Pennichuck Water Works, Inc.
Proposed 2013 WICA Water Main Projects
Revised 1/31/2013

PIPE SEGEMENT OR PROJECT NAME	CITY/TOWN	MATERIAL	LENGTH (FEET)	EXISTING 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 Sewer or Storm Drain Replacement	Subtotal prior to Geographical Area Points	GEOGRAPHICAL PROXIMITY	TOTAL
Baldwin St - Bridge/RR Crossing	NASHUA	CAST IRON UNLINED	100	8	$ 84,000.000	1938	70	YES	1				5	6	2	8
Baldwin St	NASHUA	CAST IRON UNLINED	1,198	8	$ 280,000.00	1938	70	YES	1				5	6	2	8
Elm St	NASHUA	CAST IRON UNLINED	415	8	$ 75,222.00	Pre 1888	70	YES	2				5	7	3	10
Fairmount St	NASHUA	CAST IRON UNLINED	100	6	$ 84,000.00	1901	70	YES								
Fairmount St	NASHUA	CAST IRON UNLINED	1,044	6	$ 305,000.00	1901	70	YES								
Franklin Street	NASHUA	CAST IRON UNLINED	1,120	10	$ 316,480.00	1908	70	YES					5	5	3	8
Pleasant St	NASHUA	CAST IRON UNLINED	433	4	$ 116,000.00	1891-1897	40	YES					5	5	2	7
Ash St	NASHUA	CAST IRON UNLINED	691	8	$ 240,000.00	1931	70	YES					5	5	2	7
Walnut St	NASHUA	CAST IRON UNLINED	625	4	$ 210,000.00	1888	40	YES	1				5	6	2	8
Park St	NASHUA	CAST IRON UNLINED	312	6	$ 68,950.00	1890	70	YES								
Court St	NASHUA	CAST IRON UNLINED	435	8	$ 90,175.00	1931	70	YES								
Beacon St	NASHUA	CAST IRON UNLINED	400	4	$ 87,280.00	1897	70	YES								
Beacon Court	NASHUA	CAST IRON UNLINED	174	4	$ 24,895.00	1907	70	YES								
Middle St	NASHUA	CAST IRON UNLINED	430	4	$ 82,100.00	1888	70	YES								
Broad St	NASHUA	CAST IRON UNLINED	1045 & 855	8 & 6	$ 360,000.00	Pre 1888	71	YES								
Middle St	AMHERST	ABESTOES CEMENT	1,110	6	$ 150,000.00	1950	40	YES	1				5	6	2	8
Cross St	AMHERST	ABESTOES CEMENT	370	4	50,000	1950	40	YES					5	5	2	7

		Total LF -	8,957	Total -	$ 2,624,102.00
Service Replacements[3] -	31	@	$ 1,858.00	Each	$ 57,598.00 Total estimated Service Replacement Costs
			Planning Contingency[4] -		$ -
			Total Estimated WICA $$ in 2013 -		$ 2,681,700.00

1. Material Integity - Rating of 1 point for each break in the last 20 years.
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.
3. Number of Service replacments is the average of the past 5 years. The average cost of a service replacement is the average cost over the past 4 years.
4. The City has added to its initial sewer replacement in previous years. PWW must complete replacement of its mains when the City replaces its sewer mains. A contingency of 0% is carried to account for this.

PENNICHUCK WATER WORKS, INC.
WICA Surcharge Calculation
DW 12-

	2013	2014	2015
Plant Additions	$ 2,681,700	$ 1,918,848	$ 2,310,098
Pre Tax Rate of Return	6.04%	6.04%	6.04%
Revenue Requirement	$ 161,975	$ 115,898	$ 139,530
Depreciation	$ 43,333	$ 31,128	$ 37,388
Property Taxes	$ 68,812	$ 49,238	$ 59,277
Overall Revenue Requirement	$ 274,120	$ 196,264	$ 236,195
Cumulative Revenue Requirement	$ 274,120	$ 470,384	$ 706,579
Water Revenues per DW 10-091	$ 26,997,163		
Overall Revenue Surcharge Amount	**1.02%**	**0.73%**	**0.87%**
Cumulative Revenue Surcharge Amount	**1.02%**	**1.74%**	**2.62%**

