water and Sewer System Revenue Bonds, Series 2021 (Resolution A)

- Resolution requesting the North Carolina Local Government Commission to approve the financing team to be used in connection with the issuance and sale of Orange Water and Sewer Authority Water and Sewer System Revenue Bonds, Series 2021 (Resolution B)

The purpose of Resolution A is to get the Board's approval to file an application for approval of the bond issues with the LGC. The purpose of Resolution B is to get the LGC's approval of the financing team. The financing team consists of the following:

400 Jones Ferry Road, Carrboro, NC 27510 919-968-4421 info@owasa.org @OWASA1 www.owasa.org

Bond Counsel

Based on our satisfaction with services rendered in connection with previous bond issues, staff recommends the firm of McGuireWoods LLP to serve as bond counsel. Kevin Dougherty of McGuireWoods has served OWASA in this capacity since, and including, the Series 2001 issue. Mr. Dougherty rewrote and streamlined our bond order in 2001 and has significant knowledge of our operations.

Trustee and Bond Registrar

The Bank of New York Trust Company has provided competent trustee services for OWASA beginning with the Series 1993 issue. To preserve continuity in trustee services, staff recommends that the Bank of New York Trust Company continue to serve as our bond trustee.

Financial Advisor to OWASA

David Cheatwood of First Tryon Advisors is serving as OWASA's financial advisor. Mr. Cheatwood has provided valuable guidance to OWASA in previous bond transactions and other financial matters.

Feasibility Consultant

The LGC requires that a third-party review our financial projections and verify that these projections show adequate revenue to pay existing and new indebtedness. Stantec, Inc. conducted OWASA's most recent rate studies and assists us with the annual update to our financial plan. Based on our satisfaction with their services and the efficiencies we will achieve through their knowledge of OWASA, staff recommends Stantec, Inc. to serve as feasibility consultant.

Series Resolutions to be presented for Board Approval on February 25, 2021

In accordance with Section 2.08 of OWASA's Bond Order dated September 13, 2001, the final formal action the Board of Directors must take to issue the bonds will be to adopt the Series Resolutions. This is scheduled for the Board Meeting on February 25, 2021.

Action Requested

Approve resolutions in preparation for the issuance of Series 2021 Water and Sewer Revenue Bonds.

Stephen Winters, CPA
Director of Finance and Customer Service

Attachments:

	Resolution A	Resolution directing the filing of an application with the LGC for approval of the issuance and private sale of Orange Water and Sewer Authority Water and Sewer System Revenue Bonds, Series 2021
	Resolution B	Resolution requesting the North Carolina Local Government Commission to approve the financing team to be used in connection with the issuance and sale of Orange Water and Sewer Authority Water and Sewer System Revenue Bonds, Series 2021

RESOLUTION DIRECTING THE FILING OF AN APPLICATION WITH THE NORTH CAROLINA LOCAL GOVERNMENT COMMISSION FOR APPROVAL OF THE ISSUANCE AND PUBLIC SALE OF ORANGE WATER AND SEWER AUTHORITY WATER AND SEWER SYSTEM REVENUE BONDS, SERIES 2021

WHEREAS, the Orange Water and Sewer Authority ("OWASA"), acting by and through its Board of Directors (the "Board"), is authorized by The State and Local Government Revenue Bond Act of North Carolina, Article 5 of Chapter 159 of the North Carolina General Statutes, as amended (the "Act"), and particularly Sections 159-83(a)(5) and 159-81(3)a and b thereof, to issue revenue bonds for the purpose of financing the cost of acquisition, construction, reconstruction, enlargement, equipping, extension, betterment or improvement of facilities for obtaining, conserving, treating and distributing water for domestic or industrial use, irrigation, sanitation, fire protection, or any other public or private use and the collection, treatment, purification or disposal of sewage; and

WHEREAS, OWASA owns and operates facilities for the production, collection, treatment, transmission and distribution of water and the collection, transmission, treatment and disposal of sewage; and

WHEREAS, OWASA proposes to issue its Water and Sewer System Revenue Bonds, Series 2021 (the "Series 2021 Bonds") for the purpose of providing funds, together with other available funds, to (i) acquire, construct and equip certain improvements to OWASA's water and sewer system, including, but not limited to, replacement and rehabilitation of water and sewer mains, replacement and rehabilitation of water and wastewater pumping stations, chemical facility improvements and water pump improvements at the Jones Ferry Road Water Treatment Plant, replacement of sewer interceptors, and improvements to and rehabilitation of facilities and equipment at the Mason Farm Wastewater Treatment Plant (collectively, the "2021 Additional

Project") and (ii) pay certain costs and expenses incurred in connection with the sale and issuance of the Series 2021 Bonds; and

WHEREAS, OWASA proposes to issue the Series 2021 Bonds in an aggregate principal amount not to exceed $21,000,000, the determination of the aggregate principal amount of the Series 2021 Bonds to be made at the time of the public sale of the Series 2021 Bonds;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE ORANGE WATER AND SEWER AUTHORITY DOES HEREBY DETERMINE AND RESOLVE, as follows:

1. The Board hereby finds and determines, in connection with the issuance of the Series 2021 Bonds, that (i) the issuance of the Series 2021 Bonds is necessary or expedient for OWASA, (ii) the proposed aggregate principal amount of the Series 2021 Bonds is adequate and not excessive for the proposed purposes of such issue, (iii) the proposed 2021 Additional Project is feasible, (iv) OWASA's debt management procedures and policies are good and OWASA's finances are managed in strict compliance with law and (v) under current economic conditions, the Series 2021 Bonds can be marketed at a reasonable interest cost to OWASA.

2. The Board hereby authorizes the filing of an application with the Local Government Commission for approval of the issuance of the Series 2021 Bonds, in an aggregate principal amount not to exceed $21,000,000, pursuant to Section 159-86 of the Act and directs the Executive Director of OWASA and the Director of Finance and Customer Service of OWASA, as representatives of OWASA, to file such application with the Local Government Commission.

3. The Local Government Commission is hereby requested to sell the Series 2021 Bonds at public sale after advertisement and upon sealed and electronic bids to the bidder offering to purchase the Series 2021 Bonds at the lowest interest cost to OWASA, such cost to be

determined in accordance with the true interest cost method, subject to the right of OWASA to change, cancel or reschedule the date or time established for the receipt of bids.

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

Adopted this 28th day of January, 2021.

_____
Raymond DuBose, Chair

ATTEST:

_____
Jo Leslie Eimers, Secretary

RESOLUTION REQUESTING THE NORTH CAROLINA LOCAL GOVERNMENT COMMISSION TO APPROVE THE FINANCING TEAM TO BE USED IN CONNECTION WITH THE ISSUANCE AND SALE OF ORANGE WATER AND SEWER AUTHORITY WATER AND SEWER SYSTEM REVENUE BONDS, SERIES 2021

WHEREAS, the Orange Water and Sewer Authority ("OWASA"), acting by and through its Board of Directors (the "Board"), is authorized by The State and Local Government Revenue Bond Act of North Carolina, Article 5 of Chapter 159 of the North Carolina General Statutes, as amended (the "Act"), and particularly Sections 159-83(a)(5) and 159-81(3)a and b thereof, to issue revenue bonds for the purpose of financing the cost of acquisition, construction, reconstruction, enlargement, equipping, extension, betterment or improvement of facilities for obtaining, conserving, treating and distributing water for domestic or industrial use, irrigation, sanitation, fire protection, or any other public or private use and the collection, treatment, purification or disposal of sewage; and

WHEREAS, OWASA owns and operates facilities for the production, collection, treatment, transmission and distribution of water and the collection, transmission, treatment and disposal of sewage; and

WHEREAS, OWASA proposes to issue its Water and Sewer System Revenue Bonds, Series 2021 (the "Series 2021 Bonds") for the purpose of providing funds, together with other available funds, to (i) acquire, construct and equip certain improvements to OWASA's water and sewer system, including, but not limited to, replacement and rehabilitation of water and sewer mains, replacement and rehabilitation of water and wastewater pumping stations, chemical facility improvements and water pump improvements at the Jones Ferry Road Water Treatment Plant, replacement of sewer interceptors, and improvements to and rehabilitation of facilities and equipment at the Mason Farm Wastewater Treatment Plant (collectively, the "2021 Additional

Project") and (ii) pay certain costs and expenses incurred in connection with the sale and issuance of the Series 2021 Bonds; and

WHEREAS, OWASA proposes to issue the Series 2021 Bonds in an aggregate principal amount not to exceed $21,000,000, the determination of the aggregate principal amount of the Series 2021 Bonds to be made at the time of the public sale of the Series 2021 Bonds; and

WHEREAS, OWASA has selected for recommendation to the Local Government Commission a financing team to be used in connection with the issuance and public sale of the Series 2021 Bonds; and

WHEREAS, the selection of said financing team was made by OWASA after a review of the record of service to OWASA of the members of said financing team; and

WHEREAS, OWASA wishes to obtain the approval of the Local Government Commission for said financing team;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE ORANGE WATER AND SEWER AUTHORITY DOES HEREBY DETERMINE AND RESOLVE, as follows:

1. The Board hereby recommends that the following financing team members be engaged in connection with the issuance and public sale of the Series 2021 Bonds and requests that the Local Government Commission approve said financing team members:

Bond Counsel:	McGuireWoods LLP
Trustee and Bond Registrar:	The Bank of New York Mellon Trust Company, N.A.
Financial Advisor to OWASA:	First Tryon Advisors
Feasibility Consultant (Agreed-upon Procedures):	Stantec Consulting Services, Inc.

