



ORANGE WATER & SEWER AUTHORITY

Quality Service Since 1977

**REISSUED
AGENDA #5f**

November 1, 2006

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 27516

Chairman Barry Jacobs
Orange County
Post Office Box 8181
Hillsborough, NC 27278

Dear Mayor Chilton, Mayor Foy and Chairman Jacobs;

Enclosed is our quarterly report for July through September, 2006. We believe that this summary of recent and upcoming activities reflects OWASA's commitment to a high level of customer service and environmental stewardship, efficient management, affordable rates, and community collaboration to which you and our customers are entitled.

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.

Sincerely,

Michael A. (Mac) Clarke, Chair
OWASA Board of Directors

Enclosure

c: Mr. Roger L. Stancil, Chapel Hill Town Manager (w/encs.)
Mr. Rod Visser, Interim Orange County Manager (w/encs.)
Mr. Steven Stewart, Carrboro Town Manager (w/encs.)
OWASA Board of Director (w/encs.)
Ed Kerwin, OWASA Executive Director (w/encs.)



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Quarterly Report to Local Governments November 1, 2006

OWASA's September 6, 2006 Annual Report to Local Governments summarized major accomplishments and activities for Fiscal Year 2005 (July 2005 – June 2006). This more abbreviated report provides new or updated information for the most recent (August – September 2006) quarter. Additional materials are available on request. OWASA Board members and staff will be glad to provide presentations if desired.

Water Supply – Reservoir, streamflow, and demand patterns remain good as of the end of October. The likelihood of our supplies declining to critical levels within the next 18 months is very low.

OWASA/UNC Water Reclamation Project – The next community meeting to review the route of the reclaimed water transmission main and **Meeting-of-the-Waters Creek sewer line** in the **Pinetum-Fern Lane** area is scheduled for November 1, 2006. (There is no further news on this project since the September 6, 2006 Annual Report.)

Public Hunting on OWASA Land – On October 26, OWASA and the North Carolina Wildlife Resources Commission (WRC) entered into an agreement that allows OWASA to continue its no-hunting policy at the Cane Creek Reservoir, but will allow limited hunting on the mitigation land. OWASA purchased the mitigation land in 1980 to replace the natural habitat area that was affected by construction of the reservoir and dam.

The WRC staff stated in April, 2005 that under the US Army Corps of Engineers' permit for the Cane Creek Reservoir project required that public hunting be allowed at the Cane Creek Reservoir and on the mitigation land. The OWASA Board disagreed, and in July, 2005 asked the Corps to change the permit to resolve this matter, in part because of the significant wildlife habitat benefits provided by the Reservoir, mitigation land, and more than 1,500 acres of land and conservation easements acquired in the Cane Creek watershed.

The Corps advised OWASA and the WRC to hold further discussions to reach a compromise. OWASA is pleased to have resolved this matter in a way that we believe addresses public safety concerns of our neighbors through hunting limitations, a 300-foot setback requirement, patrolling and continued work with the WRC.

Rate Study and Strategic Financial Review – The ongoing study of customer rates and fees remains on schedule for completion this winter.

Mason Farm Wastewater Treatment Plant – The overall construction project remains on schedule for substantial completion by summer 2007.

Elimination of Objectionable Offsite Odors from the Mason Farm Wastewater Treatment Plant (WWTP)– OWASA submitted its annual progress report on meeting the **off-site odor elimination goal** in January 2006 per requirements of the Town's Special Use Permit as amended in 2004. Our staff met with nearby residents on January 31, 2006 to discuss plans for the odor study and on September 27, 2006 to discuss the draft odor study report including information developed to date by our consultants, Black & Veatch. The next step will be discussion at an OWASA Board meeting on November 9, 2006. OWASA staff expects to make recommendations for odor elimination improvements in addition to those already planned.

Land Application of Biosolids – OWASA's practice of applying liquid biosolids (highly treated wastewater sludge) to agricultural land has become limited by weather conditions, cropping schedules, availability of land, increasing biosolids volume, transportation costs, and other operational factors. Several emerging issues and trends could affect the future viability and capability of this management approach and suggest the need for a more diversified program. A draft Biosolids Master Plan is scheduled for completion in 2007. It is unlikely that any further discussion of land applying OWASA biosolids to land within the Cane Creek or University Lake watersheds will occur before the Biosolids Master Plan is completed next year.

