

	DW17-128 Approved Step Revenue Requirements	Projected QCPAC Revenues For 2018 Capital Additions pro formas	Projected QCPAC Surcharge for 2018 Capital Additions	Projected QCPAC For 2019 Capital Additions pro formas	Projected QCPAC Surcharge for 2019 Capital Additions	Projected QCPAC For 2020 Capital Additions pro formas	Projected QCPAC Surcharge for 2020 Capital Additions	Projected QCPAC For 2021 Capital Additions pro formas	Projected QCPAC Surcharge for 2021 Capital Additions
City Bond Fixed Revenue Requirement (CBFRR)	\$ 926,309	\$	\$ 926,309	\$ -	\$ 926,309	\$ -	\$ 926,309	\$ -	\$ 926,309
Operating Expense Revenue Requirement	\$ 5,851,582 (1)	\$ (40,866) (4)(8)	\$ 5,810,716	\$ 65,676 (4)	\$ 5,876,393	\$ 68,782 (10)(11)	\$ 5,945,174	\$ 15,122	\$ 5,960,296
Annual Principal and Interest Payments	\$1,362,154 (2)	\$ 261,114 (5)(6)	\$ 1,623,268	\$ 143,221 (12)	\$ 1,766,489	\$ 179,234 (12)	\$ 1,945,723	\$ 222,453	\$ 2,168,176
Principal and Interest Coverage Requirement	1.10 (3)		1.10		1.10		1.10		1.10
Principal and Interest Revenue Requirement	\$ 1,498,370	\$	\$ 1,785,595	\$	\$ 1,943,137	\$	\$ 2,140,295	\$	\$ 2,384,993
Proposed Revenue Requirement excluding NCCRS	\$ 8,276,261	\$	\$ 8,522,620	\$	\$ 8,745,839	\$	\$ 9,011,778	\$	\$ 9,271,599
Current Water Revenues excluding CBFRR and NCCRS	\$ 5,947,707	\$	\$ 7,349,952	\$	\$ 7,596,311	\$	\$ 7,819,530	\$	\$ 8,085,469
Add: City Bond Fixed Revenue Requirement	\$ 926,309	\$	\$ 926,309	\$	\$ 926,309	\$	\$ 926,309	\$	\$ 926,309
Current Water Revenues with CBFRR less NCCRS	\$ 6,874,016	\$	\$ 8,276,261	\$	\$ 8,522,620	\$	\$ 8,745,839	\$	\$ 9,011,778
Proposed Percent Revenue Increase	20.40%								
ADD: NC Capital Surcharge Revenue	\$ 178,915	\$	\$ 178,915	\$	\$ 178,915	\$	\$ 178,915	\$	\$ 178,915
Proposed New Revenue Requirement	\$ 8,455,176	\$	\$ 8,701,535	\$	\$ 8,924,754	\$	\$ 9,190,693	\$	\$ 9,450,513
Projected QCPAC Increase ⁷			2.98%		2.70%		3.21%		3.14%
Cumulative QCPAC increase ⁹			2.98%		5.67%		8.89%		12.03%
Cumulative QCPAC monthly increase in average single family residential bill		\$	\$ 2.25	\$ 2.81	\$ 4.28	\$ 6.71	\$ 9.07		\$ 12.03
Average monthly single family residential bill with QCPAC		\$	\$ 77.69	\$	\$ 79.73	\$ 82.15	\$ 84.52		\$ 84.52

Notes:

(1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense approved in DW17-128

(2) Annual Principal and interest payments for PEU debt associated with all plant in service as approved in DW17-128

(3) Principal and interest coverage of 1.10 is as approved in DW17-128

(4) QCPAC operating expense proformas are based on the property taxes for plant added during the year.

(5) See Calculation of annual principal and interest payments on spreadsheet titled "2018 QCPAC PEU Additions"

(6) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a

25

year term loan with an actual total all in interest rate of

4.38%

that was not recovered in DW17-128

(7) QCPAC percent revenue surcharges based on increase in revenues over the step revenues granted in DW17-128, exclusive of prior QCPAC surcharges.

