



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, March 9, 2017, 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).

Public speakers are encouraged to organize their remarks for delivery within a four-minute time frame allowed each speaker.

The Board may take action on any item on the agenda.

Announcements

- a. Announcements by the Chair
 - Any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
- b. Announcements by Board Members
- c. Announcements by Staff
 - Update on the Environmental Management Commission Potential Decision on OWASA's Jordan Lake Allocation (Ruth Rouse)

Regular Agenda

Discussion

1. Whether to Review OWASA's Current Practice of Fluoridating Drinking Water (John Young)
2. Discuss Initial Implementation Plan for OWASA's Employee Diversity and Inclusion Program (Ed Kerwin)
3. Discuss Fiscal Year 2018 Draft Budget and Rates (Stephen Winters)
4. Discussion of Board Officer Nomination and Election Process (Barbara Foushee/Robert Epting)
5. Review Board Work Schedule (John Young/Ed Kerwin)
 - a. Request(s) by Board Committees, Board Members and Staff
 - Update on Advanced Metering Infrastructure Work Plan (Todd Taylor)
 - b. March 23, 2017 Board Meeting
 - c. April 13, 2017 Work Session
 - d. 12 Month Board Meeting Schedule
 - e. Pending Key Staff Action Items

Consent Agenda

Action

6. Resolution Setting the Date of May 25, 2017 for a Public Hearing on OWASA's Fiscal Year 2018 Budget (Stephen Winters)

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7. Resolution Setting the Date of May 25, 2017 for a Public Hearing on Proposed Revisions to OWASA's Schedule of Rates, Fees and Charges (Stephen Winters)
8. Minutes of the January 26, 2017 Meeting of the Board of Directors (Andrea Orbich)
9. Minutes of the February 23, 2017 Closed Session of the Board of Directors for the Purpose of Discussing a Two Personnel Matters (Robert Morgan)

Summary of Work Session Items

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

Closed Session

11. The Board of Directors will convene in a Closed Session for the purpose of discussing a personnel matter (Robert Morgan)

Agenda Item 1:

Whether to Review OWASA's Current Practice of Fluoridating Drinking Water

Background:

In response to petitions received by the Board of Directors in August and September 2012, the Natural Resources and Technical Services (NRTS) Committee met in December 2012 and received expert testimony on the pros and cons associated with the practice of fluoridation of drinking water. At that meeting, the Committee voted unanimously to make a recommendation to the Board of Directors that the two petitions previously received be denied, and that OWASA continue its current practice of fluoridating the drinking water provided to OWASA's customers. The Committee also agreed that this topic should continue to be monitored so that Board and staff stay abreast of any scientific developments, changes in best management practices, etc. regarding this issue.

At its June 13, 2013 meeting, after inviting and considering public feedback, the Board voted unanimously in favor of OWASA continuing fluoridation of its drinking water and of OWASA continuing to stay abreast of scientific developments, changes in best management practices, and accepted public health practices and recommendations regarding drinking water fluoridation (Attachment 1).

On February 2, 2017, OWASA temporarily discontinued fluoridation following an accidental overfeed of fluoride. No drinking water with elevated levels of fluoride entered the public water supply system. At its March 23, 2017 meeting, the OWASA Board will discuss a plan to improve the reliability of the fluoride feed system and a proposed date to resume fluoridation.

Following the February 2, 2017 overfeed event, the OWASA Board and staff received e-mails and comments at Board meetings regarding fluoridation of its drinking water (both supporting and opposing fluoridation). At its February 23, 2017 meeting, the Board decided it would discuss and possibly decide whether to review OWASA's current practice of fluoridation of its drinking water at its next meeting on Thursday, March 9, 2017.

New Information since June 2013:

Staff researched new information and recommendations of health agency and professional association positions as well as peer-reviewed research on fluoride and dental health since June 2013 (Attachment 2).

OWASA staff believes there are two key takeaways from its research:

1. The practice of fluoridating water supplies provides dental health benefits and should be continued.
2. The recommended level of fluoride in community water systems is 0.7 of one part per million. (This has been OWASA's targeted fluoride level since May 2012).

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Staff Recommendation:

Whether to review OWASA's longstanding practice of fluoridation is a policy decision for the OWASA Board. There is no fluoridation requirement imposed on OWASA.

Should the Board decide to review fluoridation, staff believes it will be necessary to:

1. determine the process, resources, and budget that will be needed to support such a review,
2. determine who will oversee the review, and
3. develop a Community Engagement Plan.

As found in Attachment 2, the practice of fluoridation at the level of 0.7 of one part per million is recommended by many organizations including:

- US Centers for Disease Control and Prevention
- US Public Health Service
- US Surgeon General
- US Environmental Protection Agency
- NC Department of Health and Human Services Division of Public Health
- NC Public Water Supply Section
- Orange County Department of Public Health
- Durham County Board of Health
- UNC Department of Pediatric Dentistry
- American Dental Association
- American Water Works Association

Based on the Board's thorough and thoughtful review of the matter in 2012 and 2013, and on staff's recent review of new information and recommendations of health agency positions on fluoride and dental health, we believe the additional time and resources needed to conduct a review is not warranted and that fluoridation should continue.

Information:

- Attachment 1. Fluoride Information and Action by OWASA Board and NRTS Committee
- Attachment 2. Excerpts of New Information and Recommendations (since 2013) of Health Agency Positions on Fluoride and Dental Health

Fluoride Information and Action by OWASA Board and NRTS Committee

February 14, 2017

Board Meetings

[June 13, 2013](#) (Most recent formal Board action)

Motion: *Will Raymond made a motion that the Board of Directors accept the NRTS Committee and staff recommendation that OWASA continue fluoridation of its drinking water and that OWASA continue to stay abreast of scientific developments, changes in best management practices, and accepted public health practices and recommendations regarding drinking water fluoridation; **the motion was seconded by Michael Hughes and unanimously approved.** (Vote 8-0, 1 Board member absent)*

[June 13, 2013 Agenda, Item 5](#) – Consider Citizens’ Petitions Regarding Fluoridation of OWASA Drinking Water

[May 23, 2013 – Excerpt from Committee Meeting Announcements](#)

*Terri Buckner said that the Natural Resources and Technical Systems (NRTS) Committee met on May 21, 2013 to discuss petitions previously received from the public requesting that OWASA discontinue its practice of fluoridating the water provided to OWASA customers and discuss Dr. Paul Connett’s book “The Case Against Fluoride” provided by OWASA customer Daria Barazandeh. After considerable discussion, **the NRTS Committee voted unanimously to confirm its previous (December 4, 2012) recommendation to the full Board that OWASA continue fluoridation of the drinking water provided to OWASA’s customers, while also committing to stay abreast of scientific developments, changes in best management practices, etc. regarding this issue.** The Committee directed staff to improve the information available on this topic on OWASA’s website. This topic will be an agenda item for the June 13, 2013 OWASA Board meeting for discussion and action.*

[February 28, 2013](#)

Motion: *Michael Hughes made a motion that Daria Barazandeh communicate with Dr. Paul Connett to determine if his book adequately represents his position on the practice of fluoridation of drinking water. If the book does and if Dr. Connett is unable to attend a meeting of the Board’s Natural Resources and Technical Systems (NRTS) Committee, the NRTS Committee will meet to discuss the book with no other presentations. However, if Dr. Connett is able to meet with the NRTS Committee, at a time when he is in the Triangle area, the NRTS Committee will schedule a meeting to discuss his thoughts, along with other professionals who would have a position to counter that of Dr. Connett. The motion was seconded by Dana Raborn and passed with a vote of seven to one with Will Raymond opposed.*

[February 28, 2013 Agenda, Item 5](#) – Discussion of the January 10, 2013 Petition to Receive Additional Information on Fluoride in Drinking Water via Skype

[December 13, 2012 – Excerpt from Committee Meeting Announcements](#)

*Terri Buckner said that the Natural Resources/Technical Systems (NRTS) Committee met on December 4, 2012, to discuss the petitions the Board received from two customers requesting that OWASA discontinue its current practice of fluoridating drinking water. **The NRTS Committee voted unanimously to recommend to the full Board that OWASA proceed with our current practices on fluoride but that we continue to review the science on a periodic basis.** On February 28, 2013, the Board will receive feedback from the public and the Committee’s recommendation to continue fluoridation in accord with current Federal and State guidelines.*

[August 23, 2012 Agenda](#) – Petition by Ms. Daria Barazandeh (fluoride in drinking water)

[August 23, 2012 Minutes](#) – *After discussion by the Board and staff, the Board referred her petition to the Board’s Natural Resources/Technical Systems Committee for review and discussion and then a report back to the full Board.*

NRTS Committee Meetings

[May 21, 2013 Meeting Summary](#)

The Committee ultimately voted unanimously to confirm their previous (December 4, 2012) decision to recommend to the full Board that OWASA continue fluoridation of the drinking water provided to OWASA’s customers, while also committing to stay abreast of scientific developments, changes in best management practices, etc. regarding this issue.

[May 21, 2013 Agenda](#) – Meeting to discuss petitions previously received from the public requesting that OWASA discontinue its practice of adding fluoride to drinking water. The Committee’s discussion specifically addressed Dr. Paul Connett’s book “The Case Against Fluoride” that was provided to all members of the OWASA Board of Directors.

[December 4, 2012 Meeting Summary](#)

The Committee ... [voted] unanimously to make a recommendation to the full OWASA Board of Directors that the two petitions previously received be denied, and that OWASA continue its current practice of fluoridating drinking water provided to OWASA’s customers. The Committee also agreed that this topic should continue to be monitored so the Board and staff stay abreast of any scientific developments, changes in best management practices, etc. regarding this issue.

[December 4, 2012 Agenda](#) – Meeting to discuss petitions received from the public requesting that OWASA discontinue its current practice of adding fluoride to drinking water as part of the treatment process at the Jones Ferry Road Water Treatment Plant.

Petitions

Ms. Esther Miller (7)

[July 10, 2014](#)

[June 12, 2014](#)

[May 8, 2014](#)

[April 10, 2014](#)

[March 27, 2014](#)

[February 27, 2014](#)

[January 23, 2014](#)

The Board received Ms. Miller's petition[s] and took no action. The Board will stay abreast of scientific developments, changes in best management practices, and accepted public health practices and recommendations regarding drinking water.

[May 23, 2013 – Ms. Esther Miller, Mr. Parker Emmerson, and Mr. Zackary Davidson](#)

[April 25, 2013 – Mr. Parker Emmerson and Mr. Corey Sturmer](#)

The Board took no action on the petitions from Mr. Emmerson and Mr. Sturmer. The Board reminded Mr. Emmerson and Mr. Sturmer of the Natural Resources and Technical Systems Committee meeting which will be held in May, 2013 to discuss fluoride which is open to the public but that no public comments would be recieved.

[March 28, 2013](#) – Petition by Ms. Daria Barazandeh that the Board's NRTS Committee read Dr. Paul Connett's book (The Case Against Fluoride, How Hazardous Waste Ended Up in Our Drinking Water and the Bad Science and Powerful Politics That Keep it There) which she said represents his position on the fluoridation of drinking water and then meet to discuss the book.

The Board agreed and Terri Buckner, Chair of the NRTS Committee, said that the Committee would be polled for a meeting date and time on this topic and then inform Ms. Barazandeh of same.

[February 28, 2013 – Mr. Corey Sturmer, Ms. Esther Miller, and Mr. Parker Emmerson](#)

[January 10, 2013](#) – Petition by Ms. Daria Barazandeh for the NRTS Committee and/or Board of Directors to receive additional information regarding fluoride in drinking water from Dr. Paul Connett.

