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, JUNE 25, 2015, 7:00 P.M.
CHAPEL HILL TOWN HALL

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

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

Public speakers are encouraged to organize their remarks for delivery within a four minute time frame allowed each speaker. 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.
   - B. Appointment of Robert Morgan, Carrboro Appointee, to the OWASA Board of Directors
   - C. Acknowledgment of Amy Witsil and Steve Dear's service on the Board of Directors
2. Announcements by Board Members
3. Announcements by Staff

Petitions and Requests

1. Public
2. Board
3. Staff

CONSENT AGENDA

Action

1. Approval of the Minutes of the May 28, 2015 Public Hearings and Meeting of the Board of Directors (Andrea Orbich)
2. Approval of the Minutes of the June 11, 2015 Work Session of the Board of Directors (Andrea Orbich)

REGULAR AGENDA

Discussion

3. Baseline Assessment of Energy Use and Management Efforts and Potential Goals and Objectives for the Energy Management Plan (Patrick Davis)
4. 12-Month Progress Report on Affordability Outreach Pilot Project (Patrick Davis)

Discussion and Action

5. Review Information and Options for Employee Merit Pay for Fiscal Year 2016 (John Young)

Summary of Board Meeting Action Items

6. 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

Work Session

7. The Board will Convene in a Work Session for the Purpose of Discussing the Results of Board Self-Assessment (John Young)

ORANGE WATER AND SEWER AUTHORITY

PUBLIC HEARINGS AND MEETING OF THE BOARD OF DIRECTORS

MAY 28, 2015

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held public hearings and a regular business meeting on Thursday, May 28, 2015, 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; Michael M. Hughes, P.E., Vice Chair; Terri Buckner; Stephen (Steve) Dear; Quinton Harper; David (Dave) Moreau; Ruchir Vora; and Amy Witsil. Board Member absent: Heather Payne, Secretary.

OWASA staff present: Ed Kerwin; Denise Battle; Mary Darr; Patrick Davis; Greg Feller; Stephanie Glasgow; Andrea Orbich; Todd Taylor; Stephen Winters; and Robin Jacobs, Epting and Hackney.

Others present: Ben Poulson, Associate Director of Energy Services, University of North Carolina at Chapel Hill; Vicki Baja, Carrboro resident; Will Raymond, former OWASA Board Member and Chapel Hill resident; John Anzivino and Joel Davis, Springsted Incorporated; Shannon Brummett, General Services Corporation; Bill Waddell and Steve McCauley, Orange Grove Road Volunteer Fire Department; and Tony Blake, White Cross Volunteer Fire Department.

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

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MOTIONS ACTED UPON

1. Steve Dear made a motion to close the Public Hearings on the Draft Annual Budget, Draft Capital Improvements Program, and the proposed adjustments to Rates, Fees and Charges for FY 2015; the motion was seconded by Dave Moreau, and carried by unanimous vote.

2. Michael Hughes made a motion to approve the Minutes of the April 23, 2015 Meeting of the Board of Directors as amended by Steve Dear, second by Quinton Harper and unanimously approved.

3. Michael Hughes made a motion to approve the Minutes of the April 23, 2015 Closed Session of the Board of Directors, second by Quinton Harper and unanimously approved.

4. Michael Hughes made a motion to approve the Minutes of the May 14, 2015 Work Session of the Board of Directors as amended by John Young, second by Quinton Harper and unanimously approved.

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5. Michael Hughes made a motion to approve the Minutes of the May 14, 2015 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter, second by Quinton Harper and unanimously approved.

6. BE IT RESOLVED THAT the Orange Water and Sewer Authority adopt the Resolution Authorizing the Executive Director to Execute Contracts with Blue Cross Blue Shield for Employee Health and Dental Insurance which supports Option 5 (increase of 21.4%). (Motion by Dave Moreau, second by Terri Buckner and the resolution passed with a vote of seven to one with Michael Hughes voting no.)

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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. There were none.

Michael M. Hughes, P.E.

Mr. Young announced Michael Hughes was reappointed to the OWASA Board of Directors for a second term effective July 1, 2015 through June 30, 2018.

Board Self-Assessment

Without objection, the Board agreed to postpone the Board Self-Assessment until the June 25, 2015 meeting.

Board Attendance

Without objection, it was agreed that the practice of Board Member absences in Quarterly Attendance Reports will be noted as "Absent" instead of "Excused" and that minutes will also reflect same.

Change to the Agenda

Without objection, the Board agreed to switch Item 7 (Community Engagement Concept for the Energy Management Plan) and Item 8 (Board Expectations for Employee Total Compensation) to accommodate visiting consultants, Springsted Incorporated.

William Raymond

The Board expressed sincere appreciation to Will Raymond for his service on the OWASA Board of Directors. The resolution was previously approved on September 25, 2014.

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Mr. Raymond said he was proud to serve on the Board and provided comments on re-banding customers' rates; work force diversity and compensation; community participation; and Jordan Lake watershed.

June 2, 2015 Carrboro Board of Aldermen Meeting

Quinton Harper announced that he and Steve Dear will provide an OWASA update to the Carrboro Board of Aldermen on June 2, 2015.

Nominating Committee Meeting

Amy Witsil said that the Nominating Committee will meet on Thursday, June 4, 2015 at 8:00 AM in the OWASA Board Room to discuss the nomination of officers for the coming year.

Employees

Quinton Harper said that he spent time with employees in the Customer Service department to learn more about their jobs and get to know the employees.

PETITIONS AND REQUESTS

Mr. Tony Blake, White Cross Volunteer Fire Department, and Bill Waddell, Orange Grove Volunteer Fire Department, petitioned the Board regarding the feasibility of installing fire hydrants on Highway 54 West in Orange County to improve firefighting capabilities in that area.

The Board accepted the petition and referred it to staff for review and follow up at a future meeting.

Steve Dear petitioned the Board to remove all descriptions of biosolids as "safe" from OWASA's website and ongoing communication. The Board agreed and staff will follow up.

John Young asked for petitions and requests from staff; there were none.

ITEM ONE: CONCURRENT PUBLIC HEARINGS ON THE PRELIMINARY ANNUAL OPERATING AND CAPITAL IMPROVEMENTS BUDGET AND PROPOSED RATES, FEES AND CHARGES

John Young opened the concurrent Public Hearings on the Draft Annual Budget, Draft Capital Improvements Program (CIP), and the proposed adjustments to Rates, Fees and Charges for Fiscal Year (FY) 2016.

Ed Kerwin began the presentation by noting that after receiving customers' feedback, the Board will close the public hearings and continue deliberations on next year's budgets and rates. If the Board approves the proposed FY 2016 budgets and rates at the next meeting, it will be the fourth year in a row with no increase in monthly water, wastewater and reclaimed water rates. This

accomplishment was achieved through proactive measures and investments to improve efficiencies in operations while ensuring consistent high quality and reliable services.

Mr. Kerwin said a feasibility study is expected to be completed by December 31, 2015, for implementing Advanced Metering Infrastructure (AMI): a system that automates meter reading, provides more extensive water use data to customers, and will help OWASA staff deliver better customer service.

Mr. Kerwin noted that while OWASA's rate structure has been effective at meeting objectives and ensuring cost-of-service principles are met, it is time to reexamine the effectiveness of the rate structure in meeting affordability, conservation and customer equity objectives. The OWASA Board will actively seek customer input before deciding whether to make any changes in our rate structure.

Mr. Kerwin noted that about 25% of our customers receive their bills electronically, which is much more efficient than paper bills. Improvements to our electronic billing system will be implemented later this summer and include: email notification that includes the amount due and due date; the ability to pay a bill without logging in; the ability for customers to store credit card information; and flexibility for scheduling payments.

Staff will conduct a customer survey later this year to learn more about customer perceptions and expectations. This survey will be available for all of our account-holders and the feedback will help guide our continuous improvement work.

Mr. Kerwin said reducing energy is a key initiative. A recently completed energy efficiency project at our Mason Farm Wastewater Treatment Plant (WWTP) resulted in a 30% reduction in use of electricity for a savings of about $250,000 a year. This energy reduction also reduces greenhouse gas emissions associated with producing electricity. Finally, Mr. Kerwin said that staff is in the process of updating our Long-Range Water Supply Plan to ensure a reliable and high quality water supply, especially during long and severe droughts.

Stephen Winters said a key objective of OWASA's strategic plan is to secure financial stability for the long-term sustainability of the community's water and wastewater systems. Budget and rate-setting assumptions must meet requirements of OWASA's founding documents and agreements, Bond Order, Financial Management Policy, and State law. The organization's revenue comes solely from customer fees; OWASA is required to charge customers the full cost of providing water and wastewater services.

Mr. Winters noted that OWASA does not expect an increase in the volume of drinking water sales for FY 2016. Projected revenue is about $37.2 million. The budget includes $20.8 million for Operating Expenses and $8.3 million for debt service payments. The CIP budget is projected to be $10.6 million, which will be spent on multiple projects including completion of the Mason Farm WWTP digester rehabilitation, water main rehabilitation, and AMI. Over the next five years, total CIP spending is expected to be about $80 million with over 79% to be spent on

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rehabilitation and replacement, about 3% on growth, and approximately 18% for system enhancement.

Mr. Winters reiterated that staff proposes no increase in monthly water, wastewater and reclaimed water rates. Mr. Winters said rate increases over the next several years are projected to be in line with inflation. Long-term planning indicates that OWASA is sustainable; water resources will meet expected demand for the next 50 years under most circumstances. Current planning indicates that the water and wastewater treatment plants will not have to be expanded for at least 15 years. OWASA continues to work diligently to reduce costs without compromising OWASA's ability to deliver high quality and dependable water and wastewater services.

Mr. Young opened the concurrent Public Hearings for public comments.

Mr. Shannon Brummett, General Services Corporation, expressed concerns about the rates OWASA charges for the apartment communities he manages and requested those communities be charged the same as single-family residents.

The Board agreed that it is important to discuss the concerns that Mr. Brummett raised and committed to do so later this summer when the Board evaluates the rate structure.

Steve Dear made a motion to close the Public Hearings on the Draft Annual Budget, Draft CIP, and the proposed adjustments to Rates, Fees and Charges for FY 2016; the motion was seconded by Dave Moreau, and carried by unanimous vote. Please see Motion No. 1 above.

Mr. Young then opened the discussion for Board comments.

Mr. Young said that it is important that OWASA is investing in rehabilitating our infrastructure and thanked the community for conserving water. Mr. Young also thanked the public for their feedback.

ITEM TWO: MINUTES

Steve Dear requested that the April 23, 2015 minutes be amended to note his reason for not seeking reappointment to Board of Directors is that he is moving out of state; the Board agreed.

Michael Hughes made a motion to approve the Minutes of the April 23, 2015 Meeting of the Board of Directors as amended by Steve Dear, second by Quinton Harper and unanimously approved. Please see Motion No. 2 above.

ITEM THREE: MINUTES

Michael Hughes made a motion to approve the Minutes of the April 23, 2015 Closed Session of the Board of Directors, second by Quinton Harper and unanimously approved. Please see Motion No. 3 above.

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ITEM FOUR: MINUTES

John Young requested that the May 14, 2015 Work Session Minutes be amended in Item Four, Appointment of the Nominating Committee on page 2 as follows: John Young appointed the following Board Members to the Nominating Committee: Amy Witsil, Chair, Terri Buckner, Steve Dear and Quinton Harper. ~~will serve as~~ The Committee~~, which~~ will propose a slate of nominations when officers are elected for the June 11, 2015 meeting.

Michael Hughes made a motion to approve the May 14, 2015 Work Session Minutes of the Board of Directors as amended by John Young, second by Quinton Harper and unanimously approved. Please see Motion No. 4 above.

ITEM FIVE: MINUTES

Michael Hughes made a motion to approve the Minutes of the May 14, 2015 Closed Session of the Board of Directors for the Purpose of Discussing a Personnel Matter, second by Quinton Harper and unanimously approved. Please see Motion No. 5 above.

ITEM SIX: RESOLUTION AUTHORIZING THE EXECUTIVE DIRECTOR TO EXECUTE CONTRACTS WITH BLUE CROSS BLUE SHIELD OF NORTH CAROLINA FOR HEALTH AND DENTAL INSURANCE

Stephanie Glasgow, OWASA's Director of Human Resources and Safety, introduced Ellen Tucker, of Hill, Chesson & Woody, who provided a presentation on options for health insurance for the Board's consideration and approval.

Ruchir Vora suggested that next year the Board consider an option to give employees a monetary amount if they elect not to participate in OWASA's health and dental insurance.

Michael Hughes made a motion to support the Current Renewal of benefits; there was no second and the motion failed.

Ruchir Vora made a motion to support Option 3, second by Amy Witsil. After discussion, Mr. Vora withdrew his motion.

After considerable Board discussion, Dave Moreau made a motion to approve the Resolution Authorizing the Executive Director to Execute Contracts with Blue Cross Blue Shield for Employee Health and Dental Insurance which supports Option 5 (increase of 21.4%); second by Terri Buckner and the motion passed seven to one with Michael Hughes voting no. Please see Motion No. 6 above.

Michael Hughes requested a copy of Hill, Chesson & Woody's contract.

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ITEM SEVEN: BOARD EXPECTATIONS FOR EMPLOYEE TOTAL COMPENSATION STUDY

Ed Kerwin introduced John Anzivino and Joel Davis, Senior Vice President and Vice President, of Springsted Incorporated, who provided a brief verbal presentation on the company and its experience related to the Employee Total Compensation Study.

The Board provided feedback and guidance to the consultants and a draft detailed scope of work will be provided at the Board's June 25th meeting.

ITEM EIGHT: COMMUNITY ENGAGEMENT CONCEPT FOR THE ENERGY MANAGEMENT PLAN

The Board discussed and supported a conceptual plan for working with the local governments, local energy and sustainability advisory boards, the University, etc. to organize and hold a forum or seminar on energy management as part of our community engagement efforts for our energy management plan initiative.

The Board supported Terri Buckner attending a June 8, 2015 Orange County Commission for the Environment meeting to see if they are interested in participating. Ms. Buckner will work with the staff to contact other organizations about this proposal.

The Board agreed that at its June 25, 2015 meeting, it will receive and discuss a staff report and presentation on a baseline assessment of OWASA's energy use and management efforts, and potential goals and objectives for the energy management plan; and will receive customers' comments. Staff will publicize the opportunity to comment.

ITEM NINE: 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

Ed Kerwin summarized the meeting as follows:

- Staff will publicize the opportunity for customers to comment following the June 25, 2015 presentation on a baseline assessment of OWASA's energy use and management efforts, and potential goals and objectives for the energy management plan;
- Staff will work on the Scope of Work for the Total Compensation Study;
- Staff will update OWASA's website and ongoing communication by deleting references to biosolids as "safe," and OWASA information will say that Federal biosolids standards provide for acceptable levels of risk;
- Staff will evaluate White Cross and Orange Grove Volunteer Fire Department's petition on possible fire hydrants on Highway 54 West in Orange County; and
- June 11, 2015 Work Session will include the following:

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- Review and approve employee health and dental insurance renewals:
- Review and approve Fiscal Year 2016 Budget and rates;
- Review draft scope of work for design of sewer system for Historic Rogers Road Area;
- Award Construction Contract for Digester Rehabilitation Contract for the Mason Farm Wastewater Treatment Plant;
- Discussion on whether the Board would like Counsel/staff to evaluate requirements regarding charitable causes; and
- Election of Officers.

The meeting was adjourned at 10:15 PM.

Respectfully submitted,

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachments

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ORANGE WATER AND SEWER AUTHORITY

WORK SESSION OF THE BOARD OF DIRECTORS

JUNE 11, 2015

The Board of Directors of the Orange Water and Sewer Authority (OWASA) met in a Work Session on Thursday, June 11, 2015, at 6:00 PM in OWASA's Community Room at 400 Jones Ferry Road, Carrboro.

Board Members present: Michael M. Hughes, P.E., Vice Chair; Heather Payne, Secretary; Terri Buckner; Stephen (Steve) Dear; Quinton Harper, David (Dave) Moreau; Ruchir Vora and Amy Witsil. Board Member absent: John A. Young, Chair

OWASA staff present: Ed Kerwin; Denise Battle; Stuart Carson; Mary Darr; Greg Feller; Jeremy Fireline; Stephanie Glasgow; John Kiviniemi; Andrea Orbich; Todd Taylor; Stephen Winters; and Robert Epting, Esq., Epting and Hackney.

Others present: Randy Foulke, AECOM; and Meg Holton, Water, Wastewater, and Stormwater Manager, University of North Carolina at Chapel Hill

There being a quorum present, Michael Hughes called the meeting to order.

MOTIONS ACTED UPON

1. BE IT RESOLVED THAT the Orange Water and Sewer Authority adopt the Resolution Adopting the Schedule of Rates, Fees and Charges Applicable to All Customers On and After October 1, 2015. (Resolution so titled attached hereto and made a part of these minutes. Motion by Terri Buckner, second by Steve Dear and unanimously approved.)

