

STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.  
DW 18-\_\_\_\_\_

2019 WATER INFRASTRUCTURE  
AND CONSERVATION ADJUSTMENT FILING

DIRECT TESTIMONY OF

CARL MCMORRAN

OCTOBER 15, 2018

1 **Q. Mr. McMorran, please state your name and business address.**

2 A. My name is Carl McMorran, and my business address is 7 Scott Road, Hampton,  
3 New Hampshire 03842.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am the Operations Manager for Aquarion Water Company of New Hampshire,  
6 Inc. (“Aquarion NH” or the “Company”).

7 **Q. Please describe your educational background.**

8 A. I have a Bachelor's Degree in Biology from Bucknell University and a Master of  
9 Environmental Science Degree from Miami University. I have also taken  
10 graduate level courses in business administration, and attended (and presented at)  
11 many water works seminars and conferences.

12 **Q. Please describe your business/professional background.**

13 A. I have worked for Aquarion NH since November 2008. As Operations Manager, I  
14 oversee all operations, maintenance, capital improvement, and administrative  
15 activities for the Company in New Hampshire.

16 From April 1999 through October 2008, I served as Production Manager for the  
17 Struthers Division of Aqua Ohio in Poland, Ohio. I supervised a 6 MGD surface  
18 water treatment plant, source water protection and reservoir management  
19 activities, and operations and maintenance for major distribution facilities (tanks,  
20 boosters, etc.). I also had interim supervisory duties at other Aqua Ohio

1 production facilities and acted as operations consultant for the water system of the  
2 City of Campbell, Ohio.

3 From August 1990 through March 1999, I served as Water Quality / Technical  
4 Services Manager for the Bangor Water District in Bangor, Maine. I supervised  
5 source water protection and watershed management activities, water quality  
6 laboratory, regulatory compliance, cross connection, metering and service  
7 activities.

8 From June 1982 through July 1990, I worked as an Environmental Protection  
9 Specialist for the Susquehanna River Basin Commission in Harrisburg,  
10 Pennsylvania, which regulates water resources in Maryland, New York, and  
11 Pennsylvania. I conducted water quality assessment surveys, water pollution  
12 control and hydropower regulation activities.

13 I currently hold Class IV Water Treatment and Distribution licenses in both New  
14 Hampshire and Maine. I previously held a Class IV Water System license in Ohio  
15 and a Class A Water System license in Pennsylvania. I also held a Lake Manager  
16 certification from 1995 through 2008. I also currently serve on the Board of  
17 Directors for the New Hampshire Water Works Association.

18 **Q. Have you previously testified before the New Hampshire Public Utilities**  
19 **Commission (“Commission”)?**

20 A. Yes, I provided live and pre-filed testimony before the Commission in the  
21 Company’s most recent rate case Docket DW 12-085. I also provided pre-filed  
22 testimony in the Company’s previous Water Infrastructure and Conservation

1 Adjustment (“WICA”) filings Dockets DW 09-211, DW 10-293, DW 11-238,  
2 DW 12-325, DW 13-314, DW 14-300, DW 15-476, DW 16-828, and DW17-154.

3 **Q. What is the basis for the Company making this WICA filing?**

4 A. As more fully explained in the testimony of Ms. Debra Szabo, the Commission  
5 approved a WICA program for Aquarion NH in Orders No. 25,019 (DW 08-098,  
6 dated September 25, 2009) and No. 25,539 (DW 12-085, dated June 28, 2013).  
7 Under the WICA program, Aquarion NH can apply for approval of a WICA  
8 surcharge adjustment to collect the revenue requirement associated with used and  
9 useful WICA-eligible infrastructure improvement projects completed in the  
10 preceding twelve months ending September 30.

11 **Q. What is the purpose of your testimony in this proceeding?**

12 A. My testimony discusses the WICA-eligible project constructed in 2018 and the  
13 projects proposed for 2019. I also provide, in Attachment CM-1, candidate  
14 WICA projects for 2020 and 2021. Deb Szabo will discuss the proposed  
15 surcharge calculation and the associated rate impact for the projects that have  
16 been put into service in 2018. The one project was placed into service in 2018  
17 and the proposed budget for that project was initially approved by Commission in  
18 Order No. 26,094 in Docket No. DW 17-154, however, as explained below, the  
19 Company modified its 2018 project.

