



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, September 8, 2022, 6:00 P.M.

OWASA Community Room

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

Announcements

1. Announcements by the Chair
 - 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

Petitions and Requests

1. Public
2. Board
3. Staff

Consent Agenda

Information and Reports

1. Formal Purchase of Scarlett-Cooper Water Line Pipe (Stephen Winters)
2. Annual Report on Disposal of Surplus Personal Property (Kelly Satterfield)
3. Preliminary Financial Report for the Twelve-Month Period Ended June 30, 2022 (Stephen Winters)
4. Capital Improvements Program (CIP) Semiannual Report (Allison Spinelli)
5. Diversity and Inclusion Program Progress Report, and Equal Employment Opportunity/Affirmative Action Report for Fiscal Year 2022 (Stephanie Glasgow)

Action

6. Minutes of the July 14, 2022 OWASA Board of Directors Meeting (Andrea Orbich)

AGENDA

September 8, 2022

Page 2

7. Minutes of the July 14, 2022 Closed Session of the OWASA Board of Directors for the Purpose of Discussing a Personnel Matter (Ray DuBose)
8. Resolution Declaring the Intent of the Orange Water and Sewer Authority to Reimburse Itself for Capital Expenditures from the Proceeds of Certain Tax-Exempt Obligations Under the Internal Revenue Code of 1986 and the United States Department of Treasury Regulations (Stephen Winters)
9. Resolutions Supporting the Application for American Rescue Plan Act Grant Funding to Extend and Connect Water and Sewer Services to Disadvantaged Households within the OWASA Service Area (Mary Tiger)
10. Request from Orange County for OWASA to Provide Land for Solid Waste Collection Site (Ruth Rouse)

Regular Agenda

Discussion and Action

11. Resolution Approving OWASA's New Strategic Plan (Mary Tiger)
12. Review and Approve Draft Water Conservation Plan (Ruth Rouse/Mary Tiger)

Discussion

13. Review Board Work Schedule
 - A. Request(s) by Board Members, General Counsel and Staff (Bruce Boehm)
 - B. Draft October 13, 2022 Board Meeting (Todd Taylor)
 - C. 12 Month Board Meeting Schedule (Todd Taylor)
 - D. Pending Key Staff Action Items (Todd Taylor)
 - F. Action Items Reoccurring Every 3 to 5+ years (Todd Taylor)

Summary of Board Meeting Items

14. Executive Director will Summarize the Key Staff Action Items from the Meeting

Closed Session

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

Agenda Item 1:

Formal Purchase of Scarlett-Cooper Water Line Pipe

Background:

As stipulated in OWASA's Purchasing Policy, the Board of Directors has delegated to the Executive Director the authority to award contracts for purchase of supplies, material, and equipment solicited under formal bids (\$90,000 and above) and submit a summary report to the Board which identifies the name of the bidders, the amount of the bids and the award decision. There is not a requirement regarding a minimum number of bids to be received.

In July 2022, staff competitively bid the purchase of water pipe and appurtenances for the Scarlett-Cooper water line replacement project. This project is expected to be completed by OWASA's construction crew. Only one response was received, and the bid was \$286,494.84.

The award was made to bidder Ferguson Waterworks.

Action Requested:

This report is for information only. No action is needed.

Agenda Item 2:

Annual Report on Disposal of Surplus Personal Property

Purpose:

To update the Board of Directors on OWASA’s disposal of surplus personal property. This report is provided for information only and no action is necessary.

Background:

OWASA’s Purchasing and Contracting Policy authorizes the Executive Director to declare as surplus and to sell personal property that is no longer needed or useful in the operation of OWASA’s systems. Personal property is broadly defined as fixtures and equipment and excludes land.

The policy is based on state statute and authorizes five methods of personal property disposal: trade-in, public auction, advertisement for bid, direct negotiation and sale, and scrap. Items having no residual value that remain unsold after an auction or other sale procedure, or that pose a potential threat to the public health or safety, may be treated as scrap or trash regardless of their original acquisition cost. Items having no apparent market value after being advertised for sale may be donated to charitable organizations.

The policy requires the Executive Director to report to the Board of Directors annually on the disposal of personal property.

The following surplus personal property was sold during Fiscal Year 2022:

Disposal Method	Items Sold	Proceeds
Web-based public auction	Service trucks, service equipment and computer equipment	\$14,319
Scrap	Metal	5,395
	Total proceeds	\$19,714

Action Needed:

For the Board’s information. No action needed.

September 8, 2022

Agenda Item 3:

Preliminary Financial Report for the Twelve-Month Period Ended June 30, 2022

Purpose:

The preliminary financial report for the twelve-month period ended June 30, 2022, 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 October 13, 2022.

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 but one of our financial performance measurement targets were met for the period. Our debt service coverage ratio for FY 2022 was 1.9, slightly below the target of 2.0.
- Average drinking water sales for the period was 5.81 million gallons per day (MGD), 6.03 MGD was projected. Combined drinking and reclaimed water sales for the period averaged 6.50 MGD versus a projection of 6.83 MGD.
- Combined drinking water and sewer services revenue was \$596 greater than budget, almost equal to projections.
- Total income was under budget by 0.9% or about \$373,000 less than the budget.
- Total operating expenses for the period were 3.7% or about \$878,000 less than the budget.
 - General and administrative expenses were over budget by 1.4% or about \$115,000. The difference is primarily due to not budgeting enough for fees for banking services and credit card processing expenses.
 - Water supply and treatment department expenses were under budget by 8.9% or about \$486,000. Position vacancies, electricity expense, chemicals expense, and maintenance expense made up most of the variance.
 - Water distribution expenses were under budget by 4.1% or about \$129,000. Maintenance expenses made up most of the variance.
 - Wastewater treatment expenses were under budget by 6.0% or about \$334,000. Most of the variance was due to maintenance expenses.
 - Wastewater collection expenses were under budget by 2.9% or about \$44,000. Vacancies and electricity expense accounted for most of the variance.

Net Income less Debt Service for the period was approximately \$537,000 greater than budget. OWASA is a nonprofit entity. Net Income less Debt Service is used to fund investments in capital improvement

September 8, 2022

projects and reserves.

Capital Improvements Program (CIP) Summary

Throughout FY 2022, approximately \$9.4 million (53% of the planned annual CIP budget) was invested in 56 capital projects to rehabilitate, replace, or improve various components of OWASA's water and wastewater infrastructure, most notably:

- water mains throughout the distribution system
- finished water pump and variable frequency drive (VFD) at the Jones Ferry Water Treatment Plant (WTP)
- gravity sewer line rehabilitation and replacement along East Main Street in the Town of Carrboro
- pipe and manhole rehabilitation throughout the wastewater collection system
- replacement of the administration building roof
- emergency repair of a portion of the Morgan Creek Interceptor
- water mains along West Cameron Avenue

The FY 2022 shortfall in spending is primarily due to the following factors:

- Delays in the WTP Electrical System Improvements project to align with the timeline for State Revolving Fund (SRF) funding
- Slower than anticipated construction for the West Cameron Avenue Water Line Replacement Project due to contractor staffing
- Delays and slower production on the water main replacements program due to COVID impacts to staffing, materials procurement, and coordination with the community
- Longer than anticipated specialty material procurement for the Wastewater Treatment Plant (WWTP) Fermenter Improvements
- Slower than anticipated construction start for the (WTP) Belt Filter Press Replacement Project due to SRF requirements, contractor staffing and material procurement
- Slower than anticipated construction start for the University Lake Permanganate Facility Project due to SRF requirements and contractor staffing
- Delays in bidding and material procurement for the Reclaimed Water Flanged Coupling Adaptor project
- Longer than anticipated design and SRF funding timeline for Secondary Clarifier No. 4 at the WWTP

Action Requested:

Receive and review the financial report.

Orange Water and Sewer Authority

**Preliminary Financial Report
For the Twelve-Month Period Ended
June 30, 2022**

Orange Water and Sewer Authority
Statement of Net Position
June 30, 2022
(unaudited)

Assets	
Current Assets	
Cash	\$25,429,235
Receivables	4,799,789
Inventory	1,884,597
Prepaid expenses	277,396
Restricted cash	5,400,732

Total Current Assets	37,791,749

Noncurrent Assets	
Capital assets (net of depreciation)	309,253,482
Other noncurrent assets	48,945,673

Total Noncurrent Assets	358,199,155

Total Assets	\$395,990,904
	=====
Liabilities and Net Position	
Current Liabilities	
Accounts payable and deferred outflows	\$6,051,229
Customer deposits	1,328,011

Total Current Liabilities	7,379,240

Noncurrent Liabilities	
Bonds and notes payable	83,695,466
Other noncurrent liabilities	21,584,900

Total Noncurrent Liabilities	105,280,366

Net Position	
Contributed capital	126,375,243
Net position at the beginning of the year	154,005,723
Year-to-date accrual basis net income	2,950,332

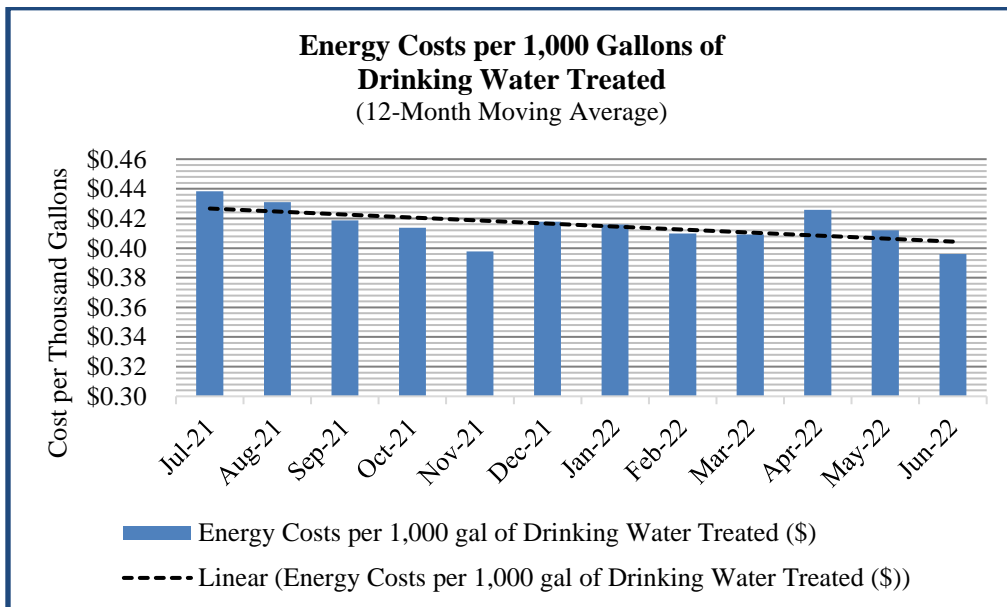
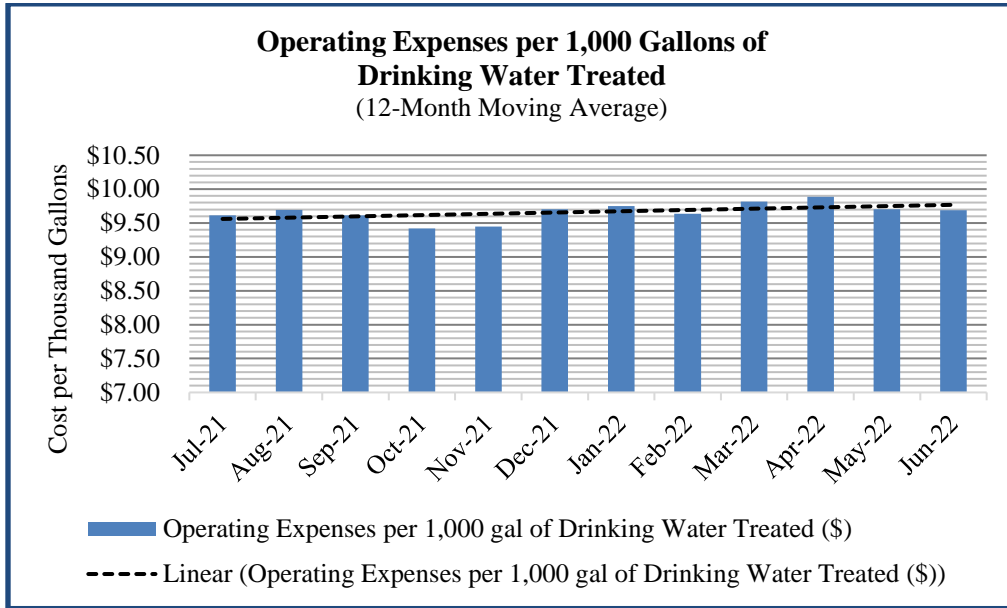
Total Liabilities and Net Position	\$395,990,904
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Net income reconciliation:	
Accrual basis net income	\$2,950,332
Depreciation, interest, other post-employment benefits expenses	13,554,592

Modified accrual basis net income	\$16,504,924
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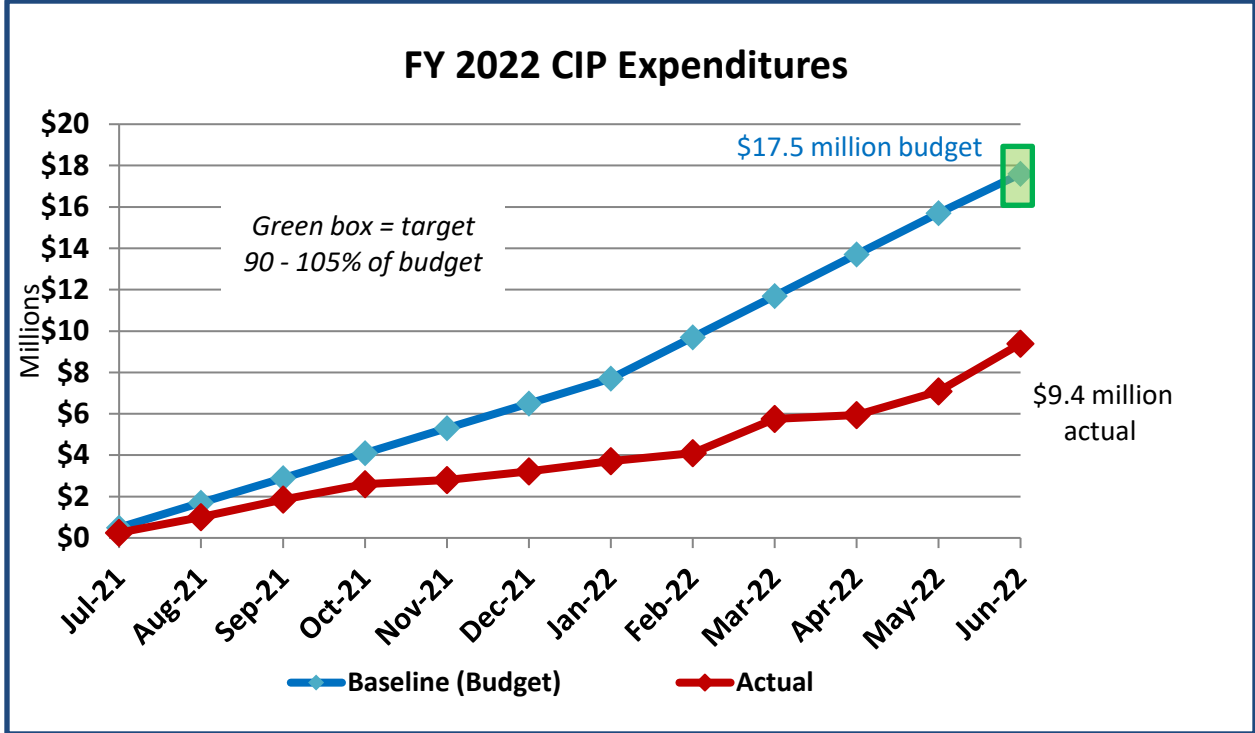
Orange Water and Sewer Authority
Income Statement
For the Twelve-Month Period Ended June 30, 2022
(unaudited)

	Actual through June 30, 2022	Amended Budget through June 30, 2022	Variance (effect on net change in Fund Balance)	Percent Variance
Operating Revenue				
Water	\$18,872,830	\$18,194,238	\$678,592	3.7%
Sewer	18,178,851	18,856,847	(677,996)	(3.6)
Reclaimed Water	452,479	463,200	(10,721)	(2.3)
Service Initiation Fees	15,945	16,510	(565)	(3.4)
Other	959,902	898,581	61,321	6.8
Refunds and Allowances	(129,536)	(107,101)	(22,435)	(20.9)
Total Operating Revenue	<u>38,350,471</u>	<u>38,322,275</u>	<u>28,196</u>	<u>0.1</u>
Non-Operating Income (Expense)				
System Development Fees	801,020	1,249,897	(448,877)	(35.9)
Interest and Other Non-Operating Income	145,217	97,759	47,458	48.5
Total Non-Operating Income	<u>946,237</u>	<u>1,347,656</u>	<u>(401,419)</u>	<u>(29.8)</u>
Total Income	<u>39,296,708</u>	<u>39,669,931</u>	<u>(373,223)</u>	<u>(0.9)</u>
Operating Expense				
General and Administrative	8,109,518	7,994,125	(115,393)	(1.4)
Water Supply and Treatment	4,942,519	5,428,258	485,739	8.9
Water Distribution	3,050,349	3,179,848	129,499	4.1
Wastewater Treatment	5,186,300	5,520,070	333,770	6.0
Wastewater Collection	1,503,098	1,547,291	44,193	2.9
Total Operating Expense	<u>22,791,784</u>	<u>23,669,592</u>	<u>877,808</u>	<u>3.7</u>
Net Income (modified accrual)	<u>16,504,924</u>	<u>16,000,339</u>	<u>504,585</u>	<u>3.2</u>
Debt Service	<u>8,590,505</u>	<u>8,623,186</u>	<u>32,681</u>	<u>0.4</u>
Net Income less Debt Service	7,914,419	7,377,153	537,266	7.3
CIP Expenditures	9,387,634	17,539,000	8,151,366	46.5
Capital Equipment Expenditures	892,971	1,147,250	254,279	22.2
Net Change in Fund Balance	<u>(\$2,366,186)</u>	<u>(\$11,309,097)</u>	<u>\$8,942,911</u>	

Orange Water and Sewer Authority
Select Financial Data
For the Twelve-Month Period Ended June 30, 2022

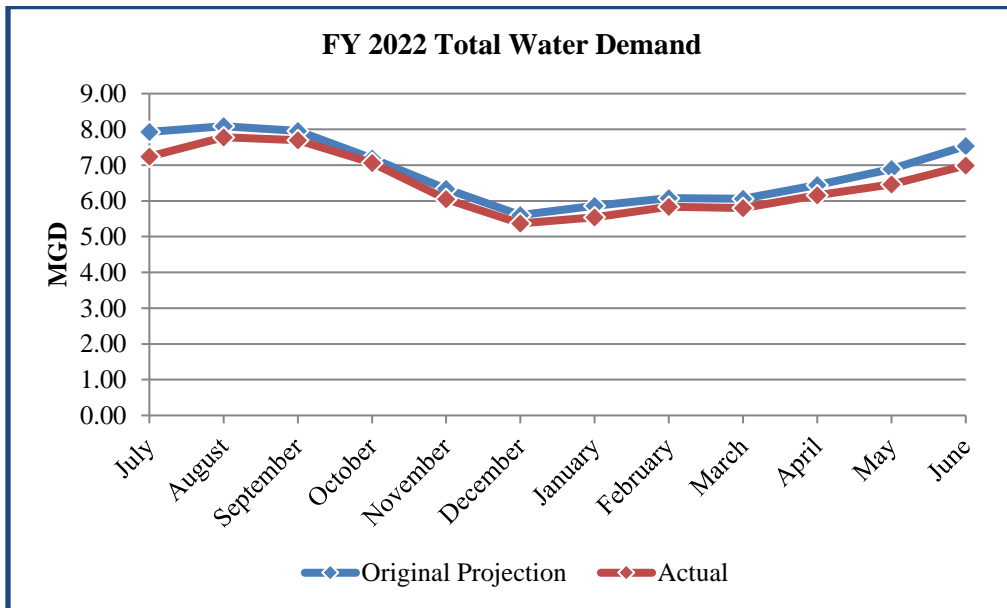


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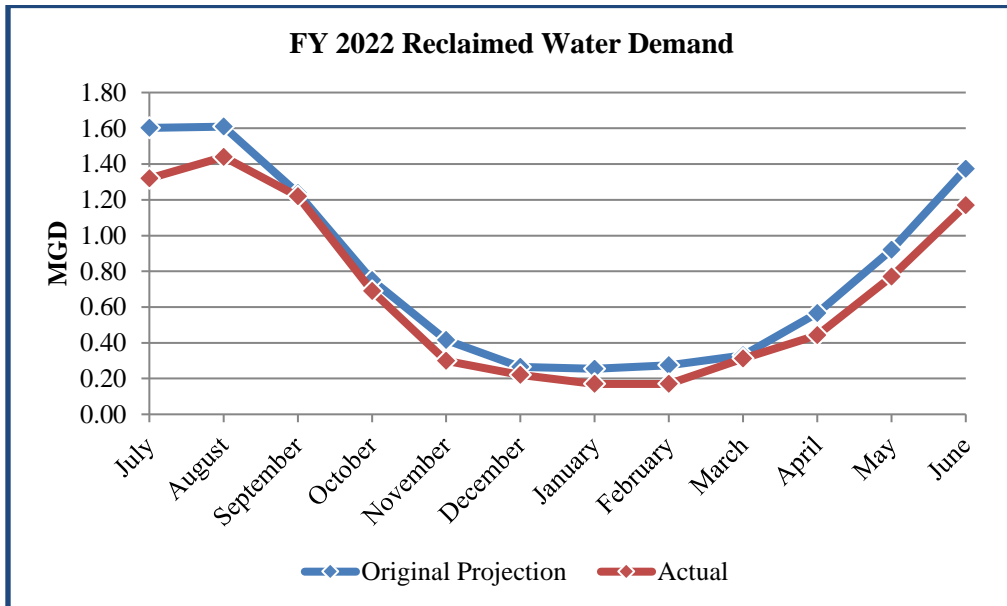
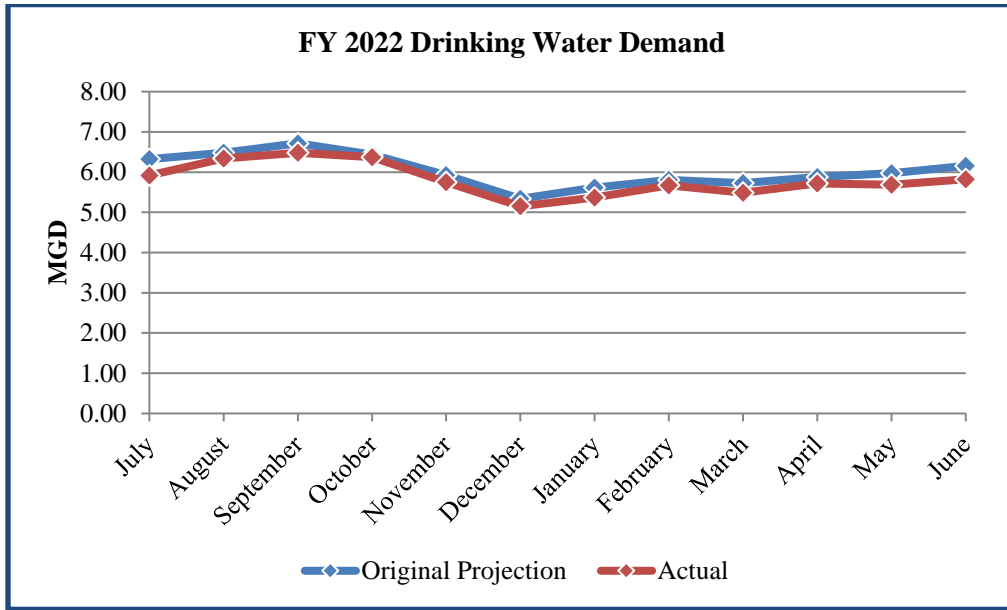


