

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	DW 16-xxx																
2	PENNICHUCK WATER WORKS, INC.																
3	SUMMARY SCHEDULE OF WICA INVESTMENTS																
4	FOR COMPLETED CONSTRUCTION YEARS 2013 - 2015																
5	and PROJECTED CONSTRUCTION YEARS 2016- 2018																
6																	
7																	
8		(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
9																	
10																	
11	2013 ¹	Actual Investment (DW 13-358)										Depreciation Expense					
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28	2014 ²	Actual Investment (DW 15-043)										Depreciation Expense					
29																	
30																	
31																	
32																	
33																	
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41																	
42																	
43																	
44																	
45	2015 ³	Actual Investment										Depreciation Expense					
46																	
47																	
48																	
49																	
50																	
51																	
52																	
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54																	
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56																	
57																	
58																	
59																	
60																	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	DW 16-xxx															
2	PENNICHUCK WATER WORKS, INC.															
3	SUMMARY SCHEDULE OF WICA INVESTMENTS															
4	FOR COMPLETED CONSTRUCTION YEARS 2013 - 2015															
5	and PROJECTED CONSTRUCTION YEARS 2016- 2018															
6																
7																
8	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)								
9																
61																
62	2016 ⁴	Projected Investment						Depreciation Expense								
63																
64																
65		Gross	Cost of													
66		Investment	Removal ⁸	Book Cost	Retirement	Net	Depreciation	Depreciation								
67				(2) - (3)		Investment	Rate ⁷	Expense								
68						(4) - (5)		(6) x (7)								
69	Mains	\$ 4,188,000	\$ (418,800)	\$ 3,769,200	\$ -	\$ 3,769,200	1.60%	\$ 60,307								
70	Contingency	418,800	(41,880)	376,920	-	376,920	1.60%	6,031								
71	Paving	292,330	(29,233)	263,097	-	263,097	1.57%	4,131								
72	Hydrants	40,752	(4,075)	36,677	-	36,677	2.24%	822								
73	Services	64,077	(6,408)	57,669	-	57,669	2.34%	1,349								
74	Valves	14,784	(1,478)	13,306	-	13,306	1.60%	213								
75	Total	<u>\$ 5,018,743</u>	<u>\$ (501,874)</u>	<u>\$ 4,516,869</u>	<u>\$ -</u>	<u>\$ 4,516,869</u>		<u>\$ 72,852</u>								
76																
77																
78																
79	2017 ⁵	Projected Investment						Depreciation Expense								
80																
81																
82		Gross	Cost of													
83		Investment	Removal ⁸	Book Cost	Retirement	Net	Depreciation	Expense								
84				(2) - (3)		Investment	Rate ⁷	(6) x (7)								
85						(4) - (5)										
86	Mains	\$ 4,493,000	\$ (449,300)	\$ 4,043,700	\$ -	\$ 4,043,700	1.60%	\$ 64,699								
87	Contingency	449,300	(44,930)	404,370	-	404,370	1.60%	\$ 6,470								
88	Paving	250,000	(25,000)	225,000	-	225,000	1.57%	\$ 3,533								
89	Hydrants	40,752	(4,075)	36,677	-	36,677	2.24%	\$ 822								
90	Services	64,077	(6,408)	57,669	-	57,669	2.34%	\$ 1,349								
91	Valves	14,784	(1,478)	13,306	-	13,306	1.60%	\$ 213								
92	Total	<u>\$ 5,311,913</u>	<u>\$ (531,191)</u>	<u>\$ 4,780,722</u>	<u>\$ -</u>	<u>\$ 4,780,722</u>		<u>\$ 77,086</u>								
93																
94																
95																
96	2018 ⁶	Projected Investment						Depreciation Expense								
97																
98																
99		Gross	Cost of													
100		Investment	Removal ⁸	Book Cost	Retirement	Net	Depreciation	Expense								
101				(2) - (3)		Investment	Rate ⁷	(6) x (7)								
102						(4) - (5)										
103	Mains	\$ 5,490,000	\$ (549,000)	\$ 4,941,000	\$ -	\$ 4,941,000	1.60%	\$ 79,056								
104	Contingency	549,000	(54,900)	494,100	-	494,100	1.60%	\$ 7,906								
105	Paving	250,000	(25,000)	225,000	-	225,000	1.57%	\$ 3,533								
106	Hydrants	40,752	(4,075)	36,677	-	36,677	2.24%	\$ 822								
107	Services	64,077	(6,408)	57,669	-	57,669	2.34%	\$ 1,349								
108	Valves	14,784	(1,478)	13,306	-	13,306	1.60%	\$ 213								
109	Total	<u>\$ 6,408,613</u>	<u>\$ (640,861)</u>	<u>\$ 5,767,752</u>	<u>\$ -</u>	<u>\$ 5,767,752</u>		<u>\$ 92,878</u>								
110																
111																
112	Notes:															
113	¹ Based on PW's WICA Filing in DW 13-358.															
114	² Based on PW's WICA Filing in DW 15-043.															
115	³ Based on Attachment B, Page 1 of 4.															
116	⁴ Based on Attachment B, Page 2 of 4.															
117	⁵ Based on Attachment B, Page 3 of 4.															
118	⁶ Based on Attachment B, Page 4 of 4.															
119	⁷ The Depreciation Rates are based on the depreciation study approved in DW 06-073.															
120	⁸ The Cost of Removal for 2014 Mains is from Page 4 of the Final Audit Report in DW 15-043 dated 3/19/15. All other Cost of Removal															
121	amounts in 2014 - 2018 are based upon 10.00% of the Gross Investment.															

