

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-1

Date of Response: April 23, 2024
Witness: D. Szabo

REQUEST: Reference the testimony of Witness Lawrence on page 4, lines 4 – 6

“Since the Company’s rate of return exceeded 50-basis points in 2023, Aquarion is not seeking approval of a WICA surcharge update, consistent with the terms of the tariff.” Please provide a copy of the Company’s 2023 rate of return analysis.

RESPONSE: Please refer to DOE-1-1 Attachment 1 for a copy of the return calculation submitted on March 28, 2024 as part of the Company’s 2023 Annual Report of Aquarion Water Company of New Hampshire to the Public Utility Commission.

Aquarion Water Company of New Hampshire
Return on Equity for the Twelve Months Ended December 31, 2023

	December 31, 2023
UTILITY PLANT	
Gross Utility Plant	63,541,643
Accumulated Depreciation	(15,846,714)
Net Utility Plant in Service	47,694,929
ADDITIONS	
Working Capital Allowance	165,843
Average Materials & Supplies	296,637
Deferred Tank Painting	416,093
Prepayments	226,893
DEDUCTIONS	
Contribution in Aid of Construction	(5,288,748)
Customer Advances	(479,092)
Deferred Taxes	(5,048,451)
TOTAL RATE BASE	37,984,104
	Twelve Months Ending December 31, 2023
NET INCOME	2,926,668
ADD: Interest Expense	805,519
LESS: Non-regulated Other Income	(55,115)
ADD: Income Taxes on Non-regulated Other Income	14,840
LESS: Step recoupment for Aug. 1, 2022 - Dec. 31, 2022 (net of tax)	(451,404)
UTILITY OPERATING INCOME	3,240,508
RETURN ON RATE BASE	8.53%

Aquarion Water Company of New Hampshire
Return on Equity for the Twelve Months Ended December 31, 2023

	<u>December 31, 2023</u>
<u>CAPITAL STRUCTURE</u>	Actual Structure
Equity	24,952,640
Long Term Debt	16,900,000
Total	<u>41,852,640</u>
Equity %	59.62%
Long Term Debt %	40.38%
Total	<u>100.0%</u>
Cost of Long Term Debt	5.98%
Weighted Cost of Short Term Debt	2.41%
Return on Rate Base ("RORB")	8.53%
LESS: WACD - Long Term Debt	<u>-2.41%</u>
Weighted Cost of Equity	6.12%
RETURN ON EQUITY ("ROE")	<u>10.26%</u>

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Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-2

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 5, line 4
Please provide line item supporting details for the Company's calculation of its projected main replacement cost per foot low of \$350.

RESPONSE: The following table shows the line item breakdown utilized to develop a low-end cost of \$350 per linear foot. The Company emphasizes that this is an estimate of the low end of a possible range of costs for water mains, as water main costs can vary greatly depending on the type of condition, location, subsurface conditions, surface conditions, and bidding climate that exist at any particular time, and will hinge on what those conditions are when the costs are incurred.

Description	Cost Per Foot
Engineering	\$10
Water Main Installation	\$260
Water Main Materials	\$55
Temporary Trench Paving	\$15
Traffic control	\$5
Labor/Overheads	\$5
Total Cost per Foot	\$350

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

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Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-3

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 5, line 5
Please provide line item supporting details for the Company's calculation of its projected main replacement cost per foot high of \$450.

RESPONSE: The following table shows the line item breakdown utilized to develop a low-end cost of \$450 per linear foot. As noted in the response to DOE 1-2, this is an estimate of the low end of a possible range of costs for water mains, as water main costs can vary greatly depending on the type of condition, location, subsurface conditions, surface conditions, and bidding climate that exist at any particular time, and will hinge on what those conditions are when the costs are incurred.

Description	Cost Per Foot
Engineering	\$15
Water Main Installation	\$325
Water Main Material	\$75
Paving	\$15
Traffic control	\$10
Labor/Overheads	\$10
Total Cost per Foot	\$450

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-4

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 5, lines 18 - 19
Please provide supporting documentation to quantify the George Avenue,
Hampton, paving savings of \$47,990.

RESPONSE: Paving savings were based on the final road restoration cost to mill and overlay the roadway. Aquarion would have been responsible for the full cost of this if the project was not done in conjunction with the Town's planned work for the roadway. The mill and overlay costs were calculated based on a quantity of 365.84 tons of asphalt at \$160 per ton (which was the cost per ton as obtained from the contractor at the time of bid, plus the cost of milling the roadway at a cost of \$6.00 per square yard for 2,242.67 Square Yards. This totaled \$71,990. Aquarion performed \$24,000 of this work as part of the Water Main project which consisted of milling the roadway and placing an asphalt binder, but the Town is completing the final overlay of the street as part of their paving schedule this summer, resulting in an overall savings of \$47,990.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-5

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 5, lines 24 – 25, Attachment DL-1, “Mains” tab, page 3 of 19 “Comments” column (cell Z9), and DOE 1-11

Please provide supporting documentation to quantify the Emery Lane, Hampton, paving savings of \$18,240 (or \$30,053 see DOE 1-11).

RESPONSE: The paving savings are calculated at \$18,240 (see response to DOE 1-11). Paving savings were based on the final road restoration cost to mill and overlay the roadway. Aquarion would have been responsible for the full cost of this if the project was not done in conjunction with the Town’s planned work for the roadway. The mill and overlay costs were calculated based on a quantity of 174 tons of asphalt at \$160 per ton (which was the cost per ton as obtained from the contractor at the time of bid) plus the cost of milling the roadway at a cost of \$6.00 per square yard for 1,067 square yards. This totaled \$34,240. Aquarion performed \$16,000 of this work as part of the Water Main project which consisted of milling the roadway and placing an asphalt binder, bhe Town is completing the final overlay of the street as part of their paving schedule this summer, resulting in overall savings of \$18,240.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
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DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-6

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 6, lines 12 -13
Please provide supporting documentation to quantify the Highland Avenue, Hampton, paving savings of \$36,166.

RESPONSE: The paving savings referenced on page 6 lines 12-13 were on Marston Way, not Highland Avenue. Paving savings were based on the final road restoration cost to mill and overlay the roadway. Aquarion would have been responsible for the full cost of this if the project was not done in conjunction with the Town's planned work for the roadway. The mill and overlay costs were calculated based on a quantity of 184 tons of asphalt at \$160 per ton, plus the cost of milling the roadway at a cost of \$6.00 per square yard for 1,126 square yards. This totaled \$36,166. Additionally, Aquarion paid a contribution of \$15,000 to the Town of Hampton towards final pavement restoration of Marston Way , resulting in net overall savings of \$21,166.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-7

Date of Response: April 23, 2024
Witness: D. Lawrence

(REQUEST: **Reference the testimony of Witness Lawrence on page 8, lines 1 -5**
“In general, the Company continues to enhance its use of its Geographic Information System (“GIS”) to evaluate and manage its distribution system assets. Information on individual pipe segments, valves and hydrants is *updated regularly* with data from field surveys, project drawings, conversion of old maps and records, engineering analyses, and hydraulic models.” [emphasis added]. Please quantify the Company’s use of the term “regularly.”

RESPONSE: The GIS system is updated on a quarterly basis. Updates are also made whenever the GIS group receives new and pertinent information, typically captured in GIS, from water distribution operators and engineering.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

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Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-8

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference Petition, page 2, paragraph 3

The Company's response to DOE 5-13 Attachment 1 in DW 20-184 anticipated a main replacement on Straws Point in 2022, estimated at \$420,000. Please indicate why no main replacements were ultimately completed in 2022 (petition, page 2 paragraph 3 in the current docket).

RESPONSE: Straws Point was initially included on the Company's list of main replacements for 2022, as there were three main breaks prior to 2022 on a small section of the road that runs onto private property. Once it was determined that the roadway was private, and Aquarion found that it held no easements that would grant the Company access to replace the main. Because of this, Aquarion began discussions with the private owners of the roadway in an attempt to obtain the proper easements. To-date Aquarion has not been able to secure an easement, but since there have not been any additional main breaks since 2019, the Company has decided to put execution of this main replacement on hold until easements are obtained.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-9

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 6, lines 1 - 13
The Company's September 21, 2023 Status Update on WICA and Filing Notification in DW 20-184 noted three water main replacement projects to be completed in 2023 (Landing Road, George Avenue, and Emery Lane). Please indicate how or why the Marston Way and Highland Avenue projects came to be completed in 2023 as well.

RESPONSE: The replacement of the Marston Way water main was identified as a priority project for water main replacement in the Final Capital Efficiency Plan Updated dated November 2015, prepared by Tata and Howard. Prioritizing replacement of the main was based on the material of construction, fire flow capacity, the main serving a critical customer, and paving coordination with the town.. The Company did not reference this project in the update on September 21, 2023 because the majority of the work was completed in 2022. However, the project had some outstanding invoices related to inspection and paving contribution that were paid in early 2023, which is why it is included in the 2023 projects.

The Highland Avenue water main replacement project was added to the list of work for 2023 because the existing water main in Highland Avenue was 16-inch prestressed concrete. The material of this main was identified during a Town of Hampton sewer project that crossed the main in 2020. Prestressed concrete pipe is an undesirable material for mains for several reasons. The material is known to fail due to poor material integrity, has a long lead time to obtain due to limited material availability and there are a limited pool of contractors capable of repairing mains made of prestressed concrete. The replacement was prioritized and completed to avoid an extended shut-down period due to a break on the 16-inch main in the vicinity of the Glade Path Water Storage Tank. The decision to proceed with execution of the Highland Avenue water main replacement project was made after the September 21, 2023 WICA Status Update.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
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Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-10

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: **Reference the testimony of Witness Lawrence**
Were all of the 2023 projects put out to bid and, if so, was the lowest bidder selected? Please explain.

RESPONSE: Yes, all 2023 projects were put out to bid and the lowest bidder was awarded the project.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-11

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 5, line 24 and Attachment DL-1, page 3 of 19

For the 2023 Emery Lane main replacement, Mr. Lawrence’s testimony (p. 5, line 24) indicates a paving savings of \$18,240, whereas his Attachment DL-1, “Mains” tab, “Comments” column (cell Z9), indicates a savings of \$30,052.80. Please explain or correct.

