

**MECO UTILITIES, INC.
DOCKET NO. W-1166, SUB 17**

**TESTIMONY OF GINA Y. CASSELBERRY
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION**

MARCH 2, 2018

1 **Q. PLEASE STATE FOR THE RECORD YOUR NAME, BUSINESS**
2 **ADDRESS, AND PRESENT POSITION**

3 A. My name is Gina Y. Casselberry. My business address is 430 North
4 Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am a
5 Utilities Engineer with the Public Staff's Water, Sewer and
6 Communications Division.

7 **Q. BRIEFLY STATE YOUR QUALIFICATIONS AND EXPERIENCE**
8 **RELATING TO YOUR PRESENT POSITION WITH THE PUBLIC**
9 **STAFF.**

10 A. I graduated from Michigan Technology University receiving a Bachelor
11 of Science Degree in Civil Engineering. Prior to joining the Public Staff,
12 I worked for McKim and Creed Engineers, PA, as a Project Engineer
13 designing water and sewer systems. I have been with the Public Staff's
14 Water Division since February, 1992. I have presented
15 recommendations in rate increase proceedings, new franchise and
16 transfer applications and other matters before the Commission for the
17 past twenty-six years.

1 **Q. WHAT ARE YOUR DUTIES IN YOUR PRESENT POSITION?**

2 A. My duties with the Public Staff are to monitor the operations of
3 regulated water and sewer utilities with regard to service and rates.
4 Included in these duties are field investigations to review, evaluate, and
5 recommend changes, when needed, in the design, construction, and
6 operations of regulated water and sewer utilities; presentation of expert
7 testimony in formal hearings; and presentation of information, data,
8 and recommendations to the Commission.

9 **Q. PLEASE DESCRIBE THE SCOPE OF YOUR INVESTIGATION IN**
10 **THIS CASE.**

11 A. On December 4, 2017, MECO Utilities, Inc. (MECO or Company) filed
12 an application with the Commission to increase its rates for providing
13 water and sewer utility service in Mobile Estates Mobile Home Park
14 (Mobile Estates) in Wake County, North Carolina. My investigation
15 included review of customer complaints, contact with the Division of
16 Water Resources (DWR), Public Water Supply Section (PWSS),
17 review of company records and analysis of revenues at existing and
18 proposed rates. I have also assisted Public Staff Accountant Manasa
19 Cooper in reviewing expenses and plant in service.

20 **Q. PLEASE DESCRIBE MECO'S SERVICE AREA.**

21 A. Mobile Estates is a mobile home park located in the Town Limits of
22 Cary, North Carolina, on the east side of Maynard Road,

1 approximately 400 yards south of the intersection of Maynard and
2 Chatham Street. MECO purchases water and sewer treatment from
3 the Town of Cary. The mobile home park has approximately 276
4 rental spaces. As of the twelve month period ending September 30,
5 2017, MECO served 271 end of period (EOP) water and sewer
6 customers.

7 **Q. WHAT ARE MECO'S PRESENT AND PROPOSED RATES?**

8 A. MECO's present and proposed rates for water and sewer utility
9 service are shown below:

10		Present	Proposed
11		<u>Rates</u>	<u>Rates</u>
12	<u>Monthly Metered Water Rates:</u>		
13	Base charge, zero usage (minimum)	\$13.81	\$16.50
14	Usage charge, per 1,000 gallons	\$ 6.44	\$ 7.69
15	<u>Monthly Metered Sewer Rates:</u>		
16	Base charge, zero usage (minimum)	\$12.14	\$16.09
17	Usage charge, per 1,000 gallons	\$ 9.96	\$13.20

18 The proposed rates would increase the average residential monthly
19 water bill from \$36.67 to \$43.80, a 19.44% increase, and monthly
20 sewer bill from \$47.50 to \$62.95, a 32.53% increase, based on an
21 average monthly usage of 3,550 gallons.

