



ORANGE WATER AND SEWER AUTHORITY

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

April 23, 2018

Mayor Pam Hemminger
Town of Chapel Hill
405 Martin Luther King Jr.
Boulevard
Chapel Hill, NC 27514

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

Chair Mark Dorosin
Orange County Board of
Commissioners
Post Office Box 8181
Hillsborough, NC 27278

Dear Mayor Hemminger, Mayor Lavelle and Chair Dorosin:

We are pleased to submit this report on our services, projects and initiatives from January through early April 2018.

[Agua Vista/Advanced Metering Infrastructure](#)

The project is well underway and scheduled to wrap up in June 2019.

To date, we have installed over half of the infrastructure necessary to relay meter reading data from the new meters. This infrastructure includes data collectors on tall buildings and water towers and signal repeaters on street signs.

In late 2017 and early 2018, we successfully completed two readiness tests (i.e. pilots) during which we upgraded about 500 residential and commercial water meters and processed and mailed bills for those customers. At the beginning of March 2018, we began full-scale deployment and began upgrading 1,500 – 1,800 meters per month. As we move through the community upgrading meters, individual customers will be notified by letter of their upcoming meter upgrade about a month in advance. We are also actively posting information in affected neighborhoods via Next Door. Once upgraded, customers will receive a door hanger with information and a link to the follow-up survey.

After approximately 75% of the meters have been upgraded, we expect to roll out a web portal for customers to access their own hourly water use data. Currently, OWASA is analyzing the data on upgraded meters and proactively reaching out to customers if their water use trends suggest a leak.

Staff provided updates to the Carrboro Board of Aldermen on March 20, 2018 and to the Chapel Hill Town Council on April 11, 2018.

Sewers for the Historic Rogers Road Area

The Historic Rogers Road Area Sewer Extension project is well underway. Approximately 34% of the sewer is installed (approximately 6,500 feet out of 19,000 feet). Construction is currently anticipated to be completed in Fall 2018.

However, the contractor has encountered significant quantities of rock in the area where sewer is next to be installed. As such, blasting has been proposed by the contractor as the best means and methods to remove the rock and install the sewer lines. Since the beginning of March when blasting was identified as necessary, three public meetings have been held on the topic of blasting with the community. Due to the recent blasting delays and construction coordination issues, some additional construction time and costs may also be added to the schedule for final completion. At this time, the project team anticipates that blasting for rock removal will begin in early May.

Unregulated Compounds in Water Resources

In October 2017, Duke University professors analyzed a sample of OWASA drinking water and found a sum total of 14 parts per trillion (ppt) of Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). This is well below the EPA Health Advisory Level (HAL) of 70 ppt combined of the two compounds. The Duke professors also analyzed the sample for seven other perfluorinated compounds, they detected a sum total of about 50 ppt for all nine compounds (PFOA, PFOS, and seven additional compounds). While we saw no reason for alarm in these results, we followed-up with additional analysis.

In January 2018, OWASA collected samples for per- and polyfluoroalkyl substances (together, PFASs) analysis. These analyses measured the level of 39 PFASs in OWASA's raw source waters, treated drinking water, and treated wastewater effluent as well as the raw well water source for the Cane Creek Reservoir Recreation Facilities water system, process water within the water treatment plant, and Morgan Creek upstream of the wastewater effluent discharge. Below are some key findings:

	Treated Drinking Water	Raw Source Water			Morgan Creek Upstream	Wastewater
		University Lake	Cane Creek Reservoir	Quarry Reservoir		Treated Wastewater Effluent
Count of PFASs detected from 39 analyzed	7	2	11	2	8	9
Sum of all PFASs (ppt) [No HAL]	37.8 – 45.9	4.7	206.1	4.9	49.6	101.9
Sum of PFOS & PFOA (ppt) [HAL* is 70 ppt]	13.7 – 18.0	4.7	120.0	4.9	13.4	23.1

*Drinking water Health advisories are specifically for PFOA and PFOS and do not apply to other perfluoroalkyl substances (PFASs). The EPA is continuing to gather information about other PFASs.

GenX was not detected in any sample.

Finished Drinking Water: Two treated drinking water samples were collected, one as water left the Jones Ferry Water Treatment Plant and one from the distribution system. The same seven PFASs were detected in each sample at very similar levels. The sum of PFOS and PFOA in these samples was well below the 70 ppt health advisory level (13.7 ppt in one sample and 18.0 ppt in the other). Studies indicate that the use of powder activated carbon (PAC) is successful in the removal of some PFASs but not all. Our test results showed that OWASA's treatment process was also successful in removing some PFASs but not all.