RESPONSE: The correct number is \$18,240. Please refer to DOE-1-11 Attachment 1 for a corrected DL-1 (Revised), cell Z9.

**AQUARION WATER COMPANY OF NEW HAMPSHIRE
WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT**

CONTACT: Daniel Lawrence, Vice President of Engineering and Real Estate
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203-362-3055

Contents:

Project Summary Estimated capital expenses by major category
All projected figures for 2024-2026 are estimates.

Hydrants	Aquarion has historically replaced 2 hydrants per year, on average.
Services	Aquarion has historically replaced 5-10 services per year, on average.
Main Replacements	Main replacements are prioritized based on GIS information. As of this date, the distribution system is separated into 1,291 pipe segments. Each segment is rated on each of the categories described below. Most ratings are based on a scale of 0 (low) to 3 (high); exceptions are noted below.

PRIMARY FACTORS

Bleeder (Non-revenue water)	3 - Main requires a bleeder to prevent freezing 0 - Main does not require a bleeder to prevent freezing
Hydraulic Capacity	3 - Hydrants do not provide satisfactory fire flow rates 2 - Hydraulic model indicates less than expected flow rates with little redundancy (i.e., parallel mains) 1 - Hydraulic model indicates less than expected flow rates with some redundancy 0 - Hydrants provide satisfactory fire flow rates.
Main Break History Ratings	One point per break.
Pipe Material Ratings	3 - Galvanized Steel (GS) 3 - Universal Pipe (UP) 3 - Lead joint (LJ) 3 - Asbestos-cement (AC) 2 - Cast iron 0 - Copper (CU) 0 - Ductile iron (DI) 0 - High density polyethylene (HDPE) 0 - Plastic wrapped ductile iron (PWDI) 0 - Poly-vinyl-chloride (PVC) 0 - Unknown (UNK).
Pipe Age / Useful Life Ratings	3 - Installed in 1915 or sooner 2 - Installed between 1916 and 1925 1 - Installed between 1926 and 1940 0 - Installed after 1940

SECONDARY FACTORS

Critical System Component Ratings	3 - Primary transmission line w/ no redundancy 2 - Primary transmission line w/ redundancy 1 - Secondary transmission line 0 - Regular distribution main
Lining	1 - unlined cast iron
Scheduled Work Coordination	3 - Paving or excavation projects by others scheduled in next two years 2 - Paving or excavation projects by others scheduled in next three or four years 1 - Paving or excavation projects by others scheduled in more than four years 1 - Adjacent to another high scoring pipe segment 0 - No other scheduled projects -1 - Street was paved five years ago -2 - Street was paved four years ago -3 - Street was paved three years ago -4 - Street was paved two years ago -5 - Street was paved one year ago
Staff Concerns / Other Factors	Staff judgment is simply a way of expressing subjective factors that can have a large impact on projects. Some examples are to avoid disrupting the same neighborhood in consecutive years and choosing to postpone a project for more time to evaluate alternative replacement methods.
Budget Constraints	Execution of top priority main replacement projects may not leave enough funding for the runner up projects, so lower scoring and lower cost projects may be done instead.
Water Quality Issues	Dropped because water quality problems cannot be reliably linked to individual main segments. Most water quality issues have been traced back to source wells, not mains. Even water quality tuberculated mains tends to show up somewhere downstream of the source.
Main Replacement Project Management	Some main replacement projects are split into design and construction phases. Due to the amount of time required for surveys, design, permitting and other design phase factors, these activities are typically scheduled for the year prior to construction. Attempts to squeeze design and construction into a single calendar year have caused scheduling and budgeting problems. The design phase typically cannot be completed early enough in the year to allow for a sufficient construction period with respect to cold weather, road opening bans and year end accounting constraints.
Control Valves	Includes pressure reducing valves and other control valves; none are currently scheduled for replacement, but a breakdown or failure could occur that would require a replacement.
Valves	Aquarion has historically replaced 1 valve per year, on average.
Production Meters	Replacement / capitalized repairs of production meters is performed on an as needed basis when routine calibration show that the meters are not functioning accurately. Sometimes these replacements can be scheduled in advance when included as part of a pumping station upgrade.

**Aquarion Water Company of New Hampshire
Water Conservation and Infrastructure Adjustment Project Summary**

	Completed 2023	Estimated 2024		Estimated 2025		Estimated 2026	
		Low	High	Low	High	Low	High
MAIN REPLACEMENTS							
George Avenue	\$ 361,381						
Emery Lane	\$ 196,345						
Marston Way	\$ 236,489						
Landing Road	\$ 390,457						
Highland Avenue	\$ 386,777						
MB2302 235 Atlantic Avenue	\$ 5,537						
MB2309 935 Ocean Boulevard	\$ 2,932						
Green Street		\$ 165,900	\$ 213,300				
Gentian Road		\$ 187,250	\$ 240,750				
Meadow Pond Road		\$ 192,500	\$ 247,500				
Ocean Boulevard		\$ 20,000	\$ 40,000				
Mace Road				\$ 1,170,000	\$ 1,510,000		
Route 1A				\$ 1,200,000	\$ 1,700,000		
Briar Road						\$ 273,350	\$ 351,450
Riverview Terrace						\$ 178,850	\$ 229,950
Total Mains	\$ 1,579,918	\$ 565,650	\$ 741,550	\$ 2,370,000	\$ 3,210,000	\$ 452,200	\$ 581,400
CONTROL VALVES	\$ -	\$ -		\$ -		\$ -	
PRODUCTION METERS	\$ -	\$ -		\$ -		\$ -	
HYDRANTS	\$ 16,703	\$ 10,000		\$ 10,500		\$ 11,000	
SERVICE LINES	\$ 38,364	\$ 40,000		\$ 41,000		\$ 42,000	
VALVES	\$ 29,747	\$ 12,000		\$ 12,500		\$ 13,000	
SUBTOTAL	\$ 84,814	\$ 62,000		\$ 64,000		\$ 66,000	
Less: Hydrant / Service Line / Valve Threshold	\$ (75,000)	\$ (75,000)		\$ (75,000)		\$ (75,000)	
VALVES / METERS / HYDRANTS / SERVICES, NET	\$ 9,814		\$ -		\$ -		\$ -
COMBINED TOTAL	\$ 1,589,731	\$ 565,650	\$ 741,550	\$ 2,370,000	\$ 3,210,000	\$ 452,200	\$ 581,400

Aquarion Water Company of New Hampshire
Main Replacement Projects

Account 881

COMPLETED PROJECTS															PRIORITIZATION FACTORS											
															1	2	3	4	5	6	7	8				
PIPE SEGMENT OR PROJECT NAME	PROJECT #	TOWN	SYSTEM	MATERIAL	LENGTH (FEET)	EXISTING PIPE DIAMETER (INCHES)	# OF SERVICES	# OF HYDRANT	MAINS \$	SERVICES \$	HYDRANT \$	TOTAL PROJECT COST	PROJECT COMPLETION DATE	PROJECT COST LOW	PROJECT COST HIGH	MAIN BREAK HISTORY	PIPE AGE /USEFUL LIFE	MATERIAL INTEGRITY	CRITICAL /SYSTEM IMPACT	WATER QUALITY ISSUES	HYDRAULIC CAPACITY	SCHEDULED WORK COORDINATION	OTHER FACTOR (SPECIFY)	TOTAL	COMMENTS	
George Avenue	ER230-2023-002	Hampton	Hampton	AC	841	6	10	1	\$330,573	\$22,785	\$8,022	\$361,381	12/31/2023	N/A - Complete	N/A - Complete	3	1	1	0	0	0	1	0	6	Replaced 841' of 6-inch AC main with 8-inch DI main in coordination with Town drainage project. A paving savings of \$47,990 was realized.	
Emery Lane	ER230-2023-003	Hampton	Hampton	AC	400	6	7	0	\$173,354	\$22,991	\$0	\$196,345	12/31/2023	N/A - Complete	N/A - Complete	3	1	1	0	0	0	1	0	6	Replaced 400' of 6-inch AC mainwith 8-inch DI main in coordination with Town drainage project. A paving savings of \$18,240 was realized.	
Marston Way	ER230-2019-008	Hampton	Hampton	AC	390	6	3	1	\$201,350	\$20,282	\$14,857	\$236,489	8/31/2023	N/A - Complete	N/A - Complete	0	3	3	0	0	1	1	0	8	Replaced 390' of 6-inch AC main with 8-inch HDPE main Final paving contribution provided to the Town for \$15,000. Net overall paving savings is \$21,166.	
Landing Road	ER230-2022-002	Hampton	Hampton	DI	459	8	8	0	\$363,373	\$27,084	\$0	\$390,457	12/31/2023	N/A - Complete	N/A - Complete	3	1	2	1	0	0	0	0	7	Replaced 459' of 8-inch DI main with 8-inch HDPE Main	
Highland Avenue	ER230-2023-001	Hampton	Hampton	Concrete	160	16	3	0	\$379,137	\$7,640	\$0	\$386,777	12/31/2023	N/A - Complete	N/A - Complete	0	3	1	2	0	0	0	3	9	Replaced 160' of 16-inch concrete main with 16-inch HDPE main.	
MR2302 235 Atlantic Avenue	XR230-2023-006-343-001	North Hampton	Hampton	AC	10	8	0	0	\$5,537	\$0	\$0	\$5,537	9/7/2023	N/A - Complete	N/A - Complete	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	Main break	
MR2309 935 Ocean Boulevard	XR230-2023-006-343-002	Hampton	Hampton	AC	10	10	0	0	\$2,932	\$0	\$0	\$2,932	12/31/2023	N/A - Complete	N/A - Complete	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	Main break	
Total					3,370		31	2	\$1,456,256	\$100,758	\$33,879	\$1,679,918														
PROPOSED PROJECTS															PRIORITIZATION FACTORS											
															1	2	3	4	5	6	7	8				
PIPE SEGMENT OR PROJECT NAME		TOWN	SYSTEM	MATERIAL	LENGTH (FEET)	EXISTING PIPE DIAMETER (INCHES)	# OF SERVICES	# OF HYDRANT	MAINS \$	SERVICES \$	HYDRANT \$	TOTAL PROJECT COST	PROJECT COMPLETION DATE	PROJECT COST LOW	PROJECT COST HIGH	MAIN BREAK HISTORY	PIPE AGE /USEFUL LIFE	MATERIAL INTEGRITY	CRITICAL /SYSTEM IMPACT	WATER QUALITY ISSUES	HYDRAULIC CAPACITY	SCHEDULED WORK COORDINATION	OTHER FACTOR (SPECIFY)	TOTAL	COMMENTS	
Green Street		Hampton	Hampton	AC	474	6	11	1	\$148,705	\$31,200	\$7,305	\$187,210	2024	\$165,900	\$213,300	0	0	3	0	0	0	3	0	6	Replace approximately 474' of 6 inch AC main with 8" HDPE Main. Town of Hampton is doing drainage work in this neighborhood in 2024.	
Gentian Road		Hampton	Hampton	AC	535	6	16	0	\$167,842	\$45,382	\$0	\$213,224	2024	\$187,250	\$240,750	0	0	3	0	0	0	3	0	6	Replace approximately 535' of 6 inch AC main with 4" HDPE Main. Town of Hampton is doing drainage work in this neighborhood in 2024.	
Meadow Pond Road		Hampton	Hampton	AC, CI	550	6, 2	17	0	\$150,587	\$48,218	\$0	\$198,805	2024	\$192,500	\$247,500	3	0	3	0	0	0	3	0	9	Replace approximately 480' of 6 inch AC main and 2" CI main with 4" HDPE Main. Town of Hampton is doing drainage work in this neighborhood in 2024. 3 Main breaks in last 9 years.	
Ocean Boulevard		North Hampton	Hampton	AC	285	8	0	0	\$30,000	0	0	\$30,000	2024	\$20,000	\$40,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Main break	
Mace Road		Hampton	Hampton	AC, CI	3,334	6, 8		3	\$1,136,230	\$175,854.55	\$21,915	\$1,334,000	2025	\$1,170,000	\$1,510,000	0	0	3	0	0	0	3	0	6	Relace approximately 3,334' of 6-inch CI and 8-inch AC main with 12-inch DI Main.	
Route 1A		Hampton	Hampton	Poly	2,705	4, 4	1	1	\$1,389,333	\$2,645	\$8,022	\$1,400,000	2025	\$1,200,000	\$1,700,000	3	1	1	0	0	0	1	0	6	Replace approximately 2,705' of 4" (2 mains) poly main with 12-inch DI main in conflict with NHDOT's proposed location for a new bridge.	
Briar Road		Hampton	Hampton	CI	781	6	10	1	\$251,286	\$14,043	\$8,022	\$273,350	2026	\$273,350	\$351,450	3	0	2	0	0	0	1	2	8	Replace approximately 781' of 6-inch CI main with 8 HDPE main to address main break history.	
Riverview Terrace		Hampton	Hampton	AC	511	6	17	0	\$154,978	\$23,872	\$0	\$178,850	2026	\$178,850	\$229,950	0	2	3	0	0	0	1	0	6	Approximately 50' of new main (outside WICA), will also be installed to close gap in Cranchette Lane.	
Total					9,176		72	6	\$5,436,961	\$341,214	\$45,264	\$5,819,439		\$3,397,850	\$4,532,950											