**Orange Water and Sewer Authority
Select Financial Data
For the Twelve-Month Period Ended June 30, 2022**

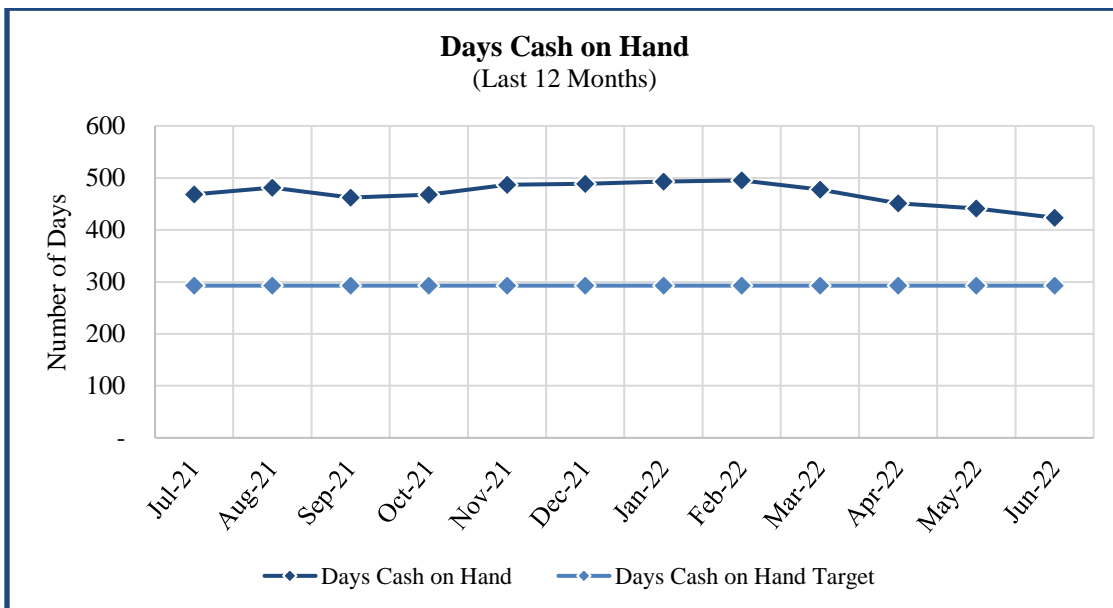
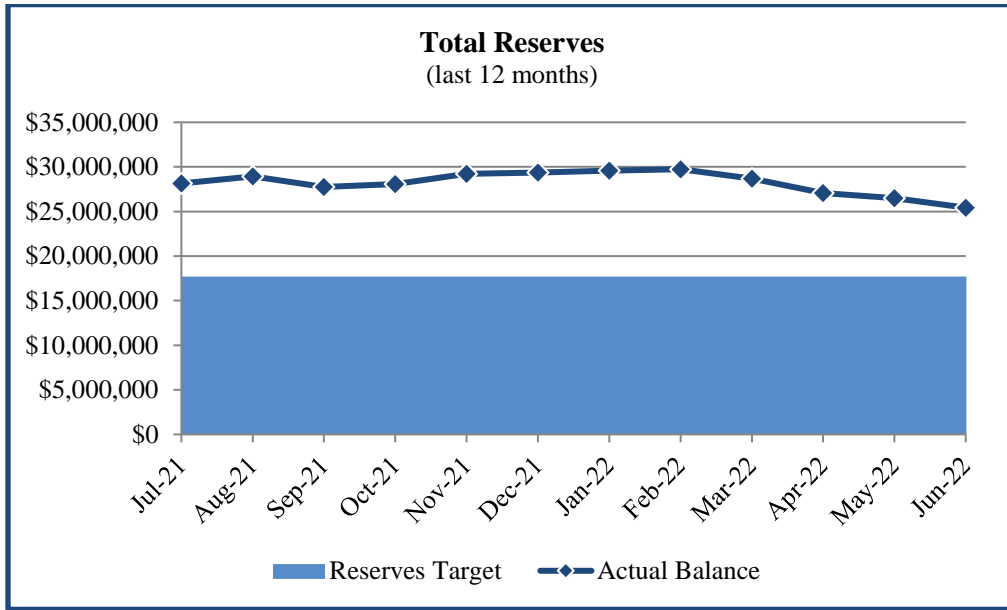
<u>FY 2022 Water Sales Projection (Average Day)</u>						
	Original Projections		Actual Water Sales		Revised Projections	
	DW	RCW	DW	RCW	DW	RCW
July	6.32	1.60	5.92	1.32	5.92	1.32
August	6.48	1.61	6.34	1.44	6.34	1.44
September	6.72	1.24	6.48	1.22	6.48	1.22
October	6.43	0.75	6.37	0.69	6.37	0.69
November	5.92	0.42	5.75	0.30	5.75	0.30
December	5.34	0.27	5.15	0.22	5.15	0.22
January	5.61	0.25	5.37	0.17	5.37	0.17
February	5.80	0.27	5.67	0.17	5.67	0.17
March	5.73	0.33	5.48	0.31	5.48	0.31
April	5.87	0.57	5.72	0.44	5.72	0.44
May	5.97	0.92	5.69	0.77	5.69	0.77
June	6.16	1.37	5.82	1.17	5.82	1.17
Average	6.03	0.80	5.81	0.69	5.81	0.69



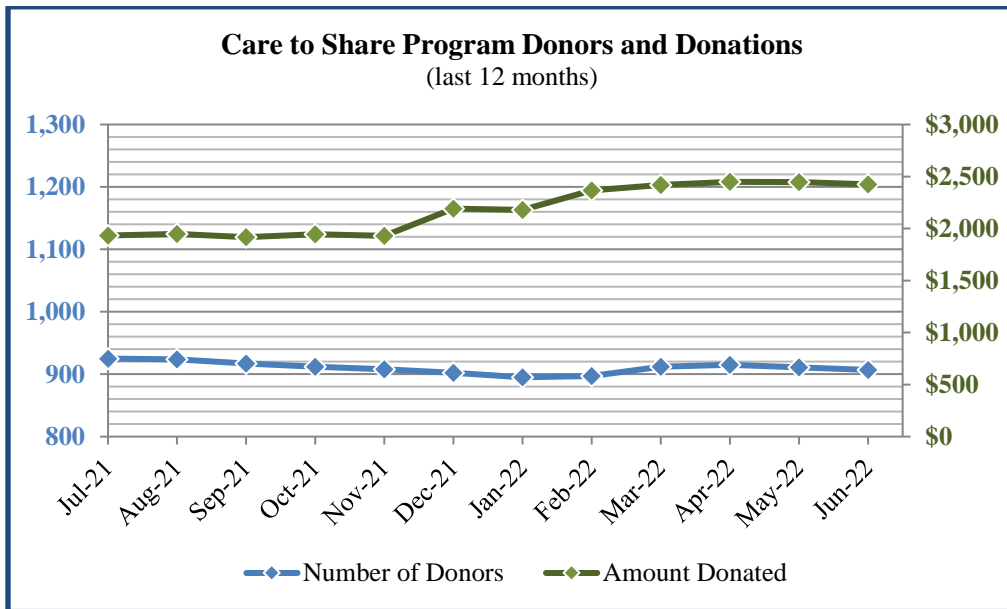
**Orange Water and Sewer Authority
Select Financial Data
For the Twelve-Month Period Ended June 30, 2022**



Orange Water and Sewer Authority
Select Financial Data
For the Twelve-Month Period Ended June 30, 2022



**Orange Water and Sewer Authority
 Select Financial Data
 For the Twelve-Month Period Ended June 30, 2022**



**Orange Water and Sewer Authority
Financial Management Policy Report Card
For the Twelve-Month Period Ended June 30, 2022**

Measurement	Objective	FY21 Results	FY22 Goal	YTD FY22 Results
Working Capital Reserves	Greater of four months Operating Expenses or 20% of succeeding three years CIP	\$22.7M	\$10.6M	\$18.4M
Capital Improvements Reserve	2% of Net Capital Assets (Funding \$400,000 per year until reach goal of approximately \$6M)	\$4.8M	\$5.2M	\$5.2M
Rate/Revenue Stabilization Reserve	5% of annual Water and Sewer Revenue	\$1.7M	\$1.9M	\$1.9M
Debt Burden to Asset Value	Total Debt not more than 50% of Total Assets	29%	≤ 50%	28%
Sufficiency of Revenues above Debt Requirements	Annual Debt Service no more than 35% of Gross Revenue	21%	≤ 35%	22%
Cash Financing of Capital ¹	Annual revenues and reserves provide at least 30% of CIP funding	32%	≥ 30%	37%
Debt Service Coverage Ratio	Annual Net Income not less than two times Annual Debt Service	2.0	2.0	1.9
Service Affordability Ratio ²	Average annual OWASA bill not more than 1.5% of area median household income	1.31%	1.5%	1.38%

M = million

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

² FY 2022 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.

Agenda Item 4:

Capital Improvements Program (CIP) Semiannual Report

Purpose:

To summarize project and program performance for OWASA's Capital Improvements Program (CIP) for Fiscal Year (FY) 2022

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.

Program Summary:

During FY 2022, approximately \$9.4 million (53% of the planned CIP budget) was invested in 56 active capital projects to rehabilitate, replace or improve various components of OWASA's water and wastewater infrastructure, most notably:

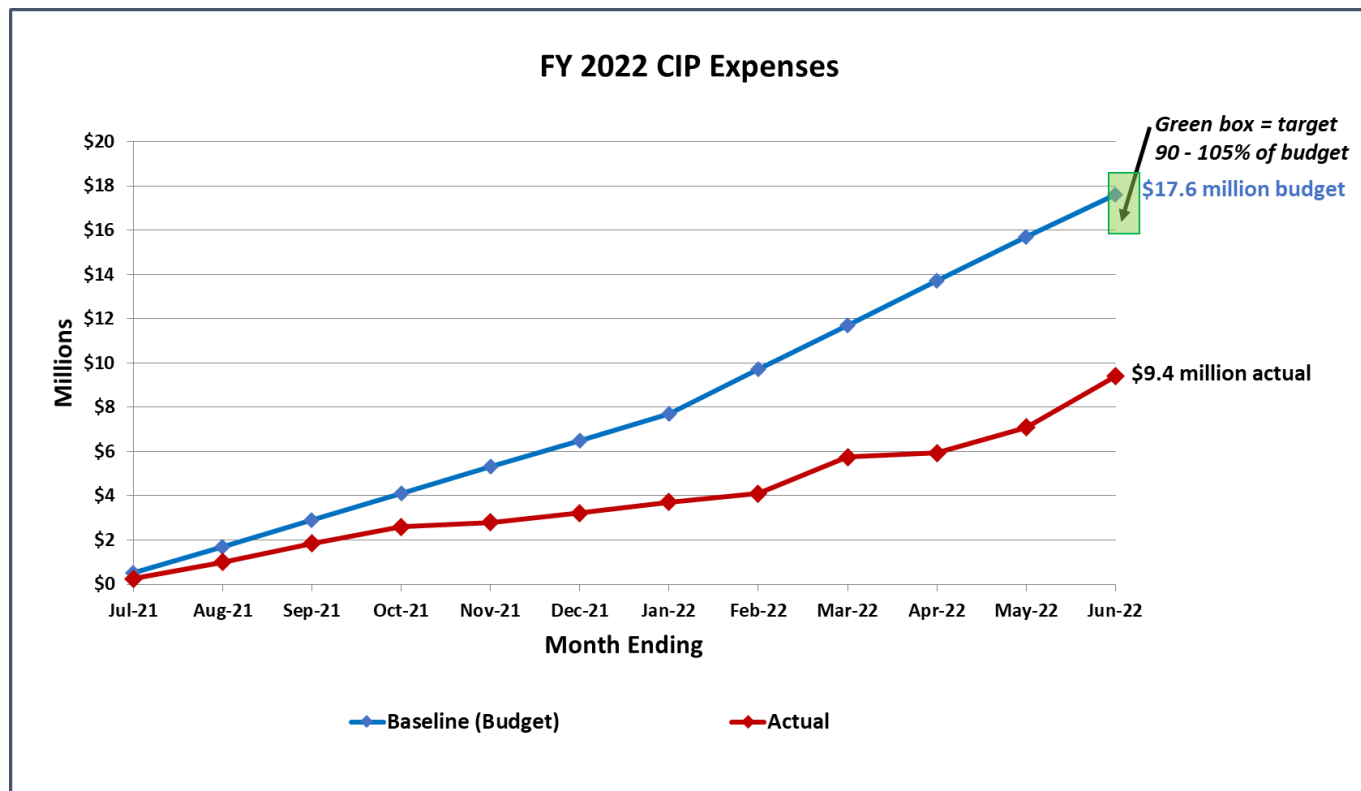
- water mains throughout the distribution system;
- a finished water pump and variable frequency drive (VFD) at the Jones Ferry Water Treatment Plant (WTP);
- gravity sewer line rehabilitation and replacement along East Main Street in Carrboro;
- pipe and manhole rehabilitation throughout the wastewater collection system;
- a replacement of the administration building roof;
- emergency repair of a portion of the Morgan Creek Interceptor; and
- water mains along West Cameron Avenue

The COVID-19 pandemic, labor shortages, and the conflict between Russia and Ukraine has continued to impact the progression of construction projects, primarily through associated supply-chain challenges. Material procurement has become increasingly difficult: a North Carolina OneWater seminar this month detailed out some of the procurement issues that are impacting water and sewer utilities, with lead times on materials that are continuing to grow, including ductile iron pipe (45 to 56 weeks), service brass (24 to 38 weeks), and hydrants (36 to 45 weeks). The suppliers and vendors at the seminar estimated that the supply chain issues affecting our industry are likely to last another two years. While several construction projects were expedited through the first half of FY 2022 in recognition of these challenges, the expedited projects did not significantly impact the overall spending of the CIP budget due to material and contractor availability.

Figure 1 shows the actual FY 2022 CIP expenses against the monthly baseline projection, as well as the expenditure target of 90% to 105% of budgeted funds.

September 8, 2022

Figure 1 – FY 2022 CIP Expenses



The FY 2022 expenditures of \$9.4 million are 53% of (or about \$8.2 million less than) the budgeted funds, primarily due to schedule changes. This expenditure-to-budget percentage does not fall within the Board-adopted target of executing between 90 to 105% of the CIP budget. The reasons behind the variance to budget can be broadly summarized as:

- A net \$8.9 million decrease in spending due to timing (schedule-based) changes that resulted in planned FY 2022 work being delayed
- A net \$85,000 decrease in spending due to scope changes.
- A net \$569,000 increase in spending due to project cost changes.
- A net \$153,000 increase in spending due to other project changes such as mid year emergencies and requests, elective project deferrals

Table 1 (attached) contains summaries of project performance for all active projects during this reporting period. The projects in the table are color coded according to the primary reason for the fiscal year cost variance (price, schedule, or scope), or included in a fourth category (other) for projects which have no or minimal project FY 2022 cost variance, or are in preliminary stages for which baseline budget and schedule have not yet been established.

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% of overall contract value. However, OWASA

encourages and tracks MWBE participation in all formal and informal construction contracts. Historical averages for the CIP program are reported in Table 2. Twelve construction contracts were awarded during FY 2022 and six of the twelve contracts awarded met the 10% MWBE goal. Of the remaining six construction contract not meeting the MWBE requirements, only one of them was in the formal range (over \$500,000). 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 Average MWBE Participation Summary, FY 2018 through FY 2022

	Black	Hispanic	Asian American	American Indian	Female	Total MWBE
Dollar amounts in MWBE categories	\$ 75,515	\$ 1,787,592	\$ 0	\$ 0	\$ 12,644,039	\$ 14,507,146
% of sum of contract value (\$59,007,594)	0.1%	3.0%	0%	0%	21.4%	24.6%**

**overall goal is 10%

Staff continues to further develop the MWBE outreach practices as previously discussed with the Board during the August 27, 2020 [Semiannual CIP Report](#). In an effort to increase MWBE participation in OWASA projects, in June OWASA CIP staff coordinated and participated in a joint open-house with the University of North Carolina (UNC). This open-house was directly geared to minority and women owned businesses and connecting them with other prime contractors as well as with OWASA and UNC staff. From this effort we have expanded our available contacts for directly bidding with MWBE businesses as well as provided an opportunity for non-MWBE prime contractors to network with additional MWBE resources for inclusion on our projects. Staff will continue to track information about prime contractors and subcontractors who are bidding OWASA projects and report relevant information about any potential trends in MWBE participation in future CIP Semiannual Reports.

Action Needed:

Receive and discuss the report.

Information:

- Table 1: Project Performance Summary – FY 2022

Table 1: Project Performance Summary - FY 2022

FY 2022 Cost Variance due to Schedule Changes
FY 2022 Cost Variance due to Cost/Pricing
FY 2022 Cost Variance due to Scope Changes

- ✔ FY 2022 (or overall project) costs within 5% of FY 2022 (or overall project) budget; completion within 2 months of baselined completion
- ✘ FY 2022 (or overall project) costs more than 5% of FY 2022 (or overall project) budget; completion more than 2 months beyond baselined completion

CIP No.	Project	Active Phase (at 6/30/22)	FY 2022 Performance			Overall Project Performance						Comments
			FY 2022 Budget	FY 2022 Cost	FY 2022 Cost Status	Baseline Budget	Forecasted Cost	Cost Status	Baseline Completion	Forecasted Completion	Schedule Status	
270-04	Jordan Lake Raw Water Supply Allocation	N/A	\$ 5,000	\$ 8,940	✘	\$ 5,000	\$ 8,070	✘	Jun 22	Jun 22	✔	Fee for annual maintenance assessed by the State was larger than budgeted - this has been addressed in FY 23 budget
270-09	Quarry Reservoir Development	N/A	\$ 15,000	\$ 15,000	✔	\$ 15,000	\$ 15,000	✔	Jun 22	Jun 22	✔	
270-28	University Lake Permanganate Facility	Construction	\$ 300,000	\$ 25,817	✔	\$ 2,242,000	\$ 3,140,000	✘	Jun 22	June 23	✘	Construction start delayed due to SRF timeline and ramping the project up after COVID requested delay
270-30	Cane Creek Dam Rehabilitation	Bidding	\$ 350,000	\$ 26,243	✔	\$ 282,000	\$ 282,000	✔	Nov 23	Nov 23	✔	Initial repairs were less extensive than originally anticipated. Future rehab covered in this line to be complete in FY 23
270-31	Cane Creek Dam Resurfacing	Complete	\$ -	\$ 41,995	✘	\$ 60,000	\$ 43,000	✔	Jun 23	Jun 22	✔	Expedited construction from FY 2023 to FY 2022 due to asphalt prices
270-34	Western Intake Partnership Projects	Pending	\$ -	\$ 2,659	✘	-	-	-	-	-	-	OWASA elected not to participate in FY 22 but later on decided to participate.
272-37	WTP Belt Filter Press Replacement	Construction	\$ 500,000	\$ 60,646	✔	\$ 3,587,000	\$ 4,445,000	✘	Oct 22	Oct 23	✘	Construction delayed due to lingering COVID requested delay and then BFP material procurement
272-39	Water and Wastewater Facilities Concrete Condition Assessment	Complete	\$ -	\$ 2,700	✘	-	-	-	-	-	-	
272-42	WTP Finished Water Pump Improvements	Complete	\$ 50,000	\$ 481,174	✘	\$ 1,231,000	\$ 1,051,000	✔	Jun 21	Aug 21	✔	Construction closeout delayed
272-46	WTP Chemical Facility Improvements	Construction	\$ 50,000	\$ 88,055	✘	\$ 3,550,000	\$ 3,786,000	✘	Jun 21	Sep 21	✘	Construction closeout delayed
272-49	WTP SCADA Master Plan Recommendations	Pending	\$ 500,000	\$ 77,719	✔	-	-	-	-	-	-	SCADA Master Plan recommendations did not move forward on schedule and have not yet been baselined
272-51	HVAC Replacement Program (Ops Center Controls, WWTP Filter Bldg)	Complete	\$ 150,000	\$ 174,339	✘	\$ 130,000	\$ 211,000	✘	Jun 22	Jun 22	✔	Expedited additional HVAC work that had been planned for future FYs due to favorable pricing
272-52	WTP Electrical Distribution Improvements	Design	\$ 2,500,000	\$ 122,902	✔	\$ 5,950,000	\$ 11,037,000	✘	Jun 23	Jul 26	✘	Bidding and construction was delayed in attempt to secure SRF Funding and accommodate other priority projects at the WTP
272-55	WTP Clearwell Rehabilitation/Flash Mix Isolation Valve Replacement	Design	\$ 150,000	\$ 33,431	✔	-	-	-	-	-	-	Design progressed slower than originally anticipated. Focus has been on the clearwell leak
272-56	Finished Water Pump #6 VFD	Complete	\$ -	\$ 97,577	✘	-	-	-	-	-	-	Mid-year request due to VFD failure
272-58	Cane Creek Raw Water Pump Station Roof Replacement	Design	\$ -	\$ 7,989	✘	\$ 109,000	\$ 108,500	✔	Jun 23	Jun 23	✔	Mid-year request to expedite roof replacements in anticipation of failure that could impact major electrical equipment at the pump station
274-14	Manning Tank Fence Replacement	Complete	\$ -	\$ 29,889	✘	-	-	-	-	-	-	Mid-year request
275-01	Lead and Copper Rule Compliance	Study	\$ -	\$ 20,077	✘	\$ 300,000	\$ 229,700	✔	Jan 23	Jan 23	✔	Mid-year request to assist with new regulation compliance
275-15	Reimbursement for Distribution System Improvements	Construction	\$ 564,000	\$ 107,661	✔	\$ 564,000	\$ 107,661	✔	Jun 22	Jun 22	✔	
275-20	Water Main Rehabilitation/Replacement Projects	Construction	\$ 1,345,000	\$ 225,227	✔	\$ 1,345,000	\$ 225,227	✔	Jun 22	Jun 22	✔	COVID and material procurement impacted the ability to perform on this annual program
275-21	Rogerson Neighborhood Water Mains	Design	\$ 180,000	\$ 39,385	✔	\$ 4,311,000	\$ 2,961,000	✔	Jun 23	Nov 23	✘	
275-46	Dobbins Drive Water Main Replacement	Closeout	\$ -	\$ 158,946	✘	\$ 2,275,000	\$ 1,669,000	✔	Dec 20	Jun 22	✘	Construction closeout delayed
275-52	West Cameron Avenue Water Main Replacement	Construction	\$ 3,249,000	\$ 1,280,059	✔	\$ 3,700,000	\$ 4,508,000	✘	Mar 22	Feb 23	✘	Construction was delayed getting started
275-53	Distribution System Hydraulic Model	Study	\$ 30,000	\$ 12,560	✔	\$ 30,000	\$ 12,560	✔	Jun 22	Jun 22	✔	On call services related to the existing hydraulic model