1 **Q. HAVE YOU REVIEWED THE OPERATIONAL STATUS OF THE**
2 **WATER SYSTEM WITH PWSS?**

3 A. Yes. I contacted the Raleigh Regional Office. Regional office
4 personnel expressed no concerns with water quality or the operation
5 of the water system.

6 **Q. HAVE YOU RECEIVED ANY CUSTOMER COMPLAINTS AS A**
7 **RESULT OF CUSTOMER NOTICE IN THIS PROCEEDING?**

8 A. No. MECO Utilities filed the Certificate of Service on December 21,
9 2017 as required. The notice period ended February 15, 2018. The
10 Public Staff has not yet received any customer complaints.

11 **Q. HAVE YOU RECOMMENDED ANY ADJUSTMENTS TO**
12 **EXPENSES RELATED TO WATER AND SEWER OPERATIONS?**

13 A. Yes, I have provided Public Staff Accountant Cooper with
14 recommendations for contract operating services, testing expenses,
15 maintenance and repairs expenses, permits and fees, and purchased
16 water for water operations; and purchased sewer treatment for sewer
17 operations.

18 CONTRACT OPERATING SERVICE

19 MECO has a management agreement with Management Group of NC,
20 Inc. (MGNC) who is responsible for meter reading, billing, account's
21 received, preparing and filing regulatory reports with state agencies,
22 collecting water samples and providing consultation in regard to water
23 and sewer operations.

1 Mobile Estates is a purchased water system with a class B
2 classification for the distribution system. Mr. James R. Butler is the
3 distribution Operator in Responsible Charge (ORC) for the water
4 system and holds a B-Distribution Certification. He resides in
5 Swansboro North Carolina, outside the 50 mile radius established by
6 the North Carolina Certification Board, but has obtained a waiver from
7 the Board. His field technician, Lara R. Butler lives within the 50 mile
8 radius and collects water samples and monitors weekly disinfectant by-
9 products (DBP), which is discussed in water testing expenses. Ms.
10 Butler holds a C-Distribution certification and is working towards
11 obtaining her B-Distribution certification.

12 In response to Engineering Data Request (EDR) No. 1, the ORC duties
13 are: (1) preparing and filing monthly DBP reports, which takes
14 approximately two hours per month, (2) observation of repairs and
15 flushing depending on the severity of the repair and (3) supervising the
16 field technician's performance, approximately three hours per month.
17 MGNC's fee for the ORC is \$324 per month. In addition, MGNC billed
18 MECO \$47.84 per month for DBP monitoring and reporting. It is the
19 Public Staff's position that DBP monitoring and reporting is part of the
20 ORC's duties and is included in the monthly fee and should not be
21 billed twice. Therefore, I recommend \$3,888 (\$324 x 12 months) for
22 annual contract operating services.

1 WATER TESTING EXPENSES

2 The Applicant expensed \$18,371.33 for water testing. The Town of
3 Cary uses chloramine as its primary disinfectant. The North Carolina
4 Department of Environmental Quality (NCDEQ) requires on-site
5 monitoring of DBP for all systems providing chloraminated water to its
6 customers. As a result, Mobile Estate's distribution system is
7 monitored at five locations, on a weekly basis for free chlorine, total
8 chlorine, monochloramine, free ammonia and pH/temperature. In
9 response to EDR No. 1, it takes the field technician 16 hours per
10 month (4 hours per week) for weekly DBP monitoring and two hours
11 per month to collect monthly or quarterly samples and transport them
12 to the lab, which is approximately 5 miles from Mobile Estates.
13 MGNC billed MECO Utilities a lump sum of \$47.84 (\$23.92 per hour)
14 for distribution sampling and a lump sum of \$386 (\$96.50 per hour)
15 per week for weekly DBP monitoring. It is the Public Staff's position
16 that the weekly rate for DBP monitoring is excessive. The five
17 parameters listed are simple field tests, which are also recorded daily
18 or weekly for a typical C-well, with the exception of monochloramine
19 and free ammonia depending on the type of disinfection. MGNC's
20 field technician performs both tasks, weekly monitoring and
21 collecting distribution samples. It is the Public Staff's position that
22 the hourly rate should be the same for both.