	A	B	C	D	E	F	G	H	I
1	DW 16-xxx								
2	PENNICHUCK WATER WORKS, INC.								
3	PROJECTED CALCULATION OF 2016 WICA SURCHARGE								
4	FOR COMPLETED CONSTRUCTION YEARS 2013 - 2015								
5									
6									
7									
8									
9									
10									
11	Plant in Service:								
12	Gross Plant Investment (Att A; Sch 1; Col (2))								
13	Less: Cost of Removal (Att A; Sch 1; Col (3))								
14	Less: Plant Retirements (Att A; Sch 1; Col (5))								
15	Net Plant Investment								
16									
17	Accumulated Depreciation:								
18	Depreciation Expense ¹ (Att A; Sch 1; Col (8)):								
19	2013 Net Plant Investment								
20	2014 Net Plant Investment								
21	2015 Net Plant Investment								
22	Total Depreciation Expense								
23	Less: Cost of Removal (Att A; Sch 1; Col (3))								
24	Less: Plant Retirements (Att A; Sch 1; Col (5))								
25	Net Accumulated Depreciation								
26									
27	Net Plant in Service								
28	Pre-tax Rate of Return ²							x	6.17%
29	Return on Investment								\$ 491,518
30									
31	Property Tax Expense ³	@	\$28.59	per	\$1,000				227,818
32									
33	Annual Depreciation Expense (Att A; Sch 1; Col (8)):								
34	2013 Net Plant Investment								29,744
35	2014 Net Plant Investment								42,114
36	2015 Net Plant Investment								49,363
37	Total Annual Depreciation Expense								121,221
38									
39	2016 Cumulative Revenue Requirement								\$ 840,557
40	Less: 2015 Cumulative Revenue Requirement ⁴								(500,198)
41	2016 Revenue Requirement								\$ 340,358
42									
43	Water Revenues per DW 13-130 ⁵								\$ 27,689,214
44									
45									
46	2016 Revenue Surcharge %								1.23%
47	2016 Cumulative Revenue Surcharge %								3.04%
48									
49									
50	Customer Impact:								
51	5/8 Inch Meter Monthly Charge								\$ 20.34
52	Volumetric Charge								\$ 3.30
53	Average Single Family Residential Usage (CCF)								7.88
54	Average Monthly Usage Charge								\$ 26.00
55	Total Average Monthly Charge								\$ 46.34
56									
57	Average Monthly \$ Impact per Customer of 2016 Surcharge								\$ 0.57
58	Average Monthly \$ Impact per Customer of 2016 Cumulative Surcharge								\$ 1.41
59									
60	Notes:								
61	¹ The half-year convention for depreciation expense is employed whereby one-half of the annual depreciation								
62	expense is recorded in the first and last year of an asset's service life.								
63	² Calculation of Pre-Tax Rate of Return (Based on PWW's Rate Filing in DW 13-130)								
64		Weighted Cost	Tax Multiplier	Pre Tax Cost					
65	Debt	5.59%	1.000	5.59%					
66	Equity	0.35%	1.656	0.58%					
67		5.94%		6.17%					
68	³ City of Nashua 2015 Mill Rate of \$21.99 and State Utility Property Tax Rate of \$6.60.								
69	⁴ Attachment A; Schedule 2a								
70	⁵ Base rate revenue requirement approved in DW 13-130 by Commission Order No. 25,693 (7/15/14).								

	A	B	C	D	E	F	G	H	I	J	K
1	DW 16-xxx										
2	PENNICHUCK WATER WORKS, INC.										
3	PROJECTED CALCULATION OF 2017 WICA SURCHARGE										
4	FOR COMPLETED CONSTRUCTION YEARS 2013 - 2015										
5	and PROJECTED CONSTRUCTION YEAR 2016										
6											
7											
8											
9											
10											
11	Plant in Service:										
12	Gross Plant Investment (Att A; Sch 1; Col (2))	\$	1,960,879	\$	2,871,915	\$	3,297,881	\$	5,018,743	\$	13,149,418
13	Less: Cost of Removal (Att A; Sch 1; Col (3))		(194,024)		(285,975)		(329,788)		(501,874)		(1,311,662)
14	Less: Plant Retirements (Att A; Sch 1; Col (5))		(25,813)		(754)		53,259		-		26,692
15	Net Plant Investment		1,741,042		2,585,186		3,021,352		4,516,869		11,864,449
16											
17	Accumulated Depreciation										
18	Depreciation Expense ¹ (Att A; Sch 1; Col (8)):										
19	2013 Net Plant Investment		14,872		29,744		29,744		29,744		104,104
20	2014 Net Plant Investment		-		21,057		42,114		42,114		105,284
21	2015 Net Plant Investment		-		-		24,681		49,363		74,044
22	2016 Net Plant Investment		-		-		-		36,426		36,426
23	Total Depreciation Expense		14,872		50,801		96,539		157,647		319,859
24	Less: Cost of Removal (Att A; Sch 1; Col (3))		(194,024)		(285,975)		(329,788)		(501,874)		(1,311,662)
25	Less: Plant Retirements (Att A; Sch 1; Col (5))		(25,813)		(754)		53,259		-		26,692
26	Net Accumulated Depreciation		(204,965)		(235,928)		(179,989)		(344,228)		(965,110)
27											
28	Net Plant in Service	\$	1,946,007	\$	2,821,114	\$	3,201,342	\$	4,861,096	\$	12,829,559
29	Pre-tax Rate of Return ²								x		6.17%
30	Return on Investment									\$	791,365
31											
32	Property Tax Expense ³	@	\$28.59 per \$1,000								366,797
33											
34	Annual Depreciation Expense (Att A; Sch 1; Col (8)):										
35	2013 Net Plant Investment										29,744
36	2014 Net Plant Investment										42,114
37	2015 Net Plant Investment										49,363
38	2016 Net Plant Investment										72,852
39	Total Annual Depreciation Expense										194,073
40											
41	2017 Cumulative Revenue Requirement									\$	1,352,235
42	Less: 2016 Cumulative Revenue Requirement ⁴										(840,557)
43	2017 Revenue Requirement									\$	511,678
44											
45	Water Revenues per DW 13-130 ⁵									\$	27,689,214
46											
47											
48	2017 Revenue Surcharge %										1.85%
49	2017 Cumulative Revenue Surcharge %										4.88%
50											
51											
52	Customer Impact										
53	5/8 Inch Meter Monthly Charge									\$	20.34
54	Volumetric Charge									\$	3.30
55	Average Single Family Residential Usage (CCF)										7.88
56	Average Monthly Usage Charge									\$	26.00
57	Total Average Monthly Charge									\$	46.34
58											
59	Average Monthly \$ Impact per Customer of 2017 Surcharge									\$	0.86
60	Average Monthly \$ Impact per Customer of 2017 Cumulative Surcharge									\$	2.26
61											
62	Notes:										
63	¹ The half-year convention for depreciation expense is employed whereby one-half of the annual depreciation										
64	expense is recorded in the first and last year of an asset's service life.										