Aquarion Water Company of New Hampshire
WICA Control Valve Replacements

Account #'s vary by project

Project	Town	Actual 2023	Projected 2024	Projected 2025	Projected 2026	Comments
None		\$ -	\$ -	\$ -	\$ -	None are currently scheduled for replacement
	TOTALS	\$ -	\$ -	\$ -	\$ -	

Aquarion Water Company of New Hampshire
WICA Production Meter Replacements

Account 334

Project	Town	Actual 2023	Projected 2024	Projected 2025	Projected 2026	Comments
		\$ -	\$ -	\$ -	\$ -	Production meters have been very reliable, and as a result, there were none replaced in 2023 nor do we anticipate the need to replace any during the projected period.
	TOTALS	\$ -	\$ -	\$ -	\$ -	

Aquarion Water Company of New Hampshire
WICA Hydrant Replacements

Account 335

COMPLETED PROJECTS			1-Jan-23	to	31-Dec-23
Hydrant #	Location	Town	Quantity	Actual Cost	Completion Date
H638	North Rd	North Hampton	1	\$ 5,703	07/03/2023
H049	Ocean Blvd	Hampton	1	\$ 11,000	12/31/2023
		TOTAL	2	\$ 16,703	

PROPOSED PROJECTS				
	Location	Town	Quantity	Estimated Annual Cost
2024	To be determined ⁽¹⁾	To be determined ⁽¹⁾	To be determined ⁽¹⁾	\$ 10,000
2025	To be determined ⁽¹⁾	To be determined ⁽¹⁾	To be determined ⁽¹⁾	\$ 10,500
2026	To be determined ⁽¹⁾	To be determined ⁽¹⁾	To be determined ⁽¹⁾	\$ 11,000

⁽¹⁾ Hydrant replacements are not scheduled more than a year in advance. Hydrants are not replaced unless identified as malfunctioning during hydrant maintenance activities.

**Aquarion Water Company of New Hampshire
WICA Service Line Replacements**

Account 333

COMPLETED PROJECTS		1-Jan-23	to	31-Dec-23	
Service Address	Town	Diameter (inches)	Cost	CompletionDate	
75 Hobson Avenue	Hampton	1"	\$ 5,178	7/31/2023	
31 Hobson Avenue	Hampton	3/4"	\$ 992	10/31/2023	
55 Hobson Avenue	Hampton	1"	\$ 5,272	7/31/2023	
56 Hobson Avenue	Hampton	1"	\$ 1,499	7/31/2023	
7 Riverview Terrace	Hampton	1"	\$ 4,366	7/31/2023	
28 Winterberry	Stratham	1"	\$ 5,464	7/31/2023	
11 Walnut Ave	Hampton	1"	\$ 6,024	10/31/2023	
52 Esker Road	Hampton	1"	\$ 9,571	11/30/2023	
TOTAL			\$ 38,364		

PROPOSED PROJECTS					
	Location	Town	Estimated Number	Estimated Annual Cost	
2024	To be determined ⁽¹⁾	To be determined ⁽¹⁾	11	\$ 40,000	
2025	To be determined ⁽¹⁾	To be determined ⁽¹⁾	12	\$ 41,000	
2026	To be determined ⁽¹⁾	To be determined ⁽¹⁾	12	\$ 42,000	

⁽¹⁾ Service lines are not scheduled for replacement unless they are identified as leaking or defective. When identified as such, they are typically replaced as soon as possible.

Aquarion Water Company of New Hampshire
WICA Valve Replacements

Account 331

A	B	C	D	E	
COMPLETED PROJECTS		1-Jan-23	to	31-Dec-23	
Valve #	Location	Town	Quantity	Actual Cost	Completion Date
V 1095 9304	32 Lafayette Road	North Hampton	1	\$ 6,229	8/31/2023
V 1000 7620	South Road	North Hampton	1	\$ 12,038	12/31/2023
H 1072 0486	Ocean Blvd	Hampton	1	\$ 11,480	11/30/2023
TOTAL			3	\$ 29,747	

PROPOSED PROJECTS				
Valve Replacements	Location	Town	Quantity	Estimated Cost
2024	To be determined ⁽¹⁾	To be determined ⁽¹⁾	1	\$ 12,000
2025	To be determined ⁽¹⁾	To be determined ⁽¹⁾	1	\$ 12,500
2026	To be determined ⁽¹⁾	To be determined ⁽¹⁾	1	\$ 13,000

⁽¹⁾ Valve replacements are not scheduled more than a year in advance because valves are not replaced unless identified as malfunctioning during valve exercising activities.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-12

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 6, line 1 and Attachment DL-1, page 3 of 19

For the 2023 Highland Avenue main replacement, Mr. Lawrence’s testimony (p. 6, line 1) and his Attachment DL-1, “Mains” tab, “Material” column (cell E12), both indicate the existing pipe to have been concrete, whereas the “Comments” column of the same tab (cell Z12) indicates the material was AC. Please explain or correct.

RESPONSE: The existing pipe on Highland Avenue was concrete. Please refer to DOE-1-11 Attachment 1 for Attachment DL-1 (Revised) and includes a corrected cell Z12.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-13

Date of Response: April 23, 2024
Witness: D. Lawrence/D. Szabo

REQUEST: Reference the testimony of Witness Lawrence on page 6, lines 15 - 19
Regarding the two main break “replacements” in 2023 (Atlantic Avenue and Ocean Boulevard), please explain how immediate and necessary main break repairs involving minimal lengths (ten feet in each of these instances) are consistent with the infrastructure incentivization and replacement goals of the WICA program.

RESPONSE: The WICA program was designed to recover the fixed costs of certain Commission-approved non-revenue producing system improvement projects completed and placed in service and to be recorded in the individual accounts between base rate cases. Eligible property consists of mains and valves installed as replacements for existing facilities that have either reached the end of their useful life, are worn out or are in deteriorated condition. The two main breaks included in this filing would qualify based upon the criteria for the program as outlined in the Company tariff on Thirteenth Revised Page 16.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-14

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence, Attachment DL-1, page 2 and 3 of 19

In the “Summary” tab of Attachment DL-1, the values indicated for “Low” estimated costs for main replacements proposed for 2024 appear to instead be those from the “Total Project Cost” column in the “Mains” tab of the same attachment. Please explain or provide a corrected copy.

RESPONSE: These have been corrected. Please refer to DOE 1-11 Attachment 1 for the updated Attachment DL-1 (Revised) Summary tab.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-15

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence on page 9 line 30 through page 10 line 4, Attachment DL-1, page 3 of 19 and DL-2, page 10 of 19

Regarding the 2024 Ocean Boulevard main replacement (285 feet):

- a) Mr. Lawrence's testimony (p. 9, line 30 through p. 10, line 4) and his Attachment DL-1, "Mains" tab, "Material" column (cell E25), both indicate the existing main is or was AC, but Attachment DL-2 (cell H9) indicates it to be CI. Please explain or correct.
- b) Please provide further narrative of the flooding event referenced in Mr. Lawrence's testimony, including:
 1. Was the event natural, or a result of the main break?
 2. How was the 285 foot replacement length determined?
 3. If the replacement has already been completed, how long after the event did it occur?