2. BE IT RESOLVED THAT the Orange Water and Sewer Authority adopt the Resolution Adopting the Annual Budget for Orange Water and Sewer Authority for the Fiscal Year July 1, 2015 through June 30, 2016. (Resolution so entitled attached hereto and made a part of these minutes. Motion by Heather Payne, second by Amy Witsil and unanimously approved.)

3. BE IT RESOLVED THAT the Orange Water and Sewer Authority adopt the Resolution Approving the Capital Improvements Program and Budget for Fiscal Years 2016-2020. (Resolution so titled attached hereto and made a part of these minutes. Motion by Dave Moreau, second by Quinton Harper and unanimously approved.)

4. BE IT RESOLVED THAT the Orange Water and Sewer Authority adopt the Capital Project Resolution for Fiscal Year 2016 Infrastructure Improvements. (Resolution so titled attached hereto and made a part of these minutes. Motion by Dave Moreau, second by Terri Buckner and unanimously approved.)

5. BE IT RESOLVED THAT the Orange Water and Sewer Authority adopt the Resolution Awarding a Construction Contract for the Rehabilitation of the Mason Farm Wastewater

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Treatment Plant Digesters. (Resolution so titled attached hereto and made a part of these minutes. Motion by Dave Moreau, second by Amy Witsil and unanimously approved.)

6. Dave Moreau made a motion to elect John Young as Chair of the Board of Directors for corporate year 2016-2016, seconded by Ruchir Vora and unanimously approved.

7. Steve Dear made a motion to elect Michael Hughes as Vice Chair of the Board of Directors for corporate year 2015-2016, second by Dave Moreau and unanimously approved.

8. Dave Moreau made a motion to elect Heather Payne as Secretary of the Board of Directors for corporate year 2015-2016, second by Michael Hughes and unanimously approved.

ANNOUNCEMENTS

Announcements by the Vice Chair

Michael Hughes 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. There were none.

Mr. Hughes said that on June 25, 2015 staff will report on OWASA's Baseline Assessment of Energy and Potential Goals and Objectives for Energy Use and the Board will receive comments from citizens.

Mr. Hughes said that Jonathan Howes, an OWASA Board Member from 1976 to 1978 and Chair from 1977 to 1978, passed away on May 31, 2015.

Mr. Hughes said the Chapel Hill Town Council appointed Jeff Danner to serve on the OWASA Board and he may take his oath of office on July 9, 2015.

Mr. Hughes also reminded Board Members to continue to notify the Clerk to the Board in advance of absences from Board and Committee meetings.

Orange County's Commission for the Environment

Terri Buckner said that Ed Kerwin and she attended the June 8th Orange County Commission for the Environment meeting. The Commission is interested in participating in a public event regarding energy management by local governments, the University, etc. She and staff will meet with additional local entities to determine their interest in participating.

Care to Share

Ms. Buckner presented a new logo for OWASA's Care to Share customer assistance program (formerly Taste of Hope) and Care to Share information on the website of the Inter-Faith Council. The Board approved the new logo and staff will incorporate it as necessary.

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June 2, 2015 Carrboro Board of Aldermen Meeting

Steve Dear and Quinton Harper reported on their June 2, 2015 presentation to the Carrboro Board of Aldermen regarding various OWASA initiatives which was well received.

Committees

Mr. Dear said the Community Engagement Committee will meet on June 23, 2015 at 5:30 PM to discuss the 12-month progress report on OWASA's Affordability Outreach Pilot Program.

Affordability Outreach Pilot Program

Denise Battle, Customer Service Manager, said OWASA representatives will meet with local agency partners to discuss the Affordability Outreach Pilot Program at 2:00 PM on June 15, 2015 in the OWASA Community Room.

ITEM ONE: REVIEW INFORMATION AND OPTIONS FOR EMPLOYEE MERIT PAY FOR FISCAL YEAR 2016

After considerable Board discussion on the alternatives, the Board asked staff for additional information and agreed to have further discussion and possible approval at the Board's June 25, 2015 meeting.

In advance of the June 25th meeting, staff will provide information on new merit pay scenarios.

ITEM TWO: APPROVAL OF THE SCHEDULE OF RATES, FEES AND CHARGES; ANNUAL BUDGET; AND FIVE-YEAR CAPITAL IMPROVEMENTS PROGRAM (CIP)

Terri Buckner made a motion to approve the Resolution Adopting the Schedule of Rates, Fees and Charges Applicable to All Customers on and After October 1, 2015; second by Steve Dear and unanimously approved. Please see Motion 1 above.

Heather Payne made a motion to approve the Resolution Adopting the Annual Budget for Orange Water and Sewer Authority for the Fiscal Year July 1, 2015 through June 30, 2016; second by Amy Witsil and unanimously approved. Please see Motion 2 above.

Dave Moreau made a motion to approve the Resolution Approving the Capital Improvements Program and Budget for Fiscal years 2016-2020; second by Quinton Harper and unanimously approved. Please see Motion 3 above.

Dave Moreau made a motion to approve Capital Project Resolution for Fiscal Year 2016 Infrastructure Improvements; second by Terri Buckner and unanimously approved. Please see Motion 4 above.

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ITEM THREE: RESOLUTION AWARDING A CONSTRUCTION CONTRACT FOR THE REHABILITATION OF THE MASON FARM WASTEWATER TREATMENT PLANT DIGESTERS

Dave Moreau made a motion to approve the Resolution Awarding a Construction Contract for the Rehabilitation of the Mason Farm Wastewater Treatment Plant Digesters; second by Amy Witsil and unanimously approved. Please see Motion 5 above.

Staff will begin to include historical minority participation data in future semi-annual Capital Improvement Project progress reports.

ITEM FOUR: REVIEW DRAFT SCOPE OF WORK FOR DESIGN OF THE SEWER SYSTEM FOR THE HISTORIC ROGERS ROAD AREA

After discussion, the Board concurred that staff will work with the consultant to finalize the scope of work for the Historic Rogers Road Area sewer design. In doing so, staff will consider feedback and suggestions from Michael Hughes.

ITEM FIVE: REQUEST(S) BY BOARD COMMITTEES, BOARD MEMBERS AND STAFF

Steve Dear requested that the Board reevaluate Board compensation and consider a higher amount.

Ruchir Vora requested that the construction project agenda items outlines background and options staff may have considered in developing the scope of the project, as well as providing pictures and graphs.

ITEM SIX: REVIEW BOARD WORK SCHEDULE

The Board and staff reviewed the draft June 25th agenda and agreed that it include: continue discussion of employee merit pay for FY 2016; baseline assessment of energy use and management efforts and potential goals and objectives for the Energy Management Plan; Update on 12-Month Progress Report on Affordability Outreach Pilot Project; and review of Board Self-Assessment.

The Board and staff reviewed the draft July 9th agenda and agreed that it include: possible Oath of Office to new Board Member(s); discussion of priorities and work schedule for key strategic initiatives; revisit Board members' suggestions regarding lake recreation activities; and approval of Scope of Work for Employee Total Compensation Study.

The Board agreed to cancel the July 23 and August 13, 2015 meetings.

ITEM SEVEN: REPORT FROM THE NOMINATING COMMITTEE AND ELECTION OF OFFICERS

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Amy Witsil said that the Nominating Committee met on Thursday, June 4, 2015 and recommends the following slate of officers for corporate year 2015-2016 beginning on July 1, 2015: John Young, Chair; Michael Hughes, Vice Chair; and Heather Payne, Secretary.

Ms. Witsil opened the floor for further discussion or nominations for Chair of the Board; there were none.

Dave Moreau made a motion to elect John Young as Chair of the Board of Directors for corporate year 2015-2016, second by Ruchir Vora and unanimously approved. Please see Motion No. 6 above.

Ms. Witsil opened the floor to further discussion or nominations for Vice Chair of the Board; there were none.

Steve Dear made a motion to elect Michael Hughes as Vice Chair of the Board of Directors for corporate year 2015-2016, second by Dave Moreau and unanimously approved. Please see Motion No. 7 above.

Ms. Witsil open opened floor was open for further discussion or nominations for Secretary of the Board; there were none.

Dave Moreau made a motion to elect Heather Payne as Secretary of the Board of Directors for corporate year 2015-2016, second by Michael Hughes and unanimously approved. Please see Motion No. 8 above.

ITEM EIGHT: SUMMARY OF BOARD WORK SESSION ACTION ITEMS

Ed Kerwin summarized the key action items for staff as follows:

- Staff will work with Terri Buckner to contact additional potential partners about an energy management event.
- Staff will publicize the Care to Share program including the new logo.
- Staff will provide the Board information on attrition and prepare new pay scenarios.
- Staff will include overall minority participation data in future semi-annual CIP progress reports.
- Staff will work with Michael Hughes to complete the scope of work for the Historic Rogers Road Area sewer design.
- For future agenda items for capital projects, staff will include a brief overview which discusses background and options staff may have considered in developing the scope of the project, and provide pictures and graphs.
- Staff will promote the Board's discussion on June 25th regarding the 12-month report on the affordability outreach pilot program.

The meeting was adjourned at 9:15 PM.

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Respectfully submitted by:

Andrea Orbich
Executive Assistant/Clerk to the Board

Attachments

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AGENDA ITEM

- BASELINE ASSESSMENT OF ENERGY USE AND MANAGEMENT EFFORTS AND POTENTIAL GOALS AND OBJECTIVES FOR THE ENERGY MANAGEMENT PLAN

PURPOSE

- Receive the Board of Directors' questions, comments, and guidance regarding the draft *Baseline Assessment of Energy Use; Overview of Energy Management Strategies to Date; and Potential Goals and Objectives for Energy Management* (attached).

BACKGROUND

- Development of an Energy Management Plan is a key initiative of our Strategic Plan. On January 22, 2015 the Board of Directors approved a Project Charter to help guide this effort, including our related community engagement activities. The Board directed that staff receive and incorporate input and guidance from the Natural Resources and Technical Systems (NRTS) Committee prior to presenting information, analyses, and recommendations to the Board.

- Staff prepared a draft ten-year baseline assessment of our energy use and management efforts, and potential goals and objectives for energy management. The NRTS Committee reviewed and discussed the draft information at its March 17 and April 28, 2015 meetings, and staff has incorporated the comments and recommendations of the Committee.

- Staff will make a presentation to at the Board's June 25, 2015 televised meeting.

- We have used several methods to inform our customers and community of our work, and to invite the public to provide questions, comments and suggestions at the June 25, 2015 Board meeting and/or via other means.

ACTION NEEDED

- Invite and consider comments from the public.

- Discuss the draft baseline assessment of energy use and management, and potential goals and objectives for the energy management plan.

- Provide guidance to the staff and NRTS Committee.

June 25, 2015

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: Patrick Davis

DATE: June 19, 2015

SUBJECT: Baseline Assessment of Energy Use and Management Efforts and Potential Goals and Objectives for the Energy Management Plan

Purpose

To obtain the Board of Directors' feedback and guidance on the draft *Baseline Assessment of Energy Use; Overview of Energy Management Strategies to Date; and Potential Goals and Objectives for Energy Management* (attached).

Background

Development of an Energy Management Plan is Strategic Initiative #5 of our Strategic Plan. On January 22, 2015 the Board approved a project charter and associated community engagement plan for development of the energy management plan.

The first phase of the project is completion of a baseline assessment of energy use; documentation of energy management strategies to date; and consideration of potential goals and objectives for the plan. The attached draft report addresses these three topics.

The report incorporates comments and suggestions received from the Board's Natural Resources and Technical Systems (NRTS) Committee at its March 17 and April 28, 2015 meetings, including specific proposed goals and objectives for energy use reductions and use of renewable energy,

At the June 25, 2015 Board meeting, staff will make a presentation to the Board. In accordance with the community engagement plan for the project, we have used several methods to inform our customers and community of our work, and invite them to provide questions, comments and suggestions at the June 25th Board meeting and/or via other means.

Staff Recommendation

Staff recommends that the Board receive the staff draft report and presentation; comments from the NRTS Committee; and comments from the public; then provide feedback and guidance to the staff and Committee.

We seek your feedback on the following questions:

Is the information in the report clear and useful?

Is additional information needed at this time?

Does the Board concur with the following key proposed goals and objectives included in the attached report?

1. *Reduce use of purchased electricity by 35% by Calendar Year 2020 compared to the Calendar Year 2010 baseline.*

2. *Reduce use of purchased natural gas by 5% by Calendar Year 2020 compared to the Calendar Year 2010 baseline.*

3. *Beneficially use all Wastewater Treatment Plant biogas by 2022, provided the preferred strategy is projected to have a positive payback within the expected useful life of the required equipment.*

Our next major tasks will be to:

1. Use a variety of methods to inform our customers and the community about our work and to provide meaningful opportunities for people to participate in and comment on our work.

2. Identify and evaluate potential strategies to achieve the goals and objectives established by the Board. We will present the draft results of that evaluation to the NRTS Committee, then submit a draft report and recommendations to the Board once it has been approved by the Committee.

We look forward to your questions, comments and guidance, as well as the comments and suggestions we receive from our customers and other stakeholders.

Thank you very much.

Patrick Davis
Sustainability Manager

Attachment: Draft *Baseline Assessment of Energy Use; Overview of Energy Management Strategies to Date; and Potential Goals and Objectives for Energy Management*

Energy Management Plan Technical Memorandum #1 (DRAFT)

Baseline Assessment of Energy Use; Overview of Energy Management Strategies to Date; and Potential Goals and Objectives for Energy Management

(Revised Draft: June 19, 2015)

1.0 Purpose

To obtain the OWASA Board of Directors' feedback and guidance concerning this draft baseline assessment of energy use at OWASA; overview of energy management strategies to date; and potential goals and objectives for OWASA's Energy Management Plan.

This draft technical memorandum (TM) incorporates comments and guidance received from the Board's Natural Resources and Technical Systems (NRTS) Committee at its March 17, 2015 and April 28, 2015 meetings, including key proposed goals and objectives for energy use reductions and use of renewable energy. The Committee requested that this TM be revised to include third-party energy use and associated greenhouse gas emissions for contract services we receive, such as for biosolids management. That information is not included here, but could be included in future analyses to the extent our contractors can provide us the applicable information to us.

We seek the Board of Directors' feedback as to:

(a) the usefulness, format, and content of the information in this draft TM;
(b) suggested draft goals and objectives for our energy management efforts, including guidance regarding specific, measurable targets and timetables for energy use reductions, possible use of renewable energy, and associated reductions in greenhouse gas emissions (GHGs); and
(c) additional information that the Board needs in support of this effort.

2.0 Background

Development of an Energy Management Plan is Strategic Initiative #5 of OWASA's *Strategic Plan for Fiscal Years 2014 – 2017*. On January 22, 2015 the Board of Directors approved a Project Charter to help guide our efforts, and directed that staff receive input and guidance from the NRTS Committee prior to presenting information, analyses, and recommendations to the Board.

The first phase of the project is completion of a baseline assessment of energy use; documentation of energy management strategies to date; and background information regarding potential goals and objectives for the Plan. This TM addresses these three topics.

3.0 Baseline Assessment of Energy Use

This section summarizes historical energy use information for Calendar Years (CY) 2005 through 2014 for three primary areas: (a) use of purchased electrical energy; (b) use of natural gas; and (c) use of fuel for OWASA's vehicles, work equipment, and standby power generators. This baseline analysis will help inform decisions regarding program goals and objectives, as well as support our efforts to track, analyze, and report on the progress of our energy management efforts.

In this section, electricity use is reported in kilowatt-hours (kWh) and natural gas use is reported in therms. One therm has the energy equivalency of about 29.31 kWh. Total energy use for all facilities and for fuel use in our vehicles, standby generators, etc. is also provided, and is reported in Million British Thermal Units (MMBTUs), thereby enabling a comparison of the relative use of our different energy sources. A BTU measures the heating value, or energy content, of fuel. One BTU is the amount of energy needed to heat one pound of water by one degree Fahrenheit. One kWh has the energy equivalency of about 3,412 BTUs.

3.1. Use of Purchased Electricity

Figure 1 shows historical electrical energy use across all OWASA facilities, by major functional area. This graph incorporates monthly billing data for OWASA's more than 50 different electrical service accounts. Energy use for the reclaimed water system was not separately metered until last year; therefore, that use is included in the energy use totals shown for the Wastewater Treatment and Recycling function. The reclaimed water system was placed in service in April 2009.

