



ORANGE WATER AND SEWER AUTHORITY

Quality Service Since 1977

November 3, 2008

Chair Barry Jacobs, Jr.
Orange County
Post Office Box 8181
Hillsborough, NC 27278

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

Mayor Kevin Foy
Town of Chapel Hill
405 Martin Luther King Jr. Blvd.
Chapel Hill, NC 27514

Dear Chair Jacobs, Mayor Chilton, and Mayor Foy:

Enclosed is an update on OWASA activities for the most recent quarter.

Please feel free to contact me or our staff if you would like an in-person presentation or further details about any of the items in the enclosed report.

Best regards,

Randy Kabrick, Chair
OWASA Board of Directors

Enclosure

- c: Ms. Laura Blackmon, Orange County Manager (w/encs.)
- Mr. Roger L. Stancil, Chapel Hill Town Manager (w/encs.)
- Mr. Steven Stewart, Carrboro Town Manager (w/encs.)
- OWASA Board of Directors (w/encs.)
- Ed Kerwin, OWASA Executive Director (w/encs.)



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Quarterly Report to Local Governments October 31, 2008

OWASA's August 29, 2008 Annual Report to Local Governments summarized major accomplishments and activities for Fiscal Year 2008 (July 2007 – June 2008). This more abbreviated report provides new or updated information through October 2008. Additional materials are available on request. OWASA Board members and staff will be glad to provide presentations if desired.

New Water and Sewer Rates in Effect – All customers received *Blue Thumb* newsletters outlining OWASA's need for higher water and sewer rates that went into effect on October 1, 2008. These factors included reduced revenues associated with the 2007-2008 drought as well as a down-turn in construction activity in our service area; higher operating costs, especially for chemicals and energy; and the need for ongoing capital investment in projects such as odor improvement at the Mason Farm Wastewater Treatment Plant, repair and replacement of aging water and sewer lines, and so forth.

Board Endorses Proposed Changes to Conservation Standards – At their October 23rd meeting, the OWASA Board endorsed proposed changes that reflect lessons learned during the 2007-2008 drought and citizen comments solicited through new releases, paid newspaper advertising, and email messages to more than 1,000 recipients. The recommended changes are designed to give customers more flexibility in the context of OWASA's aggressive conservation rate structure and drought surcharges. The proposed changes were submitted on October 24, 2008 to the Towns of Carrboro, Chapel Hill, and Orange County for their consideration and feedback.

Board Asks County Commissioners to Remove OWASA Property from Short List of Solid Waste Transfer Station Sites – On October 24, 2008 OWASA Board Chair Randy Kabrick sent a letter to the Orange County Board of Commissioners requesting that the County remove OWASA's 43-acre parcel along Route 54 near Orange Grove Road from further consideration as a new solid waste transfer station site, because the property already serves an important public purpose as part of OWASA's biosolids management program. The letter also expressed the Board's willingness to carefully consider the request if the County, in consultation with the Towns of Carrboro and Chapel Hill, ultimately determines that the OWASA property is the only location for a transfer station.

Capital Improvement Projects – Capital projects to improve the reliability of OWASA water and sewer lines are proceeding as described in the August 29, 2008 *Annual Report to Local Governments*. More recent highlights include:

- **Odor Elimination at the Mason Farm Wastewater Treatment Plant** – We have completed the design work for covering and treating foul air from our three primary settling tanks, and are seeking construction bids. Design for covering 8 of the 16 biological treatment tanks is underway. These projects, which represent a capital investment of \$4.5 million, are expected to be completed in September 2009 and late 2010, respectively.
- **Reclaimed Water (RCW) System** -- RCW pumping, storage, and pipeline facilities will begin operating this spring (2009). To date, UNC has installed about 7,000 feet of RCW pipe on the main campus, and OWASA's contractor has installed 5,300 feet along Old Mason Farm Road, Fern Lane, and Skipper Bowles Drive. Still to be completed is a section of RCW pipe in the **Coker Pinetum**, which is being installed in conjunction with the **Meeting of the Waters** sewer project.
- **Meeting of the Waters Sewer Improvement** – About 3,300 feet of sewer line has been installed along **Old Mason Farm Road**. The remaining section is currently under construction along **Fern Lane** and through a utility easement in the **Coker Pinetum**. As noted above, this is being co-constructed with the **RCW Transmission Main** and is expected to be complete by June 2009.
- **Drinking Water Pump Station on Old Durham Road Near I-40** – Landscaping work is underway and will be completed in November 2008.
- **North Columbia Street Water Line Replacement** – The replacement of portions of deteriorating water lines in North Columbia Street near the fire station and in part of North Street will create some disruption of normal traffic patterns for several weeks during December (2008).
- **Cleland Drive Water and Sewer Improvements** – Work will be completed this winter.

