



ORANGE WATER AND SEWER AUTHORITY

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

August 21, 2015

Mayor Lydia Lavelle
Town of Carrboro
301 West Main Street
Carrboro, NC 27510

Earl McKee, Chair of the
Board of Commissioners
County of Orange
PO Box 8181
Hillsborough, NC 27278

Mayor Mark Kleinschmidt
Town of Chapel Hill
405 Martin Luther King Jr. Boulevard
Chapel Hill, NC 27514

Dear Mayor Lavelle, Chair McKee and Mayor Kleinschmidt:

We are pleased to submit this report on our services, projects and initiatives. The information below focuses primarily on items from April through June 2015, with some items updated to indicate current status.

Detailed design of sewers to serve the Historic Rogers Road Area

On May 19, Orange County contracted with us for the detailed design of sewers to serve the Historic Rogers Road Area (HRRA). We estimate that design and obtaining permits for the project may take a little more than a year, but this timetable is subject to change based on the uncertainties of some tasks such as the time needed to acquire easements from property owners.

On July 28, we co-sponsored a community meeting with the Rogers-Eubanks Neighborhood Association, Marian Cheek Jackson Center, Orange County and the Towns of Carrboro and Chapel Hill to give residents information and receive comments and questions about the design process. More than 50 citizens participated in the meeting and we responded to numerous questions.

In early August 2015 our consultants began land surveying, soil boring (to check for underground rock) and other information gathering as the first part of the design work.

Energy management

Due to water conservation by our customers and our energy efficiency investments and practices, we have reduced our energy use per customer account by 27% since 2006, with a related reduction in greenhouse gas emissions.

OWASA is developing an energy management plan, an initiative in our Strategic Plan. We have reviewed data on past energy use and energy management efforts, begun the community engagement process, and developed proposed goals for electricity and natural gas reduction by 2020 as compared to those uses in 2010, and to beneficially use the methane generated as a by-product of the wastewater treatment process. Our next step will be to evaluate potential strategies to meet those goals.

Affordability of water and sewer service

On June 25, our staff reported on the first year of our affordability outreach pilot project, in which we have engaged local social service and affordable housing agencies in efforts to inform targeted customers about cost-effective ways to reduce their bills through conservation. As part of this project, we evaluated water use at several homes in the community to identify leaks and potential high water use fixtures, and to educate low and moderate income residents about how to reduce their water and sewer bills.

Our partner agencies have helped distribute water conservation and bill reduction information. For example, we worked with the Jackson Center to distribute to the Northside and Pine Knolls neighborhoods in March a newsletter on conservation and finding/fixing water leaks to reduce OWASA bills.

We have decided to make affordability outreach one of our ongoing programs, and have asked staff to submit a proposed plan including resource needs for the coming year.

Advanced Metering Infrastructure (AMI) feasibility study

We hired a consultant in July to evaluate the benefits and costs of AMI technology. AMI can help customers and OWASA learn more quickly about unexpected increases in water use and leaks and thus enhance water conservation. AMI can also help streamline customer service business processes.

We expect that the feasibility study will be complete around December 2015 and we will make decisions based on the feasibility study about how and whether to proceed.

Care to Share customer assistance program

In July, with the support of the Inter-Faith Council for Social Service (IFC), we updated our website and other materials to reflect the new Care to Share logo and change in the name of this program.

We have appealed to several dozen businesses to support Care to Share by making donations directly to the IFC, and we will continue our work to revitalize this crucial program with the help of partnering organizations including the Towns, Orange County and the University as well as the IFC. We will continue to emphasize that Care to Share donations to either the IFC or OWASA may be tax deductible and that customers may have us round up monthly OWASA bills to the nearest dollar or add any dollar amount to their bills as a donation to Care to Share.

Biosolids management

On April 9, we approved a staff proposal to study near-term options for recycling dewatered biosolids. (Biosolids are the solids remaining after treatment at the Mason Farm Wastewater Treatment Plant.) We now recycle dewatered biosolids at a private composting facility in

Chatham County We recycle the other half of our biosolids, which are not dewatered, on approved farmlands.

Staff plans to report back to us this fall. We will continue to inform and engage with farmers and other stakeholders regarding biosolids management.

Possible changes in recreation at the Cane Creek Reservoir

We will invite comments from stakeholders, including owners of land around the Cane Creek Reservoir, about allowing birdwatching in the off season (mid-November to mid-March) and holding a one-time night boating and stargazing event.