Figure 1. Electrical Energy Purchases, by Calendar Year (CY), by Major Functional Area

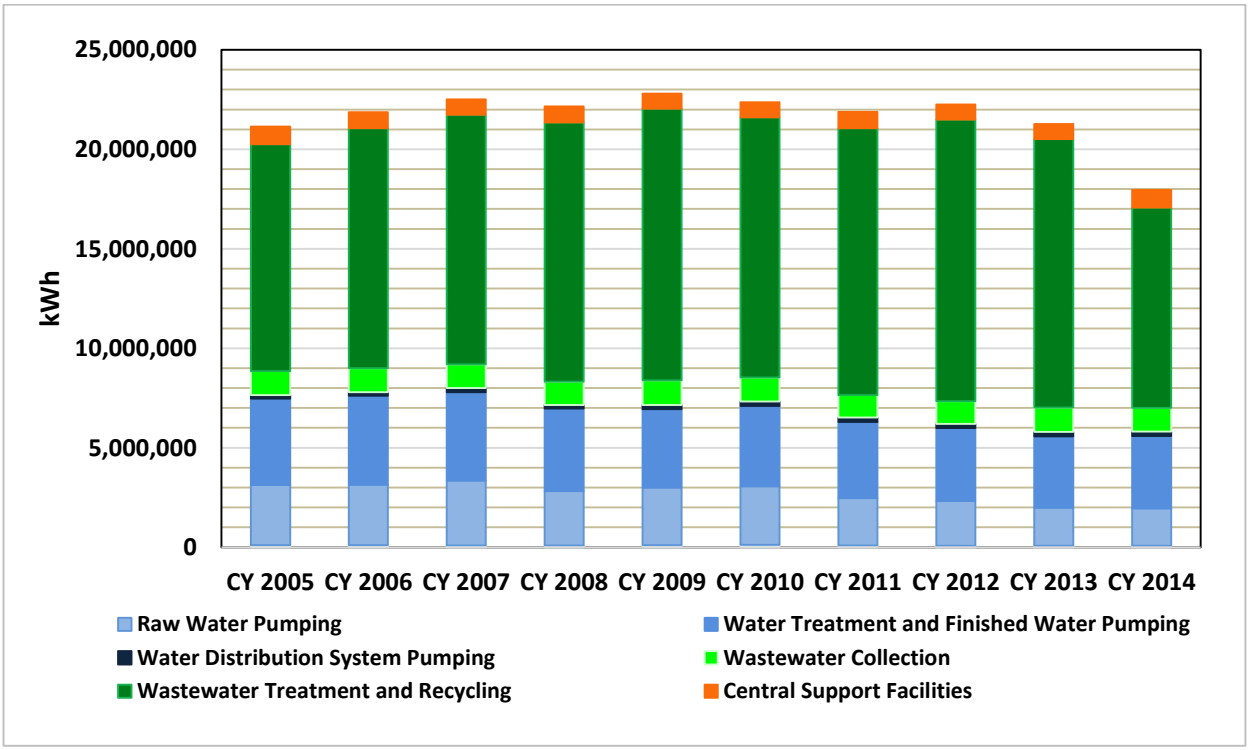
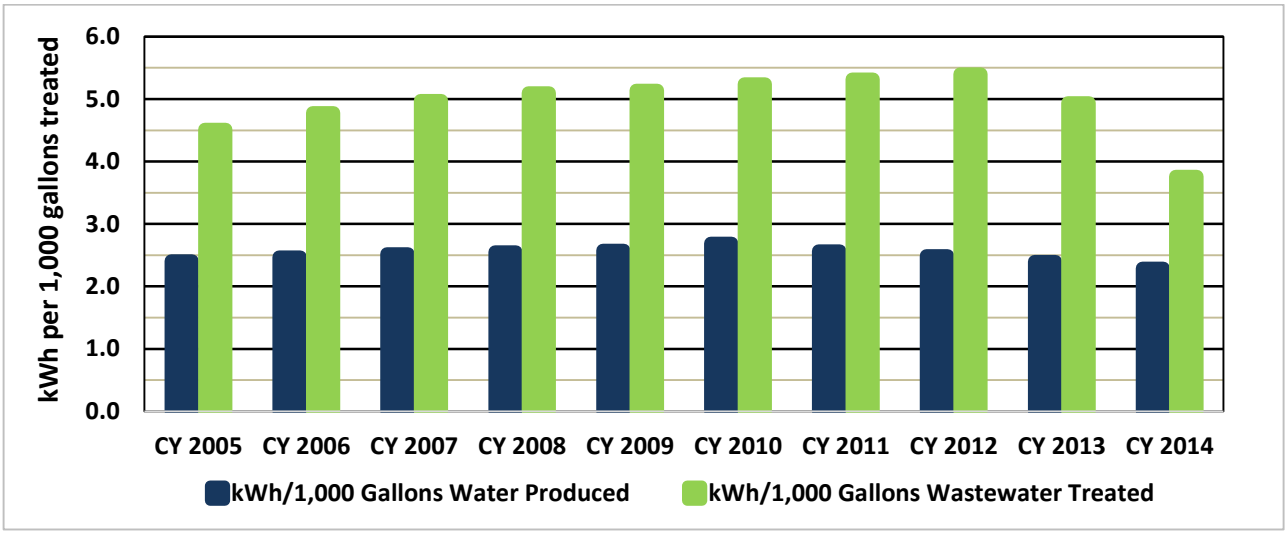


Figure 2 shows electrical energy use per 1,000 gallons – or ***energy use intensity (EUI)*** – for our water supply and treatment operations, and our wastewater collection, treatment and recycling operations (including the reclaimed water system, as noted above).

This EUI analysis only reflects electricity use at our facilities directly associated with water and wastewater pumping, piping, and treatment. It does not take into account the electricity use for the Administration Building, Operations Center, or lake offices and recreation facilities, since energy use at those support facilities is not directly affected by changes in water and wastewater demands.

Figure 2. Electrical Energy Use Intensity, by Calendar Year (CY) for Water and Wastewater Service



Key observations from Figures 1 and 2 are:

- ✓ In CY 2014, wastewater collection, treatment and recycling and reclaimed water pumping accounted for 63% of our total annual electrical energy use, and water supply, treatment, and distribution accounted for 32%. Only about 5% of our annual electricity use is for support facilities (Administration Building, Operations Center, and offices and buildings at our lakes).

- ✓ Our total electrical energy use in CY 2014 was 15% lower than in CY 2005. It was almost 20% lower than in CY 2010, when we experienced our highest use of electricity.

- ✓ EUI for wastewater collection, treatment and recycling in CY 2014 was 17% lower than in CY 2005, and 30% less than the EUI high of CY 2012. The primary reason for the savings has been the recent installation of the new energy efficient blowers, mixers, and aeration system at the Mason Farm Wastewater Treatment Plant (WWTP).

- ✓ The major reductions in electricity use for wastewater collection, treatment and recycling occurred despite the addition of several new energy-using processes at the WWTP since 2005. These include the ultraviolet light disinfection system; filter facilities; rotary press for biosolids dewatering, reclaimed water pumping facilities, and odor control improvements.

- ✓ Water supply and treatment EUI for CY 2014 is about 5% lower than CY 2005, and 15% less than the high of CY 2010. This reduction likely reflects energy savings associated with the installation of new, more efficient pumps and pump controllers, such as variable frequency drives (VFDs), and efficiency improvements resulting from the optimization of our filter operations at the WTP.

- ✓ CY 2014 EUI for water supply and treatment was 2.29 kWh/1,000 gallons produced and EUI for wastewater collection, treatment and recycling was 3.76 kWh/1,000 gallons treated. The combined annual total EUI for CY 2014 was more than 17% lower than the prior year, and nearly 24% lower than CY 2010, which had the highest combined EUI for any of the past ten years.

The Mason Farm WWTP and the Jones Ferry Road Drinking Water Treatment Plant (WTP) are our two largest energy-using facilities. Tables 1 and 2 show the estimated proportion of electricity use by major process/function for the WWTP and WTP, respectively.

Table 1. Estimated Percent of Total Annual Electricity Use at Mason Farm WWTP, by Major Functional Area

Functional Area/Process	% of Total
Aeration Blowers	27.6%
Solids Processing	25.6%
Influent Pumping	10.5%
Reclaimed Water	8.9%
Intermediate Pumping	5.2%
Odor	4.7%
UV	4.6%
Secondary Clarifiers	3.7%
Post-Aeration	2.4%
Primary Clarification	2.3%
Aeration Basins	2.2%
Other	1.6%
Filters	0.7%

Table 2. Estimated Percent of Total Annual Electricity Use at Jones Ferry Road WTP, by Major Functional Area

Functional Area/Process	% of Total
Finished Water Pumping	70.0%
Drinking Water Treatment	20.5%
Solids Processing	7.0%
Generator Building	2.5%

As shown in Table 2, finished water pumping accounts for the largest portion of electrical energy use at the WTP. When drinking water is produced at the Jones Ferry Road WTP, it flows into a storage tank at the plant, from which the water is then pumped out for delivery to customers through the drinking water distribution system. The clearwell has an overflow elevation of 465 feet above Mean Sea Level (MSL). Our water distribution system is divided into two pressure zones – the 642 zone (in which the elevated storage tanks have an overflow elevation of 642 feet MSL) and the 740 zone (which has one elevated tank with an overflow elevation of 740 feet MSL). Our four large finished water pumps at the WTP deliver the drinking water at the required pressures and flow rates to meet customer demands while also supporting fire protection services.

Raw water pumping represents our third largest use of electricity. Raw water must be pumped from University Lake (normal pool elevation is 349 feet MSL) and Cane Creek Reservoir (normal pool elevation is 500 feet MSL), through transmission mains that are about 1.33 miles and 10.95 miles,

respectively, to the Jones Ferry Road WTP. The University Lake Raw Water Pump Station is at an elevation of about 340 feet MSL, while the Cane Creek Raw Water Pump Station is at 461 feet MSL. The highest elevation along the Cane Creek raw water transmission main is 580 feet MSL. The Jones Ferry Road WTP is at 479 feet MSL.

Figures 3 and 4 show the relationship between electricity use per 1,000 gallons pumped and average-day monthly water pumping volumes for the University Lake Raw water Pump Station and the Cane Creek Raw Water Pump Station, respectively.

Both graphs show that EUI at the pump stations generally declines as average-day water pumping rates increase. This is because our pumps generally run more efficiently at higher pumping rates.

Figure 3. Monthly Electricity Use Intensity vs. Average-Day Water Pumped: University Lake Raw Water Pump Station for January 2006 – December 2014

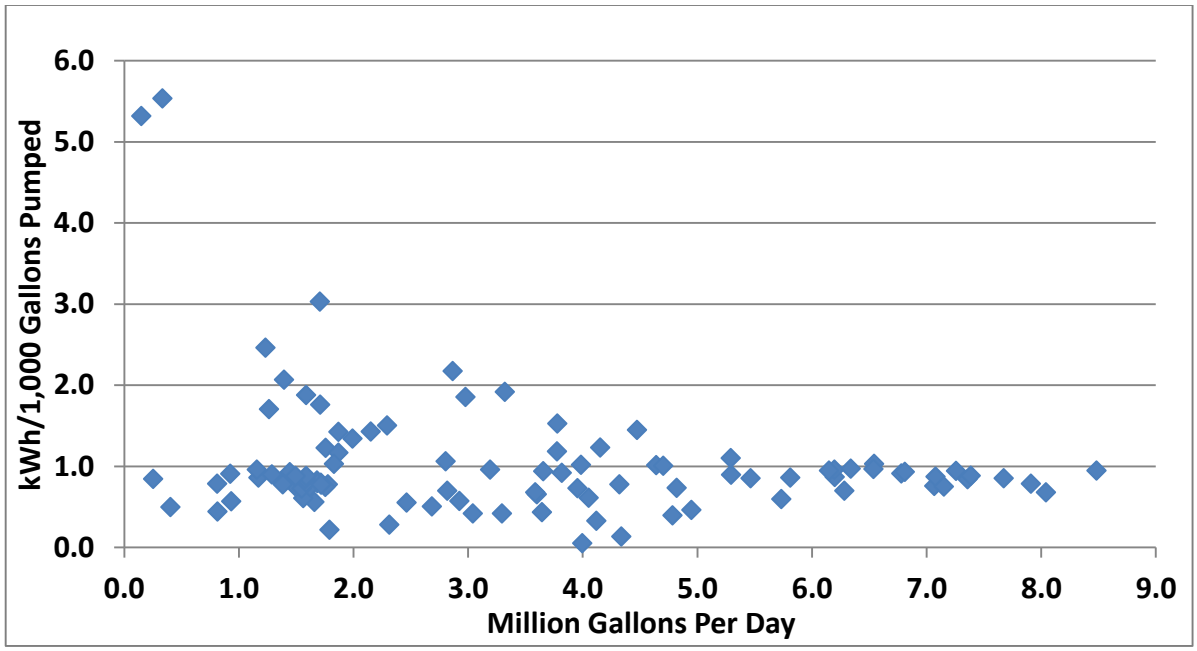
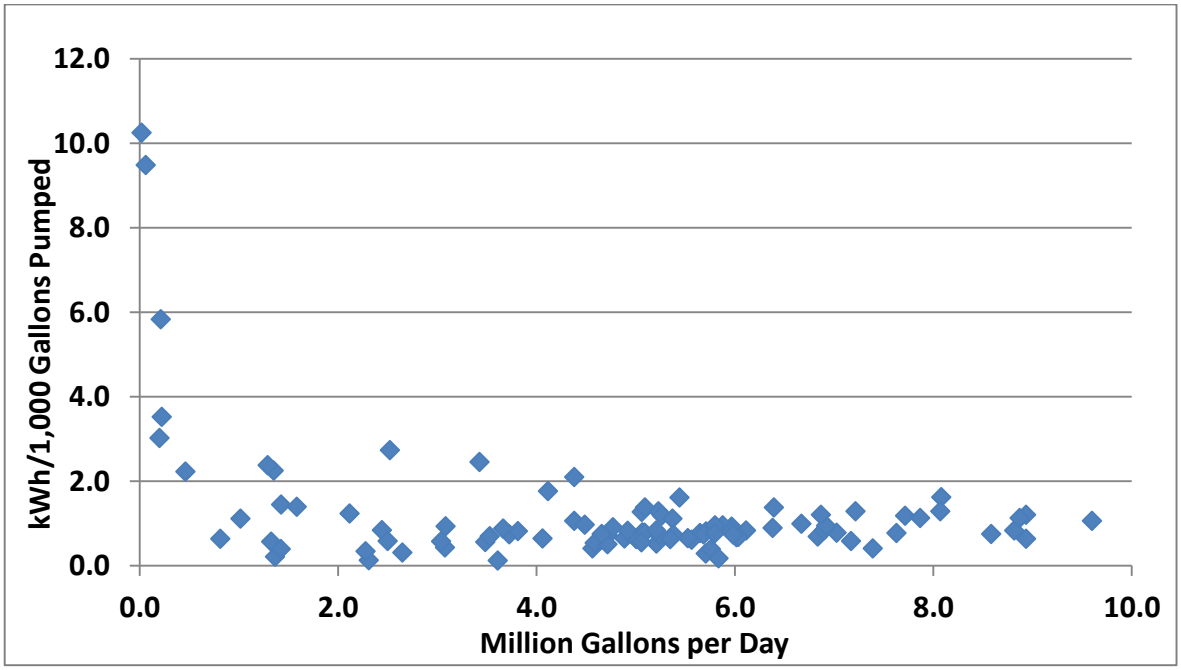
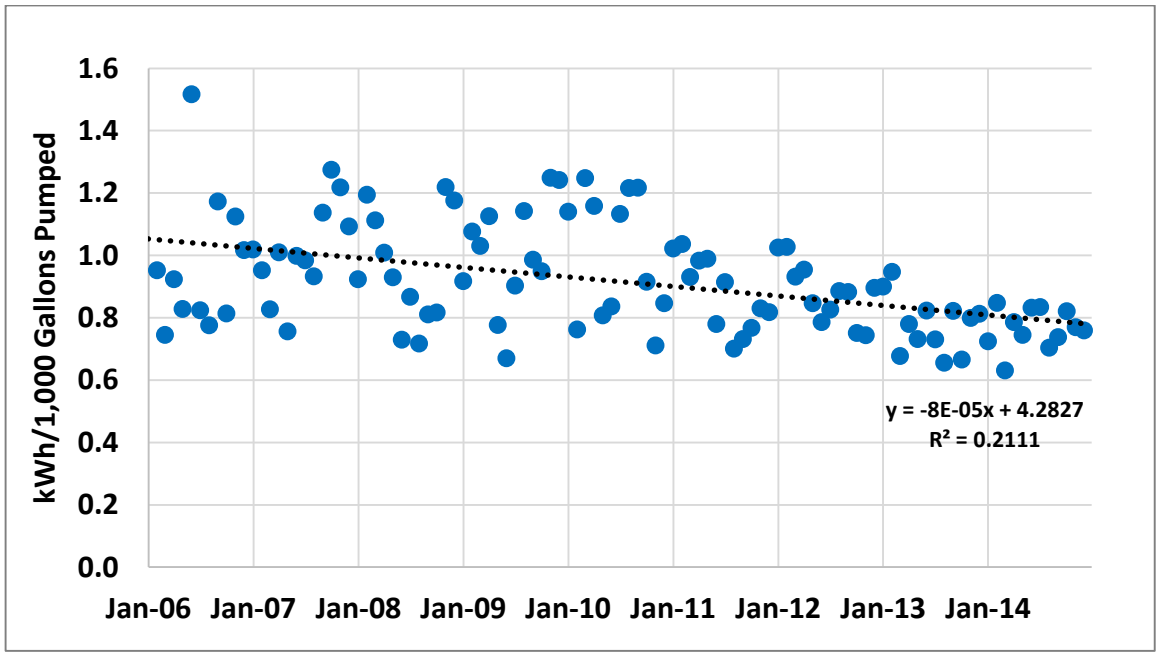


Figure 4. Monthly Electricity Use Intensity vs. Average-Day Water Pumped: Cane Creek Raw Water Pump Station for January 2006 – December 2014



Because our goal is to optimize the operation of our raw water pumping facilities as a system, it is important to consider their combined EUI. Figure 5 shows the historical combined electrical EUI for the two stations, by month. The trend line on the graph shows that EUI for raw water pumping has dropped in recent years, and is now about 20% lower than in 2006.

