



ORANGE WATER AND SEWER AUTHORITY

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

August 25, 2014

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

Barry Jacobs, 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 Jacobs and Mayor Kleinschmidt:

We are pleased to submit this annual report on our services, projects, initiatives and planning in our service year from July 2013 through June 2014. Key items from the last year are below, and supplemental information is attached.

Financial management and rates: On June 12th, the OWASA Board adopted the budget for Fiscal Year (FY) 2015 (July 2014 through June 2015). For the third year in a row, monthly rates for water, sewer and reclaimed water service will not increase.

Strategic Plan: On March 13th, the OWASA Board adopted a new [Strategic Plan](#) with initiatives regarding reliable and high quality water supply, affordability, financial sustainability, advanced metering infrastructure, billing and financial software, energy management and managing our land assets. The Board and staff are developing actions and timetables for implementing the Strategic Plan.

Affordability: In June, OWASA initiated a pilot project to engage community groups with information about how to reduce water and sewer bills through water conservation. OWASA is partnering with several local social service and affordable housing agencies to identify and pursue strategies related to the pilot project.

Jordan Lake allocation: Staff submitted a draft application on April 30th to the NC Division of Water Resources to retain our Jordan Lake allocation of about 5 million gallons per day. Based on the State's current schedule, final applications will be due on October 1, 2014. Jordan Lake is our "insurance" for use in a severe drought or operational emergency.

Improvements at Mason Farm Wastewater Treatment Plant (WWTP): Our \$10 million project at the WWTP is 98% complete. This work will increase energy efficiency, reduce greenhouse gas emissions related to electricity use, enhance treatment and cover several biological treatment tanks that are odor sources. We expect completion this fall, before our deadline of December 31, 2014. The savings from energy efficiency are project to be about \$120,000 annually.

Preliminary engineering study for sewer extension in Historic Rogers Road Area: We have entered into an agreement with Orange County for a preliminary study of conditions, alternatives and costs for extending sewers in the Historic Rogers Road Area. We have selected the

Orange Water and Sewer Authority

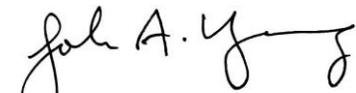
August 25, 2014

Page 2

consulting engineering firm of URS and are working with the Jackson Center to obtain approvals from owners in the neighborhood to go on their properties for surveying and other work related to the study.

We welcome the opportunity to provide additional information.

Sincerely,



John A. Young, Chair
OWASA Board of Directors

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

Attachments:

Supplemental information about services and projects
Information regarding off-site odor elimination at the Mason Farm Wastewater Treatment Plant

Supplemental information for annual report on OWASA's services, projects, initiatives and planning from July 2013 through June 2014

(Please see the cover letter with this report for a summary of key items.)

Water demand and supply: After several years of decline, drinking water sales rose 2% to an average of 6.2 million gallons per day. However, demand remains at the level last seen in the early 1990s despite a 60%+ increase in the number of our customers.

As of August 25th, our lakes are 86% full, which is slightly above the average (82%) for late August. *Based on the historical 87-year period of record*, the risk of lake levels falling to 20% or less full is minimal for the next year.

Drinking water quality: We continue to surpass the standards in the Federal Safe Drinking Water Act and related State rules. In June, we distributed our annual Water Quality Report Card including results from laboratory testing of our water, our water sources, treatment processes, etc.

Water service reliability: Breaks in our water lines averaged 5.8 per 100 miles, well below our goal of no more than 15.

Wastewater and biosolids management: For the fifth consecutive year, our treated wastewater quality met or surpassed the standards in our permit from the State. Our treated wastewater solids (biosolids) also continue to meet regulatory standards. We are now distributing to our account holders a report on the performance of our wastewater/biosolids management systems including laboratory test results. Overflows from our sewers totaled about 17,000 gallons or a fraction of 1% of total wastewater for the year (2.2 billion gallons).

Plans for advanced metering infrastructure (AMI): A key initiative in our new Strategic Plan is investing in a system to remotely read our water meters with a network of radio transmitters and antennae. This system will enable us to reduce meter reading costs, give customers timely access to information about their water use between billings, and enable us to more quickly identify locations with possible water leaks.

The Board has allocated initial funding of \$1.225 million for AMI in the current budget, and implementation is expected to take about three years. Our first task will be to hire a consultant to assist us in developing a communication plan, selecting a vendor/contractor, stakeholder coordination and implementation.

