

Aquarion Water Company of New Hampshire
2019 Annual WICA Surcharge Filing

**WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT
CALCULATION OF SURCHARGE**

Line					<u>Schedule Ref.</u>	
1						
2	Total Investment through 09/30/2018				DS-1, Pg 3 Col 6b Ln 51	\$ 4,847,046
3						
4	Accumulated Depreciation				DS-1, Pg 3 Col 8a Ln 51	(159,907)
5						
6	Net Investment				Ln 2 + Ln 4	<u>\$ 4,687,140</u>
7						
8	Allowed Return on Rate Base				DS-1, Pg 2 Col 10	<u>7.49%</u>
9						
10	Allowed Return on Investment				Ln 6 x Ln 8	\$ 351,067
11						
12	Income Tax on Equity Component					
13						
14		(a)	(b)	(c)	(d)	
15		Weighted	Tax	Pre tax	Tax Gross Up	
16		Cost	Multiplier	Cost	Col (c) - Col (a)	
17						
18	Debt	3.58%	1.00	3.58%	0.00%	
19	Equity	<u>3.91%</u>	1.374	<u>5.37%</u>	1.46%	
20						
21		7.49%		8.95%	1.46%	
22						
23	Total Eligible Investment (Line 6 above)					\$ 4,687,140
24						
25						
26	Income Tax Expense				Ln 21 Col D X Ln 23	68,432
27						
28	Depreciation Expense				DS-1, Pg 3 Col 8 Ln 51	56,370
29						
30	Property Tax Expense				DS-1, Pg 3 Col 10 Ln 51	93,377
31						
32	2017 Tax Act				DS-4 Ln 10	(262,000)
33						
34	Adjustment: Annual Revenues Allowed				Lines 10 + 26 + 28 + 30 + 32	<u>\$ 307,247</u>
35						
36	Base Revenues on which Adjustment will be applied					
37	Revenues allowed DW 12-085					\$ 7,129,043
38	Misc. Charges not subject to WICA					(189,059)
39						<u>\$ 6,939,984</u>
40						
41	Surcharge Percent (Line 34 divided by Line 39)					4.43%

Aquarion Water Company of New Hampshire
2019 Annual WICA Surcharge Filing

WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT
ELIGIBLE PROJECTS PLACED IN SERVICE

Line	Description of Project	Street	Town	1 PUC Acct	2 Depr Rate	3 Type of Project**	4 Date in Service	5 Date of 1st Filing	6a Total Capital Costs	6b Eligible Capital Costs	7a Total Retirements	7b Eligible Retirements	8 = (6b - 7b) x 2 Depreciation Expense	8a = 8 x 50% Accumulated Depreciation	9			10 = (((6b-8a)/1000) x 12) Prop. Tax Expense	
															Town	State	Total		
1																			
2	Project Surcharge Approved in DW 13-314																		
3																			
4	Production Meters	Rye		328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 3,432	\$ 3,432	\$ 3,033	\$ 3,033	\$ 18	\$ 97	7.90	6.60	14.50	\$	48
5	Production Meters	North Hampton		328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 4,511	\$ 4,511	\$ 2,331	\$ 2,331	\$ 96	\$ 528	16.02	6.60	22.62	\$	90
6	Production Meters	Hampton		328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 8,522	\$ 8,522	\$ -	\$ -	\$ 375	\$ 2,062	14.17	6.60	20.77	\$	134
7	Church Street-Highland Avenue to Williams Street	Hampton		343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 133,335	\$ 133,335	\$ 6,243	\$ 6,243	\$ 1,525	\$ 8,388	14.17	6.60	20.77	\$	2,595
8	Auburn Avenue	Hampton		343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 206,750	\$ 206,750	\$ 10,346	\$ 10,346	\$ 2,357	\$ 12,963	14.17	6.60	20.77	\$	4,025
9	Auburn Avenue Extension	Hampton		343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 85,554	\$ 85,554	\$ 359	\$ 359	\$ 1,022	\$ 5,623	14.17	6.60	20.77	\$	1,660
10	Perkins Avenue	Hampton		343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 264,216	\$ 264,216	\$ 1,760	\$ 1,760	\$ 3,149	\$ 17,322	14.17	6.60	20.77	\$	5,128
11	Hydrants*	Hampton		348	2.40%	Hydrants	9/30/2013	10/31/2013	\$ 22,839	\$ 8,147	\$ 2,498	\$ 891	\$ 174	\$ 958	14.17	6.60	20.77	\$	149
12	Services*	Hampton		345	1.85%	Services	9/30/2013	10/31/2013	\$ 33,941	\$ 12,108	\$ 1,994	\$ 711	\$ 211	\$ 1,160	14.17	6.60	20.77	\$	227
13	Services*	Rye		345	1.85%	Services	9/30/2013	10/31/2013	\$ 6,464	\$ 2,306	\$ 230	\$ 82	\$ 41	\$ 226	7.90	6.60	14.50	\$	30
14	Valves*	Hampton		349	5.00%	Other T&D Plant	9/30/2013	10/31/2013	\$ 6,351	\$ 2,265	\$ -	\$ -	\$ 113	\$ 623	14.17	6.60	20.77	\$	34
15	Valves*	North Hampton		349	5.00%	Other T&D Plant	9/30/2013	10/31/2013	\$ 8,133	\$ 2,901	\$ -	\$ -	\$ 145	\$ 798	16.02	6.60	22.62	\$	48
16									\$ 784,050	\$ 734,050	\$ 28,794	\$ 25,757	\$ 9,227	\$ 50,747				\$	14,170
17	Project Surcharge Approved in DW 14-300																		
18																			
19	Production Meters	Hampton		328	4.40%	Other Pumping	9/30/2014	10/31/2014	\$ 3,044	\$ 3,044	\$ 264	\$ 264	\$ 122	\$ 551	14.17	6.60	20.77	\$	52
20	Well 9 Transmission Main	Hampton		343	1.20%	Main Replacement	9/30/2014	10/31/2014	\$ 57,506	\$ 57,506	\$ 3,160	\$ 3,160	\$ 652	\$ 2,935	14.17	6.60	20.77	\$	1,133
21	Ocean Boulevard- Dumas Ave to Winnacunnet Rd	Hampton		343	1.20%	Main Replacement	9/30/2014	10/31/2014	\$ 536,096	\$ 536,096	\$ 6,801	\$ 6,801	\$ 6,352	\$ 28,582	14.17	6.60	20.77	\$	10,541
22									\$ 596,646	\$ 596,646	\$ 10,225	\$ 10,225	\$ 7,126	\$ 32,067				\$	11,726
23	Project Surcharge Approved in DW 15-476																		
24																			
25	Great Boars Head - Cliff Circle to Ocean Blvd	Hampton		343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$169,733	\$ 169,733	\$551	\$ 551	\$ 2,030	\$ 7,106	14.17	6.60	20.77	\$	3,378
26	Kings Hwy - 11th, 13th, 14th & 15th St	Hampton		343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$385,374	\$ 385,374	\$2,324	\$ 2,324	\$ 4,597	\$ 16,088	14.17	6.60	20.77	\$	7,670
27	Ross Avenue	Hampton		343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$186,358	\$ 186,358	\$2,637	\$ 2,637	\$ 2,205	\$ 7,716	14.17	6.60	20.77	\$	3,710
28									\$ 741,465	\$ 741,465	\$ 5,512	\$ 5,512	\$ 8,831	\$ 30,910				\$	14,758
29	Project Surcharge Approved in DW 16-828																		
30																			
31	Lafayette Road - Park Ave to Winnacunnet Rd	Hampton		343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$555,641	\$ 555,641	\$ 7,561	\$ 7,561	\$ 6,577	\$ 16,442	14.17	6.60	20.77	\$	11,199
32	Manchester St: off Ashworth Ave	Hampton		343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$187,725	\$ 187,725	\$ 1,810	\$ 1,810	\$ 2,231	\$ 5,577	14.17	6.60	20.77	\$	3,783
33	Sunsurf Ave: off Cliff Ave	Hampton		343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$135,632	\$ 135,632	\$ 739	\$ 739	\$ 1,619	\$ 4,047	14.17	6.60	20.77	\$	2,733
34	Hydrants*	Hampton		348	2.40%	Hydrants	9/30/2016	10/31/2016	\$5,486	\$ 2,301	\$ 708	\$ 297	\$ 48	\$ 120	14.17	6.60	20.77	\$	45
35	Hydrants*	North Hampton		348	2.40%	Hydrants	9/30/2016	10/31/2016	\$3,140	\$ 1,317	\$ 1,036	\$ 435	\$ 21	\$ 53	16.02	6.60	22.62	\$	29
36	Services*	Hampton		345	1.85%	Services	9/30/2016	10/31/2016	\$71,364	\$ 29,935	\$ 31,998	\$ 13,422	\$ 305	\$ 764	14.17	6.60	20.77	\$	606
37	Services*	North Hampton		345	1.85%	Services	9/30/2016	10/31/2016	\$4,770	\$ 2,001	\$ 1,997	\$ 838	\$ 22	\$ 54	16.02	6.60	22.62	\$	44
38	Valves*	Hampton		349	5.00%	Other T&D Plant	9/30/2016	10/31/2016	\$1,367	\$ 573	\$ -	\$ -	\$ 29	\$ 72	14.17	6.60	20.77	\$	10
39									\$ 965,125	\$ 915,125	\$ 45,850	\$ 25,102	\$ 10,852	\$ 27,129				\$	18,450
40	Project Surcharge Approved in DW 17-154																		
41																			
42	Lafayette Road - Park Ave to Winnacunnet Rd	Hampton		343	1.20%	Main Replacement	9/30/2017	10/31/2017	\$813,883	\$ 813,883	\$ 73,367	\$ 73,367	\$ 8,886	\$ 13,329	14.17	6.60	20.77	\$	16,628
43									\$ 813,883	\$ 813,883	\$ 73,367	\$ 73,367	\$ 8,886	\$ 13,329				\$	16,628
44																			
45	Project Surcharge Proposed Herein																		
46																			
47	Mill Road- Atlantic Avenue to Pine Road	North Hampton		343	1.20%	Main Replacement	9/30/2018	10/15/2018	\$1,045,877	\$ 1,045,877	\$ 91,840	\$ 91,840	\$ 11,448	\$ 5,724	16.02	6.60	22.62	\$	17,646
48									\$ 1,045,877	\$ 1,045,877	\$ 91,840	\$ 91,840	\$ 11,448	\$ 5,724				\$	17,646
49																			
50									TOTALS	\$ 4,947,046	\$ 4,847,046	\$ 255,588	\$ 231,803	\$ 56,370	\$ 159,907				\$ 93,377
51																			
52	*Total capital costs are reduced by \$50,000 proportionately per Order No. 25,539. Retirements are also proportionately reduced.																		
53	** Type of Project (designations will be given for various types of projects)																		

WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

In addition to the net charges provided for in this Tariff, a Water Infrastructure and Conservation Adjustment (“WICA”) surcharge of ~~7.084.43~~% will apply to all bills with services rendered on or after January 1, ~~2018~~2019.

I. General Description

Purpose: To recover the fixed costs (depreciation, property taxes and pre-tax return) of certain Commission-approved non-revenue producing system improvement projects completed and placed in service and to be recorded in the individual accounts, as noted below, between base rate cases. In addition, WICA provides the Company with the resources to accelerate asset replacement for infrastructure for the purpose of improving or protecting water quality and the reliability of service and to comply with evolving regulatory requirements imposed by the Safe Drinking Water Act.

Eligible Property: The WICA-eligible property will consist of the following:

Services over and above an annual; \$50,000 threshold (account 333) and hydrants (account 335) installed as in-kind (i.e., same size) replacements for customers;

mains and valves (account 331) installed as replacements for existing facilities that have either reached the end of their useful life, are worn out or are in deteriorated condition,

main cleaning and re-lining projects and relocations that are non-reimbursable (account 331);

replacement of production meters (account 304); and

replacement of pressure reducing valves (accounts 309, 331);

II. Computation of the WICA

Calculation: The initial charge, effective January 1, 2011, will be calculated to recover the fixed costs of eligible plant additions that have not previously been reflected in the Company's rate base and will have been placed in service between January 1, 2010 and September 30, 2010. Thereafter, the WICA will be updated on an annual basis to reflect eligible plant additions placed in service during the twelve month period ending three months prior to the effective date of each WICA update (the “Project Year”). Thus, changes in the WICA rate will occur as follows:

Issued: January 1, ~~2018~~2019

Issued by: _____
Donald Morrissey

Effective: January 1, ~~2018-2019~~

Title: Chief Financial Officer

As authorized by Order No. ~~26,094XX.XXX~~ in Docket No. DW ~~17-15418-~~

NHPUC No. 1 – Water
Aquarion Water Company of New Hampshire

Fourth Revised Page 17
Superseding Third Revised Page 17

Effective Date
Of WICA Change

Date To Which WICA
Eligible
Plant Additions Reflected

January 1, 2XXX+1

September 30, 2XXX

The fixed costs of eligible infrastructure system improvement projects will consist of depreciation, property taxes and pre-tax return, calculated as follows:

Depreciation: The depreciation expense will be calculated by applying the depreciation rates employed in the Company's last base rate case for the plant accounts to the original cost of WICA-eligible property minus the corresponding retirement unit recorded.

Property Taxes: The property tax expense will reflect an estimate of the tax expense for such projects based on the property tax rate in effect for each town at the end of the most recent Project Year completed (the "tax rate"), and shall be applied to the cumulative Project Year ending net book value of all eligible WICA projects included from the first Project Year thru the end of the most recent Project Year..

Pre-tax return: The pre-tax return will be calculated using the state and federal income tax rates. The cost of equity and debt will be the rates approved in the Company's last base rate case, DW 08-098, or a subsequent docket.

WICA Surcharge Amount: The charge will be expressed as a percentage carried to two decimal places and will be applied to the effective portion of the total amount billed to each customer under the Company's otherwise applicable rates and charges.

Formula: The formula for calculation of the WICA surcharge is as follows:

$$\text{WICA} = \frac{(\text{ISI} \times \text{PTRR}) + \text{Dep} + \text{PT}}{\text{BRWR}}$$

Where:

Issued: January 1, 2017

Issued by: _____
Donald Morrissey

Effective: January 1, 2017

Title: Chief Financial Officer

As authorized by Order No. 25,982 in Docket No. DW 16-828

ISI= the original cost to the Company of eligible infrastructure system improvement projects, less accumulated depreciation.

PTRR= the pre-tax return rate applicable to eligible infrastructure system improvement projects.

Dep= annual depreciation expense related to eligible infrastructure system improvement projects.

PT= annual property taxes related to eligible infrastructure system improvement projects.

BRWR= base retail water revenues as approved by the Commission in the Company's last rate proceeding, DW 08-098, or a subsequent docket.

Annual updates: Supporting data for each annual update will be filed with the Commission and the Office of Consumer Advocate sixty (60) days prior to the effective date of the update. The Company shall also provide notice to the Towns.

III. Safeguards

Cap: The amount of the WICA applied between general rate case filings shall not exceed seven and one-half percent (7.5%) of the Company's annual retail water revenues as approved in its most recent rate filing, and shall not exceed five percent (5%) of such revenues for any twelve-month period.

Project Changes: If, after the Company has received Commission approval for Year 1 projects, because of changed circumstances or significant new information the Company plans to undertake projects in Year 1 that were not included on the list of approved WICA projects for that year or it has decided not to proceed with one or more projects that were included on the Commission-approved list, it shall promptly notify the Commission and all parties to the proceeding in which the list of WICA projects was approved that the Company plans to add to or delete projects and the reason for the proposed changes, in accordance with the following schedule. The Company will submit updates for approved WICA projects for subsequent project years, based upon information known on a project year-to-date basis, from the beginning of the project year through the following effective dates, on the associated reporting dates:

Issued: January 1, 2017

Issued by: _____
Donald Morrissey

Effective: January 1, 2017
As authorized by Order No. 25,982 in Case DW 16-828

Title: Chief Financial Officer

NHPUC No. 1 – Water
Aquarion Water Company of New Hampshire

First Revised Page 18-A
Original Page 18-A

Effective Date

Reporting Date

December 31
March 31
June 30
September 30

January 15
April 15
July 15
October 15

Audits: The WICA will be subject to audit prior to the determination by the Commission.

