ORANGE WATER AND SEWER AUTHORITY

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

AGENDA
MEETING OF THE OWASA BOARD OF DIRECTORS
THURSDAY, FEBRUARY 25, 2016, 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. Additional time may be allowed at the discretion of the Board of Directors.

Announcements

1. Announcements by the Chair
   A. Any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
2. Announcements by Board Members
   A. Update on the February 16, 2016 Annual Update to the Orange County Board of Commissioners (Terri Buckner/Barbara Foushee)
3. Announcements by Staff

Petitions and Requests

1. Public – Mr. Alan Tom
2. Board
3. Staff

REGULAR AGENDA

Discussion

1. Receive Public Feedback on Advanced Metering Infrastructure (Todd Taylor/John Young)

Information and Reports

2. Presentation on Ensuring Drinking Water Safety (Kenneth Loflin/Monica Dodson)

REGULAR AGENDA

Discussion

3. Update on OWASA's Strategic Plan (Ed Kerwin)
4. Update on OWASA's Community Engagement (Ed Kerwin)
5. Financial Reserves Policy (Stephen Winters)

CONSENT AGENDA

Action

6. Approval of the Minutes of the January 21, 2016 Special Meeting of the Board of Directors (Andrea Orbich)
7. Approval of the Minutes of the January 28, 2016 Meeting of the Board of Directors (Andrea Orbich)
8. Approval of the Minutes of the February 11, 2016 Closed Session of the Board of Directors the Purpose of Discussing a Personnel Matter (Robert Morgan)

Summary of Board Meeting Action Items

9. 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

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

PUBLIC PETITION

Petition for the February 25 OWASA Board of Directors Meeting

Alan Tom: February 10, 2016

This petition focuses on two recreation issues: discounted fees for low-income patrons and clarifying the process for the annual review of recreation policy.

Discounted Fees for Low-income Patrons: At the request of Board member(s), the staff prepared a recommendation that would reduce recreation fees for low-income people. In the agenda for the February 15, 2015 Board meeting, the staff suggested:

> Reduced Lake Recreation Fees for Financially Disadvantaged Patrons - This item will require additional research and discussions to determine the appropriate fee levels, eligibility requirements, best practices for determining eligibility, whether or not this is a discriminatory practice, etc. In addition, we typically advertise changes to the fee schedule in advance and provide ample opportunity for public comment. Given the limited time available for these activities, we recommend considering this suggestion for the 2016 Lake Recreation Season.

This past year, this item was not considered further, as best I can tell from examining Board minutes and listening to parts of the recordings of OWASA Board meetings.

Over the years lake staff members have frequently commented that the OWASA Board should be cautious about raising recreation fees for fear that increased fees would become excessive for some patrons, possibly even leading to a reduction in total income. But there will be a time when raising fees will be seen as necessary.

A natural time to consider the possibility of a discounted fee would be the next time fees are to be raised on the two lakes, perhaps by not raising fees for people who would qualify for this special rate. Delaying consideration of any such fee reduction until a future time would give staff adequate time to figure how to implement this suggestion, should the Board wish to do so.

Clarify Recreation Policy Process: Over the past several years I have participated in the setting OWASA recreation policy. I have done such things as observe NRTS meetings, present a petition to the Board, and/or respond to questions from the Board. While my involvement (and that of others) in recreation policymaking has added time to the work of the Board, such involvement has given us a sense of ownership for recreation policy decisions and has, I hope, contributed to the improvement of recreation policy.

This past year, even though I examined Board and NRTS agendas, I was unaware that the determination of recreation policy had been separated from the annual recreation report so that this policy was (apparently) set before the recreation report was received as part of the consent agenda at the January 28 Board Meeting. At this point, I do not know how the OWASA Board, including NRTS, set recreation policy for 2016.

Summary. I recommend that the Board: 1) Consider a discount for low-income patrons when lake fees are next raised; 2) Spell out the process for determining recreation policy in 2017 and subsequent years.

AGENDA ITEM

- **RECEIVE PUBLIC FEEDBACK ON ADVANCED METERING INFRASTRUCTURE**

PURPOSE

- OWASA is considering new meter reading technology called Advanced Metering Infrastructure (AMI), and welcomes customers and stakeholders' thoughts and opinions prior to making this important decision.

BACKGROUND

- In January 2016, the AMI Feasibility Study was completed and the community engagement effort began.

- As of February 17, 2016, we have received comments from 56 citizens. The majority of the respondents support AMI.

- Before the Board of Directors makes a final decision on March 24, 2016, customers and stakeholders will have additional opportunities to get information and provide feedback through our website, email, phone, and attendance at the March 10 and March 24 Board meetings.

ACTION NEEDED

- Invite and discuss customers' comments and feedback.

ORANGE WATER AND SEWER AUTHORITY

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

MEMORANDUM

TO:	Board of Directors
THROUGH:	Ed Kerwin
FROM:	Todd Taylor, P.E.
DATE:	February 19, 2016
SUBJECT:	**RECEIVE PUBLIC FEEDBACK ON ADVANCED METERING INFRASTRUCTURE**

Purpose

OWASA is considering new meter reading technology called Advanced Metering Infrastructure (AMI), and welcomes customers and stakeholders' thoughts and opinions prior to making this important decision.

What is AMI?

An AMI system would collect meter readings remotely via radio transmissions, eliminating the need to drive or walk through the community to collect this information monthly as we do now. As a result of their efficiency, AMI systems can read meters more often (many times a day vs. once a month). AMI systems also eliminate the potential for human error when reading meters.

Key Benefits to Customers

- ✓ OWASA staff will have access to information that empowers them to proactively let customers know when their water-use patterns indicate a potential leak at the customer's premises.
- ✓ Customers will have access to their water use data on line, providing them much greater insight into water use. This will help our customers conserve water and save money.
- ✓ An AMI system will significantly reduce our vehicle use and associated costs and greenhouse gas emissions for our meter reading program.

Impact on Customers' Bills

Keeping our essential services affordable is one of OWASA's most important goals. Investing in an AMI system will not, by itself, lead to a rate increase for OWASA customers. The estimated $6 million investment in AMI would be offset by avoiding planned investments in our current, less efficient water meter technology and by savings from operational efficiency improvements.

Outreach Work and Feedback to Date

Since February 10, 2016, we have informed stakeholders about AMI and sought their feedback through the following:

- News release sent to about 10,000 citizens via email
- Website information via a link on the homepage (a main AMI webpage, including a schematic diagram, an answers to frequently asked questions webpage, a link to the feasibility study and a Survey Monkey for feedback questions on the community engagement process)
- Blue Thumb newsletter to all accountholders (still be distributed)
- Spanish translation of the AMI information in the Blue Thumb newsletter (provided to Customer Service for responding to Spanish customers and ported on line in the Blue Thumb archive)
- Letters to the local governments, UNC and other key stakeholders with information and an offer to meet for a presentation/discussion about AMI
- Twitter message

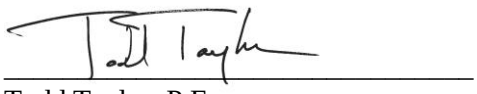
As of February 17, 2016, we have received comments from 56 citizens. The majority of the responders support AMI. The comments from citizens are attached with a summary.

In assessing the success of our Customer Engagement efforts for AMI, one of the data points we are reviewing is the amount of traffic our website has for the AMI-related pages. Using Google Analytics, we are able to track traffic on our website and determine which pages are being viewed. While the overwhelming majority of traffic on our website is related to billing, the most popular non-billing website page in the week since it went live has been the AMI information page. The AMI page has received approximately 25 views per day with nearly half of those visitors also looking at the AMI FAQ page as well.

Before the Board of Directors makes a final decision at their March 24, 2016 meeting, customers and stakeholders will also have the following opportunities to get information and provide feedback:

1. Visit our website at www.owasa.org.
2. E-mail us at info@owasa.org.
3. Call us at 919-968-4421.
4. Write us at OWASA, Attn: AMI Feedback, 400 Jones Ferry Road, Carrboro, NC 27510.
5. Attend and provide feedback at any of the following Board meetings:

    - 6 PM – March 10, 2016 at the OWASA Community Room
    - 7 PM – March 24, 2016 at the Chapel Hill Town Hall (The OWASA Board may make a decision on whether to proceed with AMI implementation at this meeting.)



Todd Taylor, P.E.
General Manager of Operations

Attachment – Comments from Citizens Regarding the Advanced Metering System Proposal

Comments from Citizens Regarding the Advanced Metering System Proposal

February 19, 2016

Summary (Updated 2/25/16)

Total responses: 61

Support: 35

Oppose: 8

Customers who asked questions or commented and neither support nor oppose: 18

NOTE: All comments were received via email unless otherwise noted. OWASA staff responded to all comments and inquiries to thank each respondent for their feedback and invite participation at the Board meetings on February 25, March 10 and March 24. Staff responses to specific inquiries are included below.

February 10:

Margaret Gourlay
I strongly support that you go forward with your **Advanced Metering Infrastructure** construction. I suggested such an innovation on a feedback form a few months ago, after a plumbing leak led to 3000 gallons of water use in one month in my small single-person household, and I didn't find out until a month later when I was billed. (I appreciate your current usage graphs because the change was obvious, and I knew what the source was because of the time frame). I would definitely use your new system often to monitor my use.

Stevan Stark
If AMI will result in staff reductions then I am in favor of it...if it doesn't then it will result in higher costs to residents who use OWASA. Since I suspect that will be the case, I am not in favor of the "new" AMI.
Stevan R Stark

Staff Response:
Dear Mr. Stark:
Thank you very much for your e-mail! We will share it with the OWASA Board and staff.
Regarding reduction in positions:

- *Our consultant estimates there will be a net reduction of 8 positions. The consultant's report is on our website at http://www.owasa.org/Data/Sites/1/media/customerService/ami-study-combined-documents.pdf. Page 30 has related information includes:*

  6.7 Staff, Vehicle and Other Cost Savings. *AMI implementation will enable savings in staffing costs, as discussed in Section 5.4. The day to-day office-side operation of the AMI system for regular periodic billing is not dissimilar from the operation of OWASA's current handheld meter reading system and would continue to be handled by a billing clerk or CSR. With AMI, OWASA should add a full-time position responsible for AMI system operation and management, business analysis, application development and user training.* ***Table B10***

presents the anticipated net annual staffing cost savings, which is estimated to be approximately $350,000 once the system is completely deployed.

and page 58 has the position reduction table including the estimated annual personnel savings.

- *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*
  Investing in an AMI system will not, by itself, lead to a rate increase for OWASA customers. The estimated $6 million investment in AMI would be offset by avoiding planned investments in our current, less efficient water meter technology and by savings from operational efficiency improvements

Please let us know if you have any additional comments or questions.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Thank you for your response. It appears AMI implementation can reduce costs if OWASA follows the consultant's recommendations. I am out of town and will not be able to attend the meeting but I would support the investment in the new technology.
S R Stark

Carol Petersen
Dear Sirs,
I read the information you shared regarding the new meter reading system. I sounds like it should be helpful in keeping our costs down and improve the carbon usage by keeping vehicle use to a minimum. I have one main question:

If the wi-fi system for reading the meter fails or seems to be inaccurately working, what is your back-up plan and how may the customer address a potential billing problem resulting from a failed meter reading or a water meter failure?
Sincerely,
Carol Petersen

Staff Response:
Ms. Peterson,
Thank you for your questions regarding the proposed AMI system.
There are multiple redundancies built into an AMI system and the systems are self-monitoring as well to detect problems with meters and other components of the system. While there are various manufacturers of these systems and each has their own specific technologies and solutions, the systems have many general features in common.

For example, if an individual meter is not reporting its readings to the data collection for some reason, the data collection system will recognize that the meter is not reporting and automatically generate a work order for an OWASA employee who will physically inspect the meter and resolve the issue. The OWASA employees will also have handheld data collection devices to record any of the missed readings. In the event that one of the data collection units malfunctions, most meters will be

able to communicate with more than one data collection unit so that data recording can continue uninterrupted. In the event an individual meter cannot communicate with any data collection unit, the individual meters are able to record at least several days of meter readings and would upload those readings when communication is reestablished. As a last resort, in the event that a meter reading cannot be transmitted, the meter will still have a visible dial that will be read and recorded by an OWASA employee physically reading the meter dial.

In the unlikely event that an individual meter was sending inaccurate readings, the data management system software reviews the readings to determine unusual readings that may indicate a leak, backflow or possible meter malfunction so that these items can be proactively addressed before any billing process results in an inaccurate bill.

And, finally, any customer that believes their bill may be in error is encouraged to contact OWASA Customer Service so that we may address any possible issues. The features of the AMI system would improve the ability of our Customer Service Representatives in assisting the customer to identify what may have resulted in an erroneous reading or possible additional water consumption.

Please let me know if you have any other questions regarding AMI.
Thank you,
Daniel D. Przybyl

Terry Maguire
Message Subject: Of special value - AMI
For me, the greatest value of having this system in place would be my ability to check on any apparent water leaks when I am out of town, especially in cold weather, but year round as well. Peace of mind is worth a lot.

For example, in another home we own, the hose to the dishwasher one morning simply split, pouring a good deal of water into the kitchen. Fortunately, I was there at the time and could address the problem immediately.

Without having sensors at various places, had the AMI meter been in place there, I would have noted shortly that the water meter was continuing to show usage even though I would have expected none. That could have brought a visit by a friend, etc., that otherwise might have run for much longer.
No doubt apps will emerge that would signal us when we tell it to do so in the event of unexpected water usage. That would be perfect.
Thanks.
Terry MAGUIRE

Lynda Isabel
Thank you for the opportunity to provide feedback on the proposed AMI. I don't have any experience with such a system, but I do know OWASA needs to improve its ability to read meters accurately ! Some months my meter reading is the same for 2 months in a row, even though the date for the last meter reading is the current month (implying that I have not used any water during the current month). Then the next month, the meter reading jumps dramatically... obviously a "catch up" reading.

Hopefully, the cost of installing and testing such a system will not be passed on to OWASA customers. Also, please do adequate "user acceptance testing" with real customers. I have found that other utilities don't do a good job at implementation, which invariably creates customer dissatisfaction. I think most customers will support the new system; but we do want it to work the first time you roll it out.

What is the timeline for implementing the new system?

Thank you !

Lynda B. Isabel

Staff Response:
Dear Ms. Isabel:
Thank you very much for your e-mail!
We will share it with the OWASA Board of Directors and staff.