RESPONSE:

- a) The main was asbestos cement (AC). Attachment DL-2 (Revised) has been updated to reflect AC in cell H9. Please refer to DOE-1-15 Attachment 1.
- b.) 1. This was a natural occurring high-tide event that resulted in washout of a section of roadway and a portion of the water main.
- b) 2. The 285 feet of main was the section of main that was washed out with the roadway during the event.
- b) 3. The repair took six days. The event occurred on January 13, 2024 and the main was replaced and back in service on January 19, 2024.

029

Project Year	GIS ID	Street	Description	Town	Class	Rise	Material	Latitude	Length	Installed	Beams	Hydraulic	Critical	Flow	Comments	Main Results	Elbow/	Pipe Size	Pipe Material	Hydraulic	Flow Level	Critical Customer	Living	Schedule	Revised Total	Final Total	Estimated Cost Low	Estimated Cost High		
1008882	Central Road	Central Rd. Jonathan Boucher to Love Ln	Rye	Transmission Main	8	CU	UNL	1295	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	4	4	412,290	412,290	
1008882	Central Road	Central Rd. north of Cable Rd	Rye	Distribution Main	8	CU	UNL	1037	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	4	4	110,012	110,174
9999999	Central Road	Jonathan Beach Tank & Well No. 5	Rye	Transmission Main	6	CU	UNL	0	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
9999999	Central Road	Jonathan Beach Tank & Well No. 5	Rye	Transmission Main	12	CU	UNL	13	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Wall 5A assembly main	Rye	Transmission Main	6	CU	UNL	191	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Wall 5A assembly main	Rye	Transmission Main	8	CU	UNL	54	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Jonathan Beach Tank & Well No. 5	Rye	Transmission Main	6	CU	UNL	52	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Cable Rd. The Rock Rd to Pine St	Rye	Transmission Main	8	CU	UNL	554	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Cable Rd. The Rock Rd to Pine St	Rye	Transmission Main	8	CU	UNL	492	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Cable Rd. The Rock Rd to Pine St	Rye	Transmission Main	12	CU	UNL	37	1987	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Cable Rd. The Rock Rd to Pine St	Rye	Transmission Main	8	CU	UNL	0	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	0	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	0	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	492	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	299	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	546	1988	1	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	1,219	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	1,829	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	184	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	1,898	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	491	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	472	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	262	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	1,408	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	590	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	698	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	59	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	1,091	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	478	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	299	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	591	1988	0	0	0	0	0		0	0	1	2	1	4	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	26	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	187	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	101	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	131	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	201	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	337	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	142	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	CL	290	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	290	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	247	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	14	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	187	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	12	CU	CL	950	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	12	CU	CL	780	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	1,096	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	CL	107	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	CL	491	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	8	CU	UNL	19	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	12	HDPR	CL	4	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	12	HDPR	CL	4	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	HD	CL	21	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	HD	CL	56	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	529	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	20	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Hampton	Distribution Main	6	CU	UNL	297	1988	0	0	0	0	0		0	0	1	2	0	0	0	0	0	0	0	0	0	0	0
1008888	Central Road	Winnemuncet Rd. Academe Ave to Mill Rd	Ham																											

Project Year	GIS ID	Street	Description	Town	Class	Rise	Material	Linetype	Length	Installed	Rebars	Hydraulic	Critical	Flowrate	Comments	Main Results	Flowrate/ Elevation	Pipe Material	Pipe Material Hydraulic	First Total	Critical Total	Original Lining	Schedule	Revised Total	Final Total	Estimated Cost Low	Estimated Cost High			
1009599	Tide Mill Rd	upstream of Fry	Tide Mill Rd upstream of Fry	Hampshire	Distribution Main	12	CL	CL	1446	1955	0	0	2					2	0	2	0	0	0	2	4	16,732	17,000			
1009582	South Avenue	off Ocean Blvd	South Avenue off Ocean Blvd	Hampshire	Distribution Main	1	UNL	UNL	61	1955	0	0	2					0	1955	2	0	0	0	0	2	4	10,821	10,912		
1009740	Red Mill Lane	South end	Red Mill Lane South end	Rye	Distribution Main	8	CL	UNL	443	1955	0	0	0					0	0	2	0	0	0	0	0	2	4	19,054	19,266	
1009739	Red Mill Lane	South end	Red Mill Lane South end	Rye	Distribution Main	1	CL	UNL	422	1955	0	0	0					0	0	2	0	0	0	0	0	0	2	4	14,256	14,500
1009803	Pine Road	Lafayette Rd to South Rd	Pine Rd - Lafayette Rd to South Rd	North Hampton	Transmission Main	8	CL	CL	2,170	1955	1	0	2					1	0	2	0	2	0	0	2	5	789,456	978,444		
1009804	Pine Road	South Rd to Seaboard Rd	Pine Rd - South Rd to Seaboard Rd	North Hampton	Transmission Main	12	CL	CL	200	1955	0	0	0					0	0	2	0	2	0	0	0	2	5	14,256	14,464	
1001081	Pine Road	South Rd to Seaboard Rd	Pine Rd - South Rd to Seaboard Rd	North Hampton	Transmission Main	8	CL	CL	1,100	1955	0	0	2					0	0	2	0	2	0	0	0	2	4	38,654	49,699	
1009488	Pine Road	South Rd to Seaboard Rd	Pine Rd - South Rd to Seaboard Rd	North Hampton	Transmission Main	8	CL	CL	1,260	1955	0	0	2					0	0	2	0	2	0	0	0	2	4	498,773	54,572	
1009411	Philbrook Ter	Philbrook Ter	Philbrook Ter	Hampshire	Distribution Main	6	AC	UNL	629	1955	0	0	0					0	0	2	0	0	0	0	0	0	2	4	219,868	282,067
1009873	Kendrick Avenue	Lafayette Ave to Moore Ave	Kendrick Ave - Lafayette Ave to Moore Ave	Hampshire	Distribution Main	6	CL	CL	576	1955	0	0	0					0	0	2	0	0	0	0	0	0	2	4	209,191	230,909
1009956	Hawthorn Avenue	Church St. to Harbor Ave to town	Church St. - Harbor Ave to town	Hampshire	Distribution Main	6	CL	UNL	61	1955	0	0	0					0	0	2	0	0	0	0	0	0	2	4	11,291	11,751
1009957	Hawthorn Avenue	Church St. to town	Hawthorn Ave - Church St. to town	Hampshire	Distribution Main	8	CL	UNL	83	1955	1	0	0					1	0	2	0	0	0	0	0	0	2	4	29,147	37,474
1009816	Gray Avenue	Church St. to town	Gray Ave - Church St. to town	Hampshire	Distribution Main	8	AC	UNL	435	1955	0	0	0					0	0	2	0	0	0	0	0	0	2	4	11,291	11,751
1009872	Church Street	Church St. to Harbor Ave to town	Church St. - Harbor Ave to town	Hampshire	Transmission Main	12	CL	CL	443	1955	0	0	2					0	0	2	0	2	0	0	0	2	4	114,575	139,126	
1009873	Church Street	Church St. to Harbor Ave to town	Church St. - Harbor Ave to town	Hampshire	Transmission Main	12	CL	CL	1,100	1955	0	0	2					0	0	2	0	2	0	0	0	2	4	114,575	139,126	
1009714	Beaver Avenue	Church St. to Harbor Ave to town	Church St. - Harbor Ave to town	Hampshire	Transmission Main	6	AC	UNL	334	1955	0	0	0					0	0	2	0	0	0	0	0	0	2	4	109,311	139,206
1001086	Worcester Circle	Worcester Cir	Worcester Cir	Hampshire	Distribution Main	6	AC	UNL	352	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	122,002	148,201
1001087	Worcester Circle	Worcester Cir	Worcester Cir	Hampshire	Distribution Main	6	AC	UNL	314	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	109,311	139,206
1009929	Worcester Circle	Worcester Cir	Worcester Cir	Hampshire	Distribution Main	6	AC	UNL	1,429	1956	1	0	0					1	0	2	0	0	0	0	0	0	2	4	569,320	644,269
1009841	Shirley Terrace	Shirley Terrace	Shirley Terrace	Hampshire	Distribution Main	6	CL	UNL	349	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	114,575	139,126
1009794	Shirley Terrace	Shirley Terrace	Shirley Terrace	Hampshire	Distribution Main	6	CL	UNL	349	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	114,575	139,126
1001020	Revere Rd	South end of Woodland Rd	Revere Rd - South end of Woodland Rd	North Hampton	Distribution Main	6	AC	UNL	757	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	245,067	340,800
1009807	Revere Rd	South end of Woodland Rd	Revere Rd - South end of Woodland Rd	North Hampton	Distribution Main	6	AC	UNL	242	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	84,568	108,708
1009831	Palmer St	Palmer St	Palmer St	Hampshire	Distribution Main	6	AC	UNL	316	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	110,448	142,003
1009862	Lamson Lane	Lamson Ln - Koon St to Lafayette Rd	Lamson Ln - Koon St to Lafayette Rd	Hampshire	Distribution Main	6	AC	UNL	601	1956	0	0	2					1	0	2	0	2	0	0	0	2	4	298,041	366,523	
1009261	Josephine Drive	Josephine Dr - Brown Ave to Goffrey Ave	Josephine Dr - Brown Ave to Goffrey Ave	Hampshire	Distribution Main	6	AC	UNL	549	1956	0	0	1					0	0	2	0	0	0	0	0	0	2	4	198,511	245,895
1009269	Josephine Drive	Josephine Dr - Koon St to Wagon Cir	Josephine Dr - Koon St to Wagon Cir	Hampshire	Distribution Main	8	AC	UNL	139	1956	0	0	1					0	0	2	0	0	0	0	0	0	2	4	48,722	62,643
1009297	Josephine Drive	Josephine Dr - Koon St to Wagon Cir	Josephine Dr - Koon St to Wagon Cir	Hampshire	Distribution Main	8	AC	UNL	528	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	191,951	236,512
1009294	Josephine Drive	Josephine Dr - Koon St to Wagon Cir	Josephine Dr - Koon St to Wagon Cir	Hampshire	Distribution Main	8	AC	UNL	17	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	5,785	7,438
1009294	Josephine Drive	Josephine Dr - Koon St to Wagon Cir	Josephine Dr - Koon St to Wagon Cir	Hampshire	Distribution Main	8	AC	UNL	96	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	33,793	43,401
1009496	Homestead Circle	Homestead Cir - town	Homestead Cir - town	Hampshire	Distribution Main	6	AC	UNL	1,894	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	523,034	672,472
1009727	Homestead Circle	Homestead Cir - town	Homestead Cir - town	Hampshire	Distribution Main	6	AC	UNL	184	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	27,249	34,394
1009496	Homestead Circle	Homestead Cir - town	Homestead Cir - town	Hampshire	Distribution Main	6	AC	UNL	954	1956	1	0	0					1	0	2	0	0	0	0	0	0	2	4	326,933	420,942
1009454	Holba Rd	Holba Rd - Mass Rd to Cl segment	Holba Rd - Mass Rd to Cl segment	Hampshire	Distribution Main	6	AC	UNL	696	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	212,144	272,701
1009454	Holba Rd	Holba Rd - Mass Rd to Cl segment	Holba Rd - Mass Rd to Cl segment	Hampshire	Distribution Main	6	AC	UNL	961	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	337,261	435,759
1009749	Carlson Rd	Carlson Rd - Harbor St to Seaboard Rd	Carlson Rd - Harbor St to Seaboard Rd	Hampshire	Distribution Main	6	AC	UNL	995	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	311,162	402,637
1009781	Carlson Road	Carlson Rd - Harbor St to Seaboard Rd	Carlson Rd - Harbor St to Seaboard Rd	Hampshire	Distribution Main	6	AC	UNL	266	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	113,339	145,709
1001043	Carlson Road	Carlson Rd - Harbor St to Seaboard Rd	Carlson Rd - Harbor St to Seaboard Rd	Hampshire	Distribution Main	6	AC	UNL	1,863	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	41,092	51,114
1009785	Beaver Avenue	Beaver Ave	Beaver Ave	Hampshire	Distribution Main	6	AC	UNL	1,033	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	395,704	503,273
1009877	Beaver Avenue	Beaver Ave - Harbor St to town	Beaver Ave - Harbor St to town	Hampshire	Distribution Main	8	CL	CL	267	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	38,289	119,942
1009898	Beaver Avenue	Beaver Ave - Harbor St to town	Beaver Ave - Harbor St to town	Hampshire	Distribution Main	8	CL	CL	492	1956	0	0	1					0	0	2	0	0	0	0	0	0	2	4	116,620	183,379
1001107	Atlantic Avenue	Atlantic Ave - Harbor St to Seaboard Rd	Atlantic Ave - Harbor St to Seaboard Rd	Hampshire	Distribution Main	6	AC	UNL	1,845	1956	0	0	0					0	0	2	0	0	0	0	0	0	2	4	395,001	1,283,184
1001014	Trafford Road	Trafford Rd - Harbor St to Seaboard Rd	Trafford Rd - Harbor St to Seaboard Rd	Hampshire	Distribution Main	6	AC	UNL	849	1957	0	0	0					0	0	2	0	0	0	0	0	0	2	4	207,154	284,096
1009854	Had Court Lane	Had Court Lane	Had Court Lane	Hampshire	Distribution Main	6	AC	UNL	349	1957	0	0	0					0	0	2	0	0	0	0	0	0	2	4	121,799	154,987
1009702	Park Road	Park Rd - Central Hall to Harbor Rd	Park Rd - Central Hall to Harbor Rd	North Hampton	Transmission Main	8	AC	UNL	827	1957	0	0	2					0	0	2	0	2	0	0	0	0	2	4	289,283	371,183
1009704	Park Road	Park Rd - Central Hall to Harbor Rd	Park Rd - Central Hall to Harbor Rd	North Hampton	Transmission Main	8	AC	UNL	429	1957	0	0	2					0	0	2	0	2	0	0	0	0	2	4	168,801	214,881
1009702	Park Road	Park Rd - Central Hall to Harbor Rd	Park Rd - Central Hall to Harbor Rd	North Hampton	Transmission Main	8	AC	UNL	2,505	1957	0	0	2					0	0	2	0	2	0	0	0	0	2	4	878,618	1,127,688
1001004	Park Road	Park Rd - Central Hall to Harbor Rd	Park Rd - Central Hall to Harbor Rd	North Hampton	Transmission Main	8	AC	UNL	267	1957	0	0	2					0	0	2	0	2	0	0	0	0	2	4	168,801	214,881
1001001	Park Road	Park Rd - Central Hall to Harbor Rd	Park Rd - Central Hall to Harbor Rd	North Hampton	Transmission Main	8	AC	UNL	277	1957	0	0	2					0	0	2	0	2	0	0	0	0	2	4	172,074	224,807
1009692	Park Road	Park Rd - Central Hall to Harbor Rd	Park Rd - Central Hall to Harbor Rd	North Hampton	Transmission Main	8	AC	UNL	553	1957	0	0	2					0	0	2	0	2	0	0	0	0	2	4	366,294	458,769
1001092	Park Road	Park Rd - Central Hall to Harbor Rd	Park Rd - Central Hall to Harbor Rd	North Hampton	Transmission Main	8	AC	UNL	961	1957	0	0	2					0	0	2	0	2	0	0	0	0	2	4	1,032	1,309
1009702	Park Road	Park Rd - Central Hall to Harbor Rd	Park Rd - Central Hall to Harbor Rd	North Hampton	Transmission Main	8	AC	UNL	421	1957	0	0	2					0	0	2	0	2	0	0	0	0	2	4	147,295	189,389
1009495	Neves Road	Neves Rd - Harbor St to Seaboard Rd	Neves Rd - Harbor St to Seaboard Rd	Hampshire	Distribution Main	6	CL	UNL	227	1957	0	0	0					0	0	2	0	0	0	0	0	0	2	4	39,207	50,649
1009198	Neves Road	Neves Rd - Harbor St to Seaboard Rd	Neves Rd - Harbor St to Seaboard Rd	Hampshire	Distribution Main	6	CL	UNL	503	1957	0	0	0					0	0	2	0	0	0	0	0	0	2	4	176,075	228,070
1009712	Neves Road	Neves Rd - Harbor St to Seaboard Rd	Neves Rd - Harbor St to Seaboard Rd	Hampshire	Distribution Main	6	CL	UNL	61	1957																				