65	² Calculation of Pre-Tax Rate of Return (Based on PW's Rate Filing in DW 13-130)										
66											
67	Debt		Weighted Cost		Tax Multiplier		Pre Tax Cost				
68	Equity		5.59%		1.000		5.59%				
69			0.35%		1.656		0.58%				
70			5.94%				6.17%				
71	³ City of Nashua 2015 Mill Rate of \$21.99 and State Utility Property Tax Rate of \$6.60.										
72	⁴ Attachment A; Schedule 2b										
73	⁵ Base rate revenue requirement approved in DW 13-130 by Commission Order No. 25,693 (7/15/14).										

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	DW 16-xxx												
2	PENNICHUCK WATER WORKS, INC.												
3	PROJECTED CALCULATION OF 2018 WICA SURCHARGE												
4	FOR COMPLETED CONSTRUCTION YEARS 2013 - 2015												
5	and PROJECTED CONSTRUCTION YEARS 2016 - 2017												
6													
7													
8													
9													
10													
11	Plant Investment:												
12	Gross Plant Investment (Att A; Sch 1; Col (2))	\$	1,960,879	\$	2,871,915	\$	3,297,881	\$	5,018,743	\$	5,311,913	\$	18,461,331
13	Less: Cost of Removal (Att A; Sch 1; Col (3))		(194,024)		(285,975)		(329,788)		(501,874)		(531,191)		(1,842,853)
14	Less: Plant Retirements (Att A; Sch 1; Col (5))		(25,813)		(754)		53,259		-		-		26,692
15	Net Plant Investment		1,741,042		2,585,186		3,021,352		4,516,869		4,780,722		16,645,170
16													
17	Accumulated Depreciation:												
18	Depreciation Expense ¹ (Att A; Sch 1; Col (8)):												
19	2013 Net Plant Investment		14,872		29,744		29,744		29,744		29,744		133,849
20	2014 Net Plant Investment		-		21,057		42,114		42,114		42,114		147,398
21	2015 Net Plant Investment		-		-		24,681		49,363		49,363		123,407
22	2016 Net Plant Investment		-		-		-		36,426		72,852		109,279
23	2017 Net Plant Investment		-		-		-		-		38,543		38,543
24	Total Depreciation Expense		14,872		50,801		96,539		157,647		232,616		552,475
25	Less: Cost of Removal (Att A; Sch 1; Col (3))		(194,024)		(285,975)		(329,788)		(501,874)		(531,191)		(1,842,853)
26	Less: Plant Retirements (Att A; Sch 1; Col (5))		(25,813)		(754)		53,259		-		-		26,692
27	Net Accumulated Depreciation		(204,965)		(235,928)		(179,989)		(344,227)		(298,575)		(1,263,686)
28													
29	Net Plant in Service	\$	1,946,007	\$	2,821,114	\$	3,201,342	\$	4,861,096	\$	5,079,297	\$	17,908,856
30	Pre-tax Rate of Return ²											x	6.17%
31	Return on Investment											\$	1,104,671
32													
33	Property Tax Expense ³	@		\$28.59	per \$1,000								512,014
34													
35	Annual Depreciation Expense (Att A; Sch 1; Col (8)):												
36	2013 Net Plant Investment												29,744
37	2014 Net Plant Investment												42,114
38	2015 Net Plant Investment												49,363
39	2016 Net Plant Investment												72,852
40	2017 Net Plant Investment												77,086
41	Total Annual Depreciation Expense												271,159
42													
43	2018 Cumulative Revenue Requirement											\$	1,887,843
44	Less: 2017 Cumulative Revenue Requirement ⁴												(1,352,235)
45	2018 Revenue Requirement											\$	535,608
46													
47	Water Revenues per DW 13-130 ⁵											\$	27,689,214
48													
49													
50	2018 Revenue Surcharge %												1.93%
51	2018 Cumulative Revenue Surcharge %												6.82%
52													
53													
54	Customer Impact:												
55	5/8 Inch Meter Monthly Charge											\$	20.34
56	Volumetric Charge											\$	3.30
57	Average Single Family Residential Usage (CCF)												7.88
58	Average Monthly Usage Charge											\$	26.00
59	Total Average Monthly Charge											\$	46.34
60													
61	Average Monthly \$ Impact per Customer of 2018 Surcharge											\$	0.90
62	Average Monthly \$ Impact per Customer of 2018 Cumulative Surcharge											\$	3.16
63													
64	Notes:												
65	¹ The half-year convention for depreciation expense is employed whereby one-half of the annual depreciation												
66	expense is recorded in the first and last year of an asset's service life.												
67	² Calculation of Pre-Tax Rate of Return (Based on PWV's Rate Filing in DW 13-130)												
68			Weighted Cost		Tax Multiplier		Pre Tax Cost						
69	Debt		5.59%		1.000		5.59%						
70	Equity		0.35%		1.656		0.58%						
71			5.94%				6.17%						
72	³ City of Nashua 2015 Mill Rate of \$21.99 and State Utility Property Tax Rate of \$6.60.												
73	⁴ Attachment A; Schedule 2c												
74	⁵ Base rate revenue requirement approved in DW 13-130 by Commission Order No. 25,693 (7/15/14).												