Financial management: FY 2014 financial highlights include:

- Operating revenue was \$35.8 million, almost 1% below budget (likely a result of above average rainfall and cooler temperatures during certain periods of the year).
- Operating costs were \$18.6 million, about 2.6% below budget

- Net income less debt service was \$10.6 million, about 7% above budget
- Capital costs totaled \$15.9 million, about 0.4% below budget
- Our credit rating remains AA+ and we continue to meet our financial management objectives.

The FY 2015 budget includes

- \$19.8 million for operating costs,
- \$10.8 million for capital investments to keep services reliable by replacing, renewing and improving pipes and treatment facilities,
- \$1.2 million for equipment and
- \$8.3 million to repay long-term debt.

Major capital investments

Type of work	Location	Purpose	Status
Renew equipment used to help separate solids from lake water	Jones Ferry Road Water Treatment Plant, Carrboro	Maintain water quality, avoid excessive maintenance/ operating costs	Complete
Water pump station improvements	Calvander (west of Carrboro)	Enable periodic inspection, cleaning and painting of Nunn Mountain water tank	Complete
Water line replacement	Kenmore Road, Chapel Hill	Maintain reliable water service	Complete
	Sunrise Lane, Chapel Hill		Complete
	Buttons Lane, Chapel Hill		Complete
	Arboretum Drive, south of Chapel Hill		Complete
	James Street, Carrboro		Complete
	Brookside Drive, Chapel Hill		Complete
	Grey Bluff Trail, Chapel Hill		Complete
	Estes, Willow and Conner Drives, Chapel Hill		In progress
	Ridge Road, Chapel Hill		Substantially complete
Sewer replacement	Heritage Hills	Prevent wastewater overflows	Complete
	Friday Center		Complete
Boat dock replacement	Cane Creek Reservoir	Enhance lake recreation services	To be complete this summer
Improvements at the Mason Farm Wastewater Treatment Plant	Old Mason Farm Road, Chapel Hill	Increase energy efficiency, enhance biological treatment, further eliminate off-site odor	To be complete this fall

Upcoming projects in FY 2015 include:

- Renovating sewers in the Rangewood neighborhood west of Carrboro, and various other areas (multi-year project)
- Replacing sewers in the Emory Drive area
- Replacing sewers where they cross over Tom's and Morgan Creeks

Human Resources: We welcome new Board Members Quinton Harper, David Moreau and Ruchir Vora. In FY 2014, Todd Taylor became our new General Manager of Operations, Mary Darr was promoted to Director of Engineering and Planning and Denise Battle was promoted to Customer Service Manager. The people at OWASA serving the community are our most valuable asset as they make excellent service and continuous improvement part of our daily work. With 130 funded positions compared to 150 about 10 years ago, we are a leaner, more agile organization.

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

January 2002 to June 2014

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 Reports	2014 Events
January	11	3	9	0	8	3	8	1	3	3	7	0	4	3
February	7	5	2	0	8	0	4	1	0	3	7	0	5	4
March	9	0	7	1	10	4	1	1	0	2	8	0	0	0
April	9	2	4	0	9	3	1	1	2	1	1	0	0	0
May	6	0	2	5	8	3	2	5	4	0	1	3	0	0
June	4	1	1	1	5	1	8	8	1	2	2	0	0	0
July	1	0	2	0	0	2	6	3	2	4	0	0		
August	1	0	4	3	11	2	9	0	1	1	2	0		
September	2	5	2	2	9	3	1	1	5	1	1	0		
October	2	6	1	1	8	8	2	0	3	3	2	2		
November	0	0	1	7	2	6	7	1	1	4	0	1		
December	3	3	2	5	8	10	2	1	1	6	3	5		
TOTALS	55	25	37	25	86	45	51	23	23	31	34	11	9	7

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.

