

THE STATE OF NEW HAMPSHIRE

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EXECUTIVE DIRECTOR
Debra A. Howland



PUBLIC UTILITIES COMMISSION
21 S. Fruit Street, Suite 10
Concord, N.H. 03301-2429

TDD Access: Relay NH
1-800-735-2964

Tel. (603) 271-2431

FAX (603) 271-3878

Website:
www.puc.nh.gov

NHPUC 1AUG19PM4:23

August 1, 2019

Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, New Hampshire 03301-2429

Re: DW 19-029 – Pennichuck Water Works, Inc.
2019 Qualified Capital Project Adjustment Charge ("QCPAC")
Staff Recommendation for Approval of 2019 QCPAC Surcharge and
2019 Capital Budget

Dear Ms. Howland:

The purpose of this letter is to recommend that the Commission approve a QCPAC surcharge of 4.06% for Pennichuck Water Works, Inc. ("PWW" or "Company") resulting in revenues of \$1,260,214 effective for bills rendered after April 4, 2018. This reflects a 2.37% increase associated with 2018 capital projects to be combined with the previously approved 2018 QCPAC surcharge of 1.69%, resulting in a \$736,175 increase in QCPAC revenues over the approved 2018 amount of \$524,039. Staff also recommends that the Commission approve a 2019 capital budget for PWW in the amount of \$15,392,170 and grant PWW the authority to include the annual interest incurred on its Fixed Asset Line of Credit (FALOC) borrowings in the Company's annual bond issuances to be recovered through customer rates. Finally, Staff recommends acceptance of PWW's 2020 and 2021 capital budgets for informational purposes only.

Background

On February 11, 2019, PWW filed a petition for approval of its 2019 QCPAC surcharge as well as its 2019 capital budget and a request to change the funding mechanism relative to interest incurred on its FALOC. The Company's petition was accompanied by the direct testimonies of Donald L. Ware, PWW's Chief Operating Officer, and John J. Boisvert, PWW's Chief Engineer. PWW's filing also contained various schedules and other attachments including its estimated QCPAC budgets for 2020 and 2021 which were provided for informational purposes only. On February 26,

2019, the Office of the Consumer Advocate ("OCA") filed a notice of participation in this docket in accordance with RSA 363:28. There are no other intervenors in this case.

PWW's filing was made in accordance with the QCPAC mechanism approved by the Commission in Order No. 26,070 (November 7, 2017) in Docket No. DW 16-806, the Company's last rate proceeding. In November of 2017, PWW filed for approval of its 2017 QCPAC budget in Docket No. DW 17-179. By Order No. 26,128 (May 3, 2018), the Commission approved the Company's 2017 QCPAC budget in the amount of \$5,266,000. In February 2018, in Docket No. DW 18-022, PWW filed for approval of a 2018 surcharge based on projects completed in 2017, and its 2018 QCPAC budget. By Order No. 26,183 (October 29, 2018), the Commission approved a QCPAC surcharge, increasing revenues by \$524,039, or 1.69%, and a preliminary budget for 2018 of \$9,142,095.

PWW's petition in the instant proceeding requested approval of an estimated QCPAC surcharge of 2.65%¹ to be combined with the 1.69% surcharge currently in effect, resulting in an estimated cumulative QCPAC surcharge of 4.34% since PWW's last rate case. The proposed 2019 surcharge would have recovered estimated additional revenues of \$821,312, including \$622,848 relative to debt service and \$198,464 in property tax expense associated with actual 2018 capital expenditures totaling \$8,229,377. The cumulative additional revenues were estimated to be \$1,345,350. PWW's petition also requested approval of its proposed 2019 capital budget in the amount of \$14,908,170. PWW also sought approval, beginning with its 2020 QCPAC filing, to recover the annual interest incurred from its FALOC via the QCPAC surcharge. The 2020 and 2021 QCPAC budgets submitted by PWW for informational purposes totaled \$12,461,750 and \$11,897,670, respectively.

Subsequent to the receipt of PWW's filing, and in accordance with the procedure approved by the Commission in Order No. 26,070, Staff filed a proposed procedural schedule for this docket with the Commission on March 6, 2019 which was approved by Secretarial Letter on March 19, 2019. Staff propounded three sets of discovery to PWW to which the Company provided responses. On June 6, 2019, PWW, Staff, and the OCA met in a technical session that resulted in an additional round of discovery from Staff to the Company, to which PWW also responded. Audit Staff also conducted an audit of the Company's 2018 capital expenditures that resulted in the issuance of a final audit report dated March 14, 2019. Additionally, Joseph Vercellotti, Utility Engineer in the Commission's Safety Division, also reviewed PWW's filing and submitted a report containing his findings and recommendations in this docket. Copies of Mr. Vercellotti's report [Attachment A], Audit Staff's report [Attachment B] and PWW's responses to Staff discovery [Attachment C] are attached to this correspondence.

¹ PWW's February 11, 2019 filing requested an estimated 2.61% QCPAC surcharge based on the increase in revenues from the previous year. Staff found it should have been calculated based on the increase in revenues from those approved in DW 16-806. See Staff Data Request 1-1 [Attachment C].

2019 QCPAC Surcharge

As stated previously, PWV's petition originally requested approval of a 2.65%² QCPAC surcharge on customer bills in order to collect \$622,848³ in debt service and \$198,464 in property tax expense relative to 2018 capital additions totaling \$8,229,377. However, during the course of discovery in this proceeding, various adjustments were made relative to these elements used in computing the 2019 QCPAC surcharge which are further detailed below.

Cost of 2018 Capital Projects:

The table below presents a detailed comparison of PWV's actual 2018 capital expenditures as compared to the budgeted amounts approved in Commission Order No. 26,183 in DW 18-022:

Description	Budget per DW 18-022	Actual per DW 19-029	Variance
Main Adds/Replacements/Paving	\$ 5,918,418	\$5,701,757	(\$216,661)
Service, Hydrant, Valves, Meters	914,000	680,467	(233,533)
Information Technology	1,095,876	856,169	(239,707)
Vehicle and Equipment	662,160	746,901	84,741
Miscellaneous Projects	<u>551,641</u>	<u>244,083</u>	<u>(307,558)</u>
Total	<u>\$9,142,095</u>	<u>\$8,229,377</u>	<u>(\$912,718)</u>

The Company stated that the variances were due to several projects that were deferred or shifted to coordinate with other large pipeline projects, such as municipal sewer or drainage projects. Additionally, Staff propounded discovery to obtain explanations for variances pertaining to specific 2018 capital projects. Based on PWV's responses to Staff's discovery, the following are explanations relative to specific project variances noted by Staff:

- Stevens St Main Replacement – Variance: \$231,158. Per the Company's response to Staff Data Request 3-2 [Attachment C], the contractor was able to complete the entire street in addition to the intersection streets. The total project budget of \$293,000 should have been split between the 2018 and 2019 budget but was not. The budget was updated in PWV's Interim QCPAC filings (DW 18-022).
- Cheshire Street Main Replacement – Variance: \$183,707. Per the Company's response to Staff Data Request 3-3 [Attachment C], this project was added during the fall of 2018 in response to the City's paving program. The existing main was 8"AC (Asbestos-Cement) and it is the Company's policy to replace any AC pipe

² See Footnote 1.

³ Actual debt service of \$566,225 x 1.1 debt service coverage requirement = \$622,848.

prior to a Street repaving. The budget was updated in PWW's Interim QCPAC filings (DW 18-022).

- Lincoln Ave Residual Paving – Variance: \$17,688. Per the Company's response to Staff Data Request 3-4 [Attachment C], the budget was for paving only but the work included cutting in a tee, butterfly valves and a gate valve that were not included in the budget.
- Click Mobile Move to iPads – Variance: \$109,378. Per the Company's response to Staff Data Request 3-5 [Attachment C], the developer needed to provide more in-depth programming than expected.

The PUC Audit Staff conducted a review relative to the 2018 capital projects proposed by PWW. The related Staff Audit Report [Attachment B], dated March 14, 2019, indicated no exceptions. Further, Mr. Vercelloti's report [Attachment A] indicates that in his judgement, the Company's 2018 water system infrastructure projects appear to be prudent, used, and useful.

Debt Service on 2018 Capital Projects:

With regard to the debt service on PWW's 2018 capital additions originally submitted as \$622,848, this amount was based on an estimated interest rate at the time of filing of 5.50% relative to the Company's 2018 bond financing. Subsequently, in response to Staff Data Request 2-2 [Attachment C] the Company stated that it had closed on the 2018 capital project portion of this financing at an interest rate of 4.222191%. When this interest rate is applied to the financing on the 2018 capital projects as originally submitted in the amount of \$8,229,377, the result is a revised annual debt service payment of \$488,828. When this amount is multiplied by the 1.1 debt service coverage requirement approved as part of the QCPAC mechanism, the debt service component included in the 2018 QCPAC surcharge becomes \$537,711 ($\$488,828 \times 1.1$).

Property Tax Expense on 2018 Capital Projects:

Property tax expense on PWW's 2018 capital additions was originally submitted as \$198,464. There were no revisions necessary for PWW's 2018 Capital Projects which results in no need for revisions to the estimated 2018 property tax expense.

Calculation of 2019 QCPAC Surcharge:

Based on the above, the total revised amount that PWW is seeking to recover through the 2019 QCPAC mechanism is \$1,260,214, which includes an increase of \$736,175 over the previously approved 2018 QCPAC revenues of \$524,039. The \$736,175 increase consists of a \$537,711 debt service component and a \$198,464 property tax expense component associated with the Company's 2018 QCPAC capital additions totaling \$8,229,377.

In order to determine the appropriate QCPAC surcharge percentage to be applied to customers' bills, the total amount being sought for recovery via the QCPAC mechanism needs to be divided by an appropriate amount related to PWW's revenue requirement approved in its last rate proceeding, DW 16-806. In that proceeding, the Commission approved a total revenue requirement for PWW of \$31,496,787.⁴ From this, the fixed contract charges associated with the Company's special contracts with Anheuser-Busch, the Town of Hudson, and the Town of Milford totaling \$485,230⁵ should be deducted, as they do not apply in the determination of the appropriate QCPAC surcharge percentage to be applied to customer bills. As such, the Company's last approved revenue requirement as adjusted becomes \$31,011,557 (\$31,496,787 - \$485,230).

The 2019 QCPAC surcharge percentage based on the Company's eligible 2018 capital expenditures results in a cumulative 4.06% surcharge ($\$1,260,214 \div \$31,011,557$), which is a 2.37 percentage ($\$736,175 \div \$31,011,557$) increase over the previously approved 2018 QCPAC surcharge of 1.69% ($\$524,039 \div \$31,011,557$).

PWW calculated the projected monthly rate impact of the proposed 2019 QCPAC surcharge. For an average single family residential customer using 8.58 ccf of water and paying a base rate charge of \$54.00 per month, and a current QCPAC surcharge of \$0.91 ($\$54.00 \times 1.69\%$), the additional 2019 QCPAC surcharge of 2.37% will result in an increase of approximately \$1.28 ($\$54.00 \times 2.37\%$) in their monthly bill. The total resulting monthly bill will now be \$56.19 ($\54.00×1.0406).

Per the QCPAC mechanism approved in Order No. 26,070, the QCPAC surcharge is eligible for an annual recoupment for bills rendered after the date on which the debt incurred to finance the specific eligible projects is issued. Based on PWW's response to Staff Data Request 2-2 [Attachment C], that date is April 4, 2019. This will be accomplished through a monthly surcharge on each customer's subsequent bills, as well as a one-time recoupment charge for each customer included on their first subsequent bill following a Commission order approving the revised QCPAC surcharge rate. This will allow the Company to cover the debt service and property taxes incurred during the period between the bond issuance date and the date of the Commission's order approving the QCPAC surcharge. Assuming a fully approved and tariffed QCPAC by the end of September 2019, an average residential customer should anticipate a one-time recoupment charge of approximately \$7.80 ($\1.30×6 months).

Conclusion and Recommendation:

Staff thoroughly reviewed the Company's proposed 2019 QCPAC surcharge including the underlying 2017 and 2018 capital projects upon which it is based as well as the debt service and property tax expense components which comprise that surcharge.

⁴ See Commission Order No. 26,070 (November 7, 2017).

⁵ This amount is based on Exhibit 2 (Page 29) of the Settlement Agreement approved in DW 16-806, and includes the following annual fixed contract charges: Anheuser-Busch - \$371,430; Town of Milford - \$81,000; Town of Hudson - \$32,800.

Based on that investigation and review, and in conjunction with Staff Engineer Joe Vercelotti's report [Attachment A] and the Staff Audit Report [Attachment B], Staff recommends that the Commission find that the 2018 QCPAC projects are prudent, used and useful pursuant to RSA 378:28.

Staff, furthermore, recommends that the Commission approve the proposed 2019 QCPAC recovery amount of \$1,260,214 via a customer surcharge of 4.06% for all bills rendered on or after April 4, 2018, and find that this surcharge is just and reasonable pursuant to RSA 374:2 and RSA 378:7. That approval and finding should also extend to a one-time recoupment charge covering the period between the effective date of the financing (April 4, 2019) and the date of the Commission's order approving the QCPAC surcharge.

2019 Capital Budget

In its original filing, PWW proposed a 2019 capital budget of \$14,908,170. This capital budget was slightly lower than the capital budget adopted by the PWW Board of Directors on January 25, 2019 of \$14,978,000. However, based on discussions during a technical session, PWW revised its 2019 capital budget to an amount of \$15,392,170. The reason for this revision was so as to present to the Commission for approval a 2019 capital budget that reflects recent changes in PWW's construction plans. PWW's revised 2019 capital budget is summarized as follows:

<u>Description</u>	<u>Budget</u>
Main Additions/Replacements and Paving	\$ 7,636,970
Merrimack River Intake Project	5,500,000
Service, Hydrant, Valve, Meter Additions/Replacements	687,000
Carbon Media Change-outs	525,000
Pump Upgrades	270,000
Information Technology	220,700
SCADA Upgrades	180,000
Vehicle and Equipment Purchases/Replacements	137,500
Miscellaneous Projects	<u>235,000</u>
Total	<u>\$15,392,170</u>

Descriptions of some of the more significant planned capital projects for 2019 follow:

- Merrimack River Intake Project - \$5,500,000. Through a Drinking Water and Ground Water Trust Fund (DWGTF) grant administered by the New Hampshire Department of Environmental Services (DES), PWW is constructing a new deep water intake in the Merrimack River, intended to provide water to the Company's water treatment plant in Nashua.⁶

⁶ See Commission Order No. 26,247 (May 3, 2019).

