

1 **TIDEWATER UTILITIES, INC.**

2 **TESTIMONY OF GERARD L. ESPOSITO**

3

4 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

5 A. My name is Gerard L. Esposito. My business address is: Tidewater Utilities, Inc.  
6 located at 1100 South Little Creek Road, Dover, DE.

7 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

8 A. I am employed by Tidewater Utilities, Inc. (TUI or Tidewater). I am President and a  
9 Board member of TUI.

10 Q. PLEASE STATE YOUR EDUCATIONAL AND OCCUPATIONAL BACKGROUND.

11 A. I have attached my professional qualifications as Exhibit A.

12 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

13 A. The purpose of my testimony is to summarize Tidewater's rate increase application as  
14 well as give an overview of its operations and service area.

15 Q. CAN YOU SUMMARIZE THE TIDEWATER RATE INCREASE APPLICATION?

16 A. Included in this application is a Briefing Sheet that provides an overview of the rate  
17 matter. Tidewater is seeking to increase annual revenue by approximately \$3.9 million,  
18 or 14.42% above current annual revenues using rates approved by the Public Service  
19 Commission in Order No. 8164. Those rates were based on capital investment and  
20 operating costs as of March 2012, or over 2 years ago when compared to the time  
21 period used to develop the proposed rates in this rate application. By June 30, 2014,  
22 Tidewater expects to have invested in \$13.7 million of water utility infrastructure since  
23 March 31, 2012.

24 Q. WHAT STEPS HAVE BEEN TAKEN TO MITIGATE COSTS?

25 A. Tidewater continually reviews its operations and costs for opportunities to provide water  
26 service at the least cost possible. Since February 2012, Tidewater has reduced its

1 workforce from 105 employees to 92, or 12.4%. In addition, effective January 1, 2013,  
2 Tidewater amended its retirement health plan qualifications resulting in a larger retiree  
3 contribution to the insurance premiums for the benefits. See Mr. O'Connor's testimony  
4 on Minimum Filing Schedule 3B-10 for further details.

5 Q. CAN YOU DESCRIBE THE TUI SYSTEMS THROUGHOUT THE STATE?

6 A. TUI serves approximately 34,000 customers through 50 water systems. Seventeen of  
7 these systems are "regional", that is, they interconnect at least two community water  
8 systems. The other systems are independent, and are not interconnected with other  
9 systems or plants. The systems range in size with the largest providing service to  
10 12,600 customers. They are located in New Castle, Kent and Sussex Counties. These  
11 facilities are indicated on the system maps in Schedule 6.

12 The Tidewater systems are served by 83 active treatment plants (most of which provide  
13 pH control in addition to disinfection; additionally, 6 are pressure filter plants for  
14 iron/manganese removal, 15 are ion-exchange plants for iron removal and 4 are ion-  
15 exchange plants for nitrate removal, 2 ion exchange plants for TOC removal and 2  
16 carbon filter plants for organic chemical removal which are supplied by approximately  
17 158 active production wells drilled into the Cheswold, Columbia, Frederica, Magothy, Mt.  
18 Laurel, Pocomoke and Potomac aquifers.

19 The Company has 5 "wide-area" service territories located in the areas north and south  
20 of Dover in Kent County, to the west of Rehoboth Beach and Lewes, and to the north  
21 and south of Indian River Bay in Sussex County.

22 Q. PLEASE DESCRIBE TIDEWATER'S REGIONAL DISTRICTS.

23 A. At the current time, Tidewater manages 17 regional districts. The major regional districts  
24 are outlined as follows:

25

26

1           **New Castle County:**

- 2           1. Northwest District – Providing for the needs of an area NNW of  
3           Middletown, which is supplied by 3 interconnected treatment plants.  
4           2. East District – Located ENE of Middletown along the Route 13 corridor,  
5           which is supplied by 3 interconnected treatment plants.  
6           3. Southeast District – Situated SE of Middletown, East of Route 1, which is  
7           supplied by a single treatment plant.

8           **Kent County:**

- 9           4. Garrison's Lake District – Servicing an area from North Dover to just  
10          south of Smyrna, which is supplied by 4 plants and an elevated water  
11          tower.  
12          5. Kenton District – Located just east of Kenton, which is supplied by a  
13          single treatment plant.  
14          6. West Dover District – Situated in an area NW of Dover, which is supplied  
15          by a single treatment plant.  
16          7. Forest Grove District – Providing for the communities located just east of  
17          Hartly, which is supplied by 2 treatment plants.  
18          8. Lakeland- Beechwood District – Servicing the communities just south of  
19          Dover, which is supplied by 3 treatment plants.  
20          9. Camden District – Servicing the needs of multiple communities in the  
21          region located generally between Dover, Camden, and Magnolia, the  
22          Camden District is supplied by 5 treatment plants and 2 water towers.

1 10. Wild Quail District – Providing service to the communities located west  
2 of Camden-Wyoming, The Wild Quail District is supplied by 2 treatment  
3 plants.

4 11. Felton District – Serving an area NE of Felton on the East side of Route  
5 13, the Felton District is supplied by 2 treatment facilities.

6 12. Frederica District – Serves an area east of Frederica, the Frederica  
7 District is supplied by one facility.

8 **Sussex County:**

9 13. The Meadows District – Providing for the needs of an area east of  
10 Millsboro, including Oak Orchard to Long Neck, the Meadows District is  
11 supplied by 3 treatment plants and 1 water tower.

12 14. Angola District – Situated in an area SE and NW of Route 24 in the area  
13 known as Angola, the Angola District is supplied by 4 treatment facilities.  
14 A water tower is soon to be completed in this district also.

15 15. Rehoboth District – Providing for the residential and commercial areas  
16 along the Route 1 corridor, extending from north of Five Points, Lewes to  
17 the City of Rehoboth, the Rehoboth District is supplied from 9 treatment  
18 plants and 1 water tower.

19 16. Bethany Bay District – Providing for the areas of Ocean View, Millville,  
20 and north of Bethany, the Bethany Bay District is supplied from 4  
21 treatment plants and 2 water towers.

22 17. Bayside District – Situated on Route 54 east of Selbyville, the Bayside  
23 District consists of 2 treatment plants and 1 water tower.

1 There are several systems within each of the Districts. Most of these are  
2 expected to be regionalized, and therefore interconnected, as development  
3 occurs in the franchise areas surrounding the current service areas.

4 Q. WILL YOU DESCRIBE TIDEWATER'S COMMITMENT TO SERVICE IMPROVEMENTS  
5 IN DELAWARE?

6 A. The expectation of our customers for appropriate service is the platform upon which  
7 every employee activity is based. Tidewater employs a diverse staff of professionals who  
8 are dedicated to operate, maintain, repair, upgrade, design, and manage all aspects of  
9 providing safe, adequate, and proper service to our customers. Our employees provide  
10 service across a wide geographic territory that is a two hour drive end-to-end. The  
11 company provides training and educational programs that enable our work force to  
12 maintain necessary technology applications and required licenses, registrations and  
13 certifications. The physical assets and other infrastructure that facilitates service delivery  
14 routinely require upgrade and replacement. Tidewater continues to upgrade and replace  
15 such infrastructure, where necessary. Tidewater's current 5-year (2014-2018) capital  
16 expenditure plan amounts to approximately \$35.3 million and does not include any  
17 significant projects for system expansion outside of its current service territories. As  
18 growth occurs, further integration of new and existing systems into regional districts is  
19 likely, as further economies of scale can be achieved, thereby resulting in greater cost-  
20 effective business processes for the benefit of our customers. The Capital Program and  
21 related schedules and testimony sponsored by Mr. Kalmbacher outline expenditures for  
22 upgrade and replacement of infrastructure through the construction or rehabilitation of  
23 treatment plants, interconnections, residuals treatment and disposal systems, fire  
24 protection facilities, stand-by power generation and storage facilities and other items. In  
25 addition, the Capital Program includes several interconnections between systems, which

1 provide additional backup and reliability during the peak water use period in the summer  
2 months.

3 Q. WHAT ARE THE COMPANY'S SOURCES OF SUPPLY?

4 A. All water supplies for TUI are from groundwater taken from the aquifers south of the  
5 Chesapeake & Delaware Canal.

6 Q. WHAT TREATMENT PROCESSES DOES THE COMPANY USE?

7 A. Chlorination is provided at all TUI's plants for disinfection. TOC removal, pH adjustment  
8 for corrosion control, activated carbon adsorption, iron removal and nitrate removal are  
9 used at some plants where the quality of the water source dictates the need for such  
10 treatment. At other locations low levels of iron and manganese are sequestered.

11 Q. CAN YOU EXPLAIN THE RELATIONSHIP BETWEEN TIDEWATER AND ITS  
12 AFFILIATES?

13 A. Tidewater is a wholly-owned subsidiary of Middlesex Water Company. Tidewater  
14 maintains a wholly-owned subsidiary, White Marsh Environmental Systems, Inc., whose  
15 primary business is to offer operations and maintenance contract services to owners of  
16 water and wastewater systems. White Marsh also owns commercial office buildings that  
17 are leased to Tidewater. Tidewater is the single member of the Southern Shores Water  
18 Company, L.L.C., which is a regulated water utility providing service to approximately  
19 2,200 customers in the Sea Colony development near Bethany Beach, Delaware. As  
20 more fully described in the testimony of A. Bruce O'Connor, there are intercompany  
21 services provided in each of these parent-subsidary relationships. Tidewater also  
22 provides services on behalf of Tidewater Environmental Services, Inc., the affiliated  
23 regulated waste-water utility, which is also wholly-owned by Middlesex. Attached to my  
24 testimony is Exhibit B, which charts the entity ownership, described above.