275-89	Distribution System Prioritization Model	Complete	\$ -	\$ 1,408	✘	\$ 425,000	\$ 445,000	✔	Feb 20	Aug 20	✘	Study was substantially complete in FY 21
275-92	Jones Ferry Rd Water Main Replacements	Construction	\$ 1,633,000	\$ 2,281,332	✘	\$ 3,750,000	\$ 3,879,500	✔	Sep 21	Oct 22	✘	Project experienced a significant redesign effort that added time and cost
275-93	Bolinwood Bridge Water Main Replacement	Complete	\$ -	\$ 18,306	✘	\$ 250,000	\$ 156,568	✔	Jun 21	Jun 21	✔	Construction closeout delayed
275-96	Water Main Replacements - Group II	Study	\$ -	\$ 17,996	✘	\$ 25,000	\$ 18,000	✔	Jun 22	Jun 22	✔	Study to help better estimate future water line costs in downtown and UNC corridors
275-99	Distribution System Asset Management	N/A	\$ 70,000	\$ 8,775	✔	\$ 70,000	\$ 8,775	✔	Jun 22	Jun 22	✔	Lack of spending due to vacant Asset Manager Position throughout FY 22
276-18	Gravity Sewer Rehabilitation Program	Closeout	\$ 350,000	\$ 503,127	✘	\$ 350,000	\$ 504,000	✘	Jun 22	Jun 22	✘	Approach to sewer rehab focused on smaller packages to be executed within the FY
276-45	Bolinwood Interceptor Replacement	Construction	\$ -	\$ 87,009	✘	\$ 1,130,000	\$ 2,932,000	✘	Mar 22	Jun 23	✘	Expedited bidding into FY 22
276-48	Dobbins Drive Interceptor Replacement	Closeout	\$ -	\$ (117,479)	✘	\$ 2,415,000	\$ 2,439,000	✔	Dec 20	Mar 21	✘	Construction closeout delayed
276-52	Rocky Branch Interceptor Replacement	Pending	\$ 350,000	\$ -	-	\$ 762,000	\$ 852,000	✘	Jun 26	Jun 26	✔	Carrboro Arts Center Project no longer moving forward so majority of the planned improvements did not get constructed
276-58	Prince Street Service Replacement	Complete	\$ -	\$ 64,122	✘	\$ 80,000	\$ 68,022	✔	Jun 21	Sep 21	✘	Final closeout lagged behind completion of the project
276-59	Morgan Creek Interceptor Replacement	Design	\$ 100,000	\$ 39,351	✔	-	-	-	-	-	-	Design has progressed slower than anticipated, project has not yet been baselined
276-63	East Main Street Sewer Rehab	Complete	\$ 1,165,000	\$ 1,760,903	✘	\$ 1,370,000	\$ 1,760,903	✘	Jun 22	Apr 22	✔	
276-64	Collection System Basin 28 Rehabilitation	Pending	\$ 320,000	\$ -	-	-	-	-	-	-	-	Decided not to continue with the project
276-65	Morgan Creek Interceptor Emergency Repair	Complete	\$ -	\$ 431,213	✘	-	-	-	-	-	-	
276-70	Collection System On-Call Modeling	Study	\$ -	\$ 2,550	✘	\$ 23,000	\$ 2,550	✔	Jun 22	Jun 22	✔	Mid-year request to support development services and CIP collection system modeling needs. This need is captured in the FY 23 budget.
276-99	Collection System Asset Management	Study	\$ 50,000	\$ 28,219	✔	\$ 50,000	\$ 28,219	✔	Jun 22	Jun 22	✔	
277-43	Rogerson Drive Force Main and Pump Station Program Services	Study	\$ 100,000	\$ 44,938	✔	\$ 307,000	\$ 253,000	✔	Jun 23	Jun 23	✔	
277-45	Chapel Hill North Pump Station Rehabilitation	Design	\$ 300,000	\$ 178,919	✔	\$ 300,000	\$ 911,000	✘	Jun 22	Jun 23	✘	
277-46	Rogerson Drive Grit Removal Evaluation	Complete	\$ 30,000	\$ 24,973	✔	\$ 30,000	\$ 24,973	✔	Jun 22	Jun 22	✔	
278-20	WWTP Secondary Clarifier #4 Improvements	Design	\$ 1,400,000	\$ 146,475	✔	\$ 2,200,000	\$ 2,490,000	✘	May 23	Jun 24	✔	Timeline for construction delayed to accommodate acquired SRF funding
278-51	WWTP Solids Thickening Improvements	Complete	\$ -	\$ 26,178	✘	\$ 6,023,000	\$ 6,317,000	✘	Apr 21	Feb 22	✘	Construction closeout delayed
278-75	WWTP Facilities Planning	Study	\$ 235,000	\$ 138,073	✔	\$ 350,000	\$ 350,000	✔	Oct 22	Oct 22	✔	
278-78	WWTP Fermenter Improvements	Construction	\$ 883,000	\$ 222,779	✔	\$ 994,000	\$ 2,092,000	✘	Jun 21	Mar 23	✘	Material procurement has significantly delayed construction progress
278-80	WWTP Miscellaneous Rehabilitation	Construction	\$ -	\$ 47,840	✘	\$ 400,000	\$ 274,294	✔	June 21	June 21	✔	
278-82	WWTP Headworks Rehabilitation	Complete	\$ -	\$ 23,235	✘	\$ 1,466,000	\$ 1,518,698	✔	Dec 20	Sep 21	✔	Final retainage released well after construction completion
278-90	WWTP Admin Bldg. Planning study	Complete	\$ 55,000	\$ 24,050	✔	\$ 55,000	\$ 24,050	✔	Jun 22	Jun 22	✔	
278-94	Biogas Removal System Improvements	Design	\$ 250,000	\$ -	✔	-	-	-	-	-	-	Biogas equipment has been purchased but due to material lead times it has not yet been received
278-96	WWTP Flood Assessment	Complete	\$ -	\$ 31,943	✘	-	-	-	-	-	-	Mid-year request to transfer from Operations to CIP

278-97	Digester 3 and 4 Cleaning, Assessment and Repair	Construction	\$ -	\$ 86,551	⊗	\$ 520,000	\$ 520,000	✔	Jun 23	Jun 23	✔	Expedited due to anticipated Digester failure, baselined project is just cleanout, condition assessment and minor repairs
279-13	Reclaimed Water Valve and coupling Rehab	Bidding	\$ 325,000	\$ 59,178	✔	\$ 450,000	\$ 350,000	✔	Jun 21	Jun 22	⊗	Design and coordination with stakeholders took longer than anticipated
279-14	Reclaimed Water Quality Evaluation	Pending	\$ 75,000	\$ -	-	-	-	-	-	-	-	Deferred due to other staff priorities at WWTP
280-02	Main Admin Building Repairs	Complete	\$ -	\$ 64,719	⊗	-	-	-	-	-	-	Mid-year request to assist with building failures

Total FY 2022 Active Projects	FY 2022 Budget	FY 2022 Cost
	\$ 17,629,000	\$ 9,387,672

Agenda Item 5:



DIVERSITY AND INCLUSION / EEO REPORT FOR FISCAL YEAR 2022

In fulfilling our goal to fill vacancies with the best candidates based on skill and qualifications, we seek to encourage and promote diversity within the organization. Advertising in a wide variety of venues helps attract a diverse candidate base. We pursue opportunities by participating in numerous outreach efforts to make more potential applicants aware that OWASA is a great place to work!

This annual report is a tangible reflection of our commitment to Diversity and Inclusion.

Goal #1	Goal #2
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The diversity of OWASA’s workforce reflects the communities we serve.

Inclusive work environment for everyone that encourages and supports each Team member to contribute to their full ability towards OWASA’s mission.



2022 HIGHLIGHTS

DIVERSITY GROUPS

There are many individuals invested in assisting in the facilitation of our current and future of D&I initiatives. The three main ambassadors are the Diversity Leadership, Diversity Resource and Diversity Recruitment groups.

EMPLOYEE INVOLVEMENT

In addition to the Diversity Groups, we have a Welcome Team, Employee Human Resources Team, Employee Safety Committee, and Interview Panels. All of which provide a supportive and welcoming workplace culture and encourage collaborative decision making.

GOVERNMENT LEADERSHIP SOLUTIONS

In the spirit of continuous improvement, Government Leadership Solutions (GLS) was enlisted to further the work of Diversity and Inclusion (D&I) within OWASA. Their recommendations included:

- Celebrate the achievements so far along our D&I journey.
- Implement a comprehensive training regimen around the second goal of inclusion that is voluntary rather than mandatory.
- Focus on inclusion in the six focus goals of: Recruitment and Outreach, Leadership Development, Training and Mentoring, Workplace Environment, Resources and Staffing
- Engage in strategic communication emphasizing the benefits of D&I to all employees and connecting to OWASA's mission.
- Develop a Diversity and Inclusion position.
- Engage in strategic communication processes to ensure clarity and consistency to create social agents.
- Incorporating Diversity and Inclusion from the operational perspective where the work is a strategic imperative and operational pillar.
- The Diversity Resource Group undergo a refresher training so that they can continue to understand their roles and how to best function within the OWASA context and bridge the polarity within the organization.

GLS was tasked with four main deliverables:

- Assess, identify, and execute a D&I training approach for the Board of Directors
- Perform an Organizational Assessment to gather data and input from staff
- Based on the assessment, provide recommendations that focus on OWASA's D&I goals and best practices
- Develop and execute a D&I training and education strategy to increase employees' and supervisors' awareness, knowledge and skills and help OWASA achieve our D&I goals

TRAINING

With a focus on creating a welcoming workplace, training was provided to all staff and included specific sessions for supervisors. Topics such as active listening, upskilling for change, team communication and connection, and mental models were highlighted and discussed. **Diversity training increases awareness and appreciation for co-workers. It provides strategies to enhance employees' interpersonal and communication skills to help build a positive work environment.**

The Board trained on governance and operation, D&I implication, synthesis and strategic impressions, engagement, and support.



QUARTERLY MEETUPS

Facilitated by the Diversity Resource Group, all employees were invited to attend discussions on pertinent topics advancing our knowledge. Topics in fiscal year 2022 included:

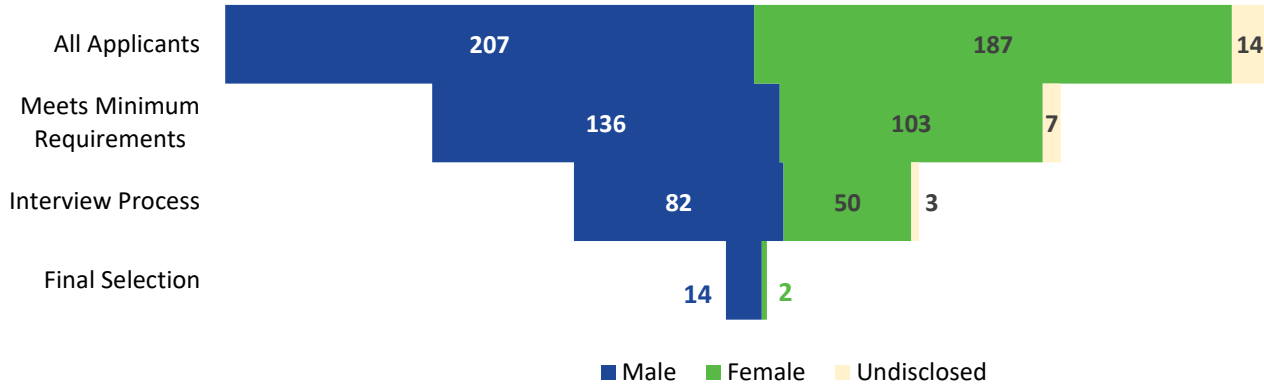
- Deconstructing Racism in Media Headlines
- Diversity in Science
- When Neurodiversity Works
- Multinational Companies Impact on Local Water Resources

RECRUITING EFFORTS

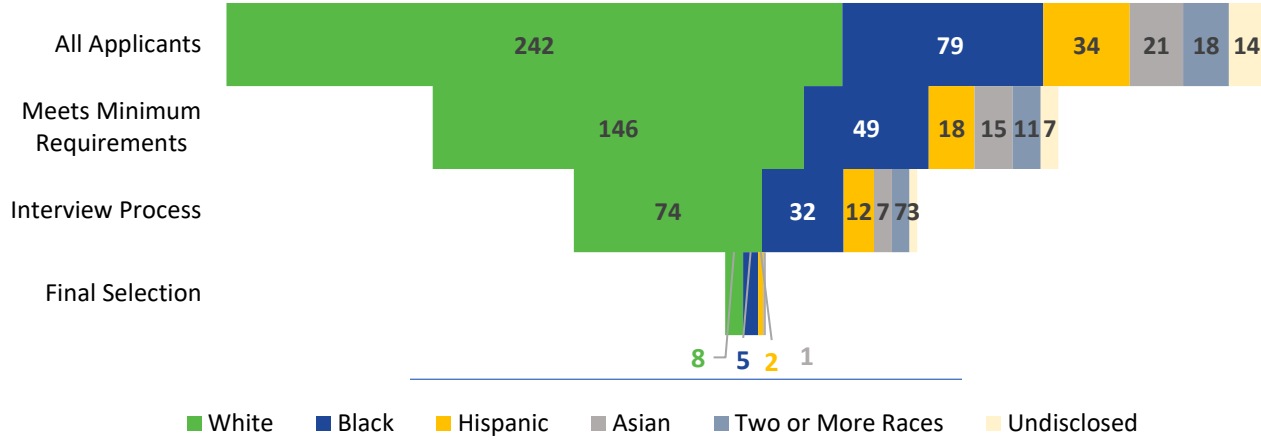
We received 408 applications and filled twenty-five (25) positions with sixteen (16) from applicants during this reporting period and the other nine (9) from recruitments that began and were reported in FY21. We are proud to report that of the twenty-five (25) positions filled using our competitive process, five (5) were filled by way of internal promotions. The OWASA Team works diligently to provide high quality services to our community, and we are proud to support promotions within the organization. There were 41 employees that served on an interview panel and were 39% female and 39% racially diverse. The use of an interview panel provides diverse perspectives and expertise to assist the Hiring Supervisor in evaluating the candidates. Utilizing a panel improves the objectivity of the interview process and reinforces OWASA's inclusive teamwork culture.

Monitoring the demographic representation at each step within the recruitment process is important to tracking our efforts to promote workforce diversity. Below is information on the gender and racial diversity of the sixteen (16) recruitments completed this reporting period.

Gender Distribution in the Recruitment Process



Racial Distribution in the Recruitment Process



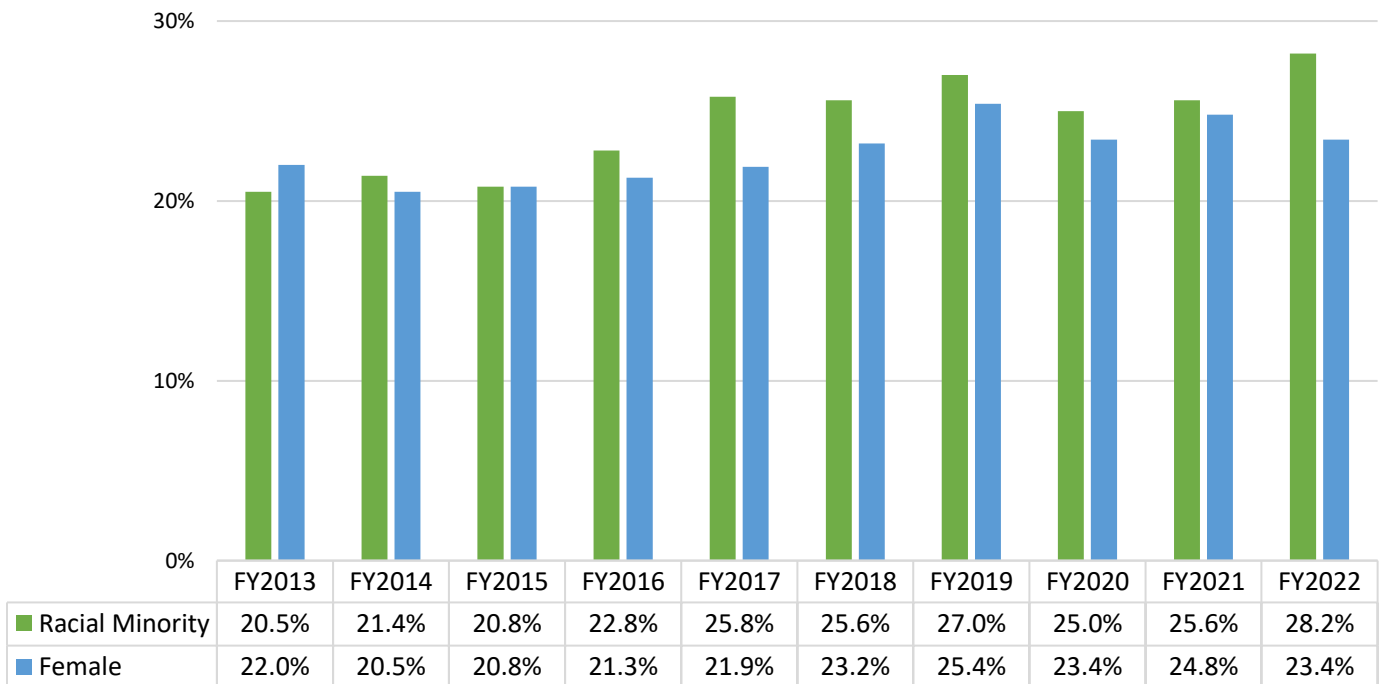
EEO REPORT

WORKFORCE RACE AND GENDER DISTRIBUTION

OWASA works hard to attract people to the exciting career opportunities in the water/wastewater industry.

The racial minority representation on June 30, 2022 was 28.2% which is a 2.6% increase from the previous reporting period and the highest level in ten years. The number of applications received in FY22 is significantly lower than previous years. Like other employers, OWASA felt the impacts of a strained labor market. Many vacancies took longer to fill with postings needing to be extended; we stay committed to our recruitment practices and strategies to find the best qualified candidate for the position.

**OWASA Workforce
Race and Gender Distribution on June 30th (FY13-FY22)**



**Workforce Race and Gender Distribution
By EEO Classification on June 30, 2022**

Classification	Gender		Race						
	Male	Female	Two or More Races	White	Black/ African American	Hispanic	Asian	American Indian or Alaska Native	Native Hawaiian or Other Pacific Islander
Officials and Administrators	7	8	2	11	1	0	1	0	0
Professionals	9	3	2	9	0	0	1	0	0
Technicians	13	3	1	13	1	1	0	0	0
Protective Service Workers	2	0	0	2	0	0	0	0	0
Paraprofessionals	5	3	1	3	3	0	1	0	0
Administrative Support	0	9	0	2	5	2	0	0	0
Skilled Craft Workers	36	2	4	30	2	1	0	1	0
Service-Maintenance	23	1	0	19	4	0	1	0	0
Total (124)	95	29	10	89	16	4	4	1	0
Percentage	76.6%	23.4%	8.1%	71.8%	12.9%	3.2%	3.2%	0.8%	0

A LOOK AHEAD TO FY 2023

Recruiting for a Diversity and Inclusion Specialist will begin at the start of the 2023 calendar year. This position will assist in developing and implementing strategies in recruitment, training, leadership, cross-cultural competencies as well as continuing to build community relationships.

A work group has been formed with members of all three Diversity Groups. This work group is currently:

- Discussing the guiding principles for our Diversity and Inclusion program
- Determining the effectiveness of the three groups and how to best achieve our objectives
- Reviewing our Diversity and Inclusion metrics and their usefulness



Agenda Item 6:

Orange Water and Sewer Authority
Meeting of the Board of Directors
July 14, 2022

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held its duly noticed regular work session by virtual means in accordance with law, on Thursday, July 14, 2022, at 6:00 p.m. utilizing Microsoft Teams software.

Board Members attending virtually: Bruce Boehm (Chair), Todd BenDor (Vice Chair), Raymond (Ray) DuBose (Secretary), Jody Eimers, Pedro Garcia, David Gorelick, Melody Kramer, Kevin Leibel, and Elmira Mangum.

OWASA staff attending virtually: Mary Darr, Robert Epting, Esq. (Epting and Hackney), Vishnu Gangadharan, Monica Hill, Robin Jacobs, Esq. (Epting and Hackney), Coleman Olinger, Andrea Orbich, Dan Przybyl, Ruth Rouse, Todd Taylor, Mary Tiger, Stephen Winters, and Richard Wyatt.

Others attending virtually: Meg Holton (UNC), and Henry DePietro.

Motions

1. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Approving the Long-Range Water Supply Plan. (Motion by Ray DuBose, second by Kevin Leibel and the motion unanimously approved.)
2. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Adjusting the Executive Director's Compensation. (Motion by Ray DuBose, second by Kevin Leibel and the motion unanimously approved.)
3. Ray DuBose made a Motion to approve the Minutes of the June 9, 2022, Board of Directors Meeting; second by Kevin Leibel and the Motion was unanimously approved.
4. Ray DuBose made a Motion to approve the Minutes of the June 9, 2022, Closed Session of the OWASA Board of Directors for the Purpose of Discussing a Personnel Matter; second by Kevin Leibel and the Motion was unanimously approved.
5. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Approving the Elimination of Account Delinquency Fee. (Motion by Todd BenDor, second by Kevin Leibel and the motion was unanimously approved.)
6. Kevin Leibel made a Motion to approve the Key Focus Areas for OWASA's Executive Director as amended for the Period of June 2022 to May 2023; second by Todd BenDor and the Motion was unanimously approved.

* * * * *

Announcements

Chair Bruce Boehm announced that due to the ongoing North Carolina State of Emergency, the OWASA Board of Directors held the meeting virtually utilizing Microsoft Teams software. Chair Boehm stated that Board Members, General Counsel, and staff participated in the meeting remotely.

Chair Boehm asked if any Board Member knew 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.

Chair Boehm welcomed four new Board Members and announced that on June 15, 2022, the Chapel Hill Town Council appointed David Gorelick to the OWASA Board of Directors to complete the unexpired term of John Morris which will end on June 30, 2023. He said that on June 21, 2022, the Carrboro Town Council appointed Melody Kramer to replace Robert Morgan's seat and Elmira Mangum to replace Yinka Ayankoya's seat on the OWASA Board. A new Board Member orientation session was held on Tuesday, July 12, 2022, for the Carrboro Appointees. Because of the four new Board Members, Chair Boehm conducted a short icebreaker to welcome and warm up the conversation among participants in the meeting,

Chair Boehm said the new Executive Committee met on July 12, 2022, to review the roles and responsibilities and review OWASA's general topics for this fiscal year.

Vishnu Gangadharan, Director of Engineering and Planning, introduced Coleman Olinger, OWASA's new Asset Manager.

Petitions and Requests

Chair Boehm said no petitions or requests were received from the public.

Chair Boehm asked for petitions and requests from the Board and staff; none were provided.

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

The Board accepted this as an information item.

Item Two: Resolution Approving the Long-Range Water Supply Plan

Ray DuBose made a Motion to approve resolution; second by Kevin Leibel and the Motion was unanimously approved. Please see Motion 1.

Item Three: Resolution Adjusting the Executive Director's Compensation

Ray DuBose made a Motion to approve resolution; second by Kevin Leibel and the Motion was unanimously approved. Please see Motion 2.

Item Four: Minutes of the June 9, 2022, OWASA Board of Directors Meeting

Ray DuBose made a Motion to approve the Minutes of the May 12, 2022, Board of Directors Meeting; second by Kevin Leibel and the Motion was unanimously approved. Please see Motion 3.

Item Five: Minutes of the June 9, 2022, Closed Session of the OWASA Board of Directors Meeting

Ray DuBose made a Motion to approve the Minutes of the June 9, 2022, Closed Session of the OWASA Board of Directors for the purpose of discussing a personnel matter; second by Kevin Leibel and the Motion was unanimously approved. Please see Motion 4.

Item Six: Proposed Elimination of Account Delinquency Fee

Todd BenDor made a Motion to approve the Resolution Approving the Elimination of Account Delinquency Fee; second by Kevin Leibel and the Motion was unanimously approved. Please see Motion 5.

The Board also requested staff inform the public of the elimination of the delinquency fee.

Item Seven: Review Proposed Work Plan for OWASA's Executive Director

The Board requested the Executive Director's Work Plan be amended to rename item one as High Quality Service, include long-term regulations outlook, fraud resiliency, and financial management and billing. Item two (equitable services) will include a task to explore rate study options. Item seven (service reliability and resiliency) will include the new computerized maintenance management system regarding the asset management plan and the project delivery optimization plan will be updated to identify the Capital Improvements Plan. The 2022 Communications Plan will be updated to reflect the suggestions communicating the elimination of the customer delinquency fee and to connect with UNC students regarding their water use.

Kevin Leibel made a Motion to approve the Key Focus Areas for OWASA's Executive Director as amended for the Period of June 2022 to May 2023; the was Motion seconded by Todd BenDor and unanimously approved. Please see Motion 6.

Item Eight: Review Board Work Schedule

The Board discussed and requested accommodations for in-person Board meetings (masking, availability of masks for the public who attend the meeting, seating, attendance, remote rooms, etc.) which will be implemented on September 8, 2022, following the end of the State of Emergency on August 15, 2022. The Board requested information on the cost and time to provide public participation virtually for future Board meetings.

The Board agreed the Standing Committees of the Board would not be assigned at this time since there has not been a need for committee meetings.

The Board agreed to cancel the August 11, 2022, OWASA Board Meeting.

Item Nine: Summary of Board Meeting Action Items

Todd Taylor noted the following staff action items:

- Incorporate feedback into Executive Director's Key Focus Areas;
- Implement requests for in-person Board meetings; and
- Provide an updated 2022 Communications and Community Engagement Plan.

Item Ten: Closed Session

Without objection, the Board of Directors convened in a closed session for the purpose of discussing a personnel matter as provided in N.C. General Statutes 143.318.11(6).

Following the closed session, the Board reconvened in open session, reported no action was taken in the closed session, and the meeting was adjourned at 8:22 p.m.

Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachments

Agenda Item 7:

Orange Water and Sewer Authority

Closed Session of the Board of Directors

July 14, 2022

The Board of Directors of Orange Water and Sewer Authority met virtually in Closed Session on Thursday, July 14, 2022, following the Board meeting.

Board Members attending virtually: Bruce Boehm (Chair), Todd BenDor (Vice Chair), Ray DuBose (Secretary), Jody Eimers, Pedro Garcia, David Gorelick, Melody Kramer, Kevin Leibel, and Elmira Mangum.

Item One

The Board of Directors met in Closed Session without General Counsel to evaluate the annual performance of General Counsel for Fiscal Year 2022.

No official action was taken. At the conclusion of the closed session, the Board convened in open session to adjourn the meeting.

The meeting was adjourned at 8:22 p.m.

