



ORANGE WATER AND SEWER AUTHORITY

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

August 23, 2013

Mayor Mark Chilton
Town of Carrboro
301 West Main Street
Carrboro, NC 27510

Barry Jacobs, Chair of the Board
of Commissioners
County of Orange
Post Office Box 8181
Hillsborough, NC 27278

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

Dear Mayor Chilton, Chair Jacobs and Mayor Kleinschmidt:

We are pleased to submit our annual report on OWASA's initiatives and services from July 2012 through June 2013.

The key points in the attached information include:

- For the second consecutive year, we adopted the annual budget with no increase in monthly water, sewer and reclaimed water rates. In the coming year, the Board will further consider potential changes in our rate structures. There will be a public comment process for any changes proposed by the Board in 2014.
- We are continuing our intensive process to develop a new Strategic Plan. We have held four work sessions led by Vice Chair John Young as facilitator, and are collaborating with staff in analyzing priorities and feasibility for action items.
- Our water supply outlook remains very good due to continuing conservation by our customers and with our lakes remaining full since January 17, 2013.

We welcome the opportunity to provide additional information and/or to plan a presentation or discussion on any matter of interest to you.

Sincerely,

Alan Rimer, P.E., Chair
OWASA Board of Directors

Enclosure

- c: Mr. Frank Clifton, Orange County Manager (w/encs.)
Mr. David Andrews, Carrboro Town Manager (w/encs.)
Mr. Roger L. Stancil, Chapel Hill Town Manager (w/encs.)
OWASA Board of Directors (w/encs.)
Ed Kerwin, OWASA Executive Director (w/encs.)



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Annual Report to the Carrboro Board of Aldermen, Chapel Hill Town Council and Orange County Board of Commissioners on OWASA Initiatives and Services

(July 2012 through June 2013)

Budget and rates: For the second consecutive year, we approved an annual budget with no increase in monthly water, sewer and reclaimed water rates.

Our cost reductions in recent years have included reducing our workforce by 12% since 2004. Improvements underway at the Mason Farm Wastewater Treatment Plant (WWTP) will save about \$125,000 in electrical costs annually. The State's approval of a \$6.5 million no-interest loan for the project will save more than \$1 million in interest over the next twenty years.

Strategic Planning: We are developing a new multi-year plan focused on five topics:

- Affordability and Cost Management,
- Environmental Stewardship and Conservation,
- OWASA's Role in the Community,
- Resource Management and Infrastructure Sustainability and
- Technology.

We have had four strategic planning work sessions to date and the Board has identified 27 strategy ideas for evaluation. The Board expects to select five to ten as priorities for the Strategic Plan.

Water supply planning: On March 14, 2013 the NC Environmental Management Commission approved OWASA's request to change its Jordan Lake allocation from Level II (future use) to Level I so that we can use the allocation when and if needed due to a severe drought or operational emergency.

The Town of Cary and City of Durham staffs have said that during extended droughts, they will transfer water from Jordan Lake to OWASA only if OWASA has a Level I allocation so that water provided to OWASA would not be counted against their Jordan allocations.

We see Jordan Lake access as an insurance policy for severe droughts and operational emergencies. Because OWASA has no direct access to Jordan Lake, the only feasible way to use our Jordan allocation is through the Town of Cary and City of Durham water systems. Existing agreements allow the exchange of drinking water for short durations but those agreements must be modified, or new ones negotiated, for access to additional water in an extended drought.

We recently worked with the City of Durham and Town of Cary to test our system interconnections to ensure that potable water could be transferred into or out of our system to the other communities. The tests were successful.

On January 10, 2013 we adopted a Drought Response Operating Protocol providing that OWASA may purchase water or use its Jordan Lake allocation only after our lakes have fallen to a level that requires declaration of a Stage 1 shortage under our State-approved Water Shortage Response Plan.

Water supply and demand: Our lakes have remained full since January 17th. The risk of critical reservoir drawdown based on the last 87 years of streamflow records is minimal, but we recognize that the climate is changing and past experience does not predict the future.

In Fiscal Year (FY) 2013, drinking water use (water sales) averaged about 6.1 million gallons per day, or about 30% less than in 2002 despite continuing growth in the community. In FY 2013, reclaimed water use was about 0.63 million gallons per day, or more than 9% of our community's total water demand.

Water quality: At our Jones Ferry Road Water Treatment Plant and at the WWTP, we continue to surpass Federal and State standards for the quality of our drinking water and treated wastewater. Also, our treated wastewater solids, or "biosolids," continue to meet Federal standards for the "Exceptional Quality" designation, and metals and pathogen levels are well below the Federal limits.

We report to our customers in June of each year on the quality of our drinking water and in August on wastewater and biosolids. These annual reports are mailed to accountholders and available on our website, www.owasa.org.

Asset Management: With assistance from a consultant, staff is developing a comprehensive asset management program to guide replacement, renovations and other work to sustain the value and reliability of aboveground assets (treatment plants, pump stations and other buildings). The analysis has included condition assessments of critical facilities. This initiative for aboveground assets will complement existing models we use to prioritize replacement and renovation of sewer and water lines.

Capital Investments

Mason Farm Wastewater Treatment Plant: In March 2013 we began almost \$10 million of improvements at the WWTP to increase energy efficiency, reduce greenhouse gas emissions, enhance treatment plant performance and further control odor. The odor control improvements are on schedule for completion by December 31, 2014 per our commitment to the Town of Chapel Hill and to neighbors of the WWTP.