1 My research suggest that the median hourly rate for an
2 environmental technician is \$15.17. In EDR No.1, MGNC stated that
3 the hourly rate was \$24.68 before a 78 percent markup. The hourly
4 rate of \$24.68 is 63 percent higher than the median. It is also a 3.2
5 percent pay increase from 2017. It is the Public Staff's opinion that
6 \$24.68 is a reasonable hourly rate. Therefore, I recommend a lump
7 sum of \$98.72 per week for weekly DBP monitoring and \$49.36 for
8 distribution sampling. I recommend \$7,116 for water testing
9 expenses. My calculations are shown in Casselberry Exhibit No. 1.

10 MAINTENANCE AND REPAIR EXPENSES

11 The Applicant expensed \$901 for maintenance and repairs expenses.
12 The \$901 was for preparing the consumer confidence report, which I
13 reclassified to permits and fees. There were no other expenditures for
14 maintenance and repairs. Based on MGNC's response to EDR No. 1,
15 there is no flushing program established for Mobile Estates. MGNC
16 stated that the system was flushed three times as a result of system
17 repairs. The Public Staff recommends a quarterly flushing program
18 which can be done in conjunction with collecting quarterly samples or
19 as needed if repairs are necessary within the quarter. The ORC stated
20 that it took approximately 4 hours to cycle through the system. Since
21 the field technicians collects quarterly samples, I used the hourly rate
22 of \$24.68 to calculate expenses associated with flushing. I

1 recommend \$395 (4 hours x \$24.68 per hour x 4 quarters) for
2 maintenance and repair expenses.

3 PERMITS AND FEES

4 As I previously stated, I reclassified \$901 from maintenance and repair
5 expenses and \$780 was reclassified from miscellaneous expenses for
6 NCDEQ/PWSS's annual permit. I recommend \$1,681 for permits and
7 fees.

8 PURCHASED WATER

9 Based on my review of invoices, I determined purchased water in the
10 amount of \$83,814. I increased purchased water by \$2,235 to reflect
11 the Town of Cary's new rates. I also reduced purchased water by
12 \$8,818 for water losses greater than 20 percent. I recommend
13 \$77,231 for purchased water. My adjustments are shown in
14 Casselberry Exhibit Nos. 2 and 3.

15 PURCHASED SEWER TREATMENT

16 Based on my review of invoices, I determined purchased sewer
17 treatment in the amount of \$158,473. I increased purchased sewer
18 treatment by \$4,279 to reflect the Town of Cary's new rates.
19 Purchased sewer treatment is based on the amount of water
20 purchased. Therefore, I also, reduced purchased sewer treatment
21 for water losses greater than 20, resulted in a reduction of \$16,832.
22 I recommend \$145,920 for purchased sewer treatment. My
23 adjustments are shown in Casselberry Exhibit Nos. 2 and 3.

1 **Q. WHAT ARE THE ANNUAL SERVICE REVENUES UNDER**
 2 **PRESENT AND PROPOSED RATES?**

3 A. My calculations for service revenue at present and proposed rates
 4 are shown below:

5 Water Utility Service

6 Revenue at Present Rates:

7	271 customers x \$13.81 x 12 months =	\$ 44,910
8	11,496,155 gallons x \$6.44/1,000 gallons =	<u>\$ 74,035</u>
9		\$118,945

10 Revenue at Proposed Rates:

11	271 customers x \$16.50 x 12 months =	\$ 53,658
12	11,496,155 gallons x \$7.69/1,000 gallons =	<u>\$ 88,405</u>
13		\$142,063