We do not have a timeline for implementing AMI, but you may wish to check the AMI part of our website, www.owasa.org.
If AMI is approved, OWASA staff would recommend billing in tens of gallons instead of in thousands of gallons as we do now. Such a change is a policy matter to be decided by the OWASA Board.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Ronnie Graham
AMi sounds like the time is ripe for it! TOO OFTEN i FEEL THAT THE PERSON WHO WALKS IN THE HEAT AND THE SNOW TO READ METERS MAY NOT BE DOING IT EXACTLY ACCURATELY. Human error happens way to often. Give them a good another job and let's let technology work for us. Thanks for opening this up to the public. YEAH OWASA!!! Ronnie Graham

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Fred Heffron
it was installed in our house in kansas city and was a terrible idea
fred heffron

Louis Giordano
Message Subject: New meter reading system
It sounds like an improved system to me.
Louis B. Giordano

Victor Lancaster
Hi Greg,
These are my comments on the above subject.
I trust the intention of OWASA is to pass on the bulk of the savings to customers. Has there been any preliminary estimates on how much this savings would be?
I assume this will use some form of radio frequency to transmit the data to the central site using cell phone technology?
Is there enough bandwidth on current cell towers to accommodate this?
How is error checking/corrections handled? If there is an error, is there provision for manual backup readings?
What happens if cell tower or power goes down?
These are a few questions that will need addressing.
Best Regards,
Vic Lancaster

Staff Response:
Dear Mr. Lancaster:
Our consultant estimates that AMI would save about $325,000 annually by avoiding continued investment in our current meter reading system and ending the need for meter readers to drive and walk in the community to read meters once a month, with related vehicle and fuel costs. Over time, the annual savings would recover the $6 million investment in AMI.

The OWASA Board of Directors makes decisions on rates and fees as part of the annual budget process each spring. The rates and budget reflect service needs; cost factors; capital projects to renew, replace and improve our facilities; water demand and other factors in a given year.

Regarding your questions about AMI technology, below is information from Dan Przybyl, our Director of Information Technology.

I assume this will use some form of radio frequency to transmit the data to the central site using cell phone technology?

> *There are a variety of AMI technology vendors employing various methods to transfer meter reading data in different parts of the system. While some vendors use cell phone technology to transmit data from the water meter to the data collection device, this is more common in areas covering larger geographic areas with low population densities and is unlikely to be part of our selected system. Another use of cell phone technology to transmit data from the data collection devices to the central database although other network technologies may be used as well such as cabled network connections, point-to-point wireless networking, etc. We will not know the exact technology or configuration used for data transmission until we review and select and specific vendor proposal and the AMI system architecture is designed.*

Is there enough bandwidth on current cell towers to accommodate this?

> *If we implement an AMI system that utilizes cell phone technology for data transmission from data collectors to the central database, we do not anticipate that bandwidth would be an issue due to a number of factors. Firstly, the amount of data transmitted is actually very small; think in terms of text messaging as compared to transmitting video files. Second, the transmission is not continuous but happens periodically, perhaps once or several times a day. Although the meters may record a reading every 15 minutes, it would adversely affect the battery life of the meter*

transmitter to transmit those readings every 15 minutes. Ratner the meter may only transmit readings to the data collectors twice a day which in turn would compress the data and transmit the data to the central database. The data collectors can also be configured to transmit data during times of lower network utilization (e.g., 4 AM).

How is error checking/corrections handled? If there is an error, is there provision for manual backup readings?

Again, while each vendor has developed its own system, AMI systems are designed to be self-monitoring to identify meters that are not transmitting and to identify unusual or erratic readings. These applications, usually called Meter Data Management Systems (MDMS) have the ability to exclude erroneous reading, auto-generate work orders for suspected leaks or faulty meters, etc. Finally, there are handheld data collections for use by utility personnel to physically inspect the meters and record the readings either electronically or manually.

What happens if cell tower or power goes down?

Again, while each vendor has developed its own system, AMI systems are designed to accommodate network outages by locally storing data for an extended period until network communication is restored and data collection units are also equipped with backup power supplies to prevent data loss in the event of a power outage. Additionally, if the data collectors utilize cellular modems for data transmission, the collectors likely would be able to communicate with multiple cell towers so that multiple cell tower outages would be necessary to affect system performance.

Please let us know if you have any additional comments or questions.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Rajkash
Message Subject: AMI comment
AMI should lead to lower costs/rates for customers.

Janet Boren
I am fully against this idea of "smart" meters as
This kind of energy is very bad for many consumers
I would suggest that this issue be 4passed over and thrown out as an idea
Janet Boren

Staff Response:
Dear Ms. Boren:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff. As information, here are comments from our consultant's report on meter reading technologies:

While few scientific studies have specifically focused on water meter AMI technology, the available studies (mainly associated with electric meters) come to the same conclusions as the many peer-reviewed studies of similar technologies using low-level wireless radio frequencies: no adverse health impacts. For example, a World Health Organization survey of published research concluded that there is no convincing scientific evidence that the weak Radio Frequency (RF) signals from wireless meter reading networks cause adverse health effects. Although there is anecdotal information that some individuals may be hypersensitive to radio frequencies, there is no definitive evidence linking such symptoms to low-level wireless transmissions like those associated with AMI meters.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Jay Raval
Message Subject: Advanced Metering Infrastructure: YES
Hi,
Jay Raval here at [deleted]. My wife (Marian) and I fully support (i.e., vote YES) on the proposal to move forward with plans to install and implement use of AMI in our water system. It sounds like a fantastic idea with benefits on multiple fronts (including recording water use data, using water use data in real time, and saving on driving/other current water use measuring costs).
Thanks, and please email with any questions/comments.
Take care,
Jay

John Schmidt
I have a number of questions that could have been answered in your email. I'd like to get the answers before any public information meeting

1. How powerful is the signal from the meter compared to what is generated now?
2. Duke Energy also wants to use a similar system, and could there be intereference?
3. What kind of an antenna is needed. Does it stick up above grade?
4. Does the water meter location need to be changed?
5. How much does the truck and driver (present method) cost compared to the $6 million outlay? There must be something else involved to warrant this kind outlay.

You can answer my questions by email, or by a phone call from Greg Feller. I am at 919-968-0322
Thank you, --- John Schmidt

Staff Response:
Dear Mr. Schmidt:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff. Below are your questions and comment and our information regarding each.

1. How powerful is the signal from the meter compared to what is generated now?
With an AMI system, the signal from the transmitter at our meter would have essentially the same strength as with our present meters transmitting to a meter reader's truck.

(With AMI, our meters would of course transmit more often than with the present system.)

2. *Duke Energy also wants to use a similar system, and could there be interference?* ***No. The use of radio transmitters is licensed by the Federal Communications Commission and systems in the same area are required to have different frequencies (like radio stations).***

3. *What kind of an antenna is needed? Does it stick up above grade?* ***The antenna would be a simple one such as a disc about ¾" high on the meter box.***

4. *Does the water meter location need to be changed?* ***Not in residential areas. Some non–residential meters might be moved.***

5. *How much does the truck and driver (present method) cost compared to the $6 million outlay?* ***For a 10 year period (in which AMI would pay for itself by cutting costs), the present system would cost an average of about $325,000/year more than AMI. If you are interested in reading our consultant's report for the details, the report is at*** *http://www.owasa.org/Data/Sites/1/media/customerService/ami-study-combined-documents.pdf* ***and we suggest going to*** *page 32 of the report.*

6. There must be something else involved to warrant this kind outlay.
AMI would help OWASA and customers more quickly see water use patterns indicating a possible leak, so leaks could be found and fixed sooner, thus conserving water (and saving money).
By eliminating the need to drive in the community to read meters, AMI would reduce our fuel use and costs and related greenhouse gas emissions.
AMI would also be safer for employees and reduce our part of the traffic on local streets.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Great to hear from you again, John!
Best regards,
Greg Feller

Shannon Jordan
I won't be able to make it to a meeting but here's one vote to move over to AMI. Seems like a win-win proposition!

Thanks,
Shannon Jordan

Susan Meyer
Dear Sir,
Many thanks for soliciting comments regarding the proposed new meter reading technology.
I am interested in knowing:

1. How many people will lose their jobs if the new meter reading technology is implemented by OWASA?
2. As a customer who rarely meets the 1000 gallons per month usage minimum, will this new system charge me for exactly the amount of water I use and not the $35.xx I pay monthly (with rare exceptions)?
Thank you again for providing OWASA customers with this opportunity.

Best regards,
Susan Jordan Meyer

Staff Response:
Dear Ms. Meyer:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.

- ***What will happen to OWASA's employees who read meters?*** *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

- *Whether to change our present billing in whole thousands of gallons is a policy decision to be made by the OWASA Board. With AMI, OWASA staff would recommend billing in tens of gallons in most cases.*

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 25, when AMI will be on the agenda.
Sincerely,
Greg Feller

Fredrick Lee
I am totally for AMI. My rental property is [deleted]
How about installing a monthly budget plan as well as AMI (just sayin')?

Thank you,
Fred Lee

Jan Schochet
Message Subject: no AMI
Please do NOT change to AMI.
There are people who are greatly affected by radio waves.
I am one of them.
Thank you,
Jan Schochet

Staff Response:
Dear Ms. Schochet:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.

As information, here are comments from our consultant's report on meter reading technologies:

While few scientific studies have specifically focused on water meter AMI technology, the available studies (mainly associated with electric meters) come to the same conclusions as the many peer-reviewed studies of similar technologies using low-level wireless radio frequencies: no adverse health impacts. For example, a World Health Organization survey of published research concluded that there is no convincing scientific evidence that the weak Radio Frequency (RF) signals from wireless meter reading networks cause adverse health effects. Although there is anecdotal information that some individuals may be hypersensitive to radio frequencies, there is no definitive evidence linking such symptoms to low-level wireless transmissions like those associated with AMI meters.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

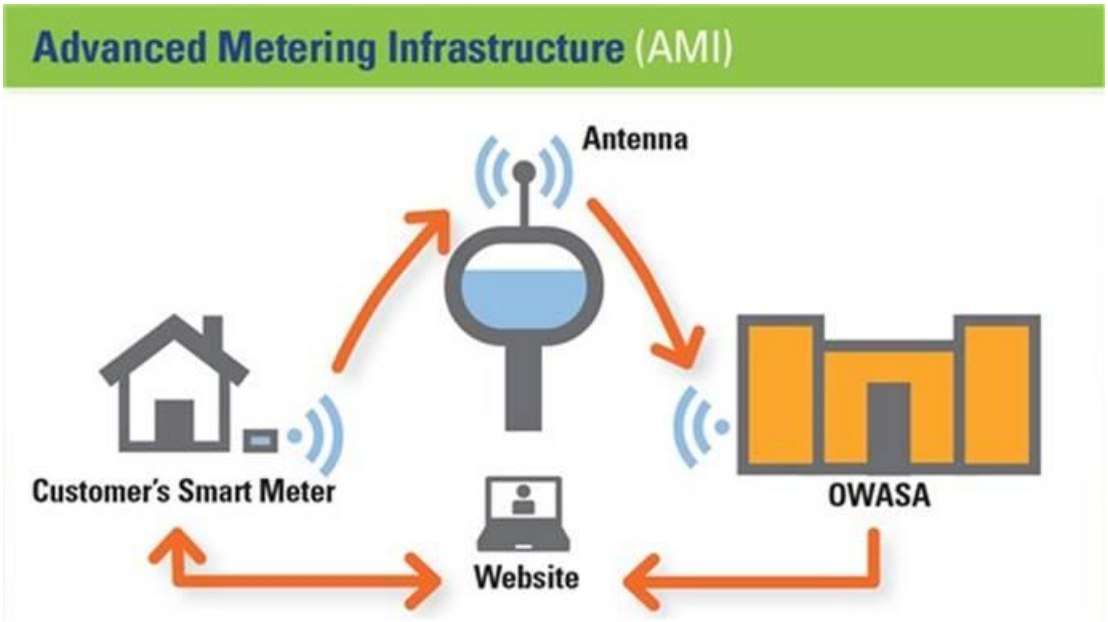
W. Patrick Gale
I welcome this technology especially of users can access their water usage online each day. I have had water leaks in the past so knowing if my water usage has spiked would be helpful.
Cheers

Carol Troutner
Hi Greg,
I do not want AMI meters. They broadcast radiation ALL the time, or every 10-30 seconds. I want an AMR meter, which turns on only when the meter reader drives by to read it. It's important to install only meters that turn on/off the radio frequency device and do NOT broadcast all the time.
Thank you for asking for my comments and please keep me posted.
Carol

I wish I knew more about the remote radio meter reading transmission proposal. Can you tell me how this would work?

Staff Response:
Dear Carol:
Here is some information from the OWASA webpage about AMI which I hope will be helpful:

How does the system work?
Low powered radios installed in the water meter boxes and connected to the water meters will periodically transmit water use information to data collectors on OWASA's water towers, buildings and other facilities, which will relay this information to OWASA's offices.



How does this differ from the current meter reading system?
About two-thirds of our water meters are read by employees who drive to neighborhoods and walk from meter to meter to read them and record the readings. The other one-third of our meters have radio transmitters and these meters are read by employees who drive close enough to the meters to get the readings. We read all of our meters once a month.
In contrast, AMI would not require employees to walk or drive in the community to get meter readings. Small, battery powered transmitters at meters would send information on water use several times a day via antennae in the community to a computer system at OWASA. The computer data would be available to OWASA staff to check for water use patterns that may indicate a leak (so we can quickly alert customers as needed), and customers with Internet access could frequently check their water use on line.
Does this system pose any risk to my health?
While few scientific studies have specifically focused on water meter AMI technology, the available studies (mainly associated with electric meters) come to the same conclusions as the many peer-reviewed studies of similar technologies using low-level wireless radio frequencies: no adverse health impacts. For example, a World Health Organization survey of published research concluded that there is no convincing scientific evidence that the weak Radio Frequency (RF) signals from wireless meter reading networks cause adverse health effects. Although there is anecdotal information that some individuals may be hypersensitive to radio frequencies, there is no definitive evidence linking such symptoms to low-level wireless transmissions like those associated with AMI meters.
Best,
Greg Feller

Message Subject: FW: If you're going to read only one report on Smart Meters, (by Cindy Sage)
Hi Greg,
I thought you might be interested in this information.
Carol
Subject: If you're going to read only one report on Smart Meters, (by Cindy Sage)
...this is it!

We are very fortunate to have earned the support of a number of global EMF experts and one of them is Cindy Sage! You can read her report (attached) which was submitted today to the NC Utilities Commission to help our work for a smart meter opt-out!
Sage Associates is a nationally known environmental sciences consulting firm and Cindy is the co-editor and principal author of the BioInitiative Reports (2007 and 2012) and a founder and organizer of the BioInitiative Working Group, which is dedicated to determining and promoting biologically-based exposure standards for low-intensity electromagnetic radiation.

Robert M Aris
Message Subject: i vote yes for the AMI, time to get into the 21st century
in theory this should SAVE a lot of money over time but may lead to job lay offs
thanks Robert aris

Staff Response:
Dear Mr. Aris:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.
Regarding your concern about layoffs:

> ***What will happen to OWASA's employees who read meters?*** *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda
Sincerely,
Greg Feller

Ekrols
I have a home in Spain and they use this system since 2 years.
Works fine and we are every month billed for our real consume.

Faith Kurdi
Message Subject: AMI vs current system for meter reading
My opinion :
Technology sounds good.
Too much money - could be used for employee raises
Do not want technology to get into the way of providing jobs
Is some of the investment monies set aside for employee training in other fields if they are going to lose their jobs?
As far as mistakes...computers and technology have mistakes too just a lot more expensive to fix
I say keep the people working and continue providing the best service at the lowest price possible for clients.
Faith Kurdi

Staff Response:
Dear Ms. Kurdi:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.