The Board requested that Ms. Barazandeh provide access to professional papers and/or documents published by Dr. Connett with supporting information indicating the level of professional peer review that the published documents have undergone. The Board also requested information that supports Dr. Connett is regarded as an expert on the issue of fluoridation of drinking water. Following that review, the Board will notify Ms. Barazandeh of its decision.

[September 27, 2012](#) – Petition by Ms. Esther Miller to stop adding fluoride to OWASA's drinking water.

The Board referred Ms. Miller's petition the Board's Natural Resources/Technical Systems Committee for review and discussion and then report back to the full Board.

[August 23, 2012](#) – Petition by Ms. Daria Barazandeh to stop adding fluoride to OWASA’s drinking water.

After discussion by the Board and staff, the Board referred her petition to the Board’s Natural Resources/Technical Systems Committee for review and discussion and then a report back to the full Board.

Professional Association Position/Recommendation Letters

(Included in December 4, 2012 NRTS Committee Agenda)

[Dr. L. Herald, State Health Director, North Carolina Division of Public Health](#)

[Dr. K Buckholtz, Dentist with Oral Health Section of the NC Division of Public Health](#)
(statements made to the Durham City Council)

[Dr. C. Bridger, Health Director, Orange County Health Department](#)

[Dr. T. Wright, UNC Department of Pediatric Dentistry](#)

[Dr. S. Keener, Mecklenburg County Medical Director](#)

[American Water Works Association](#)

**Excerpts of New Information and Recommendations (since 2013) of
Health Agency and Professional Association Positions on Fluoride and Dental Health**

Prepared February, 2017

Background

Following an extensive review and public input, the OWASA Board of Directors voted unanimously in June 2013 to continue fluoridation of drinking water. The Board also agreed to stay abreast of scientific developments.

Approach and Scope

This summary was developed using Attachment 1 ([Fluoride Information and Action by OWASA Board and NRTS Committee](#)) as the reference starting place. The Professional Association Position/Recommendation Letters were reviewed and current statements and publications were located online or via email. Recent peer-reviewed research was also identified from literature searches and from Public Health agencies. Each statement/publication was reviewed and excerpts of any updated (more recent than June 2013) findings, positions, or recommendations are provided below. Copies of all current statements and publications are provided [here](#) and URLs, where available, are provided in the footnotes.

***US Centers for Disease Control and Prevention*^{1,2,3}**

Scientists in the United States and other countries have studied the safety and benefits of fluoridated water for decades, and found no convincing evidence to link water fluoridation and any potential unwanted health effect other than dental fluorosis. Dental fluorosis is a change in the appearance of tooth enamel. It can occur when young children (less than 8 years of age) regularly take in fluoride when their permanent teeth are still developing.

Today there are more sources of fluoride, such as toothpaste and mouth rinse, than when fluoridation was first introduced. With greater availability of fluoride, there has been an increase in the dental fluorosis. Most dental fluorosis in the U.S.—more than 90 percent—appears in its milder forms as white spots on the tooth surface that may not be noticed.

To balance the benefits of fluoridation with the chance for dental fluorosis, the US Public Health Service just [April, 2015] published an updated recommendation for the optimal level of fluoride in drinking water to prevent tooth decay. The new recommendation sets the level of fluoride in drinking water at 0.7 milligrams/liter (mg/L). This new guidance updates and replaces the previous recommended range of 0.7 mg/L to 1.2 mg/L. It is important to note that there is no federal “requirement” to fluoridate.

¹ <https://www.cdc.gov/fluoridation/basics/70-years.htm> Accessed Feb 15, 2017; Page updated May 4, 2016

² [CDC Community Water Fluoridation Statement](#) Jan 30, 2017

³ [2014 National Water Fluoridation Statistics](#) Accessed Feb 16, 2017; Page updated Aug 19, 2016

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States and local communities decide whether to fluoridate or not. CDC's Division of Oral Health does provide technical help and training for state fluoridation programs.

US Public Health Service⁴

Through this final recommendation, the U.S. Public Health Service (PHS) updates and replaces its 1962 Drinking Water Standards related to community water fluoridation—the controlled addition of a fluoride compound to a community water supply to achieve a concentration optimal for dental caries prevention. For these community water systems that add fluoride, PHS now recommends an optimal fluoride concentration of 0.7 mg/L. In this guidance, the optimal concentration of fluoride in drinking water is the concentration that provides the best balance of protection from dental caries while limiting the risk of dental fluorosis. The earlier PHS recommendation for fluoride concentrations was based on outdoor air temperature of geographic areas and ranged from 0.7–1.2 mg/L. This updated guidance is intended to apply to community water systems that currently fluoridate, or that will initiate fluoridation, and is based on considerations that include:

- Scientific evidence related to the effectiveness of water fluoridation in caries prevention and control across all age groups,
- Fluoride in drinking water as one of several available fluoride sources,
- Trends in the prevalence and severity of dental fluorosis, and
- Current evidence on fluid intake of children across various outdoor air temperatures.

...

It is expected that implementation of the new recommendation will lead to a reduction of approximately 25% (range: 12%–42%) in fluoride intake from drinking water alone and a reduction of approximately 14% (range: 5%–29%) in total fluoride intake.

US Surgeon General⁵

Based on further research, we have concluded that it is time to update the original 1962 PHS recommendations on fluoridation. Americans now have access to more sources of fluoride, such as toothpaste and mouth rinses, than they did when water fluoridation was first introduced in the United States. The result has been an increase in dental fluorosis, which, in most cases, manifests as barely visible lacy white markings or spots on the tooth enamel. A severe form of dental fluorosis, with staining and pitting of the tooth surface, is rare in the United States. Dental fluorosis can occur when children younger than 8 years of age, whose permanent teeth are still forming, regularly ingest fluoride.

...

⁴ [US Public Health Service Recommendation for Fluoride Concentration in Drinking Water for the Prevention of Dental Caries](#) Jul-Aug 2015

⁵ [Community Water Fluoridation: One of the CDC's "10 Great Public Health Achievements of the 20th Century"](#) Jul-Aug 2015

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Based on this comprehensive, multiyear assessment, PHS now recommends that community water systems use a single concentration of 0.7 mg/L of fluoride in drinking water to maintain cavity prevention benefits and reduce the risk of dental fluorosis. This new recommendation revises and replaces the previously recommended range of 0.7–1.2 mg/L.

US Environmental Protection Agency^{6,7,8}

EPA has reviewed the fluoride NPDWR as part of this Six-Year Review and determined that a revision to the NPDWR for fluoride is not appropriate at this time [December 2016].

...[T]he data on health effects suggests a potential to improve public health protection through a revision to the MCLG. However, as explained above occurrence at public drinking water systems and analytical method Minimum Reporting Levels (MRLs) must be considered when making the final determination as to whether there is a meaningful opportunity to improve public health through revisions to the current rule.

...

Potential New MCLG based strictly on the health evaluation (not occurrence data or other risk management considerations) using the RSC values currently applied to each NPDWRs: 0.9-1.2 mg/L; Relevant New Assessment: EPA 2010a.

...

On November 23, 2016, a ... petition was submitted ... to urge EPA “to protect the public and susceptible subpopulations from the neurotoxic risks of fluoride by banning the addition of fluoridation chemicals to water” [by] “prohibit[ing] the purposeful addition of fluoridation chemicals to U.S. water supplies.” ...

After careful consideration, EPA denied the ... petition, primarily because EPA concluded that the petition has not set forth a scientifically defensible basis to conclude that any persons have suffered neurotoxic harm as a result of exposure to fluoride in the U.S. through the purposeful addition of fluoridation chemicals to drinking water or otherwise from fluoride exposure in the U.S....

The petition asserts that the fluoridation of drinking water confers little benefit to public health, claiming that the primary benefit of fluoride comes from topical fluoride contact with the teeth and that there is thus little benefit from ingesting fluoride in water or any other product. ... EPA and other authoritative bodies have previously reviewed many of the studies cited as evidence of neurotoxic effects of fluoride in humans and found significant limitations in using them to draw conclusions on whether neurotoxicity is associated with fluoridation of drinking water. ... The petition cites several

⁶ [Fact Sheet: Completion of EPA's Third Six-Year Review of Existing Drinking Water Standards](#) Dec 2016

⁷ [Six-Year Review 3 - Health Effects Assessment for Existing Chemical and Radionuclide National Primary Drinking Water Regulations - Summary Report](#) Dec 2016

⁸ Federal Register. 82(37). [Fluoride Chemicals in Drinking Water; TSCA Section 21 Petition; Reasons for Agency Response](#). Feb 27, 2017

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studies as evidence that water fluoridation does not have any demonstrable benefit to the prevention of tooth decay. However, EPA has found substantial concerns with the designs of each of these studies including small sample size and uncontrolled confounders, such as recall bias and socioeconomic status. ... Fluoride has been proven to protect teeth from decay by helping to rebuild and strengthen the tooth's surface or enamel. According to the [CDC] and the [ADA], water fluoridation prevents tooth decay by providing frequent and consistent contact with low levels of fluoride. Thus, the health benefits of fluoride include having fewer cavities, less severe cavities, less need for fillings and removing teeth, and less pain and suffering due to tooth decay.

Fluoride protects teeth in two ways—systemically and topically. Topical fluorides include toothpastes, some mouth rinse products and professionally applied products to treat tooth surfaces. Topical fluorides strengthen teeth already in the mouth by becoming incorporated into the enamel tooth surfaces, making them more resistant to decay. Systemic fluorides are those ingested into the body. Fluoridated water and fluoride present in the diet are sources of systemic fluoride. As teeth are developing (pre-eruptive), regular ingestion of fluoride protects the tooth surface by depositing fluorides throughout the entire tooth surface. Systemic fluorides also provide topical protection as ingested fluoride is present in saliva which continually bathes the teeth. Water fluoridation provides both systemic and topical exposure which together provide for maximum reduction in dental decay. ...

The petition has not set forth a scientifically defensible basis to conclude that any persons have suffered neurotoxic harm as a result of exposure to fluoride in the U.S. through the purposeful addition of fluoridation chemicals to drinking water or otherwise from fluoride exposure in the U.S. ... EPA and other authoritative bodies have previously reviewed many of the studies cited as evidence of neurotoxic effects of fluoride in humans and found significant limitations in using them to draw conclusions on whether neurotoxicity is associated with fluoridation of drinking water. In contrast, the benefits of community water fluoridation have been demonstrated to reduce dental caries ... Left untreated, decay can cause pain, school absences, difficulty concentrating, and poor appearance, all contributing to decreased quality of life and ability to succeed. ...

EPA has further observations about the petition's claims that drinking water fluoridation is linked to lead hazards. The CDC studied the relationship between fluoridation additives and blood lead levels in children in the [US]. More than 9,000 children between the ages of 1-16 years were included in the study's nationally representative sample. ... [The study] concluded that their detailed analyses did not support concerns that silicofluorides in community water systems cause high lead concentrations in children. ... [Another study] reevaluated the NHANES data comparing systems that used silicofluorides to all systems (e.g., a combination of fluoridated, nonfluoridated and naturally fluoridated) and found a small difference between the number of children in each group with blood lead levels $>5 \mu\text{g}/\text{dL}$; the results were not evaluated to see if the difference was statistically significant. A number of other chemical characteristics are known to increase lead release into water sources such as pH, natural organic matter, water hardness, oxidant levels, and type of piping, age of housing; [the] study did not evaluate these factors.