DW 16-xxx
PENNICHUCK WATER WORKS, INC.
PROJECTED CALCULATION OF 2019 WICA SURCHARGE
FOR COMPLETED CONSTRUCTION YEARS 2013 - 2015
and PROJECTED CONSTRUCTION YEARS 2016 - 2018

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11	Plant Investment:														
12	Gross Plant Investment (Att A; Sch 1; Col (2))	\$	1,960,879	\$	2,871,915	\$	3,297,881	\$	5,018,743	\$	5,311,913	\$	6,408,613	\$	24,869,944
13	Less: Cost of Removal (Att A; Sch 1; Col (3))		(194,024)		(285,975)		(329,788)		(501,874)		(531,191)		(640,861)		(2,483,714)
14	Less: Plant Retirements (Att A; Sch 1; Col (5))		(25,813)		(754)		53,259		-		-		-		26,692
15	Net Plant Investment		1,741,042		2,585,186		3,021,352		4,516,869		4,780,722		5,767,752		22,412,922
16															
17	Accumulated Depreciation:														
18	Depreciation Expense ¹ (Att A; Sch 1; Col (8)):														
19	2013 Net Plant Investment		14,872		29,744		29,744		29,744		29,744		29,744		163,593
20	2014 Net Plant Investment		-		21,057		42,114		42,114		42,114		42,114		189,512
21	2015 Net Plant Investment		-		-		24,681		49,363		49,363		49,363		172,770
22	2016 Net Plant Investment		-		-		-		36,426		72,852		72,852		182,131
23	2017 Net Plant Investment		-		-		-		-		38,543		77,086		115,628
24	2018 Net Plant Investment		-		-		-		-		-		46,439		46,439
25	Total Depreciation Expense		14,872		50,801		96,539		157,647		232,616		271,159		823,634
26	Less: Cost of Removal (Att A; Sch 1; Col (3))		(194,024)		(285,975)		(329,788)		(501,874)		(531,191)		(640,861)		(2,483,714)
27	Less: Plant Retirements (Att A; Sch 1; Col (5))		(25,813)		(754)		53,259		-		-		-		26,692
28	Net Accumulated Depreciation		(204,965)		(235,928)		(179,989)		(344,227)		(298,575)		(369,703)		(1,633,388)
29															
30	Net Plant in Service	\$	1,946,007	\$	2,821,114	\$	3,201,342	\$	4,861,096	\$	5,079,297	\$	6,137,454	\$	24,046,310
31	Pre-tax Rate of Return ²													x	6.17%
32	Return on Investment														\$ 1,483,247
33															
34	Property Tax Expense ³	@		\$28.59	per	\$1,000									687,484
35															
36	Annual Depreciation Expense (Att A; Sch 1; Col (8)):														
37	2013 Net Plant Investment														29,744
38	2014 Net Plant Investment														42,114
39	2015 Net Plant Investment														49,363
40	2016 Net Plant Investment														72,852
41	2017 Net Plant Investment														77,086
42	2018 Net Plant Investment														92,878
43	Total Annual Depreciation Expense														271,159
44															
45	2018 Cumulative Revenue Requirement														\$ 2,441,889
46	Less: 2017 Cumulative Revenue Requirement ⁴														(1,887,843)
47	2018 Revenue Requirement														\$ 554,046
48															
49	Water Revenues per DW 13-130 ⁵														\$ 27,689,214
50															
51															
52	2018 Revenue Surcharge %														2.00%
53	2018 Cumulative Revenue Surcharge %														8.82%
54															
55															
56	Customer Impact:														
57	5/8 Inch Meter Monthly Charge													\$	20.34
58	Volumetric Charge													\$	3.30
59	Average Single Family Residential Usage (CCF)														7.88
60	Average Monthly Usage Charge													\$	26.00
61	Total Average Monthly Charge													\$	46.34
62															
63	Average Monthly \$ Impact per Customer of 2018 Surcharge													\$	0.93
64	Average Monthly \$ Impact per Customer of 2018 Cumulative Surcharge													\$	4.09
65															
66	Notes:														
67	¹ The half-year convention for depreciation expense is employed whereby one-half of the annual depreciation														
68	expense is recorded in the first and last year of an asset's service life.														
69	² Calculation of Pre-Tax Rate of Return (Based on PW's Rate Filing in DW 13-130)														
70															
71	Debt			Weighted Cost		Tax Multiplier		Pre Tax Cost							
72	Equity			5.59%		1.000		5.59%							
73				0.35%		1.656		0.58%							
74				5.94%				6.17%							
75	³ City of Nashua 2015 Mill Rate of \$21.99 and State Utility Property Tax Rate of \$6.60.														
76	⁴ Attachment A; Schedule 2c														
77	⁵ Base rate revenue requirement approved in DW 13-130 by Commission Order No. 25,693 (7/15/14).														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	DW 16-xxx													