Capital Improvement Projects – Capital projects to improve the reliability of OWASA water and sewer lines in Carrboro and Chapel Hill are proceeding as described in the September 6, 2006 Annual Report to Local Governments.

Carolina North – OWASA is represented on the University's Carolina North Leadership Advisory Council (LAC) by Vice Chair Randy Kabrick. Staff will participate in the Carolina North Infrastructure Workshop scheduled for November 6-8.

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 2006). Principal findings include:

- OWASA water sales and reservoir withdrawals for the past five years have remained below the historically high levels observed in 2001. Reduced consumption is likely due to a combination of weather factors and water conservation efforts by customers across all user categories. Reduced reservoir withdrawals also result from the recycling of water treatment plant process water that began in the fall of 2002. Process water was previously released to an intermittent creek. Water withdrawals from University Lake and Cane Creek are 23 percent less in 2006 than were projected in OWASA's 2001 Master Plan.
- Substantial reductions in summer peak demands at the Jones Ferry Road Water Treatment Plant continue to indicate that customers are using less water outdoors (irrigation). We believe this is a response to OWASA's seasonal rate structure and

to year-round standards in the Carrboro, Chapel Hill, and Orange County conservation ordinances.

- A continuing trend of lower peak flows at the Mason Farm Wastewater Treatment Plant during rainy periods suggests that OWASA's long-term program to systematically identify, repair and replace older sewer lines is successfully reducing the unwanted inflow and infiltration of stormwater into the sewer system.
- Lower peak demands at both the water and wastewater treatment plants will delay the need for costly future expansions.
- OWASA's projections of future demand are based on the approved comprehensive plans of Carrboro, Chapel Hill, and Orange County and reflect the most up-to-date information available regarding new development proposed for the University's Central Campus and Carolina North. Local rezoning decisions that are consistent with existing comprehensive plans are not expected to affect OWASA's demand projections. Additional development density can be accommodated within the scope of OWASA's current plans if highly efficient water conservation technologies are implemented in new development projects. We are working with local government staffs to develop collaborative approaches for increasing water use efficiency in our service area.
- The existing reservoir/quarry water supply system and its future expansion can meet the ultimate buildout needs of the Carrboro/Chapel Hill/University community. However, if projected demands are not reduced further and/or additional water supply sources are not developed, the community will become more vulnerable to severe drought conditions beginning around 2020 until the Stone Quarry expansion is available for water storage in the early 2030s. The primary goal of OWASA's long-range conservation program and the reclaimed water system project is to reduce water shortage risks without having to rely on additional water from Jordan Lake.
- Water quality in OWASA's University Lake and Cane Creek Reservoir remains good, but not pristine, as indicated by periodic blooms of blue-green algae, especially in University Lake. Both reservoirs remain sensitive to nitrogen and phosphorus nutrient inputs from their respective watersheds. Bloom conditions appear to be aggravated by prolonged summer periods of high temperature and low streamflow.
- The ongoing \$50 million upgrade and expansion of the Mason Farm Wastewater Treatment Plant will be completed in 2007. New and upgraded treatment units have improved the quality of the water released to Morgan Creek, increased plant reliability, eliminated odor problems, and enabled the reuse of treated effluent to meet certain non-drinking water needs. The new filter complex and ultraviolet light (UV) disinfection systems are in service, but the filters are not yet being operated to remove nitrogen from the wastewater. The expansion to 14.5 million gallons per

day (mgd) will provide additional capacity to serve new development anticipated by Carrboro, Chapel Hill, and the University.

- OWASA's practice of applying liquid biosolids (highly treated wastewater sludge) to agricultural land has become limited by weather conditions, cropping schedules, availability of land, increasing biosolids volume, transportation costs, and other operational factors. Several emerging issues and trends could affect the future viability and capability of this management approach and suggest the need for a more diversified program. A draft Biosolids Master Plan is scheduled for completion in 2007.