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NC Department of Health and Human Services Division of Public Health^{9,10,11}

...[T]he U.S. Department of Health and Human Services (HHS) [sic] and other public health agencies understand that it is now possible to slightly lower the level of fluoride in water and still maintain the health benefits associated with fluoridating water supplies. For this reason, HHS has proposed changing the recommended level for community water systems to 0.7 milligrams per liter, down from the current maximum of 1.2 milligrams per liter.

While it is clear that the amount of fluoridation in community water supplies can be reduced, research also shows that the practice of fluoridating water supplies should continue. Completely eliminating the fluoride from our water supplies would dramatically affect the dental health of our state residents. Community water fluoridation is credited with reducing tooth decay by as much as 25 percent – and that is over and above the effects of fluoridated products such as toothpaste and mouth rinse. Based on this information, it is easy to see that eliminating established fluoridation programs would impose substantial costs upon our health and our communities.

Oral Health Science Section¹²

Community Water Fluoridation is one of the most important methods to prevent tooth decay in children and adults. It is safe, and equitably distributed to all members of a community. We ask that you continue this important and cost effective public health practice.

NC Public Water Supply Section¹³

Research yielded no new information. The agency continues to support the addition of fluoride to drinking water.

Orange County Department of Public Health¹⁴

The Department Director indicated that her October 2, 2012 letter¹⁵ is still accurate. The agency continues to support the addition of fluoride to drinking water.

⁹ [NC Acting State Health Director Community Fluoridation Position Statement](#) Apr 25, 2014

¹⁰ [Fluoride Facts](#) Accessed Feb 16, 2017; Page updated Jun 28, 2016

¹¹ [Dental Facts and Stats](#) Feb 2014

¹² Letter of Support Feb 17, 2017

¹³ [Section .1400 Fluoridation of Public Water Supplies](#)

¹⁴ Email exchange with Colleen Bridger, MPH, PhD, Orange County Health Director Feb 16, 2017

¹⁵ [Letter of Support](#) Oct 2, 2012

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Durham County Board of Health¹⁶

Recommendation from the Ad Hoc Committee

The Board of Health fluoridation subcommittee met on May 24, 2013 to consider all information, research, presentations, and public comments gathered on fluoridation of municipal water supplies. Based on research evidence and literature review as well as testimony from reputable panelists contained in this report, and considering public comments, the DCoDPH Ad Hoc Committee recommends to the Durham County Board of Health that fluoridation of Durham's municipal water supply be continued at the current levels, as deemed effective for prevention of tooth decay and for promotion of good oral health by the US-DHHS, Centers for Disease Control and Prevention.

Recommendation from the Durham County Board of Health

A regular session of the Durham County Board of Health was held on June 13, 2013. During the Committee Reports section of the agenda, Dr. F. Vincent Allison III read the above recommendation from the committee. The Board of Health voted unanimously to approve the committee's recommendation.

UNC Department of Pediatric Dentistry¹⁷

An updated letter from the current Department Chair has been requested, however, the October 4, 2012 letter¹⁸ is still accurate. The agency continues to support the addition of fluoride to drinking water.

American Dental Association¹⁹

Research yielded no new information. The agency continues to support the addition of fluoride to drinking water.

American Water Works Association²⁰

Research yielded no new information. The agency continues to support the addition of fluoride to drinking water.

¹⁶ Municipal Water Fluoridation: Recommendation for Durham City Council, Jun 2013

¹⁷ Email exchange with Dr. Wright Feb 16, 2017.

¹⁸ [Letter of Support](#). New Letter of Support from the current Department Chair requested Feb 17, 2017

¹⁹ [ADA Fluoridation Policy and Statements](#) Accessed Feb 16, 2017

²⁰ [Fluoridation of Public Water Supplies Policy Statement](#) Accessed Feb 16, 2017; Page updated Jan 16, 2016

Water Research Foundation²¹

Table 5.1
Summary of fluoridation concerns

Topic of concern	Summary of concerns about CWF	Summary of findings regarding concern
Dental fluorosis	Cases of dental fluorosis in the United States have increased, but almost entirely in the mild and very mild forms (U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation 2015).	Mild and very mild dental fluorosis does not affect the functionality of the tooth enamel and is considered a cosmetic affect. Severe dental fluorosis (with brown discolorations and mottling of enamel) has not been documented associated with CWF fluoride levels (U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation 2015). PHS recommended lower CWF levels to prevent mild fluorosis. Bottle fed infants should avoid water with fluoride.
Skeletal fluorosis	Can be a potential health risk in areas with endemic water and air fluoride levels (Sutton et al., 2015).	EPA has estimated that it would require 20+ mg/day over the course of 20 years for clinical skeletal fluorosis to occur. These exposure levels are not approached in areas that practice CWF (EPA 1987).
Neurological effects	Chinese studies have shown links between water fluoride levels and reduced mental IQ (Sutton et al., 2015).	Chinese studies are inconsistent with testing and reporting IQ and fluoride levels. Many do not examine other parameters besides fluoride water levels that may affect IQ such as air and food fluoride concentrations, other environmental contaminants, deficiencies etc. Lowered IQ because of fluoride exposure has not been documented in areas that practice CWF (Sutton et al., 2015).
Carcinogenicity	Statistically significant correlation between osteosarcoma and water fluoride levels in males based on residence history (Bassin et al., 2006).	No statistically significant correlation between osteosarcoma and fluoride levels in cancerous and benign bone tumors (Kim et al., 2011). This method is a more accurate procedure for determining fluoride exposure than residence history.
Endocrine disruption	Evidence of endocrine disruption is inconsistent where some studies show correlation and some do not. NRS felt the studies showing a relationship were not conducted in a way to conclude any relationship. The National Research Council called for more research on the matter to characterize the mechanisms of fluorides effect on the endocrine system and to establish factors that would determine response (U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation 2015).	

²¹ [State of the Science: Community Water Fluoridation](#) Web Report #4641; 2015

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Topic of concern	Summary of concerns about CWF	Summary of findings regarding concern
Dosage Control	Fluoride exposure through water cannot be precisely controlled due to varying water consumption throughout populations.	Based on the oral reference dose, a 70 kg adult would have to consume 28 L of water a day at 0.7 mg/L to approach 20 mg/day and do this for 20+ years to develop clinical skeletal fluorosis. (EPA 1987).
Safety of fluoride additives	If additives do not completely dissociate in water they may help to leach lead from copper pipes when they are present with chloramines and free chlorines (Maas et al., 2007).	Studies have shown that additives do completely dissociate in drinking water (Finney et al., 2006). Studies have also shown that fluoride is not metabolized any differently for natural or artificially fluoridated water (Whitford et al., 2008). Lead and copper controlled by CCT.
Ethical concerns	There is no easy way for people to opt out of fluoridated water once it has been established in their community and some people propose that this is a form of forced mass medication.	U.S. courts have upheld that practicing CWF is "a proper means of furthering public health and welfare" (U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation 2015). State and local communities decide and often vote on fluoridation practices. It is correct that an individual would have to remove the F or buy non-fluoridated water.
Cost effectiveness	For large utilities, it costs the water customers less than \$1 annually (U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation 2015).	Benefits of CWF have been estimated around \$30 annually. This includes dental treatment for tooth decay (U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation 2015).

Peer-reviewed Research

Exploring the short-term impact of community water fluoridation cessation on children's dental caries: a natural experiment in Alberta, Canada²²

ABSTRACT

Objectives: Dental caries (tooth decay) is common and can be serious. Dental caries is preventable, and community water fluoridation is one means of prevention. There is limited current research on the implications of fluoridation cessation for children's dental caries. Our objective was to explore the short-term impact of community water fluoridation cessation on children's dental caries, by examining change

²² McLaren L, S Patterson, S Thawer, P Faris, D McNeil, ML Potestio, and L Shwart. [Exploring the short-term impact of community water fluoridation cessation on children's dental caries: a natural experiment in Alberta, Canada](#). 2017. 146:56-64. *Public Health*. doi: 10.1016/j.puhe.2016.12.040.

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in caries experience in population-based samples of school children in two Canadian cities, one that discontinued community water fluoridation and one that retained it.

Study design: We used a pre-post cross-sectional design.

Methods: We examined dental caries indices (deft [number of decayed, extracted, or filled primary teeth] and DMFT [number of decayed, missing, or filled permanent teeth]) among grade 2 school children in 2004/05 and 2013/14 in two similar cities in the province of Alberta, Canada: Calgary (cessation of community water fluoridation in 2011) and Edmonton (still fluoridated). We compared change over time in the two cities. For Calgary only, we had a third data point from 2009/10, and we considered trends across the three points.

Results: We observed a worsening in primary tooth caries (deft) in Calgary and Edmonton, but changes in Edmonton were less consistent and smaller. This effect was robust to adjustment for covariates available in 2013/14 and was consistent with estimates of total fluoride intake from biomarkers from a subsample. This finding occurred despite indication that treatment activities appeared better in Calgary. The worsening was not observed for permanent teeth. For prevalence estimates only (% with >0 deft or DMFT), the three data points in Calgary suggest a trend that, though small, appears consistent with an adverse effect of fluoridation cessation.

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METHODS:

Target population and sampling: The target population was grade 2 children (approximately aged 7 years) attending school in the Public or Catholic school systems in Calgary and Edmonton. These two systems captured more than 90% of the Alberta schoolchildren in 2013/14. We selected grade 2 because children of that age, on average, have both primary and some permanent teeth available for assessment.

...

RESULTS:

Based on Pearson's chi-squared statistic ($P < 0.05$), the Calgary sample was significantly higher than the Edmonton sample on: %excellent/good health of child's mouth; %brush twice/day or more; %who visited the dentist within the past year; %eat fruit/vegetables once/day or more; % received fluoride treatment at the dentist; % household education of bachelor's degree or higher; % who own their home; and % 'white' ethno-cultural background. Edmonton was significantly higher than Calgary on: % who visit the dentist only for emergencies or never; and % who drink sugary drink once/day or more.

...

The proportion of children with protective dental sealants showed no significant differences between cities or between time points in either city: 26% (24%-29%) for Calgary 2004/05; 24% (22%-26%) for Calgary 2013/14; 27% (26%-29%) for Edmonton 2004/05; and 27% (24%-31%) for Edmonton 2013/14.

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Information on dental public health programming was obtained from dental public health managers in the two regions. Programming in both areas is targeted to schools located in lower socio-economic communities. Calgary has had a targeted fluoride varnish program in place since at least 2002/03, which is delivered approximately yearly. Post CWF cessation, a subset of the targeted schools in Calgary was targeted further by a dental health bus initiative which travels to schools to deliver sealants and fluoride varnish. In Edmonton, a targeted fluoride varnish program has been in place since approximately 2000, which since 2012 has been accompanied by a targeted sealant program. Using aggregate information from the 2013/14 programs (individual-level data was not available), approximately 28% of our Calgary sample attended a school that participated in the targeted fluoride varnish program, and approximately 12.5% attended a school that also participated in the dental health bus program. For Edmonton, approximately 23% of our sample attended a school that participated in the targeted program. Thus, it appears that exposure to these programs was broadly similar across our samples.

DISCUSSION:

We observed an increase in primary tooth dental caries in Calgary that occurred over a time period when CWF was discontinued in that city (2004/05e2013/14). Although an increase was also observed in Edmonton, where CWF remains in place, and during that time frame, it was less consistent and smaller in magnitude.