- Elm Street Main Replacement - \$559,350. Per the Company's response to Staff Data Request 3-7 [Attachment C], this project is part of the delayed 2017 Water Main Replacements Project. Elm Street is a very confined work area with high traffic which requires temporary paving daily both of which slow down the rate of the replacement work and drive up the cost.
- West Pearl Street Main Replacement - \$138,050. Per the Company's response to Staff Data Request 3-8 [Attachment C], this project is in a high traffic area which requires daily paving.
- Northwest High-Pressure System Improvements (Tinker Road) - \$522,500. The Company's response to Staff Data Request 3-9 [Attachment C] explains that Tinker Road requires a 12" temporary water main during construction due to high domestic flows. Additionally, due to limited space in the right of way, the old asbestos main must be removed and disposed of so the new main can be placed into the existing trench.
- Carbon Media Change-outs - \$525,000. Per the Company's response to Staff Data Request 3-12 [Attachment C], the water treatment plant has twelve filters requiring carbon media. The Company expects the cost to rebuild and load four filters with new media \$525,000 a year. This estimate is down from \$1,000,000 per year in the Company's initial filing due to a drop in the price of carbon.

Staff Engineer, Joseph Vercellotti, specifically reviewed PWW's planned infrastructure additions to its water system for 2019 [Attachment A]. Mr. Vercellotti's report indicated that during 2019, PWW's plans include the addition or replacement of approximately 20,470 linear feet of water main. Mr. Vercellotti's report concluded that the Company's 2019 planned water system infrastructure projects and estimated costs appear to be appropriate and that he supports approval of PWW's petition.

Estimated 2020 QCPAC Surcharge:

Based on PWW's proposed QCPAC budget for 2019, the Company projects an estimated QCPAC surcharge of 8.72%, or an additional 4.66 percentage increase over its 2019 proposed surcharge of 4.06%. PWW calculated the projected monthly rate impact relative to its estimated 2020 QCPAC surcharge. For an average single family residential customer using 8.58 ccf of water and paying a base rate charge of \$54.00 per month, and the proposed 2019 QCPAC surcharge of \$2.19 ($\$54.00 \times 4.06\%$), the additional 2020 QCPAC surcharge of 4.66% will result in an increase of approximately \$2.52 ($\$54.00 \times 4.66\%$) in their monthly bill. The total monthly bill will be \$58.71 ($\54.00×1.0872).

Conclusion and Recommendation:

Staff thoroughly reviewed the Company's proposed 2019 capital budget as filed and subsequently updated. As a result of its review, Staff recommends that the

Commission find the 2019 capital budget of \$15,392,170 appropriate and that the projects listed appear to fulfill the objectives of the QCPAC program by enabling PWW to effectively maintain its capital improvements program and maintain the necessary cash flows to pay the debt and tax obligations associated with these projects. Staff, furthermore, recommends that the Commission approve the 2019 capital budget on a preliminary basis, but withhold the required prudency determinations, pursuant to RSA 378:28, in PWW's 2020 QCPAC filing.

FALOC Interest

In its petition, PWW also requested approval to pay the annual interest incurred on its FALOC borrowings through the Company's annual bond issuances that, currently, only pays off the principal portion of the FALOC. At present, PWW makes monthly interest payments on its FALOC borrowings using its 0.1 Debt Service Revenue Requirement (0.1 DSRR) reserve account as its source of funds for these payments.

The Company argued that having the ability to "roll" its FALOC interest payments into its annual long-term debt financings, instead of drawing on its 0.1 DSRR reserve account, would facilitate greater financial flexibility. Specifically, the funds remaining in the 0.1 DSRR reserve account, by not having to be used to pay interest, would further enable the Company to prefund its annual capital projects or replenish its other reserve accounts. This would save the Company from having to borrow additional funds for these items. The Company further maintained that this would ultimately be to the benefit of its customers through the realized reduction in debt payments recovered through future QCPAC and base rate adjustments.

If approved, the FALOC interest incorporated into PWW's annual bond financings would be capitalized over the lives of the underlying qualified capital projects (QCP's) that are being bonded. Further, if approved, the Company's proposal would not go into effect relative to the 2019 QCPAC surcharge, as the FALOC interest related to the underlying 2018 projects has already been paid. Rather, it would go into effect commencing with next year's, or 2020's, QCPAC surcharge based on PWW's 2019 capital expenditures.

In Staff Data Request 3-14, [Attachment C] PWW was asked to estimate the annual rate impact of its request using its proposed 2019 QCPAC surcharge of 4.06% as the example. In its response, the Company stated that under that scenario, the cumulative QCPAC surcharge would have increased from 4.06% to 4.10%. For an average single-family ratepayer, this translates into an additional \$0.02 per month on their bill. Staff recommends that the Commission authorize this change, as the increase in the QCPAC charge would be minimal, and ultimately a cost saving measure, thus resulting in rates that are just and reasonable, pursuant to RSA 374:2 and RSA 378:7.

2020 and 2021 QCPAC Budgets

In its original filing and for informational purposes, PWW provided anticipated QCPAC budgets for the years 2020 and 2021 in the amounts of \$12,461,750 and \$11,897,670, respectively. These budgets correspond to those adopted by PWW's board of directors on January 25, 2019. However, as a result of discussions during a technical session, PWW revised its projected 2020 and 2021 QCPAC budgets to \$10,179,150 and \$11,442,670, respectively. The purpose of these revisions were so that the 2020 and 2021 QCPAC budgets presented for informational purposes to the Commission would better conform to recent changes in the proposed construction plans for those two years. Staff recommends the Commission accept the 2020 and 2021 budgets for informational purposes only.

Overall Summary and Conclusion

In conclusion, based on its review of the Company's filing in this case, including Staff's Engineering Review, Staff's Audit Report, and the associated discovery, Staff recommends that the Commission approve the following for Pennichuck Water Works, Inc.:

- (1) A cumulative QCPAC surcharge of 4.06% effective for bills rendered after April 4, 2018, as the resulting rates are just and reasonable;
- (2) A 2019 capital budget in the amount of \$15,392,170, on a preliminary basis;
- (3) Inclusion of annual interest incurred on PWW's FALOC borrowings into the Company's annual bond issuances for recovery via customer rates; and
- (4) Acceptance of the 2020 and 2021 capital budget for informational purposes only.

Before filing this letter with the Commission, Staff provided the Company and the OCA with a draft copy for their review. Both PWW and the OCA assented to Staff's recommendations.

Thank you for your attention and assistance with this matter. If you have any further questions, please do not hesitate to contact me.

Sincerely,



Robyn J. Descoteau
Utility Analyst III, Gas-Water Division

Attachments: Attachment A: Staff Report of Joseph M. Vercellotti
Attachment B: Staff Audit Report dated March 14, 2019
Attachment C: PWW Responses to Staff Data Requests

cc: Service List

Attachment A

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: July 31, 2019
AT (OFFICE): NHPUC

FROM: Joseph M. Vercellotti, P.E.
Utility Engineer

SUBJECT: Pennichuck Water Works, Inc.
DW 19-029 Qualified Capital Project Adjustment Charge (QCPAC)

TO: Steve Frink, Director Gas-Water Division, NHPUC
Jayson Laflamme, Asst. Director Gas-Water Division, NHPUC
Robyn Descoteau, Utility Analyst, NHPUC

Introduction

Pennichuck Water Works, Inc. (PWW) had been participating in a Water Infrastructure and Conservation Adjustment (WICA) Pilot Program approved under the June 9, 2011 Commission Order 25,230. In Docket DW 16-806 the Commission issued Order 26,070 replacing the WICA with the Qualified Capital Project Adjustment Charge (QCPAC) program. On February 11, 2019 PWW filed the 2019 QCPAC petition in Docket DW 19-029 seeking the following:

- Approval of PWW's 2018 projects for recovery under the QCPAC mechanism in 2019 and authorize PWW to bill and collect an additional QCPAC surcharge which will be recouped beginning with bills rendered after the date for which bonded debt that is incurred with respect to the specific eligible projects is issued or consummated;
- Preliminary approval of PWW's proposed 2019 projects as being eligible for recovery through the QCPAC surcharge mechanism, subject to the Commission's audit and prudence review of the final costs associated with those projects; which are subject to further refinement through quarterly updates filed with the Commission for the purpose of keeping the Commission apprised of the Company's progress with regard to its 2019 projects (to be filed on or before August 15, November 15 and January 15) and subject to the Commission's review with the Company's 2020 QCPAC filing; and to
- Provide information regarding PWW's proposed 2020 and 2021 projects for informational purposes only.

2018 Projects

The PUC Water Division Staff prepared the following comparison of PWW's actual 2018 capital expenditures to the budgeted amounts approved in Commission Order No. 26,183 in DW 18-022 in July 31, 2019 correspondence.

Description	Budget per DW 18-022	Actual per DW 19-029	Variance
Main Adds/Replacements/Paving	\$ 5,918,418	\$5,701,757	(\$216,661)
Service, Hydrant, Valves, Meters	914,000	680,467	(233,533)
Information Technology	1,095,876	856,169	(239,707)
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Total	<u>\$9,142,095</u>	<u>\$8,229,377</u>	<u>(\$912,718)</u>

The Company stated that the variances were due to several projects being deferred or shifted to coordinate with other large pipeline projects such as municipal sewer or drainage projects. PWW provided the following information relative to specific project variances noted by Staff:

- Stevens St Main Replacement – Variance: \$231,158. Per the Company's response to Staff Data Request 3-2 [Attachment C], the contractor was able to complete the entire street in addition to the intersection streets. The total project budget of \$293,000 should have been split between the 2018 and 2019 budget but was not. The budget was updated in PWW's Interim QCPAC filings (DW 18-022).
- Cheshire Street Main Replacement – Variance: \$183,707. Per the Company's response to Staff Data Request 3-3 [Attachment C], this project was added during the fall of 2018 in response to the City's paving program. The existing main was 8" AC (Asbestos-Cement) and it is the Company's policy to replace any AC pipe prior to a Street repaving. The budget was updated in PWW's Interim QCPAC filings (DW 18-022).
- Lincoln Ave Residual Paving – Variance: \$17,688. Per the Company's response to Staff Data Request 3-4 [Attachment C], the budget was for paving only but the work included cutting in a tee, butterfly valves and a gate valve that were not included in the budget.
- Click Mobile Move to iPads – Variance: \$109,378. Per the Company's response to Staff Data Request 3-5 [Attachment C], the developer needed to provide more in-depth programming than expected.

Based on a review of available information, PWW's 2018 water system infrastructure projects appear to be prudent, used, and useful.

Proposed 2019 Water Main Replacement Projects

This review also pertains to the assessment of the engineering and operational aspects of the proposed 2019 water system infrastructure projects. Staff reviewed the petition and testimony submitted as part of the Docket DW 19-029 including PWW's responses to three sets of data requests and project information discussed in the June 6, 2019 technical session. PWW proposed the following water main replacement projects for 2019.

- Gilman St.: Replace 1,470 linear feet (LF) of 8 inch cast iron (CI) main with 12 inch ductile iron pipe cement lined (DIPCL) (project deferred from 2018)
- Elm St.: Replace 875 LF of 6 inch CI with 12 inch DIPCL (project deferred from 2018)
- Monroe St.: Replace 310 LF of 4 inch CI with 8 inch DIPCL (project deferred from 2018)
- West Pearl St.: Replace 260 LF of 8 inch CI with 8 inch DIPCL (project deferred from 2018)
- Harvard Street: Replace 800 LF of 8 inch CI with 8 inch DIPCL
- Northwest High Pressure System (NWS) Improvements:
 Manchester St: Add 2,700 LF of 24 inch DIPCL
 Rte 101A and Rte 121 (Amherst): Add 2,200 LF of 12 inch DIPCL to close loop
 Tinker Rd: Replace 825 LF of 16 inch Asbestos-Cement (AC) with 24 inch DIPCL
 Deerwood Dr & Amherst St Intersect: Replace 1,300 LF of 12 inch AC with 24 inch DIPCL
 Deerwood Dr Northwest Blvd Loop: Add 3,400 LF of 20 inch HDPE including RR pipe jacking
 Ponemah Rd / Rte 101A Loop: Add 2,200 LF of 12 inch DIPCL to close two loop major dead ends
- Mains replaced as part of City of Nashua Sewer Projects:
 Chase St.: Replace 470 LF of 8 inch CIP with 6 inch DIPCL
 Ash St.: Replace 710 LF of 6 inch CIP with 12 inch DIPCL
 Lake St.: Replace 2,950 LF of 6 inch CI with 12 inch DIPCL

The six NWS water main improvements totaling \$3,319,800 and the \$5,500,000 Merrimack River intake project were deferred until 2019 to take advantage of lower cost financing from the State's Drinking Water and Groundwater Trust Fund (DWGTF).

The 2019 projects will add or replace approximately 20,470 LF of water main at an estimated cost of \$7,636,970 with an estimated \$3,319,800 of the pipe replacement cost receiving DWGTF financing. PWW also estimated that during 2019 the pavement restoration cost for water mains added or replaced in 2018 is estimated to be approximately \$97,800. PWW indicated the 2019 projects will be coordinated with municipal and natural gas company work to further control restoration costs.

Granular Activated Carbon Media Replacement

The 2019 projects include the replacement of granular activated carbon (GAC) media in filters 1 & 2 (1A, 1B, 2A, 2B) at an estimated cost of \$525,000. The GAC media is required to remove organic compounds which can contribute to seasonal taste and odor problems. The GAC also serves as a

barrier for removal of potential volatile organic compound (VOC) contamination from intake water from the Pennichuck Brook and the Merrimack River watersheds. PWW indicated the current carbon filter media is approaching 7 years in service and recent testing indicates that the granular activated carbon's (GAC) adsorptive capacity is exhausted. Without replacement, the media cannot serve in this function due to its diminished adsorptive capacity.