Jordan Lake allocation request

On November 14, 2014, we applied to the NC Division of Water Resources to retain our Jordan Lake water supply storage allocation of about 5 million gallons per day for use in extended droughts and operational emergencies. We now expect that the NC Environmental Management Commission may decide on allocation requests in July 2016.

The State's decision on our Jordan Lake allocation will be important in how we proceed with the water supply plan update, but water conservation will continue to be an essential part of our planning.

Rates and financial management

Our Fiscal Year 2016 budget is the fourth year in a row with no increase in monthly rates.

Cost cutting and efficiency initiatives in the last year included refinancing \$15.7 million of bond debt to save about \$150,000 annually (\$2 million over 17 years) and improvements at our Mason Farm Wastewater Treatment Plant which cut electricity costs about \$250,000 annually.

Study of total compensation of employees

We have engaged Springsted Incorporated, based in Richmond, to review our pay and benefits. Our next step will be discussions to establish our compensation philosophy.

Capital Improvements

Projects under construction include:

- renovating two of our four solids treatment tanks (called “digesters”) at the Mason Farm Wastewater Treatment Plant for structural rehabilitation and to contain odor. The digesters are where we treat solids to make recyclable biosolids.
- replacing water lines on Ridgewood Lane east of East Franklin Street.
- renewing sewers at various locations by resealing the inside of the pipes to keep out stormwater and groundwater, which can cause overflows by overloading a sewer.

- replacing a section of sewer where it crosses over Morgan Creek in Chapel Hill.

Projects which will begin this fall include:

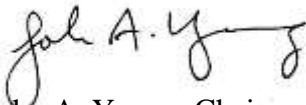
- replacing a sewer near Brigham Road and Emory Drive in Chapel Hill.
- replacing a water line in Plum Lane in the Briarcliff neighborhood.
- replacing a water line on part of Purefoy Road east of South Columbia Street.
- renewing water lines in Evergreen Lane and Ridge Lane in the Gimghoul Road area by lining the inside of the pipes.

Projects completed in the last year include:

- improvements at the Mason Farm Wastewater Treatment Plant for energy efficiency, enhanced wastewater treatment and additional odor elimination.
- replacing water lines at The Glen, Briarbridge Lane, Sunrise Lane, Prince Street and on part of Estes, Willow and Conner Drives.
- replacing a section of sewer where it crosses over Tom's Creek in Carrboro.
- access improvements near the Cane Creek Reservoir dock.

We welcome the opportunity to make a presentation or otherwise provide information on these or other topics.

Sincerely,



John A. Young, Chair
OWASA Board of Directors

c: Ms. Bonnie Hammersley, Orange County Manager
Mr. Roger L. Stancil, Chapel Hill Town Manager
Mr. David Andrews, Carrboro Town Manager
OWASA Board of Directors
Ed Kerwin, OWASA Executive Director

Attachments: Information regarding off-site odor elimination at the Mason Farm Wastewater Treatment Plant

**MONTHLY SUMMARY OF CALLS AND E-MAILS TO OWASA
FROM NEIGHBORS REPORTING ODOR
IN THE MASON FARM WASTEWATER TREATMENT PLANT AREA**

January-2002 to July -2015

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 Reports | 2015 Events |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------|----------------|
| January | 11 | 3 | 9 | 0 | 8 | 3 | 8 | 1 | 3 | 3 | 4 | 0 | 3 | 0 | 0 |
| February | 7 | 5 | 2 | 0 | 8 | 0 | 4 | 1 | 0 | 3 | 3 | 0 | 4 | 0 | 0 |
| March | 9 | 0 | 7 | 1 | 10 | 4 | 1 | 1 | 0 | 2 | 8 | 0 | 0 | 1 | 1 |
| April | 9 | 2 | 4 | 0 | 9 | 3 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 |
| May | 6 | 0 | 2 | 5 | 8 | 3 | 2 | 5 | 4 | 0 | 1 | 3 | 0 | 0 | 0 |
| June | 4 | 1 | 1 | 1 | 5 | 1 | 8 | 8 | 1 | 2 | 2 | 0 | 0 | 0 | 0 |
| July | 1 | 0 | 2 | 0 | 0 | 2 | 6 | 3 | 2 | 4 | 0 | 0 | 2 | 0 | 0 |
| August | 1 | 0 | 4 | 3 | 11 | 2 | 9 | 0 | 1 | 1 | 2 | 0 | 2 | 0 | |
| September | 2 | 5 | 2 | 2 | 9 | 3 | 1 | 1 | 5 | 1 | 1 | 0 | 3 | 0 | |
| October | 2 | 6 | 1 | 1 | 8 | 8 | 2 | 0 | 3 | 3 | 2 | 2 | 3 | 0 | |
| November | 0 | 0 | 1 | 7 | 2 | 6 | 7 | 1 | 1 | 4 | 0 | 1 | 0 | 0 | |
| December | 3 | 3 | 2 | 5 | 8 | 10 | 2 | 1 | 1 | 6 | 3 | 5 | 0 | 0 | |
| TOTALS | 55 | 25 | 37 | 25 | 86 | 45 | 51 | 23 | 23 | 30 | 27 | 11 | 17 | 1 | 1 |