25 Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

26 A. Yes, it does.

**GERARD L. ESPOSITO**

18 Victoria Drive  
The Heath  
Milford, DE 19963

**EDUCATION**

Masters of Science 1979; 3.7 GPA  
University of Delaware, Newark, DE

Bachelor of Science 1973; High Honors  
Rutgers University, New Brunswick, NJ

**EMPLOYMENT HISTORY**

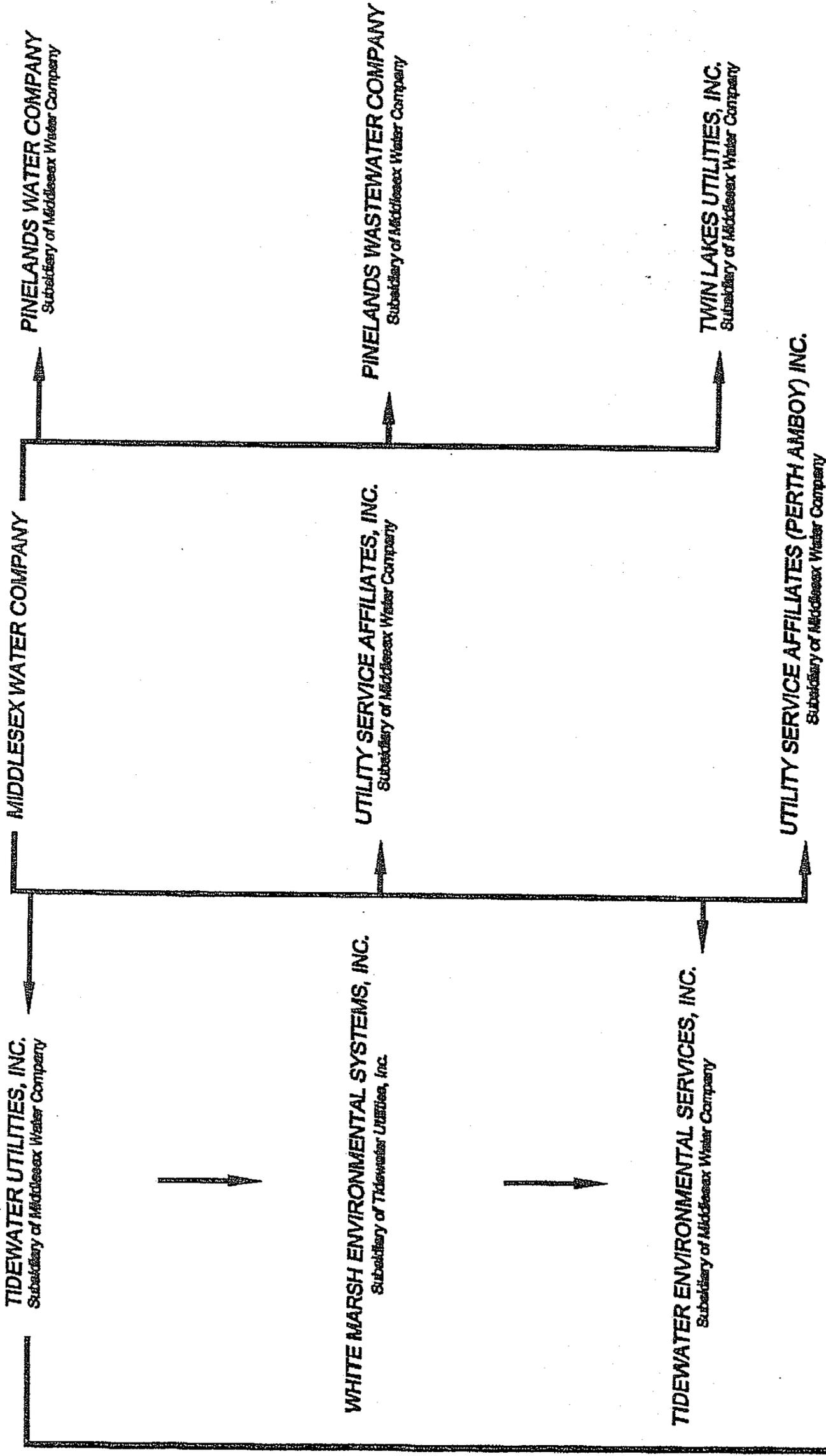
April 2002-Present	<b>President, Tidewater Utilities, Inc., Dover, DE and its three affiliated companies</b>
1998-2002	<b><u>Executive Vice President</u>, Tidewater Utilities, Inc., Odessa, DE <u>President and Board Member</u>, White Marsh Environmental Systems, Inc., Odessa, DE</b>
1989-1998	<b><u>Director</u>, Division of Water Resources, DE Department of Natural Resources and Environmental Control, Dover, DE</b>
1978-1989	<b><u>Environmental Planner</u> (2 yrs); <u>Planning Supervisor</u> (4 yrs); Division of Environmental Control <u>Deputy Director</u> (1 yr); Division of Water Resources <u>Deputy Director</u> (4 yrs) [listed chronologically]</b>
1976-1978	<b>Coastal Sussex Water Quality Program, Sussex County Council, Georgetown, DE – <u>Environmental Planner</u></b>
1973-1976	<b>University of Delaware, Department of Resource Economics, Newark, DE – <u>Graduate Assistant</u></b>

**AWARDS AND AFFILIATIONS:**

Received: Honorary Commander, Dover Air Force Base (2010), State of Delaware Environmental Lifetime Achievement Award (2008), State of Delaware Distinguished Service Award from Delaware Governor and Lt. Governor, Delaware State Senate Tribute, Delaware House of Representatives Tribute – all for 20 years of dedicated service to the State of Delaware (1998); Friend of the Inland Bays Award (1998); Listed in International Who's Who of Professionals (1997), Who's Who in the East (22nd Edition), and Who's Who Environmental Registry (1992); 1992 Division of Water Resources Employees' Choice Award; 1984 Annual Delaware American Planning Association (A.P.A.) Achievement Award for Inland Bays Task Force Final Report.

Present member of Board of Directors for: Junior Achievement Delaware, Better Business Bureau of Delaware, University of Delaware Sea Grant Advisory Council (Chairman); Delaware Water Supply Task Force, Delaware Sea Level Advisory Committee, Rehoboth/Dewey Beach Chamber of Commerce, Positive Growth Alliance, Meals on Wheels Delaware, Wilmington Diamond State Port Authority, Delaware Solid Waste Authority, Greater Kent Committee, DRBC Watershed Advisory Committee, Delawareans for Economic and Environmental Development, State of Delaware Workforce Investment Board and State of Delaware Board of Certification for Wastewater Operators.

**MIDDLESEX WATER COMPANY**  
ORGANIZATIONAL CHART  
AS OF MAY 24, 2011



**SOUTHERN SHORES WATER COMPANY LLC**

Southern Shores is a limited liability company whose sole member is Tidewater Utilities, Inc. Southern Shores primarily provides water service to Sea Colony Development in Sussex County, Delaware.

**TIDEWATER UTILITIES, INC.**

**TESTIMONY OF JEREMY M. KALMBACHER**

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2  
3  
4 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

5 A. My name is Jeremy M. Kalmbacher. My business address is: Tidewater Utilities,  
6 Inc. located at 1100 South Little Creek Road, Dover, Delaware.

7 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

8 A. I am employed by Tidewater Utilities, Inc. (TUI). I am the Director of  
9 Engineering for TUI.

10 Q. PLEASE STATE YOUR EDUCATIONAL AND OPERATIONAL  
11 BACKGROUND.

12 A. I have attached my resume as Exhibit A.

13 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

14 A. The purpose of my testimony is to give an overview of the capital program.

15 Q. PLEASE PROVIDE THE BACKGROUND FOR THE COMPANY'S CAPITAL  
16 PROGRAM.

17 A. Ongoing system improvements are necessary to maintain service reliability and  
18 related supply levels to ensure safe, adequate and proper service to Tidewater's  
19 customers and also to maintain compliance with changing regulatory  
20 requirements applicable to TUI.

21 Q. CAN YOU DISCUSS THE COMPANY'S FIVE YEAR CAPITAL PROGRAM?

22 A. Tidewater's five year capital program is developed such that we attempt to  
23 maintain pace with modest planned growth, while also keeping existing systems

1 properly updated and maintained. This program includes distribution system  
2 improvement projects, system interconnections, new main extensions, treatment  
3 plant upgrades, new sources of supply, and storage additions.

4 Q. WHAT PART OF THE COMPANY'S FIVE YEAR CAPITAL PROGRAM IS  
5 INCLUDED IN THIS RATE INCREASE PETITION?

6 A. Schedule 2A, Pages 2 and 3, entitled "Test Period Project List" provides a  
7 detailed list of capital projects that are expected to be completed and placed in  
8 service prior to June 30, 2014 (Test Period).

9 Q. HOW OFTEN IS THE CAPITAL PROGRAM UPDATED?

10 A. The five year capital program is formally updated on an annual basis.

11 Q. WITH REGARD TO THE INFRASTRUCTURE UPGRADES,  
12 IMPROVEMENTS AND REGULATORY REQUIREMENTS DISCUSSED  
13 ABOVE, CAN YOU QUANTIFY WHAT PORTION OF THE PROPOSED  
14 CAPITAL PROGRAM ADDITIONS IN THIS MATTER ARE FOR THOSE  
15 PURPOSES?

16 A. Yes, my analysis of the Test Period Project List concludes that all of the projects  
17 are for the purpose of infrastructure upgrade, improvements or regulatory  
18 requirements except the Bayside Distribution Phase 2 project. The Bayside  
19 project is for customer growth. These proposed capital program additions amount  
20 to approximately \$8.5 million.