Merrimack River “Deep Water” Intake Project

PWW proposes to replace the existing Merrimack River Intake with the construction of a new “deep-water” Merrimack River Intake. The new intake will replace the current "in bank" intake, to draw water from the deeper part of the river further out from the river banks. The new intake will be able to function 365 days per year. The existing intake cannot function in winter when ice conditions are present. The new intake project has been put out to public bid and PWW anticipates actual construction of the intake to incur in the summer and fall of 2019. Funding of the project will be from a \$5,500,000 low interest loan from the DWGTF.

Conclusion

Based on the assessment of information provided by PWW, the Company’s 2018 water infrastructure projects appear to be prudent, used, and useful. The engineering and operational aspects of the proposed 2019 water system infrastructure projects described in the petition, testimony, data requests and the June 6, 2019 technical session, the company's proposed 2019 projects and estimated costs appear to be appropriate and as such, I support approval of the company's petition. Please let me know if you need anything further in this regard.

Attachment B

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: March 14, 2019
AT (OFFICE): NHPUC

FROM: James Schuler, Utility Examiner

SUBJECT: Pennichuck Water Works, Inc.
DW 19-029 Qualified Capital Project Adjustment Charge - QCPAC
FINAL Audit Report

TO: Steve Frink, Director Gas - Water Division, NHPUC
Jayson Laflamme, Asst. Director Gas - Water Division, NHPUC

Introduction

Pennichuck Water Works, Inc. (PWW, The Company) had been participating in a Water Infrastructure and Conservation Adjustment (WICA) Pilot Program since approved by Commission Order 25,230 on June 9, 2011. In Docket DW 16-806 the Commission issued Order 26,070 replacing the WICA with the Qualified Capital Project Adjustment Charge (QCPAC).

On November 30, 2018, in Docket DW 18-022, Order No. 26,183, PWW filed an interim application for Approval of its 2018 QCPAC projects. On February 16, 2018, PWW filed the initial 2018 QCPAC reconciliation. This reconciliation, and the associated projects, subject to a Commission Audit and subsequent Order, would then be eligible for recovery through the QCPAC.

Regulatory Approval

As required by Order 26,070, to be eligible for recovery through the 2018 QCPAC, a project must meet the following standards:

- (1) Completed, in service and used and useful on or before December 31, 2018;
- (2) Financed by debt that has been approved by the Commission; and
- (3) Corresponds with a capital budget that has previously been submitted by the Company and approved by the Commission.

2018 Projects

PWW originally proposed the 2018 QCPAC budgeted amount of \$12,054,400. The first modified budget revised the figure down to \$10,008,000. As presented to the Commission in Docket DW 18-022, that total was revised downward again in the first quarterly update to \$9,102,095. The second quarterly update revised the figure down again to \$6,807,006. The third

quarterly update increased the budget amount to \$8,600,675. The final unaudited project cost was updated on February 9, 2019 to \$8,229,377 and an unaudited increase in property tax expense of \$198,464.

Discussed on bates page 17 of the testimony of D. Ware in Docket DW 18-022, PWW stated the reason for the decrease in capital expenses was due to project deferments, shifting of projects as well as the coordination of pipeline projects with local community paving, sewer and drain projects.

Review of Selected Projects

The following table shows the projects that were selected for review, a dollar total of those projects and the annual property tax impact if applicable. In addition to the mains, services, and paving projects that were historically included under the WICA, to be eligible for recovery through the QCPAC a project can be related to replacement of vehicles, network infrastructure and building improvements.

Project Name/ Description	Work Order # Project #	Cost	Property Tax Expense
Interconnection of BWC (Bedford) to PWW	1800734	\$ 258,923	\$ 6,411
Lincoln Ave. Residual Paving from 2017	1813071 / 1807532	\$ 69,988	\$ 1,946
Fifield St. Residual Paving from 2017	1812917 / 1806835	\$ 59,273	\$ 1,648
Ritter St. Main Replacement	1806828	\$ 168,793	\$ 4,694
Factory St. Main Replacement	1806830	\$ 607,926	\$ 16,906
Russell Ave. Main Replacement	1806802	\$ 256,860	\$ 7,143
Taylor St. Main Replacement	1806803	\$ 651,468	\$ 18,117
Kinsley St. Main Replacement	1825911	\$ 693,827	\$ 19,295
Marshall St. Main Replacement	1813935	\$ 355,362	\$ 9,883
Lovewell St. Main Replacement	1825912	\$ 139,417	\$ 3,877
		\$ 3,261,837	\$ 89,920

Interconnection of BWC (Bedford) to PWW - \$258,923

The E-22 form, Capital Improvements/Company Expenditures Authorization dated January 30, 2018, states that the project consists of connecting the Bedford Water Company (BWC) to PWW and decommission the existing BWC Station. Work order #1800734 totaled \$258,923 for the replacement of 1,700 feet of aging transit (asbestos cement) pipe with DI pipe along Back River Road in Bedford.

N. Granese & Sons, Inc. performed the work installing approximately 2,400 feet of water main ranging from \$50 per foot for 4" CLDI pipe and \$70/\$80 per foot for 8" CLDI pipe. Audit reviewed the requisitions and other vendor invoices with no exceptions noted.

Three invoices from Meridian Land Services, Inc. were for survey work along Back River Road in Bedford. The survey was performed in January, February and March of 2018 and

totaled \$6,442. Labor charges ranged from \$65 to \$125 per hour. Audit recalculated the hours by the rate with no exceptions noted.

Granese & Sons, Inc.	\$252,330
Meridian Land Services	\$ 6,443
Town of Bedford	\$ 150
Total W/O #1806802	\$258,923

PWW did not post any cost of removal (COR) stating that this was a brand new system and that the only COR was debris that had to be excavated. Audit traced the Acquisition COR to the Accumulated Depreciation – Cost of Removal, account #108001. The additions were posted to the general ledger on December 1, 2018 to the plant accounts shown below:

Work Order #1800734/01 - Interconnection of BWC

Account	Description	Gross Plant	COR	Gross Book
108001	Acquisition Costs	\$ 6,000	\$ (6,000)	\$ -
331200	Distribution Mains: New	\$ 152,438	\$ -	\$ 152,438
331250	Dist. Mains: Gates Valves	\$ 75,045	\$ -	\$ 75,045
333004	Pavements: Services	\$ 1,440	\$ -	\$ 1,440
333100	New Services	\$ 24,000	\$ -	\$ 24,000
		\$ 258,923	\$ (6,000)	\$ 252,923

The CAPEX shows that this project was in the approved budget and was estimated to cost \$83,000 as of June 30, 2018. The final work order totaled \$258,923. Notes to the CAPEX explained that the reason for the cost overrun was due to the fact that the original budget was done prior to the design which increased the scope of the work to remove all AC (Asbestos/Cement), water main from Back River Road.

The Town of Bedford's tax rate of \$24.76/thousand results in an eligible property tax expense of \$6,411.

Lincoln Avenue Residual Paving - \$69,988

Two work orders, #'s 1813071 and 1807532 consisted of approximately 800 feet of water main replacement in 2017 and paving in 2018 at \$80 and \$85 per liner foot. The E-22 filed by the Company indicated that the existing main is in poor condition and the neighborhoods south of Allds Street are experiencing poor fire flows. The costs by vendor are broken out below:

PWW Paving Contribution	\$48,017
J. P. Cardillo & Sons	\$20,248
RWC Enterprises	\$ 1,000
Engineering & IS Overhead	\$ 723
Total W/O #1813071/1807532	\$69,988

J.P. Cardillo & Sons charged \$20,248 for a mobilization and demobilization activities, temporary trench restoration, butterfly valves and a flagger. Temporary water main totaled \$10,000 and PWW's paving contribution was \$48,017. Engineering and IS Overhead totaled

\$723 with inspection and licensing fees from RWC Enterprises totaling \$1,000. Audit recalculated several line items with no exceptions noted.

The Company booked the cost of the project as seen in the accounts below.

Work Order #1807532/01 - Lincoln Avenue Residual Paving - 2017 Carryover

Account	Description	Gross Plant	COR	Gross Book
331200	Distribution Mains: New	\$ 21,971	\$ (2,197)	\$ 19,774
331002	Pavements: Dist. Mains	\$ 48,017	\$ (4,802)	\$ 43,215
		\$ 69,988	\$ (6,999)	\$ 62,989

The CAPEX shows that the residual paving in the approved budget was estimated to cost \$52,300 as of June 30, 2018. The final work order cost totaled \$69,988 or 34% over budget. The City's tax rate of \$27.81/thousand results in an eligible property tax expense of \$1,946.

Fifield Street Residual Paving - \$59,273

The project was a part of the 2018 Main Street Area Water Main Improvements, Phase 2. Per the E-22 filed by the Company in April of 2018, work order #1806835 consisted of abandoning the existing 6" main that will be dead ended by work on Taylor Street and the transfer of existing domestic services to the 16" main on Fifield Street. The costs by vendor are broken out below:

J. P. Cardillo & Sons, Labor & Materials	\$46,666
City of Nashua (Paving)	\$ 9,991
Engineering & IS Overhead	\$ 2,509
Nashua Telegraph	\$ 54
IMTEKPRO	\$ 53
Total W/O #1806835	\$59,273

J.P. Cardillo & Sons charged \$5,500 for a mobilization and demobilization activities per the invoice #1. Temporary trench restoration and temporary paving on Taylor Street totaled \$13,726. Approximately 30 feet of main at \$150 per foot was installed totaling \$4,500 and a flagger totaled \$1,190. The total billing from Cardillo was \$46,666, engineering costs totaled \$2,509 and PWW's contribution to the City of Nashua paving was \$9,991. Miscellaneous charges from IMTEKPRO and the Nashua Telegraph totaled \$107. Audit recalculated several line items with no exceptions noted.

Work Order #1806835/01 - Fifield Street Residual Paving: Phase 2

Account	Description	Gross Plant	COR	Gross Book
331002	Pavements: Dist. Mains	\$ 15,890	\$ (1,589)	\$ 14,301
331200	Distribution Mains: New	\$ 34,383	\$ (3,438)	\$ 30,945
333200	Renewed Services	\$ 9,000	\$ (900)	\$ 8,100
		\$ 59,273	\$ (5,927)	\$ 53,346

The CAPEX shows that this project was in the approved budget and was estimated to cost \$4,400 as of June 30, 2018. The final work order totaled \$59,273. PWW explained that the project increase was due to 2019 paving done in 2018, purchase and install a new 16" butterfly valve, service connections to the 16" main which all were an expansion of the scope of the project but allowed the abandonment of year 1894, 6" cast iron main.

The City's tax rate of \$27.81/thousand results in an eligible property tax expense of \$1,648.

Ritter Street Main Replacement – \$168,793

The costs in work order's #1702858 and #1806828 were part of a larger construction project that included eleven streets in the Main Street area of Nashua according to the E-22 filed by the Company in March of 2018. The project consisted of replacing approximately 500 feet of 6" main with 12" DIPCL at a cost of \$125 per linear foot. Audit reviewed the work order detail, invoices, and other charges without exception.

J. P. Cardillo & Sons, Labor & Materials	\$119,406
City of Nashua (Paving)	\$ 39,770
Engineering & IS Overhead	\$ 9,383
Microtech	<u>\$ 234</u>
Total W/O #1806828	\$168,793

PWW correctly booked the original acquisition cost (gross) and immediately booked a corresponding credit to the CWIP account #105222 to cover the Cost of Removal (COR) of the old assets resulting in the Book value or the depreciated value. The COR that PWW takes is a general 10% of the gross cost. The main replacement was posted to the general ledger on December 1, 2018 to the accounts shown below:

Work Order #1806828/01 - Ritter Street Main Improvements

Account	Description	Gross Plant	COR	Gross Book
331002	Pavements: Dist. Mains	\$ 45,680	\$ (4,568)	\$ 41,112
331200	Distribution Mains: New	\$ 96,705	\$ (9,670)	\$ 87,035
331250	Dist. Mains: Gate Valves	\$ 11,100	\$ (1,110)	\$ 9,990
333200	Renewed Services	\$ 8,500	\$ (850)	\$ 7,650
335000	Hydrants	\$ 6,808	\$ (681)	\$ 6,127
		\$ 168,793	\$ (16,879)	\$ 151,914

The CAPEX shows that this project was in the approved budget and was estimated to cost \$161,500 as of June 30, 2018. The final work order cost totaled \$168,793. The City's tax rate of \$27.81/thousand results in an eligible property tax expense of \$4,694.

Factory Street Main Replacement - \$607,926

The costs in work order's #1813532 and #1806830 were part of a larger construction project that included eleven streets in the Main Street area of Nashua according to the E-22 filed

by the Company in March of 2018. This project consisted of two work orders that covered approximately 35 feet of main on Mechanic Street as well as Factory Street and replacing approximately 1,000 of water main with 16", zinc plated DIPCL main to improve fire flows. The 16" main was installed at \$150 per liner foot on Factory Street and \$135 per linear foot on Mechanic Street.

J.P. Cardillo & Sons charged \$476,526 for a preconstruction documentation video, mobilization activities, main replacement, trench restoration, paving, miscellaneous materials and supplies and police detail and flaggers. Temporary main and the cost to bury the temporary main totaled \$35,000 and \$15,070 respectively. The Company explained that temporary main is used to provide continued domestic water supply and at times, fire protection until the new main is in service and all domestic services, fire services and hydrants are connected to the new main. Audit requested documentation for a charge described on Cardillo's invoice as Factory Street conflicts in the amount of \$31,261 (See the explanation for the cost overrun below). Audit recalculated several line items with no exceptions noted.