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Project No.	GID ID	Street	Description	Town	Class	Size	Material	Lanes	Length	Installed	Rebars	Hydrants	Outlets	Critical	Shoeder	Comments	Main	Blower	Flow Amt	Pipe	Hydrants	First	Outlets	Flow	Shoeder	Rebar	Final	Estimated	Estimated
10062826	Emmard Avenue	Emmard Ave. Andrus Ave to Spruce St	Hampton	Distribution Main	6	DI	CL		228	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79,290	31,851.85
10062827	Emmard Avenue	Emmard Ave. Ash St to Overlook St	Hampton	Distribution Main	6	DI	CL		194	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79,290	31,851.85
10062842	Emmard Avenue	Emmard Ave. Ash St to Spruce St	Hampton	Distribution Main	6	DI	CL		179	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42,721	7,801.61
10062847	Emmard Avenue	Emmard Ave. Ash St to Overlook St	Hampton	Distribution Main	6	DI	CL		194	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42,721	7,801.61
10067455	Emmard Avenue	Emmard Ave. Cross St to Sunbeam Ave	Hampton	Distribution Main	6	DI	CL		76	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	154,153	1,198,197
10068260	Edgewood Drive	Edgewood Dr. 1100 75th to Wilmontwood Rd	Hampton	Distribution Main	6	DI	CL		1,451	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	516,432	4,686,256
10067570	Forest Street	Forest St. General Ave to Thorndyke St	Hampton	Distribution Main	6	DI	CL		266	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110,020	119,567
10067600	Constance Avenue	Constance Ave. Ocean Blvd to Atlantic Ave	Hampton	Distribution Main	6	DI	CL		296	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103,492	1,133,449
10067601	Ash Street	Ash Street	Hampton	Distribution Main	6	DI	CL		194	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110,020	119,567
10018292	Woodland Rd	Woodland Rd. Atlantic Ave - Shaw Rock Rd	North Hampton	Distribution Main	12	DI	CL		798	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	279,574	3,359,169
10018403	Woodland Rd	Woodland Rd. Reckman Rd - Shaw Rock Rd	North Hampton	Distribution Main	12	DI	CL		400	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	279,574	3,359,169
10018502	Woodland Rd	Woodland Rd. Rummolds Dr - Shaw Rock Rd	North Hampton	Distribution Main	12	DI	CL		440	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	154,153	1,198,197
10018503	Woodland Rd	Woodland Rd. Rummolds Dr - Shaw Rock Rd	North Hampton	Distribution Main	12	DI	CL		440	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	154,153	1,198,197
10010316	Watson Lane	Watson Lane. east end double main to Mill Rd	Hampton	Distribution Main	12	DI	CL		197	1985	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	41,961	81,961
10010316	Watson Lane	Watson Lane. north end of double main	Hampton	Distribution Main	12	DI	CL		775	1985	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	171,147	1,316,618
10010316	Watson Lane	Watson Lane. west end double main to Lafayette Rd	Hampton	Distribution Main	12	DI	CL		1,699	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	391,003	3,409,161
10026209	Towne Terrace	Towne Terrace. north end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		1,699	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	391,003	3,409,161
10027100	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		1,699	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	391,003	3,409,161
10026208	Towne Terrace	Towne Terrace. north end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		663	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	224,949	2,289,220
10026209	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		663	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	224,949	2,289,220
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL		211	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,713	94,773
10030041	Towne Terrace	Towne Terrace. south end of double main to Liberty Ln	Hampton	Distribution Main	6	DI	CL																						

