



ORANGE WATER AND SEWER AUTHORITY

*A public, non-profit agency providing water, sewer and reclaimed water services
to the Carrboro-Chapel Hill community.*

Agenda

Work Session of the OWASA Board of Directors

Thursday, April 11, 2019, 6:00 P.M.

OWASA Community Room

The Board of Directors appreciates and invites the public to attend and observe its meetings. For the Board's Work Session, public comments are invited on only items appearing on this agenda. Speakers are invited to submit more detailed comments via written materials, ideally submitted at least three days in advance of the meeting to the Clerk to the Board via email or US Postal Service (aorbich@owasa.org/400 Jones Ferry Road, Carrboro, NC 27510).

For items 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.
 - Mr. Fred Battle, former OWASA Board Member, passed away on Monday, April 1, 2019
- b. Announcements by Board Members
 - Members of the Orange County Board of Commissioners and Orange County Appointees to the OWASA Board will meet on Thursday, April 25, 2019 at 8:00 AM in the OWASA Boardroom to discuss items of mutual interest (Ray DuBose)
- c. Announcements by Staff
 - Introduction of Tyrus Johnson, OWASA's new Safety and Risk Manager (Stephanie Glasgow)
- d. Additional Comments, Suggestions, and Information Items by Board Members (Yinka Ayankoya)

Consent Agenda

Information and Reports

1. Quarterly Report on Board and Committee Meetings (Andrea Orbich)

Action

2. Award the Manning Drive and Country Club Road Water Main Replacement Project Construction Contract (Allison Reinert)
3. Minutes of the March 14, 2019 Meeting of the Board of Directors (Andrea Orbich)
4. Minutes of the March 28, 2019 Closed Session of the Board of Directors to Discuss a Personnel Matter (Robert Morgan)

Regular Agenda

Discussion

5. Review Employee Health and Dental Insurance (Stephanie Glasgow/Ellen Tucker, Hill, Chesson & Woody)

AGENDA

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6. Review Fiscal Year 2020 Budget and Rate Adjustment Options (Stephen Winters)
7. Long-Range Water Supply Plan: Supply and Demand Management Alternatives (Ruth Rouse)
8. Draft Community Engagement Plan for Forest Management (Linda Low/Ruth Rouse)
9. Discussion of Election Procedures and Bylaws (Yinka Ayankoya)
10. Review Board Work Schedule (Yinka Ayankoya/Ed Kerwin)
 - a. Request(s) by Board Committees, Board Members and Staff
 - b. April 25, 2019 Board Meeting
 - c. May 9, 2019 Work Session
 - d. 12 Month Board Meeting Schedule
 - e. Pending Key Staff Action Items

Summary of Work Session Items

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

Agenda Item 1**ORANGE WATER AND SEWER AUTHORITY - QUARTERLY REPORT****ATTENDANCE AT BOARD AND COMMITTEE MEETINGS**

BOARD OF DIRECTORS	JANUARY 2019	FEBRUARY 2019	MARCH 2019
YINKA AYANKOYA, CHAIR	January 9 D&I (Meeting) January 10 WS (Meeting) January 24 Board (Meeting)	February 5 HR (Absent) February 14 WS (Meeting) February 28 WS (Meeting)	March 5 CE (Meeting) March 14 WS (Meeting) March 18 HR (Meeting) March 28 Board (Meeting)
JEFF DANNER, VICE CHAIR	January 9 D&I (Absent) January 10 WS (Meeting) January 24 Board (Meeting)	February 5 HR (Absent) February 14 WS (Meeting) February 28 WS (Meeting)	
RAY DUBOSE, SECRETARY	January 9 D&I (Meeting) January 10 WS (Meeting) January 24 Board (Meeting)	February 5 HR (Meeting) February 14 WS (Meeting) February 28 WS (Absent)	March 5 CE (Meeting) March 14 WS (Meeting) March 18 HR (Meeting) March 28 Board (Meeting)
BRUCE BOEHM	January 9 D&I (Meeting) January 10 WS (Meeting) January 24 Board (Meeting)	February 14 WS (Meeting) February 28 WS (Absent)	March 5 CE (Meeting) March 14 WS (Meeting) March 28 Board (Meeting)
JODY EIMERS	January 9 D&I (Meeting) January 10 WS (Meeting) January 24 Board (Meeting)	February 14 WS (Meeting) February 28 WS (Meeting)	March 5 CE (Meeting) March 14 WS (Meeting) March 28 Board (Absent)
ROBERT MORGAN	January 9 D&I (Meeting) January 10 WS (Meeting) January 24 Board (Meeting)	February 5 HR (Meeting) February 14 WS (Meeting) February 28 WS (Meeting)	March 14 WS (Meeting) March 18 HR (Meeting) March 28 Board (Meeting)
JOHN N. MORRIS	January 9 D&I (Meeting) January 10 WS (Meeting) January 24 Board (Meeting)	February 14 WS (Meeting) February 28 WS (Meeting)	March 5 CE (Absent) March 14 WS (Meeting) March 28 Board (Meeting)
RUCHIR VORA	January 9 D&I (Meeting) January 10 WS (Meeting) January 24 Board (Meeting)	February 5 HR (Absent) February 14 WS (Meeting) February 28 WS (Meeting)	March 5 CE (Meeting) March 14 WS (Meeting) March 18 HR (Meeting) March 28 Board (Absent)

APRIL 11, 2019

BOARD OF DIRECTORS	JANUARY 2019	FEBRUARY 2019	MARCH 2019
JOHN A. YOUNG	January 9 D&I (Meeting) January 10 WS (Meeting) January 24 Board (Meeting)	February 5 HR (Meeting) February 14 WS (Meeting) February 28 WS (Meeting)	March 5 CE (Meeting) March 14 WS (Meeting) March 18 HR (Meeting) March 28 Board (Meeting)
TOTAL MEETINGS HELD:	3	3	4

Board – Board of Directors
CE – Community Engagement Committee
D&I – Diversity and Inclusion
HR – Human Resources Committee
WS – Work Session

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Agenda Item 2:

Award the Manning Drive and Country Club Road Water Main Replacement Project Construction Contract

Purpose:

This memorandum recommends that the OWASA Board award a construction contract to Moffat Pipe, Inc. (“Moffat”) for the construction of the Manning Drive and Country Club Road Water Main Replacement Project (“Project”).

Background:

The Project is part of OWASA’s High Priority Water Main Replacement Program and overall goal to replace or abandon aging water mains to ensure a safe and reliable supply of drinking water for our customers. Due primarily to their break history, age, and material, the existing mains within this project were identified as a high priority for replacement by our Water Main Prioritization Model. Additionally, Manning Drive scored high on prioritization due to its location and service to the University of North Carolina - Chapel Hill (UNC) and the UNC Hospitals.

The Project consists of two separate sites:

- The Manning Drive site (Attachment 1a) extends along Manning Drive from its intersection with Ridge Road to the intersection along Fordham Boulevard. Approximately 3,100 feet of existing approximately 47 to 60 year old 12-inch asbestos cement (AC) pipe will be replaced by new 12-inch ductile iron pipe.
- The Country Club Road site (Attachment 1b) runs along Country Club Road from its intersection with Battle Lane to the intersection with Gimghoul Road. Approximately 1,600 feet of existing approximately 66 year old 12-inch AC pipe will be replaced by new 12-inch ductile iron pipe.

Throughout design, OWASA coordinated with the Town of Chapel Hill, UNC, UNC Hospitals, and the North Carolina Department of Transportation (NCDOT) to address construction impacts on traffic, university activities, safety, and hospital access. OWASA plans to continue coordination and communication with these stakeholders before construction commences as well as throughout construction as part of the overall Community Engagement Plan for this project. Construction is expected to last approximately 10 months.

Advertising and Bidding

CJS Conveyance, PLLC (“Engineer”) developed complete design and specifications for the improvements during Fiscal Year 2019. Prospective bidders were screened through our standard prequalification process, which involved having interested contractors submit a package outlining their qualifications, including past performance on similar projects, credentials of their management team, safety record, etc. Only those firms that clearly

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demonstrated the capability to adequately perform the work were invited to submit bids.

Construction procurement details are summarized below:

Event	Date	Notes
Solicitation of Contractor Qualifications	March 23, 2018	7 contractors were prequalified to bid
Construction Contract Advertised for Bid	February 15, 2019	4 prequalified contractors attended the mandatory pre-bid meeting
Construction Contract Initial Bid Deadline	March 19, 2019	One bid received, not opened
Construction Contract Advertised for Rebid	March 19, 2019	N/A
Construction Contract Rebid Deadline	March 28, 2019	One bid received and opened publicly

A copy of the certified bid tabulation is attached with the Engineer's recommendation for award (Attachment 2), and the results are summarized below:

Moffat Pipe, Inc.	\$3,448,820.00
<i>Engineer's Final Estimate</i>	<i>\$2,940,000.00</i>

Minority and Women Business Enterprise (MWBE) Participation

OWASA's Minority Business Participation Outreach Plan and Guidelines include all of the statutory requirements from the State of North Carolina, and specify a 10% goal for participation by minority businesses. In keeping with standard practice, OWASA staff took several actions to solicit minority participation in this contract, including advertising the Request for Qualifications in the Greater Diversity News, North Carolina Institute of Minority Economic Development, North Carolina Department of Administration Historically Underutilized Businesses, OWASA's website, and plan rooms. OWASA also requires bidders to complete "good faith" efforts to solicit participation by minority subcontractors. OWASA staff publicly advertised the formal bid as an additional effort to encourage participation by subcontractors, and also directly notified MWBE-certified subcontractors within a 50-mile radius about the upcoming subcontracting opportunity.

The apparent low bidder (Moffat) is a Women Owned Business Enterprise (WBE) and they anticipate self-performing at least \$2,070,000.00 of the work. While none of Moffat's identified subcontractors are certified MWBE firms, Moffat provided documentation of their good faith efforts to employ MWBE subcontractors where those opportunities exist. The total percentage of work going to an MWBE in this contract is approximately 60%.

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Bid Analysis and Recommendation

Only one bid was received, and it was 17% higher than the Engineer's estimate. There were several contractual requirements for the work along Manning Drive which led to low bidder turnout and higher cost. Due to its location as a main avenue into campus and to the hospital, NCDOT required that construction along Manning Drive be done at night to minimize traffic disruption. The requirement for nightwork and the small amount of patching allowed before final paving approved by NCDOT resulted in a premium on pavement restoration costs for this half mile of water main replacement. Additionally, traffic control costs for both Manning Drive and Country Club Road were bid at a higher price than was originally anticipated due to additional NCDOT permit requirements. Given these requirements, and under the current bidding climate, staff believes the low bid to be an acceptable cost for the work and recommends awarding the contract.

Moffat's ability to complete this project was evaluated thoroughly during the prequalification process, and they demonstrated sufficient qualifications in past project performance, personnel qualifications/experience, reference checks, and all other rated categories. Moffat completed the Hillsborough Street Water Main Replacement Project, the recent Pritchard Avenue Main Replacement Project, and numerous other successful water main replacements for OWASA over the past several years. OWASA staff also determined that Moffat's safety performance, relevant project experience, bonding capacity, and other non-rated categories met our requirements.

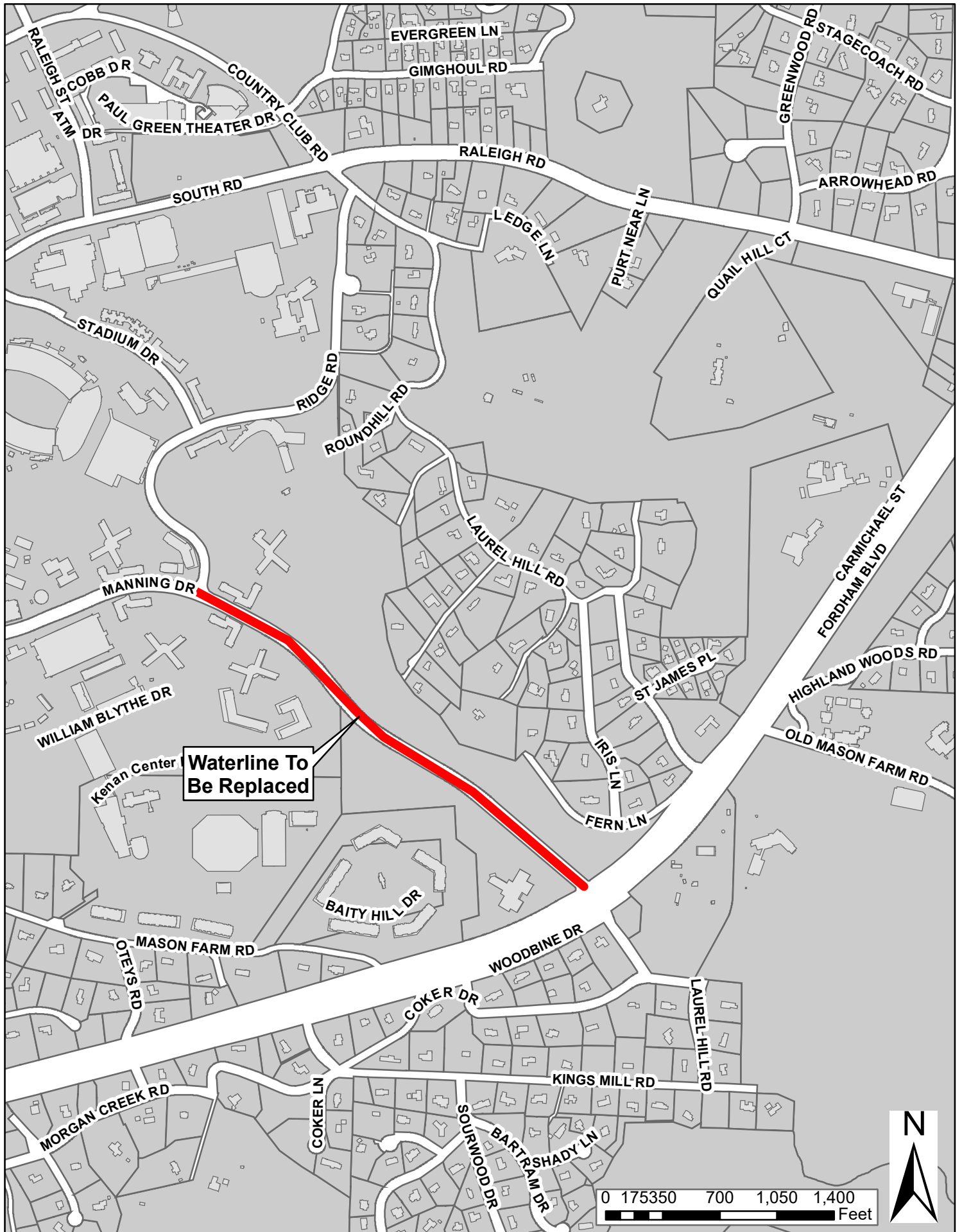
The Engineer's recommendation that the construction contract for this project be awarded to Moffat is attached along with the certified bid tabulation (Attachment 2). OWASA staff concurs with this recommendation and requests the Board's adoption of the attached resolution (Attachment 3) awarding the construction contract to Moffat.

Information

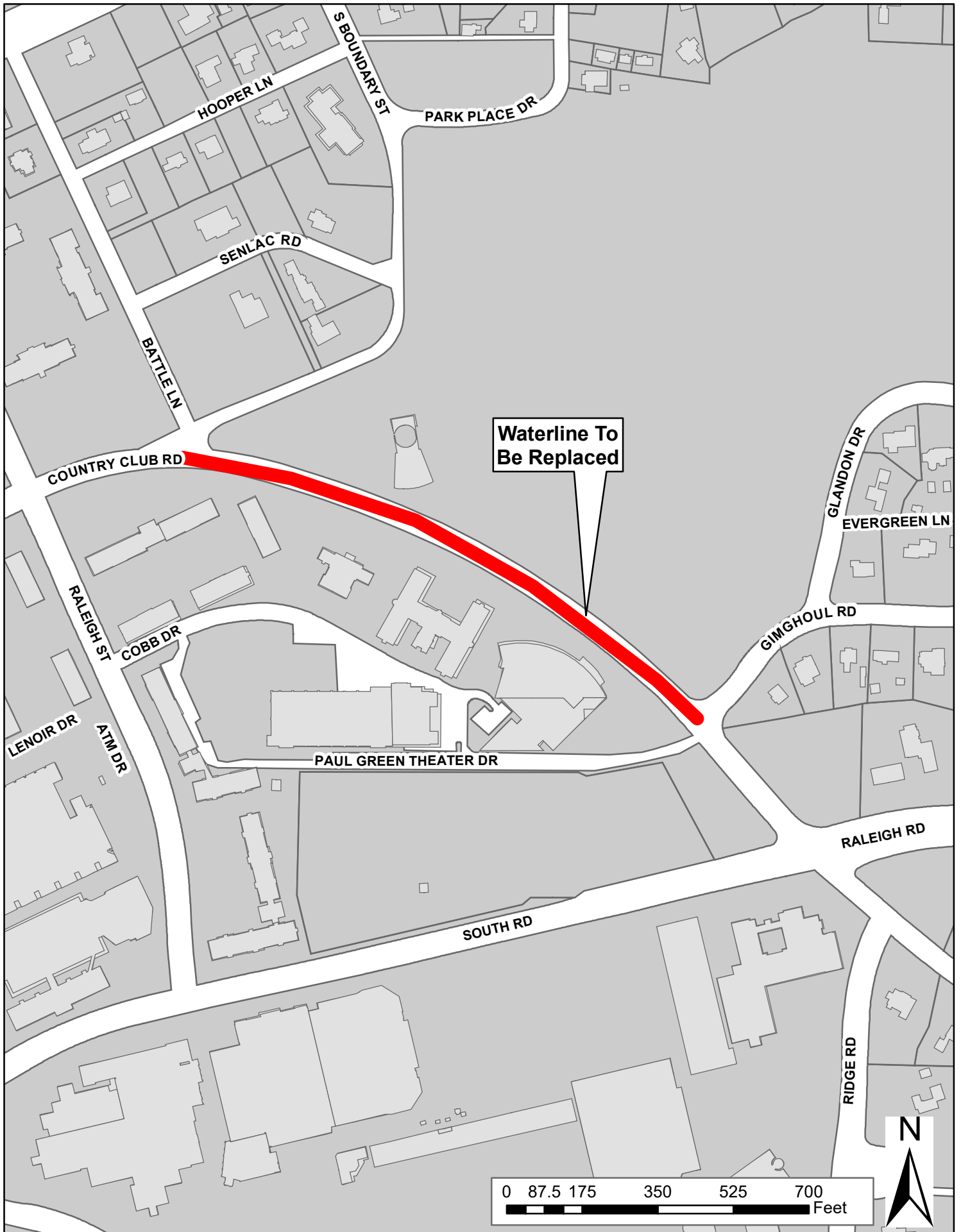
- Project Location Maps (Attachments 1a and 1b)
- Engineer's Recommendation for Award and Certified Bid Tabulation (Attachment 2)
- Resolution (Attachment 3)

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Site Location Map- Manning Drive



Site Location Map - Country Club Road





320 S. Academy Street
Cary, NC 27511

919-890-3877 (direct)
919-818-8322 (mobile)

www.cjsconveyance.com

April 1, 2019

Allison Reinert, P.E.
Utilities Engineer
Orange Water and Sewer Authority
400 Jones Ferry Road
Carrboro, North Carolina 27510

Re: High Priority Water Mains Project – Manning Drive and Country Club Road Water Main Replacement Recommendation of Award

Dear Ms. Reinert:

Please find enclosed the certified bid tabulation for the Manning Drive and Country Club Road Water Main Replacement Project. Submitted bids were opened and read aloud on March 28, 2019 at 10:00 am in the offices of Orange Water and Sewer Authority on Jones Ferry Road.