(8) 2018 Proforma Operating Expenses include a reduction in purchased water expenses associated with the completion of the PWV-PEU Interconnection in the amount of

\$

180,500

(9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW17-128

(10) QCPAC operating expense proforma associated with property taxes is reduced by \$ 70,000 to reflect reduction in purchased water costs associated with the completion of the Londonderry Storage Tank

(11) QCPAC operating expense proforma associated with property taxes is reduced by \$ 28,000 to reflect reduction in arsenic treatment costs associated with the completion of the Locke Lake raw water well line to the Peacham Road Treatment plant

(12) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1 and 12/31 for designated year based on a

25

year term loan with an actual total all in interest rate of

5.50%

that was not recovered in DW17-128

Impact on PEU Single Family Residential Home:

Monthly meter charge granted in DW17-128, inclusive of Step increase -	\$ 20.70
Average Single Family Consumption (CCF) -	7.29
Consumption Charge granted in DW17-128, inclusive of Step increase -	\$ 7.51 per CCF
Average Single Family monthly bill with rates granted in DW17-128, inclusive of step -	\$ 75.45

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	2018 Board Approved Budgeted Amount	Estimated Project Cost as of 10/31/2018	Final Project cost as of 12/31/2018	Community	Eligible for 2018 QCPAC Surcharge?	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Brady Avenue ⁶	Replace 2,400 linear feet of existing 1.5" thin wall HDPE water main with new 8" diameter ductile iron water main	1703684 & 1807069	DW17-055	26,006	4/19/2017	\$ 379,600	\$ 598,000	\$ 618,983	Derry	Yes	Yes	\$ 30.59	\$ 18,935	
Hillcrest Road	Replace approximately 1,200 linear feet of existing 12" thin wall ductile iron water main with high break history through swamp with 12" HDPE.	1707188 & 1807072	DW17-055	26,006	4/19/2017	\$ 242,000	\$ 240,000	\$ 254,860	Litchfield	Yes	Yes	\$ 26.84	\$ 6,840	
PEU-PWW Interconnection ⁸	Interconnect PEU to PWW under Merrimack River	See Below	DW17-055/Pending filing ⁷	26,006	4/19/2017	\$ 3,300,000	See Below		Merrimack/Litchfield	Yes	Yes	\$ 27.88		
PEU-PWW Interconnection	Interconnecting Water Main - Owned by PEU	1807155, 1807362, 1608938, 1701789	See above	See above	See above	\$\$ Included above	\$ 3,515,850	\$ 3,335,078	Merrimack/Litchfield	Yes	Yes	\$ 27.88	\$ 92,982	
PEU Contribution toward PWW water main upgrade	Interconnecting Water Main - Owned by PWW (50% PEU paid portion)	1807148	See above	See above	See above	\$ 33,925	\$ 33,925	\$ 33,925	Merrimack/Litchfield	Yes	No	\$ 27.88	\$ -	No property tax obligation for PEU as this is a PWW asset. PEU contribution to this PWW asset per NHPUC Order #26/049 in DW17-071.
PEU-PWW Interconnection Station Bidding & Construction	Booster Station, including purchase of building and meter from PWW	1813395	See above	See above	See above	\$ 340,000	\$ 339,864	\$ 339,864	Merrimack	Yes	Yes	\$ 28.92	\$ 9,829	
Locke Lake Treatment Design	Design treatment for new Source of Supply required by NHIDES Corrective Action Plan	1813409	DW18-132			\$ 100,000	\$ -	\$ -	Barnstead	No	Yes	\$ 27.10	\$ -	Design work for project that is not used and useful is not eligible for QCPAC Surcharge
Atkinson Commerce Park Station Imp.	Rebuild Booster Station, Replace Atmospheric Storage Tanks	Deferred	Pending Filing ⁷			\$ 330,000	\$ -	\$ -	Atkinson	Yes	Yes	\$ 22.35	\$ -	Project deferred due to Engineering resources being diverted to design Bedford/Litchfield PFOA facilities
Booster/Well/Chem Feed pump replacements	Replace small booster/well/chemical feed pumps as they fail (run rate) (21)	760 - 763 workorders	Pending Filing ⁷			\$ 60,000	\$ 100,200	\$ 92,476	Various	Yes	Yes	\$ 27.72	\$ 2,563	24 through December 31, 2018
Install/replace treatment systems in small CWS	Replace failed CWS treatment systems. Install new CWS treatment system if water quality or standards requires it.	n/a	Pending Filing ⁷			\$ 25,000	\$ 5,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	