New Base Rates: The WICA charge will be reset at zero as of the effective date of new base rates that provide for prospective recovery of the annual costs that had theretofore been recovered under the WICA. Thereafter, only the fixed costs of new eligible plant additions, that have not previously been reflected in the Company's rate base, would be reflected in the annual updates of the WICA.

Customer Notice: Customers shall be notified of changes in the WICA by including appropriate information on the first bill they receive following any change. An explanatory bill insert shall also be included with the first billing. Before sending, the Company will review the notice with the Commission's Consumer Affairs division.

Issued: January 1, 2017

Issued by: _____
Donald Morrissey

Effective: January 1, 2017
As authorized by Order No. 25,982 in Case DW 16-828

Title: Chief Financial Officer

Aquarion Water Company of New Hampshire
2020 Annual WICA Surcharge Filing (2018 Estimate)

**WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT
CALCULATION OF SURCHARGE**

Line		<u>Schedule Ref.</u>	
1			
2	Total Investment through 09/30/2019	2020 3 Col 6b Ln 43	\$ 5,735,546
3			
4	Accumulated Depreciation	2020 3 Col 8a Ln 43	(221,424)
5			
6	Net Investment	Ln 2 + Ln 4	<u>\$ 5,514,122</u>
7			
8	Allowed Return on Rate Base	2020 2 Col 10	<u>7.49%</u>
9			
10	Allowed Return on Investment	Ln 6 x Ln 8	\$ 413,008
11			
12	Income Tax on Equity Component		
13			
14			
15		(a)	(b)
16		Weighted	Tax
17		Cost	Multiplier
18	Debt	3.58%	1.000
19	Equity	<u>3.91%</u>	<u>1.374</u>
20			
21		7.49%	8.95%
22			1.46%
23	Total Eligible Investment (Line 6 above)		\$ 5,514,122
24			
25			
26	Income Tax Expense	Ln 21 Col D X Ln 23	80,506
27			
28	Depreciation Expense	2020 3 Col 8 Ln 43	66,664
29			
30	Property Tax Expense	2020 3 Col 10 Ln 43	111,828
31			
32	2017 Tax Act	DS-4 Ln 10	(262,000)
33			
34	Adjustment: Annual Revenues Allowed	Lines 10 + 26 + 28 + 30	<u>\$ 410,006</u>
35			
36	Base Revenues on which Adjustment will be applied		
37	Revenues allowed DW 12-085		\$ 7,129,043
38	Misc. Charges not subject to WICA		(189,059)
39			<u>\$ 6,939,984</u>
40			
41	Surcharge Percent (Line 34 divided by Line 39)		5.91%

Aquarion Water Company of New Hampshire
2020 Annual WICA Surcharge Filing (2018 Estimate)

WATER INFRASTRUCTURE & CONSERVATION ADJUSTMENT
COMPLETED PROJECTS

Line	Project Name or Class Category	1 Estimated Completion Date**	2 Actual Completion Date	3 Estimated Project Cost**	4 Actual Project Cost	5 Accumulated Depreciation	6 Project Cost minus Accumulated Depreciation	7 Depreciation Expense	8 Property Tax Expense	9 Income Tax Expense	10 Rate of Return	11 Annual Retail Revenues	12 = ((4-5) x 10) + 7 + 8 + 9 WICA Adjustment Dollars
2013 Projects													
3	Production Meters	30-Sep-13	30-Sep-13	\$ 18,030	\$ 16,466	\$ 3,175	\$ 13,291	\$ 488	\$ 262	\$ 194	7.49%	\$ 7,129,043	1,940
4	Main Replacements	30-Sep-13	30-Sep-13	\$ -	\$ 689,856	\$ 52,350	\$ 637,507	\$ 8,054	\$ 13,241	\$ 9,308	7.49%	\$ 7,129,043	78,352
5	Hydrants*	30-Sep-13	30-Sep-13	\$ 32,700	\$ 8,147	\$ 1,132	\$ 7,015	\$ 174	\$ 146	\$ 102	7.49%	\$ 7,129,043	948
6	Services*	30-Sep-13	30-Sep-13	\$ 80,600	\$ 14,414	\$ 1,638	\$ 12,776	\$ 252	\$ 253	\$ 187	7.49%	\$ 7,129,043	1,648
7	Valves*	30-Sep-13	30-Sep-13	\$ 10,800	\$ 5,167	\$ 1,679	\$ 3,488	\$ 258	\$ 76	\$ 51	7.49%	\$ 7,129,043	647
				\$ 142,130	\$ 734,050	\$ 59,974	\$ 674,076	\$ 9,227	\$ 13,978	\$ 9,842			83,534
2014 Projects													
11	Production Meters	30-Sep-14	30-Sep-14	\$ 1,600	\$ 3,044	\$ 673	\$ 2,371	\$ 122	\$ 49	\$ 35	7.49%	\$ 7,129,043	384
12	Main Replacements	30-Sep-14	30-Sep-14	\$ 937,968	\$ 593,603	\$ 38,520	\$ 555,082	\$ 7,004	\$ 11,529	\$ 8,104	7.49%	\$ 7,129,043	68,213
				\$ 939,568	\$ 596,646	\$ 39,193	\$ 557,453	\$ 7,126	\$ 11,578	\$ 8,139			68,596
2015 Projects													
16	Main Replacements	30-Sep-15	30-Sep-15	\$ 741,465	\$ 741,465	\$ 39,741	\$ 701,723	\$ 8,831	\$ 14,575	\$ 10,245	7.49%	\$ 7,129,043	86,210
				\$ 741,465	\$ 741,465	\$ 39,741	\$ 701,723	\$ 8,831	\$ 14,575	\$ 10,245			86,210
2016 Projects													
20	Main Replacements	30-Sep-16	30-Sep-16	\$ 766,000	\$ 878,998	\$ 36,493	\$ 842,505	\$ 10,427	\$ 17,499	\$ 12,301	7.49%	\$ 7,129,043	103,330
21	Hydrants*	30-Sep-16	30-Sep-16	\$ 12,000	\$ 3,618	\$ 242	\$ 3,376	\$ 69	\$ 72	\$ 49	7.49%	\$ 7,129,043	444
22	Services*	30-Sep-16	30-Sep-16	\$ 29,000	\$ 31,936	\$ 1,145	\$ 30,791	\$ 327	\$ 643	\$ 450	7.49%	\$ 7,129,043	3,726
23	Valves*	30-Sep-16	30-Sep-16	\$ 5,000	\$ 573	\$ 100	\$ 473	\$ 29	\$ 10	\$ 7	7.49%	\$ 7,129,043	81
				\$ 812,000	\$ 915,125	\$ 37,981	\$ 877,145	\$ 10,852	\$ 18,224	\$ 12,806			107,580
2017 Projects													
27	Main Replacements	30-Sep-17	30-Sep-17	\$ 520,000	\$ 813,883	\$ 22,215	\$ 791,668	\$ 8,886	\$ 16,443	\$ 11,558	7.49%	\$ 7,129,043	96,183
				520,000	813,883	22,215	791,668	8,886	16,443	11,558			96,183
2018 Projects													
31	Main Replacements	30-Sep-18	30-Sep-18	\$ 1,049,694	\$ 1,045,877	\$ 17,173	\$ 1,028,704	\$ 11,448	\$ 23,269	\$ 15,019	7.49%	\$ 7,129,043	126,787
				1,049,694	1,045,877	17,173	1,028,704	11,448	23,269	15,019			126,787
2019 Projects													
35	Production Meters	30-Sep-18	30-Sep-18	\$ 3,500	\$ 3,500	\$ 70	\$ 3,430	\$ 141	\$ 53	\$ 50	7.49%	\$ 7,129,043	501
36	Main Replacements	30-Sep-18	30-Sep-18	\$ 885,000	\$ 885,000	\$ 5,076	\$ 879,924	\$ 10,153	\$ 13,707	\$ 12,847	7.49%	\$ 7,129,043	102,613
				888,500	888,500	5,147	883,353	10,294	13,760	12,897			103,114
39	TOTALS			\$5,093,357	\$ 5,735,546	\$ 221,424	\$ 5,514,122	\$ 66,664	\$ 111,828	\$ 80,506			\$ 672,006

* Emergency Replacement

** Per Docket Filing DW 14-300

Aquarion Water Company of New Hampshire
2020 Annual WICA Surcharge Filing (2018 Estimate)

WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT
ELIGIBLE PROJECTS PLACED IN SERVICE

Line	Description of Project	Street	Town	1 PUC Acct	2 Depr Rate	3 Type of Project**	4 Date in Service	5 Date of 1st Filing	6a Total Capital Costs	6b Eligible Capital Costs	7a Total Retirements	7b Eligible Retirements	8 = (6b - 7b) x 2 Depreciation Expense	8a = 8 x 50% Accumulated Depreciation	9			10 = (((6b-8a)/1000) x 12) Prop. Tax Expense	
															Town	State	Total		
2013 Projects																			
1	Production Meters		Rye	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 3,432	\$ 3,432	\$ 3,033	\$ 3,033	\$ 18	\$ 114	7.90	6.60	14.50	\$ 48	
2	Production Meters		North Hampton	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 4,511	\$ 4,511	\$ 2,331	\$ 2,331	\$ 96	\$ 624	16.02	6.60	22.62	\$ 88	
3	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 8,522	\$ 8,522	\$ -	\$ -	\$ 375	\$ 2,437	14.17	6.60	20.77	\$ 126	
4	Church Street-Highland Avenue to Williams Street		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 133,335	\$ 133,335	\$ 6,243	\$ 6,243	\$ 1,525	\$ 9,913	14.17	6.60	20.77	\$ 2,563	
5	Auburn Avenue		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 206,750	\$ 206,750	\$ 10,346	\$ 10,346	\$ 2,357	\$ 15,320	14.17	6.60	20.77	\$ 3,976	
6	Auburn Avenue Extension		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 85,554	\$ 85,554	\$ 359	\$ 359	\$ 1,022	\$ 6,645	14.17	6.60	20.77	\$ 1,639	
7	Perkins Avenue		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 264,216	\$ 264,216	\$ 1,760	\$ 1,760	\$ 3,149	\$ 20,472	14.17	6.60	20.77	\$ 5,063	
8	Hydrants*		Hampton	348	2.40%	Hydrants	9/30/2013	10/31/2013	\$ 22,839	\$ 8,147	\$ 2,498	\$ 891	\$ 174	\$ 1,132	14.17	6.60	20.77	\$ 146	
9	Services*		Hampton	345	1.85%	Services	9/30/2013	10/31/2013	\$ 33,941	\$ 12,108	\$ 1,994	\$ 711	\$ 211	\$ 1,370	14.17	6.60	20.77	\$ 223	
10	Services*		Rye	345	1.85%	Services	9/30/2013	10/31/2013	\$ 6,464	\$ 2,306	\$ 230	\$ 82	\$ 41	\$ 267	7.90	6.60	14.50	\$ 30	
11	Valves*		Hampton	349	5.00%	Other T&D Plant	9/30/2013	10/31/2013	\$ 6,351	\$ 2,265	\$ -	\$ -	\$ 113	\$ 736	14.17	6.60	20.77	\$ 32	
12	Valves*		North Hampton	349	5.00%	Other T&D Plant	9/30/2013	10/31/2013	\$ 8,133	\$ 2,901	\$ -	\$ -	\$ 145	\$ 943	16.02	6.60	22.62	\$ 44	
13									\$ 784,050	\$ 734,050	\$ 28,794	\$ 25,757	\$ 9,227	\$ 59,974				\$ 13,978	
14	2014 Projects																		
15	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2014	10/31/2014	\$ 3,044	\$ 3,044	\$ 264	\$ 264	\$ 122	\$ 673	14.17	6.60	20.77	\$ 49	
16	Well 9 Transmission Main		Hampton	343	1.20%	Main Replacement	9/30/2014	10/31/2014	\$ 57,506	\$ 57,506	\$ 3,160	\$ 3,160	\$ 652	\$ 3,587	14.17	6.60	20.77	\$ 1,120	
17	Ocean Boulevard- Dumas Ave to Winnacunnet Rd		Hampton	343	1.20%	Main Replacement	9/30/2014	10/31/2014	\$ 536,096	\$ 536,096	\$ 6,801	\$ 6,801	\$ 6,352	\$ 34,933	14.17	6.60	20.77	\$ 10,409	
18									\$ 596,646	\$ 596,646	\$ 10,225	\$ 10,225	\$ 7,126	\$ 39,193				\$ 11,578	
19	2015 Projects																		
20	Great Boars Head - Cliff Circle to Ocean Blvd		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$169,733	\$ 169,733	\$551	\$ 551	\$ 2,030	\$ 9,136	14.17	6.60	20.77	\$ 3,336	
21	Kings Hwy - 11th, 13th, 14th & 15th St		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$385,374	\$ 385,374	\$2,324	\$ 2,324	\$ 4,597	\$ 20,685	14.17	6.60	20.77	\$ 7,575	
22	Ross Avenue		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$186,358	\$ 186,358	\$2,637	\$ 2,637	\$ 2,205	\$ 9,921	14.17	6.60	20.77	\$ 3,665	
23									\$ 741,465	\$ 741,465	\$ 5,512	\$ 5,512	\$ 8,831	\$ 39,741				\$ 14,575	
24	2016 Projects																		
25	Lafayette Road - Park Ave to Winnacunnet Rd		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$555,641	\$ 555,641	\$ 7,561	\$ 7,561	\$ 6,577	\$ 23,019	14.17	6.60	20.77	\$ 11,063	
26	Manchester St. off Ashworth Ave		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$187,725	\$ 187,725	\$ 1,810	\$ 1,810	\$ 2,231	\$ 7,808	14.17	6.60	20.77	\$ 3,737	
27	Sunsurf Ave. off Cliff Ave		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$135,632	\$ 135,632	\$ 739	\$ 739	\$ 1,619	\$ 5,665	14.17	6.60	20.77	\$ 2,699	
28	Hydrants*		Hampton	348	2.40%	Hydrants	9/30/2016	10/31/2016	\$5,486	\$ 2,301	\$ 708	\$ 297	\$ 48	\$ 168	14.17	6.60	20.77	\$ 44	
29	Hydrants*		North Hampton	348	2.40%	Hydrants	9/30/2016	10/31/2016	\$3,140	\$ 1,317	\$ 1,036	\$ 435	\$ 21	\$ 74	16.02	6.60	22.62	\$ 28	
30	Services*		Hampton	345	1.85%	Services	9/30/2016	10/31/2016	\$71,364	\$ 29,935	\$ 31,998	\$ 13,422	\$ 305	\$ 1,069	14.17	6.60	20.77	\$ 600	
31	Services*		North Hampton	345	1.85%	Services	9/30/2016	10/31/2016	\$4,770	\$ 2,001	\$ 1,997	\$ 838	\$ 22	\$ 75	16.02	6.60	22.62	\$ 44	
32	Valves*		Hampton	349	5.00%	Other T&D Plant	9/30/2016	10/31/2016	\$1,367	\$ 573	\$ -	\$ -	\$ 29	\$ 100	14.17	6.60	20.77	\$ 10	
33									\$ 965,125	\$ 915,125	\$ 45,850	\$ 25,102	\$ 10,852	\$ 37,981				\$ 18,224	
34	2017 Projects																		
35	Main Replacements		Hampton	343	1.20%	Main Replacement	9/30/2017	10/31/2017	\$813,883	\$813,883	\$ 73,367	\$ 73,367	\$ 8,886	\$ 22,215	14.17	6.60	20.77	\$ 16,443	
36									\$ 813,883	\$ 813,883	\$ 73,367	\$ 73,367	\$ 8,886	\$ 22,215				\$ 16,443	
37																			
38	2018 Projects																		
39	Main Replacements		North Hampton	343	1.20%	Main Replacement	9/30/2018	10/15/2018	\$1,045,877	\$ 1,045,877	\$ 91,840	\$ 91,840	\$ 11,448	\$ 17,173	16.02	6.60	22.62	\$ 23,269	
40									\$ 1,045,877	\$ 1,045,877	\$ 91,840	\$ 91,840	\$ 11,448	\$ 17,173				\$ 23,269	
41																			
42	2019 Projects																		
43	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2019	10/15/2019	\$ 3,500	\$ 3,500	\$303	\$ 303	\$ 141	\$ 70	14.17	6.60	20.77	\$ 53	
44	Main Replacements		Hampton	343	1.20%	Main Replacement	9/30/2019	10/15/2019	\$885,000	\$ 885,000	\$ 38,921	\$ 38,921	\$ 10,153	\$ 5,076	14.17	6.60	20.77	\$ 13,707	
45									\$ 888,500	\$ 888,500	\$ 39,224	\$ 39,224	\$ 10,294	\$ 5,147				\$ 13,760	
46																			
47									TOTALS	\$ 5,835,546	\$ 5,735,546	\$ 294,812	\$ 271,027	\$ 66,664	\$ 221,424				\$ 111,828