A single bid was submitted for the project, which was a second attempt at a bid opening due to a single bidder being present at the first bid opening attempt on March 19, 2019. The bidder, Moffat Pipe, Inc. of Wake Forst, North Carolina, was on the list of approved bidders as determined during the pre-qualification for this project and as listed in the bidding documents. Moffat Pipe submitted a bid price of **\$3,448,820.00**. Their bid has been reviewed and is deemed complete. After a review of the provided bid proposal versus the requirements in the bidding documents Moffat Pipe, Inc. is deemed to possess satisfactory qualifications to perform the work required for this project. Furthermore, we recommend the award of the project to Moffat Pipe Inc.

Please feel free to contact me at 919-890-3877 or sleitch@cjsconveyance.com if you have any questions or would like to discuss further.

Sincerely,

Stephen D. Leitch, PE
Project Manager

Enc: Certified Bid Tabulation

cc: file

Certified Bid Tabulation

Manning Drive and Country Club Road Water Main Replacement Project

Orange Water and Sewer Authority
Carrboro, NC

Item No.	Description	Unit	Estimated Quantity	Moffat Pipe, Inc.	
				Unit Price	Extended Total
1a	12" Ductile Iron Water Main, PC 350 Restrained Joint	LF	4,780	\$215.00	\$1,027,700.00
1b	8" Ductile Iron Water Main, PC 350 Restrained Joint	LF	380	\$200.00	\$76,000.00
1c	6" Ductile Iron Water Main, PC 350 Restrained Joint	LF	30	\$250.00	\$7,500.00
2	Sanitary Sewer Replacement at Water Main Crossings	EA	2	\$20,000.00	\$40,000.00
3	Ductile Iron Bends and Fittings	LBS	16,000	\$12.00	\$192,000.00
4a	12" Transition Coupling	EA	3	\$4,500.00	\$13,500.00
4b	8" Transition Coupling	EA	4	\$4,000.00	\$16,000.00
4c	6" Transition Coupling	EA	2	\$4,000.00	\$8,000.00
5a	12" Gate Valve Assembly	EA	29	\$6,000.00	\$174,000.00
5b	8" Gate Valve Assembly	EA	14	\$5,000.00	\$70,000.00
5c	6" Gate Valve Assembly	EA	1	\$4,000.00	\$4,000.00
6	12" Insertion Gate Valve	EA	1	\$35,000.00	\$35,000.00
7	Fire Hydrant Assembly	EA	2	\$8,000.00	\$16,000.00
8	Air Release Valve Assembly	EA	2	\$7,500.00	\$15,000.00
9a	Connect to Exist. 12" Water Main	EA	6	\$8,000.00	\$48,000.00
9b	Connect to Exist. 8" Water Main	EA	10	\$5,000.00	\$50,000.00
9c	Connect to Exist. 6" Water Main	EA	3	\$4,750.00	\$14,250.00
10	Connect to 2" Water Service	EA	1	\$5,500.00	\$5,500.00
11	Temporary Blow-Off Assembly	EA	15	\$5,000.00	\$75,000.00
12	Single 3/4" Water Service	EA	1	\$7,500.00	\$7,500.00
13	Abandon Existing Water Mains in Place	LS	5,860	\$12.00	\$70,320.00
14a	Milling of Asphalt	SY	4,650	\$10.00	\$46,500.00
14b	Surface Course (SF9.5A)	TN	650	\$285.00	\$185,250.00
14c	Base Course (B25.0B)	TN	1,430	\$200.00	\$286,000.00
14d	Aggregate Base Course	TN	5,200	\$35.00	\$182,000.00
15	Miscellaneous Surface Restoration	LS	1	\$210,000.00	\$210,000.00
16	Miscellaneous Concrete	CY	60	\$950.00	\$57,000.00
17	Offsite Fill Material	CY	200	\$20.00	\$4,000.00
18	Undercut and Replace with #57 Stone	CY	150	\$50.00	\$7,500.00
19	Trench Rock Removal by Mechanical Means	CY	170	\$200.00	\$34,000.00
20	Trench Rock Removal by Blasting	CY	170	\$40.00	\$6,800.00
21	Remove and Replace Curb and Gutter	LF	100	\$150.00	\$15,000.00
22	Traffic Control	LS	1	\$200,000.00	\$200,000.00
23	Town of Chapel Hill Street Cut Allowance	-	-	-	\$50,000.00
24	Town of Chapel Hill Permit Fee Allowance	-	-	-	\$2,500.00
25	Contingency Allowance	-	-	-	\$25,000.00
26	Mobilization (Less than 5% of Bid)	LS	1	\$172,000.00	\$172,000.00
Total Bid Amount					\$3,448,820.00

CERTIFICATION

The bids shown herein were opened and read aloud at the Orange Water and Sewer Authority office located 400 Jones Ferry Road in Carrboro, North Carolina 27510 on March 28, 2019, at 10:00 a.m. The bids shown represent the total bid amount provided on the original Bid Form of each Bidder's proposal.



Stephen D. Leitch, P.E.
CJS Conveyance, PLLC



Attachment 3

Resolution Awarding a Construction Contract for the Manning Drive and Country Club Road Water Main Replacement Project

Whereas, OWASA's Water Main Prioritization Model identified the need to replace sections of the 12-inch asbestos cement water mains along Manning Drive and Country Club Road due to their break history, age, material, criticality, and other factors; replacement with ductile iron pipe will increase water service reliability by reducing the risk of water main breaks in this area.

Whereas, CJS Conveyance, PLLC prepared the plans and specifications for the construction of this project; and

Whereas, a request for contractor qualifications was advertised on the websites of the North Carolina Institute of Minority Economic Development and the North Carolina Department of Administration, and on OWASA's website on March 23, 2018, and seven contractors were pre-qualified to bid; and

Whereas, prequalified contractors were formally invited to submit construction bids for the project on February 15, 2019; having received one bid on the initial bid deadline, the project was subsequently re-advertised for bids on March 19, 2019; one bid was received and opened on the re-bid deadline on March 28, 2019; and

Whereas, Moffat Pipe, Inc. of Wake Forest, North Carolina is the low responsive, responsible bidder for the project; and

Whereas, the Board approved a resolution authorizing funds for Capital Improvement Projects on June 14, 2018, including funds for this project as part of the High Priority Water Main Replacement Program;

Now, Therefore, Be It Resolved:

1. That the Orange Water and Sewer Authority Board of Directors awards the construction contract to Moffat Pipe, Inc., the low responsive, responsible bidder for the Manning Drive and Country Club Road Water Main Replacement Project, in accordance with the approved plans and specifications, in the amount of \$3,448,820.00, 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 11th day of April, 2019.

Yinka Ayankoya, Chair

ATTEST:

Raymond E. DuBose, Secretary

Agenda Item 3

Orange Water and Sewer Authority

Meeting of the Board of Directors

March 14, 2019

The Board of Directors of the Orange Water and Sewer Authority (OWASA) met in a work session on Thursday, March 14, 2019, at 6:00 p.m. in OWASA's Community Room, 400 Jones Ferry Road, Carrboro.

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

OWASA staff present: Justin Andrews, Brett Bradshaw, Sandra Bradshaw, David Brooks, Mary Darr, Patrick Davis, Robert Epting, Esq., (Epting and Hackney), Vishnu Gangadharan, Stephanie Glasgow, Alicia Grey, Ed Kerwin, Simon Lobdell, Dale Lovely, Linda Low, Addison McDonough, Terry Mossow, Andrea Orbich, Dan Przybyl, Allison Reinert, Nicholas Rogers, Ruth Rouse, Todd Taylor, Mary Tiger, Stephen Winters, Gil Womble and Richard Wyatt.

Others present: Meg Holton (UNC Water Resources Manager), Barbara Foushee (Carrboro Board of Aldermen), Cathy Horton, Reed Palmer (Hazen and Sawyer) and Ben Poulson (UNC Associate Director of Energy Services).

Motions

1. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Approving a Sole Source Procurement for the Belt Filter Press Replacement. (Motion by Robert Morgan, second by John Young and unanimously approved.)
2. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Approving an Update to the Policy on Confidentiality of Individual Customers' Billing and Water-Consumption Records and Data. (Motion by Robert Morgan, second by John Young and unanimously approved.)
3. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts the Resolution Authorizing Orange Water and Sewer Authority's Executive Director to Apply for Loans from the State of North Carolina. (Motion by Robert Morgan, second by John Young and unanimously approved.)
4. Robert Morgan made a motion to approve the Minutes of the January 24, 2019 Meeting of the Board of Directors; second by John Young and unanimously approved.
5. Robert Morgan made a motion to approve the Minutes of the February 14, 2019 Meeting of the Board of Directors; second by John Young and unanimously approved.
6. Robert Morgan made a motion to approve the Minutes of the February 14, 2019 Closed Session of the Board of Directors to Discuss a Personnel Matter; second by John Young and unanimously approved.

7. BE IT RESOLVED THAT the Board of Directors of the Orange Water and Sewer Authority adopts Resolution Honoring Randy T. Horton to the Orange Water and Sewer Authority. (Motion by Ray DuBose, second by John Morris and unanimously approved.)

8. Bruce Boehm made a motion to set the rate for manual read meters to the same rate as the charge for other customer site visits, effective at the time of the next rate adjustment; second by Ruchir Vora and the motion passed with a vote of five to three with Ray DuBose, Robert Morgan and John Morris opposed.

* * * * *

Announcements

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

Ruchir Vora said the Community Engagement Committee met on March 5, 2019 to discuss Agua Vista Web Portal. Information on the public roll-out of the portal was shared; the Agua Vista Web Portal goes live on Monday, March 18, 2019 and customers will start receiving invitational emails and letters.

Mr. Vora said the Chapel Hill Town Council OWASA Committee and Chapel Hill Appointees to the OWASA Board met on March 14, 2019. Topics discussed included: Chapel Hill appointments to the OWASA Board; Water System Resiliency; Agua Vista Web Portal; the Mayor's water conservation challenge; update on Sewers for Historic Rogers Road Area; and an overview of our new Forestry Management Approach. The information was well-received, and everyone agreed to continue meeting three times a year.

Robert Morgan said the Human Resources Committee will meet on Monday, March 18, 2019 at 8:00 a.m. in the OWASA Boardroom to continue discussing OWASA's deferred compensation plan (457) benefit.

Ray DuBose said he attended the International District Energy Association 32nd Annual Campus Energy Conference in New Orleans, Louisiana. Mr. DuBose shared a few takeaways from the conference regarding resiliency and reliability and how well OWASA prepared for hurricanes in 2018 and November water emergency. Mr. DuBose shared information on possible 2050 climate change affects across the country.

Mr. Morgan said he received information on OWASA's Youth Water Academy and suggested OWASA approach Carrboro and Chapel Hill to inquire if there is interest in a "government day" for high school students to expose the students to the various careers local governments provide.

Item One: Sole Source Procurement of a new Belt Filter Press for the Jones Ferry Road Water Treatment Plant

Robert Morgan made a motion to approve the resolution; second by John Young and unanimously approved. Please see Motion 1 above.

Item Two: Resolution Approving an Update to the Policy on Confidentiality of Individual Customers' Billing and Water-Consumption Records and Data

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

Item Three: Resolution Authorizing Orange Water and Sewer Authority's Executive Director to Apply for Loans from the State of North Carolina

Robert Morgan made a motion to approve the resolution; second by John Young and unanimously approved. Please see Motion 3 above.

Item Four: Minutes

Robert Morgan made a motion to approve the Minutes of the January 24, 2019 Meeting of the Board of Directors; second by John Young and unanimously approved. Please see Motion 4 above.

Item Five: Minutes

Robert Morgan made a motion to approve the Minutes of the February 14, 2019 Meeting of the Board of Directors; second by Bruce Boehm and unanimously approved. Please see Motion 5 above.

Item Six: Minutes

Robert Morgan made a motion to approve the Minutes of the February 28, 2019 Closed Session of the Board of Directors to Discuss a Personnel Matter; second by John Young and unanimously approved. Please see Motion 6 above.

Item Seven: Resolution Honoring the Service of Randy T. Horton to the Orange Water and Sewer Authority

Ray DuBose made a motion to approve the resolution; second by John Morris and unanimously approved. Please see Motion 7 above.

The Board and staff expressed deep appreciation to Randy Horton for his service to OWASA and this community, and announced his retirement celebration will be held on Wednesday, March 27, 2019 at 2:00 p.m. at the Operations Center. Mr. Horton will retire on March 31, 2019 with over 42 years of dedicated service to OWASA and the Carrboro-Chapel Hill-Orange County community.

Item Eight: Diversity and Inclusion Program Update

The Board received a report on OWASA's Diversity and Inclusion (D&I) Program from the Diversity Resource Group which is a group of employee volunteers who help guide and promote D&I efforts. Sandra Bradshaw (Laboratory Supervisor – Wastewater Treatment Plant), Addison McDonough (Business Systems Analyst) and Alicia Grey (Administrative Assistant) provided an update on their work to date.

Item Nine: Review Status of Agua Vista Manual Read Option

In the Fall of 2017, the Board adopted a policy that defines terms of a "manual read option" for customers who object to having an Agua Vista meter installed at their residence. The policy sets forth the terms for performing manual meter readings including establishing a charge of \$25 per month to cover the costs of an OWASA employee traveling to a customers' site. Under the policy, only existing customers (residents who were customers at the time Agua Vista was implemented) are eligible for the manual read option. The Board considered making changes to the policy.

Robert Morgan made a motion to allow customers to choose the manual read option at any time; there was no second and the motion failed.

Robert Morgan made a motion to set the rate for manual read meters at \$30 per month, effective October 1, 2019, with an incremental \$5 per year increase until the rate is the same as the charge for other customer site visits (currently \$45); second by John Morris and the motion failed.

Ruchir Vora made a motion to set the rate for manual read meters at \$45 per month, effective October 1, 2019; second by Jody Eimers and the motion failed.

Yinka Ayankoya stated that customers who choose to have their meters read manually should pay the true cost of service of \$45 per monthly read to avoid compromising the affordability of service for all OWASA customers.

Bruce Boehm made a motion to set the rate for manual read meters to the same rate as the charge for other customer site visits, effective at the time of the next rate adjustment; second by Ruchir Vora and the motion passed with a vote of five to three with Ray DuBose, Robert Morgan and John Morris opposed. Please see motion 8 above.

Item Ten: Long-Range Water Supply Plan: Demands and Yield

The Board received and discussed a presentation on the development of the raw water demand projections including a Monte Carlo analysis completed to capture uncertainty in the projections. The raw water demand projections will be used as the basis to evaluate water supply and demand management options to meet the community's 2070 water needs.

The Board agreed that staff will use the 1st and 99th percentiles from the Monte Carlo analysis to illustrate the uncertainty in our demand projections.

The Board also agreed that staff will determine which percentile projection values to use to evaluate the various water supply and demand management alternatives against the criteria included in the goals and objectives.

Item Eleven: Review Preliminary Fiscal Year 2020 Budget Information

Stephen Winters, Director of Finance and Customer Service, gave a brief introduction to the draft operating budget for Fiscal Year (FY) 2020.

The Board requested additional information regarding what type of assets are included in the equipment maintenance budget and why the FY 2020 draft budget is higher than the budget for FY 2019.

John Young suggested that the Board may want to consider adjustments to employee health insurance benefits as part of the operating budget.

The Board will discuss drafts of the FY 2020 capital equipment, capital improvements and operating budgets, as well as rate adjustment information, on March 28, 2019.

Item Twelve: Draft Conceptual Approaches to Secure Access to OWASA's Jordan Lake Allocation

The Board received and discussed draft approaches to secure access to OWASA's Jordan Lake Allocation.

Item Thirteen: Review Board Work Schedule

The Board agreed that Ray DuBose will serve on Orange County's inter-agency Climate Committee.

The Board agreed that staff will revise the Community Engagement Plan approach for Forestry Management to indicate the Board will receive a report on the proposed community meeting summarizing feedback received on the overall approach, guiding principles and other matters important to stakeholders. This will be discussed by the Board on April 11, 2019.

The Board agreed that staff will add a banking request for proposals as an agenda item to the 12 Month Board Meeting Schedule.

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

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

- Implement the Board's decision on the rate for manual read meters;
- Proceed with work on Long-Range Water Supply Plan to develop water supply and demand management alternatives;
- Provide responses to questions regarding draft Fiscal Year 2020 Budget;

- Add banking request for proposals to the 12-Month Board Meeting Schedule; and
- Update draft Community Engagement Plan approach for Forestry Management to reflect new guidance.

Item Fifteen: Closed Session

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

The Board meeting was adjourned at 9:25 p.m.

Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachments

DRAFT

Agenda Item 4

Orange Water and Sewer Authority

Closed Session of the Board of Directors

March 28, 2019

The Board of Directors of Orange Water and Sewer Authority met in Closed Session in on Thursday, March 28, 2019, following the Board meeting.

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

Staff present: Ed Kerwin (Executive Director).

ITEM ONE

The Board of Directors met in Closed Session with the Executive Director to evaluate Executive Director's semiannual performance review.

No official action was taken at the meeting.

The meeting was adjourned at 9:03 p.m.

Robert Morgan, Chair
Human Resources Committee

Agenda Item 5:

Review Employee Health and Dental Insurance

Purpose:

Information and update from staff and Hill, Chesson and Woody a Gallagher Company to generate Board discussion and guidance regarding employee insurances beginning July 1, 2019.

Background:

The Orange Water and Sewer Authority began using the firm of Hill, Chesson and Woody in April 2014 to manage benefit plans and negotiate premiums for Employee Health, Dental, Life, Dependent Life, AD&D and LTD Insurance.

The current Employee Health and Dental contracts expire on June 30, 2019.

The Board received a presentation from Hill, Chesson and Woody in January 2019 that included:

- Financial Performance of Health Insurance Plan
- Overview of Claims Data
- Renewal Considerations

Information:

At the April 11, 2019 Board Work Session, Ellen Tucker with Hill, Chesson and Woody will be presenting information on the following:

- Health Plan Renewal
 - Financial Performance
 - Benchmarking with Area Entities
 - Additional Renewal Options and Considerations
- Dental Plan Renewal
- Next Steps

April 11, 2019

Agenda Item 6:

Review Fiscal Year 2020 Budget and Rate Adjustment Options

Purpose:

The purpose of this discussion is to provide the Board of Directors with information about the draft budget for Fiscal Year (FY) 2020 as well as options for potential rate adjustments. The Board will continue to discuss these topics, as necessary, to be prepared to hold public hearings on May 23, 2019 and make final budget and rates decisions at the June 13, 2019 Work Session.

The draft budget consists of the operating budget, the capital improvements program (CIP) budget and the capital equipment budget. While the Board makes budget and rate adjustment decisions each year, this discussion includes information about budget and rate adjustment projections for the next five years, FY 2020-2024.

Background:

OWASA is a non-profit, public agency with the limited purpose of providing water, wastewater and reclaimed water services to the community. Annual budgets are developed to meet the needs of the organization, including those required to:

- Consistently deliver safe and reliable services, such as limiting the number of water main breaks and wastewater overflows, maintaining drinking water quality, wastewater effluent and biosolids quality, etc.;
- Meet financial management goals established as policy by the Board of Directors;
- Achieve the goals set forth in our strategic plan;
- Employ a diverse, well-trained staff to provide 24-hour service; and
- Maintain system assets.