Printed copies and supporting graphics of the full update report are available on request from OWASA and will be available on our website at

<http://www.owasa.org/pages/MasterPlanRev06.pdf> by mid-November.



ORANGE WATER & SEWER AUTHORITY

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Quality Service Since 1977

OWASA'S ODOR ELIMINATION PROGRAM AT THE MASON FARM WASTEWATER TREATMENT PLANT (WWTP)

As discussed below, we believe the completion of a new, enclosed "headworks" next summer will be an important milestone in odor elimination at the Mason Farm WWTP. The headworks is the area where wastewater enters the treatment plant. Our consultants' odor sampling at the WWTP in June, 2006 showed that the headworks has a daily pattern of elevated odor from the late afternoon through early morning due to hydrogen sulfide levels in wastewater entering the plant.

On September 27, 2006, OWASA representatives and consultants met with sixteen of our WWTP neighbors to discuss a draft report by our odor consultant, a conceptual draft of a proposed definition of successful odor elimination and related items.

OWASA staff will make a report and recommendations to the OWASA Board of Directors on Thursday, November 9th regarding near-term odor elimination improvements identified by our consultants. The 2006-07 OWASA budget includes \$300,000 for the current odor study and odor-related improvements in addition to those already planned or underway.

Background

- ✓ In March, 2004, the OWASA Board of Directors formally adopted a goal of eliminating off-site objectionable odors from the Mason Farm Wastewater Treatment Plant.
- ✓ In May, 2004, following approval of a Special Use Permit Modification by the Chapel Hill Town Council, the Pizzagalli Construction Co. began a three-year, \$50 million improvement project at the Mason Farm Wastewater Treatment Plant. The improvements include odor-related modifications, expansion of the plant's capacity, enhancements in wastewater treatment processes and additional back-up power to increase our operating reliability during storms and other conditions.
- ✓ In the spring of 2006, OWASA retained the firm of Black & Veatch to do an odor study at the WWTP. This study will help in developing a definition of successful odor elimination and will provide information about odor solutions at other treatment plants like OWASA's, as well as providing recommendations for additional odor control improvements by OWASA and related technical help.

Recently completed work

- ✓ In September, a contractor completed the installation of new, aboveground pipes to carry foul air away from our solids digesters. The old, underground pipes were subject to blockages that resulted in odor releases.

"Headworks" improvements to be completed in summer of 2007

- ✓ Our contractor has begun work on and is scheduled to complete a new headworks facility by the summer of 2007. The new headworks will be enclosed, and foul air from it will be treated in our odor scrubber.

This work is now our highest priority for odor elimination and we expect it will be a major step forward in successfully eliminating off-site objectionable odor.

Evaluation of additional improvements

Based on odor sampling results and related information to date from the consultants, we plan to make recommendations to the OWASA Board on November 9th regarding the following improvements:

- ✓ covering the exposed holding tanks at two pump stations in the interior of the WWTP site, and
- ✓ covering devices called "splitter boxes" where wastewater from the headworks is channeled to and from solids settling tanks called "primary clarifiers."

Communications with customers

We held a community meeting on September 27th as noted above. Attachment 1 summarizes the key comments received from WWTP neighbors and our responses.

Attachments 2 through 4 summarize odor reports we received from WWTP neighbors from 2002 through October, 2006; individual odor reports in September and October, 2006; and our communications to stakeholders in the last two months, primarily by e-mail.

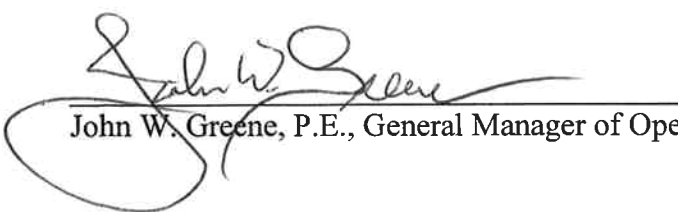
Attachment 5 is the current list of customers to whom we send notices by e-mail.

We continue to maintain a Hotline, 537-04376, for reporting odor from the WWTP and getting project status information.