An “odor event” is defined as: One or more odor reports received during a 24 hour period from WWTP neighbor(s). Each odor event shall be considered to be “verified” unless OWASA determines conclusively that an alternative source other than the WWTP created the odor.

**E-mails from OWASA to neighbors of the Mason Farm Wastewater Treatment Plant (WWTP)
regarding odor elimination matters**

April 1 – August 18, 2015

| Date | Topic |
|-----------------|---|
| April 29, 2015 | Quarterly report to the Town of Chapel Hill |
| July 17, 2015 | Notice of plan to start renovating solids treatment tanks (digesters) in late July and odor releases expected during construction |
| August 14, 2015 | Update regarding odor releases from WWTP during renovation of solids treatment tanks |

**LOG OF CALLS AND E-MAILS TO OWASA
FROM NEIGHBORS REPORTING ODOR IN THE MASON FARM
WASTEWATER TREATMENT PLANT (WWTP) AREA**

January 2015 – July 2015

| Date call received | Time call received | Location |
|---------------------------|---------------------------|--------------------------|
| January 2015 | No Reported Odors | N/A |
| February 2015 | No Reported Odors | N/A |
| 3/11/2015 | 8:16 AM | 1016 Highland Woods Road |
| April 2015 | No Reported Odors | N/A |
| May 2015 | No Reported Odors | N/A |
| June 2015 | No Reported Odors | N/A |
| July 2015 | No Reported Odors | N/A |

E-mail distribution list

for notices about odor-related items at the Mason Farm Wastewater Treatment Plant

August 21, 2015

Highland Woods

Paul Neebe
Mary Turner
Malcolm Forbes
Natalia Lebedeva
Gary Richman
Gail Wood
Robert and Melissa Porter
Robin Casey
Joseph Clancy
Ann Schwab
Seth Kingsbury
Amanda Kingsbury
Freeman and Angela Kirby
Reed Johnson
Kay Johnson
Rex Bartles
Lisa Bartles
Barnes Bierck
Ann Alexander
Nortin Hadler
Carol Hadler
Frank P. Rexford
Scott Brees
Kendall Brees
Ed and Helen Ludwig
Rainer Blaesius
Elisabeth Schweins
Susannah Shearer
Fred Hall
Lawanda Rainey-Hall
Katie Jamieson
Richard Harrill
Frank Phoenix
Angel Smith
Jordon Sharome
Adam Kimplead
Cindy Underwood
Dan Puckett
David J. Polewka
Kathryn Conard

Finley Forest

Laurel Hill

Michael Sharpe
Julie Maness
Bob Wendell
Carol David
Pat Evans
Ewan Rodewald and Sharon Hodge
Marcella Grendler
Kay Goldstein
Ann Wilson
Anne Fogleman
Louis Fogleman

**St. Thomas More Church
and School
Morgan Creek area**

St. Thomas More Church staff
Carlos Lima
Ellen Johnson
Betsy Malpass
Hanson Malpass
Jeannie Cox
Laura King Moore
Jeanne Langley
AW Carr
Marilyn and Don Hartman

**Ronald McDonald House
Family House**

Robert Huls
Shelly Day
Greg Kirkpatrick, Executive Director
Janice Ross, Operations Manager
Matt Hapgood

Reserve

Steve McPhail
James F. Howard
Steven and Susan Frye
Doug Longman
Barbara and Edward Paradise
Jeanne & David Jarrett
Nadine O'Malley
Mark Witcher
Ralph Abrahams
Kathy Abrahams

**Bayberry Drive area
UNC**

William Ware
Jim Ward, NC Botanical Garden
Jim Ward--home
Johnny Randall, NC Botanical Garden
Jennifer Peterson, NC Botanical Garden
Phil Barner, Energy Services Director
Margaret Holton, Water, Sewer & Stormwater Coordinator
Mary Beth Koza, Director, Environment, Health and Safety
Ross Fowler, Finley Golf Course
Willie Scroggs, Athletic Department