21 Q. PLEASE DESCRIBE THE COMPANY'S CAPITAL BUDGETING PROCESS.

22 A. The annual capital budgeting process is developed as part of the five year capital  
23 program. Each fall the status of the current year's (calendar year) capital budget

1 is reviewed at a significant level of detail on a project-by-project basis, and the  
2 five-year capital program is updated. The operational and financial status of each  
3 project is tracked during the year. Some projects are not fully completed by the  
4 end of the calendar year and therefore, are continued into the next year. Other  
5 projects may or may not proceed as originally planned until a future period, due to  
6 changing conditions. The following year's budget and related project timetable is  
7 based on currently available information, as the Company analyzes system needs,  
8 customer needs, and growth.

9 Q. PLEASE BRIEFLY DESCRIBE THE AWARD PROCESS FOR THE  
10 CONSTRUCTION OF CAPITAL PROJECTS.

11 A. We maintain a list of pre-qualified contractors that are invited to submit bid  
12 proposals for capital project work. The pre-qualification of contractors is the  
13 result of an evaluation of the experience and reputation for quality of these firms.  
14 Each project is competitively bid and multiple bids are normally received. The  
15 construction project is awarded to the contractor with the lowest qualified bid in  
16 order to achieve an appropriate balance between cost and quality.

17 Q DO YOU HAVE MAPS THAT SHOW THE LOCATIONS FOR PROJECTS IN  
18 THE CAPITAL PROGRAM?

19 A. Yes, the maps can be found under Schedule 6.

20 Q. WOULD YOU BRIEFLY DESCRIBE EACH OF THE PROJECTS ON  
21 SCHEDULE 2A?

22 A. The location of each project is indicated by project number on the maps provided  
23 under Schedule 6.

1. East District Improvements – This project includes the relocation of a ground level storage tank from Asbury Chase to Drawyers Creek and the installation of a new 173,000 gallon storage tank at Asbury Chase to increase storage capacity for the East District and enhance fire protection capabilities at Drawyers Creek.  
Estimated Cost: \$354,307
2. Dickerson Farms Piping Upgrades – This project involves the upgrade of the existing raw water pipelines from Sch 80 pvc to ductile iron within the plant. Estimated Cost: \$30,000
3. NW District Media Replacement – This project involves the replacement of the greensand and anthracite filtration media at the Wheatland Plant. Estimated Cost: \$45,000
4. NW District Control System Upgrades – This project involves the upgrading of the existing process control systems at the Nautical Cove, Wheatland, and Dickerson plants.  
Estimated Cost: \$229,488
5. Generals Greene – This project includes the demolition of the existing plant and construction of a new building, piping, electrical system, control system, and chemical addition.  
Estimated Cost: \$884,607
6. Kent County Flow Monitoring – This project involves the installation of flow monitoring equipment at certain plants within

1 Kent County. Work includes replacing flow metering, installing  
2 instrumentation, and upgrading PLC's. Estimated Cost: \$325,000

3 7. Canterbury Road Main Relocation – This project involves the  
4 replacement of approximately 800 feet of 12-inch HDPE water  
5 main due to DelDOT requirements for the construction of a bridge.  
6 Estimated Cost: \$160,740

7 8. Camden District Hydraulic Upgrades – This project involves the  
8 installation of approximately 7,700 feet of water main to connect  
9 Pinehurst Village with Woodbury Acres.  
10 Estimated Cost: \$727,235

11 9. Hiddenbrook Main Extension – This project involves the  
12 installation of approximately 4,200 feet of water main to  
13 Hiddenbrook Acres. This main will eventually interconnect with  
14 Lakeshore Village. Estimated Cost: \$428,423

15 10. Seasons – Warrington Creek Interconnection – This project  
16 involves the installation of approximately 1,500 feet of directional  
17 drilled 12-inch PVC water main and 1,200 feet of PVC water  
18 main. Estimated Cost: \$798,654

19 11. Angola Elevated Storage Tank – This project involves the  
20 construction of a new 400,000 gallon elevated storage tank to  
21 service the Angola District. Estimated Cost: \$1,743,638

- 1 12. Meadows Plant Upgrades – This project involves the upgrade of  
2 the existing piping, electrical control system, and installation of  
3 nitrate removal equipment. Estimated Cost: \$227,107
- 4 13. Townsend Property Interconnection – This project involves the  
5 installation of approximately 1200 feet of 12-inch HDPE by  
6 directional drill method to interconnect Bay Crossing with  
7 Senators. Estimated Cost: \$217,847
- 8 14. Aspen Meadows Hydrants – The project involves the installation  
9 of fire protection to Aspen Meadows. Estimated Cost: \$270,830
- 10 15. Angola District SCADA – This project involves the installation of  
11 SCADA equipment in the Angola District and integration with the  
12 existing SCADA network. Estimated Cost: \$150,000
- 13 16. Bayside Phase 2 Distribution – This project involves the  
14 installation of new water main, valves, and hydrants to serve  
15 Bayside. Estimated Cost: \$136,971
- 16 17. Clearbrooke Upgrades – This project involves the installation of  
17 piping, chemical equipment, and building to eliminate a confined  
18 space issue. Estimated Cost: \$49,339
- 19 18. Love Creek Woods Generator – This project involves the  
20 installation of a generator for emergency power. Estimated Cost:  
21 \$49,377

- 1 19. Ocean Farms Fire Protection Upgrades – This project involves the  
2 upgrade of the fire protection system by installing the hydrants on  
3 the domestic supply system.  
4 Estimated Cost: \$48,967
- 5 20. Property Records – This project involves the documentation and  
6 recordation of easements and property rights.  
7 Estimated Cost: \$149,198
- 8 21. Wells – The cost for replacing/adding/upgrading wells is projected  
9 at \$19,516.
- 10 22. Treatment and Pumping Structures – The cost for  
11 replacing/installing treatment and pumping structures is projected  
12 at \$34,547.
- 13 23. Pumping Equipment – The cost for replacing/installing pumping  
14 equipment is projected at \$172,369.
- 15 24. Treatment Equipment – The cost for replacing/installing treatment  
16 equipment is projected at \$38,976.
- 17 25. Mains, Blow-offs & Valves – The cost of replacing/installing  
18 mains, blow-offs and valves is projected at \$152,078.
- 19 26. Service Lines – The cost of installing new service lines is projected  
20 to be \$611,087.
- 21 27. Meter Purchase & Installations – Meters are installed for new  
22 service connections and meters are replaced as part of the meter

1 testing program to meet regulatory service standards. The cost of  
2 purchasing and installing new meters is projected to be \$376,000.

3 28. Hydrants – The cost of replacing/adding fire hydrants is projected  
4 at \$50,280.

5 29. Leasehold Improvements – Emergency generators are to be  
6 installed at the Dover Office Complex and Operations Center and  
7 the fence will be extended at the Operations Center. The cost for  
8 leasehold improvements is projected at \$23,000.

9 30. Computers – Routine replacement of computers, printers, servers,  
10 networking equipment, and technological upgrades will be  
11 completed. The cost for computer systems is projected at  
12 \$311,000.

13 31. Transportation – The cost for replacing vehicles is projected at  
14 \$185,820.

15 32. Tools and Shop Equipment – The cost for tools and shop  
16 equipment is projected at \$30,000.

17 33. Lab Equipment – The cost for lab equipment is projected at  
18 \$6,000.

19  
20 Q. IS IT ANTICIPATED THAT ALL OF THESE PROJECTS WILL BE IN  
21 SERVICE BY THE END OF THE TEST PERIOD?

22 A. Yes, most have been started and are in various stages of design or construction.

1 Q. ARE ALL OF THESE PROJECTS NECESSARY AND ARE THE COSTS  
2 REASONABLE TO PROVIDE SAFE, ADEQUATE AND PROPER SERVICE  
3 TO THE CUSTOMERS OF TIDEWATER?

4 A. Yes. Based upon my knowledge of the systems and my experience in the water  
5 industry, they are.

6 Q. DOES TIDEWATER EXPECT TO RECEIVE CONTRIBUTIONS-IN-AID-OF-  
7 CONSTRUCTION (CIAC)?

8 A. CIAC is projected to be recorded for projects that are subject to Docket 15 rules  
9 as well as pre-Docket 15 rules. Schedule 2A includes CIAC recorded by type;  
10 pre-Docket 15 and under Docket 15 rules, as applicable.

11 Q. WHAT IS DOCKET 15?

12 A. PSC Regulation Docket 15, effective April 10, 2006 via Order No. 6873,  
13 governs the terms and conditions under which water utilities require advances  
14 and/or contributions from customers or developers, and proper rate making  
15 treatment for such contributions and advances. Not all of the Test Period projects  
16 are subject to Docket 15 as they are either system improvements and/or regulatory  
17 requirements, or are for projects that were under contract prior to the  
18 implementation of Docket 15.

19 Q. WILL THERE BE ANY REFUNDS TO DEVELOPERS DURING THE TEST  
20 PERIOD?

21 A. Tidewater estimates that there will be rebate payments to developers for pre-  
22 Docket 15 projects. This is reflected on Schedule 2A, page 3 of 3.

1 Q. DO YOU HAVE AN OPINION ON THE REASONABLENESS AND  
2 NECESSITY OF THE EXPENDITURES YOU HAVE JUST DISCUSSED?

3 A. Yes, in my opinion, all these expenditures are reasonably priced and are necessary  
4 to provide safe, adequate and proper service.