The observed effect in primary tooth caries was consistent across our data. First, the 2013/14 estimates were robust to adjustment for differences between the samples in sociodemographic and behavioral variables. Second, the effect was consistent with estimates of total fluoride intake from fingernail clippings from a subsample, and municipal water quality reports, both of which confirmed less fluoride in Calgary than in Edmonton in 2013/14. Third, the effect occurred despite indications that treatment was higher in Calgary than in Edmonton. Although we were not able to measure treatment access directly, our observations that the proportion with 'complete caries care' increased over time in Calgary (decreased in Edmonton) suggest that children in Calgary are visiting the dentist more which, in addition to treatment, could also signal more preventive activities such as fluoride application and uptake of dental hygiene recommendations. This possibility is supported by 2013/14 questionnaire data showing more frequent visits to the dentist, receipt of supplemental fluoride at the dentist, and more regular tooth brushing in Calgary than in Edmonton (Table S1).

...

In summary, trends observed in caries rates in Calgary, Canada (especially in primary teeth), along with other information gathered, appear to be broadly consistent with an adverse effect of CWF cessation. It is important to undertake subsequent oral health surveys to monitor and confirm these trends over time.

Community Water Fluoridation and Intelligence: Prospective Study in New Zealand²³

ABSTRACT

Objectives. This study aimed to clarify the relationship between community water fluoridation (CWF) and IQ.

Methods. We conducted a prospective study of a general population sample of those born in Dunedin, New Zealand, between April 1, 1972, and March 30, 1973 (95.4% retention of cohort after 38 years of prospective follow-up). Residence in a CWF area, use of fluoride dentifrice and intake of 0.5-milligram fluoride tablets were assessed in early life (prior to age 5 years); we assessed IQ repeatedly between ages 7 to 13 years and at age 38 years.

Results. No clear differences in IQ because of fluoride exposure were noted. These findings held after adjusting for potential confounding variables, including sex, socioeconomic status, breastfeeding, and birth weight (as well as educational attainment for adult IQ outcomes).

Conclusions. These findings do not support the assertion that fluoride in the context of CWF programs is neurotoxic. Associations between very high fluoride exposure and low IQ reported in previous studies may have been affected by confounding, particularly by urban or rural status.

Is fluoride a risk factor for bone cancer? Small area analysis of osteosarcoma and Ewing sarcoma diagnosed among 0-49-year-olds in Great Britain, 1980-2005²⁴

ABSTRACT

Background: Artificial fluoridation of drinking water to improve dental health has long been a topic of controversy. Opponents of this public health measure have cited the possibility of bone cancer induction. The study objective was to examine whether increased risk of primary bone cancer was associated with living in areas with higher concentrations of fluoride in drinking water.

Methods: Case data on osteosarcoma and Ewing sarcoma [ES], diagnosed at ages 0-49 years in Great Britain (GB) (defined here as England, Scotland and Wales) during the period 1980-2005, were obtained from population-based cancer registries. Data on fluoride levels in drinking water in England and Wales were accessed through regional water companies and the Drinking Water Inspectorate. Scottish Water provided data for Scotland. Negative binomial regression was used to examine the relationship between incidence rates and level of fluoride in drinking water at small area level.

Results: The study analyzed 2,566 osteosarcoma and 1,650 [ES] cases. There was no evidence of an association between osteosarcoma risk and fluoride in drinking water [relative risk (RR) per one part per

²³ Broadbent JM, WM Thomson, S Ramrakha, TE Moffitt, J Zeng, LAF Page, R Poulton. [Community Water Fluoridation and Intelligence: Prospective Study in New Zealand](#). 2015. 105(1):72-76. *American Journal of Public Health*. doi: 10.2105/AJPH.2013.301857.

²⁴ Blakey K, RG Feltbower, RC Parslow, PW James, BG Pozo, C Stiller, TJ Vincent, P Norman, PA McKinney, MF Murphy, AW Craft. and RJQ McNally. [Is fluoride a risk factor for bone cancer? Small area analysis of osteosarcoma and Ewing sarcoma diagnosed among 0-49-year-olds in Great Britain, 1980-2005](#). 2014. 43(1):224-234. *International Journal of Epidemiology*. doi: 10.1093/ije/dyt259.

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million increase in the level of fluoride = 1.001; 90% confidence interval (CI) 0.871 – 1.151] and similarly there was no association for [ES] (RR = 0.929; 90% CI 0.773 – 1.115).

Conclusions: The findings from this study provide no evidence that higher levels of fluoride (whether natural or artificial) in drinking water in GB lead to greater risk of either osteosarcoma or Ewing sarcoma.

...

DISCUSSION

This ecological analysis used high-quality population based osteosarcoma and ES case data from 0–49-year-olds diagnosed 1980–2005 in GB. The demographic profile of the study population has previously been published. There was no evidence of an association between fluoride in drinking water and osteosarcoma or ES. Thus, there was no support for prior hypothesis (i) that geographical heterogeneity of osteosarcoma is modulated by differences in fluoride levels. There was support for prior hypothesis (ii) that geographical heterogeneity of ES is not modulated by differences in fluoride levels.

...

In conclusion, this small area analysis used high-quality population-based osteosarcoma and ES case data. Novel GIS methodologies were developed to enable fluoride level in drinking water to be assigned to each [small area unit] in GB. No association was found between fluoride level and osteosarcoma or ES before and after adjustment for deprivation. The findings from this study provide no evidence that higher levels of fluoride (whether natural or artificial) in drinking water in GB lead to greater risk of osteosarcoma or ES. Ecological design was appropriate for this initial investigation but also introduced limitations. Further research, such as large case-control studies that incorporate the GIS methodologies developed during this study, is recommended.

Agenda Item 2:

Discuss Initial Implementation Plan for OWASA's Employee Diversity and Inclusion Program

Purpose:

Seek the Board's feedback, guidance and support for staff's Initial Implementation Plan for our Employee Diversity and Inclusion Program.

Background:

The Board of Directors and staff recognize the value of establishing an Employee Diversity and Inclusion Program. Our updated Strategic Plan adopted by the Board on June 9, 2016 identified this as a high priority task for the organization.

The Board received and discussed staff's first draft Diversity and Inclusion Plan at its July 14, 2016 meeting. Following discussion, the Board agreed to hold a Special Work Session in the fall of 2016 to receive additional information and to continue its discussion of the draft.

The Board held a Special Work Session on November 3, 2016 and received excellent presentations on diversity and inclusion by Maria Hicks-Few, Camille Brooks, Jennifer Bynum, Faith Thompson and Michelle Johnson. Following discussion, the Board agreed that staff will update the draft Diversity and Inclusion Plan based on information learned since July 2016 for discussion at a future Board meeting.

An updated "working draft" Diversity and Inclusion Plan was provided to the Board by email on November 17, 2016, and it was provided to other peers for review and comment. Voluntary meetings with employees were also held to answer questions and receive feedback and suggestions on the updated "working draft."

Staff's Proposed Initial Implementation Plan for our Employee Diversity and Inclusion Program:

The information gathered over the last six months greatly assisted staff in preparing our proposed Initial Implementation Plan (Plan) for our Employee Diversity and Inclusion Program (attached). Our Plan proposes specific tasks and target completion dates to achieve our goals and objectives, and notes tasks to be completed by a consultant(s) or staff. Key tasks include:

- Employee climate survey
- Voluntary training for all employees
- Mandatory training for all supervisors
- Expand scope of existing Employee Human Resource Team or create new Employee Diversity and Inclusion Team

March 9, 2017

- Review recruitment and hiring systems and processes for implicit and explicit biases and make changes as necessary.
- Develop applicant targets for under-represented groups
- Evaluate options to allow employees to advance more quickly through their pay ranges based on performance.

We believe our proposed Plan is a good start for what will be a sustained program that will be routinely reviewed and improved. We believe it is essential that we continue to actively involve employees throughout the organization in this important work.

Staff Recommendation:

Staff recommends the Board formally adopt a Motion “approving the attached Initial Implementation Plan, for our Employee Diversity and Inclusion Program, and directing staff to proceed in accordance therewith.”

We suggest that our first progress report be provided to the Board in August for discussion at our September 9, 2017 Work Session.

Information:

- OWASA’s Diversity and Inclusion Program - Draft Initial Implementation Plan

OWASA's Diversity and Inclusion Program

Draft Initial Implementation Plan – March 9, 2017

Goal 1. The diversity of OWASA's workforce reflects the communities we serve.

Objective 1.1 Attract diverse pool of applicants for open positions.					
<i>Strategies</i>	<i>Task #</i>	<i>Tasks</i>	<i>Resources to Complete Task</i>	<i>Target Completion Date</i>	<i>Outcomes & Measures of Success</i>
Increase the diversity of applicants for employment and establish OWASA as an employer that values diversity and inclusion.	1.1a	Develop a list of agencies/ organizations that can assist OWASA with ways to attract a more diverse group of applicants for employment.	Human Resources and Safety Director (HR Director)	March 2017 Ongoing to keep current	Comprehensive list developed
	1.1b	Engage with agencies/ organizations to seek assistance in recruitment and to communicate OWASA's commitment as an employer that values diversity and inclusion.	HR Director (May be a collaborative effort with local governments)	August 2017 Ongoing to keep current	Number of agencies/ organizations participating Diversity of applicants increases
	1.1c	Solicit assistance from OWASA employees for employment referrals and suggestions to improve diversity recruitment. Consider adding this scope to existing Employee Human Resources Team or creating new Employee Diversity and Inclusion Team.	Department Directors	Ongoing	Number of employee referrals Diversity of applicants reflects the diversity of the labor market for that position

Strategies	Task #	Tasks	Resources to Complete Task	Target Completion Date	Outcomes & Measures of Success
	1.1d	Evaluate the job application process for implicit and explicit biases.	Consultant	July 2017	Use industry best practices Increase yield of a diverse applicant pool at each stage of the application/selection process
	1.1e	Implement NeoGov (on-demand HR software for the public sector) for applicant tracking and management reporting to provide greater functionality for applicants and provide statistical data for Team evaluation.	HR Director	May 2017	Software implemented Staff trained
Prepare a recruitment plan for each job vacancy to ensure continuing efforts to build a diverse workforce.	1.1f	Develop process for preparing recruitment plans for each job vacancy.	Consultant	August 2017	Standard process for preparing recruitment plans completed Staff trained Applicant pools are diverse
	1.1g	Using local census data, develop applicant targets for under-represented groups for each job category.	HR Director	August 2017	Targets for each job category established and incorporated into recruitment plans

Objective 1.2 Employment decisions are made based on merit and job-related ability.					
<i>Strategies</i>	<i>Task #</i>	<i>Tasks</i>	<i>Resources to Complete Task</i>	<i>Target Completion Date</i>	<i>Outcomes & Measures of Success</i>
Conduct training for supervisors on recognizing and understanding explicit and implicit bias and how to effectively conduct screening and selection interviews.	1.2a	Provide mandatory training program for all supervisors. (Offer voluntary training to non-supervisors.)	Consultant	August 2017	Training program developed All supervisors successfully complete training and demonstrate competency Employment decisions based on an established and creditable merit system
	1.2b	Evaluate "train-the-trainer" to sustain the training program moving forward.	Consultant Department Directors	TBD	TBD
Use an inclusive process to objectively evaluate candidates for vacant positions to inform employment decisions.	1.2c	Develop standard process for use by an employee interview panel for vacant positions.	Executive Director	March 2017	Standardized process for use of employee evaluation panel completed Staff trained
	1.2d	Develop standard process for making employment decisions.	Executive Director	March 2017	Standard process completed Staff trained Workforce diversity

Goal 2. Inclusive work environment for everyone that encourages and supports each Team member to contribute to their full ability towards OWASA's mission

Objective 2.1 Employees are aware of the importance and value of diversity and inclusion					
Strategies	Task #	Tasks	Resources to Complete Task	Target Completion Date	Outcomes & Measures of Success
Provide training for all employees on the importance and value of diversity and inclusion and how they contribute to a successful, diverse and dynamic work environment.	2.1a	Provide voluntary training program for all employees.	Consultant	October 2017	Training program developed Number of employees trained Employee feedback
	2.1b	Evaluate "train-the-trainer" to sustain the training moving forward.	Consultant Department Directors	TBD	TBD
Provide training and coaching for all supervisors on how to lead and manage their area of responsibility in a manner that promotes and values the positive aspects of a more diverse workplace.	2.1c	Provide mandatory training for supervisors. (Offer voluntary training to non-supervisors.)	Consultant	October 2017	Training program developed All supervisors successfully complete training and demonstrate competency Employee feedback
	2.1d	Evaluate "train-the-trainer" to sustain the training moving forward.	Consultant Department Directors	TBD	TBD

Strategies	Task #	Tasks	Resources to Complete Task	Target Completion Date	Outcomes & Measures of Success
Assess the work culture to determine level of success for diversity and inclusion.	2.1e	Develop, administer and evaluate employee survey and recommend options for improvement (combined with 2.3d).	Consultant Executive Director	August 2017	Survey participation rate Recommendations for continuous improvement
Establish a "welcome team" to help acclimate new employees	2.1f	Develop and train "welcome team."	HR Director	April 2017	Onboarding process improved

Objective 2.2 Provide employees with opportunities to enhance their knowledge and skills to improve their performance and advance their career.