J. P. Cardillo & Sons, Labor & Materials	\$476,526
PWW Paving Contribution	\$106,700
Engineering & IS Overhead	\$ 17,869
Misc. Materials & Supplies	\$ 2,797
Tri-State	\$ 2,128
Smith Plumbing	\$ 1,039
Net Traffic	\$ 696
Microtech	\$ 171
Total W/O #1806830	\$607,926

PWW correctly booked the original acquisition cost (gross) and immediately booked a corresponding credit to cover the Cost of Removal (COR) of the old assets resulting in the Book value or the depreciated value. The COR that PWW takes is a general 10% of the gross cost. Audit traced the Acquisition COR to the Accumulated Depreciation – Cost of Removal, account #108001. The Company booked the cost of the project as seen in the accounts below:

Work Order #1806830/01 - Factory Street Main Improvements

Account	Description	Gross Plant	COR	Gross Book
108001	Acquisition Costs	\$ 1,064	\$ (1,064)	\$ -
331002	Pavements: Dist. Mains	\$ 126,090	\$ (12,609)	\$ 113,481
331200	Distribution Mains: New	\$ 373,273	\$ (37,327)	\$ 335,946
331250	Dist. Mains: Gate Valves	\$ 21,896	\$ (18,300)	\$ 3,597
333200	Renewed Services	\$ 56,295	\$ (5,630)	\$ 50,665
335000	Hydrants	\$ 29,308	\$ (2,930)	\$ 26,378
		\$ 607,926	\$ (77,860)	\$ 530,066

The CAPEX shows that this project was in the approved budget and was estimated to cost \$487,000 as of June 30, 2018. The final work order cost totaled \$607,926 or 25% over the budgeted figure. PWW explained that because two significant duct banks were discovered during excavation, the work had to be done by hand rather than machine. Also, paving that was budgeted for 2019 was moved to 2018. The Company states that the additional funds were transferred from budgeted projects that were delayed or deferred to 2019 or beyond.

The City's tax rate of \$27.81/thousand results in an eligible property tax expense of \$16,906. The cost of removal was applied at 10% of the project cost totaling \$77,860. After reviewing the work order, Audit found no exceptions or inconsistencies.

Russell Avenue Main Replacement - \$256,860

The costs in work order's #1720992 and #1806802 were part of a larger construction project that included eleven streets in the Main Street area of Nashua according to the E-22 filed by the Company in March of 2018. The CAPEX describes the project as replacing approximately 775 feet of 8" and 275 feet of 6" CI water main with new 8" and 4" DIPCL main to improve fire flows. The four-inch main was installed at \$70 per liner foot and the eight-inch main was \$80 per liner foot.

The Company's Record of Bids and Proposals shows that the total Main Street Area Main Improvements construction lists four companies which bid for the project, with J.P. Cardillo & Sons, the lowest bidder, chosen for the work.

The work order detail report with project and engineering costs was reviewed by Audit. Per the City of Nashua's invoice dated December 27, 2018, PWV's contribution to pavement reclamation was \$98,073 or one-third of the total paving cost. Temporary main totaled \$20,000 and all costs for contracting work by J.P. Cardillo & Sons, Inc. and PWV engineering were reviewed without exception.

The total costs are broken out by vendor below:

J. P. Cardillo & Sons, Labor & Materials	\$156,035
PWV Paving Contribution	\$ 98,073
Engineering & IS Overhead	\$ 2,479
Wells & Sons Plumbing	\$ 165
Nashua Telegraph	\$ 55
IMTEKPRO	\$ 53
Total W/O #1806802	\$256,860

The Company booked the cost of the project as seen in the accounts below. PWV correctly booked the original acquisition cost (gross) and immediately booked a corresponding credit to cover the Cost of Removal (COR) of the old assets resulting in the Book Value or the depreciated value. The COR that PWV takes is 10% of the gross cost.

Work Order #1806802/01 - Russell Avenue Main Replacement

Account	Description	Gross Plant	COR	Gross Book
331002	Pavements: Dist. Mains	\$ 116,109	\$ (11,611)	\$ 104,498
331200	Distribution Mains: New	\$ 114,281	\$ (11,428)	\$ 102,853
331250	Dist. Mains: Gate Valves	\$ 1,970	\$ (197)	\$ 1,773
333200	Renewed Services	\$ 18,500	\$ (1,850)	\$ 16,650
335000	Hydrants	\$ 6,000	\$ (600)	\$ 5,400
		\$ 256,860	\$ (25,686)	\$ 231,174

The CAPEX shows that this project was in the approved budget and was estimated to cost \$237,800 as of June 30, 2018 and was completed at a cost of \$256,860 with the COR totaling \$25,686. The City's tax rate of \$27.81/thousand results in an eligible property tax expense of \$7,143. After reviewing the work order, Audit found no exceptions or inconsistencies.

Taylor Street Main Replacement - \$651,468

The Taylor Street main replacement work order, #1806803, is part of a larger construction project that included eleven streets in the Main Street area of Nashua according to the E-22 filed by the Company in March of 2018. The Company's Record of Bids and Proposals shows that the total Main Street Area Main Improvements construction shows four companies bid for the project with J.P. Cardillo & Sons, the lowest bidder, chosen for the work.

The initial estimate was \$171,800 per the E-22 which included an updated estimate of \$345,000 with an explanation that the scope of the work was extended. The City of Nashua invoiced \$202,148 for paving which resulted in the total cost of the work order being \$651,468. Audit requested an explanation for why the work order was almost 50% more than estimated. PWV explained that *"the original estimate was for 790 feet of main and did not include the final pavement restoration that was budgeted for 2019. The project scope changed to 2,084 of main to follow along with work being done by other utilities and the City. Final paving would have been included in the 2019 budget, however payment to the City in the amount of \$202,148 was made in 2018 as opposed to 2019. There is no further paving on Taylor Street and the paving was removed from the 2019 budget."*

The invoice Breakdown Sheet Work shows approximately 1552 feet of deteriorating, 6" and 8" unlined water main being replaced with new 6", 8" and 12" DIPCL main to improve fire flows. The total costs are broken out by vendor below:

J. P. Cardillo & Sons, Labor & Materials	\$435,717
PWW Paving Contribution	\$202,148
Microtech	\$ 6,555
Engineering & IS Overhead	\$ 6,358
Smith Plumbing	\$ 331
Misc. Materials	\$ 251
Nashua Telegraph	\$ 55
IMTEKPRO	\$ 53
Total W/O #1806803	\$651,468

The Company booked the cost of the project as seen in the accounts below. PWV correctly booked the original acquisition cost and immediately booked a corresponding credit to cover the Cost of Removal (COR) of the old assets resulting in the Book value or the depreciated value. Audit traced the Acquisition COR to the Accumulated Depreciation – Cost of Removal, account #108001.

Work Order #1806803/01 - Taylor Street Main Replacement

Account	Description	Gross Plant	COR	Gross Book
108001	Acquisition Costs	\$ 50,556	\$ (50,556)	\$ -
331002	Pavements: Dist. Mains	\$ 239,660	\$ (23,966)	\$ 215,694
331200	Distribution Mains: New	\$ 265,318	\$ (26,533)	\$ 238,785
331250	Dist. Mains: Gate Valves	\$ 39,205	\$ (3,920)	\$ 35,285
333200	Renewed Services	\$ 34,600	\$ (3,460)	\$ 31,140
335000	Hydrants	\$ 22,129	\$ (2,212)	\$ 19,917
		\$ 651,468	\$ (110,647)	\$ 540,821

The CAPEX shows that this project was in the approved budget and was estimated to cost \$171,800 as of June 30, 2018 and includes an explanation that the amount of pipe increased from 790 feet to 2,084 feet that was actually to be replaced. The City's tax rate of \$27.81/thousand results in an eligible property tax expense of \$18,117. The cost of removal was applied at 10% of the project cost totaling \$110,647. After reviewing the work order, Audit found no exceptions or inconsistencies.

Kinsley Street Main Replacement – \$693,827

The Company filed the E-22 in October of 2018 stating that work order #1825911 was to replace approximately 1,034 feet of pre-1888, 6" unlined cast iron pipe and 270 feet of vintage 1931 12" unlined cast iron pipe. The E-22 explained that the project was undertaken at this time because of the City of Nashua's planned drain and sewer work, the poor condition of the existing main which is operating beyond its service life, and may be subject to breakage during the planned construction. The total costs are broken out by vendor below:

J. P. Cardillo & Sons, Labor & Materials	\$443,166
RWC Enterprises	\$242,225
Engineering & IS Overhead	\$ 7,246
Pennichuck	\$ 856
Microtech	\$ 234
Misc. Materials	\$ 100
Total W/O #1825911	\$693,827

J.P. Cardillo & Sons charged \$20,780 for mobilization. Labor and materials to replace approximately 1,411 feet of main at \$125 per foot for a total of \$176,375. Service replacements and trench restoration totaled approximately \$142,000. Relocation and connection of a hydrant and one new hydrant totaling \$15,000. Paving totaled \$57,012. Police detail and a flagger totaling \$31,870. Audit recalculated several line items with no exceptions noted.

RCW Enterprises charged \$5,000 for mobilization and demobilization. Labor and materials for 1,275 feet of high traffic trench restoration at \$175 per foot totaling \$223,125. Driveway restoration and traffic control totaled \$14,100 resulting in the total costs from RCW of \$242,225. Audit recalculated several line items with no exceptions noted.

Work Order #1825911/01 - Kinsley Street Main Improvements

Account	Description	Gross Plant	COR	Gross Book
331002	Pavements: Dist. Mains	\$ 304,675	\$ (30,467)	\$ 274,207
331200	Distribution Mains: New	\$ 286,702	\$ (28,670)	\$ 258,032
331250	Dist. Mains: Gate Valves	\$ 24,600	\$ (2,460)	\$ 22,140
333200	Renewed Services	\$ 60,850	\$ (6,085)	\$ 54,765
335000	Hydrants	\$ 17,000	\$ (1,700)	\$ 15,300
		\$ 693,827	\$ (69,383)	\$ 624,444

The CAPEX shows that this project was not originally in the approved budget but was updated with the Commission in June 2018. The work order was estimated to cost \$526,000 as of June 30, 2018 and finished at a cost of \$693,827. The Company explained *“that the additional \$167,827 included final paving completed in 2018 as required by the City as opposed to what would have been added to the 2019 budget.”*

The City’s tax rate of \$27.81/thousand results in an eligible property tax expense of \$19,295. The cost of removal was applied at 10% of the project cost totaling \$69,383. After reviewing the work order, Audit found no exceptions or inconsistencies.

Marshall Street Main Replacement - \$355,362

The Company filed the E-22 in May of 2018 stating that work order #1813935 was to replace approximately 1,074 feet of the existing 8” CI main with 8” DIPCL. The existing main was in poor condition and a portion of a railroad crossing will be lowered. The installation of fire protection to support additional apartment complexes in the area of Coburn Woods development would have resulted in the main being too shallow to prevent freezing. The total costs are broken out by vendor below:

W. F. Grace Construction, Labor & Materials	\$336,157
Engineering & IS Overhead	\$ 16,926
Microtech	\$ 2,079
Unishipper	\$ 80
IMTEKPRO	\$ 50
Misc. Materials	\$ 70
Total W/O #1813935	\$355,362

Along with the E-22 was an explanation of the no bid contract. The Company states that *“Marshall Street is a short notification project that is small in scope and critical to a new development presently underway at the intersection of Marshall and East Hollis Streets.”* Engineering used an estimate based on a recent 2018 Main Street water main replacement project. The contractor, W.F. Grace Construction offered to match or beat the low bidder price hence the no bid contract was deemed to be in everybody’s best interest.

Audit reviewed the four Application for Payment certificates from W.F. Grace covering the period of July through November 2018 and totaling \$336,157. The contract support included materials and labor costs, unit costs, quantities and a total of work completed this period. Audit recalculated several line items with no exceptions noted.

Monthly Engineering and IS Overhead support shows the hours worked on the project and the total without overhead. The non-union overhead rate of 51.84% was multiplied by the total resulting in the total with overhead added. The cost of removal was applied at 10% of the project cost totaling \$56,482. Audit traced the Acquisition COR to the Accumulated Depreciation – Cost of Removal, account #108001. Audit recalculated several line items with no exceptions noted.

Work Order #1813935/01 - Marshall Street Main Replacement

Account	Description	Gross Plant	COR	Gross Book
108001	Acquisition Costs	\$ 23,273	\$ (23,273)	\$ -
331002	Pavements: Dist. Mains	\$ 154,965	\$ (15,497)	\$ 139,469
331200	Distribution Mains: New	\$ 130,624	\$ (13,062)	\$ 117,562
331250	Dist. Mains: Gate Valves	\$ 12,000	\$ (1,200)	\$ 10,800
333200	Renewed Services	\$ 22,500	\$ (2,250)	\$ 20,250
335000	Hydrants	\$ 12,000	\$ (1,200)	\$ 10,800
		\$ 355,362	\$ (56,482)	\$ 298,880

The CAPEX shows that this project was not originally in the approved budget but was updated with the Commission in June 2018. The CAPEX shows the estimated amount of \$270,000 as of June 30, 2018 and a final cost of \$355,362. The Company explains that approximately 600 feet of concrete under the roadway was unforeseen and added \$144,735 to final project cost.

The City's tax rate of \$27.81/thousand results in an eligible property tax expense of \$9,883. After reviewing the work order, Audit found no exceptions or inconsistencies.

Lovewell Street Main Replacement – \$139,417

Per the E-22 filed by the Company in October 2018, work order #1825912 was to replace approximately 400 feet of the existing year 1939, 1-1/4" steel water main with 8" DIPCL (ductile iron pipe-cement lined). The existing main was undersized for the eight homes and a daycare center which requested fire service in the past but which the Company was unable to provide due to size of the pipe. The City also intends on repaving the street, which would keep the costs lower should the work be done at a later date although PWW did incur some paving costs with the project.

J. P. Cardillo & Sons, Labor & Materials	\$ 75,845
PWW Paving Contribution	\$ 56,357
Engineering & IS Overhead	\$ 6,981
Microtech	\$ 234
Total W/O #1825912	\$139,417

J.P. Cardillo & Sons charged \$7,500 for mobilization and pre-construction video documentation. Labor and materials to replace 415 feet of main at \$80 per foot for a total of \$33,200. Service replacements and trench restoration totaled \$30,490 and \$4,655 for a flagger. The Company provided the City of Nashua's December 27, 2018 invoice which shows PWW's contribution for paving Lovewell Street from Pine to Madison in the amount of \$56,357.

Engineering and IS Overhead totaled \$6,981. The general ledger shows the project costs posted to the appropriate plant accounts on December 2, 2018.