Project Year	OID ID	Street	Description	Town	Class	Rise	Material	Linetype	Length	Installed	Rebars	Hydraulic	Critical	Flowrate	Comments	Main Results	Flowrate Flow Rate	Pipe Material	Pipe Hydraulic	Flow Total	Critical Customer	Living	Schedule	Revised Total	Final Total	Estimated Cost Low	Estimated Cost High
19990881	Barbour Road	Barbour Rd. Millboro Ave to Vanderpool Dr	Hampton	Distribution Main	12	IN	CL		294	1990	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19990887	Barbour Rd	Barbour Rd Mill Rd to Shureburn Dr	Hampton	Distribution Main	12	IN	CL		444	1990	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19990890	Barbour Road	Barbour Rd. Shureburn Dr to Vanderpool Dr	Hampton	Distribution Main	12	IN	CL		649	1990	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19997303	Great Gate	Great Gate Dr. off Ocean Blvd	Hampton	Distribution Main	8	IN	CL		437	1991	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19997304	Fullerton Ln	Fullerton Ln	Hampton	Distribution Main	8	IN	CL		889	1991	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19997305	Control Rd	Control Rd. Crossover Rd to Ocean Blvd	Hampton	Distribution Main	8	IN	CL		1091	1991	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999089	Cable Rd Extension	Cable Rd East Ocean Blvd to end	Rye	Distribution Main	6	IN	CL		390	1991	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999093	Buckhorn Lane	Buckhorn Lane	North Hampton	Distribution Main	8	IN	CL		1491	1991	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999094	Buckhorn Lane	Buckhorn Lane	North Hampton	Distribution Main	8	IN	CL		1,612	1991	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999097	West Atlantic Ave	West Atlantic Ave	Rye	Distribution Main	8	IN	CL		296	1992	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999102	Vincent Court	Vincent Ct. off Surf Ln	Rye	Distribution Main	8	IN	CL		179	1992	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999117	Surf Lane	Surf Ln. Vincent Ct. to end	Rye	Distribution Main	6	IN	CL		55	1992	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999182	Great Gate Dr	Great Gate Dr. Downer Dr to Joanne Ln	Hampton	Distribution Main	8	IN	CL		485	1992	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999183	Great Gate Dr	Great Gate Dr. Downer Dr to Woodland Rd	Hampton	Distribution Main	8	IN	CL		719	1992	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999184	Great Gate Dr	Great Gate Dr. off Joanne Ln	Hampton	Distribution Main	8	IN	CL		832	1992	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999926	Baker Avenue	Baker Ave. Just 200 feet to end	Hampton	Distribution Main	8	IN	CL		202	1992	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999937	Newsum Way	Newsum Way	Hampton	Distribution Main	8	IN	CL		561	1993	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999941	Joanne Lane	Joanne Ln. Great Gate Dr. to Newsum Way	Hampton	Distribution Main	8	IN	CL		1,169	1993	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999943	Island Path	Island Path. PVC segment west of Rockwell Ave	Hampton	Distribution Main	8	PVC	UNL		2,176	1993	0	0	3		YH		3	0	0	0	0	0	0	0	0	0	0
19999947	Downer Dr	Downer Dr	Hampton	Distribution Main	8	IN	CL		789	1993	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999980	Pawnee St	Pawnee St	Hampton	Distribution Main	6	IN	CL		281	1994	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999991	Malbrook Rd	Malbrook Rd	Hampton	Distribution Main	6	IN	CL		249	1994	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999981	Falcon Circle	Falcon Cr. St. Cr. to in to 1000 8902	Hampton	Distribution Main	8	IN	CL		280	1994	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999982	Falcon Circle	Falcon Cr.	Hampton	Distribution Main	8	IN	CL		492	1994	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999983	Falcon Circle	Falcon Cr.	Hampton	Distribution Main	8	IN	CL		1,648	1994	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999984	Island Path	Island Path	Hampton	Distribution Main	8	IN	CL		248	1994	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999984	Island Path	Island Path	Hampton	Distribution Main	8	IN	CL		1,673	1994	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999840	Woodland Rd	Woodland Rd. Great Gate Dr. to Pawnee St	Hampton	Distribution Main	12	IN	CL		1,199	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999844	Woodland Rd	Woodland Rd. Hunter Dr. to Little River Rd	Hampton	Distribution Main	12	IN	CL		285	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999878	Woodland Rd	Woodland Rd. Hunter Dr. to Little River Rd	Hampton	Distribution Main	12	IN	CL		228	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999880	Woodland Rd	Woodland Rd. Hunter Dr. to Little River Rd	Hampton	Distribution Main	12	IN	CL		281	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999845	Woodland Rd	Woodland Rd. Hunter Dr. to North Shore Rd	Hampton	Distribution Main	12	IN	CL		908	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999846	Woodland Rd	Woodland Rd. Katin Ln. to Malbrook St	Hampton	Distribution Main	12	IN	CL		294	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999844	Woodland Rd	Woodland Rd. Katin Ln. to North Shore Rd	Hampton	Distribution Main	12	IN	CL		1,435	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999844	Woodland Rd	Woodland Rd. Malbrook St. to Pawnee St	Hampton	Distribution Main	12	IN	CL		295	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999913	Winemont Road	Winemont Rd. Wall 10 ft to assembly main	Stratham	Transmission Main	8	IN	CL		533	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont Rd. Wall 10 ft to assembly main	Stratham	Transmission Main	8	IN	CL		533	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont Rd. Wall 10 ft to assembly main	Stratham	Transmission Main	8	IN	CL		1,291	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Walls 12 - 13 ft assembly main	North Hampton	Transmission Main	8	IN	CL		84	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Walls 12 - 13 ft assembly main	North Hampton	Transmission Main	8	IN	CL		49	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont Rd. combined assembly main	North Hampton	Transmission Main	12	IN	CL		551	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont Rd. combined assembly main	North Hampton	Transmission Main	12	IN	CL		2,097	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont Rd. abut. end to Wall 20 ft end	North Hampton	Distribution Main	8	IN	CL		425	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont Rd. combined assembly main to end	North Hampton	Distribution Main	8	IN	CL		425	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont Rd. Wall 10 ft to assembly main	North Hampton	Transmission Main	12	IN	CL		49	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		49	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		1,892	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		744	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		692	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		516	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		86	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		86	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		714	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		891	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		1,313	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		891	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		61	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		215	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		333	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		25	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		621	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		693	1995	0	0	0				0	0	0	0	0	0	0	0	0	0	0
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		225	1995	0	0	2				0	0	0	0	2	0	0	2	2	2	2
19999914	Winemont Road	Winemont WTP	North Hampton	Transmission Main	12	IN	CL		878	1995	2	0	0				2	0	0	0	2	0	0	2	2	2	2
19999914																											