Raymond E. DuBose, P.E.
Secretary

Agenda Item 8:

Resolution Declaring the Intent of the Orange Water and Sewer Authority to Reimburse Itself for Capital Expenditures from the Proceeds of Certain Tax-Exempt Obligations Under the Internal Revenue Code of 1986 and the United States Department of Treasury Regulations

Background and Purpose:

We are tentatively planning to issue revenue bonds in March or April of 2023 to provide funding for Capital Improvements Program projects. Some of the projects to be funded by the bonds are likely to begin prior to when the bonds are issued. Therefore, as in previous bond issues, we will need to be able to reimburse ourselves with bond proceeds in the event that we expend funds before the bonds are issued.

This resolution grants the authority to declare official intent to reimburse expenditures under United States Department of Treasury regulations to the Director of Finance and Customer Service. This authority applies to the potential spring 2023 bond issue and future issues.

In the past, we have presented a reimbursement resolution to the Board for approval each time we issued bonds. Our bond counsel recommends that instead, we grant this authority to the Director of Finance and Customer Service; this approach has the same result and is more efficient for the Board, staff, and advisors. The Director of Finance and Customer Service will report such instances to the Board.

OWASA's General Counsel agrees with this approach.

Action Requested:

Adopt the resolution.

RESOLUTION DECLARING THE INTENT OF THE ORANGE WATER AND SEWER AUTHORITY TO REIMBURSE ITSELF FOR CAPITAL EXPENDITURES FROM THE PROCEEDS OF CERTAIN TAX-EXEMPT OBLIGATIONS UNDER THE INTERNAL REVENUE CODE OF 1986 AND UNITED STATES DEPARTMENT OF TREASURY REGULATIONS

BE IT RESOLVED by the Board of Directors of the Orange Water and Sewer Authority (the “*Authority*”) as follows:

Section 1. It is hereby found, determined and declared by the Board of Directors as follows:

(a) Section 54A(d)(2)(D) of the Internal Revenue Code of 1986 (the “*Code*”) and Section 1.150-2 of the Treasury Regulations (the “*Regulations*”) prescribe specific procedures which will be applicable to certain bonds or notes issued by the Authority including, without limitation, a requirement that the Authority declare its official intent to reimburse certain expenditures with proceeds of debt to be incurred by the Authority.

(b) The Code and the Regulations expressly permit the statement of official intent to be declared by any person designated by the Authority to declare such official intent on behalf of the Authority.

(c) The Board of Directors believes that it is in the best interest of the Authority to designate the Director of Finance and Customer Service of the Authority to declare such official intents on behalf of the Authority.

Section 2. As permitted by the Code and the Regulations, the Director of Finance and Customer Service of the Authority, now or hereafter serving in such capacity, is hereby designated by the Board of Directors to declare the official intent on behalf of the Authority to reimburse any and all expenditures with the proceeds of debt to be hereafter incurred by the Authority.

Section 3. The Director of Finance and Customer Service is directed to report to the Board of Directors on an annual basis any such declaration of intent.

Section 4. This resolution is effective on its adoption.

Adopted this 8th day of September 2022.

Bruce Boehm, Chair

ATTEST:

Raymond E. DuBose, P.E., Secretary

STATE OF NORTH CAROLINA)
)
COUNTY OF ORANGE) SS:

I, Andrea Orbich, duly appointed Clerk to the Board of Directors of the Orange Water and Sewer Authority, *DO HEREBY CERTIFY*, that the foregoing is a true and accurate copy of a resolution, which was adopted by the Board of Directors of Orange Water and Sewer Authority, at its regular meeting held on September 8, 2022, to become effective on September 8, 2022, and that such resolution has been duly recorded in the minutes of the Authority.

WITNESS my hand and the corporate seal of the Orange Water and Sewer Authority, this ___day of September, 2022.

(SEAL)

Andrea Orbich
Clerk to the Board
Orange Water and Sewer Authority

Agenda Item 9:

- Resolutions Supporting the Application for American Rescue Plan Act Grant Funding to Extend and Connect Water and Sewer Services to Disadvantaged Households within the OWASA Service Area

Purpose

- OWASA’s Draft Strategic Plan includes a goal to decrease the number of disadvantaged/underserved households not connected to OWASA’s services. Given OWASA’s financial model, the strategy to achieve this goal must include identifying and pursuing outside funding to cover the cost-of-service extension and connection.
- The North Carolina Division of Water Infrastructure is making \$42.5 million in American Rescue Plan Act grant funding available for “At-Risk” utilities. Although the area served by OWASA is not categorized as distressed or “at-risk”, DWI will consider extending grant funding to connect existing households identified to be disadvantaged or underserved to public water and sewer. The funding will cover the cost to extend water and/or sewer mains, as well as the homeowner’s cost to install a private water and/or sewer laterals and tap, connection, and system development fees.
- Preliminary analysis shows that about 1,200 households in OWASA’s service area are not connected to public sewer services and about 500 households are not connected to public water services.
- OWASA is planning to apply for approximately \$5 million in grant funding (between two separate proposals) to extend water and sewer service to households (about \$2.5 million each). If funded, we will partner with the UNC Center for Public Engagement to help identify and focus outreach to low-income households within our service area.
- Staff recommends approving the attached resolutions to submit with the proposals.

Action Requested

- Approve the Resolutions Supporting the Application for American Rescue Plan Act Grant Funding to Extend Water and Sewer Services to Disadvantaged Households within the OWASA Service Area

Resolution By Orange Water and Sewer Authority to Submit Applicant for Water Service Extension to Disadvantaged Households

Whereas, Orange Water and Sewer Authority (OWASA) has need for and intends to construct, plan for, or conduct a study in a project described as “Water Service Extension to Disadvantaged Households in OWASA Service Area” and

Whereas, OWASA intends to request a State loan and/or grant assistance for the project:

Now Therefore Be It Resolved, By The Board Of Directors Of Orange Water And Sewer Authority:

1. That OWASA, the Applicant, will arrange financing for all remaining costs of the project, if approved for a State loan and/or grant award.
2. That the Applicant will provide for efficient operation and maintenance of the project on completion of construction thereof.
3. That the Applicant will adopt and place into effect on or before completion of the project a schedule of fees and charges and other available funds which will provide adequate funds for proper operation, maintenance, and administration of the system and the repayment of all principal and interest on the debt.
4. That the governing body of the Applicant agrees to include in the loan agreement a provision authorizing the State Treasurer, upon failure of OWASA to make a scheduled repayment of the loan, to withhold from OWASA any State funds that would otherwise be distributed to the local government unit in an amount sufficient to pay all sums then due and payable to the State as a repayment of the loan.
5. That the Executive Director, the Authorized Official, and successors so titled, is hereby authorized to execute and file an application on behalf of the Applicant with the State of North Carolina for a loan and/or grant to aid in the study of or construction of the project described above.
6. That the Authorized Official, and successors so titled, is hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with such application or the project: to make the assurances as contained above; and to execute such other documents as may be required in connection with the application.
7. That the Applicant has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the project and to Federal and State grants and loans pertaining thereto.

Adopted this 8th day of September 2022.

Bruce Boehm, Chair

Attest:

Raymond E. DuBose, P.E., Secretary

CERTIFICATION BY RECORDING OFFICER

The undersigned duly qualified and acting Clerk of the OWASA Board of Directors does hereby certify: That the above/attached resolution is a true and correct copy of the resolution authorizing the filing of an application with the State of North Carolina, as regularly adopted at a legally convened meeting of the OWASA Board of Directors duly held on the 8 day of September, 2022; and, further, that such resolution has been fully recorded in the journal of proceedings and records in my office. IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of _____, 20____.

Andrea Orbich, CMC NCCMC
Executive Assistant/Clerk to the Board of Directors

Resolution By Orange Water and Sewer Authority to Submit Applicant for Sewer Service Extension to Disadvantaged Households

Whereas, Orange Water and Sewer Authority (OWASA) has need for and intends to construct, plan for, or conduct a study in a project described as “Sewer Service Extension to Disadvantaged Households in OWASA Service Area”; and

Whereas, OWASA intends to request State loan and/or grant assistance for the project:

NOW THEREFORE BE IT RESOLVED, BY THE BOARD OF DIRECTORS OF ORANGE WATER AND SEWER AUTHORITY:

1. That OWASA, the Applicant, will arrange financing for all remaining costs of the project, if approved for a State loan and/or grant award.
2. That the Applicant will provide for efficient operation and maintenance of the project on completion of construction thereof.
3. That the Applicant will adopt and place into effect on or before completion of the project a schedule of fees and charges and other available funds which will provide adequate funds for proper operation, maintenance, and administration of the system and the repayment of all principal and interest on the debt.
4. That the governing body of the Applicant agrees to include in the loan agreement a provision authorizing the State Treasurer, upon failure of OWASA to make a scheduled repayment of the loan, to withhold from OWASA any State funds that would otherwise be distributed to the local government unit in an amount sufficient to pay all sums then due and payable to the State as a repayment of the loan.
5. That Executive Director, the Authorized Official, and successors so titled, is hereby authorized to execute and file an application on behalf of the Applicant with the State of North Carolina for a loan and/or grant to aid in the study of or construction of the project described above.
6. That the Authorized Official, and successors so titled, is hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with such application or the project: to make the assurances as contained above; and to execute such other documents as may be required in connection with the application.
7. That the Applicant has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the project and to Federal and State grants and loans pertaining thereto.

Adopted this 8th day of September 2022.

Bruce Boehm, Chair

Attest:

Raymond E. DuBose, P.E., Secretary

CERTIFICATION BY RECORDING OFFICER

The undersigned duly qualified and acting Clerk of the OWASA Board of Directors does hereby certify: That the above/attached resolution is a true and correct copy of the resolution authorizing the filing of an application with the State of North Carolina, as regularly adopted at a legally convened meeting of the OWASA Board of Directors duly held on the 8 day of September, 2022; and, further, that such resolution has been fully recorded in the journal of proceedings and records in my office. IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of _____, 20____.

Andrea Orbich, CMC NCCMC
Executive Assistant/Clerk to the Board of Directors

Agenda Item 10:

Request from Orange County for OWASA to Provide Land for Waste and Recycling Center

Purpose:

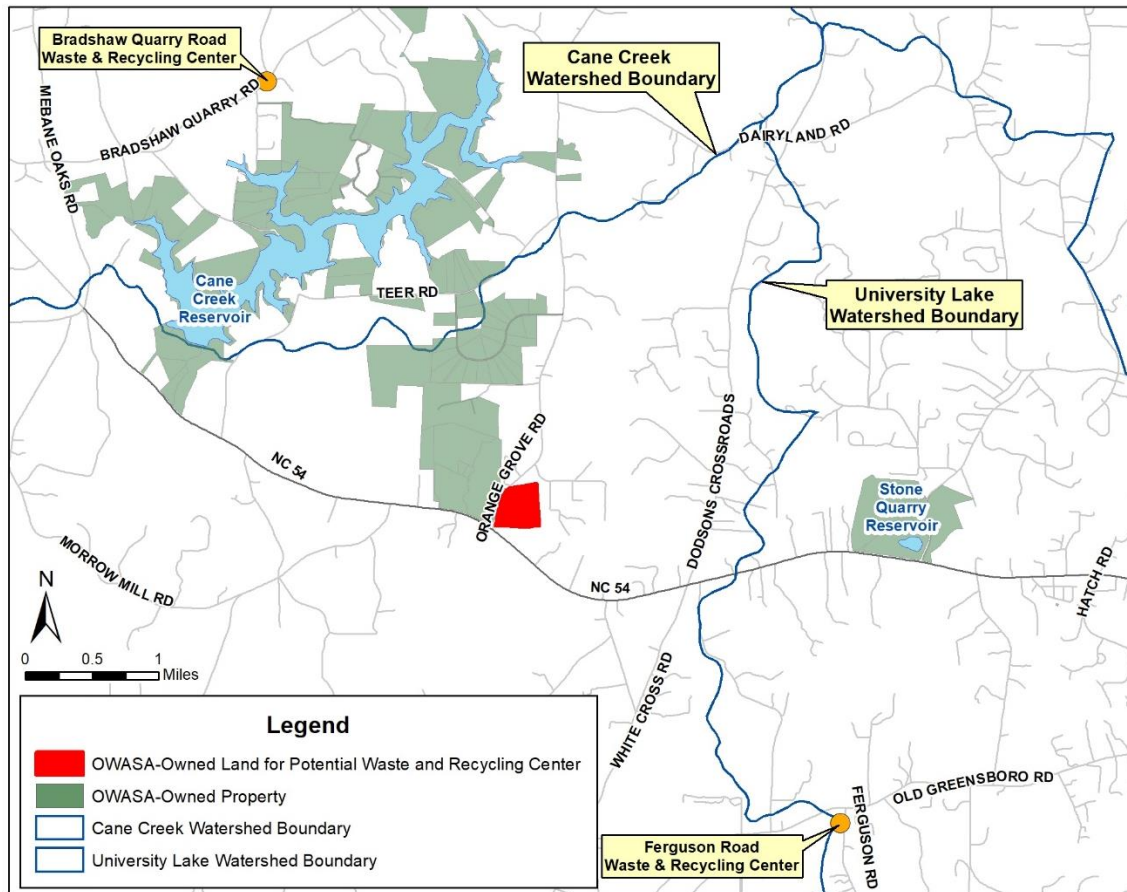
To receive authorization from the Board of Directors to discuss conditions with Orange County staff that would need to be met for OWASA to provide land for a proposed waste and recycling center.

Background:

- Orange County is planning on closing two waste and recycling centers located on Bradshaw Quarry Road in the Cane Creek Reservoir watershed and on Ferguson Road in the University Lake watershed.
- The Board of County Commissioners directed staff in the Department of Solid Waste Management to find an alternative location for Orange County residents to dispose and recycle household waste that is between the existing Bradshaw Quarry Road and Ferguson Road locations.
- County staff identified that OWASA owns a 57-acre parcel on the northeast side of the intersection of NC Highway 54 and Orange Grove Road (parcel 9749-14-0294) that has the site characteristics needed to properly design and operate a facility to minimize the impacts on the environment, public health, and the surrounding community. Figure 1 illustrates the location of the OWASA property.
- OWASA purchased this property in 1992 to meet the current and future needs of its biosolids recycling program.
- The County has indicated that it likely would need four to six acres of land to meet its needs.
- The County is open to either a purchasing or leasing a portion of OWASA property.
- OWASA staff are confident that we can work successfully with the County to meet the needs of our long-term biosolids program and our other interests if we provide the land for the recycling center.

September 8, 2022

Figure 1: Location of OWASA Land being Considered for Potential Waste and Recycling Center



Proposed Path Forward

OWASA staff see several advantages to working with the County to provide space on this parcel for a solid waste site:

- The proposed site is located outside of Cane Creek Reservoir and University Lake watersheds, our two primary water supply sources; it would serve to replace existing facilities that are located in our water supply watersheds.
- Having waste and recycling centers that are convenient to residents minimizes that amount of waste illegally dumped, reducing the potential for public health risk and eyesores in the community. The proposed site is centrally located between the two sites that are planned to close. While it is not a prevalent problem, people have dumped trash on OWASA property.
- Convenient sites increase the amount of waste that is beneficially recycled.

We further recognize that it is important for the proposed site to be carefully designed and operated to minimize impacts on the environment, the surrounding area, and OWASA's long-term operational needs. We also note that staff would like to limit OWASA's costs to staff and

general counsel time during the planning phase. Thus, we propose to work with County staff to identify conditions that would need to be met in order for OWASA to provide land through sale or lease for the proposed solid waste and recycling center.

If the Board agrees that staff should work with the County on the potential siting, we propose the following next steps:

1. OWASA staff work with County staff to identify conditions that will meet the County's needs while minimizing impacts to OWASA's current and planned operations, the environment, and the surrounding community.
2. OWASA staff present draft conditions for the use of our land for a waste and recycling center to the Board of Directors. OWASA would notify neighbors of the date of this discussion and invite them to provide comments.
3. The Board of Directors determines whether OWASA should provide land to the County for the proposed waste and recycling center and, if so, under what the conditions.
4. If applicable, the Board of County Commissioners considers OWASA's conditions and determines if they wish to site a waste and recycling center on OWASA land.
5. If the County and OWASA wish to proceed, details of land sale or lease will be developed. The Board of Directors will have final approval of the sale or lease conditions.

Staff and General Counsel Recommendation and Action Needed:

Staff and General Counsel recommend that we work with the County to develop conditions for use of OWASA land for a waste and recycling center. If the Board agrees, we suggest they do so through a motion; draft motion language follows:

Authorize staff to work with Orange County staff to identify conditions that meet the County's requirements for a waste and recycling center on land provided by OWASA that also minimizes impacts to the environment, public health, and OWASA's current and long-term operating needs.

Agenda Item 11:

Resolution Approving OWASA's New Strategic Plan

Purpose:

To review and approve OWASA's Strategic Plan, with the benefit of staff and community review and feedback

Background:

- Over the last year, the OWASA Board of Directors and staff have engaged in a multi-step and inclusive process to develop a new strategic plan for the organization. Major milestones have included:
 - Synthesis of Environmental and Organizational Scan ([November 18, 2021](#))
 - Workshop on Vision, Mission, and Values ([December 16, 2021](#))
 - Approval of Strategic Priorities ([February 24, 2022](#))
 - Review and Approval of Strategic Goals and Initiatives ([June 23, 2022](#))
- After the Board's approval of the strategic goals and initiatives, the complete draft of the Strategic Plan was reviewed and discussed with the entire OWASA Team at departmental staff meetings. Additionally, it was introduced to the community via email newsletter, social media, and radio programming and sent to the stakeholders that engaged earlier in the process.

Summary of Staff and Community Feedback:

- Overall, OWASA Staff were receptive to and excited about the new Strategic Plan. In particular, there was somewhat widespread appreciation for and interest in the goals and initiatives supporting the "Employee Recruitment, Retention, and Development".
- Overall, the draft Vision, Mission, and Values resonated with staff, with one notable oversight. Staff requested and the Leadership Team agreed with the addition of "Safety" as a value. The draft plan includes the addition of this value.
- We received positive feedback from a few stakeholders and no direct feedback from individual community members (as of September 1, 2022). The community was invited to provide comment at the September 8, 2022 OWASA Board Meeting.

Staff Recommendation:

Staff recommends that the Board of Directors adopt the resolution approving OWASA's new Strategic Plan 2023-2027 and authorize staff to transition to its implementation.

September 8, 2022

Next Steps:

- Once approved, OWASA Staff will develop an implementation plan. The Board will be updated on our progress on the Strategic Plan in its entirety on a semi-annual basis: in review of the Executive Director's Key Focus Areas and in an annual review and update of the Strategic Plan. Additionally, the Board will be engaged in the development of individual initiatives throughout the year, as needed.

Information:

- Resolution Approving OWASA's New Strategic Plan
- Draft Strategic Plan

Resolution by Orange Water and Sewer Authority to Adopt New Strategic Plan

Whereas, the OWASA Board of Directors and staff have engaged in and completed an expansive and inclusive review of the community’s water resources needs and values, and in that light has completed the attached updated Strategic Plan to identify broad reaching strategic priorities and goals; and

Whereas, the Board of Directors has considered and is adopting this Resolution to formalize its updated Strategic Plan, and to provide guidance to the staff and to the public as to the values, goals, and means by which OWASA’s work will be achieved;

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

1. The attached, updated Strategic Plan is hereby adopted.

Adopted this 8th day of September 2022.

Bruce Boehm, Chair

Attest:

Raymond E. DuBose, P.E., Secretary



STRATEGIC PLAN

2023-2027



WORKING WITH THE COMMUNITY TO PROTECT PUBLIC HEALTH AND ENVIRONMENT

The Orange Water and Sewer Authority has proudly served the Chapel Hill and Carrboro community for over 45 years. We take pride in the services that we provide to protect the health of the community and our beautiful and bountiful environment. In pursuing our strategic plan, we will work to be our community's trusted partner for clean water and environmental protection for decades to come, taking on the most pressing challenges and opportunities.

Our strategic plan helps to ensure that we are anticipating and preparing for the future that we want and setting a course for aligning valuable resources with our strategic goals and objectives. We utilized the development process as a time to think comprehensively and identify broad-reaching strategic goals and initiatives for the next five to six years, engaging employees, community members, stakeholders, and past and present board members.

Over the next five years, **OWASA will plan for and respond to a broad range of issues, from ensuring that we recruit and retain a dedicated workforce to preparing for emergencies and climate change.** You can count on us to track and evaluate the effectiveness of our plan and adjust as necessary. This plan will allow us to adapt to changing conditions, while maintaining the highest level of service for our community.

We can't do it alone. We invite you to join us in our stewardship of the community's water and sewer infrastructure and the natural resources that are so critical to our health, environment, and economy. Conserve water. Tour the water treatment plant. Join the Board. Join the Team. **We look forward working WITH you to protect public health and environment today and for years to come.**

In partnership,

BRUCE BOEHM
Chair of the OWASA Board



TODD TAYLOR, P.E.
Executive Director



OWASA's Strategic Plan (FY23-FY27) will guide the investment of our time and resources over the next five years and help ensure that we are advancing the priorities of our community and preparing for the future that the community wants for its water and sewer utility.

Although condensed into a relatively brief document, this Plan represents an expansive and inclusive review of the most pressing opportunities for achieving a collectively defined vision of what we want to be. The investments that we make over the next five to six years will lay the path for our leadership decades from now.

This document, and more importantly the effort of developing this document, helps to assure that we are looking down the pipe and proactively investing in tomorrow.

DEVELOPMENT PROCESS

Assisted by OWASA staff and strategic planning consultant Raftelis and informed by a broadly focused scan, the OWASA Board of Directors, Executive Director, and Leadership Team developed the following strategic plan.

Staff engagement was critical to the process. Early on, a Strategic Planning Advisory and Resource Council (SPARC) was formed of staff from across the organization. The SPARC collectively provided feedback on individual steps of the Plan's development and represented the Plan to the entire OWASA Team. Additionally, members of the SPARC helped to design, implement, and analyze components of the scan. They also served as members of task forces to have challenging, yet inspiring, conversations about what is truly needed to advance OWASA's strategic priorities. And as the Strategic Plan has been finalized, the SPARC served as ambassadors for the Plan and will, no doubt, be critical, alongside other Team members, in advancing its initiatives.



OWASA undertook a multi-faceted scan to help assess the current organization and environment in which we are working. This scan included:

- Departmental assessments of OWASA's strengths, opportunities, aspirations, and (desired) results
- Survey of current and past Board members
- Sessions with representatives from institutions that OWASA serves and works with, businesses, and other important stakeholders
- Literature review of the strategic plans of leading utilities and businesses across the country, community partners, and utility industry organizations
- Survey of OWASA employees
- Survey of community members

9 DEPARTMENTAL
SOARs

23 BOARD
PARTICIPANTS

34 STAKEHOLDER
PARTICIPANTS

51 STRATEGIC
PLANS REVIEWED

61 EMPLOYEE
PARTICIPANTS

1,153
COMMUNITY
PARTICIPANTS

**WE APPROACHED
THE SCAN WITH
THE FOLLOWING
QUESTIONS:**

Who is OWASA?

What are our strengths?

What values and priorities do various groups hold for OWASA to consider in our strategic plan?

What is currently happening or emerging that presents opportunities for OWASA?

The OWASA Board of Directors and Leadership Team used the results of this scan as a foundation for their revisions to OWASA’s vision, mission, and values and the identification of the top strategic priorities for the organization over the next five to six years.

Task forces of OWASA staff, including members of the Leadership Team, organized around each of the strategic priorities to identify and prioritize goals for each priority and the initiatives required to achieve them. The OWASA Board of Directors provided input on the recommendations made by OWASA staff in order to finalize a draft strategic plan. Before finalizing the plan, the draft was put forward to OWASA staff and the community for feedback and input.

The result is a Strategic Plan that was collectively developed by the OWASA Board, staff, stakeholders, and community. This inclusive approach to the development and execution of the Plan is critical to its representation and ultimate success.



WHAT WE LEARNED: THEMES FROM THE SCAN

The OWASA of the future stands on a solid foundation that was recognized by various groups in the scan. Five commonly referenced attributes of OWASA and our staff included:

COMMUNITY-
MINDED

CUSTOMER
SERVICE

COMMITMENT
TO QUALITY

RELIABLE

CONTINUOUSLY
IMPROVING

CHALLENGES AND OPPORTUNITIES

WORKFORCE ISSUES OWASA has an excellent and dedicated team; our employees are our most valuable resource. Ensuring that OWASA is attracting a high volume of diverse and promising applicants has become increasingly important and challenging as the labor market tightens and OWASA faces unprecedented levels of retirement eligibility. Once here, employees need engagement, training, and recognition to bring their best selves forward and grow within the organization.