Annual Update of OWASA's *Comprehensive Water and Sewer Master Plan* – OWASA staff has updated the *2001 Master Plan* with recent data, strategic trends, and commentary (October 17, 2008). Printed copies of the update report and graphic data are available on request. Principal findings include:

- Water use by OWASA customers during eight months of mandatory Water Shortage restrictions (October 2007 through May 2008) was 15 percent below pre-drought projections for that period. Water withdrawals from University Lake and Cane Creek in 2008 have been 43 percent less than projected in OWASA's *2001 Master Plan*.
- Water sales and reservoir withdrawals have remained below the historically high levels of 2001. Average drinking water production during the past six years has been 11 percent less than during the preceding three years, even though the total number of OWASA meter equivalents increased by more than 11 percent during the same six-year period.

- The reductions sustained over the past six years appear to represent a permanent shift in customer demand and likely reflect important local conservation initiatives implemented since 2002: seasonal and tiered water rates, year-round conservation requirements, and proactive community education. A portion of these reductions is also due to ongoing “passive” conservation that occurs as older plumbing fixtures are replaced by more water-efficient ones.
- Reduced water use has also been reflected in lower average flows at the Mason Farm Wastewater Treatment Plant. Lower peak flows (during rainy periods) suggest that our long-term efforts to identify, repair, and replace older sewer lines and to remove inappropriate storm drain connections are successfully reducing the unwanted entry of stormwater into the sewer system.
- The \$50+ million wastewater plant upgrade completed in 2007 included \$11 million for facilities to achieve the anticipated Jordan Lake nutrient removal requirements, which can now be met at current flow and loading rates. Although average and peak wastewater volumes have decreased in recent years, the total load of incoming waste continues to grow as our service area population grows. We do not yet know what combination of flow and nutrient loading conditions will determine the need and timing of the next major wastewater plant upgrade/expansion project. Staff is carefully reviewing our previous assessments of the operational and financial implications of the nutrient limits, and additional information will be developed through a special optimization/re-rating study that will be conducted in FY 2010.
- OWASA will thoroughly review our long-term (2060 planning horizon) water supply plans during the coming year. We will revisit underlying assumptions, such as demographic and development trends and associated water demand forecasts, and we will re-evaluate the supply and demand management alternatives considered since 2000. With the aid of a consultant, we will examine water supply alternatives that can offer additional flexibility and reliability, such as expanded reclaimed water distribution, additional conservation opportunities, and supplemental water from Jordan Lake. This project, which will involve interaction with local officials and other community stakeholders at key points, is expected to be completed in 2009.

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

January, 2002–October, 2008

	2002	2003	2004	2005	2006	2007 Reports	2007 Events	2008 Reports	2008 Events
January	11	3	9	0	8	3	3	11	8
February	7	5	2	0	8	0	0	6	4
March	9	0	7	1	10	6	4	1	1
April	9	2	4	0	9	3	3	1	1
May	6	0	2	5	8	4	3	2	2
June	4	1	1	1	5	1	1	13	8
July	1	0	2	0	0	4	2	6	6
August	1	0	4	3	11	2	2	12	9
September	2	5	2	2	9	3	3	1	1
October	2	6	1	1	8	9	8	2	2
November	0	0	1	7	2	11	6		
December	3	3	2	5	8	16	10		
TOTALS	55	25	37	25	86	62	45	55	42

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**

August, 2008- October 2008

Date call received	Time call received	Location
8/2/2008	7:00 AM	Highland Woods Road
8/5/2008 ¹	8:08 PM	Highland Woods Road
8/5/2008	8:47 PM	Highland Woods Road
8/7/2008 ²	11:51 PM	Highland Woods Road
8/16/2008	6:30 PM	Highland Woods Road
8/17/2008	9:30 PM	Highland Woods Road
8/18/2008	9:00 PM	Highland Woods Road
8/19/2008	7:30 AM	Highland Woods Road
8/19/2008	7:30 AM	Highland Woods Road
8/19/2008	5:07 PM	Highland Woods Road
8/23/2008	10:20 PM	Highland Woods Road
8/25/2008	7:51 AM	Highland Woods Road
9/12/2008	9:22 PM	Highland Woods Road
10/26/2008	12:50 AM	Highland Woods Road
10/30/2008	5:55 PM	Highland Woods Road

Notes:

Complaint was about odor experienced on:

