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
Work Session of the OWASA Board of Directors
Thursday, December 9, 2021, 6:00 P.M.

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

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

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

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

Announcements

a. 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.

b. Announcements by Board Members

c. Announcements by Staff
   - Update on Care to Share Day (Mary Tiger)
   - Thursday, December 16, 2021, Strategic Plan Work Session (Mary Tiger)

Consent Agenda

Action

1. Resolution Awarding a Construction Contract for the East Main Street Sewer - Phase 1 Project (Vishnu Gangadharan)
2. Resolution Authorizing OWASA to Engage Counsel and Participate in PFAS Remediation Cost Recovery Litigation (Robert Epting/Todd Taylor)
3. Minutes of the October 28, 2021, Meeting of the Board of Directors (Andrea Orbich)

4. Minutes of the November 11, 2021, Work Session of the Board of Directors (Andrea Orbich)
5. Minutes of the November 11, 2021, Closed Session for the Purpose of Discussing Potential Environmental Claims in Accordance with N.C. General Statutes 143-318.11 (Robert Epting)

Regular Agenda

Information and Reports

6. Information on the Process and Timeline for Renewing Employee Medical Insurance Coverage (Stephanie Glasgow/Ellen Tucker, Gallagher)

Discussion

7. Revision of the Employee Attendance Award Program (Stephanie Glasgow)
8. Modification to Employee Personal Leave (Stephanie Glasgow)
9. Long-Range Water Supply Plan – Evaluation of Alternatives to Provide Access to OWASA's Allocation of Water in Jordan Lake (Ruth Rouse)

Discussion

10. Review Board Work Schedule
    a. Request(s) by Board Committees, Board Members, General Counsel and Staff (Jody Eimers)
    b. January 13, 2022 Work Session (Todd Taylor)
    c. January 27, 2022 Board Meeting (Todd Taylor)
    d. 12 Month Board Meeting Schedule (Todd Taylor)
    e. Pending Key Staff Action Items (Todd Taylor)
    f. Action Items Reoccurring Every 3 to 5+ Years (Todd Taylor)

Summary of Work Session Items

11. Executive Director will summarize the key staff action items from the Work Session

Closed Session

12. The Board of Directors will meet in Closed Session for the Purpose of Discussing a Personnel Matter in Accordance with N.C. General Statutes 143-318.11.6 (Ray DuBose)

Agenda Item 1:

Award a Construction Contract for the East Main Street Sanitary Sewer Rehabilitation and Replacement Phase 1

Purpose:

This memorandum recommends that the OWASA Board of Directors award a construction contract to Moffat Pipe, Inc. (Moffat) for the construction of the East Main Street Sanitary Sewer Rehabilitation and Replacement Phase 1 (Project).

Background:

The Project includes the replacement and rehabilitation of deteriorated sanitary sewer mains in the East Main Street corridor in Carrboro between North Greensboro Street and West Rosemary Street (see attached map). The project will: replace 1,700 linear feet (LF) of 8-inch diameter sanitary sewer main including two "point repairs" (structural pipe restoration with limited digging); upsize 300 LF of 10-inch diameter sewer main to 12-inch diameter sanitary sewer main; replace eight existing sanitary sewer manholes and install two new sanitary sewer manholes.

The project was identified as an urgent need based on OWASA video inspections of pipe segments in the project area that indicated significant corrosion and deterioration. The current condition of the pipes along this important corridor in the Town of Carrboro could potentially cause service disruptions to the customers in the area affecting businesses and residents.

The project schedule was coordinated with Town of Carrboro (TOC) and the North Carolina Department of Transportation (NCDOT) with respect to a resurfacing project along East Main Street that is now slated to start in May 2022 after completion of the sanitary sewer main project.

The project team has engaged the Towns and local residents in various ways throughout the design phase, including one community meeting, paper mailers, in person meetings, and review meetings with TOC, NCDOT and Town of Chapel Hill (TOCH); these discussions have focused particularly on the anticipated work hours, duration of the project, and ways to minimize impacts to business in the downtown Carrboro corridor. Furthermore, coordination with NCDOT has been conducted to ensure our project is aligned with the Main Street resurfacing project, and additional outreach with Carrboro Business Alliance is planned for mid-December.

McKim and Creed was selected as the design engineer and evaluated alternatives for the construction type and sequencing of work. The attached map shows the extent of sanitary sewer main replacements at this site.

Advertising and Bidding:

The Engineer completed the Project design and bid documents in October 2021. The bid advertisement was posted to websites, news outlets, and emailed to contractors on October 7,

2021. Additionally, throughout the bid process, the Engineer and OWASA staff made direct contact with numerous general contractors via phone calls and emails. A total of three bids were received and opened publicly on the November 9, 2021 deadline. The bid results are summarized below. The bid alternate scope includes the use of ductile iron pipe in lieu of PVC pipe to accommodate supply chain issues (see discussion below).

Bidder	**Base Bid**	**Bid Alternate**	**Total**
Moffat Pipe, Inc	$1,882,415.00	$73,238.00	$1,955,653.00
Pipeline Utilities, Inc,	$2,564,000.00	$67,000.00	$2,631,000.00
Mid-Atlantic Infrastructure Systems, Inc.	$2,943,149.00	$146,373.00	$3,089,522.00
Engineer's Estimate	*$1,244,307.90*	*$54,477.50*	*$1,298,785.40*

After an evaluation of the low bidder's project references, current projects list, financial statement and references, safety performance data, debarment status, and claims and judgements information, Moffat Pipe, Inc. (Moffat) was determined to be the low, responsive and responsible bidder.

In order to meet schedule requirements for the project, staff is requesting that the Board award a total construction contract amount of $1,955,653.00, which includes the bid alternate for using ductile iron pipe (DIP). Based on current material lead times, using DIP will save between 4 to 12 weeks over using PVC, and this schedule savings is essential for the project to be able to finish before NCDOT begins to resurface East Main Street in May. Note that NCDOT's work is already under contract and is planned to begin construction immediately after University of North Carolina at Chapel Hill spring commencement.

A copy of the certified bid tabulation is included with the attached Engineer's recommendation for award.

Minority and Women Business Enterprise (MWBE) Participation:

OWASA's Minority Business Participation Outreach Plan guidelines include all the statutory requirements from the State of North Carolina and specify a 10% goal for participation by minority businesses. OWASA staff took several actions to solicit minority participation in this contract, including advertising the construction bid with the Greater Diversity News, publishing the advertisement on the websites of the State of North Carolina Interactive Purchasing System (NC IPS) and OWASA, and posting advertisement in multiple plan rooms. Staff also emailed the advertisement directly to MWBE contractors identified in NC IPS as having relevant experience.

OWASA also requires bidders to complete "good faith efforts" to solicit participation by minority subcontractors, and to attest to those efforts via an affidavit submitted with the bid. Staff reiterated this requirement at the pre-bid meeting and provided the bidders with detailed guidelines. The apparent low bidder (Moffat) is a Woman-Owned Business Enterprise (WBE)

and they anticipate self-performing at least $1,000,000.00 of the work. There were limited subcontractor opportunities with this project. Moffat is only subcontracting out the paving work associated with project restoration. The total percentage of work going to MWBE in this contract is approximately 51.0% of the contract value. The remaining contract value is a combination of material costs and the subcontracted pavement work.

Bid Analysis and Recommendation:

The wide range in bids received is at least partially reflective of the current volatility of material prices, with the three bidders accounting for this risk differently. All three bids received were higher than the engineer's estimate mainly due to two items:

1. Ongoing fluctuation in material prices; and
2. Changes to the design requirements based on addendums released during the bidding process that contained updated information:
    a. Addendum added test holes to confirm the possibility of petroleum contaminated soil, the possible cost of removing contaminated soil, updated gasket and polywrap for pipes in potential contaminated soil areas
    b. Addendum added NCDOT updates that increased the amount of temporary asphalt and stone for backfill throughout the project work area

A redesign or rebid of this project is not recommended at this time due to the requirement to complete the sewer repairs prior to the upcoming NCDOT resurfacing work (anticipated to start in May 2022) and the current poor condition of the pipe. Staff feels it is necessary to complete the rehabilitation as soon as possible.

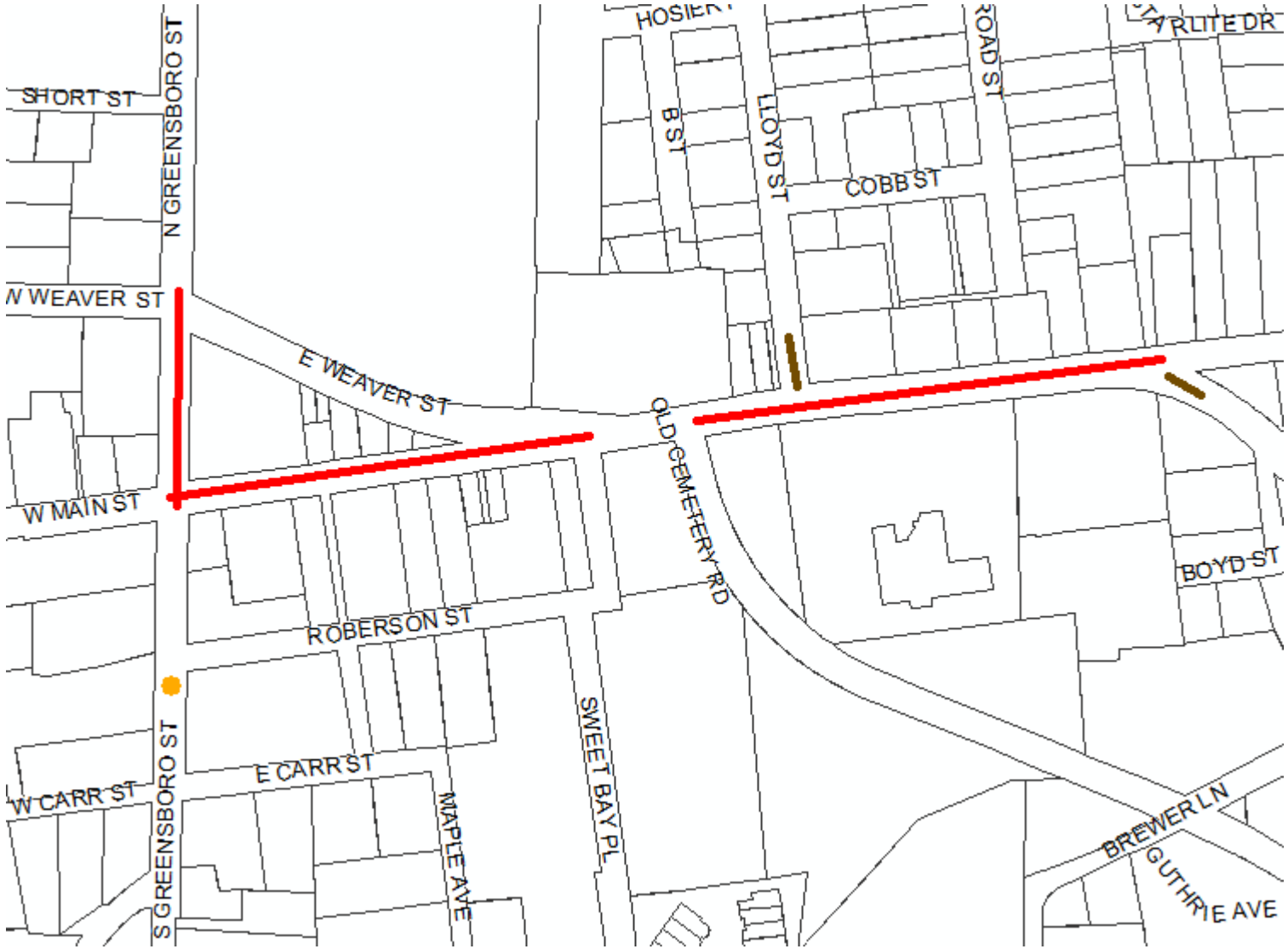
Moffat has demonstrated sufficient qualifications in past project performance (including several past OWASA projects), personnel qualifications/experience, and reference checks. The Engineer and OWASA staff also determined that Moffat met safety performance, relevant project experience, bonding capacity, and other requirements.

McKim and Creed's recommendation that the construction contract for this project be awarded to Moffat is attached along with the certified bid tabulation (attached). OWASA staff supports the Engineer's recommendation and requests that the Board adopt the attached resolution (attached) awarding the construction contract to Moffat.

Information:

- Work Area Location Map
- Engineer's Recommendation for Award and Certified Bid Tabulation
- Resolution Awarding a Construction Contract for the East Main Street Sanitary Sewer Rehabilitation and Replacement Phase 1 Project

East Main Street Sewer Phase 1 Project Extents



- Open Cut Dig and Replace
- Manhole Installation
- Point Repair (Structural Repair Limited Digging)

McKIM&CREED

ENGINEERS
SURVEYORS
PLANNERS

November 15, 2021 M&C 01519-0055 (54)

Ms. Deepthi Kalyanam, PE
Utilities Engineer
Orange Water & Sewer Authority
400 Jones Ferry Road
Carrboro, NC 27510

RE: East Main Street Sanitary Sewer Rehabilitation and Replacement – Phase 1
Recommendation of Award of Construction Contract

Dear Ms. Kalyanam:

On Tuesday, November 9, 2021, at 2:00 pm, the Orange Water and Sewer Authority received bids for the East Main Street Sanitary Sewer Rehabilitation and Replacement – Phase 1 project. Three (3) bids were received and the bids were opened and read aloud. The advertisement and bidding procedures were consistent with statutory requirements to the best of our knowledge. Please refer to the attached bid summary tabulation and detailed bid tabulation for the bids received. The referenced bids have been reviewed by the Engineer, and Moffat Pipe, Inc. (NC License # 54906) is the apparent low bidder, with a bid submitted in the base bid amount of $1,882,415.00.

The Base Bid includes removal and replacement of approximately 1,700 linear feet of 8-inch diameter sanitary sewer main with new 8-inch diameter sanitary sewer main, including two (2) point repairs, and the removal and replacement of approximately 300 linear feet of 10-inch diameter existing sanitary sewer main with new 12-inch diameter sanitary sewer main. The Base Bid also includes removal and replacement of eight (8) existing sanitary sewer manholes and installation of two (2) new sanitary sewer manholes along with the re-establishment or replacement of existing laterals as shown on the Contract Documents.

The Unit Price Alternate Bid includes Alternates 1, 2, and 3 for alternative pipe materials in bid Section D; specifically, Alternate 1 provides for CL350 ductile iron pipe with 401 lining in lieu of C900 PVC for 8" sanitary sewer; Alternate 2

Venture IV Building
1730 Varsity Drive
Raleigh, NC 27606

919.233.8091
Fax 919.233.8031
www.mckimcreed.com

provides for CL350 ductile iron pipe with 401 lining in lieu of C900 for 12" sanitary sewer, and Alternate 3 provides for CL350 ductile iron pipe with 401 lining and associated ductile iron fittings and cleanouts in lieu of C900 PVC and PVC fittings and cleanouts for 4" sanitary sewer service laterals. The following represents the total bid amounts as submitted by Moffat Pipe, Inc.:

Total Base Bid: $1,882,415.00
Total Unit Price Alternate Bid: $73,238.00
Total Base Bid + Unit Price Alternate Bid: $1,955,653.00

Upon review of the submitted bids, a mathematical error was found in the bid submitted by Mid-Atlantic Infrastructure Systems, Inc. The attached certified bid tabulations reflect the corrected bid amounts. Moffat Pipe, Inc. remains the apparent low bidder, and any combination of award of the base bid or base bid and unit price alternates, results in Moffat Pipe, Inc. being the apparent low bidder.

Moffat Pipe, Inc. is properly licensed and experienced in the type of construction involved, as indicated by the information supplied with the bid. Based on the Engineer's review of the bids, we recommend award of the project to the lowest responsible, responsive bidder, Moffat Pipe, Inc. The amount of award of the construction contract will depend on selection of the unit price alternate bid items by the Orange Water and Sewer Authority. As of the date of this letter, the specified ductile iron pipe and fittings appear to be more readily available when compared to the specified C900 PVC pipe and fittings; therefore, acceptance of the unit price alternate bid items is recommended, for a total construction contract amount of $1,955,653.00.

Please accept this letter as the formal recommendation of award of construction contract to Moffat Pipe, Inc. This recommendation of award is subject to acceptance of the submitted bid by the Orange Water and Sewer Authority.

Enclosed you will find the following documents:

- Certified Bid Summary Tabulation
- Certified Detailed Bid Tabulation
- Moffat Pipe, Inc. Bid Package
- Moffat Pipe, Inc. Bid Bond

Per the requirements of the bidding documents, Moffat Pipe, Inc. has been requested to provide the following documents:

- Non-Collusion Affidavit of Subcontractors
- Affidavit C – Portion of Work to be Performed by Minority Firms

Should you have any questions or concerns in regard to this letter or any of the enclosures, please do not hesitate to contact our office.

Sincerely,

McKIM & CREED, INC.

Jacob Bowes, PE
Construction Administrator

Enclosures

cc: File, w/encl.
Michael Penny, PE (M&C)
Adam Paukovich, PE (M&C)

CERTIFIED BID TABULATION
ORANGE WATER AND SEWER AUTHORITY
EAST MAIN STREET SANITARY SEWER REHABILITATION AND REPLACEMENT - PHASE 1
BID DATE: NOVEMBER 9, 2021 at 2:00PM
MC PROJECT NO. 01519-0055

BIDDER	ATTENDED MANDATORY PRE-BID	LICENSE NO.	BID BOND	BASE BID	BASE BID + ALTERNATES
Moffat Pipe, Inc.	Y	54906	y	$ 1,882,415.00	$ 1,955,653.00
Pipeline Utilities, Inc.	Y	13040	Y	$ 2,564,000.00	$ 2,631,000.00
Mid-Atlantic Infrastructure Systems, Inc.	Y	47041	Y	$ 2,943,149.00	$ 3,089,522.00



Certified as Correct

Jacob E. Bowes 11/10/21

Jacob E. Bowes, PE — Date
Construction Administrator
McKim & Creed, Inc.