5 Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

6 A. Yes, it does.

**Jeremy M. Kalmbacher, P.E.**

**QUALIFICATIONS**

During my career at Tidewater, I have been directly involved in the engineering, planning, budgeting, and project management of over \$50 million of capital improvement projects including distribution and collection upgrades, treatment upgrades, elevated storage tanks, well installations, and wastewater disposal systems. In my role with the company during the last three years, my responsibilities have extended in the wastewater utility business, GIS development, and ERP implementations such as work and asset management and mobile workforce management.

**EXPERIENCE**

2006-Present Director of Engineering, Tidewater Utilities, Inc.

- Prepare, manage, and implement 5 year capital program
- Oversee engineering and construction contracts
- Perform engineering project management
- Supervise engineering and inspection staff
- Provide rate case testimony to Public Service Commission

2004-2006 Manager of Engineering, Tidewater Utilities, Inc.

- Manage and implement annual capital budget
- Oversee engineering staff
- Perform engineering project management

2002-2004 Staff Engineer, Tidewater Utilities, Inc.

- Manage construction projects and corresponding budgets
- Review and recommendation of engineering and construction contracts
- Design of water pumping, storage and treatment facilities
- Design and layout of water distribution systems
- Exploration of geological substrata for ground water yields

**EDUCATION**

1995-1999 Bachelor of Civil Engineering, University of Delaware

1999-2002 Graduate Research Assistant, Center for Applied Coastal Research, University of Delaware

- Application of SHORECIRC to hydrodynamic phenomena
- Research concentration on infragravity wave generation
- Fluid mechanics lab instructor

**PROFESSIONAL AFFILIATIONS (past or current)**

Member, American Water Works Association

Member, Water Environment Federation

Associate Director, National Utility Contractors Association of Delmarva

**TIDEWATER UTILITIES, INC.**

**TESTIMONY OF BRUCE E. PATRICK, P.E.**

1  
2  
3  
4  
5  
6 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

7 A. My name is Bruce E. Patrick. My business address is:  
8 Tidewater Utilities, Inc. located at 1100 South Little Creek Road, Dover,  
9 Delaware.

10 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

11 A. I am employed by Tidewater Utilities, Inc. (TUI). I am the Vice President and  
12 General Manager for TUI.

13 Q. PLEASE STATE YOUR EDUCATIONAL AND OPERATIONAL  
14 BACKGROUND.

15 A. I have attached my resume as Exhibit A.

16 Q. HAVE YOU TESTIFIED IN RATE PROCEEDINGS PRIOR TO THIS CASE?

17 A. Yes, I have testified before the Delaware Public Service Commission.

18 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

19 A. The purpose of my testimony is to provide support for certain operating expenses.

20 Q. HAVE YOU PREPARED INFORMATION OR SCHEDULES FOR THE O&M  
21 EXPENSES COVERED BY YOUR TESTIMONY?

22 A. Under my supervision, Schedules 3B-2, 3B-3, 3B-4 3B-5 and a portion of  
23 Schedule 3B-1 relating to purchased power, chemicals, treatment and lab

1 services, tank painting and labor were prepared and are included as part of the  
2 Minimum Filing Requirements.

3 Q. CAN YOU DESCRIBE THE INFORMATION IN THESE SCHEDULES?

4 A. Schedule 3B-1, Labor – Actual cost for the twelve months ended September 30,  
5 2013 (Test Year) has been adjusted through June 30, 2014 (Test Period) to  
6 account for projected wage increases. Due to the passing of an employee, there  
7 is currently one vacant Plant Operator position. In addition, due to a recent  
8 resignation, there is one vacant Sampler position. We are in the process of filling  
9 those two positions.

10 Schedule 3B-2, Power – The actual cost of power has been adjusted for the  
11 projected overall system pumpage through the Test Period.

12 Schedule 3B-3, Chemicals – The actual cost of chemicals for the twelve months  
13 ended December 31, 2012 and the Test Year are shown on this schedule by type  
14 of chemical. The Test Period cost is based on the actual Test Year cost per gallon  
15 applied to the projected Test Period overall system pumpage.

16 Schedule 3B-4, Treatment and Laboratory Services – The actual costs of  
17 treatment and laboratory services for the twelve months ended December 31,  
18 2012 and the Test Year are shown on this schedule. The Test Period projection  
19 was derived by applying the actual Test Year cost per gallon to the projected Test  
20 Period pumpage.

21 Schedule 3B-5, Tank Painting – The schedule of tank painting amortizations for  
22 the twelve months ended December 31, 2012 and the Test Year are shown on this  
23 schedule, as well as projections for the Test Period.

24

**Bruce E. Patrick, PE, MBA**  
754 Pear Tree Lane  
Harrington, Delaware 19952  
302-398-3721

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SUMMARY OF QUALIFICATIONS

I currently hold the position of Vice President and General Manager at Tidewater Utilities, Inc. and its affiliates Tidewater Environmental Services, Inc., and White Marsh Environmental Systems, Inc. In this position, I manage the Operations Department which is responsible for the overall management of the Production, Distribution, Maintenance, Water Quality and Engineering Sections of the companies. In this capacity I am responsible for the day to day operations and maintenance of the water and wastewater systems, as well as the water quality/regulatory issues and capital planning and construction.

I previously held the position of Vice President of Engineering within the same companies mentioned above, where I was responsible for the capital improvements planning, budgeting, engineering, and construction.

I have also held the position of Kent County Public Works Director (County Engineer), in which I was responsible for the overall planning, budgeting, engineering, construction and operation and maintenance of the County's regional wastewater facilities. These positions, as well as, my regulatory experience as the Director of Technical Environmental Health Services with the Division of Public Health, and my position as an Environmental Program Manager with the Department of Natural Resources and Environmental Control have required multiple duties in the environmental, regulatory, engineering, and management fields. I am a registered Professional Engineer and have a Master's Degree in Business Administration, which has allowed me to further mesh my technical and administrative/management skills.

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EDUCATION

**University of Delaware**  
Newark, Delaware  
Bachelor of Civil Engineering Degree

1987-1991

**Delaware State University**  
Dover, Delaware  
Master of Business Administration Degree

1993-1996  
(Part time Basis)

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PROFESSIONAL EXPERIENCE

**Vice President and General Manager, Tidewater Utilities, Inc. (and its affiliates), Dover, Delaware.**

- Responsible for operations and maintenance of the various water/wastewater facilities and associated appurtenances, involving the coordination of the various sections within the Operations Department.
- Responsible for the preparation and oversight of the operating budgets for the Tidewater companies.
- Responsible for regulatory compliance issues including monitoring and reporting regulatory requirements.
- Responsible for capital program implementation (budgeting, planning, design, permitting, construction).
- Establish Goals and provide administration and direction for the Operations Department (Distribution and Collection, Production/Treatment Water and Wastewater, Maintenance, Water Quality and Engineering).

**Vice President of Engineering, Tidewater Utilities, Inc. (and its affiliates), Dover, Delaware.**

- Manage Capital Improvements program, including planning and budgeting, for Five Year Capital Program.
- Manage current fiscal year capital budget including the engineering/design, permitting and construction of approximately \$12-15 million annually in improvements, ensuring timely and within budget completions.

- Responsible for the oversight of water service agreements, ensuring that the company grows into new un-served areas, while providing quality service at an economical rate.
- Prepare state/federal loan applications for funding assistance.
- Responsible for obtaining necessary easements and handling of other land/property management issues.
- Manage wastewater projects for the company's subsidiary *Whitemarsh Environmental Systems, Inc* and affiliate *Tidewater Environmental Services, Inc.*

**Director, Technical Environmental Health Services, Division of Public Health, Dover, Delaware.**

- Manage the Office of Plan Review, Permitting and Enforcement and the Office of Radiation Control.
- Responsible for plan review, permitting and enforcement for public drinking water systems, public food establishments, public pools, recreational camps and several other public health programs.
- Manage a technical staff consisting of engineers, scientists and technicians, as well as a clerical support staff.
- Represent the Division of Public health on several Technical Advisory Committees.
- Provide technical assistance to several programs including The Office of Drinking Water, The Office of Health Facilities Licensing and The Office of Community Environmental Health.
- Act as a liaison and/or provide support to the Board of Plumbing Examiners and the Authority on Radiation Protection.
- Administer the Employee Right to Know Program.
- Administer or provide support to funding programs including the Drinking Water State Revolving Fund and the Fluoride Grant Program.

**Public Works Director/County Engineer, Kent County Levy Court, Dover, Delaware.**

- Responsible for management and engineering work involving the budgeting, planning, design, scheduling, construction, and operation and maintenance for the County's regional wastewater system.
- Prepared and managed a \$10 Million annual budget and approved expenditures in compliance with approved budget.
- Responsible for managing a Federally mandated Industrial Pretreatment Program.
- Prepared designs/specifications and bid packages for various wastewater projects.
- Participated in public hearings and meetings and made recommendations regarding the County's wastewater system and other public works projects, to the elected body.
- Prepared grant and loan applications from various agencies in order to obtain funding assistance for projects.
- Responsible for creating and managing new sewer, garbage and street lighting districts.
- Managed a staff of approximately sixty-five (65) people including engineers, scientists, technicians, clericals, operators and other field personnel.

**Environmental Program Manager, Department of Natural Resources and Environmental Control, Large Wastewater Systems Branch, Dover, Delaware.**

- Managed, coordinated and planned projects for multiple regulatory permitting and compliance programs (Land Treatment/Spray Irrigation, Large On-Site Wastewater Systems and the Underground Injection Control Program).
- Managed a group of technical professionals including engineers, scientists and technicians.
- Assisted in drafting regulations and guidance documents.
- Prepared enforcement documents (Notices of Violations, Conciliation orders, etc.) in order to bring facilities into compliance in an appropriate and timely fashion.
- Reviewed Plans and specifications including alternative technologies for on-site wastewater systems.
- Prepared and analyzed budget proposals, including project funding and projecting user rates.
- Experience in resolving disputes between contractors, co-workers, and the regulated community.
- Experience with computers and multiple software packages including databases, spreadsheets, and statistical analysis packages.
- Participated in public hearings and provided regulatory testimony.