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

Adopted this 28th day of January, 2021.

_____
Raymond DuBose, Chair

ATTEST:

_____
Jo Leslie Eimers, Secretary

Orange Water and Sewer Authority

Closed Session of the Board of Directors

January 14, 2021

The Board of Directors of Orange Water and Sewer Authority met virtually in Closed Session on Thursday, January 14, 2021, following the Board meeting.

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

Staff present: None

****

Item One

The Board of Directors met in Closed Session without staff to evaluate the performance of OWASA's new Executive Director from October 22, 2020 (the date of his last interim on-boarding performance evaluation) through January 14, 2021.

No official action was taken at the meeting.

The meeting was adjourned at 7:24 p.m.

_____

Jo Leslie Eimers, Chair
Human Resources Committee

DRAFT

Agenda Item

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

Purpose

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

- Staff will provide a verbal update on activities since October 22, 2020 including an update on OWASA's support of wastewater surveillance testing for COVID-19.

Action Needed

- Discussion and questions by the Board of Directors.

January 28, 2021

Agenda Item

- 2020 Annual Lakes Recreation Report

Purpose

- To provide information about the 2020 lake recreation season including visitors, expenses, and revenues.

Background

- This report and other agenda information has been distributed by email to more than 250 lake recreation stakeholders.

Action Needed

- Receive and discuss the 2020 Annual Lakes Recreation Report

January 28, 2021

MEMORANDUM

TO: Board of Directors

THROUGH: Todd Taylor

FROM: Johnny Riley

DATE: January 22, 2021

SUBJECT: 2020 Lake Recreation Report

Purpose

To provide information about lake recreation in calendar year 2020 including visitors, costs, and revenues.

In accordance with the Board's direction, this report is provided in the Board's regular meeting agenda each year and public comments are welcome. This report and other agenda information will also be distributed by e-mail to more than 250 lake recreation stakeholders.

Key Takeaways

- Opening day for recreation at University Lake and Cane Creek Reservoir (the Lakes) was delayed from March 21st until May 29th due to COVID-19.
- Limits were put in place to keep attendance at 1/3 capacity due to COVID-19 restrictions and rental of OWASA-owned equipment was suspended. Only equipment owned by visitors was allowed.
- An online registration system was established to handle the demand for available spots.
- Overall attendance and revenue decreased by 80.3% and 86.0%, respectively.
- Revenue covered about 14% of costs.
- We had a safe year with no incidents.
- We plan to open the 2021 recreation season with the 2020 COVID-19 safety measures in place and evaluate our practices, based on public health guidance, as the recreation season progresses.

Operational Changes due to COVID-19

Due to COVID-19, the Lakes opened for recreation later than normal and at reduced capacity. Opening day was postponed until May 29th and capacity was limited to 25 boats and 10 shore activity users per day at Cane Creek Reservoir. At University lake, the limits were 10 boats per day and 4 shore activity users per day. No fees were charged during the first two weekends to limit close contact with visitors while a no touch credit card payment system was developed. Also, an online reservation system was established for lake visitors to sign-up for visitation

spots. To ensure available spots were distributed fairly, people were asked to sign up for a reservation on the Monday and Tuesday preceding the weekend they wanted to visit. Once the names had been submitted for that week, a computer program selected the names of those that would be able to visit the lakes that weekend. An email was sent to each person that signed up notifying them whether they had been selected or not. During the first few months of opening, we had more people sign up than we had available spots. Some weeks we had almost double the people sign up than we had spots available. As the season progressed, this number became less and less, and during the last few months of the season, almost all the people that signed up for a spot got them.

Rental of OWASA-owned equipment was suspended for the season and only equipment owned by visitors was allowed, eliminating the need for staff to sanitize equipment. Other than the delayed opening date, the hours and days of operation did not change. University Lake was open Friday, Saturday and Sunday from 6:30 a.m. to 6:00 p.m. and Cane Creek Reservoir was open Friday and Saturday from 6:30 a.m. to 6:00 p.m. Cane Creek Reservoir is open for birdwatching on Wednesdays from 7:00 a.m. to 11:00 a.m. during the winter months of November through mid-March.

User Fees

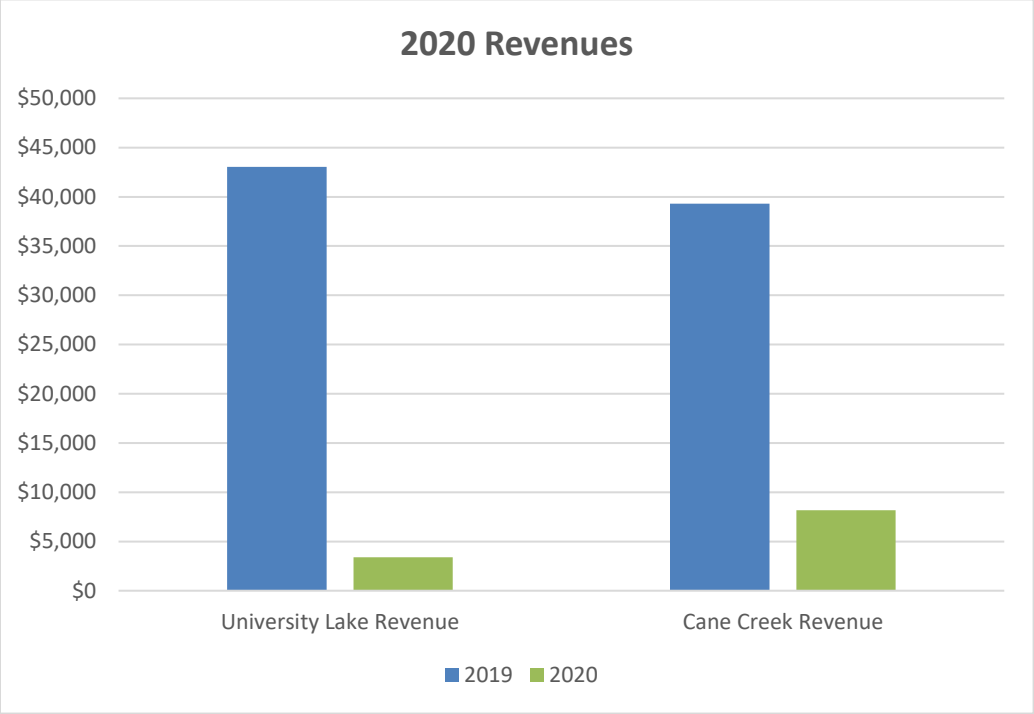
Attachment 1 shows the rates and fees applicable for the 2020 season. Fees have remained unchanged since 2011. Since equipment rental was suspended due to COVID-19, only private boat launch and lake use fees were applicable during the 2020 season

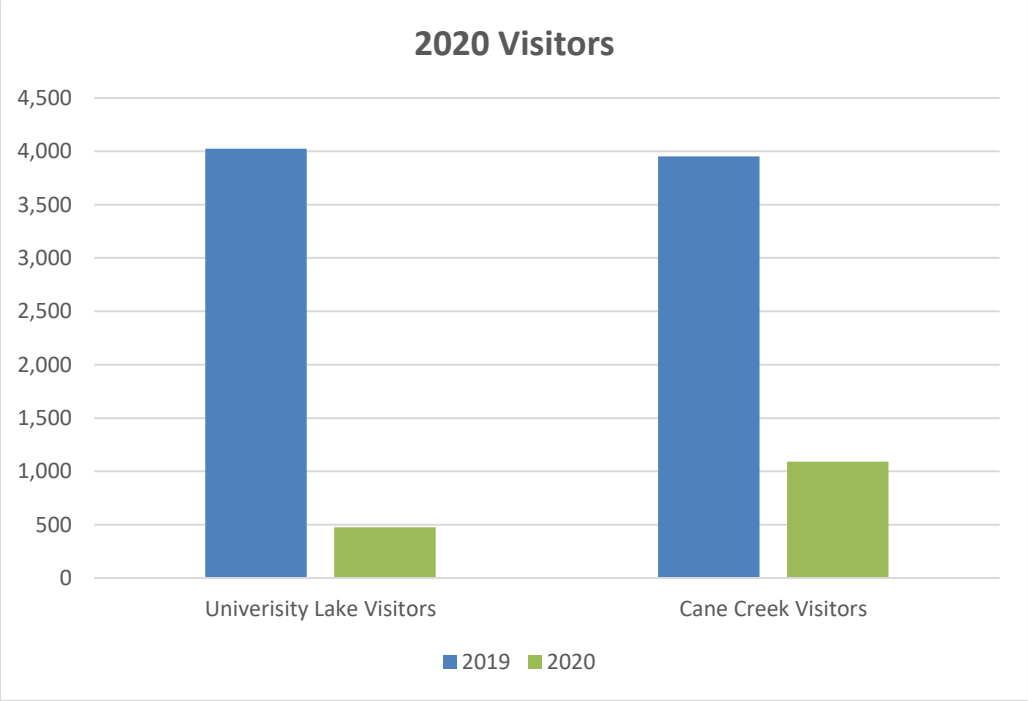
Revenue and Attendance

The following table and graphs show 2020 revenue and attendance information for both recreation locations.