CERTIFIED DETAILED BID TABULATION
ORANGE WATER AND SEWER AUTHORITY
EAST MAIN STREET SANITARY SEWER REHABILITATION AND REPLACEMENT - PHASE 1
BID DATE: NOVEMBER 9, 2021 at 2:00PM
MC PROJECT NO. 01519-0055

				MOFFAT PIPE, INC		PIPELINE UTILITIES, INC.		MID-ATLANTIC INFRASTRUCTURE SYSTEMS, INC.	
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
SECTION A - EAST MAIN ST, SOUTH GREENSBORO STREET, LLOYD ST									
1	Mobilization (maximum 3% of Section A)	LS	1	$42,000.00	$42,000.00	$64,000.00	$64,000.00	$51,750.00	$51,750.00
Sanitary Sewer Mains									
2	Remove and Replace by Open Cut								
a	8" C900 PVC, 0-10' Depth	LF	1,275	$410.00	$522,750.00	$338.00	$430,950.00	$920.00	$1,173,000.00
b	Additional cost to install 8-inch 401-lined DIP with Nitrile Gaskets and Polywrap in lieu of PVC on Pipe Segment 683	LF	128	$40.00	$5,120.00	$44.00	$5,632.00	$1,004.00	$128,512.00
3	Sanitary Sewer Point Repair (up to 18-feet in length)								
a	8" DIP, Class 350 Sanitary Sewer w/ 401 Lining, 0-10' Depth	EA	1	$17,500.00	$17,500.00	$7,260.00	$7,260.00	$45,232.00	$45,232.00
b	8" C900 PVC Sanitary Sewer, 0-10' Depth	EA	1	$17,500.00	$17,500.00	$8,102.00	$8,102.00	$43,917.00	$43,917.00
4	Cleaning, Flushing, CCTV Inspection for Sanitary Sewer (Applies to Bid Items 2 and 3 only)	LF	1,722	$15.00	$25,830.00	$20.00	$34,440.00	$8.00	$13,776.00
Sanitary Sewer Manholes									
5	Remove Existing Manhole and Replace with new Precast Concrete Manhole (4-foot Diameter w/ Epoxy Lining)								
a	6'-8' Depth	EA	6	$25,000.00	$150,000.00	$13,555.00	$81,330.00	$23,145.00	$138,870.00
6	Install New Manhole on 8-inch Sewer Main (4-foot Diameter w/ Epoxy Lining)								
a	6'-8' Depth	EA	1	$25,000.00	$25,000.00	$12,810.00	$12,810.00	$22,848.00	$22,848.00
7	Install New Doghouse Manhole on Existing 10-inch Sewer Main (4-foot Diameter w/ Epoxy Lining)								
a	6'-8' Depth	EA	1	$25,000.00	$25,000.00	$13,039.00	$13,039.00	$26,794.00	$26,794.00
Sanitary Sewer Service Laterals									
8	Sanitary Sewer Service Lateral Remove and Replace by Open Cut								
a	4" PVC (C900) Sanitary Sewer	LF	240	$400.00	$96,000.00	$423.00	$101,520.00	$566.00	$135,840.00
b	8x4 PVC (C900) Wye	EA	8	$2,500.00	$20,000.00	$1,070.00	$8,560.00	$1,131.00	$9,048.00
c	4" PVC Cleanout Assembly	EA	7	$2,500.00	$17,500.00	$804.00	$5,628.00	$3,346.00	$23,422.00
Erosion Control/Restoration/Miscellaneous Construction									
9	Inlet Protection Devices	EA	23	$200.00	$4,600.00	$224.00	$5,152.00	$332.00	$7,636.00
10	Remove and Replace Town of Carrboro Asphalt Roadway/Trench Repair (8" CABC + 2" S9.5A)	SY	20	$46.00	$920.00	$28.00	$560.00	$488.00	$9,760.00
11	Remove and Replace NCDOT Asphalt Roadway/Trench Repair (8" Asphalt Base Course + 2" - 3" S9.5B)	SY	800	$200.00	$160,000.00	$145.00	$116,000.00	$265.00	$212,000.00
12	Remove and Replace NCDOT Asphalt Roadway/Trench Repair (6" Asphalt Base Course + 2" - 3" S9.5B)	SY	20	$150.00	$3,000.00	$127.00	$2,540.00	$265.00	$5,300.00
13	Mill Existing Asphalt and Overlay with 1.5" S9.5B	SY	90	$260.00	$23,400.00	$20.00	$1,800.00	$57.00	$5,130.00
14	Remove and Replace Traffic Signal Loops	LF	2,000	$15.00	$30,000.00	$10.00	$20,000.00	$13.00	$26,000.00

				MOFFAT PIPE, INC		PIPELINE UTILITIES, INC.		MID-ATLANTIC INFRASTRUCTURE SYSTEMS, INC.	
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
15	Rock Removal	CY	25	$250.00	$6,250.00	$245.00	$6,125.00	$450.00	$11,250.00
16	Undercut Excavation and Disposal of Unsuitable Material	CY	100	$60.00	$6,000.00	$57.00	$5,700.00	$150.00	$15,000.00
17	Traffic and Pedestrian Control	LS	1	$140,000.00	$140,000.00	$1,132,972.00	$1,132,972.00	$122,661.00	$122,661.00
18	Sanitary Sewer Bypass Pumping	LS	1	$51,000.00	$51,000.00	$57,120.00	$57,120.00	$20,371.00	$20,371.00
19	Petroleum Contaminated Soil - Test Hole	EA	2	$1,500.00	$3,000.00	$3,080.00	$6,160.00	$2,350.00	$4,700.00
20	Petroleum Contaminated Soil - Removal	CY	200	$100.00	$20,000.00	$123.00	$24,600.00	$200.00	$40,000.00
	SUBTOTAL SECTION A (Bid Items 1 thru 20)				$1,412,370.00		$2,152,000.00		$2,292,817.00
SECTION B - NORTH GREENSBORO STREET									
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
21	Mobilization (maximum 3% of Section B)	LS	1	$11,500.00	$11,500.00	$9,900.00	$9,900.00	$16,900.00	$16,900.00
Sanitary Sewer Mains									
22	Remove and Replace Pipe Segment No. 704 by Open-Cut								
a	12" C900 PVC, 0-10' Depth	LF	297	$420.00	$124,740.00	$358.00	$106,326.00	$930.00	$276,210.00
23	Cleaning, Flushing, CCTV Inspection for Sanitary Sewer (Applies to Bid Item 22 only)	LF	297	$15.00	$4,455.00	$20.00	$5,940.00	$8.00	$2,376.00
Sanitary Sewer Manholes									
24	Remove Existing Manhole and Replace with new Precast Concrete Manhole (4-foot Diameter w/ Epoxy Lining)								
a	0-6' Depth	EA	1	$24,000.00	$24,000.00	$14,567.00	$14,567.00	$22,629.00	$22,629.00
b	6'-8' Depth	EA	1	$25,000.00	$25,000.00	$14,602.00	$14,602.00	$23,145.00	$23,145.00
Sanitary Sewer Service Laterals									
25	Sanitary Sewer Service Lateral Remove and Replace by Open Cut on Pipe Segment No. 704								
a	4" PVC (C900) Sanitary Sewer	LF	30	$400.00	$12,000.00	$313.00	$9,390.00	$566.00	$16,980.00
b	12x4 PVC (C900) Wye	EA	1	$2,600.00	$2,600.00	$916.00	$916.00	$2,120.00	$2,120.00
c	4" PVC Cleanout Assembly	EA	1	$2,500.00	$2,500.00	$838.00	$838.00	$3,346.00	$3,346.00
Erosion Control/Restoration/Miscellaneous Construction									
26	Inlet Protection Devices	EA	3	$200.00	$600.00	$278.00	$834.00	$332.00	$996.00
27	Remove and Replace NCDOT Asphalt Roadway/Trench Repair (6" Asphalt Base Course + 2" - 3" S9.5B)	SY	200	$150.00	$30,000.00	$118.00	$23,600.00	$265.00	$53,000.00
28	Mill Existing Asphalt and Overlay with 1.5" S9.5B	SY	550	$85.00	$46,750.00	$26.00	$14,300.00	$57.00	$31,350.00
29	Remove and Replace Traffic Signal Loops	LF	400	$16.00	$6,400.00	$14.00	$5,600.00	$13.00	$5,200.00
30	Undercut Excavation and Disposal of Unsuitable Material	CY	25	$60.00	$1,500.00	$57.00	$1,425.00	$150.00	$3,750.00
31	Traffic and Pedestrian Control	LS	1	$73,000.00	$73,000.00	$99,761.00	$99,761.00	$81,774.00	$81,774.00
32	Sanitary Sewer Bypass Pumping	LS	1	$25,000.00	$25,000.00	$24,001.00	$24,001.00	$30,556.00	$30,556.00
	SUBTOTAL SECTION B (Bid Items 21 thru 32)				**$390,045.00**		**$332,000.00**		**$570,332.00**
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
SECTION C – ALLOWANCES									
33	Utility Relocation Allowance	LS	1	$50,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00
34	Contingency Allowance	LS	1	$25,000.00	$25,000.00	$25,000.00	$25,000.00	$25,000.00	$25,000.00
35	NCDOT Bond Allowance	LS	1	$5,000.00	$5,000.00	$5,000.00	$5,000.00	$5,000.00	$5,000.00
	SUBTOTAL SECTION C (Bid Items 33 thru 35)				**$80,000.00**		**$80,000.00**		**$80,000.00**

Item No.	Description	Unit	Estimated Quantity	MOFFAT PIPE, INC		PIPELINE UTILITIES, INC.		MID-ATLANTIC INFRASTRUCTURE SYSTEMS, INC.	
				Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
SECTION D - UNIT PRICE ALTERNATES									
ALT-1	Class 350 Ductile Iron Pipe w/ 401 lining in lieu of C900 PVC, for 8" Sanitary Sewer (Bid Item 2a)	LF	1,275	$27.00	$34,425.00	$29.00	$36,975.00	$42.00	$53,550.00
ALT-2	Class 350 Ductile Iron Pipe w/ 401 lining in lieu of C900 PVC, for 12" Sanitary Sewer (Bid Item 20)	LF	297	$29.00	$8,613.00	$28.00	$8,316.00	$36.00	$10,692.00
ALT-3	Sanitary Sewer Service Lateral Remove and Replace by Open Cut								
a	Class 350 Ductile Iron Pipe w/ 401 lining in lieu of C900 PVC, for 4" Sanitary Sewer Service Laterals (Bid Items 8a and 23a)	LF	270	$50.00	$13,500.00	$41.00	$11,070.00	$64.00	$17,280.00
b	MJ Ductile Iron Wye w/ 401 lining in lieu of C900 PVC on 8" Sanitary Sewer Main, for 4" Sanitary Sewer Service Laterals (Bid Item 8b)	EA	8	$1,400.00	$11,200.00	$500.00	$4,000.00	$1,395.00	$11,160.00
c	MJ Ductile Iron Wye w/ 401 lining in lieu of C900 PVC Wye on 12" Sanitary Sewer Main, for 4" Sanitary Sewer Service Laterals (Bid Item 23b)	EA	1	$1,500.00	$1,500.00	$1,159.00	$1,159.00	$3,379.00	$3,379.00
d	Ductile Iron Pipe Cleanout Assembly w/ 401 lining in lieu of PVC Cleanout Assembly, for 4" Sanitary Sewer Service Laterals (Bid Items 8c and 23c)	EA	8	$500.00	$4,000.00	$685.00	$5,480.00	$6,289.00	$50,312.00
SUBTOTAL SECTION D (Bid Items ALT-1 thru ALT-3)					$73,238.00		$67,000.00		$146,373.00
TOTAL BASE BID (SECTION A+B+C)					$1,882,415.00		$2,564,000.00		$2,943,149.00
TOTAL BASE BID+UNIT PRICE ALTERNATES (SECTION A+B+C+D)					$1,955,653.00		$2,631,000.00		$3,089,522.00

*Highlighed areas - Math error - correct as shown.



Certified as Correct

Jacob E. Bowes 11/10/21

Jacob E. Bowes, PE — Date
Construction Administrator
McKim & Creed, Inc.

Resolution Awarding a Construction Contract for the East Main Street Sanitary Sewer Rehabilitation and Replacement Phase 1 Project

Whereas, there is a need to replace/rehabilitate the sanitary sewer mains in the East Main Street corridor due to their age and condition; and

Whereas, advertisement to bid was published on the websites of the Greater Diversity News, publishing the advertisement on the websites of the State of North Carolina Interactive Purchasing System (NC IPS) and OWASA, and posting advertisement in multiple plan rooms on October 7, 2021; and

Whereas, after receiving three bids on the bid opening date of November 9, 2021; Moffat Pipe, Inc. of Wake Forest NC has been determined to be the low responsive, responsible bidder for the project; and

Whereas, funding for this project is included in the Capital Improvements Budget, last approved by the Board of Directors on June 10, 2021:

Now, Therefore, Be It Resolved:

1. That the Board of Directors of Orange Water and Sewer Authority awards the construction contract to Moffat Pipe Inc., the low responsive, responsible bidder for the East Main Street Sanitary Sewer Rehabilitation and Replacement Phase 1 Project, in accordance with the approved plans and specifications, in the amount of $1,955,653.00, subject to such change orders as may apply.

2. That the Executive Director be, and hereby is, authorized to execute said contract, subject to prior approval of legal counsel, and to approve and execute change orders and such documents as may be required in connection with the construction contract.

Adopted this 9th day of December 2021.

_____
Jo Leslie Eimers, Chair

ATTEST:

_____
John N. Morris, Secretary

Agenda Item 2:

Resolution Authorizing OWASA to Engage Counsel and Participate in PFAS Remediation Cost Recovery Litigation

Purpose:

To authorize OWASA to engage Counsel to participate in litigation on claims to recover damages caused by PFAS pollution in OWASA water resources.

Background:

Like many other water resources across the country, OWASA's water resources and treatment operations have been found to contain amounts of per- and polyfluoroalkyl substances known collectively as PFAS compounds. While no treatment limits have yet been determined by regulatory authorities, PFAS compounds are constituents of concern to regulators, and expensive treatments to protect the public health from their presence in drinking water will doubtless be required in the foreseeable future.

More than five hundred public water supply operators have brought suit in various actions in federal courts across the country, seeking cost recovery for PFAS management and removal. These suits have been consolidated in one multi-district case being heard in the Federal District Court in Charleston, South Carolina. In that litigation, the claims of all of the various claimant parties are litigated together to determine the liability of the defendant product manufacturers for the claimant parties' damages. It is likely that a settlement fund will be created by the defendant product manufacturers, either before or after trial of the cases, and that the settlement fund will be divided for distribution among the various claimant parties.

OWASA's General Counsel has advised that OWASA should join the multi-district litigation in order to be able to claim a part of any settlement fund created in this litigation. OWASA's General Counsel has also advised that its office is unable to provide the resources to litigate this specialized product liability litigation and has recommended that OWASA engage the firm of Napoli Shkolnik, PLLC to represent OWASA in this litigation. General Counsel and staff have reviewed, revised, and reached agreement on the terms of an acceptable Retainer Agreement with Napoli Shkolnik, PLLC, and has recommended that the Board of Directors authorize the Executive Director to engage the firm by executing the Retainer Agreement.

On September 23, 2021, the Board received a presentation from, Napoli Shkolnik, PLLC, (Napoli) on the PFAS cost recovery program. At that time, that firm proposed to serve as Counsel to OWASA in litigation it will bring on OWASA's behalf, to be joined in the multi-district litigation in Charleston, South Carolina, seeking to recover any expenses OWASA may incur or experience in the future for testing, treatment and remediation of PFAS contamination. Napoli's efforts have been endorsed by the National Rural Water Association, and they already represent many of the other claimant parties in the multi-district litigation.

Action:

Board review and approval of the Resolution for OWASA to Retain Counsel and Participate in the PFAS Cost Recovery litigation to be brought and pursued as part of the multi-district litigation already pending against the defendant PFAS manufacturers.

Information:

- Retainer Agreement
- Resolution Authorizing OWASA to Engage Counsel and Participate in PFAS Cost Recovery Litigation

NAPOLI SHKOLNIK PLLC
ATTORNEYS AT LAW
PFAS COST RECOVERY PROGRAM

RETAINER AGREEMENT

Orange Water And Sewer Authority, Carrboro, North Carolina, ("Client"), and Napoli Shkolnik PLLC, ("Napoli") have agreed that the Law Firm of Napoli Shkolnik PLLC, is hereby engaged upon the terms and conditions contained herein to prosecute any legal claim for negligence (or other viable causes of action) against any and all parties individuals and/or corporations that are or may be liable under the law for injuries and/or property damages and other costs which are or may be suffered arising out of the contamination of water supplies by per- and polyfluoroalkyl substances (*PFAS*) and 1,4 - Dioxane. We specifically agree as follows:

1. **ENGAGEMENT OF NAPOLI SHKOLNIK PLLC FIRM:** Client agrees that Napoli shall be engaged as Client's Counsel for the purposes set out herein. Napoli agrees to well and diligently represent Client in the prosecution of any and all legal claims for damages or other relief to which Client may be found to be entitled, arising out of the contamination of its treatment or transmission equipment, its water supplies or wastewater treatment effluent or other products, including surfaces to which they may have been applied, by per- and polyfluoroalkyl substances (PFAS) and 1,4- Dioxane by Defendants known or to be discovered in the course of this litigation by Napoli. Napoli shall have charge of all aspects of this litigation, keep Client fully advised as to the progress of proceedings therein, and shall coordinate and communicate with Client through Client's General Counsel.

2. **RESERVATION OF CLAIMS AGAINST OTHER NORTH CAROLINA PUBLIC ENTITIES:** It is specifically agreed that Napoli will not bring any action on Client's behalf or otherwise represent Client in litigation against any county, municipality or other public entity of or in North Carolina, without first obtaining Client's further specific written direction and consent to do so. Client has specifically reserved the right to engage, or not to engage in litigation with other North Carolina public entity water and wastewater service providers and shall have the right to designate Napoli or other Counsel for such purposes if it decides to do so.

3. **FEE PERCENTAGE:** Client and Law Firm agree that the Law Firm shall be paid Twenty five Percent (25%) of the sum recovered, whether by suit, settlement or otherwise. *Client will not be liable to pay the Law Firm any legal fee if there is not any form of recovery*.

4. **DISBURSEMENTS:** In the event there is no recovery, the Client shall not be obligated to pay the Law Firm a legal fee for services rendered. Disbursements may include some of the following expenses: court filing fees, sheriff fees, medical and hospital report/record fees, doctor's report, court stenographer fees, deposition costs, expert fees for expert depositions and court appearances, trial exhibits, computer on-line search fees, express mail, postage,

photocopy charges, document management charges, long distance telephone charges among other charges. Document management charges are the fees charged by the law firm for processing documents during litigation, such as medical records, documents produced by defendant(s) and/or other parties, etc. Processing of the documents may include but is not limited to the following: (1) scanning; (2) conversion of native files to PDF documents; (3) OCR (optical code recognition); and/or (4) indexing. At the time of settlement and distribution of proceeds, these expenses shall be deducted from the Client's share after computation of the Attorney's Fee. Client shall reimburse Napoli for all necessary court filing fees, and for all fees for service of process, but Client shall not be responsible for any other said disbursements or expenses in excess of Seven Thousand Five Hundred Dollars, nor shall any sum in excess of Seven Thousand Five Hundred be deducted by Napoli from Client's recovery as Client's share of such other expenses.

5. **COMPUTATION OF FEES:** The contingency fee shall be computed on the gross recovery, resulting in a net settlement (or judgment), from which all appropriate disbursements in connection with the institution and prosecution of this claim is deducted, as set forth in paragraph 2 above. Examples of how a contingency fee is computed are as follows:

Gross settlement	**$100.00**
25% Attorney's Fee	**$ 25.00**
Net settlement	**$ 75.00**
Disbursements	**-$ 10.00**
Net to Client	**$ 65.00**

6. **WITHDRAWAL:** The Law Firm expressly reserves the right to withdraw its representation at any time upon reasonable notification to the client. In the event that the client advises the Law Firm to discontinue the handling of this claim, or if the client fails to cooperate with the Law Firm in the handling of this claim, client agrees to compensate the Law Firm a reasonable amount for its services, and for the time spent on this claim on an hourly basis or under such other arrangement that may be agreed upon by the parties, not to exceed the said Five Thousand Dollars. The client understands that the Law Firm has conditionally accepted this case based upon independent confirmation of all facts and injuries claimed to have been sustained by Client. In the event that the client desires to transfer the file from this office, the client shall be responsible to compensate the Law Firm for the reasonable value of their services. Such transfer shall not include documents or attorney work product regarding the general liability of the defendants.

7. **APPEALS:** The above contingency fee does not contemplate any appeal. The Law Firm are under no duty to perfect or prosecute such appeal until a satisfactory fee arrangement is made in writing regarding costs and counsel fees.

8. **STATUTE OF LIMITATIONS:** We understand that any lawsuit must be commenced within a certain limited time period, (that may vary, depending upon the defendant) starting from the "discovery of the injury" or of "the date when through the exercise of reasonable diligence such injury should have been discovered… whichever is earlier". We further

understand that the Statute of Limitations period for any case must be investigated and that this Agreement is made subject to that investigation as well as an investigation of the entire case.

9. **FINANCING OF CASE**: If the firm borrows money from any lending institution to finance the cost of the client's case, the amounts advanced by this firm to pay the cost of prosecuting or defending a claim or action or otherwise protecting or promoting the client's interest will bear interest at the highest lawful rate allowed by applicable law. In no event will the interest be greater than the amount paid by the firm to the lending institution. In no event shall the interest charged against Client's settlement share be greater than One Thousand Dollars.

10. **RESULTS NOT GUARANTEED:** No attorney can accurately predict the outcome of any legal matter, accordingly, no representations are made, either expressly or impliedly, as to the final outcome of this matter. We further understand that we must immediately report any changes in address and telephone number to the Law Firm.

11. **APPROVAL NECESSARY FOR SETTLEMENT:** Attorneys are hereby granted a power of attorney so that they may have full authority to prepare, sign and file all legal instruments, pleadings, drafts, authorizations, and papers as shall be reasonably necessary to conclude this representation, including settlement and/or reducing to possession any and all monies or other things of value due to the Client under the claim as fully as the Client could do so in person. Attorneys are also authorized and empowered to act as Client's negotiator in any and all negotiations concerning the subject of this Agreement. Provided, that no such exercise of this authority as to settlement of the litigation and ultimate payment of the sums due Client may be exercised by Napoli without prior review and approval by OWASA General Counsel.

12. **ASSOCIATION OF OTHER ATTORNEYS:** The Law Firm may, at its own expense, use or associate other attorneys in the representation of the aforesaid claims of the Client. Client understands that Law Firm employs numerous attorneys that may work on Client's case.

13. **ASSOCIATE COUNSEL:** Not inconsistent with the applicable rules and statutes of the State of North Carolina and the North Carolina State Bar, the Law Firm may participate in the division of fees in this case and assume joint responsibility for the representation of the client either in the event that the Attorney retains associate counsel or that the client later chooses new counsel, provided that the total fee to the client does not increase as a result of the division of fees and that the attorneys involved have agreed to the division of fees and assumption of joint responsibility. The Client will be advised of such joint responsibility and full disclosure will be made to Client regarding the division of fees so that the consent of the Client can be obtained. -

14. **NORTH CAROLINA OR APPLICABLE LAW TO APPLY:** This Agreement is made and entered into under and in accordance with the laws of the State of North Carolina, and any claims or litigation pertaining hereto shall be filed and prosecuted in the appropriate division of the North Carolina Court of General Justice in Orange County, North Carolina, or in the United States Federal District Court for the Middle District of North Carolina, and the applicable law and the rights, duties and obligations of Client and of Attorneys regarding

Attorney's representation of Client and regarding anything covered by this Agreement shall be governed by the laws of the State of North Carolina.