Figure 5. Historical Combined Electricity Use Intensity vs. Average-Day Water Pumped for University Lake and Cane Creek Raw Water Pump Stations for January 2006 – December 2014



3.2 Use of Major Standby Power Generators on Duke Energy's Curtailable Plan

At four of our major facilities, we have installed major standby power generators which can be automatically activated by Duke Energy if needed to curtail peak power demands on Duke Energy's facilities. We receive monthly billing credits for those generators. Table 3 lists the locations and capacities (KW) of those generators, and the total annual billing credits we received from Duke Energy for those generators in Calendar Year 2014.

These generators are essential for ensuring continuous operation of our major facilities at times when Duke Energy service is unavailable.

Table 3. Major Standby Power Generators for Which OWASA Receives Billing Credits From Duke Energy

Facility	Generator Capacity (KW)	Annual Billing Credits
Jones Ferry Road Water Treatment Plant	1,000 1,500	$16,700
Cane Creek Raw Water Pump Station	1,135	$12,600
Rogerson Drive Wastewater Pump Station	600	$3,800
Mason Farm Wastewater Treatment Plant	2,000 2,700	$65,000
Total Standby Generator Credits in Fiscal Year 2014		**$98,100**

3.3 Use of Natural Gas and WWTP Biogas

Figure 6 shows historical natural gas use across the major functional areas, based on monthly billing data for our eight different natural gas accounts for the ten-year period from Calendar Year 2005 to 2014.

Our largest use of natural gas occurs at the Mason Farm WWTP, where it is used mostly as supplemental fuel for running the two boilers that provide heat for the anaerobic digestion (solids treatment) process. Methane – or "biogas" – is produced as a by-product of the digestion process, and is used as the primary fuel in our boilers at the plant.

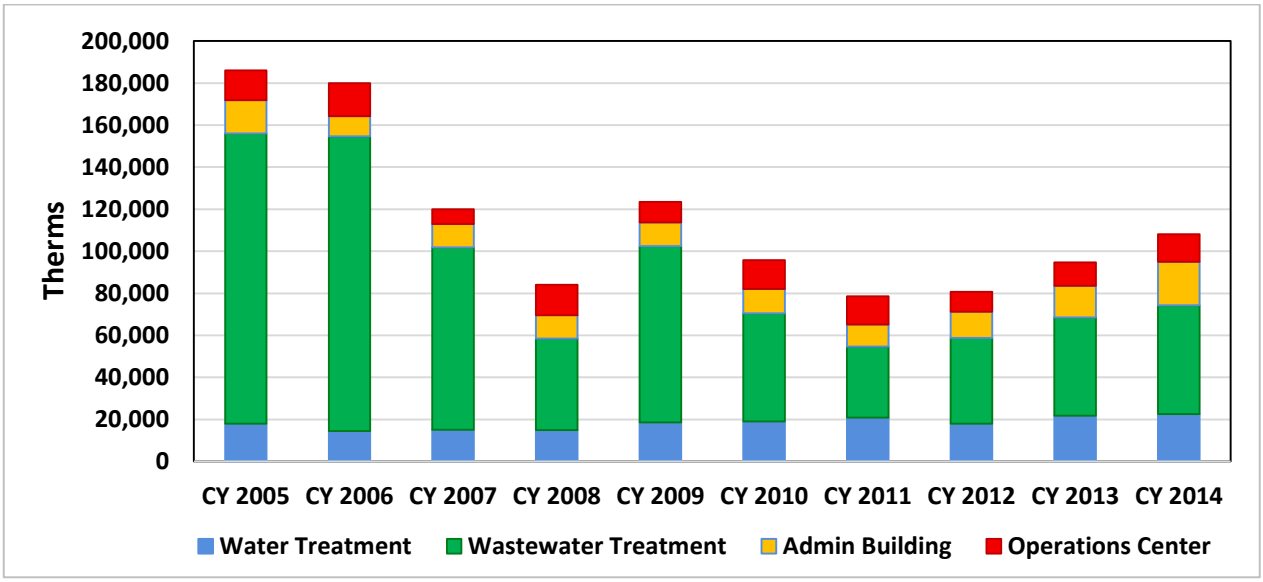
We do not have equipment to accurately measure the volume of the biogas we produce or beneficially use at the WWTP. We also do not have equipment to treat or condition the biogas to remove impurities (such as hydrogen sulfide and siloxanes) or moisture before it is used in the boilers. When biogas quality, flow, or pressure rates prevent us from using the biogas in our boilers, we must switch over to using natural gas to ensure continuous operation of the boilers.

We generate more biogas than we use in the boilers. The excess biogas must be burned rather than released directly into the atmosphere for two reasons: (1) the untreated biogas contains impurities such as hydrogen sulfide that can cause major odor problems if released directly into the atmosphere, and (2) on a pound

for pound basis, methane has a global warming potential that is 25 times greater than carbon dioxide over a 100-year period. When methane is burned, it combines with oxygen to form carbon dioxide and water. We use natural gas to run the pilot light for our biogas flare.

In addition to the uses at the WWTP, we use natural gas in our main office buildings and at the WTP for domestic hot water heating and for running our boilers that provide hot water for space heating.

Figure 6. Natural Gas Purchases, by Calendar Year (CY), by Major Functional Area



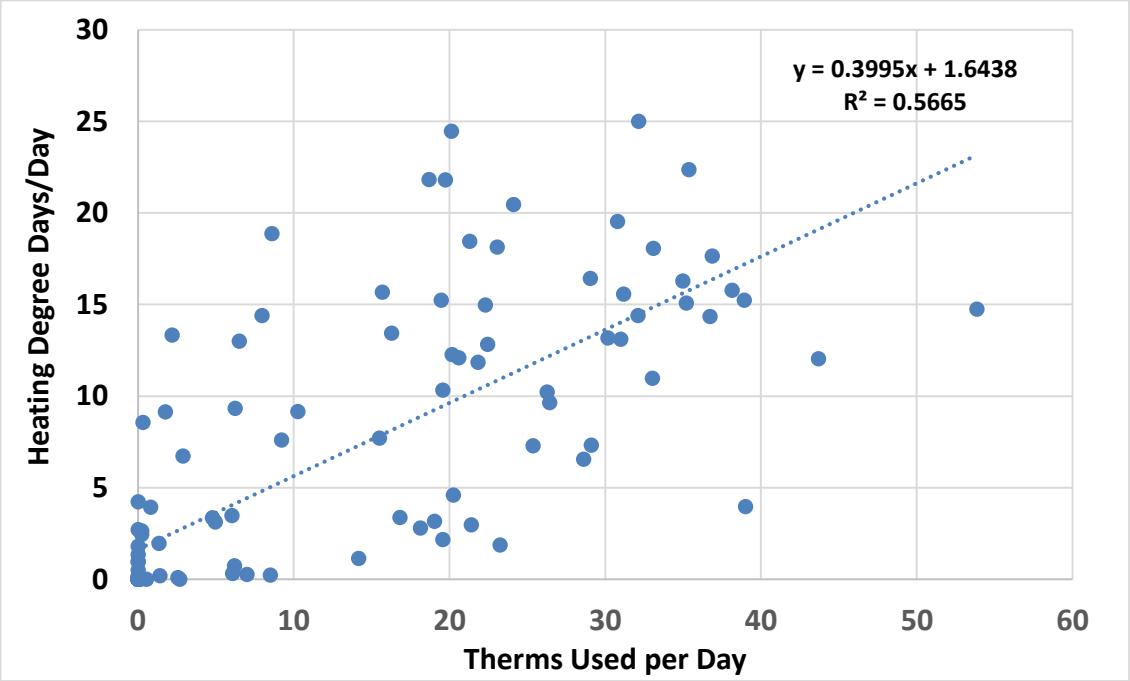
Key observations from the above graph are:

- ✓ The wastewater collection, treatment and recycling functions account for about 48% of our total annual natural gas use. Water supply, treatment, and distribution accounts for about 22% and central office and operations facilities account for the remaining 30%.

- ✓ In CY 2005 and CY 2006, natural gas use was considerably higher at the WWTP as a result of plant construction activities that impacted our storage and use of biogas to heat the digesters.

In facilities where natural gas is used for space heating, that use varies with changes in temperature. An example of this is provided in Figure 7, which shows a positive relationship between monthly natural gas use per day and heating degree days for the Operations Center. Heating degree days are a measure of heating load on a facility as a result of the outdoor temperature. When the daily outdoor temperature is one degree below a stated temperature reference point it is defined as one heating degree day. For example, if the temperature was 10 degrees below the reference temperature for a 30-day period, there would be 300 heating degree days in that month. We have used 65 degrees Fahrenheit as the reference point for the graph in Figure 7.

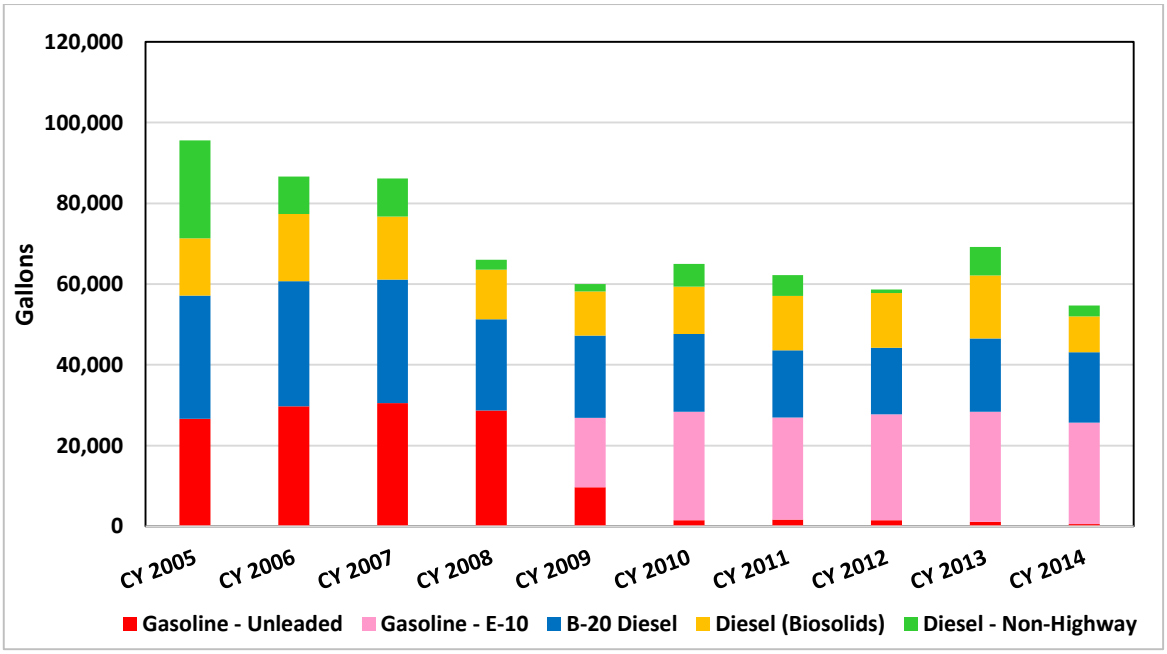
Figure 7. Relationship Between Natural Gas Use/Day and Heating Degree Days for the Operations Center (July 2006 through December 2014)



3.3 Fuel Purchases for Vehicles, Work Equipment, and Standby Power Generators

Figure 8 shows historical gallons of fuel purchases for our vehicles, major work equipment, and standby power generators.

Figure 8. Fuel Use for Vehicles and Equipment, by Calendar Year (CY)
(Use is assumed to occur in year fuel was purchased. CY 2006 and 2007 include partial estimates for Diesel.)



Key observations from this graph are:

- ✓ Our overall use of fuel for vehicles has been declining. Contributing factors are (a) we are dewatering more biosolids and using contract services for transport and spreading of liquid biosolids; therefore, we are using less diesel fuel for hauling liquid biosolids, and (b) we have reduced truck miles driven as a result of operational efficiencies (such as radio-read metering and use of mobile computing technology to receive and complete field service orders).

- ✓ The non-highway diesel gallons shown for CY 2005 are very high because it reflects the fuel purchase we made to initially fill a new 20,000 gallon diesel fuel storage tank at the WWTP.

- ✓ In CY 2009, we began to purchase E-10 gasoline in place of regular gasoline. E-10 gasoline has a lower BTU value than regular gasoline; therefore, fuel economy declines and more gallons of fuel must be used. The U.S. Environmental Protection Agency reports that use of E-10 reduces vehicle fuel efficiency by 1.5 to 3%.

3.4 Summary of Total Energy Use

Figure 9 shows total annual energy consumption by energy source, in MMBTUs. A key observation is that our electrical energy use generally accounts for 85 to 90% of our total annual energy consumption.

Figure 9. Total Energy Use, by Calendar Year (CY), in Million BTUs

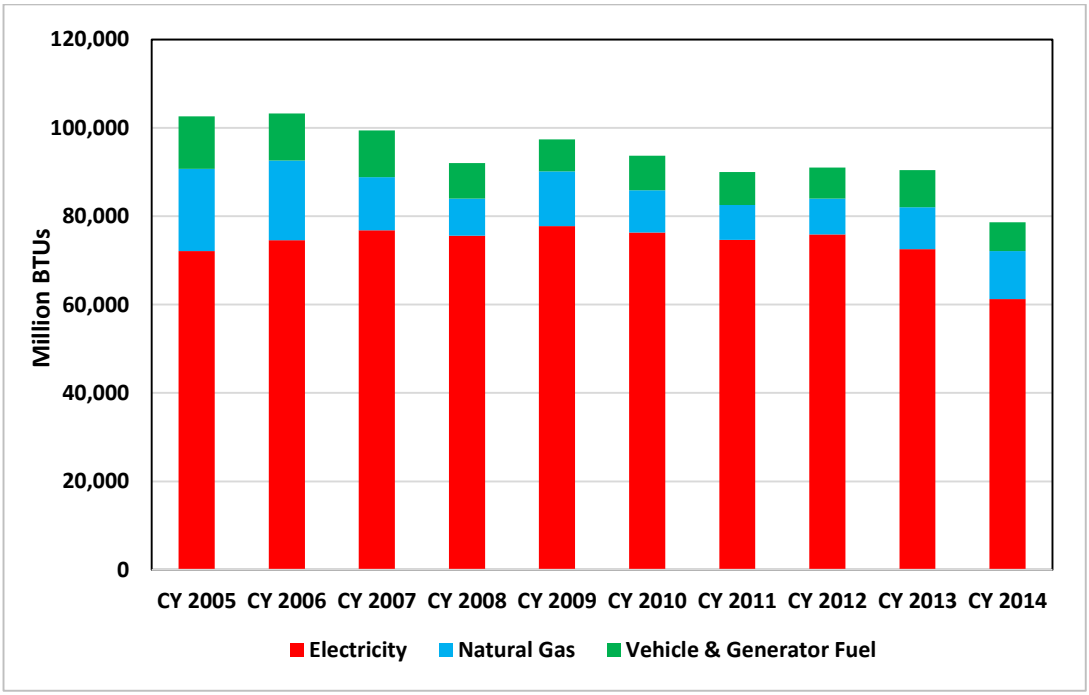
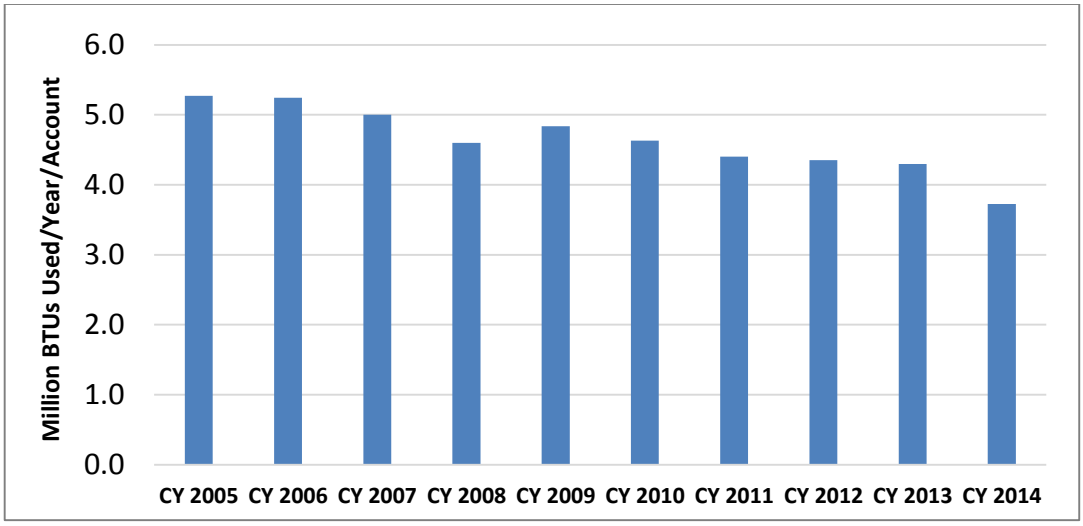


Figure 10 shows millions of BTUs of energy used per year per customer account served by OWASA. This graph shows that BTUs used per customer account served has declined by about 29% since 2005.