14 Sewer Utility Service

15 Revenue at Present Rates:

16	271 customers x \$12.14 x 12 months =	\$ 39,479
17	11,496,155 gallons x \$9.96/1,000 gallons =	<u>\$114,502</u>
18		\$153,981

19 Revenue at Proposed Rates:

20	271 customers x \$16.09 x 12 months =	\$ 52,325
21	11,496,155 gallons x \$13.20/1,000 gallons =	<u>\$151,749</u>
22		\$204,074

23 **Q. WHAT IS YOUR RECOMMENDATION CONCERNING MECO'S**
 24 **PROPOSED RATES?**

25 A. The Public Staff's recommended service revenues are listed below:

26 Service Revenues:

27	Water Utility Service	\$122,855
28	Sewer Utility Service	\$179,746

1 The Public Staff recommends a partial rate increase for water and
2 sewer utility service.

3 **Q. PLEASE DESCRIBE YOUR RATE DESIGN AND RECOMMENDED**
4 **RATES?**

5 A. MECO is a purchased water and sewer treatment system. Therefore,
6 I calculated the water and sewer usage charge based on the cost for
7 purchased water and sewer treatment. The base charge reflects the
8 remaining expenses associated with providing service. By setting the
9 usage charges for water and sewer based on purchased water and
10 sewer treatment, should MECO request a pass through, any increase
11 to the usage charges would be directly associated with the increased
12 cost for purchased water and sewer treatment. My calculations are
13 shown below.

14 **Metered Water Rates:**

15	Service revenue	\$122,855
16	Purchased water	<u>\$ 77,231</u>
17	Difference	\$ 45,624

18
19 Base charge:

20 $\$45,625/271 \text{ EOP customers} \times 12 \text{ mo.} = \14.03

21 Usage charge:

22 $\$77,231/11,496,155 \text{ gallons} \times 1,000 = \$ 6.72$

23 I recommend a base charge of \$14.03 and a usage charge of \$6.72
24 per 1,000 gallons, which generate revenue of \$122,880.

25	$\$14.03 \times 271 \text{ EOP customers} \times 12 \text{ mo.}$	$= \$ 45,626$
26	$\$6.72/1,000 \text{ gallons} \times 11,496,155 \text{ gallons}$	$= \underline{\$ 77,254}$
27		$\$122,880$

1 **Metered Sewer Rates:**

2	Service revenue	\$ 179,746
3	Purchased sewer treatment	<u>\$ 145,920</u>
4	Difference	\$ 33,826

5 Base charge:

6 \$33,826/271 EOP customers x 12 mo. = \$10.40

7 Usage charge:

8 \$145,920/11,496,155 gallons x 1,000 = \$12.69

9 I recommend a base charge of \$10.42 and a usage charge of
10 \$12.69 per 1,000 gallons, which generate revenue of \$179,772.

11	\$10.42 x 271 EOP customers x 12 mo.	= \$ 33,886
12	\$12.69/1,000 gallons x 11,496,155 gallons	= <u>\$ 145,886</u>
13		\$ 179,772

14 MECO's present and proposed rates and the Public Staff's
15 recommended rates are shown on Casselberry Exhibit No. 4.

16 **DOES THIS CONCLUDE YOUR TESTIMONY?**

17 A. Yes.

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Test Year Ending September 30, 2017

Casselberry
Exhibit No. 1

WATER TESTING EXPENSES

Test	Collection and/or Monitoring	Frequency	Cost Per test	Factor	Total Cost
Bac-T	\$ 49.36	1/month	\$ 35.00	12	\$ 1,012.32
Lead & Cooper	\$ 49.36	10/3 years	\$ 35.00	3.33	\$ 133.44
TTHM & HAA5	\$ 49.36	1/quarterly	\$ 160.00	4	\$ 837.44
DBP's	\$ 98.72	weekly	N/A	52	\$ 5,133.44
Total					\$ 7,116.64