The rates for OWASA's service must represent the full and true costs of providing and sustaining high-quality, safe and reliable services.

During the past year, the OWASA Board of Directors and staff committed to make additional resiliency improvements in our water and wastewater systems. Other drivers for our need to make additional investments and raise the rates for our services include:

- In 2018, two hurricanes and a large water main break that resulted in a community-wide boil water advisory exposed risks and opportunities for enhanced resiliency. These events also highlighted the importance of a reliable water and wastewater system for essential services in our community (e.g. hospital/education/businesses). We are planning for greater investment in risk reduction and resiliency improvement (both in the operating and capital budgets). This includes activities that the Board has already agreed to jumpstart in the current fiscal year, such as a more aggressive valve maintenance program, replacing piping and valves at the water treatment plant, the addition of a utilities engineer for project execution, and resources needed for enhanced emergency communications.
- We are accounting for increases in maintenance and chemical costs, as well as continued escalation in construction costs due to material prices and a less competitive bidding environment. For example, the engineer's estimate for work at the wastewater treatment plant to

utilize more efficient technology for solids thickening and to renovate portions of the structure where wastewater first enters the plant was \$5,380,000; the low bid was \$6,522,000.

- We are taking a more thoughtful and strategic approach to inform and engage the community. The Communications and Community Engagement Plan approved by the Board earlier this year creates engaging and dynamic opportunities to inform our customers as to how their fees are used and the value of the services OWASA provides.
- We are continuing to strive to improve the way we do business. As an organization, we are committed to investing time and energy into increasing diversity and creating a more inclusive environment. And with the Agua Vista web portal, we are providing our community with more tools and resources to manage water use.
- At the same time, we are identifying and investing in ways to save and manage costs. Last year, we took advantage of about \$14 million in low-interest loans provided by the state for water and wastewater projects, saving our customers in interest costs. The Board recently granted the authority to pursue an additional \$8.4 million in low-interest loans from the state. We completed the investment in Agua Vista which will provide the community financial returns in years to come. And we realized over \$400,000 of avoided costs as a result of our investment in energy efficiency and conservation.

Draft Budget and Rate Adjustment Options:

Staff has prepared three budget and rate projection scenarios for the Board to review and discuss.

Option 1 Includes expenditures staff believes are necessary to meet OWASA's needs as described above. While adjustments may be made to this version, this is the option staff recommends.

Option 2 Includes budget reductions that reduce projected rate increases. Staff believes these reductions would have modest to significant impacts on our operations and service levels.

Option 3 Includes budget reductions that reduce projected rate increases to equal the rate increases we projected for FY 2020-2024 last year. Staff believes these reductions will have significant impacts on our operations and service levels.

For each scenario, we have estimated the consequences of eliminating or deferring the project, initiative or expenditure.

Option 1 – Staff's Recommendation

Staff updated the draft of the [FY 2020 budget](#) the Board reviewed at its meeting on March 28, 2019. The draft operating budget has been reduced by about \$208,000, largely because we learned that employee health insurance costs will be decreasing by 15%.

Operating Budget	Amount
Total operating expenses – March 28 draft	\$23,766,948
Reductions:	
Health insurance (15% reduction vs. 5.8%)	(169,900)
Information technology small equipment purchases and maintenance agreements	(13,500)
Rate consultant fees	(15,000)
Chemicals expense	(9,600)
Total after adjustments	\$23,558,948

The draft five-year CIP budget has been reduced by about \$775,000 primarily due to removal of contingency funds previously included in FY 2020 and FY 2021 for unplanned capital needs at water and wastewater facilities.

The draft capital equipment budget is unchanged and totals \$989,700.

The rate adjustments necessary to fund staff’s recommended budget (Option 1) are show below. The rate increase recommended for FY 2020 has been reduced from 6% to 5%.

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
March 2019 projections	6.0%	5.0%	5.0%	5.0%	4.0%
Revised projections	5.0%	5.0%	5.0%	5.0%	4.0%

Option 2 - Potential Budget Reductions

Option 2 is designed to reduce the projected rate increases of Option 1 by eliminating or deferring expenditures for projects and initiatives that staff believes would have modest to significant impacts on OWASA’s operations and service levels.

Reductions to the operating budget (not in order of priority):

No.	Description	Amount (\$)	Estimated Consequence
1	Forgo purchasing pressure monitors for use in the distribution system	10,500	Eliminates the expansion of our water distribution system pressure monitoring network. The information obtained from these monitors could aid in the identification of breaks/leaks, indicate fluctuations in system pressure, and inform our hydraulic model.
2	Forgo purchasing flushing devices for use in the distribution system	9,900	Eliminates the replacement/expansion of automated flushing devices used to maintain water quality in areas with insufficient water turnover. These devices make the process more effective and efficient by reducing the need to manually flush these areas.
3	Reduce funds budgeted for water main maintenance costs by 10%	32,500	Assumes that the number of breaks will be fewer or less expensive to repair than in previous years.

No.	Description	Amount (\$)	Estimated Consequence
4	Eliminate provision for consulting assistance with community engagement and materials related to the Long-Range Water Supply Plan	15,000	Eliminates funding for community engagement and outreach materials such as graphics, public education materials, video, etc. for the Long-Range Water Supply Plan update.
5	Reduce contract administrative support in the Human Resources department by 50%	7,500	Reduced assistance during staff absences and times of heavy workload.
6	Reduce safety training contract assistance by 40%	10,000	Reduced assistance with safety training and fewer sessions offered to employees. Additionally, this would reduce outside expert assessments and audits for hazards in our facilities and field operations.
7	Reduce Diversity and Inclusion program assistance by 50%	25,000	This could delay progress on our Diversity and Inclusion initiatives including the Organizational Assessment to measure progress.
8	Reduce training for core and job skills by 50%	21,000	There would be fewer of these training sessions offered.
9	Eliminate provision for consulting assistance with our finance and customer billing system	10,000	If we need any assistance from our software provider that is not covered by routine support (training, customization, process review), we will either need to defer to a future year or request a budget amendment.
10	Reduce planned assistance for IT security assessment	10,000	We are having consultants conduct a SCADA security assessment at both plants in FY 2020 as a result of evolving threats and significant changes to the system architectures at both plants. Without these funds, we may need to limit the scope of the assessments or remediation efforts and/or defer some work to future years.
11	Eliminate assistance in evaluating alternative solutions for our finance and customer billing systems	20,000	We are planning to evaluate our financial and customer billing systems to determine if we have the most effective solution. The UNC School of Government Center for Public Technology has conducted similar reviews for other NC local government organizations and we are planning to have them assist us. We would postpone this effort to a future year.
12	Reduce funds for spare parts at the water treatment plant	20,000	Would impact staff's ability to quickly address corrective and preventive maintenance issues.
13	Forgo cleaning the exterior of 400 Jones Ferry Road buildings	5,000	Minimal negative impact by not performing this work.
14	Forgo installing shelving for storage at the water treatment plant	9,000	No adverse impact to plant operations. Would impact efforts to clean and organize storage areas.
15	Forgo painting interior areas of the water treatment plant	15,000	No adverse impact to plant operations. This work is to address staining of the walls and ceiling tiles where the roof has leaked.

No.	Description	Amount (\$)	Estimated Consequence
16	Forgo repairing concrete at the water treatment plant	9,000	Broken sidewalks will not get repaired. Could become a potential tripping hazard and safety concern.
17	Reduce the amount planned for roof repairs at 400 Jones Ferry Road	5,000	Potential for water damage and the growth of mold due to continued wet conditions.
18	Forgo painting and carpet installation in the administration building	14,000	General maintenance of administration building. Worn carpets would not get replaced. Damaged or scuffed walls would not be painted.
19	Eliminate project to reduce energy used in the wastewater treatment plant's odor control system	40,000	Odor management is the seventh largest energy-using process at OWASA. A recent analysis identified this opportunity to reduce energy-use by the system. By not funding this work, we lose or delay the opportunity for improving energy efficiency and reducing costs.
20	Reduce funds set aside for contractor assistance with biosolids land application	40,000	This reduction could result in staff not meeting our goals of 75% land application and 25% dewatering. Could result in increased overtime for biosolids staff. The need for assistance is impacted by weather.
21	Forgo planned maintenance on the wastewater treatment plant's hot water boiler system	11,000	This is for contract assistance for the maintenance of the water quality within our hot water boiler system. Improper management of the water quality can lead to premature failures of the hot water system. Failure could result in heating issues in our digesters and difficulty maintaining temperatures.
22	Reduce planned maintenance of wet wells at wastewater pump stations	20,000	This is to fund periodic removal of grit and debris from wastewater pump stations and wastewater plant processes. A reduction would limit our ability to perform this maintenance and failures could lead to capacity issues and potential overflows.
23	Reduce budget for wastewater treatment plant equipment maintenance by 5%	42,000	Various preventative and corrective maintenance activities will be deferred or dropped increasing the risk for premature equipment failures and preventable repairs. These failures increase the potential for sanitary sewer overflows (SSOs), issues with effluent discharge and biosolids quality, and regulatory compliance issues. All of which can erode public confidence and trust.
25	Eliminate funding for forest management consulting services and community outreach.	15,000	Only work required by 401 permit for the Mitigation Tract would be funded. Postpones all forest management activities to improve poor quality, diseased, and storm-damaged OWASA forested lands. Potential increased risk to water quality and forest fires.

No.	Description	Amount (\$)	Estimated Consequence
26	Eliminate rental of valve exercising equipment	60,000	Will delay the completion of the “initial push” regarding water distribution system valve inspections and exercise which increases the risk for delays in isolating water main breaks. These delays can result in prolonged service interruptions for customers, traffic impacts, property damage, erosion and sediment in streams, etc. All of which can erode public confidence and trust.
27	Reduce employee health insurance benefit	To be determined	The current plan is well-liked and highly-valued by staff. Could result in higher turnover and difficulty in filling certain jobs.
	Total Option 2 operating expense reductions	476,400	

For planning purposes, we are assuming that the amount of these operating budget reductions would be sustained in future years. However, deferring or eliminating some of these expenses would likely result in increased spending in the future.

Changes to the five-year CIP budget:

For Option 2, we identified the elimination or deferral of projects planned for FY 2020-2024. The total reduction in the five-year CIP would be approximately \$8.8 million. The projects impacted are (not in order of priority):

CIP No.	Description	Reduction in Five-Year CIP (\$)	Estimated Consequence
270-new	Jordan Lake Western Intake Projects: eliminate placeholder funding	600,000	OWASA continues to participate with the Western Intake Partners in initial discussion and analysis of regional governance structures, water withdrawal, treatment, and transmission facilities and expects to provide the Board with detailed information and a recommendation to support this project. Declining to participate in the collaborative planning and design phases for the regional facility would likely increase future costs if we decided to “buy back in.”
270-16	Cane Creek Pump Station Improvements: defer project by two years	1,108,000	The project scope will be further defined by an ongoing evaluation of the raw water transmission main from the pump station. However, preliminary analysis found that this project has potential energy savings between 138,000 and 227,000 kilowatt hours per year. Deferring completion by two years would delay this potential energy savings beyond the extended deadline for Objective 1 (Reduce Use of Purchased Electricity) in the Energy Management Plan.

CIP No.	Description	Reduction in Five-Year CIP (\$)	Estimated Consequence
270-31	Cane Creek Walkways Resurfacing: defer project by five years	125,000	Deferral of the project from FY 2022 to FY 2027 would extend minor pedestrian safety risk, customer experience, and customer confidence for visitors to Cane Creek Reservoir through rehabilitation of the visitor walkways from the office to the lake, which have uneven surfaces and cracks. Project funding includes minor revisions to the vehicular entrance along Highway 54 to increase safety.
270-29	University Lake Fishing Pier and Boat Launch: defer project by five years	70,000	Deferral of the project from FY 2022 to FY 2027 would delay the opportunity to significantly enhance the visitor experience to University Lake through an expanded and safer boat launch area along the shoreline. This project was originally proposed in FY 2016 following the completion of a very successful and well-received similar upgrade to the facilities at Cane Creek Reservoir.
272-new	Repair/Rehabilitate front entryway at water treatment plant: eliminate placeholder construction funds	350,000	Very preliminary investigation of the deteriorating brick façade at the entrance to the water treatment plant suggests the need to replace the structural support walls for the staircase. While funds remain in the draft budget for a structural evaluation and alternatives analysis, elimination of the placeholder construction funding assumes that cosmetic repairs to brickwork and electrical conduit will be sufficient to maintain the asset.
274-14	Storage Tank Water Quality Monitors: defer project by three years	100,000	Deferral of the project would delay the opportunity to more rapidly detect water quality incidents in the distribution system, to optimize operation, and to assist with meeting Partnership for Safe Water goals.
275-20	Long-Term Funding for Water Distribution System: reduce water main replacement rate to two miles/year for budget years 4 through 8 (FY 2023-2027)	3,410,000	Reducing current target replacement rate for a five-year period would likely result in an increase in the rate of water main breaks and decrease in water service reliability metrics.
275-77	Galvanized Water Main Replacement Program: reduce funding by slowing pace of replacement	450,000	Reduction of the current target replacement rate for a five-year period would likely result in an increase in the rate of water main breaks and a relatively minor decrease in water service reliability metrics.
276-52	Rocky Branch Interceptor Replacement: defer project by three years	696,000	Deferral of the project would increase the risk that periodic discharges of process water from the water treatment plant would overwhelm the receiving sewer, resulting in an overflow.

CIP No.	Description	Reduction in Five-Year CIP (\$)	Estimated Consequence
276-53	Creek Crossing Access Improvements: reduce scope of project from six high priority sites to two	546,000	Reduction of scope increases the risk that staff's access to these specific areas of the collection system, particularly during emergency situations, would result in adverse impacts to creeks and adjacent areas.
278-50	WWTP Warehouse: defer project by three years	580,000	Deferral of completion of the warehouse from FY 2022 to FY 2025 would delay the opportunity to improve operational efficiency of maintenance staff. This project was initially proposed in FY 2013.
278-68	Water and Wastewater Facilities Building Envelope Rehabilitation: reduce scope to highest priority sites	800,000	Reduction of scope would increase the funding required in future operating budgets for the repair or replacement of roofing systems.

Based on these budget reductions, the projected rate adjustments for Option 2 are:

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
March 2019 projections	6.0%	5.0%	5.0%	5.0%	4.0%
Option 2	4.0%	4.0%	4.0%	4.0%	4.0%

Analysis of Rate Adjustment Option 3

Option 3 includes budget reductions that reduce projected rate increases to equal the rate increases we projected for FY 2020-2024 last year. Staff believes these reductions will have significant impacts on our operations and service levels.

Reductions to the operating budget (not in order of priority):

No.	Description	Amount (\$)	Estimated Consequence
1	Forgo purchasing pressure monitors for use in the distribution system	10,500	Eliminates the expansion of our water distribution system pressure monitoring network. The information obtained from these monitors could aid in the identification of breaks/leaks, indicate fluctuations in system pressure, and inform our hydraulic model.
2	Forgo purchasing flushing devices for use in the distribution system	9,900	Eliminates the replacement/expansion of automated flushing devices used to maintain water quality in areas with insufficient water turnover. These devices make the process more effective and efficient by reducing the need to manually flush these areas.
3	Reduce funds budgeted for water main maintenance costs by 10%	32,500	Assumes that the number of breaks will be fewer or less expensive to repair than in previous years.

No.	Description	Amount (\$)	Estimated Consequence
4	Eliminate provision for consulting assistance with community engagement and materials related to the Long-Range Water Supply Plan	15,000	Eliminates funding for community engagement and outreach materials such as graphics, public education materials, video, etc. for the Long-Range Water Supply Plan update.
5	Reduce contract administrative support in the Human Resources department by 100%	15,000	Reduced assistance during staff absences and times of heavy workload.
6	Reduce safety training contract assistance by 100%	25,000	Reduced assistance with safety training and fewer sessions offered to employees. Additionally, this would reduce outside expert assessments and audits for hazards in our facilities and field operations.
7	Reduce Diversity and Inclusion program assistance by 100%	50,000	This could delay progress on our Diversity and Inclusion initiatives including the Organizational Assessment to measure progress.
8	Reduce consulting assistance for core and compliance training by 100%	42,000	Our Diversity and Inclusion Plan Objective 2.2 includes training staff on core job skills that benefit all employees and the organization. The number of training sessions would be reduced.
9	Eliminate provision for consulting assistance with our finance and customer billing system	10,000	If we need any assistance from our software provider that is not covered by routine support (training, customization, process review), we will either need to defer to a future year or request a budget amendment.
10	Reduce planned assistance for IT security assessment	10,000	We are having consultants conduct a SCADA security assessment at both plants in FY20 as a result of evolving threats and significant changes to the system architectures at both plants. Without these funds, we may need to limit the scope of the assessments or remediation efforts and/or defer some work to future years.
11	Eliminate assistance in evaluating alternative solutions for our finance and customer billing systems	20,000	We are planning to evaluate our financial and customer billing systems to determine if we have the most effective solution. The UNC School of Government Center for Public Technology has conducted similar reviews for other NC local government organizations and we are planning to have them assist us. We would postpone this effort to a future year.
12	Reduce funds for spare parts at the water treatment plant	20,000	Would impact staff's ability to quickly address corrective and preventive maintenance issues.
13	Forgo cleaning the exterior of 400 Jones Ferry Road buildings	5,000	Minimal negative impact by not performing this work.
14	Forgo installing shelving for storage at the water treatment plant	9,000	No adverse impact to plant operations. Would impact efforts to clean and organize storage areas.

No.	Description	Amount (\$)	Estimated Consequence
15	Forgo painting interior areas of the water treatment plant	15,000	No adverse impact to plant operations. This work is to address staining of the walls and ceiling tiles where the roof has leaked.
16	Forgo repairing concrete at the water treatment plant	9,000	Broken sidewalks will not get repaired. Could become a potential tripping hazard and safety concern.
17	Reduce the amount planned for roof repairs at 400 Jones Ferry Road	5,000	Potential for water damage and the growth of mold due to continued wet conditions.
18	Forgo painting and carpet installation in the administration building	14,000	General maintenance of administration building. Worn carpets would not get replaced. Damaged or scuffed walls would not be painted.
19	Eliminate project to reduce energy used in the wastewater treatment plant's odor control system	40,000	Odor management is the seventh largest energy-using process at OWASA. A recent analysis identified this opportunity to reduce energy-use by the system. By not funding this work, we lose or delay the opportunity for improving energy efficiency and reducing costs.
20	Reduce funds set aside for contractor assistance with biosolids land application	40,000	This reduction could result in staff not meeting our goals of 75% land application and 25% dewatering. Could result in increased overtime for biosolids staff. The need for assistance is impacted by weather.
21	Forgo planned maintenance on the wastewater treatment plant's hot water boiler system	11,000	This is for contract assistance for the maintenance of the water quality within our hot water boiler system. Improper management of the water quality can lead to premature failures of the hot water system. Failure could result in heating issues in our digesters and difficulty maintaining temperatures.
22	Reduce planned maintenance of wet wells at wastewater pump stations	20,000	This is to fund periodic removal of grit and debris from wastewater pump stations and wastewater plant processes. A reduction would limit our ability to perform this maintenance and failures could lead to capacity issues and potential overflows.
23	Eliminate funds for opportunistic purchases of sewer easements	7,500	Eliminates funding for non-CIP project easement acquisition. Each year, as opportunities arise, a few easements are purchased from property owners for older sewer pipes that don't have recorded easements. Consequence of cutting this item would be the lost opportunity to acquire easements that allow OWASA to keep clear access to the pipes and to perform maintenance, repairs, inspections, improvements and renovations.
24	Reduce training and education expense by 25%	46,000	As long as staff attends the training necessary for maintaining certifications and licenses, the primary impact will be to employee satisfaction and effectiveness.