TECHNOLOGY AND INNOVATION Technology is a vital tool for maximizing the efficiency of a utility's operations and for connecting with customers, but the use of technology can also carry risks, particularly for cybersecurity. OWASA has made good and efficient use of technology over the years, but this field is rapidly evolving. Technology is increasingly complex, changes quickly, and will continue to require substantial resources. Additionally, community expectations for technology are increasing, and there is additional pressure for real-time information and data.

ENVIRONMENTAL PROTECTION OWASA's operations are intricately intertwined with the environment; we are both affected by and affect the environment. Climate change was a frequently cited challenge for OWASA to manage in the future. Participants in the scan recognized the link between land use, watershed protection, and water quality and called for OWASA to prioritize initiatives to advance and communicate our work in environmental protection.

COMMUNICATIONS Achieving and maintaining the trust of our community requires that we effectively engage with them and respond to their needs. The community survey identified some informational gaps regarding OWASA's commitment to environmental protection, sustainability, and infrastructure construction. The scan recognized that there is no one best practice to communicate, and that OWASA should be working on a number of fronts to communicate and connect.

REGULATORY RESPONSIBILITY & RISK OWASA operates in a heavily regulated field. We are responsible for meeting the regulations of today and staying ahead of tomorrow's regulations. Additionally, it is critical that OWASA maintains a responsible level of investment in the repair and rehabilitation of our community's water and wastewater infrastructure to ensure the quality and reliability of services so essential to public health and environmental protection.

OWASA'S STRATEGIC PLAN

(FISCAL YEAR 2023 – 2027)



VISION

To be our community's trusted partner for clean water and environmental protection.



MISSION

Our dedicated Team delivers valuable water and sewer services that are essential to our community's health, environment, and economy through the stewardship of infrastructure and natural resources.

VALUES

DIVERSITY & INCLUSION

We are committed to creating an inclusive workplace that promotes and values diversity.

TEAMWORK & PARTNERSHIP

We work together to achieve shared goals.

RELIABILITY

We are committed to consistently providing high-quality products and services.

SAFETY

We put the safety of our employees and community above all else.

INTEGRITY

We can be counted on to use sound judgment and follow-through on our promises.

EQUITY

We work to ensure fair access to and delivery of our essential services.

STEWARDSHIP

We make wise and efficient use of the financial and natural resources with which we are entrusted.

INNOVATION

We take a creative approach and adapt to changing circumstances.



ONE WATER

Water connects us: past, present, future. We take an integrated approach to our management of surface water, drinking water, wastewater, and reclaimed water. It is our responsibility to treat it well for downstream uses, while at the same time respecting its upstream power.



STRATEGIC PRIORITIES

- Employee recruitment, retention, and development
- Equitable services
- Climate and land use change adaptation
- Community engagement
- Emergency management and cybersecurity
- Service reliability and resiliency

STRATEGIC PRIORITIES

EMPLOYEE RECRUITMENT, RETENTION, AND DEVELOPMENT

OWASA's mission requires a dedicated team. The following initiatives make advancements beyond the myriad of important HR efforts underway. This priority has a high-level of overlap with OWASA's organizational value of Diversity and Inclusion.

GOAL

INITIATIVE

- | | | | |
|---|--|---|--|
| ① | Increase the number of applicants for entry-level and/or high-turnover positions | ➔ | Develop a recruitment strategy for entry-level and high-turnover positions |
| ② | Achieve and maintain competitive compensation | ➔ | Conduct and implement a Pay and Class Study |
| ③ | Ensure staff are prepared, informed, and engaged to lead OWASA into the future | ➔ | Develop and institute an Employee Development Plan |





EQUITABLE SERVICES

This priority focuses on assisting those in our community who face challenges with obtaining and paying for our services. The following goals and initiatives were identified as near-term opportunities to increase the equity of OWASA's life-critical services.

GOAL

- ① Decrease number of disadvantaged/underserved households not connected to OWASA's services
- ② Increase adequacy and accessibility of customer assistance funding



INITIATIVE

- Identify affected households and pursue outside funding to connect
- Evaluate and update Care to Share program

CLIMATE AND LAND USE CHANGE ADAPTATION

Climate change readiness/adaptation was universally identified as a high priority by OWASA staff, Board, community, and stakeholders. In the strategic priority-setting workshop, climate change mitigation was differentiated from adaptation: adaptation was rated a very high priority to address, mitigation was not. Additionally, recognizing the interplay between climate change and land use change (particularly on hydrology), adaptation to land use change is included in this strategic priority.

GOAL

INITIATIVE

1

Increase drought resilience



Implement most viable Jordan Lake alternative

2

Prepare for organizational impacts of climate and land use change



Develop Climate Action Plan





SERVICE RELIABILITY AND RESILIENCY

Service reliability and resiliency are at the core of ensuring that our water and sewer services are valued and the community’s trust is developed and maintained. This requires us to ensure our infrastructure remains in good working order, our investments and operations are data-driven, and we have redundancy in the system.

GOAL

INITIATIVE

- | | | |
|---|--|--|
| <p>① Increase capital project execution</p> | | <p>Develop and pursue Project Delivery Optimization Plan</p> |
| <p>② Reduce downtime of critical infrastructure and equipment</p> | | <p>Update and execute Asset Management Plan</p> |
| <p>③ Improve the collection and use of real-time data to inform and drive decision-making</p> | | <p>Execute SCADA Master Plan</p> |
| <p>④ Establish and pursue capital investment goals</p> | | <p>Establish and implement Capital Investment Strategy</p> |



EMERGENCY MANAGEMENT AND CYBERSECURITY

The OWASA Board (past and present), stakeholders, and community members all ranked “preparing for emergencies and cybersecurity threats” as one of their top three priorities for OWASA to address over the next five years. However, preparation is only one aspect of emergency management. It is equally important to focus on the prevention of, protection against, response to, and recovery from emergencies and cybersecurity threats. Therefore, this priority was adapted to broadly address emergency management. OWASA has a robust emergency management and cybersecurity program. The following initiatives will enhance existing efforts and help to increase our capacity to manage emergencies.

GOAL

① Ensure staff are prepared and ready for emergencies of all types



② Reduce risk exposure



INITIATIVE

Develop and institute a Continuous Emergency Preparedness Model

Assess risk on collection and wastewater system and implement high priority risk mitigation actions for entire system

COMMUNITY ENGAGEMENT

Achieving and maintaining the trust of our community requires that we effectively engage with them and respond to their needs. The community survey identified some informational gaps regarding OWASA's commitment to environmental protection, sustainability, and infrastructure construction. In addition to continuing to pursue and refine OWASA's Communications and Community Engagement Program, the following goals and initiatives were prioritized to further enhance our community engagement.

GOAL

- ① Increase the quality and use of community feedback
- ② Streamline customer account experience



INITIATIVE

- Develop and implement regular community survey
- Integrate online billing and water use portals



Agenda Item 12:

Review and Approve Draft Water Conservation Plan

Purpose:

To approve OWASA's Water Conservation Plan, which serves as a companion document to the Long-Range Water Supply Plan.

Background:

- The OWASA Board of Directors approved a Strategic Plan on March 13, 2014 and subsequently updated it on June 9, 2016. This Strategic Plan included an action to prepare a Water Conservation Plan.
- In accordance with that Strategic Plan, OWASA staff developed a draft Water Conservation Plan that it presented to the Board of Directors on November 11, 2021. This draft summarized the many conservation-based programs OWASA is already doing.
- Based on feedback from the Board of Directors, staff developed guiding principles for our Water Conservation Plan that were approved by the Board of Directors on [January 13, 2022](#). They are:
 1. The strategy is expected to contribute to a sustained reduction in the community's per capita water consumption.
 2. The strategy is cost-effective as measured by dollars per thousand gallons saved. Where cost cannot be reliably quantified, the strategy will be considered based on how well it promotes environmental, economic, and societal goals.
 3. Where appropriate, the strategy will be developed in coordination and with the cooperation of the Town of Chapel Hill, Town of Carrboro, UNC, Chapel Hill Carrboro City Schools, Orange County, the development community, and other partners and stakeholders.
 4. Strategies will be evaluated by their performance against the following criteria:
 - The strategy is based on the best available and demonstrated water efficiency technology, designs, and practices.
 - The strategy utilizes a data-driven approach.
 - The strategy is equitable and provides multiple benefits to all.
 - The strategy incorporates efforts to raise community awareness and advocacy through active engagement, public outreach, and education.

September 8, 2022

Water Conservation Plan:

The American Water Works Association published a Management Standard for *Water Conservation and Efficiency Program Operation and Management* (2021). This standard describes consensus requirements and identifies principles and practices that promote the efficient use and management of water resources.

Staff evaluated the standard against OWASA practices, plans, and programs to identify areas for improvement. This analysis has been added to the Water Conservation Plan reviewed by the Board at its November 11, 2021 meeting.

Based on the guiding principles and a desire for a data driven approach to water conservation, staff suggests that we use the data available through our advanced metering infrastructure (AMI) to develop SMART goals for our water conservation program, to identify our largest types of water use, target our messaging, and evaluate strategies included in AWWA's standards against the data obtained through this AMI analysis.

Next Steps:

Based on the guiding principles and AWWA's suggestions, staff recommends the next steps:

1. **Appoint the Strategic Initiatives Manager and Planning and Development Manager as the points of contact for water conservation.** An effective water conservation program will have elements of engineering, planning, sustainability, and communications – a combination of the skill sets of both positions. In addition, having two points of contact enables one to keep the program moving while the other may have other priorities or in the event that one of the positions is vacated or absent for an extended period of time. This action is effective immediately.
2. **Use the AMI data to develop SMART goals for the program, identify the areas of largest water use, target communications, and identify the most cost-effective strategies to achieve our SMART goals.** In order to fully achieve the benefit of our AMI data, staff believe we will need consultant help on this step. Thus, the earliest it would be completed is in fiscal year 2024 if the Board approved this assistance in that year's budget.
3. **Update our Water Shortage Response Plan using the analysis of the AMI data.** Our Water Shortage Response Plan assumes certain water reductions are achieved by the community with each level of declared water shortage. Given the water reductions already achieved by the community, staff has reservations on whether we could achieve these water reduction goals in the case of a severe drought. At the same time, we should update the trigger graphs to show how they would change when we have guaranteed access to our allocation of water from Jordan Lake. We are required to update our Water Shortage Response Plan and have it approved by the Board of Directors in calendar year 2025 by general statute. Thus it will be important to include consulting help to evaluate our AMI data in the FY 2024 budget. Upon completion of these analyses, staff will bring

a summary of the data with a draft SMART goal(s) and an updated list of next steps to the Board of Directors.

4. **Pursue a new Customer Billing and Information System (CIS)** that allows for billing in increments smaller than thousand gallons. The budget for this step has been approved in the current (FY 2023) budget.
5. **OWASA staff meet with Town of Carrboro and Town of Chapel Hill staff.** Each of the Towns recently adopted plans that include elements of water conservation in them that require partnering with OWASA. Staff proposes to begin meeting with the Towns to identify short- and long-term strategies that will help meet the goals in each of our respective Plans. We would propose pursuing strategies that score well against the guiding principles.

Staff Recommendation:

Staff recommends that the Board of Directors approve the Water Conservation Plan. Draft motion language follows: *Motion that the Board of Directors approve the Water Conservation Plan*

Information:

Draft Water Conservation Plan: Summary of Existing Program and Plan Forward



Draft Water Conservation Plan:

Summary of Existing Program and Plan Forward



September 8, 2022



ORANGE WATER AND SEWER AUTHORITY

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

DRAFT Water Conservation Plan: Summary of Existing Program and Plan Forward

September 8, 2022

Introduction

OWASA and the community we serve have a long history of water conservation. In the last two decades, our community has invested in a suite of water conservation strategies that have made us a leader in water conservation, efficiency, and reclaimed water use:

- Our utility has implemented policies, pricing structures and programs that encourage water conservation and efficiency.
- Our customers have installed water-saving products in their homes, yards, and businesses, making water conservation and demand management a way of life in Carrboro and Chapel Hill.
- The University of North Carolina at Chapel Hill, in partnership with OWASA, has made significant investments in water demand reduction, including an innovative reclaimed water system that now meets over 10 percent of system-wide water demand, freeing up the community's drinking water supply.

As a result of these and other efforts, drinking water sales are now 22 percent less than they were in 1995, despite increasing the number of accounts by about 50 percent.

In updating our Long-Range Water Supply Plan (LRWSP), staff evaluated the costs and benefits of various supply and demand management alternatives against social, environmental, and economic goals established and approved by the Board. ([Link to August 2020 evaluation.](#)) Based on this evaluation, OWASA determined that, at present, there are no individual or collective group of demand management strategies that, if pursued further, would prevent the need for additional supply in the long run.

Nonetheless, demand management through water conservation, water efficiency, and reclaimed water use remains a key value of the organization and our community, and we are committed to considering water demand management strategies as a companion document to the LRWSP. Developing a Water Conservation Plan is also a strategic initiative of the 2016 strategic plan. Sustainability is a core value of that plan: *the utility strives to make the highest and best use of our local water resources and promotes conservation of water, energy, and other natural resources.*

Purpose

The purpose of this document is to summarize existing policies, pricing structures, and programs that incentivize water conservation and efficiency, as well as the use of reclaimed water. It also provides a path forward to enhance our existing Water Conservation program.

This plan is intended to serve as a complementary document to OWASA's Long-Range Water Supply Plan (LRWSP), Water Shortage Response Plan, Affordability Program Plan, Energy Management Plan, and Communications and Community Engagement Plan. This plan captures OWASA's current water conservation and efficiency practices and ensures that demand management elements of these plans are well-coordinated. A full accounting of how these plans work together is included as Appendix A of this document.

Background

Historical System-wide Water Demand

OWASA and the community that we serve is a leader in water conservation, efficiency, and reclaimed water use.

Stretching our water supply and wisely managing our water resources makes good sense for the short-term and the long-term. Reductions in drinking water demand – and the associated reductions in wastewater flows – help defer the need for costly expansion of the capacities of our raw water supplies, water treatment plant, and wastewater treatment plant. More efficient use of water also helps reduce costs for energy and chemicals for water supply, drinking water treatment and water distribution, and wastewater collection and treatment.

Water demand management is also critical when responding to droughts. In 2001/2002 and again in 2007/2008, our community was hit with prolonged and severe droughts. Since then OWASA and the community have made investments in water conservation, efficiency and reclaimed water use that have resulted in significant and sustained declines in water consumption.

From 1995 to 2020, water sales decreased despite adding about 5,000 customer accounts (Fig. 1). This is due primarily to four key programs that demonstrate how policy changes, rate structures, and infrastructure and technology can positively influence water demand:

- 1) Federal efforts and initiatives, most notably the 1992 Energy Policy Act, changed national policy regarding water fixture efficiency. Utilities across the country have seen declines in per capita water use as a result of this legislation. Since 1994, it has been almost impossible to purchase a toilet that does not meet the national standard for water use efficiency (at 1.6 gallons per flush). Now, models that are even more efficient (1.28 gallons per flush or less) are readily available. EPA Water Sense fixtures, dishwashers and washing machines are commonplace in

our community.

- 2) In 2002, OWASA established seasonal water rates for all customers. Subsequently, in 2007, the utility was one of the first in the state to implement a five-tiered increasing block rate structure for all individually metered residential customers. These rate structures are designed to encourage conservation.
- 3) In 2009, the reclaimed water system came online. This unique system, funded predominately by UNC-Chapel Hill, now meets over 10 percent of the community’s water needs, freeing up the drinking water supply.
- 4) In 2019, OWASA’s Advanced Metering Infrastructure (AMI) project was completed, and the corresponding Agua Vista web portal was launched. The program reads data hourly from roughly 22,000 new meters installed across the service area. This powerful data portal allows customers to know more about their water usage and suggests ways to conserve water. It also allows OWASA to send leak alert to customers much more quickly.

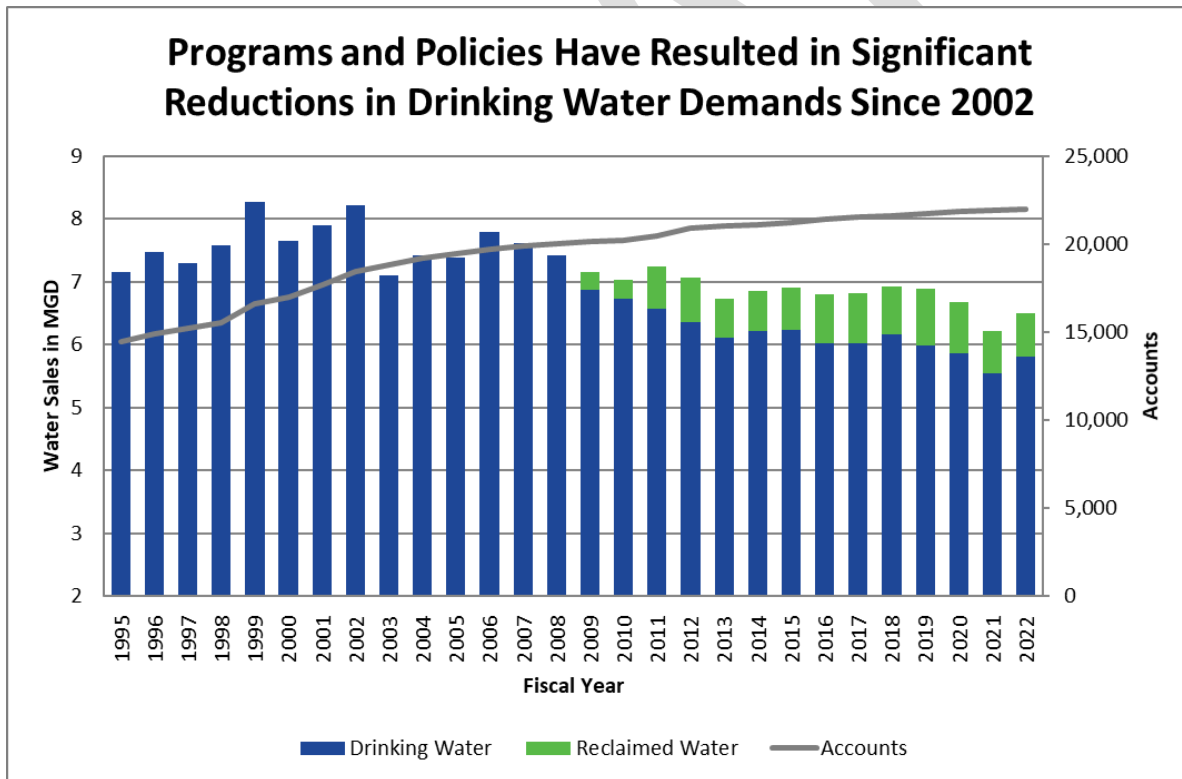


Fig. 1: Total potable water sales declined in 2003 and again in 2009. These declines correspond with droughts, as well as significant changes in OWASA’s rate structure. Additionally, in 2009, when the reclaimed water system came online, OWASA’s potable water sales decreased significantly and have remained at these lower levels.

In addition to direct water sales, it is also important to look at unbilled water that may be lost throughout the system. Every year, we conduct a system water audit using the American Water Works Association (AWWA) Water Audit Method and Water Audit Software. This analysis compares treated water pumped to the system to all billed water consumed by customers, as well as water used in flushing, Capital Improvements Program (CIP) projects, unbilled water from illicit connections, and water that leaks out of OWASA’s nearly 400 miles of drinking water distribution pipes.

The Water Audit Software calculates an “infrastructure leak index” (ILI) as the ratio of real water losses (physical losses from the distribution system) to the unavoidable real water losses (an industry-calculated technical low limit of leakage for well-managed systems in good condition with aggressive active leak control). OWASA maintains a historical ILI at or around 1.0, which means that the water leaking from our distribution system is equal to the lowest limit technically (and economically) feasible to maintain.

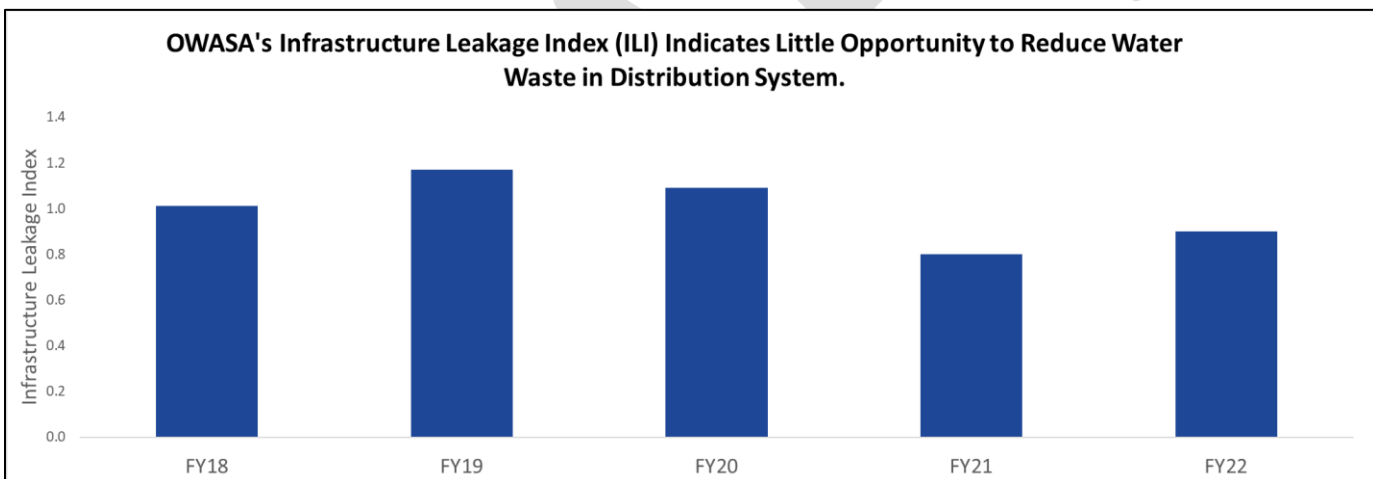


Fig. 2: OWASA's Infrastructure Leakage Index (ILI) has been consistently close to 1.0.

Finally, gallon per capita per day (gpcd) use by residential customers provides a useful way for primarily residential systems like OWASA’s to benchmark water demand management.

OWASA’s residential customers used 48 gallons per capita per day in 2010. In 2017, they used 42.6 gpcd, a decrease of about 11 percent from 2010 levels.

OWASA’s residential customers use less water per day than those in Raleigh, Durham, Cary, and Hillsborough. Our gallons per capita per day is also significantly less than the national average, which was calculated using data from 23 utilities across the country.

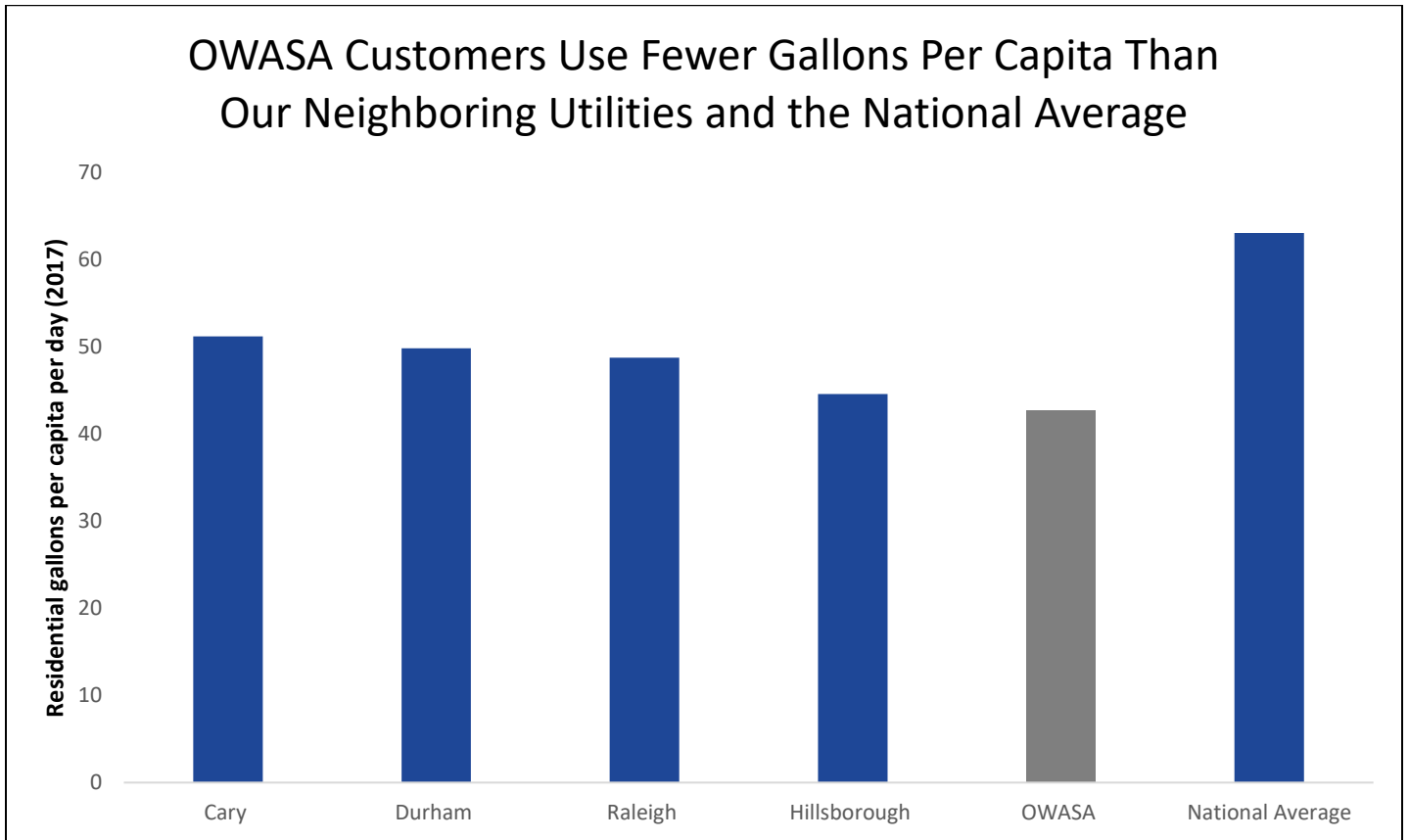


Fig. 3: OWASA residential customers used 42.6 gallons per capita per day in 2017. Neighboring utility data from the NC Division of Water Resources' Local Water Supply Plans. National average figure from the Water Research Foundation's Residential End Uses of Water, Version 2 (2016).