Regarding your concerns about layoffs and the cost of our services:

What will happen to OWASA's employees who read meters? *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

Impact on customers' bills

Keeping our essential services affordable is one of OWASA's most important goals. Investing in an AMI system will not, by itself, lead to a rate increase for OWASA customers.

The estimated $6 million investment in AMI would be offset by avoiding planned investments in our current, less efficient water meter technology and by savings from operational efficiency improvements

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Erica Morehouse
Message Subject: I support AMI system

David Rizzieri, M.D.
Thanks for the AMI notice. I like the idea... would it allow your team to 'flag' residential meters that are using at an inconsistant rate such that a big leak is potentially responsible? that would allow a proactive approach to intervention saving water and the customer money.... i would highlight that in the notice if it is a potential benefit

Staff Response:
Dear Dr. Rizzieri:
Yes, AMI would allow us to identify water use patterns that indicate a possible leak. We would then promptly notify the customer of the need to check for a leak and fix it if there is one.
(As you may know already, OWASA may give an account adjustment once every three years after a leak is repaired, subject to some conditions and limits.)
We agree about emphasizing that AMI would enable us to identify apparent leaks based on water use patterns. Our news release and website, etc. include:

- *OWASA staff will have access to information that empowers them to proactively let customers know when their water-use patterns indicate a potential leak at the customer's premises.*

We invite you to participate in the OWASA Board's meetings when AMI will be discussed (February 25, March 10 and March 24).
Please let us know if you have further comments or questions.
Sincerely,
Greg Feller

Mary Jane Gore
Would this new system also bill us for exact water used rather than approximations each month? My bill is really high sometimes in the year and low at others, but my water use is about even. I don't water my yard much.
thanks for letting me know, Mary Jane gore

Staff Response:
Dear Ms. Gore:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.

Whether to change our present billing in whole thousands of gallons is a policy decision to be made by the OWASA Board. With AMI, OWASA staff would recommend billing in tens of gallons in most cases.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 25, when AMI will be on the agenda.
Sincerely,
Greg Feller

David Wiener
My input: Do it! Will pay off in many ways over the long run assuming new meters have been tested as fairly bullet proof and long-lasting.

Eric Webb
Hello - This sounds like it reduce the need for many individuals and vehicles for OWASA. I read below that it wouldn't directly impact our bills, but why wouldn't lower them once the $6M (some of which is already budgeted for standard maintenance) is recouped?
Eric

Staff Response:
Dear Mr. Webb:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.

AMI would reduce our net annual costs by an estimated $325,000. We estimate that the $6 million initial cost of AMI would be recovered in about 10 years through cost savings.

If you are interested in the details, please see our consultant's overall report at http://www.owasa.org/Data/Sites/1/media/customerService/ami-study-combined-documents.pdf and the discussion of AMI costs on page 32 (http://www.owasa.org/Data/Sites/1/media/customerService/ami-study-combined-documents.pdf#page=32)

OWASA's rates and fees are a policy matter which the OWASA Board decides each year in the budget process after a hearing on the proposed rates and budget. Budget and rate decisions take into account various factors including service and project needs as well as costs in a given year.

May I add you to our electronic distribution list for notices about future rate and budget matters including the annual public hearings, which are normally held in May?

Please let us know whenever you have any questions or comments for us.

We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Karl Hawkins
Message Subject: AMI: equipment to be used
Has a decision been made as to which manufacturer's equipment is to be used? If not, it there a list of contenders?

Staff Response:
Dear Mr. Hawkins:
Thank you for your questions.

If there is a decision to implement AMI, OWASA would then use a bid or proposal process to determine who would provide and install the system.

I'm sharing this with other staff here in case they have a list of companies that have provided AMI systems in other communities.

Please let us know whenever you have any questions or comments for us in the future.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Philip C Singer
I strongly endorse the implementation of this advanced remote meter monitoring technology.

Bill Ferrell, Meadowmont Association
Greg,
Before replying…
Q: OWASA installs?
Q: OWASA covers install costs?

Staff Response:
Bill—
If the OWASA Board approves the AMI system, we would make the changes in our meter equipment with OWASA funds. I'm copying this to other people here in case they wish to add or clarify anything.
Please let us know if you have additional questions or comments.
Thanks!
Best regards,
Greg Feller

Joyce Watkins
(Notes on phone call to G. Feller Feb. 10, 2016)

- I cannot participate in a Board meeting due to circumstances.
- I am worried about pipes leaking in my crawlspace. I went to check my meter for a leak and it was dirty but the meter reader helped me.
- I need to be able to check the flow indicator on my meter. Will that still be possible? *(OWASA response: yes.)*
- AMI would be the least expensive way to read meters and I hope others will support it.
- It is good that employees will not lose their jobs if AMI is approved.

Follow up Email
Message Subject: Re: Thank you!

Thanks, Greg, for this abbreviated version. The only other thing I can add is that I would very much support the meter reading being available on my home computer. The fact that readings would be constant with the AMI technology (if my understanding of this is correct) so that I would not have to read the outside meter, which is inconvenient for me at times. I would only have to log into the system and high or unusual water usage would be evident there.
I look forward to reading the input of other residents.
Good luck.
Joyce Watkins

February 11, 2016:

Brennan Bouma - Sustainability Coordinator, Orange County Asset Management Services
As the lead person tracking utilities usage by Orange County operations, I would very much appreciate the detailed and rapidly updating data that the AMI system would provide. I also applaud OWASA for making a plan to move to this technology without the need to increase rates for customers.

I would hope that the operational efficiencies and savings will not come at the expense of too many good jobs. If those people reading meters will need to be let go, I would hope that it be done as gradually and compassionately as possible.

That said, assuming this cost-saving technology will likely become the industry standard, meter reader personnel will be required to transition elsewhere as well.
Thanks for providing the opportunity to comment.

Staff Response:
Dear M. Bouma:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff. Regarding meter reading jobs:

> ***What will happen to OWASA's employees who read meters?*** *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Carol Douglas Henderson
Message Subject: In favor
Since our OWASA bills have been way high--even when we're out of town--and we've had OWASA out to check meter(which was malfunctioning) and have spent a good bit of money looking for leaks, which we don't have, I am in favor of this new system.
I'd like to be able to track out usage carefully.
We work hard to conceive water--always--and despair at the aberrant high bills, which are a time consuming pain to deal with, and battles we often Lise.
Very disappointed with OWASA at this point, though employees are also courteous and seem to be trying to help us.

Mark Soderstrom
OWASA,
As a utility meter reader for Pacific Gas & Electric for many years in California me and almost my coworkers jobs were eliminated due to this kind of technology being rolled out. Still, I feel that it is a necessary and beneficial step towards utilizing the most accurate and efficient manner of monitoring and managing resource usage. It saves time, manpower, fleet resources, increases employee safety, etc. all while generating much more real time useable information on your network. I support it.
-Mark Soderstrom

Staff Response:
Dear Mr. Soderstrom:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.
Regarding your concern about jobs:
What will happen to OWASA's employees who read meters? *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*
Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

I'm glad to hear that your employees will be reassigned. That sadly was not the case for me and my co-workers. All said though, I loved my meter reading job and loved working for PG&E.
-Mark

Nancy Drozd
Automatic meter reading makes a lot more sense than the human errors that come from manual readings except I don't know how well it works on the old meters you have in Finley Forest part of Chapel Hill. I hope this would not mean more costs for customers.
thanks

Anne Johnson
I am against it. One more device that eliminates human jobs causing our economy to tail spin out of control. Also, computer devices do make errors and cause a lot more problems in the long run than a real human smiling when ya see them reading your meter and representing OWASA as a friendly, helpful company.
NO don't use electronic devices.
Anne

Staff Response:
Dear Ms. Johnson:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff. Regarding your concern about jobs:

> ***What will happen to OWASA's employees who read meters?*** *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Josh Bowman
Message Subject: AMI Privacy and Security Concerns
I am writing in regards to the email I received about the potential use of smart meters by OWASA. There are a couple of potential concerns that I think need to be seriously considered from the consumer's point of view. First and foremost, connecting meters to a network opens them up to a variety of malicious attacks ranging from denial of service to manipulating the data being reported (allowing theft of service, or incurring superfluous charges for the consumer). What is being done to protect these meters from interference?
Second, from a privacy perspective, increasing the frequency of collection can result in data collection that extends beyond simply how much water is being used. When granular enough, it can be used to infer behavior as well (e.g. when people might or might not be home). What guarantees do consumers have about the use of the collected data and it's safe storage? Will it be accessible to outside entities?
Please take these concerns into consideration when evaluating this new technology.
Thanks,
Josh Bowman

Staff Response:
Dear Mr. Bowman:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.

Below is information I received from Dan Przybyl, our Director of Information technology, in response to your comments.

> *There is no single answer to this question. As far as the security of the network from malicious attacks, each vendor will have its own approach. One example is Sensus (see here http://sensus.com/wp-content/themes/sensus/functions/webdam_download.php?asset_id=22902873). Basically, the AMI is protected similar to any other computer network through the use of encryption, firewalls, intrusion prevention/intrusion detection, etc. As OWASA has not yet selected a vendor, we do not have the specifics of the security measures that will be utilized; however, when soliciting proposals from vendors to implement an AMI system, network and data security requirements will be part of the requirements.*
>
> *Regarding the privacy issues, OWASA does not share non-aggregated customer data with outside organizations. Any data collected will be securely stored to the best of OWASA's abilities, just as we now safeguard customer information. The granularity of the data collected, both in intervals and consumption, is to be determined but the risk of AMI data utilization to determine behavior of occupants is considered to be virtually none.*
>
> *Thank you,*
> *Daniel D. Przybyl*

Please let us know whenever you have any questions or comments.
We encourage you to participate in the OWASA Board of Directors' meetings on February 25, March 10 and March 24.
Sincerely,
Greg Feller

Mr. Feller,

Thank you for the prompt reply. I have read the response from Mr. Przbyl, and appreciate the details he was able to share regarding data privacy. It is reassuring to know that it is a matter being taken seriously. With regard to security, I understand that my question was fairly open ended and ultimately is dependent on your choice of vendor. I do urge you to be thorough in your review of the security measures offered by each potential vendor.

Thank you for your time.

Sincerely,
Josh Bowman

Martha Dill
How many jobs will be eliminated? How many people are employed full time whose jobs will disappear.

I understand the wish to go high tech, but we need to consider the human cost also.
Martha Dill

Staff Response:
Dear Ms. Dill:
Thank you very much for your e-mail! We will share it with the OWASA Board and staff.

Regarding your concern about employees:

What will happen to OWASA's employees who read meters? *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Judith Bergman
My concern, and other's I'm sure, is the health danger of radio transmissions.

Staff Response:
Dear Ms. Bergman:
Thank you very much for your e-mail. We will share it with the OWASA Board and staff.

As information, here are comments from our consultant:

While few scientific studies have specifically focused on water meter AMI technology, the available studies (mainly associated with electric meters) come to the same conclusions as the many peer-reviewed studies of similar technologies using low-level wireless radio frequencies: no adverse health impacts. For example, a World Health Organization survey of published research concluded that there is no convincing scientific evidence that the weak Radio Frequency (RF) signals from wireless meter reading networks cause adverse health effects. Although there is anecdotal information that some individuals may be hypersensitive to radio frequencies, there is no definitive evidence linking such symptoms to low-level wireless transmissions like those associated with AMI meters.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.

Good to hear from you again!
Best regards,
Greg Feller

Catherine Steele
Hello!

This is a comment on the potential new AMI system.

It sounds like a great advantage on all front. I strongly believe, however, that customers should have the option to opt-in to this new infrastructure. There should be a way to maintain both systems so that people who do not want radio-controlled devices attached to their homes should not have to have one.

Thank you!
Catherine Steele

> *Staff Response:*
> *Dear Ms. Steele:*
> *Thank you very much for your e-mail! We will share it with the OWASA Board and staff.*
>
> *As information, here are comments from our consultant:*
>
> *While few scientific studies have specifically focused on water meter AMI technology, the available studies (mainly associated with electric meters) come to the same conclusions as the many peer-reviewed studies of similar technologies using low-level wireless radio frequencies: no adverse health impacts. For example, a World Health Organization survey of published research (http://www.who.int/peh-emf/publications/facts/fs304/en/) concluded that there is no convincing scientific evidence that the weak Radio Frequency (RF) signals from wireless meter reading networks cause adverse health effects. Although there is anecdotal information that some individuals may be hypersensitive to radio frequencies, there is no definitive evidence linking such symptoms to low-level wireless transmissions like those associated with AMI meters.*
>
> *Please let us know whenever you have any questions or comments for us.*
> *We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.*
> *Sincerely,*
> *Greg Feller*

Allison Schad
Message Subject: Feedback Against Advanced Metering Infrastructure
Dear OWASA,
As a resident of North Carolina and a member of the Chapel Hill community, I am writing to give feedback against the new "Advanced Metering Infrastructure." The United States has lost too many jobs to automation. As such, I am a proponent of keeping Orange County residents employed to physically come into our county's communities to read our water meters. I appreciate the green house gas reductions that would result from AMI, but I would rather OWASA purchase fuel-efficient automobiles than lose jobs to machines.
Sincerely,
Alli Schad

Staff Response:
Dear Ms. Schad:
Thank you very much for your e-mail! We will share it with the OWASA Board and staff.

Regarding your concern about employees:

What will happen to OWASA's employees who read meters? *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

George Koszalka
I fully support OWASA moving to this technology. It can quickly alert the user if an excessive amount of water is being used in case of a water line leak or break and it will eliminate the misreads of physically reading the meter.
George Koszalka

Sharon Fowler
it sounds very efficient to me. I especially like the leak/use detection aspect and less carbon emissions (trucks)

if a person reads this, I've always had a question: why is use represented by blocks (1-2-3-4) instead of actual readings? does it mean we pay fully for each level, even if we're at the bottom of it? if so, not a good way to charge, need a fairer system.

thanks for all you do for us!

best,
Sharon F

Staff Response:
Dear Ms. Fowler:
Thank you very much for your e-mail! We will share it with the OWASA Board and staff.

OWASA has for many years billed for whole thousands of gallons of water use. Unbilled gallons in one month are included in the following bill. For example, if a customer uses 1,500 gallons per month, for a total of 3,000 gallons in two months, the first month's bill would be for 1,000 gallons (500 gallons are not billed) and the second month's bill would be for 2,000 gallons including the 500 gallons not billed in the first bill.

In essence, the present system does not round up a meter reading, but catches up later for gallons that are used but not billed in a given month.

If AMI is approved, staff would recommend billing in tens of gallons. However, this is a policy matter that the OWASA Board would decide.

I hope this information is clear and helpful. Please let me know if you would like further explanation or clarification.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Steve Caiola
Message Subject: AMI - comment & questions
AMI sounds like appropriate use of technology available today - to the benefit of OWASA & its customers.

This paragraph needs a bit more explanation:
Keeping our essential services affordable is one of OWASA's most important goals. Investing in an AMI system will not, by itself, lead to a rate increase for OWASA customers. The estimated $6 million investment in AMI would be offset by avoiding planned investments in our current, less efficient water meter technology and by savings from operational efficiency improvements.