Work Order #1825912/01 - Lovewell Street Main Improvements

Account	Description	Gross Plant	COR	Gross Book
331002	Pavements: Dist. Mains	\$ 69,947	\$ (6,995)	\$ 62,952
331200	Distribution Mains: New	\$ 54,970	\$ (5,497)	\$ 49,473
331250	Dist. Mains: Gate Valves	\$ 1,500	\$ (150)	\$ 1,350
333200	Renewed Services	\$ 13,000	\$ (1,300)	\$ 11,700
		\$ 139,417	\$ (13,942)	\$ 125,475

The CAPEX shows that this project was not originally in the approved budget but was updated with the Commission in June 2018. The work order was estimated to cost \$210,000 as of June 30, 2018. The City's tax rate of \$27.81/thousand results in an eligible property tax expense of \$3,877. The cost of removal was applied at 10% of the project cost totaling \$13,942. After reviewing the work order, Audit found no exceptions or inconsistencies.

Overhead Rates

Overhead rates are input into Synergen by the Senior or Staff Accountant and are automatically calculated and posted to the general ledger when the work orders are posted to the general ledger at the end of the month.

For 2018 the Union overhead rate decreased from 67.96 to 66.78%. This rate is calculated on the total Union labor hours for a specific job and is intended to capture the cost of benefits for Union employees while the general overhead rate remained at 2%. The general OH rate is calculated on the total job cost including the union labor rate as described above. The general OH rate is determined by an analysis of the employee benefits which is reviewed/revised annually as part of the budget process. Audit verified the OH rates to the work order detail reports of each project reviewed.

Cost of Removal

The Company submitted a detailed spreadsheet showing the cost of removal for the selected projects totaling \$389,805 on the gross investment of \$3,261,837 in 2018. Where the project was a new project, the Company correctly indicated and booked no cost of removal. Audit noted that the assets reviewed in 2018 all had a cost of removal rate of 10% of the total project cost.

Retirements

Audit requested the list of retired assets and documentation that those assets had been taken off the books and records of PWW associated with the specific projects chosen and PWW produced a spreadsheet that listed those retirements. Audit reviewed the retirement worksheet referencing specific general ledger account numbers and amounts that were also found on the general ledger itself.

Depreciation

The Company submitted to Audit a detailed spreadsheet for the selected additions to utility plant. This spreadsheet indicated a total depreciation charge of \$23,933 from total selected additions of \$3,261,837. This figure represents a ½ year depreciation charge for 2018 in accordance with utility accounting standards. Audit recalculated several samples from all the plant accounts to verify the accuracy, the rates and the use of half-year convention for new additions. The Company used the straight-line method on the gross book value (after the cost of removal) and the rates used agreed with those specified in docket DW 16-806.

Bid Summary

Audit requested and was provided with a record of bid proposals for the 2018 projects. The bid summary Excel spreadsheet was listed by work order and included up to the top 4 bidders per project. Every work order indicated the lowest bidder was the winning bidder. There was one instance that did not contain multiple bidders however, and the Company indicated there was only one vendor who was able to provide the service and therefore no other bidders were included.

Taxes

The January 4 filing by the Company indicated an estimated property tax impact of \$198,464. The work orders Audit reviewed showed the total eligible property tax expense of \$89,920. All the projects reviewed were in the City of Nashua except for the Bedford Water Connection. Nashua lists the rate for 2018 at \$27.81 per thousand and Bedford's property tax rate was \$24.76 per thousand for 2018.

Revenues

PWW applied a one-time recoupment charge to recover the cost of the debt service and property taxes incurred during the period between the bond issuance date of April 4, 2018 and the date on which the 2018 QCPAC was implemented. All customer classes were charged based on the customer charge, the actual usage and fire protection in accordance with the 1.69% surcharge that was stipulated in order number 26,183 dated October 29, 2018. Audit recalculated several surcharge calculations for bills rendered May through November, 2018 for each customer class with no exceptions noted.

Summary

In Summary, the Company submitted projects in the amount of \$8,229,377 and an initial tax impact of \$198,464 totaling \$8,427,841. After reviewing the material submitted, the Company has shown that these projects were used and useful and booked to the appropriate plant accounts as of 12/31/2018; financed by debt approved by the Commission in Order No. 26,183; and that the projects in question had been submitted to the PUC as part of DW 18-022 and 19-029. Support for project costs was provided in the form of the general ledger (GL) balances, journal entries, work orders, work order detail reports, E-22's, invoices and Excel spreadsheets.

Attachment C

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19
Request No. Staff 1-1

Date of Response: 3/27/19
Witness: Donald L. Ware

REQUEST: Exhibit 1, Schedule A

Calculation of the QCPAC percentage of increase should be calculated based on the increase in revenues from those approved in DW 16-806 (\$31,011,556), similar to the calculation of the cumulative QCPAC percentage of increase. If the Company agrees, please submit an updated/recalculated Exhibit 1, Schedule A. If the Company disagrees, please provide a detailed explanation.

RESPONSE:

Attached please find an updated, recalculated QCPAC Exhibit 1, Schedule A, based on the percentage increase in revenues required for the 2018 QCPAC being based on the DW16-806 revenues. Please note that it is the Company's understanding that the QCPAC line on the customer bill will reflect the cumulative percentage for the 2017 and 2018 QCPAC of 4.34% required to generate \$1,345,450 in total revenues above \$31,011,556 granted in DW16-806.

	DW16-806 Approved Step Revenue Requirements (11)	Requested QCPAC For 2017 Capital Additions pro formas	Requested QCPAC Surcharge for 2017 Capital Additions	Projected QCPAC For 2018 Capital Additions pro formas (7,8)	Projected QCPAC Surcharge for 2018 Capital Additions	QCPAC For 2019 Capital Additions pro formas (7,8)	QCPAC Surcharge for 2019 Capital Additions	QCPAC For 2020 Capital Additions pro formas (7,8)	QCPAC Surcharge for 2020 Capital Additions	QCPAC For 2021 Capital Additions pro formas (7,8)	QCPAC Surcharge for 2021 Capital Additions
City Bond Fixed Revenue Requirement (CBFRR)	\$7,729,032		\$ 7,729,032	-	\$ 7,729,032	\$ -	\$ 7,729,032	\$ -	\$ 7,729,032	\$ -	\$ 7,729,032
Operating Expense Revenue Requirement	\$16,442,012 (1)(11)	\$ 122,079 (4)	\$ 16,564,090	\$ 198,464	\$ 16,762,554	\$ 416,669	\$ 17,179,222	\$ 326,226	\$ 17,505,448	\$ 280,650	\$ 17,786,098
Annual Principal and Interest Payments	\$6,218,648 (2)	\$365,418 (5)(10)	\$ 6,584,066	\$566,225	\$ 7,150,291	\$891,274	\$ 8,041,565	\$857,436	\$ 8,899,001	\$818,624	\$ 9,717,625
Principal and Interest Coverage Requirement	1.10 (3)		1.10		1.10		1.10		1.10		1.10
Principal and Interest Revenue Requirement	\$ 6,840,513		\$ 7,242,472		\$ 7,865,320		\$ 8,845,722		\$ 9,788,901		\$ 10,689,387
Proposed Revenue Requirement	\$ 31,011,556		\$ 31,535,594		\$ 32,356,906		\$ 33,753,976		\$ 35,023,381		\$ 36,204,517
Current Water Revenues excluding CBFRR	\$20,694,038		\$ 23,282,524		\$ 23,806,562		\$ 24,627,874		\$ 26,024,944		\$ 27,294,349
Add: City Bond Fixed Revenue Requirement	\$7,729,032		\$ 7,729,032		\$ 7,729,032		\$ 7,729,032		\$ 7,729,032		\$ 7,729,032
Current Water Revenues with CBFRR	\$ 28,423,070		\$ 31,011,556		\$ 31,535,594		\$ 32,356,906		\$ 33,753,976		\$ 35,023,381
Percent QCPAC Surcharge (9)			1.69%		2.65%		4.50%		4.09%		3.81%
Cumulative QCPAC Surcharge (13)					4.34%		8.84%		12.94%		16.75%
Cumulative QCPAC monthly increase in average single family residential bill			\$ 0.91		\$ 2.34		\$ 4.77		\$ 6.98		\$ 9.04
Average monthly single family residential bill with QCPAC			\$ 54.90		\$ 56.32		\$ 58.76		\$ 60.97		\$ 63.02

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense, Amortization Expense and Payroll Tax Expenses approved in DW16-806
- (2) Annual Principal and interest payments for PWV debt associated with all plant in service as approved in DW16-806
- (3) Principal and interest coverage of 1.10 is as approved in DW16-806
- (4) Reflects the net increase in property taxes associated with the plant placed in service between 1/1/2017 and 12/31/2017 that was not included in DW16-806.
- (5) Portion of Annual Principal and interest payments for debt associated with plant placed in service between 1/1/2017 and 12/31/2017 based on a 30 year bond with an actual total all in interest rate of 4.898453% that was not recovered in DW16-806
- (7) QCPAC operating expenses are based on the property taxes for plant added during the year
- (8) QCPAC Principal and Interest expenses are based on 30 year bond with interest rate of 5.5% for 2018 through 2021 Capital Expenditures unless funding is via an SRF/DWGTF financing.
- (9) QCPAC percent revenue surcharges based on increase in revenue requirement over the revenue requirement allowed in DW16-806.
- (10) Portion of QCPAC Principal and Interest associated with SRF loan of \$ 767,357 for 2017 work completed on Amherst Street project based on the fact that \$ 27,746.00 of P&I was recovered in DW16-806 leaving \$ 25,178.00 of remaining P&I on this SRF loan to be collected via the QCPAC surcharge. The remaining P&I is based on the amortization schedule for this loan provided by the NHDES and is the P&I payment due the State in 2018 after principal forgiveness.
- (11) Reduction in revenues associated with fixed contracts as follows: Hudson Annual Fixed Chg \$ 32,800 Milford Annual Fixed Chg \$ 81,000.00 A-B Annual Fixed Chg \$ 371,430.48
- (12) QCPAC Principal and Interest expenses for DWGTF financing are based on a 30 year bond with interest rate of 3.38%
- (13) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW16-806

Impact on Single Family Residential Home:

Monthly meter charge granted in DW16-806, inclusive of Step increase -	\$ 22.58
Average Single Family Consumption (CCF) -	8.58
Consumption Charge granted in DW16.806, inclusive of Step increase -	\$ 3.66
Ave. Single Family monthly bill with rates granted in DW16-806, inclusive of step -	\$ 53.98

32

Total Projected 2017 PWW Capital Exp	\$ 9,729,000	\$ 4,163,760	\$ 6,058,766	Projected Property Tax -	\$ 122,079
Amount to be funded with April 2018 Bond issue -			\$ 5,291,409		
Amount to be funded with Amherst Street Project SRF loan -			\$ 767,357		