Misc. Structural Improvements	Repair/replace aging/failed station structures as needed	n/a	Pending Filing ⁷			\$ 20,000	\$ -	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous Fencing and Security projects	Install fencing/security facilities as needed	n/a	Pending Filing ⁷			\$ 10,000	\$ -	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous SCADA/Electrical	Install/repair/replace SCADA/Electrical equipment as needed		Pending Filing ⁷			\$ 30,000	See Below	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	2 more VFD failures are projected through year end.
Miscellaneous SCADA/Electrical	Replace Pump #4 VFD at Castle Reach	1819462	Pending Filing ⁷			\$ 3,944	\$ 3,944	\$ 3,944	Various	Yes	Yes	\$ 27.72	\$ 109	
Miscellaneous SCADA/Electrical	Replace Pump #2 VFD at W&E	1816163	Pending Filing ⁷			\$ 3,013	\$ 3,013	\$ 3,013	Various	Yes	Yes	\$ 27.72	\$ 84	
Miscellaneous SCADA/Electrical	Replace Pump #5 VFD at Castle Reach	1807058	Pending Filing ⁷			\$ 4,145	\$ 4,145	\$ 4,145	Various	Yes	Yes	\$ 27.72	\$ 115	
Miscellaneous SCADA/Electrical	Replace Well Pump #13 VFD at Locke Lake	1818296	Pending Filing ⁷			\$ 2,639	\$ 2,684	\$ 2,684	Various	Yes	Yes	\$ 27.72	\$ 74	
Well Rehabilitation	Rehab wells as necessary to restore efficiency as needed	n/a	Pending Filing ⁷			\$ 60,000	\$ 15,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	Only one projected well rehab to occur in 2018 vs. 4 in budget.
5 New Services	Single Family, Owner Build, New Homes	720 workorders	Pending Filing ⁷			\$ 23,000	\$ 32,800	\$ 27,558	Various	Yes	Yes	\$ 27.72	\$ 764	8 services added through December
10 Renewed Services	Replacement of failed services	721 & 722 workorders	Pending Filing ⁷			\$ 40,000	\$ 17,400	\$ 18,667	Various	Yes	Yes	\$ 27.72	\$ 517	9 services replaced through December
2 Hydrants	Replacement of non functional hydrants	730 & 731 workorders	Pending Filing ⁷			\$ 10,000	\$ 10,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	None Replaced in 2018.
10 Valve Replacements	Replacement of Failed Gate Valves	712 workorders	Pending Filing ⁷			\$ 30,000	\$ 12,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	None Replaced in 2018.
75 New Meters (growth) 5/8"-2"	New meters for new customers	750 workorders	Pending Filing ⁷			\$ 22,500	\$ 14,500	\$ 70,429	Various	Yes	Yes	\$ 27.72	\$ 1,952	531 replacements through December 31, 2018 inclusive of new and replacement meters
719 New Meters for Lead Meter exchanges 5/8"-6"	Replace High lead brass meter with new no lead brass meter	750 workorders	Pending Filing ⁷			\$ 144,000	\$ 143,400	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	
Radio Reads	New and replaced radios for meter reading (123)	754 workorders	Pending Filing ⁷			\$ -	\$ 17,100	\$ 18,606	Various	Yes	Yes	\$ 27.72	\$ 516	249 Radio replacements were completed through December 31, 2018
Investment in Developer Installed Services	One times revenue tariffed amount (57)	n/a	Pending Filing ⁷			\$ -	\$ 42,500	\$ 47,838	Various	Yes	Yes	\$ 27.72	\$ 1,326	Required by Tariff. Not in 2018 Board Approved Budget
Insertion Valve Install	Installation of Insertion Valve on 16" Main MWV	1824544	Pending Filing ⁷			\$ -	\$ 25,000	\$ -	Londonderry	Yes	No	\$ 26.15	\$ -	MWV was going to shut service off for all of Londonderry for a hydrant repair. Insertion valve allowed hydrant replacement without losing service to any of Londonderry. Not included in QCPAC as this will be funded with 0.1 DSRP cash.
Chlorine Transfer Pump for NC Operations	Purchase new chlorine transfer pump to transfer bleach solution from large drum containers to smaller transportable containers	1817322	Pending Filing ⁷			\$ -	\$ 2,587	\$ 2,587	Various	Yes	Yes	\$ 27.72	\$ 72	
Hardwood New Source	Hardwood New Source	1701877	Pending Filing ⁷			\$ -	\$ 6,285	\$ 6,285	Windham	Yes	Yes	\$ 27.57	\$ 173	
Locke Lake, Varney Rd Area	Locke Lake, Varney Rd Area - Clean up and final Paving	1817280	Pending Filing ⁷			\$ -	\$ 94,050	\$ 94,050	Barnstead	Yes	Yes	\$ 27.10	\$ 2,549	
Locke Lake Well 14 VFD	Locke Lake Well 14 VFD	1900391	Pending Filing ⁷			\$ -	\$ 8,608	\$ 8,608	Barnstead	Yes	Yes	\$ 27.10	\$ 233	
Short term interest	Short term interest on FALOC and SRF loans to fund 2018 Capex						\$ 39,547	\$ -		Yes	No	\$ -	\$ -	
Total 2018 Board Approved PEU Capital Expenditures -						\$ 4,826,100	\$ 5,179,004	\$ 5,023,146					\$ 139,634	
						Projected 2018	\$ 5,179,004							