$6 million is a lot of $. I can see savings in vehicle & fuel costs, & possibly, personnel who take measurements currently. Is this reasonable for those people now employed to take those measurements - can most be trained to contribute to supporting the AMI or other OWASA initiatives? What is the time-line for making this change? How much cost shifting can be appreciated? Can a $6 million outlay now be managed with current reserves or will a bond issue be required - or some combination of such? I can see savings down the road, but the 2nd sentence in the above paragraph needs more explanation.

Many thanks for requesting feedback. And thank you to OWASA for excellent service to our community!
Steve Caiola

Staff Response:
Dear Mr. Caiola:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff. Below are your questions and comments from your e-mail and our information regarding each.

- *$6 million is a lot of $. I can see savings in vehicle & fuel costs, & possibly, personnel who take measurements currently. Is this reasonable for those people now employed to take those measurements - can most be trained to contribute to supporting the AMI or other OWASA initiatives.*

What will happen to OWASA's employees who read meters? *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

- *What is the time-line for making this change?*

We do not now have a timeline for implementing AMI. The OWASA Board will make a decision on AMI after receiving public comments (on February 25, March 10 and March 24). If there is a decision to proceed with AMI, you may wish to check our website in the future for updates.

- *How much cost shifting can be appreciated? Can a $6 million outlay now be managed with current reserves or will a bond issue be required - or some combination of such? I can see savings down the road, but the 2nd sentence in the above paragraph needs more explanation.*

Savings from implementing AMI would average about $325,000 per year and the majority of the savings would be from avoiding further investment in our current meter reading system. If you are interested in details, you may wish to read our consultant's report on various alternatives at http://www.owasa.org/Data/Sites/1/media/customerService/ami-study-combined-documents.pdf. The section on cost savings starts at Page 32.

We hope this information is clear, helpful and responsive to your questions.
Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Ralf Schmid
Hi,
I want to voice my full and enthusiastic support of your AMI initiative. AMI will allow OWASA to use 21st century cutting edge technology to monitor water distribution and pro-actively identify leaks. This will help to conserve water and protect our environment by cutting down on use of meter reading vehicles, and eventually safe money. Thank you for this proposal and I do hope that it can be implemented soon.
Best,
Ralf Schmid
Homeowner in Carrboro

February 12, 2016:

Maria Darlington
Advance Metering sounds like an excellent program.
My concern: the meter readers jobs.
Will they be given other jobs at OWASA? Please let the public know what you plan for these workers.
Maria Darlington
Carrboro

Staff Response:
Dear Ms. :
Thank you very much for your e-mail! We will share it with the OWASA Board and staff.

Regarding employees, the following is in the questions and answers page of our website section on AMI:

What will happen to OWASA's employees who read meters? *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Thank you. I plan to be at one of your meetings.
I've had it with user names and especially passwords! so wont 'sign up'.
But will go to your web page if no passwprd is needed. I realize...why am
I going on? A computer no doubt reads and answers these messages.
Maria Darlington

Madeline Kalstein
I think it is a wonderful idea. The community should do everything to advance our system with the latest technology possible.

The next step would be to remove the monthly charge. This expense should be added to the per gallon charge. Accordingly, people who use more water & sewage would pay more of the burden.
Madeline Kalstein

John and Mary Thomas
Hi, Greg and all:
What is the potential for getting a grant to offset (some/all) of cost of installation, as it will reduce pollution, etc.?

It should be done, asap, with grant; even without, as financing of bonds is about as low as it's ever going to get.

OWASA needs to control/reduce labor costs in order to control/REDUCE fixed portion of the customer billing structure.
As much as we all hate any job loss, it should be done through attrition as much as possible.

Also, during meter change-over, it would be great if some type of shut-off valve could be installed that would activate in the event of an obvious pipe rupture: say, a very large % increase of flow through the meter.

Although our Carrboro home is for sale (we've retired to FL) we are happy to providing our concise input above.
Here in FL FPL (FL power and light) has "read-out feedback metering, which sends back readout on hourly KWHr usage. It is very handy.

Thanks for asking,
Sincerely, John and Mary Thomas

Staff Response:
John and Laura:
Just a quick note as follow-up to one of your comments.

What will happen to OWASA's employees who read meters? *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*
Sincerely,
Greg Feller

February 13, 2016:

Glenn Wright
AMI is a great idea! I'll be more knowledgeable and in control of my water usage. Go for it
Glenn Wright

William Watson
Hello,
I am in favor of the proposed AIM system. Anything that gives customers better water usage information and could potentially detect water leaks sounds like a good idea.
Sincerely,
William Watson

February 14, 2016:

Sylvia Gazdzinska
Hello
In response to your email about AMI system i am very glad about this idea. I'm hoping my water meter would be read more efficiently. I was looking at my meter some time ago myself and found it thickly covered in dust giving me impression that it was not read for months or probably years. I'm very savvy with water use and there is only two of us in the house most of the time yet my water bills are consistently the very same from month to month $57.79. I found it very peculiar. Please look into this matter at your convenience.
Thank you

Staff Response:
Dear Ms. Gazdzinska:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff. Regarding our water meter and bills, we now read about one-third of our water meters by radio from a vehicle, without having to open the cover of the meter box and see the dial. I believe this is the reason the clear plastic over the meter dials was dirty.
Also, we bill in whole thousands of gallons of water use and carry over unbilled gallons to the next bill. For example, if a customer uses 1,500 gallons per month in two months, the first bill would be for 1,000 gallons and the second bill would be for 2,000 gallons. Similarly, if a customer were to use 3,100 gallons per month, then most bills would be for 3,000 gallons and every tenth bill would be for 4,000 gallons.
However, if AMI is approved, OWASA staff would propose that we bill in tens of gallons instead of thousands of gallons. (This is a policy matter which the OWASA Board would decide.)
I hope this information is helpful and clear. Please let us know if you have additional comments or questions or if we can provide further explanation.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Bob Weickert
To Whom It May Concern:
I'm wondering what impacts on personnel there will be to achieve the "efficiency" that AMI will bring. Are layoffs in-plan? If so, how many? If not, what are the efficiencies envisaged?
Thank you.

Staff Response:
Dear Mr. Weickert:
Thank you very much for your e-mail. We will share it with the OWASA Board of Directors and staff.

Regarding employees and efficiencies:

> ***What will happen to OWASA's employees who read meters?*** *OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.*

We expect to reduce the number of positions with AMI but without laying off employees as noted above. We would also have lower vehicle costs including those for fuel. However, the largest savings would come from no longer investing in our current meter reading system.

We invite you to participate in the Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.

Good to hear from you again!
Best regards,
Greg Feller

Can you tell me what the resolution is and how to find it? I clicked on the url offered, but the msg there was that I did not have access.

Staff Response:
Bob—I'm very sorry the link did not work.
Here is another way to read the feasibility study, which is a pdf file:
Please go to www.owasa.org and click on the link to our AMI webpage, which I highlighted below:

***OWASA welcomes your comments about Advanced Metering Infrastructure (AMI),** a proposed new meter reading system. **Please click here** for information about AMI and opportunities to provide feedback.*

When you get to http://www.owasa.org/advanced-metering-infrastructure, please scroll to the bottom of the page and click on the Feasibility Study link:
Feasibility study
Please let me know if this works—thanks!
I'm sorry but I don't know the resolution of the file.
Best,
Greg Feller

Thanks, Greg. I see the section on staff impacts. It may be optimistic to have all reassigned and none let go, but maybe that assumption is supported by actual OWASA staffing plans. Bob

Staff Response:
Bob—Thanks. This is the staff proposal/commitment in our information on AMI.
We definitely have turnover in our utility mechanic positions.
Best,
Greg

February 15, 2016:

Rob Taylor
As an OWASA customer, I am in favor of the AMI system assuming that the OWASA Board determines that this investment is going to increase the system's efficiency and serve our community for the long term.
Thank you,
Rob Taylor

Staff Response:
Dear Mr. Taylor:
Thank you very much for your e-mail! We will share it with the OWASA Board of Directors and staff.

We had a consultant evaluate AMI and several alternatives. Pages 30 and 31 of the consultant's report at

http://www.owasa.org/Data/Sites/1/media/customerService/ami-study-combined-documents.pdf have a discussion of the cost savings and payback from AMI. Pages 28, 30 and 31 may be of interest.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Ti Harmony
To The Board Members,
My main comment is that both in the email sent to me AND on the website, the only aspects of this that are addressed are potential benefits and that it wouldn't, apparently, cost me/us any more. However, I notice a glaring absence of potential negative impacts of this change, possibly including but of course not limited to, people losing their jobs who check meters, negative impact of that much increased radio transmissions on people or the environment, or other concerns.
Though these may not be concerns, as with any change, there are losses and negative impacts and I'm more concerned that none of these are even mentioned, as if it was only a win-win for everyone concerned. Clearly OWASA wants it to happen, so I assume it is a done deal regardless of any other input or impacts that you have not acknowledged to us the customers who wouldn't know what to ask other than "what's it going to cost?"
I hope the board is more informed and intelligent than me and can address possible concerns that have not been enumerated to the rest of us.
In peace.

Staff Response:
Dear M. Harmony:
Thank you very much for your e-mail. We will share it with the OWASA Board and staff.

Regarding employees who read meters and radio transmissions, below is information from our AMI webpage with answers to frequently asked questions.

What will happen to OWASA's employees who read meters?
OWASA's Utility Mechanics read meters, among other responsibilities. Employees who primarily focus on reading meters will be reassigned to other areas.

Does this system pose any risk to my health?
While few scientific studies have specifically focused on water meter AMI technology, the available studies (mainly associated with electric meters) come to the same conclusions as the many peer-reviewed studies of similar technologies using low-level wireless radio frequencies: no adverse health impacts. For example, a World Health Organization survey of published research concluded that there is no convincing scientific evidence that the weak Radio Frequency (RF) signals from wireless meter reading networks cause adverse health effects. Although there is anecdotal information that some individuals may be hypersensitive to radio frequencies, there is no definitive evidence linking such symptoms to low-level wireless transmissions like those associated with AMI meters.

Please let us know if you have any additional comments of questions.

We encourage you to participate in the February 25, March 10 and March 24 meetings of the OWASA Board, when AMI will be on the agenda.
Sincerely,
Greg Feller

Rick Szymanski
I am an OWASA customer and think AMI is a fantastic idea. I had an undetected water leak not too long ago that ended up being very expensive. If customers could be notified almost immediately of significant changes in water usage (as opposed to waiting for a monthly bill), that would be great. Call me if you would like to discuss.

Staff Response:
Dear Mr. Szymanski:
Thank you very much for your e-mail! We will share it with the OWASA Board and staff.

The frequency of meter readings with an AMI system has not been decided, but we will continue to inform our customers about AMI if there is a decision to proceed with it.

Please let us know whenever you have any questions or comments for us.
We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.
Sincerely,
Greg Feller

Dan Schnitzer - Sustainability Coordinator, Chapel Hill-Carrboro City Schools
Subject: Re: OWASA Information about Advanced Metering Infrastructure (AMI)
Thanks Ed,

Can we assume that the real time data collected via AMI will also be available to us (not just "residential customers" as listed in the FAQ?)

Will there be a way to set alerts for deviations within certain criteria?

Thanks for sending this along and eliciting feedback. This seems like a helpful tool for the district and valuable for the community as a whole.

Staff Response:
Hi Dan,
Yes and yes. Please let us know if you would like additional info.
Thanks,
Ed Kerwin

NEW AGENDA PAGES

February 24, 2016:

Sjacobs18

could you tell me which manufacture of AMR meters you are considering?

Dear M. Jacobs:

Thank you very much for your e-mail! We will share it with the OWASA Board.

If there is a decision to implement AMI, OWASA would use a bidding process to determine who would install an AMI system.

Please let us know if you have additional questions or comments.

We invite you to participate in the OWASA Board meetings on February 25, March 10 and March 24, when AMI will be on the agenda.

Sincerely,
Greg Feller

Christiana Prince

Just a quick note to say that switching to AMI meters sounds like a good plan to me.

Sincerely,

Christiana Prince

February 23, 2016:

Daniel Sumerlin

Message Subject: AMI Questions

Hi there,
I was glancing over the newest "Blue Thumb" newsletter and just had a couple questions about the Advance Metering Infrastructure project, and thought I'd send them your way. I am more curious than anything.

Am I correct that the wireless infrastructure you set up will only be used to transmit data between my meter and OWASA--in other words it cannot be used to turn my water on or off, or otherwise control it?

Specifically, what data will be wirelessly transmitted to OWASA from my meter, and what if any will be transmitted to my meter from OWASA?

What encryption or other methods are you planning to use to keep the transmitted data secure?

Thanks very much!
Daniel Sumerlin

> *Dear Mr. Sumerlin:*
> *Thank you very much for your e-mail!*
> *We will share it with the OWASA Board.*
>
> *Regarding your questions:*
>
> *Typically, AMI systems do not have the ability to turn water off and on remotely. While some vendors do make meters with the option of remotely activated valves these tend to be more expensive and are not the majority of deployed meters. OWASA has not decided if it will use any of these type of meters in an AMI implementation.*
>
> *Water use information may be sent one or more times per day. Two to four times is probably more common than once. The data transmitted typically consists of a meter equipment number, date/time stamp and meter reading.*
>
> *Each vendor has its own solution for providing data security. We will not have details until we make a vendor selection. We will be including data security requirements in the RFP we issue for system acquisition and implementation.*
>
> *Please let us know if you have additional questions or comments.*
> *We encourage you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.*
>
> *Sincerely,*
> *Greg Feller*

February 21, 2016:

Peter Lee

As long as the cost is mitigated as per The Blue Thumb newsletter, the idea is terrific.
Regards,
Peter & Ellen Lee

Carol Troutner

Hi Greg,
I thought you might be interested in this article if you hadn’t seen it.

Carol

Ontario pulls plug on 36,000 rural 'Smart' meters: Is big energy imploding?

February 21, 2016 hopegirl 0 Comment energy, meters:, ontario, plug, pulls, rural

Last night I watched *The Big Short* — maybe the most important Hollywood film in years. This true story is a powerful and eloquent invitation to wake up to the sheer depravity at the core of the system of commerce.

The fact that the film got nominated for 5 Oscars including Best Picture is a huge sign that there are way more people waking up than we ever thought. The wrongs may not be getting righted as quickly as we'd like, but it is happening.

The reality of this shift is clearly evidenced by this news last week from Ontario. After years of obvious problems, Hydro One finally **admitted that rural 'smart' meters do not work**, and has decided to pull the plug on 36,000 of them — to start**.** We will see more utilities begin to do likewise. **[UPDATE: BC Hydro just announced plans to remove 88,000 meters suspected of failure.]**

Costing ratepayers billions, smart meters are actually designed to unlawfully harvest detailed data of the in-home activities of occupants without their knowledge or consent.

As reported by the *National Post*:

"Astonishing," was the reaction from Lanark-area MPP Randy Hillier, who has been deluged with complaints about Hydro One billing and smart-meter suspicions.

"I've been banging my head against the wall for the last five years, saying we've got problems with smart meters in rural Ontario." **Since first being elected in 2007, no single issue has attracted as much attention in his riding, he said.**

For the purpose of clarification: at this time Hydro One is not planning to uninstall smart meters and replace with analogs — but rather to manually read rural customers' meters quarterly, and estimate the months in between, because the wireless reporting is simply not working.