Raw Reservoir Water: In the University Lake and Quarry Reservoir samples only two PFASs were detected. In the sample from Cane Creek Reservoir, 11 PFASs were detected. The sum of PFOS and PFOA in University Lake, Quarry Reservoir, and Cane Creek Reservoir were 4.7, 4.9, and 120 ppt, respectively.

The definite sources of PFOS and PFOA in the Cane Creek Reservoir are unknown. There are no facilities typically associated with elevated levels of PFAS in the watershed, although we do not have specifics on past land use. We do know that other utilities apply biosolids in the watershed; OWASA does not.

Upstream Morgan Creek: Eight PFASs were detected in the sample collected from Morgan Creek upstream of where the Mason Farm Wastewater Treatment Plant effluent is discharged. These were the same eight compounds detected in the effluent sample; one additional compound was detected in the effluent and not in the creek sample. Four of the compounds were present at similar levels in the creek and effluent samples.

Wastewater: In the Mason Farm Wastewater Treatment Plant effluent sample, nine PFASs were detected. The list of nine compounds detected in the effluent includes all seven PFASs detected in the drinking water samples and two additional compounds. Five of these compounds were present at similar levels to that in the drinking water samples.

The Board of Directors and staff are continuing to review and discuss these findings.

Fiscal Year 2019 Budgets and Rates Including New System Development Fees

We are in the process of developing the budget for FY 2019 and determining whether it is necessary to implement a rate increase for monthly water and sewer services to meet our financial obligations and maintain financial stability and sustainability. OWASA has not increased monthly water and sewer rates since October 2011. However, staff is recommending a rate increase of 2.0% to 2.75% in FY 2019. The OWASA Board will be discussing rate adjustment options at our meeting on Thursday, April 26, 2018 at 7:00 p.m. at Chapel Hill Town Hall (link will be provided).

We are proposing to reduce System Development Fees (fees for new connections made to the water or sewer system) by approximately 20%, in compliance with a North Carolina statute passed in 2017. (More information about the proposed fee changes and the methodology used to calculate the new fees can be found in the [Water and Sewer System Development Fee Study](#)).

Adjustments to fees for miscellaneous services will be made based on changes in the costs to provide the services.

Public hearings are scheduled for Thursday, May 24th at 7:00 p.m. in the Chapel Hill Town Hall to receive comments on the proposed budget and rates. Final approval for FY 2019 budgets and rates is schedule for our June 14, 2018 meeting.

Fiscal Year 2018 Financial Forecast

Based on actual results through February 2018 and projections for the remaining four months of the fiscal year, we are forecasting the following:

	Budget	Forecast	Variance Pct
Revenue	\$37,346,000	\$38,134,000	2.1%
Expenses	21,920,000	21,666,000	(1.2%)
Net Income	15,426,000	16,470,000	6.8%

Affordability Outreach Program/[Care to Share](#)

On February 8, the OWASA Board of Directors approved a plan for [Year 3 of the Affordability Outreach Program](#). This Plan reflects our partnership with the community in an ongoing commitment to increase community awareness of options to manage and reduce water and sewer bills and to empower low-income customers, and the local agencies that serve them, with information and tools to manage and reduce water and sewer bills. Of note for the next year, we plan to repeat the Save2Gain Water Conservation Challenge in partnership with the Town of Chapel Hill’s Public Housing, to pilot a bill deferment/financial coaching partnership with the Community Empowerment Fund, and to utilize the hourly water use data from the Agua Vista Metering Initiative to proactively alert customers about leaks.

Additionally, the Plan addresses strategies to increase contributions to Care to Share, our customer assistance program implemented by the Interfaith Council for Social Services. For example, in March, we mailed a thank you letter to all Care to Share on-bill contributors and encouraged customers to increase their contributions. Thus far, twenty-four (24) customers have changed their “round up” contribution to a fixed dollar amount, resulting in an increase of \$98 contributed to the program last month alone.

Diversity and Inclusion Program

A Draft Plan for Improvements identified by the Organizational Assessment has been prepared and was received and accepted by the Board on April 12, 2018. The Plan includes prioritizing and delegating general and recruitment recommendations. The Diversity Recruitment Group has been evaluating recruitment, career development and promotion processes for improvements toward our goal of providing service excellence, a diverse workforce and an inclusive environment.