48 *Total capital costs are reduced by \$50,000 proportionately per Order No. 25,539. Retirements are also proportionately reduced.
49 ** Type of Project (designations will be given for various types of projects)

Aquarion Water Company of New Hampshire
2021 Annual WICA Surcharge Filing (2018 Estimate)

**WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT
CALCULATION OF SURCHARGE**

Line		<u>Schedule Ref.</u>	
1			
2	Total Investment through 09/30/2020	2021 3 Col 6b Ln 43	\$ 6,405,546
3			
4	Accumulated Depreciation	2021 3 Col 8a Ln 43	(291,931)
5			
6	Net Investment	Ln 2 + Ln 4	<u>\$ 6,113,615</u>
7			
8	Allowed Return on Rate Base	2021 2 Col 10	<u>7.49%</u>
9			
10	Allowed Return on Investment	Ln 6 x Ln 8	\$ 457,910
11			
12	Income Tax on Equity Component		
13			
14			
15		(a) (b) (c) (d)	
16		Weighted Tax Pre tax Tax Gross Up	
17		Cost Multiplier Cost Col (c) - Col (a)	
18	Debt	3.58% 1.00 3.58% 0.00%	
19	Equity	<u>3.91% 1.37 5.37% 1.46%</u>	
20			
21		7.49% 8.95% 1.46%	
22			
23	Total Eligible Investment (Line 6 above)		\$ 6,113,615
24			
25			
26	Income Tax Expense	Ln 21 Col D X Ln 23	89,259
27			
28	Depreciation Expense	2021 3 Col 8 Ln 43	74,350
29			
30	Property Tax Expense	20210 3 Col 10 Ln 43	126,310
31			
32	2017 Tax Act	DS-4 Ln 10	(262,000)
33			
34	Adjustment: Annual Revenues Allowed	Lines 10 + 26 + 28 + 30	<u>\$ 485,829</u>
35			
36	Base Revenues on which Adjustment will be applied		
37	Revenues allowed DW 12-085		\$ 7,129,043
38	Misc. Charges not subject to WICA		(189,059)
39			<u>\$ 6,939,984</u>
40			
41	Surcharge Percent (Line 34 divided by Line 39)		7.00%

**Aquarion Water Company of New Hampshire
2021 Annual WICA Surcharge Filing (2018 Estimate)**

**WATER INFRASTRUCTURE & CONSERVATION ADJUSTMENT
COMPLETED PROJECTS**

Line	Project Name or Class Category	1 Estimated Completion Date**	2 Actual Completion Date	3 Estimated Project Cost**	4 Actual Project Cost	5 Accumulated Depreciation	6 Project Cost minus Accumulated Depreciation	7 Depreciation Expense	8 Property Tax Expense	9 Income Tax Expense	10 Rate of Return	11 Annual Retail Revenues	12 = ((4-5) x 10) + 7 + 8 + 9 WICA Adjustment Dollars
2013 Projects													
3	Production Meters	30-Sep-13	30-Sep-13	\$ 18,030	\$ 16,466	\$ 3,664	\$ 12,802	\$ 488	\$ 252	\$ 187	7.49%	\$ 7,129,043	1,887
4	Main Replacements	30-Sep-13	30-Sep-13	\$ -	\$ 689,856	\$ 60,403	\$ 629,453	\$ 8,054	\$ 13,074	\$ 9,190	7.49%	\$ 7,129,043	77,464
5	Hydrants*	30-Sep-13	30-Sep-13	\$ 32,700	\$ 8,147	\$ 1,306	\$ 6,841	\$ 174	\$ 142	\$ 100	7.49%	\$ 7,129,043	929
6	Services*	30-Sep-13	30-Sep-13	\$ 80,600	\$ 14,414	\$ 1,890	\$ 12,524	\$ 252	\$ 248	\$ 183	7.49%	\$ 7,129,043	1,620
7	Valves*	30-Sep-13	30-Sep-13	\$ 10,800	\$ 5,167	\$ 1,938	\$ 3,229	\$ 258	\$ 70	\$ 47	7.49%	\$ 7,129,043	618
				\$ 142,130	\$ 734,050	\$ 69,200	\$ 664,850	\$ 9,227	\$ 13,786	\$ 9,707			82,517
2014 Projects													
11	Production Meters	30-Sep-14	30-Sep-14	\$ 1,600	\$ 3,044	\$ 795	\$ 2,249	\$ 122	\$ 47	\$ 33	7.49%	\$ 7,129,043	370
12	Main Replacements	30-Sep-14	30-Sep-14	\$ 937,968	\$ 593,603	\$ 45,524	\$ 548,079	\$ 7,004	\$ 11,384	\$ 8,002	7.49%	\$ 7,129,043	67,440
				\$ 939,568	\$ 596,646	\$ 46,319	\$ 550,327	\$ 7,126	\$ 11,430	\$ 8,035			67,811
2015 Projects													
16	Main Replacements	30-Sep-15	30-Sep-15	\$ 741,465	\$ 741,465	\$ 48,573	\$ 692,892	\$ 8,831	\$ 14,391	\$ 10,116	7.49%	\$ 7,129,043	85,237
				\$ 741,465	\$ 741,465	\$ 48,573	\$ 692,892	\$ 8,831	\$ 14,391	\$ 10,116			85,237
2016 Projects													
20	Main Replacements	30-Sep-16	30-Sep-16	\$ 766,000	\$ 878,998	\$ 46,920	\$ 832,078	\$ 10,427	\$ 17,282	\$ 12,148	7.49%	\$ 7,129,043	102,180
21	Hydrants*	30-Sep-16	30-Sep-16	\$ 12,000	\$ 3,618	\$ 312	\$ 3,307	\$ 69	\$ 71	\$ 48	7.49%	\$ 7,129,043	436
22	Services*	30-Sep-16	30-Sep-16	\$ 29,000	\$ 31,936	\$ 1,472	\$ 30,464	\$ 327	\$ 636	\$ 445	7.49%	\$ 7,129,043	3,690
23	Valves*	30-Sep-16	30-Sep-16	\$ 5,000	\$ 573	\$ 129	\$ 444	\$ 29	\$ 9	\$ 6	7.49%	\$ 7,129,043	78
				\$ 812,000	\$ 915,125	\$ 48,832	\$ 866,293	\$ 10,852	\$ 17,999	\$ 12,648			106,384
2017 Projects													
27	Main Replacements	30-Sep-17	30-Sep-17	\$ 520,000	\$ 813,883	\$ 31,102	\$ 782,781	\$ 8,886	\$ 16,258	\$ 11,429	7.49%	\$ 7,129,043	95,203
				520,000	813,883	31,102	782,781	8,886	16,258	11,429			95,203
2018 Projects													
31	Main Replacements	30-Sep-18	30-Sep-18	\$ 1,049,694	\$ 1,045,877	\$ 28,621	\$ 1,017,256	\$ 11,448	\$ 23,010	\$ 14,852	7.49%	\$ 7,129,043	125,503
				1,049,694	1,045,877	28,621	1,017,256	11,448	23,010	14,852			125,503
2019 Projects													
35	Production Meters	30-Sep-18	30-Sep-18	\$ 3,500	\$ 3,500	\$ 211	\$ 3,289	\$ 141	\$ 68	\$ 48	7.49%	\$ 7,129,043	503
36	Main Replacements	30-Sep-18	30-Sep-18	\$ 885,000	\$ 885,000	\$ 15,229	\$ 869,771	\$ 10,153	\$ 18,065	\$ 12,699	7.49%	\$ 7,129,043	106,063
				888,500	888,500	15,440	873,060	10,294	18,133	12,747			106,566
2020 Projects													
40	Main Replacements	30-Sep-18	30-Sep-18	\$ 670,000	\$ 670,000	\$ 3,843	\$ 666,157	\$ 7,686	\$ 11,301	\$ 9,726	7.49%	\$ 7,129,043	78,609
				670,000	670,000	3,843	666,157	7,686	11,301	9,726			78,609
43	TOTALS			\$ 5,763,357	\$ 6,405,546	\$ 291,931	\$ 6,113,615	\$ 74,350	\$ 126,310	\$ 89,259			\$ 747,829