More than 10,000 billing complaints have been filed with the Ontario Ombudsman, and the Auditor General of Ontario released a scathing report, calling out the smart metering program as a total flop. Hydro One was the first major utility in Canada to deploy so-called 'smart' meters upon an unsuspecting customer base. The price tag for rollout, paid for by the people of Ontario, was $2 billion — which was $900M over budget.

Go Green, or Go Greed?

For those new to this topic, here's the skinny. Smart utility meters are being deployed worldwide under the banner of *climate action.* But they typically **increase** energy usage, and a high-level industry executive has admitted that the data collected by the surreptitious devices will be worth "a lot more" than the electricity itself.

Portland State University recently published a brilliant report on the morally-bankrupt surveillance agenda behind smart meters. The industry-gutting report is titled "*The Neoliberal Politics of 'Smart': Electricity Consumption, Household Monitoring, and the Enterprise Form,*" and excerpts can be read at Smart Grid Awareness here.

Customers are not being informed how their constitutional rights are being violated for the purposes of a for-profit home surveillance network. Nor how this technology has caused thousands of fires which have resulted in several deaths. Nor how our bodies are being affected by pulsed microwave radiation exponentially stronger than cell phones, as shown in *Take Back Your Power*.

If there wasn't an avalanche of facts to back all of this up, it might sound too unbelievable to be true. But we live in strange times.

We Can Handle The Truth

Just like the banking system, the energy system has likewise become rotten to the core. To change both will require a complete overhaul and the embrace of a challenge to our comfort zone.

It is both harrowing and exciting for one to discover that there are major societal programs which are simply manufactured lies fueled by the *idea of lack*. That there's not enough energy, food, resources, money. In reality, there is enough for all life to survive — and to thrive. It is provable fact that these truths have been suppressed.
Case in point: a 1971 de-classified US Army briefing actually calls for the secretization of solar technology which has greater than 20% efficiency (see page 14). This was back in 1971! And, of course, it's in the name of *national security* and *property interests*.
Meanwhile, the energy mafia in Nevada just decreed a 40% fee hike for solar-producing customers, while reducing the amount paid for excess power sold to the grid, effectively killing the solar industry there.
There is a war on energy. When we understand the level of corruption involved, the implications are enormous. And we must act to solve this problem.
I believe that the suppression of solutions is a dam ready to burst. And I'm optimistic of our passing through this dark night successfully, as we are learning to connect and serve the higher good. There is really no other choice.
Sources:
National Post – Hydro One pulling plug on 36,000 rural smart meters after years of complaints
The Province – B.C. Hydro must remove more than 88,000 smart meters
Smart Grid Awareness – 'Smart' Meters Represent Industrial Profiteering and Government Sanctioned Surveillance, New Study Says

By Josh del Sol
Josh del Sol is the Director and Producer of ***Take Back Your Power***, winner of the AwareGuide Transformational Film of the Year, the Indie Fest Annual Humanitarian Award, and the 2014 Leo Award for Best Feature Documentary in British Columbia. Watch the film and subscribe to updates at www.takebackyourpower.net, and follow the movement via facebook and twitter @TBYPfilm.
(Source: collective-evolution.com; January 20, 2015; http://tinyurl.com/jumbdmx)

http://www.hopegirlblog.com/ontario-pulls-plug-on-36000-rural-smart-meters-is-big-energy-imploding/

Anita Lang

Hello—
I got a email notice about the AMI meters and I am concerned. Are these like "smart meters" being used by energy companies in other areas of the country? If so, they are hazardous the human health and if installed outside a bedroom, where someone is sleeping 8 hours a night, it is even worst.

https://www.youtube.com/watch?v=eGdAefQ8nbg&feature=share

BUSTED: Smart Meters Emit Constant Microwave Radiation: WUSA9 News

Please watch the above video on smart meters. Please let me know if it is the same type of technology. That said, that don't like any additional wifi in or around my house.
Thanks,
Anita Lang

Dear Ms. Lang:

Thank you very much for your e-mail! We will share it with the OWASA Board of Directors.

Our water meters and transmitters in an AMI system would differ from electric "smart meters" in these ways:

- *The transmitters at our water meters would be battery powered (less than 2 watts).*
- *Transmissions from water meters in AMI systems in most cases transmit for a second seconds once a day.*
- *Our meters are normally at or close to the boundary of private property with street right-of-way.*

Our consultant's study of meter technology included the following on page 34:

While few scientific studies have specifically focused on water meter AMI technology, the available studies come to the same conclusions as the many peer-reviewed studies of similar technologies using radio frequencies (low-level wireless): no adverse health impacts. For example, a World Health Organization survey of published research concluded that there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects. Although there is anecdotal information that some individuals may be hypersensitive to radio frequencies, there is no definitive evidence linking such symptoms to low-level wireless transmissions like those associated with smart meters

Please let us know if you have any additional comments or questions.

We invite you to participate in the OWASA Board's meetings on February 25, March 10 and March 24, when AMI will be on the agenda.

Sincerely,

Greg Feller

AGENDA ITEM

- PRESENTATION ON ENSURING DRINKING WATER SAFETY

PURPOSE

- To provide an overview of OWASA's corrosion control program that ensures safe drinking water for our customers and to provide a summary of lead testing results.

BACKGROUND

- OWASA's drinking water is safe and continues to meet all drinking water standards under the Lead and Copper Rule. Since testing began, OWASA has maintained levels of lead detection which are well below the EPA Action Level.

- OWASA provides lead testing for our customers on request at no charge.

- Lead is not typically present in "raw" lake water sources. Lead can be introduced into drinking water primarily through corrosion of plumbing materials containing lead such as pipes, fittings, fixtures, and solder.

- In the 1990s, OWASA removed all known lead pipes from our water distribution system. However, plumbing materials used on the customer's side of the meter may still contain lead.

- OWASA actively maintains a corrosion control program that includes both properly managing the drinking water chemistry throughout the treatment process to reduce corrosive properties and the addition of a corrosion inhibitor to form a protective coating inside pipes and fixtures.

- OWASA regularly tests the treated drinking water leaving the plant and the drinking water in the distribution system to ensure appropriate levels of corrosion control are being maintained.

- The OWASA website includes the following related to lead:

    - The February 2016 Blue Thumb, with the article on the safety of our water and information about lead including testing by OWASA.

    - The Annual Water Quality Report Card, which has data from testing for lead and copper and sections on testing for lead and lead and your health.

    - Frequently asked questions and answers from our Laboratory staff, which has information about lead, OWASA's pipes and water.

ACTION NEEDED

- Receive staff's presentation and invite customers' comments and feedback.

February 25, 2016

AGENDA ITEM

- **UPDATE ON OWASA'S STRATEGIC PLAN**

PURPOSE

- Update the public and Board of Directors on our progress completing initiatives in our Strategic Plan.

- Seek the Board's feedback on the proposed timeline to have our new Strategic Plan in place.

BACKGROUND

- OWASA's Strategic Plan was adopted on March 13, 2014 for Fiscal Years 2014-2017.

- Significant progress has been made on the Plan's Strategic Initiatives as summarized in the staff memorandum.

- Staff has proposed a timeline to complete the new Strategic Plan.

ACTION NEEDED

- Board feedback on staff's proposed timeline to complete the new Strategic Plan.

ORANGE WATER AND SEWER AUTHORITY

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

MEMORANDUM

TO: Board of Directors

FROM: Ed Kerwin

DATE: February 19, 2016

SUBJECT: **UPDATE ON OWASA'S STRATEGIC PLAN**

Purpose

1) Update the public and Board of Directors on our progress completing initiatives in our Strategic Plan.

2) Seek the Board's feedback on the proposed timeline to have our new Strategic Plan in place.

Progress on Strategic Initiatives

Strategic Initiative 1

Provide reliable and high quality supply of water for the next 50 years

A key task in this initiative is to update the Long-Range Water Supply Plan (LRWSP). Staff will develop the LRWSP in accordance with the Project Charter and Community Engagement Plan approved by the Board in March 2014 and February 2015, respectively.

The Board's first item for the LRWSP update will be to finalize the goals and objectives (currently scheduled for May 2016) which were drafted as part of the Project Charter. These goals will guide staff as it develops the Plan.

One of the first tasks to complete is to update the demand projections through 2065. The Towns of Carrboro and Chapel Hill are currently updating their growth projections as part of regional transportation planning work. These growth projections will serve as a foundation for OWASA's demand projections.

Concurrent to making demand projections, staff are working with a Ph.D. student to evaluate the estimated yield of our reservoirs considering potential climate change scenarios. The demand, yield, and water supply risk information will be used to determine if any additional raw water supply capacity is needed to support the expected growth in the community. Staff will evaluate

both supply and demand management alternatives. The update will include development of a Water Conservation Plan.

A key factor that could shape our future plans will be the State's decision regarding our request to maintain our Jordan Lake water supply storage allocation for use during extended drought or other water supply emergencies. Public meetings on the draft allocations should occur soon; the final allocation date will depend on the number and extent of public comments received.

Our draft LRWSP may be completed in summer 2017, but the actual date will depend on when we receive the updated population and employment growth projection information from the local governments, the timing of the Jordan Lake allocation decisions, and the level of community engagement.

Strategic Initiative 2

Community Engagement

Staff is using Community Engagement Plans (CEPs) for all capital improvement projects and other key initiatives in accord with our *Guide for Preparing Community Engagement Plans*. Capital improvement projects and other key initiatives vary in scale, community impact, duration, etc.; therefore, staff will utilize only those elements of the CEP that are relevant and applicable to the individual project. The Board of Directors reviewed and approved CEPs for the Energy Management Plan on January 22, 2015 and LRWSP on February 12, 2015.

The 2015 Customer Survey was distributed in the fall of 2015, and OWASA received more than 800 responses. Staff reported to the Board on the survey results and proposed staff actions items on January 28, 2016.

Strategic Initiative 3

Implement a new customer billing and financial management system

After a thorough process of selecting and evaluating potential new customer billing and financial management systems, it was determined that no alternative system offered improvements that made it worthwhile to invest in a new solution. In Fiscal Year 2015, we invested time and resources to upgrade our existing system, adopt improved processes, and train staff.

Strategic Initiative 4

Adopt financial management policies and budget decision processes to ensure affordable services and fiscal sustainability

Work to review and potentially revise our financial management policies is ongoing. On January 28, 2016, the Board received a presentation on OWASA's Capital Improvements Program (CIP) investment practices and no changes to the policy were recommended. At the meeting, the Board also received staff's Asset Management Program Report. Our asset management program includes industry best-practices to assess and prioritize infrastructure improvements needed to cost-effectively achieve desired customer and environmental service level objectives, minimize critical asset failure, and ensure the safety and long-term viability of the water, wastewater, and reclaimed water systems.

Our Financial Management Policy sets the Service Affordability Ratio target at 1.5; this means the average annual residential water and sewer bills for a year should be no more than 1.5% of the community's median household income. We are meeting this target; OWASA's Service Affordability Ratio is currently 1.4.

At the February 25, 2016 meeting, the Board will review and discuss OWASA's policy on financial reserves.

Strategic Initiative 5

Implement an Energy Management Plan

The Board approved a Project Charter including community engagement on January 22, 2015. The Board accepted baseline assessment of energy use and draft goals and objectives for the Energy Management Plan at their June 25, 2015 meeting.

Ongoing tasks that will lead to the development of the Plan include: updating our energy use analysis to include calendar year 2015; working with our local partners to consider ways we can collaborate on energy efficiency and renewable energy strategies, including a potential biogas-to-energy project; participating in the U.S. Department of Energy's (DOE) *Better Buildings, Better Plants Program* and pursuing technical assistance from DOE in evaluating energy efficiency opportunities as well as potential strategies for using solar power. We also continue to evaluate and incorporate energy savings opportunities as part of our capital improvements planning and annual budget process.

Following is the current schedule for completing the Plan. This timetable may be revised to reflect the completion of technical evaluations by DOE and others who are assisting in our efforts.

May 2016:	Board review of and guidance regarding draft evaluation of potential strategies.

July 2016:	Board review of and guidance regarding draft Energy Management Plan.
July- Sept. 2016:	Public review and comment process for draft Energy Management Plan.
October 2016:	Board discussion of public comments on draft Energy Management Plan and direction regarding preparation of final plan.
December, 2016:	Approve final Energy Management Plan.

Strategic Initiative 6

Implement Advanced Metering Infrastructure

The Advanced Metering Infrastructure (AMI) Feasibility Study and supplemental information were completed and accepted by the Board on January 14, 2016. Public feedback is currently being solicited and the Board is scheduled to make a decision on whether or not to proceed to the procurement phase at their March 24, 2016 meeting.

Should the Board elect to proceed with system procurement, a service contract with Don Schlenger and Associates and a community engagement plan will be submitted to the Board for review and approval. If the Board decides to proceed with the next steps for the AMI project, we anticipate that the Board will consider the system procurement contract in October 2016 and take action in November 2016.

Strategic Initiative 7

Develop a plan and policy framework for long-term management and disposition of OWASA lands

This initiative has not been scheduled for near-term completion due to other priorities. Staff has implemented the forest management measures included in the NC Wildlife Resources Commission's forest management plan for the Cane Creek Mitigation Tract (as required by our U.S. Army Corps of Engineers permit for Cane Creek Reservoir). We plan to provide the Board with a tour of this site later this year.

We do not plan to sell or lease any land assets until we develop our land management plan (which incorporates the recent findings and recommendations regarding biosolids) and the Board reviews and evaluates strategies for achieving energy management goals and objectives. These two initiatives are tied to land management decisions.

Other Key Initiatives

Employee Total Compensation Study

The Board of Directors authorized an Employee Total Compensation Study be prepared to ensure OWASA's employee compensation objectives are being met.

At their February 11, 2016 meeting, the Board approved a draft Employee Total Compensation Philosophy and authorized staff to work with the consultant to develop the scope of work for the next phase of the Study. Once the Board approves the scope of work, a schedule to complete the next phase of the Study will be established.

Biosolids Management

At their October 8, 2015 meeting, the Board directed staff to proceed with moving the program to a 75% liquid land application and 25% dewatered cake to composting model. Recruiting for the additional positions needed to support the expanded land application program is underway. Also, the request for qualifications for stand-by contract services has been developed and is currently under review. Staff will provide a program report to the Board in January 2017.

Affordability Outreach Program

Affordability and cost management is a key theme of our Strategic Plan. On October 22, 2015, the Board approved an ongoing affordability outreach program to increase awareness of options to reduce OWASA bills and empower low-income customers and local agencies with information and tools for bill reduction. The program includes strategies to help address customer affordability at various stages for our customers (from high bill prevention to bill payment strategies) and with various communities (directly with customers and via social service agencies). The Program will be implemented in partnership with community, social service, affordable housing, and property rental agencies.

In November 2016, the Board will receive an update on the program, as well as a set of proposed strategies for the coming year.

Sewer Easement Pilot

Staff worked with 11 homeowners in downtown Carrboro to evaluate the potential to obtain sewer easements on private property where we have a sewer line, but for which there is no recorded easement. Staff will present the results of this pilot and other information regarding sewer easements at the March 10, 2016 work session.