Projected Annual P&I Payments

Amount to be funded with 2019 Loan from CoBank ²⁷	\$ 1,153,000	\$ 76,800
Amount to be funded SRF loan for Brady Avenue watermain replacements ⁸	\$ 570,000	\$ 23,215
Amount to be funded SRF loan for PWW/PEU Interconnection ⁷	\$ 2,400,000	\$ 146,210
Amount to be funded SRF loan for Hillcrest Road watermain replacements ⁸	\$ 244,389	\$ 14,888
Amount to be funded with Drinking Water and Groundwater Trust Fund Grant -	\$ 600,000	\$ -
Total Projected 2018 QCPAC P&I -		\$ 261,114

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.69/\$1000

2. Final CoBank Loan Terms are 25 Years at 4.38%

3. Projected Brady Ave. SRF Terms are 30 Years at 1.96% with 10% Principal forgiveness

4. Projected PWW/PEU Interconnection SRF Terms are 20 Years at 1.96%

5. Projected Hillcrest Road SRF Terms are 20 Years at 1.96%

6. Brady Ave was budgeted in 2 phases by the Board, Phase I was in the 2017 Capital Budget and Phase II was in the 2018 Capital Budget with the total \$ 254,860 of which \$ 10,471 is internal engineering that can not be funded with SRF funds.

7. The cash to fund the "pending filing" projects in 2018 was borrowed from CoBank through the short term Fixed Asset Line of Credit (FALOC) approved in DW17-157. PEU will be filing for approval to borrow long term funds from CoBank in the Winter of 2019 to repay the CoBank FALOC.