* Emergency Replacement
** Per Docket Filing DW 14-300

Aquarion Water Company of New Hampshire
2021 Annual WICA Surcharge Filing (2018 Estimate)

WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT
ELIGIBLE PROJECTS PLACED IN SERVICE

Line	Description of Project	Street	Town	1 PUC Acct	2 Depr Rate	3 Type of Project**	4 Date in Service	5 Date of 1st Filing	6a Total Capital Costs	6b Eligible Capital Costs	7a Total Retirements	7b Eligible Retirements	8 = (6b - 7b) x 2 Depreciation Expense	8a = 8 x 50% Accumulated Depreciation	9			10 = (((6b-8a)/1000) x 12) Prop. Tax Expense	
															Town	State	Total		
2013 Projects																			
1	Production Meters		Rye	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 3,432	\$ 3,432	\$ 3,033	\$ 3,033	\$ 18	\$ 132	7.90	6.60	14.50	\$ 48	
2	Production Meters		North Hampton	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 4,511	\$ 4,511	\$ 2,331	\$ 2,331	\$ 96	\$ 719	16.02	6.60	22.62	\$ 86	
3	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 8,522	\$ 8,522	\$ -	\$ -	\$ 375	\$ 2,812	14.17	6.60	20.77	\$ 119	
4	Church Street-Highland Avenue to Williams Street		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 133,335	\$ 133,335	\$ 6,243	\$ 6,243	\$ 1,525	\$ 11,438	14.17	6.60	20.77	\$ 2,532	
5	Auburn Avenue		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 206,750	\$ 206,750	\$ 10,346	\$ 10,346	\$ 2,357	\$ 17,676	14.17	6.60	20.77	\$ 3,927	
6	Auburn Avenue Extension		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 85,554	\$ 85,554	\$ 359	\$ 359	\$ 1,022	\$ 7,668	14.17	6.60	20.77	\$ 1,618	
7	Perkins Avenue		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 264,216	\$ 264,216	\$ 1,760	\$ 1,760	\$ 3,149	\$ 23,621	14.17	6.60	20.77	\$ 4,997	
8	Hydrants*		Hampton	348	2.40%	Hydrants	9/30/2013	10/31/2013	\$ 22,839	\$ 8,147	\$ 2,498	\$ 891	\$ 174	\$ 1,306	14.17	6.60	20.77	\$ 142	
9	Services*		Hampton	345	1.85%	Services	9/30/2013	10/31/2013	\$ 33,941	\$ 12,108	\$ 1,994	\$ 711	\$ 211	\$ 1,581	14.17	6.60	20.77	\$ 219	
10	Services*		Rye	345	1.85%	Services	9/30/2013	10/31/2013	\$ 6,464	\$ 2,306	\$ 230	\$ 82	\$ 41	\$ 309	7.90	6.60	14.50	\$ 29	
11	Valves*		Hampton	349	5.00%	Other T&D Plant	9/30/2013	10/31/2013	\$ 6,351	\$ 2,265	\$ -	\$ -	\$ 113	\$ 850	14.17	6.60	20.77	\$ 29	
12	Valves*		North Hampton	349	5.00%	Other T&D Plant	9/30/2013	10/31/2013	\$ 8,133	\$ 2,901	\$ -	\$ -	\$ 145	\$ 1,088	16.02	6.60	22.62	\$ 41	
13									\$ 784,050	\$ 734,050	\$ 28,794	\$ 25,757	\$ 9,227	\$ 69,200				\$ 13,786	
2014 Projects																			
15	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2014	10/31/2014	\$ 3,044	\$ 3,044	\$ 264	\$ 264	\$ 122	\$ 795	14.17	6.60	20.77	\$ 47	
16	Well 9 Transmission Main		Hampton	343	1.20%	Main Replacement	9/30/2014	10/31/2014	\$ 57,506	\$ 57,506	\$ 3,160	\$ 3,160	\$ 652	\$ 4,239	14.17	6.60	20.77	\$ 1,106	
17	Ocean Boulevard- Dumas Ave to Winnacunnet Rd		Hampton	343	1.20%	Main Replacement	9/30/2014	10/31/2014	\$ 536,096	\$ 536,096	\$ 6,801	\$ 6,801	\$ 6,352	\$ 41,285	14.17	6.60	20.77	\$ 10,277	
18									\$ 596,646	\$ 596,646	\$ 10,225	\$ 10,225	\$ 7,126	\$ 46,319				\$ 11,430	
2015 Projects																			
19	Great Boars Head - Cliff Circle to Ocean Blvd		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$ 169,733	\$ 169,733	\$ 551	\$ 551	\$ 2,030	\$ 11,166	14.17	6.60	20.77	\$ 3,293	
21	Kings Hwy - 11th, 13th, 14th & 15th St		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$ 385,374	\$ 385,374	\$ 2,324	\$ 2,324	\$ 4,597	\$ 25,281	14.17	6.60	20.77	\$ 7,479	
22	Ross Avenue		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$ 186,358	\$ 186,358	\$ 2,637	\$ 2,637	\$ 2,205	\$ 12,126	14.17	6.60	20.77	\$ 3,619	
23									\$ 741,465	\$ 741,465	\$ 5,512	\$ 5,512	\$ 8,831	\$ 48,573				\$ 14,391	
2016 Projects																			
25	Lafayette Road - Park Ave to Winnacunnet Rd		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$ 555,641	\$ 555,641	\$ 7,561	\$ 7,561	\$ 6,577	\$ 29,596	14.17	6.60	20.77	\$ 10,926	
26	Manchester St. off Ashworth Ave		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$ 187,725	\$ 187,725	\$ 1,810	\$ 1,810	\$ 2,231	\$ 10,039	14.17	6.60	20.77	\$ 3,691	
27	Sunsurf Ave. off Cliff Ave		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$ 135,632	\$ 135,632	\$ 739	\$ 739	\$ 1,619	\$ 7,284	14.17	6.60	20.77	\$ 2,666	
28	Hydrants*		Hampton	348	2.40%	Hydrants	9/30/2016	10/31/2016	\$ 5,486	\$ 2,301	\$ 708	\$ 297	\$ 48	\$ 216	14.17	6.60	20.77	\$ 43	
29	Hydrants*		North Hampton	348	2.40%	Hydrants	9/30/2016	10/31/2016	\$ 3,140	\$ 1,317	\$ 1,036	\$ 435	\$ 21	\$ 95	16.02	6.60	22.62	\$ 28	
30	Services*		Hampton	345	1.85%	Services	9/30/2016	10/31/2016	\$ 71,364	\$ 29,935	\$ 31,998	\$ 13,422	\$ 305	\$ 1,375	14.17	6.60	20.77	\$ 593	
31	Services*		North Hampton	345	1.85%	Services	9/30/2016	10/31/2016	\$ 4,770	\$ 2,001	\$ 1,997	\$ 838	\$ 22	\$ 97	16.02	6.60	22.62	\$ 43	
32	Valves*		Hampton	349	5.00%	Other T&D Plant	9/30/2016	10/31/2016	\$ 1,367	\$ 573	\$ -	\$ -	\$ 29	\$ 129	14.17	6.60	20.77	\$ 9	
33									\$ 965,125	\$ 915,125	\$ 45,850	\$ 25,102	\$ 10,852	\$ 48,832				\$ 17,999	
2017 Projects																			
35	Main Replacements		Hampton	343	1.20%	Main Replacement	9/30/2017	10/31/2017	\$ 813,883	\$ 813,883	\$ 73,367	\$ 73,367	\$ 8,886	\$ 31,102	14.17	6.60	20.77	\$ 16,258	
36									\$ 813,883	\$ 813,883	\$ 73,367	\$ 73,367	\$ 8,886	\$ 31,102				\$ 16,258	
2018 Projects																			
38	Main Replacements		North Hampton	343	1.20%	Main Replacement	9/30/2018	10/15/2018	\$ 1,045,877	\$ 1,045,877	\$ 91,840	\$ 91,840	\$ 11,448	\$ 28,621	16.02	6.60	22.62	\$ 23,010	
39									\$ 1,045,877	\$ 1,045,877	\$ 91,840	\$ 91,840	\$ 11,448	\$ 28,621				\$ 23,010	
2019 Projects																			
41	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2019	10/15/2019	\$ 3,500	\$ 3,500	\$ 303	\$ 303	\$ 141	\$ 211	14.17	6.60	20.77	\$ 68	
42	Main Replacements		Hampton	343	1.20%	Main Replacement	9/30/2019	10/15/2019	\$ 885,000	\$ 885,000	\$ 38,921	\$ 38,921	\$ 10,153	\$ 15,229	14.17	6.60	20.77	\$ 18,065	
43									\$ 888,500	\$ 888,500	\$ 39,224	\$ 39,224	\$ 10,294	\$ 15,440				\$ 18,133	
2020 Projects																			
45	Main Replacements		North Hampton	343	1.20%	Main Replacement	9/30/2019	10/15/2019	\$ 670,000	\$ 670,000	\$ 29,466	\$ 29,466	\$ 7,686	\$ 3,843	16.02	6.60	22.62	\$ 11,301	
46									\$ 670,000	\$ 670,000	\$ 29,466	\$ 29,466	\$ 7,686	\$ 3,843				\$ 11,301	
47																			
48									TOTALS	\$ 6,505,546	\$ 6,405,546	\$ 324,278	\$ 300,492	\$ 74,350	\$ 291,931				\$ 126,310