15. **PARTIES BOUND:** This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representative, - successors and assigns. Client or the Law Firm can execute this document electronically, by indicating "I agree" (or similar language) via electronic mail after receiving the Agreement via electronic mail. By indicating "I agree" (or similar language) Client will be bound by the terms of the Agreement and is executing the document electronically via Client's electronic signature, indicated as "/s/" in the signature field and elects the Law Firm advance disbursements.

16. **LEGAL CONSTRUCTION:** In case any one or more of the provisions contained in this Agreement shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provisions thereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

17. **PRIOR AGREEMENTS SUPERSEDED:** This Agreement constitutes the sole and only Agreement of the parties hereto and supersedes any prior understandings or written or oral agreement between the parties respecting the within subject matter.

    We certify and acknowledge that we have had the opportunity to read this Agreement and have answered any questions pertaining thereto. We further state that we have voluntarily entered into this Agreement fully aware of the terms and conditions.

SIGNED AND ACCEPTED ON THIS _____day of_____, 20_____

ORANGE WATER AND SEWER AUTHORITY

By: _____

Printed Name: Todd Taylor, P.E.^

Title: Executive Director

Address: 400 Jones Ferry Road
Carrboro, NC 27510

E-Mail/Phone: ttaylor@owasa.org / 919-537-4216

NAPOLI SHKOLNIK, PLLC

By: _____

_____
Printed Name of Attorney

REVIEW AND APPROVED AS TO FORM AND LEGALITY:

By: _____
OWASA General Counsel

Resolution Authorizing Orange Water and Sewer Authority (OWASA) to Engage Counsel and Participate in PFAS Cost Recovery Litigation

Whereas, PFAS polluting compounds have been found in OWASA's water resources, and in its treatment and transmission facilities, and in its wastewater treatment system, and it is to be expected that Federal and State regulatory agencies will require detection, testing and removal to some level at some time in the future; and

Whereas, such pollution has been noted in public water systems around the country, and water utilities anticipate that the regulatory requirements bound to be applied will be expensive, and that such remedial costs ought to be recovered from the parties legally responsible for that pollution; and

Whereas, Multi-District litigation seeking such recovery has been filed by more than 500 public water supply providers across the country, and their individual claims have been consolidated for hearing in the Federal District Court in Charleston, S.C., in *In re: Aqueous Film-Forming Foam Products Liability Litigation.* The NAPOLI SHKOLNIK PLLC law firm is one of the co-Lead Counsel Firms representing many of the more than 500 Plaintiff communities in that litigation; and

Whereas, OWASA has determined to retain NAPOLI SHKOLNIK PLLC to represent it in bringing its claims in litigation to be joined with that Multi-District litigation as a party plaintiff, to obtain a share of the recovery of such costs from those responsible for the manufacture and distribution of the PFAS polluting compounds, all by way of the Retainer Agreement proposed and revised, see copy attached.

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

1. That Orange Water and Sewer Authority (OWASA) accepts the offer of NAPOLI SHKOLNIK PLLC to represent OWASA to pursue litigation on OWASA's behalf to recover such claims as may be determined to arise out of PFAS pollution of OWASA water resources and treatment facilities, such litigation to be joined with the Multi-District litigation pending in the Federal Court in Charleston, South Carolina.

2. The Executive Director and General Counsel are authorized and directed to execute the Retainer Agreement with Napoli Shkolnik PLLC to engage that firm as OWASA's Counsel, and to take such other actions as necessary to assist Napoli Shkolnik LLC to pursue these claims.

Adopted this 9th day of December 2021.

_____

Jo Leslie Eimers, Chair

ATTEST:

_____

John N. Morris, Secretary

Agenda Item 3:

Orange Water and Sewer Authority

Virtual Meeting of the Board of Directors

October 28, 2021

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, October 14, 2021, at 6:00 p.m. utilizing Microsoft Teams software.

Board Members attending virtually: Jody Eimers (Chair), Yinka Ayankoya (Vice Chair), John N. Morris (Secretary), Todd BenDor, Bruce Boehm, Raymond (Ray) DuBose, and Kevin Leibel.

OWASA staff attending virtually: Mary Darr, Robert Epting, Esq. (Epting and Hackney), Vishnu Gangadharan, Stephanie Glasgow, Katie Harwell, Robin Jacobs (Epting and Hackney), Steve Naylor, Andrea Orbich, Dan Przybyl, Ruth Rouse, Allison Spinelli, Todd Taylor, Stephen Winters, and Richard Wyatt.

Others attending virtually: Monica Dodson and Meg Holton (UNC Water Resources Manager).

Motions

1. Todd BenDor made a Motion to approve the Minutes of the September 23, 2021, Annual Meeting of the Board of Directors; second by Ray DuBose and the Motion was unanimously approved.

2. Todd BenDor made a Motion to approve the Minutes of the October 14, 2021, Closed Session of the Board of Directors for the Purpose of Discussing Potential Environmental Claims in Accordance with N.C. General Statutes 143-318.11; second by Ray DuBose and the Motion was unanimously approved.

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Announcements

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

Ms. Eimers 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.

Ms. Eimers announced that on October 21, 2021, Mary Tiger and she attended the Orange County Climate Council meeting. Items of note discussed in that meeting included: work is underway to provide a more defined purpose for this group; Orange County was awarded a technical assistance grant to pursue LEED certification for cities and communities; the Town of

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Carrboro appointed a Climate Action Team; and updates were provided from the Community Engagement and Relations and Partnership Committees. Ms. Eimers said the next meeting will be November 18, 2021, and OWASA delegates will be absent due to the scheduling of the OWASA Board's first strategic planning work session.

Stephanie Glasgow, Director of Human Resources and Safety, introduced OWASA's new Safety Manager, Steve Naylor.

Kevin Leibel asked if there was additional information on why the Carrboro Town Council did not make an appointment to the OWASA Board of Directors. Todd Taylor said the Carrboro Town Council would like more diversity in the candidate pool before making an appointment to the OWASA Board.

Item One: 12 Month Board Meeting Schedule

The Board accepted this as an information item.

Item Two: Minutes

Todd BenDor made a Motion to approve the Minutes of the September 23, 2021, Annual Meeting of the Board of Directors; second by Ray DuBose and the Motion was unanimously approved. Please see Motion 1.

Item Three: Minutes

Todd BenDor made a Motion to approve the Minutes of the October 14, 2021, Closed Session of the Board of Directors for the Purpose of Discussing Potential Environmental Claims in Accordance with N.C. General Statutes 143-318.11; second by Ray DuBose and the Motion was unanimously approved. Please see Motion 2.

Item Four: Discuss American Recovery Plan Act, Low-Income Household Water Assistance Program and Plan for Resuming Standard Collection Practices

Stephen Winters, Director of Finance and Customer Service, provided the Board an overview of the American Rescue Plan Act and the Low-Income Household Water Assistance Program and how funds may be provided to help OWASA with infrastructure projects and to assist customers who are behind on water and sewer bills.

Item Five: Discuss Process for Selecting an Independent Auditing Firm for the Fiscal Year 2022 Financial Audit

The Board approved staff's proposed process to solicit proposals and to hire an independent auditor for Fiscal Year 2022. Bruce Boehm volunteered to be on the interview panel to hire the auditor.

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Item Six: Annual Review and Update of Strategic Trends and Utility Planning Issues for Fiscal Year 2021

Ruth Rouse, Planning and Develop Manager, provided a presentation of the Annual Review and Update of Strategic Trends and Utility Planning Issues for Fiscal Year 2021.

The Board expressed appreciation for the report, provided feedback, and requested the following information be incorporated into future reports: (1) make suggested revisions to the water main replacement decision support model graph, and (2) provide a graph on wastewater treatment daily max flow. The Board requested staff consider how to evaluate reliability and risk for the Reclaimed Water System; provide information on the estimated yield of our local water supply reservoirs; provide information on the potential to submeter master-metered multifamily residential buildings; and consider how to evaluate trends in the labor market, cyber security.

Item Seven: Financial Report for the Three-Month Period Ended September 30, 2021, and an Explanation of Pension and Other Post-Employment Benefit Liabilities

The Board received this as an information item; all of OWASA's financial management policy targets were met for the period.

Item Eight: Summary of Work Session Items

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

- Incorporate Board feedback into next year's Strategic Trends Report:
    - Make revisions to the water main replacement decision support model graph and to the graph on wastewater treatment daily max flow.
    - Consider how to evaluate reliability and risk for the Reclaimed Water System.
    - Evaluate trends in the labor market, cyber security.
    - Provide information on the estimated yield of our local reservoirs.
- Provide information on potential unit submetering for Multi Family Master Meters.
- Agenda items for November 11, 2021 virtual meeting include:
    - Award Fermenter Construction Project
    - Development of a New Budget Format
    - New approach for distributing Care to Share Funds
    - Review and Discuss Draft Water Conservation Plan
    - Closed Session on potential PFAS Cost Recovery litigation
- Draft Agenda items on December 9, 2021:
    - moved from Nov. 11 Long-Range Water Supply Plan on the Draft Alternatives Analysis for Jordan Lake Options and Communication Engagement Plan
    - Information Session on Medical Insurance Renewals
    - Award East Main Street Sewer Construction Project
    - Closed Session to prepare for the Executive Director's interim review
- The Board will hold a virtual Strategic Plan Work Session on November 18th and December 16th.

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Item Nine: 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 adjourned at 8:33 p.m.

Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

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Agenda Item 4:

Orange Water and Sewer Authority

Virtual Work Session of the Board of Directors

November 11, 2021

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, November 11, 2021, at 6:00 p.m. utilizing Microsoft Teams software.

Board Members attending virtually: Jody Eimers (Chair), Yinka Ayankoya (Vice Chair), John N. Morris (Secretary), Bruce Boehm, Raymond (Ray) DuBose, and Todd BenDor. Board Member absent: Todd BenDor.

OWASA staff attending virtually: Amy Armbruster, Brad Barber, Denise Battle, Mary Darr, Robert Epting, Esq. (Epting and Hackney), Vishnu Gangadharan, Stephanie Glasgow, Andrea Orbich, Dan Przybyl, Ruth Rouse, Allison Spinelli, Todd Taylor, Mary Tiger, Stephen Winters, and Richard Wyatt.

Others attending virtually: Monica Dodson, Margaret Holton (UNC Water Resources Manager), and Kelly Satterfield.

Motions

1. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Awarding a Construction Contact for the Mason Farm Wastewater Treatment Plan Fermenter Mixing Improvements Project. (Motion by Kevin Leibel, second by Bruce Boehm and the motion unanimously approved.)

2. Kevin Leibel made a Motion to approve the Minutes of the October 14, 2021, Work Session of the Board of Directors; second by Bruce Boehm, and the Motion was unanimously approved.

3. Kevin Leibel made a Motion to approve the Minutes of the October 28, 2021, Closed Session of the Board of Directors for the Purpose of Discussing Confidential Information Regarding Security Infrastructure In-Place to Protect OWASA Customers, Personnel and Assets; second by Bruce Boehm, and the Motion was unanimously approved.

* * * * * * *

Announcements

Chair Jody Eimers announced that due to COVID-19 public health concerns, the OWASA Board of Directors held this meeting virtually utilizing Microsoft Teams software. Ms. Eimers stated that Board Members, General Counsel, and staff participated in the meeting remotely by virtual means.

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Ms. Eimers 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.

Yinka Ayankoya said on November 2, 2021, OWASA Board Members, staff, forest consultant, and two members of the public attended a forest management program tour of the Cane Creek Mitigation Tract. The tour consisted of a brief history of the Mitigation Tract, reasons why the tract is managed, and a tour of the most recent forest management activities.

Mary Tiger, Strategic Initiatives Manager, said on November 18, 2021, the Board will hold its first Strategic Plan Work Session virtually utilizing Zoom at 3:00 p.m. and requested Board Members provide any questions or comments in advance to help prepare for the session.

Mary Darr, General Manager of Operations, announced OWASA's Mason Farm Wastewater Treatment Plant is the recipient of the AWWA's 2021 Partnership for Clean Water Directors Award.

Stephanie Glasgow, Director of Human Resources and Safety, acknowledged Veterans Day and OWASA's veterans.

Item One: Award a Construction Contract for the Mason Farm Wastewater Treatment Plant Fermenter Mixing Improvements Project

Kevin Leibel made a Motion to adopt the Resolution Awarding a Construction Contact for the Mason Farm Wastewater Treatment Plan Fermenter Mixing Improvements Project; second by Bruce Boehm, and the Motion unanimously approved. Please see Motion 1.

Item Two: Minutes

Kevin Leibel made a Motion to approve the Minutes of the October 14, 2021, Work Session of the Board of Directors; second by Bruce Boehm, and the Motion was unanimously approved. Please see Motion 2.

Item Three: Minutes

Kevin Leibel made a Motion to approve the Minutes of the October 28, 2021, Closed Session of the Board of Directors for the Purpose of Discussing Confidential Information Regarding Security Infrastructure In-Place to Protect OWASA Customers, Personnel and Assets; second by Bruce Boehm, and the Motion was unanimously approved. Please see Motion 3.

Item Four: Review and Discuss Draft Water Conservation Plan

Amy Armbruster (Sustainability and Outreach Coordinator) and Mary Tiger (Strategic Initiatives Manager) provided the Board a presentation on the draft Water Conservation Plan.

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The Board and staff discussed: OWASA's current water conservation efforts; how OWASA's Agua Vista program educates and informs customers on their water use; and what criteria should be used in identifying and evaluating additional conservation opportunities, if any. Staff will incorporate feedback received and present draft guiding principles to guide the completion of the Water Conservation Plan to the Board for approval at a future meeting. The approved Plan will serve as an appendix to the Long-Range Water Supply Plan.

Item Five: Discuss the Development of a New Budget Format

Stephen Winters, Director of Finance and Customer Service, provided an update on the status of developing a new budget format to improve understanding and decision-making. Mr. Winters proposed delaying further development of a new budget format until after several high priority projects are complete.

The Board agreed with staff's recommendation. Staff will incorporate the Board feedback into the next iteration, provide a proposed schedule for developing a new budget format, and research opportunities for potential consultant assistance.

Item Six: Discuss a Temporary Approach for Distributing Care to Share Funds

Denise Battle, Customer Service Manager, provided a verbal update on a temporary approach for OWASA to distribute funds from Care to Share to customers who are delinquent in paying their water and sewer bills.

The Board agreed with this temporary approach. Bruce Boehm expressed concern about OWASA staff making an assessment as to whether a customer is eligible to receive Care to Share funds. Robert Epting, OWASA General Counsel, explained that the temporary approach, to involve specific qualifying conditions applicable to all customers equally, is within OWASA's authority and would be an acceptable alternative under the present exigent circumstances, and given the Legislature's recent discussions indicating that local entities already have apparent authority to accept and expend grant funds to provide relief for customers struggling to keep current on their water and sewer utility bills. Mr. Epting reminded the Board that water and sewer authorities are not authorized by law to expend revenues received from customers to provide such relief.

Item Seven: Review Board Work Schedule

The Board agreed to add an agenda item to a future meeting regarding various factors to encourage the public to apply to the OWASA Board of Directors.

Item Eight: Summary of Work Session Items

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

- Incorporate Board feedback into the draft Water Conservation Plan Guiding Principles.

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- Provide a draft schedule for new budget format development for the Board's review, and research opportunities for consultant assistance with new budget format.
- Add agenda item to a future Board meeting regarding various factors to encourage applications to the OWASA Board.

Item Nine: Closed Session

Without objection, the Board of Directors convened in a Closed Session for the purpose of discussing potential environmental claims in accordance with N.C. General Statutes 143.318.11(a)(3).

Following the Closed Session, the Board reconvened in open session, reported no action was taken in the closed session, and the meeting adjourned at 8:04 p.m.

Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachment

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Agenda Item 5:

Orange Water and Sewer Authority

Closed Session of the Board of Directors

November 11, 2021

The Board of Directors of Orange Water and Sewer Authority met virtually in Closed Session on Thursday, November 11, 2021, following the Board meeting.

Board Members attending virtually: Jody Eimers (Chair), Yinka Ayankoya (Vice Chair), John Morris (Secretary), Bruce Boehm, Raymond (Ray) DuBose, and Kevin Liebel. Board Member absent: Todd BenDor.

Staff attending virtually: Mary Darr, Robert Epting, Vishnu Gangadharan, Todd Taylor and Stephen Winters.

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Item One

The Board of Directors met in Closed Session with General Counsel and Staff to discuss potential environmental claims in accordance with N.C. General Statutes 143.318.11(a)(3).

No official action was taken at the meeting.

The meeting was adjourned at 8:04 p.m.

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Robert Epting, Esquire
OWASA General Counsel

DRAFT

Agenda Item 6:

Information on the Process and Timeline for Renewing Employee Medical Insurance Coverage

Purpose:

To provide information to the Board regarding the process and timeline for contracting our employee Medical Insurance Plan.

Background:

The Orange Water and Sewer Authority began using Gallagher in April 2014 to manage benefit plans and negotiate premiums for Employee Medical, Dental, Life, Dependent Life, Accidental Death and Dismemberment and Long-Term Disability Insurance.

Since July 2008, OWASA has contracted with Blue Cross and Blue Shield of North Carolina for employee medical insurance coverage. At the work session on April 8, 2021, the Board requested a future discussion regarding the process and timeline for soliciting bids from insurance carriers for OWASA's medical insurance needs.

The current Employee Medical and Dental Insurance plan contracts expire on June 30, 2022 with the Life, Dependent Life, Accidental Death and Dismemberment and Long-Term Disability contracts expiring on June 30, 2023.

Information:

Ellen Tucker will be presenting the following information on December 9, 2021:

- Fully Insured Medical Plan Features
- Renewal Underwriting Analysis
- Premium and Net Incurred Claims History
- Large Claimant History
- Medical Renewal History

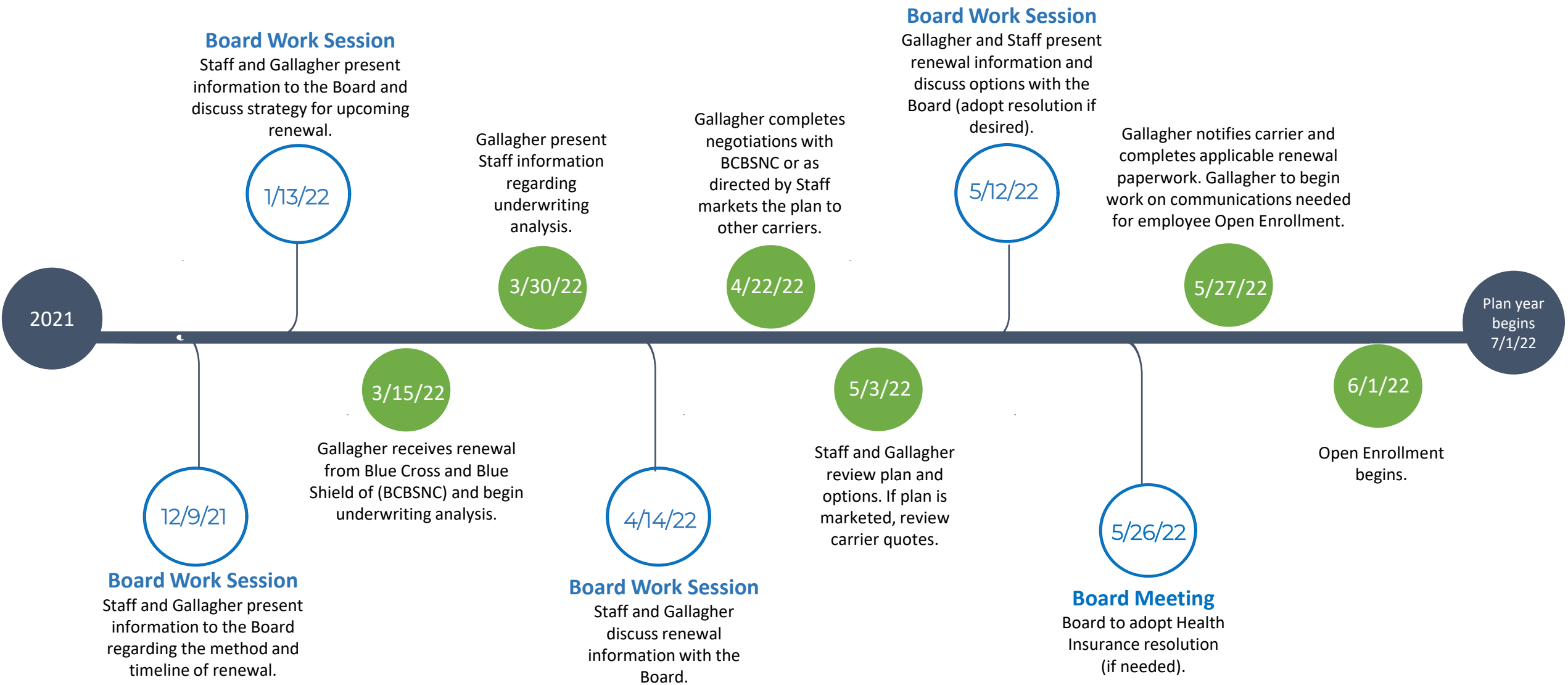
A timeline for the upcoming renewal process is attached and will be available for discussion on December 9, 2021.