2	PENNICHUCK WATER WORKS, INC.													
3	SUMMARY OF WICA SURCHARGE CALCULATIONS													
4	FOR APPROVED 2015 WICA SURCHARGE, PROPOSED 2016 WICA SURCHARGE													
5	and PROJECTED 2017 - 2018 WICA SURCHARGES													
6														
7														
8			Actual	Actual	Projected									
9														
10			2014	2015	2016	2017	2018	2019						
11														
12	SUMMARY OF CALCULATIONS (Att A; Sch's 2):													
13														
14	Annual Revenue Requirement		\$ 181,151	\$ 319,047	\$ 340,358	\$ 511,678	\$ 535,608	\$ 554,046						
15	Cumulative Revenue Requirement		\$ 181,151	\$ 500,198	\$ 840,557	\$ 1,352,235	\$ 1,887,843	\$ 2,441,889						
16														
17														
18	Annual Revenue Surcharge %		0.67%	1.15%	1.23%	1.85%	1.93%	2.00%						
19	Cumulative Revenue Surcharge %		0.67%	1.81%	3.04%	4.88%	6.82%	8.82%						
20														
21														
22	Annual Average Monthly \$ Impact per Customer		\$ 0.31	\$ 0.53	\$ 0.57	\$ 0.86	\$ 0.90	\$ 0.93						
23	Cumulative Average Monthly \$ Impact per Customer		\$ 0.31	\$ 0.84	\$ 1.41	\$ 2.26	\$ 3.16	\$ 4.09						
24														
25														
26														
27	PER MOST RECENT APPROVED RATE FILING DW15-043													
28														
29	Annual Revenue Requirement		\$ 181,151	\$ 319,047	\$ 529,073	\$ 543,192	\$ 444,906							
30	Cumulative Revenue Requirement		\$ 181,151	\$ 500,198	\$ 1,029,270	\$ 1,572,463	\$ 2,017,369							
31														
32														
33	Annual Revenue Surcharge %		0.67%	1.15%	1.91%	1.96%	1.61%							
34	Cumulative Revenue Surcharge %		0.67%	1.81%	3.72%	5.68%	7.29%							
35														
36														
37	Annual Average Monthly \$ Impact per Customer		\$ 0.31	\$ 0.53	\$ 0.89	\$ 0.91	\$ 0.74							
38	Cumulative Average Monthly \$ Impact per Customer		\$ 0.31	\$ 0.84	\$ 1.72	\$ 2.63	\$ 3.38							
39														

Attachment B
Page 1 of 4

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
1	Pennichuck Water Works, Inc.																				Attachment B Page 2 of 4
2	Proposed 2016 WICA Water Main Projects																				
3	1/11/2016																				
4																					
5																					
6	PIPE SEGEMENT OR PROJECT NAME	CITY/TOWN	MATERIAL	LENGTH (FEET)	EXISTING PIPE DIAMETER (INCHES)	PROPOSED NEW PIPE DIAMETER (INCHES)	ESTIMATED COST	PIPE INSTALLATION DATE	PIPE AGE USEFUL LIFE	FULLY DEPREC	BREAK HISTORY	KEY CUSTOMERS	WATER QUALITY	FIRE PROTECTION FLOWS ²	Work coordination with Gas, Sewer or Storm Drain Replacement ^{4,5,6}	Subtotal prior to Geographical Area Points	Geographic Points	TOTAL	Funding Source	Included in 2015-2017 WICA projects filed in January 2015	
7	Fossa Ave Int with Main St	NASHUA	CAST IRON UNLINED	68	6	8	\$ 65,000	1928	70	YES				2	P	8	3	11	12/2014 Bond	Yes - 2016	
8	Buchanan St Int with Main St	NASHUA	CAST IRON UNLINED	45	8	8	\$ 65,000	1934	70	YES				1	P	7	3	10		Yes - 2016	
9	Lincoln Ave Int with Main St	NASHUA	CAST IRON UNLINED	36	6	8	\$ 65,000	1889	70	YES				2	P	8	3	11		Yes - 2016	
10	Russell Ave Int with Main St	NASHUA	CAST IRON UNLINED	18	6	8	\$ 65,000	1906	70	YES				2	P	8	3	11		Yes - 2016	
11	Taylor St Int with Main St	NASHUA	CAST IRON UNLINED	26	6	12	\$ 65,000	1906	70	YES				2	P	8	3	11		Yes - 2016	
12	Faxon St Int with Main St	NASHUA	CAST IRON UNLINED	15	6	6	\$ 65,000	1906	70	YES				2	P	8	3	11		Yes - 2016	
13	Allds St Int with Main St	NASHUA	CAST IRON UNLINED	60	16	16	\$ 90,000	1962	70	YES		3		2	P	9	3	12		Yes - 2015	
14	Allds St Int with Main St. (W. Allds)	NASHUA	CAST IRON UNLINED	50	2	6	\$ 15,000	1930	70	YES		3		2	P	11	3	14		No	
15	Field St Int with Main St.	NASHUA	CAST IRON UNLINED	42	6	6	\$ 65,000	1922	70	YES				2	P	8	3	11		No	
16	Revere St Int with Main St	NASHUA	CAST IRON UNLINED	38	6	6	\$ 65,000	1921	70	YES				2	P	8	3	11		Yes - 2016	
17	Pratt St Int with Main St.	NASHUA	CAST IRON UNLINED	33	6	12	\$ 90,000	1908	70	YES				2	P	8	3	11		Yes - 2016	
18	Fowell St Int with Main St.	NASHUA	CAST IRON UNLINED	37	6	6	\$ 65,000	1919	70	YES				2	P	8	3	11		Yes - 2016	
19	Stevens St Int with Main St.	NASHUA	CAST IRON UNLINED	15	6	6	\$ 58,000	1930	70	YES				2	P	8	3	11		Yes - 2016	
20	Tolles Street (Canal to Whitney)	NASHUA	CAST IRON UNLINED	470	6	8	\$ 146,000	1888	70	YES		1		1	S & P	11	3	14	12/2014 Bond	No	
21	Temple Street (Armory to Commercial St.)	NASHUA	CAST IRON UNLINED	300	8	8	\$ 93,000	1888	70	YES		1			S & G & P	11	3	14		Yes - 2016	
22	Water Street	NASHUA	CAST IRON UNLINED	755	6	0	\$ 58,000	1888	70	YES		1	2	7		10	3	13		No	