8. Eliminate AFUDC on PWW-PEU Interconnect Project in the amount of \$ 95,807

Project Name/Description	Project Description	Work Order #	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Eligible for 2020 QCPAC Surcharge	Estimated Project Cost as of 6/30/2019
Elevated Storage Tank in Londonderry ²	Construct 1.25 MG Elevated Storage Tank	1818349, 1901641	\$ 700,000	No	\$ -	\$ 700,000
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	1901642	\$ 440,000	No	\$ -	\$ 595,088
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	combined with below	\$ 200,000	No	\$ -	\$ 200,000
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	1813409, 1900433	\$ 75,000	No	\$ -	\$ 75,000
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901644	\$ 619,300	Yes	\$ 619,300	\$ 682,478
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901645	\$ 253,000	Yes	\$ 253,000	\$ 278,810
N.Barnstead Road - Eliminate deadend piping	Add 680 LF of 4 inch C-900 PVC to eliminate dead end. Replace 275 LF of 4 inch sch 40 PVC with 6 inch C900 PVC	1901646	\$ 132,000	Yes	\$ 132,000	\$ 145,466
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901647	\$ 68,200	Yes	\$ 68,200	\$ 75,157
Replace Gilcrest Road PRV Pit	Replaced failing piping and underground structure	1813928, 1906952	\$ 110,000	Yes	\$ 110,000	\$ 140,000
Upgrade Michells Way PRV Pit	Add additional pit with power and motor control valve to work with dist. System.		\$ -	Yes	\$ -	\$ 45,000
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	1825265, 1901649	\$ 150,000	Yes	\$ 150,000	\$ 150,000
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	n/a	\$ 96,000	Yes	\$ 96,000	\$ 94,880
Alexander Road, Water Main Upsizing	Alexander Road, Water Main Upsizing	1908374		No		\$ 1,120
Weinstein/Dame Station Upgrades	Weinstein/Dame Station Upgrades	1506139, 1603114, 1703756, 1813249, 1907079		Yes		\$ 108,286
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	760 - 763 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000
Well Pump replacements	Replace well pumps as they fail (run rate)	760 - 763 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	760 - 763 workorders	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	n/a	\$ 25,000	Yes	\$ 25,000	\$ 25,000
Misc. Structural Improvements	Misc. Structural Improvements	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	\$ 30,000	Yes	\$ 30,000	\$ 30,000
Well Rehabilitation	Well Rehabilitation	n/a	\$ 60,000	Yes	\$ 60,000	\$ 60,000
Atkinson Booster pump station design	Atkinson Booster pump station design	n/a	\$ 30,000	No	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	1901650	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000
New Services (5)	Single Family, Owner Build, New Homes	720 workorders	\$ 23,000	Yes	\$ 23,000	\$ 23,000
Renewed Services (10)	Replacement of failed services	721 & 722 workorders	\$ 46,000	Yes	\$ 46,000	\$ 46,000
Hydrants (5)	Replacement of non functional hydrants	730 & 731 workorders	\$ 25,000	Yes	\$ 25,000	\$ 25,000
Gates (8)	Replacement of Failed Gate Valves	712 workorders	\$ 32,000	Yes	\$ 32,000	\$ 32,000
Radios (550)	New and replaced radios for meter reading	754 workorders	\$ 55,000	Yes	\$ 15,000	\$ 15,000
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	750 workorders	\$ 22,000	Yes	\$ 22,000	\$ 22,000
Meters 5/8"-6" Lead Meter Exchange - PEU (550)	Replace High lead brass meter with new no lead brass meter	750 workorders	\$ 55,000	Yes	\$ 55,000	\$ 55,000

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,396,500
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment (Based on Board approved 2019 Budget) - \$ 1,951,500 adjusted for project el
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment, June 30 Update - \$ 2,203,077

Funded with SRF Funds - \$ 1,072,500
Amount to be funded with 2020 Loan from CoBank⁴ - \$ 879,000

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

Project Name/Description	Project Description	Work Order #	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Eligible for 2020 QCPAC Surcharge	Estimated Project Cost as of 6/30/2019
4. Projected CoBank Loan Terms are	25 Years at 5.5%	resulting in Annual P&I of	\$ 82,234			
5. Projected SRF Terms for Locke Lake project are	20 Years at 2.704%	resulting in Annual P&I of	\$ 71,929			