Strategies	Task #	Tasks	Resources to Complete Task	Target Completion Date	Outcomes & Measures of Success
Provide job skills training.	2.2a	Develop training program(s) for core job skills that benefit all employees and the organization (teamwork, communication, problem-solving, dispute resolution, multi-cultural appreciation, etc.).	Department Directors	TBD (longer-term task)	Training program developed
	2.2b	Make core job skills training available for all employees.	Consultant Staff Intergovernmental cooperation (?)	TBD	Employee feedback Employees demonstrate core job competency

Strategies	Task #	Tasks	Resources to Complete Task	Target Completion Date	Outcomes & Measures of Success
	2.2c	Provide interested employees a coaching and mentoring program.	Department Directors	Ongoing	Number of mentors and mentees participating Number of employees advancing career

Objective 2.3 Retain successful employees.

Strategies	Task #	Tasks	Resources to Complete Task	Target Completion Date	Outcomes & Measures of Success
Provide competitive total compensation (pay and benefits) and reward employees for high performance.	2.3a	Evaluate options to allow employees to advance more quickly through their pay range based on performance.	Board of Directors Executive Director Department Directors	April 2017	TBD
	2.3b	Routine evaluation of total compensation.	Board of Directors Executive Director	Ongoing	Voluntary turnover rate
Routinely assess the diversity and inclusive work culture to identify opportunities to improve.	2.3c	Evaluate process to timely and effectively address employee concerns.	HR Director	May 2017	Number of employee concerns successfully resolved
	2.3d	Develop, administer and evaluate employee survey and recommend options for improvement (combined with 2.1e).	Consultant	August 2017	Survey participation rate Recommendations for continuous improvement

Agenda Item 3:

Fiscal Year (FY) 2018 Draft Budget and Rates

Purpose:

To review the FY 2018 draft operating and capital equipment budgets.

Overview:

The draft FY 2018 operating and equipment budgets are consistent with projections in the financial plan we developed last year.

Staff will provide the Board with rate adjustment alternatives for consideration at the March 23, 2017 meeting. However, preliminary work on our financial plan indicates that the Board will be in a position to consider approving a budget with no rate increase for the sixth consecutive year.

The assumption that staff will not recommend a rate increase is based on drafts of the operating and capital equipment budgets, and a high-level estimate of annual totals of the 5-year capital improvements program (CIP). Detailed drafts of the operating and CIP budgets will be provided at the March 23 Board meeting.

Action Requested:

Review information, provide feedback, and identify any additional information the Board would like staff to provide.

Information:

- Background Information for Operating and Capital Equipment Budgets

March 9, 2017

**Background information for draft FY 2018
Operating and Capital Equipment Budgets
March 3, 2017
Page 1**

Purpose

The purpose of this discussion is to provide the Board of Directors with:

- Information about the draft operating and capital equipment budgets for Fiscal Year (FY) 2018.
- A summary of the next steps in the budget development process.

The Board of Directors will continue to discuss these topics, as necessary, in order to be prepared to hold public hearings on May 25, 2017 and make final budget and rates decisions at the June 8, 2017 Board meeting.

Budget and rate adjustment status

Staff has developed drafts of the FY 2018 operating budget, the capital equipment budget, and a high-level estimate of annual totals of the 5-year capital improvements program (CIP). Detailed drafts of the operating and CIP budgets will be provided at the March 23, 2017 Board meeting. Staff will also provide the Board with rate adjustment alternatives for consideration at the March 23 meeting. However, preliminary work on our financial plan indicates that the Board will be in a position to consider approving a budget with no rate increase for the sixth consecutive year.

Capital Improvements Program

Staff is developing the CIP budget with consideration given to the resources needed to achieve our budget execution goal. The Board is scheduled to consider a recommendation to add a Utilities Engineer position to the CIP group at the March 23, 2017 Board meeting. Additionally, we will soon have a vacancy in one of our two existing Utilities Engineer positions that will need to be filled. As a result, productivity will be negatively impacted by training of up to two new staff members and the transfer of existing project workload.

Budget preparation efforts to date

Our draft budget is based on the needs of the organization and our continued commitment to provide high value to our customers. We began the process of developing the FY 2018 budget in December 2016. We completed operating budget request worksheets for each department, compiled the information, performed various analyses, and held budget request review meetings. However, due to the water emergency event in early February, some of our review efforts have been delayed.

Summary of the draft budget

Expenditures in the draft FY 2018 budget include:

Category	Amount (in thousands)
Operating Expenses	\$21,760
Capital Equipment Expenditures	1,271
CIP	To be determined
Debt Service on Outstanding Bonds	6,930
Total	\$29,961

Approach to developing the draft FY 2018 budget

We have drafted the FY 2018 budget based on “normal operating conditions” without contingencies. This increases our risk of exceeding the budget if we incur higher than normal costs from, for example, chemical price increases, more instances of equipment failures, etc. However, OWASA has taken deliberate actions over the last several years to improve its financial condition and these efforts have been successful. Our improved financial condition has enhanced our ability to manage the finances of the organization with a leaner budget.

One of the intended outcomes of accumulating reserves and improving our financial condition is to be better prepared for contingencies that can adversely affect the organization and the customers we serve. Without adequate reserves, we might not be able to react timely and effectively to situations such as a critical asset failure, significant and sudden decrease in water demand, or the effects of a natural disaster. Having adequate reserves also helps us reduce the risk of needing to suddenly increase rates to address unbudgeted expenditures.

Assumptions and highlights

- 2.5% vacancy allowance – the personnel compensation budget has been reduced by about \$200,000, to account for position vacancies.
- 15% increase in health insurance. This will be adjusted once we receive information from our health insurance provider.
- No increase in the rates we are charged for electricity or chemicals.
- A placeholder for a 3% merit increase is included. The Board is scheduled to discuss employee merit increases on May 11, 2017 and make a decision on employee raises on June 8, 2017.
- We continue to consider alternative methods for measuring and compensating employee performance; the Board has discussed implementing a plan to allow for employees to progress through their position’s salary range more quickly. However, since no plan has yet been determined, no funding provision is included in the current draft budget.
- 138 Board authorized positions with 134 funded in the FY 2018 budget. At the March 23, 2017 Board meeting, we plan to request adding a Utilities Engineer position to the CIP group but this potential new position has not yet been factored-in to the budget.
- After action reviews related to the February 2017 water emergency event are ongoing and may result in recommendations for CIP projects or other expenditures but no funding provisions are included in the current draft budget for such outlays.
- Recent changes to the rate structure applicable to multi-family master-metered customers are projected to be revenue neutral.
- Drinking water and reclaimed water sales are not expected to increase or decrease significantly.
- The budget includes funds for consulting assistance to help in the development and implementation of our diversity and inclusion program.
- Staff is working to update the fees we charge for new connections to the system (Service Availability Fees). While we plan to recommend Service Availability Fee rate changes, we do not expect the recommendation to significantly impact the budget.

Financial Management Policy Objectives

Based on the assumptions and projections underlying the draft FY 2018 budget described above, we expect to achieve all of our financial management measurements goals. Reserve levels for FY 2018 are expected to remain above our minimum targets. We will provide projections of future years’ reserve levels after we revise the draft budget as mentioned above.

Additional data

Attachment 1 – Table 1 shows how the draft FY 2018 budget compares to FY 2015 and 2016 actual results, FY 2017 budget and current forecast, and the FY 2018 budget projection included in last year’s financial plan.

Attachment 1 – Table 2 shows details of the capital equipment budget

Attachment 1 – Table 3 shows details of the draft consultants budget.

Budget and rate setting process next steps

With the Board’s approval, we plan to hold public hearings on the budget and rates on May 25, 2017 and present a final budget and proposed rate schedule for approval at the Board meeting on June 8, 2017.

1. Staff will present detailed drafts of the operating and CIP budgets as well as rate adjustment alternatives at the Board’s March 23 meeting.
2. Staff will incorporate feedback from the March 9 and March 23 Board meetings into the budget and financial plan.
3. Staff anticipates presenting an updated draft of the FY 2018 budget to the Board of Directors in late April in advance of the public hearings.
4. Staff will prepare a revised (if necessary) draft of the FY 2018 budget and rate adjustment recommendation for presentation at public hearings tentatively scheduled for May 25.
5. At the public hearings, the Board will receive and consider comments from customers and other stakeholders.
6. After considering public input, the Board of Directors will discuss and provide guidance to staff on the final draft of the FY 2018 budget and rate adjustment recommendation.
7. Staff will finalize the FY 2018 budget and rate adjustment recommendation and present it for adoption by the Board of Directors at its meeting on June 8, 2017.

Action requested

Review the draft FY 2018 budget information and provide guidance.



Stephen Winters, CPA
Director of Finance and Customer Service

**Orange Water and Sewer Authority
Draft FY 2018 Budget Information**

Attachment 1, Table 1

	FY15 Actual	FY16 Actual	FY17 Forecast	FY17 Budget	FY18 Budget	FY18 Amounts in last year's model	FY18 Budget Compared FY17 Forecast	FY18 Budget Compared FY17 Budget	FY18 Budget compared to amount in last year's model
Operating Expenses	19,463,185	19,793,818	20,907,943	21,007,583	21,760,098	21,313,806	4.1%	3.6%	2.1%
Capital Equipment	1,165,000	332,252	1,627,000	1,227,000	1,271,100	900,000	-21.9%	3.6%	41.2%
CIP	10,842,000	7,538,017	11,191,000	13,648,000	TBD	22,505,000			
Total	31,470,185	27,664,087	33,725,943	35,882,583	23,031,198	44,718,806			

Preliminary budget includes:

- 2.5% vacancy allowance
- 3% merit adjustment placeholder
- 15% increase in health insurance
- 134 positions funded
- 7.5% Local Government Employee Retirement System employer contribution rate

Department	Equipment Description	FY 2018 Request	Notes
Engineering Dept 03			
	Replacement truck for Construction Inspector	27,000	Replaces a 2005 Ford Ranger with 175,000 miles.
Department 03 total		<u>27,000</u>	
IT Department 07			
	Core Network Switch	16,000	Existing switch has reached end-of-support and needs to be replaced.
	Server for WWTP	10,000	Second server at WWTP for increased capacity and redundancy
Department 07 total		<u>26,000</u>	
WTP Department 11			
	2017 Ford F250 pickup truck, 8,600 lbs. GVWR	31,100	Replaces 1997 Ford F250 with 122,050 miles.
	Grasshopper 725 DT6 Mower, 25 hp diesel motor with 61" mowing deck.	15,600	During the past two years lake staff has only been able to use the Kubota mower for approximately 50% of the time needed due to lengthy repairs and servicing that have totaled over \$5,000. The mower is approximately 20 years old.
	Used 6 inch dri-prime diesel pump	40,000	The pump will be used exclusively at the WTP for cleaning process basins. Assigning a pump for use exclusively at the WTP will reduce the risk of bacteriological contamination of the process water that is recycled back to the head of the plant.
Department 11 total		<u>86,700</u>	
Dist Department 12			
	CL-12 Tapping Machine	28,000	Replaces and old machinge that 23 years old and does not perform well.
	Tool Truck with Utility Bed	60,000	Replaces a 2001 Dodge Truck 12-17 with 166,596 miles and high maintenance costs.
	CAT 420F2 Backhoe	108,800	Replaces a 1999 JCB 214 4WD backhoe/loader with 6,400 hours and high maintenance costs. Parts are obsolete and the equipment has become difficult to operate.
	Mack Dump Truck	125,000	Replaces a 1995 Mitsubishi FK 457 dump truck. Repair/replacement parts are obsolete and therefore difficult to find.
	Mack Boom Truck	275,000	Replaces a 1995 Ford CFT8000 boom and dump truck. Repair/replacement parts are obsolete and therefore difficult to fine.