Customer Water Demands

Unlike many water utilities, one large customer is responsible for about 30 percent of OWASA's system-wide water use, when reclaimed water is included: UNC-Chapel Hill. The University has an out-sized impact on our water sales as is evident in the large drop in potable water sales when the reclaimed water system came on-line in 2009 and in the significant decline in water sales when the University moved to virtual instruction and work from home procedures due to the pandemic.

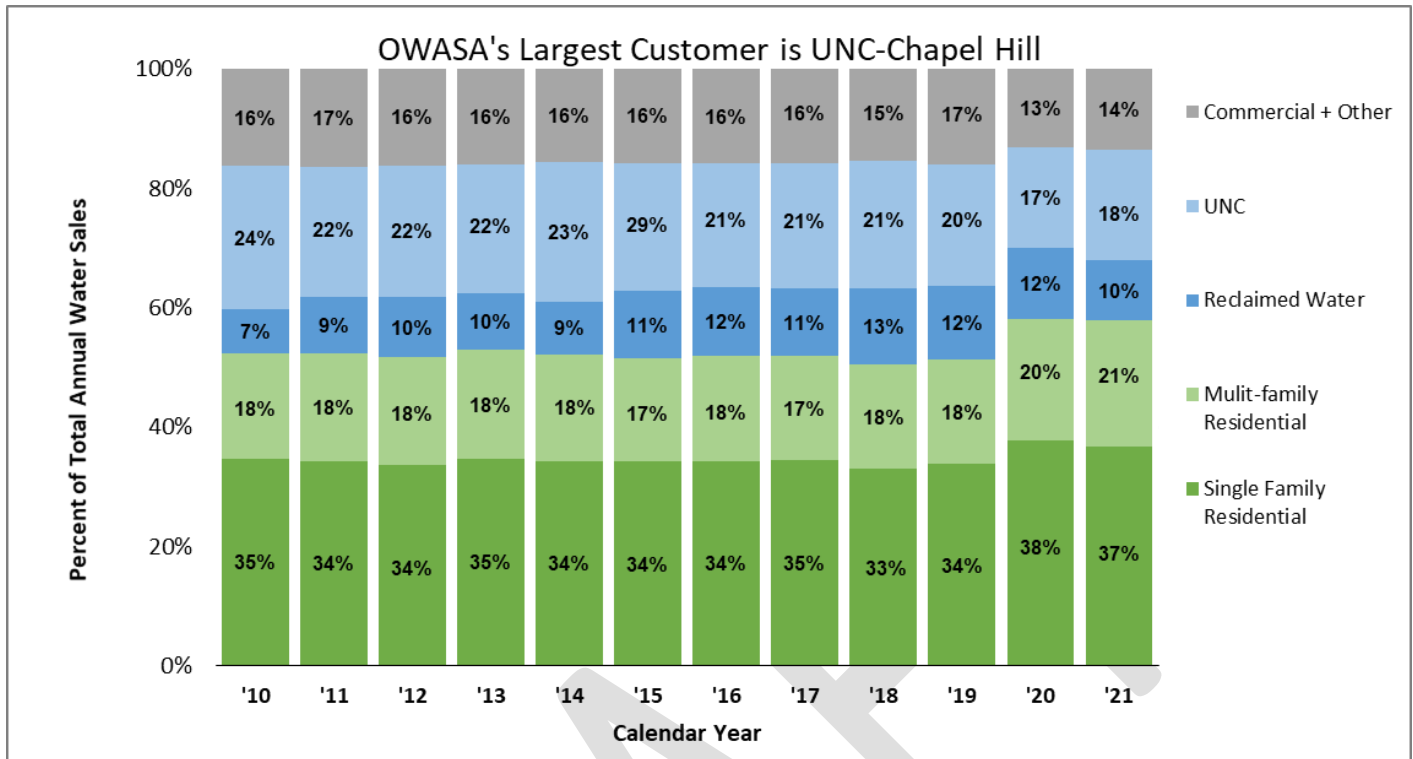


Fig. 4: Water Use by sector shows little change since 2010.

Next to UNC, and to a much lesser extent, the Chapel Hill-Carrboro City School System (CHCCS) is OWASA's largest customer.

OWASA'S Top 10 Largest Water Users

Name	Consumption FY22 (million gallons)	Sector
UNC-CH	441	UNC
CHCCS	26.9	Commercial
Mid-Atlantic Management	21.1	Multi-family residential
RA Properties	17.0	Multi-family residential
Triangle Communities	15.0	Multi-family residential
OWASA	14.2	*Not included in graph above
Northwood Ravin	12.8	Multi-family residential
CH Housing	12.0	Multi-family residential
ACV XVII LLC	12.0	Multi-family residential
Estes Part Apts.	11.9	Multi-family residential
CP Villages LP	11.7	Multi-family residential
Laramar Collins Crossing	11.3	Multi-family residential

While single family residential homes represent the largest percentage of our system-wide water use, growth and demand forecasts made as part of the LRWSP indicate that non-residential water use will become the dominant water use sector in the next 50 years. Multi-family master metered accounts are also projected to grow over this time-period, with single-family residential accounts remaining relatively stable.

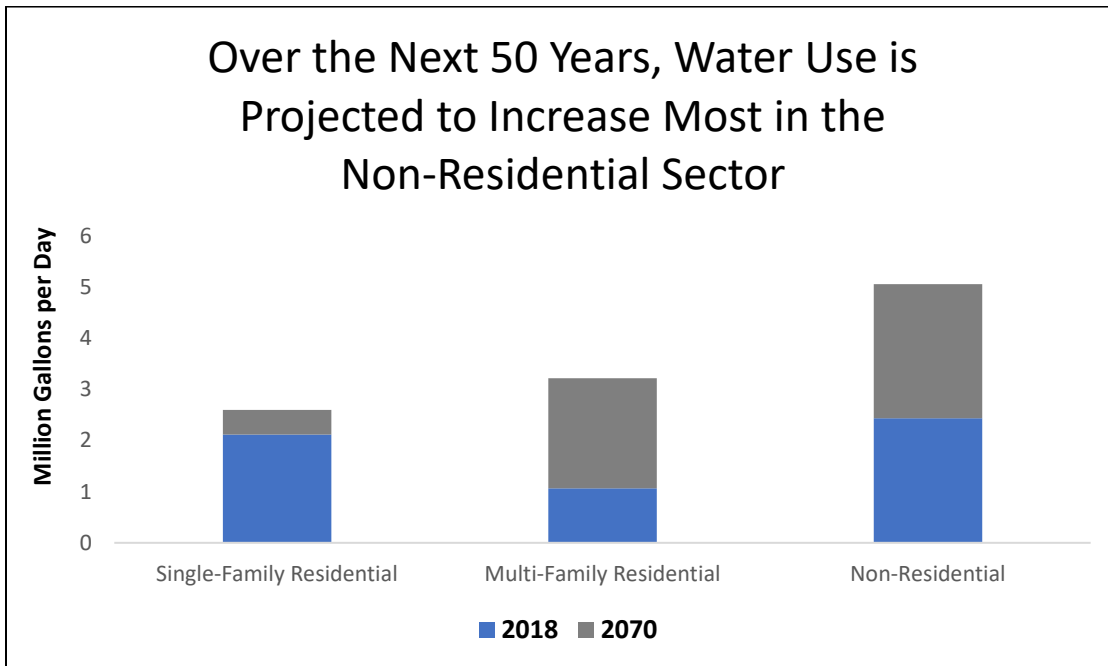


Fig. 5: Non-residential water use is projected to more than double between now and 2070, making it the largest water use sector in OWASA's system. Multi-family residential water consumption is also projected to increase, while single family residential is projected to have only a modest increase in consumption.

Water Demand by OWASA

One of OWASA's core values is stewardship, which includes making the highest and best use of our local water resources and promoting conservation of water, energy, and other natural resources. OWASA operations use a large amount of water. Figure 6 tracks water use across the top three water-using facilities: the Mason Farm Wastewater Treatment Plant (WWTP), the Rogerson Drive Pump Station (RDPS), and for use by the Distribution and Collection System. The graph does not capture drinking water use at the Water Treatment Plant. AMI meters will be installed at the plant in FY 2023 and will allow us to better monitor and manage drinking water use at this facility.

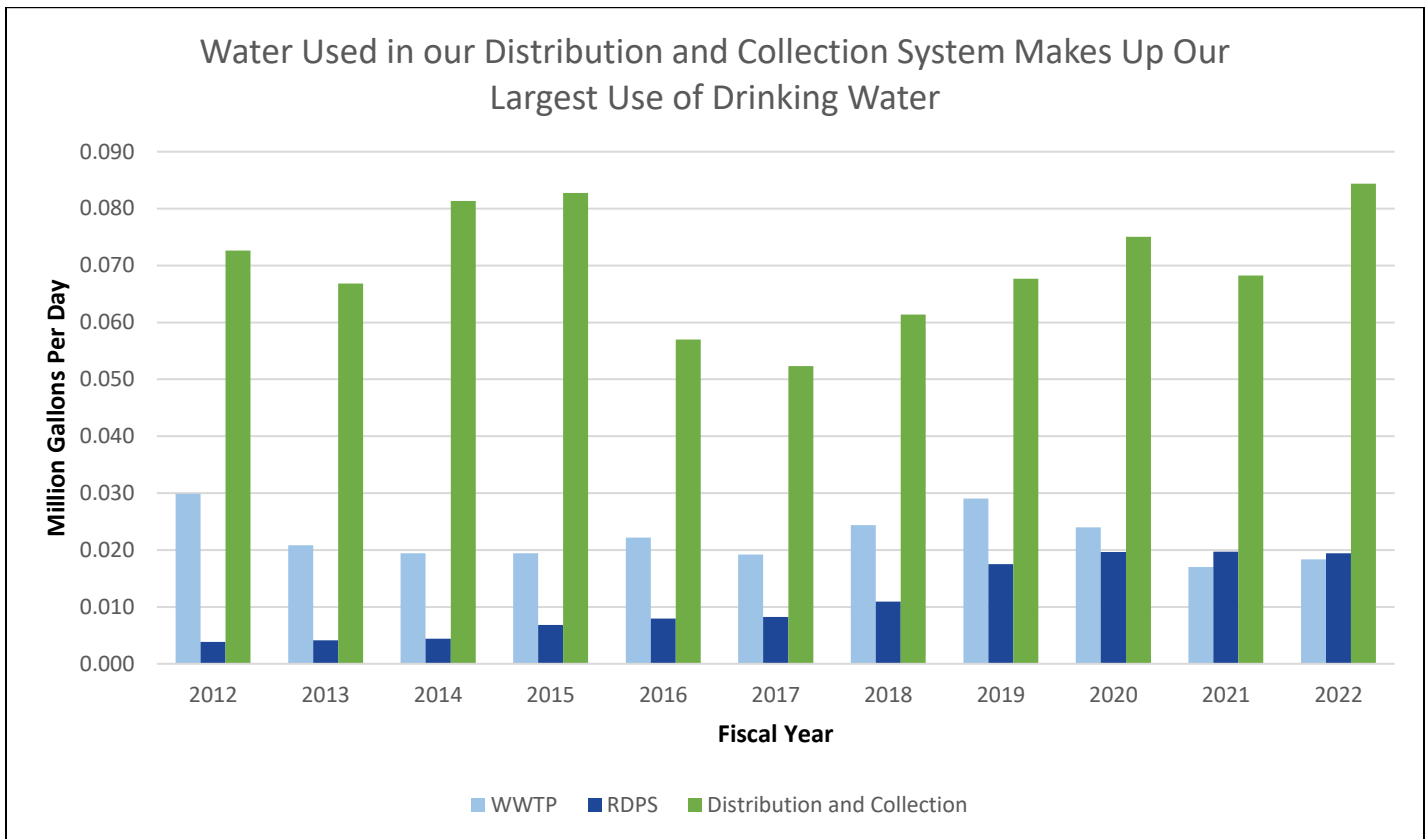


Fig. 6: Over the past 11 years, drinking water use for OWASA facilities has varied. Most recently, water use has increased at Rogerson Drive Pump Station (RDPS) and for the purposes of system flushing.

The largest water-using OWASA “facility” is distribution and collection for distribution system flushing and sewer cleaning. In early 2015 (mid-FY15), OWASA started a uni-directional flushing program that continued until late 2017 (mid-FY18). During these years, OWASA used less water for routine flushing. Since discontinuing the program, water use has increased for distribution system flushing. The LRWSP investigated a possible demand management strategy that would loop distribution lines, which would reduce the amount of water used in flushing. This was not determined to be economically viable. Additionally, in 2018, OWASA started using much more water at its Rogerson Drive Pump Station for the purposes of pump sealing. This is discussed further in existing strategies and initiatives.

Existing Strategies and Initiatives

OWASA has a long history of water conservation and a suite of active water conservation strategies. These strategies are outlined below and described later in detail.

Conservation Measure	Target Use Class
EDUCATION AND OUTREACH	
School-based Education and Community Events	Residential
Affordability Program	Residential
Water Conservation Kits	Residential
Agua Vista Leak Detection and AMI Technology	All
Agua Vista Water Use Data	All
REGULATORY	
Water Conservation Ordinances	All
Alternate Day Watering Ordinance	All – Outdoor
CONSERVATION-ORIENTED RATE STRUCTURES	
Increasing Block Rate Structure	Single Family Residential
Irrigation Rates and Metering	All – Outdoor
Seasonal Rate Structures	Commercial and Institutional
Drought Surcharges	All
RECLAIMED WATER	
Pumped to Customers (Offset Potable Water Use)	Commercial
OWASA’S INTERNAL WATER CONSERVATION EFFORTS	
Maintenance and Upgrade of Infrastructure	Internal
Water Main Break Repair	Internal
Leak Detection and Pressure Monitoring	Internal
Water Conservation and Reuse at the Wastewater Treatment Plant	Internal
Recirculation System at Rogerson Drive Pump Station	Internal
In-plant Recycling of Water Treatment Plant Process Water	Internal
Water Sense Fixtures and Equipment	Internal
Data Management	Internal

EDUCATION AND OUTREACH

School-based Education and Community Events

OWASA’s Communications and Community Engagement Plan identifies the provision of “unique educational experiences to get people interested and invested in OWASA and the water/wastewater system” as a key strategy. Water conservation is a topic thoroughly integrated into these experiences, including outreach through school programs and presentations, as well as the Youth Water Academy. In addition, messages of water conservation are integrated into our annual water quality report card and outreach at community events using the OWASA Water Wagon.

Affordability Program

The goal of OWASA's Affordability Program is to increase awareness of options to manage and reduce water and sewer bills and to empower low-income customers, and the local agencies that serve them, with information and tools to manage and reduce water and sewer bills. Over the years, this program has included a pilot toilet replacement program, home water audits, presentations to a wide range of community groups, community events, and co-publishing of water conservation tips with partner organizations. More recently, it included a pilot Home Water Report program; using information compiled and analyzed in the Agua Vista web portal, regular letters and emails were sent to low-wealth customers to summarize individual household water use and make recommendations on water conserving strategies.

Water Conservation Kits

OWASA offers free-of-charge water conservation kits, which include toilet leak detection tablets; low-flow showerheads; faucet aerators; shower timers; can caps; and grease scrapers, to any interested residential customers.

Agua Vista Leak Detection and AMI technology

OWASA finished upgrading all meters to AMI technology and deployed the Agua Vista Web Portal in 2019. These have become important tools in our water conservation toolbox. Before AMI technology, a customer would not notice a silent leak until they received a larger-than-expected bill. At this point, water may have been leaking for almost a month. National studies have estimated that 10 – 12 percent of water used across the country is lost due to leaks, with toilets, faucets, and outdoor spigots being the main culprits. Leaking water can cause huge amounts of property damage and can disrupt a family's finances, both of which are particularly devastating to low-wealth families, which is why this tool plays an important role in our Affordability Program. OWASA customers can now take control of their water usage and save money with the help of OWASA's Agua Vista program.

In 2020, Agua Vista detected 274 million gallons of water loss due to leaks. Over 9,900 leak alerts were sent to customers. The Agua Vista platform estimates that almost 74 million gallons were saved due to leak alerts (~0.2 MGD).

If OWASA has an email address for a customer, they will automatically receive a leak alert if the system detects a leak. For residential customers for whom we do not have email addresses, we pay an additional service to mail a printed leak alert.

Agua Vista Water Use Data

In addition to detailed hourly water use data and proactive leak notifications, the Aqua Vista web portal provides customized water conservation tips based on a customer's historical water use. The portal even quantifies the savings that customers could expect from making changes to their behavior or by replacing a fixture.

The screenshot shows a web interface for a water conservation recommendation. At the top, the title "Install High-Efficiency Toilets" is displayed. Below the title is a navigation bar with four buttons: "+ Start action", "Save for later", "I completed this", and "Not for me". To the right of these buttons, it states "Savings up to... 20 GPD \$107/yr". On the left side of the recommendation card, there is a photograph of a white toilet in a bathroom. To the right of the photo, the text reads: "Did you know? Toilets are the largest contributor to indoor water use (source: U.S. Environmental Protection Agency). Older toilets use about 3.6 gallons per flush, while high-efficiency toilets typically use 1.28 gallons or less per flush. That's a **64% reduction** in water use! When you consider that each person flushes about 5 times per day, that can add up to **BIG** savings. High-efficiency toilets often pay for themselves in less than two years." Below this text, under the heading "What to do next", there is a list of instructions: "Figure out when your toilet was manufactured, or how many gallons per flush (gpf) it uses." and "To do this, look for the manufacturer's date stamp or gpf label. On most toilets, one of these indicators can be found behind the seat hinge on the bowl, on the wall of".

Fig. 7: Screenshot of a water saving recommendation our customers might see on their Agua Vista page.

OWASA customers can register for this free service through the web portal with their account number and zip code. Encouraging new and existing customers to register with Agua Vista and share either a phone number or email address so that they can receive timely leak alerts is an important objective of the Communication Plan, Affordability Plan, and the Customer Service team.

Currently, approximately 63% of OWASA's accounts are registered for Agua Vista.

REGULATORY

Water conservation ordinances

In 2003, the Towns of Carrboro and Chapel Hill both adopted local water conservation ordinances which include year-round conservation standards. The Town of Carrboro's Water

Conservation Restrictions and The Town of Chapel Hill's Water Conservation Standards and Regulations are identical:

- Prohibit water waste
- Require year-round water restrictions for spray irrigation, that all irrigation systems be equipped with automatic controllers, rain or soil moisture sensors that prevent irrigation during periods of rainfall or when there is sufficient moisture in the ground for plant health and survival
- Specify that all hoses used for hand watering, vehicle washing, or other uses must have a shutoff nozzle
- Require all indoor and outdoor water leaks to be repaired within 10 days of discovery
- Requires restaurants and dining facilities to serve water only on request, hotels, motels and other facilities change bed linens on upon request of the customer, upon customer changeover or every 5 days for long-term customers

If customers do not comply with these restrictions, OWASA may discontinue water service after notice of a prohibited use is delivered to the service address.

[Alternate day watering ordinance](#)

The Town of Chapel Hill's and the Town of Carrboro's identical ordinances state:

The following outdoor or exterior use requirements shall apply to all customers using OWASA-supplied potable water:

- Spray irrigation shall not occur more than three (3) days per week. Even-numbered properties may be irrigated with spray systems only on Sundays, Wednesdays, and/or Fridays. Odd-numbered properties may be irrigated with spray systems only on Tuesdays, Thursdays, and/or Saturdays. All spray irrigation shall occur only between the hours of 6:00 p.m. and 10:00 a.m. and shall apply no more than one (1) inch of water in any given week. These restrictions shall not apply to properties using underground, drip irrigation, micro spray, low precipitation bubblers, soaker hoses, hand watering, tree or shrub watering bags, or where watering of containerized plants and commercial plant stock in trade is maintained for resale.
- No exterior use of OWASA-supplied potable water shall result in the flow of water onto adjacent property or public right-of-way, and all irrigation systems shall be designed and maintained to prevent to the extent practicable water from flowing onto paved or other impervious surfaces.
- Owners of public purpose athletic fields, recreational fields, and/or public purpose botanical sites shall not be subject to the year-round limitations of subsections

(a)(1)— (5) if those facilities are operated in compliance with an OWASA-approved water conservation plan that specifies the conservation measures and irrigation operating modes to be employed at that facility year-round and during successive stages of a declared water shortage.

CONSERVATION-ORIENTED RATE STRUCTURES

In providing essential drinking water, wastewater, and reclaimed-water services to our customers, OWASA charges “cost-of-service” rates. Water pricing can have a significant impact on water use. One of the most effective ways to reduce water use (and waste) is by charging higher prices. Given that water demands track back to the size and operation of costly infrastructure, OWASA has implemented rate structures that both align with utility costs and promote water conservation.

Increasing Block Rate Structure

In 2007, OWASA implemented a 5-tiered increasing block rate structure for individually metered residential customers. Block pricing incentivizes water conservation by maintaining low cost for small-volume users but charging more for high-volume users.

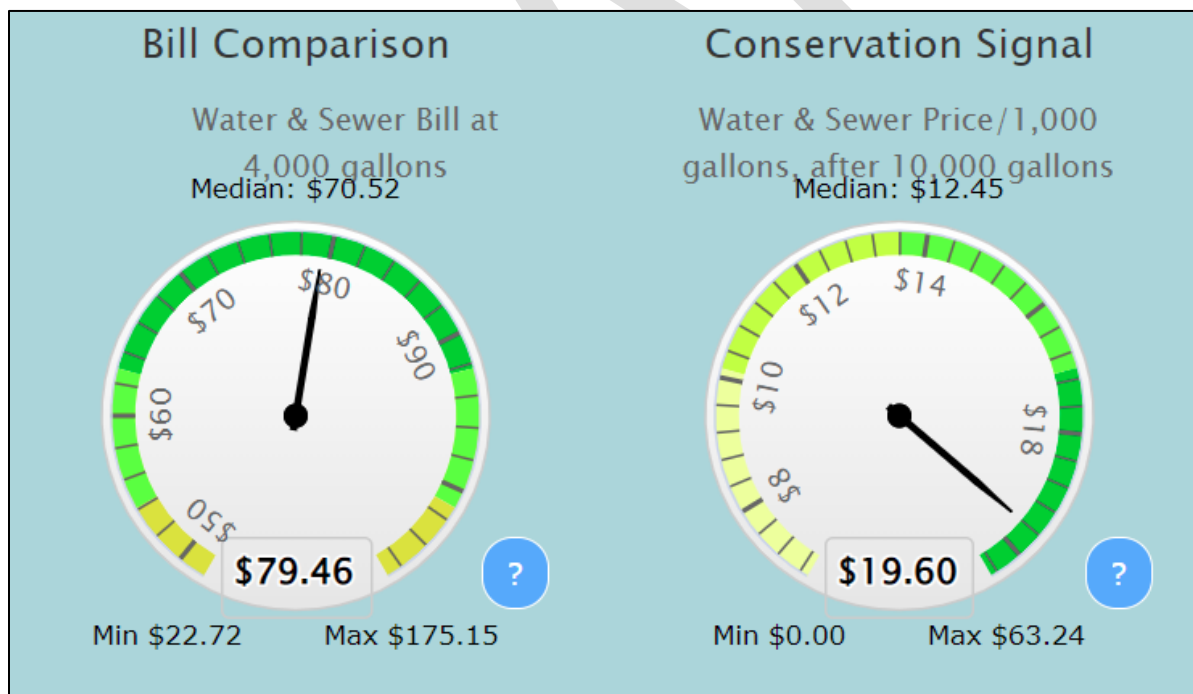


Fig.