Project Name/Description	Project Description	Work Order #	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Eligible for 2020 QCPAC Surcharge	Estimated Project Cost as of 6/30/2019	Estimated Project Cost as of 9/30/2019
Elevated Storage Tank in Londonderry ²	Construct 1.25 MG Elevated Storage Tank	1818349, 1901641	\$ 700,000	No	\$ -	\$ 700,000	\$ -
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	1901642	\$ 440,000	No	\$ -	\$ 595,088	\$ -
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	combined with below	\$ 200,000	No	\$ -	\$ 200,000	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	1813409, 1900433	\$ 75,000	No	\$ -	\$ 75,000	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901644	\$ 619,300	Yes	\$ 619,300	\$ 682,478	\$ 640,567
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901645	\$ 253,000	Yes	\$ 253,000	\$ 278,810	\$ 278,810
N.Barnstead Road - Eliminate deadend piping	Add 680 LF of 4 inch C-900 PVC to eliminate dead end. Replace 275 LF of 4 inch sch 40 PVC with 6 inch C900 PVC	1901646	\$ 132,000	Yes	\$ 132,000	\$ 145,466	\$ 265,466
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901647	\$ 68,200	Yes	\$ 68,200	\$ 75,157	\$ 75,157
Replace Gilcrest Road PRV Pit	Replaced failing piping and underground structure	1813928, 1906952	\$ 110,000	Yes	\$ 110,000	\$ 140,000	\$ -
Upgrade Michells Way PRV Pit	Add additional pit with power and motor control valve to work with dist. System.		\$ -	Yes	\$ -	\$ 45,000	\$ 45,000
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	1825265, 1901649	\$ 150,000	Yes	\$ 150,000	\$ 150,000	\$ 165,000
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	n/a	\$ 96,000	Yes	\$ 96,000	\$ 94,880	\$ 44,000
Alexander Road, Water Main Upsizing	Alexander Road, Water Main Upsizing	1908374		No		\$ 1,120	\$ 1,120
Nashua Rd 4" Main Relocation - Carryover Charges	Nashua Rd 4" Main Relocation - Carryover Charges	1906036	\$ -	No	\$ -	\$ -	\$ 1,201
Weinstein/Dame Station Upgrades	Weinstein/Dame Station Upgrades	1506139, 1603114, 1703756, 1813249, 1907079		Yes		\$ 108,286	\$ 108,286
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	760 - 763 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000	\$ 32,000
Booster Pump replacement/rebuild	W&E Booster, Replace 3 pump motors, install 3 VFD drives	1908374	\$ -	Yes	\$ -	\$ -	\$ 8,000
Well Pump replacements	Replace well pumps as they fail (run rate)	760 - 763 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000	\$ 48,000
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	760 - 763 workorders	\$ 10,000	Yes	\$ 10,000	\$ 10,000	\$ 8,200
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	n/a	\$ 25,000	Yes	\$ 25,000	\$ 25,000	\$ 25,000
Misc. Structural Improvements	Misc. Structural Improvements	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000	\$ 20,000
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	\$ 10,000	Yes	\$ 10,000	\$ 10,000	\$ 10,000
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	\$ 30,000	Yes	\$ 30,000	\$ 30,000	\$ 10,000
Miscellaneous SCADA/Electrical	Replace VFD Booster #3, Liberty Tree	1910159	\$ -	Yes	\$ -	\$ -	\$ 1,720
Miscellaneous SCADA/Electrical	Replace VFD, Booster #2 - Forest Ridge	1915363	\$ -	Yes	\$ -	\$ -	\$ 1,742
Miscellaneous SCADA/Electrical	Replace VFD, Booster #1 - Spruce Pond	1915856	\$ -	Yes	\$ -	\$ -	\$ 2,156
Well Rehabilitation	Well Rehabilitation	n/a	\$ 60,000	Yes	\$ 60,000	\$ 60,000	\$ 60,000
Atkinson Booster pump station design	Atkinson Booster pump station design	n/a	\$ 30,000	No	\$ -	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	1901650	\$ 10,000	Yes	\$ 10,000	\$ 10,000	\$ -
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000	\$ 20,000
New Services (5)	Single Family, Owner Build, New Homes	720 workorders	\$ 23,000	Yes	\$ 23,000	\$ 23,000	\$ 13,200
Renewed Services (10)	Replacement of failed services	721 & 722 workorders	\$ 46,000	Yes	\$ 46,000	\$ 46,000	\$ 35,000
Hydrants (5)	Replacement of non functional hydrants	730 & 731 workorders	\$ 25,000	Yes	\$ 25,000	\$ 25,000	\$ 11,000
Gates (8)	Replacement of Failed Gate Valves	712 workorders	\$ 32,000	Yes	\$ 32,000	\$ 32,000	\$ 21,500
Radios (550)	New and replaced radios for meter reading	754 workorders	\$ 55,000	Yes	\$ 15,000	\$ 15,000	\$ 16,500
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	750 workorders	\$ 22,000	Yes	\$ 22,000	\$ 22,000	\$ 90,000
Meters 5/8"-6" Lead Meter Exchange - PEU (550)	Replace High lead brass meter with new no lead brass meter	750 workorders	\$ 55,000	Yes	\$ 55,000	\$ 55,000	\$ -