Conclusion

Successfully eliminating objectionable off-site odor from the WWTP is a process that involves fresh evaluations and feedback from the community as key actions are completed. We remain committed to the odor elimination goal as we work to continue moving forward diligently and cost-effectively.

We look forward to additional discussions with WWTP neighbors and other interested stakeholders including Town representatives. We welcome any comments on this report and would be glad to respond to any questions.



John W. Greene, P.E., General Manager of Operations

Attachments:

1. Summary of Community Meeting on September 27, 2006
2. Monthly summary of calls and e-mails to OWASA from neighbors reporting odor in the Mason Farm Wastewater Treatment Plant area, January, 2002 – October, 2006
3. Log of dates and times of calls and e-mails to OWASA by neighbors reporting odor in the Mason Farm Wastewater Treatment Plant area, September-October, 2006
4. Log of e-mails and a letter from OWASA to neighbors of the Mason Farm Wastewater Treatment Plant, September-October, 2006
5. Distribution list for OWASA e-mails about odor releases from the Mason Farm Wastewater Treatment Plant, and related items

MEETING SUMMARY

COMMUNITY MEETING ON SEPTEMBER 27, 2006 REGARDING ODOR ELIMINATION AT THE MASON FARM WASTEWATER TREATMENT PLANT (WWTP) AND RELATED ITEMS

7:00 – 9:00 PM, Wednesday, September 27, 2006

Community Room, OWASA Administration Building, 400 Jones Ferry Road, Carrboro

PARTICIPANTS

WWTP Neighbors

Ann Alexander
Barnes Bierck
Reed Johnson
Seth Kingsbury
Helen Ludwig
Alice Neebe
Abraham and Elin Nussbaum

Peg Parker
Gary Richman
Gail Wood
Kathy and Ralph Abrahams
Mark Witcher
Betsy Malpass
Matt Hapgood

OWASA and consultants

Mac Clarke, Chair, OWASA Board of Directors
Ed Kerwin, Executive Director
Mary Darr, P.E., Operations Engineer/
Project Manager for the Odor Study
John Greene, P.E., General Manager of Operations
Mason Crum, P.E., Director of Engineering and
Planning
Greg Feller, Public Affairs Administrator

Walter Gottschalk, Wastewater Treatment
and Biosolids Recycling Manager
Randy Foulke, P.E., Project Manager,
Black & Veatch
Gayle Van Durme, P.E., Senior Odor
Expert, Black & Veatch
Sock-Hoon Koh, Black & Veatch
Pete Schuler, Brown & Caldwell

BRIEF BACKGROUND

On September 12, 2006, OWASA staff invited the neighbors of the Mason Farm Wastewater Treatment Plant (WWTP) to a community meeting on Wednesday, September 27th to discuss the odor elimination program at the WWTP.

On September 19, OWASA staff sent e-mail to several dozen WWTP neighbors with a summary of a draft report by Black & Veatch and a conceptual first draft of a proposed definition of successful odor elimination at the WWTP.

SUMMARY OF KEY COMMENTS BY CITIZENS
WITH RESPONSES BY OWASA STAFF

DEFINING SUCCESSFUL ODOR ELIMINATION

1. OWASA should not just *control* odor, but *eliminate* it.

Response: OWASA expects to complete very important odor elimination improvements by the summer of 2007 as further described in item 4 below. Additionally, the OWASA staff expects to make recommendations to the OWASA Board of Directors on November 9th for further odor elimination improvements to be completed in the near-term (schedule to be developed). The OWASA staff and consultant believe that the combination of these planned and newly proposed improvements will greatly reduce the potential for objectionable off-site odors.

2. The draft odor elimination standard allowing up to 20 odor events per year is not acceptable. OWASA staff's proposal did not include a statement of consequences for violating an odor elimination standard.

Response: As discussed in previous community meetings and with the Chapel Hill Town Council, it is not realistic to expect perfect elimination of odor. OWASA will therefore continue to work with the WWTP neighbors to develop a practical definition of successful odor elimination as part of our overall approach including additional improvements at the WWTP. OWASA staff understands that the draft proposal for up to 12 planned odor releases and up to 8 unplanned odor releases per year is unacceptable to the neighborhood. OWASA staff will do further work on a proposed definition for successful odor elimination with the benefit of additional information to be provided by our consultants as noted above.