Department	Equipment Description	FY 2018 Request	Notes
	2 SALA Tripod	23,500	Replacing two old and outdated tripods used by staff when descending into a pit. This is a safety issue.
	Used Mack Tractor	42,500	This is an addition to the fleet and will be used to pull our lowboy trailer. The WTP's tractor has been modified for use at the plant and cannot meet Distribution's needs.
Department 12 total		<u>662,800</u>	
WWTP Department 21			
	Emergency/Back-Up Pump	30,000	Need multi-purpose emergency/back-up pump for use at the WWTP; specifically during high flow (storm) events.
	3/4 ton pick-up truck (inclusive of utility body/boxes/trailer hitch)	40,000	Replaces a 2002 Chevrolet 2500 service truck with 131,586 miles on it. Requesting to replace due to age, mileage and maintenance costs.
	3/4 ton pick-up truck (inclusive of utility body/boxes/trailer hitch)	40,000	Replaces 2000 Dodge 2500 with 126,225 miles on it. Requesting to replace due to age, mileage and maintenance costs.
	Nutrient/Alkalinity Analyzers	35,000	Additional process control nutrient analyzers for 1) total nitrogen and total phosphorus optimization and 2) replacement alkalinity analyzer for reclaimed water operation.
	Autoclave for WWTP lab	15,000	Replacement autoclave for WWTP lab (in use since 1994).
	Tractor and Pull Behind Tank for Biosolids Land Application	195,000	Replacement for old terragator (obsolete, replacement parts no longer commercially available)
	Skid Steer	65,000	Need multi-purpose equipment for use around WWTP, remote pump stations, and biosolids sites. Includes variety of attachments - pallet forks, scrape blade, grapple, etc. Most locations @ WWTP are too small to get backhoe or other larger equipment in due to tight spaces.
Department 21 total		<u>420,000</u>	
Coll Department 22			
	Two Bush Hogs	9,400	Replaces existing units purchased in 2012.
	2017 3/4 Ton 4x4 Pickup Truck	39,200	Replaces 1997 F250 4x4 pickup truck with 249,600 miles and high maintenance costs.
Department 22 total		<u>48,600</u>	
Grand total		<u>1,271,100</u>	

Item No.	Description	Dept	FY18 Draft Budget Total	FY17 Budget Total	Notes
1	Energy Management Plan	Executive Director	15,000	35,000	
2	Diversity and Inclusion program	Executive Director	40,000	-	
3	Interpreter service for hearing impaired	Executive Director	1,000	1,000	
4	Miscellaneous survey work - easement surveys, boundary surveys, manholes, etc.	Engineering and Planning	7,500	7,500	
5	LRWSP - update cost analysis and yield analysis; additional cost analysis (Burlington option; new legislation on reclaimed water)	Engineering and Planning	60,000	60,000	
6	LRWSP - climate change	Engineering and Planning	5,000	5,000	
7	LRWSP - community engagement (depending on Board guidance on community engagement)	Engineering and Planning	-	30,000	
8	Water and sewer capacity evaluations for new developments	Engineering and Planning	10,000		
9	Other (Jordan Lake Partnership, Miscellaneous LRWSP)	Engineering and Planning	10,000	22,700	
10	Hill, Chesson and Woody	Human Resources	57,200	52,000	
11	Frank Horton and Associates (Employee Assistance Program)	Human Resources	4,000	4,000	
12	Envirosafe (safety consulting (audits of facilities, programs) and safety training services)	Human Resources	52,500	42,000	
13	Total compensation study	Human Resources	-	130,000	
14	HR department - administrative support	Human Resources	15,000	15,000	
15	South Orange Technical Rescue	Human Resources	6,500	6,000	

Item No.	Description	Dept	FY18 Draft Budget Total	FY17 Budget Total	Notes
16	Diversity/employee development training programs	Human Resources	-	40,000	FY18 funding in Executive Director Department's budget
17	Other (fit for drug screens, fitness for duty testing, background investigations, etc.)	Human Resources	14,000	13,500	
18	Annual rate revenue sufficiency study (Burton & Associates)	Finance	50,000	50,000	
19	Cabling	IT	15,000	15,000	
20	Network vulnerability assessment	IT	60,000	60,000	Instead of doing a Network Vulnerability Assessment in FY17, we did a PCI (credit card security) Standards Assessment because of some major changes we have had in our architecture since the last assessment. We have new card swipe machines and other network changes. As a result, we are not doing the Network Vulnerability Assessment in FY17 and instead want to do it in FY18.
21	Microsoft infrastructure	IT		30,000	
22	Cloud-hosted VoIP Planning and Design	IT	30,000		
23	Dynamics/Cogsdale	IT	10,000	10,000	
24	Website update	IT	20,000	20,000	Web Site update was originally intended for FY17. Since there is so much going on organization-wide, we are considering it for FY18.
25	PSW membership	Water Treatment and Supply		600	Moved to Dues Expense (\$600 for FY18)
26	Triangle area water supply monitoring project (Triangle J)	Water Treatment and Supply		43,000	Moved to Dues Expense (\$48,934 for FY18)
27	Water Research Foundation	Water Treatment and Supply		6,000	Moved to Dues Expense (\$6,000 for FY18)

Item No.	Description	Dept	FY18 Draft Budget Total	FY17 Budget Total	Notes
28	Urban Water Consortium	Water Treatment and Supply		5,000	Moved to Dues Expense (\$5,000 for FY18)
29	Upper Cape Fear River Basin Association	Wastewater Treatment		12,500	Moved to Dues Expense (\$11,500 for FY18)
30	North Carolina Water Quality Association	Wastewater Treatment		5,000	Moved to Dues Expense (\$5,000 for FY18)
31	WERF	Wastewater Treatment		5,000	Moved to Dues Expense (\$5,000 for FY18)
32	CITI - Instrument Calibration Contract	Wastewater Treatment		25,000	Moved to Meter Maintenance Expense (\$25,000 for FY18)
33	CITI - Instrumentation/SCADA Maintenance Contract	Wastewater Treatment		100,000	Moved to Meter Maintenance Expense (\$100,000 for FY18)
34	WRRI	Wastewater Treatment		2,500	Moved to Dues Expense (\$5,000 for FY18)
Totals			482,700	853,300	

Agenda Item 4:

Discussion of Board Officer Nomination and Election Process

Purpose:

Proposed revisions to Bylaws to assure diversity/inclusion in Board Members' service as officers and committee members.

Background:

At our recent Board meeting, we discussed strategies for increasing the opportunities all Board Members have for service as officers of the OWASA Board and its committees.

Among the strategies discussed were changes to encourage or require all Board Members to participate in the officer nomination process; limiting Board officers to two consecutive years in the same office; and allowing Board committees to choose their own officers.

At our February 9th Board Work Session, I propose that we discuss these three strategies, and that we decide which, if any, we want to provide for by amending OWASA's Bylaws. I would propose that we direct OWASA Counsel to prepare and bring us revisions to effect the changes favored, at our March Board meeting, where our efforts to improve our diversity can be seen in our broadcast meeting.

Here are some of my thoughts about each of these strategies. I look forward to hearing from you about these proposals.

1. Full Board Acts as Nominating Committee:

I think requiring all Members to participate in the nominating process for election of Board officers will make new persons less hesitant about nominating themselves or others they think may not be favored by the group.

I think actually requiring each Board Member to nominate two persons for each office would likely result in a more diverse pool of nominees, and will certainly result in more nominees for each position. It will also make Members think about who ought, (and perhaps who ought not), be nominated. Remember, the nomination is not an election, but sets the Board up to be able to vote for anyone nominated in that first step, which would be the first step in the election for each office. And, I would propose we do as we do now, once the nominations are collected from the Board, and reported as the names in nomination, that Board Members should then have the privilege of making additional nominations if someone they think should be nominated, wasn't. Voting on the nominees would continue from that first round, into subsequent rounds, with the person with the least votes dropping out after each round, until a candidate is elected by at least five votes.

March 9, 2017

An alternative would be to begin the election for each office with every Board Member's name in nomination. (Everyone would be in nomination for each office.) At the end of each round, until one gets five votes, the person with the least votes drops out, and you vote again on the rest.

2. Board Members May Only Serve Two Years in the Same Office:

I think I heard general consensus to the idea that Board Members should be limited to not more than two consecutive years in the same office, for Chair, Vice Chair, or Secretary. This has been our practice (but not currently in the Bylaws), as I understand it. If broadening opportunities for service as an OWASA officer is the goal, why not change officers every year? The downside to that would be the loss of the benefit of a year's experience as an officer. The upside is that Board Members would have more opportunities to serve on the Executive Committee. The Board should discuss and decide whether increasing service opportunity is a greater benefit than the benefit of a year's experience to the officer who may be re-elected under our present Bylaws.

Keep in mind as well that the Executive Committee consists of the Chair, Vice Chair, and Secretary, so that re-election of any of them also limits opportunities for others to serve on the Executive Committee. In addition, a person who has served two terms as Vice Chair, and is then elected Chair, would then have already served two years on the Executive Committee, and would necessarily then serve a third (consecutive) term on the Executive Committee.

3. Committees Should Be Self-Selected, and Choose Their Own Officers:

The Board Chair has traditionally appointed members to each of the committees, subject to the right of every Board Member to attend and participate in every committee meeting, whether a member or not.

Greater participation might be afforded if every Board Member were allowed to select two committees to "join" as a committee member. The Board Chair ought to oversee this process, and could add others to committees where greater diversity is desired by the Board, or where not enough members have joined. (Each committee's membership should reflect the diversity of the Board.)

The Board Chair has traditionally selected the Chair of each committee. Should these selections be made by the committee members instead?

Next steps:

After the Board determines which of these strategies should be adopted, it might direct Counsel to draft amendments to the Bylaws to effect these purposes, and the Board could consider and vote on their proposals at a following meeting.

Counsel reminds us that it is difficult to draft amendments to Bylaws before the Board makes its determination about what it wants to change, or not to change.

Finally, Counsel notes that Bylaws are always subject to amendment by the process set out in the Bylaws, which basically requires a majority vote. Provided, the change may not be made “on the fly” in the middle of deliberations in a meeting, but has to wait for the next Board meeting, where the change can be written down and published in the meeting package as its own agenda item. There is no such thing as a “permanent by-law.”