Calendar Year 2020 Revenue and Attendance						
	University Lake		Cane Creek Reservoir		Total	
	Amount	% Change from 2019	Amount	% Change from 2019	Amount	% Change from 2019
Revenue	$3,395	-92.1%	$8,169	-79.2%	$11,564	-86.0%
Visitors	476	-88.2%	1,092	-72.4%	1,568	-80.3%
Average Revenue per visitor	$7.13	-33.3%	$7.48	-24.7%	$7.38	-31.4%
Daily attendance – Friday	6	-68.4%	23	-36.1%	29	-55.4%
Daily attendance – Saturday	8	-82.6%	29	-61.8%	37	-69.7%
Daily attendance – Sunday	9	-81.6%	NA	NA	9	-81.6%

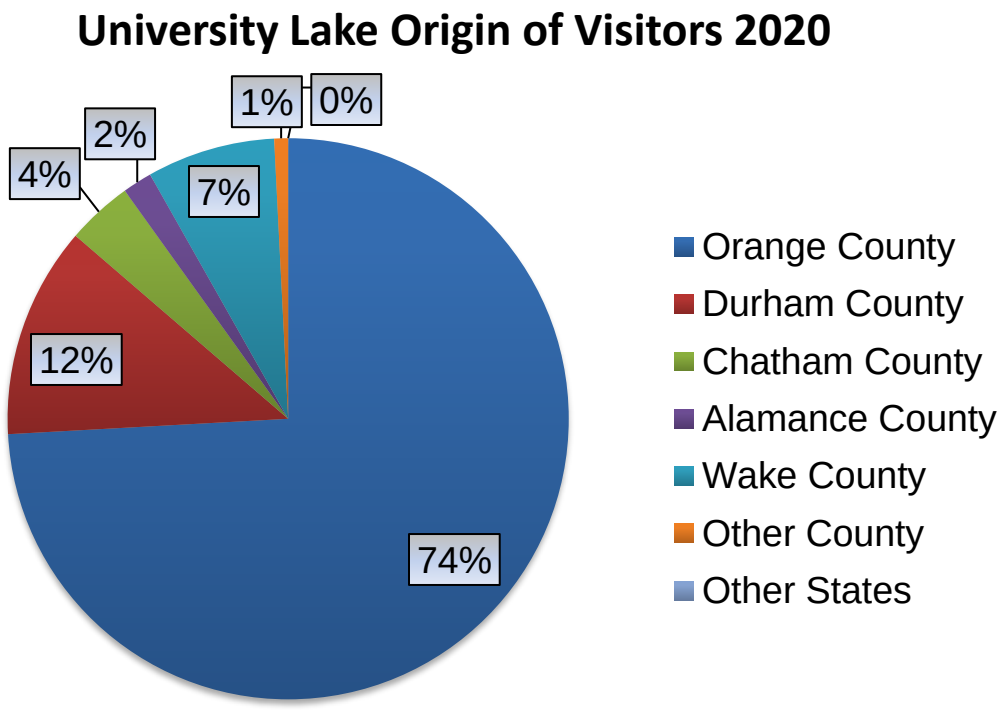
Revenue and attendance decreased at both University Lake and Cane Creek Reservoir in 2020.



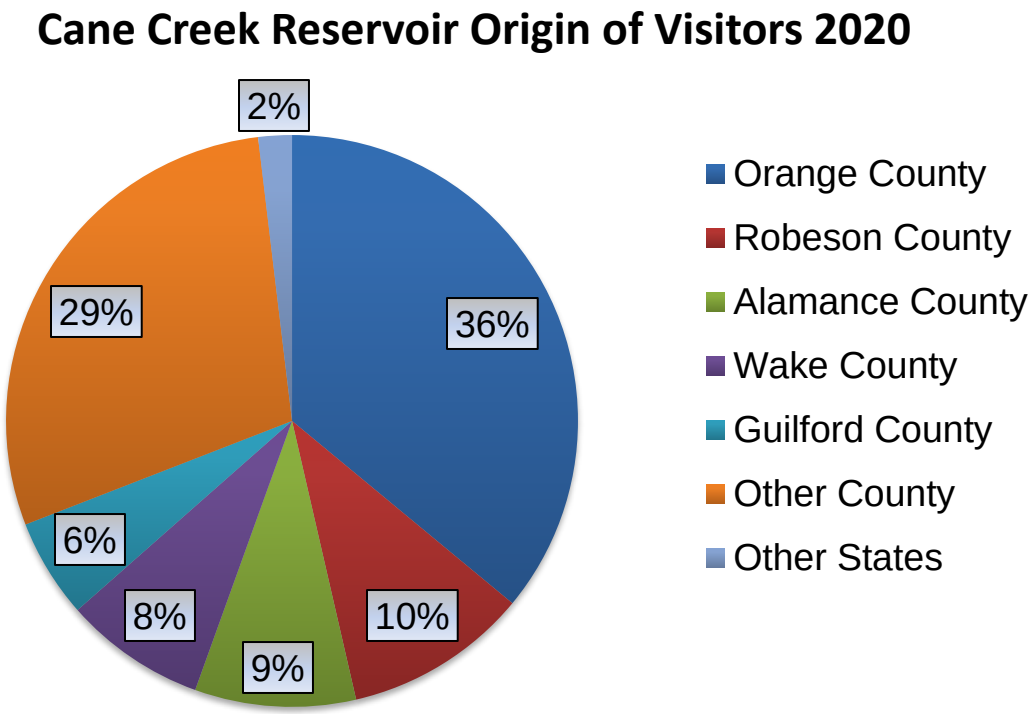


Demographics

The largest segment of visitors at University Lake continues to be Orange County residents.



The largest segment of visitors at Cane Creek Reservoir continues to be Orange County residents.



Expenses versus Revenues

As shown in Attachment 3, expenses exceeded revenues by $68,982 in 2020. Revenues covered about 14% of costs. Labor remains the largest expense in the operation of the lakes. The lakes staff time is allocated to recreation oversight activities and normal lake operations.

2021 Lake Recreation Season

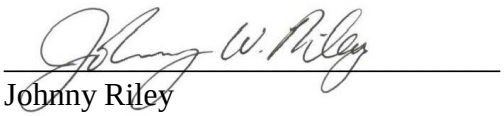
Both lakes will open for recreation March 27, 2021. The lakes will be open to a reduced number of visitors (the same limits as this year) via a reservation system, among other restrictions. In order to visit either lake, visitors will have to register ahead of time via our online registration system.

To apply for a reservation, visitors will fill out a form on the Recreation page of the OWASA website during the designated time each week (Monday and Tuesday). If more applications are submitted than slots available, a random drawing will take place. Applicants will then be notified via email whether their name was selected or not. Visitors selected for one of the available boating slots will be allowed to bring one guest.

We will not be renting equipment (i.e. boats, motors, personal floatation devices, etc.) to visitors. Boaters must supply their own equipment, and OWASA staff will continue to inspect equipment before being allowed to be used on the lake.

These recreation guidelines may be updated as the season progresses, depending on guidance from health officials.

Please feel free to contact me with any questions concerning this report or the lake operation.



Johnny Riley
Reservoir and Land Resources Supervisor

Attachment 1: Lake Use Fees
Attachment 2: 5-year Lake Revenues
Attachment 3: 2020 Lake Operating Expenses

Attachment 1 – Lake Use Fees

2019 and 2020 Lake Use Fees

USE FEES:		**2019 Season**	**2020 Season**
Boat Rental Fee	Orange County Resident	$4.50[1]	$4.50[1]
	Non-county Resident	$8.00[1]	$8.00[1]
Kayak Rental Fee	Orange County Resident	$15.00	$15.00
	Non-county Resident	$20.00	$20.00
Private Boat Launch Fee	Orange County Resident	$3.50	$3.50
	Non-county Resident	$7.00	$7.00
Motor Rental	Orange County Resident	$15.00	$15.00
	Non-county Resident	$22.00	$22.00
Lake Use Fee	Orange County Resident	$4.50	$4.50
	Non-county Resident	$5.50	$5.50
	Child (Orange County Resident)	$2.00	$2.00
	Senior (OWASA Customer or Orange County Resident)	$0.00	$0.00
	Senior or Child (Non-County Resident)	$2.50	$2.50

[1] Rental Fee does not include applicable Lake Use Fees

Attachment 2 – 5-year Lake Revenues

YEAR	2016	2017	2018	2019	2020
Boat Rentals	12,702	14,425	12,255	13,101	0
Lake Use & Boat Launch Fees	30,935	34,664	30,997	32,914	11,564
Electric Motor Rentals	15,335	19,134	19,005	21,645	0
Lakes Use Passes	2,991	4,063	4,475	5,946	0
Kayak Rentals	6,530	8,200	8,320	8,740	0
TOTAL:	***$68,493***	***$80,486***	***$75,052***	***$82,346***	***$11,564***

Attachment 3
2020 Lake Operating Expenses

Description	Expenses				
	Total	Cane Creek Reservoir		University Lake	
		Non-Recreational	Recreational	Non-Recreational	Recreational
Full Time Employee Salaries	$194,821	$89,610	$21,334	$52,983	$30,894
Payroll Taxes & Employee Benefits	$79,877	$36,740	$8,747	$21,723	$12,667
Part Time Employee Salaries	0	0	0	0	0
Utilities	$7,799	$2,146	$2,004	$2,349	$1,300
Materials and Supplies	$4,321	$2,002	$1,408	$343	$568
Maintenance of Facilities	$655	$172	$73	$265	$145
Annual Amortization of equipment	$4,000	$2,000	0	$2,000	0
Miscellaneous Expenses	$3,645	$1,581	$1,406	$658	0
Totals	**$295,118**	**$134,251**	**$34,972**	**$80,321**	**$45,574**

2020 Recreation Revenue	**$11,564**
Total Recreation Expenses	**$80,546**
Recreation Deficit	**($68,982)**

Agenda Item

- Financial Report for the Six-Month Period Ended December 31, 2020

Purpose

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

Background

- The financial report consists of a Statement of Net Position, an Income Statement that includes a budget to actual comparison, graphical presentations of financial performance indicators and a Financial Management Policy Report Card.