23	Chapman St (Lund to end)	NASHUA	CAST IRON UNLINED	130	1 1/4	4	\$ 34,000	1948	70	YES			3		P	9	0	9		No	
24	McKean St (Arlington to #31 McKean)	NASHUA	CAST IRON UNLINED	970	6	8	\$ 127,000	1888	70	YES		1		1	P	8	3	11		Yes - 2017	
25	Amherst Street	NASHUA	CAST IRON UNLINED	3150	6	12	\$ 1,071,000	1892-1912	70	YES		1		2	P	9	3	12	SRF	No	
26	Terrace Street	NASHUA	CAST IRON UNLINED	280	4 & 2	4	\$ 73,000	1924, 1946	70	YES			1		P	7	3	10		No	
27	Bruce Street	NASHUA	CAST IRON UNLINED	260	6	6	\$ 72,000	1909-1926	70	YES			1	1	P	8	3	11		No	
28	Berkshire Street	NASHUA	CAST IRON UNLINED	575	6	6	\$ 158,000	1913-1915	70	YES			1	1	P	8	3	11		No	
29	Worcester Street (Scripture to Shedd's)	NASHUA	CAST IRON UNLINED	399	6	8	\$ 143,000	1888 - 1924	70	YES		1		2	S & G & P	13	3	16	12/2014 Bond	Yes - 2017	
30	Scripture Street (Temple to Worcester)	NASHUA	CEMENT LINED STEEL	458	6	8	\$ 143,000	1924	70	YES				2	S & G & P	12	3	15		Yes - 2017	
31	Shedd's Avenue (Scripture to Worcester)	NASHUA	CEMENT LINED STEEL	291	2	4	\$ 100,000	1940	40	YES	2	1	1		S & G & P	14	3	17		Yes - 2017	
32	Hoyts Ln (Scripture to Shedd's)	NASHUA	CAST IRON UNLINED	400	4	4	\$ 57,000	1922	70	YES					S & G & P	10	2	12		No	
33	Gorman Ave (Temple to Hoyts)	NASHUA	CEMENT LINED STEEL	113	1 1/2	4	\$ 100,000	1940	40	YES			1		S & G & P	11	2	13		No	
34	Gilman Street	NASHUA	CAST IRON UNLINED	1460	6 & 8	8	\$ 453,000	1909-1924	70	YES				1	P	7	2	9	12/2014 Bond	No	
35	Bridle Path	NASHUA	CAST IRON UNLINED	330	6 & 1 1/4	6 & 4	\$ 89,000	1930	70	YES				1	P	7	2	9		No	
36	Chestnut Street (Kinsley to W. Otterson)	NASHUA	CAST IRON UNLINED	585	6 & 4	12	\$ 199,000	1887-1931	70	YES		1		3	P	10	3	13		No	
37	Hughes St (Hutchison to Warsaw)	NASHUA	CAST IRON UNLINED	755	6	8	\$ 234,000	1924-1946	70	YES				1	P	7	2	9		No	
38	Total LF -				12164	Total -		\$ 4,188,000													
39					Paving from 2015 projects -		\$ 292,330														
40	Valve Replacements ³ -				7	@	\$ 2,112	=	\$ 14,784												
41	Service Replacements ³ -				31	@	\$ 2,067	=	\$ 64,077												
42	Hydrant Replacements ³ -				9	@	\$ 4,528	=	\$ 40,752												
43					Planning Contingency ⁵ -		\$ 418,800														
44					Total Estimated WICA \$ in 2016 -		\$ 5,018,743														
45																					
46	1. Material Integrity - Rating of 1 point for each break in the last 20 years.																				
47	2. ISO Fire Ratings - A rating of 1 for each 500 gpm that the flow in the watermain is less than the ISO required rating.																				
48	3. Number of Service, Valve and hydrant replacements is the average of the past 5 years. The average cost for each replacement types is the average cost for 2014																				
49	4. PWW must complete replacement of its mains when the City replaces its sewer mains.																				
50	5. The City operates on a Fiscal year basis between July 1 and June 30 of the following Calendar year. A contingency of 10% is carried to account for this.																				
51	6. Work Coordination Legend - P - Project in street affected by City Paving Program, G - Project in street where Gas Company master plan calls for gas main replacement, S - Project in street where sewer and/or storm drain replacement is occurring.																				
52	7. Projects that are highlighted in same color are located in the same geographical area. If there is no highlighting the projects are not located in proximity to any other planned WICA projects																				
53	8. S&G&P - Water replacement related to sewer and gas replacement with 1/3 cost sharing of pavement, must move water due to conflict with sewer - 10 points																				
54	S&P - Water replacement related to sewer replacement with 1/2 cost sharing of pavement, must move water due to conflict with sewer - 9 points																				
55	G&P - Water replacement related to gas replacement and City Street paving with 1/3 cost sharing of pavement. Water does not have to be moved, no conflict with gas - 8 points																				
56	P - City paving street over water main. 1/2 cost sharing of pavement. Reduced risk of damage of new pavement by break of old water main if not replaced with paving project - 6 points																				
57	G - Water replacement related to gas replacement with 1/2 cost sharing of pavement. Water does not have to be moved, no conflict with gas - 5 points																				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