**Consulting/Design Engineer, Davis, Bowen and Friedel, Inc., Salisbury, Maryland.**

- Performed field studies and developed water and wastewater designs and budgets accordingly.
- Compiled technical reports and performed presentations for various projects.
- Prepared and analyzed cost estimates and budgets for various authorities and projects, including projected user rates.
- Prepared federal grant applications for project funding assistance.
- Monitored construction of projects for compliance with plans, specifications and regulations.
- Assisted in writing and proofing project specifications.
- Prepared operation and maintenance manuals for various designs.

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RECOGNITION'S

**Department of Natural Resources and Environmental Control**

1. Secretary's Certificate of Merit for Meritorious Service to the People and Environment of the State of Delaware.
2. Division of Water Resources - 1996 Outstanding Employee Award - Administrative Management Field.
3. Certificate of Recognition for Coordinating and Providing Technical Expertise on the Proposed Ellendale Sanitary Sewer District.

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REFERENCES AVAILABLE UPON REQUEST

**TIDEWATER UTILITIES, INC.**

T-4

**TESTIMONY OF A. BRUCE O'CONNOR**

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Q. STATE YOUR NAME AND BUSINESS ADDRESS.

A. A. Bruce O'Connor. My business address is: 1500 Ronson Road, Iselin, New Jersey 08830.

Q. PLEASE STATE YOUR PROFESSIONAL QUALIFICATIONS AND EXPERIENCE.

A. I am a Certified Public Accountant and Vice President and Chief Financial Officer of Middlesex Water Company (Middlesex). Tidewater Utilities, Inc. is a wholly-owned subsidiary of Middlesex. I have been employed with Middlesex since 1990.

Q. DO YOU HOLD AN OFFICIAL POSITION WITH THE APPLICANT?

A. I have been the Treasurer of Tidewater Utilities, Inc. (Tidewater or Company) since 1996. I was Controller of Tidewater from 1993 until promoted to Treasurer in 1996. I have overall responsibility for accounting, taxes, payroll, customer service, billing and disbursement procedures, cash management and financial statement preparation. My responsibilities also include the Company's financing program.

Q. HAS TIDEWATER COMPLIED WITH ITS COMMITMENT IN THE SETTLEMENT AGREEMENT APPROVED BY ORDER NO. 8164 FOR A MONTHLY METER READING AND BILLING STUDY SUBMISSION AND THE FILING OF A LEAD-LAG STUDY?

A. On or about March 12, 2013, Tidewater submitted a monthly meter reading and billing feasibility study to Public Service Commission and the Department of the Public Advocate. Tidewater has included the results of lead-lag study in the preparation of the financial information used to determine its projected rate increase request in this rate matter.

1 Q. ARE THE BOOKS AND RECORDS OF TIDEWATER PREPARED AND  
2 MAINTAINED IN ACCORDANCE WITH THE UNIFORM SYSTEMS OF  
3 ACCOUNTS PRESCRIBED BY THE DELAWARE PUBLIC SERVICE  
4 COMMISSION FOR A MAJOR WATER UTILITY?

5 A. Yes.

6 Q. HAVE YOU PREPARED FINANCIAL SCHEDULES WHICH SUPPORT THE  
7 COMPANY'S APPLICATION FOR AN INCREASE IN ITS BASE RATES?

8 A. Yes, the summary and supporting financial schedules that comply with the Minimum Filing  
9 Requirements (MFR) of the Delaware Public Service Commission (PSC) were prepared under  
10 my direct supervision.

11 Q. IS THE INFORMATION CONTAINED IN THESE SCHEDULES TRUE  
12 AND CORRECT TO THE BEST OF YOUR KNOWLEDGE AND BELIEF?

13 A. Yes.

14 Q. WHAT ARE THE TEST YEAR AND THE TEST PERIOD FOR THIS RATE CASE?

15 A. The Test Year is the twelve months ended September 30, 2013. The Test Period is the  
16 twelve months ended June 30, 2014 and reflects all known and measurable changes,  
17 annualized, that are expected to occur on or before June 30, 2014. The Test Period rate  
18 base items start with actual September 30, 2013 Balance Sheet data, with adjustments to  
19 June 30, 2014. The Company has selected this Test Period as it will partially reflect the  
20 actual results for the first year the rates are expected to be in effect.

21 Q. PLEASE EXPLAIN SCHEDULE 1, OVERALL FINANCIAL SUMMARY.

22 A. Schedule 1 summarizes the calculation of the requested rate increase for the Test Year  
23 and the Test Period, indicating the Rate Base, Net Operating Income, Proposed Fair Rate  
24 of Return and Gross Revenue Conversion Factor. The schedules that support these items

1 are referenced on Schedule 1. Testimony and information with respect to the Rate Base  
2 MFR Schedule 2 and all the sub-schedules associated with Rate Base, except Schedule  
3 2A, will be sponsored by Michele L. Tilley. Mr. Jeremy M. Kalmbacher has sponsored  
4 testimony for Schedule 2A.

5 Q. PLEASE EXPLAIN SCHEDULE 3, INCOME STATEMENT FOR 2012 ACTUAL,  
6 TEST YEAR AND TEST PERIOD.

7 A. This schedule reflects the Company's income statement for the actual results in calendar  
8 year 2012, the Test Year and the Test Period at Present and Proposed rates. Column 1 on  
9 Schedule 3 indicates the actual results for the year 2012. Column 2 represents the Test  
10 Year, which is the twelve months ended September 30, 2013, with all changes in  
11 revenues and expenses, annualized, as though the change had been in effect for the entire  
12 Test Year. Column 3 represents the Test Period, the twelve months ended June 30, 2014  
13 with all changes in revenues and expenses, annualized, as though the change had been in  
14 effect for the entire period. Column 4 calculates the rate increase that is necessary for the  
15 Company to earn a fair rate of return on its investments in rate base and recovery of  
16 prudently-incurred operating expenses. Column 5 represents the Test Period after  
17 inclusion of the revenue and expense effect of the proposed rate increase. The supporting  
18 schedules are referenced on the schedule.

19 Q. WOULD YOU PLEASE DESCRIBE SCHEDULE 3A – OPERATING REVENUES?

20 A. Schedule 3A, page 1 of 3 summarizes the detailed calculations found on Schedule 3A  
21 pages 2 and 3 for each customer class or, type of revenue. The detail was used to develop  
22 the proposed rates included in the pro forma tariff sheets labeled as Schedule 8.

23 Schedule 3A, Page 2 of 3, Lines 1 through 10 – Facility Charge – This represents the  
24 proposed fixed component of customer bills based on the actual number of customers at

1 September 30, 2013, by meter size, as shown therein, under the column entitled Present  
2 Rates, Test Year. The projected number of customers at June 30, 2014, by meter size, is  
3 listed under the column entitled Number of Customers, Test Period. In general,  
4 customers are billed quarterly. In order to calculate projected Facility Charge revenues,  
5 the number of customers was multiplied by 4 to equal the number of bills rendered  
6 annually. The resulting number of bills was multiplied by the current tariff rate, resulting  
7 in Test Year and Test Period Facility Charge Revenues. This represents the first of two  
8 components of the General Metered Service class revenues.

9 Schedule 3A, Page 2 of 3, Lines 11 through 20 – Consumption Charges – In order to  
10 develop Test Year revenues, I utilized actual consumption for the twelve months ended  
11 September 30, 2013 to represent the Test Year. Test Period consumption was projected  
12 by utilizing a combination of actual and projected consumption for the period ended June  
13 30, 2014. The foundation for the projected consumption was an exercise performed by  
14 Company Witness Bruce E. Patrick in developing the Test Period water production data.  
15 Mr. Patrick reviewed monthly production records for the five-year period 2008 through  
16 2012 and also reviewed production data for 2013 if available. He used 5 or 6 year  
17 averages in most cases where the consumption was consistent from year to year; he then  
18 rounded the projection. For periods where the last 2-3 years of consumption significantly  
19 varied from the average, he used a 2 or 3 year average using the most recent 2-3 years of  
20 production data. Once, Mr. Patrick determined the nature of the variance, the production  
21 data in question was normalized as necessary to reflect expected production during the  
22 Test Period. The overriding reason for normalization was due to weather variations and a  
23 reduction in summer months of recent years which appears to be from customers  
24 installing irrigation wells to avoid purchasing water from Tidewater for outdoor irrigation

1 purposes. Mr. Patrick has sponsored testimony that provides expanded information on  
2 irrigation customers. The next step in determining Test Period consumption was to  
3 apply the line loss factor to Test Period production. The Test Period line loss factor was  
4 developed using the same methodology that was used to develop Test Period production.  
5 The annual consumption for the Test Year and Test Period was multiplied by the current  
6 tariff rates, yielding Test Year and Test Period Consumption Revenues. This represents  
7 the remaining components of the General Metered Service class revenues.

8 Schedule 3A, Page 2 of 3, Lines 21 through 27 – Contract Sales Consumption Charges –

9 Test Year and Test Period revenues were developed in similar fashion as General  
10 Metered Service consumption revenues, utilizing a combination of actual and projected  
11 consumption for period ended June 30, 2014.