¹ 8/4/2008 8:00 PM

² 8/7/2008 7:40 PM

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

August - October, 2008

Date	Topic/Comments:
September 3, 2008	Status of planned additional odor elimination improvements
September 9, 2008	Quarterly report to the Town of Chapel Hill on odor elimination program
September 16, 2008	Field investigation of odor reports
October 20, 2008	OWASA Board's consideration on October 23rd of authorizing staff to seek bids for covering the three primary settling tanks at the Mason Farm WWTP
October 24, 2008	OWASA Board's authorization on October 23rd to seek bids for covering the three primary settling tanks at the Mason Farm WWTP

**DISTRIBUTION LIST FOR OWASA E-MAILS ABOUT ODOR RELEASES FROM
THE MASON FARM WWTP AND RELATED ITEMS (October 30, 2008)**

Highland Woods	Alice W. Neebe
	Paul Neebe
	Malcolm Forbes
	Gary Richman
	Robert and Melissa Porter
	Peg Parker
	Jeffrey Tate and Anna Schwab
	Seth Kingsbury
	Amanda Kingsbury
	Abraham Nussbaum
	Elin Nussbaum
	Reed Johnson
	Rex Bartles
	Dan Pollitt
	Mary Ellen Bierck
	Barnes Bierck
	Nortin Hadler
	Carol Hadler
	Frank P. Rexford, President, Highland Woods Association
	Christina and Rex Page
	Ed Ludwig
	Joy Javits
	Gunilla Luboff
	Fred Hall
	John and Anna K Schwab
	Mary Helen and Donald Hayman
Finley Forest	Adam Kimplead
	Cindy Underwood
	Dan Puckett
	Donna Kaye
	David J. Polewka
	Kathryn Conard
	Michael Sharpe
	Dan Choi
	Julie Maness
Laurel Hill area	Mike Ramsey
	Phyllis Barrett
	Bob Wendell, President, Laurel Hill Association
	Carol David
	Pat Evans
	Ewan Rodewald and Sharon Hodge
	Joe Ferrell

	Dr. Sian Kwa
	Marcella Grendler
	Paul Grendler
	Carolyn Goldfinch
	Carol Hazard and Winston Liao
	Dick and Marie Clark
	Kay Goldstein
	Ann Wilson
	Anne Fogleman
	Louis Fogleman
	St. Thomas More staff
	Carlos Lima
	Aldersgate Methodist Church c/o Deil Wright
Morgan Creek area	Ellen Johnson
	Betsy Malpass
	Hanson Malpass
	Jeannie Cox
	Laura King Moore
	Jeanne Langley
	John Pendergrass
	A.W. Carr
	Gary Glish
	Marilyn and Don Hartman
Ronald McDonald House	Shelly Day
Family House	Greg Kirkpatrick, Executive Director
	Janice Ross, Operations Manager
	Matt Hapgood
Reserve	Steve McPhail, President, Hunt's Reserve Homeowners
	Steven and Susan Frye
	Doug Longman
	Barbara and Edward Paradise
	Jeanne & David Jarrett
	Nadine O'Malley
	Mark Witcher
	Ralph Abrahams
	Kathy Abrahams
Bayberry area	William Ware
UNC	Jim Ward--office
	Jim Ward--home
	Peter White, Director
	Johnny Randall, Assistant Director
	Carolyn Elfland, Assoc. Vice Chancellor
	Ray DuBose, Energy Services Director
	Margaret Holton, Water, Sewer & Stormwater Coord.
	Mary Beth Koza, Director, Environment, Health and Safety
	Ross Fowler
	Willie Scroggs

	Michael Wilkinson, golf pro
	John Inman, Men's Golf Coach
	Sally Austin, Women's Golf Coach
	Aaron Bednar
	UNC Tennis Center
	UNC parking
	Mike McFarland, Corporate Relations
	Scott Ragland, Corporate Relations
	Lisa Katz, Corporate Relations
	Linda Convissor, Corporate Relations
	Jon Howes, Corporate Relations
	Married Student Housing Manager
	UNC Farm (Faculty Staff Recreation Association)
	Steve Reznick, UNC Farm Association President
	Jim McAdams, Energy Services
	Frank Maynard, Athletics/ Finley Golf Course
	Robert Costa, Athletics/ Finley Golf Course
	Jeremy Whitehurst, Athletics/ Finley Golf Course
	Mark Steffer, Athletics/ Finley Golf Course
	Jeff McCracken, Public Safety
UNC Hospitals	Lynn Wooten, Corporate Relations
	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
	Richard Terrell, Public Works Operations Supt.
	Greg Ling, Street Supv.
	Robert Sykes, Public Works
	Dan Jones, Fire Chief
	Caprice Mellon, Deputy Fire Chief
	Robert Bosworth, Deputy Fire Chief
	Kevin Gunter, Captain/ Police Information Officer
	Bob Overton, Police Captain
	Brian Curran, Police Chief
	Richard Terrell, PW Operations Supt.
	George Small, Town Engineer
	Larry Tucker, Engineering
	Bobby Pettiford, Inspections
	Steve Spade, Transportation Director
	Butch Kisiah, Parks and Recreation Director
	Bill Webster, Assistant Parks and Recreation Director
	Catherine Lazorko, Public Information Officer
	Lance Norris, Public Works Director
	Jennie Bob Culpepper, Planning Director
	Phil Mason, Planner