- Highlights of the report include:

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

    - Total income for the period was about $691,000 greater than the budget.

    - System development fees were about $937,000 greater than budget.

    - Operating Expenses were about $1.1 million less than budget.

    - Net Income less Debt Service was about $1.7 million greater than budget. OWASA is a nonprofit entity. Net Income less Debt Service is used to fund investments in capital improvement projects and reserves.

    - Capital Improvements Program expenditures for the six-month period were approximately $9.1 million. FY 2021 expenditures are currently projected to be approximately $19.9 million or 98% of budget.

Action Needed

- Receive and discuss the financial report for the six-month period ended December 31, 2020.

January 28, 2021

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:	Todd Taylor, P.E.
From:	Stephen Winters, CPA
Date:	January 22, 2021
Subject:	Financial Report for the six-month period ended December 31, 2020

Purpose

The financial report for the six-month period ended December 31, 2020 is presented to inform the Board of Directors of OWASA's financial position and financial performance in relation to budget.

Contents

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

Fiscal Performance

- In March 2020, the COVID-19 pandemic began impacting our service area. The University of North Carolina and many businesses were closed or significantly scaled back their operations. For the period from March 16 through December 31, 2020, water volume demand was down about 12% as compared to the same period in 2019. The budget for revenue for the first six months of FY 2021 was reduced from original projections by 12%.
- As shown on page 10 of the report, all but one of our financial performance measurement targets were met for the period. Our working capital reserve fund was about $6.6 million less than our target of $12.2 million. After we close on our next bond issue in April 2021, we expect our working capital reserve balance to equal or exceed our target.
- Average drinking water sales for the period was 5.57 million gallons per day (MGD), 6.17 MGD was projected. Combined drinking and reclaimed water sales for the period averaged 6.49 MGD versus a projection of 7.14 MGD.
- Total income was over budget by 3.6% or about $691,000 greater than the budget. Water and sewer sales were under budget by 1.1% or about $207,000.
- System development fees were over budget by about $937,000. Several large meters that were scheduled to be set in FY 2020 were instead set in FY 2021.
- Total operating expenses for the period were about $1.1 million less than the budget. Due to the impact of the pandemic, staff is limiting non-essential operating expenses.

- General and administrative expenses were under budget by about $119,000. The difference is primarily due to deferring consulting expenses.
- Water supply and treatment department expenses were under budget by about $306,000. Energy, chemicals and supplies, and maintenance were under budget by between $80,000 and $100,000 each.
- Water distribution expenses were under budget by about $195,000. Position vacancies, material and supplies, and maintenance made up most of the variance.
- Wastewater treatment expenses were under budget by about $366,000. The variance is due to being under budget in energy, chemicals, and maintenance.
- Wastewater collection expenses were under budget by about $100,000. Most expense categories were under budget.

- Net Income less Debt Service for the period was approximately $1.7 million more than budget. OWASA is a nonprofit entity. Net Income less Debt Service is used to fund investments in capital improvement projects and reserves.
- **Capital Improvements Program (CIP) Summary**

  During the first half of FY 2021, approximately $9.3 million (45% of the planned CIP budget) was invested in 56 capital projects to rehabilitate, replace or improve various components of OWASA's water and wastewater infrastructure, most notably:

  - equipment used to thicken or concentrate the solids produced in various parts of the Wastewater Treatment Plant (WWTP) process;
  - concrete tanks used for secondary clarification of the treated wastewater stream at the WWTP;
  - several chemical storage and pumping facilities at the Water Treatment Plant (WTP);
  - water mains along Barclay Road, Kensington Drive, and the intersection of Cameron Avenue and Columbia Street;
  - water and sewer mains along Dobbins Drive;
  - pipes and manholes throughout the wastewater collection system.

  As foreshadowed in the August 2020 report, construction activity was heavy for the first two quarters of FY 2021. Projects in construction account for close to 98% of the $9.3 million spent this reporting period. Also of note was the near completion of design for the largest standalone project currently funded in the five-year CIP: the $6 million project to convert the remainder of the WTP electrical distribution system to an updated voltage standard.

  The COVID-19 pandemic continued to impact the progression, monitoring, and communication aspects of construction and other projects, as CIP staff continue to operate primarily in a remote-work environment. However, the most significant impacts of COVID-19 on the program are expected to be its ramifications on upcoming budget deliberations this spring.

  Most of the large construction projects listed above will be closed out early in the third quarter, but final billing on these projects as well as an increased period of construction activity at the WTP (Chemical Improvements, Finished Water Pumping, Finished Water Mains Resiliency projects) is reflected in a FY 2021 forecast generally in alignment with budget assumptions. Figure 1 below shows the actual and forecast FY 2021 CIP expenses against the monthly baseline, as well as the expenditure target of 90% to 105% of budgeted funds. The forecast FY 2021 expenditures of $19.9 million represents 98% of the

budgeted funds, which falls within the Board-adopted target of executing between 90 to 105% of the CIP budget.

Action Requested

Receive and discuss the financial report.



Stephen Winters, CPA
Director of Finance and Customer Service

Attachment

Orange Water and Sewer Authority

Financial Report
For the Six-Month Period Ended
December 31, 2020

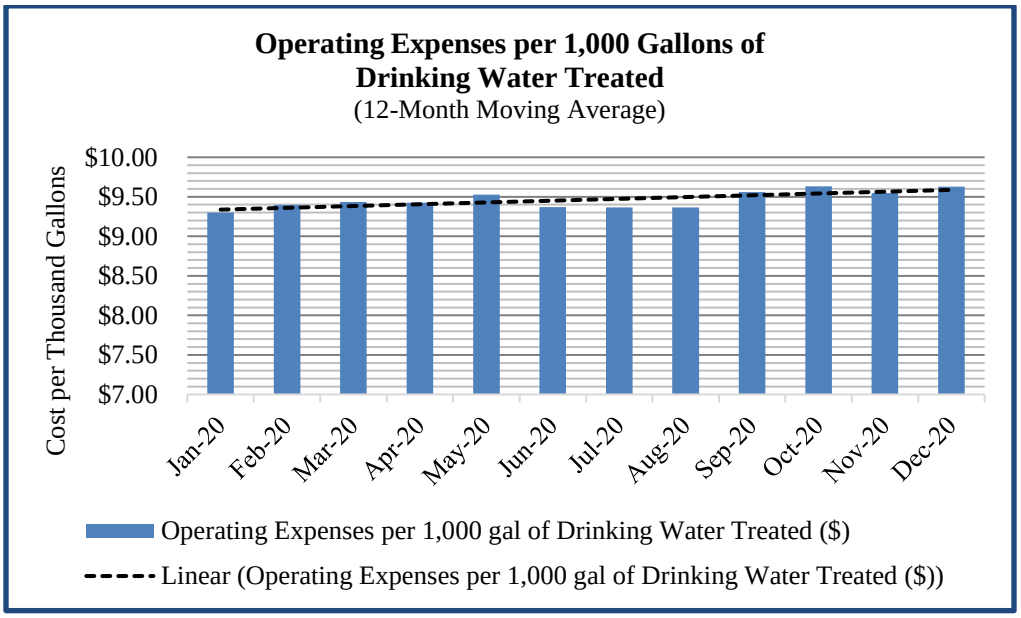
Orange Water and Sewer Authority
Statement of Net Position
December 31, 2020
(unaudited)

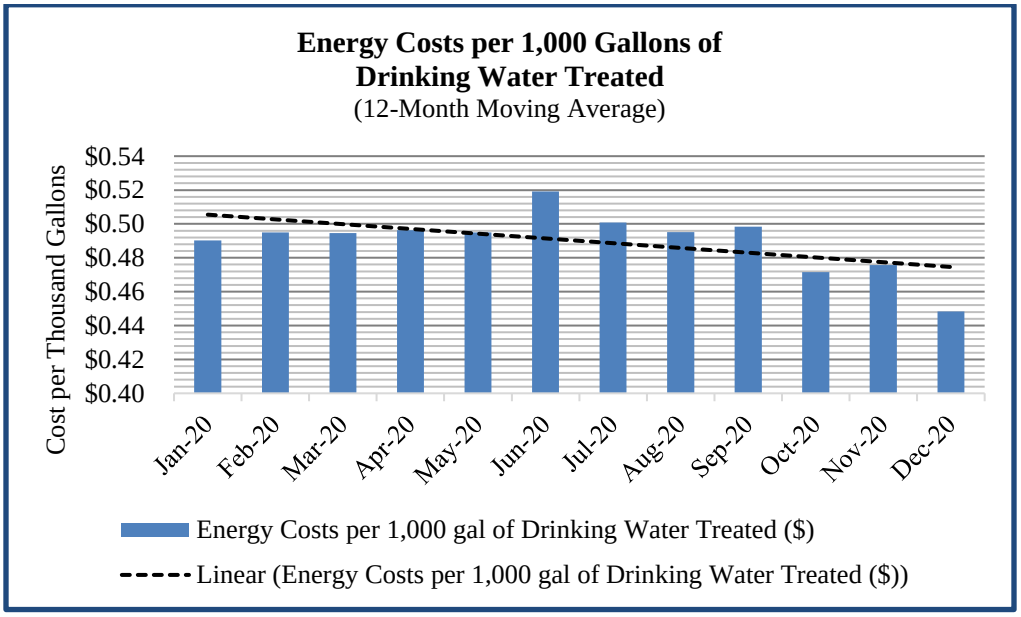
Assets	
Current Assets	
Cash	$12,093,504
Receivables	4,877,305
Inventory	1,346,852
Prepaid expenses	456,778
Restricted cash	2,916,411
Total Current Assets	21,690,850
Noncurrent Assets	
Capital assets (net of depreciation)	287,234,191
Other noncurrent assets	61,198,962
Total Noncurrent Assets	348,433,153
Total Assets	$370,124,003
Liabilities and Net Position	
Current Liabilities	
Accounts payable and accrued expenses	$2,144,811
Unearned income	245,545
Customer deposits	1,233,334
Total Current Liabilities	3,623,690
Noncurrent Liabilities	
Bonds payable	71,403,647
Other noncurrent liabilities	14,626,203
Total Noncurrent Liabilities	86,029,850
Net Position	
Contributed capital	124,978,560
Net position at the beginning of the year	152,025,895
Year-to-date accrual basis net income	3,466,008
Total Liabilities and Net Position	$370,124,003
Net income reconciliation:	
Accrual basis net income	$3,466,008
Depreciation, interest, other post-employment benefits expenses	6,065,838
Modified accrual basis net income	$9,531,846