Fig. 8: The Environmental Finance Center at UNC School of Government’s NC Water and Wastewater Rates Dashboard indicates that OWASA’s conservation signaling is high compared to other NC utilities and our rates are about average. Conservation signaling looks at the charge for the next 1,000 gallons

after a customer uses 10,000 gallons/month. It affects single family residential customers with high water use.

Irrigation rates and metering

To further incentivize wise water use, irrigation-only accounts are charged a higher monthly charge than all other customers and a more expensive rate than the average individually-metered residence. There is no block rate structure for irrigation accounts. In effect, irrigation is charged at one of the highest rates to discourage overwatering and encourage water-saving landscape design and maintenance. In addition, in accordance with state law, any newly platted land that installs in-ground irrigation is required to be separately metered and billed for irrigation water use.

Seasonal rates

Peak seasonal rates for all non-residential commercial and institutional accounts begin in May and end in September. These rates are designed to encourage conservation in times of peak system-wide water demand. Residential and Multi-family Master Meter (MFMM) accounts are not charged these higher rates in the warmer months to help address affordability and billing challenges.

Drought surcharges

Starting in Stage 1 of declared water shortages, OWASA begins to apply a drought surcharge to certain levels of water use. These multipliers and the level of water use against which they are applied increase as drought conditions worsen.

Individually Metered Residential						Multi-family master-metered residential	Non-residential and irrigation-only
Block:	Res. Block 1	Res. Block 2	Res. Block 3	Res. Block 4	Res. Block 5		
Use level (gallons)	1,000 to 2,000	3,000 to 5,000	6,000 to 10,000	11,000 to 15,000	16,000 and up		
Stage 1	No surcharge	No surcharge	1.25 times normal Block 3 rate	1.5 times normal Block 4 rate	2 times normal Block 5 rate	1.15 times year-round rate	1.15 times seasonal and irrigation-only rate
Stage 2	No surcharge	1.25 times normal Block 2 rate	1.5 times normal Block 3 rate	2 times normal Block 4 rate	3 times normal Block 5 rate	1.25 times year-round rate	1.25 times seasonal and irrigation-only rate

Individually Metered Residential						Multi-family master-metered residential	Non-residential and irrigation-only
Stage 3 and Emergency	No surcharge	1.5 times normal Block 2 rate	2 times normal Block 3 rate	3 times normal Block 4 rate	4 times normal Block 5 rate	1.5 times year-round rate	1.5 times seasonal and irrigation-only rate

RECLAIMED WATER SYSTEM

Reclaimed water is the clean water produced from the advanced treatment of wastewater at our wastewater treatment plant. It is used in our service area for non-drinking water purposes, such as flushing toilets, irrigating fields, and in the cooling towers at UNC and UNC Hospital. Other utilities also use reclaimed water for washing cars, concrete mixing, and augmentation of surface drinking water supplies.

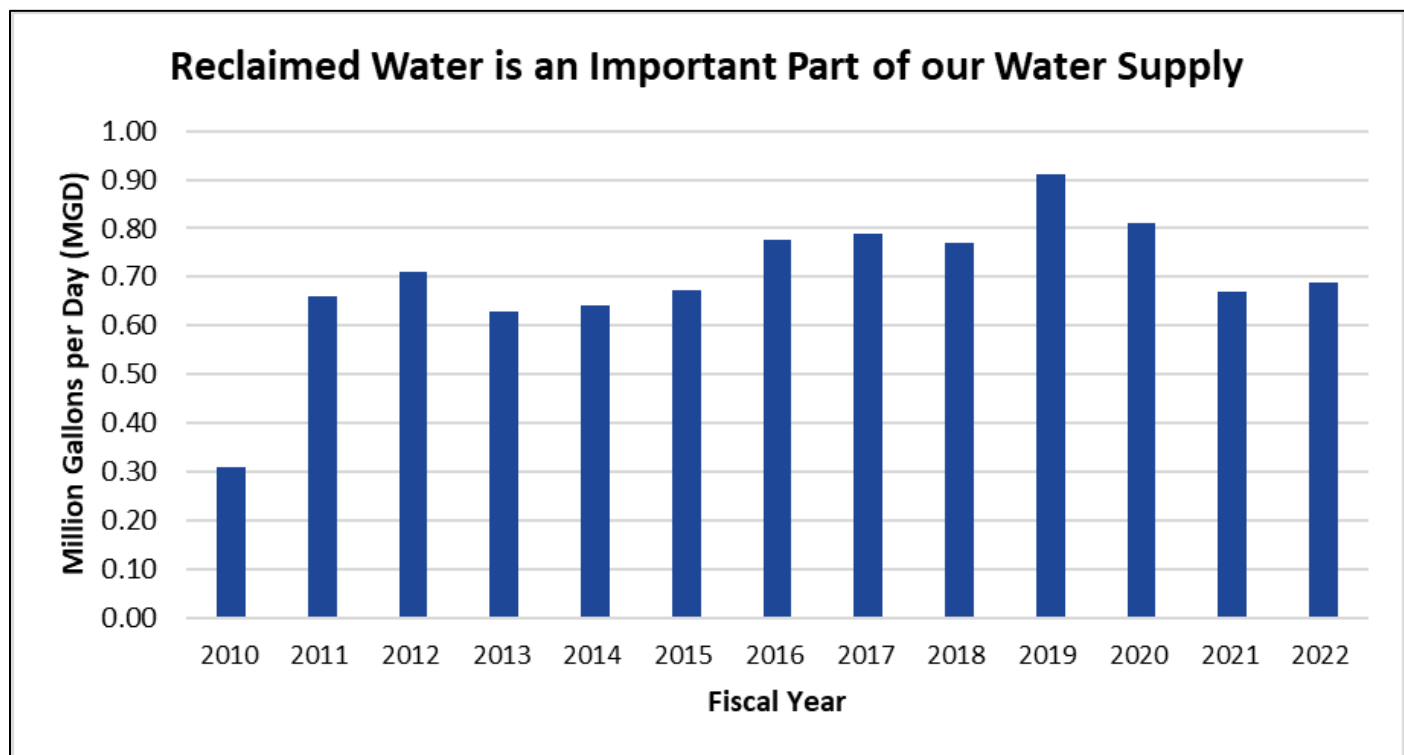


Fig. 9: Reclaimed water sales reached over 900,000 gallons per day in 2019.

- The Reclaimed Water System:
- Enables OWASA to meet non-potable water needs, freeing up the community’s drinking water supply in a cost-effective manner

- Lowers the risk of a water shortage in future droughts
- Defers or eliminates the need for costly water supply or expanded treatment facilities

As currently constructed, the reclaimed water system can meet peak demand of 3 million gallons per day (mgd), and it was constructed to allow cost-effective expansion to about 5 mgd. The cost to operate and maintain the system is paid solely by reclaimed water customers: the University of North Carolina at Chapel Hill, which uses the majority of reclaimed water, as well as St. Thomas More School.

OWASA'S INTERNAL WATER CONSERVATION EFFORTS

Maintenance and upgrade of infrastructure

Since beginning operations in 1977, OWASA has utilized a systematic replacement program for aging water distribution mains. Under this program, projects are prioritized by the following conditions:

- where line breaks may result in major damage or disruption to the community;
- where pipe material condition and other factors have indicated a pipe has reached the end of its useful life;
- Where there are serious risks to water service reliability;
- Where there are opportunities to improve water quality; and
- where capacity is no longer adequate.

OWASA catalogs the risk conditions listed above using the following two sources: a system hydraulic model and a risk-based pipe prioritization model:

- In 2011, the hydraulic model of the water distribution system was updated to identify and prioritize any areas of capacity and/or pressure concerns that need to be addressed in OWASA's water system through 2030. OWASA is currently updating the hydraulic model and final modeling results should be available in 2024 and will be used to evaluate areas where expanded capacity and distribution system improvements may be needed in the future.
- In 2020, as part of a comprehensive Distribution System Management Plan Update, OWASA updated its detailed distribution system prioritization model, which systematically evaluates and prioritizes water mains for replacement. This model relies on a statistical analysis of historical breaks to define pipe deterioration drivers for water main failures and determine potential failure patterns. This detailed understanding of failure patterns was combined with criteria regarding the consequence of specific main failures to develop the risk prioritization framework which is used to guide decisions on replacement projects. The model is not intended to predict when or where breaks will occur but rather to be used as a tool to observe trends in likelihood of failure and then

use engineering judgement to prioritize lines and project groupings for replacement within the Capital Improvements Program (CIP).

Over the last 10 years, OWASA has replaced about 1.7 miles of water main per year. OWASA's water main replacement goal is 3 miles per year. Recently, additional water main replacements have been completed by OWASA's internal construction crew, which focuses on smaller diameter, neighborhood replacements.

Water main break repair

OWASA's valve maintenance program ensures that we test the valves in our distribution system on a routine basis and fix valves that are broken - before they fail. If a water main does break, our goal is to isolate the break as soon as possible. Our GIS-based valve isolation tool pinpoints the primary and secondary valves necessary to isolate the area needed to make the repair. The faster we can isolate the break; the less water is lost.

Leak detection and pressure monitoring

OWASA currently monitors distribution system pressure at nine locations in addition to the Jones Ferry Road Water Treatment Plant (WTP). The distribution system locations include three storage tanks, three booster pump stations, and three locations elsewhere in the distribution system. Data from each of these locations are transmitted from their location back to the Supervisory Control and Data Acquisition (SCADA) system at the Water Treatment Plant (WTP). WTP staff monitor the pressures in the elevated water storage tanks, but the locations at the booster pump stations and throughout the distribution system are not monitored routinely.

Although OWASA's Infrastructure Leakage Index (ILI) indicates that there is little opportunity to reduce water waste in our distribution system, when leaks occur, time is of the essence: the faster we know about a leak, the faster we can repair it and stop the water loss. In addition to water conservation benefits, both pressure and leak monitoring strategies can provide benefits to operations, condition assessment and capital planning efforts. These monitoring strategies and associated technologies can help pinpoint water leaks, identify main failures or mains that are more likely to fail, reduce break response time, alert operators to system anomalies and respond to customer complaints, among other benefits.

Based on recent recommendations, OWASA staff is evaluating both temporary and permanent leak and pressure monitoring strategies throughout the distribution system. OWASA's FY23-27 Capital Improvements Program plan has \$150,000 of funding for distribution system asset management strategies which includes leak detection and pressure monitoring among other initiatives.

Water conservation and reuse at the Wastewater Treatment Plant

Since the 1960s, the wastewater treatment plant has incorporated non-potable water, treated wastewater, into many of its processes. Non-potable water is used in the headworks, in the solids building, in the aeration basin spray system, in the secondary clarifiers, fire hydrants, and as seal water for the pumps that move water throughout the wastewater treatment plant. Using this non-potable water instead of potable water saved approximately 200 million gallons of potable water in 2020 (about 0.5 MGD).

OWASA staff have begun sub-metering non-potable water use at the plant and are actively working to identify and pursue strategies to reduce our use of potable water and to connect facilities that currently use potable water to the non-potable system.

Recirculation System at Rogerson Drive Pump Station

In late 2017, the recirculating seal water system for the pumps at the Rogerson Drive Pump Station began to fail. This damaged the pumps. By 2018, the recirculation system was taken off-line entirely. Now, instead of recirculating water, potable water is used as seal water to maintain the pump pressure. With the recirculating system out-of-service, the seal water is sent back into the wastewater collection system. In FY22, this used approximately 20,000 gallons per day. Staff have a plan to put the recirculation system back in place in FY 23 and potable water use should fall to pre-2018 levels.

In-plant recycling of water treatment plant process water

After the 2001/2002 drought, OWASA sought state approval to recycle process water at the Jones Ferry Road WTP. Process water is the water used to remove solids from the treatment process and backwash (clean) filters. In 2005, OWASA received approval from the State of North Carolina to use recycled process water for up to 10 percent of the total daily flow of raw water. This change effectively cut the amount of raw water used by 0.4 million gallons per day. In addition, it allows treatment plant operators to make small adjustment to WTP flow without making changes to University Lake or Cane Creek Reservoirs pumping rates.

Water Sense certified toilets, showerheads, dishwashers and water efficient fixtures

OWASA has water saving devices, fixtures and faucets installed in many bathrooms and kitchens.

Data Management

OWASA tracks water use in many of our facilities using Agua Vista. The system alerts our maintenance staff when water use increases indicating a possible leaking faucet or toilet so that

repairs can be made promptly. In addition, OWASA regularly conducts AWWA water audits to identify cost-effective strategies to reduce water waste in our distribution system.

Evaluation of OWASA’s Water Conservation and Efficiency Program

The American Water Works Association (AWWA) updated a standard in 2021 for Water Conservation and Efficiency Program Operation and Management. This standard describes the critical elements of an effective water conservation and efficiency program. It encompasses activities undertaken by a given utility within its own operations to improve water use on the supply side upstream of customer meters through distribution system management, and on the demand side downstream of customer meters through customer billing and education practices. A program meeting this standard has the potential to impact all water users.

AWWA serves the entire country; therefore, these guidelines are not prescriptive but rather provide a general template for a robust water conservation plan. These are designed as voluntary guidelines and can be modified to better fit our needs and the needs of our community. They are organized into four sections: regulatory requirements, top-level organization functions, internal utility actions, and external policy requirements.

Based on an evaluation of OWASA’s existing program described above, staff have assigned each requirement a score of ‘not yet,’ ‘good,’ ‘better,’ and ‘best’ based on our current water conservation strategies. Appendix B includes more information on each standard, staff’s rationale for its rating, and potential opportunities to improve each area rated as ‘not yet,’ ‘good,’ or ‘better’.

Section	Requirements	OWASA ‘Score’
REGULATORY REQUIREMENTS		
	Meet or exceed all current federal, state and local regulatory requirements	BEST
TOP-LEVEL ORGANIZATION FUNCTIONS		
	Point of contact for water conservation initiatives	NOT YET
	Water conservation and efficiency plan that addresses conservation across all relevant customer categories and includes clearly defined and measurable performance goals	NOT YET
	Integrated resource planning evaluates efficiency and conservation on a comparable basis with supply options	BEST
	Water shortage or drought plan	BETTER
	Public information and education program promoted to all customers	GOOD
	Landscape efficiency program	GOOD
INTERNAL UTILITY ACTIONS		
	Universal metering or a plan to achieve universal metering	BETTER
	Source water metering	BEST
	Conservation-oriented rate structures that provide a financial incentive to reduce water use	BEST

Section	Requirements	OWASA 'Score'
	Monthly billing to provide regular feedback on usage to customers	BEST
	Units clearly labeled and defined in gallons	GOOD
	Limit estimated billings to no more than twice per year per customer	BEST
	Water loss control program to detect and minimize water loss in the distribution system including a utility water audit validated by a third-party	BETTER
EXTERNAL POLICY REQUIREMENTS		
	Water efficiency in building codes and standards	NOT YET
	Integrate water efficiency into land-use planning	NOT YET
	Water waste ordinance	BETTER

Guiding Principles

At its [January 13, 2022](#) meeting, the Board of Directors adopted the following guiding principles for evaluating strategies within the Water Conservation program:

1. The strategy is expected to contribute to a sustained reduction in the community's per capita water consumption.
2. The strategy is cost-effective as measured by dollars per thousand gallons saved. Where cost cannot be reliably quantified, the strategy will be considered based on how well it promotes environmental, economic, and societal goals.
3. Where appropriate, the strategy will be developed in coordination and with the cooperation of the Town of Chapel Hill, Town of Carrboro, UNC, Chapel Hill Carrboro City Schools, Orange County, the development community, and other partners and stakeholders.
4. Strategies will be evaluated by their performance against the following criteria:
 - The strategy is based on the best available and demonstrated water efficiency technology, designs, and practices.
 - The strategy utilizes a data-driven approach.
 - The strategy is equitable and provides multiple benefits to all.
 - The strategy incorporates efforts to raise community awareness and advocacy through active engagement, public outreach, and education.

Next Steps

The Guiding Principles for our Water Conservation Program described above signify that the Board of Directors desires a data-driven approach, and that strategies that will cost-effectively achieve sustained water reductions are preferred. OWASA's AMI system provides data that strategies could be evaluated against. Staff proposes using our AMI data to develop SMART goals for our water conservation program, to identify our largest types of water use, target our messaging, and evaluate strategies included in

AWWA's standards against the data obtained through this AMI analysis. Staff will need consulting help to evaluate the AMI data and proposes the following next steps.

- 1. Appoint the Strategic Initiatives Manager and Planning and Development Manager as the points of contact for water conservation.** An effective water conservation program will have elements of engineering, planning, sustainability, and communications – a combination of the skill sets of both positions. In addition, having two points of contact enables one to keep the program moving while the other may have other priorities or in the event that one of the positions is vacated or absent for an extended period of time. This action is effective immediately.

Point of contact for water conservation initiatives: NOT YET > GOOD
- 2. Use the AMI data to develop SMART goals for the program, identify the areas of largest water use, target communications, and identify the most cost-effective strategies to achieve our SMART goals.** In order to fully achieve the benefit of our AMI data, staff believe we will need consultant help on this step. Thus, the earliest it would be completed is in fiscal year 2024 if the Board approved this assistance in that year's budget.

Water conservation and efficiency plan that addresses conservation across all relevant customer categories and includes clearly defined and measurable performance goals: NOT YET > BEST
- 3. Update our Water Shortage Response Plan using the analysis of the AMI data.** Our Water Shortage Response Plan assumes certain water reductions are achieved by the community with each level of declared water shortage. Given the water reductions already achieved by the community, staff has reservations on whether we could actually achieve these water reduction goals in the case of a severe drought. At the same time, we should update the trigger graphs to show how they would change when we have guaranteed access to our allocation of water from Jordan Lake. We are required to update our Water Shortage Response Plan and have it approved by the Board of Directors in calendar year 2025 by general statute. Thus it will be important to include consulting help to evaluate our AMI data in the FY 2024 budget. Staff will bring a summary of the data with a draft SMART goal(s) and an updated list of next steps to the Board of Directors.

Water shortage or drought plan: BETTER > BEST
- 4. Pursue a new Customer Billing and Information System (CIS)** that allows for displaying water consumption in increments smaller than thousand gallons. The budget for this step has been approved in the current (FY 2023) budget.

Units clearly labeled and defined in gallons: GOOD > BETTER/BEST
- 5. OWASA staff meet with Town of Carrboro and Town of Chapel Hill staff.** Each of the Towns recently adopted plans that include elements of water conservation in them that require partnering with OWASA. Staff proposes to begin meeting with the Towns to identify short- and long-term strategies that will help meet the goals in each of our respective Plans. We would propose pursuing strategies that score well against the guiding principles.

Water efficiency in building codes and standards: NOT YET > TBD
Integrate water efficiency into land-use planning: NOT YET > TBD
Water waste ordinance: BETTER > TBD

APPENDIX A: Coordination of OWASA Plans Related to Water Conservation

This plan captures OWASA's current water conservation and efficiency practices and ensures that demand management elements of OWASA's Long-Range Water Supply Plan (LRWSP), Water Shortage Response Plan, Affordability Program Plan, Energy Conservation Plan and Communications Plan, and Strategic Plan are well-coordinated.

A copy of the most recent version of all these plans can be found at:

<https://www.owasa.org/plans-budgeting/>

Long-Range Water Supply Plan

The Long-Range Water Supply Plan used 50-year forecasts to evaluate the need, costs, and benefits of various alternatives to increase the resiliency of our water supply. Staff evaluated several supply and demand management alternatives against the social, environmental, and economic goals established and approved by the OWASA Board of Directors. Based on this evaluation, it was determined that there is no individual or collective group of demand management strategies that, if pursued further, would prevent the need for additional supply in the long-run in a cost-effective manner.

Demand management through water conservation, water efficiency, and reclaimed water use, however, remain a key value of OWASA, and we are committed to considering cost-effective demand management strategies as part of this Water Conservation Plan. Cost-effective is defined by the LRWSP as having a lower unit cost (\$ per million gallons) than the next supply option.

Water Shortage Response Plan

For the purposes of this document, demand side strategies do not include those that are only enacted in times of drought. While water shortage response strategies are important to extending OWASA's water supply during a drought, they are not desirable to reduce average day demands on a regular basis. Instead, these strategies are considered in OWASA's Water Shortage Response Plan.

Communication and Community Engagement Plan

Additionally, for the purposes of this document, demand side strategies are not communications and outreach strategies. Although extremely important in influencing our community's ethos regarding sustainable water use, the impacts of outreach strategies are difficult to quantify. Now that OWASA has a strategic communication plan such strategies will be included in the updates of these plans.

Affordability Plan

OWASA's affordability plan ensures that our rates are fair and equitable. One program that helps OWASA accomplish this goal while also contributing to water conservation is the tiered

rate structure. Single-family households that use less water enjoy a lower rate than those that use more. In addition, multi-family master meter customers (i.e., apartment complexes) are no longer subject to seasonal rate fluctuations to ensure that families living in these households are not faced with larger bills in the warmer months.

Energy Management Plan

It is important to note that saving water in turn conserves energy. The treating, transporting, and heating of water all take some form of either electricity or gas power, and those costs translate to rising rates on utility bills. Water conservation efforts, including increasing the use of non-potable water at our wastewater treatment plant, are also a part of OWASA's Energy Management Plan.

Strategic Plan

OWASA's Strategic Plan includes strategies to adapt to climate change including improving our resiliency to drought. Water conservation can help meet that goal. The Plan also includes a goal to integrate the online billing system with water use portals which can help educate customers on how to reduce their water bill with practices to reduce their water use.

DRAFT

Appendix B: Evaluation of American Water Works Association (AWWA) Water Conservation and Efficiency Program Operation and Management Strategies Against OWASA Practices

This appendix summarizes the rationale on why OWASA staff rated various strategies within the AWWA standard as “not yet”, “good”, “better”, or “best”. We included time frames for strategies that we have identified as next steps in upcoming years.

NOT YET

1. Point of contact for water conservation initiatives

AWWA Standard – A water utility shall have a dedicated coordinator who is the person responsible for planning and implementing water conservation and efficiency efforts

Rationale for Scoring – While water conservation and efficiency is a part of many OWASA staff member’s job descriptions, no one is officially dedicated as a point of contact for water conservation efforts - yet. If the Board approves appointing the Strategic Initiatives Manager and the Planning and Development Manager as points of contact for the Water Conservation Program, this strategy will move into the “good” category.

Move the Needle –

Staff Score	Opportunity	Timeline
GOOD	Officially designate the Strategic Initiatives Manager as point of contact	FY2023
BETTER	Hire a part-time position to plan, implement and track water conservation and efficiency efforts	TBD
BEST	Hire a full-time position who dedicates a portion of their level of effort to water conservation and efficiency efforts	TBD

2. Water Conservation Plan with SMART Goal

AWWA Standard – The utility shall create, implement, and maintain a water conservation and efficiency plan. The plan must address water conservation and efficiency across all relevant customer categories and include clearly defined and measurable program performance goals accompanied by benchmarks that can be used to assess progress.

Rationale for Scoring – OWASA does not have a water conservation plan – yet. With adoption of this plan, this strategy would move into the “good” category. Staff proposes using its AMI data to develop SMART goals for the Water Conservation Program. Staff will need consulting help to evaluate the AMI data. Staff would then report on progress toward meeting those goals annually as part of the annual Operating Trends report.

Move the Needle –

Staff Score	Opportunity	Timeline
GOOD	Officially approve a water conservation plan	FY2023
BETTER	Commit to a measurable program performance goal	FY2024 (assuming consultant help approved in budget)
BEST	Report on progress annually; Update plan regularly to reflect new technology and best practices	FY2024 and annually thereafter

3. Integration of Water Efficiency into Land-use Planning and Building Codes

AWWA Standard – Where feasible, the utility shall engage in the development or adoption of water-efficient codes and standards for indoor plumbing fixtures, commercial/industrial equipment, and outdoor landscaping.

Where appropriate, the utility shall coordinate and integrate with their land-use planning authority to influence water demand, such as requiring or incentivizing low-water-use landscaping and efficient outdoor fixtures; requiring turf limitations; incentivizing higher density; and requiring water conservation commitments or adherence to green building standards.