Pennichuck East Utilities Board approved 2019 Capital Expenditures -	\$ 3,396,500	\$ 3,774,285	\$ 2,058,625
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment (Based on Board approved 2019 Budget) -	\$ 1,981,500		
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment, June 30 Update -	\$ 3,774,285		
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment, June 30 Update -	\$ 2,056,304		
Funded with SRF Funds -	\$ 1,072,500	\$ 1,100,000	\$ 1,100,000
Amount to be funded with 2020 Loan from CoBank ⁴ -	\$ 909,000	\$ 2,674,285	\$ 956,304

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

Project Name/Description	Project Description	Work Order #	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Eligible for 2020 QCPAC Surcharge	Estimated Project Cost as of 6/30/2019	Estimated Project Cost as of 9/30/2019
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2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are 25 Years at 5.5%

resulting in Annual P&I of \$ 71,292

5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

resulting in Annual P&I of \$ 71,929

Project Name/Description	Project Description	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Community	Taxable	Tax Rate (1)	QCPAC Eligible Property Tax Expense
Elevated Storage Tank in Londonderry ²	Construct 1.25 MG Elevated Storage Tank	\$ 700,000	\$ -	Londonderry	Yes	\$ -	\$ -
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ 440,000	\$ 440,000	Barnstead	Yes	\$ 33.23	\$ 14,621
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	\$ 200,000	\$ -	Barnstead	Yes	\$ -	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	\$ 75,000	\$ -	Barnstead	Yes	\$ -	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 619,300	\$ 619,300	Barnstead	Yes	\$ 33.23	\$ 20,579
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 253,000	\$ 253,000	Barnstead	Yes	\$ 33.23	\$ 8,407
	Add 680 LF of 4 inch C-900 PVC to eliminate dead end. Replace 275 LF of 4 inch sch 40 PVC with 6 inch C900 PVC	\$ 132,000	\$ 132,000	Barnstead	Yes	\$ 33.23	\$ 4,386
N.Barnstead Road - Eliminate deadend piping	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 68,200	\$ 68,200	Barnstead	Yes	\$ 33.23	\$ 2,266
Belmont Drive water main replacement	Replaced failing piping and underground structure	\$ 110,000	\$ 110,000	Londonderry	Yes	\$ 29.00	\$ 3,190
Replace Gilcrest Road PRV Pit	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	\$ 150,000	\$ 150,000	Plaistow	Yes	\$ 30.00	\$ 4,500
Rolling Hills Water Main Replacement	Per Tariff	\$ 96,000	\$ 96,000	Various	Yes	\$ 28.64	\$ 2,749
IX revenue investments Normal Run Rate with two months of PFOA in Litchfield	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Booster Pump replacement/rebuild	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Well Pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Chemical Feed pump replacements	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Install/replace treatment systems in small CWS	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Misc. Structural Improvements	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Miscellaneous Fencing and Security projects	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64	\$ 859
Miscellaneous SCADA/Electrical	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64	\$ 1,718
Well Rehabilitation	Atkinson Booster pump station design	\$ 30,000	\$ -	Atkinson	Yes	\$ -	\$ -
Atkinson Booster pump station design	Replace softener media, W and E	\$ 10,000	\$ 10,000	Windham	Yes	\$ 27.25	\$ 273
Replace softener media, W and E	Install web based communication equipment, 4 locations	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Add communications between remote facility and Nashua WTP	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64	\$ 659
New Services (5)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64	\$ 1,317
Renewed Services (10)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Hydrants (5)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64	\$ 916
Gates (8)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575
Radios (550)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64	\$ 630
Meters (Growth) 5/8"-2" - PEU (220)	Replace High lead brass meter with new no lead brass meter	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575
Meters 5/8"-6" Lead Meter Exchange - PEU (550)							