Orange Water and Sewer Authority
Income Statement
For the Six-Month Period Ended December 31, 2020
(unaudited)

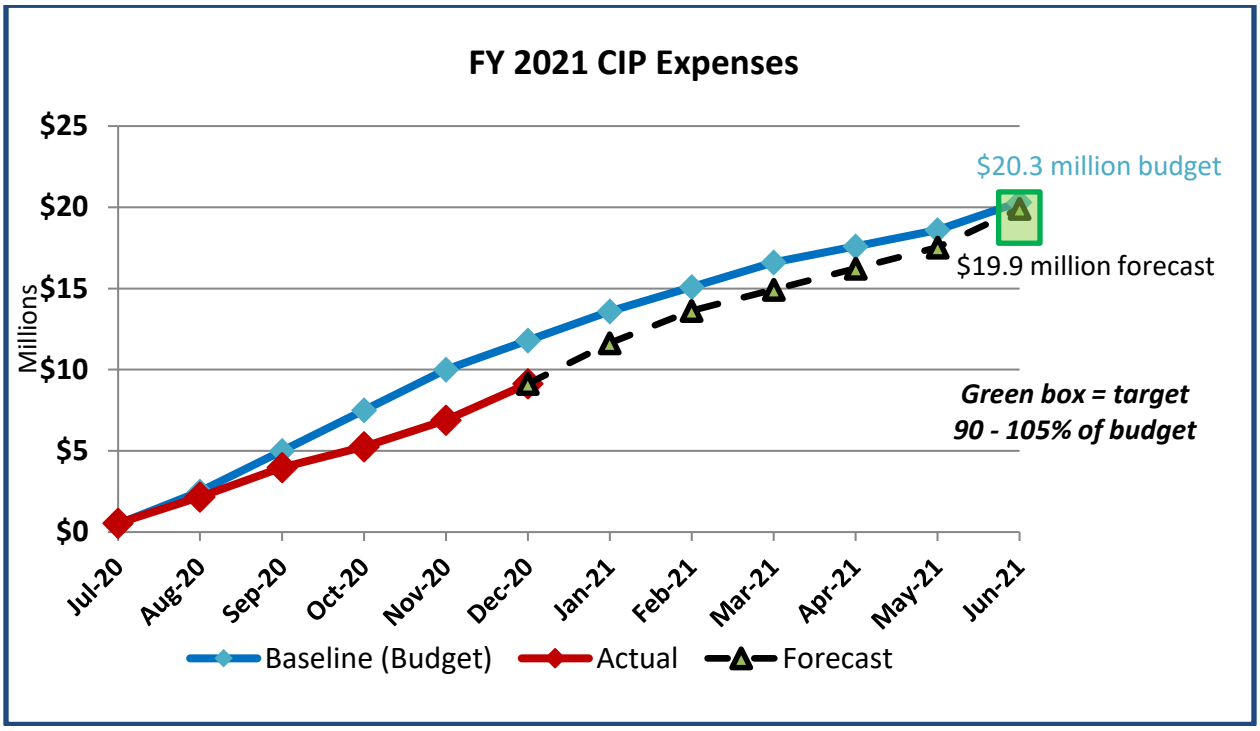
	Actual through December 31, 2020	Budget through December 31, 2020	Variance (effect on net change in Fund Balance)	Percent Variance
Operating Revenue				
Water	$9,221,781	$9,138,638	$83,143	0.9%
Sewer	8,528,820	8,786,229	(257,409)	(2.9)
Reclaimed Water	260,670	279,742	(19,072)	(6.8)
Service Initiation Fees	8,200	9,408	(1,208)	(12.8)
Other	419,868	471,614	(51,746)	(11.0)
Refunds and Allowances	(59,367)	(99,060)	39,693	40.1
Total Operating Revenue	18,379,972	18,586,571	(206,599)	(1.1)
Non-Operating Income (Expense)				
System Development Fees	1,477,933	540,744	937,189	173.3
Interest and Other Non-Operating Income	785	40,650	(39,865)	(98.1)
Total Non-Operating Income	1,478,718	581,394	897,324	154.3
Total Income	19,858,690	19,167,965	690,725	3.6
Operating Expense				
General and Administrative	3,659,040	3,778,039	118,999	3.1
Water Supply and Treatment	2,301,258	2,607,189	305,931	11.7
Water Distribution	1,400,094	1,594,964	194,870	12.2
Wastewater Treatment	2,310,545	2,676,439	365,894	13.7
Wastewater Collection	655,907	755,884	99,977	13.2
Total Operating Expense	10,326,844	11,412,515	1,085,671	9.5
Net Income (modified accrual)	9,531,846	7,755,450	1,776,396	22.9
Debt Service	3,931,057	3,904,047	(27,010)	(0.7)
Net Income less Debt Service	5,600,789	3,851,403	1,749,386	45.4
CIP Expenditures	9,132,923	11,800,000	2,667,077	22.6
Capital Equipment Expenditures	517,441	704,500	187,059	26.6
Net Change in Fund Balance	($4,049,575)	($8,653,097)	$4,603,522	

Orange Water and Sewer Authority
Select Financial Data
For the Six-Month Period Ended December 31, 2020





Orange Water and Sewer Authority
Select Financial Data
For the Six-Month Period Ended December 31, 2020

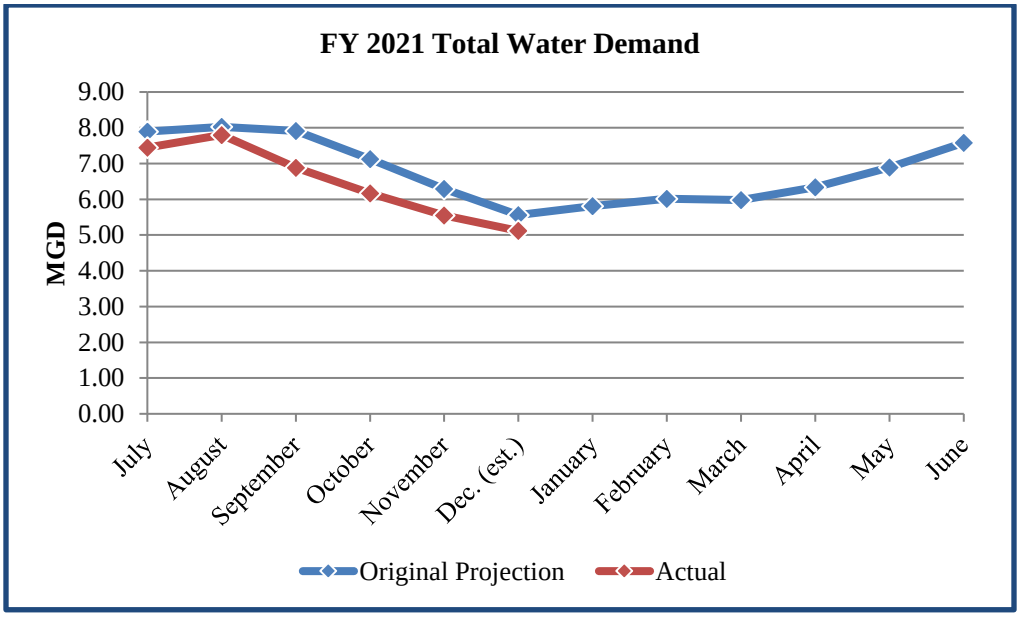


Orange Water and Sewer Authority
Select Financial Data
For the Six-Month Period Ended December 31, 2020