Possible Changes to Rate Structure

At its February 11, 2016 meeting, the Board identified multi-family, master-metered customers as a separate rate class from General Service customers and in the coming months will consider potential options for modifying the water rates charged to this new rate class.

The Board plans to continue these discussions and any decision to change our rate structure will be made after the public has had the opportunity to receive information about the proposal and provide their input.

Proposed Timeline to Complete New Strategic Plan

The current Strategic Plan was adopted on March 13, 2014 for Fiscal Years 2014 – 2017. We recommend that a new Strategic Plan be prepared and adopted by February 2017, so that the initiatives can be incorporated into the development of the Fiscal Year 2018 budgets.

If the Board agrees to this completion date, we propose this preliminary schedule:

1) April 2016 Board Meeting – Board discussion on staff's proposed process and scope of work to complete Strategic Plan

2) May 2016 Board Meeting – Board discussion and approval of the process and scope of work to complete Strategic Plan (which may include a Community Engagement Plan)

3) September 2016 – start work on new Strategic Plan (new Board Members in place, if applicable)

4) February 2017 – complete new Strategic Plan

We believe development of our new Strategic Plan will be best accomplished in special meetings of the full Board. The use of an outside facilitator may be useful. We also look forward to having employees throughout the organization have opportunities to provide their input.

We look forward to your questions, comments, and guidance regarding the update on our key initiatives and proposed timeline to complete our new Strategic Plan.

Ed Kerwin
Executive Director

AGENDA ITEM

- **UPDATE ON OWASA'S COMMUNITY ENGAGEMENT**

PURPOSE

- Receive feedback from the Board of Directors on staff's proposed criteria for determining when Community Engagement Plans will be submitted for Board review and approval, and how accountability for successfully executing Community Engagement Plans will be managed.

BACKGROUND

- The Community Engagement Committee and staff met on December 7, 2015 to discuss expectations for OWASA's community engagement work. The Committee and staff agreed that our near-term priority for 2016 should be community engagement for specific projects and initiatives, such as Advanced Metering Infrastructure and possible changes to our rate structure.

- Staff will establish CEPs for all capital improvement projects and other key initiatives following the *Guide for Preparing Community Engagement Plans*.

ACTION NEEDED

- Board feedback on staff's proposed criteria for determining when Community Engagement Plans will be submitted for Board review and approval, and how accountability for successfully executing Community Engagement Plans will be managed.

February 25, 2016

ORANGE WATER AND SEWER AUTHORITY

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

MEMORANDUM

TO: Board of Directors

FROM: Ed Kerwin

DATE: February 19, 2016

SUBJECT: **UPDATE ON OWASA'S COMMUNITY ENGAGEMENT**

Purpose

Receive Board feedback on staff's proposed criteria for determining when Community Engagement Plans will be submitted for Board review and approval, and how accountability for successfully executing Community Engagement Plans will be managed.

Background

The Community Engagement Committee and staff met on December 7, 2015 to discuss expectations for OWASA's community engagement work (Attachment 1). The Committee and staff agreed that our near-term priority for 2016 should be community engagement for specific projects and initiatives, such as Advanced Metering Infrastructure (AMI) and possible changes to our rate structure. We further agreed that our ongoing general public information and outreach program (for non-project specific matters) is acceptable and that current initiatives should be continued.

Proposed Criteria for Board Review and Approval of Community Engagement Plans (CEPs)

Staff will establish CEPs for all capital improvement projects and other key initiatives following the *Guide for Preparing Community Engagement Plans* previously accepted by the Board (Attachment 2). Capital improvement projects and other key initiatives vary in scale, community impact, duration, etc.; therefore, staff will utilize only those elements of the CEP Guide that are relevant and applicable to an individual project.

Staff proposes to seek Board review and approval of CEPs for projects or key initiatives that:

- Are expected to be of great interest to a large number of our customers and stakeholders due to one or more of the following:

  - significant benefits to customers and/or stakeholders;
  - significant environmental and/or sustainability impacts (positive or negative);
  - significant changes in scope, reliability, quality, etc. of our services;
  - the need for action/behavioral change by a significant number of customers and/or stakeholders due to changes in conditions, needs, etc.;
  - total project or initiative cost could result in a rate increase.

- Will require extensive involvement, collaboration and/or support by our customers, partners or other stakeholders.

- Include potential alternatives for which OWASA would seek extensive public input prior to Board action.

Staff plans to use a simple checklist for each CEP to ensure it has been properly executed. CEPs requiring Board approval will include specific information on the frequency and methods for keeping the Board informed as required in the CEP Guide.

A current example of a CEP which we believe would not require Board review and approval is our East Rosemary Street Water Main Replacement project (Attachment 3). The Community Engagement Committee suggested an example be provided.

CEPs that the Board may be requested to approve and/or amend during the next year include:

- Advanced Metering Infrastructure
- Rate structure changes
- Energy Management Plan (current CEP adopted January 22, 2015)
- Long Range Water Supply Plan (current CEP adopted February 12, 2015)

New Staff Community Engagement Initiatives

To more proactively engage with our customers, staff is exploring a few new community engagement initiatives. One project is the construction of a mobile drinking water station to provide free and clean drinking water to the public and connect with our customers one-on-one at public events. Additionally, we are working with the Chapel Hill-Carrboro City Schools to consider ways to present OWASA as a living textbook for student learning, stewardship and career development. OWASA staff is in the early stages of exploring the potential scope, scale, costs and benefits of such initiatives. We think these initiatives have the potential to improve the effectiveness of project-specific community engagement and look forward to updating the Board on these initiatives in the future.

We look forward to the Board's feedback on our proposed criteria for determining when CEPs will be submitted for Board review and approval, and how accountability for successfully executing the plans will be managed.

Ed Kerwin
Executive Director

Attachments:

1. December 7, 2015 Community Engagement Committee Meeting Summary
2. Guide for Preparing Community Engagement Plans
3. Capital Project – Community Engagement Plan East Rosemary Street Water Main Replacement

ORANGE WATER AND SEWER AUTHORITY

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

Meeting Summary
Community Engagement Committee
December 7, 2015 – 5:30 – 6:30 PM in the OWASA Boardroom

Committee Members present:	Ruchir Vora, Chair; Terri Buckner, Quinton Harper, Robert Morgan and John Young (Ex-Officio)
Other Board Members present:	Barbara Foushee
Staff:	Mary Darr, Patrick Davis, Ed Kerwin, Todd Taylor and Stephen Winters
Public:	None

The Committee discussed staff's *Draft Process to Establish the Key Expectations for OWASA's Community Engagement Work*. The Committee and staff agreed to the following:

- Our near-term priority for 2016 should be community engagement for specific projects and initiatives such as possible changes to our rate structure and Advanced Metering Infrastructure.
- Our general public information and outreach program (for non-project specific matters) is acceptable and that current initiatives should be continued. No further work is necessary to address non-project related communications and community engagement at this time.
- Staff will establish Community Engagement Plans (CEP) for all capital improvement projects and other initiatives following the *Guide for Preparing Community Engagement Plans* previously accepted by the Board (attached). The Committee noted that capital improvement projects and other initiatives vary in scale, community impact, duration, etc. and therefore project CEPs will utilize only those elements of the Guide relevant and applicable to the individual project.
- Staff will propose potential criteria to be used for determining when a CEP is to be submitted for Board review and approval. Staff will also provide an active example of a project CEP not requiring Board review and approval.
- Staff will propose a method to assist the Board and staff monitor the progress and ensure accountability that CEPs are successfully executed.
- Staff will prepare a list of 2016 projects/initiatives requiring Board review and approval of CEPs.
- The agenda item for the January 28, 2016 Board meeting will be revised to include the information noted above.

Meeting Summary prepared by:

Ed Kerwin
Executive Director

Attachment
c: Board of Directors

GUIDE FOR PREPARING COMMUNITY ENGAGEMENT PLANS

December 8, 2015

1. ***Purpose*** of the proposed policy/plan/initiative

2. Outcomes/objectives

   a. ***Define key messages***, information to be communicated, level of engagement desired, etc.
   b. ***Inform the relevant stakeholder group(s)*** about what is proposed, how they would be affected, costs and benefits, what would change, etc.
   c. ***Seek stakeholders' feedback and questions*** so that we can better understand their perspectives and expectations.
   d. ***Engage in dialogue*** by receiving stakeholders' comments, responding to questions and providing additional information as needed.
   e. ***Show that we listened to stakeholders' comments.***
   f. ***Encourage action by customers*** when applicable to the proposed policy, plan, initiative, etc.

3. ***Identify the stakeholder groups*** we want to inform and engage

   The engagement may include all accountholders, all system users including people who are not OWASA accountholders, or specific categories of customers/citizens.

4. Set forth our core messages

   These messages should concisely explain the key benefits or needs we want to meet.

5. ***Identify the key information stakeholders should have*** throughout the various stages of the engagement process

   a. ***What is proposed*** and why, including alternatives under consideration
   b. ***Who would be affected*** and how
   c. ***Costs and benefits***/advantages and disadvantages
   d. ***Return on community investment*** if applicable
   e. ***Timetable*** for public comment opportunities, decisions and potential implementation
   f. ***How to get more information***
   g. ***Board actions***
   h. ***Other*** as needed

6. ***Identify practical and cost-effective communication/engagement methods*** that are appropriate considering the level of impact and importance of the policy issue, plan, initiative, etc.

   a. The ***information process*** will include an appropriate mix of methods, which may include some or all of the following: electronic or paper mailing(s) to stakeholders,

news releases, outreach presentations to interested community groups including elected officials, paid advertising, social media, website information, announcements/presentations in televised Board meetings and community meeting(s).

b. The ***engagement/dialogue process*** will include opportunities to comment/ask questions in meeting(s) of the Board of Directors, to participate in less formal meetings for open discussion, outreach presentations and informal surveys. Formal surveys designed to achieve a representative sample of stakeholders' views may be done for high priority initiatives. It is important that OWASA take the message to stakeholders rather than expecting them to come to OWASA.
c. ***The level of resources and activity*** for a given engagement plan will depend on the expected level of community interest and the costs, benefits and impacts of the proposed initiative. For example, a proposal that would affect rates would normally involve a high level of information/engagement.

7. ***Provide a timetable*** for the information/engagement process

    a. The timetable will ***normally allow at least two to four weeks*** for the information process before the engagement/feedback opportunities.
    b. Some timetables ***may include multiple phases.***

8. ***Plan to measure effectiveness*** of the engagement

    a. Will include seeking ***stakeholders' feedback on quality and timeliness of information and engagement opportunities.***
    b. Will normally include ***measurable objectives such as the number of outreach presentations,*** level of stakeholder participation in community meetings, etc.
    c. ***Formal surveys*** may be done to evaluate high priority engagements.

9. ***Board engagement and staff communications:***

    a. What specific ways will the Board be involved in the community engagement activities?
    b. On what frequency and by what method(s) will staff keep the Board updated about the initiative?
    c. On what frequency and by what method(s) will the Board provide staff feedback regarding the effectiveness of the community engagement work for the initiative?

GUIDE FOR PREPARING A COMMUNITY ENGAGEMENT PLAN

1. ***Purpose*** of the proposed policy/plan/initiative

2. Outcomes/objectives

   a. ***Define key messages***, information to be communicated, level of engagement desired, etc.
   b. ***Inform the relevant stakeholder group(s)*** about what is proposed, how they would be affected, costs and benefits, what would change, etc.
   c. ***Seek stakeholders' feedback and questions*** so that we can better understand their perspectives and expectations.
   d. ***Engage in dialogue*** by receiving stakeholders' comments, responding to questions and providing additional information as needed.
   e. ***Show that we listened to stakeholders' comments.***
   f. ***Encourage action by customers*** when applicable to the proposed policy, plan, initiative, etc.

3. ***Identify the stakeholder groups*** we want to inform and engage

   The engagement may include all accountholders, all system users including people who are not OWASA accountholders, or specific categories of customers/citizens.

4. Set forth our core messages

   These messages should concisely explain the key benefits or needs we want to meet.

5. ***Identify the key information stakeholders should have*** throughout the various stages of the engagement process

   a. ***What is proposed*** and why, including alternatives under consideration
   b. ***Who would be affected*** and how
   c. ***Costs and benefits***/advantages and disadvantages
   d. ***Return on community investment*** if applicable
   e. ***Timetable*** for public comment opportunities, decisions and potential implementation
   f. ***How to get more information***
   g. ***Board actions***
   h. ***Other*** as needed

6. ***Identify practical and cost-effective communication/engagement methods*** that are appropriate considering the level of impact and importance of the policy issue, plan, initiative, etc.

   a. The ***information process*** will include an appropriate mix of methods, which may include some or all of the following: electronic or paper mailing(s) to stakeholders,

news releases, outreach presentations to interested community groups including elected officials, paid advertising, social media, website information, announcements/presentations in televised Board meetings and community meeting(s).

b. The ***engagement/dialogue process*** will include opportunities to comment/ask questions in meeting(s) of the Board of Directors, to participate in less formal meetings for open discussion, outreach presentations and informal surveys. Formal surveys designed to achieve a representative sample of stakeholders' views may be done for high priority initiatives. It is important that OWASA take the message to stakeholders rather than expecting them to come to OWASA.
c. ***The level of resources and activity*** for a given engagement plan will depend on the expected level of community interest and the costs, benefits and impacts of the proposed initiative. For example, a proposal that would affect rates would normally involve a high level of information/engagement.

7. ***Provide a timetable*** for the information/engagement process

    a. The timetable will ***normally allow at least two to four weeks*** for the information process before the engagement/feedback opportunities.
    b. Some timetables ***may include multiple phases.***

8. ***Plan to measure effectiveness*** of the engagement

    a. Will include seeking ***stakeholders' feedback on quality and timeliness of information and engagement opportunities.***
    b. Will normally include ***measurable objectives such as the number of outreach presentations,*** level of stakeholder participation in community meetings, etc.
    c. ***Formal surveys*** may be done to evaluate high priority engagements.

9. ***Board engagement and staff communications:***

    a. What specific ways will the Board be involved in the community engagement activities?
    b. With what frequency and by what method(s) will staff keep the Board updated about the initiative?
    c. With what frequency and by what method(s) will the Board provide staff feedback regarding the effectiveness of the community engagement work for the initiative?

CAPITAL PROJECT - COMMUNITY ENGAGEMENT PLAN
EAST ROSEMARY STREET WATER MAIN REPLACEMENT

Last Updated: February 17, 2016

1. Purpose

Orange Water and Sewer Authority (OWASA) is replacing a cast iron water main and abandoning an asbestos cement water main beneath East Rosemary Street. Water mains will also be replaced under portions of Henderson Street and Hillsborough Street. These water mains have reached the end of their useful life and need to be replaced or abandoned in order to maintain reliable water service, including fire protection, to this area of downtown Chapel Hill.

Construction will start in early summer 2016 and be completed by mid-spring 2017 in advance of the Town of Chapel Hill's resurfacing of Rosemary Street.

2. Desired outcomes

This Community Engagement Plan (CEP) has been developed to ensure that stakeholders are:

- well-informed about the extent and purpose of the project, and about our coordination with the Town of Chapel Hill;
- well-informed of the impacts of construction;
- well-informed about progress of construction;
- provided meaningful and timely opportunity to provide comments, questions, and feedback, and that their feedback is considered and responded to as appropriate.