Action Requested

Discussion and questions by the Board of Directors.

Health Insurance Renewal for FY 2023

December 1, 2021 – June 30, 2022



Agenda Item 7:

Revision of the Employee Attendance Award Program

Background:

The Employee Attendance Award Program provides employees a monetary award of eight (8) hours of pay for not using any Sick Leave during a calendar year.

Information:

Staff has identified several aspects of the Employee Attendance Award Program that are inconsistent with organization goals:

- The award is non-inclusive to those with disabilities, those with on-going health concerns or those with caregiver responsibilities who may utilize sick leave more often than others.
- The award encourages employees to come to work while physically or mentally ill which can impact their performance.
- The award provides an incentive for employees to come to work when they are possibly contagious which can be detrimental to the health and performance of their coworkers.

Staff Recommendation:

Discontinue the Employee Attendance Award Program effective January 1, 2022. This will allow employees who, operating under existing policy, did not use Sick Leave in 2021 to receive the award for this past year's attendance.

If the Board approves this change, staff will modify the Human Resource Policy as necessary.

Action Needed:

Discuss and provide feedback.

Information:

- Draft Resolution Revising the Employee Attendance Award Program and modifying the Human Resources Policy

RESOLUTION REVISING THE EMPLOYEE ATTENDANCE AWARD PROGRAM

Whereas, Orange Water and Sewer Authority (OWASA) has an Employee Attendance Award Program, providing employees a monetary award of eight (8) hours of regular pay for not using Sick Leave during a calendar year; and

Whereas this program does not promote inclusiveness and does not promote a safe and healthy work environment where all employees can perform at their best; and

Whereas, the elimination of the Employee Attendance Award Program requires an amendment to the Human Resources Policy, by Board action:

Now, Therefore, Be It Resolved:

1. That the Board of Directors of the Orange Water and Sewer Authority amends the Human Resources Policy, Section 13. N. Attendance Award Program, is hereby removed as provided below effective January 1, 2022:

~~*N. Attendance Award Program*~~

~~OWASA recognizes excellent employee attendance by providing a monetary award of eight hours of regular pay for employees who do not use any Sick Leave during the course of the calendar year.~~

Adopted this 9th day of December 2021.

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Jo Leslie Eimers, Chair

ATTEST:

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John N. Morris, Secretary

DRAFT

Agenda Item 8:

Modification to Employee Personal Leave

Purpose:

Consider two policy changes related to Personal Leave:

- Provide sixteen (16) hours of Personal Leave annually to employees who do not telework.
- Modify the way Personal Leave may be used.

Background:

Regular, full-time employees currently receive eight (8) hours of Personal Leave each calendar year. The eight hours of Personal Leave must be taken at once (all in one eight-hour day) and does not carry over to the following year.

Information

Additional Personal Leave

Telework is a tool to increase productivity, attract and retain highly qualified individuals, lessen the environmental impact of travel as well as aid in business continuity. It has shown to benefit employees whose positions can accommodate such an arrangement. Telework can provide flexibility, decrease commute time which increases free time, and save on fuel and maintenance on vehicles.

OWASA implemented a telework option earlier this year, however, many positions in our organization are not conducive to telework arrangements and the employees who are not eligible are excluded from the related advantages. To address this situation, staff requests the Board consider adding sixteen (16) hours of Personal Leave annually to full-time employees who do not telework.

Modify the way Personal Leave may be used

Current policy states that Personal Leave shall be taken all in one eight (8) hour day. Employees have asked to change the policy to allow Personal Leave to be used just as Annual and Sick Leave may be used. For Annual and Sick Leave, minimum use is one hour with additional time eligible to be used in increments of 30 minutes.

Staff Recommendation

Staff recommends granting sixteen (16) hours of Personal Leave each year to full-time employees who do not telework and allowing Personal Leave to be taken in increments of

one hour initially and thereafter in increments of 30 minutes. If approved, these changes would take place effective January 1, 2022.

Should the Board approve these modifications, staff will modify the Human Resource Policy as necessary.

Action:

Discuss and provide feedback.

Information:

- Draft Resolution Modifying Employee Personal Leave and Modifying the Human Resource Policy

RESOLUTION TO MODIFY EMPLOYEE PERSONAL LEAVE

Whereas, Orange Water and Sewer Authority (OWASA) provides regular, full-time employees eight hours of Personal Leave each calendar year; and

Whereas, Personal Leave must be taken all in one eight (8) hour day and does not carry over to the following year; and

Whereas, telework is a tool to increase productivity, attract and retain highly qualified individuals, lessen the environmental impact of travel as well as aid in business continuity. It has shown to benefit employees whose positions can accommodate such an arrangement. Telework can provide flexibility, decrease commute time which increases free time, and save on fuel and maintenance on vehicles; and

Whereas, OWASA implemented a telework option earlier this year, however, many positions in our organization are not conducive to telework arrangements and the employees who are not eligible are excluded from the related advantages. To address this situation, staff requests the Board consider adding sixteen (16) hours of Personal Leave annually to full-time employees who do not telework.

Whereas, Personal Leave is to be taken in one eight (8) hour day. To provide more flexibility to employees, changing this requirement to mimic Annual and Sick leave and allow it to be used in increments of one hour initially and thereafter in increments of 30 minutes; and

Now, Therefore, Be It Resolved:

1. That the Board of Directors of the Orange Water and Sewer Authority amends the Human Resources Policy, Section 14. K Personal Leave, is hereby modified as provided below effective January 1, 2022:

K. Personal Leave

Personal Leave is eight (8) hours of leave available to all permanent, full-time employees in each calendar year. An additional sixteen (16) hours of Personal Leave will be granted to full-time employees that do not have an approved telework application on file with Human Resources each January 1st. This benefit will not be added mid-year and will not be awarded to those that previously teleworked but are no longer eligible due to performance or disciplinary actions.

Personal Leave may be taken in increments of one hour and thereafter in increments of 30 minutes. This time does not carry over so employees must use it within each calendar year. While it is highly desirable that this Leave be pre-approved, it may be used for emergencies. The Personal Leave may not be donated as Compassionate Leave and may not be rolled into the employee's 457 Tax Deferred Compensation Plan account.

DRAFT

Adopted this 9th day of December 2021.

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Jo Leslie Eimers, Chair

ATTEST:

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John N. Morris, Secretary

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Agenda Item 9:

Long-Range Water Supply Plan (LRWSP): Evaluation of Alternatives to Provide Access to OWASA's Allocation of Water in Jordan Lake

Purpose:

To receive feedback from the Board of Directors on a preferred alternative to access drinking water from Jordan Lake. We plan to evaluate this preferred Jordan Lake alternative against other viable water supply alternatives in January 2022.

Summary:

OWASA evaluated six alternatives to access its Jordan Lake allocation against guiding principles established by the Board of Directors at its July 8, 2021 meeting. Three alternatives involve being a partner in the proposed intake, treatment plant and conveyance facilities on the western side of Jordan Lake and three alternatives are agreement options with the other western intake partners (WIP) that provide some level of guaranteed access to our allocation of water. Staff recommend that we eliminate the three partner alternatives from further consideration for the Long-Range Water Supply Plan for the following reasons:

- Based on current information, OWASA will likely not need to access our Jordan Lake water supply on a regular basis to meet customer demand for several decades. At this time, our Jordan Lake water supply is needed as an insurance policy for extended droughts and operational emergencies.
- All three alternatives have higher capital and net present costs, and financing would begin in FY 2023 for OWASA's share of planning, permitting, and design.
- The expense of these alternatives would either increase the rates for our current customers or defer other capital investments which may be higher priorities. This may leave us vulnerable in other areas of our operations.

The three agreement alternatives are the following:

- **Option contract** in which OWASA would purchase the option to buy water from the WIP facility during drought or other emergency conditions without formally buying any physical capacity in the WIP facility or related transmission capacity.
- **Long-term option to join the WIP as a partner in Phase 2** (projected to begin around 2050), when the capacity of the treatment plant is expected to be expanded, but which does not involve OWASA in Phase 1 for the WTP. The cost of this option could be linked to the cost of the raw water intake and transmission mains in Phase 1 which will be sized for Phase 2 capacity from the outset of Phase 1.
- **Hybrid Option** which is a combination of the option contract and the long-term option to join the WIP in Phase 2. In this alternative, we would invest in a long-term option to join

the WIP as a partner in Phase 2 with payments serving as the option fee that would also give OWASA the right to request water transfers from the WIP during Phase 1 under specified conditions such as drought or operational emergency.

Staff recommends that OWASA move forward with evaluating the hybrid option against the other viable non-Jordan Lake supply alternatives because this alternative accomplishes the following:

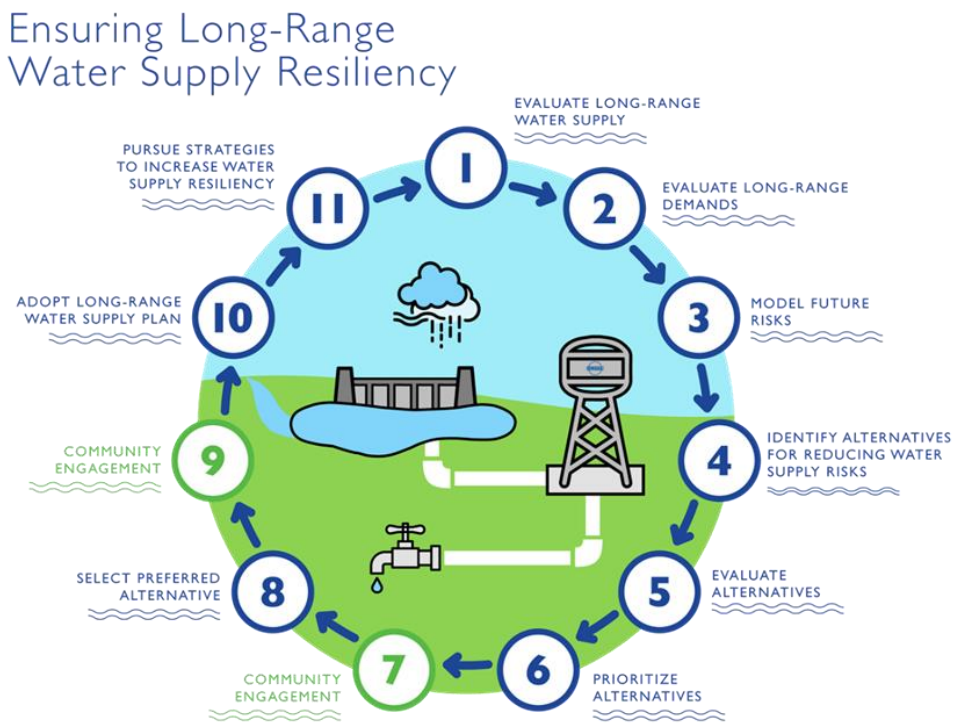
- Guarantees access to our Jordan Lake allocation in the short-term by securing conditional access through option payments until we assess the opportunity to join the WIP in Phase 2.
- Guarantees access to our Jordan Lake allocation in the long-term by providing an opportunity to join the WIP in Phase 2. Since OWASA will not own capacity in the WIP facilities in Phase 1, staff and our consultants believe the option fee should be less than the capital cost of the infrastructure.
- Involves a modest investment (estimated net present cost through 2050 is $2.6 million) that would begin in 2031.
- Provides us some flexibility to change course as we learn more.
- Aligns with OWASA's precedent of planning fifty years ahead for water supply needs in recognition of the fact that developing new supplies is difficult, costly and takes decades to plan and permit.

Staff further recommends that we also carry the mutual aid agreement forward to evaluate with other supply alternatives. This status quo alternative could be paired with another supply alternative to cover short-term emergency needs. Staff also notes that it plans to continue with mutual aid agreements regardless of which supply alternative is selected to implement when the LRWSP is completed.

Background:

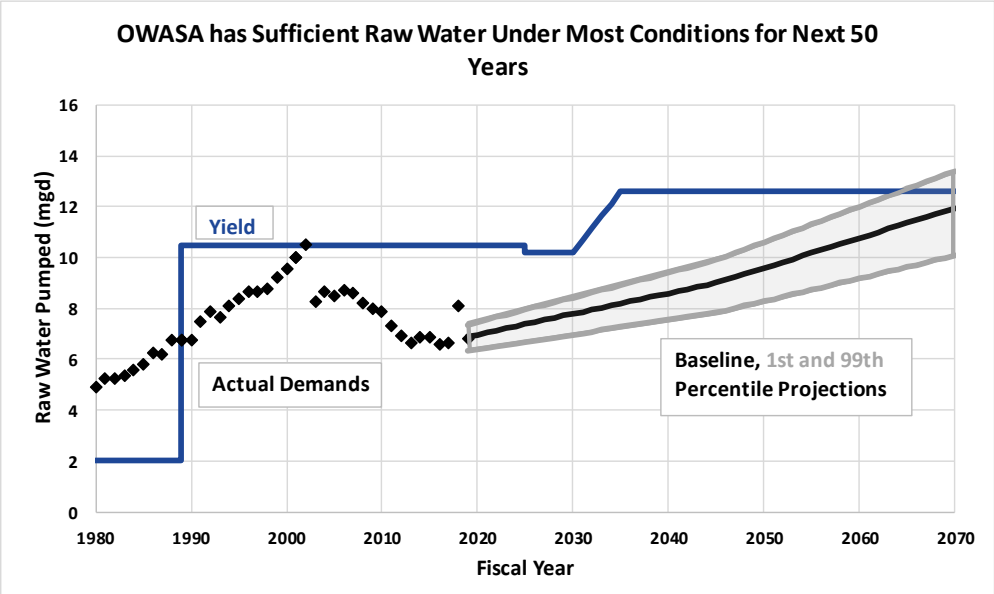
OWASA is updating our LRWSP to ensure that we have an adequate supply of water for our community through 2070. OWASA has updated our projections of water supply needs, estimated the yield of our planned supplies, evaluated demand management and supply alternatives to meet our long-term needs, and completed an initial round of community engagement. Figure 1 illustrates the LRWSP process; we are currently in the early stages of Step 8: Select Preferred Alternative.

Figure 1: Long-Range Water Supply Planning Process



At its March 14, 2019 meeting, the Board of Directors reviewed and approved a set of long-range (through 2070) water demand projections for the update of the LRWSP that account for the uncertainty in those projections (Figure 2).

Figure 2: Water Demand Projections and Estimated Yield

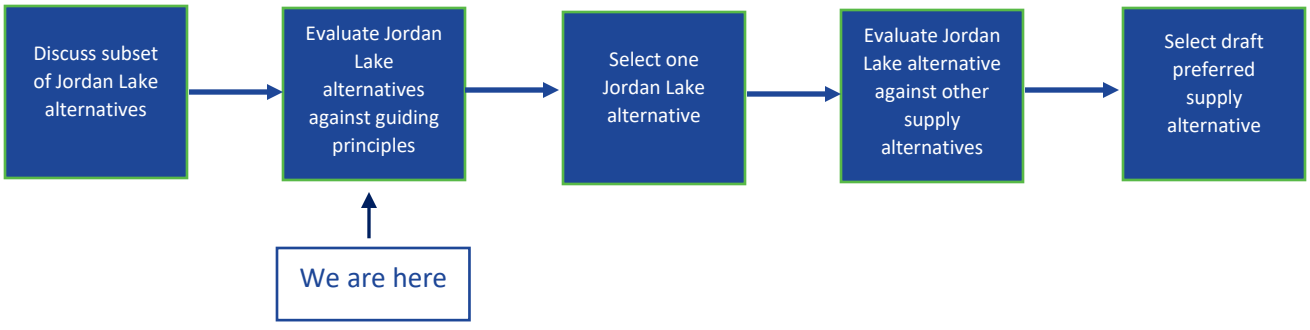


As illustrated in Figure 2, OWASA has sufficient water under most circumstances for the next several decades. However, it should be noted that a new drought of record would shift the yield line shown in blue in Figure 2 down. While climate change models indicate that our region will receive higher levels of precipitation on average, it will come in the form of more frequent, high intensity storms and may have more frequent periods of drought or higher intensity drought. In addition, Cane Creek Reservoir has a small drainage area for a relatively high amount of storage. While this large amount of storage is generally advantageous, the small drainage area leaves us vulnerable during a drought (this small drainage area results in longer refill times once the reservoir is drawn down). Thus, OWASA needs to identify cost-effective ways to improve the reliability and resilience of its raw water supply.

At its August 13, 2020 meeting, the Board of Directors discussed various supply and demand management alternatives. A group of alternatives that provide reliable access to OWASA's existing allocation of water in Jordan Lake appear to be the most viable candidates to meet future needs following the addition of the Shallow Quarry Reservoir to our water supply portfolio in 2035 (responsible for the increase in yield shown in the 2030s on Figure 2). The Board agreed with staff's recommendation to further evaluate this group of Jordan Lake alternatives and to move forward with the initial community engagement phase of the LRWSP. After reviewing feedback from the community, the Board requested that guiding principles be developed to steer and frame the evaluation of the suite of alternatives. At its July 8, 2021 meeting, the Board approved a set of guiding principles (Attachment 5) to evaluate alternatives.

The purpose of the next step is to select one Jordan Lake alternative to evaluate against other viable water supply alternatives. Figure 3 illustrates the process to complete step 8, select preferred alternative, as shown in Figure 1.

Figure 3: Process to Complete Step 8, Select Preferred Alternative, of LRWSP Process



Background on the Western Intake Partnership:

The City of Durham, Town of Pittsboro, Chatham County and OWASA (Western Intake Partners or WIP) have been working together since 2014 to evaluate options to develop a new intake and treatment facilities on the western side of Jordan Lake. The City of Durham funded initial studies which identified that it was most cost-effective to build one intake and treatment

facility to serve all four Partners. The WIP executed an Agreement which outlines cost-sharing between the Partners for planning, designing, and permitting the facilities. OWASA chose not to cost-share in these studies until our LRWSP is completed; the Agreement includes clauses for making up payments should OWASA choose to participate in the WIP.

For the purposes of the evaluations included in this agenda package, it is assumed that the treatment facilities will be constructed in two phases:

- Phase 1 – this will accommodate Partner capacity needs through approximately 2050; these facilities are projected to be online in approximately 2031.
- Phase 2 – these facilities will be online in approximately 2051 and provide capacity through approximately 2070.

Regional Context for OWASA Water Supply Planning:

Jordan Lake is an important regional water supply. There are currently 11 local governments which hold allocations of water from Jordan Lake, and the lake's water supply pool has been 91.2 percent allocated. The lake's water supply pool will likely be fully allocated in the next round of allocations (new rounds open up upon an allocation application request from a local government). During each future round of allocations, OWASA will need to apply to maintain its allocation and it will be reconsidered against other requests.

At this time, the Towns of Cary and Apex own and operate the only intake on Jordan Lake, and there are two treatment facilities: (1) one jointly owned by Cary and Apex with a design capacity of 56 mgd, and (2) one owned by Chatham County which obtains raw water from Cary/Apex and then treats it at a 3 mgd facility. Therefore, during a prolonged drought, all allocation holders will be looking to Cary and Apex to access their Jordan Lake allocations.

When the proposed Western Intake and Treatment Facility is online, the security of the entire region's water supply increases. It reduces the impact of a single point of failure that results from currently having only one intake on the lake and provides an additional treatment plant from which allocation holders can access drinking water from Jordan Lake.

With proper planning, OWASA can make the most of increased regional security and other factors which could help OWASA access its allocation of water in a cost-effective manner:

- Treatment plants typically have underutilized capacity in the early years of their lives
- OWASA has a large amount of storage (relative to current demands) in Cane Creek Reservoir which would enable us to draw water from our Jordan Lake allocation during non-peak times (i.e., winter) even as the new plant approaches its capacity. (Water treatment plants typically produce less water in winter when demands are lower and more during summer. However, even in summer there is variability in the amount treated; peak treatment typically occurs during the hottest, driest days).