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Casselberry
Exhibit No. 2

Purchased Water and Sewer Treatment

Date	Invoices			Adjusted for current rates					
	Water	Sewer	Usage	Water	Water	Total	Sewer	Sewer	Total
	Amount	Amount		Base	Usage		Base	Usage	
				136.93	5.26/1k	Water	136.93	10.04/1k	Sewer
10/7/2016	7,187.40	13,593.01	1,380,520	136.93	7261.54	7,398.47	136.93	13,860.42	13997.35
11/7/2016	6,571.23	12,417.36	1,259,940	136.93	6627.28	6,764.21	136.93	12,649.80	12786.73
12/7/2016	6,770.32	12,797.22	1,298,900	136.93	6832.21	6,969.14	136.93	13,040.96	13177.89
1/6/2017	6,679.77	12,624.45	1,281,180	136.93	6739.01	6,875.94	136.93	12,863.05	12999.98
2/7/2017	6,955.30	13,150.17	1,335,100	136.93	7022.63	7,159.56	136.93	13,404.40	13541.33
3/7/2017	6,682.68	12,630.00	1,281,750	136.93	6742.01	6,878.94	136.93	12,868.77	13005.70
4/7/2017	6,910.13	13,063.98	1,326,260	136.93	6976.13	7,113.06	136.93	13,315.65	13452.58
5/8/2017	7,106.40	13,438.47	1,364,670	136.93	7178.16	7,315.09	136.93	13,701.29	13838.22
6/7/2017	6,842.83	12,935.57	1,313,090	136.93	6906.85	7,043.78	136.93	13,183.42	13320.35
7/7/2017	7,382.55	13,965.36	1,418,710	136.93	7462.41	7,599.34	136.93	14,243.85	14380.78
8/7/2017	7,001.80	13,238.89	1,344,200	136.93	7070.49	7,207.42	136.93	13,495.77	13632.70
9/7/2017	7,723.69	14,618.12	1,442,350	136.93	7586.76	7,723.69	136.93	14,481.19	14618.12
Total	83,814.10	158,472.60	16,046,670			86,048.64			162,751.73

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Casselberry
Exhibit No. 3

Purchased Water Adjustment for Water Loss

Service Area	Total Gallons Purchased	Total Gallons Sold	Loss	20% Loss	Sold Plus 20% loss	Loss at 20%	Reduction In gallons	Usage Rate per 1000 gal.	Adjusted Expense
Mobile Estates	16,046,670	11,496,155	4,550,515	28.36	14,370,194	2,874,039	1,676,476	5.26	8,818

Purchased Sewer Adjustment for Water Loss

Service Area	Total Gallons Purchased	Total Gallons Sold	Loss	20% Loss	Sold Plus 20% loss	Loss at 20%	Reduction In gallons	Usage Rate per 1000 gal.	Adjusted Expense
Mobile Estates	16,046,670	11,496,155	4,550,515	28.36	14,370,194	2,874,039	1,676,476	10.04	16,832

MECO Utilities, Inc.
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Casselberry
Exhibit No. 4

MECO's Present and Proposed Rates and the Public Staff's Recommend Rates

	MECO's Present <u>Rates</u>	MECO's Proposed <u>Rates</u>	Public Staff's Recommended <u>Rates</u>
<u>Monthly Metered Water Rates:</u>			
Base charge, zero usage	\$13.81	\$16.50	\$14.03
Usage charge, per 1,000 gallons	\$ 6.44	\$ 7.69	\$ 6.72
Average bill (average usage 3,550 gallons)	\$36.67	\$43.80	\$37.89
Percent increase		19.44%	3.33%
<u>Monthly Metered Sewer Rates:</u>			
Base charge, zero usage	\$12.14	\$16.09	\$10.42
Usage charge, per 1,000 gallons	\$ 9.96	\$13.20	\$12.69
Average bill (average usage 3,550 gallons)	\$47.50	\$62.95	\$55.47
Percent increase		32.53%	16.78%