3. Stakeholder groups

Stakeholder groups affected by the completion of this project include:

- Property owners and other residents/businesses/organizations directly adjacent to the work or affected by planned water service interruptions
- Other property owners and other residents/businesses/organizations in and within 2,000 feet of project area affected by construction noise, changed traffic patterns, etc.
- Additional people who may be outside 2,000-foot radius but who should be notified due to expected or unexpected impacts or interest in the project
- Drivers and pedestrians affected by travel lane impacts
- Town of Chapel Hill—various departments, including Engineering, Traffic, Street Maintenance, Operations, Police and Fire
- Chapel Hill Transit
- City Schools (school bus routes)
- Town of Carrboro (fire protection back-up)
- Orange County (911 Center)
- UNC and UNC Health Care
- Other utilities: Duke Energy, AT&T, PSNC
- Delivery services: US Postal Service, UPS, FedEx, etc.
- NC Department of Transportation

- Other community organizations such as Chamber of Commerce and Downtown Partnership
- OWASA Board of Directors
- OWASA staff—Engineering, Customer Service, Collection & Distribution, Admin, WTP operators and lab staff

4. Core information

- Replacing these aging water pipes allows OWASA to continue to provide high quality service to our customers by strategically investing in our infrastructure.
- Completing construction before a planned resurfacing project on East Rosemary Street will reduce costs and avoid the need to remove and replace portions of a newly paved street.

5. Identify key information for stakeholders

- ***What will the construction involve?*** We will be replacing water pipes beneath portions of East Rosemary Street, Henderson Street and Hillsborough Street.

- ***Who would be affected?*** Construction will mainly affect customers with property fronting the construction corridor, citizens who use the roadways and sidewalks, other citizens and businesses within a 2000-foot radius of the project site, and other utility owners. Complete list is included under #3 above.

- ***How would customers and other stakeholders be affected by construction?***
  - Customers along the construction corridor will be affected by temporary, planned service interruptions required to switch service connections to the new pipe.
  - Citizens who use the roadways will be affected during lane closures required to install the new pipes.
  - Users of Chapel Hill Transit may notice minor impacts due to lane closures. However, special arrangements will be made to accommodate bus traffic through the work zones.
  - Other citizens living within 2000-foot radius of the project site may be affected by noise, dust, mud etc. as well as changed traffic patterns.
  - Work in the Rosemary/Hillsborough and Rosemary/Henderson intersections is proposed to occur during night to avoid heavy traffic during the day.

- ***Costs and benefits/advantages and disadvantages.*** Core information about benefits (#4 above) will be conveyed qualitatively.

- ***Return on community investment.*** Core information about benefits (#4 above) will be conveyed qualitatively.

- ***How to get more information:***

All forms of communication will include an individual point of contact to obtain more information, resolve concerns, etc.:

- OWASA project manager will typically be the primary staff point of contact for the project: Jeremy Fireline at 919-537-4249 or jfireline@owasa.org.
- Other contact information may be included depending on the form of communication, but typically may include the main OWASA contact information, hyperlink or QR code link to website page

- ***Board actions and timing:***
  - The project Community Meeting planned for March 2016 and the public notice planned for April 2016 will convey that the Board will consider a construction contract award for this project at the April 28, 2016 Board meeting (subject to change), and invite public comment.

6. Cost-effective communication/engagement methods

- ***Information process:***

Method	**Use?**
E-mail and paper mail	Yes
Project specific webpage	Yes
Twitter	Yes
Other social media	No
Neighborhood or community meeting(s)	Yes – March 2016
News releases to OWASA Board and staff, news media, local governments, community organizations and citizens who have provided e-mail addresses	Yes – to alert of project start, significant traffic shifts, significant construction impacts
Article in customer newsletter	No
Signs at project location	Yes (include QR code links to webpage)
Other signage	No
Paid advertising in local media	No

- ***Engagement/dialogue process:***
  - Due to the extensive length and potential impact of this project, door-to-door interaction by staff will likely be used as an effective way of engaging the directly affected customers, proactively identifying and resolving concerns. This was a critical component of success of the South Estes & Willow Drive Water Main Replacement project.
  - Community meeting providing information about the project is planned for March 2016.
  - Public notice will include invitation for public comment at the April 28, 2016 Board meeting, where staff expects to recommend Board award of construction contract.

- Post construction survey will solicit feedback about communication plan effectiveness and project planning and construction. Staff will follow up directly with respondents as warranted.

- ***Level of resources and activity.*** Dollar costs: about $800 for each paper mailing to roughly 1,500 stakeholders in the project vicinity. About 8 to 12 mailings are anticipated.

7. Timetable for engagement

ACTION	**TARGET DATE**
Develop communication/engagement plan**	Spring 2016, updated periodically
Create stakeholder list**	Spring 2016, updated periodically
Initial** communication to stakeholders through multiple means, including joint news release with Town of Chapel Hill	Late February / early March 2016 with invitation to Community Meeting, etc.
Notice of community meeting (scheduled)	March 2016
Community meeting and summary	March 2016
Door-to-door outreach to directly affected customers	March 2016
Notice of April 28 Board meeting	April 2016
Updates on the project	May 2016 through construction completion
Planned impact notices—water service interruption, driveway access, etc.	At least 2 business days in advance
Information about unplanned impacts	As/if needed
Survey of stakeholders for perceptions/feedback	After complete
After Action Review, if desired	After project and survey

***Note: this project was planned, partially designed, and shelved several years ago before being restarted last summer; communications plan activities above refer to current phases (design completion and construction).*

8. Measuring effectiveness of the engagement

- ***Stakeholders' feedback on quality and timeliness of information and engagement opportunities:*** Post construction survey will solicit feedback about communication plan effectiveness and project planning and construction. Staff will follow up directly with respondents as warranted.

- ***Measurable objectives:*** an overall rating of very good to excellent in stakeholders' ratings of the communication/engagement process for this project.

9. Board engagement and staff communications

- ***How will the Board be involved in the community engagement?*** No direct involvement is proposed in the development or execution of this CEP.

- ***On what frequency and by what method(s) will staff keep the Board updated about the initiative?*** Staff will e-mail the Board any project updates being sent to customers as well as summaries of customer/community meeting(s), and will report on community engagement as part of periodic CIP semi-annual status reports.

- ***On what frequency and by what method(s) will the Board provide staff feedback regarding the effectiveness of the community engagement work for the initiative?*** Ongoing via e-mail or phone to Project Manager as needed.

AGENDA ITEM

- FINANCIAL RESERVES POLICY

PURPOSE

- To review and provide guidance to staff regarding the Board's position on OWASA's financial reserves policy.

BACKGROUND

- OWASA's Financial Management Policy establishes reserve funds to help ensure OWASA's financial stability and sustainability.

- OWASA's Strategic Plan includes an initiative to "set financial reserve funds at an appropriate level."

- The Board last reviewed the organization's policy on reserves in December 2014. At that time, the Board agreed with a recommendation made by the Board's Finance Committee to continue with the level of reserve minimums identified in the current Financial Management Policy at least until Fiscal Year 2017 budget deliberations.

- Staff continues to believe that our current reserve policy is appropriate to sustain the organization financially.

ACTION NEEDED

- Provide guidance to staff regarding the Board's position on OWASA's reserve policy and next steps in the Board's evaluation of the adequacy of the policy.

ORANGE WATER AND SEWER AUTHORITY

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

MEMORANDUM

TO:	Board of Directors
THROUGH:	Ed Kerwin
FROM:	Stephen Winters, CPA
DATE:	February 19, 2016
SUBJECT:	Financial Reserves Policy

Background

In OWASA's Strategic Plan, Initiative 4 is to "*adopt financial management policies and budget decision processes to ensure affordable services and fiscal sustainability"*. One of the goals under this initiative is to "*set financial reserve funds at an appropriate level."*

One of the issues the Board continues to consider is whether the level of reserves established by our Financial Management Policy is appropriate to sustain the organization financially.

The Board of Directors and the Finance Committee last discussed financial reserves at meetings held on December 11, 2014. Quoting from the minutes of the board meeting that immediately followed the committee meeting, Finance Committee Chair, Heather Payne, reported:

> The Finance Committee met prior to the Board meeting tonight to review the Board's policy regarding financial reserves. Ms. Payne reported that several Committee members indicated that they are comfortable with reserves as currently stipulated in OWASA's Financial Management Policy. However, some members favor considering reducing the minimum reserve target amounts. The Committee voted to continue with the level of reserve minimums identified in the current Financial Management Policy at least until Fiscal Year 2017 budget deliberations.

During the discussion, it was decided that since no change in policy was recommended, no formal Board action was required.

Staff continues to believe that our reserve policy is appropriate to sustain the organization financially.

A Case for a Reserve Policy

The Government Finance Officers Association recommends reserve policies as part of an overall financial policy to define boundaries, support good bond ratings, and manage risks to financial condition, among other benefits. An article published in the November 2014 American Water Works Association's Journal (Journal AWWA) stated the following:

> "The reality of uncertain water demand, increasing supply costs, large capital costs inherent in providing water service, and potential liabilities from system failures faced by water enterprises illustrates the importance of adopting reserve policies that are specifically tailored to each utility.

> Adopting a formal reserve policy can provide a number of potential benefits. A reserve policy can help ensure that adequate cash is available to meet working capital needs, an appropriate level of capital investments is funded with cash rather than debt, and adequate resources are available to cope with fiscal emergencies such as revenue shortfalls from droughts, asset failures, or natural disasters. It also provides guidelines for sound financial management by promoting a long-term emphasis on maintaining financial sufficiency and mitigating financial risks associated with revenue instability, volatile capital costs, and emergencies. Additionally, adopting and adhering to a sustainable reserve policy enhance financial management transparency, which improves public confidence and elected officials' credibility and helps achieve or maintain stronger credit ratings for future debt issues. There are a variety of components to consider when determining the financial health of an enterprise utility, but two main indicators are of particular importance: debt-service coverage and liquidity."

Nonetheless, according to discussions with the UNC School of Government, as well as other utilities across the state and country, Board-adopted policy on reserves are rare in organizations similar to OWASA. In fact, on several occasions, we have been asked to contribute to articles and presentations about our Financial Management Policy. (Here is a YouTube video interview regarding OWASA's Financial Policy.) Bond rating agencies have given us feedback indicating that our policies regarding debt-service coverage and liquidity, and our adherences to them, have been instrumental in maintaining our "AA+" bond ratings and being considered sound financially.

OWASA's Current Reserve Policy

Our Financial Management Policy includes provisions for three reserve funds.

Reserve	Purpose (paraphrased)	Funding Strategy	Funding Target as of FY 2016
Rate/Revenue Stabilization	Provide sufficient funding for operations during extended times when expenses are higher and/or revenues are lower than budgeted while offsetting the need for rate increases or spending changes during the fiscal year	5% of projected water and sewer revenue	$1,750,000
Capital Improvements	Ensure more sustainable CIP funding and cover major unplanned increases in CIP costs	2% of annual depreciated capital costs	$5,500,000
Working Capital	Provide sufficient cash flow for daily needs plus funds to counter revenue instability and unanticipated expenses	Greater of 4 months of Operating or succeeding 3 years of CIP budget	$10,200,000
Total			$17,450,000

All of the funds are unrestricted – meaning that the Board can decide to expend the funds for any lawful purpose, not just the purposes specified in the fund definitions.

Days Cash On Hand

One measure of the adequacy of reserves is the financial statistic, *days cash on hand*. At the fully funded level of $17.45 million, OWASA's aggregated reserve balance equates to 306 days of operating expenses, or *days cash on hand*. For perspective, according to Fitch Ratings, municipal utilities could be considered strong if days cash on hand were 365 or more, whereas one with only 180 days cash on hand would be considered midrange. However, it is important to remember that *days cash on hand* is just one component of an entity's financial profile.

Sensitivity Analysis

At its meeting on December 11, 2014, the Finance Committee expressed support for maintaining the existing three reserve funds. However, in order to assess whether the balances in the accounts are appropriate for financial sustainability (e.g. neither too large nor too small), the committee wanted to analyze scenario-based financial modeling to further evaluate risks and vulnerabilities.

The following table indicates the financial impact of various potential scenarios that could result in the need to utilize reserve funds.

Scenario	Estimated Financial Impact ($)
Loss of revenue due to a 10% reduction in water and sewer revenue [1]	(3,500,000) [2]
5% loss of water and sewer revenue	(1,700,000) [2]
Operating expenses are 10% over budget	(1,980,000) [2]
Electricity expense is 20% over budget	(375,000) [2]
Chemicals expense is 20% over budget	(385,000) [2]
Health insurance expense is 20% over budget	(275,000) [2]
Maintenance expense is 20% over budget	(570,000) [2]
Minimum cost of a catastrophic loss of an elevated water storage tank	(3,000,000)
Destruction of a large gravity sewer aerial creek crossing	(250,000)
Major issue with one of our dams (for example, in FY 2013 an unexpected gate repair was almost $1 million)	(1,000,000)
Loss of the ability to bill customers and receive payments for services for one month	(2,900,000) [2]
Construct temporary pipeline to Haw River in case of severe water shortage	(2,000,000) [3]

[1] The largest single-year-reduction in water and sewer revenue OWASA has experienced since inception was 11% which occurred from 2002 to 2003. This reduction occurred in spite of a rate increase of 6.25%. However, drought surcharges were not yet implemented. On an average million gallons per day basis, water sales dropped by 7.5% from 2008 to 2009. But due to drought surcharges and a rate increase of 9.75%, revenue actually increased by $700,000.

[2] Calculations are based on FY 2015 budget information.

[3] When last contemplated during the drought of 2007-08, cost estimates for a temporary Haw River pipeline were between $1 and $8 million depending on the duration of the need and other factors.

Some of the scenarios listed above may be less likely to happen than others but each have the potential to occur. Obviously, one can identify many additional scenarios that could lead to a reduction in cash flowing into the organization or an increase in cash flowing out of the organization. However, the result of any of these types of scenarios is the same: less cash on hand.

If one or more of the scenarios listed above occur at a time when we do not have adequate reserves, we would have to take steps to mitigate the related impact on cash available. Mitigating steps could include one or a combination of the following:

- Increase rates
- Reduce operating expenses
- Reduce capital improvement expenditures

- Increase borrowing

Taking these steps could have adverse impacts including:

- Customer affordability
- Our ability to properly maintain our assets which could affect the level of service we deliver
- Our ability to improve and rehabilitate system assets which could also affect level of service
- Borrowing costs
- Stakeholder confidence

The issue to address is whether our current reserve policy is sufficient to provide the resources needed to sustain the organization financially. Based on our research, there is no standard approach to setting reserve levels. The Journal AWWA article quoted above mentions "the importance of adopting reserve policies that are specifically tailored to each utility."

A few considerations that may help in analyzing the appropriateness of our reserve policy include the following. If we encounter one or more of the potential scenarios listed above, will our reserves provide sufficient cash to:

- Meet working capital needs,
- Fund an appropriate level of capital investments with cash rather than debt,
- Deal with fiscal emergencies such as revenue shortfalls from droughts, asset failures, or natural disasters, and
- Sustain our bond ratings?