Water line replacement: To help maintain reliable service, we have completed water line replacements at Scarlett Drive, Brookview Drive, Barclay Road, Clark Court and Arboretum Drive. Work is underway at Buttons Lane, James Street and East Cameron Avenue. The latter was substantially completed in mid-August to allow two-way traffic before the start of the University's fall semester.

Calvander Water Pump Station improvements (west of Carrboro): This work, which began in March, will enable us to take the Nunn Mountain water tank (west of Piney Mountain Road) out of service in September 2013 for cleaning and painting.

Sewer replacements to help prevent wastewater overflows: Our work to replace the pressurized sewer in Heritage Hills and along part of Smith Level Road is likely to be complete in September. Work to

replace a sewer near Finley Golf Course and the Friday Center began in June and should be complete in November.

On-line performance measures: For additional information, we invite you to review the dashboards on our website under About OWASA/ Performance and Financial Information (<http://www.owasa.org/about/FinancialDocuments.aspx>).

**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 2013

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013 Reports	2013 Events
January	11	3	9	0	8	3	8	1	3	3	7	0	0
February	7	5	2	0	8	0	4	1	0	3	7	0	0
March	9	0	7	1	10	4	1	1	0	2	8	0	0
April	9	2	4	0	9	3	1	1	2	1	1	0	0
May	6	0	2	5	8	3	2	5	4	0	1	3	3
June	4	1	1	1	5	1	8	8	1	2	2	0	0
July	1	0	2	0	0	2	6	3	2	4	0		
August	1	0	4	3	11	2	9	0	1	1	2		
September	2	5	2	2	9	3	1	1	5	1	1		
October	2	6	1	1	8	8	2	0	3	3	2		
November	0	0	1	7	2	6	7	1	1	4	0		
December	3	3	2	5	8	10	2	1	1	6	3		
TOTALS	55	25	37	25	86	45	51	23	23	30	34	3	3

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

January 2013 – June 2013

Date call received	Time call received	Location
5/12/2013	5:00 AM	Highland Woods Rd.
5/16/2013	7:00 PM	Highland Woods Rd.
5/21/2013	10:05 PM	Highland Woods Rd.

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

April 25-August 22, 2013

Date	Topic
April 30, 2013	Quarterly report to the Town of Chapel Hill

DISTRIBUTION LIST FOR OWASA E-MAILS ABOUT WWTP ODOR-RELATED ITEMS
(August 22, 2013)

Area	Resident or owner
Highland Woods	Alice W. 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
	Rex Bartles
	Lisa Bartles
	Mary Ellen Bierck
	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
	Angel Smith
Finley Forest	Adam Kimplead
	Cindy Underwood
	Dan Puckett
	Donna Kaye
	John Neal

Area	Resident or owner
	David J. Polewka
	Kathryn Conard
	Michael Sharpe
	Rima Wehbe
	Dan Choi
	Julie Maness
Laurel Hill	Mike Ramsey
	Bob Wendell
	Carol David
	Pat Evans
	Ewan Rodewald and Sharon Hodge
	Marcella Grendler
	Carolyn Goldfinch
	Carol Hazard and Winston Liao
	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
	Gary Glish
	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
	Nadine O'Malley
	Mark Witcher

Area	Resident or owner
	Ralph Abrahams
	Kathy Abrahams
Bayberry Drive area	William Ware
UNC	Jim Ward, Curator, NC Botanical Garden
	Jim Ward--home
	Peter White, Director, NC Botanical Garden
	Johnny Randall, Assistant Director, 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, Corporate Relations
	Scott Ragland, Corporate Relations
	Linda Convissor, Corporate Relations
	Married Student Housing Manager
	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 Hospitals	Mel Hurston
	Karen McCall
Town of Chapel Hill	Roger Stancil, Town Manager
	Florentine A. Miller, Deputy Town Manager
	Bruce Heflin, Asst. Town Manager
	Ralph Karpinos, Town Attorney
	Lance Norris, Public Works Director
	Jay Gibson, Town Engineer
	Richard Terrell, Public Works Operations Supt.
	Dan Jones, Fire Chief
	Robert Bosworth, Deputy Fire Chief
	Catherine Lazorko, Public Information Officer
	Jennie Bob Culpepper, Planning Director
	David Bonk, Planner
	Phil Mason, Planner
	Sabrina Oliver, Town Clerk
	Amy Harvey, Public Affairs and Communications

Area	Resident or owner
	Larry Tucker, Engineering
	Bobby Pettiford, Inspections
	Chris Blue, Police Chief
	Jeff Clark, Patrol Captain
	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
	Rob Masterson, BellSouth/ATT
	Billy Miller, PSNC
	Time Warner Cable
Orange County	Orange 911 Center Supervisor on duty
	Tom Konsler, Environmental Health
Other	Meadowmont Apts.
	Bill Ferrell, Meadowmont Community Association
	Chamber of Commerce

**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 2013	0.0015	0.0000	0.5118 ¹	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
May 2013	0.0018	0.0000	0.1559 ²	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0524 ³
June 2013	0.0006	0.0000	0.0224 ⁴	0.0000	0.0000	0.0154 ⁵	0.0000	0.0000	0.0000	0.0000	0.0000	0.0059 ⁶

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 occurred on April 17, 2013 at 9:00 AM.

² Maximum reading occurred on May 8, 2013 at 9:25 AM.

³ Maximum reading occurred on May 22, 2013 at 6:27 PM.

⁴ Maximum reading occurred on June 4, 2013 at 2:16 PM.

⁵ Maximum reading occurred on June 28, 2013 at 6:51 AM.

⁶ Maximum reading occurred on June 1, 2013 at 8:01 AM.