Figure 10. Million BTUs of Energy Use per Customer Account, by Calendar Year (CY)



3.5 Summary of GHG (Carbon) Emissions Associated With Our Energy Use

Figure 11 shows total annual GHG emissions – expressed in tons of carbon dioxide equivalents (CO_2e) – associated with our use of energy. As discussed in the Project Charter, this analysis includes Scope 1 and Scope 2 emissions, excluding direct emissions from our water and wastewater treatment processes. Scope 1 sources are owned or controlled by OWASA, and for this analysis include emissions from our fuel use for generators, natural gas-fueled equipment, and our vehicles. Scope 2 emissions occur outside of our facility boundaries, such as emissions caused by the production of the electricity we use.

In addition to not including emissions from our treatment processes, the GHG emission estimates shown in Figure 11 do not include Scope 3 emissions, which are associated with activities such as employee travel in personal vehicles, travel in airplanes for business use, or emissions generated by the manufacture and transport of goods purchased by OWASA.

Figure 11. Total Carbon Emissions From Our Use of Energy Use, by Calendar Year (CY), in Tons

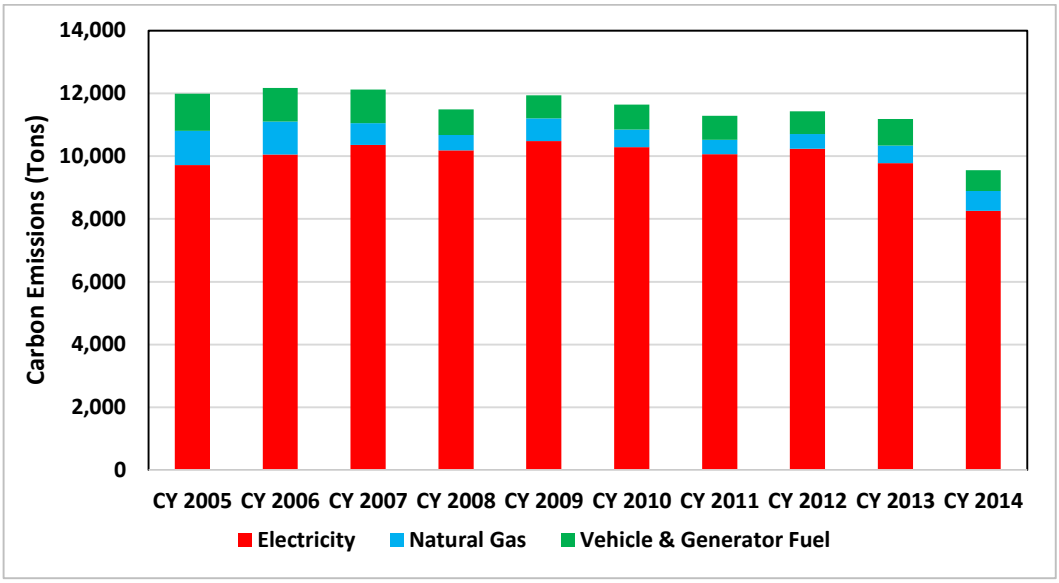
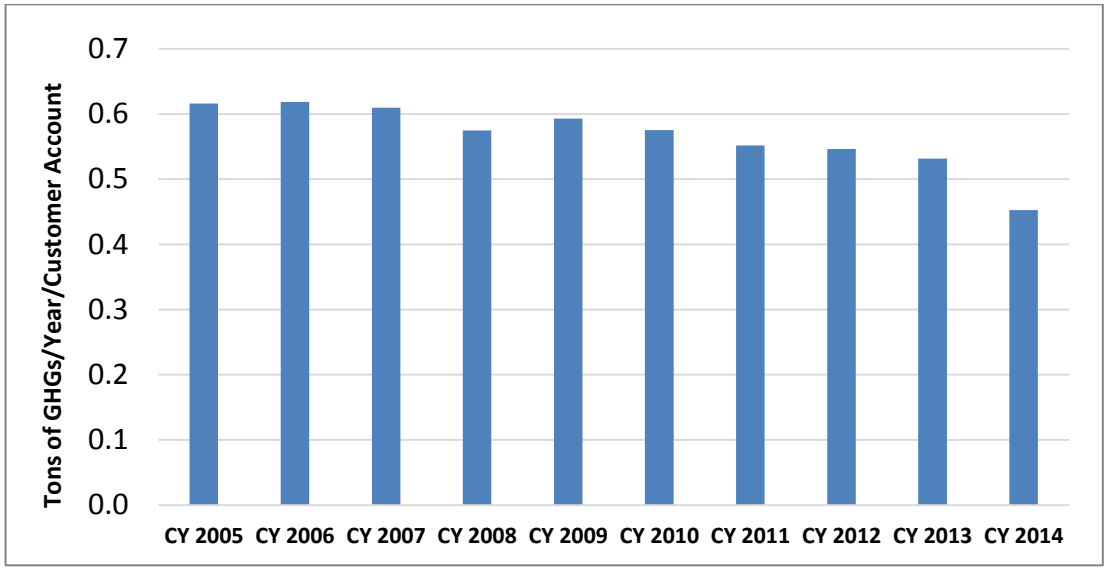


Figure 12 shows tons of total carbon emissions per year per customer account served by OWASA. This graph shows that carbon emissions per customer account served has declined by about 26% since 2005.

Figure 12. Total Carbon Emissions per Customer Account, by Calendar Year (CY), in Tons



3.6 Selecting a "Baseline" Year for Our Plan

A best practice in energy management is to establish a baseline period against which future progress is to be measured. There is no standard method for determining the appropriate baseline year, and there are many examples of different baseline years that agencies have set for their energy management and GHG emission reduction programs.

The U.S. Environmental Protection Agency's 2012 guidance on GHG accounting and reporting states that Federal agencies are to use Fiscal Year 2008 as their baseline year. However, the agency's guidance for the proposed Clean Power Plan specifies 2005 as the baseline year.

At the local level, the Town of Chapel Hill and San Jose, California have set 2005 as their baseline year. The University of North Carolina at Chapel Hill and Elon University have set 2008 as the baseline, whereas Duke University and Stanford University use 2007.

There is no clear choice as to what our preferred baseline should be. Calendar Years 2005 and 2006 were non-drought years; however, our WWTP (which accounts for the majority of our electrical energy use) was undergoing construction during that period. Calendar Years 2009 and 2010 were also non-drought years, and may be an appropriate baseline period.

The Project Charter references Calendar Year 2010 as the baseline, and staff recommends that year be established as our baseline.

4.0 Overview of Energy Management Strategies to Date

This section summarizes a number of important energy management measures we have implemented to reduce energy use and costs. These include general management strategies as well as site-specific energy efficiency improvements.

4.1 General Energy Management Strategies

- ✓ We track energy use and costs, and meet annually with Duke Energy to review electrical energy usage and applicable rate schedules for each of our accounts. Where possible, we make adjustments to ensure we are being charged the most economical rates for each of our accounts. As a result of these reviews, we recently worked with Duke Energy to change the power feed arrangements at the WWTP, which enabled us to avoid an annual cost increase of more than a $60,000.

- ✓ We seek financial support for our energy efficiency efforts. Two examples are the receipt of a $6.56 million, 20-year, no-interest loan from the North Carolina Clean Water State Revolving Fund for our recent energy efficiency improvements at the WWTP, and receipt of a $168,000 custom financial incentive payment from Duke Energy for that same project. We have also obtained no-cost and low-cost energy auditing services through Duke Energy, the State Energy Office, and the North Carolina Waste Reduction Partners Program.

- ✓ We shift pumping operations to off-peak periods when possible to reduce electricity costs. This strategy does not reduce total energy use, but it helps reduce our peak demand on Duke Energy's generation capacity, and provides cost savings under Duke Energy's time-of-day electrical rates.

- ✓ As our customers have become more efficient in their use of water, we save energy throughout our water and wastewater pumping and treatment operations. Our water line renewal and replacement program has enabled us to operate our system with minimal water losses due to leaks, thereby further reducing our energy requirements for water supply, treatment, and distribution.

  Average-day water sales have declined by about 2 MGD since peaking during 1999 – 2001. About 0.7 MGD of that reduction is the result of the University's use of reclaimed water. Assuming our current combined energy use rate of 6.05 kilowatt-hours per 1,000 gallons of water and wastewater treated, and factoring in the energy savings from using reclaimed water instead of drinking water, the reduction in our customer water demands corresponds to an estimated annual energy savings of more than 3 million kilowatt-hours a year.

- ✓ During condition assessment field work for our comprehensive asset management program, we identify pumps and motors in need of corrective maintenance. We include funding to address those needs in our annual budget and capital improvements program.

- ✓ We buy the most fuel-efficient vehicles that meet our service needs, provided that can be done at a reasonable cost.

- ✓ We have obtained energy audits and studies to help inform and guide our energy efficiency investments. Examples of these are:

  University Lake Raw Water Pump Station: Pump Station Evaluation for Addition of a One (1) MGD Raw Water Pump. August 2006. McKim & Creed.

  Cane Creek Raw Water Transmission Facility Improvements. February 1, 2002. Hazen and Sawyer. This study included an evaluation of the existing 2-speed raw water pumps at Cane Creek Reservoir.

  HVAC Energy Survey Report for Orange Water and Sewer Authority. December 31, 2007. State Energy Office and NCSU Industrial Extension Service.

  Lighting Energy Survey Report for Orange Water and Sewer Authority. December 31, 2007. State Energy Office and NCSU Industrial Extension Service.

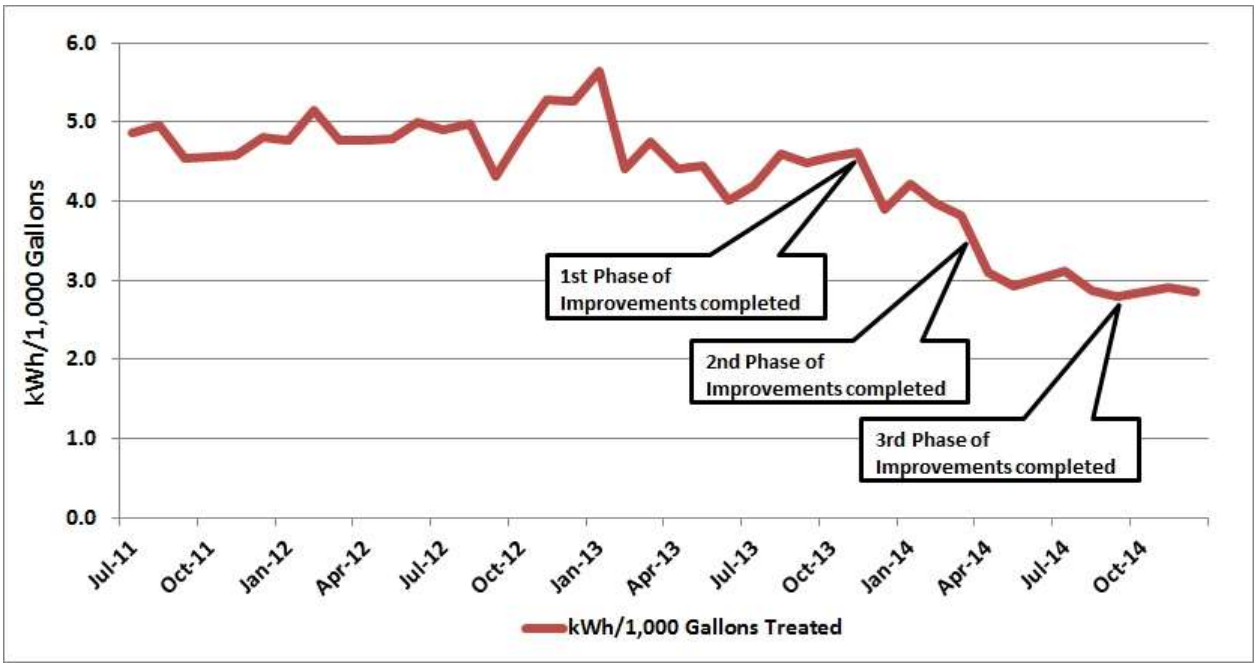
  Mason Farm Wastewater Treatment Plant Hydraulic and Treatment Capacity Study. March 2010. Hazen and Sawyer.

  OWASA Biogas Utilization Study. August 24, 2011. Brown and Caldwell.

4.2 Examples of Some of Our Energy Efficiency Improvements

✓ In September 2014, we completed installation of a fine bubble diffused aeration system, energy efficient blowers and mixers at the Mason Farm WWTP. As shown in Figure 13, these improvements have reduced energy use intensity at the WWTP by about 30%, which is an ***annual energy savings of more than 3 million kWh***.

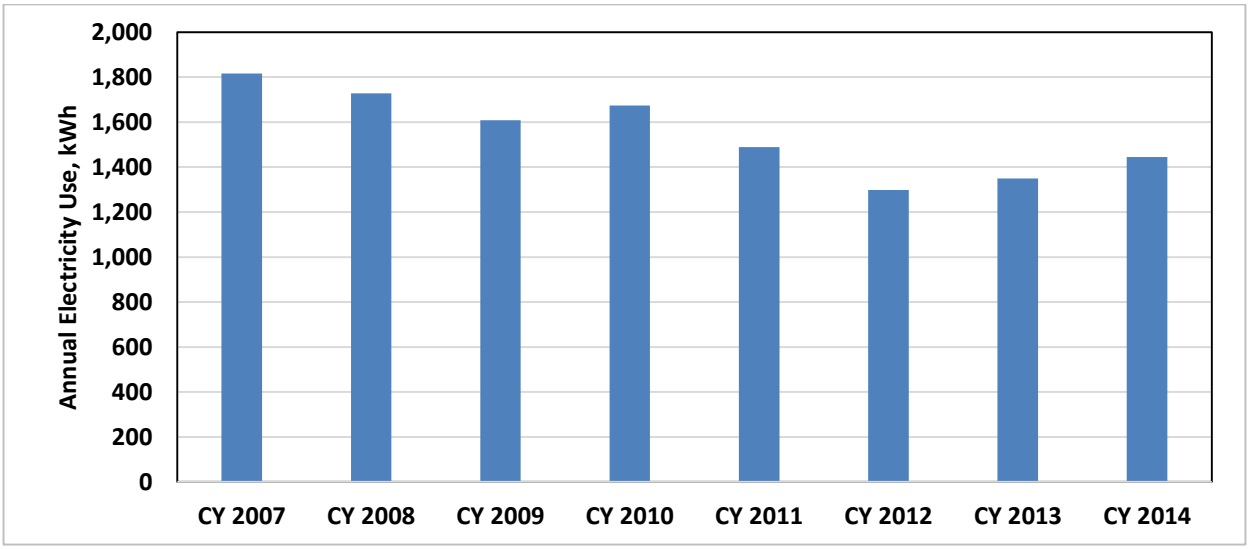
Figure 13. Mason Farm WWTP Electrical Energy Use Intensity: July 2011 – December 2014



✓ We save energy by meeting certain non-drinking water demands with reclaimed water instead of drinking water. We estimate that *it takes about 35% less energy to meet water demands with reclaimed water instead of drinking water* from our reservoirs and WTP. At the current reclaimed water demand level of about 0.65 million gallons per day, this equates to an ***annual energy savings of about 190,000 kWh***.