Status of Reserves Compared to Funding Target

Each year in preparation of developing OWASA's annual budget and analyzing the need for a rate adjustment, we update our long-term financial plan. In the FY 2016 Budget, we projected that the year-end reserves balance will be approximately $22 million: about $4.5 million above the aggregated target. At FY 2018 year-end, based on our long range financial planning, the balance is projected to be approximately equal to the reserve funding target.

Additional Information

Attachment 1 is a chart (used in the December 2014 meetings) showing information about how OWASA's policies compare to the reserve policies of about a dozen other utilities.

Action Requested

Provide guidance to staff regarding the Board's position on OWASA's reserve policy. Alternatives could include:

- Identify additional information needed to continue to deliberate the appropriateness of the current reserve policy.
- Maintain the current reserve policy and ask staff to continue to monitor its appropriateness at least annually during budget development and to report to the Board as needed.



Stephen Winters, CPA
Director of Finance and Customer Service

Attachment 1

Comparison of Water Utility Financial Reserve Policies

Entity	Debt Service Coverage Ratio	Debt Burden	Min. Rating Goal	Reserves	Reserve Targets
OWASA	2.00	<50%	AA+	1) Working Capital 2) Rate/Revenue Stabilization 3) CIP	1) Greater of 33% of operating budget or 20% of succeeding 3yrs CIP budget 2) 5% of annual Water/Sewer revenue 3) 2% net capital costs
Alameda County Water District	1.25	NA	NA	1) Debt Service 2) Emergency/Rate Stabilization 3) Retiree 4) Self-Insurance 5) CIP and Contingencies	Not provided
Arlington (TX) Water Utiliites	1.50	NA	NA	1) Operating reserve 2) Rate Stabilization	1) 60 days cash on hand 2) 5% of total expenditure budget (operating, CIP, other)
Baltimore Dept of Publ Works	1.40	NA	NA	1) Operating reserve 2) Five others	1) 90 days cash on hand 2) Not provided
Beaufort-Jasper W&S	1.25	NA	NA	1) Restricted for Capital/Debt Svc 2) Unrestricted	Not provided
Birmingham Waterworks	1.50			1) Revenue 2) Capital Reserve 3) Demand Shorfall 4) Rate Funding	1) 12.5% operating expenses and debt service 2) 20% of average annual capital plan 3) 10% of operating expenses and debt service 4) 20% of annual capital plan
Charlotte-Mecklenberg Utilities	1.80	not provided	AAA	1) Operating 2) Debt Service 3) CIP	1) 100% of operating expenses 2) Not provided 3) Not provided
Clayton County Water Authority	1.50	NA	Best poss.	1) Debt Service 2) Construction 3) Renewal and Extension 4) Working Capital 5) Unrestricted	Not provided
Denver Water	2.20	<40%	AA	1) Operating/Insurance 2) CIP	25% of next years operating, average depreciation cost and 2% of current capital assess, 50% of annual debt service
Northeast Ohio Regional Sewer District	1.25	NA	NA	1) Working Capital 2) CIP 3) Insurance 4) Rate Stabilization	1) 90 days operating expenses 2) Identified through asset management 3) Flexible 4) Up to 5% or revenues
ONWASA	1.20	NA	NA	1) Unreserved	1) 50% of annual operating budget. Spend <= 85% of annual oper budget.
Raleigh Water Dept.	2.00	NA	AAA	1) Water & Sewer Operating 2) Water CIP 3) Sewer CIP 4) Bond	Not provided
San Antonio Water Dept.	2.00	NA	NA	1) System 2) Operating 3) Debt Service 4) CIP	1) Not provided 2) 2 months current year operating expenses 3) Not provided 4) Not provided
Water Dist No. 1 Johnson County	2.00	NA	AAA	1) Bond 2) Operating Contingency 3) Negative Cash Flow 4) Rate Stabilization	1) Not provided 2) 60 days operating expenses 3) Not provided 4) >$2 million
Winston-Salem Water Dept	1.2 - 1.5	NA	AA+	1) Working Capital	1) 1 times annual operating and debt service expeditures

ORANGE WATER AND SEWER AUTHORITY

SPECIAL MEETING OF THE BOARD OF DIRECTORS

JANUARY 21, 2016

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held a Special Meeting on Thursday, January 21, 2016, at 6:00 PM in the OWASA Board Room, 400 Jones Ferry Road in Carrboro.

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

OWASA staff present: Ed Kerwin; Mary Darr; Patrick Davis; Greg Feller; Andrea Orbich; Kelly Satterfield; Todd Taylor; Mary Tiger; Stephen Winters; and Robert Epting, Epting and Hackney.

Others present: Andrew Burnham and David Hyder of Burton & Associates.

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

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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 the same at this time; none were disclosed.

ITEM ONE: DISCUSSION OF COST ALLOCATION STUDY

Stephen Winters discussed with the Board of Directors the Cost Allocation Study (Study). He reviewed the goals and objectives of the Study: cost recovery; equity across customer classes; legal, using methodology accepted in the water industry; ease of understanding and administration; affordability; promoting conservation; and revenue stability (fixed versus variable and cost recovery). The Board made a preliminary decision to model rate structure modifications based on the following customer rate classes:

- Single-family, individually-metered residences
- Multi-family, master-metered residences
- Irrigation
- General Service

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- All University of North Carolina at Chapel Hill (UNC) accounts

Before a final decision on whether to treat UNC as a separate class, the Board requested that the Study be revised to show cost of service results of removing UNC accounts from General Services to a separate class.

Once the Board makes a decision on rate classes, and subject to consideration of the additional costs for rate consultant modeling services, the Board may direct that all or a subset of the following water rate structures be modeled to determine the impact of potential changes on different customers.

- Uniform – one year-round commodity rate
- Seasonal – a commodity rate that is higher in peak-demand periods and lower in non-peak-demand periods
- Increasing block – a commodity rate that increases as water-use increases
- No monthly fixed service charge – all costs recovered through the commodity charge
- Monthly fixed service charge that recovers 10% of OWASA's fixed costs
- Monthly fixed service charge that recovers 20% of OWASA's fixed costs

The Board also requested an estimate of the cost and time required to model all of the rate scenarios identified during this meeting. Staff and the consultant will follow up.

The information requested by the Board will be provided and discussed at the January 28, 2016 meeting. The purpose of the January 28th discussion will be to try to come to a consensus on customer rate classes, confirm the rate structures to be modeled, and next steps.

ITEM TWO: DISCUSSION OF COMMUNITY ENGAGEMENT FOR ADVANCED METERING INFRASTRUCTURE

The Board accepted the proposed draft Community Engagement Plan for Advanced Metering Infrastructure.

Ed Kerwin said that due to the predicted adverse weather for the Carrboro-Chapel Hill area the OWASA Administrative Offices will be closed on Friday, January 22, 2016.

The meeting was adjourned at 8:55 PM.

Respectfully submitted,

Andrea Orbich
Executive Assistant/Clerk to the Board

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ORANGE WATER AND SEWER AUTHORITY

MEETING OF THE BOARD OF DIRECTORS

JANUARY 28, 2016

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held a regular business meeting on Thursday, January 28, 2016, at 7:00 PM in Council Chambers at the Chapel Hill Town Hall, 405 Martin Luther King Jr. Boulevard.

Board Members present: John A. Young, Chair; Robert Morgan, Vice Chair; Heather Payne, Secretary; Terri Buckner; Jeff Danner; Barbara Foushee; Quinton Harper; David (Dave) Moreau; and Ruchir Vora. Board Members absent: none.

OWASA staff present: Ed Kerwin; Mary Darr; Patrick Davis; Greg Feller; Adam Haggerty; Vishnu Gangadharan; Kenneth Loflin; Eric Oldham; Andrea Orbich; Johnny Riley; Todd Taylor; Mary Tiger; Stephen Winters; Ronnie Weed; and Robert Epting, Epting and Hackney.

Others present: Ben Poulson, Associate Director of Energy Services and Meg Holton, Water, Wastewater, and Stormwater Manager, University of North Carolina (UNC) at Chapel Hill; Joel Bulkey; and Julie Hellman, President of the NC American Water Works Association-Water Environment Association.

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

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MOTIONS ACTED UPON

1. Robert Morgan made a motion to approve the Minutes of the December 10, 2015 Work Session of the Board of Directors; second by Heather Payne and unanimously approved.

2. Robert Morgan made a motion to approve the Minutes of the January 14, 2016 Work Session of the Board of Directors; second by Heather Payne and unanimously approved.

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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 the same at this time. None were disclosed.

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Advanced Metering Infrastructure

John Young said that the Board is considering implementing Advanced Metering Infrastructure (AMI) and invited citizens to comment and/or ask questions about AMI at the Board's February 25th meeting as well as on March 10th and 24th. He said that with the benefit of public feedback, the Board may make a decision on whether or not to implement AMI on March 24, 2016. Mr. Young said AMI is a meter reading system which frequently receives data transmitted by radio from water meters and would enable OWASA and customers to detect leaks more quickly. AMI would eliminate the need to drive through the community to read 21,000 meters once per month. OWASA can implement AMI without raising rates. Mr. Young said additional information will be in an upcoming news release, OWASA's Blue Thumb newsletter and on OWASA's website.

Change in the Agenda

Without objection, Agenda Item 2, Semi Annual Status Report for Various Capital Improvement Projects, was moved to the end of the Regular Agenda to receive the Board's consolidated feedback.

January 19, 2016 OWASA Orientation for Newly Elected Town of Chapel Hill Officials

Heather Payne said that on January 19, 2016, OWASA held an orientation meeting for newly elected Chapel Hill officials (Mayor Pam Hemminger and Council Members Nancy Oates and Michael Parker). Council Member Jessica Anderson was unable to attend and her orientation is scheduled for Monday, February 1st at 1:30 p.m. The orientation included OWASA's governance, key obligations and responsibilities, strategic initiatives and operations. The orientation was well received and there is interest in touring OWASA facilities at a later date.

Eric Oldham

Julie Hellman, Chair of the NC Chapter of the American Water Works Association/Water Environment Association, presented the Safewater Maintenance Technologist of the Year award to Eric Oldham, Maintenance Supervisor at the Jones Ferry Road Water Treatment Plant.

Mason Farm Wastewater Treatment Plant Awards

Ms. Hellman also presented to Ronnie Weed, Operations Supervisor, the Operations and Maintenance Excellence award to staff of the Mason Farm Wastewater Treatment Plant (WWTP).

Todd Taylor said that OWASA received the National Association of Clean Water Agencies' Platinum Performance Award for Five Years of Excellence in Permit Compliance at the WWTP.

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PETITIONS AND REQUESTS:

John Young asked for petitions and requests from the public; none were received.

Mr. Young requested and the Board agreed that a staff report be provided within a month on the measures OWASA takes to ensure customers have safe drinking water and that OWASA fully complies with lead and copper standards. Staff will report at the Board's February 25, 2016 meeting as well as informing customers through the Blue Thumb newsletter.

Mr. Young asked for petitions and requests from staff; none were received.

ITEM ONE: QUARTERLY REPORT ON ATTENDANCE AT BOARD AND COMMITTEE MEETINGS

The Board received this report as an information item.

ITEM TWO: SEMIANNUAL STATUS REPORT FOR VARIOUS CAPITAL IMPROVEMENT PROJECTS

This item was moved to the end of the Regular Agenda as Item Ten.

ITEM THREE: 2015 ANNUAL RECREATION REPORT FOR UNIVERSITY LAKE AND CANE CREEK RESERVOIR

The Board received this report as an information item.

ITEM FOUR: MINUTES

Robert Morgan made a motion to approve the Minutes of the December 10, 2015 Work Session of the Board of Directors; second by Heather Payne and unanimously approved. Please see Motion No. 1 above.

ITEM FIVE: MINUTES

Robert Morgan made a motion to approve the Minutes of the January 14, 2016 Work Session of the Board of Directors; second by Heather Payne and unanimously approved. Please see Motion No. 2 above.

ITEM SIX: DISCUSS POTENTIAL RATE STRUCTURE MODIFICATIONS

John Young said that this item is a continuation of the Board's discussion of potential rate structure modifications at the January 21, 2016 special meeting.

At the January 21 meeting, the Board requested information regarding the cost of additional consulting services from expanding the scope of work. The Board also requested additional cost

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of service analysis information regarding University of North Carolina accounts. Stephen Winters said that the requested information from OWASA's rate consultants was received but staff needs additional time to review it and resolve questions. He anticipates being ready to discuss this information at the Board's February 11, 2016 work session.

The Board agreed to continue discussion of potential rate structure modifications on February 11th.

ITEM SEVEN: 2015 CUSTOMER SURVEY RESULTS

The Board received the results of the 2015 customer survey and asked staff for additional information about actions to enhance services and community engagement in light of the survey. The Board also expressed appreciation to staff for positive feedback about service to customers, and suggested that the next survey focus on projects such as Advanced Metering Infrastructure.

ITEM EIGHT: REVIEW OF OWASA'S CAPITAL IMPROVEMENT PROGRAM INVESTMENT PRACTICES

The Board received a staff presentation on how capital improvement projects are identified and prioritized using an asset management process. The Board expressed appreciation to staff for developing high quality and well informed Capital Improvement and Asset Management Programs.

ITEM NINE: FINANCIAL REPORT FOR THE SIX-MONTH PERIOD ENDED DECEMBER 31, 2015

The Board received this report as an information item.

ITEM TEN: SEMIANNUAL STATUS REPORT FOR VARIOUS CAPITAL IMPROVEMENT PROJECTS (CIP)

The Board received this report as an information item.

Prior to the meeting Board Members requested revised information about project budget and schedule variances. That information was provided and will be incorporated into the next Semiannual Report as well as adding a hyperlinks to the on line Capital Improvements Program document to give more detail about projects.

ITEM ELEVEN: 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 BOARD MEETING

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Ed Kerwin summarized staff action items as follows:

- Staff will provide a report to the Board on the measures OWASA takes to ensure customers have safe drinking water and that OWASA operates in full compliance with lead and copper standards;
- Staff will provide the Board requested information regarding the cost of additional consulting services from expanding the scope of work to consider rate structure modifications;
- Staff will provide the Board additional cost of service analysis information regarding University of North Carolina accounts;
- Staff will provide additional detail about continuous improvement measures in light of the 2015 Customer Survey; and
- Staff will implement the Board's requested changes to the Semiannual Report for Various Capital Improvement Projects.

The meeting was adjourned at 9:10 PM.

Respectfully submitted,

Andrea Orbich
Executive Assistant/Clerk to the Board

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ORANGE WATER AND SEWER AUTHORITY

CLOSED SESSION OF THE BOARD OF DIRECTORS

FEBRUARY 11, 2016

The Board of Directors of Orange Water and Sewer Authority met in Closed Session on Thursday, February 11, 2016, following the Board Meeting.

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

Staff present: Ed Kerwin, Executive Director.

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ITEM ONE

The Board of Directors met in Closed Session to discuss the semiannual performance review of General Counsel.

No official action was taken at the meeting.

The meeting was adjourned at 9:47 PM.

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Robert Morgan, Vice Chair
Board of Directors