No.	Description	Amount (\$)	Estimated Consequence
25	Forgo solar leasing project	43,000	Funding for up-front expenses and an estimated full year of lease payments. The Board will have an opportunity to approve moving forward with a solar lease. If we do not pursue a solar lease, it will significantly impair our ability to meet our energy management goal to reduce electricity use by 35% by 2022.
26	Forgo energy management project to more efficiently operate pump stations in the collection system	32,000	Loss or delay in the use of technology to optimize pump station operation, including energy management and flow calculations for hard-to-meter flows. Consequence is continuing to run the pumps to failure, rather than using energy-use to predict maintenance and replacement needs.
27	Reduce budget for wastewater treatment plant equipment maintenance by 5%	42,000	Various preventative and corrective maintenance activities will be deferred or dropped increasing the risk for premature equipment failures and preventable repairs. These failures increase the potential for sanitary sewer overflows (SSOs), issues with effluent discharge and biosolids quality, and regulatory compliance issues. All of which can erode public confidence and trust.
28	Eliminate funding for forest management consulting services and community outreach.	15,000	Only work required by 401 permit for the Mitigation Tract would be funded. Postpones all forest management activities to improve poor quality, diseased, and storm-damaged OWASA forested lands. Potential increased risk to water quality and forest fires.
29	Eliminate rental of valve exercising equipment	60,000	Will delay the completion of the “initial push” regarding water distribution system valve inspections and exercise which increases the risk for delays in isolating water main breaks. These delays can result in prolonged service interruptions for customers, traffic impacts, property damage, erosion and sediment in streams, etc. All of which can erode public confidence and trust.
30	Eliminate funds for professional design services	10,000	Will not be able to redesign publications such as our water and wastewater report cards.
31	Eliminate funds for professional writing services	8,000	Much of this work will be done as part of our project to update owasa.org. Without outside help, staff will assume responsibility which will mean other tasks will not get done, or will be delayed.
32	Forgo hiring an intern	2,000	We will not have this resource to help with community engagement tasks.
33	Eliminate funds for continuing to use Hill, Chesson and Woody	62,000	This is the firm that helps us with our health insurance analysis, negotiations with providers, and coverage decisions. Could result in higher health insurance costs.

No.	Description	Amount (\$)	Estimated Consequence
34	Defer implementing proposed changes to the 457 plan	55,640	Improving OWASA's 457 plan benefit to be more competitive with peer organizations will be delayed.
35	Reduce provision for merit and cost of labor adjustments to employee pay from 4% to 2%	188,000	Negative impact to employee morale and not consistent with the Board's commitment to advance employees through pay ranges based on performance. Would make hiring and retaining staff more challenging.
36	Reduce employee health insurance benefit	To be determined	The current plan is well-liked and highly-valued by staff. Could result in higher turnover and difficulty in filling certain jobs.
	Total Option 3 operating expense reductions	999,040	

For planning purposes, we are assuming that the amount of these operating budget reductions would be sustained in future years. However, deferring or eliminating some of these expenses would likely result in increased spending in the future.

Changes to the five-year CIP budget:

For Option 3, we identified the elimination or deferral of projects planned for FY 2020-2024. The total reduction in the five-year CIP would be approximately \$17.5 million. The projects impacted are (not in order of priority):

CIP No.	Description	Reduction in Five-Year CIP (\$)	Estimated Consequence
270-new	Jordan Lake Western Intake Projects: eliminate placeholder funding	600,000	OWASA continues to participate with the Western Intake Partners in initial discussion and analysis of regional governance structures, withdrawal, treatment, and transmission facilities and expects to provide the Board with detailed information and a recommendation to support this project. Declining to participate in the collaborative planning and design phases for the regional facility would likely increase future costs if we decided to "buy back in."
270-16	Cane Creek Pump Station Improvements: defer project by two years	2,100,000	The project scope will be further defined by an ongoing evaluation of the raw water transmission main from the pump station. However, preliminary analysis found that this project has potential energy savings between 138,000 and 227,000 kilowatt hours per year. Deferring completion by five years would delay this potential energy savings well beyond the extended deadline for Objective 1 (Reduce Use of Purchased Electricity) in the Energy Management Plan.

CIP No.	Description	Reduction in Five-Year CIP (\$)	Estimated Consequence
270-31	Cane Creek Walkways Resurfacing: defer project by five years	125,000	Deferral of the project from FY 2022 to FY 2027 would extend minor pedestrian safety risk, customer experience, and customer confidence for visitors to Cane Creek Reservoir through rehabilitation of the visitor walkways from the office to the lake, which has uneven surfaces and cracks. Project funding includes minor revisions to the vehicular entrance along Highway 54 to increase safety.
270-29	University Lake Fishing Pier and Boat Launch: defer project by five years	70,000	Deferral of the project from FY 2022 to FY 2027 would delay the opportunity to significantly enhance the visitor experience to University Lake through an expanded and safer boat launch area along the shoreline. This project was originally proposed in FY 2016 following the completion of a very successful and well-received similar upgrade to the facilities at Cane Creek Reservoir.
272-new	Repair/Rehabilitate front entryway at water treatment plant: eliminate placeholder construction funds	350,000	Very preliminary investigation of the deteriorating brick façade at the entrance to the water treatment plant suggests the need to replace the structural support walls for the staircase. While funds remain in the draft budget for a structural evaluation and alternatives analysis, elimination of the placeholder construction funding assumes that cosmetic repairs to brickwork and electrical conduit will be sufficient to maintain the asset.
274-14	Storage Tank Water Quality Monitors: eliminate project	100,000	Project deletion would forego the opportunity to more rapidly detect water quality incidents in the distribution system, to optimize operation, and to assist with meeting Partnership for Safe Water goals.
275-20	Long Term Funding for Water Distribution System: reduce water main replacement rate to two miles/year for budget years 4 through 8 (FY 2023-2027)	3,410,000	Reduction of the current target replacement rate for a five-year period would likely result in an increase in the rate of water main breaks and decrease in water service reliability metrics.

CIP No.	Description	Reduction in Five-Year CIP (\$)	Estimated Consequence
275-53	Distribution System Hydraulic Model: defer model update by five years	290,000	The bulk of the proposed Option 1 funding in for this project in FY 2020 and FY 2021 supports the development and calibration of a hydraulic model to account for pipes replaced or added to the system, changed demand conditions, and demand projections from the ongoing update of the Long-Range Water Supply Plan. The model was last calibrated in FY 2010. Deferral of the model update by five years would likely result in increased staff effort to reestablish demand projections, as well as decreased confidence in modeling results for areas of the system that are typically of most interest (i.e., areas subject to higher rates of development and/or changes in network geometry).
275-77	Galvanized Water Main Replacement Program: reduce funding by deferring all work for three years and slowing future pace of replacement	720,000	Deferral of galvanized main replacements and reduction of the future replacement rate would likely result in an increase in the rate of water main breaks and a relatively minor decrease in water service reliability metrics.
276-52	Rocky Branch Interceptor Replacement: defer project by three years	696,000	Deferral of the project would increase the risk that periodic discharges of process water from the water treatment plant would overwhelm the receiving sewer, resulting in an overflow.
276-53	Creek Crossing Access Improvements: reduce scope of project from six high priority sites to two	546,000	Reduction of scope increases the risk that staff's access to these specific areas of the collection system, particularly during emergency situations, would result in adverse impacts to creeks and adjacent areas.
276-17	Gravity Sewer Condition Evaluation: defer next phase of evaluation by three years	800,000	Funding in the CIP for prioritized condition assessment throughout the collection system augments the inspection efforts completed by in-house staff, and is used to identify areas requiring rehabilitation under 276-18. CIP funding for 276-17 includes two-year phases of inspections spaced at three-year intervals. Deferral of the next phase of inspections (from FY 2021/2022 to FY 2024/2025) would slow the identification of deficiencies and the corresponding planned pace of rehabilitation under 276-18.
276-18	Gravity Sewer Rehabilitation: slow the rate of rehabilitation of identified deficiencies	900,000	Reduction in the pace of rehabilitation during the five-year period will increase the risk of inflow and infiltration into the collection system as well as overflow risk.

CIP No.	Description	Reduction in Five-Year CIP (\$)	Estimated Consequence
276-new	Bolin Creek Interceptor: defer project by three years	5,254,000	This capacity project was originally identified in the 2010 collection system master plan as needed to address risk of pipe surcharging and overflows on this major trunk line for the collection system. The ongoing update to the master plan, to be completed in early FY 2020, will refine the timing of this project; however, preliminary analysis suggests that the project should not be deferred beyond the next few years. The project is expected to be completed in two major phases. Options 1 and 2 of the draft CIP fund the completion of this project by FY 2024 (Phase 1) and FY 2026 (Phase 2). Option 3 defers completion of both phases by three years, further increasing the risk of surcharging and overflows.
278-50	WWTP Warehouse: delete project	725,000	Deletion of the warehouse would eliminate a significant opportunity to improve operational efficiency of maintenance staff. This project was initially proposed in FY 2013.
278-68	Water and Wastewater Facilities Building Envelope Rehabilitation: reduce scope to highest priority sites	800,000	Reduction of scope would increase the funding required in future operating budgets for the repair or replacement of roofing systems.

Based on these budget reductions, the projected rate adjustments for Option 3 are:

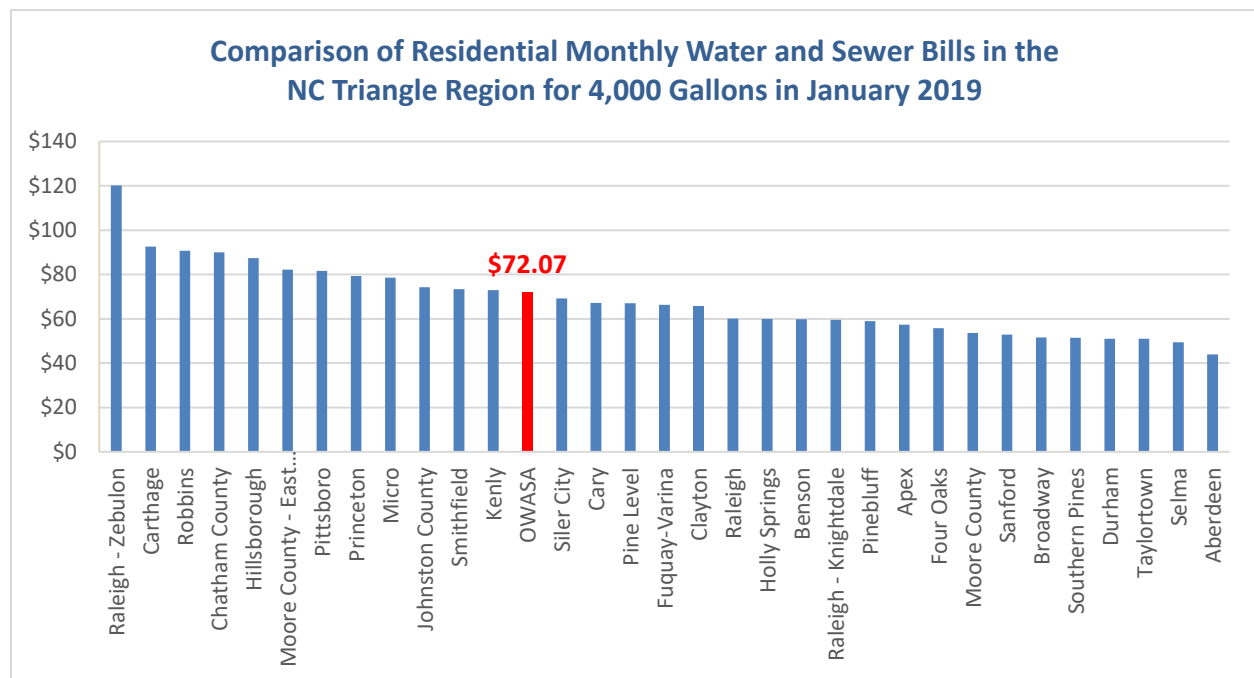
	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
March 2019 projections	6.0%	5.0%	5.0%	5.0%	4.0%
Option 3	2.0%	3.0%	4.0%	4.0%	4.0%

Rate Adjustment Impact to Individually-Metered Residential Customers

The impact of the rate increases shown in the table below is for one month's bill for a single-family residence using the system average of 4,000 gallons. The difference is the amount the bill increases from the previous year. The current bill for 4,000 gallons is \$72.07.

Rate Increase Options – % Increase and Average Bill Impact												
	FY 2020		FY 2021		FY 2022		FY 2023		FY 2024		5-Year Cumulative	
	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$
Option 1	5.0	3.60	5.0	3.78	5.0	3.97	5.0	4.19	4.0	3.54	21.7	19.08
Option 2	4.0	2.88	4.0	3.00	4.0	3.12	4.0	3.24	4.0	3.37	20.8	15.61
Option 3	2.0	1.44	3.0	2.21	4.0	3.03	4.0	3.15	4.0	3.28	17.8	13.10

The following graph shows how OWASA’s current rates for 4,000 gallons of water use per month (the average monthly amount used by households in our service area) compares with other utility rates in the Triangle.



Affordability Outreach

Just as we are stewards of the system assets, environment and human resources we manage, we are also stewards of our community’s financial resources. Affordable water and wastewater services are critical to the health of our community.

The value and affordability of the services OWASA provides is a critical consideration in our daily decision-making and annual budgeting. We understand that while many households will be able to absorb a slightly higher bill to increase the reliability and resiliency of their water and sewer service (\$3.60 more per month for the average bill at the staff-recommended 5% increase), a rate increase at any level places an increased burden on some in our community.

We are grateful to the more than 1,000 OWASA customers that contribute every month on their OWASA bill to the Care to Share program. In 2018, Care to Share donors increased their collective contributions by more than \$3,000 and provided \$8,440 of utility bill assistance to their neighbors.

OWASA's Board of Directors and staff remain committed to working with local social service agencies through our [Affordability Outreach Program](#) to empower low-income customers with information and tools to manage and reduce water and sewer bills through water conservation and efficiency. With the capability to provide bill forecasts, early leak notifications, and customized conservation tips, the Agua Vista web portal will be an important resource in this effort in the coming years.

About OWASA's Budget and Rates

OWASA is committed to providing high-quality, safe, and reliable water and wastewater services, and our rates reflect the true cost of providing these services. As a community-owned utility, we reinvest the rates and fees paid by our customers directly into the plants, pipes, and people that will serve our community for years to come.

We appreciate our customers for their partnership. Beyond paying their OWASA bill each month, the cost and commitment borne by our community to use water wisely and protect the wastewater system pays dividends, ecologically and economically.

It is our responsibility, as public servants, to let the community know the true cost of water and wastewater service. We are not eager to raise rates, but we know that we borrow from future generations if we do not maintain our complex infrastructure of pipes, pumps, reservoirs, and equipment and the trained staff to manage them sustainably.

Since October 2012, OWASA has increased monthly water and wastewater rates only once: by 2%. Continued focus on, and gains in operational and business practice efficiencies have been important in keeping our rate increases to a minimum. However, largely due to limited staffing, we have not consistently met our projected investment in capital improvements. To address this, over the last two years the Board approved adding two additional Utility Engineers which will enable us to better execute our CIP program budget.

Key Takeaways of Staff's Recommended Budget and Rate Adjustment (Option 1)

- Represents the true costs of sustainably providing water, wastewater and reclaimed water services to the community.
- Funds important improvements to system resiliency expected by the community and stakeholders.
- Funds capital improvements program investments to sustain OWASA's vast and critically important infrastructure.
- Reflects unavoidable cost increases for capital projects and other essential supplies, such as chemicals.

Budget and Rate Setting Process Next Steps:

Public hearings on the budget and rates are tentatively scheduled for May 23, 2019. A final budget and proposed rate schedule are scheduled to be presented for approval at the Board Work Session on June 13, 2019.

1. Staff will prepare a revised draft of the FY 2020 budget and rate adjustment information (if necessary) for presentation at the April 25, 2019 Board meeting and May 23, 2019 public hearings.
2. At the April 25, 2019 meeting, staff will request permission from the Board to publicize budget and rate information in advance of the public hearings.
3. At the public hearings, the Board will receive and consider comments from customers and other stakeholders.
4. After considering public input, the Board of Directors will discuss and provide guidance to staff on the final draft of the FY 2020 budget and rate adjustment.
5. Staff will finalize the FY 2020 budget and schedule of rates, fees and charges and is scheduled to present them for adoption by the Board of Directors at its meeting on June 13, 2019.

Action requested:

Review the draft FY 2020 budget and rate adjustment information and provide guidance.

Agenda Item 7:

Long-Range Water Supply Plan: Supply and Demand Management Alternatives

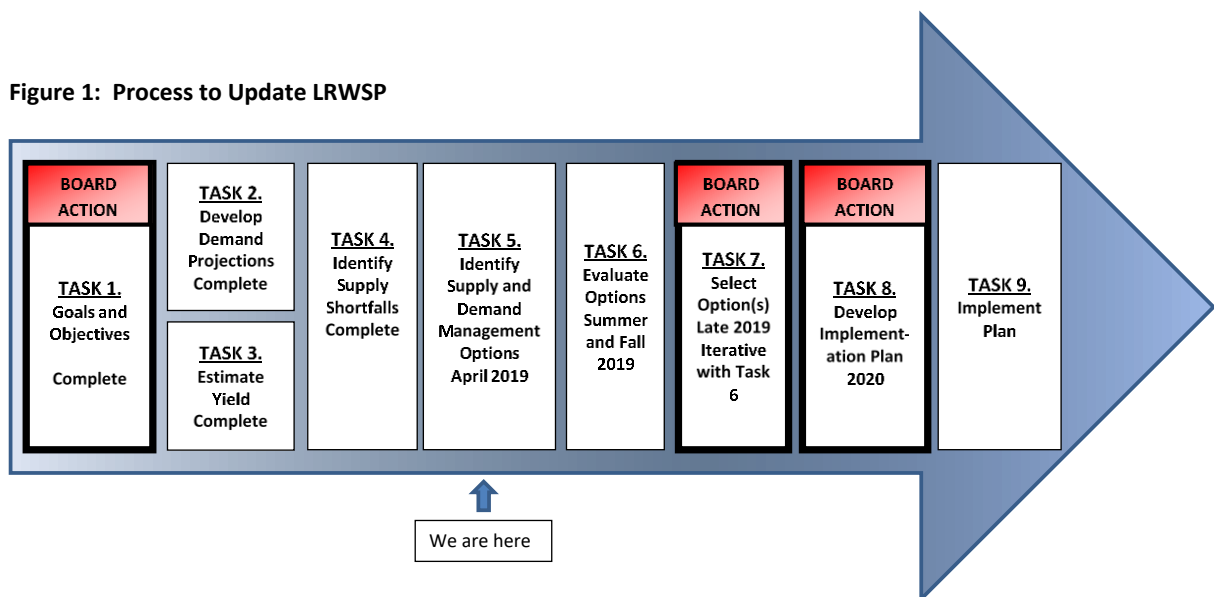
Purpose:

To receive the OWASA Board of Directors' questions, comments, and guidance to staff on the list of supply and demand management alternatives to evaluate in the update of the Long-Range Water Supply Plan (LRWSP).