50 *Total capital costs are reduced by \$50,000 proportionately per Order No. 25,539. Retirements are also proportionately reduced. to DS-1, Pg 1, Ln 2 to DS-1, Pg 1, Ln 28 to DS-1, Pg 1, Ln 4 to DS-1, Pg 1, Ln 30

51 ** Type of Project (designations will be given for various types of projects)

Aquarion Water Company of New Hampshire
2021 Annual WICA Surcharge Filing (2018 Estimate)

**WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT
CALCULATION OF SURCHARGE**

Line		<u>Schedule Ref.</u>	
1			
2	Total Investment through 09/30/2020	2021 3 Col 6b Ln 43	\$ 7,325,546
3			
4	Accumulated Depreciation	2021 3 Col 8a Ln 43	(371,559)
5			
6	Net Investment	Ln 2 + Ln 4	<u>\$ 6,953,988</u>
7			
8	Allowed Return on Rate Base	2021 2 Col 10	<u>7.49%</u>
9			
10	Allowed Return on Investment	Ln 6 x Ln 8	\$ 520,854
11			
12	Income Tax on Equity Component		
13			
14			
15		(a)	(b)
16		Weighted	Tax
17		Cost	Multiplier
18	Debt	3.58%	1.00
19	Equity	<u>3.91%</u>	<u>1.37</u>
20			
21		7.49%	8.95%
22			
23	Total Eligible Investment (Line 6 above)		\$ 6,953,988
24			
25			
26	Income Tax Expense	Ln 21 Col D X Ln 23	101,528
27			
28	Depreciation Expense	2021 3 Col 8 Ln 43	84,905
29			
30	Property Tax Expense	2021 3 Col 10 Ln 43	142,746
31			
32	2017 Tax Act	DS-4 Ln 10	(262,000)
33			
34	Adjustment: Annual Revenues Allowed	Lines 10 + 26 + 28 + 30	<u>\$ 588,033</u>
35			
36	Base Revenues on which Adjustment will be applied		
37	Revenues allowed DW 12-085		\$ 7,129,043
38	Misc. Charges not subject to WICA		(189,059)
39			<u>\$ 6,939,984</u>
40			
41	Surcharge Percent (Line 34 divided by Line 39)		8.47%

Aquarion Water Company of New Hampshire
2021 Annual WICA Surcharge Filing (2018 Estimate)

WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT
ELIGIBLE PROJECTS PLACED IN SERVICE