The Board of Directors will be having our fourth training and discussion session with our consultant (VISIONS, Inc.) on Wednesday, May 30, 2018.

Long-Range Water Supply Plan

Staff are beginning to develop water projections. We are using the same growth projections that the local governments are using as a basis for our demand projections. Staff are meeting with local government and UNC staff to make sure they agree with our assumptions and overall results.

Energy Management

On March 8, the OWASA Board of Directors approved the 2018 Energy Management Plan Update. The Plan outlines our effort to reduce our use of purchased electricity and natural gas and to generate renewable energy, where viable. Over the coming year, we will be engaging the community in the evaluation of a solar photovoltaic installation at our Cane Creek Reservoir property. Additionally, after a thorough analysis that concluded no immediate financially viable option, we are delaying our goal of having a strategy employed by 2022 to fully convert the biogas generated at the Mason Farm Wastewater Treatment Plant into renewable energy. We will continue to work with partners and stay abreast of technology and policy changes that could help support a fiscally-responsible option.

Infrastructure Investments

Capital investments, including debt payments for capital projects, account for about half of our costs.

Key projects underway:

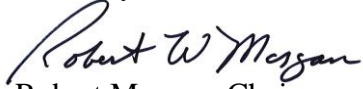
- Rehabilitation and improvements to the wastewater pump station near Cleland Drive, our largest remote wastewater pump station.
- Completion of an assessment at our treatment plants to identify and assess risks that would prevent OWASA from providing services that meet or exceed federal, state and local quality requirements.
- Replacement of filter media and rehabilitation and improvements to the filtration system used at the Jones Ferry Water Treatment Plant.
- Enhancements to security systems at various remote water supply and storage facilities.
- Upsizing of a sanitary sewer main across Hillsborough Street near Bolinwood Drive.
- Completion of work in the Heritage Hills Neighborhood, including replacement of water mains on portions of Brandywine and Lexington Roads, and rehabilitation of sewer mains and manholes throughout the neighborhood.

Key upcoming projects:

- Replacement of a water main on Pritchard Avenue and Noble Street.
- Replacement of small-diameter galvanized water mains at approximately 25 locations throughout the service area, typically at dead end streets or other smaller sites.
- Electrical and ventilation improvements to a pumping station at the Mason Farm Wastewater Treatment Plant.

We would be happy to provide you more detailed information on the items above or other topics of interest as desired. Please feel free to contact Ed Kerwin, Executive Director (ekerwin@owasa.org or 919-537-4211), or me.

Sincerely,



Robert Morgan, Chair
OWASA Board of Directors

Attachments

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

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 Events
January	11	3	9	0	8	3	8	1	3	3	4	0	3	0	0	0	0
February	7	5	2	0	8	0	4	1	0	3	3	0	4	0	0	1	0
March	9	0	7	1	10	4	1	1	0	2	8	0	0	1	0	0	0
April	9	2	4	0	9	3	1	1	2	1	1	0	0	0	0	0	-
May	6	0	2	5	8	3	2	5	4	0	1	3	0	0	0	0	-
June	4	1	1	1	5	1	8	8	1	2	2	0	0	0	0	0	-
July	1	0	2	0	0	2	6	3	2	4	0	0	2	0	0	0	-
August	1	0	4	3	11	2	9	0	1	1	2	0	2	2	0	0	-
September	2	5	2	2	9	3	1	1	5	1	1	0	3	0	0	0	-
October	2	6	1	1	8	8	2	0	3	3	2	2	3	0	0	0	-
November	0	0	1	7	2	6	7	1	1	4	0	1	0	0	0	0	-
December	3	3	2	5	8	10	2	1	1	6	3	5	0	0	0	1	-
TOTAL	55	25	37	25	86	45	51	23	23	30	27	11	17	3	0	2	0

January-2002 to December-2017 History and 2018 present

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 2018 – December 2018

Date call received	Time call received	Location
January 2018	No Reported Odors	N/A
February 2018	No Reported Odors	N/A
March 2018	No Reported Odors	N/A
April 2018	-	-
May 2018	-	-
June 2018	-	-
July 2018	-	-
August 2018	-	-
September 2018	-	-
October 2018	-	-
November 2018	-	-
December 2018	-	-

**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)
January 2018	0.0001	0.0000	0.0176 ¹	0.0000	0.0000	0.0000 ²	0.0000	0.0000	0.0000 ³	0.0008	0.0000	0.0137 ⁴
February 2018	0.0001	0.0000	0.0078 ⁵	0.0000	0.0000	0.0000 ⁶	0.0000	0.0000	0.0000 ⁷	0.0008	0.0000	0.0088 ⁸
March 2018	0.0000	0.0000	0.0044 ⁹	0.0000	0.0000	0.0000 ¹⁰	0.0000	0.0000	0.0000 ¹¹	0.0003	0.0000	0.0039 ¹²

Monitor Locations:

Headworks Monitor (#1) – Monitor located at Headworks Facility.