Background:

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 ongoing update of the LRWSP. That was the first key technical task for the project, as it is essential for evaluating: (a) how much water we expect our customers will need us to provide; (b) the ability (reliable yield) of our existing water supply sources to meet future needs; and (c) the need for and cost-effectiveness of additional supply-side and/or demand-side strategies (including the expansion of our reclaimed water system).

As shown in Figure 1, our next major technical task is to evaluate alternative water supply expansion and demand management strategies that can be considered for meeting our long-term water supply objectives.



All dates are tentative and dependent on public engagement process and Board direction.

An initial list of alternatives to be considered was included in the Board-approved March 2014 Project Charter for the LRWSP update. Those are summarized later in the document, along with some additional options that have been suggested by Board members since that time (see “Supply-Side Options Proposed for Evaluation”).

The 2014 charter also included a list of options that would *not* be considered as they had previously been determined to be socially, economically, and/or environmentally infeasible. Those previously-eliminated options are:

1. Alternatives which involve the transfer of water from outside the Jordan Lake watershed;
2. Alternatives which were evaluated in the 2010 LRWSP but eliminated from detailed consideration. These include: a new reservoir on Sevenmile Creek (in the Neuse River Basin), dredging of University Lake, expanding Cane Creek Reservoir, expanding University Lake, and putting a permanent intake on the Haw River; and
3. Demand management alternatives for which reasonably firm, measurable savings cannot be documented (such as public education and outreach programs). Such measures will be considered as part of our Communications Plan and during the preparation of OWASA’s Water Conservation Plan, a planned companion document to the LRWSP.

Our Existing Assets as a Starting Point:

As we move forward to develop our plan, as a starting point, we will assume the following key existing, measurable supply-side and demand-side strategies will remain in place through the 50-year planning horizon:

1. University Lake, which has an estimated 2070 total usable storage volume of about 320 million gallons (MG);
2. Cane Creek Reservoir, which has an estimated 2070 total usable storage volume of about 2.7 billion gallons (BG);
3. Process water recycling system at Water Treatment Plant, which reduces our raw water withdrawal requirements by about 6 to 7 percent; and
4. Reclaimed water (RCW) system, which currently meets about 0.7 million gallons per day (mgd) of the community’s water demands.

As part of the Plan, we will evaluate reliability and redundancy, and resiliency scenarios under which one or more of these key strategies may be temporarily or permanently out-of-service.

NOTE: We also have made plans and have the land assets required to move forward with the planned expansion of the existing Quarry Reservoir to the “Shallow Quarry Option (an estimated 1.5 BG of total usable storage).” While we are certain the expanded Quarry Reservoir will be an essential water supply strategy beyond 2030, we propose to include that project and the “Deep Quarry Option (an estimated 2.2 BG of total usable storage)” in our alternatives evaluation.

Supply-Side Options Proposed for Evaluation:

Supply-side options are strategies which would, if implemented, increase the total reliable yield of our water supply system. The list below includes the supply-side options proposed for evaluation against the social (e.g. estimated yield, impact on our supply diversity and resilience, legality, impacts on community), environmental (e.g., impacts to streams and wetlands, energy use), and financial (e.g., relative life cycle cost) criteria that the Board approved as part of the Goals and Objectives discussion on November 10, 2016 and is included as Appendix C. Appendix A includes further information about the supply-side options.

The supply-side options listed below are generally categorized as short-term (could be implemented in 10 years or less), intermediate-term (could be implemented between 10 years and 20 years), and long-term (would take longer than 20 years to implement). Each option could be in place for an extended period of time.

Summary of Supply-Side Management Options Proposed for Evaluation

1. Jordan Lake: continue with mutual aid agreements (Short-term)
2. Jordan Lake: agreements with Cary and Durham to guarantee access to allocation (Short-term)
3. Jordan Lake: agreement with other Western Intake Partners who build new intake and WTP on western side of Jordan Lake to guarantee access to allocation (Intermediate to Long-term)
4. Jordan Lake: full partner in new intake and WTP on western side of Jordan Lake (Intermediate to Long-term)
5. Shallow Quarry: access with existing pumping infrastructure (Intermediate-term)
6. Deep Quarry: access with new pumping infrastructure (Intermediate-term)
7. Indirect potable reuse with return from Mason Farm WWTP to Quarry Reservoir (Intermediate to Long-term)
8. Indirect potable reuse with return from Mason Farm WWTP to University Lake (Intermediate to Long-term)
9. Direct potable reuse (Long-term)

Demand-Side Management Options Proposed for Evaluation:

Demand-side management options are strategies which would, if implemented, reduce raw water demands from existing and/or new development. Demand reductions from many of these types of strategies are often difficult to quantify; therefore, in accordance with the project charter, we plan to consider in our LRWSP those demand-side strategies for which we believe we can develop credible estimates of the expected annual average-day demand reductions, under given assumptions. Expected long-term savings from behavioral changes are difficult to quantify; these types of demand management strategies will be included in other documents such as OWASA's Communications Plan, future Water Conservation Plan, Water Shortage Response Plan and Affordability Outreach Plan.

Given the progress that our community has already achieved in demand reduction and the efficiency of future development, staff does not believe that any demand management strategy or combination of demand management strategies would result in abandoning the implementation of any selected supply strategy. Based on past analysis, the resulting reduction in demands do not diversify our water supply portfolio and meet the community's needs if one of our water supply reservoirs could not be used for any reason. However, demand management strategies do have benefits such as:

- reducing our overall demands which helps ensure we can meet the community's demands during a drought;
- reducing our energy use;
- complementing our affordability outreach program; and
- reducing peaking factors at our treatment plants and pump stations, which extends their hydraulic life and ultimately saves our customers money.

Demand management approaches generally fall into one of the following categories:

1. Incentive programs – These programs typically provide a financial incentive for installing low flow fixtures. This could be in the form of a rebate or low/no interest loan program or in the form of a lower system development fee for installing fixtures in new development that are more efficient than those required by law.
2. Mandatory programs – These programs would involve the Board of Directors and/or local governments adopting new policies or ordinances that would require implementation of certain drinking water use reduction measures as a requirement to obtain service. Examples of such requirements are mandatory hook-up to the reclaimed water system, extension of the reclaimed water system, installation of fixtures that are more efficient than those required under current law, or submetering and rebilling in master-metered multifamily residences.
3. Rate Structures – These programs would involve modifying OWASA's current rate structure to further strengthen OWASA's conservation pricing signals.
4. Institutional – These approaches include programs that OWASA would be responsible for such as implementing measures to reduce leakage in the water distribution system or reusing and recycling more water for utility operations.

In our community engagement efforts, staff proposes to discuss these broad approaches (with examples) with stakeholders (such as the University of North Carolina, the Chapel Hill Carrboro City School System, Chamber of Commerce, Home Builders Association, and others) to brainstorm strategies that will advance water use efficiency beyond what is currently in-place and underway.

Appendix B includes some general supporting information regarding these options.

Proposed Next Steps:

If the Board concurs, staff will:

1. Revise the list of options to be considered as needed to reflect the Board’s guidance;
2. Incorporate the list of options into our community engagement materials and presentations;
3. Provide opportunities for public input on the approved draft list of options to be evaluated in accordance with the community engagement plan approved by Board in February 2015 and updated November 2016; and
4. Begin our technical evaluation work with the understanding that additional options may be selected for evaluation as a result of our community engagement efforts.

Staff Recommendation:

Consistent with past practice, if and when the Board is ready for us to move forward with receiving public feedback on a potential set of water supply and demand management options to be evaluated during the next phase of the LRWSP update, the Board may consider acting on this matter via approval of a motion, perhaps similar to the following:

“Motion that the Board of Directors:

- (a) approves the list of potential water supply and demand management strategies agreed to on April 11, 2019 as those planned to be evaluated in detail for our LRWSP Update, and*
- (b) authorizes staff to put forward the initial list of options for public review and comment in accordance with the Board-approved community engagement plan for the LRWSP Update project.”*

Information:

- Appendix A: Additional General Information About Supply-Side Options
- Appendix B: Additional Information About Demand-Side Options
- Appendix C: Long-Range Water Supply Plan – Goals and Objectives Agenda Package from November 10, 2016 OWASA Board of Directors Meeting

APPENDIX A

Additional General Information About Supply-Side Options

Jordan Lake

OWASA has an allocation of five percent of Jordan Lake's water supply pool, which is approximately 5 million gallons per day (mgd) on an average annual basis. As discussed with the Board at its March 14, 2019 Work Session, there are several options to access water from Jordan Lake.

1. **Access Jordan Lake through mutual aid agreements** – OWASA has mutual aid agreements with the City of Durham (Durham) and Town of Cary (Cary) and this is how we would currently access our Jordan Lake allocation. Cary and the Town of Apex own the only water supply intake on Jordan Lake. Under our mutual aid agreements, we could have Cary withdraw and treat water originating from our Jordan Lake allocation which Cary would then transfer to Durham through their interconnections; Durham would then in turn send that volume of drinking water to OWASA through our existing interconnections. If Durham and/or other entities do not also need drinking water from the Cary water treatment plant when we need it, we could potentially receive approximately 7 mgd of water through these agreements and interconnections. The existing mutual aid agreements do not bind Cary or Durham to supply us with water; they would supply us water as long as providing us with water would not put their own communities at risk. Thus, there is no guarantee that we could access our Jordan Lake allocation through these existing agreements.
2. **Agreement with Cary and Durham to guarantee access to our allocation during non-peak times** – Under this option, OWASA would develop agreements with Cary and Durham to guarantee access to our Jordan Lake allocation. OWASA would pay each entity to guarantee access to our allocation on an annual basis; however, during peak demand periods, they may not provide water to us. This option would enable us to obtain a greater volume of drinking water during non-peak periods, thereby reducing withdrawals from our own reservoirs and enabling them to fill faster than would otherwise occur.
3. **Agreement with Western Intake Partners to guarantee capacity during non-peak times** – This option is similar to Option 2, but we would enter into an agreement with the partners involved in development of a new intake and water treatment plant (WTP) on the west side of Jordan Lake. Currently these entities are Durham, Pittsboro, and Chatham County. This alternative would not be available until a new intake and WTP are constructed and in service, so it would not provide any immediate benefit.
4. **Full partner in new western intake and treatment plant** – Under this option, OWASA would be a full partner in a new intake and WTP on the western side of Jordan Lake. This option would provide us the highest level of assurance of permanent access to our Jordan Lake allocation and enable us to provide direct input on the design, financing, construction, operation, and maintenance of the facilities. This would likely be the highest cost option for us to obtain water through our Jordan Lake allocation.

Quarry Reservoir Options

Since the early 1980s, OWASA has owned and used a small Quarry Reservoir which stores about 200 million gallons (MG) of water. In 2001, we entered into a multi-party agreement in which we obtained more land adjacent to the small Quarry Reservoir, and which assured us the right to own and use a much larger, nearby existing rock quarry as a future water supply source, once quarrying ceases at that location. Under that agreement, as well as corresponding County and State permits applicable to the rock quarry operations, American Stone/Martin Marietta has the right to mine rock from the quarry and maintain facilities there through December 31, 2030. At OWASA's direction, they must join the active quarry pit with our existing Quarry Reservoir before they cease operations, thereby forming one, much larger Quarry Reservoir.

The Quarry Reservoir is located within the University Lake watershed; however, the quarry receives runoff from only a very small drainage area. Our Cane Creek Raw Water Transmission Main runs right by, and can divert water into, the Quarry Reservoir. We plan to primarily use water from Cane Creek Reservoir to fill/refill the Quarry Reservoir.

We propose to evaluate the following two Quarry Reservoir options:

5. **Shallow quarry** – This option was recommended in the 2010 LRWSP, and assumes that the usable storage volume would be limited to that which can be accessed using OWASA's existing Quarry Reservoir pumping facilities, which can withdraw water from approximately the top 100 feet of storage. That corresponds to a usable storage volume of 1.5 billion gallons (BG).
6. **Deep quarry** – As described in the 2010 LRWSP, this option would provide access to a total volume of about 2.2 BG of raw water, which is the projected usable storage volume assuming new pumping facilities are constructed and used to access all the water in the expanded Quarry Reservoir. This would require construction of a very deep vertical shaft and very large pumping facilities to withdraw water from the deepest area of the Quarry Reservoir.

Reclaimed Water

Reclaimed water (RCW) is the clean water produced from the advanced secondary treatment process at the Mason Farm Wastewater Treatment Plant (WWTP). OWASA and UNC-Chapel Hill partnered to develop the RCW system to enable UNC to meet certain non-potable water demands (chilled water cooling tower make-up, irrigation, and toilet flushing at certain facilities) with RCW. While that strategy has been very successful, it requires the installation of a dual plumbing systems at end-use sites, and a separate RCW distribution system network.

The Board has requested that we evaluate the advantages and disadvantages of using RCW in a considerably different way – by using it to more directly supplement our raw water supply sources through either (a) “indirect potable water reuse” whereby the highly treated water from the WWTP is returned to a drinking water supply reservoir, or (b) “direct potable water reuse” whereby the highly treated water from the WWTP undergoes much more advanced treatment to ensure that it reliably meets drinking water standards, thereby enabling it to be directly used as a source of drinking water.

Examples of indirect and direct potable reuse options that we propose to evaluate are:

7. **Indirect potable reuse with return to Quarry Reservoir** - In 2014, the General Assembly enacted [Senate Bill 116](#) which provides a regulatory framework through which a utility may be permitted to use RCW as a source of drinking water, provided that the RCW is first pumped to a “mixing basin” that is disconnected from any surface waters, and no more than 20 percent of the water in the mixing basin is RCW (at least 80 percent is from another source water). This alternative would involve using the Quarry Reservoir as the mixing basin. Staff will seek the NC Department of Environmental Quality’s guidance as to whether this option is considered feasible under current law.
8. **Indirect potable reuse with return to University Lake** – This option is similar to Options 8, but would return water to University Lake. This option is not legal under current North Carolina law.
9. **Direct potable reuse** – Direct potable reuse is not allowed under current North Carolina law; however, it is allowed in other states and countries. We believe it is useful to include an evaluation of this option as part of our LRWSP Update. We propose to evaluate the advantages and disadvantages of installing advanced drinking water treatment processes to enable direct potable reuse at either (a) the end of the Mason Farm WWTP, or (b) or the Jones Ferry Road WTP, to which RCW from the WWTP would be conveyed.

Other Supply Side Options not Recommended for Additional Evaluation:

Other supply side options have been suggested in the past that staff does not recommend evaluating for the LRWSP update, but which could be included in the LRWSP if the Board desires a more detailed evaluation: These are:

1. **Indirect potable reuse with return to new off-stream storage impoundment** – This option is similar to Option 7 (Indirect potable reuse with return to Quarry Reservoir) described above, but would return the reclaimed water to a new off-stream storage site. In accord with state law, a key requirement for this option is that the RCW must first be pumped to a “mixing basin” that is disconnected from any surface waters, and no more than 20 percent of the water in the mixing basin can be RCW (at least 80 percent is from another source water). Under this option, OWASA would have to obtain a tract of land of sufficient size and topography to build a major off-stream storage impoundment that would comply with the statute. We recommend eliminating this from consideration as we believe it would be economically, socially, and environmentally infeasible to undertake such a project.
2. **Mine the Quarry Reservoir longer** - The Board of Directors previously requested that staff also evaluate an option under which it is assumed that the County’s special use permit and applicable State permits would be extended to allow quarrying to continue beyond December 31, 2030. This could result in an even larger raw water storage volume than expected to be available under the Deep quarry option, and it could also increase the volume of water available under the Shallow quarry option. Staff does not believe this will result in much additional storage in the Quarry Reservoir, and we are constrained by the amount of water available in Cane Creek Reservoir to refill the Quarry Reservoir. This option also contradicts prior commitments made by OWASA.

- 3. Purchase water from City of Burlington** – One past Board member suggested that staff evaluate purchasing water from the City of Burlington, which is also in the Jordan Lake watershed. Staff has confirmed with City of Burlington staff that they currently have excess water supply capacity available. However, this alternative would require longer new transmission lines than would be needed to access our Jordan Lake allocation, and it may not be a reliable long-term source of water. The Triad region is growing, and Burlington has several commitments to provide water to other communities around them. The needs of these communities will continue to increase in the future. This option also does not promote the work we have completed with other utilities in the Triangle through the Triangle Water Supply Partnership.
- 4. Groundwater** – Under this option, OWASA would develop one or more well fields to supplement available surface water supplies. OWASA would withdraw and mix groundwater with our surface water supplies for subsequent treatment at the Jones Ferry Road WTP or pump and treat groundwater for direct delivery into the drinking water distribution system. Staff evaluated and eliminated this option as an emergency water supply source during the 2007-08 drought. Conversations with staff at Aqua North Carolina, who provide drinking water to several communities in the Triangle, indicate that the average yields of their wells in fractured bedrock is 30 gallons per minute (approximately 0.02 mgd assuming pumping for 12 hours and recharge for 12 hours), but they do have one well which is an anomaly at 600 gallons per minute (0.4 mgd) and one at 6 gallons per minute (0.004 mgd). Assuming similar average yields, OWASA would need to drill approximately 25 wells for every 0.5 mgd increase in our raw water supply. There is little known about the impact the cone of depression from such a well field would have on surrounding private wells; however, development of high-yield wells could result in neighboring wells going dry.

APPENDIX B

Additional Information About Demand-Side Options

Water use efficiency and conservation and the beneficial use of reclaimed water are keys to sustainable water resource management, as they can provide several important benefits, such as: helping to defer or eliminate the need to increase water supply and treatment facility capacities and install new pipelines, thereby reducing long-term direct and indirect financial and environmental costs; helping ensure that the community's drinking water supply is better able to meet essential needs during extended droughts or other events; and reducing the amount of energy required to withdraw, pump and deliver drinking water to meet the community's water needs, thereby complementing local greenhouse gas emission reduction efforts.

For these and other reasons, potential strategies for improving water use efficiency are strategies that should be evaluated side-by-side with potential strategies for developing new water supplies and related infrastructure.

Following is a summary of some categories of demand management options with specific examples proposed to be evaluated during the update of OWASA's Long-Range Water Supply Plan (LRWSP). This list may be revised based on guidance from the OWASA Board of Directors and public input received during the community engagement process for the LRWSP.

This report focuses on long-term conservation measures. It is not intended to address actions that OWASA will take in the event of an extended drought or other short-term emergency.

Types of Demand Management Approaches

Several types of demand management approaches can be used to proactively manage long-term water demands. Those categories include incentive programs, mandatory programs, rate structures, and utility management (institutional) programs to reduce the use of drinking water, which are described further below.

- 1. Incentive Programs** – Incentive programs are used by a number of utilities to promote the use of low flow fixtures and technologies. This type of program would involve the establishment of one or more financial incentive programs designed to promote the purchase and installation of water-saving devices and technologies. Such incentives can reduce the length of time it takes for customers to receive an acceptable financial payback on the installation of water-saving measures. We will review examples of incentive programs implemented by other utilities, such as fixture rebate programs and on-bill credits for customers that install specific water saving devices, and low or no-interest loan programs. We will look at the incentive program design, incentive amount(s), eligibility requirements, participation rates, water savings, program funding and staffing requirements, and other factors as we define the details of potential incentive program options that will be evaluated as part of our alternatives analysis. Incentives to promote submetering on older complexes could also be evaluated.