Thanks for your responses to these suggestions, and I look forward to working with you on these issues.

Agenda Item 5:

Review Board Work Schedule

Purpose:

- a) Request(s) by Board Committees, Board Members and Staff
 - Update on Advanced Metering Infrastructure Work Plan (Todd Taylor)
- b) Review the draft agendas and discuss expectations for the March 23, 2017 and April 13, 2017 meetings
- c) Review and update the 12 Month Board Meeting Schedule
- d) Review Pending Key Staff Action Items

Information:

- Draft agenda for the March 23, 2017 meeting
- Draft agenda for the April 13, 2017 work session
- Draft 12 Month Board Meeting Schedule
- Pending Key Staff Action Items from Board Meetings

March 9, 2017

Agenda
Meeting of the OWASA Board of Directors
Thursday, March 23, 2017, 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 the four-minute time frame allowed each speaker.

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
3. Announcements by Staff
 - A. March 25, 2016 OWASA's Lake Recreation Season Begins (Todd Taylor)
 - B. Audubon Society Recognition of OWASA for Work on the Cane Creek Mitigation Tract (Ruth Rouse/Aimee Tomcho, Conservation Biologist with Audubon North Carolina)

Petitions and Requests

1. Public
2. Board
3. Staff

CONSENT AGENDA

Action

1. Approve Rates Schedule Effective May 1, 2017 which has been modified to include the Board-Approved Change in Rates for Multi-Family Master-Metered Customers (Stephen Winters)
2. Resolution Awarding a Construction Contract for the Rogerson Drive Force Main Rehabilitation Project (Simon Lobdell)
3. Minutes of the February 9, 2017 Work Session of the Board of Directors (Andrea Orbich)
4. Minutes of the February 17, 2017 Special Work Session of the Board of Directors (Andrea Orbich)
5. Minutes of the February 23, 2017 Meeting of the Board of Directors (Andrea Orbich)

6. Minutes of the March 9, 2017 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter (Robert Morgan)

REGULAR AGENDA

Discussion and Action

7. Proposed Action Plan to Improve the Fluoride Feed System, including Proposed Date to Resume Fluoride (Todd Taylor/Kenneth Loflin)
8. Proposed Action Plan as a Result of the 12" Water Main Break (Vishnu Gangadharan)
9. Proposed Resolution of the Orange Water and Sewer Authority Authorization of a New Utilities Engineer Position in the Engineering and Planning Department (Mary Darr)

Discussion

10. Discuss Fiscal Year 2018 Draft Budget and Rates (Stephen Winters)

Summary of Board Meeting Action Items

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

Closed Session

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

DRAFT

Agenda
Work Session of the OWASA Board of Directors
Thursday, April 13, 2017, 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).

Public speakers are encouraged to organize their remarks for delivery within a four-minute time frame allowed each speaker.

The Board may take action on any item on the agenda.

Announcements

- a. Announcements by the Chair
 - Any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
- b. Announcements by Board Members
- c. Announcements by Staff

Consent Agenda

Action

1. Minutes of the March 9, 2017 Work Session of the Board of Directors (Andrea Orbich)
2. Minutes of the March 23, 2017 Meeting of the Board of Directors (Andrea Orbich)
3. Minutes of the March 23, 2017 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter (Robert Morgan)
4. Resolution Awarding a Construction Contract for the Eastowne, Eubanks and Meadowmont 1 Pump Station Improvements (Simon Lobdell)

Regular Agenda

Discussion

5. Approve Action Plan to Resume Fluoride in Drinking Water (Todd Taylor/Kenneth Loflin)
6. **(If needed)** Approve Action Plan as result of 12" Water Main Break (Vishnu Gangadharan)
7. Review Employee Health and Dental Insurance (Stephanie Glasgow/Ellen Tucker, Hill, Chesson and Woody)
8. Review Draft Fiscal Year 2018 Budget, Rates, and Reserves (Stephen Winters)
9. Authorize Staff to Publish Draft Fiscal 2018 Budget and Rates Information (Stephen Winters)
10. **(Tentative)** Appointment of the Nominating Committee (John Young)
11. **(Tentative)** Discuss Advanced Metering Infrastructure Manual Read Option (Stephen Winters)
12. **(Tentative)** Discuss Draft Energy Management Plan (Mary Tiger)
13. Review Board Work Schedule (John Young/Ed Kerwin)
 - a. Request(s) by Board Committees, Board Members and Staff
 - b. April 27, 2017 Board Meeting
 - c. May 11, 2017 Work Session
 - d. 12 Month Board Meeting Schedule
 - e. Pending Key Staff Action Items

Summary of Work Session Items

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

Closed Session

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

DRAFT

OWASA Board of Directors – 12 Month Board Meeting Schedule (March 3, 2017)

	Award the Administration Building HVAC Replacement Contract CS – General Counsel Review 8/10/2017	(C)	8/24/2017	
September 2017	CS – ED Review 9/14/2017	(C)	Annual Report and Financial Audit Approve General Counsel Engagement CS – ED Review 9/28/2016	(C) (C) (C)
October 2017	Discussion of impact on MFMM rate change CS – ED Review 10/12/2017	(C)	Q1 Financial Report Strategic Trends Report CS – ED Review 10/26/2017	(C) (C) (C)
November 2017	TBD 11/9/2017		<i>Holiday - no meeting</i>	
December 2017	Discuss KPI Trends 12/14/2017		<i>Holiday - no meeting</i>	
January 2018	FY 18 Budget Calendar and Assumptions Employee Health and Dental Insurance Update CY 17 Biosolids Report 1/11/2018	(C) (C)	Annual Lakes Recreation Report (regular agenda) Q2 Financial Report CIP Semiannual Report 1/25/2018	(C) (C) (C)
February 2018	CS - General Counsel Interim Review 2/8/2018	(C)	CS - General Counsel Interim Review 2/22/2018	(C)

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 (e.g., continuing our comprehensive asset management work).

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.
- Improve effectiveness as a learning organization is considered a longer-term priority.
- Water Conservation Plan will be prepared concurrent with update of the Long-Range Water Supply Plan.

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.

OWASA Board of Directors – 12 Month Board Meeting Schedule (March 3, 2017)

Abbreviations Used in Draft Schedule:

- ☐ Recurring agenda item (generally these are “required” items)
- AMI Advanced Metering Infrastructure
- CE Community Engagement
- CEP Community Engagement Plan
- CIP Capital Improvements Program
- COLA Cost of Labor Adjustment
- CS Closed Session of the Board
- CY Calendar Year
- ED Executive Director
- FY Fiscal Year

- JLP Jordan Lake Partnership
- LRWSP Long-Range Water Supply Plan
- MST Mountains-to-Sea Trail
- MFMM Multi-Family Master Meter
- NRTS Natural Resources/Technical Services
- Q Quarter
- SOW Scope of Work
- TBD To Be Determined
- WTP Water Treatment Plant
- WWTP Wastewater Treatment Plant

Current and Pending Key Projects and Stages

Project	Strategic Initiative	Project Lead	Mar-17	Apr-17	May-17	Jun-16	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18
AMI	6	Taylor		Manual Read	Contract									
Total Compensation Study		Glasgow	<i>Schedule To Be Determined</i>											
MFMM Rate Structure Study	4	Winters												
LRWSP	1	Rouse				Demand & Yield								
Energy Plan	5	Tiger												

Stages	Committee Discussion	Feasibility Study	Board Review	Community Engagement	Action	Procurement	Implementation
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Pending Key Staff Action Items from Board Meetings

Date	Action Item	Target Board Meeting Date	Person(s) Responsible	Status
2-23-2017	Put additional information on website which documents that elevated levels of fluoride did not enter the public water supply system.	NA	Feller Loflin	
2-23-2017	Provide answers by email to Board member questions raised at the Feb. 23 Board meeting related to the water emergency.	NA	Taylor Darr Kerwin	
1-26-2017	Explain why water and sewer revenue are about \$200,000 over/under budget. Provide the Board via email.	NA	Winters	
1-26-2017	For the next CIP report, consider adding multi-year budget information. Provide an explanation of significant budget impacts or delays for key projects in the report narrative.	8-24-2017	Gangadharan	
12-8-2016	Implement improvements to the Key Performance Indicators as discussed with the Board on 12-8-2016.	NA	Tiger All Dept. Directors	Many improvements made to the November KPI Report; others are in-development
4-28-2016	Consider educational and public access opportunities at the Cane Creek mitigation tract.	8/10/2017	Rouse Feller	Low priority. Staff will contact our Partners to obtain feedback on alternative educational opportunities on the Cane Creek Mitigation Tract. Staff will work with our Partners to develop a plan regarding public access and educational opportunities for late calendar year 2017 and beyond. Staff will provide an update to the Board of Directors at a work session in CY 2017 (to coincide with overview of forest management work session item).

Agenda Item 6:

Resolution Setting the Date of May 25, 2017 for a Public Hearing on OWASA's Fiscal Year (FY) 2018 Budget

Background:

General Statutes (G.S.) of North Carolina require that before adopting the annual budget, the Board shall hold a public hearing at which time any persons who wish to be heard on the budget may comment.

Notice of the time and place of the public hearing shall be advertised prior to the date of the public hearing, and a copy of the budget is to be provided to news media in the county.

Notice is to be mailed to the University, the Towns of Chapel Hill and Carrboro and to Orange County.

In order to satisfy public notice requirements and to allow for budget adoption tentatively scheduled for June 8, 2017, the attached resolution sets May 25, 2017 as the date of the public hearing on OWASA's budget.

Recommendation:

Set May 25, 2017 as the date of the public hearing on OWASA's FY 2018 budget.

Action Needed:

Adopt the Resolution Setting the Date of May 25, 2017 for a Public Hearing on OWASA's FY 2018 budget

March 9, 2017


Resolution setting date of public hearing on FY 2018 Budget
March 3, 2017

Purpose and background

Section 159-12 of the General Statutes (G.S.) of North Carolina requires that before adopting the annual budget, the Board shall hold a public hearing at which time any persons who wish to be heard on the budget may comment. Historically, the OWASA Board of Directors has conducted the public hearing during the second meeting in May. Statutes also require that the proposed budget be filed with the Clerk to the Board where it shall remain available for public inspection until the budget ordinance is adopted.

Notice of the time and place of the public hearing shall be advertised prior to the date of the public hearing, and a copy of the budget is to be provided to news media in the county. Additionally, the notice is to be mailed to the University of North Carolina at Chapel Hill, the Towns of Chapel Hill and Carrboro, and to Orange County.

The attached resolution sets May 25, 2017 as the date of the public hearing on OWASA's FY 2018 budget. Adoption of the budget is tentatively scheduled for June 8, 2017.



Stephen Winters, CPA
Director of Finance and Customer Service

**RESOLUTION SETTING THE DATE OF MAY 25, 2017 FOR A PUBLIC HEARING ON
OWASA'S FISCAL YEAR 2018 BUDGET**

WHEREAS, Section 159-12 of the General Statutes of North Carolina requires a Public Hearing on the budget for the ensuing fiscal year; and

WHEREAS, in accordance with Section 7.05 of the Bond Order, and Section 159-13 of the General Statutes of North Carolina, the Board of Directors of Orange Water and Sewer Authority shall adopt an Annual Budget for the Fiscal Year 2018 on or before the first day of July 2017; and

WHEREAS, said proposed Budget will be placed with the Clerk to the Board and will be available for public inspection;

NOW, THEREFORE, BE IT RESOLVED:

1. That a Public Hearing is hereby set for Thursday, May 25, 2017, at 7:00 P.M., in Chapel Hill Town Hall, for the purpose of receiving public comment on the proposed Fiscal Year 2018 budget.
2. That any interested persons may appear in-person, or by agent or attorney, and present any comments they may have regarding the proposed budget.
3. That notice of the time and place of the Public Hearing shall be advertised and mailed at least ten days prior to the date fixed above for the Public Hearing to The University of North Carolina at Chapel Hill, and to the Towns of Chapel Hill and Carrboro and to Orange County.