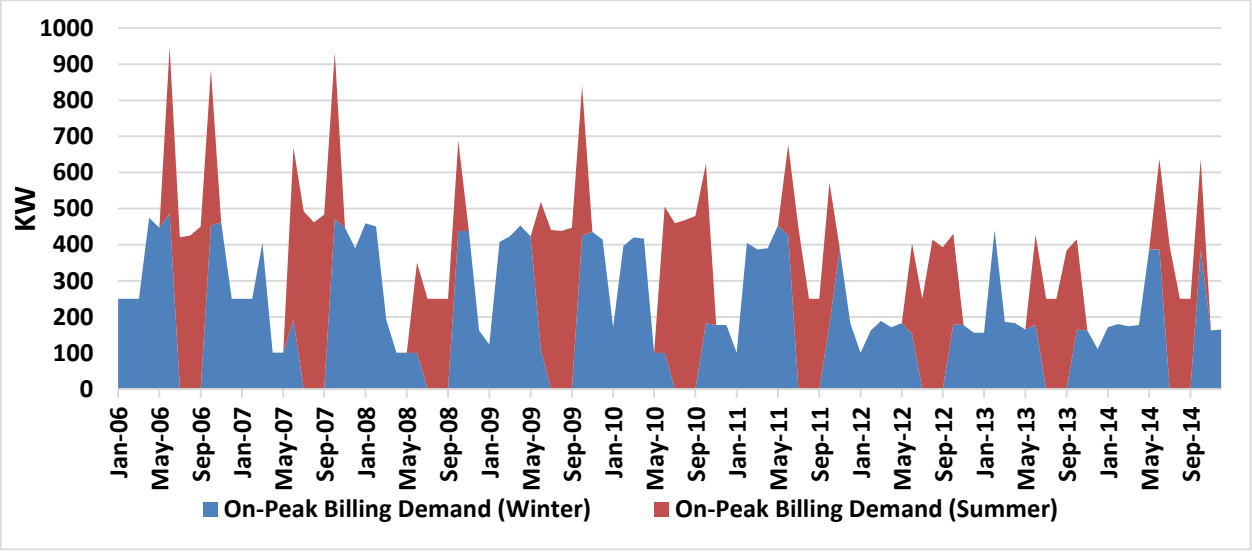
✓ We have installed energy efficient pumps, motors and motor controls at many of our facilities. Examples are the variable speed, horizontal split case pump at the WTP, the VFD for Finished Water Pump #7, and replacement of the Heritage Hills Wastewater Pumping Station, which has resulted in ***annual energy savings of almost 10,000 kWh***, or 20%. (See Figure 14.)

Figure 14. Annual Electrical Energy Use at Heritage Hills Wastewater Pumping Station



✓ We also installed a new, low-flow pump and VFD at University Lake which has enabled us to better optimize system-wide raw water pumping across a wide range of demand conditions. This pump has been an important contributing factor to the reduction in EUI for raw water pumping which was previously illustrated in Figure 5. As shown in Figure 15, installation of that pump has helped us reduce peak power demands at the Cane Creek Raw Water Pumping Station, which contributes to lower monthly electricity bills for that station.

Figure 15. Peak Electricity Demand at Cane Creek Raw Water Pumping Station



- ✓ In September 2002 we implemented a system to recycle treated process water back to the head of the WTP. This system has enabled us to reduce raw water withdrawals and energy requirements for pumping by about 7%. At current raw water withdrawal rates and energy use, the ***estimated annual energy savings is more than 130,000 kWh***.

- ✓ Since 2004, we have eliminated four wastewater pumping stations (Lloyd Street, Starlite Drive, Cleland Drive, and North Forest Hills) by extending the gravity sewer system. The ***estimated annual energy savings has been about 18,500 kWh***.

- ✓ We have installed more efficient lights and lighting controls at several facilities, including the Administration Building, Operations Center, WWTP, and WTP. We replaced several lights on a portion of the exterior basins at the WTP, and eliminated several fixtures that were no longer needed.

- ✓ Several of our information technology improvements have improved the energy efficiency of our operations. Some key strategies have been:

    - ✓ Servers, personal computers, monitors, printers and copiers are Energy Star rated.

    - ✓ Through server virtualization, we have significantly reduced the amount of equipment in our server room. Excluding the phone system (which we cannot presently virtualize) we have reduced the number of physical servers from 24 to 8. This has reduced electrical consumption for the servers and also reduced the waste heat generated which reduces our server room cooling requirements.

    - ✓ We have deployed mobile technology so field personnel can remotely access our Geographic Information System and asset information in the field, and receive and complete service and work orders electronically. These improvements help reduce our costs, use of vehicle fuel, and use of paper, printing, and copying.

    - ✓ We have implemented an automated call system that we use to notify customers that their accounts are overdue and they could be disconnected for non-payment. Since implementation, the average monthly cutoffs have fallen from about 160 per month to 80 per month. That represents 80 fewer trips in a crew truck to turn water off and then turn water back on. This reduces fuel use and carbon emissions, and reduces costs.

Table 4 summarizes estimated annual energy and cost savings from several of the above energy initiatives, assuming our Fiscal Year 2014 average electricity cost of about $0.07/kWh. The Mason Farm WWTP energy cost savings estimate also reflects the savings resulting from a major reduction in the fixed monthly contract demand charges for the WWTP.

Table 4. Estimated Annual Energy and Cost Savings from Selected Energy Management Measures

Energy Management Measure	Estimated Annual kWh Savings	Estimated Annual Cost Savings at Current Average Cost/kWh *(Based on 2014 average cost of $0.07/kWh)*
New blowers, mixers, and aeration system at Mason Farm WWTP	3,000,000	$250,000
Reconfigured Duke Energy power feed arrangement at Mason Farm WWTP	Avoided new Extra Facilities Charges	$60,000
New low-flow raw water pump with VFD at University Lake	380,000	$26,600
Use of reclaimed water instead of drinking water to meet UNC demands	190,000	$13,300
Process water recycling at Jones Ferry Road WTP	130,000	$9,100
Elimination of four wastewater pumping stations	18,500	$1,300
Heritage Hills Wastewater Pump Station Replacement	10,000	$700
TOTAL ESTIMATED ANNUAL SAVINGS FROM ABOVE MEASURES:	**3,728,500 kWh**	**$361,000**

4.3 Renewable Energy and Green Fleet Strategies

- ✓ As discussed in Section 3.3, we use a portion of the methane gas at the WWTP as fuel for up to two boilers that provide heat for the anaerobic digesters at the plant.

- ✓ We use B-20 diesel (regular diesel blended with 20 percent biodiesel) in many of our trucks. We also piloted the use of B-100 biodiesel fuel in one of our biosolids tanker trucks. However, that trial was discontinued due to problems with fuel quality.

- ✓ We have three gas-electric hybrid vehicles in our fleet.

5.0 Background Information Regarding Potential Goals and Objectives for Energy Management

The Board-approved Charter for the Energy Management Plan (EMP) states that we will address the following objectives, which are organized along the three pillars of sustainability: social performance, environmental performance, and financial performance.

Social Performance: Our EMP will impact the people and communities we serve.

1) Strategies will be evaluated against their impacts on the community.
2) We will inform and engage our customers and stakeholders in our energy planning efforts.
3) We will inform and involve our employees in our energy management efforts.

Environmental Performance: Our EMP will help us preserve natural resources; conserve energy, water, and other natural resources; minimize waste and pollution emissions, and reduce our environmental impacts.

4) We will seek to reduce our energy use per million gallons per day of water, wastewater, and reclaimed water used in our community compared to our 2010 baseline energy use (or other baseline year as determined appropriate and for which historical data is available).
5) Energy management, energy efficiency, and renewable energy alternatives will be evaluated against their relative effect on energy use and GHG emissions.
6) Where practical, we will implement energy management strategies that enhance the reliability and resiliency of our water, wastewater, and reclaimed water facilities and operations.

Financial Performance: The economic well-being of our customers and our community depend on our ability to manage energy services, use, and costs so that we can ensure high quality and reliable services at an acceptable financial cost to our customers.

7) Energy management, energy efficiency, and renewable energy alternatives will be evaluated against their relative life-cycle financial costs (capital and operating and maintenance costs).
8) The selected set of strategies will represent a reasonable balance of financial considerations with our social and environmental performance objectives.
9) To ensure that the selected strategies are cost-effective for our community, the selected mix of measures will have a positive financial payback.
10) We will seek funding support for our program, such as: federal, state, and foundation grants; energy utility incentives; revenues from renewable energy credits and carbon trading; etc.

As we evaluate opportunities to improve energy efficiency, invest in renewable energy projects, and reduce our carbon footprint, we must consider and decide how we will balance all of these important but oftentimes conflicting values. We will also need to decide how we will value environmental and social benefits as we evaluate cost-effectiveness. We hope one important outcome of the Plan will be to establish an evaluation and decision-making framework which we can use to guide our energy management efforts.

The performance goals we establish for the Plan will be very important, as they will drive our future energy management activities and continuous improvement efforts. Therefore, they need to be clear and measurable, and also serve as a basis for tracking, measuring, evaluating, and reporting on our progress.

The Board may wish to provide some initial guidance as to *potential* goals and targets for our Plan, then revise and finalize those after considering information about the scope, costs, and benefits of alternative energy management strategies that we will be evaluating in the coming months.

As we move forward with this effort, some key policy questions for the Board's consideration are:

1. **Should we establish time-bound targets for (a) reductions in our use of non-renewable energy and generation of related greenhouse gas emissions, and (b) the percentage of our energy needs that should be met from renewable energy sources? Is there a preferred technical basis for establishing those targets?**

Examples of Goals and Objectives Established by Other Agencies

Portland Water Bureau set a goal of reducing annual use of electricity by 5% by July 2012 compared to the 2005-2008 baseline period.

American Water has a goal of reducing Energy Use Intensity by 8% compared to a 2008-2010 baseline. It also has a goal of reducing greenhouse gases by 16% from a 2007 baseline. The target completion date is 2017.

Southern Nevada Water Authority has established the following goals:

- *have a 100% alternative-fueled vehicle fleet by 2015*
- *20% of energy needs to be met by renewable sources by 2015*

Tampa Bay Water (FL) has a goal of meeting 10% of its energy needs through alternative energy sources within the next 10 years.

Encina Wastewater Authority (CA) has established a Target Energy Independence goal to self-generate 95% of the total WWTP electrical needs by 2020, and to beneficially use all the biogas produced at the WWTP.

The East Bay Municipal Utility District (California) established a goal of meeting all of its WWTP energy needs with biogas by 2010. The WWTP is now a net energy producer that sells renewable energy to the grid after meeting all the plant's power demands.

Several States, local governments, and other countries have based their reduction targets on specific science-based assessments, such as that done by the International Panel on Climate Change (IPCC). The IPCC has concluded that the following GHG reductions are needed to stabilize global CO_2 levels to 450 parts per million:

- *40% below 1990 levels by 2020*
- *80% to 95% below 1990 levels by 2050*

The proposed federal Clean Power Plan seeks to reduce 2030 carbon dioxide emissions from the power sector by 30 compared to 2005 levels.

2. **Should we establish guidelines for applicable financial payback thresholds for different types of energy efficiency and renewable energy investments, or for our overall plan?**

3. **Should our financial evaluations include consideration of the "social cost of carbon"? If so, how will we determine what that value should be?** *(The Federal Interagency Working Group on Social Cost of Carbon has addressed this question in a May 2013 report "Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866.")*

4. **As we consider funding requirements for energy efficiency and renewable energy strategies and compare those against other competing operating and capital needs, what are the criteria and relative weights we will use for that evaluation?**

Examples of Evaluation Criteria Established by Other Agencies

- *Initial capital cost*
- *Financial performance over the life of the project (rate of return; net present value)*
- *Degree to which strategy helps resolve an existing or expected problem*
- *Degree to which strategy has been proven at a scale relevant to our operations*
- *Extent to which strategy reduces greenhouse gas emissions*
- *Impact on the community and public visibility*
- *Impact on employees*
- *Extent to which project contributes to energy cost stabilization*

5. **Should we allow other parties to construct, own, and operate renewable energy facilities on OWASA lands or facilities, such as a rooftop solar photovoltaic (PV) system at the Administration Building or a biogas-to-energy project at the WWTP, provided we have the option to purchase the system at a future date?** *(We have never done this; however, it is a strategy that many other utilities have implemented.)*

Examples of Goals and Objectives Established by Other Agencies

Phoenix (AZ) has a goal of meeting 15% of its electrical energy requirements with renewable energy by 2025. The city plans to achieve this through renewable energy installations that are either city-owned or city-sponsored.

6. **As one strategy for offsetting our carbon emissions, should we consider "purchasing" renewable energy on the open market (such as through NC GreenPower), or otherwise pay other parties to reduce their carbon emissions?**

Examples of Goals and Objectives Established by Other Agencies

Tualatin Valley Water District (Oregon) has a goal of purchasing green power for 100 percent of the electrical energy requirements for its operations.

5.1 Potential Key Objectives for Our Plan

Based on discussions with the Board's Natural Resources and Technical Systems Committee, the following key objectives are proposed for the Energy Management Plan. These objectives reflect consideration of the proposed projects included in our Capital Improvements Plan for Fiscal Years 2016 – 2020, as well as the energy efficiency improvements we have made since 2010.

1. **Reduce use of purchased electricity by 35% by the end of Calendar Year 2020 compared to the Calendar Year 2010 baseline.** *(The Committee believes that this "stretch" goal will encourage OWASA to identify and evaluate strategies that might not normally be considered in the absence of such a goal. As discussed in Section 3.1, electricity use during Calendar Year 2014 was almost 20% below the Calendar Year 2010 baseline level, so the above objective would amount to an additional 15 percent reduction in electricity use by 2020.)*

2. **Reduce use of purchased natural gas by 5% by Calendar Year 2020 compared to the Calendar Year 2010 baseline.**

3. **Beneficially use all WWTP biogas by 2022, provided the preferred strategy is projected to have a positive payback within the expected useful life of the required equipment.**

4. **Formally engage local governments and partners in discussion about potential development of a biogas-to-energy project at the Mason Farm WWTP.**

5. **Seek proposals for third-party development of renewable energy projects on OWASA property, such as rooftop solar at the Administration Building.**

The NRTS Committee has suggested that programmatic objectives be established and periodically reviewed and revised, such as annually as part of the budget and capital improvements planning process. This would ensure that our energy efficiency and renewable energy efforts remain a focal point of attention, and that we have a number of projects and activities underway to continually remind employees, customers and the community of the importance of energy management in all that we do.

Examples of potential programmatic objectives are:

1. Complete energy efficiency lighting retrofits at the _____ by FY ____, with the target of achieving a financial payback within X years of completing those improvements.

2. Retain a qualified consultant to complete a study of the heating and air conditioning systems at _____ by FY ____ to determine the scope, costs, expected energy savings from improving or replacing those systems.

Additional objectives can be considered as we and the community consider the results of the technical analyses of alternative energy efficiency and renewable energy strategies.

6.0 Next Steps

Staff will revise this TM to address feedback received from the Board of Directors at the Board's June 25, 2015 meeting. We will proceed to evaluate alternative strategies for meeting the proposed goals and objectives established by the Board. Those alternatives will be summarized in TM #2, which will be submitted for review and guidance from the Committee prior to consideration by the Board.

In accordance with the community engagement plan for this project, staff will post this document on our website, and provide it to stakeholders on our project distribution list. We will include information about the date and time at which our energy management planning project will be discussed by the Committee and Board of Directors, and ways that interested citizens can provide the questions, comments, and feedback regarding our efforts.

Acronyms Used in Technical Memorandum #1

BTU	British Thermal Unit (a measure of the heating value, or energy content, of fuel. One BTU is the amount of energy needed to heat one pound of water by one degree Fahrenheit.)
B-20	A blend of diesel fuels that consists of 20% biodiesel and 80% petroleum diesel (B-20 is the most common biodiesel blend in the United States)
CO_2	Carbon Dioxide, a naturally occurring chemical compound that is also a major greenhouse gas
CY	Calendar Year
E-10	A blend of gasoline composed of 10% ethanol and 90% gasoline (E-10 is classified as "substantially similar" to gasoline by the U.S. Environmental Protection Agency (EPA) and is legal for use in any gasoline-powered vehicle; however, it does not qualify as an alternative fuel under the Energy Policy Act of 1992)
EMP	Energy Management Plan
EUI	Energy Use Intensity (for this report, Energy Use Intensity refers to the units of energy required per 1,000 gallons of drinking water produced and wastewater treated)
GHG	Greenhouse Gases, which are gases that trap heat in the atmosphere (for this report, GHGs are expressed in carbon dioxide equivalents)
kWh	Kilowatt-hour, which is a unit of energy equivalent to one kilowatt of power expended for one hour of time
MMBTU	One million British Thermal Units
MSL	Mean Sea Level
NRTS	Natural Resources and Technical Systems Committee
OWASA	Orange Water and Sewer Authority
TM	Technical Memorandum
VFD	Variable Frequency Drive
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

AGENDA ITEM

- 12-MONTH PROGRESS REPORT ON AFFORDABILITY OUTREACH PILOT PROJECT

PURPOSE

- Provide the Board of Directors and community our *12-Month Progress Report: Affordability Outreach Pilot Project*, and seek the Board's feedback on possible affordability outreach strategies for the coming year.

BACKGROUND

- Affordability and Cost Management is one of the five key strategic themes in our Strategic Plan. On March 27, 2014 the Board of Directors concurred with the Community Engagement Committee's (CEC) recommendation that OWASA implement a pilot project *"to engage the community/target groups with information about how to reduce OWASA bills."*

- Staff initiated the Affordability Outreach Pilot Project with a kick-off meeting on June 16, 2014 and has pursued several strategies in partnership with staff from more than a dozen local social service and affordable housing agencies and Town and County departments.