12 Schedule 3A, Page 3 of 3, Line 1 – Public Fire Protection - The Company charges for

13 Public Fire Protection service to individual customers where fire service is required. The  
14 Public Fire Service Revenues were developed from the same data used for the General  
15 Metered Service Facility Charges revenue calculation. The data indicates which  
16 developments have fire service and therefore, which current and new customers will have  
17 fire service. The actual number of Public Fire Service customers for the Test Year and the  
18 projected number of Public Fire Service customers for the Test Period were multiplied by  
19 4, since these customers are billed quarterly, to equal the number of bills rendered  
20 annually. The resulting number of bills was multiplied by the quarterly rate, yielding  
21 Public Fire Protection Revenues for the Test Period.

22 Schedule 3A, Page 3 of 3, Lines 2 through 7 – Private Fire Protection – Facility Charge –

23 I calculated the actual number of customers at September 30, 2013, by meter size for  
24 Private Fire Protection. Growth was projected, based upon anticipated new customers, to

1 arrive at Test Period customers. The actual number of fire service customers for the Test  
2 Year and projected number of customers for the Test Period were multiplied by 4, since  
3 these customers are billed quarterly, to equal the number of bills rendered annually. The  
4 resulting number of bills was multiplied by the applicable quarterly tariff rate, yielding  
5 Private Fire Protection revenues for the Test Period.

6 Schedule 3A, Page 3 of 3, Lines 8 through 16 – Connection Fees - A fee is charged for  
7 connecting new customers to the system. The connection fee revenue was calculated by  
8 taking the number of projected new customers, by meter size, projected for General  
9 Metered Service and Private Fire Protection, times the applicable Connection Fee tariff  
10 rate. The decline in connection fees from the Test Year to the Test Period reflects a  
11 continuing trend of a decreasing rate of new customers added to the Tidewater system.

12 Q. ARE THERE ANY OTHER REVENUES THAT ARE INCLUDED IN TIDEWATER'S  
13 OPERATIONS?

14 A. At the bottom of Schedule 3A, page 1 of 3 there is a table of miscellaneous service  
15 revenues for charges such as Turn-on Fees, Late Payment Penalties, and Returned Check  
16 Fees.

17 Q. PLEASE DESCRIBE SCHEDULE 3B.

18 A. Schedule 3B lists the major categories of Operation & Maintenance Expenses and  
19 references the relevant support schedules where the underlying detail is presented. The  
20 schedule shows the expenses for 2012, the Test Year and the Test Period. Included as an  
21 attachment to my testimony identified as Appendix A is a listing of the major expense  
22 categories for transactions with affiliates.

23 Schedules 3B-2, 3B-3, 3B-4, 3B-5, and a portion of Schedule 3B-1, have been sponsored  
24 by, and will be discussed in the testimony of, Mr. Bruce Patrick.

1 Schedule 3B-1, Labor - Labor expense was developed starting with salaries of 92 active  
2 positions at September 30, 2013. A projected average wage increase of 2.5%, anticipated  
3 to be granted effective April 1, 2014, as well as scheduled progression increases for  
4 certain positions, were annualized to derive Test Period labor. Overtime was calculated  
5 utilizing a combination of actual Test Year information and budgeting forecasts to arrive  
6 at the Test Period overtime labor. Average labor costs capitalized and/or billed to  
7 affiliated companies for the twelve months ended June 30, 2014 was projected at 32.95%,  
8 and were subtracted from Test Period labor.

9 Schedule 3B-6 - Customer Record and Collection Expenses - This schedule details the  
10 elements of customer service expenses such as allocated labor, postage, billing and  
11 lockbox services. Middlesex provides customer call center and billing services on behalf  
12 of Tidewater. To the extent possible, specifically identified costs are charged to  
13 Tidewater. However, the majority of call center and billing services costs are  
14 homogeneous and cannot be specifically identified and attributable to one specific entity.  
15 Because of the homogenous nature of these costs, costs such as for the Middlesex central  
16 call center labor (Line 1) are allocated by Middlesex to all of its affiliates based on the  
17 number of customers served by the individual affiliate. Line 1 has been adjusted to  
18 reflect the impact of both anticipated wage increases and new customer growth in the  
19 Tidewater service territory. Postage and lockbox costs (lines 2 and 4, respectively) are  
20 based on the number of customer mailings and payments as well as a 2013 and 2014  
21 increase in first class mailings through the U.S. Postal Service. Line 3 costs are for the  
22 fees charged by an outside service to print our customer invoices, stuff the envelopes and  
23 mail the invoices to our customers.

1 Schedule 3B-7 - Uncollectibles - This schedule indicates actual write-offs of bad debts,  
2 adjusted on a percentage basis for the rate increase, since a rate increase would result in  
3 higher receivables and therefore, higher uncollectibles. In addition, Tidewater has seen its  
4 level of aged receivables grow, and the amount of uncollectible accounts as well, by a  
5 corresponding amount.

6 Schedule 3B-8 - Outside Services - This schedule lists the various outside services costs.

7 On Line 1, Temporary Help costs are expected to decline in the Test Period as a result of  
8 process improvement for periodic meter change-out program and collections activities.

9 Line 2 represents overhead allocation charges to Tidewater from Middlesex based on a  
10 three-factor cost allocation methodology. A comprehensive study prepared by the  
11 international accounting firm Deloitte and Touche LLP was the foundation for the  
12 methodology, which was adopted in connection with a recommendation from a New  
13 Jersey Board of Public Utilities initiated management audit of Middlesex Water  
14 Company. As part of the last review by Commission Staff of services provided to  
15 Tidewater by Middlesex (PSC Docket No. 10-247), this methodology was reviewed and  
16 discussed and no objections were reported.

17 The three-factor overhead cost allocation is intended to reflect a pro-rata share of indirect  
18 expenses associated with employees that provide specific services to affiliate companies  
19 and other applicable expenses that are not specifically identifiable by entity. Three  
20 factors (revenues, net assets and payroll) are used in formulating the standard monthly  
21 overhead allocation. Indirect expenses incorporated as part of the overhead allocation  
22 include but are not limited to audit fees, employee benefits, property taxes, utilities,  
23 insurance, lease payments, depreciation, maintenance, safety, training, support personnel

1 and other costs associated with building space and equipment not otherwise charged  
2 directly to affiliate companies.

3 Line 3 indicates projected Test Period legal fees that are ongoing in nature, although for  
4 different matters.

5 Line 4 represents charges from Middlesex Water Company to Tidewater, based upon  
6 actual hours of service provided by Middlesex employees to Tidewater. These services  
7 are provided pursuant to a Service Agreement updated November 15, 2013 for  
8 supervisory, technical and clerical personnel services including, but not limited to, the  
9 following: accounting, administration, billing, communications, corporate, customer  
10 service, engineering, financial, human resources, information services, meter reading,  
11 operations, rates and revenue, risk management and water quality. The Test Period  
12 expense was determined utilizing a combination of actual and projected data.

13 Line 5 reflects the cost of a separate independent audit report for Tidewater as required  
14 by the PSC rules and regulations.

15 Line 6 represents overhead costs associated with Tidewater employees that provide  
16 professional services to affiliated companies. In addition, the actual labor costs for those  
17 services are excluded from employee salaries and wages shown on Schedule 3B-1.

18 Line 7 represents an allocation of the annual and ongoing licensing fees and maintenance  
19 agreement costs for the Enterprise Resource Planning (ERP) system and the allocation  
20 employee costs for services provided by the Middlesex Information Technology  
21 Department. The allocation of these fees and costs is based on a separate three-factor  
22 model calculation, which includes the three factors of Middlesex and Tidewater only.

23 Q. WHAT IS THE NEED FOR A SEPARATE THREE-FACTOR OVERHEAD  
24 CALCULATION FOR ERP ASSOCIATED COSTS?

1 A. ERP is a business process technology platform designed to efficiently collect mass  
2 quantities of data for use by companies, such as water utilities, to properly plan and  
3 operate their businesses by making timely information available for such areas as  
4 Accounting, Billing, Budgeting, Capital Projects, Customer Service, Dispatching,  
5 Distribution, Engineering, Financing, Human Resources, Insurance, Metering, Plant  
6 Replacement, Rate Matters, Regulatory Filings and Water Treatment. Data collection  
7 needs for larger public utilities are a more complex and demanding exercise than for  
8 small utilities. The scope and size of the Middlesex (60,000 customers and annual water  
9 production of 13.5 billion gallons) and Tidewater (34,000 customers and annual water  
10 consumption of 1.7 billion gallons) systems and operations necessitate the need for an  
11 ERP system. Conversely, systems such as our affiliates Twin Lakes Utilities, Inc. (116  
12 customers and annual water consumption of 4.1 million gallons), Southern Shores Water  
13 Company, LLC (2,450 customers [58 billing customers] and water consumption of 64.7  
14 million gallons) and Pinelands Water Company (2,459 customers and annual  
15 consumption of 144.5 million gallons) have data and operational requirements that do  
16 not require the sophisticated capabilities of an ERP system.

17 Q. HOW DO INDEPENDENT SMALL PUBLIC UTILITIES COST EFFECTIVELY  
18 MANAGE THEIR DATA NEEDS?

19 A. It depends on the size of the utility, the technology skill set that the owner brings to the  
20 business or can attract to perform the work. Many use manual (excel based spreadsheets)  
21 or off-the-shelf basic general ledger, billing and fixed asset software packages to run their  
22 businesses. Some engage an outside service vendor to provide billing services which  
23 usually includes a customer information system (customer history and accounts

1 receivable) (collectively "CIS"). Prior to migrating to an ERP system, Middlesex,  
2 Tidewater and its affiliates utilized such a service.