Pennichuck East Utilities Board approved 2019 Capital Expenditures -	\$ 3,396,500	Projected annual property tax expenses for QCPAC eligible projects -	\$ 75,665
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment (Based on Board approved 2019 Budget) -	\$ 2,391,500		
Funded with SRF Funds -	\$ 1,512,500		
Amount to be funded with 2020 Loan from CoBank ⁴ -	\$ 879,000		

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
 2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
 3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
 4. Projected CoBank Loan Terms are 25 Years at 5.50%
 5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

Pennichuck East Utilities, Inc.
DW 19-035
2019 QCPAC Filing
Board Approved 2020 Capital Expenditures³
2/15/2019, Revised 6/17/19 to reflect delayed payment on Locke Lake Surface Water Treatment
Revised 8/6/2019 to reflect Airstrip alternative arsenic treatment being used and useful in 2020 instead of 2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
Londonderry Tank	Construct 1.25 MG Elevated Storage Tank	\$ 693,580	\$ 1,393,580	Londonderry	Yes	\$ 29.00
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ -	\$ 540,000	Barnstead	Yes	\$ 33.23
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64
Locke Lake Surface Water Treatment⁶	Intake & Treatment Facility construction	\$ 2,400,000	\$ -	Barnstead	Yes	\$ 33.23
Arsenic Treatment install to respond to new MCL	Arsenic Treatment install to respond to new MCL	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Lead Meter Exchange - PEU (420)	Replace High lead brass meter with new no lead brass meter	\$ 42,000	\$ 42,000	Various	Yes	\$ 28.64

Projected Property Tax Expense associated with QCPAC projects -

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget -	\$ 3,630,580	\$ 2,470,580
Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment -		
Funded with CoBank Loan -		\$ 1,930,580
Funded with SRF Loan -		\$ 540,000

- Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
- The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC
- The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
- Projected CoBank Loan Terms are
25 Years at 5.5% resulting in P&I of \$ 143,923 per year
- Projected SRF Terms for Locke Lake project are
20 Years at 2.704% resulting in P&I of \$ 35,310 per year
- Locke Lake Surface Water Treatment project completed in late 2020. First P&I payments expected in May 2021. Monthly P&I based on borrowing \$ 2,800,000.00
Resulting in a monthly payment of P&I on this loan of about \$ 15,258 Expected P&I payments in 2021 of \$ 122,060.86 to be paid with 0.1 DSRR
Property taxes will be incurred on this project in 2021 and need to be recovered in the 2021 QCPAC filing

Pennichuck East Utilities, Inc.
DW 19-035
2019 QCPAC Filing
Board Approved 2021 Capital Expenditures³
2/15/2019, Revised 6/17/2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Meter Exchange - PEU (180)	Replace failed meters (Run Rate)	\$ 18,000	\$ 18,000	Various	Yes	\$ 28.64
Wellesley Drive water main replacement ⁵	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Radcliffe Drive water main replacement ⁵	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Vassar Drive water main replacement ⁵	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Rolling Hills water main replacement ⁵	Replace 4,300 LF of 2 inch PE with 4,300 LF of C900 PVC	\$ -	\$ -	Plaistow	Yes	\$ 30.00
Locke Lake Surface Water Treatment ⁶	Intake & Treatment Facility construction	\$ 2,800,000	\$ 2,800,000	Barnstead	Yes, but collected in 2020 QCPAC	
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64

Projected Property Tax Expense associated with QCPAC projects -

Pennichuck East Utilities Projected 2021 Total Capital Expenditure Budget - \$ 3,328,000
Pennichuck East Utilities Projected 2021 QCPAC Eligible Capital Investment - \$ 3,328,000
Funded with CoBank Loan - \$ 528,000
Funded with SRF Loan - \$ 2,800,000

- Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
- The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC
- The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
- Projected CoBank Loan Terms are 25 Years at 5.5% resulting in P&I of \$ 39,362 per year
- Projects moved out of 2021 Capex
- Funding of Locke Lake Surface Water Treatment sought in the QCPAC. First 5 months of P&I paid in 2021 will be covered with the 0.1 DSRR
Projected SRF Terms for Locke Lake project are 20 Years at 2.704% resulting in P&I of \$ 183,091 per year