- Staff has prepared a 12-month progress report that summarizes our work to date and suggested affordability outreach strategies for the coming year. Partner agencies provided many of those suggestions, which have been ranked in order of importance based on the results of an on-line survey which staff of eleven agencies participated in.

- The CEC met and discussed a draft of this report on May 14, 2015. Staff has revised the report in response to the Committee's comments. The Committee was scheduled to meet on Tuesday, June 23, 2015 to discuss affordability outreach strategies for the coming year.

- Staff will make a presentation at the Board's June 25, 2015 televised meeting.

- We have invited our affordability outreach partners to attend and comment at the June 25, 2015 meeting. We also issued a news release with information about this agenda item, and which invited interested customers and stakeholders to attend the meeting and provide their comments.

ACTION NEEDED

- Receive the 12-month progress report and staff presentation and comments from the CEC, and invite and consider comments from the public.

- Discuss the report and suggested strategies for the year ahead, and provide guidance to the staff and CEC.

June 25, 2015

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: Patrick Davis

DATE: June 19, 2015

SUBJECT: 12-Month Progress Report on Affordability Outreach Pilot Project

Purpose

To provide the Board of Directors and community our *12-Month Progress Report: Affordability Outreach Pilot Project* (attached), and seek the Board's feedback on possible affordability outreach strategies for the coming year.

Background

Affordability and Cost Management is one of the five key strategic themes of our Strategic Plan. On March 27, 2014, the Board concurred with the Community Engagement Committee's recommendation that OWASA implement an affordability outreach pilot project *"to engage the community/target groups with information about how to reduce OWASA bills."*

In June 2014, staff established an informal partnership with staff from more than a dozen local social service and affordable housing agencies, and over the past year has pursued several affordability outreach strategies with assistance from those agencies. As requested by the Board, staff has prepared a 12-month progress report summarizing the activities and accomplishments of the Affordability Outreach Pilot Project, and suggested affordability outreach strategies for the coming year. The suggested strategies were ranked by eleven partner agencies, and those rankings are reflected in the attached report.

The Board's Community Engagement Committee discussed a draft of this report at its May 14, 2015 meeting, and will discuss possible affordability outreach strategies at its June 23, 2015 meeting.

At the June 25, 2015 Board meeting, staff will make a presentation to the Board and the community.

Staff Recommendation

Staff recommends that the Board receive the staff report and comments from the Committee, invite comments from the public, then provide feedback and guidance to staff and the Committee. We look forward to your questions, comments, and guidance.

Patrick Davis
Sustainability Manager

Attachment: *12-Month Progress Report: Affordability Outreach Pilot Project*

ORANGE WATER AND SEWER AUTHORITY

12-MONTH PROGRESS REPORT:
AFFORDABILITY OUTREACH PILOT PROJECT
June 19, 2015

Purpose

This report summarizes the prior year's activities on Orange Water and Sewer Authority's (OWASA) Affordability Outreach Pilot Project. It also includes a prioritized list of potential strategies to address during the next year, as determined from a survey of our partner agencies.

Background

"Affordability and Cost Management" is one of the five key strategic themes in our Strategic Plan. During rate-setting discussions and strategic planning meetings, the OWASA Board of Directors concluded that water conservation should be promoted as a key strategy for customers – especially those in financial need – to lower their monthly water and sewer bills.

On March 27, 2014 the OWASA Board of Directors concurred with the Community Engagement Committee's recommendation that OWASA implement a pilot project *"to engage the community/target groups with information about how to reduce OWASA bills."*

Staff initiated the Affordability Outreach pilot project with a kick-off meeting on June 16, 2014. Since then, OWASA has pursued several affordability outreach strategies in partnership with more than a dozen local social service and affordable housing agencies. This report has been prepared in response to the Board's request for a 12-month progress report on this initiative.

Who Have We Partnered With?

We have partnered with staff from the following agencies, and their assistance has been essential to our affordability outreach efforts.

Carrboro Town Manager's Office and Planning Department
Community Alternatives for Supportive Abodes (CASA)
Chapel Hill Public Housing Department
Chapel Hill Office of Planning and Sustainability
Community Home Trust
Compass Center for Women and Families
EmPOWERment
Habitat for Humanity of Orange County
Interchurch Housing Corporation
Inter-Faith Council for Social Service
Marian Cheek Jackson Center
Orange County Department on Aging
Orange County Department of Social Services
Orange County Housing, Human Rights, and Community Development Department

What Have We Accomplished?

Following is a summary of our progress to date, organized primarily along the seven objectives originally proposed for the pilot project.

1. **Develop and distribute to our target audiences information about cost-effective ways they can reduce bills through conservation practices and water use efficiency investments.** *We have prepared and distributed two variations of a brochure titled "How to Lower Your Water Bills" – one for homeowners, and one targeted to people who rent an apartment or residence and receive OWASA bills. We have distributed copies of the brochures (in English and Spanish) to several partner agencies, which hand them out to their clients.*

   In partnership with the Marian Cheek Jackson Center, we collaborated on the March 2015 issue of the Northside News newsletter, and provided an educational article with tips about how customers can save money on their OWASA bill by reducing their water use, finding and repairing water leaks, and more. Jackson Center volunteers hand-delivered the newsletter to more than 800 households, businesses, and agencies, most of which are within the Northside and Knolls neighborhoods.

   George Barrett of the Jackson Center commented: "It's safe to say that this issue is a HIT!!!… Thank you again for all of your work. This was an amazing collaborative effort and the work has not gone unnoticed!"

   When we conducted 20 in-home water use evaluations under this initiative, we also talked directly with customers about their water use and bills, and ways they can reduce their bills by reducing their water use.

2. **Build and strengthen partnerships with other organizations to more effectively inform our target audiences about ways to reduce their water and sewer bills.** *We have made important progress in partnering with several social service and affordable housing agencies, as well as local government staff working on affordable housing issues. Six of the affordable housing and social service agencies responded to our question "How would you rate the success of the partnership, on a scale of 1 to 10 (with 10 being highly successful)?" The average score was 7.8, with the lowest rater commenting "There is still a lot to do..."*

   The success of our work to partner with other agencies is reflected in the following comments from Delores Bailey, Executive Director of EmPOWERment, Inc. (EI):

   > *"These meetings allowed EmPOWERment to meet other key OWASA employees. We developed a great working relationship with each other I believe will continue. EI also developed an Emergency Utility fund to help low wealth residents living in rental housing. Employees at OWASA were very helpful to our staff as we help those in need. Thank you. Some how these collaborations should be shared with the public… Having OWASA representatives present at the Northside Community Outreach meeting and to our tenant's association meeting was huge for our tenants."*

Ms. Bailey also said EI has benefited from the "information sharing, meeting and understanding issues and frustrations others are experiencing."

3. **Obtain active participation of our target audiences in evaluating their water use and implementing conservation practices and water use efficiency investments to save water and reduce their bills.** *We have reviewed water use at properties owned or managed by local affordable housing agencies, and conducted in-home water use evaluations at several residences to identify opportunities to reduce water use and bills at those residences.*

   As a service to our partner agencies, we completed a "desk-top" analysis of billed water use at properties owned and/or managed by the affordable housing agencies listed in the following table. We met with staff from all but one of those agencies shown to review the results and determine next steps.

CASA	*46 units within 20 properties*
Community Home Trust	*133 units within 133 properties*
EmPOWERment	*37 units within 23 properties*
Habitat for Humanity of Orange County	*86 units within 86 properties*
Interchurch Housing Corporation	*79 units within 2 properties*

   We also conducted water use evaluations at seven residential units managed by EmPOWERment, and 13 other residences in the Northside, Knolls, and Rogers Road neighborhoods.

   We provided technical assistance to the Inter-Faith Council for Social Services (IFC) in evaluating potential residences to include in a water efficiency retrofit pilot project undertaken by the IFC. The IFC contracted with a local plumbing firm to repair leaks and install water-efficient toilets and showerheads in four homes in the Northside neighborhood.

4. **Use a variety of methods, such as targeted surveys, focus groups, etc. to obtain feedback from our target audiences regarding: the usefulness of the information we provide; the most (and least) effective methods and channels for communication; and their suggestions for additional ways in which we can help customers reduce bills.** *We have not yet done any targeted surveys or focus groups to obtain feedback; however, several partner agencies have commented that the information we have provided has been clear and helpful.*

5. **Use the pilot project as a springboard for engaging the community in addressing water and sewer affordability challenges.** *The pilot project has provided us a forum through which we have been able to discuss affordability challenges and share information and ideas with staff from several other agencies. The value of this effort is reflected in the following comments from James Davis, Civil Rights Specialist with the Orange County Department of Housing, Human Rights and Community Development:*

> *"First, we became aware that this initiative was in existence which alone was empowering. As a result, we are more equipped to inform our low income tenants of the economic benefits of conserving energy. We have distributed the brochures that you provided and have encouraged our Housing Choice Voucher participants to conserve in an effort to reduce the financial strain that many of them experience on a monthly basis. Although some of our program participants do not have water through OWASA, the concept (and the information on the brochure) is still relevant for Duke Power, Piedmont Electric, etc. A penny saved is a penny that could be saved or expended on other necessities."*

Natalia Lenis with El Centro Hispano added:

> *"Our organization has seen this as an opportunity to create new partnerships and to connect with other organizations who work in the community. Also, it has been very informative – the sessions and the ideas and outcomes have been useful to pass along in the community."*

6. **Keep the scope of the pilot project at a level that can be managed using existing staff and modest program expenses.** *We have supported the pilot project using existing staff, and to date our expenses for paper, printing, etc. have been less than $1,000.*

7. **Create awareness and positive perception of OWASA.** *Based on the positive feedback we have received from partner agencies, we believe the pilot project has accomplished this.*

   We have helped partner agencies understand our billing procedures and requirements to recover our costs, as well as our strong desire to address service affordability challenges. Our partners helped us identify ways to improve our bill payment business processes to help customers in need, including:

   (a) We revised our Reminder Notices to inform our customers that if they are working with an agency to obtain financial assistance, they should let us know, and authorize us to release their billing information to that agency. (Reminder Notices are sent to customers with a past due balance, and state that they must pay that balance by a specified date, typically 10 days from the date of issuance of the notice.)

   (b) We now enable financial assistance agencies to initiate, on behalf of their clients, requests for extension of time for customers to pay their bills (these are called Customer Payment Deferral Agreements). The agency has a client sign the agreement while the client is in the agency's office seeking financial assistance. This facilitates the extension-of-credit process and eliminates the need for the customer to make a separate trip to OWASA to enter in to such an agreement.

Both processes help reduce the risk that a customer will have service disconnected for non-payment, thereby helping them avoid having to pay the $45 fee for reconnection of service due to non-payment. We also call customers prior to disconnection of service, so that they can make arrangements to avoid being disconnected for non-payment.

John Dorward, Executive Director of the IFC, commented that "We have also been pleased with the new systems OWASA put in place as a result of the meetings on how past due bills are handled."

What Have We Learned?

Some key lessons we have learned from the pilot project are:

- Staff in our partner agencies are very supportive of our efforts, and have been eager to learn and convey information about how their clients can reduce their water and sewer bills by reducing their water use.
- Partner agencies have been able to help us improve certain business processes.
- We can reach targeted customers more effectively by collaborating with our partner agencies.
- Customers and partner agencies have appreciated our assistance in evaluating their water use and helping them identify ways they can reduce their bills by saving water.
- A number of our customers do not have a good understanding of how much their various water use practices contribute to the cost of their water and sewer services.
- More water-efficient toilets have been installed in older housing units than we expected, so a large-scale toilet replacement program may not result in the level of water savings we would have previously expected.
- The older homes and toilets we evaluated had a high frequency of water leaks (more than 40%), which was much higher than the average reported in national studies.
- Some customers do not believe we are billing them correctly, and some do not understand our rate structure. Our partner agencies can help us better communicate and improve our relationships with customers in financial need.

What Strategies Should We Focus on Over the Next Year?

In collaboration with our partner agencies, we have identified a number of potential strategies to pursue during the next year. We surveyed our partner agencies to learn how important each strategy is to them. We received responses from eleven agencies, and used the results to rank the suggested strategies in order of importance to our partner agencies. The following table lists the suggested strategies, in order of importance to our partner agencies.

Suggested Strategy	**Average Score**
1. ***Pursue grant funding support*** *for activities such as purchase and installation of water-saving fixtures in homes owned by low to moderate income families. Potential funding partners include, but are not limited to, Duke Energy Foundation, Lowe's Charitable and Educational Foundation, and Home Depot Foundation.* *(Several partner agencies strongly support this strategy, and believe it will be the only way to make fixtures widely available and affordable for customers in need.)*	**9.27**
2. *Continue to* ***assist agencies in planning and implementing water efficiency retrofits****, which offer direct benefits for households. Consider cost-share arrangements that would enable discount purchases of fixtures and contract services.*	**8.73**
3. *Continue to* ***provide targeted in-home water use evaluations*** *for customers, especially those having difficulty paying their OWASA bills. Continue to give priority attention to those households that have really high water usage.*	**8.64**
4. ***(Tie) Consider opportunities to complement service affordability efforts as part of OWASA's planned review of its rate structure*** *and evaluation of alternative water conservation strategies (such as providing cost-share assistance, on-bill financing, or other incentives for water efficiency retrofits, installation of separate meters as an alternative to master meters, etc.).*	**8.36**
4. ***(Tie) Collaborate with other affordable housing boards and agencies*** *in the County. Affordable housing initiatives tend to focus on the base rent of units, and home purchase costs. OWASA's participation in the broader conversation about affordable housing could be enlightening, and impact the effort to build or rehabilitate units to be more water and energy efficient and, thus, more affordable.*	**8.36**
6. ***(Tie)*** *Complete post-retrofit evaluations and* ***prepare a case study for the IFC's pilot retrofit project*** *and use the case study as supporting information for pursuit of funding support.*	**8.27**
6. ***(Tie) Engage rental property owners and managers*** *in this initiative and assist them in evaluating cost-effective strategies for reducing water use and bills for their tenants. Request their assistance in distributing bill reduction and water conservation information for tenants.*	**8.27**

8. Consider the feasibility of modifying monthly bills to display how the conserved water translates into actual dollars saved *over the previous month (or in relation to the same period as compared to the previous year). This will further encourage customers to conserve.*	**8.00**
9. Invite the Triangle Apartment Association to be an active partner *in the affordability outreach effort.*	**7.91**
10. Create education and outreach materials that are more visual*, because some members in our community receive and understand visual representations more effectively than written material.*	**7.64**
11. Submit articles to the Chapel Hill News, Chapel Hill Herald, WCHL, Daily Tar Heel, etc. regarding the affordability outreach initiative, and tips for reducing bills by saving water.	**7.36**
12. *Provide* ***technical workshops and training for partner agencies*** *on topics such as how to read a water meter and how to do a home water use evaluation. Support those agencies that are interested in providing in-home water use evaluations as a service for their clients.*	**7.27**
13. *Find additional ways to* ***introduce educational materials into partner agencies' communications****, such as has been done for the Northside News and community events.*	**6.82**
14. Collaborate with the waste management boards *that focus on the reduction of waste and the increase of recycling.*	**6.64**
15. Develop videos and/or web-based interactive water conservation/ affordability activities *targeted to customers in need (for people receiving bill payment assistance, extensions of credit, etc.) but also applicable to other customers interested in saving water and money.*	**6.00**

Nine out of the eleven agencies that responded ranked the need for funding support as either a 9 or 10. John Dorward with the IFC highlighted the need for funding support for this effort:

> *"We think you are on the right track, but there is a lot more work to be done to really make an impact on the people who need it the most. The only way to do that is with funding. While it isn't terribly expensive to update many of the homes, it does take real money. Having done some other work in the Northside and Rogers Road neighborhoods, we have seen firsthand what can happen when regular maintenance is not completed. There are any number of people living in our towns who do not have the money for regular upkeep, much less for purchasing and replacing water using fixtures."*

Next Steps

Following receipt of guidance from the Board of Directors, staff will continue to work with our partner agencies to pursue the above strategies. We will provide periodic progress reports to the Board of Directors, and welcome questions, questions, and suggestions at any time.

Acknowledgements

We very much appreciate the support, ideas, and assistance provided by the staff of our partner agencies. With their help, we have been able to improve business processes, better target our information and staff resources to address affordability challenges, and reach more people than we would have been able to do on our own. We look forward to continuing and expanding on this important work in the year ahead.

We also appreciate the Board of Directors' support and guidance for this initiative.

AGENDA ITEM

- REVIEW INFORMATION AND OPTIONS FOR EMPLOYEE MERIT PAY FOR FISCAL YEAR (FY) 2016

PURPOSE

- To provide the Board of Directors information to make a decision on employee pay adjustments, if any, for Fiscal Year 2016.

BACKGROUND

- Last year, the Board decided to make future decisions on employee compensation adjustments as part of the annual budget development process.

- Compensation adjustment information was e-mailed to the Human Resource Committee for review and comment on April 28, 2015.