Calculation of Pre Tax Rate of Return (Based on DW 11-026)

	Weighted Cost	Tax Multiplier	Pre Tax Cost
Debt	6.04%	1.000	6.04%
Equity	0.00%	1.681	0.00%
	6.04%		6.04%

Customer Impact

	2013	2014	2015
5/8 inch Meter Charge	$ 20.34	$ 20.34	$ 20.34
Volumetric Charge	$ 3.30	$ 3.30	$ 3.30
Average Single Family Residential Usage (CCF)	7.88	7.88	7.88
Monthly Usage	$ 26.00	$ 26.00	$ 26.00
Total Month Charge	$ 46.34	$ 46.34	$ 46.34
Monthly Impact of Surcharge	**$ 0.47**	**$ 0.34**	**$ 0.41**
Cumulative Monthly Impact of Surcharge	**$ 0.47**	**$ 0.81**	**$ 1.21**

PENNICHUCK WATER WORKS, INC.
WICA Surcharge Calculation
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Revised
Attachment C
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2013	**Investment**			**Depreciation Expense**		**Property Tax Expense**	
	Investment	Retirement[1]	Net Investment	Depreciation Rate[2]	Depreciation Expense	Mil Rate[3]	Property Tax Expense
Mains	$ 2,624,102	$ -	$ 2,624,102	1.60%	$ 41,986	25.66	$ 67,334
Contingency	$ -	$ -	$ -	1.60%	$ -	25.66	$ -
Hydrants	$ -	$ -	$ -	2.24%	$ -	25.66	$ -
Services	$ 57,598	$ -	$ 57,598	2.34%	$ 1,348	25.66	$ 1,478
Valves	$ -	$ -	$ -	1.60%	$ -	25.66	$ -
Total	$ 2,681,700	$ -	$ 2,681,700		$ 43,333		$ 68,812

2014	**Investment**			**Depreciation Expense**		**Property Tax Expense**	
	Investment	Retirement[1]	Net Investment	Depreciation Rate[2]	Depreciation Expense	Mil Rate[3]	Property Tax Expense
Mains	$ 1,489,000	$ -	$ 1,489,000	1.60%	$ 23,824	25.66	$ 38,208
Contingency	$ 372,250	$ -	$ 372,250	1.60%	$ 5,956	25.66	$ 9,552
Hydrants	$ -	$ -	$ -	2.24%	$ -	25.66	$ -
Services	$ 57,598	$ -	$ 57,598	2.34%	$ 1,348	25.66	$ 1,478
Valves	$ -	$ -	$ -	1.60%	$ -	25.66	$ -
Total	$ 1,918,848	$ -	$ 1,918,848		$ 31,128		$ 49,238

2015	**Investment**			**Depreciation Expense**		**Property Tax Expense**	
	Investment	Retirement[1]	Net Investment	Depreciation Rate[2]	Depreciation Expense	Mil Rate[3]	Property Tax Expense
Mains	$ 1,802,000	$ -	$ 1,802,000	1.60%	$ 28,832	25.66	$ 46,239
Contingency	$ 450,500	$ -	$ 450,500	1.60%	$ 7,208	25.66	$ 11,560
Hydrants	$ -	$ -	$ -	2.24%	$ -	25.66	$ -
Services	$ 57,598	$ -	$ 57,598	2.34%	$ 1,348	25.66	$ 1,478
Valves	$ -	$ -	$ -	1.60%	$ -	25.66	$ -
Total	$ 2,310,098	$ -	$ 2,310,098		$ 37,388		$ 59,277

Notes:

1. Mains as listed are fully depreciated. Actual retirement for Services will be presented with the completed surcharge filing.
2. As per last depreciation study in DW 06-073 utilizing composite rate.
3. Based on Nashua 2012 property rate of $19.06 and state rate of $6.60