58																					
59																					
60	Pennichuck Water Works, Inc.																				
61	Proposed 2017 WICA Water Main Projects																				
62	1/11/2016																				
63	Attachment B Page 3 of 4																				
64	PIPE SEGEMENT OR PROJECT NAME	CITY/TOWN	MATERIAL	LENGTH (FEET)	PIPE DIAMETER (INCHES)	PROPOSED NEW PIPE DIAMETER (INCHES)	ESTIMATED COST	AGE OF PPE	PIPE AGE USEFUL LIFE	FULLY DEPREC	BREAK HISTORY	KEY CUSTOMERS	WATER QUALITY	FIRE PROTECTION FLOWS ²	Work coordination with Gas, Sewer or Storm Drain Replacement ^{4,6,8}	Subtotal prior to Geographical Area Points	Geographic Points	TOTAL	Funding Source	Included in 2015-2017 WICA projects filed in January 2015	
65	Bridge St (Amory to E St)	NASHUA	CAST IRON UNLINED	1300	8	12	\$ 442,000	187-1898	70	YES		1		2	P & G	11	3	14	To Be Determined Combination of future Bond and future SRF Funding	No	
66	Sanders St (Bridge to end)	NASHUA	CAST IRON UNLINED	526	8	0	\$ 30,000	1942	70	YES		1			P & G	9	3	12		No	
67	D St (Bridge to E. Hollis)	NASHUA	CAST IRON UNLINED	500	4	6	\$ 138,000	1898	70	YES				2	P & G	10	2	12		No	
68	E St (Bridge to E. Hollis)	NASHUA	CAST IRON UNLINED	375	8	12	\$ 128,000	1906	70	YES		3		2	P & G	13	3	16		No	
69	Hobbs Ave (E. Hollis to Crown)	NASHUA	CAST IRON UNLINED	485	8	12	\$ 165,000	1906	70	YES				2	P & G	10	2	12		No	
70	Chase St (E. Hollis to Crown)	NASHUA	CAST IRON UNLINED	416	6	6	\$ 114,000	1902	70	YES					P & G	8	2	10		No	
71	Crown St (Denton to Arlington)	NASHUA	CAST IRON UNLINED	220	6	12	\$ 75,000	1901-1908	70	YES		1		3	P & G	12	3	15		No	
72	Brook Street (Ash to Fulton)	NASHUA	CAST IRON UNLINED	1141	6	8	\$ 182,000	1887-1924	70	YES		1		3		4	2	6		Yes - 2015	
73	Chestnut Street (w. Otterson to Nevada)	NASHUA	CAST IRON UNLINED	515	6 & 4	12	\$ 375,000	1887	70	YES				3		3	2	5		No	
74	Lake Street (Pine St. easterly)	NASHUA	CAST IRON UNLINED	154	6	12	\$ 52,000	1888	70	YES	2			4		6	2	8		Yes - 2015	
75	Verona Street (Sarasota to Manatee)	NASHUA	CAST IRON UNLINED	698	6	8	\$ 335,000	1913 - 1915	70	YES		1		2		3	3	6		Yes - 2016	
76	Sarasota Avenue (Pine to Verona)	NASHUA	CAST IRON UNLINED	250	6	8	\$ 100,000	1926-1949	70	YES		1		2		3	3	6		Yes - 2016	
77	Hamilton Street (Lake to Brook)	NASHUA	CAST IRON UNLINED	411	6	6	\$ 113,000	1909-1941	70	YES		1		1		2	3	5		Yes - 2015	
78	Burritt Street (Lake to Brook)	NASHUA	CAST IRON UNLINED	424	6	6	\$ 117,000	1887-1921	70	YES		1		3		4	3	7		Yes - 2015	
79	Burritt Street (Brook St. southerly)	NASHUA	CAST IRON UNLINED	182	4	4	\$ 107,000	1941	40	YES						-	2	2		Yes - 2015	
80	Ash Street (Lake to Lovell)	NASHUA	CAST IRON UNLINED	517	6	6	\$ 130,000	1892	70	YES				1		1	2	3		Yes - 2015	
81	Fossa Avenue (Main to end)	NASHUA	CAST IRON UNLINED	282	6	8	\$ 125,000	1928	70	YES				4		4	3	7		Yes - 2016	
82	Stevens Street (Main to Lawndale)	NASHUA	CAST IRON UNLINED	980	6 & 4	6	\$ 270,000	1896 - 1946	70	YES		1		2		3	3	6		Yes - 2016	
83	Faxon Avenue (Faxon St. to end)	NASHUA	CEMENT LINED STEEL	195	2	4	\$ 34,000	1940	40	YES	1					1	2	3		Yes - 2016	
84	Nutt Street (Faxon to Lincoln)	NASHUA	CAST IRON UNLINED	420	4	6	\$ 87,000	1890	40	YES	1			1		2	2	4		Yes - 2016	
85	Buchanan Street (Main to Nutt)	NASHUA	CAST IRON UNLINED	590	6	8	\$ 78,000	1908	70	YES				1		1	2	3		Yes - 2016	
86	Lincoln Avenue (Main to Fifield)	NASHUA	CAST IRON UNLINED	833	6	8	\$ 133,000	1889 - 1912	70	YES	2			2		4	2	6		Yes - 2016	
87	Russell Street (Main to Fifield)	NASHUA	CAST IRON UNLINED	948	6	8	\$ 167,000	1906 - 1913	40	YES				1		1	2	3		Yes - 2016	
88	Circle Avenue (Nutt to end)	NASHUA	CEMENT LINED STEEL	164	2	4	\$ 27,000	1930	40	YES						-	2	2		Yes - 2016	
89	Taylor Street (Main to Lynn)	NASHUA	CAST IRON UNLINED	1629	6 & 8	12	\$ 340,000	1892 - 1940	70	YES		3		2		5	3	8		Yes - 2016	
90	Highland St (Fairmount to Auburn)	NASHUA	CAST IRON UNLINED	620	6 & 4	6	\$ 171,000	1892-1932	70	YES				1	G	6	0	6		No	
91	Auburn St (Amherst to Charles)	NASHUA	CAST IRON UNLINED	1225	4 & 8	8	\$ 349,000	1887	70	YES				2	G	7	0	7		No	
92	Beard St (Fletcher to Auburn)	NASHUA	CAST IRON UNLINED	350	8	8	\$ 109,000	1940	70	YES					G	5	0	5		No	
93																					
94																					
95																					
96																					
97																					
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101																					
102	1. Material Integrity - Rating of 1 point for each break in the last 20 years.																				
103	2. ISO Fire Ratings - A rating of 1 for each 500 gpm that the flow in the watermain is less than the ISO required rating.																				
104	3. Number of Service, Valve and hydrant replacements is the average of the past 5 years. The average cost for each replacement types is the average cost for 2014																				
105	4. PWW must complete replacement of its mains when the City replaces its sewer mains.																				
106	5. The City operates on a Fiscal year basis between July 1 and June 30 of the following Calendar year. A contingency of 10% is carried to account for this.																				