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Project Year	GIS ID	Street	Description	Town	Class	Size	Material	Linem	Length	Installed	Breaks	Hydraulic	Critical	Risoler	Comments	Main Breaks	Breaker?	Pipe Ass	Pipe Material	Hydraulic	First Level Total	Critical Customer	Lining	Schedule	Second Level Total	Final Total	Estimated Cost Low	Estimated Cost High				
1885385	Mill Rd	Well 5 to Well 11 Raw Water	Hampton	Transmission Main	12	HDPE	UNL		1,829	2018	0	0	3			0	0	0	0	0	0	3	0	0	0	0	0	\$ 335,312	\$ 385,250			
1885384	Mill Rd	Well 5 to Well 6 Raw Water	Hampton	Transmission Main	12	HDPE	UNL		679	2018	0	0	3			0	0	0	0	0	0	3	0	0	0	0	0	0	\$ 277,895	\$ 305,250		
1885382	Liberty Ln	Churchhouse	Hampton	Distribution Main	12	HDPE	UNL		46	2018	0	0	0			0	0	0	0	0	0	3	0	0	0	0	0	0	\$ 15,933	\$ 20,480		
1885383	Liberty Ln	Liberty Ln west to Liberty Ln east	Hampton	Distribution Main	12	HDPE	UNL		705	2018	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 246,843	\$ 312,250	
1885402	Exeter Rd	Near Horseneck Station off of Exeter Road	Hampton	Distribution Main	8	DI	CTL		620	2018	0	0	3			0	0	0	0	0	0	3	0	0	0	0	0	0	0	\$ 217,135	\$ 279,174	
1885960	Rt 101	Rt 101 Church St to Tide Mill Creek	Hampton	Distribution Main	16	HDPE	UNL		1,665	2019	0	0	3			0	0	0	0	0	0	3	0	0	0	0	0	0	0	\$ 1,009,165	\$ 1,574,645	
1885961	Rt 101	Rt 101 Tide Mill Creek crossin	Hampton	Distribution Main	12	HDPE	CTL		175	2019	0	0	3			0	0	0	0	0	0	3	0	0	0	0	0	0	0	\$ 61,695	\$ 78,551	
1885710	Mill Road	Mill Rd Ames Ln to Well 9	Hampton	Transmission Main	16	DI	CTL		2,751	2019	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 965,925	\$ 1,239,042	
1885715	Mill Road	Mill Rd Ames Ln to Well 9	Hampton	Transmission Main	16	DI	CTL		5	2019	0	0	0			0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 3,923	\$ 2,967
1885716	Mill Road	Mill Rd Harbor Rd to Vandermere Dr	Hampton	Distribution Main	16	DI	CTL		1,771	2019	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 619,696	\$ 796,739	
1885718	Mill Road	Mill Rd Harbor Rd to Well 9	Hampton	Distribution Main	16	DI	CTL		899	2019	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 314,325	\$ 494,136	
1885719	Mill Road	Mill Rd Hamster line to wellfield south	North Hampton	Transmission Main	16	DI	CTL		141	2019	0	0	2			0	0	0	2	0	0	2	0	0	0	0	0	0	0	\$ 49,460	\$ 63,591	
1885718	Mill Road	Mill Rd Holmes Ln to Watsons Ln	Hampton	Transmission Main	16	DI	CTL		335	2019	0	0	2			0	0	0	2	0	0	2	0	0	0	0	0	0	0	\$ 117,177	\$ 150,064	
1885718	Mill Road	Mill Rd Holmes Ln to Well 9	Hampton	Transmission Main	16	DI	CTL		139	2019	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 48,747	\$ 62,674	
1885714	Mill Road	Mill Rd North Hampton line to Well 6	North Hampton	Transmission Main	16	DI	CTL		411	2019	0	0	2			0	0	0	2	0	0	2	0	0	0	0	0	0	0	\$ 143,972	\$ 184,107	
1885714	Mill Road	Mill Rd Palmer St to Reddington Lane	Hampton	Transmission Main	16	DI	CTL		259	2019	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 90,806	\$ 116,756	
1885714	Mill Road	Mill Rd Reddington Lane to Well 6	Hampton	Transmission Main	16	DI	CTL		105	2019	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 36,405	\$ 47,380	
1885714	Mill Road	Mill Rd Seard St to Watsons Ln	Hampton	Transmission Main	16	DI	CTL		389	2019	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 153,961	\$ 174,830	
1885714	Mill Road	Mill Rd wellfield north to wellfield south	North Hampton	Transmission Main	16	DI	CTL		12	2019	0	0	2			0	0	0	2	0	0	2	0	0	0	0	0	0	0	\$ 4,181	\$ 5,379	
1877625	Mill Road		Hampton	Transmission Main	16	HDPE	UNL		29	2019	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	\$ 3,664	\$ 15,451	
1885948	Tenth Street	Tenth St off Ocean Blvd.	Hampton	Distribution Main	2	HDPE	UNL		261	2020	1	0	0			1	0	0	0	0	1	0	0	0	0	0	0	0	0	\$ 92,474	\$ 118,895	
1885974	Seventh St	Seventh St	Hampton	Distribution Main	2	HDPE	UNL		292	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 31,810	\$ 116,941
1885671	Richard Street	Hampton WWTp feeder main	Hampton	Distribution Main	6	DI	CTL		1,164	2020	0	0	1			0	0	0	0	0	0	1	0	0	0	0	0	0	0	\$ 386,554	\$ 496,967	
1885557	Richard Street	Richard St, Elms St to Winnemacot Rd	Hampton	Distribution Main	8	DI	CTL		1,012	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 364,758	\$ 468,967
1885613	Ninth St	Ninth St	Hampton	Distribution Main	2	HDPE	UNL		269	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 93,504	\$ 120,731
1885712	Mill Road	Mill Rd North Hampton line to Seard St	Hampton	Distribution Main	16	DI	CTL		690	2020	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 229,618	\$ 285,052
1885712	Mill Road	Mill Rd Seard St to Wayside Farm Ln	Hampton	Distribution Main	16	DI	CTL		339	2020	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 119,775	\$ 155,715
1885710	Locke Road	Locke Rd Bradstreet Rd to Carlson Rd	Hampton	Distribution Main	12	DI	CTL		373	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 180,415	\$ 167,670
1885860	Locke Road	Locke Rd Bradstreet Rd to Haulb St	Hampton	Distribution Main	12	DI	CTL		796	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 247,052	\$ 312,612
1885717	Locke Road	Locke Rd Carlson Rd to Edgewood Dr	Hampton	Distribution Main	12	DI	CTL		256	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 89,719	\$ 115,355
1885710	Locke Road	Locke Rd Edgewood Dr to Winnemacot Rd	Hampton	Distribution Main	12	DI	CTL		415	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 145,547	\$ 186,875
1885710	Locke Road	Locke Rd Wentworth Ave to Winnemacot Rd	Hampton	Distribution Main	12	DI	CTL		1,211	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 424,008	\$ 545,154
1885710	Elkins Street	Elms St, Richard St to Winnemacot Rd	Hampton	Distribution Main	8	DI	CTL		1,129	2020	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 394,448	\$ 507,662
1885710	Elkins St	Elkins St	Hampton	Distribution Main	2	HDPE	UNL		301	2020	0	0	0			0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	\$ 165,490	\$ 155,630
1887063	Off Old Beach Road	2 inch to 3 service off Old Beach Road	Rye	Distribution Main	2	PVC	UNL		24	2021	0	0	0			0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	\$ 4,400	\$ 10,800
1877062	Merton Way	Merton Way off Haulb St	Hampton	Distribution Main	8	HDPE	UNL		345	2021	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 170,891	\$ 154,135
1861709	Haulb St	Haulb St, Dunsmuir Woods to Pine Rd	Hampton	Distribution Main	12	DI	CTL		1,435	2021	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 562,141	\$ 645,692
1861709	Haulb St	Haulb St, Alexander Ave - Dunsmuir Woods	Hampton	Distribution Main	12	DI	CTL		710	2021	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 248,500	\$ 310,560
1861709	Haulb St	Haulb St, Alexander Ave - Holmes Ave	Hampton	Distribution Main	12	DI	CTL		292	2021	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 102,300	\$ 131,400
1861709	Haulb St	Haulb St, Elliot St - Little River Rd	Hampton	Distribution Main	12	DI	CTL		136	2021	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 57,600	\$ 61,200
1861709	Haulb St	Haulb St, Elliot St - Taylor St	Hampton	Distribution Main	12	DI	CTL		404	2021	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 141,400	\$ 181,800
1861709	Haulb St	Haulb St, Holmes Ave - Taylor St	Hampton	Distribution Main	12	DI	CTL		565	2021	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 197,700	\$ 254,200
1885950	Hubland Avenue	Lawford Rd, Route 101 to Y 1000 2201	Hampton	Distribution Main	8	HDPE	UNL		760	2021	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 290,000	\$ 345,000
1885950	Hubland Avenue	Hubland Ave Church St to Nudd Ave cross	Hampton	Distribution Main	16	HDPE	UNL		299	2021	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 104,548	\$ 134,410
1885950	Hubland Avenue	Hubland Ave Church Street to Hubland	Hampton	Distribution Main	16	HDPE	UNL		129	2021	0	0	2			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	\$ 41,300	\$ 56,700
1885810	Gouene Avenue	Gouene Ave, Emerys Ln to Haulb St	Hampton	Distribution Main	8	DI	CTL		820	2021	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 290,294	\$ 373,241
1885820	Gouene Lane	Emerys Ln, Gouene Ave to Mill Rd	Hampton	Distribution Main	8	DI	CTL		401	2021	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 140,564	\$ 184,201

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-16

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence, Attachment DL-1, cells Q27 – Y29 and DL-2, cells R10 – AB11 and R23 – AB27

Prioritization factors shown in the “Mains” tab of Attachment DL-1 for the projects installed in years 2024 through 2026 don’t always agree with those in the Attachment DL-2 Inventory List. For example, see: Route 1-Hampton River Crossing (also referred to as Route 1A) (2025), Briar Road (2026), and Riverview Terrace (2026). Please comment or explain.

RESPONSE: Updates have been made to Attachment DL-1 (Revised) (refer to DOE 1-11 Attachment 1) and Attachment DL-2 (Revised) (refer to DOE 1-15 Attachment 1), however, prioritization factors will not always match on both schedules, as DL-2 (inventory) is based on multiple main segments, which can have different rankings and are broken out accordingly, whereas DL-1 represents rankings related to the combined segments.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 1

Data Request Received: April 9, 2024
Request No.: DOE 1-17

Date of Response: April 23, 2024
Witness: D. Lawrence

REQUEST: Reference the testimony of Witness Lawrence, Attachment DL-2, cells AB41 – AB45, AB48, AB104

Please comment on why main segments in Attachment DL-2 having significantly higher prioritization factors than those proposed for replacement through 2026 were not included in the latter. For example, seven segments (all on Ocean Boulevard) each having a total rating of from 10 to 14 were not included, as compared to five of the eight proposed projects with a total rating (final total) of 6. How long does the Company envision continued delay of some of these seemingly more critical replacements?

RESPONSE: Aquarion disagrees that the Ocean Boulevard replacements referenced above are more critical than those included for replacement through 2026, or that they are being delayed in any way. The Company is waiting for the right opportunity to dovetail the replacements with any possible state and local infrastructure efforts, thereby harnessing any cost efficiencies that would result from such coordination. Absent exigent circumstances that would elevate the priority level of the mains mentioned above, the Company sees no need for their inclusion before 2026.

The prioritization factors are an excellent tool for allowing Aquarion to prioritize water main replacements. However, there are some factors that the prioritization factors cannot effectively capture, but are nonetheless critical in determining which main replacement projects to act upon. For the Ocean Boulevard segments noted above, Aquarion has a second main within this roadway that parallels this Ocean Boulevard main providing redundancy to this section of roadway, and consequently lessening the urgency of the replacements. Ocean Boulevard is a state roadway and as such, Aquarion would ideally replace this main in conjunction with a state roadway project in this area in order to minimize paving costs.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 2

Data Request Received: May 14, 2024
Request No.: DOE 2-1

Date of Response: May 23, 2024
Witness: D. Lawrence

REQUEST: Re: Company responses to DOE 1-13 and DOE 1-15:

DOE 1-13 involves two 10'-long main break repairs in 2023; DOE 1-15 involves a single 285'-long emergency main replacement in 2024. While one could argue that such emergency main repairs technically meet the tariff requirements for WICA eligibility, 10-foot main break repairs in particular seem out of sync with the larger goals of the WICA program, especially when main replacements are the biggest cost factor in that program, and incentivizing replacement of mains is arguably the program's biggest goal. To consider such repairs "system improvement projects", as noted in both the tariff and the response to DOE 1-13, and not simply remedial or necessary, does not seem accurate.

For smaller items, the tariff indicates the first \$75,000 in costs related to the emergency/reactive replacement of services, valves, and hydrants in a given year's WICA filing are not eligible for recovery through the WICA surcharge.

In these regards, please indicate:

- a) When, if ever, the company has included a main replacement of less than 50 feet in a previous WICA filing. Please provide details.
- b) To the extent the company has seldom or never included lengths of less than 50 feet, why it is doing so now, when the company has presumably performed many main break repairs of less than 50 feet (but more than the Company's internal 5-foot demarcation for expensing vs capitalizing) over the years while the WICA program has been in effect.
- c) Whether the company would be amenable to establishing a minimum main replacement length for WICA eligibility, and if not, why not.
- d) Is there any Company guideline or policy or industry standards, which define system improvement projects?

RESPONSE:

- a) The Company included a main replacement project of 40 feet for the Well 9 Transmission Main in Hampton in Docket No. DW 14-300, approved by order *nisi* 25,751 because the Commission "found the 2014 projects prudent, and used and useful", and states that "[s]taff [now the Department of Energy] recommended approval of the 2014 WICA investments and found no errors *or exceptions in*, and recommended approval of, Aquarion's calculation of the 2015 WICA surcharge." (Order at 2).