3. The definition of odor elimination for OWASA should be based on a comparison to similar WWTPs that have successfully eliminated odor. OWASA should examine best practices for odor elimination in the WWTP industry.

Response: We agree. Black & Veatch's draft report will be revised to include:

- ✓ An inventory of WWTPs which are similar to OWASA's and which are "best in class" in successful odor elimination. This additional research will include plants in addition to those listed in the draft report from Black & Veatch.
- ✓ The actions taken at those WWTPs ("best practices") to successfully eliminate odor.
- ✓ The standards or measures used at these plants to determine successful odor elimination.

ODOR SOURCES

4. Odor in Highland Woods is often bad at night.

Response: The odor monitoring done this summer at the WWTP showed a regular pattern of elevated hydrogen sulfide in the incoming sewage from the late afternoon until the early morning.

OWASA's highest current priority for successful odor elimination is replacing the present headworks with an enclosed structure where foul air will be captured and transferred to our odor scrubber for treatment. Replacing the headworks was planned during the WWTP project design process in 2001, and we believe that completion of the new headworks in the summer of 2007 will be a major step toward odor elimination.

We have been adding hydrogen peroxide to wastewater at the headworks since August, 2006 in an effort to reduce odor there. Before then, we added peroxide at the septage disposal area upstream of the headworks, and the peroxide was then carried in wastewater through the headworks.

The odor study work by Black & Veatch this summer identified the headworks, "splitter boxes" which channel wastewater to tanks called "primary clarifiers" and the pump stations in the interior of the WWTP site as odor sources to be addressed. The current OWASA capital improvement budget has \$300,000 for odor elimination improvements. OWASA staff is assessing the potential additional odor elimination improvements discussed in the consultants' draft report and expects to recommend additional odor elimination improvements to the OWASA Board on November 9th.

5. OWASA has not scheduled the covering of all odor sources, but is working down a priority list of odor sources.

Response: OWASA staff believes that the process for successful odor elimination should include evaluating the results of major odor improvements and periodically re-examining conditions and priorities for further improvements in addition to implementing those already scheduled.

OWASA has spent several million dollars on odor elimination work, is obligated to look at costs and benefits as part of wisely using customers' funds, and the bottom line is to achieve odor elimination that neighbors will be satisfied with.

Since 2002, OWASA has addressed odor sources including:

- a. the biosolids storage tanks (covered; foul air is treated in an odor scrubber)
- b. the "flares" which burn unused methane (a video monitor and redundant equipment were added to keep the flame lit)
- c. the solids digesters (new fixed covered structures were installed)
- d. underground pipes that carried foul air away from the digesters (replaced with aboveground piping)

ODOR MODELING

6. OWASA should use simple models to predict odor impacts on the surrounding neighborhoods, to evaluate the effectiveness of odor-related improvements at the WWTP and should use this data and obtain models to decide what additional work should be done for odor elimination.

Response: Our consultants, Black & Veatch, will investigate the use of odor transport model(s) and data from the consultants' study to determine the impact on surrounding neighborhoods and evaluate the effectiveness of planned improvements.

OTHER

7. OWASA stopped doing follow-up odor checks at the secondary perimeter outside of the WWTP as was prescribed in OWASA odor monitoring plan. OWASA should do what it said it would do. The neighbors should not have the job of monitoring for odor.

Response: In accord with the monitoring plan approved in October, 2005, we have resumed doing odor checks at the "secondary boundary" when odor is detected inside the WWTP at a level greater than "mild."

8. Should neighbors continue to call to report odor via the WWTP Hotline? Should neighbors call to report odor even if it is expected?

Response: Neighbors are invited to call to report odor and are encouraged to do so if not sure whether a given odor release was expected. The number of odor reports from WWTP will not by itself be the basis for deciding whether successful odor elimination has been achieved or that the WWTP neighbors are satisfied.

9. OWASA should install an odor monitor in Highland Woods.

Response: We have done so at a residence offered by a Highland Woods homeowner.