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109	8. S&G&P - Water replacement related to sewer and gas replacement with 1/3 cost sharing of pavement, must move water due to conflict with sewer - 10 points																				
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114	Pennichuck Water Works, Inc. Proposed 2018 WICA Water Main Projects 1/11/2016																				Attachment B Page 4 of 4
115																					
116																					
117																					
118																					
119																					
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121	Alds St (Harbor to Williams)	NASHUA	CAST IRON UNLINED	1788	8	12	\$ 600,000	1924 -1930	70	YES	1	1		2	P	4		4	To Be Determined Combination of future Bond and future SRF Funding	Yes - 2017	
122	Newbury Street (Underhill to Bowers)	NASHUA	CAST IRON UNLINED	1896	6 & 8	8	\$ 820,000	1888-1940	70	YES	1	1		1		3	2	5		Yes - 2017	
123	Gillis Street (Alds to Arlington)	NASHUA	CAST IRON UNLINED	1090	4	8	\$ 500,000	1888	40	YES	1	1	3	2		7	3	10		Yes - 2017	
124	Proctor Street (Alds to Mulvanity)	NASHUA	CAST IRON UNLINED	206	8	8	\$ 85,000	1929 - 1940	70	YES	1			1		2	3	5		Yes - 2017	
125	Proctor Street (Mulvanity to end)	NASHUA	CEMENT LINED STEEL	136	2	4	\$ 37,000	1922 - 1940	40	YES	1		1			2	2	4		Yes - 2017	
126	Mulvanity Street (Proctor to end)	NASHUA	CEMENT LINED STEEL	284	2	4	\$ 67,000	1940 -1954	40	YES	0		1			1	2	3		Yes - 2017	
127	Thomas Street (Haines to McKean)	NASHUA	CAST IRON UNLINED	449	6	6	\$ 184,000	1892 - 1908	70	YES	1					1	2	3		Yes - 2017	
128	Barker Street (Burke to King)	NASHUA	CAST IRON UNLINED	603	6	6	\$ 151,000	1892	70	YES	0					0	2	2		Yes - 2017	
129	Williams Street (Alds to Arlington)	NASHUA	CAST IRON UNLINED	1495	6	8	\$ 411,000	1910 - 1934	70	YES	0			2		2	3	5		Yes - 2017	
130	McKean Street (Alds to Arlington)	NASHUA	CAST IRON UNLINED	1714	6	8	\$ 478,000	1888	70	YES	2					2	3	5		Yes - 2017	
131	Cherry Street (McKean to end)	NASHUA	CAST IRON UNLINED	236	4	4	\$ 88,000	1926	40	YES	0					0	2	2		Yes - 2017	
132	Benson Street (Burke to Spaulding)	NASHUA	CAST IRON UNLINED	630	4	6	\$ 144,000	1889 - 1890	40	YES	0			2		2	2	4		Yes - 2017	
133	Arlington Avenue (Gillis to end)	NASHUA	CAST IRON UNLINED	200	4	4	\$ 41,000	1922	40	YES	0					0	2	2		Yes - 2017	
134	Vine St (W. Hollis to Kinsley)	NASHUA	CAST IRON UNLINED	673	6	8	\$ 211,000	1888	70	YES				1	P & G					No	
135	Monroe St (Lake to Early)	NASHUA	CAST IRON UNLINED	768	6	12	\$ 259,000	1893-1906	70	YES				2	P & G					No	
136	Lake St (Pine to Almont)	NASHUA	CAST IRON UNLINED	2767	6	12	\$ 945,000	1890-1899	70	YES		1		3	P & G					No	
137	Linwood St (Lake to Cleveland)	NASHUA	CAST IRON UNLINED	1400	6 & 8	8	\$ 202,000	1891, 1951-1953	70	Yes/no				1						No	
138	Edwin St (Blanchard to Cleveland)	NASHUA	CAST IRON UNLINED	465	2	8	\$ 135,000	1955-1962	40	Yes				2						No	
139	Miami Street (Intervale to Tampa)	NASHUA	GAVANIZED STEEL	427	2	8	\$ 132,000	1927	40	YES	1		1	4		6	2	8		No	
140	Total LF -				17227	Total -				\$ 5,490,000											
141					Paving from 2017 projects-				\$ 250,000												
142	Valve Replacements ³ -				7	@	\$ 2,112	=	\$ 14,784												
143	Service Replacements ³ -				31	@	\$ 2,067	=	\$ 64,077												
144	Hydrant Replacements ³ -				9	@	\$ 4,528	=	\$ 40,752												
145					Planning Contingency ⁴ -				\$ 549,000												
146	Total Estimated WICA \$\$ in 2018 -								\$ 6,408,613												
147																					
148																					
149	1. Material Integrity - Rating of 1 point for each break in the last 20 years.																				
150	2. ISO Fire Ratings - A rating of 1 for each 500 gpm that the flow in the watermain is less than the ISO required rating.																				
151	3. Number of Service, Valve and hydrant replacments is the average of the past 5 years. The average cost for each replacement types is the average cost for 2014																				
152	4. PWV must complete replacement of its mains when the City replaces its sewer mains.																				
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154	6. Work Coordination Legend - P - Project in street affected by City Paving Program, G - Project in street where Gas Company master plan calls for gas main replacement, S - Project in street where sewer and/or storm drain replacement is occurring.																				
155	7. Projects that are highlighted in same color are located in the same geographical area. If there is no highlighting the projects are not located in proximity to any other planned WICA projects																				
156	8. S&G&P - Water replacement related to sewer and gas replacement with 1/3 cost sharing of pavement, must move water due to conflict with sewer - 10 points																				
157	S&P - Water replacement related to sewer replacement with 1/2 cost sharing of pavement, must move water due to conflict with sewer - 9 points																				
158	G&P - Water replacement related to gas replacement and City Street paving with 1/3 cost sharing of pavement. Water does not have to be moved, no conflict with gas - 8 points																				
159	P - City paving street over water main. 1/2 cost sharing of pavement. Reduced risk of damage of new pavement by break of old water main if not replaced with paving project - 6 points																				
160	G - Water replacement related to gas replacement with 1/2 cost sharing of pavement. Water does not have to be moved, no conflict with gas - 5 points																				