33

Project Name/Description	Project Description	Work Order #	Financing Docet No.	Approved Budgeted Amount	Estimated Project Cost as of 6/30/2018	Estimated Project Cost as of 9/30/2018	Estimated Project Cost as of 11/30/2018	Final Project Cost as of 12/31/2018	Community	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018	
Replish Evonnet Track	Existing Track has been a safety and maintenance problem	170851 & 1815325		\$ 90,000	\$ 97,685	\$ 120,756	\$ 120,756	\$ 92,018	Memorick	No	\$ 28.92	\$ -	Additional labor, metal and other hardware to properly outfit the track. Project reduced by \$16,000 for trade in value.	
Single Family New Services	Single Family, Owner Build, New Homes	20 workorders	2019 Docet	\$ 46,000	\$ 46,000	\$ 46,000	\$ 37,403	\$ 40,850	Various	Yes	\$ 28.40	\$ 1,160	10 New Services installed in 2018	
Recreational Services	workorders	2019 Docet	\$ 92,000	\$ 92,000	\$ 37,758	\$ 40,000	\$ 47,818	Various	Yes	\$ 28.40	\$ 1,358	18 failed services replaced in 2018.		
Hydrams	Replacement of non functional hydrams (Run rate) (8 YTD)	30 & 31 workorders	2019 Docet	\$ 50,000	\$ 50,000	\$ 50,000	\$ 45,000	\$ 35,560	Various	Yes	\$ 28.40	\$ -	8 failed hydrams replaced in 2018.	
Valve Replacements	Replacement of Failed Gate Valves	12 & 13 workorders	2019 Docet	\$ 30,000	\$ 30,000	\$ 20,000	\$ 32,000	\$ 14,412	Various	Yes	\$ 28.40	\$ 409	5 failed gate valves replaced in 2018.	
Replish failed meter reading radios	Replish out of warranty failed radio meter readers	34 workorders	2019 Docet	\$ 50,000	\$ 50,000	\$ 50,000	\$ 60,000	\$ 46,153	Various	Yes	\$ 28.40	\$ 1,311	102 failed radios replaced in 2018.	
New Meters for new customers	New meters for new customers	50 workorders	2019 Docet	\$ 114,000	\$ 114,000	\$ 40,000	\$ 40,000	\$ -	Various	Yes	\$ 28.40	\$ -	2,301 new meters installed in 2018. The new meters installed were for new customers and also to replace meters that had lead content in excess of 0.25% by weight of the brass meter body.	
Replish High lead brass meter with new no lead brass meter (2017 YTD)	Replish High lead brass meter with new no lead brass meter (2017 YTD)	30 workorders	2019 Docet	\$ 532,000	\$ 532,000	\$ 360,000	\$ 340,000	\$ 326,902	Various	Yes	\$ 28.40	\$ 9,284		
Emergency Pipe Location (3)	Ongoing small equipment replacement - run rate	2019 Docet	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	\$ -	Memorick	No	\$ 28.92	\$ -	\$ -	Purchase deferred until 2019	
Service Truck replacement (0750)	Replish 2008 Pick-up with 156,000 miles	1900417	2019 Docet	\$ 60,000	\$ 60,000	\$ 60,000	\$ 61,905	\$ -	Memorick	No	\$ 28.92	\$ -		
Service Truck - New	Service Truck for 4 new city employees	1900416	2019 Docet	\$ 35,000	\$ 35,000	\$ 35,000	\$ 62,215	\$ 62,215	Memorick	No	\$ 28.92	\$ -	Vehicle spec was changed to Heavy Duty Quad Cab	
Replacement of Meter Supervisor Truck (#14)	Replish 7 year old pick up with 167,000+ miles with small SUV	1825491	2019 Docet	\$ 28,000	\$ 28,000	\$ 28,000	\$ 31,563	\$ 25,563	Memorick	No	\$ 28.92	\$ -	Project reduced by \$6,000 for trade in value.	
Replish Valve/vac trailer unit	Existing unit has reached the end of its usable life	2019 Docet	\$ 65,000	\$ 65,000	\$ -	\$ -	\$ -	Memorick	No	\$ 28.92	\$ -	\$ -	Project deferred until 2019	
Trickle units for Meter Reading (6 units)	Replish C1 meter reading equipment	1801444	2019 Docet	\$ 39,000	\$ 39,000	\$ 48,000	\$ 58,629	\$ 56,829	Memorick	No	\$ 28.92	\$ -		
Pipe Sams (5)	Ongoing small equipment replacement - run rate	1819287	2019 Docet	\$ 6,000	\$ 6,000	\$ 5,000	\$ 5,000	\$ 5,900	Memorick	No	\$ 28.92	\$ -		
Metal Detectors (0)	Ongoing small equipment replacement - run rate	2019 Docet	\$ 7,000	\$ 7,000	\$ -	\$ -	\$ -	Memorick	No	\$ 28.92	\$ -	\$ -	Purchase deferred until 2019	
Add Air Conditioning to Mechanics Bay	Security Project	1805724	2019 Docet	\$ 52,000	\$ 62,641	\$ 62,641	\$ 62,641	\$ 62,641	Memorick	Yes	\$ 28.92	\$ 1,812	Updated quotes with higher materials cost, steel surcharge & Freight.	
Four trench boxes	Replish 22 year old trench boxes	1818578	2019 Docet	\$ 20,000	\$ 22,456	\$ 22,456	\$ 22,456	\$ 22,456	Memorick	No	\$ 28.92	\$ -		
Vehicle Lift Replacement	Replish 9000lb Amesco lift with new 12000lb Rotax Lift in Mechanics Bay	1805726	2019 Docet	\$ -	\$ -	\$ 7,974	\$ 7,974	\$ 7,974	Memorick	Yes	\$ 28.92	\$ 231		
Utility Truck	Replish Vehicle #4 2011 F-350 w/ 140,000 miles and higher maintenance needs	2019 Docet	\$ -	\$ -	\$ 63,000	\$ 62,215	\$ -	Memorick	No	\$ 28.92	\$ -	\$ -	Purchase deferred until 2019	
Utility Van	Replish Vehicle #72 2011 Ford F-2500 Van - High mileage & maintenance costs	1826440	2019 Docet	\$ -	\$ -	\$ 35,000	\$ 31,648	\$ 32,052	Memorick	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018	
Utility Van	Replish Vehicle #27 2011 Ford F-2500 Van - High Mileage & maintenance costs	1826439	2019 Docet	\$ -	\$ -	\$ 35,000	\$ 31,704	\$ 32,897	Memorick	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018	
Utility Van	Replish Vehicle #28 2011 Ford F-2500 Van - High mileage & maintenance costs	1826438	2019 Docet	\$ -	\$ -	\$ 35,000	\$ 31,704	\$ 32,097	Memorick	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018	
Boat Poles (2)	Replish 8x10 1" Steel Road Poles	1801446	2019 Docet	\$ -	\$ -	\$ 5,500	\$ 5,380	\$ 5,380	Memorick	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018	
Interconnection of BWC (Bedford) to PWW		1800734	2019 Docet	\$ 85,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ -	Bedford	Yes	\$ 24.76	\$ -	6,411	Original budget done prior to design, increased scope of work to remove all AC water main from Back River Rd.
Elm St	Replish 1570 LF of 8 & 6 inch CI with 12 inch DIPCL	1812907	2019 Docet	\$ 416,000	\$ -	\$ -	\$ -	\$ 238,923	Nashua	Yes	\$ 27.81	\$ -	\$ -	City Sewer deferred until 2019
Monroe Street	Replish 485 LF of 4 inch (HDPE) CI with 8 inch DIPCL	1812908	2019 Docet	\$ 122,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	City Sewer deferred until 2019
West Pearl Street	Replish 325 LF of 6 inch CI with 8 inch DIPCL	1812909	2019 Docet	\$ 100,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	City Sewer deferred until 2019
Orange St (Concord St to Lock St)	Residual paving from prior year main replacement	1812910	2019 Docet	\$ 96,000	\$ 60,000	\$ 60,000	\$ 61,887	\$ 61,887	Nashua	Yes	\$ 27.81	\$ 1,720	\$ -	Based on revised paving contribution estimate.
Temple Street	Residual paving from prior year main replacement	1812923	2019 Docet	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Bachman St	Residual paving from prior year main replacement	1809533	2019 Docet	\$ 36,000	\$ 36,000	\$ 36,000	\$ 33,330	\$ 33,330	Nashua	Yes	\$ 27.81	\$ -	\$ 987	
Lancaster Ave	Residual paving from prior year main replacement	1813071 & 1807532	2019 Docet	\$ 52,300	\$ 52,300	\$ 54,000	\$ 70,137	\$ 69,988	Nashua	Yes	\$ 27.81	\$ 1,046	\$ -	
Swan St	Residual paving from prior year main replacement	1812912	2019 Docet	\$ 39,600	\$ 39,600	\$ 41,000	\$ 29,154	\$ 29,154	Nashua	Yes	\$ 27.81	\$ 810	\$ -	
Cattle Ave	Residual paving from prior year main replacement	1812913	2019 Docet	\$ 11,000	\$ 11,000	\$ 15,140	\$ 9,136	\$ 9,136	Nashua	Yes	\$ 27.81	\$ 254	\$ -	
Draft St	Residual paving from prior year main replacement	1812914	2019 Docet	\$ 47,000	\$ 47,000	\$ 49,000	\$ 46,218	\$ 46,218	Nashua	Yes	\$ 27.81	\$ 1,285	\$ -	
Zabrowski Ave	Residual paving from prior year main replacement	1812915	2019 Docet	\$ 25,000	\$ 25,000	\$ 27,000	\$ 26,076	\$ 26,076	Nashua	Yes	\$ 27.81	\$ 725	\$ -	
Union St	Residual paving from prior year main replacement	1812916	2019 Docet	\$ 6,000	\$ 6,000	\$ 7,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Tridell St	Residual paving from prior year main replacement	1812917 & 1806835	2019 Docet	\$ 4,400	\$ 4,400	\$ 6,400	\$ 28,675	\$ 59,273	Nashua	Yes	\$ 27.81	\$ 1,648	\$ -	
Terrence Street	Residual paving from prior year main replacement	1807533	2019 Docet	\$ 50,000	\$ 50,400	\$ 61,000	\$ 57,308	\$ 57,308	Nashua	Yes	\$ 27.81	\$ 1,595	\$ -	
Beard St	Residual paving from prior year main replacement	1812918	2019 Docet	\$ 5,200	\$ 5,200	\$ 5,200	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Grant St	Residual paving from prior year main replacement	1812919	2019 Docet	\$ 16,100	\$ 17,700	\$ 17,700	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Green St	Residual paving from prior year main replacement	1812920	2019 Docet	\$ 5,100	\$ 5,100	\$ 5,100	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Warren St	Residual paving from prior year main replacement	1807535	2019 Docet	\$ 11,000	\$ 11,000	\$ 11,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Lewell St	Residual paving from prior year main replacement	1812921	2019 Docet	\$ 23,000	\$ 23,000	\$ 23,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Lemore St	Residual paving from prior year main replacement	1812922	2019 Docet	\$ 4,400	\$ 4,400	\$ 4,400	\$ 4,400	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Lancaster Ave	Residual paving from prior year main replacement	1900449	2019 Docet	\$ -	\$ -	\$ 8,100	\$ 8,100	\$ 8,100	Nashua	Yes	\$ 27.81	\$ 228	\$ -	
Main Street	Residual paving from prior year main replacement	xxxx	2019 Docet	\$ -	\$ -	\$ 6,402	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Residual Paving Costs still outstanding at end of 2018
Mahantony St - Emergency Replacement	Residual paving from prior year main replacement	1812925	2019 Docet	\$ 51,700	\$ 21,670	\$ 21,670	\$ 21,670	\$ 20,101	Nashua	Yes	\$ 27.81	\$ 559	\$ -	Paving shared with other impacted Unides and Cn
Powder Street Emergency Replacement	Residual paving from prior year main replacement	1812924	2019 Docet	\$ 10,600	\$ 10,600	\$ 10,600	\$ 10,600	\$ 10,600	Nashua	Yes	\$ 27.81	\$ 303	\$ -	
Reserve for Contingent Liability for Paving Costs	Reserve for Contingent Liability for Paving Costs	n/a	2019 Docet	\$ (634,800)	\$ (634,800)	\$ (634,800)	\$ -	\$ -	Nashua	No	\$ 27.81	\$ -	\$ -	Contingent Paving obligation paid
Asset Management	Asset Management - Outside GIS Consulting Services	1800341	2019 Docet	\$ 330,000	\$ 561,000	\$ 461,000	\$ 380,000	\$ 386,500	Various	Yes	\$ 28.40	\$ 10,996	\$ -	Reduced based on anticipated work to be completed in 2018
Asset Management - Outside GIS Consulting Services	Asset Management - Outside GIS Consulting Services	1800341	2019 Docet	\$ 73,000	\$ 73,000	\$ -	\$ -	\$ -	Various	No	\$ 28.40	\$ -	\$ -	Canceled an Asset Management Budget
Asset Management - Water Modeling Consulting	Asset Management - Water Modeling Consulting	1800341	2019 Docet	\$ 50,000	\$ 50,000	\$ 10,000	\$ 10,000	\$ -	Various	No	\$ 28.40	\$ -	\$ -	Used on an as-needed basis
Asset Management - Trimble R2 Units	Asset Management - Trimble R2 Units	1800341	2019 Docet	\$ 13,000	\$ -	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	\$ -	Replacement not needed in 2018
Asset Management - Water Level Well Monitoring Equipment	Asset Management - Water Level Well Monitoring Equipment	1800341	2019 Docet	\$ 5,000	\$ 5,000	\$ -	\$ -	\$ -	Various	No	\$ 28.40	\$ -	\$ -	Replacement not needed in 2018
Gleason Street	Replish 1470 LF of 8 inch CI with 12 inch DIPCL	1806433	2019 Docet	\$ 475,100	\$ 435,000	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Project deferred until 2019
Baker Street	Replish 500 LF of 6 inch CI with 12 inch DIPCL	170858 & 1806828	2019 Docet	\$ 161,500	\$ 215,000	\$ 225,000	\$ 191,000	\$ 168,703	Nashua	Yes	\$ 27.81	\$ 4,034	\$ -	
Woodward Street	Replish 300 LF of 6 inch CI with 12 inch DIPCL	1708587 & 1806829	2019 Docet	\$ 95,300	\$ 110,000	\$ 130,000	\$ 142,373	\$ 145,417	Nashua	Yes	\$ 27.81	\$ 4,044	\$ -	Increased due to conditions encountered during construction and additional temporary paving
Factory Street	Replish 625 LF of 8 inch and 950 LF of 16 inch DIPCL	1708586 & 1806830	2019 Docet	\$ 487,000	\$ 520,000	\$ 540,000	\$ 602,707	\$ 607,926	Nashua	Yes	\$ 27.81	\$ 16,906	\$ -	Increased due to conditions encountered during construction and additional temporary paving
Pennichuck Street	Replish 100 LF of 12 inch CI with 12 inch DIPCL	170993 & 1806831	2019 Docet	\$ 39,900	\$ 42,000	\$ 76,000	\$ 76,000	\$ 78,146	Nashua	Yes	\$ 27.81	\$ 2,173	\$ -	Increased due to conditions encountered during construction and additional temporary paving
Earl Street	Replish 385 LF of 6" CI with 8" DIPCL	1806836	2019 Docet	\$ -	\$ 119,000	\$ 119,000	\$ 161,636	\$ 161,632	Nashua	Yes	\$ 27.81	\$ 4,495	\$ -	Added to Misc Replacements to improve fire protection near hospital
Provo Avenue	Replish 310 LF of 6 inch CI and 2 PVC with 6 inch and 4 inch DIPCL	172991 & 1806801	2019 Docet	\$ 46,200	\$ 38,346	\$ 38,346	\$ 115,917	\$ 114,888	Nashua	Yes	\$ 27.81	\$ 3,195	\$ -	Reduce based on bid numbers does not include final paving
Bassett Avenue	Replish 775 LF of 8 inch and 275 LF of 6 inch CI with 775 LF of 8 inch and 225 LF of 4 inch DIPCL	172992 & 1806802	2019 Docet	\$ 237,400	\$ 197,374	\$ 197,374	\$ 255,478	\$ 256,460	Nashua	Yes	\$ 27.81	\$ 7,143	\$ -	Final Paving completed in 2018
Tyler Street (Main St to Lynn)	Replish 2084 LF of 6 inch CI with 8 inch DIPCL	1806803	2019 Docet	\$ 177,800	\$ 142,504	\$ 152,600	\$ 651,568	\$ 651,408	Nashua	Yes	\$ 27.81	\$ 18,117	\$ -	Amount of replacement pipe increased from 790 LF to 2084 LF, includes final paving
Buonetti Street	Replish 535 LF of 6 inch CI with 12 inch DIPCL	1806804	2019 Docet	\$ 172,800	\$ 143,424	\$ 143,424	\$ 205,565	\$ 204,647	Nashua	Yes	\$ 27.81	\$ 5,663	\$ -	Final Paving completed in 2018
Field Street	Replish 325 LF of 6 inch CI with 6 inch DIPCL	1806433	2019 Docet	\$ 71,700	\$ 39,311	\$ 39,311	\$ 67,944	\$ 67,483	Nashua	Yes	\$ 27.81	\$ 1,277	\$ -	Final Paving completed in 2018
Replish 420 LF of 6 inch CI with 12 inch DIPCL	Replish 420 LF of 6 inch CI with 12 inch DIPCL	1806794	2019 Docet	\$ 191,000	\$ 131,070	\$ 131,070	\$ 132,779	\$ 132,779	Nashua	Yes	\$ 27.81	\$ 3,159	\$ -	Final Paving completed in 2018
Replish 760 LF of 6 inch CI with 8 inch DIPCL	Replish 760 LF of 6 inch CI with 8 inch DIPCL	1806795	2019 Docet	\$ 191,000	\$ 158,530	\$ 158,530	\$ 182,994	\$ 183,004	Nashua	Yes	\$ 27.81	\$ 5,091	\$ -	Final Paving completed in 2018
Seymour Street	Replish 760 LF of 8 inch CI and 160 LF of 6 inch CI with 760 LF of 8 inch and 160 LF of 4 inch DIPCL	1806797	2019 Docet	\$ 40,000	\$ 31,200	\$ 40,200	\$ 264,258	\$ 264,508	Nashua	Yes	\$ 27.81	\$ 7,352	\$ -	The \$40,200 in the Budget approved budget was a copy and paste error. The correct budget for this project based on the distribution engineer's original estimate was \$55,400.
Evergreen Street	Replish 310 LF of 1.5 and 1.25 inch CI with 4 inch DIPCL	1806798	2019 Docet	\$ 69,500	\$ 57,519	\$ 57,519	\$ 71,995	\$ 71,695	Nashua	Yes	\$ 27.81	\$ 1,594	\$ -	Final Paving completed in 2018
Morton Street	Replish 200 LF of 1.5 inch CI with 160 LF of 2 inch CI with 300 LF of DIPCL and 160 LF of 4 inch DIPCL	1806799	2019 Docet	\$ 94,000	\$ 78,601	\$ 78,602	\$ 103,934	\$ 104,053	Nashua	Yes	\$ 27.81	\$ 2,493	\$ -	Final Paving completed in 2018
Park Avenue	Replish 300 LF of 8 inch CI and 160 LF of 2 inch CI with 300 LF of DIPCL and 160 LF of 4 inch DIPCL	1806796	2019 Docet	\$ 132,000	\$ 109,560	\$ 109,560	\$ 180,970	\$ 180,796	Nashua	Yes	\$ 27.81	\$ 5,028	\$ -	Final Paving completed in 2018. Original budget assumed paving would be completed in 2019
Camden Woods (all side streets)	Replish 4400 LF of 2 inch PVC with 4 inch DIPCL	n/a	2019 Docet	\$ 1,024,400	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Deferred to future, time frame undetermined
Northeast High Pressure System Improvements	Loosening of dead end mains. Parallel watermain required to rebuild Kessler Tank	2019 Docet	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	\$ -	Project needed to be deferred to complete other water main replacement projects that came up in 2018
Northeast High Pressure System Improvements	Add 2700 LF of 24 inch DIPCL to													