Adopted this 9th day of March, 2017.

John A. Young, Chair

ATTEST:

Barbara M. Foushee, Secretary

Agenda Item 7:

Resolution Setting the Date of May 25, 2017 for a Public Hearing on Proposed Revisions to OWASA's Schedule of Rates, Fees and Charges

Background:

Although there is no statutory requirement for a water and sewer authority to hold a public hearing on proposed revisions to rates, OWASA historically holds such a public hearing in conjunction with the public hearing on the annual budget during its second meeting in May.

The Agreement of Sale and Purchase with The University of North Carolina at Chapel Hill requires that The University be provided a 90-day notice prior to implementation of changes in rates, fees and charges.

The attached resolution sets May 25, 2017, as the date for a public hearing on revisions to rates, fees and charges that, if approved, would go into effect in Fiscal Year 2018.

Recommendation:

Set May 25, 2017 as the date of the public hearing on proposed changes to OWASA's rates, fees and other charges.

Action Needed:

Adopt the Resolution Setting the Date of May 25, 2017 for a Public Hearing on Proposed Revisions to OWASA's Rates, Fees and Charges.

March 9, 2017

Purpose and background

Although there is no statutory requirement for a water and sewer authority to hold a public hearing on proposed revisions to rates, OWASA historically holds such a public hearing in conjunction with the public hearing on the annual budget during the Board's second meeting in May. Information on the annual budget and revisions to rates provided by staff during the public hearings is typically combined into a single presentation.

Any proposed adjustment to rates, fees and other charges will be recommended to become effective during the new fiscal year. The Agreement of Sale and Purchase with the University of North Carolina at Chapel Hill requires that the University be provided a 90-day notice prior to implementation of changes in rates, fees and charges.

The attached resolution sets May 25, 2017, as the date for a public hearing on revisions to rates, fees and charges. Receiving public comment on May 25, 2017 will provide sufficient time to consider public input; adopt a revised schedule of rates, fees and other charges before June 30, 2017, and enable us to meet the notification requirements for the University before any new rates go into effect.



Stephen Winters, CPA
Director of Finance and Customer Service

**RESOLUTION SETTING MAY 25, 2017 AS THE DATE FOR A PUBLIC HEARING ON
PROPOSED REVISIONS TO OWASA'S SCHEDULE OF RATES, FEES AND
CHARGES**

WHEREAS, the Orange Water and Sewer Authority must charge fees sufficient to provide financial resources to recover the cost of ongoing operations, pay for capital improvements, and provide sufficient financial resources to ensure sustainable fiscal strength and stability; and

WHEREAS, Section 162A-6 of the General Statutes of North Carolina and Section 7.04 of the Amended and Restated Bond Order adopted September 13, 2001, provide for the revision of such rates, fees and charges;

NOW, THEREFORE, BE IT RESOLVED:

1. That a Public Hearing is hereby set for Thursday, May 25, 2017 at 7:00 P.M., in Chapel Hill Town Hall, for the purpose of receiving public comment on any proposed adjustments to Orange Water and Sewer Authority's rates, fees and charges.
2. That any interested persons may appear in person, or by agent or attorney, to present comments on the proposed modifications to the current schedule of rates, fees and charges.
3. That notice of the time and place of the Public Hearing shall be advertised and shall be mailed at least ten days prior to the date fixed above for the Public Hearing to the University of North Carolina at Chapel Hill, Town of Carrboro, Town of Chapel Hill, and Orange County.

Adopted this 9th day of March, 2017.

John A. Young, Chair

ATTEST:

Barbara M. Foushee, Secretary

Agenda Item 8

ORANGE WATER AND SEWER AUTHORITY
MEETING OF THE BOARD OF DIRECTORS
JANUARY 26, 2017

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held a regular meeting on Thursday, January 26, 2017, at 7:00 P.M. at the Chapel Hill Town Hall Council Chamber, 405 Martin Luther King Jr. Boulevard, Chapel Hill.

Board Members present: John A. Young (Chair), Jeff Danner (Vice Chair), Barbara Foushee (Secretary), Yinka Ayankoya, Terri Buckner, David (Dave) Moreau, Robert Morgan and Heather Payne. Board Member absent: Ruchir Vora.

OWASA staff present: Ed Kerwin, Mary Darr, Monica Dodson, Greg Feller, Vishnu Gangadharan, Alicia Grey, Kenneth Loflin, Johnny Riley, Ruth Rouse, Kelly Satterfield, Todd Taylor, Mary Tiger, Stephen Winters, and Robert Epting (Epting and Hackney).

Others present: Meg Holton, Water, Wastewater and Stormwater Manager at the University of North Carolina at Chapel Hill (UNC); Mary Sonis, Julie McClintock and Michael Paul with the Friends of Bolin Creek; Alan Tom; and Joel Bulkley, Community Sports News.

There being a quorum present, Chair John Young called the meeting to order.

* * * * *

MOTION ACTED UPON

1. Dave Moreau made a motion to approve the Minutes as amended of the January 12, 2017 Work Session of the Board of Directors; second by Jeff Danner and unanimously approved.

* * * * *

ANNOUNCEMENTS

Conflict of Interest

John Young said 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 at this time; none were disclosed.

Meetings

Jeff Danner said that the Chapel Hill Town Council's OWASA Committee and the Chapel Hill Appointees to the OWASA Board of Directors met on January 26, 2017. Mr. Danner provided a brief update on the following items: appointments/reappointments to the OWASA Board;

diversity and inclusion work; year two of OWASA's affordability outreach program; OWASA's 40th anniversary; Advanced Metering Infrastructure; and the Rogers Road sewer project.

Barbara Foushee announced that she, Terri Buckner and John Young will provide OWASA's annual update to the Orange County Board of County Commissioners on Tuesday, February 21, 2017, 7:00 P.M., at the Southern Human Services Center in Chapel Hill.

Ms. Foushee also requested Board Members' feedback on the February 9, 2017, agenda item, Discussion of Board Officer Nomination and Election Process, by noon on February 1, 2017.

PETITIONS AND REQUESTS

John Young asked for petitions and requests from the public, Board and staff; there were none.

ITEM ONE: CAPITAL IMPROVEMENTS PROGRAM (CIP) SEMIANNUAL REPORT

The Board requested additional information on the schedule and budget variances for the Mason Farm Wastewater Treatment Plant digester project and the Little Creek sewer project. The Board concurred that when there are significant delays or budget impacts on a project(s), a summary paragraph should be provided on the particular project(s) in the CIP report.

ITEM TWO: 12 MONTH BOARD MEETING SCHEDULE

The Board received this as an information item.

ITEM THREE: MINUTES

Without objection, Terri Buckner requested that the Minutes of the January 12, 2017 Work Session of the Board of Directors be amended on page 3, Item Nine, Compensation for the Executive Director (second paragraph, second sentence): *Terri Buckner thanked Mr. Kerwin for his work and service but stated that she intended to vote against the Motion because she continues to favor favored across the board lump sum pay increases over percentage-of-pay increases.*

Dave Moreau made a motion to approve the Minutes as amended of the January 12, 2017 Work Session of the Board of Directors; second by Jeff Danner and unanimously approved. Please see Motion No. 1 above.

ITEM FOUR: FRIENDS OF BOLIN CREEK PRESENTATION

Julie McClintock, Michael Paul (Stream Ecologist) and Mary Sonis (Naturalist), who are representatives of the Friends of Bolin Creek, gave a presentation on Bolin Creek's wildlife and other ecological information to make the Board aware of the special effort that will be needed to protect Bolin Creek in planning the future sewer line replacement along Bolin Creek.

The Board thanked the group for the presentation, and advised that the sewer line replacement near Bolin Creek is a future capital improvement project and work has not begun. When the timing of the project is confirmed and as project planning starts, staff will engage stakeholders, including the Friends of Bolin Creek, regarding the planning and design of the project.

ITEM FIVE: 2016 ANNUAL LAKES RECREATION REPORT

Mr. Alan Tom said he is supportive of recreation and said that the lake operating expenses for full-time employee salaries and fringe benefits do not accurately reflect recreational cost for the amount of time the lakes are open to the public.

The Board agreed to continue the birdwatching program on Wednesday mornings at the Cane Creek Reservoir from mid-November to mid-March.

ITEM SIX: FINANCIAL REPORT FOR THE SIX-MONTH PERIOD ENDED DECEMBER 31, 2016

The Board requested additional information on why water revenue is under budget for the period but sewer revenue is over budget. The Board also asked about savings in consultant fees for Fiscal Year 2017 related to the employee total compensation study.

ITEM SEVEN: SCOPE AND SCHEDULE FOR EVALUATING FUTURE RATE CHANGES

The Board agreed to re-evaluate OWASA's rate structure for charging customers for monthly water and sewer service when the Advanced Metering Infrastructure system is in place; agreed to review the impact of the recent change in the water rate for multi-family master-metered customers in the fall of 2017; and discussed the types of rate structure changes the Board wants to consider in the future.

Yinka Ayankoya was excused at 8:30 P.M.

Barbara Foushee was excused at 8:45 P.M.

ITEM EIGHT: 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

Ed Kerwin summarized the meeting as follows:

- Staff will provide additional information on the schedule and budget variances for the Mason Farm Wastewater Treatment Plant digester project and the Little Creek sewer project;
- Staff will update future Capital Improvement Projects reports to include additional information when there are significant delays or budget impacts on project(s);

- Staff will provide additional information on why water and sewer revenue are over/under budget;
- Staff will report on the savings in consultant fees for Fiscal Year 2017 related to the employee total compensation study; and
- The February 9, 2017 Work Session will include the following:
 - o Contract for a gravity sewer rehabilitation project;
 - o Discuss Advanced Metering Infrastructure Manual Meter-Reading Option;
 - o Discuss initial implementation plan for OWASA's Employee Diversity and Inclusion Program;
 - o Overview of OWASA's land holdings and past management discussions and actions; and
 - o Discussion of Board officer nomination and election process.

The meeting was adjourned at 8:52 P.M.

Respectfully submitted,

Andrea Orbich
Executive Assistant/Clerk to the Board

DRAFT

Agenda Item 9

ORANGE WATER AND SEWER AUTHORITY
CLOSED SESSION OF THE BOARD OF DIRECTORS

FEBRUARY 23, 2017

The Board of Directors of Orange Water and Sewer Authority met in Closed Session on Thursday, February 23, 2017, following the Board meeting.

Board Members present: John A. Young, Chair; Jeff Danner, Vice Chair; Yinka Ayankoya; Terri Buckner; David (Dave) Moreau; Robert Morgan; and Ruchir Vora.
Board Members absent: Barbara M. Foushee, Secretary; and Heather Payne.

Staff present: Ed Kerwin, Executive Director; Robert Epting, General Counsel; Robin Jacobs; Todd Taylor; Stephanie Glasgow; and Kenneth Loflin.

ITEM ONE

The Board of Directors met in Closed Session with staff to discuss a confidential personnel matter.

ITEM TWO

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

No official action was taken at the meeting.

The meeting was adjourned at 9:45 P.M.

Robert Morgan, Chair
Human Resources Committee