3 Q. WHY DIDN'T THE MIDDLESEX AFFILIATES REMAIN WITH THE OUSTIDE  
4 SERVICE VENDOR?

5 A. Notification in 2006 by the vendor that its parent company was seeking to divest its  
6 ownership of its CIS business combined with a lack of commitment from its existing  
7 management to upgrade, enhance or replace the aging technology platform prompted  
8 Middlesex to evaluate alternative CIS options. At the time, Middlesex was the outside  
9 vendor's second largest customer. Once a decision was made by Middlesex to move to  
10 an ERP system, it was impractical from a management standpoint to consider leaving all  
11 8 affiliates on a separate CIS with an uncertain future while managing Middlesex and  
12 Tidewater on an owned and operated system.

13 Q. SHOULD THOSE AFFILIATES USE THE ERP SYSTEM AND NOT BE  
14 RESPONSIBLE FOR ITS COST?

15 A. There should be no cross-subsidization for the customers of those affiliates. At the same  
16 time those affiliates shouldn't subsidize Middlesex and Tidewater customers either.  
17 Incremental costs due to ERP use by affiliates should be borne by those affiliates. In  
18 addition, avoided costs at the affiliates by using Middlesex/Tidewater ERP system  
19 instead of an alternate solution should be used to offset the cost of ERP to Middlesex and  
20 Tidewater. Annual license fees for the ERP billing module are based on a \$1.20 rate per  
21 customer account. The total number of affiliate accounts at the end of the Test Period is  
22 projected to be 28,737 which when multiplied by the rate per account amounts to  
23 \$34,484. This would be a deduction from Line 7, Schedule 3B-8. I have obtained unit

1 pricing charged by an outside service vendor that provides billing services to small and  
2 mid-size water utilities. The per bill charge is \$0.80 for:

- 3 1. Bill Calculation
- 4 2. Bill Print
- 5 3. Bill Mailing
- 6 4. Customer History Maintenance

7 Our affiliates use an outside vendor for items numbered 2 and 3 above at a rate of \$0.13  
8 per item. Our affiliates utilize the ERP system for items numbered 1 and 4 above. The  
9 net avoided cost to the affiliates is \$0.67 per item, which when multiplied by the Test  
10 Period projected 142,582 bills issued would be a deduction from Line 7, Schedule 3B-8  
11 after the avoided cost is allocated between Middlesex and Tidewater. With regard to  
12 accounting transactions, off the shelf solutions for general ledger and fixed asset modules  
13 are viable thrifty tools for small utilities. Quick Books is available on-line for \$189.95,  
14 while Fixed Asset Pro is available for \$549.00.

15 Q. CAN YOU CONTINUE WITH YOUR EXPLANATION OF SCHEDULE 3B-8?

16 A. Line 8 is for costs for outside consultants and out-of-pocket expenses for travel and  
17 accommodations for Middlesex employees traveling to Delaware to provide services for  
18 Tidewater.

19 Schedule 3B-9 – Property and Liability Insurance – This schedule shows the detail of  
20 each type of insurance, a general description of the coverage and the current premium.  
21 All insurance coverage is procured by Middlesex Water and allocated to the affiliated  
22 companies based on the three-factor formula. All but one of the insurance policies renew  
23 annually on June 1<sup>st</sup>. The pollution insurance policy renews on a triennial cycle with the  
24 next renewal date set for June 2015.

1        Schedule 3B-10 – Employee Pensions and Benefits – This schedule details the cost of  
2        health, welfare and retirement benefits provided to Tidewater employees and retirees.  
3        The amounts in the Test Period column, Lines 1 and 2, represent the annualized cost,  
4        assuming a certain percentage increase, upon renewal of the insurance policies. As the  
5        renewal date approaches, the actual premium rates will be available and incorporated into  
6        an update to the Test Period. The 401(K) Plan expenses for matching contributions are  
7        expected to change accordingly as wage levels change. Therefore, the 401(K) Plan  
8        expense has been annualized, assuming a certain percentage increase, as a function of the  
9        wage increase percentage projected to be granted in the Test Period. The Test Period  
10       amounts for Postretirement Benefits (Line 5) and Pensions (Line 6) are based on  
11       projections for each respective retirement plan valuation as of January 1, 2014, for the  
12       twelve months ended June 30, 2014. Statutorily, all Employee Retirement Income  
13       Security Act (ERISA) qualifying plans are required to prepare their valuation using  
14       assumptions in place on the first day of the fiscal year of the Plan Sponsor to determine  
15       the plan cost for the coming year. For 2014, Tidewater has increased its expected  
16       Postretirement Benefits and Pensions costs by 7.0%. The 2014 valuation is expected to  
17       be completed by April 1, 2014 and will be provided to the parties in this matter when  
18       available.

19    Q.    WHAT CAUSED THE LARGE DROP IN LINE 5 – POSTRETIREMENT BENEFITS  
20       FROM 2012 TO THE TEST YEAR AND TEST PERIOD?

21    A.    Effective January 1, 2013, the Postretirement Health Benefit Plan (FAS 106) was  
22       amended to lengthen the employee service period to qualify for retirement health care  
23       benefits and to limit the Company's overall percentage contribution for these benefits.  
24       The Net FAS 106 cost in this proceeding shown is \$446,000 and is considerably lower

1 than the Net FAS 106 cost of \$1,379,000 in PSC Docket 11-397 or the \$1,391,000 for  
2 2012.

3 Q. CAN YOU CONTINUE ON AND EXPLAIN SCHEDULE 3B-11?

4 A. Schedule 3 B-11 - Regulatory Commission Expense - This schedule details the estimated  
5 cost of this rate proceeding, based on the assumption that this proceeding will be fully  
6 litigated. If it appears that this rate case will be stipulated, these expenses will be updated  
7 to reflect the projected cost of a stipulated case. The schedule was also prepared to be in  
8 compliance with the MFR, indicating the cost of prior rate cases. Also included in this  
9 Schedule are 4-year amortization period costs associated with the management audit  
10 ordered by the PSC in Docket No. 10-247 and 5-year amortization period costs associated  
11 with the reduction in employees in 2012 and the related severance Tidewater incurred in  
12 2012 during its last base rate proceeding (PSC Docket No. 11-397).

13 Schedule 3B-12 – Other Operation and Maintenance Expenses – This schedule lists, by  
14 PSC account number, all Operation and Maintenance Expenses not specifically addressed  
15 in Schedule 3B-2 to 3B-11, Schedule 3C or Schedule 3H.

16 Schedule 3B-13 - Interest on Customer Deposits - Interest on Customer Deposits is  
17 included as an Operation and Maintenance Expense.

18 Q. PLEASE DESCRIBE THE OTHER SCHEDULES THAT YOU ARE SPONSORING?

19 A. Schedule 3D, 3E, 3F and 3G - Minimum Filing Requirements - This information has  
20 been supplied on these schedules in compliance with the MFR. The statement required  
21 by Item 11 of the MFR is the Company has not spent any amounts in the Test Year or the  
22 Test Period on influencing legislation. The lobbying portion of the National Association  
23 of Water Company dues is recorded in Other Income and Deductions, “below the line”.

1 Schedule 3J - Federal and State Income Taxes - This schedule calculates Federal and  
2 State Income Taxes for the Test Year and the Test Period at present and proposed rates.  
3 In arriving at the Company's Federal and State tax expense, taxable income has been  
4 calculated by deducting from Operating Revenues the following: Operation and  
5 Maintenance Expenses, Depreciation, Taxes Other Than Income Taxes, and State Income  
6 Taxes for calculating Federal Income Taxes, and Interest Charges calculated by utilizing  
7 interest synchronization. The calculation of interest synchronization is shown on the  
8 bottom of Schedule 3J whereby, the interest for tax purposes is calculated by using the  
9 Rate Base from Schedule 2, multiplied by the weighted cost of debt from the Rate of  
10 Return Calculation found on Schedule 4. The Test Year rate of return on Schedule 4  
11 represents the rate of return established to set the revenue requirement in the settled  
12 outcome of the most recent base rate matter approved by the PSC. Since the effective  
13 date of the last base rate increase, this is the percentage that was used to calculate the  
14 Allowance for Funds Used During Construction (AFUDC) on all capital projects  
15 expected to cost \$200,000 and have a construction period in excess of two months. This  
16 AFUDC rate is also applied to qualifying capital projects during the Test Period.

17 At the bottom of this Schedule 3J is a breakdown of Federal and State Income Taxes  
18 between current and deferred, which is being provided in accordance with the MFR. The  
19 deferred income taxes calculated and recorded by Tidewater result from the accelerated  
20 treatment of the recovery of capital investment in long-lived assets as allowed under the  
21 Internal Revenue Service Code and Regulations (collectively, the "Code") compared to  
22 financial and regulatory requirements. In order for a regulated public utility to properly  
23 elect an accelerated method of tax depreciation for its utility plant, which currently is the  
24 Modified Accelerated Cost Recovery System (MACRS), it must calculate and reflect

1 deferred income taxes in its rate base in accordance with the Code. Deferred income  
2 taxes on sales or retirements of utility plant, including cost of removal and sales proceeds  
3 must also be calculated and recorded in accordance with the Code in order to continue to  
4 utilize MACRS.

5 Tidewater is included in the consolidated federal income tax return filed by Middlesex.

6 Each member of the consolidated group is responsible for its income tax liability and the  
7 respective share is recorded by journal entry on a monthly basis.

8 Schedule 3M - Taxes Other Than Income Taxes - This schedule details payroll taxes, real  
9 estate taxes, other taxes and the PSC Assessment for Actual 2012, the Test Year and the  
10 Test Period. The payroll taxes were calculated utilizing the Test Year and Test Period  
11 labor developed on Schedule 3B-1 for the current applicable taxable bases and tax rates.  
12 These taxes were also reduced for capitalized/billed payroll taxes at the same  
13 capitalization rate of 32.95% as labor expense. The real estate taxes shown on this  
14 schedule represent the assessed taxes from 2012, and will be updated upon receipt of the  
15 current year assessment notices. Tidewater pays to the PSC an assessment of \$.003 per  
16 million gallons of gross intrastate operating revenues.