- Compensation adjustment information has been provided to the Board at the May 14 and June 11, 2015 meetings. The Board requested additional options be included at the June 25, 2015 meeting.

STAFF RECOMMENDATION

- Staff recommends the Board discuss the information provided and determine employee merit pay, if any, for Fiscal Year 2016.

June 25, 2015

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: Stephanie S. Glasgow

DATE: June 19, 2015

SUBJECT: Information and Options for Employee Merit Pay for Fiscal Year 2016

Purpose

To provide the Board of Directors information and options to make a decision on pay range adjustments and employee compensation adjustments, if any, for Fiscal Year (FY) 2016.

Background

Last year, the Board decided to make future decisions on employee compensation adjustments as part of the annual budget development process. Staff has prepared the following information to assist the Board in its decision.

If approved, pay range adjustments and merit pay increases normally go into effect in November.

Information was received and discussed by the Board at the May 14 and June 11 meetings. The Board asked staff to provide additional options for the June 25, 2015 meeting. Options are shown in Attachment #1.

Administration of Employee Compensation Increases

The most recent Classification and Pay Study (Study) included recommendations for maintaining a market-based pay structure and for implementing employee compensation increases.

Cost of Labor Adjustments to OWASA's Pay Structure

The Study recommended that our pay structure be adjusted annually in proportion to movements in the labor market.

> "The percentage allocated for future adjustments to the pay structure will be based on movement of salaries in the market. For example, if salaries have increased on average by two percent (e.g., Cost of Labor equals two percent), the salary structure would need to be adjusted upward by two percent, to maintain OWASA's position relative to the market. This would be accomplished by moving the entire structure by two percent. If the pay structure moves, all employees' salaries in the structure should move a minimum of the same amount to avoid compression."

Merit Pay Adjustments

Our performance management system provides four overall ratings for employee performance:

- Exceptional
- Successful
- Needs Improvement
- Unsuccessful

Only employees with Exceptional or Successful performance ratings are to receive an increase in compensation. Regarding increases for employees receiving an Exceptional or Successful rating, the Study states that the amount recommended for merit increases:

> "Should be based on data collected through a market review. Data can be collected from benchmark organizations to determine the average budgets for merit pay increases or data from WorldatWork[1] can be used to determine the acceptable increases that should be allocated." It further states, "It is recommended that employees receiving "Exceptional" ratings should receive a percent increase of at least twice the level of the increase for a "Successful" rating."

Market Analysis

Based on the most recent WorldatWork survey data available (which is the same data used in the fall of 2014), for the calendar year 2015, merit increases are projected to be from 1.6% to 3.1%. (See Attachment #2 for WorldatWork survey data.)

The following table shows planned compensation increases for local entities.

Entity	Merit	Cost of Labor
City of Durham	3-3.5%	N/A
Town of Cary	4%	N/A
Town of Hillsborough	3.25%	N/A
Cape Fear Public Utility	2.5%	1.5%
Town of Chapel Hill	N/A	4% (2% in July & 2% in January)
Town of Carrboro	N/A	2%
Orange County	0, $500 or $1,000 Bonus Based on Performance	2%

[1] WorldatWork (www.worldatwork.org) is a nonprofit human resources association for professionals and organizations focused on compensation, benefits, work-life effectiveness and total rewards.

Compensation Increases Scenarios

OWASA's current pay administration guidelines, recommended by the Study, state that employees rated as Exceptional and Successful are eligible for merit increases: Exceptional at a rate of twice that awarded to Successful. Last year, the Board opted to award employees rated Exceptional a merit increase of 50% higher than the increase awarded to employees rated Successful.

Preliminary Fiscal Year 2016 Budget

The preliminary Fiscal Year 2016 budget includes a placeholder for a merit increase of 3% of wages or about $210,000.

Pay-range Market Adjustment

Based on the Cost of Labor information from WorldatWork, our pay-ranges should be adjusted from between 1.5% to 2.5%. This adjustment does not result in a raise for employees unless an employee's compensation, after application of the range adjustment, and any applicable merit increase, is below the minimum salary for his or her pay range. Those employees would then receive the amount needed to bring them to the minimum of their pay range.

Staff Recommendation

Staff recommends that the Board discuss the information provided and make the following determinations:

1. The pay range for all positions shall be increased by _____% effective November 2, 2015 (this is not a pay increase, it is adjusting the pay ranges).

2. Employees rated as "Successful" in their October 2015 annual performance review shall receive a merit pay increase of _____ effective November 2, 2015.

3. Employees rated as "Exceptional" in their October 2015 annual performance review shall receive a merit pay increase of _____ effective November 2, 2015.

The draft resolution (Attachment #3) which contains these three elements is attached.

Stephanie S. Glasgow, MESH, MPM, PHR
Director of Human Resources and Safety

Attachments: 1 – Options for Pay Range Adjustments and Merit Pay Increases
2 – World at Work Salary Survey Data
3 – Resolution

	Merit Options from June 11, 2015 Board Meeting										Additional Options for June 25			
	Option 1	**Option 2**	**Option 3**	**Option 4**	**Option 5**	**Option 6**	**Option 7**	**Option 8**	**Option 9**	**Option 10**	**Option 11**	**Option 12**	**Option 13**	**Option 14**
Wage increase for Successful employees	1.5%	1.5%	2.0%	2.0%	2.5%	2.5%	3.0%	3.0%	$1,600	$1,500				
Wage increase for Exceptional employees (no more than 10% of EEs)	2.25%	3.0%	3.0%	4.0%	3.75%	5.0%	4.5%	6.0%	$2,400	$3,000				
Wage increase for all Successful and Exceptional employees ($1,500 minimum)											2%	2%		
Wage increase for all Successful and Exceptional employees													2%	2%
One-time performance bonus for Successful employees													$500	1%
One-time performance bonus for Exceptional employees (no more than 10% of EEs)											1%	2%	$1,000	2%
Minimum applied to combined wage increase													$1,500	$1,500
Total impact on wages expense	**$107,352**	**$112,333**	**$143,136**	**$149,777**	**$178,920**	**$187,222**	**$214,704**	**$224,666**	**$212,000**	**$208,500**	**$203,918**	**$210,559**	**$218,073**	**$229,905**

Impact of Options on select employee wage examples – Amount

Assumed annual wage	Option 1		Option 2		Option 3		Option 4		Option 5		Option 6		Option 7		Option 8		Option 9		Option 10		Option 11		Option 12		Option 13		Option 14	
	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E
$32,200	$482	$724	$482	$965	$643	$965	$643	$1,286	$804	$1,206	$804	$1,608	$965	$1,447	$965	$1,930	$1,600	$2,400	$1,500	$3,000	$1,500	$1,822	$1,500	$2,143	$1,500	$1,643	$1,500	$1,500
$38,500	$578	$866	$578	$1,155	$770	$1,155	$770	$1,540	$963	$1,444	$963	$1,925	$1,155	$1,733	$1,155	$2,311	$1,600	$2,400	$1,500	$3,000	$1,500	$1,885	$1,500	$2,270	$1,500	$1,770	$1,500	$1,540
$41,650	$625	$837	$625	$1,249	$833	$1,249	$833	$1,666	$1,041	$1,561	$1,041	$2,082	$1,249	$1,874	$1,249	$2,498	$1,600	$2,400	$1,500	$3,000	$1,500	$1,916	$1,500	$2,333	$1,500	$1,833	$1,500	$1,666
$44,700	$671	$1,006	$671	$1,341	$894	$1,341	$894	$1,788	$1,118	$1,676	$1,118	$2,235	$1,341	$2,012	$1,341	$2,682	$1,600	$2,400	$1,500	$3,000	$1,500	$1,947	$1,500	$2,394	$1,500	$1,894	$1,500	$1,788
$46,775	$702	$1,052	$702	$1,403	$935	$1,403	$935	$1,871	$1,169	$1,754	$1,169	$2,338	$1,403	$2,105	$1,403	$2,806	$1,600	$2,400	$1,500	$3,000	$1,500	$1,968	$1,500	$2,435	$1,500	$1,935	$1,500	$1,871
$49,550	$743	$1,115	$743	$1,486	$991	$1,486	$991	$1,982	$1,239	$1,858	$1,239	$2,477	$1,486	$2,230	$1,486	$2,973	$1,600	$2,400	$1,500	$3,000	$1,500	$1,996	$1,500	$2,491	$1,500	$1,991	$1,500	$1,982
$51,150	$767	$1,151	$767	$1,534	$1,023	$1,534	$1,023	$2,046	$1,279	$1,918	$1,279	$2,557	$1,534	$2,301	$1,534	$3,068	$1,600	$2,400	$1,500	$3,000	$1,500	$2,011	$1,534	$2,523	$1,523	$2,023	$1,535	$2,046
$58,375	$876	$1,313	$876	$1,751	$1,167	$1,751	$1,167	$2,335	$1,459	$2,189	$1,459	$2,918	$1,751	$2,627	$1,751	$3,502	$1,600	$2,400	$1,500	$3,000	$1,500	$2,084	$1,751	$2,667	$1,667	$2,167	$1,751	$2,335
$63,425	$951	$1,427	$951	$1,903	$1,269	$1,903	$1,269	$2,537	$1,586	$2,378	$1,586	$3,171	$1,903	$2,854	$1,903	$3,806	$1,600	$2,400	$1,500	$3,000	$1,500	$2,134	$1,903	$2,769	$1,769	$2,269	$1,903	$2,537
$69,625	$1,044	$1,567	$1,044	$2,089	$1,393	$2,089	$1,393	$2,785	$1,741	$2,611	$1,741	$3,481	$2,089	$3,133	$2,089	$4,178	$1,600	$2,400	$1,500	$3,000	$1,500	$2,196	$2,089	$2,893	$1,893	$2,393	$2,089	$2,785
$89,750	$1,346	$2,019	$1,346	$2,692	$1,795	$2,692	$1,795	$3,590	$2,243	$3,365	$2,243	$4,487	$2,692	$4,038	$2,692	$5,384	$1,600	$2,400	$1,500	$3,000	$1,795	$2,692	$2,692	$3,590	$2,295	$2,795	$2,692	$3,590

Impact of Options on select employee wage examples – Percentage

Assumed annual wage	Option 1		Option 2		Option 3		Option 4		Option 5		Option 6		Option 7		Option 8		Option 9		Option 10		Option 11		Option 12		Option 13		Option 14	
	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E	S	E
$32,200	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	5.0%	7.5%	4.7%	9.3%	4.7%	5.7%	4.7%	6.7%	4.7%	5.1%	4.7%	4.7%
$38,500	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	4.2%	6.2%	3.9%	7.8%	3.9%	4.9%	3.9%	5.9%	3.9%	4.6%	3.9%	4.0%
$41,650	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	3.8%	5.8%	3.6%	7.2%	3.6%	4.6%	3.6%	5.6%	3.6%	4.4%	3.6%	4.0%
$44,700	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	3.6%	5.4%	3.4%	6.7%	3.4%	4.4%	3.4%	5.4%	3.4%	4.2%	3.4%	4.0%
$46,775	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	3.4%	5.1%	3.2%	6.4%	3.2%	4.2%	3.2%	5.2%	3.2%	4.1%	3.2%	4.0%
$49,550	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	3.2%	4.8%	3.0%	6.1%	3.0%	4.0%	3.0%	5.0%	3.0%	4.0%	3.0%	4.0%
$51,150	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	3.1%	4.7%	2.9%	5.9%	2.9%	3.9%	2.9%	4.9%	3.0%	4.0%	3.0%	4.0%
$58,375	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	2.7%	4.1%	2.6%	5.1%	2.6%	3.6%	2.6%	4.6%	2.9%	3.7%	3.0%	4.0%
$63,425	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	2.5%	3.8%	2.4%	4.7%	2.4%	3.4%	2.4%	4.4%	2.8%	3.6%	3.0%	4.0%
$69,625	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	2.3%	3.5%	2.2%	4.3%	2.2%	3.2%	2.2%	4.2%	2.7%	3.4%	3.0%	4.0%
$89,750	1.5%	2.25%	1.5%	3.0%	2.0%	3.0%	2.0%	4.0%	2.5%	3.75%	2.5%	5.0%	3.0%	4.5%	3.0%	6.0%	1.8%	2.7%	1.7%	3.3%	2.0%	3.0%	2.0%	4.0%	2.6%	3.1%	3.0%	4.0%

Note: The FY 2016 operating budget includes a provision for a merit increase of 3% or approximately $210,000.

WORLD AT WORK SALARY SURVEY DATA

	2014				2015 projected			
	COLA	**Merit**	**Other**	**Total [4]**	**COLA**	**Merit**	**Other**	**Total [4]**
	(Percent)				(Percent)			
1-499 Employees, $30M-$100M revenue								
All Industries								
National	1.2	2.8	0.7	3.1	1.5	3.1	0.9	3.3
Southern [1]	2.2	2.7	0.9	3.1	2.2	2.9	1.7	3.3
NC	*	2.6	*	3.2	*	2.6	*	3.2
Public Administration [2]								
National	2.0	1.5	*	2.5	2.0	2.0	*	2.5
Southern [1]	2.0	0.5	*	2.5	2.0	*	*	2.5
NC	*	*	*	*	*	*	*	*
Utilities [3]								
National	*	2.4	*	2.9	*	1.6	0.8	2.4
Southern [1]	*	*	*	*	*	*	*	*
NC	*	*	*	*	*	*	*	*
All Size Employees, All Size Revenue								
All Industries								
National	1.4	2.8	0.8	3.0	1.6	2.9	0.8	3.1
Southern [1]	1.3	2.8	0.9	3.0	1.5	2.9	0.8	3.0
NC	1.2	2.7	0.7	2.9	1.5	2.8	0.7	3.0
Public Administration [2]								
National	1.9	2.3	1.6	2.7	1.8	2.5	0.7	2.5
Southern [1]	1.6	2.2	1.1	2.6	1.6	2.5	0.6	2.5
NC	*	2.5	*	2.0	*	2.6	*	2.1
Utilities [3]								
National	2.1	2.8	1.1	3.1	2.5	2.8	1.2	3.1
Southern [1]	1.1	2.7	0.9	3.0	1.7	2.7	1.1	3.0
NC	*	2.7	0.7	2.9	*	2.4	0.1	2.8

* Not enough responses for World at Work to report on this category

[1] Southern includes these states: AL, AR, FL, GA, LA, MS, NC, OK, SC, TN, TX

[2] Public Administration includes cities, states, port authorities, retirement systems, airport authorities, etc.

[3] Utilities include organizations such as Alliant Energy, American Water Works, Black Hills Corp, City Utilities of Springfield, MO, Denver Water Dept, Entergy, NY Power Authority, Southern California Edison, TN Valley Authority, Vermont Gas Systems, Westinghouse Electric

[4] The "Total Increase" is the increase for each year but it includes all types of increases. Therefore, it is not a straight average of the three "Types of Increase." The Total Increase will be an average of all increases across the three options listed (COLA, Merit, Other). When a Total Increase indicates an average that is higher than any of the three options, it means there are organizations that are giving multiple increases and the Total Increase is calculated using all increases provided by that organization.

RESOLUTION UPDATING THE SCHEDULE OF EMPLOYEE CLASSIFICATION AND AUTHORIZED COMPENSATION; ADJUSTING AFFECTED EMPLOYEES' COMPENSATION TO THE MINIMUM OF THE PAY RANGE; AND AUTHORIZING MERIT PAY INCREASES FOR ELIGIBLE EMPLOYEES

WHEREAS, the Orange Water and Sewer Authority maintains a Schedule of Employee Classification and Authorized Compensation which provides the appropriate number of properly classified and compensated employees to efficiently and effectively fulfill the organization's duties and responsibilities; and

WHEREAS, the Board of Directors has determined that it is reasonable and prudent in achieving and maintaining competitiveness in the market to increase the pay ranges in the Schedule of Employee Classification and Authorized Compensation; and

WHEREAS, the Board of Directors has determined that it is reasonable and prudent to provide Merit Increases to provide fair and equitable compensation so that qualified employees may be retained to do the work necessary for the operation of the OWASA service system:

NOW THEREFORE, BE IT RESOLVED:

1. That the Board of Directors hereby approves the updated Schedule of Employee Classification and Compensation increasing each pay grade by _____% and it shall therefore remain in effect until further modification or revision by the Board of Directors.

2. That the Board of Directors hereby approves increasing the base pay of any employee who would be paid less than the minimum of the newly established pay ranges, to the minimum of the pay range.

3. That the Board of Directors hereby approves increasing the base pay of employees receiving a performance review rating of "Successful" during the October 2015 annual review process by _____.

4. That the Board of Directors hereby approves increasing the base pay of employees receiving a performance review rating of "Exceptional" during the October 2015 annual review process by _____.

5. That the Board of Directors hereby determines that employees receiving "Needs Improvement" or "Unsuccessful" during the October 2015 annual review process receive no merit increase.

6. That the aforementioned pay adjustments will be effective November 2, 2015.

Adopted this 25th day of June 2015.

_____
John A. Young, Chair

ATTEST:

_____
Heather Payne
Secretary