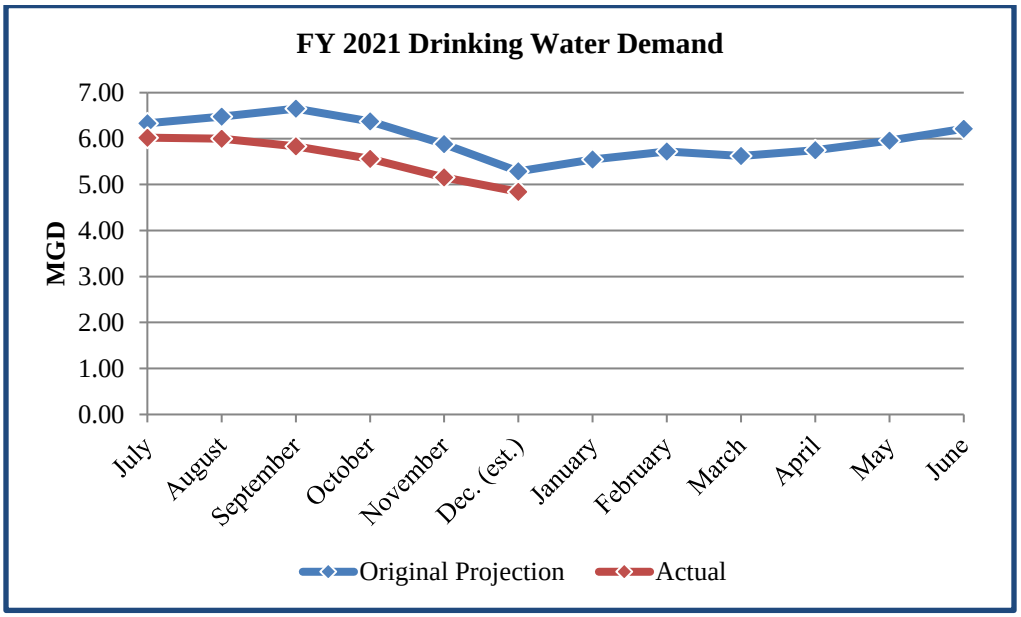
FY 2021 Water Sales Projection (Average Day)

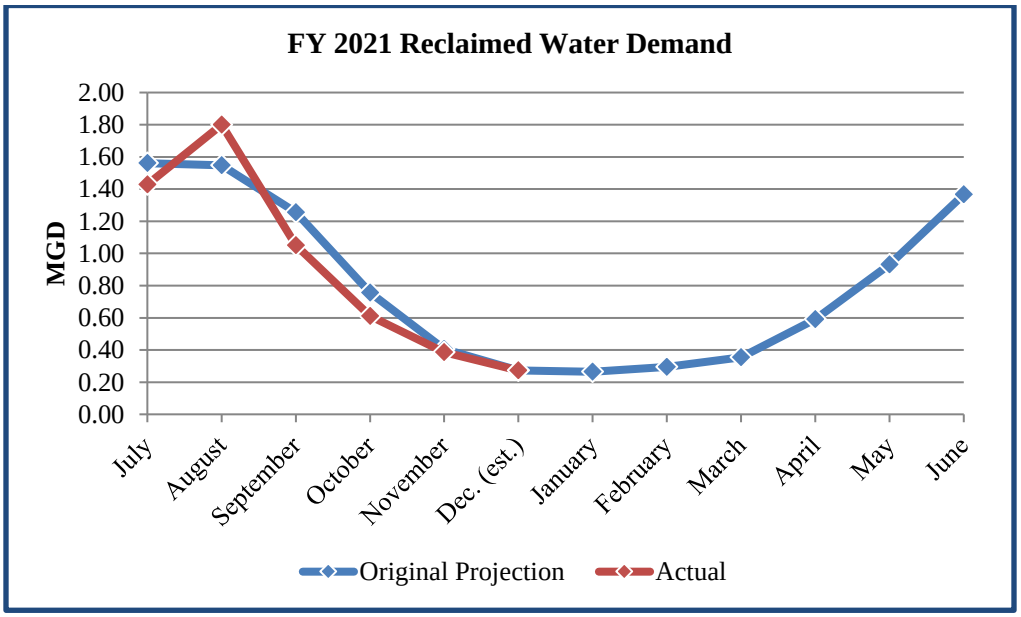
	Original Projections		Actual Water Sales		Revised Projections	
	DW	RCW	DW	RCW	DW	RCW
July	6.33	1.56	6.02	1.43	6.02	1.43
August	6.48	1.55	6.00	1.80	6.00	1.80
September	6.65	1.26	5.83	1.05	5.83	1.05
October	6.37	0.76	5.56	0.61	5.56	0.61
November	5.88	0.41	5.16	0.39	5.16	0.39
December	5.29	0.27	4.84	0.27	5.29	0.27
January	5.54	0.26			5.54	0.26
February	5.72	0.29			5.72	0.29
March	5.62	0.35			5.62	0.35
April	5.75	0.59			5.75	0.59
May	5.96	0.93			5.96	0.93
June	6.22	1.37			6.22	1.37
Average	5.98	0.80	5.57	0.93	5.72	0.78

Estimates shown in red

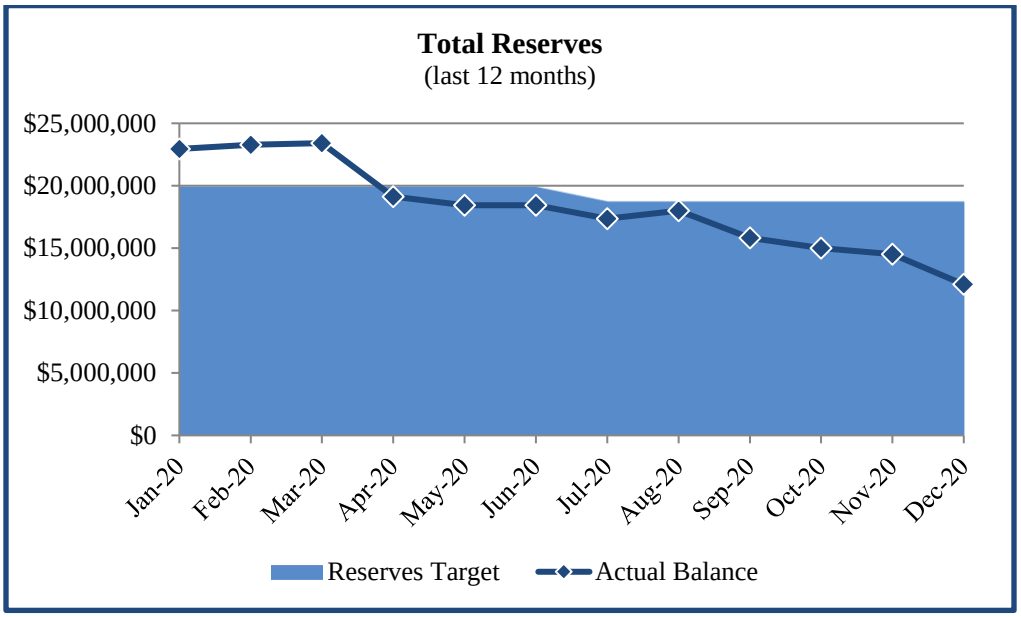


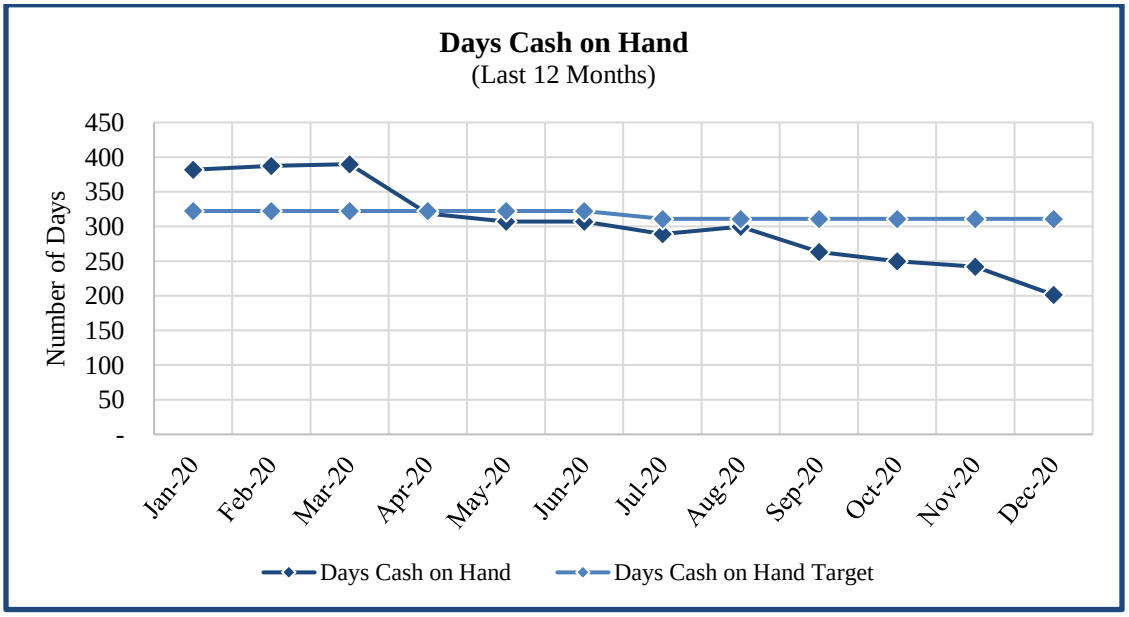
Orange Water and Sewer Authority
Select Financial Data
For the Six-Month Period Ended December 31, 2020