	Kumar Neppalli, Traffic Engineer
	Sabrina Oliver, Town Clerk
	Sandy Kline, Deputy Town Clerk
City Schools	Neil Pedersen, Superintendent
	Bill Mullin
	Beverly Knight
Orange County	Clint Osburn, Emergency Management
	Orange 911 Center Supervisor on duty
	Mike Tapp, Fire Marshall
	Tom Konsler, Environmental Health
Utilities	Ken Kernodle, Duke Energy
	Steve Small, Duke Energy
	Billy Miller, PSNC
	Time Warner Cable
	Rob Masterson, BellSouth/ATT
Other	Meadowmont Apts.
	Meadowmont Community Association
	Chamber of Commerce

**SUMMARY OF ON-SITE AND OFF-SITE ODOR INSPECTIONS
AND NUMBER OF TIMES ODOR WAS DETECTED AT THE VARIOUS MONITORING SITES**

ON-SITE:

Month and year	Total Inspections	Entrance Gate (1)	Generator Bldg. (2)	Old Outfall (3)	UV Complex (4)	Solids Tanks (5)	Odor Scrubber (6)	Head-works (7)	Digesters (8)	UNC Bldg. (9)
Aug. 2008	59	26	15	0	0	16	20	34	39	35
Sept. 2008	71	16	14	2	2	9	41	44	49	48
Oct. 2008	56	13	13	0	0	6	20	23	28	22
Totals	186	55	42	2	2	31	81	101	116	105
%		10%	8%	0%	0%	6%	15%	19%	22%	20%

OFF-SITE: (see Note 2)

Month and year	Total Inspections	Mc Donald House (1)	Highland Woods-A (2)	Highland Woods-B (3)	Athletic Assoc. (4)	Finley GC (5)	Silers Fen Ct. (6)	Morgan Cliff Ct. (7)	Kings Mill Rd. (8)	Laurel Hill Rd. (9)	Botanical Garden (10)
Aug. 2008	8	1	1	1	1	1	0	0	0	0	0
Totals	8	1	1	1	1	1	0	0	0	0	0
%		20%	20%	20%	20%	20%	0%	0%	0%	0%	0%

Notes:

- 1) All on-site odor events were characterized by the WWTP Operators as “Mild” with odors that would not be expected to create an off-site problem.
- 2) As reported to our WWTP neighbors, as of September 2008 off-site evaluations were discontinued because of the limited benefit. Under the definition of an off-site odor event, unless OWASA is able to attribute the odor to another source, an odor report is considered to have resulted from the wastewater treatment operation. In the three years of OWASA staff responding to off-site odor reports, staff was not able to find any other explanation for the odor events that have been reported.

**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)
August 2008	0.0000	0.0000	0.0001 ¹	0.0196	0.0000	0.4175 ²	0.0004	0.0000	0.0342 ³	0.0013	0.0000	0.0219 ⁴
September 2008	0.0000	0.0000	0.0000	0.0027	0.0000	0.1223 ⁵	0.0004	0.0000	0.0425 ⁶	0.0002	0.0000	0.0501 ⁷
October 2008	0.0000	0.0000	0.0000	0.0025	0.0000	0.0935 ⁸	0.0002	0.0000	0.0200 ⁹	0.0001	0.0000	0.0205 ¹⁰

Notes:

OS – Unit Out of Service (OS). Sent to manufacturer for calibration

¹ Maximum reading occurred on August 25, 2008 at 2:00 AM.

² Maximum reading occurred on August 3, 2008 at 7:50 PM.

³ Maximum reading occurred on August 26, 2008 at 11:50 PM.

⁴ Maximum reading occurred on August 11, 2008 at 9:30 PM.

⁵ Maximum reading occurred on September 3, 2008 at 6:36 PM.

⁶ Maximum reading occurred on September 10, 2008 at 8:06 PM.

⁷ Maximum reading occurred on September 12, 2008 at 7:56 PM.

⁸ Maximum reading occurred on October 26, 2008 at 6:42 PM.

⁹ Maximum reading occurred on October 27, 2008 at 9:26 AM.

¹⁰ Maximum reading occurred on October 26, 2008 at 7:33 PM.

Monitor Locations (see attached location map):

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.