20 **Q. Please briefly describe the attachments to your testimony.**

1 A. Attachment CM-1 identifies Aquarion's completed 2018 WICA projects and their  
2 respective costs as well as estimated costs for projects anticipated for 2019  
3 through 2021. Attachment CM-2 contains the updated main replacement  
4 prioritization analysis and infrastructure inventory. The prioritization analysis  
5 was updated pursuant to the approved Settlement Agreement in the Company's  
6 last general rate case.

7 **Q. Was there any change in the scope of the projects constructed in 2018 from**  
8 **what was approved by the Commission in Docket DW 17-154?**

9 A. Yes. In a letter dated May 18, 2018 and filed in Docket No. DW 17-154, the  
10 Company informed the Commission (in italics below) that the proposed projects  
11 were changing.

12 *Proposed Main Replacement Projects for 2018:*  
13 *Hampton River Crossings: There are two parallel 4-inch mains that cross the*  
14 *Hampton River. Both the Company's hydraulic model and field tests show that*  
15 *fire flows are inadequate on the south side of the river. Replacement of these*  
16 *mains with larger mains will improve fire protection in this area.*

17  
18 Replacement of the Hampton River crossing mains was dropped when it was  
19 determined that technical conditions were much different than originally  
20 expected, and that more extensive engineering would be needed to adequately  
21 address this issue. Primarily, records showing an old abandoned main that was  
22 targeted for use as a pathway for a new main were incorrect; the old main had  
23 been swept away by the river flow long ago. The alternative to bore a new main  
24 under the sand was complicated and too expensive due to shallow bedrock.

1 *Ninth Street, Seventh Street, Sixth Street and Tenth Street: These are old*  
2 *galvanized mains serving streets running between Kings Highway and Ocean*  
3 *Boulevard that have higher break frequencies. They will be replaced with HDPE*  
4 *pipe.*

5  
6 These main replacements were postponed because funding resources had to be  
7 redirected to the Mill Road Main Replacement project. This change was required  
8 because the State Department of Transportation (DOT) changed its paving  
9 schedule for Mill Road in North Hampton. Paving was originally scheduled for  
10 2019, however, DOT informed the Company early in 2018 that the schedule had  
11 been accelerated to 2018. Because this section of main was prone to main breaks,  
12 the Company moved it up to 2018 to avoid future main breaks under the new  
13 pavement.

14 *Proposed Main Replacement Projects for 2019:*  
15 *The main on Mill Road between Atlantic Avenue and Pine Road has been subject*  
16 *to main breaks. This road is scheduled to be repaved by NH DOT in 2019 and the*  
17 *Company would like to benefit from cost savings related to paving.*

18 **Q. Were there any other changes from the originally approved WICA budget**  
19 **for 2018?**

20 A. Yes. The Company estimated it would replace 10 service lines, one valve and one  
21 hydrant. Between October 1, 2017 and September 30, 2018, the Company  
22 replaced 6 service lines, no valves, and no hydrants. The estimate and the actual  
23 total cost of these categories did not exceed the \$50,000 threshold required for  
24 inclusion in the WICA surcharge.

1 **Q. What action is the Company requesting in this WICA filing with regard to**  
2 **the projects put into service during the 2018 program year?**

3 A. The Company is requesting that the Commission approve a surcharge consistent  
4 with that proposed by Ms. Szabo in her testimony. The 2018 project was  
5 considered by the Commission in Docket No. DW 17-154 and approved for  
6 construction by Order No. 26,094. The costs associated with the project were  
7 prudently incurred and is consistent with the approved budget.