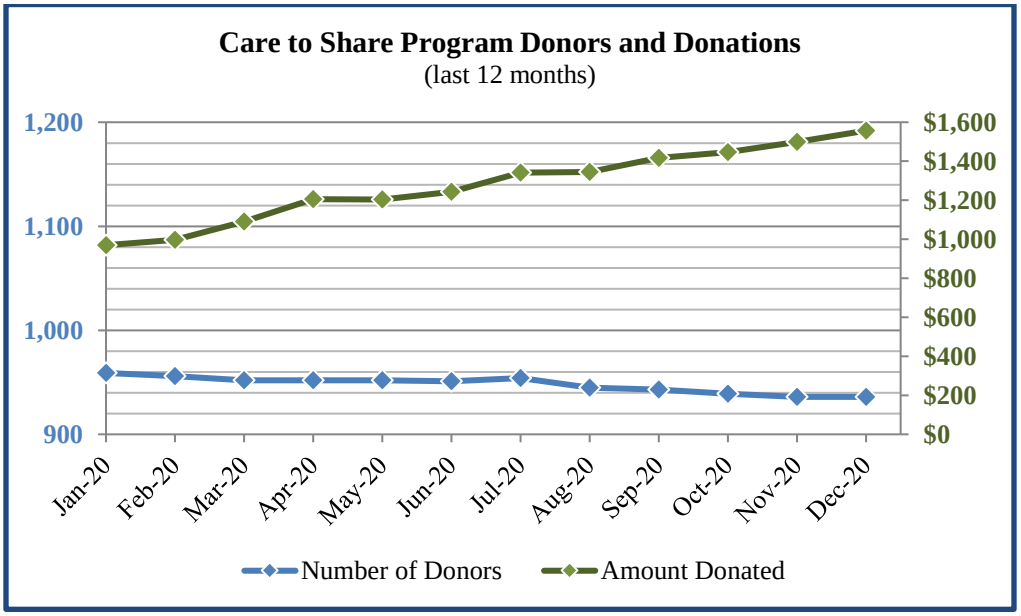


Orange Water and Sewer Authority
Select Financial Data
For the Six-Month Period Ended December 31, 2020





Orange Water and Sewer Authority
Select Financial Data
For the Six-Month Period Ended December 31, 2020



Orange Water and Sewer Authority
Financial Management Policy Report Card
For the Six-Month Period Ended December 31, 2020

Measurement	Objective	FY20 Results	FY21 Goal	YTD FY21 Results
Working Capital Reserves	Greater of four months Operating Expenses or 20% of succeeding three years CIP	$12.1M	$12.2M	$5.6M
Capital Improvements Reserve	2% of Net Capital Assets (Funding $400,000 per year until reach goal of approximately $6M)	$4.4M	$4.8M	$4.8M
Rate/Revenue Stabilization Reserve	5% of annual Water and Sewer Revenue	$1.9M	$1.7M	$1.7M
Debt Burden to Asset Value	Total Debt not more than 50% of Total Assets	26%	≤ 50%	24%
Sufficiency of Revenues above Debt Requirements[3]	Annual Debt Service no more than 35% of Gross Revenue	19%	≤ 35%	24%
Cash Financing of Capital[1]	Annual revenues and reserves provide at least 30% of CIP funding	32%	≥ 30%	32%
Debt Service Coverage Ratio[3]	Annual Net Income not less than two times Annual Debt Service	2.1	2.0	1.5[4]
Service Affordability Ratio[2]	Average annual OWASA bill not more than 1.5% of area median household income	1.33%	1.5%	1.31%

M = million

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

Agenda Item

- Fiscal Year (FY) 2022 Budget Calendar and Assumptions

Purpose

- The following pages include:
    - FY 2022 Budget Calendar – the proposed dates of Board meetings and work sessions at which budget matters are expected to be discussed. It also lists the dates by which major budget tasks are to be completed by staff.
    - FY 2022 Budget Planning Assumptions – a high-level list of assumptions that are planned to be considered in preparing the budget.
    - Analysis of historical operating expense information.

Action Requested

- Review the budget calendar and planning assumptions and provide guidance to staff.

January 28, 2021

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: Todd Taylor, P.E.

FROM: Stephen Winters, CPA

DATE: January 22, 2021

SUBJECT: Discussion of Fiscal Year 2022 Budget Calendar and Planning Assumptions

Purpose

In advance of developing the budget for Fiscal Year (FY) 2022, staff has drafted a calendar of events and an outline of some of the key planning assumptions that are proposed to be considered. Additionally, an updated framework for a new budget format is included.

Budget Calendar

The following is a schedule of the key dates related to developing the budget for FY 2022.

December 2020	Distribute templates for the preparation of operating expense appropriations, capital equipment requests and departmental budget narratives.
January 28, 2021	**Board of Directors Meeting** – review FY 2022 Budget Calendar and Planning Assumptions. Review the FY 2021 financial report for the six-month period ended December 31, 2020
January 29, 2021	Staff submission of capital equipment requests, budget narratives and departmental operating budget requests to Director of Finance and Customer Service.
February 11, 2021	**Board of Directors Work Session** – managers of the Water Supply and Treatment, Water Distribution and Wastewater Collection, and Wastewater Treatment departments to present information about key drivers, opportunities and challenges of their departments' preliminary budgets.
February/March 2021	**Finance Committee meetings** – if necessary, to conduct more in-depth budget analyses and discussions.
March 11, 2021	**Board of Directors Work Session** – discussion of *Draft Annual Budget* (operating and CIP).

400 Jones Ferry Road, Carrboro, NC 27510 919-968-4421 info@owasa.org @OWASA1 www.owasa.org

March 25, 2021	**Board of Directors Meeting -** discussion of *Draft Annual Budget* and staff recommendation of rate adjustment. Set date for public hearings on budget and rates.
April 8, 2021	**Board of Directors Work Session** – discussion of *Draft Annual Budget* and staff recommendation of rate adjustment.
April 22, 2021	**Board of Directors Meeting** – Discuss FY 2022 budget and rates and authorize staff to publicize draft budget and rate information. Review FY 2021 financial report for the nine-month period ended March 31, 2021.
April/May 2021	**Finance Committee meetings –** if necessary, to conduct more in-depth budget analyses and discussions.
May 27, 2021	**Board of Directors Meeting** – public hearings on the *Draft Annual Budget* and proposed adjustments to rates, fees, and charges.
June 10, 2021	**Board of Directors Work Session** – adopt *FY 2022 Annual Budget* and *Schedule of Rates, Fees and Other Charges*.
July 2021	Distribute *FY 2022 Annual Budget*.

Budget Assumptions

The following are key focus areas of the organization for the near future; the possible operating expense and capital improvements program (CIP) budget impacts are noted. Deferrals mentioned are anticipated due to budget constraints resulting from the impact of the pandemic.

Key Focus Area	Budget Impact for FY 2022+
A. Reliable and resilient services:	
i. American Water Infrastructure Act of 2018 (AWIA)	Actions to address vulnerabilities are currently being evaluated with many activities planned or deferred beyond FY 2022
ii. Select a new and comprehensive Computerized Maintenance Management System.	Project will likely be deferred.

Key Focus Area	Budget Impact for FY 2022+
B. Long-Range Water Supply Plan (LRWSP) expected to be completed in FY 2022	Continued consultant assistance will be needed in FY 2022 to evaluate options to access our Jordan Lake allocation. Future operating expense and CIP budget impacts will depend on future Board decisions guided by findings and recommendations in the LRWSP. The largest potential CIP expenditure anticipated will be whether the Board supports future participation in the Western Intake Partnership for studies in governance, preliminary design, and environmental permitting for potential new intake and water treatment facility on Jordan Lake.
C. Forest Management	Budget will include funding to implement priority plans and continued maintenance of the Mitigation Tract. While we expect to receive revenue from timber sales, no proceeds will be budgeted due to the uncertainty of how much they may be and when timber sales may occur.
D. Diversity and Inclusion work continues	Ongoing consultant support may be included in the FY 2022 budget.
E. Transition from our current banking services provider to JP Morgan Chase	Financial services expenses are expected to decrease.
F. Increase in-house construction activities	We will continue utilizing in-house crews vs. contractors for certain CIP projects (to replace galvanized water mains, for example). This allows us to take advantage of opportunities to reduce construction costs, enhance employee skill sets and increase pipe replacement rates.
G. Renewal and replacement of aging infrastructure	Our asset management program continues to identify and prioritize infrastructure improvements needed to achieve desired customer and environmental service level objectives, minimize critical asset failures and ensure the long-term viability of the water, wastewater and reclaimed water systems. Some projects identified may be deferred.
H. Investigate utility billing and financial software alternatives	Minimal, if any, impact on FY 2022 budget but depending on outcome of analysis, may have significant impact on future budgets.

<u>Additional assumptions</u>

The following will also be considered as we develop the FY 2022 budget.

- The budget will be developed to meet the financial performance objectives stipulated in our Financial Management Policy.
- Current service and staffing levels will be maintained.
- Provide employee wage increases in accordance with the Board's guidance (at least 2.9 percentage points greater than the cost of labor adjustment, if any.)
- Maintain current employee benefit levels.

- Drinking water and reclaimed water sales are expected to remain lower than normal through Calendar Year 2021.
- The regulatory environment will remain the same.
- CIP projects and capital equipment purchases may be deferred to offset cash flow decreases caused by lower-than-normal water and sewer revenue.
- We have not been notified of unit cost increases for chemicals, but the cost has increased over the last few years.
- We expect energy prices to increase by as much as 5%.

Last year, staff projected that a 7% increase in monthly water and sewer rates would be necessary for the FY 2022 budget year.

Historical Financial Information

Attachment A contains information highlighting the operating expense categories that make-up most of OWASA's annual operating expenses and identifies the primary drivers that determine the amount of the expenses. This information is included to provide perspective on elements of OWASA's budget.