Project Name/Description	Project Description	Work Order #	Financing Docket No.	Approved Budgeted Amount	Estimated Project Cost as of 6/30/2018	Estimated Project Cost as of 9/30/2018	Estimated Project Cost as of 11/30/2018	Final Project Cost as of 12/31/2018	Community	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Shakespeare High Pressure System	Expand JHP system to address pressure issues to 4 streets	1813926	2019 Docket	\$ -	\$ 27,300	\$ 230,000	\$ 230,000	\$ 211,981	Nashua	Yes	\$ 27.81	\$ 5,894	Project developed in response to a combination of low pressure and pressure surges causing customer plumbing issues.
Lakewood Avenue	Replace 275 LF of 1.25" and pipe with 4" PVC	n/a	2019 Docket	\$ -	\$ 75,000	\$ -	\$ -	\$ -	Nashua	Yes	\$ 29.82	\$ -	Gas Company with late start. Project requires temporary water. Deferred to 2019
Cheshire Street	Replace 394 LF of 8" AC with 394 LF of 12" DIPC1	1823913	2019 Docket	\$ -	\$ -	\$ 123,000	\$ 183,386	\$ 183,307	Nashua	Yes	\$ 27.81	\$ 5,109	Eliminate AC water main located in Street that City added to their 2018 street paving project. Final paving completed in 2018.
Investment in developer installed services at 13 annual revenue	Per tariff (224)	n/a	2019 Docket	\$ -	\$ -	\$ 133,175	\$ 133,175	\$ 141,179	Various	Yes	\$ 28.40	\$ 4,009	Tariffed investment not included in Board approved budget
Chase Street	Replace 430 LF of 6" CI with 4" HDPE	1829925	2019 Docket	\$ -	\$ -	\$ -	\$ 134,600	\$ -	Nashua	Yes	\$ 27.81	\$ -	Completed in conjunction with a City of Nashua Sewer Replacement. City covering Street reconstruction
Booster/Well/Chem Feed pump replacements	Booster/Well/Chem Feed pump replacements (13 YTD)	60, 61, 62 & 63 workorders	2019 Docket	\$ 60,000	\$ 60,000	\$ 60,000	\$ 48,354	\$ 50,869	Various	Yes	\$ 28.40	\$ -	\$ 1,446
Replace 2 Submersible Jet Pumps	Replace two submersible jet pumps at the handworks at the WTP	1818297	2019 Docket	\$ -	\$ -	\$ 14,707	\$ 14,707	\$ 14,707	Nashua	Yes	\$ 27.81	\$ 409	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	n/a	2019 Docket	\$ 15,000	\$ 15,000	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Misc. Structural Improvements	Misc. Structural Improvements	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 5,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Misc. Structural Improvements	WTP - Replace F/WPS on Tank Leak Monitor	1820031	2019 Docket	\$ -	\$ -	\$ 1,200	\$ 5,331	\$ 3,331	Nashua	Yes	\$ 27.81	\$ 93	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 5,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Replacement of 18" Backwash Actuator	The replacement of the electric valve actuator for the 18" backwash water control valve	1819988	2019 Docket	\$ -	\$ -	\$ 4,456	\$ 4,456	\$ 4,456	Nashua	Yes	\$ 27.81	\$ 124	
Miscellaneous SCADA/ Electrical	Miscellaneous SCADA/ Electrical	n/a	2019 Docket	\$ 30,000	\$ 30,000	\$ 10,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Miscellaneous SCADA/ Electrical	WTP - Replace High Lift #4, Soft Starter Mechanism	1813113	2019 Docket	\$ -	\$ -	\$ 5,265	\$ 5,265	\$ 5,265	Nashua	Yes	\$ 27.81	\$ 146	
Miscellaneous SCADA/ Electrical	WTP - Replace Turbidity Controller - Filters 1A/1B	1805725	2019 Docket	\$ -	\$ -	\$ 3,246	\$ 3,246	\$ 3,246	Nashua	Yes	\$ 28.40	\$ 92	
Miscellaneous SCADA/ Electrical	Install CMI units on 4 meters at this location	1818556	2019 Docket	\$ -	\$ -	\$ 3,572	\$ 3,572	\$ 3,572	Nashua	Yes	\$ 27.81	\$ 99	
Miscellaneous SCADA/ Electrical	Replacement of the variable frequency drive unit for pump #2 at this location	1819999	2019 Docket	\$ -	\$ -	\$ 9,765	\$ 9,765	\$ 9,765	Nashua	Yes	\$ 28.40	\$ 277	
Well Rehabilitation	Well Rehabilitation	n/a	2019 Docket	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	No well rehabilitations projected to occur
WTP Structural/IVAC	WTP Structural/IVAC	n/a	2019 Docket	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	
WTP Structural/IVAC	The scheduling of the testing/M. need top unit for WTP Finished Water Pump Station	1818208	2019 Docket	\$ -	\$ -	\$ 6,094	\$ 6,094	\$ 6,094	Nashua	Yes	\$ 27.81	\$ 169	
Purchase new lab equipment	Purchase new lab equipment	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 5,000	\$ -	\$ -	Nashua	No	\$ 27.81	\$ -	
Purchase new lab equipment	Replace Combined Filter Effluent Chlorine Analyzer	1820254	2019 Docket	\$ -	\$ -	\$ 3,573	\$ 3,573	\$ 3,573	Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	2019 Docket	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	None projected through year end
Miscellaneous new vehicle #212	Vehicle needed for new Community Water System Operator	1816162	2019 Docket	\$ -	\$ 65,000	\$ 39,513	\$ 39,513	\$ 41,478	Nashua	Yes	\$ 27.81	\$ -	
Replace Vehicle	Replacement of vehicle #62	1825400	2019 Docket	\$ 65,000	\$ 65,000	\$ 50,000	\$ 48,574	\$ 42,574	Nashua	No	\$ 27.81	\$ -	Project reduced by \$6,000 for trade in value.
Replace Vehicle	Replacement of vehicle #38	1819999	2019 Docket	\$ 40,000	\$ 40,000	\$ 27,306	\$ 30,981	\$ 27,581	Nashua	No	\$ 27.81	\$ -	Project reduced by \$2,500 for trade in value.
WTP Damaged Assets	WTP Damaged Assets	n/a	2019 Docket	\$ 80,000	\$ 80,000	\$ -	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Deferred to 2019 due to resource availability.
Bowen Dam Spillway reconstruction engineering	Bowen Dam Spillway reconstruction engineering	1824545	2019 Docket	\$ 90,000	\$ 90,000	\$ 50,000	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Not Eligible for 2018 QCPAC, as this is engineering only
WTP Camera system upgrade	Existing Camera system is outdated	1819073	2019 Docket	\$ 50,000	\$ 50,000	\$ 4,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Equipment will not be installed until 2019
Designing feasibility study	Designing feasibility study	1807145	2019 Docket	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,673	\$ -	Various	No	\$ 28.40	\$ -	Study is not QCPAC Qualified
Seawater Protection Study	Seawater Protection Study	1807146	2019 Docket	\$ 15,000	\$ 15,000	\$ 15,000	\$ -	\$ -	Various	No	\$ 28.40	\$ -	Study is not QCPAC Qualified
Purchase replacement Aeration system compressor	Harris Pond raw water aeration system, replace 1 of 2	1829845	2019 Docket	\$ -	\$ -	\$ 17,000	\$ 17,000	\$ 16,889	Nashua	Yes	\$ 27.81	\$ 470	Reduced existing compressor which was not repairable.
Purchase new lab equipment	Purchase bench top Zeta potential analyzer	1825977	2019 Docket	\$ -	\$ -	\$ 75,000	\$ 75,000	\$ 38,573	Nashua	Yes	\$ 27.81	\$ 1,067	Devices used to verify and correlate seawater current monitors and further optimize treatment process
WTP Damaged Assets	Replacement of two older units, 1 currently not operational	1829848	2019 Docket	\$ 65,000	\$ 65,000	\$ 65,000	\$ 10,023	\$ 10,023	Nashua	Yes	\$ 27.81	\$ 277	Devices used to optimize water treatment at Nashua Facility. Purchase in new lab equipment line above.
Aquatic Vegetation Assessment and Management	Aquatic Vegetation Assessment and Management	1807147	2019 Docket	\$ 7,500	\$ 7,500	\$ 7,500	\$ -	\$ -	Various	No	\$ 28.40	\$ -	Study is not QCPAC Qualified
WTP - Replace Filter to Waste Valve Actuator	Replace valve actuator that controls flow of water from filters during waste/backwash phase	1800482	2019 Docket	\$ -	\$ -	\$ 6,276	\$ -	\$ 6,276	Nashua	Yes	\$ 27.81	\$ 175	
Website Upgrades	Improved Customer Service Experience	1814346, 1704175 &	2019 Docket	\$ 10,000	\$ 19,068	\$ 19,068	\$ -	\$ 4,500	Merriam	No	\$ 28.02	\$ -	Project deferred until 2019
SIEM Appliances	Aggregate Real-time monitoring of system alerts and logs	n/a	2019 Docket	\$ 26,000	\$ -	\$ -	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Project Cancelled due to reduced need
Windows Server Licensing Renewal	Purchase Windows server for virtual servers	1813466	2019 Docket	\$ -	\$ 22,925	\$ 22,925	\$ 22,925	\$ 22,925	Merriam	No	\$ 28.02	\$ -	The consolidation of multiple new Windows Server licenses from multiple projects into one Enterprise License to cover all virtual servers. Project finished
AD Change Auditor	Needed to track changes to Authentication Server	n/a	2019 Docket	\$ 4,000	\$ 4,000	\$ -	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Due to the licensing model moving from Purchase to Subscription based, this will become an expense item
File Server Replacement	Replace older hardware	n/a	2019 Docket	\$ 13,000	\$ 13,000	\$ -	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Project Cancelled due to reduced need
Storage Upgrade	Replace non-supported hardware and increase speed	1817426	2019 Docket	\$ 70,000	\$ 52,000	\$ 32,000	\$ 43,785	\$ 45,197	Merriam	No	\$ 28.02	\$ -	Project Complete
Maint FER Enhancements	Needed as Business process change	n/a	2019 Docket	\$ 64,000	\$ 64,000	\$ 64,000	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Project deferred until 2019
Check Mobile Application Changes	Needed as Business process change	n/a	2019 Docket	\$ 30,000	\$ 30,000	\$ 30,000	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Deferred to 2019
Click/Mobile Move to iPad	Move to a more functional device	1807440	2019 Docket	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 249,378	Merriam	No	\$ 28.02	\$ -	Hardware purchases and Contractor charges
Additional iPad for Meter Techs	Configuration and deployment of 6 devices	1825224	2019 Docket	\$ -	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	Merriam	No	\$ 28.02	\$ -	Deferred until 2019
Improved Customer Service Experience	Improved Customer Service Experience	n/a	2019 Docket	\$ 4,000	\$ 4,000	\$ -	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	
Miscellaneous Hardware	Run Rate replacements	n/a	2019 Docket	\$ 15,000	\$ 15,000	\$ 2,500	\$ 2,500	\$ -	Merriam	No	\$ 28.02	\$ -	
Miscellaneous Hardware	Purchase network switch for core routing @ Manchester Street	1813280	2019 Docket	\$ -	\$ -	\$ 4,203	\$ 4,203	\$ 4,203	Merriam	No	\$ 28.02	\$ -	
Miscellaneous Hardware	Cable/Wire Laptops	1818947	2019 Docket	\$ -	\$ -	\$ 4,642	\$ 4,642	\$ 4,642	Merriam	No	\$ 28.02	\$ -	Replaced desktops. Allows for remote access via VPN
Miscellaneous Hardware	Replacement Printer - Engineering	1817323	2019 Docket	\$ -	\$ 2,249	\$ 2,249	\$ 2,249	\$ 2,249	Merriam	No	\$ 28.02	\$ -	Replaced failed engineering printer
Miscellaneous Software	Run Rate replacements	n/a	2019 Docket	\$ 12,000	\$ 12,000	\$ 12,000	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	No plan for the rest of the year. Will request from contingency fund if something comes up
IDS upgrade	Allow for Electronic Data Collection in the Field	1817795	2019 Docket	\$ 11,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 939	Merriam	No	\$ 28.02	\$ -	No additional project costs expected
Physical Server for Pearl	Physical Server for Pearl	n/a	2019 Docket	\$ 12,000	\$ -	\$ -	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Project Cancelled due to reduced need
Corporate Job Scheduler	Centralized nightly job management and notification	n/a	2019 Docket	\$ 4,000	\$ 4,000	\$ 4,000	\$ -	\$ -	Merriam	No	\$ 28.02	\$ -	Deferred
Consulting	Consulting	n/a	2019 Docket	\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000	\$ -	Merriam	No	\$ 28.02	\$ -	
Laptops for LG & DW	Laptops for LG & DW	1813464	2019 Docket	\$ 4,000	\$ 5,442	\$ 5,442	\$ 5,442	\$ 5,442	Merriam	No	\$ 28.02	\$ -	These Laptop tags acquired for LG, G.T. and J.B. Replaced desktops. Allows for remote access via VPN. Project Complete
Additional Computers	Additional Computers	1814843	2019 Docket	\$ 4,000	\$ 5,717	\$ 5,717	\$ 5,717	\$ 5,717	Merriam	No	\$ 28.02	\$ -	Project Complete
Replaces 43 desktop computers at Main office	Computers are 7 years old and running on unsupported Windows 7 platform	1825498	2019 Docket	\$ -	\$ -	\$ 41,267	\$ 41,267	\$ 49,614	Merriam	No	\$ 28.02	\$ -	Moved project from 2019 to 2018
Office 365 Exchange Migration	Office 365 Exchange Migration	1817818	2019 Docket	\$ -	\$ 6,200	\$ 6,200	\$ 6,200	\$ 7,717	Merriam	No	\$ 28.02	\$ -	
VPN Update	VPN appliances to better support our mobile workforce	1824579	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 3,366	Merriam	No	\$ 28.02	\$ -	
Bedfordham St	Water Main Replacement	1817715	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 5,239	Nashua	Yes	\$ 27.81	\$ 146	2018 Spring clean up associated with water main project completed in 2017
Bedford Water System Expansion	6" P" Meters	1820043	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 10,947	Bedford	Yes	\$ 24.76	\$ 271	Meters and Radon for PFOA customers in Bedford
GIS/GIS/Work	GIS/GIS/Work	1813962	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 13,860	Nashua	Yes	\$ 28.40	\$ 379	
2017 Phase 2 Install Overhead Crane and Door-WTP Process Area Design	2017 Phase 2 Install Overhead Crane and Door-WTP Process Area Design	1814354	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 12,412	Nashua	Yes	\$ 27.81	\$ 345	
New Virtual Server	New Virtual Server	1819083	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 16,321	Merriam	Yes	\$ 28.02	\$ 472	
Replaces VXD	Replaces VXD, Booster #2, Orchard Ave Station	1819288	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 1,719	Nashua	Yes	\$ 27.81	\$ 48	
Quinnboro, RI 8236	Backup and Disaster Recovery Device	1617283	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 27,998	Merriam	No	\$ 28.02	\$ -	
W. Aldo St. Water Main Replacement - Main Street Nashua Intersections	W. Aldo St. Water Main Replacement - Main Street Nashua Intersections	1706032	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 77,969	Nashua	Yes	\$ 27.81	\$ 778	
W. Aldo Street Phase II (Main to end) Int with Main Street Nashua Inter	W. Aldo Street Phase II (Main to end) Int with Main Street Nashua Inter	1706076	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 6,331	Nashua	Yes	\$ 27.81	\$ 182	
TIG Welder	TIG Welder	1900049	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 2,955	Merriam	No	\$ 28.02	\$ -	
Utility Truck Replacement	Replacement of #47 with Truck #315	1900418	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 62,313	Merriam	No	\$ 28.02	\$ -	
Additional French Drains	Additional French Drains	1824037	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 22,241	Merriam	No	\$ 28.02	\$ -	
Overhead Crane and Door	WTP Process Area Installation	1807303	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 17,761	Nashua	Yes	\$ 27.81	\$ 550	
Sweet Hill Well #13	Sweet Hill Well #13 (2018 Carryover)	1813054	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 2,408	Plaisance	Yes	\$ 26.93	\$ 70	
SCADA System Upgrade	WTP - 2018 replace all SCADA computers and upgrade system	1813303	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 30,642	Nashua	Yes	\$ 27.81	\$ 374	
Leakless Water System Expansion	Meters and Radon	1806532	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 11,591	Merriam	No	\$ 28.02	\$ -	Meters and Radon for PFOA customers in Ashcroft
#353-Service Truck Replacement (#47)	#353-Service Truck Replacement (#47)	1819945	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 1,303	Merriam	No	\$ 27.81	\$ -	
Retainage	Retainage	n/a	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ (197,247)	Nashua	Yes	\$ 27.81	\$ (5,485)	Please see the "Retainage Support" tab for breakdown of amount. This is retainage on projects completed above. The \$8 held in retainage will need to be recovered in 2020 QCPAC.
				\$ 10,008,000	\$ 9,932,095	\$ 6,897,086	\$ 8,690,675	\$ 8,229,377	Projected Property Tax Expense associated with 2018 QCPAC projects -				\$ 198,464