8 **Q. What action is the Company requesting with regard to the proposed WICA**  
9 **projects reflected in the budgets for 2019, 2020, and 2021 shown in**  
10 **Attachment CM-1?**

11 A. With regard to the projects listed for 2019, the Company is requesting that the  
12 Commission approve these projects for construction in 2019 and that project costs  
13 be considered for inclusion in the 2020 WICA surcharge, subject to the  
14 Commission's audit and prudence review of the actual costs of the projects. With  
15 regard to the projects listed for 2020, the Company is requesting that the  
16 Commission preliminarily approve these proposed projects for the WICA  
17 program, subject to the Commission's final review next year. Finally, with regard  
18 to the projects listed for 2021, the Company is not requesting any action and is  
19 simply providing these projects for informational purposes only.

20 **Q. Please describe the selection process for the WICA projects.**

21 A. As in previous WICA filings, the Company uses an objective scoring system to  
22 evaluate pipe segments for replacement. However, projects proposed for 2019 and

1 2020 involve special conditions that are not accurately prioritized by the scoring  
2 system.

3 In general, the Company continues to enhance its use of its Geographic  
4 Information System (“GIS”) to evaluate and manage its distribution system assets.  
5 Information on individual pipe segments, valves and hydrants is updated regularly  
6 with data from field surveys, project drawings, conversion of old maps and  
7 records, engineering analyses, and hydraulic models. Pipe segments are first  
8 scored on the characteristics of breaks and leaks, pipe age, materials  
9 characteristics, need for bleeders and hydraulic capacity, then on critical  
10 customer, pipe lining, and schedule coordination factors.

11 However, the projects proposed for 2019 and 2020 are not accurately scored by  
12 this system. Details are explained below.

13 **Q. Please describe the main replacement projects that the Company proposes to**  
14 **include in the WICA program for 2019, 2020, and 2021.**

15 **A. Proposed Main Replacement Project for 2019: NH Route 101 main**

16 This main is the primary water feed to Hampton Beach pressure zone from the  
17 main distribution system. Although this project scored well on some criteria, it  
18 does not score high overall based on the objective criteria. The project, however,  
19 has several critical conditions that cannot be ignored. First, the water main runs  
20 about 4,000 feet through the salt marsh parallel to NH Route 101 between Tide  
21 Mill Road and Glade Path. Second, it has a small, but known, leak that will  
22 inevitably increase over time. Third, a catastrophic failure would reduce flow

1 capacity to Hampton Beach by about two-thirds and compromise the Company's  
2 ability to meet water consumption and fire protection demands.

3 The marsh location presents very poor conditions to find and repair any leak.

4 Ground and soil conditions are very poor for heavy equipment, excavation would  
5 require complicated salt marsh wetlands permits, and there is a fiber optic cable  
6 on top of portions of the main that would seriously complicate excavation work.

7 Company staff is also very concerned about the potential cost of fixing a leak on  
8 this main. The Town of Hampton had similar breaks on sewer mains crossing the  
9 marsh, which cost almost \$100,000 to repair. Subsequently, the Town is  
10 installing new sewer mains along NH Route 101 to remedy this problem. The  
11 Company determined that these exceptional factors outweighed the Company's  
12 traditional scoring and that it would be prudent to replace the water main in  
13 conjunction with the Town's sewer work. Installing a new water main of better  
14 material and in a better location along NH Route 101 will avoid unplanned  
15 service interruptions and excessive repair costs.

16 Proposed Main Replacement Projects for 2020: Lafayette Road bridge at North  
17 Road in North Hampton

18 This project is driven by DOT's scheduled bridge replacement project on  
19 Lafayette Road at North Road. The existing water main runs with a few feet  
20 parallel to the bridge over the old Boston & Main Railroad grade, and feeds all  
21 services off Lafayette Road north of this location. There is no alternative to  
22 provide water to this area.

1 DOT requires the existing main to be removed during bridge construction.

2 Lafayette Road may also be re-graded, which may require water mains to be  
3 replaced for several hundred feet in both directions from the existing bridge.

4 The Company is still evaluating alternatives, but generally plans to install a new  
5 main around the bridge in order to maintain water service when the existing main  
6 is removed for bridge construction.

7 Proposed Main Replacement Projects for 2021: Ocean Boulevard main between  
8 Dumas Avenue and Highland Avenue

9 This project was on last year's schedule for 2020, and is the highest scoring  
10 project based on the traditional criteria.

11 **Q. Does this conclude your direct testimony?**

12 **A. Yes.**