CONCLUSION

OWASA staff will make a report to the OWASA Board on November 9th regarding the odor elimination program, the community meeting, the consultants' draft odor report and recommended odor-related improvements.

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

January, 2002 through October, 2006

	2002	2003	2004	2005	2006
January	11	3	9	0	8
February	7	5	2	0	8
March	9	0	7	1	10
April	9	2	4	0	9
May	6	0	2	5	8
June	4	1	1	1	5
July	1	0	2	0	0
August	1	0	4	3	11
September	2	5	2	2	9
October	2	6	1	1	8
November	0	0	1	7	
December	3	3	2	5	
TOTALS	55	25	37	25	76 (year to date)

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

September-October, 2006

When odor was noticed		Odor location
date	time	
9/6/2006	7:35 PM	Highland Woods
9/7/2006	8:55 PM	Highland Woods
9/12/2006	11:26 AM	Woodbine Drive
9/15/2006	9:15 PM	Highland Woods
9/26/2006	11:56 PM	Highland Woods
9/27/2006	9:04 PM	Highland Woods
9/27/2006	8:38 PM	Highland Woods
9/27/2006	6:52 PM	Highland Woods
9/27/2006	9:03 PM	Highland Woods
10/2/2006	8:20 AM	Highland Woods
10/4/2006	9:15 PM	Highland Woods
10/5/2006	8:45 PM	Woodbine Drive
10/11/2006	5:35 PM	Highland Woods
10/11/2006	7:06 PM	Highland Woods
10/11/2006	7:10 PM	Highland Woods
10/25/2006	Midnight	WWTP
10/27/2006	10:18 AM	Highland Woods

**LOG OF E-MAILS AND A LETTER FROM OWASA
TO NEIGHBORS OF THE MASON FARM WASTEWATER TREATMENT PLANT
IN ADVANCE OF EXPECTED ODOR RELEASES
AND REGARDING RELATED ITEMS**

September- October, 2006

Date	Time	Comments
Sept. 6	9:58 PM	E-mail notice that odor release on Sept. 6 was from wastewater entering headworks.
Sept. 7	10:10 PM	E-mail notice that odor release on Sept. 7 was from wastewater entering headworks.
Sept. 8	7:52 AM	Annual report to local governments with odor elimination program report to the Town of Chapel Hill; item on the Sept. 11 Town Council agenda
Sept. 11	7:39 PM	E-mail notice of expected odor releases Sept. 12-14 and status report on work on gas handling pipes near solids digesters
Sept. 13	2:05 PM	Invitations by e-mail and postcard to a Community Meeting on Sept. 27 th sent to stakeholders including property owners within 4,000 feet of the WWTP
Sept. 18	12:34 PM	Information for Sept. 27 th Community Meeting—paper and e-mail
Oct. 6	5:07 PM	E-mail to Sept. 27 Community Meeting participants with first draft meeting summary
Oct. 12	4:56 PM	E-mail to Sept. 27 meeting participants regarding comments received on draft summary of the Community Meeting
Oct. 13	5:37 PM	E-mail regarding construction noise expected during a three-week period

DISTRIBUTION LIST FOR OWASA E-MAILS ABOUT ODOR RELEASES FROM THE MASON FARM WWTP AND RELATED ITEMS (OCTOBER 30, 2006)