Introduction to Agreement Alternatives and Other Alternatives to Access Jordan Lake:

At its October 14, 2021 meeting the Board of Directors discussed alternative agreements that may enable OWASA to cost-effectively access its Jordan Lake allocation. Since OWASA is at low risk of running out of water supply, entering into an agreement with the other Western Intake Partners in which OWASA could obtain some level of guaranteed access to our Jordan Lake allocation when needed may be a cost-effective method. The Board supported an evaluation of these agreements, but noted they could not narrow down the list of options without cost estimates. The agreement types were also presented to the WIP, and the Partners indicated that they are open to those being considered by OWASA. The alternatives for OWASA to access Jordan Lake are briefly described below (note: the alternative agreement options have been renumbered since the October 14, 2021 Board of Directors meeting):

Status Quo Alternative

1. **Continue with mutual aid agreements** to access our Jordan Lake allocation; this is the baseline scenario and is a viable alternative. OWASA intends to maintain our current mutual aid agreements regardless of which alternative is selected. In addition, this status quo alternative could be paired with another supply alternative to cover short-term emergency needs. Thus, this alternative will be brought forward to evaluate with other supply alternatives.

Partner Alternatives

2. **Partner in the western intake and WTP project** which is assumed to be at a flow of 2 mgd in the initial plant and 5 mgd in Phase 2 of the WTP; a significant initial investment will be required for the intake and transmission pipe capacity to be sized for OWASA's ultimate capacity share of 5 mgd in Phase 1 since these are more difficult and costly to expand later.
3. **Fixed capacity sharing agreement** in which OWASA would own a set portion of the WIP facility's capacity (be a partner at a low flow; assumed to be 0.5 mgd in Phase 1 of the WTP and 2 mgd in Phase 2 of the WTP) without the ability to change that portion over time.
4. **Uniform rate capacity sharing agreement** in which OWASA owns an initial share of the WIP facility's capacity based on assumptions outlined in Alternative 3. However, annual costs are allocated on the proportionate amount of water actually used by each Partner rather than the initial capacity reserved at the outset of the agreement (i.e, the capacity assigned to each Partner changes over time as the amount of water used by each Partner changes). We assumed that the agreement would include a minimum withdrawal on an annual average basis and for cost comparison, assumed the minimum would be at fifty percent of the capacity planned for each Partner (for OWASA assumed to use a minimum of 0.25 mgd in Phase 1 and 1 mgd in Phase 2 on an annual average basis).

Agreement Alternatives

5. **Option contract** in which OWASA would purchase the option to buy water transfers from the WIP facility during drought and/or other emergency conditions without formally buying any physical capacity in the WIP facility (or related transmission capacity).
6. **Long-term option to join the WIP as a partner in Phase 2** (projected to begin around 2050), when the capacity of the treatment plant is expected to be expanded, but which does not involve OWASA in Phase 1 for the WTP. The cost of this option could presumably be linked to the cost of the raw water intake and transmission mains in Phase 1 which will need to be sized for Phase 2 from the outset of Phase 1.
7. **Hybrid Option** is a combination of Alternatives 5 and 6. In this alternative, we would invest in a long-term option to join the WIP as a partner in Phase 2 with payments serving as the option fee on an option contract that would also give OWASA the right to request water transfers from the WIP during Phase 1 under specified conditions such as drought.

Note that alternatives 5 and 7 involve OWASA purchasing transfers that involve raw water from OWASA's Jordan Lake allocation that is then treated and conveyed to OWASA via WIP facilities. Each alternative is described in more detail in Attachment 2.

Assumptions for Estimating Cost of Each Jordan Lake Alternative:

Estimating the cost of the various alternatives to provide access to OWASA's Jordan Lake allocation is challenging because the cost estimates are impacted by the uncertainty in the various assumptions included in the analyses. These include assumptions regarding:

- the amount of flow each of the partners in the new intake and treatment plant facility plan to reserve and what their actual demands will be over time,
- how frequently OWASA accesses its allocation of water from Jordan Lake under the various alternatives,
- the estimated cost of the new treatment, intake, and transmission facilities, and
- the proposed agreements with the WIP.

While this information is difficult to quantify, OWASA and our engineering consultant have worked to include consistent assumptions such that comparison among the alternatives can be completed. Where appropriate, these assumptions will be carried over to other supply alternatives. Attachment 2 contains more details on the assumptions for each alternative.

The agreement alternatives (alternatives 5-7) may include two types of fees:

1. **Option fee** – this is an upfront fee that could occur one time or on an annual basis. This fee entitles OWASA to purchase transfers of treated water from the WIP under specified

conditions (e.g., our local reservoir storage reaches a certain level). The raw water itself is part of OWASA's Jordan Lake allocation.

2. **Exercise fee** – this is the purchase price from the transferred water itself and would be charged each time OWASA accesses its Jordan Lake allocation via the WIP as defined in the agreement. This fee would also apply to alternative 1, using our mutual aid agreements.

When negotiating option contracts, there is a tradeoff between the option and exercise fee. For example, if OWASA paid a higher option fee, the exercise fee should be lower and vice versa.

Methodology for Alternatives Analysis:

Staff evaluated each of the Jordan Lake alternatives against the guiding principles (Attachments 1 - 3) established by the Board of Directors in July 2021. Given the significant differences between the groups of Partner and Agreement alternatives, staff thought it would be difficult to compare seven alternatives against one another simultaneously. Thus, staff evaluated the subsets of alternatives against one another with "winners" proceeding to subsequent rounds similar to NCAA basketball tournament brackets. Thus, this section begins with a high level analysis of the partner alternatives (Alternatives 2-4) against one another and then evaluates agreement alternatives (Alternatives 5-7) against one another. In the second round, the staff's recommended partner alternative is evaluated against staff's recommended agreement alternative. Attachment 1 includes color coded results of each round.

Selecting the Best Partner Alternative

Alternatives 2, 3, and 4 all entail being a partner in the proposed western intake and treatment facilities. Table 1 summarizes the flow capacity in the WTP assumed for each alternative.

Table 1: Capacity Assumed for Each Partner Alternative in Phase 1 and Phase 2

Phase	Alternative 2 High Flow at Fixed Capacity	Alternative 3 Low Flow at Fixed Capacity	Alternative 4 Low Flow at Uniform Rate[1]
1 (approx. 2031)	2 mgd	0.5 mgd	0.5 mgd
2 (approx. 2050)	5 mgd	2 mgd	2 mgd

[1] OWASA may not actually own the specified capacity in Alternative 4, but was used to estimate costs based on an Agreement which would require us to cover the costs for at least ½ the flow shown in this table on an annual average basis.

Each of the partner alternatives have relatively equivalent ratings against the guiding principles with the exception of the impact on current and future rates. Alternative 2 has much higher capital and net present costs and would impact current and future rates more than the other two alternatives. Alternative 4 has slightly lower costs than Alternative 3.

A summary table of the evaluation of the partner alternatives against the guiding principles is provided in Attachment 1, more detailed narrative descriptions of each alternative against the guiding principles is provided in Attachment 2, and Attachment 3 includes a summary of each alternative.

Staff Recommendation: Staff recommends that Partnership Alternative 4, which involves lower flows and lower rate impacts be brought forward for evaluation against a selected agreement alternative.

Selecting the Best Purchase Agreement Alternative

Alternatives 5, 6, and 7 are types of purchase agreements which would guarantee OWASA access to its Jordan Lake allocation when the new intake and treatment plant come online in approximately 2031 or in a future phase of the facilities (assumed to be Phase 2 in approximately 2050).

Staff selects the hybrid option alternative 7 as the preferred purchase agreement alternative for the following reasons:

- It rated best for two of the three "highest" guiding principles. It provides the greatest long-term reliability of our water supply and reduces our vulnerability to drought by providing access to our Jordan Lake allocation over the next thirty years under specified conditions (drought and operational emergency).
- It provides an opportunity to join the WIP in the future when OWASA is more likely to need additional water supply on a regular basis and will have the additional customer base to help spread the costs over. At that time, it also provides us with a backup water treatment facility.
- While it has a higher cost than the options contract, the options contract will continue to go up in cost after 2070 as OWASA's demands increase.

The options contract is a viable option. There is the potential that OWASA could negotiate a clause in the agreement which would enable us to join the WIP at a future time. If this occurred, it would help address long-term water supply vulnerability.

More details are provided in Attachments 1-3.

Staff Recommendation – Staff recommends pursuing Alternative 7, the hybrid of Alternatives 5 and 6. The costs are reasonable given that we are guaranteed water when we have water supply needs during Phase 1 and will own a share of the WIP facilities in Phase 2 when our customer demand will have increased to a point to warrant additional supply.

Evaluating the Best Partner Alternative Against the Best Agreement Alternative

Based on the guiding principles, the decision comes down to whether we believe that the hybrid option reduces our vulnerability to extended drought sufficiently. While the selected partner alternative certainly achieves that, it requires a significant investment of current funds to secure water supply that we will likely not need on a regular basis for a generation, potentially

increasing rates and/or deferring other important capital investments. It should be noted that the recommended partnership alternative would require OWASA to participate in the planning, permitting, and preliminary design studies currently underway, and the associated costs would need to be included in our budget for FY 2023. The purchase agreement alternative would involve payments when the proposed WTP is online, and this would begin to impact our budget and rates in approximately FY 2031.

Staff believes that the hybrid purchase agreement reduces our vulnerability to droughts sufficiently. Further information is provided in Attachments 1-3. As shown in Figure 2, OWASA is at low risk of running out of water over the next few decades. This conclusion is further supported by the hydrologic modeling completed to support the analyses included in this agenda package. When using predicted Stage 1 mandatory water conservation measures as described in OWASA's Water Shortage Response Plan to trigger purchases, the model predicted that no water would be purchased until demands reached projected levels in the late 2050s (i.e., no historic drought would cause a Stage 1 event until the 2050s). When using a predicted advisory stage to trigger purchases (10 percent above the storage that triggers mandatory water conservation measures), the model predicted that purchases would be made in the early 2030s until the Quarry Reservoir was fully online in approximately 2035. Purchases then would resume in the late 2040s. These modeling results assume that future years will have similar hydrologic patterns to those observed during the 94-year period of record included in the model, which may or may not be accurate. However, these results further support our determination that OWASA is currently at low risk of running out of water supply. Thus, the partnership alternative results in spending money now for infrastructure that is likely not needed for several decades.

The hybrid alternative provides us guaranteed access to our Jordan Lake allocation over the next several decades when we need to use the allocation during droughts and operational emergencies. Thus, this alternative provides us another supply of water which addresses the vulnerability of Cane Creek Reservoir's small drainage area and addresses the uncertainty that climate change places on the frequency and severity of future droughts. This alternative then provides us access to regularly use our Jordan Lake allocation when the WIP facilities are expanded in approximately 2050. Our demand projections (Figure 2) illustrate that this is approximately the time when we would need to find a regular supply of water to supplement our local reservoirs.

One item not directly included in the guiding principles is OWASA's ability to influence how the proposed WTP, intake, and transmission facilities are designed. For the purchase agreement alternatives, we assumed that OWASA would not have influence over this. Having said that, staff is confident that the Partners will select treatment design elements that will treat contaminants of emerging concern and provide flexibility in future expansions and design elements. The Partners have committed to consider Envision, a decision support system that helps identify sustainable, resilient, and equitable approaches during planning, design, and construction. However, there are varying degrees of Envision certification, and the desired level by the Partners has not yet been determined. By participating as a partner, OWASA would have

some influence over sustainability measures included in the design of these facilities. In addition, OWASA would have some influence over the community engagement around the proposed facilities which will be important to keep the proposed plant on schedule.

Staff Recommendation: Staff recommends purchase agreement alternative 7 (hybrid) for comparison to the mutual aid agreement. This alternative guarantees us sufficient access to our Jordan Lake allocation during droughts and operational emergencies through 2050 and then provides secure access as a partner when we are likely to need water on a regular basis. The cost to implement the partner alternatives for infrastructure that is not needed on a regular basis for several decades is not warranted.

Next Steps:

The following steps are planned to complete the LRWSP after we select our preferred Jordan Lake alternative:

1. We will select a preferred supply alternative, which may be a Jordan Lake alternative or one of the other viable supply options (tentatively scheduled for January 2022).
2. Staff will develop a community engagement plan (CEP) that aligns with the communication and outreach required for the selected alternative and present it to the Board of Directors (tentatively scheduled for February 2022).
3. Staff will implement the CEP.
4. Staff will summarize the feedback from the community and present the final draft of LRWSP to Board for review.
5. Staff will incorporate feedback from the Board, finalize the LRWSP, and commence implementation.

Staff Recommendation and Action Needed:

Staff recommends that we move forward with evaluating the hybrid agreement Alternative 7 along with other viable supply alternatives against the guiding principles. If the Board agrees, we suggest a motion along the following lines:

Motion to authorize staff to evaluate hybrid agreement Alternative 7 which provides an option to access our Jordan Lake allocation during droughts and operational emergencies through Phase 1 of the Western Intake Partnership and guarantees OWASA's ability to join the Partnership in Phase 2 along with other viable supply alternatives against the guiding principles.

Information:

Attachment 1: Summary Tables of Each Round of Alternatives Analysis against Guiding Principles

Attachment 2: Narrative Description of Jordan Lake Alternatives Against Guiding Principles

Attachment 3: Summary Table of Jordan Lake Alternatives Against Guiding Principles

Attachment 4: Financial Summary Table of Jordan Lake Alternatives

Attachment 5: Guiding Principles for Evaluating Water Supply Alternatives to Access Jordan Lake

Attachment 1: Summary Tables of Each Round of Alternatives Analysis Against Guiding Principles

Key to Shading					
	Unacceptable and worst option for GP	May be unacceptable, and/or not worst option for GP	Acceptable with reservation or all options are relatively equivalent	Acceptable, but not best alternative	Acceptable and best option for GP

Summary of Partner Alternatives Against the Guiding Principles

		Required	Highest			High				Other	
		A Produce high quality drinking water	**B** Reduce vulnerability to extended drought	**C** Improve water supply reliability and resiliency	**D** Minimize impact on current rates	**E** Minimize impact on future rates	**F** Minimize long-term impacts on environment	**G** Minimize impacts on community	**H** Maintain flexibility to change course	**I** Support regional water supply planning	**J** Minimize short-term impacts on environment
2	Partner in New Intake and WTP on West Side	☑									
3	Partner: Fixed Capacity Sharing Agreement	☑									
4	Partner: Uniform Rate Capacity Sharing Agreement	☑									

B - Alt 2 provides guaranteed access to full Jordan Lake allocation in Phase 2

C - Alt 2 greatly overinvests in capacity, potentially leaving us vulnerable elsewhere

D - Alt 2 has higher capital cost; all alts have high cost when compared to water supply risk

E - Alt 2 has higher net present cost; all alts have high cost when compared to water supply risk

H - All alts likely have us tied into Partnership with Alt 2 leaving us with highest capacity in Phase 2 and Alt 4 with lowest capacity in Phase 2

Summary of Agreement Alternatives Against the Guiding Principles

		Required	Highest			High				Other	
		A Produce high quality drinking water	**B** Reduce vulnerability to extended drought	**C** Improve water supply reliability and resiliency	**D** Minimize impact on current rates	**E** Minimize impact on future rates	**F** Minimize long-term impacts on environment	**G** Minimize impacts on community	**H** Maintain flexibility to change course	**I** Support regional water supply planning	**J** Minimize short-term impacts on environment
5	Option Contract	☑									
6	Option payments in 2031 Payments deferred to 2047	☑									
7	Hybrid Option between Alternatives 5 and 6	☑									

B - Alt 7 reduces short and long-term vulnerability; all alts improve it over status quo

C - Alt 7 improves reliability in short and long-term; all alts improve over status quo

D - Alt 6 may not be acceptable if option payments begin in 2031 to cover most costs of Phase 2 infrastructure; options contract has lowest near-term NPC

E - Alt 5 has lowest NPC through 2070; other 2 alternatives similar

H - Payments in Alts 6 and 7 may not be recoverable; option payments in Alt 7 do guarantee short-term water access.

Summary of Selected Agreement Alternative and Partner Alternative Against Guiding Principles

		Required	Highest			High				Other	
		A Produce high quality drinking water	**B** Reduce vulnerability to extended drought	**C** Improve water supply reliability and resiliency	**D** Minimize impact on current rates	**E** Minimize impact on future rates	**F** Minimize long-term impacts on environment	**G** Minimize impacts on community	**H** Maintain flexibility to change course	**I** Support regional water supply planning	**J** Minimize short-term impacts on environment
4	Partner: Uniform Rate Capacity Sharing Agreement	☑									
7	Hybrid Option between Alternatives 5 and 6	☑									

B - Alt 4 better at meeting this GP, but Alt 7 is adequate

C - Cost of Alt 4 may divert funds from other higher priority capital projects

D - Alt 4 significantly higher capital cost and NPC, particularly short-term NPC

E - Alt 4 has slightly higher 2070 NPC, but significantly higher 2050 NPC

H - Alt 7 has no ownership in new WIP facilities until we need them so greater flexibility

Alternative 1: Continue with Mutual Aid Agreements

Under this alternative, OWASA would access its Jordan Lake allocation as it currently can through its mutual aid agreements. The Towns of Apex and Cary jointly own the only water supply intake on Jordan Lake; they would treat OWASA's Jordan Lake water at their water treatment plant (WTP) and send the water through Cary's interconnections with the City of Durham, and Durham would then send the water to OWASA through our interconnections.

OWASA has been working with the City of Durham, Town of Pittsboro and Chatham County (Western Intake Partners or WIP) to evaluate options for securing access to our Jordan Lake allocations. A new intake and treatment facility is planned on the western shore of Jordan Lake that could provide access to WIP allocations. When these WIP facilities are available in approximately 2031, OWASA could also use its mutual aid agreement to access its Jordan Lake allocation from the City of Durham, which will be a partner in the new facilities. For the purposes of developing costs for this alternative, we assumed the following:

- For comparison to other alternatives, we only included potential purchases through our mutual aid agreements from 2031 to 2070, and assumed that all water from Jordan Lake would come from the new western intake.
- We used OWASA's water supply model to evaluate risk through 2070 and assumed we would use our mutual aid agreements to access our allocation of water when we hit a Stage 1 water shortage as described in our Water Shortage Response Plan.
- When we purchase water, we purchase at a rate of 4 mgd, but also maintain 4 mgd through our Jones Ferry Road WTP (i.e. we would purchase a lower amount to maintain 4 mgd at our WTP).
- We would purchase water at the price outlined in our mutual aid agreement which was escalated based on estimates of the impact of the WTP on Durham's water rates, updated cost information for the western intake facilities, and inflation.

It should be noted that regardless of which alternative is ultimately selected by the Board of Directors, OWASA will continue to keep its mutual aid agreements with neighboring utilities. These provide additional resilience to our own raw water and drinking water at no capital cost.

How does this alternative reduce our vulnerability to extended drought conditions? (Guiding Principle (GP) B)

This alternative maintains the status quo and does not reduce our vulnerability to extended drought conditions. It does not address the vulnerability of Cane Creek Reservoir's small drainage area, which may result in a long refill time following drought.

How does this alternative improve the reliability and resiliency of our water supply including reducing vulnerability to a single point of failure? (GP C)

This alternative maintains the status quo and does not improve the reliability and resiliency of our water supply. It does not diversify OWASA's water supply portfolio and has the highest risk of OWASA's allocation of water being reduced or rescinded in future rounds.

What are the incremental environmental impacts of this alternative? (GPs F and J)

No new infrastructure is needed for this alternative, therefore, the only expected environmental impact is the incremental increase in energy use (and associated carbon footprint) associated with pumping water from the proposed water treatment plant to OWASA, which would partially be offset by reductions in pumping and production from our own system.

What are the incremental social impacts of this alternative? (GP G)

Since there is no construction needed, there are no impacts to private property, traffic, noise, or recreation areas. This alternative does not increase the diversity, reliability or resiliency of our raw water supplies as this is our existing condition, and it does not guarantee access to our Jordan Lake allocation. Therefore, it has the potential for our customers to face more frequent mandatory restrictions and the associated impact on affordability related to surcharges during extended drought.

What flexibility to change course as we learn more about future customer demands, growth, climate impacts, and other uncertainties does this alternative provide? (GP H)

Since this alternative does not require any capital investment, OWASA can easily switch to another alternative providing one exists. However, it should be noted that selecting this alternative could limit options to access our Jordan Lake allocation in the future and has the highest probability of having our allocation reduced or rescinded in future allocation rounds.