For purposes of the long-range water supply plan, it will be imperative that the savings realized from such a program are additional to those that would have been realized in the absence of an incentive and are permanent in nature. If OWASA was to consider paying for water use efficiency improvements on customers' premises, we will need to clearly demonstrate that the overall community would benefit from such an investment.

- 2. Mandatory requirements as a condition for receiving water and sewer service –** under this option, OWASA and/or its member governments would establish a set of requirements which new development (and redevelopment) projects must comply with as a condition of receiving OWASA service. These requirements could include water efficient fixtures, submetering and rebilling of master-metered properties and/or mandatory hook-up to the reclaimed water system when it is available.

The financial impact of regulatory strategies should be considered more broadly than other long-range water supply strategies. Ultimately, the cost-burden of meeting regulatory requirements comes at the cost of the regulated community. Therefore, the cost-effectiveness of mandatory requirements will consider the cost to the community of meeting a mandatory requirement.

Water use efficiency standards would require installation of fixtures and systems that are more efficient than those currently mandated by state and national building codes and regulations. One example of such a program is that implemented by Miami-Dade County effective January 1, 2009. It incorporated the US Environmental Protection Agency's WaterSense program standards, and applies to all new development connecting to the Miami-Dade County water system. Another example is Soquel Creek Water District in California, which requires installation of high efficiency toilets (1.28 gallons per flush or less) in new developments and retrofits of existing buildings. The District also requires new development to offset the amount of water the new development is projected to use so that there will be a "zero impact" on the District's water supply.

The Town of Chapel Hill's policy to promote energy efficiency and energy management planning in rezoning and Special Use Permit applications is a local example of a similar concept. Under that policy, developers are requested to incorporate a "20 percent more energy efficient" feature into their plans, and to consider sustainable energy strategies in the proposed development.

Data have shown that submetering multi-family, master-metered (MFMM) residences results in lower water use. The OWASA Board of Directors and/or the local governing Boards could require submetering and rebilling as a condition of service or project development approval. As a condition of approval for at least two different new multifamily developments, the Town of Chapel Hill required implementation of water submetering and rebilling systems within those projects. The State of Texas requires either direct utility metering or sub-metering for all new apartment units.

OWASA could also consider mandating the extension of and/or connection to the reclaimed water (RCW) system. Under this option, OWASA and/or its member governments would establish requirements (such as ordinances) mandating that new development and redevelopment projects extend and connect to the RCW system where practical (such as within some specified distance from the nearest property line). Such a requirement would be similar to existing local government requirements that mandate connections to the OWASA water and sewer systems.

In defined areas where RCW service is not available but is planned to be extended in the future, developers could also be required to install a parallel set of RCW mains within the development so that RCW service can be easily established at such time as the RCW system is extended to the property. In the interim, drinking water would be supplied through the RCW mains to meet certain non-drinking water needs within the development.

One example of such an approach is the Town of Cary's October 2014 policy on the "Effective Utilization of Reclaimed Water System." Cary has perhaps the most comprehensive RCW ordinance in North Carolina. Where RCW service is available from the Town, it requires customers with irrigation systems to use RCW for irrigation. The Town also requires developers to extend and connect to the RCW system where it is available. In areas where it is not currently available, but the Town plans to extend RCW service to in the future, the Town requires developers to install a dual water system that will readily enable future provision of RCW service within the development once the RCW system is extended to the development.

Austin, Texas has similar requirements in place, but also considers variances from the policy in cases of financial hardship or when there are potential health issues.

- 3. Rate Structures** – Rates can be an effective method for impacting demand. Basic economics for price elastic goods suggests that as cost goes up, demand goes down. However, there are varying levels of demand reduction that can be achieved through rates because price elasticity *for the services* that water provides varies greatly. Therefore, the structure of rates (the way in which the rates are applied) can help to "target" certain price-elastic uses of water (i.e. lawn watering), while protecting affordability for relatively inelastic uses of water (i.e. cooking and drinking).

In the past, OWASA customers have responded to changes in rate structure. A change to seasonal rate structures (i.e. higher in warmer months, lower in cooler months) in 2002 corresponded with a decline in average water use. A subsequent change to single-family residential rates to an increasing block rate structure (i.e. higher rate levels for higher levels of water use) in 2007 also corresponded to a decline in average household water use.

Modifications to the current rate structure or alternative rate structures could be considered as a method to promote even greater reductions in non-discretionary (i.e. price

elastic) water use. Ultimately, any change in rate structure would be “revenue neutral” in that it would not generate more money than is needed for running the utility.

Beyond monthly water usage rates, there are other fees that could be restructured to promote water efficiency and conservation. For example, we currently charge system development fees based on the size of the meter and house size, which serves as a coarse proxy for water use. An option for consideration could be in fine-tuning the basis for a system development fee to incentivize water-efficient development.

- 4. Utility management strategies (Institutional)** – These strategies include programs that would reduce water use on OWASA’s side of the meter. Such a strategy has been successfully implemented at the Water Treatment Plant by recycling a portion of the process water. This strategy has resulted in a significant decrease in raw water demand. Other strategies to consider could include the development of an enhanced water loss control program. Some water that is pumped to the distribution system escapes through leaks and pipe joints, service connections, and valves. Based on our annual water audit, we have limited leaks in our system, but we will continue to do the water audit and identify cost-effective improvements we can make to our program.

APPENDIX C

Agenda Item 4:

Long-Range Water Supply Plan - Goals and Objectives

Purpose:

Receive guidance from the Board of Directors on how we will evaluate water supply and demand management alternatives in the Long-Range Water Supply Plan (LRWSP) update.

Background:

The Board of Directors approved a *Charter for Long-Range Water Supply Plan* (Charter) at its March 27, 2014 meeting. The Charter includes draft goals for updating the LRWSP.

The Board of Directors approved a *Community Engagement Plan for Long-Range Water Supply Plan Update* in February 2015. The Community Engagement Plan indicated that Goals and Objectives and financial and non-financial factors to evaluate water supply and demand management alternatives against were key topics to seek feedback from the community early in the process.

Staff has drafted the attached *Evaluating Supply and Demand Management Alternatives Against Goals and Objectives for the Long-Range Water Supply Plan (LRWSP)* to meet the intentions of the Community Engagement Plan. The proposed approach builds on the goals and objectives included in the Charter.

Action Requested:

Discussion and concurrence with proceeding with the draft method to evaluate supply and demand management alternatives against goals and objectives for the Long-Range Water Supply Plan and beginning to obtain feedback from the public on the draft document. Consistent with past practice, we do not believe a formal resolution is needed for this matter. However, if the Board would like to approve that staff obtain feedback on the proposed approach from the public, we do recommend that the Board consider acting on this matter via approval of a motion, perhaps similar to the following:

*“Motion that the Board of Directors authorizes staff to obtain feedback from the community on the approach described in *Evaluating Supply and Demand Management Alternatives Against Goals and Objectives for the Long-Range Water Supply Plan (LRWSP)*”.*

Information:

- *Evaluating Supply and Demand Management Alternatives Against Goals and Objectives for the LRWSP*
- [*Charter for Long-Range Water Supply Plan*](#)
- *Community Engagement Plan for Long-Range Water Supply Plan Update*

November 10, 2016

Evaluating Supply and Demand Management Alternatives Against Goals and Objectives for the Long-Range Water Supply Plan (LRWSP)

Background

The OWASA Board of Directors approved a [Charter for Long-Range Water Supply Plan](#) (Charter) at its March 27, 2014 meeting. The Charter outlines the need for the project, project vision, deliverables, water supply and demand management alternatives that will not be evaluated in the LRWSP, risks, and associated community engagement process. It also includes draft goals and objectives for the project which may change based on community input. These goals will serve as the basis to evaluate water supply and demand management alternatives. Supply alternatives are those that create a new or expanded source of water; demand management alternatives are those that promote more efficient use of water.

Proposed Approach

The goals and objectives included in the Charter are organized along the three pillars of sustainability: social performance, environmental performance, and financial performance. Based on guidance the Board of Directors has provided regarding goals and objectives for energy management, biosolids management, and the advanced metering infrastructure (AMI) study, staff does not propose to establish specific weights for the given objectives. However, each supply and demand management option will be generally evaluated against the objectives, and the results will be presented in a table as was done for the biosolids plan and AMI feasibility study.

In evaluating supply and demand management options and potential “portfolios” strategies (combinations of supply and demand management options), there are several social performance goals which must be met or the alternative is unacceptable. Running out of water is not an option; neither is providing water to our customers that does not meet drinking water standards. Criteria which must be met for the selected mix of supply and demand management alternatives (i.e. the portfolio) include:

1. Annual average-day raw water demand does not exceed the reliable capacity of OWASA’s existing and planned water supply sources. This could be achieved through a mix of supply and demand management alternatives.
2. Our plan will include contingency measures for meeting water demands if and when an extreme event (such as an exceedance of the 2001-02 drought of record or sudden loss of water supply storage capacity) is projected to cause us to drawdown our remaining supply to 20 percent or less of total storage.
3. We will maintain a diverse and resilient portfolio of water supply and demand management strategies so we are positioned to meet the community’s water needs as we face increasing uncertainty in the future.

4. Selected water supply strategies must enable us to meet all applicable drinking water-related standards.

Staff also recognizes that a given water supply or demand management option may not meet one of first three criteria on its own, but when evaluated as one element within a portfolio of water supply and demand management options, it may meet those four elements. Thus, staff proposes a 2-step approach:

- Step 1: Evaluate each supply and demand management option against the framework outlined in Table 1. This table does not include community values; those will be evaluated in Step 2. Similar to what has been done to evaluate alternatives for biosolids management and AMI, each option would be categorized (coded) as unacceptable, acceptable, better, and best against the criteria.
- Step 2: Evaluate alternative portfolios (combinations of supply and demand management alternatives) against the goals and objectives included in the Charter as outlined in Table 2. This evaluation includes community values for the social, environmental and financial performance goals. Our ratings for the community values criteria will incorporate the feedback obtained during the community engagement process for the water supply and demand management alternatives. As proposed for Step 1, each combination of supply and demand management alternatives would be categorized as unacceptable, acceptable, better, and best against the criteria.

TABLE 1. RELATIVE COMPARISON OF WATER SUPPLY AND DEMAND MANAGEMENT OPTIONS AGAINST EVALUATION CRITERIA (Step 1)

Each option will be shaded to illustrate the relative comparison of performance to each other (only applicable to the objective for that row)

Key to Cell Shading:

UNACCEPTABLE	ACCEPTABLE	BETTER	BEST
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EVALUATION CRITERIA		SUPPLY OPTIONS			DEMAND MANAGEMENT OPTIONS		
		Supply Option 1	Supply Option 2	Additional Columns for Supply Options 3, 4, 5...	Demand Mgmt Option 1	Demand Mgmt Option 2	Demand Mgmt Options 3, 4, 5...
SOCIAL PERFORMANCE	Estimated Yield	Estimated Yield for each Supply Option.			Quantity of water saved where possible (annual average day and/or maximum day during peak season); narrative description on other demand management options Note: Charter indicates that demand management savings where firm, measureable savings cannot be documented (such as public education and outreach) would not be considered in LRWSP update, but in the Conservation Plan.		
	Impact on portfolio's diversity and resilience	Location and size of watershed, confidence in yield in extreme circumstances, length of time to activate in drought.			Length of time to activate in drought; potential impacts on customer behavior; potential impacts on targeted water use.		
	Does strategy enable us to meet all applicable drinking water-related standards and other public health regulatory requirements?	Any option that did not meet this criteria would be rated as unacceptable and not move on to Step 2.			Any option that did not meet this criteria would be rated as unacceptable and not move on to Step 2.		
	Water Use Restrictions	Provide description of how frequently we may enter any declared drought stage, how long we are in declared drought, and which stage we may reach (Stages 2 and 3 impact certain commercial uses; drought surcharges also apply).			Narrative description of how option may reduce demand and delay declaration of various drought stages.		
	Legal in North Carolina?	This criteria was not included in the Charter. There are some supply options that are not legal in North Carolina such as direct potable reuse. Staff may evaluate the option, but any that are not legal will be rated as unacceptable and not move on to Step 2.			This criteria was not included in the Charter. There are some demand management options that are not legal in North Carolina such as mandatory water use efficiency retrofits at time of property resale. Staff may evaluate the option, but any that are not legal will be rated as unacceptable and not move on to Step 2.		
	Impacts on community	Based on information in geographic information system, estimate number of private parcels and recreation areas impacted. Provide narrative description of potential traffic, noise, and other impacts to human environment.			Demand management options may have no new OWASA infrastructure, but could have impacts on the community (economic impact, targeted groups versus community-wide approach, public health, ability to enforce).		
ENVIRONMENTAL PERFORMANCE	Energy use and greenhouse gas emissions	Narrative description of energy use and associated greenhouse gas emissions for each option.			Narrative description of energy use and associated greenhouse gas emissions for each option.		
	Impacts on streams, wetlands, groundwater	Based on data in geographic information system, estimate the number of stream crossings (pipelines) and acres of wetlands impacted. Narrative description of other potential impacts to surface and groundwater.			Narrative description of impacts to surface and groundwater; may be limited impacts for many options.		
	Other environmental impacts	Narrative description of impacts to air quality, habitat, soils, and other environmental features.			Narrative description of impacts to air quality, habitat, soils, and other environmental features; may be limited impacts for many options.		
	Highest and best use of local water resources	This criteria was not included in the Charter, but is based on the Sustainability Value within the Strategic Plan. Narrative description of how option promotes the highest and best use of our local water resources and promotes conservation of water and other natural resources.			This criteria was not included in the Charter, but is based on the Sustainability Value within the Strategic Plan. Narrative description of how option promotes the highest and best use of our local water resources and promotes conservation of water and other natural resources.		
FINANCIAL PERFORMANCE	Relative life-cycle costs	Provide estimates of capital costs and operating and maintenance costs through 2065.			Provide estimates of initial costs plus any annual costs; also provide information on revenue impacts.		
	Levelized cost /1000 gallons	Relative life cycle costs/estimated yield.			Relative life cycle costs/estimate of water saved.		

TABLE 2. RELATIVE COMPARISON OF WATER SUPPLY AND DEMAND MANAGEMENT PORTFOLIO OF ALTERNATIVES AGAINST EVALUATION CRITERIA (Step 2)

Each supply and demand management portfolio alternative will be shaded to illustrate the relative comparison of performance to each other (only applicable to the objective for that row)

		UNACCEPTABLE	ACCEPTABLE	BETTER	BEST
EVALUATION CRITERIA		Baseline (Existing Plan) Portfolio CCR, UL, Expand Quarry (shallow option) Jordan Lake - no guaranteed access	Water Supply and Demand Management Portfolio Alternative 2	Additional Columns for Water Supply and Demand Management Portfolio Alternatives 3, 4, 5...	
SOCIAL PERFORMANCE	Supply meet projected demand?	Yes/No; Unacceptable portfolio if does not meet projected demand.			
	Description of contingency for extreme drought event	Narrative description of contingency plan.			
	Diverse and resilient portfolio	Narrative description of how portfolio provides diversity, resiliency, and redundancy.			
	Water Use Restrictions	Provide description of how frequently we may enter any declared drought stage, how long we are in declared drought, and which stage we may reach (Stages 2 and 3 impact certain commercial uses; drought surcharges also apply)			
	Impacts on community	Based on information in geographic information system, estimate number of private parcels and recreation areas impacted. Provide narrative description of potential traffic, noise, and other impacts to human environment.			
	Community values	Narrative description of comments made during the public process will be incorporated into the summary table.			
ENVIRONMENTAL PERFORMANCE	Energy use and greenhouse gas emissions	Narrative description of energy use and associated greenhouse gas emissions.			
	Impacts on streams, wetlands, groundwater	Based on data in geographic information system, estimate the number of stream crossings (pipelines) and acres of wetlands impacted. Narrative description of other potential impacts to surface and groundwater.			
	Other environmental impacts	Narrative description of impacts to air quality, habitat, soils, and other environmental features.			
	Acceptability to community and regulatory agencies	Narrative description of comments made during the public process will be incorporated into the summary table; also describe acceptability to neighboring communities.			
	Highest and best use of local water resources	This criteria was not included in the Charter, but is based on the Sustainability Value within the Strategic Plan. Narrative description of how portfolio promotes the highest and best use of our local water resources and promotes conservation of water and other natural resources.			
FINANCIAL PERFORMANCE	Relative life-cycle costs	Provide estimates of capital costs and operating and maintenance costs through 2065.			
	Levelized cost /1000 gallons	Estimated capital and operating costs per 1000 gallons of yield and water saved.			
OVERALL PERFORMANCE	Balance of social, environmental, and financial considerations	Narrative description of comments made during the public process will be incorporated into the summary table.			

Community Engagement Plan for Long-Range Water Supply Plan Update (approved 2/12/2015)

Purpose

OWASA is updating its Long-Range Water Supply Plan (LRWSP) to ensure a reliable and high quality supply of water for the community for the next 50 years. As part of this process, OWASA will seek to involve and engage the community as we identify and evaluate our water supply and demand management options.

The intent of this community engagement plan is to set goals for this effort, identify meaningful engagement activities, identify resource needs, and provide a schedule for engagement activities.

Outcomes/Objectives

Goals for the public engagement process are:

- Involve stakeholders in the exchange of information and ideas, and in the Board of Directors' decision-making process so that we can better understand and incorporate public values, and ultimately improve the quality of the decisions;
- Increase public awareness and understanding of the findings, recommendations, and implementation of the plan;
- Obtain commitments from stakeholders that will have key roles in the implementation of the plan;
- Build trust in OWASA;
- Develop and implement outreach strategies to help engage minority communities and socio-economically disadvantaged individuals;
- Better understand and seek to minimize sources of conflict among interested and affected parties by building agreement on proposed strategies.

Stakeholders

Stakeholders we will seek to engage as the Plan proceeds include, but are not limited to, the following. Additional stakeholders may be identified and included once the project is underway.

- Our residential and non-residential customers
- Local government Boards and staff
- UNC-Chapel Hill
- UNC Health Care
- Community organizations
- Neighbors in our water supply watersheds
- Local government utility neighbors

Core Messages

1. Providing a high quality and reliable water supply is a key mission of OWASA and OWASA seeks to proactively inform and engage stakeholders as we update the LRWSP
2. OWASA values community feedback
3. OWASA wants to ensure an adequate, high quality supply of water while being mindful of affordability, social, and environmental issues

Key Topics Seeking Feedback from the Community

1. Goals and objectives – The project charter outlines draft goals and objectives organized along the three pillars of sustainability: social performance, environmental performance, and financial performance. We would like feedback from the community on those goals.
2. OWASA will develop draft financial and non-financial factors to evaluate the water supply and demand management alternatives against. We would like feedback on those factors and how they should be weighted in the decision process.
3. Alternatives analysis – OWASA would like feedback from the community on the alternatives being evaluated, how they compare to the goals and objectives and the financial and non-financial factors.
4. Draft LRWSP

Key Information Provided To Community

1. Why is long-range water supply planning important?
2. Why is OWASA updating its Plan?
3. What are the proposed goals and objectives of the Plan?
4. How much water can OWASA provide?
5. How much water does our community need now and in the future?
6. What alternatives are available to meet future water supply needs?
7. What is the difference between demand management and water supply alternatives?
8. How will OWASA evaluate the different demand management and water supply alternatives?
9. What alternatives will help OWASA meet the community's future water needs and what are the relative advantages and disadvantages (financial and non-financial) of those alternatives?
10. What is the preferred mix of water supply and demand management alternatives?
11. What opportunities will the public have to provide input to the LRSWP?
12. What is the schedule for public input?
13. What decisions has the OWASA Board of Directors made regarding the LRWSP, and what future decisions will the Board make after community engagement/feedback processes?