NEIGHBORHOOD/ ORGANIZATION	NAME	STREET OR OTHER LOCATION
Highland Woods	Alice W. Neebe	Highland Woods Road
	Paul Neebe	Highland Woods Road
	Malcolm Forbes	Highland Woods Road
	Gary Richman	Highland Woods Road
	Robert and Melissa Porter	Highland Woods Road
	Peg Parker	Highland Woods Road
	James and Alice Ingram	Highland Woods Road
	Kay Johnson	Highland Woods Road
	Reed Johnson	Highland Woods Road
	Rex Bartles	Highland Woods Road
	Dan Pollitt	Highland Woods Road
	Mary Ellen Bierck	Highland Woods Road
	Barnes Bierck	Highland Woods Road
	Nortin Hadler	Highland Woods Road
	Carol Hadler	Highland Woods Road
	Frank P. Rexford	Highland Woods Road
	Christina and Rex Page	Highland Woods Road
	Ed Ludwig	Highland Woods Road
	Joy Javits, President, Highland Woods Association	Highland Woods Road
	Fred Hall	Highland Woods Road
	Anna K Schwab	Highland Woods Road
	Mary Helen and Donald Hayman	Highland Woods Road
	Abraham and Elin Nussbaum	Highland Woods Road
	Seth Kingsbury	Highland Woods Road
	Amanda Kingsbury	Highland Woods Road
	Tan and John Schwab	Highland Woods Road
	Gunilla Luboff	Highland Woods Road
	Elin Kondrad	Highland Woods Road
Finley Forest	Adam Kimplead	Brookberry Circle
	Cindy Underwood	Summerwalk Circle
	Dan Puckett	Springberry Lane
	Donna Kaye	Finley Forest Drive
	Linda Vaughn, Unit Owner	
	David J. Polewka	Summerwalk Circle
	Kathryn Conard	Summerwalk Circle
	Dan Choi	Summerwalk Circle
	Julie Maness	Summerwalk Circle
	Bob Stipe	Pine Lane
Laurel Hill Road area	Phyllis Barrett	Laurel Hill Road
	Bob Wendell, Pres. Laurel Hill Association	Country Club Road
	Carol David	Laurel Hill Road
	Pat Evans	Laurel Hill Road
	Ewan Rodewald and Sharon Hodge	Pine Lane

	Joe Ferrell	Iris Lane
	Dr. Sian Kwa	Pine Lane
	Marcella and Paul Grendler	Fern Lane
	Carolyn Goldfinch	Fern Lane
	Carol Hazard and Winston Liao	Fern Lane
	Dick and Marie Clark	Laurel Hill Road
	Kay Goldstein	Fern Lane
	Ann Wilson	Laurel Hill Road
St. Thomas More Church and School	St. Thomas More staff	St. Thomas More
Morgan Creek area	Carlos Lima	St. Thomas More School
	Ellen Johnson	Kings Mill Road
	Betsy Malpass	Woodbine Drive
	Hanson Malpass	Woodbine Drive
	Robert Ferrier	Coker Drive
	Laura King Moore	Morgan Creek
	Jeanne Langley	Sourwood Drive
	John Pendergrass	Coker Drive
	AW Carr	Coker Drive
	Gary Glish	North Hawick Court
Ronald McDonald House Family House	Shelly Day	Old Mason Farm Road
Reserve	Matt Hapgood	Old Mason Farm Road
	Steve McPhail, President, Hunt's Reserve	Flagstone Court
	Homeowners	
	Doug Longman	Siler's Fen Court
	Susan Frye	Flagstone Court
	Jeanne & David Jarrett	Rhododendron Drive
	Nadine O'Malley	Siler's Fen Court
	Mark Witcher	Siler's Fen Court
	Ralph Abrahams	Chimineas Place
	Kathy Abrahams	Chimineas Place
Bayberry Drive area UNC	William Ware	Bayberry Drive area
	Jim Ward--office	NC Botanical Garden
	Jim Ward--home	NC Botanical Garden
	Peter White	NC Botanical Garden
	Johnny Randall	NC Botanical Garden
	Kristin Sinclair	NC Botanical Garden
	Carolyn Elfland, Assoc. Vice Chancellor	UNC at Chapel Hill
	Ray DuBose, Energy Services Director	UNC at Chapel Hill
	Margaret Holton, Water, Sewer & Stormwater Coord.	UNC at Chapel Hill
	Peter Reinhardt, Environment, Health and Safety	UNC at Chapel Hill
	Brent Webber, Environment, Health and Safety	UNC at Chapel Hill
	Ross Fowler	Finley Golf Course
	Willie Scroggs	UNC Athletics
	Michael Wilkinson, golf pro	Finley Golf Course
	John Inman, Men's Golf Coach	Finley Golf Course
	Sally Austin, Women's Golf Coach	Finley Golf Course
	Aaron Bednar	Public Safety