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

April 2014 – June 2014

NO ODOR REPORTS/EVENTS

E-MAILS FROM OWASA TO NEIGHBORS OF THE MASON FARM
WASTEWATER TREATMENT PLANT (WWTP)
REGARDING ODOR ELIMINATION MATTERS

April 21 - August 22, 2014

Date	Topic
May 13, 2014	Quarterly report to the Town of Chapel Hill

**DISTRIBUTION LIST FOR OWASA E-MAILS
ABOUT WWTP ODOR-RELATED ITEMS**
(August 22, 2014)

Area	Resident or owner
Highland Woods	Alice W. Neebe
	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
	Reed Johnson
	Kay Johnson
	Rex Bartles
	Lisa Bartles
	Barnes Bierck
	Ann Alexander
	Lex Alexander
	Nortin Hadler
	Carol Hadler
	Frank P. Rexford
	Scott Brees
	Kendall Brees
	Ed and Helen Ludwig
	Rainer Blaesius
	Elisabeth Schweins
	Gunilla Luboff
	Fred Hall
	Lawanda Rainey-Hall
	Katie Jamieson
	Richard Harrill
	Frank Phoenix
	Richard and Jane Caswell
	Ed Tostanoski

Area	Resident or owner
	Angel Smith
	Smiths
Finley Forest	Adam Kimplead
	Cindy Underwood
	Dan Puckett
	David J. Polewka
	Kathryn Conard
	Michael Sharpe
	Rima Wehbe
	Julie Maness
Laurel Hill	Mike Ramsey
	Bob Wendell, Pres. Laurel Hill Association
	Carol David
	Pat Evans
	Ewan Rodewald and Sharon Hodge
	Marcella Grendler
	Dick and Marie Clark
	Kay Goldstein
	Ann Wilson
	Anne Fogleman
	Louis Fogleman
St. Thomas More Church and School	St. Thomas More Church staff
	Carlos Lima
Morgan Creek area	Ellen Johnson
	Betsy Malpass
	Hanson Malpass
	Jeannie Cox
	Laura King Moore
	Jeanne Langley
	John Pendergrass
	AW Carr
	Marilyn and Don Hartman
	Robert Huls
Ronald McDonald House	Shelly Day
Family House	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

Area	Resident or owner
	Nadine O'Malley
	Mark Witcher
	Ralph Abrahams
	Kathy Abrahams
Bayberry Drive area	William Ware
UNC	Jim Ward, NC Botanical Garden
	Jim Ward--home
	Peter White, Director, NC Botanical Garden
	Johnny Randall, NC Botanical Garden
	Jennifer Peterson, NC Botanical Garden
	Phil Barner, Energy Services Director
	Margaret Holton, Water, Sewer & Stormwater Coord.
	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)
	Steve Reznick, UNC Farm Assoc.
	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	Roger Stancil, Town Manager
	Florentine A. Miller, Deputy Town Manager
	Bruce Heflin
	Ralph Karpinos, Town Attorney
	Lance Norris, Public Works Director
	Jay Gibson, Town Engineer
	Richard Terrell, Public Works Operations Supt.
	Dan Jones, Fire Chief
	Catherine Lazorko, Public Information Officer

Area	Resident or owner
	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
	Time Warner Cable
Orange County	Orange 911 Center Supervisor on duty
	Connie Pixley, Environmental Health Supervisor
Other	Bill Ferrell, Meadowmont Community Association
	Chamber of Commerce

SUMMARY OF ON-SITE HYDROGEN SULFIDE (H₂S) MONITORING

Monitor Locations

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 2014	0.0072	0.0008	2.0000 ¹	0.0006	0.0000	0.0420 ²	0.0003	0.0000	0.0650 ³	0.0000	0.0000	0.0000
May 2014	0.0039	0.0003	0.0334 ⁴	0.0001	0.0000	0.0121 ⁵	0.0002	0.0000	0.0386 ⁶	0.0000	0.0000	0.0000
June 2014	0.0044	0.0029	0.0203 ⁷	0.0017	0.0012	0.0330 ⁸	0.0002	0.0000	0.0303 ⁹	0.0000	0.0000	0.0095 ¹⁰

Headworks Monitor (#1) between Headworks Facility and Septage Receiving Station on south side of plant.
 Digester Monitor (#2) between Digester #1 and Digester #4 on west side of plant.
 UNC Monitor (#3) between UNC Research Building and Trickling Filter on north side of plant.
 Switchgear Monitor (#4) across from Switchgear building on north side of plant.

¹ Maximum reading occurred on April 4, 2014

² Maximum reading occurred on April 30, 2014

³ Maximum reading occurred on April 23, 2014

⁴ Maximum reading occurred on May 1, 2014

⁵ Maximum reading occurred on May 1, 2014

⁶ Maximum reading occurred on May 15, 2014

⁷ Maximum reading occurred on June 21, 2014

⁸ Maximum reading occurred on June 29, 2014

⁹ Maximum reading occurred on June 19, 2014

¹⁰ Maximum reading occurred on June 11, 2014