How does this alternative provide support for regional water supply planning efforts? (GP I)

While OWASA would not financially support the proposed intake, treatment, and transmission facilities, it would continue to support the project. This new intake and treatment facility improves the reliability and resiliency of the water supply of the Triangle Region by providing more than one way for utilities to access their Jordan Lake allocations. OWASA would sell the land for the proposed treatment facility as it purchased the property it owns in Chatham County for the purpose of a new intake and treatment facility on Jordan Lake.

What is the cost to implement this alternative?

There are no capital costs associated with this alternative. Operating and maintenance costs include: (a) the costs to operate and maintain our water system interconnections, and (b) the charges we must pay to Western Intake Partners to withdraw, treat, and pump our Jordan Lake water. The assumptions outlined above were used to estimate the costs to purchase water as summarized in the table below.

2021 Capital Cost Estimate	$0
Net Present Cost of Alternative through 2070	$1.7 million
Net Present Levelized Cost of Project ($/1,000 gallons of demand actually met over planning horizon	$5.45 /1,000 gallons actually supplied
Net Present Cost of Alternative through 2050	$212,000[1]

1 – estimated cost to maintain 5% Jordan Lake allocation through 2050 with no purchases from WIP or Cary/Apex

What impact do these costs have on current rates? (GP C)

These costs may impact current rates if we need to exercise the mutual aid agreement. We pay retail rates for water under our agreements and depending on the amount of water we needed to purchase, this could impact a given year's budget.

What impact do these costs have on future rates? (GP D)

These costs potentially impact future rates when we use our mutual aid agreements to access our Jordan Lake allocation as demonstrated by the net present cost. In addition, selecting our mutual aid agreements could increase the cost for future customers to access additional water supply. While the costs are based on average purchases over time, the hydrologic model indicates that OWASA could spend as much as $7.2 million in a single year if it purchased water under Stage 1 conditions which would impact that year's budget. If the Board selects this alternative, a plan should be implemented to cover this potential budget impact.

This alternative has the highest risk of OWASA's allocation of water from Jordan Lake being rescinded or reduced; if the allocation were rescinded, other supplies would likely be costly to develop.

Alternative 2: Jordan Lake – Partner in New Intake and WTP on Western Side of Jordan Lake

Under this alternative, OWASA would access its Jordan Lake allocation by partnering with the City of Durham, Town of Pittsboro, and Chatham County on a new water supply intake, water treatment plant, and major transmission mains on the western side of Jordan Lake. Hazen and Sawyer (Hazen) completed a study entitled "Jordan Lake Partnership Western Intake Feasibility Study" in 2014 that serves as the basis for this alternative. Hazen updated costs included in the 2014 study for the alternatives presented to the Board of Directors on August 13, 2020. Since that cost analysis was completed, HDR, the program manager for the Western Intake Partners, developed updated costs. Hazen used those updated costs and modified them to be comparable to the analyses completed for the other supply alternatives. In addition, Hazen used their best estimate of flows for the other partners and assumes that the plant will be expanded in approximately 2050 as summarized in the table below:

Assumed Peak Demands for each Partner

Partner	Phase 1 (2031) Peak Flow (mgd)	Phase 2 (2050) Peak Flow (mgd)
OWASA	2	5
Durham	16.5	21
Pittsboro	6	14
Chatham County	3	5
Total Plant Capacity	27.5	45

How does this alternative reduce our vulnerability to extended drought conditions? (GP B)

This alternative provides us guaranteed access to our Jordan Lake allocation whenever we need it. By regularly using our allocation and by having invested in it, this alternative has the lowest risk of having our allocation of water from Jordan Lake being reduced or rescinded in future allocation rounds.

This alternative diversifies our water supply portfolio, which addresses the vulnerability of Cane Creek Reservoir's small watershed area which will require greater time to recover from being drawn down during drought.

How does this alternative improve the reliability and resiliency of our water supply including reducing vulnerability to a single point of failure? (GP C)

This alternative provides guaranteed access to our allocation of water in Jordan Lake which improves the reliability and resiliency of our water supply. This alternative also results in OWASA having ownership in a second water treatment plant.

This alternative has us overbuilding infrastructure that we likely will not need for several decades. This could result in impacts to our capital improvements program in which other

important projects are delayed leaving us vulnerable elsewhere. For example, we could delay important rehabilitation and replacement projects which may result in more water line breaks.

What are the incremental environmental impacts of this alternative? (GPs F and J)

The proposed intake, plant, and transmission lines are shared with other partners. Thus incremental environmental impacts are low and largely limited to the increased energy use associated with conveying OWASA's share of water. This impact would be partially offset by reductions in pumping and production from our own system.

What are the incremental social impacts of this alternative? (GP G)

The proposed intake, plant, and transmission lines are shared with other partners. Thus, there are no incremental social impacts from construction and operation of the proposed WTP and related facilities.

This alternative reduces the risk, severity and duration of future water shortages and use restrictions we might impose on our customers; however, the high cost we incur to implement this alternative would require an increase in our customers' water bills.

What flexibility to change course as we learn more about future customer demands, growth, climate impacts, and other uncertainties does this alternative provide? (GP H)

This alternative has the lowest amount of flexibility to change course. If this alternative is selected, it is unlikely that OWASA would back out of being a partner in the proposed intake and treatment facilities on the western side of Jordan Lake. Thus, there is little flexibility to change course as we learn more about the uncertainties that result from planning 50 years into the future. However, OWASA could opt to not expand its capacity in future phases of the treatment facility which provides some flexibility.

How does this alternative provide support for regional water supply planning efforts? (GP I)

This alternative results in OWASA financially supporting the proposed western intake and treatment facilities. These facilities will improve the region's water supply resiliency and reliability by addressing the single point of failure of having only one intake on Jordan Lake, and important regional water supply resource.

What is the cost to implement this alternative?

The 2021 capital costs and net present costs factoring in current federal guidance regarding discount rates and inflation are presented in the table below.

Capital Cost Estimate (2021 dollars)	$39.7 million (based on 2 mgd plant capacity and 5 mgd intake and piping capacity) $60.9 million for full 5 mgd
Net Present Cost of Alternative through 2070	$109.2 million (includes full capacity of 5 mgd)
Net Present Levelized Cost of Project ($/1,000 gallons of demand actually met over 50-year planning horizon	$8.10 /1,000 gallons actually supplied
Net Present Cost of Alternative through 2050	$68.5 million

What impact do these costs have on current rates? (GP C)

This alternative will require OWASA to participate in the planning, permitting, and preliminary design studies currently underway, and would be included in our budget for FY 2023. Thus, there is an immediate impact on our budgets and potentially the funds available for projects included in our capital improvements program in FY 2023.

This alternative also results in OWASA investing in infrastructure it does not yet need. Based on the hydrologic model, OWASA would not hit mandatory restrictions until the mid-2050s based on the 96-year period of record in the model and our demand projections. Assuming that future weather patterns will be similar, current customers would be investing in infrastructure not needed for a generation.

What impact do these costs have on future rates? (GP D)

This alternative secures OWASA's water supply for many decades (i.e. beyond the 2070 planning horizon of this LRWSP). Thus, it helps future generations meet water supply needs cost-effectively. This alternative places higher priority on minimizing rate impacts in the future than it does on present rates.

Alternative 3: Fixed Capacity Sharing Agreement

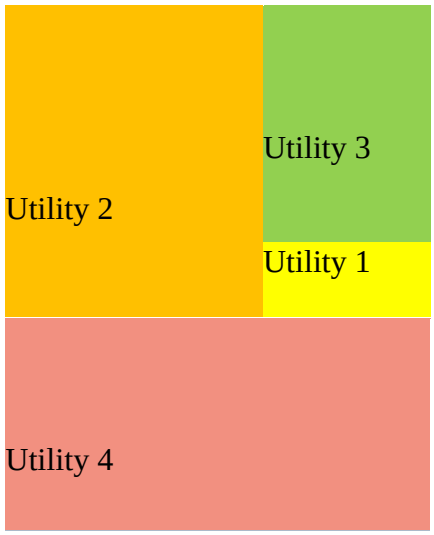
This alternative is similar to Alternative 2 and has OWASA being a full partner in the proposed intake, treatment and transmission facilities on the west side of Jordan Lake, but at a lower flow as outlined in the table below.

Assumed Peak Demands for each Partner

Partner	Phase 1 (2031) Peak Flow (mgd)	Phase 2 (2050) Peak Flow (mgd)
OWASA	0.5	2
Durham	16.5	21
Pittsboro	6	14
Chatham County	3	5
Total Plant Capacity	26	42

As in Alternative 2, this type of agreement involves all participants reserving a fixed amount of capacity in a facility at the outset of construction, with the sum across all participants adding up to the facility's total capacity. Each participant pays an amount equal to that fraction of the total costs of production (debt service + operations) that correspond to the fraction of capacity that it has reserved.

Representation of a fixed capacity sharing agreement in which the total facility capacity is allocated amongst the four participating utilities, even as not all of it is used, particularly in the early years



Total Facility Capacity

How does this alternative reduce our vulnerability to extended drought conditions? (GP B)

This alternative provides us guaranteed access to our Jordan Lake allocation whenever we need it. By regularly using our allocation and by having invested in it, this alternative has low risk of having our allocation of water from Jordan Lake being rescinded in future allocation rounds.

This alternative diversifies our water supply portfolio, which addresses the vulnerability of Cane Creek Reservoir's small watershed area which will require greater time to recover from being drawn down during drought.

How does this alternative improve the reliability and resiliency of our water supply including reducing vulnerability to a single point of failure? (GP C)

This alternative provides guaranteed access to our allocation of water in Jordan Lake which improves the reliability and resiliency of our water supply. This alternative results in OWASA having ownership in a second water treatment plant.

This alternative has us building infrastructure that we likely will not need for several decades. This could result in impacts to our capital improvements program in which other important projects are delayed leaving us vulnerable elsewhere.

What are the incremental environmental impacts of this alternative? (GPs F and J)

The proposed intake, plant, and transmission lines are shared with other partners. Thus incremental environmental impacts are low and largely limited to the increased energy use associated with treating and conveying OWASA's share of water and would be partially offset by a reduction in pumping and treatment at our current facilities. The impacts from this alternative would be lower than for Alternative 2.

What are the incremental social impacts of this alternative? (GP G)

The proposed intake, plant, and transmission lines are shared with other partners. Thus, there are no incremental social impacts from construction and operation of the proposed WTP and related facilities.

This alternative reduces the risk, severity and duration of future water shortages and use restrictions we might impose on our customers. However, this benefit would be offset by the potential increase in customer rates that this alternative would result in.

What flexibility to change course as we learn more about future customer demands, growth, climate impacts, and other uncertainties does this alternative provide? (GP H)

If this alternative is selected, it is unlikely that OWASA would back out of being a partner in the proposed intake and treatment facilities on the western side of Jordan Lake. However, OWASA could opt to keep its capacity at the initial 0.5 mgd capacity and not expand it if demands did not warrant a higher capacity or if other cost-effective water supply or demand management options were identified.

How does this alternative provide support for regional water supply planning efforts? (GP I)

This alternative results in OWASA financially supporting the proposed western intake and treatment facilities. These facilities will improve the region's water supply resiliency and reliability by addressing the single point of failure of having only one intake on Jordan Lake, and important regional water supply resource.

What is the cost to implement this alternative?

The 2021 capital costs and net present costs factoring in current federal guidance regarding discount rates and inflation are presented in the table below.

Capital Cost Estimate (2021 dollars)	$13.6 million (based on 0.5 mgd plant capacity and 2 mgd intake and piping capacity) $23.8 million (for 2 mgd)
Net Present Cost of Alternative through 2070	$35.3 million (for 2 mgd)
Net Present Levelized Cost of Project ($/1,000 gallons of demand actually met over 50-year planning horizon	$2.81 /1,000 gallons actually supplied
Net Present Cost of Alternative through 2050	$21.4 million

What impact do these costs have on current rates? (GP C)

This alternative will require OWASA to participate in the planning, permitting, and preliminary design studies currently underway, and would be included in our budget for FY 2023. Thus, there is an immediate impact on our budgets and potentially the funds available for projects included in our capital improvements program in FY 2023.

While this alternative has OWASA participating in the proposed WIP facilities at a lower capacity than Alternative 2, it still has OWASA investing in infrastructure it does not yet need. Based on the hydrologic model, OWASA would not hit mandatory restrictions until the mid-2050s based on the 96-year period of record in the model and our demand projections. Assuming that future weather patterns will be similar, current customers would be investing in infrastructure not needed for a generation.

What impact do these costs have on future rates? (GP D)

This alternative secures OWASA's water supply for many decades (i.e. beyond the 2070 planning horizon of this LRWSP). Thus, it helps future generations meet water supply needs cost-effectively. This alternative places higher priority on minimizing rate impacts in the future than it does on present rates.

Alternative 4: Uniform Rate Capacity Sharing Agreement

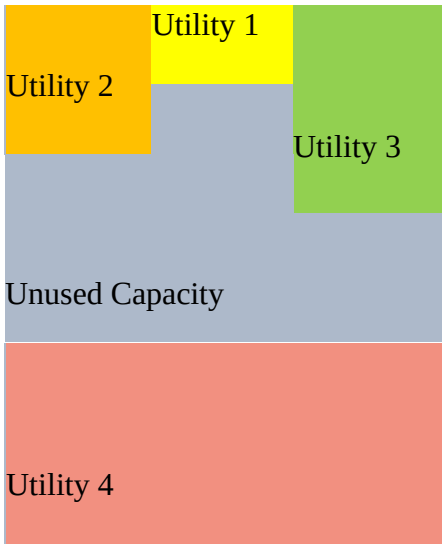
OWASA would be a full partner in the proposed intake, treatment plant, and transmission facilities on the western side of Jordan Lake. For this alternative, we assumed that the WIP facilities would have the same capacity as described in Alternative 2:

Assumed Peak Demands for each Partner

Partner	Phase 1 (2031) Peak Flow (mgd)	Phase 2 (2050) Peak Flow (mgd)
OWASA	0.5	2
Durham	16.5	21
Pittsboro	6	14
Chatham County	3	5
Total Plant Capacity	26	42

However, the costs are allocated differently between the partners under this alternative. This type of agreement involves all participants in the WIP agreeing to pay a "uniform rate" sufficient to cover the total debt service and operating costs of the WIP facility (i.e. treatment plant and intake structure) and related conveyance, regardless of the fraction of the total capacity each partner uses. No participant commits to any specific level of capacity upfront, but rather each participant agrees to pay a rate sufficient that the entire costs of the facility will be covered and that this rate will be calculated using the total costs of production (debt service + operations) and the total fraction of capacity used. Each participant has the ability to increase their use of the facility's capacity until the unused capacity is fully utilized.

Representation of the allocation of capacity in a uniform rate capacity sharing agreement. The total facility capacity is not fully allocated amongst the four participating utilities, at least in the early years



This type of agreement can be helpful for small, fast-growing communities that need to reserve capacity, but may have trouble financing it in early years.

For the purposes of costing this alternative, we assumed that the Uniform Rate Sharing Agreement would require a minimum purchase each year; for the purposes of analysis, we assumed each Partner would need to cover at least half the costs of their planned capacity. Thus we assumed OWASA would take at least 0.25 mgd of water on an annual average basis during Phase 1, and at least 1 mgd of water in Phase 2.

We used the hydrologic model to identify when purchases may exceed the minimum required purchase. We assumed that OWASA would use water any time an advisory stage as described in its Water Shortage Response Plan (reservoir storage 10 percent above the level when mandatory restrictions would apply). If the hydrologic model indicated OWASA would need more than that in a given year, we assumed the necessary amount to address the advisory (i.e., more than 0.25 mgd or 1 mgd depending on whether it occurred during Phase 1 or 2) would be purchased.

If the Partners opt to charge each other based on fixed capacity (Alternatives 2 and 3), which is easiest to implement and most familiar to the Partners, OWASA would also be charged based on a fixed capacity. This, this alternative may not be viable in the future. Similarly, if the Partners selected a uniform rate Agreement to split costs, Alternative 2 would be modified to reflect this change, and Alternative 3 would not be viable.

How does this alternative reduce our vulnerability to extended drought conditions? (GP B)

This alternative provides us guaranteed access to our Jordan Lake allocation whenever we need it. By regularly using our allocation and by having invested in it, this alternative has low risk of having our allocation of water from Jordan Lake being rescinded in future allocation rounds.

This alternative diversifies our water supply portfolio, which mitigates the vulnerability of Cane Creek Reservoir's small watershed area which will require greater time to recover from being drawn down during drought.

How does this alternative improve the reliability and resiliency of our water supply including reducing vulnerability to a single point of failure? (GP C)

This alternative provides guaranteed access to our allocation of water in Jordan Lake which improves the reliability and resiliency of our water supply. This alternative also results in OWASA having ownership in a second water treatment plant.

This alternative has us building infrastructure that we likely will not need for several decades. This could result in impacts to our capital improvements program in which other important projects are delayed leaving us vulnerable elsewhere.

What are the incremental environmental impacts of this alternative? (GPs F and J)

The proposed intake, plant, and transmission lines are shared with other partners. Thus incremental environmental impacts are low and largely limited to the increased energy use

associated with treating and conveying OWASA's share of water, which would be partially offset by reductions in pumping and treatment at our local facilities. The impacts from this alternative would be lower than for Alternative 2.

What are the incremental social impacts of this alternative? (GP G)

The proposed intake, plant, and transmission lines are shared with other partners. Thus, there are no incremental social impacts from construction and operation of the proposed WTP and related facilities.

This alternative reduces the risk, severity and duration of future water shortages and use restrictions we might impose on our customers. However, this benefit would be offset by the increase in customer rates that this alternative could result in.

What flexibility to change course as we learn more about future customer demands, growth, climate impacts, and other uncertainties does this alternative provide? (GP H)

If this alternative is selected, it is unlikely that OWASA would back out of being a partner in the proposed intake and treatment facilities on the western side of Jordan Lake. However, OWASA could opt to keep its capacity at the initial 0.5 mgd capacity and not expand it if demands did not warrant a higher capacity or if other cost-effective water supply or demand management options were identified. If this occurred, and other Partner demands continued to grow, OWASA's relative share of costs would decrease over time.

How does this alternative provide support for regional water supply planning efforts? (GP I)

This alternative results in OWASA financially supporting the proposed western intake and treatment facilities. These facilities will improve the region's water supply resiliency and reliability by addressing the single point of failure of having only one intake on Jordan Lake, and important regional water supply resource.

What is the cost to implement this alternative?

The 2021 capital costs and net present costs factoring in current federal guidance regarding discount rates and inflation are presented in the table below.

Capital Cost Estimate (2021 dollars)	$13.6 million (based on 0.5 mgd plant capacity and 2 mgd intake and piping capacity)[1] $23.8 million (for 2 mgd)
Net Present Cost of Alternative through 2070	$29.2 million (for 2 mgd)
Net Present Levelized Cost of Project ($/1,000 gallons of demand actually met over 50-year planning horizon	$3.10 /1,000 gallons actually supplied
Net Present Cost of Alternative through 2050	$12.8 million

1- debt service payments would be adjusted each year after the facility goes into service based on usage and therefore could be very different than for Alternative 3.

What impact do these costs have on current rates? (GP C)

This alternative will require OWASA to participate in the planning, permitting, and preliminary design studies currently underway, and would be included in our budget for FY 2023. Thus, there is an immediate impact on our budgets and potentially the funds available for projects included in our capital improvements program in FY 2023.

While this alternative has OWASA participating in the proposed WIP facilities at a capacity lower than Alternative 2, it still has OWASA investing in infrastructure it does not yet need. Based on the hydrologic model, OWASA would not hit mandatory restrictions until the mid-2050s based on the 94-year period of record in the model and our demand projections. Assuming that future weather patterns will be similar, current customers would be investing in infrastructure not needed for a generation.

What impact do these costs have on future rates? (GP D)

This alternative secures OWASA's water supply for many decades (i.e. beyond the 2070 planning horizon of this LRWSP). Thus, it helps future generations meet water supply needs cost-effectively. However, this alternative effectively places higher priority on minimizing rate impacts in the future than it does on present rates.

Alternative 5: Option Contract

Under this alternative, OWASA purchases no capacity in the WIP facility or conveyance infrastructure. Instead OWASA would contract to purchase transfers of water from the WIP under specified conditions that could be related to drought or an operational emergency. This alternative is most similar to a mutual aid agreement, but the option contract guarantees access when the contract conditions are met (our mutual aid agreements (Alternative 1) include only an exercise fee and do not guarantee that we can access our allocation, but neither does it limit the conditions under which we could request water).

The proposed structure would be similar to that of an "option" contract in the financial world, involving an upfront "option fee", that would entitle OWASA to a defined volume of water under the specified conditions, with these likely being related to one or more drought metrics (e.g., reservoir level) or a specific operational event (e.g. main break or other operational emergency). When these conditions were met and a transfer of water "triggered", an additional "exercise" payment would be made, likely in the form of a volumetric charge (e.g., $/1000 gal.).