Digester Monitor (#2) – Monitor located between Digester #1 and Digester #4.

UNC Monitor (#3) – Monitor located at Primary Sludge PS.

Switchgear Monitor (#4) – Monitor located at Switchgear Building.

¹ Maximum reading occurred on January 4, 2018

² Maximum reading zero all of January 2018

³ Maximum reading zero all of January 2018

⁴ Maximum reading occurred on January 20, 2018

⁵ Maximum reading occurred on February 25, 2018

⁶ Maximum reading zero all of February 2018

⁷ Maximum reading zero all of February 2018

⁸ Maximum reading occurred on February 23, 2018

⁹ Maximum reading occurred on March 16, 2018

¹⁰ Maximum reading zero all of March 2018

¹¹ Maximum reading zero all of March 2018

¹² Maximum reading occurred on March 1, 2018

DISTRIBUTION OF OWASA E-MAILS ABOUT OFF-SITE ODOR ELIMINATION

March 31, 2018

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 Ann Alexander Nortin Hadler Carol Hadler Frank P. Rexford Scott Brees Kendall Brees Rainer Blaesius Elisabeth Schweins Susannah Shearer Fred Hall Lawanda Rainey-Hall Katie Jamieson Richard Harrill Angel Smith Jordon Sharome Cameron Williams Marian Rice Janet McLamb Michael Henning Benjamin Duan-Porter Matthew Mauck
Finley Forest	Adam Kimplead Cindy Underwood Dan Puckett David J. Polewka

Distribution of OWASA E-mails About Off-Site Odor Elimination

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Laurel Hill	Kathryn Conard Michael Sharpe Julie Maness Bob Wendell Carol David Pat Evans Ewan Rodewald and Sharon Hodge Marcella Grendler Kay Goldstein Ann Wilson Louis Fogleman
St. Thomas More Church and School Morgan Creek area	St. Thomas More Church staff Ellen Johnson Aldersgate United Methodist Church Betsy Malpass Hanson Malpass Jeannie Cox Laura King Moore Jeanne Langley AW Carr Marilyn and Don Hartman Robert Huls
Ronald McDonald House Family House	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 and David Jarrett Nadine O'Malley Mark Witcher Ralph Abrahams Kathy Abrahams
Bayberry Drive area UNC	William Ware 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 Michael Wilkinson, golf pro

Distribution of OWASA E-mails About Off-Site Odor Elimination

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	Andrew Sapp, Men's Golf Coach
	UNC Tennis Center
	UNC parking
	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
	Kate Luck
UNC Healthcare	Mel Hurston
	Karen McCall
	Keith Morris
Town of Chapel Hill	Roger Stancil, Town Manager
	Florentine A. Miller, Deputy Town Manager
	Ralph Karpinos, Town Attorney
	Lance Norris, Public Works Director
	Chris Roberts, Town Engineer
	Richard Terrell, Public Works Operations Superintendent
	Catherine Lazorko, Public Information Officer
	Jeanne Brown, Assistant to the Mayor
	Phil Mason, Planner
	Sabrina Oliver, Town Clerk
	Amy Harvey, Public Affairs and Communications
	Chris Blue, Police Chief
	Bryan Walker, Captain/Police Information
	Josh Mecimore, Police Information Officer
	Allison Weakley
	Kiel Harms
	Ran Northam
	Ross Tompkins
City Schools	Bill Mullin
	Todd LoFrese, Assistant Superintendent for Support Services
	Jeff Nash, Community Relations
	Crystal Jones
	Chris Liles
	Darlene Ryan
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

Distribution of OWASA E-mails About Off-Site Odor Elimination

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Other	Connie Pixley, Environmental Health Supervisor Bill Ferrell, Meadowmont Community Association Chamber of Commerce Michael Hughes Post Office
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