17 Schedule 3N - Depreciation - This schedule calculates depreciation expense for the Test  
18 Year and the Test Period utilizing the Utility Plant less Contributions-in-Aid-of-  
19 Construction and Customer Advances for Construction balances developed in Schedule  
20 2-1. The depreciation rates used to calculate the annual depreciation expense for  
21 categories of utility plant shown on Schedule N were approved in PSC Docket No. 99-  
22 466, dated November 21, 2000.

23 Q. ARE THERE OTHER SCHEDULES THAT YOU ARE SPONSORING?

1 A. Schedule 4A-MWC, 4B-MWC, 4C-MWC and 4D – MWC – These four schedules represent  
2 the capital structure, cost of debt and cost of preferred equity for Middlesex consolidated  
3 group. This information has been filed to ensure compliance with the MFR and does not  
4 represent a proposal by Tidewater to adopt a consolidated capital structure in this matter. As  
5 noted in the MFR Schedule Index, Schedules 4, 4A, 4B and 4C for Tidewater stand-alone are  
6 part of the exhibits attached to the testimony sponsored by Witness Dylan D'Ascendis.

7 Schedule 5 – Calculation of Gross-up Factor - The Revenue Gross-up factor is developed  
8 using the statutory tax rates for State and Federal Income Taxes and the PSC assessment to  
9 determine the applicable factor to be applied to the deficiency in utility operating income.

10 Q. PLEASE DISCUSS THE PROOF OF REVENUES AND THE TARIFF SHEETS THAT  
11 ARE CONTAINED IN SCHEDULES 8 AND 9, RESPECTIVELY.

12 A. Tidewater engaged a cost of service expert, Gary Shambaugh, to undertake a cost of  
13 service study. Mr. Shambaugh prepared the study and submitted tariff design  
14 recommendations with regard to the allocation of costs to Tidewater's customer classes.  
15 The cost of service study, recommendations, testimony and supporting exhibits have been  
16 filed with this base rate increase application and have been identified as Exhibit T-8.  
17 Tidewater has reviewed the cost of service study and its recommendations and has  
18 adopted the allocation of costs to the various customer classes based upon  
19 recommendations from Mr. Shambaugh. Schedule 8B is a proof of the proposed revenue  
20 increase applied to existing rates based on those recommendations. Schedule 9B contains  
21 the marked Tariff pages for the proposed rate changes as well as certain proposed  
22 changes to non-revenue sections of the Tariff, specifically Section 3.6 Cross Connection  
23 Control and Section 6.2 Maintenance of Fire Hydrants. Schedule 8A is a proof of the

1 proposed revenue from implementing rates under bond. Schedule 9A contains the  
2 marked Tariff pages for the proposed rates under bond.

3 Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

4 A. Yes, it does.

5.3.14 - Schedule of Allocated Costs From/To Affiliate Companies

MFR Schedule Ref.	Test Year	Test Period	Basis for Allocation	Services or Products Provided
3B-1	(2,004,376)	(2,097,564)	Time Sheet Reporting	Tidewater labor costs allocated to affiliate companies or capitalized
3B-6	398,613	425,292	Customer Counts	Middlesex labor costs for Customer Service Call Center shared support
3B-8	897,460 308,985 (241,343) 661,790	941,782 366,376 (221,987) 651,350	3-Factor Cost Allocation Method Time Sheet Reporting 3-Factor Cost Allocation Method 3-Factor Cost Allocation Method	Middlesex overhead costs for Administrative shared service support Middlesex labor charged for Administrative shared service support Overhead costs charged out to affiliate companies for shared services Information Technology operations and maintenance expense recovery
3B-9	41,113 85,628 53,827 10,583 117,744 45,344 13,562 16,821 82,154	60,927 90,592 56,281 11,191 157,651 47,937 13,562 19,968 85,365	3-Factor Cost Allocation Ratios 3-Factor Cost Allocation Ratios Number of Vehicles	Property Insurance General Liability Insurance General Liability - Umbrella Insurance Punitive Damages Insurance Workers Compensation Insurance Directors and Officers Insurance Pollution Insurance Employment Practices Insurance Automobile Insurance

(1) Automobile Insurance is allocated to various Operation and Maintenance Expense Accounts as a transportation cost.

TESTIMONY OF MICHELE L. TILLEY

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Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Michele L. Tilley, 1500 Ronson Road, Iselin, New Jersey 08830.

Q. PLEASE STATE YOUR PROFESSIONAL QUALIFICATIONS AND EXPERIENCE.

A. I have been employed with Middlesex Water Company (Middlesex or the Company) since July, 2007. My present duties consist of preparing and assisting in all regulatory and rate planning related activities for Middlesex, as well as all of its other regulated water and wastewater entities in New Jersey, Delaware and Pennsylvania. My responsibilities include the preparation and review of financial statements, work papers, exhibits, pre-filed testimony and other activities in support of the regulatory and planning activities for Middlesex. I have prepared exhibits and analysis for every rate adjustment related matter since my employment began in 2007. My responsibilities also include managing the Company's budget process and income tax compliance filings. Prior to 2007, I held various financial positions in publically traded companies primarily within the retail industry. I earned a Bachelor of Science Degree in Accounting from Rutgers University in 1989.

Q. PLEASE EXPLAIN SCHEDULE 2, ENTITLED RATE BASE.

A. This schedule details the various components of rate base. The Test Period rate base was developed by beginning with the Test Year as of September 30, 2013

1 and projecting the balances as of June 30, 2014. Schedule 2-1 details the  
2 calculations for Utility Plant, Accumulated Depreciation, Customer Advances and  
3 Contributions-in-Aid-of- Construction.

4 Line Number 1 - Utility Plant - Schedule 2A, Pages 2 and 3, details the projected  
5 capital projects to be completed during the Test Period ended June 30, 2014. This  
6 information was developed and sponsored by Mr. Kalmbacher and was added to  
7 the actual Utility Plant as of September 30, 2013. Retirement information shown  
8 on Schedule 2A, Page 1 of 3, which was also developed and sponsored by Mr.  
9 Kalmbacher, was subtracted from Utility Plant as of September 30, 2013.

10 Schedule 2A, Page 1 of 3, shows Utility Plant by PSC Account Number at  
11 September 30, 2013 and June 30, 2014, the Test Period.

12 Line Number 2 - Accumulated Depreciation - Line Number 2 shows actual  
13 Accumulated Depreciation at September 30, 2013, which was adjusted for the  
14 Test Period depreciation calculated on Schedule 3N, for January 1, 2013 to June  
15 30, 2014. Retirements were subtracted from Accumulated Depreciation.

16 Schedule 2C shows the Accumulated Depreciation at September 30, 2013 and at  
17 the end of the Test Period, by PSC Account Number.

18 Line Number 4 - Materials & Supplies – Line Number 4 represents permanent  
19 investments in inventories of materials and supplies that are needed for the proper  
20 operation of a water utility. The average monthly balance for the twelve months  
21 ended September 30, 2013 was used for the Test Year, and an estimated average

1 monthly balance for the twelve months ending June 30, 2014 was used for the  
2 Test Period. The calculations are detailed on Schedule 2E, Page 1.

3 Line Number 5 - Cash Working Capital – Line Number 5 has been calculated  
4 using the results obtained from a comprehensive Lead/Lag Study prepared under  
5 the supervision of Mr. A. Bruce O'Connor, Tidewater's Treasurer. In all prior  
6 Tidewater base rate proceedings, the "1/8 Method" cash working capital model  
7 had been employed in determining this rate base component. Schedule 2E, Page  
8 2, details the mathematical calculation of Cash Working Capital for the Test Year  
9 and Test Period.

10 Q. WHY DID TIDEWATER CHANGE ITS CASH WORKING CAPITAL  
11 MODEL?

12 A. As part of the settlement agreement in Tidewater's most recent base rate  
13 proceeding (PSC Docket No. 11-397, Order No. 8164), Tidewater committed to  
14 file a Lead/Lag Study in its next base rate proceeding.

15 Q. PLEASE CONTINUE WITH YOUR DESCRIPTION OF THE COMPONENTS  
16 OF RATE BASE AS SUMMARIZED ON SCHEDULE 2?

17 A. Line Number 6 - Deferred Income Taxes (Property Related) - First, this schedule  
18 shows the accumulated deferred income taxes on normalized depreciation and  
19 taxable developer advances as of the end of the Test Year of September 30, 2013.  
20 Next, it shows the pro forma adjustment to arrive at the accumulated deferred  
21 income taxes as of the end of the Test Period of June 30, 2014. That adjustment  
22 was calculated by determining the normalized depreciation on the projected utility

1 plant at the end of the Test Year and applying the combined income tax rate to the  
2 normalized depreciation. Next, I applied the combined income tax rate to the  
3 rebates made to refund taxable developer advances.

4 Line Numbers 8 & 9 - Customer Advances for Construction and Contributions-in-  
5 Aid-of-Construction – Line Numbers 8 and 9 show that Customer Advances for  
6 Construction and Contributions-in-Aid-of-Construction were developed by taking  
7 the end of the Test Year of September 30, 2013 balances and adding the advances  
8 and contributions, then subtracting any refunds during the Test Period, as  
9 developed and sponsored by Mr. Kalmbacher in his testimony and on Schedule  
10 2A.

11 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

12 A. Yes.

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