Communication/Engagement Methods

OWASA will use a variety of methods to inform and actively engage stakeholders and evaluate the success of our engagement effort. For the purposes of this Community Engagement Plan,

informing stakeholders provides them with information while engagement provides stakeholders with information and an opportunity for them to provide feedback to inform the Board of Directors' decision making process. Three core strategies are proposed that will be common to all our information, engagement, and evaluation efforts:

1. Establish and publicize a LRWSP project webpage to convey information about the project and enable interested stakeholders to submit their questions, comments, and suggestions on-line.
2. Establish an email distribution list, which includes all Board of Directors' members that helps us convey project information and public participation opportunities to stakeholders in a timely and efficient way through our Constant Contact service.
3. Include informal survey and feedback opportunities as a feature of our project website, public meetings on the project, and presentations to stakeholder groups.

Other information efforts include: Blue Thumb articles, news releases, and LRWSP tweets.

Engagement efforts include:

- Offers of presentations at meetings of local elected Boards; if not accepted, make short announcement during public comment period of an elected Board meeting
- Participation at project-related community outreach meetings
- Face-to-face meetings with stakeholder groups
- Participation at meetings of the OWASA Board of Directors

Table 1 includes a summary of proposed information and engagement efforts for this project. Staff will provide additional information on potential costs or support needs as we proceed in the engagement process.

Staff also proposes to establish an informal Technical Advisory Committee (TAC) comprised of local experts. The Committee could include water resource, environmental and public policy experts from UNC-Chapel Hill, other customers with expertise in water resources or decision processes, and other regional experts in water resources planning. The TAC would provide peer review of information before it was provided to stakeholders.

Table 1: Summary of Potential Community Engagement Activities, Target Audiences, and Methods for the Long-Range Water Supply Plan

ID	Description	Activity Type*	Responsibility	Schedule	Target Audience	Communication Methods	Resources	Comments
1	Dedicated project webpage	Information	Staff	Establish- summer- 2015Com pleted Sept. 2016	Stakeholders	Information provided via Internet; on-line methods for stakeholder comment and feedback	TBD	Potential resource need depending on amount of activity
2	Project stakeholder email list and dedicated project email	Information	Staff	Establish- summer- 2015Com pleted Sept. 2016	Stakeholders	Email distribution through Constant Contact to provide timely e-mail updates to stakeholders with notice of opportunities for participation and feedback; dedicated project email address to accept comments from public	TBD	Need to have staff to respond to emails that come in; potential resource need depending on amount of activity
3	LRWSP Tweets	Information	Staff	Establish- summer- 2015Com pleted Sept. 2016	Stakeholders	LRWSP-specific Tweets about information availability and opportunities to be involved	TBD	Need to have staff to respond; potential resource need depending on amount of activity
4a	Background on LRWSP process	Information & Engagement	Board/Staff	Fall 20152016	Elected officials and customers	Letter to elected officials from Board Chair providing information and offering to make presentation. Presentation on LRWSP process at Board/Council meetings if requested	Board and Staff time	Include link to project charter and project webpage
4b		Information	Staff	Fall 20152016	Customers	Electronic and paper mailings; Blue Thumb newsletter; local media outlets	Staff time	Include link to project charter and project webpage
5a	Goals/Objectives - weighing financial and non-financial metrics	Engagement	Board/Staff	4th Qtr CY 20152016	Stakeholders	Board work session	Staff time	Publicize through project webpage, email distribution list, and LRWSP tweet
5b		Information & Engagement	Staff	4 th 1st Qtr CY 20152017	Stakeholders	Website update; email project stakeholders	Staff time	
6	Water demands	Engagement	Staff	1st Qtr CY 20162017	Local Govt Staff, UNC staff, UNC-H staff	Meetings with local govt staff to ensure they concur with our methods to extend their growth projections to 2065 and our use of their information	Staff time	May be multiple meetings; will QA/QC demand process with local govt staff, UNC, and UNC-H
7a	Water demands and yield	Engagement	Board, Staff and consultant	2nd Qtr CY 20162017	Stakeholders	Board work session	Staff time	Publicize through project webpage, email distribution list, and LRWSP tweet
7b		Information	Staff	2nd Qtr CY 20162017	Customers and Other Stakeholders	Electronic and paper mailings; Blue Thumb newsletter; dedicated project webpage; dedicated project email; local media outlets	Staff time	
7c		Information & Engagement	Board/Staff	2 nd 3rd Qtr CY 20162017	Elected officials	Letter to elected officials from Board Chair, providing information about OWASA's future water supply status and offering to make presentation. Presentation at Board meetings if requested.	Board and Staff time	

Table 1: Summary of Potential Community Engagement Activities, Target Audiences, and Methods for the Long-Range Water Supply Plan

ID	Description	Activity Type*	Responsibility	Schedule	Target Audience	Communication Methods	Resources	Comments
8a	Alternatives evaluation	Information & Engagement	Board, Staff and consultant	TBD	Stakeholders	Board work session	TBD	Publicize through project webpage, email distribution list, and LRWSP tweet
8b		Information & Engagement	Board/Staff		Elected officials and customers	Letter to elected officials regarding alternatives and offering to make presentation. Presentation at Board meetings upon request.	Board and Staff time	
8c		Information & Engagement	Board/Staff	TBD	Targeted stakeholder groups	Meetings with targeted stakeholder groups to provide opportunity for input on goals/objectives (financial/non-financial metrics), future water supply needs, and water supply and demand management alternatives to meet those needs. Alternatives will be evaluated against metrics.	TBD	Provide opportunity for attendees to provide feedback on the stakeholder group session
8d		Information & Engagement	Board/Staff	TBD	Stakeholders	Board work session - provide follow up information regarding alternatives from targeted stakeholder groups	Staff time	Publicize through project webpage, email distribution list, and LRWSP tweet
9a	Draft LRWSP	Engagement	Board/Staff	TBD	Stakeholders	Board Work Session	Staff time	
9b		Information	Staff	TBD	Stakeholders	Media notice of upcoming Open House along with notification through webpage, email distribution list, Twitter, and Blue Thumb (if time)		
9c		Engagement	Board/Staff	TBD	Stakeholders	Public Information Open House between Board Work Session and Board meeting on Draft Plan	TBD	Provide opportunity for attendees to provide feedback on the Open House format
9d		Information & Engagement	Board/Staff	TBD	Elected officials	Letter to elected officials from Board Chair, providing information regarding the LRWSP and offering to make presentations. Presentations made upon request.	Board and Staff time	
9e		Engagement	Board/Staff	TBD	Stakeholders	Board Meeting	Staff time	
10a	Final LRWSP	Engagement	Board/Staff	TBD	Stakeholders	Board Work Session	Staff time	Publicize through media, project webpage, email distribution list, LRWSP tweet; make clear that this is discussion about final LRWSP
10b		Engagement	Board/Staff	TBD	Stakeholders	Board Meeting	Staff time	Publicize through media, project webpage, email distribution list, LRWSP tweet; make clear that this is discussion and action around final LRWSP
10c		Information	Board/Staff	TBD	Elected Officials	Letter to elected officials informing them of final LRWSP. Presentation at Board meetings upon request.	Board and Staff time	
10d		Information	Board/Staff	TBD	Stakeholders	Information provided regarding the approval of LRWSP		Publicize through media, project webpage, email distribution list, LRWSP tweet; include link to final plan
11a	Measure effectiveness of stakeholder engagement process	Survey external stakeholders	Staff	Ongoing	Stakeholders	Electronic and paper survey methods	Staff time	Provide opportunities through website or Survey Monkey; paper surveys at targeted stakeholder meetings and public meetings
11b		Survey Board	Board/Staff	TBD (end of project)	Board	Electronic survey	Board and staff time	
11c		After Action Review By Board and Staff	Board/Staff	TBD (end of project)	Board and Staff	After-Action-Review meeting with documentation for future reference	Board and staff time	

* Written communication is typically labeled as "information", but material will also include information on how to provide feedback or obtain additional information in the written package.

* Engagement typically means that there is a face-to-face meeting or conversation occurring.

Agenda Item 8:

Draft Community Engagement Plan for Forest Management

Purpose:

To receive the OWASA Board of Directors' questions, comments, and feedback on a draft Community Engagement Plan for OWASA's forest management program.

Background:

- OWASA owns approximately 2,400 acres of forested lands to help meet its mission of providing high quality and reliable water, wastewater and reclaimed water service through responsible and creative stewardship of the resources we manage.
- Approximately 1,600 acres of OWASA's forested lands have not been managed.
- Some of the forests OWASA owns are poor quality, diseased, or damaged from storms. Some of the poorer quality areas also pose a wildfire risk.
- On January 10, 2019, the Board of Directors supported an overall approach for a forest management program.
- On February 14, 2019, the Board of Directors supported an overall approach to engage the community regarding OWASA's forest management program and directed staff to develop a Community Engagement Plan.
- This agenda item includes a draft Community Engagement Plan for OWASA's forest management program.

Action Needed:

No formal resolution is needed for this matter. However, staff recommends that if and when the Board supports moving forward with the proposed Community Engagement Plan, it consider acting on the matter in the form of a motion, perhaps similar to the following:

“Motion that the Board of Directors approves the Community Engagement Plan for Forest Management and authorizes staff to implement the actions outlined in the Plan.

Information:

Draft Community Engagement Plan for OWASA's Forest Management Program

April 11, 2019

Draft Community Engagement Plan for OWASA's Forest Management Program

1. Overview and purpose

OWASA owns, and plans to sustainably manage, some forest lands to protect watersheds and meet potential future utility needs. This document outlines OWASA's planned community engagement activities to be implemented throughout 2019 with respect to forest management.

The majority of OWASA's forested land was purchased to protect Cane Creek Reservoir, a main water source for Carrboro and Chapel Hill in Orange County; protecting Cane Creek Reservoir's watershed helps safeguard water quality. OWASA will manage this forest land, as it manages its other resources, in accordance with science-based practices – to ensure healthy forest management, and with it, continued protection of local watersheds.

OWASA has developed a new approach for its forest management program, which incorporates draft guiding principles for forest management, and an incremental approach to selecting high priority stands of trees to manage in accordance with the principles. Each tract of land managed will yield new learnings that OWASA will consider to continuously adapt and improve the program.

2. Community engagement objectives

A key part of OWASA's forest management process is engaging with the community. We aim to:

- Be transparent and inclusive. We wish to involve stakeholders in an exchange of information and ideas, to garner local insights and knowledge, and improve the quality of decisions
- Increase public awareness and understanding of science-based principles in forest management, and related challenges and opportunities linked to protecting the watershed
- Ensure neighboring landowners are aware of the goals of OWASA's new forest management approach, and potential impacts on nearby landowners
- Enable two-way dialogue between the community and OWASA throughout the process
- Build trust in OWASA as a collaborative community partner

3. Stakeholders

OWASA aims to engage with representative stakeholders throughout the process, to foster substantive dialogue and enable informed decision making. Stakeholders that we will engage with include:

- Neighboring landowners, residents, and businesses that may be impacted by forest management activities
- OWASA customers
- North Carolina and federal agencies: NC Forest Service, NC Wildlife Resources Commission, NC Division of Water Resources, NC Department of Environmental Quality, US Fish and Wildlife Service
- Local government staff: Soil and Water Conservation, planning staff, emergency management, fire marshal, governmental and volunteer fire departments, Cooperative Extension
- Local government Boards: elected Boards in Orange and Chatham Counties, Chapel Hill, Carrboro, and Hillsborough, and Orange County Commission for the Environment (citizen board)

- Community groups with land management expertise: Triangle Land Conservancy, The Nature Conservancy, Sierra Club, Haw River Assembly, NC Audubon
- Other forest experts: Duke Forest Manager, UNC researchers, NCSU forestry researchers

4. Core OWASA messages

OWASA will communicate the key messages listed below throughout its forest management activities. These messages will provide people with the situational context that they need to know, in order to actively participate in the community dialogue.

- Cane Creek Reservoir is a main water source for Carrboro and Chapel Hill in Orange County; protecting Cane Creek's watershed helps safeguard water quality. OWASA will manage nearby tracts of trees – in accordance with science-based practices – to ensure healthy forest management, and with it, continued protection of the local watershed.
- OWASA has developed a new forest management approach, which incorporates draft guiding principles for forest management, and an incremental approach to selecting high priority stands of trees to manage in accordance with the principles.
- A key part of OWASA's forest management process is engaging with the community. We wish to enable two-way dialogue – to garner local insights and knowledge, exchange information and ideas, and minimize impacts on neighboring residents – to protect the watershed together.

5. Communication and engagement methods

To introduce OWASA's new forest management program, we will implement a series of communications and engagement activities to maximize inclusion in the dialogue. This includes:

- Sending information letters and delivering presentations on request to elected officials and government staff
- Hosting an information sharing session convening land management organizations and forest experts
- Hosting a community meeting in vicinity of the majority of our forest land (Cane Creek).
Outreach will include:
 - Sending email notifications about the community meeting in Cane Creek to residents who have expressed interest in forest management
 - Sending a letter or postcard about the community meeting in Cane Creek to landowners and residents near our forest land
 - Posting flyers about the community sessions in OWASA's recreation offices and local businesses
- Hosting a community information session in Carrboro-Chapel Hill. Outreach will include:
 - Notifying residents in Carrboro and Chapel Hill about the community information session (which will likely be part of a Wonderful Water education series with a local partner) through OWASA's communications channels, as well as the partner's communication channels
- Schedule times for public comment at OWASA Board meetings

- Dedicated webpage on owasa.org with information about OWASA’s new forest management approach, draft guiding principles, and regular updates

Following the introduction of the new program and consideration of community inputs, specific tracts of land will be identified for forest management on an incremental approach. During this phase of the program, communications and engagement activities will include:

- Development of individual engagement plans targeting immediate neighbors who may be impacted by localized forest management activities
- Possibly educational tours for immediate neighbors
- Schedule time for public comment at Board meetings

6. Draft Timeline for 2019

Date	Activity
April Week 3	<ul style="list-style-type: none"> • Update on OWASA’s community engagement plan for forest management to local governments via OWASA’s quarterly update
May Week 3	<ul style="list-style-type: none"> • Letters to local elected officials (and presentations as requested) • Save the date notice to local residents re: community meeting in Cane Creek
June Week 1	<ul style="list-style-type: none"> • Information sharing session with community land management organizations and forest experts • Send invitations to local residents near our forested lands to community meeting with accompanying agenda and RSVP request, post flyers at the OWASA Cane Creek recreation office and local stores
June Week 3	<ul style="list-style-type: none"> • Host the Cane Creek community meeting at Maple View Agricultural Education Center (not on Wednesday which is for some church night)
June Week 4 or early July	<ul style="list-style-type: none"> • OWASA staff reports to the Board a summary of the community meeting and feedback on the new forest management approach/draft guiding principles (tentative July 11, 2019 Board meeting)
August	<ul style="list-style-type: none"> • OWASA staff present a draft list of up to 10 priority sites for forest management to the Board for discussion and approval (tentative August 22, 2019 Board meeting)
September – October	<ul style="list-style-type: none"> • Host a watershed protection information session as part of a “Wonderful Water” public education series in Carrboro-Chapel Hill
October	<ul style="list-style-type: none"> • OWASA staff develop draft forest management plans for selected priority tracts and individual engagement plans targeting immediate neighbors who may be impacted by the proposed forest management activities (tentative October 10, 2019 Board meeting)

Date	Activity
November	<ul style="list-style-type: none"> Begin one-on-one engagement with potentially impacted neighbors regarding the forest management plans. Timing of implementation of plans will depend on feedback from stakeholders and types of management activities

Note: Timeline may change depending on feedback from the Board of Directors and community.

7. Community meeting in Cane Creek

The community meeting in Cane Creek is designed to enable the sharing of information and foster small-group dialogue – so all participants have equal opportunity to express their insights and local knowledge. Professional facilitators from the DSC Institute will lead the small-group dialogues.

The meeting will take place in the evening in mid-June. The venue will be the Maple View Agricultural Education Center. The draft agenda with main presentation points is provided below.

Time	Item	Lead
6:05 pm	Welcome/opening remarks by OWASA	Ed Kerwin
6:10 pm	<p>OWASA outlines the agenda for the Community Meeting</p> <ul style="list-style-type: none"> OWASA will deliver a presentation about its new forest management approach, as well as draft guiding principles developed by staff to guide implementation. Highlight that this is a new approach. Following this, we will break out into small groups: to make space for discussion, invite inputs on OWASA’s approach, and to ensure everyone has equal opportunity to speak. Following this, we’ll reconvene as a large group and invite the small groups to share main inputs/questions they discussed, and feedback on the process. 	Ed Kerwin
6:15 pm	<p>Presentation from OWASA senior leader on the new forest management approach</p> <ul style="list-style-type: none"> Overview of OWASA: mandate to provide high quality water to some communities in Orange County, role in managing raw water sources including Cane Creek Reservoir. Background on why we own forested land and the importance of protecting watersheds: what OWASA is doing to protect other watersheds, information on the Cane Creek watershed (size, etc.) and its importance. OWASA’s new approach to forest management, different than what was developed in 2010; choosing a few sites, managing as appropriate, incorporating learnings for the next sites. Our new approach incorporates science-based data, insight from officials, local government staff, and technical experts – consultants and respected non-profits specializing in land management (list some), 	Ed Kerwin

Time	Item	Lead
	<p>and your inputs and local knowledge garnered from this community meeting and throughout the forest management process.</p> <ul style="list-style-type: none"> ● Share the current state of OWASA’s forests with photos/exhibits to illustrate the need for management near the reservoir, include examples of highest priorities to enable environmental and community benefits. ● Provide context on forest management through the lens of a 3rd party non-profit expert, invite the Triangle Land Conservancy or other to provide a high-level overview on forest management, pros and cons. ● Share staff’s draft guiding principles for forest management, supported by science-based data and local knowledge. ● Thank the Cane Creek community for hosting the reservoir and helping to protect the watershed, in doing so ensuring access to water for local communities. Reiterate today is the launch of a new approach to forest management that we want the Cane Creek community to be part of. ● We want to hear your inputs, your local knowledge, and answer questions. We want to make sure everyone has equal opportunity to speak. Hand-off to lead facilitator to explain this evening’s dialogue process. 	<p>3rd party non-profit if possible</p>
<p>6:35 pm</p>	<p>Lead facilitator overviews dialogue process</p> <ul style="list-style-type: none"> ● Will invite you to gather in small groups: 6 to 8 people per ● A facilitator will be at each group to: <ul style="list-style-type: none"> ○ Enable introductions ○ Ask a series of questions to enable the conversation ○ Pace the conversation ○ Make space for every participant to contribute ○ Document input/local knowledge/questions on poster paper ● An OWASA team member will participate in each group to provide additional information and clarification in case of questions. ● Please remember to nominate a representative to share highlights of your small group discussions when we all reconvene as a large group: either someone from the group or your facilitator. <p>DSC facilitators launch small group discussions</p> <ul style="list-style-type: none"> ● Roundtable introductions. ● Facilitators ask the groups to describe the kind of dialogue they want to have, facilitators write keywords expressed by participants on a large poster paper. For example, respect, listening 	<p>Linda Low or DSC</p>

Time	Item	Lead
	<p>intentionally, being mindful of enabling to contribute, making it possible for people to ask clarifying questions, etc.</p> <ul style="list-style-type: none"> • Facilitators then pose a series of questions (applied consistently by all facilitators) to spark the dialogue. For example: <ul style="list-style-type: none"> ○ How long you have lived in the region, what keeps you here? ○ What is positive about the new approach to forest management? What can be improved? ○ Which of the draft guiding principles resonate with you the most? ○ How will forest management potentially impact you? ○ Do you have additional local knowledge that you wish share to inform forest management? ○ Is this small-group dialogue effective for you? • Each group appoints a representative (not the OWASA participant) to share their group’s inputs/questions when we reconvene as a large group. 	
7:15 pm	<p>Lead facilitator invites participants to reconvene in large group for report backs</p> <ul style="list-style-type: none"> • Representative from each group (not OWASA) reports back to the large group. • Lead facilitator summarizes the main themes that she/he heard expressed during the report backs. 	Linda Low or DSC
7:40 pm	<p>Reflections and next steps from OWASA senior leader</p> <ul style="list-style-type: none"> • Reflections on what he has heard throughout the dialogue and community meeting. • Asks if outstanding questions/comments from participants, respond with OWASA reflections. • Share next steps: <ul style="list-style-type: none"> ○ Staff will report to the OWASA Board the information and feedback garnered today. ○ In line with the new approach: guided by the draft principles, informed by best practices in forest management and science-based data, and in consideration of feedback garnered from the community meeting, staff will present to the Board a draft list of up to 10 sites to consider for forest management. The public will have opportunity to comment at the meeting. ○ Aligned with OWASA’s new incremental approach, the Board will select a subset of these priority sites to move forward with forest management. The public will have opportunity to comment at the meeting. 	Ed Kerwin

Time	Item	Lead
	<ul style="list-style-type: none"> ○ OWASA staff will develop forest management plans and individual community engagement plans that focus on neighboring landowners to these sites. ○ Summary of today’s meeting and future forest management items will be posted on owasa.org so residents have access to relevant information at all times. ○ Thank you for everyone’s time and the community’s partnership in protecting the watershed. 	
7:55 pm	<p>Closing remarks</p> <ul style="list-style-type: none"> ● Reiterate thanks for everyone’s participation in the meeting. ● Reiterate OWASA’s commitment to being a good neighbor. 	Ed Kerwin
8:00 pm	Close of meeting	

8. Opportunities to learn about OWASA’s forest management program in Carrboro-Chapel Hill

While a meeting dedicated solely to forest management is not proposed, OWASA plans to host a “Wonderful Water” educational series in the Fall in the Chapel Hill-Carrboro community. Water conservation and protection will be part of the series, which will include a presentation on local watershed protection and forest management. Community members will be invited into a variety of dialogues, including the topic of forest management, as part of the Wonderful Water educational series.