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 2

Data Request Received: May 14, 2024
Request No.: DOE 2-1

Date of Response: May 23, 2024
Witness: D. Lawrence

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- b) The WICA program was designed to recover the fixed costs of certain Commission-approved, non-revenue producing system improvement projects completed and placed in service between base rate cases. All capitalized main replacements, whether a planned or unplanned repair, are eligible for recovery under the WICA program as they satisfy both the explicit criteria of the program and the overarching purpose of the program, both of which are in the Aquarion tariff. Specifically, eligible property consists of mains and valves installed as replacements for existing facilities that have either reached the end of their useful lives, are worn out or are in deteriorated condition. The two main breaks included in this filing meet the program criteria as defined in the Company tariff on Thirteenth Revised Page 16. Aquarion is not including these main repairs now simply on a technicality, but because this is the type of work the policy of the program is intended to allow the Company to recover.
 - c) The Company's capitalization policy defines five feet as the minimum main replacement length required for capitalization. While the Company would be amenable to establishing a minimum main replacement length for WICA eligibility during a future base rate proceeding, Aquarion also believes that including this type of system improvement is consistent with the WICA program and advances its policy purposes.
 - d) The Company does not have a written policy which defines system improvement projects nor is it aware of a formalized definition within the water industry. But based on professional experience and expertise, the concept of a water system improvement would include any work that extends the useful life, increases reliability, creates efficiency, or address regulatory requirements related to a specific asset or a group of assets. Main break repairs fall squarely within system improvement work.

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 2

Data Request Received: May 14, 2024
Request No.: DOE 2-2

Date of Response: May 23, 2024
Witness: D. Szabo

REQUEST: Re: Fourteenth Revised Pages 16 and 17 of Aquarion's Tariff, regarding the effective date of the Annual WICA Surcharge:

Fourteenth Revised Page 16 states that the WICA surcharge will apply to all bills with services rendered on or after March 1, 2023. Fourteenth Revised Page 17 indicates that the effective date of the WICA change will be April 1, 2XXX+1. The DOE has concerns regarding the abbreviated review period that seemingly will result from these tariff entries regarding Aquarion's future WICA filings. More specifically, if the Company submits its annual WICA filing in early to mid-February, the DOE does not believe that the resulting six to eight weeks between the Company's filing and April 1 is a sufficient amount of time to 1) initially review the filing, 2) complete an audit and audit report on the filing, 3) propound and receive responses to, at least, two rounds of discovery 4) possibly conduct a technical session, 4) file a report or settlement on the filing with the Commission, and 5) receive a final order from the Commission, inclusive of a possible 30-day comment period relative to an order *Nisi*.

In these regards:

- a) Please comment.
- b) Please propose a possible alternative(s) that would both, resolve the above stated concerns and be acceptable to the Company

RESPONSE:

- a) While the company understands and is not unsympathetic to the Department's concerns, Third Revised Page 18 of Aquarion's tariff contains a paragraph titled "Annual Updates" which states in relevant part, "[s]upporting 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." This provision makes it clear that the review period for update of the WICA surcharge was to be 60 days, and all parties to the docket had ample chance to review the tariff's proposed new terms, which included the annual update to the WICA, to determine if they were just, reasonable and in the public interest.

The settlement agreement in Aquarion's rate case, Docket No. DW 20-184, that adopted the WICA update provisions was filed with the Commission on June 22, 2022, nearly a year after the formation of the Department of Energy. Both the Department and the Commission had an opportunity to express these concerns during that docket, but ultimately all parties assented to and the Commission approved the current terms of the tariff, including the WICA annual update. No conditions have changed since the signing and approval of the settlement by the Commission that would warrant a change to the terms of the tariff; this was the agreement that was

AQUARION WATER COMPANY OF NEW HAMPSHIRE, INC.
2024 WATER INFRASTRUCTURE AND CONSERVATION ADJUSTMENT

DW 24-040

Aquarion Water Company's Responses to DOE Data Requests—Set 2

Data Request Received: May 14, 2024
Request No.: DOE 2-2

Date of Response: May 23, 2024
Witness: D. Szabo

negotiated among the parties to Docket No. DW 20-184, including the Company. Aquarion has a keen interest in maintaining this schedule, to provide predictability to customers with regard to the timing of rate changes as well as the Company's timely recovery of costs.

- b) For the reasons stated above, the Company would prefer that the terms of the tariff remain unchanged. This means that, consistent with the tariff's terms, Aquarion would be filing any proposed update to the WICA surcharge by January 31st of the year, not in early or mid-February as referenced in the question, as the tariff requires the filing be made to the Department and the OCA 60 days before the updated surcharge effective date. An alternative that could resolve the concerns regarding the review timeline would be to adjust the WICA surcharge to allow collection of the authorized WICA revenue over a time period of less than 12 months. The Company could provide in its WICA filing calculations to support a WICA surcharge collected over a 12 month, 11 month or 10 month period.

MEMO REPORT

Date: June 19, 2024

From: Douglas W. Brogan, P.E.

To: Jayson Laflamme, Asst. Director - Water Group, Regulatory Support Div., NH Dept. of Energy

Re: DW 24-040 Aquarion Water Company of New Hampshire
Petition for WICA Budget Approval

I am writing this memo report as an engineering consultant to the Water Group, Regulatory Support Division to summarize my observations and recommendations in the above-referenced docket regarding the Water Infrastructure and Conservation Adjustment (WICA) program of Aquarion Water Company of New Hampshire (Aquarion or company). The company's WICA program was implemented as a pilot program by Order 25,019 in DW 08-098 (September 25, 2009); modified by Order 25,539 in DW 12-085 (June 28, 2013); and further modified and given a more permanent status by Order 26,659 in DW 20-184 (July 29, 2022). For reasons explained more fully in the company's filing, the company is not seeking a WICA surcharge for any completed projects at this time: but is seeking approval of its 2024 and 2025 WICA budgets; confirmation that its completed 2023 projects met the WICA eligibility criteria of the company's tariff; and is providing its 2026 WICA budget for informational purposes. My review is limited primarily to the engineering and operational aspects of the filing, and is based on review of the filing, case discovery, previous company WICA and rate cases, and participation in a May 9, 2024 technical session in the current docket.

The WICA program allows the company to recover costs of applicable plant between rate cases, in part to incentivize replacement of aging infrastructure. While eligible plant includes smaller items such as valves, hydrants, services and production meters, the largest focus of the program by far is on water mains. Replacement of aging mains has been a concern nationally because it is expensive; not generally mandated; lacking in immediate, observable benefit; inconvenient to customers; spurred by needs that are obscured (buried and out of sight); and is therefore easy to bypass or delay as infrastructure continues to decay in place.

Aquarion has a fairly comprehensive rating system in place for individual pipe segments based on specific characteristics including age, material, break history, criticality, hydraulic concerns and other factors. The company carefully selects projects based on these and other elements, including efforts to coordinate with municipal and/or state sewer, drain and paving projects to achieve notable cost savings. I have reviewed the company's 2023 projects, as well as those proposed in its

2024 and 2025 WICA budgets, and recommend approval of all three years' projects and budgets, with the sole exception addressed in the remainder of this report.

Two of the company's 2023 projects each involved replacement of a 10-foot section of water main as a result of a water main break (Atlantic Avenue and Ocean Boulevard). Inclusion of such emergency repairs seems out of sync with the larger purposes of the WICA program. While the costs are not significant, I am concerned about the potential for mission creep from including such projects for the following reasons¹:

- 1) As alluded to above, a primary focus of the program is to incentivize replacement of aging water mains. As noted in my March 2, 2022 testimony in DW 20-184, the company's most recent rate case:

Aquarion's system dates from about 1907 - old enough to have deteriorating mains. The system still has mains from 1910 and 1915 in service; and ample amounts of 'bad' pipe materials (unlined cast iron, asbestos-cement, galvanized, etc.) that are more prone to leak, break, and contribute to water quality, hydraulic and other problems. Based on pre-WICA replacement rates, it would take some 400 years to replace every main in the system - most or all of which would presumably have failed by then. The average annual replacement under the WICA program cuts that figure nearly in half, to a little over 200 years ... (p. 2, lines 11-18).

In this regard Aquarion's WICA program has achieved notable success. Opening the door to including emergency main break repairs in the program would seem to take away from the critical incentivization and focus on replacement of aging mains, with all the associated analysis, planning, coordination and other effort the latter entails.

- 2) The company has an internal 5-foot length demarcation for determining whether a water main repair is capitalized or expensed. It would seem that over the course of the WICA program the company would have performed many emergency main break repairs exceeding 5 feet in length; yet it appears to have, with one reported exception², never previously included a main replacement of less than 50 feet in a WICA filing.

¹ While I have included only limited citations in this report, I would refer the reader generally to the company's response to DOE 2-1 for background on the ensuing discussion.

² See company response to DOE 2-1 a. The sole exception noted by the company was a highly unusual, one-off project involving replacement of a main located partially within and partially outside a pump station. The original proposal was to replace up to 300 feet of this unlined cast iron main; however, the project was ultimately shortened to its most critical 40 feet. The project's history is indicative of the extensive assessment and planning typical of genuine infrastructure replacement projects for which the WICA program was intended.

- 3) One tenet of the program was to provide a degree of transparency and the opportunity for parties (towns, regulators, customers and others) to provide input on specific projects and priorities before dollars are actually spent (see, for example, discussion on p. 16 of Order 25,019). Emergency repairs obviously do not satisfy this goal.
- 4) It seems at best debatable whether such emergency repairs satisfy the tariff requirement that eligibility be limited to “system improvement projects” (tariff page 16, numbered paragraph ‘I’, second and third lines). While conceivable that an emergency main break repair could “improve” the life of a main or increase its reliability, rather than simply becoming another indication over time of its need for replacement, the effort required to make such determinations would seem to go beyond the original intent of the program.
- 5) Inclusion of the emergency (vs planned) replacement of smaller, less significant plant items is limited under the program, in that the first \$75,000 of emergency replacement of services, valves and hydrants is ineligible in a given year. For similar reasons, to the extent water main break repairs are allowed at all, incorporating a minimum replacement length or dollar amount may be appropriate for those as well.

I would note that the issue of emergency water main repair eligibility remains somewhat moot unless and until the company requests an actual surcharge based on either the 2023 projects or other future main break repairs; and may warrant further research, discovery and the participation of other parties to fully assess. However, the company is requesting approval of its 2023 projects in this docket, and has suggested that any changes to the program in this regard await the company’s next full rate proceeding. In the latter regard I would note that the interval between the company’s most recent rate cases was eight years.

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