Action Requested

Review information and provide guidance to staff.

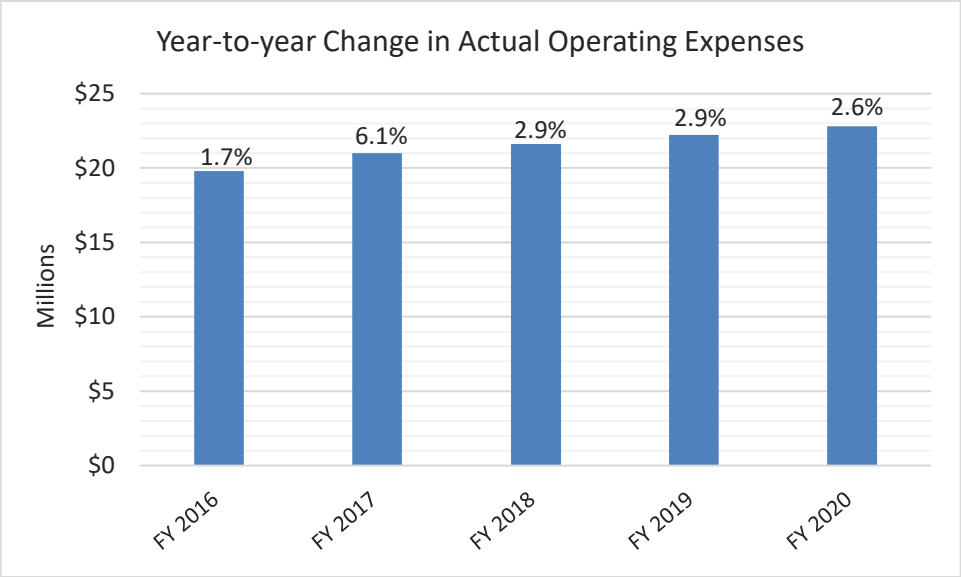
Stephen Winters, CPA
Director of Finance and Customer Service

Enclosures:

Attachment A: Financial Analysis

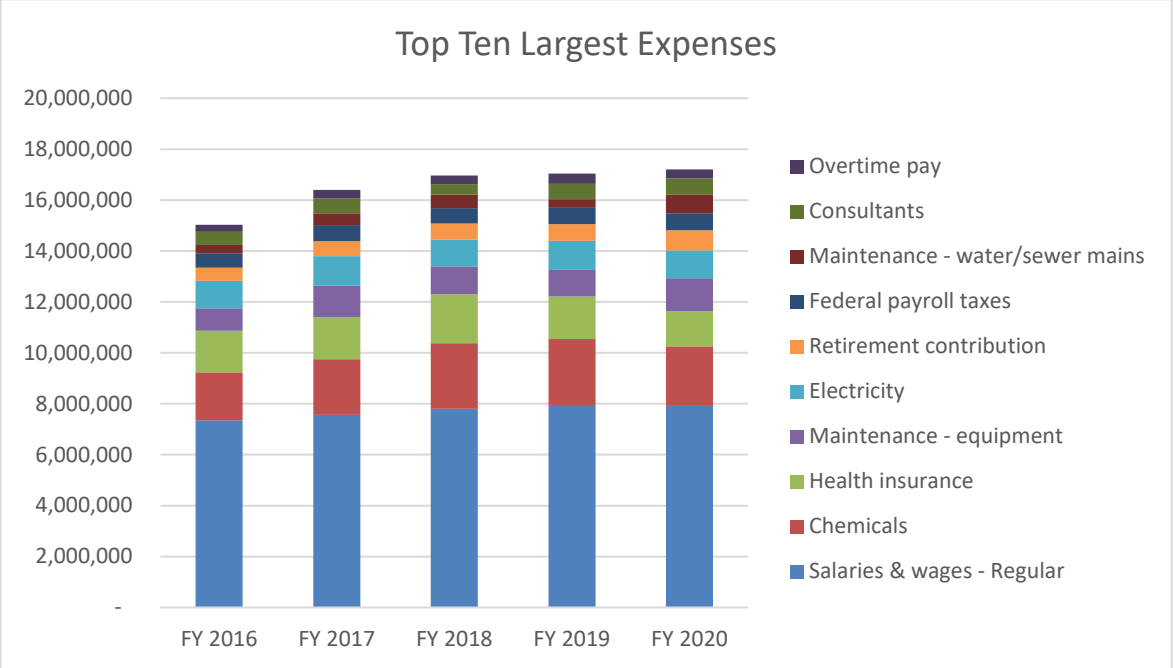
Operating Expense Analysis

On average, OWASA's operating expenses have increased by about 3.6% per year over the last five Fiscal Years (FY).



Each year, ten expense items comprise about three-fourths of total operating expenses.

Operating Expenses	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY20 % of Total
Salaries & wages - Regular	7,343,784	7,564,689	7,799,169	7,954,140	7,919,738	35%
Chemicals	1,888,608	2,190,143	2,576,433	2,586,487	2,330,292	11%
Health insurance	1,631,609	1,654,664	1,922,043	1,674,722	1,387,818	7%
Maintenance - equipment	890,594	1,235,064	1,096,049	1,040,473	1,294,777	5%
Electricity	1,075,155	1,148,288	1,061,802	1,141,713	1,087,614	5%
Retirement contribution	510,262	598,984	617,219	655,451	790,230	3%
Federal payroll taxes	569,007	619,190	615,629	636,513	672,025	3%
Maintenance - water/sewer mains	331,459	465,747	521,595	348,174	734,873	2%
Consultants	514,344	583,365	418,381	605,202	627,726	3%
Overtime pay	267,682	339,114	329,755	394,171	363,884	2%
Top 10 expenses total	15,022,504	16,399,248	16,958,075	17,037,046	17,208,977	75%
Total operating expenses for FY	19,588,099	20,054,246	21,291,854	21,877,244	22,645,287	22,915,763
Additional information						**Decision-Maker**
Funded positions	127.5	132.5	134.0	135.0	135.0	OWASA Board
Cost of labor adjustment	NA	1.5%	1.0%	1.8%	1.8%	OWASA Board
Merit adjustment	3.0%	1.5%	3.0%	3.1%	2.3%	OWASA Board
Health insurance adjustment	21.4%	15.0%	6.8%	-18.0%	-15.1%	OWASA Board and Insurer
Retirement system contribution	7.00%	7.31%	7.50%	9.00%	9.00%	LGERS Board
Payroll taxes - soc. sec. & medicare	7.65%	7.65%	7.65%	7.65%	7.65%	Fed. Govt.
Drinking water treated (MGs)	2,441	2,397	2,463	2,432	2,352	
Wastewater treated (MGs)	3,149	3,095	2,843	2,972	2,735	
Number of customers	21,385	21,526	21,585	21,712	21,823	
Miles of water and sewer pipe	741	743	744	750	752	



Observations

1. Employee compensation, taxes and benefits account for about 56% of our annual operating expenses.
    a. Regular salaries and wages make up about 35% of annual expenses. Over the last five years, the average annual increase in salaries and wages has been between 2% and 4%. Based on the Board's stated intentions, future merit increases will be at least 2.9%. Cost of labor will be determined based on market data.
    b. Health insurance makes up about 7% of annual expenses. Health insurance rates are a function of benefits offered and claims experience.
    c. As of July 1, 2020, mandatory employer contributions to the Local Government Employees Retirement System are 10.2% of total employee wages. (While not an OWASA expense, employees are required to contribute 6% of wages.) OWASA's contributions average about 3% of total annual expenses.
    d. Employer-paid federal payroll taxes are 7.65% of total wages and also average about 3% of total annual expenses.
2. Chemicals expense averages 10% to 12% of total expenses each year. The unit price of chemicals is somewhat volatile, and the quantity used by our drinking water and wastewater treatment plants is impacted by the volume and condition of the water entering the plants.
3. Total maintenance expenses make up about 13% of annual expenses. We separately track maintenance for different types of assets. Maintenance of equipment (everything other than pumps, reservoirs and tanks, buildings, pipelines, and vehicles) is the largest maintenance line-item and averages about 5% of annual operating expenses.
4. Electricity costs average about 5% of total annual expenses. We recently met the Board's goal of reducing purchased electricity by 35% by the end of Calendar Year (CY) 2020 compared to the CY 2010 baseline.

Continuous Improvement Initiatives

Over the years, OWASA has continued to evaluate and implement measures to improve the efficiency and effectiveness of our operation and business practices. Some examples include:

- Water treatment optimization through the Partnership for Safe Water (ongoing)
- Wastewater treatment optimization through the Partnership for Clean Water (ongoing); energy efficiency improvements (2014); modified nutrient removal process (2010); and rotary press for biosolids dewatering (2008)
- ADP payroll, time and attendance (2015)
- Comprehensive Asset Management (ongoing)
- Agua Vista/Advanced Metering Infrastructure (2018/2019)

These efficiency/effectiveness measures were initiated and evaluated in a variety of ways. The Partnerships for Safe/Clean Water optimizations were initiated by staff soon after these programs began by the respective professional organizations. Other projects such as the rotary press and energy efficiency improvements were initiated by staff during the annual development of the Capital Improvements Program. The Agua Vista project was initiated by our 2014 Strategic Plan.

Each year during the development and review of our operating expense budget and our Capital Improvements Program (CIP), staff evaluates opportunities for improvement for the Board to consider. Staff believes this process has worked well and plans to continue it.