Michael Wilkinson, golf pro
Andrew Sapp, Men's Golf Coach
Ms. Jan Mann, Women's Golf Coach
UNC Tennis Center
UNC parking
Karen Moon, News Services
Mike McFarland, University Communications
Scott Ragland, News Services
Linda Convisor, Director of Local Relations
UNC Farm (Faculty Staff Recreation Association)
Frank Maynard, Athletics/ Finley Golf Course
Robert Costa, Athletics/ Finley Golf Course
Mark Steffer, Athletics/ Finley Golf Course
Jeff McCracken, Public Safety

UNC Healthcare

Mel Hurston
Karen McCall

Town of Chapel Hill

Jennifer James, Communications Director
Roger Stancil, Town Manager
Florentine A. Miller, Deputy Town Manager
Bruce Heflin
Ralph Karpinos, Town Attorney
Lance Norris, Public Works Director
Richard Terrell, Public Works Operations Supt.
Catherine Lazorko, Public Information Officer
David Bonk, Planner
Phil Mason, Planner
Sabrina Oliver, Town Clerk
Amy Harvey, Public Affairs and Communications
Larry Tucker, Engineering
Chris Blue, Police Chief
Jeff Clark, Patrol Captain
Bryan Walker, Captain/Police Information
Josh Mecimore, Police Information Officer

City Schools

Tom Forcella, Superintendent
Bill Mullin
Todd LoFrese, Asst. Supt. for Support Services
Jeff Nash, Community Relations

Other Utilities

Indira Everett, Duke Energy
Brenda Duke, Duke Energy
Steve Small, Duke Energy
Billy Miller, PSNC

Orange County

Time Warner Cable
Orange 911 Center Supervisor on duty
Connie Pixley, Environmental Health Supervisor

**SUMMARY OF ON-SITE HYDROGEN SULFIDE (H₂S)
ODOR MONITORING**

| Month and year | Headworks Monitor | | | UNC Monitor | | | Digester Monitor | | | Switchgear Monitor | | |
|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| | Average H ₂ S Reading (ppm) | Minimum H ₂ S Reading (ppm) | Maximum H ₂ S Reading (ppm) | Average H ₂ S Reading (ppm) | Minimum H ₂ S Reading (ppm) | Maximum H ₂ S Reading (ppm) | Average H ₂ S Reading (ppm) | Minimum H ₂ S Reading (ppm) | Maximum H ₂ S Reading (ppm) | Average H ₂ S Reading (ppm) | Minimum H ₂ S Reading (ppm) | Maximum H ₂ S Reading (ppm) |
| April 2015 | 0.0000 | 0.0000 | 0.0000 ¹ | 0.0000 | 0.0000 | 0.0000 ² | 0.0001 | 0.0000 | 0.0015 ³ | 0.0000 | 0.0000 | 0.0000 ⁴ |
| May 2015 | 0.0000 | 0.0000 | 0.0000 ⁵ | 0.0000 | 0.0000 | 0.0000 ⁶ | 0.0001 | 0.0000 | 0.0000 ⁷ | 0.0000 | 0.0000 | 0.0000 ⁸ |
| June 2015 | 0.0000 | 0.0000 | 0.0000 ⁹ | 0.0000 | 0.0000 | 0.0000 ¹⁰ | 0.0000 | 0.0000 | 0.000 ¹¹ | 0.0000 | 0.0000 | 0.0000 ¹² |

Monitor Locations :

Headworks Monitor (#1) – Monitor located between Headworks Facility and Septage Receiving Station on south side of plant property.

Digester Monitor (#2) – Monitor located between Digester #1 and Digester #4 on west side of plant property.

UNC Monitor (#3) – Monitor located between UNC Research Building and Trickling Filter on north side of plant property.

Switchgear Monitor (#4) – Monitor located across from Switchgear building on north side of plant property.

¹ Maximum reading zero all of April

² Maximum reading zero all of April

³ Maximum reading occurred on April 1, 2015

⁴ Maximum reading zero all of April

⁵ Maximum reading zero all of May

⁶ Maximum reading zero all of May

⁷ Maximum reading zero all of May

⁸ Maximum reading zero all of May

⁹ Maximum reading zero all of June

¹⁰ Maximum reading zero all of June

¹¹ Maximum reading zero all of June

¹² Maximum reading zero all of June