Line	Description of Project	Street	Town	1 PUC Acct	2 Depr Rate	3 Type of Project**	4 Date in Service	5 Date of 1st Filing	6a Total Capital Costs	6b Eligible Capital Costs	7a Total Retirements	7b Eligible Retirements	8 = (6b - 7b) x 2 Depreciation Expense	8a = 8 x 50% Accumulated Depreciation	9			10 = (((6b-8a)/1000) x 12) Prop. Tax Expense	
															Town	State	Total		
2013 Projects																			
1	Production Meters		Rye	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 3,432	\$ 3,432	\$ 3,033	\$ 3,033	\$ 18	\$ 149	7.90	6.60	14.50	\$ 48	
2	Production Meters		North Hampton	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 4,511	\$ 4,511	\$ 2,331	\$ 2,331	\$ 96	\$ 815	16.02	6.60	22.62	\$ 84	
3	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2013	10/31/2013	\$ 8,522	\$ 8,522	\$ -	\$ -	\$ 375	\$ 3,187	14.17	6.60	20.77	\$ 111	
4	Church Street-Highland Avenue to Williams Street		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 133,335	\$ 133,335	\$ 6,243	\$ 6,243	\$ 1,525	\$ 12,963	14.17	6.60	20.77	\$ 2,500	
5	Auburn Avenue		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 206,750	\$ 206,750	\$ 10,346	\$ 10,346	\$ 2,357	\$ 20,033	14.17	6.60	20.77	\$ 3,878	
6	Auburn Avenue Extension		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 85,554	\$ 85,554	\$ 359	\$ 359	\$ 1,022	\$ 8,690	14.17	6.60	20.77	\$ 1,596	
7	Perkins Avenue		Hampton	343	1.20%	Main Replacement	9/30/2013	10/31/2013	\$ 264,216	\$ 264,216	\$ 1,760	\$ 1,760	\$ 3,149	\$ 26,770	14.17	6.60	20.77	\$ 4,932	
8	Hydrants*		Hampton	348	2.40%	Hydrants	9/30/2013	10/31/2013	\$ 22,839	\$ 8,147	\$ 2,498	\$ 891	\$ 174	\$ 1,480	14.17	6.60	20.77	\$ 138	
9	Services*		Hampton	345	1.85%	Services	9/30/2013	10/31/2013	\$ 33,941	\$ 12,108	\$ 1,994	\$ 711	\$ 211	\$ 1,792	14.17	6.60	20.77	\$ 214	
10	Services*		Rye	345	1.85%	Services	9/30/2013	10/31/2013	\$ 6,464	\$ 2,306	\$ 230	\$ 82	\$ 41	\$ 350	7.90	6.60	14.50	\$ 28	
11	Valves*		Hampton	349	5.00%	Other T&D Plant	9/30/2013	10/31/2013	\$ 6,351	\$ 2,265	\$ -	\$ -	\$ 113	\$ 963	14.17	6.60	20.77	\$ 27	
12	Valves*		North Hampton	349	5.00%	Other T&D Plant	9/30/2013	10/31/2013	\$ 8,133	\$ 2,901	\$ -	\$ -	\$ 145	\$ 1,233	16.02	6.60	22.62	\$ 38	
13									\$ 784,050	\$ 734,050	\$ 28,794	\$ 25,757	\$ 9,227	\$ 78,427				\$ 13,594	
2014 Projects																			
15	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2014	10/31/2014	\$ 3,044	\$ 3,044	\$ 264	\$ 264	\$ 122	\$ 918	14.17	6.60	20.77	\$ 44	
16	Well 9 Transmission Main		Hampton	343	1.20%	Main Replacement	9/30/2014	10/31/2014	\$ 57,506	\$ 57,506	\$ 3,160	\$ 3,160	\$ 652	\$ 4,891	14.17	6.60	20.77	\$ 1,093	
17	Ocean Boulevard- Dumas Ave to Winnacunnet Rd		Hampton	343	1.20%	Main Replacement	9/30/2014	10/31/2014	\$ 536,096	\$ 536,096	\$ 6,801	\$ 6,801	\$ 6,352	\$ 47,637	14.17	6.60	20.77	\$ 10,145	
18									\$ 596,646	\$ 596,646	\$ 10,225	\$ 10,225	\$ 7,126	\$ 53,445				\$ 11,282	
2015 Projects																			
19	Great Boars Head - Cliff Circle to Ocean Blvd		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$ 169,733	\$ 169,733	\$ 551	\$ 551	\$ 2,030	\$ 13,196	14.17	6.60	20.77	\$ 3,251	
21	Kings Hwy - 11th, 13th, 14th & 15th St		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$ 385,374	\$ 385,374	\$ 2,324	\$ 2,324	\$ 4,597	\$ 29,878	14.17	6.60	20.77	\$ 7,384	
22	Ross Avenue		Hampton	343	1.20%	Main Replacement	9/30/2015	10/31/2015	\$ 186,358	\$ 186,358	\$ 2,637	\$ 2,637	\$ 2,205	\$ 14,330	14.17	6.60	20.77	\$ 3,573	
23									\$ 741,465	\$ 741,465	\$ 5,512	\$ 5,512	\$ 8,831	\$ 57,404				\$ 14,208	
2016 Projects																			
25	Lafayette Road - Park Ave to Winnacunnet Rd		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$ 555,641	\$ 555,641	\$ 7,561	\$ 7,561	\$ 6,577	\$ 36,173	14.17	6.60	20.77	\$ 10,789	
26	Manchester St: off Ashworth Ave		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$ 187,725	\$ 187,725	\$ 1,810	\$ 1,810	\$ 2,231	\$ 12,270	14.17	6.60	20.77	\$ 3,644	
27	Sunsurf Ave: off Cliff Ave		Hampton	343	1.20%	Main Replacement	9/30/2016	10/31/2016	\$ 135,632	\$ 135,632	\$ 739	\$ 739	\$ 1,619	\$ 8,903	14.17	6.60	20.77	\$ 2,632	
28	Hydrants*		Hampton	348	2.40%	Hydrants	9/30/2016	10/31/2016	\$ 5,486	\$ 2,301	\$ 708	\$ 297	\$ 48	\$ 265	14.17	6.60	20.77	\$ 42	
29	Hydrants*		North Hampton	348	2.40%	Hydrants	9/30/2016	10/31/2016	\$ 3,140	\$ 1,317	\$ 1,036	\$ 435	\$ 21	\$ 116	16.02	6.60	22.62	\$ 27	
30	Services*		Hampton	345	1.85%	Services	9/30/2016	10/31/2016	\$ 71,364	\$ 29,935	\$ 31,998	\$ 13,422	\$ 305	\$ 1,680	14.17	6.60	20.77	\$ 587	
31	Services*		North Hampton	345	1.85%	Services	9/30/2016	10/31/2016	\$ 4,770	\$ 2,001	\$ 1,997	\$ 838	\$ 22	\$ 118	16.02	6.60	22.62	\$ 43	
32	Valves*		Hampton	349	5.00%	Other T&D Plant	9/30/2016	10/31/2016	\$ 1,367	\$ 573	\$ -	\$ -	\$ 29	\$ 158	14.17	6.60	20.77	\$ 9	
33									\$ 965,125	\$ 915,125	\$ 45,850	\$ 25,102	\$ 10,852	\$ 59,684				\$ 17,773	
2017 Projects																			
35	Main Replacements		Hampton	343	1.20%	Main Replacement	9/30/2017	10/31/2017	\$ 813,883	\$ 813,883	\$ 73,367	\$ 73,367	\$ 8,886	\$ 39,988	14.17	6.60	20.77	\$ 16,074	
36									\$ 813,883	\$ 813,883	\$ 73,367	\$ 73,367	\$ 8,886	\$ 39,988				\$ 16,074	
2018 Projects																			
38	Main Replacements		North Hampton	343	1.20%	Main Replacement	9/30/2018	10/15/2018	\$ 1,045,877	\$ 1,045,877	\$ 91,840	\$ 91,840	\$ 11,448	\$ 40,070	16.02	6.60	22.62	\$ 22,751	
39									\$ 1,045,877	\$ 1,045,877	\$ 91,840	\$ 91,840	\$ 11,448	\$ 40,070				\$ 22,751	
2019 Projects																			
41	Production Meters		Hampton	328	4.40%	Other Pumping	9/30/2019	10/15/2019	\$ 3,500	\$ 3,500	\$ 303	\$ 303	\$ 141	\$ 352	14.17	6.60	20.77	\$ 65	
42	Main Replacements		Hampton	343	1.20%	Main Replacement	9/30/2019	10/15/2019	\$ 885,000	\$ 885,000	\$ 38,921	\$ 38,921	\$ 10,153	\$ 25,382	14.17	6.60	20.77	\$ 17,854	
43									\$ 888,500	\$ 888,500	\$ 39,224	\$ 39,224	\$ 10,294	\$ 25,734				\$ 17,920	
2020 Projects																			
45	Main Replacements		North Hampton	343	1.20%	Main Replacement	9/30/2019	10/15/2019	\$ 670,000	\$ 670,000	\$ 29,466	\$ 29,466	\$ 7,686	\$ 11,530	16.02	6.60	22.62	\$ 14,895	
46									\$ 670,000	\$ 670,000	\$ 29,466	\$ 29,466	\$ 7,686	\$ 11,530				\$ 14,895	
2021 Projects																			
48	Main Replacements		Hampton	343	1.20%	Main Replacement	9/30/2019	10/15/2019	\$ 920,000	\$ 920,000	\$ 40,460	\$ 40,460	\$ 10,554	\$ 5,277	14.17	6.60	20.77	\$ 14,249	
49									\$ 920,000	\$ 920,000	\$ 40,460	\$ 40,460	\$ 10,554	\$ 5,277				\$ 14,249	
50																			
51																			
52																			
53																			
54																			
									TOTALS	\$ 7,425,546	\$ 7,325,546	\$ 364,738	\$ 340,952	\$ 84,905	\$ 371,559				\$ 142,746

*Total capital costs are reduced by \$50,000 proportionately per Order No. 25,539. Retirements are also proportionately reduced.

** Type of Project (designations will be given for various types of projects)

to DS-1, Pg 1, Ln 2 to DS-1, Pg 1, Ln 28 to DS-1, Pg 1, Ln 4 to DS-1, Pg 1, Ln 30

Aquarion Water Company of New Hampshire

2019 Annual WICA Surcharge Filing

Impact of Tax Reform on Revenue Requirement

In \$000's

Line #	Impact to Revenue Requirement		Source
1	Net EDIT at 12.31.2017	\$ (1,271.00)	Line 15
2	Amortization	\$ (36)	Line 15
3	Gross-up factor	1.374	Line 22
4	Revenue requirement reduction #1	\$ (49.00)	Line 2 x Line 3
5	Estimated 2018 Income tax expense at 21%	\$ 232	
6	Estimated 2018 Income tax expense at 35%	387	
7	Income tax expense rate variance	(155)	Line 5 - Line 4
8	Gross up factor	1.374	Line 22
9	Revenue requirement reduction #2	\$ (213.00)	Line 7 x Line 8
10	Total revenue requirement reduction	\$ (262.00)	Line 4 + Line 9

Line #	Excess Deferred Income Taxes (EDIT)	Components	Recovery Period		Amortization
11	Depreciation	\$ 1,469	29.75	a	\$ 49
12	Pension and OPEB	(195)	20.00	b	(10)
13	Other normalized items	(6)	1.00	c	(6)
14	Deferred debits	3	1.00	c	3
15	Total EDIT at 12.31.2017	\$ 1,271			\$ 36

- a. Line 29.
- b. Assume a 20 year period.
- c. Minor items amortize over 1 year.

Line #	Computation of gross-up factor		
16	Operating revenues	100%	
17	NH Business Profits Tax Rate	7.90%	
18		92.10%	Line 16- Line 17
19	Federal Statutory Income Tax Rate	21.00%	
20	Effective Tax Rate	19.34%	Line 18 x Line 19
21	Operating income percentage	72.76%	Line 18 - Line 20
22	Gross-up conversion factor	1.374	1 / Line 21

Line #	NBV as a Percentage of Total Plant		
23	Remaining NBV at 12.31.2017	\$ 29,543	
24	Total plant balance at 12.31.2017	\$ 41,729	
25	Percentage remaining	70.80%	Line 23 / Line 24

Line #	Average Remaining Book Life		
26	Composite depreciation rates @ 12.31.2017	2.38%	
27	Average useful life	42.02	1/Line 26
28	Percentage remaining	70.80%	Line 25
29	Average remaining book life	29.75	Line 27* Line 28