In addition to this educational series, community members may also attend the Board meetings where forest management is discussed.

9. Measuring effectiveness of engagement

There are a number of indicators that OWASA will track to monitor the effectiveness of our community engagement. This includes:

- The generation of insightful themes and identification of local needs (during the Community Meeting in Cane Creek and educational session in Carrboro-Chapel Hill) to inform OWASA’s planning
- Qualitative responses to post-dialogue survey questions such as:
 - Do you feel more informed about OWASA’s new forest management approach? (Y, N)
 - Were you able to share your feedback on the new approach? (Y, N)
 - Would you like to receive updates on OWASA’s forest management activities? (Y, N)
 - Do you have the information you need? (Y, N)
 - Did the Community Meeting format foster effective dialogue? Why or why not? (open response box)
 - Was the information presented clear and easy-to-understand? (Y, N)
 - Additional comments (open response box)

- Quantitative indicators such as:
 - Number of participants at the Community Meeting and educational series
 - Number of phone inquiries received when we implement forest management activities (lower numbers are indicators of successful outreach)
 - Number of page views to the forest management webpage

10. Next steps

The immediate next steps in implementing the engagement plan for forest management are:

- Receive Board approval on the community engagement plan
- Set the date for the information sharing session with community land management organizations and forest experts (early June) and identify the venue
- Set the Community Meeting date (mid-June) and book the venue
- Draft outreach materials
- Brief DSC facilitators

Agenda Item 9:

Discussion of Election Procedures and Bylaws

Purpose:

To discuss whether the Board should amend OWASA's Bylaws to recognize and formalize the Board's present officer nomination process, and to recognize and formalize its current practice of limiting eligibility for successive terms in Board offices.

Discussion:

On February 14, 2019, the Board determined to discuss at the April 11, 2019 meeting whether to amend the OWASA Bylaws to formalize the Board's present practice of having the full Board serve as the Nominating Committee for Board offices, as opposed to having a smaller Nominating Committee appointed by the Board Chair, as required by the present Bylaws.

The Board also determined to discuss at this meeting whether to amend OWASA's Bylaws to formalize the Board's present practice prohibiting successive terms in any office. These changes, if adopted, would be effective for the next election, coming up in June.

OWASA's present Bylaws require that the Nominating Committee shall consist of the present Chair of the Board and enough other Board Members, to be appointed by the Chair, to total not less than three (3) members.

OWASA's present practice is to have the full Board serve as the Nominating Committee, to allow nominations to be made by Board Members in a meeting prior to the meeting in which the election for Board offices is held, and to limit Board Members to no more than one successive term in any particular office.

The following language might be substituted for the present Bylaws provision to accomplish this purpose:

The full Board of Directors shall serve on the Nominating Committee, and to that end, shall receive nominations for election to each office of the Board, at a Board meeting prior to the meeting in which the election of Board officers is to be held. Any Board Member may nominate or self-nominate, and if seconded, such nominations, subject to the following limitation, shall constitute the slate of eligible candidates for election to each office. Provided, no person presently serving as an officer shall be eligible for nomination to succeed herself or himself in that office.

The Chair, Vice-Chair and Secretary are elected annually at the Board's first regular meeting in June (June 13, 2019) and shall hold office for one year or until their successors are elected and qualified.

April 11, 2019

If desired, discuss the nominations process and potential changes to OWASA's Bylaws for the Election of Officers for Fiscal Year 2020.

Action:

1. Board discussion and possible approval on whether to follow existing practice or revert to the nomination procedure set out in the Bylaws.

If the Board approves the proposed language, a motion, second and vote to amend the Board of Directors Bylaws, Article X. Advisory Committees to:

The full Board of Directors shall serve on the Nominating Committee, and to that end, shall receive nominations for election to each office of the Board, at a Board meeting prior to the meeting in which the election of Board officers is to be held. Any Board Member may nominate or self-nominate, and if seconded, such nominations, subject to the following limitation, shall constitute the slate of eligible candidates for election to each office. Provided, no person presently serving as an officer shall be eligible for nomination to succeed herself or himself in that office.

2. Board discussion and decision on whether to continue the practice of eliminating successive terms for the offices of Chair, Vice Chair and Secretary.

Information:

- Minutes of the February 14, 2019 Board Work Session – [Review Board Work Schedule](#) (Item 11)
- Excerpt of Bylaws, Article X. Advisory Committees – Nominating

Excerpt of Bylaws, Article X. Advisory Committees (approved January 10, 2008)

ARTICLE X. ADVISORY COMMITTEES

A Nominating Committee shall consist of the present Chair of the Board and enough other Board members, to be appointed by the Chair, to total not less than three (3) members. The nominations made by the Nominating Committee shall not preclude other nominations from the floor during the Annual Meeting of the Authority when elections are conducted. The Nominating Committee shall advise members of its nominations by mail and by email not less than seven (7) days before the day on which the elections are to be held.

Agenda Item 10:

Review Board Work Schedule

Purpose:

- a) Request(s) by Board Committees, Board Members and Staff
- b) April 25, 2019 Board Meeting
- c) May 9, 2019 Work Session
- d) Review and update the 12 Month Board Meeting Schedule
- e) Review Pending Key Staff Action Items

Information:

- Draft agenda for the April 25, 2019 meeting
- Draft agenda for the May 9, 2019 meeting
- 12 Month Board Meeting Schedule
- Pending Key Staff Action Items from Board Meetings

April 11, 2019

Agenda
Meeting of the OWASA Board of Directors
Thursday, April 25, 2019, 7:00 P.M.
Chapel Hill Town Hall

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

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

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

Announcements

1. Announcements by the Chair
 - A. Any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
2. Announcements by Board Members
 - A. Update on Meeting Between Members of the Orange County Board of Commissioners and Orange County Appointees to the OWASA Board on April 25, 2019 (Ray DuBose/ Jody Eimers)
3. Announcements by Staff
4. Additional Comments, Suggestions, and Information Items by Board Members (Yinka Ayankoya)

Petitions and Requests

1. Public
2. Board
3. Staff

Consent Agenda

Information and Reports

1. 12 Month Board Meeting Schedule (Yinka Ayankoya/Ed Kerwin)

Action

2. Award the Fordham Boulevard Service Road Water Main Replacement Construction Contract (Simon Lobdell)

Regular Agenda

Discussion and Action

3. Discuss Draft FY 2020 Budget and Rate Adjustment and Authorize Staff to Publish Proposed Budget and Rates Information (Stephen Winters)

Discussion

4. Demonstration of Agua Vista Web Portal (Mary Tiger)
5. Update on Managing Taste and Odor in Drinking Water (Katie Harrold)

Information and Reports

6. Financial Report for the Nine-Month Period Ended March 31, 2019 (Stephen Winters)

Summary of Board Meeting Action Items

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

DRAFT

Agenda
Work Session of the OWASA Board of Directors
Thursday, May 9, 2019, 6:00 P.M.
OWASA Community Room

The Board of Directors appreciates and invites the public to attend and observe its meetings. For the Board's Work Session, public comments are invited on only items appearing on this agenda. Speakers are invited to submit more detailed comments via written materials, ideally submitted at least three days in advance of the meeting to the Clerk to the Board via email or US Postal Service (aorbich@owasa.org/400 Jones Ferry Road, Carrboro, NC 27510).

For items 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
- d. Additional Comments, Suggestions, and Information Items by Board Members (Yinka Ayankoya)

Consent Agenda

Action

1. Award the Mason Farm Wastewater Treatment Plant Secondary Clarifier Rehabilitation Construction Contract (Simon Lobdell)

Regular Agenda

Discussion and Action

2. Approve Employee Health and Dental Insurance Renewals (Stephanie Glasgow/Ellen Tucker, Hill, Chesson & Woody)

Discussion

3. Discuss Information and Options for Employee Merit Pay for Fiscal Year 2020 (Stephanie Glasgow)
4. Update on Potential Western Intake Partnership to Access Jordan Lake (Ruth Rouse)
5. Review Board Work Schedule (Yinka Ayankoya/Ed Kerwin)
 - a. Request(s) by Board Committees, Board Members and Staff
 - b. May 23, 2019 Board Meeting
 - c. June 13, 2019 Work Session
 - d. 12 Month Board Meeting Schedule
 - e. Pending Key Staff Action Items

Summary of Work Session Items

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

OWASA Board of Directors – 12 Month Board Meeting Schedule (April 5, 2019)

Month	Board Meetings		Committee & Other Meetings
	Work Session	Business Meeting	
April 2019	Review Employee Health and Dental Insurance Renewals (C) FY 20 Draft Budget and Rate Adjustment Information (C) LRWSP – Discuss Water Supply and Demand Management Alternatives Forest Management – Draft Community Engagement Plan Award the Manning and Country Club Water Main Replacement Construction Contract Discussion of Election Procedures and Bylaws 4/11/2019	Q3 Financial Report (C) FY 20 Budget and Rates Discussion and Authorize Staff to Publish Proposed Rates Update on Managing Taste and Odor in Drinking Water Demonstration of Agua Vista Web Portal Award the Fordham Boulevard Service Road Water Main Replacement Construction Contract 4/25/2019	<i>OC Appointees to the OWASA Board meet with Members of Orange County BOCC (4/25/2019)</i>
May 2019	Approve Employee Health and Dental Insurance Renewals (C) Discuss Employee Merit Pay for FY 20 Update on Potential Western Intake Partnership to access Jordan Lake Award the Mason Farm Wastewater Treatment Plant Secondary Clarifier Rehabilitation Construction Contract 5/9/2019	Public Hearings – FY 20 Budget and Rates (Tentative) Approve New Banking Services Provider (C) Approve Employee Health and Dental Insurance Renewals (if needed) 5/23/2019	
June 2019	Approve FY 20 Budget and Rates, including merit pay decision (C) (Tentative) LRWSP – Final Water Supply and Demand Management Alternatives Award the Dobbins Drive Water and Sewer Replacement Construction Contract (Tentative) Approve Changes to Retiree Health Insurance & 457 Deferred Compensation Election of Officers (C) 6/13/2019	TBD 6/27/2019	
July 2019	Diversity and Inclusion Update Award Kensington Drive Water Main Replacement Construction Contract (Tentative) Forest Management – Feedback on Community Meeting 7/11/2019	TBD 7/25/2019	
August 2019	TBD 8/8/2019	Preliminary 12 Month Financial Report (C) CIP Semiannual Report (C) (Tentative) Forest Management – draft priority sites CS – Prepare for General Counsel Review (C) 8/22/2019	
September 2019	EEO/Affirmative Action Report & Diversity and Inclusion Update (C) Annual Report on Disposal of Surplus Personal Property (C) AMI Low-Flow Leak Alerts CS – General Counsel Review (C) 9/12/2019	Annual Report and Financial Audit (C) Approve General Counsel Engagement (C) CS – Prepare for ED Review (C) 9/26/2019	
October 2019	(Tentative) Forest Management – draft plans and community engagement for priority sites CS – ED Review (C) 10/10/2019	Q1 Financial Report (C) Strategic Trends Report and Strategic Plan Update (C) Water Main Break and WTP/WWTP Reliability and Risk Assessment Action Plans Progress Report 10/24/2019	

OWASA Board of Directors – 12 Month Board Meeting Schedule (April 5, 2019)

Month	Board Meetings		Committee & Other Meetings
	Work Session	Business Meeting	
November 2019	(Tentative) LRWSP – Draft Evaluation of Water Supply and Demand Management Alternatives 11/14/2019	<i>Holiday – no meeting</i>	
December 2019	TBD 12/12/2019	<i>Holiday – no meeting</i>	
January 2020	Appoint Audit Firm (C) Employee Health and Dental Insurance Update for FY 21 (C) Affordability Outreach Program Update (Tentative) LRWSP – Final Evaluation of Water Supply and Demand Management Alternatives 1/9/2020	Annual Lakes Recreation Report (C) CIP Semiannual Report (C) Q2 Financial Report (C) FY 21 Budget Calendar and Assumptions (C) 1/23/2020	
February 2020	CS – Prepare for General Counsel Interim Review (C) 2/13/2020	CS – General Counsel Interim Review (C) 2/27/2020	
March 2020	FY 21 Draft Budget & Rates (C) CS – Prepare for ED Interim Review (C) 3/12/2020	Set date for Public Hearings – FY 21 Budget & Rates (C) Annual Update of the Energy Management Plan (C) FY 21 Draft Budget & Rates and Proposed Staff Rate Adjustment Recommendation (C) CS – ED Interim Review (C) 3/26/2020	

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

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

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

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

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

- Development of a plan and policy framework for OWASA lands is considered a longer-term priority. The NRTS Committee discussed this issue in September 2017 and determined it was lower priority than Forest Management.
- Water Conservation Plan will be prepared concurrent with update of the Long-Range Water Supply Plan.
- Update of Strategic Plan. On November 15, 2018, the Board and staff agreed to defer update of the Strategic Plan to a date to be determined.

OWASA Board of Directors – 12 Month Board Meeting Schedule (April 5, 2019)

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

Abbreviations Used in Draft Schedule:

☺	Recurring agenda item (generally these are “required” items)	JLP	Jordan Lake Partnership
AV/AMI	Agua Vista/Advanced Metering Infrastructure	KPI	Key Performance Indicator
BOCC	Board of County Commissioners	LRWSP	Long-Range Water Supply Plan
CBOA	Carrboro Board of Aldermen	MOA	Memorandum of Agreement
CE	Community Engagement	MST	Mountains-to-Sea Trail
CEP	Community Engagement Plan	MFMM	Multi-Family Master Meter
CHTC	Chapel Hill Town Council	NCDOT	North Carolina Department of Transportation
CIP	Capital Improvements Program	NRTS	Natural Resources and Technical Services
COLA	Cost of Labor Adjustment	OC	Orange County
CS	Closed Session of the Board	Q	Quarter
CY	Calendar Year	RFP	Request for Proposals
D&I	Diversity and Inclusion	SRF	State Revolving Fund
ED	Executive Director	SOW	Scope of Work
EEO	Equal Employment Opportunity	TBD	To Be Determined
FY	Fiscal Year	WTP	Water Treatment Plant
HR	Human Resources	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.	3-28-2019	Provide additional information for discussion at the April 11 Work Session on the FY 2020 budgets and rates.	4-11-2019	Winters Directors Managers	Complete
2.	3-28-2019	Address Board Member feedback on the Energy Management Plan.	NA	Tiger	Complete - added to the 12 Month Board Meeting Schedule.
3.	3-14-2019	Implement the Board's decision on the fee for manual read meters.	6-13-2019	Winters	Complete - added to the 12 Month Board Meeting Schedule.
4.	3-14-2019	Proceed with work on Long-Range Water Supply Plan to develop water supply and demand management alternatives.	4-11-2019	Rouse	Complete - added to the 12 Month Board Meeting Schedule.
5.	3-14-2019	Provide Board answers to questions raised regarding draft Fiscal Year 2020 Budget.	NA	Winters	Complete – email sent on 3-21-2019
6.	3-14-2019	Add to the 12-Month Board Meeting calendar when the banking proposal will be scheduled.	5-23-2019	Winters	
7.	3-14-2019	Update Draft Outline for Community Engagement for Forestry Management to reflect new guidance at tonight's meeting.	4-11-2019	Low	Complete – email sent on 3-19-2019
8.	2-28-2019	Considering Board member feedback, finalize the 2019 Communications and Community Engagement Plan. Continue implementation, except those tasks needing funding support (pending Board approval as part of FY 2020 budget).	NA	Low	Complete. Plan currently in implementation.
9.	2-14-2019	Proceed with water distribution system prioritization model project. Consider condition assessment of raw water mains and update the Board on same via email.	NA	Gangadharan	Underway.
10.	1-10-2019	Provide Board progress reports on action items addressing opportunities for improvement identified in Hazen's report on November 5 th water main break.	10-24-2019	Taylor Darr Gangadharan Rogers	Complete - Progress reports will be combined with action items for risk and reliability work at treatment plants (item 14). Added to the 12 Month Board Meeting Schedule.

Pending Key Staff Action Items from Board Meetings

No.	Date	Action Item	Target Board Meeting Date	Person(s) Responsible	Status
11.	1-10-2019	Staff will proactively look for and consider opportunities for savings in the FY 2019 O&M budget.	NA	Winters Kerwin Directors	Ongoing.
12.	12-13-2018	Update Strategic Trends Report to reflect Board Member suggestions.	10-24-2019	Rouse	Complete - added to the 12 Month Board Meeting Schedule.
13.	11-8-2018	Schedule full Board discussion on PFAS sampling plan.	TBD	Kerwin	Sampling underway. Todd Taylor sent an email update on 3-14-2109. Ed Kerwin will follow up with Ruchir Vora regarding this matter.
14.	10-25-2018	Incorporate Board feedback on WTP & WWTP Reliability and Risk Assessment Action Plan and provide the Board a yearly progress report via email in October 2019.	10-24-2019	Darr Taylor Loflin Dodson	Complete – combined with item 10 and added to the 12 Month Board Meeting Schedule.