	UNC Tennis Center	Friday Center Drive
	UNC parking	UNC at Chapel Hill
	Mike McFarland, Corporate Relations	UNC at Chapel Hill
	Scott Ragland, Corporate Relations	UNC at Chapel Hill
	Lisa Katz, Corporate Relations	UNC at Chapel Hill
	Linda Convisor, Corporate Relations	UNC at Chapel Hill
	Jon Howes, Corporate Relations	UNC at Chapel Hill
	Married Student Housing Manager	UNC at Chapel Hill
	UNC Farm (Faculty Staff Recreation Association)	UNC at Chapel Hill
	Steve Reznick, UNC Farm Assoc President	UNC Farm
	Jim McAdams, Energy Services	UNC at Chapel Hill
	Jim Alty, Facility Services	UNC at Chapel Hill
	Steve Bryant, Facilities Management	UNC at Chapel Hill
	Cameron Smith, Construction Management	UNC at Chapel Hill
UNC Hospitals	Lynn Wooten, Corporate Relations	
	Mel Hurston	
	Karen McCall	
	Chad Lefteris	
Town of Chapel Hill	Roger Stancil, Town Manager	
	Florentine A. Miller, Deputy Town Manager	
	Bruce Heflin, Asst Town Manager	
	Ralph Karpinos, Town Attorney	
	Bill Letteri, Public Works Director	
	Richard Terrell, Public Works Operations Supt.	
	Greg Ling, Street Supv.	
	Robert Sykes, Public Works	
	Dan Jones, Fire Chief	
	Robert Bosworth, Deputy Fire Chief	
	Gregg Jarvies, Police Chief	
	Jane Cousins, Police Planner	
	Bob Overton, Police Captain	
	Brian Curran, Police Major	
	Richard Terrell, PW Operations Supt.	
	George Small, Town Engineer	
	Larry Tucker, Engineering	
	Kurt Neufeng, Transit	
	Bill Webster, Interim Parks and Recreation Director	
	Ted Hobgood, Town Manager's Office	
	Catherine Lazorko, Town Information Officer	
	Lance Norris, Inspections 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	
	Steve Scroggs	
	Bill Mullin	

ADDENDUM TO OWASA'S REPORT IN NOVEMBER, 2006

November 1, 2006

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Orange County

Jack Ball, Director

Orange 911 Center Supervisor on duty

Mike Tapp, Fire Marshall

Tom Konsler, Environmental Health

Other Utilities

Scott T. Gardner, Duke Energy

Steve Small, Duke Energy

Billy Miller, PSNC

David Bracey, Time Warner Cable

Troy Ellis, BellSouth

Other

Aldersgate Methodist Church c/o Deil Wright

Aurora Restaurant

Meadowmont Apts.

Dave Hill, Meadowmont Homeowners

WWTP Contractor (Mike Angelli, Pizzagalli
Construction)

Pat Porter, Oaks Condominiums Owners Assoc

Vanessa Blackwood-Spinks, Glen Lennox Apts.
Mgr.

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. 06	94	12	7	0	1	9	2	20	17	8
Sept. 06	87	15	10	1	0	6	3	27	23	3
Oct. 06	95	17	5	3	1	13	2	30	18	16
Totals	276	44	22	4	2	28	7	77	58	27
%	----	16%	8%	1%	1%	10%	3%	29%	22%	10%

OFF-SITE:

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. 06	1	0	1	1	0	0	0	0	0	0	0
Sept. 06	6	0	0	0	0	0	0	0	0	0	0
Oct. 06	3	0	0	0	0	0	0	0	0	0	0
Totals	10	0	1	1	0	0	0	0	0	0	0
%	----	0%	50%	50%	0%	0%	0%	0%	0%	0%	0%

Notes:

1) All except seven (7) odor events were characterized by the WWTP Operators as “Mild” with odors that would not be expected to create an off-site problem.

2) “Strong” odors were detected by the WWTP Operators on the following dates
 August 17 – 7:45 AM September 4 – 1:00 AM
 August 25 – 1:00 AM September 8 – 7:55 AM
 August 26 – 2:00 AM October 25 – 1:00 AM *
 August 28 – 1:00 AM

* An asterisk indicates a corresponding date when WWTP neighbor(s) reported odor at the same time.