Rationale for Scoring – While OWASA does work closely with our partners at the Town of Chapel Hill and Carrboro, we have not encouraged the adoption or implementation of water efficiency codes or land-use planning standards. The Town of Carrboro adopted their Comprehensive Plan in 2022, and the Town of Chapel Hill adopted their Climate Action and Response Plan in 2021. Each of these Plans includes elements of water conservation and partnering with OWASA. In addition, the town of Chapel Hill is beginning its Complete Community initiative that will identify where and how to meet future housing needs. This initiative could be coordinated to include water conservation objectives. Staff proposes to begin meeting with the Towns to identify short- and long-term strategies that will help meet the goals in each of our Plans. These partnerships could include integrating requirements into land-use planning and building codes as well as partnering on communications and other strategies included in the AWWA water conservation standards.

As part of the update of our Long-Range Water Supply Plan, OWASA evaluated several demand management alternatives. Based on that evaluation, OWASA determined that there are no individual or collective group of demand management strategies that would prevent the need for additional supply in the long run. However, two alternatives were identified to be cost-effective that would fall under this

standard. Because these strategies are so closely linked with land-use planning and building codes, they will be incorporated into discussions with Town staff.

- Unit sub-metering of water use for multi-family, master-metered (MFMM) customers, accompanied by a required for WaterSense fixtures.** MFMM properties are projected to be the second largest water use sector in OWASA’s service area by 2070. For reasons of practicality and economics, apartments and mixed use developments may be master-metered for water use, and individual tenants never see a water bill (i.e., the water bill is included in rent payments). Research shows that metered customers use 15-20% less water than non-metered customers. Retrofitting existing buildings can be difficult and requires meter reading inside an individual unit, which can be costly. It is much easier to accommodate in new construction. Given the projected growth of multi-family and mixed-use developments in our service area, this initiative was identified to have water savings potential and would be relatively easy and cost-effective to implement. This initiative would be coupled with a requirement for the installation of high efficiency fixtures, so as not to put off the cost of water onto tenants.
- OWASA-run water efficiency design assistance and development program with application of a conservation-oriented system development fee.** OWASA’s development review program accepts developers’ proposed water use requirements and designs OWASA’s infrastructure to meet their needs with minimal discussion of technologies and approaches to reduce a facility’s water use. This potential initiative would include the adoption of an OWASA-provided service for new development in which OWASA staff review water use projections and provide individualized efficiency recommendations and design assistance. It will not be regulatory in nature but would partner with the conservation-oriented system development fee (SDF) structure. OWASA’s current SDFs for non-residential/MFMM customers are based on meter size. Meter size-based SDFs are easy to administer and allow OWASA to charge for the infrastructure needed to provide the maximum amount of water a customer could possibly use. However, this approach does not give developers an incentive to build more efficiently unless they are on the cusp of needing a smaller meter size. Maximum flow rates vary widely between meter sizes, so though a customer’s peak flow rate might be significantly lower than what their meter size allows, the customer would still have to pay for the infrastructure associated with full use of the meter.

Move the Needle –

Staff Score	Opportunity	Timeline
GOOD	Partner with the Town of Chapel Hill and Town of Carrboro to identify short- and long-term strategies which support goals and strategies identified in their plans and OWASA’s Water Conservation Plan and Strategic Plan. These strategies should include voluntary actions from developers.	FY2023
BETTER	Partner with the Town of Chapel Hill and Town of Carrboro to develop incentives for adopting water conservation and efficiency into residential and mixed use development or re-development projects. Require sub-metering for all new multi-family development and WaterSense fixtures.	TBD

Staff Score	Opportunity	Timeline
BEST	Hire a water conservation and efficiency advocate to help developers applying for system development fees design developments that reduce water use	TBD

GOOD

1. Landscape Efficiency Program

AWWA Standard – The utility shall establish a program to improve and maintain water-efficient landscapes and irrigation. The program should include any or all of the following:

- Programs intended to maximize water efficiency through proper design, installation, and maintenance of new and existing landscapes and irrigation systems
- Irrigation scheduling
- Landscape water budgets
- Landscape transformations

Rationale for Scoring – OWASA does not have a landscape efficiency program. Staff proposes using the results of the AMI data analysis to estimate how much water is used to irrigate and the potential cost-effectiveness of including this strategy in our Water Conservation Program. If that analysis indicates that landscape water efficiency programs would help us cost-effectively achieve our SMART goal for the program, OWASA will partner with the Town of Chapel Hill and Carrboro to identify landscape efficiency strategies.

Move the Needle –

Staff Score	Opportunity	Timeline
BETTER	Partner with the Town of Chapel Hill and Town of Carrboro to develop a landscape efficiency program that applies to new development.	
BEST	Partner with the Town of Chapel Hill and Town of Carrboro to develop a landscape efficiency program that applies to all development.	

1. Public Information and Education

AWWA Standard – The utility shall develop or incorporate into existing programs information that fosters a culture of conservation and efficiency. Key components of this program include: communicating the value of water, the water source, and the treatment and delivery process; information on methods and opportunities for reducing consumption; and delivering consistent and persistent messages. The utility shall promote the use and maintenance of water-efficient products, practices, and services to all of their customers.

Rationale for Scoring –OWASA has a strategic communications plans that incorporates water conservation and efficiency messages. We are particularly good at communicating the value of water, the water source and treatment and delivery processes and communicating to low-income customers about ways they can reduce their water bills. We could improve by sending more consistent and persistent messages to all our customers about how to reduce their water consumption. Customers who do not receive OWASA water bills are key target audience that are not currently receiving these messages.

Move the Needle –

Staff Score	Opportunity	Timeline
BETTER	Integrate more messaging around water conservation and efficiency into our Communications Plan Utilize AguaVista to send customized home water reports to all residential water users, comparing their water use to their neighbor’s, and recommending actions they can take to reduce water use. Contract with a local plumbing company or non-profit to conduct home water audits and fix emergency leaks for low-income customers	TBD
BEST	Dedicate key accounts manager to work one-on-one with top water users to reduce water use at their facilities	TBD

2. Clearly Label Units on All Bills and Communications

AWWA Standard – When reporting water use to customers on the water bill or other communications, the units should be clearly labeled in gallons.

Rationale for Scoring – OWASA’s current bill reports customer’s consumption in a box labeled: USAGE (1000S). Our customers must know that 1000S means thousand gallons of water used. A clearer way to represent this would be to label this 1000 gallons. An even better way to clearly communicate how much water a customer is using and therefore how much they could save by adopting water conservation strategies is to bill in 100 gallon or less increments. This would also address the Town of Carrboro’s number one issue related to water conservation: lumpy billing. Because we bill in 1,000 gallons, if you use just under 1,000 gallons one month, your bill will be smaller. But, those gallons carry forward to the next month; making your next bill larger. This is a real hardship for low or fixed-income customers. OWASA’s FY 2023 budget includes funding for a new customer billing system. Staff should ensure that this system be able to clearly report usage in 100 gallons or less when they evaluate vendor responses to proposals.

Move the Needle –

Staff Score	Opportunity	Timeline
BETTER	Ensure our new billing system can clearly label units	FY2023
BEST	Ensure new billing system can report usage in 100 gallons or less	FY2023

BETTER

1. Water shortage and drought plan

AWWA Standard – The utility shall have a plan to describe utility actions that will be carried out in the event of a drought or other water shortage conditions.

Rationale for Scoring – OWASA’s current Water Shortage Response Plan does not include several important new tools in our toolbox, such as AMI technology, that have been introduced in that time. We are required by statute to update our WSRP by December 2025. Our Water Shortage Response Plan assumes certain water reductions are achieved by the community with each level of declared water shortage. Given the water reductions already achieved by the community, staff has reservations on whether we could actually achieve these water reduction goals in the case of a severe drought. Staff suggests using AMI data to evaluate the estimated reductions we could anticipate at each water shortage threshold. We will need consultant help to complete this exercise. We also suggest using this opportunity to add trigger tables (when we declare a given water shortage stage) to use when we have access to our Jordan Lake allocation through the Western Intake Partnership.

Move the Needle –

Staff Score	Opportunity	Timeline
BEST	Update Water Shortage Response Plan	FY2024

2. Universal metering practices

AWWA Standard – The utility shall have universal metering of all service connections.

Rationale for Scoring – Currently, we supply water to approximately 4,500 households that are not individually metered. Because they do not receive a bill for their water use, these are not receiving the strong conservation rate signals our single-family residential customers do. In addition, they may not know how much water they use per month or how much they are paying for it they are billed for water as a part of their monthly rent. This is an item that we can discuss with our local government Partners as outlined in the “Integration of Water Efficiency into Land-use Planning and Building Codes” described above.

Move the Needle –

Staff Score	Opportunity	Timeline
BEST	Develop a plan for all new developments to require sub-metering for MFMM complexes	TBD

3. Water loss control program

AWWA Standard – The utility shall prepare an annual water loss audit report. Each water loss audit shall undergo validation as described in the Water Research Foundation *Level 1 Water Audit Validation: Guidance Manual*.

Rationale for Scoring – For many years, OWASA has conducted a water loss audit, but has never hired a third-party firm to validate the report.

Move the Needle –

Staff Score	Opportunity	Timeline
BEST	Hire a third-party firm to validate the water loss audit report every 5 years	TBD

4. Water waste ordinance

AWWA Standard – A water waste ordinance shall be in force and effect throughout the utility service area.

Rationale for Scoring – Both the Town of Chapel Hill and Town of Carrboro have a water waste ordinance, but it is rarely, if ever, enforced. This is another topic we can discuss with our local government Partners.

Move the Needle –

Staff Score	Opportunity			
BEST	Work with our partners in the towns to update the ordinance and add enforcement			

BEST

1. Regulatory requirements

AWWA Standard – A water utility shall demonstrate that it meets or exceeds all current state or local regulatory requirements.

Rationale for Scoring – OWASA meets or exceeds all regulatory requirements

2. Integrated resource planning

AWWA Standard – The utility shall evaluate conservation and efficiency on a comparable basis with other water supply options.

Rationale for Scoring – As part of the Long-Range Water Supply Plan (LRWSP), OWASA considered several suites of water demand management and reclaimed water strategies alongside supply options.

3. Source water metering

AWWA Standard – The utility shall implement metering of all sources.

Rationale for Scoring – OWASA meters all source water from our three reservoirs as well as interconnects from other utilities.

4. Conservation-oriented rate structures

AWWA Standard – Utilities shall use a non-promotional water rate that provides the financial incentive for customers to reduce water use. These rate structures include one or more of the following:

- Inclining tier rates
- Marginal cost pricing
- Seasonal rates, and
- Water budget-based rates

Utilities shall provide sanitary sewer collection or treatment service shall include a volumetric component in the sewer rate structure. Such rates shall provide a conservation signal by using wintertime water use to set sewer rates.

Rationale for Scoring – OWASA utilizes increasing block rates and seasonal rates. In addition, we charge different rates for irrigation and apply drought surcharges.

5. Monthly billing

AWWA Standard – Retail billing shall be monthly.

Rationale for Scoring – OWASA bills all customers on a monthly basis.

6. Limited estimated billing

AWWA Standard – Utilities shall estimate a bill amount no more than twice a year per customer.

Rationale for Scoring – By using AMI technology, OWASA rarely estimates customer bills.

Agenda Item 13:

Review Board Work Schedule

Purpose:

- a) Request(s) by Board Members, General Counsel and Staff
- b) Review draft Board Meeting Agenda for October 13, 2022
- c) Review 12 Month Board Meeting Schedule
- d) Review Pending Key Staff Action Items
- e) Action Items Reoccurring Every 3 to 5+ Years

Information:

- Draft October 13, 2022 Board Meeting Agenda
- 12 Month Board Meeting Schedule
- Pending Key Staff Action Items from Board Meetings
- Action Items Reoccurring Every 3 to 5+ Years

September 8, 2022

Agenda
Annual Meeting of the OWASA Board of Directors
Thursday, October 13, 2022, 6:00 P.M.
OWASA Community Room

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

Announcements

1. Announcements by the Chair
 - 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

Petitions and Requests

1. Public
2. Board
3. Staff

Presentation of Annual Report

1. A. Staff Comments
- B. Martin Starnes & Associates, CPAs, P.A.'s Comments

Consent Agenda

Information and Reports

2. Operating Trends Report (Ruth Rouse)

Action

3. Resolution Reappointing the Firm of Epting and Hackney as General Counsel to the Orange Water and Sewer Authority (Bruce Boehm)
4. Resolution Awarding a Construction Contract for the Chapel Hill North Pump Station Improvements Project (Brad Barber)
5. Minutes of the September 8, 2022 OWASA Board of Directors Meeting (Andrea Orbich)
6. Minutes of the September 8, 2022 Closed Session of the OWASA Board of Directors for the Purpose of Discussing a Personnel Matter (Bruce Boehm)

Regular Agenda

Discussion

7. Discuss Lake Recreation Report FAQs, Plan and Potential Program Changes (Johnny Riley)
8. Update on the Development of a New Budget Format (Stephen Winters)
9. Review Board Work Schedule
 - A. Request(s) by Board Committees, Board Members, General Counsel and Staff (Bruce Boehm)
 - Check in on In-Person Board Meetings
 - B. Draft November 10, 2022 Board Meeting (Todd Taylor)
 - C. 12 Month Board Meeting Schedule (Todd Taylor)
 - D. Pending Key Staff Action Items (Todd Taylor)

Summary of Board Meeting Items

10. Executive Director will Summarize the Key Staff Action Items from the Meeting

DRAFT

OWASA Board of Directors – 12 Month Board Meeting Schedule (September 8, 2022)

Meeting Date	Agenda Items	Committee Meetings & Other Board Items
<i>September 8 2022</i>	Formal Purchase of Scarlett-Cooper Water Line Pipe Bond Resolution Resolution to Submit Application to NC DWI for ARPA Grant Funding for Low-Income Customers within Service Area to Water and/or Sewer Services Potential Orange County Solid Waste Site Approve Draft Strategic Plan Approve Water Conservation Plan CS – GC Annual Review	New Board member overview of Finance, CIP, Asset Management programs (9-20-2022) Meeting between the BOCC Members & OC Appointees to the BOD (TBD)
<i>October 13 2022</i>	Annual Meeting of the Board – Annual Report and Financial Audit Discuss Lake Recreation Report FAQs, Plan, and Potential Program Changes Update on Development of New Budget Format Award Chapel Hill North Pump Station Improvements Project Approve GC Engagement	Meeting between the CHTC OWASA Committee & Chapel Hill Appointees to the BOD (TBD)
<i>November 10 2022</i>	Discuss Goals and Expectations for a Potential Rate Study (Tentative) Award the Large Meter Vaults Project – Estes and Shepard PFAS Update	
<i>December 8 2022</i>	CS – Prepare for ED Interim Review	
<i>January 12 2023</i>	Approve Audit Firm Contract Discuss FY 24 Budget Calendar and Assumptions CS – ED Interim Performance Review	OWASA Orientation for newly elected officials (TBD)
<i>February 9 2023</i>	Department Managers FY 24 Budget Presentations CS – Prepare for GC Interim Review (Tentative) Series 2023 Bond Resolution	Annual Update to BOCC (TBD) Meeting between the CHTC OWASA Committee & Chapel Hill Appointees to the BOD (TBD)
<i>March 9 2023</i>	Set Date for Public Hearings on FY 24 Budget & Rates FY 24 Draft Budget and Rate Adjustment CS – GC Interim Review	
<i>April 13 2023</i>	Discuss Draft FY 2024 Budget and Authorize Staff to Publish FY 2024 Budget and Rate Information BOD Eligible for Nominations to Election as Board Officers (include Officer descriptions) Planning BOD Self-Assessment CS – Prepare ED Annual Review	
<i>May 11 2023</i>	Public Hearings – FY 24 Budget and Rates Approve Employee Insurance Renewals Discuss Employee Merit Pay for FY 24 CS - ED Annual Review	
<i>June 8 2023</i>	Approve FY 24 Budget and Rates (including Employee Merit Pay decision) Election of Officers ED Compensation	
<i>July 13 2023</i>	Review Proposed ED Work Plan CS – Prepare GC Annual Review	

OWASA Board of Directors – 12 Month Board Meeting Schedule (September 8, 2022)

Meeting Date	Agenda Items		Committee Meetings & Other Board Items
August 10 2023	CS – GC Annual Review	()	

Recurring Reports (included as part of monthly Consent Agendas)

- **January** - Employee Health and Dental Insurance Update; Annual Lakes Recreation Report
- **February** - Reliability and Resiliency Report; Q2 Financial Report; CIP Semiannual Report; Affordability Program Update
- **March** - Energy Management Plan
- **April** - TBD
- **May** - Q3 Financial Report
- **June** - TBD
- **July** - TBD
- **August** - Preliminary 12 Month Financial Report and CIP Semiannual Report
- **September** - Disposal of Surplus Personal Property; EEO/Affirmative Action Report and D&I Update
- **October** - Operating Trends Report
- **November** - Q1 Financial Report
- **December** - TBD

The 12 Month Board Meeting Schedule shows priority efforts the Board and staff plan to consider during the next twelve months. The schedule also shows annual updates to the Board which will be distributed on the consent agenda. This schedule does not show all the items the Board may consider in a meeting. The 12 Month Board Meeting Schedule will be reviewed and updated by the Board each month.

The OWASA Board determines which topics it wants to explore as a full Board 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:

<p>() Recurring agenda item (generally these are “required” items)</p> <p>ARPA American Rescue Plan Act</p> <p>BOCC Orange County Board of County Commissioners</p> <p>BOD Board of Directors</p> <p>CCR Cane Creek Reservoir</p> <p>CE Community Engagement</p> <p>CEP Community Engagement Plan</p> <p>CHTC Chapel Hill Town Council</p> <p>CIP Capital Improvements Program</p> <p>COLA Cost of Labor Adjustment</p> <p>CS Closed Session of the Board</p> <p>CTC Carrboro Town Council</p> <p>CY Calendar Year</p> <p>D&I Diversity and Inclusion</p> <p>ED Executive Director</p>	<p>EEO Equal Employment Opportunity</p> <p>EPA Environmental Protection Agency</p> <p>FY Fiscal Year</p> <p>GC General Counsel</p> <p>HR Human Resources</p> <p>JL Jordan Lake</p> <p>KPI Key Performance Indicator</p> <p>LRWSP Long-Range Water Supply Plan</p> <p>MOA Memorandum of Agreement</p> <p>MWBE Minority/Women-owned Business Enterprises</p> <p>MST Mountains-to-Sea Trail</p> <p>MFMM Multi-Family Master Meter</p> <p>NCDOT North Carolina Department of Transportation</p> <p>NRTS Natural Resources and Technical Services</p>
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OWASA Board of Directors – 12 Month Board Meeting Schedule (September 8, 2022)

- OC Orange County
- Q Quarter
- RFP Request for Proposals
- SRF State Revolving Fund
- SOW Scope of Work
- TBD To Be Determined
- WIP Western Intake Partnership
- WTP Water Treatment Plant
- WWTP Wastewater Treatment Plant

Pending Key Staff Action Items from Board Meetings

No.	Date	Action Item	Target Board Meeting Date	Person(s) Responsible	Status
1.	7-14-2022	Incorporate feedback into Executive Director's Key Focus Areas.	NA	Taylor	Feedback incorporated and will be part of the Executive Director Interim Review on 12-8-2022.
2.	7-14-2022	Implement new in-person Board meetings requirements.	9-8-2022	Przybyl Orbich	
3.	7-14-2022	Provide updated 2022 Communications and Community Engagement Plan.	NA	Tiger	Completed – emailed on 7-15-2022

OWASA Action Items Recurring Every 3 to 5+ Years

No.	Action Item	Purpose	Board Action Needed	Target Start Date	Target Completion Date	Frequency	Staff Lead
1.	Strategic Plan	Identify key strategic initiatives and corresponding actions for OWASA during the next 3-5 years	<ol style="list-style-type: none"> 1) Participate with and guide staff to develop an updated draft Strategic Plan 2) Invite and consider customer and stakeholder feedback on draft Plan 3) Approve Strategic Plan 4) Provide staff resources and guidance needed to execute the Plan 	July 2021	August 2022	3-5 years	Executive Director and Strategic Initiatives Manager
2.	Local Water Supply Plan and Water Shortage Response Plan	NC General Statutes requires Local Water Supply Plan and Water Shortage Response Plan be updated at least every 5 years to be submitted to NC Department of Environmental Quality	<ol style="list-style-type: none"> 1) Board budget approval for FY 2024 to fund analysis of AMI data to evaluate estimated water use reductions for the various water shortage stages and provide triggers that include access to Jordan Lake allocation 2) If staff identifies a policy or material change in the update of the Plans, Board guidance is required 3) Approve Plans 	Fall 2023	Summer 2024	5 years	Planning and Development Manager
3.	Water Demand Projections will be updated approximately every 10 years, unless there is a significant change in assumptions	Periodically check the assumptions used to develop our water demand projections	<ol style="list-style-type: none"> 1) Provide staff feedback and guidance on assumptions and methods to develop demand projections 2) Invite and consider stakeholder feedback on draft demand projections 	2028	2029	10 years	Planning and Development Manager
4.	Cost of Service Rate Study	1) Ensure OWASA's rates, fees and charges continue to meet the goals of the	1) Provide guidance to staff on draft Rate Study	FY 2023	FY 2023	5 years	Director of Finance and Customer Service

OWASA Action Items Recurring Every 3 to 5+ Years

No.	Action Item	Purpose	Board Action Needed	Target Start Date	Target Completion Date	Frequency	Staff Lead
		organization (e.g. sustainability, conservation, etc.) 2) Update cost allocations and adjust rates as necessary. NC General Statues requires review of System Development Fees every 5 years.	2) Invite and consider customer and stakeholder feedback on draft Rate Study 3) Approve Rate Study and annual update of rates, fees and charges as needed				
5.	Auditor	NC General Statues requires an annual audit of OWASA's finances. It is a best-practice to invite proposals and select best-qualified audit firm every 3 years.	1) Assign 1 or 2 Board Members to participate on staff's panel to select a best-qualified audit firm 2) Award annual contract to audit firm	Winter 2024	Spring 2025	3 years	Director of Finance and Customer Service
6.	Banking Services	It is a best-practice to invite proposals and select a best-qualified financial institution to provide OWASA's various banking needs.	1) Provide guidance to staff on the social responsibility and environmental sustainability criteria to be considered when selecting a best-qualified financial institution for banking services 2) Approve financial institution	2032	2033	10 years	Director of Finance and Customer Service
7.	Employee Classification Pay and Compensation	It is best-practice every 5-7 years to thoroughly review employee jobs to ensure they are properly classified in their position and to ensure total compensation (pay and benefits) are competitive and meeting OWASA's needs.	1) Provide guidance to staff about goals and objectives for employee total compensation 2) Approve Employee Classification, Pay and Compensation Study & Pay Administration Guidelines	2022	2023	5-7 years	Director of Human Resources and Safety

OWASA Action Items Recurring Every 3 to 5+ Years

No.	Action Item	Purpose	Board Action Needed	Target Start Date	Target Completion Date	Frequency	Staff Lead
8.	Financial Management Policy	It is a best-practice to review OWASA's Financial Management Policy periodically to ensure organizational fiscal objectives are appropriate.	<ol style="list-style-type: none"> 1) Provide guidance to staff about OWASA's Financial Management objectives 2) If needed, approve update to Financial Management Policy 	FY 2023	FY 2023	5 years	Director of Finance and Customer Service
9.	Audit of OWASA Board Policies and Ordinances (such as Cross-Connection, Sewer Use, Purchasing and Procurement, etc.)	It is a best-practice to have staff audit the various Board approved policies to ensure they are still appropriate. As needs change, staff is responsible to act and inform the Board.	<ol style="list-style-type: none"> 1) Provide guidance to staff on staff's recommended updates to various Board policies. 2) As needed, approve policy updates 	As needed	Ongoing	5+ years	Executive Director
10.	Communications and Community Engagement Plan	Review key communications and engagement initiatives to ensure they align with, and support, current and future business operations, as well as community engagement needs and priorities	<ol style="list-style-type: none"> 1) Update communications plan taking into consideration learnings from and measurement of the previous years' activities, and current and future fiscal year business priorities, as well as associated community engagement needs 	As needed	Ongoing	Annual	Strategic Initiatives Manager
11.	Human Resources Policy	As needs change, staff is responsible to act and inform the Board	<ol style="list-style-type: none"> 1) Provide guidance to staff on staff's recommended updates to various topics within the HR Policy. 2) As needed, approve policy updates 	As needed	As needed	As needed	Director of Human Resources and Safety