This type of agreement takes advantage of the fact that when a new water treatment facility is first constructed, there is often a lot of unused capacity. In later years, there is typically a cyclical pattern in which peak treatment occurs during hot, dry days (WTPs are designed to treat the peak day demand) and during the winter there remains a lot of unused capacity and even during non-peak demand summer days there is unused capacity. OWASA can take advantage of the amount of storage it has in Cane Creek Reservoir and the fact that it has adequate treatment capacity at its Jones Ferry Road WTP and access its allocation only during times when peak treatment is not occurring.

For this analysis, we assumed the following:

- We used OWASA's water supply model to evaluate risk through 2070 and assumed we would use our mutual aid agreements to access our allocation of water when we hit a water shortage advisory (10 percent above mandatory restrictions in Stage 1 water shortage) as described in our Water Shortage Response Plan.
- When we purchase water, we purchase at a rate of 4 mgd, but also maintain 4 mgd through our Jones Ferry Road WTP (i.e. we would purchase a lower amount to maintain 4 mgd at our WTP).
- Contracts are in place for ten year periods. The annual option fee increases with each subsequent agreement period based on the increased probability that OWASA will exercise its option as demand grows over time. (The exception to this is that OWASA has higher probability of requesting water before the Quarry Reservoir is online). For this alternative, we further assume that we continue options contracts through 2070.
- Assume we can purchase water at any time of year, but note that the agreement could restrict us to getting water when plant is operating near capacity.

How does this alternative reduce our vulnerability to extended drought conditions? (GP B)

This alternative provides us guaranteed access to our Jordan Lake allocation on an annual average basis, but does not guarantee access on any given day or week. We would use our Jordan Lake allocation less than partner alternatives 2-4 which would put us at higher risk of having our allocation reduced in future allocation rounds, but improves that risk when compared to mutual aid agreements since we would be investing in the western Jordan Lake facilities and likely withdrawing water more frequently than we would under a standard mutual aid agreement.

How does this alternative improve the reliability and resiliency of our water supply including s reducing vulnerability to a single point of failure? (GP C)

This alternative guarantees us access to at least some of our Jordan Lake allocation on an annual average basis when pre-established conditions are met (e.g., seasonal storage in our reservoirs drops to a certain level), but does not guarantee that we can obtain water whenever we want it. This alternative does improve our reliability and resiliency over Alternative 1 (continuing with mutual aid agreements). Given OWASA's low water supply risk, this alternative would improve our reliability and resiliency over the next few decades, but we may want to seek more permanent water supply solutions prior to 2070.

What are the incremental environmental impacts of this alternative? (GPs F and J)

There would be minor impacts based on increased electricity use when OWASA exercised its option, but this would be partially offset by reduced pumping and treatment at our local facilities. It is assumed that the impacts would be marginally higher than under mutual aid, but lower than Alternatives 2-4 (partner in WIP facilities alternatives).

What are the incremental social impacts of this alternative? (GP G)

There are no incremental social impacts of this alternative.

This alternative reduces the risk, severity and duration of future water shortages and use restrictions we might impose on our customers when compared to the mutual aid alternative which maintains our status quo. However, there is an option fee which would be accounted for in our budgeting process.

What flexibility to change course as we learn more about future customer demands, growth, climate impacts, and other uncertainties does this alternative provide? (GP H)

This alternative provides a great deal of flexibility. OWASA is not investing in any capital projects which makes it easy to switch to another alternative. This alternative also avoids OWASA having to commit major financial resources to the WIP facility decades prior to reaching the demand when the facility might be needed as part of OWASA's regular supply portfolio.

How does this alternative provide support for regional water supply planning efforts? (GP I)

This alternative results in OWASA financially supporting the proposed western intake and treatment facilities by providing an option fee. These facilities will improve the region's water supply resiliency and reliability by addressing the single point of failure of having only one intake on Jordan Lake, an important regional water supply resource. OWASA would also sell the land for the proposed treatment facility as it purchased the property it owns in Chatham County for the purpose of a new intake and treatment facility on Jordan Lake.

What is the cost to implement this alternative?

The costs for this alternative are presented in the table below.

Capital Cost (2021 dollars)	$0
Net Present Cost of Alternative through 2070	$5.0 million
2070 Net Present Levelized Cost of Project ($/1,000 gallons of demand actually met over 50-year planning horizon	$6.01 /1,000 gallons actually supplied
Net Present Cost through 2050	$1.0 million
Annual Option Fee (2021 dollars)	2031-2040: $56,000 2041-2050: $30,000 2051-2060: $110,000 2061-2070: $280,000

What impact do these costs have on current rates? (GP C)

This alternative postpones any investment in the western intake facilities until we have to pay an option fee in approximately 2031. This alternative also avoids OWASA having to commit major financial resources to the WIP facility decades prior to reaching the demand when the facility might be needed as part of OWASA's regular supply portfolio.

What impact do these costs have on future rates? (GP D)

This alternative places higher priority on minimizing current rate impacts over future rate impacts by delaying the investment in actual capacity. This alternative does not secure access to our Jordan Lake allocation, which could increase the cost of doing so in the future.

These costs potentially impact future rates when we exercise our option to access our Jordan Lake allocation. While the costs are based on average purchases over time, the hydrologic model indicates that OWASA could spend approximately $4 million in one year if it purchased water under Advisory conditions which would impact that year's budget. OWASA could opt to pay a higher option fee to reduce this cost when it withdraws water or develop a plan to cover that year's costs if they do occur.

Alternative 6: Long-Term Option to Join WIP as Partner in Phase 2

Under this alternative, OWASA would work with the WIP to create an agreement where OWASA would be a partner in a future Phase of the facilities (assumed for costing to be Phase 2). The WIP expects to expand the WTP in Phase 2 around 2050; they plan to design and build the intake structure and conveyance network to meet Phase 2 demands during Phase 1 construction. OWASA may be interested in forgoing any participation in Phase 1 development of the WIP facility, but developing an option agreement to secure the right to participate in a later phase. One approach to buying an option for joining a future phase would be to link the option fee to a payment that OWASA would make on the intake structure and raw water pipeline from Jordan Lake to the WIP treatment plant, both of which will include capacity that OWASA would need if we participate in a future phase and would be difficult and expensive to expand at that time. Annual payments would be based on the marginal cost to plan, design and construct OWASA's future capacity in the intake, raw water pipeline, drinking water conveyance, and the portion of the WTP that would logically be constructed to the Phase II ultimate capacity during Phase 1.

For this alternative, we assumed the following:

- Option fee based on 2 mgd in intake and raw water pipeline, WTP, and finished water transmission
- Between 2031 and 2050, OWASA would use its mutual aid agreements to access its Jordan Lake allocation
- From 2050 to 2070, OWASA would be a full partner at 2 mgd ownership in Phase 2 of the facility

Another potential costing method is to delay payments until planning, permitting, and design of the Phase 2 facilities begins in approximately 2043 and option payments until 2047. Under this option, OWASA would still pay for the marginal cost. Delaying payments enables OWASA to begin paying for the facility's cost closer in time to when it needs water, but the Partners may wish to receive some paid assurance that OWASA will participate in Phase 2 if they are providing capacity they would not otherwise need. For purposes of this agenda package, both costs are presented. Actual terms would depend on how an agreement could be negotiated.

How does this alternative reduce our vulnerability to extended drought conditions? (GP B)

This alternative does not reduce our vulnerability to extended drought conditions beyond that provided by mutual aid until approximately 2050. However, this alternative guarantees us the right to join the WIP and access our Jordan Lake allocation when the Phase 2 facilities are online. The anticipated timing of Phase 2 is likely more in line with when we will need access to our allocation of water from Jordan Lake. Since we will be making option payments and have invested in infrastructure to access our Jordan Lake allocation, there is less risk of having our

allocation rescinded or reduced than simply using our mutual aid agreements as described in Alternative 1.

When we become an owner in Phase 2, the vulnerability of Cane Creek Reservoir's small drainage area and long refill time following drought is also addressed.

How does this alternative improve the reliability and resiliency of our water supply including reducing vulnerability to a single point of failure? (GP C)

This alternative does not improve the reliability and resiliency of our water supply in the near-term, but it provides guaranteed access to our allocation of water in approximately 2050. This alternative also results in OWASA having ownership in a second water treatment plant in the future.

What are the incremental environmental impacts of this alternative? (GPs F and J)

During Phase 1, there would be no incremental environmental impacts of this alternative. During Phase 2, there would be increased electricity use at the western intake facilities to pump and treat OWASA's share of water which would be partially offset by a reduction in pumping and treatment at our local facilities.

What are the incremental social impacts of this alternative? (GP G)

There are no incremental social impacts of constructing and operating the proposed intake, plant, and transmission lines.

This alternative reduces the risk, severity and duration of future water shortages and use restrictions we might impose on our customers in Phase 2; during Phase 1, there would be no change from current conditions in terms of water shortage restrictions. However, depending on when option payments began, there could be an impact on increased water rates.

What flexibility to change course as we learn more about future customer demands, growth, climate impacts, and other uncertainties does this alternative provide? (GP H)

The flexibility of this alternative varies depending on the when OWASA would need to start making payments. If payments began in 2031, OWASA would be investing a lot of money in the western intake, which would make it difficult to change course. If payments began in 2047, this alternative provides more flexibility. OWASA would likely forfeit any options payments it made during Phase 1 if it did not choose to participate in Phase 2 of the western intake and treatment facilities. However, it may be able to cover some of that cost by selling its interest to another utility depending on how the agreement was written.

How does this alternative provide support for regional water supply planning efforts? (GP I)

This alternative results in OWASA financially supporting the proposed western intake and treatment facilities by providing an option fee during the first phase. These facilities will

improve the region's water supply resiliency and reliability by addressing the single point of failure of having only one intake on Jordan Lake, an important regional water supply resource. OWASA would also sell the land for the proposed treatment facility as it purchased the property it owns in Chatham County for the purpose of a new intake and treatment facility on Jordan Lake.

What is the cost to implement this alternative?

The net present costs factoring in current federal guidance regarding discount rates and inflation are presented in the tables below for the option payments beginning in 2031 and deferring them until 2047.

Option Payments Begin in 2031

Capital Cost (2021 dollars)	$13.6 million
Net Present Cost of Alternative through 2070	$22.7 million
2070 Net Present Levelized Cost of Project ($/1,000 gallons of demand actually met over 50-year planning horizon	$2.42 /1,000 gallons actually supplied
Net Present Cost of Alternative through 2050	$16.2 million

Option Payments Deferred Until 2047

Capital Cost (2021 dollars)	$13.6 million
Net Present Cost of Alternative through 2070	$21.4 million
2070 Net Present Levelized Cost of Project ($/1,000 gallons of demand actually met over 50-year planning horizon	$2.28 /1,000 gallons actually supplied
Net Present Cost of Alternative through 2050	$3.4 million

What impact do these costs have on current rates? (GP C)

This alternative postpones any investment in the western intake facilities until we have to pay an option fee in approximately 2030. However, the shorter-term impact on rates could be significantly different depending on the timing of when option fees would begin. If payments began in 2031, the net present cost in 2050 is $16.2 million for infrastructure that we will not use much for a generation. If an agreement could be made that would defer payments until 2047, the 2050 net present cost is $3.4 million, which seems like a reasonable investment which guarantees access to our Jordan Lake allocation when we are more likely to need it.

What impact do these costs have on future rates? (GP D)

This alternative potentially balances the impact on current and future rates. By proactively planning ahead for future supply, OWASA helps manage the impact of future rate changes. However, if option payments began in 2031, OWASA's near-term customers would be subsidizing future infrastructure.

Alternative 7: Hybrid Option between Alternatives 5 and 6

This alternative is a hybrid between the options agreement and buying into a future phase of the WIP. Under this alternative, OWASA would buy into a future phase of the treatment plant based on OWASA's future capacity and the actual cost to plan, design, and construct the intake, raw water pipeline, and transmission facilities. The option payments made would be used to secure access to OWASA's Jordan Lake allocation under specified conditions related to drought or operational emergency. For the purposes of this analysis, we made similar assumptions to those summarized in Alternatives 5 and 6:

- We used OWASA's water supply model to evaluate risk through 2070 and assumed we would use our mutual aid agreements to access our allocation when we hit a water shortage advisory (10 percent above mandatory restrictions in Stage 1 water shortage) as described in our Water Shortage Response Plan.
- When we purchase water, we purchase at a rate of 4 mgd, but also maintain 4 mgd through our Jones Ferry Road WTP (i.e. we would purchase a lower amount to maintain 4 mgd at our WTP).
- Assumed option payments would begin in 2031 and continue through 2050; the option fee as presented is assumed to be $150,000 annually in 2021 dollars. OWASA would repay the WIP for the outstanding marginal capacity built into the Phase I facilities beginning in 2047. The option fee agreed upon is highly negotiable and helps pay for a portion of the marginal capacity prior to OWASA joining the WIP in Phase II.
- Assume we can purchase water at any time of year.
- From 2050 to 2070, OWASA would be a full partner at 2 mgd ownership in Phase 2 of the facility

How does this alternative reduce our vulnerability to extended drought conditions? (GP B)

This alternative provides us guaranteed access to our allocation of water in Jordan Lake on an annual average basis, but does not guarantee year-round access until about 2050. When the Phase 2 facilities are online, OWASA would have guaranteed access of up to 2 mgd of its allocation of water at any time. Since OWASA will be making option payments and withdrawing water more frequently that it would under mutual aid agreements, there is likely less risk of having our allocation of water rescinded or reduced than continuing with mutual aid agreements. This alternative also reduces our vulnerability to extended drought than agreement alternatives 5 and 6 do individually; the reduction would not be as high as being a full partner but should meet OWASA's needs during drought given our risk level.

This alternative guarantees us access to our Jordan lake allocation on an annual average basis until 2050, and when Phase 2 facilities are available, it provides guaranteed access on a year-round basis. Thus, this alternative diversifies our water supply portfolio and addresses our vulnerability of Cane Creek Reservoir's small watershed area which will require greater time to recover from being drawn down during drought.

How does this alternative improve the reliability and resiliency of our water supply including reducing vulnerability to a single point of failure? (GP C)

This alternative results in OWASA having ownership in a second water treatment plant in the future.

What are the incremental environmental impacts of this alternative? (GPs F and J)

There would be some increased electricity use at the western intake facilities to pump and treat OWASA's share of water in Phase 1 and 2. This increase would be partially offset by reduced pumping and treatment at our local facilities.

What are the incremental social impacts of this alternative? (GP G)

There are no incremental social impacts of constructing and operating the proposed intake, plant, and transmission lines.

This alternative reduces the risk, severity and duration of future water shortages and use restrictions we might impose on our customers in Phase 1 and 2, but costs associated with this alternative would be reflected in customer bills.

What flexibility to change course as we learn more about future customer demands, growth, climate impacts, and other uncertainties does this alternative provide? (GP H)

This alternative provides flexibility. However, OWASA would likely forfeit any options payments it made during Phase 1 if it did not choose to participate in Phase 2 of the western intake facilities. Since the option payments provided guaranteed access to water on an annual average basis, this may be an acceptable risk. There is also potential for OWASA to sell its basis in the infrastructure to another utility needing capacity at that time depending on how the agreement was structured.

How does this alternative provide support for regional water supply planning efforts? (GP I)

This alternative results in OWASA financially supporting the proposed western intake and treatment facilities by providing an option fee during the first phase and buying into the facilities in Phase 2. These facilities will improve the region's water supply resiliency and reliability by addressing the single point of failure of having only one intake on Jordan Lake, an important regional water supply resource. OWASA would also sell the land for the proposed treatment facility as it purchased the property it owns in Chatham County for the purpose of a new intake and treatment facility on Jordan Lake.

What is the cost to implement this alternative?

The net present costs factoring in current federal guidance regarding discount rates and inflation are presented in the table below.

Capital Cost (2021 dollars)	$13.6 million
Net Present Cost of Alternative through 2070	$22.2 million
2070 Net Present Levelized Cost of Project ($/1,000 gallons of demand actually met over 50-year planning horizon	$2.35 /1,000 gallons actually supplied
Net Present Cost of Alternative through 2050	$2.6 million
Annual Option Fee (2021 dollars)	$150,000

What impact do these costs have on current rates? (GP C)

This alternative postpones any investment in the western intake facilities until we have to pay an option fee in approximately 2031. This alternative also has a fairly low net present cost in 2050, and therefore should have minimal impact on rates in the near-term.

What impact do these costs have on future rates? (GP D)

This alternative balances the impact on current and future rates. By proactively planning ahead for future supply, OWASA helps manage the impact of future rate changes.

Priority	Guiding Principle	Alternative 1 Continue with Mutual Aid Agreements	Alternative 2 Full Partner in WIP	Alternative 3 Reduced Partner in WIP Based on Capacity Sharing Agreement	Alternative 4 Reduced Partner in WIP Based on Uniform Agreement	Alternative 5 Option Agreement	Alternative 6 Future Partner in WIP	Alternative 7 Hybrid of Alternatives 5 and 6
	High quality drinking water (GP A)	Provides high quality drinking water	Provides high quality drinking water	Provides high quality drinking water	Provides high quality drinking water	Provides high quality drinking water	Provides high quality drinking water	Provides high quality drinking water
Highest	Ability to reduce vulnerability to extended drought (GP B)	Maintains status quo and does not guarantee OWASA access to its allocation; may be vulnerable during new drought of record or back-to-back droughts. Circumstances of other utilities will impact whether we can get water.	Highest, but likely overbuilding infrastructure that we are unlikely to need for several decades potentially leaving us vulnerable elsewhere.	High - guarantees OWASA access to a given amount of supply under any condition.	High - guarantees OWASA access to a given amount of supply under any condition.	Better than baseline as it guarantees water, but likely would not be guaranteed year-round access. Given amount of storage in Cane Creek Reservoir, this is acceptable.	Does not guarantee OWASA access to its allocation in Phase 1 of the Western Intake and WTP. However, guarantees access to our allocation in a future phase when we are more likely to need the allocation.	Higher than baseline and alternatives 5 and 6; lower than alternatives 3 and 4.
Highest	Ability to improve reliability and resiliency of our water supply including single points of failure (GP C)	Does not improve our reliability and resiliency. Highest probability that our JL allocation could be reduced or rescinded. Does not address single points of failure, but given our interconnection capacity, this risk is acceptable.	Improves reliability and resiliency of water supply by guaranteeing access to another water source. Provides a 2nd WTP. However, this alternative has us overbuilding infrastructure that we likely will not need for several decades. This could impact our capital improvements program in which other important projects are delayed leaving us vulnerable elsewhere.	Improves reliability and resiliency of water supply by guaranteeing access to another water source. Provides a 2nd WTP.	Improves reliability and resiliency of water supply by guaranteeing access to another water source. Provides a 2nd WTP.	Improves reliability and resiliency of water supply, but year-round access not guaranteed.	No short-term improvement of the resiliency and reliability of our water supply in Phase 1, but improves it in approximately 2050.	Improves the reliability and resiliency of water supply; may not be year-round during Phase 1, but would become year-round in Phase 2 of WTP when we are more likely to need water. Provides ownership in 2nd WTP in Phase 2.
Highest	Impact on current rates (GP D)	Minimal impact. If purchase water under mutual aid, could impact that year's budget depending on the amount of water purchased.	$39.7M in capital costs for Phase 1. Will require OWASA to participate in Phase 1 studies, which would be included in our FY 2023 budget.	$13.6M in capital costs for Phase 1. Will require OWASA to participate in Phase 1 studies, which would be included in our FY 2023 budget.	$13.6M in capital costs for Phase 1. Will require OWASA to participate in Phase 1 studies, which would be included in our FY 2023 budget.	Some impact. NPC through 2050 is $1 million	Depending on how agreement structured, could be high near-term cost. If option payments began in 2031, 2050 NPC is $16.2M; if option payments begin in 2047, 2050 NPC is $3.4M	Some impact. NPC through 2050 is $2.6M
High	Impact on future rates (GP E)	Net present cost of $1.67M While this is low cost now, this could leave future generations needing to invest higher amounts of capital.	Net present cost of $109.2M $28.10 /1000 gallons used	Net present cost of $35.3M $2.81 /1000 gallons used	Net present cost of $29.2M $3.10 /1000 gallons used	Net present cost of $5.0 M $6.01 /1000 gallons used	Net present cost of $21.4-22.7M depending on year option payments begin $2.28-$2.42 /1000 gal used	Net present cost of $22.2M $2.38 /1000 gal used

Priority	Guiding Principle	Alternative 1 Continue with Mutual Aid Agreements	Alternative 2 Full Partner in WIP	Alternative 3 Reduced Partner in WIP Based on Capacity Sharing Agreement	Alternative 4 Reduced Partner in WIP Based on Uniform Agreement	Alternative 5 Option Agreement	Alternative 6 Future Partner in WIP	Alternative 7 Hybrid of Alternatives 5 and 6
High	Incremental long-term impacts on the environment from operation of infrastructure to support water supply (GP F)	No impact	Highest level of additional electricity use to pump water to OWASA from the new WTP.	Some additional electricity use to pump water to OWASA from the new WTP.	Some additional electricity use to pump water to OWASA from the new WTP.	Minor increase in electricity use when OWASA accesses its allocation through its agreements.	No change from baseline in Phase 1; would have increase in electricity use in Phase 2 of the WTP	Minor increase in electricity use in Phase 1 when OWASA accesses its allocation through its agreements. Some additional increase in electricity use in Phase 2 of the WTP.
High	Incremental impacts on community from OWASA's participation in construction and operation of water supply source, including impacts to landowners, recreation, and transportation (GP G)	No impact	Proposed infrastructure shared with other Partners so no incremental impact.	Proposed infrastructure shared with other Partners so no incremental impact.	Proposed infrastructure shared with other Partners so no incremental impact.	No impact.	No impact. Phase 2 infrastructure shared with other Partners.	No impact. Phase 2 infrastructure shared with other Partners.
High	Flexibility to change course as we learn more about future demands, growth, climate impacts, and other uncertainties (GP H)	High flexibility, but highest probability of reducing or eliminating our access to Jordan Lake in future, which may reduce future options. However, no capital investment made in Jordan Lake facilities.	Lowest amount of flexibility to change course in future years. OWASA could decide not to expand its capacity in WTP in Phase 2.	Greater flexibility than full partner, but would be hard to totally remove ourselves from partnership in future. OWASA could decide not to expand its capacity in Phase 2.	Greater flexibility than full partner, but would be hard to totally remove ourselves from partnership in future. OWASA could opt to continue to withdrawal minimum of 0.5 mgd in Phase 2, and overall contribution in cost would decrease over time.	Greatest flexibility to change course.	Flexibility to change course, but payments made may not be recoverable if OWASA chose not to participate in Phase 2.	Flexibility to change course, but payments made may not be recoverable if OWASA chose not to participate in Phase 2.
Other	Support for regional water supply planning efforts, recognizing that we rely on neighboring utilities to supply water during planned and unplanned interruptions to our water supply (GP I)	Requires continued partnership and mutual aid agreements with Town of Cary, City of Durham, and Chatham County; will continue to support other regional planning efforts. OWASA will provide land for new WTP.	Requires partnership with City of Durham, Chatham County and Town of Pittsboro on new intake and plant and provides financial support in that plant. OWASA will provide land for new WTP. Will continue to support other regional planning efforts.	Requires partnership with City of Durham, Chatham County and Town of Pittsboro on new intake and plant and provides financial support in that plant. OWASA will provide land for new WTP. Will continue to support other regional planning efforts.	Requires partnership with City of Durham, Chatham County and Town of Pittsboro on new intake and plant and provides financial support in that plant. OWASA will provide land for new WTP. Will continue to support other regional planning efforts.	Requires collaboration and agreement with City of Durham, Chatham County and Town of Pittsboro on new intake and plant and provides financial support in that plant. OWASA will provide land for new WTP. Will continue to support other regional planning efforts.	Requires collaboration and agreement with City of Durham, Chatham County and Town of Pittsboro on new intake and plant and provides financial support in that plant. OWASA will provide land for new WTP. Will continue to support other regional planning efforts.	Requires collaboration and agreement with City of Durham, Chatham County and Town of Pittsboro on new intake and plant and provides financial support in that plant. OWASA will provide land for new WTP. Will continue to support other regional planning efforts.

Priority	Guiding Principle	Alternative 1 Continue with Mutual Aid Agreements	Alternative 2 Full Partner in WIP	Alternative 3 Reduced Partner in WIP Based on Capacity Sharing Agreement	Alternative 4 Reduced Partner in WIP Based on Uniform Agreement	Alternative 5 Option Agreement	Alternative 6 Future Partner in WIP	Alternative 7 Hybrid of Alternatives 5 and 6
Other	Incremental short-term impacts on environment from development of the water supply and construction of the associated infrastructure (GP J)	No impact	Proposed infrastructure shared with other Partners so no incremental impact.	Proposed infrastructure shared with other Partners so no incremental impact.	Proposed infrastructure shared with other Partners so no incremental impact.	No impact	No impact. Phase 2 infrastructure shared with other Partners.	No impact. Phase 2 infrastructure shared with other Partners.

Cost Summary Table of Alternatives to Access Jordan Lake Allocation

Alt #	Name	Assumed Estimated Yield of Project (MGD)	Capital Cost in 2021 $ (Million $)	Year Construction Begins	Year Initially On-Line	Net Present Cost through 2070 (Million $)	NPC through 2070 Per 1,000 Gallons Projected to be Consumed	Net Present Cost through 2050 (Million $)
1	Continue with Mutual Aid Agreements	N/A	$0	N/A	N/A	$1.67	$5.45	$0.2
2	Partner in New Intake and WTP on West Side	Phase 1: 2 Phase 2: 5	$39.7 (Ph 1) $60.9 (Ph 1,2)	2027	2031	$109.2	$8.10	$68.5
3	Partner: Fixed Capacity Sharing Agreement	Phase 1: 0.5 Phase 2: 2	$13.6 (Ph 1) $23.8 (Ph 1,2)	2027	2031	$35.3	$2.81	$21.4
4	Partner: Uniform Rate Capacity Sharing Agreement	Phase 1: 0.5 Phase 2: 2	$13.6 (Ph 1) $23.8 (Ph 1,2)	2027	2031	$29.2	$3.10	$12.8
5	Option Contract	N/A	$0	N/A	N/A	$5.0	$6.01	$1.0
6	Option payments in 2031 Payments deferred to 2047	Phase 2: 2 Phase 2: 2	$13.6 $13.6	2047 2047	2051 2051	$22.7 $21.4	$2.42 $2.28	$16.2 $3.4
7	Hybrid Option between Alternatives 5 and 6	Phase 2: 2	$13.6	2047	2051	$22.2	$2.35	$2.6

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Guiding Principles for Evaluating Water Supply Alternatives to Access Jordan Lake

Introduction to Guiding Principles

OWASA has developed the following guiding principles to aid in evaluating and comparing viable water supply alternatives to reliably access OWASA's allocation of water in Jordan Lake. The guiding principles include factors that staff can quantify or use to compare alternatives on a qualitative basis. While all the social, environmental, and economic factors addressed in the guiding principles are important to consider when evaluating this group of water supply alternatives, they are categorized as "Highest", "High", or as "other considerations" to assist with the evaluation. Guiding principles ranked "Highest" will be given more weight than guiding principles ranked "High" when evaluating Jordan Lake water supply alternatives.

The Board of Directors will use the guiding principles to guide their discussion but may also use other factors including their best judgment to select the most viable alternative. While these guiding principles will be used initially to evaluate Jordan Lake alternatives, OWASA has not abandoned other supply alternatives. The Western Intake Partners (City of Durham, Chatham County, Town of Pittsboro, and OWASA) have made progress in planning for a new intake on the western side of Jordan Lake since all alternatives were presented to the Board of Directors on August 13, 2020, and more complete evaluations of the Jordan Lake alternatives can now be accomplished. These guiding principles will be used to narrow down the Jordan Lake alternatives to compare to other viable water supply alternatives. It is anticipated that these guiding principles and prioritization will be adapted to evaluate other viable water supply alternatives against the selected Jordan Lake alternative. OWASA is committed to hearing feedback from our customers and will consider diverse perspectives as the Board makes its decisions concerning future water supply.

OWASA's core assumptions of our Long-Range Water Supply Plan (LRWSP) will be maintained regardless of which supply alternative is ultimately selected. These assumptions include:

- OWASA's service area as defined in the Water and Sewer Management, Planning and Boundary Agreement will remain unchanged, and we will not be required to provide water service beyond the existing Urban Service Area boundary of Carrboro and Chapel Hill.
- OWASA will continue with planned activities to develop the Shallow Quarry Reservoir alternative; this additional supply will be available by approximately 2035 and is included in our estimated yield.
- OWASA will develop our water supply portfolio to meet our community's drinking water needs for the next two generations (to 2070).
- OWASA will continue to use our local water supplies in Cane Creek Reservoir, University Lake, and the Quarry Reservoir as our primary water sources to the maximum extent practicable.
- OWASA will continue to support and encourage the water conservation ethic embraced by our community, including UNC – Chapel Hill's continued use of reclaimed water. Demand management (conservation) alternatives that are financially viable will be

included in OWASA's Water Conservation Plan, which will be an appendix to the LRWSP.

- OWASA continues to support the affordability and cost management strategic theme included in the 2016 update to its Strategic Plan and will carefully weigh the cost impacts of supply alternatives on our customers before selecting a preferred alternative.
- OWASA will actively seek input from the community before it makes decisions concerning future water supply.

Guiding Principles

1. We will continue to provide the community with high-quality treated drinking water that meets or surpasses federal and state public health requirements regardless of the source(s) of supply. Any supply alternative that cannot meet this guiding principle will be eliminated from further consideration.

2. We will consider the following factors for each supply option:

    a. Highest Priority
        i. ability to reduce our vulnerability to extended drought conditions
        ii. ability to improve the reliability and resiliency of our water supply including addressing single points of failure;
        iii. impact on current rates.

    b. High Priority
        i. impact on future rates;
        ii. incremental long-term impacts on the environment from operation of the infrastructure needed to support the water supply;
        iii. incremental impacts on the community from OWASA's participation in the construction and operation of the water supply source including impacts to landowners, recreation, and transportation;
        iv. flexibility to change course as we learn more about future customer demands, growth, climate impacts, and other uncertainties.

    c. Other Considerations
        i. support for regional water supply planning efforts, recognizing that we rely on neighboring water utilities to supply water during our occasional planned and unplanned interruptions to water supply;
        ii. incremental short-term impacts on the environment from development of the water supply and construction of the associated infrastructure including temporary impacts to streams, wetlands, aquatic and terrestrial habitat, and other environmental considerations.

Agenda Item 10:

Review Board Work Schedule

Purpose:

a) Request(s) by Board Committees, Board Members, Counsel and Staff
b) January 13, 2022 Board Work Session
c) January 27, 2022 Board Work Session
d) Review 12 Month Board Meeting Schedule
e) Review Pending Key Staff Action Items
f) Action Items Reoccurring Every 3 to 5+ Years

Information:

- Draft agenda for the January 13, 2022 Meeting of the Board
- Draft agenda for the January 27, 2022 Board Work Session
- 12 Month Board Meeting Schedule
- Pending Key Staff Action Items from Board Meetings
- Action Items Reoccurring Every 3 to 5+ Years

December 9, 2021

Agenda
Work Session of the OWASA Board of Directors
Thursday, January 13, 2022, 6:00 P.M.

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

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

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

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

Announcements

a. 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.

b. Announcements by Board Members

c. Announcements by Staff

Consent Agenda

Action

1. (Tentative) Resolution Appointing Independent Audit Firm for the Orange Water and Sewer Authority's Fiscal Year 2022 Finance Audit (Stephen Winters)
2. Minutes of the December 9, 2021 Work Session of the Board of Directors (Andrea Orbich)
3. Minutes of the December 9, 2021 Closed Session for the Purpose of Discussing a Personnel Matter in Accordance with N.C. General Statutes 143-318.11.6 (Ray DuBose)

Regular Agenda

Information and Reports

DRAFT

4. Employee Health and Dental Insurance Update for Fiscal Year 2023 (Stephanie Glasgow/ Ellen Tucker, Gallagher)
5. Diversity and Inclusion Update (Stephanie Glasgow)

Discussion and Action

6. Long-Range Water Supply Plan – Select Alternative to Provide Access to OWASA's Jordan Lake Allocation for Comparison to Other Viable Supply Alternatives (Ruth Rouse)

Discussion

7. Review Board Work Schedule
   a. Request(s) by Board Committees, Board Members and Staff (Jody Eimers)
   b. January 27, 2022 Board Meeting (Todd Taylor)
   c. February 10, 2022 Work Session (Todd Taylor)
   d. 12 Month Board Meeting Schedule (Todd Taylor)
   e. Pending Key Staff Action Items (Todd Taylor)

Summary of Work Session Items

8. Executive Director will summarize the key staff action items from the Work Session

Closed Session

9. The Board of Directors will meet in Closed Session for the Purpose of Discussing a Personnel Matter in Accordance with N.C. General Statutes 143-318.11.6 (Ray DuBose)

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Agenda
Meeting of the OWASA Board of Directors
Thursday, January 27, 2022, 6:00 P.M.

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

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Announcements

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b. Announcements by Board Members

c. Announcements by Staff

Petitions and Requests

1. Public
2. Board
3. Staff

Consent Agenda

Information and Reports

1. Capital Improvements Program (CIP) Semiannual Report (Allison Spinelli)
2. 12 Month Board Meeting Schedule (Todd Taylor)

Action

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3. Minutes of the January 13, 2022, Closed Session for the Purpose of Discussing a Personnel Matter in Accordance with N.C. General Statutes 143-318.11 (Ray DuBose)

Regular Agenda

Information and Reports

4. 2021 Annual Lakes Recreation Report (Johnny Riley)
5. Financial Report for the Six-Month Period Ended December 31, 2021 (Stephen Winters)

Discussion and Action

6. Long-Range Water Supply Plan – Selection of Preferred Supply Alternative (Ruth Rouse)
7. Final Approval of the Water Conservation Plan Guiding Principles (Amy Armbruster)

Discussion

8. Discuss FY 23 Budget Calendar and Planning Assumptions (Stephen Winters)

Summary of Work Session Items

9. Executive Director will summarize the key staff action items from the Work Session

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OWASA Board of Directors – 12 Month Board Meeting Schedule (December 3, 2021)

Month	Board Meetings		Committee Meetings & Other Board Items
	Work Session	Business Meeting	
December 2021	Award East Main Street Sewer Construction Project – Phase 1 Resolution Authorizing OWASA to Engage Counsel and Participate in PFAS Cost Recovery Litigation Information Session on FY 23 Medical Insurance Renewals Revision of Employee Attendance Award Modification of Employee Personal Leave LRWSP – Evaluate Alternatives for Access to JL Allocation CS – Prepare for ED Interim Review () 12/9/2021	*Holiday – no meeting*	*Strategic Plan Work Session (12-16-2021)* *Board/Staff Panel Meeting to Interview Audit Firms (TBD)*
January 2022	Appoint Audit Firm (Tentative) () LRWSP – Select Jordan Lake Alternative Employee Health and Dental Insurance Update for FY 23 () Review Water Conservation Plan Draft Guiding Principles D&I Update () Discuss Various Factors to Encourage Applications to the OWASA BOD CS – ED Interim Performance Review () 1/13/2022	2021 Annual Lakes Recreation Report () CIP Semiannual Report () Approve Water Conservation Plan Guiding Principles Q2 Financial Report () Discuss FY 23 Budget Calendar and Planning Assumptions () LRWSP – Select Alternative 1/27/2022	*Strategic Plan Work Session (TBD)* *BOD D&I Training Sessions (Tentative - TBD)*
February 2022	Award WTP Belt Filter Press Construction Project LRWSP - Review and Approve CEP Department Managers FY 23 Budget Presentations () Reliability and Resiliency Improvements Update () CS – Prepare for GC Interim Review () 2/10/2022	Award University Lake Permanganate Facility Construction Project Award Bolinwood Interceptor Construction Project (Tentative) Receipt of the OC Board of Health Report on Drinking Water Fluoridation CS – GC Interim Review () 2/24/2022	*Strategic Plan Work Session (TBD)*
March 2022	FY 23 Draft Budget () Annual Update of the Energy Management Plan () 3/10/2022	Set date for Public Hearings – FY 23 Budget & Rates () FY 23 Draft Budget and Rate Adjustment () Affordability Program Update () 3/24/2022	
April 2022	Review Employee Health and Dental Insurance Renewals () Award Secondary Clarifier No. 4 Construction Project FY 23 Draft Budget and Rate Adjustment () Strategic Plan Update BOD Eligible for Nominations to Election as Board Officers (include Officer descriptions) () Planning for BOD Self-Assessment () 4/14/2022	Q3 Financial Report () Authorize Staff to Publish FY 23 Budget and Rate Information () BOD Eligible for Nominations to Election as Board Officers (include Officer descriptions – if needed) () 4/28/2022	*Mitigation Banking Field Trip (TBD)*
May 2022	Approve Employee Insurance Renewals () Employee Merit Pay for FY 23 () Strategic Plan Update CS – Prepare ED Annual Review () 5/12/2022	Public Hearings – FY 23 Budget and Rates () Approve Employee Insurance Renewals () CS –ED Annual Performance Review () (Public Hearings) 5/26/2022	
June 2022	Approve FY 23 Budget and Rates (including Employee Merit Pay decision) () Strategic Plan Update	TBD	

OWASA Board of Directors – 12 Month Board Meeting Schedule (December 3, 2021)

Month	Board Meetings		Committee Meetings & Other Board Items
	Work Session	Business Meeting	
	Election of Officers (↻) 6/9/2022	6/23/2022	
July 2022	D&I Update (↻) Strategic Plan Update 7/14/2022	TBD 7/28/2022	*Possible welcome of new Board member(s)*
August 2022	TBD 8/11/2022	Preliminary 12 Month Financial Report (↻) CIP Semiannual Report (↻) CS – Prepare GC Annual Review (↻) 8/25/2022	
September 2022	Annual Report on Disposal of Surplus Personal Property (↻) EEO/Affirmative Action Report and D&I Update (↻) Review Draft Strategic Plan CS – GC Annual Review (↻) 9/8/2022	Annual Report and Financial Audit (↻) Approve GC Engagement (↻) Forest Management Program Update (↻) Approve Strategic Plan (Annual Meeting of the BOD) 9/22/2022	
October 2022	TBD 10/13/2022	Strategic Trends Report (↻) Q1 Financial Report (↻) 10/27/2022	
November 2022	TBD 11/10/2022	*Holiday – no meeting*	

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

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

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

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

- Development of a plan and policy framework for OWASA lands is considered a longer-term priority. The NRTS Committee discussed this issue in September 2017 and determined it was lower priority than Forest Management.

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

Abbreviations Used in Draft Schedule:

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

OWASA Board of Directors – 12 Month Board Meeting Schedule (December 3, 2021)

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

Pending Key Staff Action Items from Board Meetings

No.	Date	Action Item	Target Board Meeting Date	Person(s) Responsible	Status
1.	11-11-2021	Incorporate Board feedback into the draft Water Conservation Plan Guiding Principles.	1-13-2022	Armbruster Rouse Tiger	
2.	11-11-2021	Provide a draft schedule for new budget format development, and research opportunities for consultant assistance with new budget format.	TBD	Winters	
3.	11-11-2021	Add agenda item to a future Board meeting regarding various factors to encourage applications to the OWASA Board.	1-13-2022	Orbich Taylor	
4.	10-28-2021	Evaluate trends in the labor market, cyber security, etc.	NA	Taylor Directors	
5.	7-8-2021	Schedule Board D&I training session.	NA	Taylor Orbich	Will be scheduled once a consultant is hired.
6.	7-8-2021	Schedule separate Board Work Sessions to update the Strategic Plan this fall and winter.	11-18-2021 12-16-2021	Orbich Tiger	November and December sessions scheduled; will schedule 2022 sessions in December.

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 (Note: the Board agreed to consider updating the 1996 Cane Creek Reservoir Watershed Study as part of the Strategic Plan process following completion of the Long-Range Water Supply Plan)	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	TBD	3-5 years	Executive Director and Strategic Initiatives Manager
2.	Local Water Supply Plan and Water Shortage Response Plan	NC General Statues 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	1) If staff identifies a policy or material change in the update of the Plans, Board guidance is required 2) Approve Plans	Spring 2022 (if policy or material change)	Spring 2023 (to align with Local Water Supply Plan for calendar year 2022)	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	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 (will be sooner if water demands post COVID continue to be lower than anticipated)	2029	10 years	Planning and Development Manager

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
4.	Cost of Service Rate Study	1) Ensure OWASA's rates, fees and charges continue to meet the goals of the organization (e.g. sustainability, conservation, affordability, etc.) 2) Update cost allocations and adjust rates as necessary. NC General Statues requires review of System Development Fees every 5 years.	1) Provide guidance to staff on draft Rate Study 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	FY 2023	FY 2023	5 years	Director of Finance and Customer Service
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 2021	Spring 2022	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	2029	2030	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.	1) Provide guidance to staff about OWASA's Financial Management objectives 2) If needed, approve update to Financial Management Policy	FY 2022	FY 2022	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.	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	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	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