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

Total PWW Capex for 2018 - \$ 8,229,377

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Community	Taxable	Tax Rate (t)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes		DW17-183	26,101	2/2/2018	\$ 46,000	Yes	Various	Yes	\$ 28.85	\$ 1,327	
Renewed Services (20)	Replacement of failed services		DW17-183	26,101	2/2/2018	\$ 92,000	Yes	Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants		DW17-183	26,101	2/2/2018	\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Radios (2750)	Replace out of warranty failed radio meter readers		DW17-183	26,101	2/2/2018	\$ 275,000	Yes	Various	Yes	\$ 28.85	\$ 7,934	
Meters (Growth) 5/8"-2" - Core & CWS (480)	Meters (Growth) 5/8"-2" - Core & CWS (480)		DW17-183	26,101	2/2/2018	\$ 48,000	Yes	Various	Yes	\$ 28.85	\$ 1,385	
Meters 5/8"-6" Lead Meter Exchange - Core & CWS (3000)	Meters 5/8"-6" Lead Meter Exchange - Core & CWS (3000)		DW17-183	26,101	2/2/2018	\$ 300,000	Yes	Various	Yes	\$ 28.85	\$ 8,655	
Entrance Security Gate & Perimeter Fence	Entrance Security Gate & Perimeter Fence		DW17-183	26,101	2/2/2018	\$ 75,000	Yes	Merrimack	Yes	\$ 28.92	\$ 2,169	
Replace 13 yr Vac Trailer - Safety & Maint issue	Replace 13 yr Vac Trailer - Safety & Maint issue		DW17-183	26,101	2/2/2018	\$ 100,000	Yes	Merrimack	Yes	\$ 28.92	\$ 2,892	
Protectus Meter Upgrade	Spitbrook Rd Protectus Meter Upgrade		DW17-183	26,101	2/2/2018	\$ 21,000	Yes	Nashua	Yes	\$ 27.81	\$ 584	
Gilman Street	Replace 1470 LF of 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
Ellis Street	Replace 875 LF of 6 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 550,350	Yes	Nashua	Yes	\$ 27.81	\$ 15,556	
Montrose Street	Replace 310 LF of 4 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 122,270	Yes	Nashua	Yes	\$ 27.81	\$ 3,400	
W Pearl Street	Replace 260 LF of 8 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 138,050	Yes	Nashua	Yes	\$ 27.81	\$ 3,839	
Harvard Street	Replace 800 LF of 8 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 247,500	Yes	Nashua	Yes	\$ 27.81	\$ 6,883	
West Hollis Street Check Valve Pit	Install at the int of W. Hollis St and Panther Dr.		DW17-183	26,101	2/2/2018	\$ 88,000	Yes	Nashua	Yes	\$ 27.81	\$ 2,447	
NWS Improvements - Manchester Street	Add 2700 LF of 24 inch DIPCL on Manchester St.		DWGTF Financing			\$ 660,000	Yes	Nashua	Yes	\$ 27.81	\$ 18,355	
NWS Improvements -Route 101A and Route 121 (Amherst)	Add 2200 LF of 12 inch DIPCL to close loop					\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
NWS Improvements - Tinker Road	Replace 825 LF of 16 inch AC with 825 LF of 24 inch DIPCL					\$ 522,500	Yes	Nashua	Yes	\$ 27.81	\$ 14,531	
NWS Improvements - Deerwood Drive & Amherst St Intersection	Replace 1300 LF of 12 inch AC with 1300 LF of 24 inch DIPCL					\$ 467,500	Yes	Nashua	Yes	\$ 27.81	\$ 13,001	
NWS Improvements - Deerwood Dr. Northwest Blvd Loop	Add 3400 LF of 20 inch HDPE including RR pipe jacking					\$ 635,800	Yes	Nashua	Yes	\$ 27.81	\$ 17,682	
NWS Improvements Potomah Rd/ Route 101A Loop	Add 2200 LF of 12 inch DIPCL to close two loop major dead ends					\$ 484,000	Yes	Nashua	Yes	\$ 27.81	\$ 13,460	
City of Nashua Sewer - Chase Street	Replace 470 LF of 6 inch CIP with 470 LF of 6 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 176,000	Yes	Nashua	Yes	\$ 27.81	\$ 4,895	
City of Nashua Sewer - Ash Street	Replace 710 LF of 6 inch CIP with 710 LF of 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 242,000	Yes	Nashua	Yes	\$ 27.81	\$ 6,730	
City of Nashua Sewer - Lake Street	Replace 2950 LF of 6 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 990,000	Yes	Nashua	Yes	\$ 27.81	\$ 27,532	
Merrimack River Intake	Year Round Raw Water Intake from Merrimack River		DWGTF Financing			\$ 5,500,000	Yes	Merrimack	Yes	\$ 28.92	\$ 159,060	
Asset Management Outside GIS Consulting Services	Outside GIS Consulting Services		DW17-183	26,101	2/2/2018	\$ 60,000	Yes	Various	No		\$ -	
Asset Management Water Modeling Consulting	Water Modeling Consulting		DW17-183	26,101	2/2/2018	\$ 36,000	Yes	Various	No		\$ -	
Asset Management Trimble R2 Units	Trimble R2 Units		DW17-183	26,101	2/2/2018	\$ 14,000	Yes	Various	Yes	\$ 28.85	\$ 404	
Investment in developer installed services at 12 annual revenue	Per tariff		DW17-183	26,101	2/2/2018	\$ 60,000	Yes	Various	Yes	\$ 28.85	\$ 1,731	
Bower Dam reconstruction and engineering	Bower Dam reconstruction and engineering		DW17-183	26,101	2/2/2018	\$ 25,000	No	Merrimack	No		\$ -	Design Engineering Work for 2020 Dam rehabilitation
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Well Pump replacements	Well Pump replacements		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Chemical Feed pump replacements	Chemical Feed pump replacements		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Upgrade SCADA historian software, new hardware	upgrade SCADA historian software, new hardware		DW17-183	26,101	2/2/2018	\$ 150,000	Yes	Various	Yes	\$ 28.85	\$ 4,528	
Twin Ridge rebuild softener system, install radon treatment	Twin Ridge rebuild softener system, install radon treatment		DW17-183	26,101	2/2/2018	\$ 50,000	Yes	Plastow	Yes	\$ 28.85	\$ 1,443	
Misc. Structural Improvements	Misc. Structural Improvements		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased		DW17-183	26,101	2/2/2018	\$ 17,500	Yes	Various	Yes	\$ 28.85	\$ 505	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		DW17-183	26,101	2/2/2018	\$ 30,000	Yes	Various	Yes	\$ 28.85	\$ 866	
WTP Structural/HVAC	WTP Structural/HVAC		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Purchase new lab equipment	Purchase new lab equipment		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Nashua	Yes	\$ 28.85	\$ 577	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Replace Ferric Chloride Feed pump	Replace Ferric Chloride Feed pump		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Carbon media changeout-filters 1 & 2	Carbon media changeout-filters 1 & 2		DW17-183	26,101	2/2/2018	\$ 1,000,000	Yes	Nashua	Yes	\$ 28.85	\$ 28,850	
Add 3rd pump at Main Dunstable Booster, replace 1 existing	Add 3rd pump at Main Dunstable Booster, replace 1 existing		DW17-183	26,101	2/2/2018	\$ 120,000	Yes	Nashua	Yes	\$ 28.85	\$ 3,462	
Replace Kessler Farm booster pump package	Replace 20 year old package booster station pumps and piping. Piping is steel which is beginning to pit		DW17-183	26,101	2/2/2018	\$ 75,000	Yes	Nashua	Yes	\$ 28.85	\$ 2,164	
Stump Pond Subwatershed assessment	Stump Pond Subwatershed assessment		DW17-183	26,101	2/2/2018	\$ 25,000	No	Merrimack	No		\$ -	Study - Amortized expense
Stump Pond Stormwater BMP	Stump Pond Stormwater BMP		DW17-183	26,101	2/2/2018	\$ 20,000	No	Merrimack	No		\$ -	BMP Engineering and Design
Public Education -Watershed signage	Public Education -Watershed signage		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Merrimack	Yes	\$ 28.85	\$ 577	
Replace 2 Hach Turbidimeters and associated control module	Replace 2 Hach Turbidimeters and associated control module		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Fiber Conduit between WTP and Dist	Install Fiber Conduit between Water Treatment Plant and Distribution to eliminate ongoing Comcast Ethernet line to one of the buildings		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Nashua	No		\$ -	
Munis FER Enhancements	Munis FER Enhancements		DW17-183	26,101	2/2/2018	\$ 35,000	Yes	Merrimack	No		\$ -	
Wireless Access Points for Main Office	Wireless Access Points for Main Office		DW17-183	26,101	2/2/2018	\$ 14,000	Yes	Merrimack	No		\$ -	
KVM for Data Center	KVM for Data Center		DW17-183	26,101	2/2/2018	\$ 2,500	Yes	Merrimack	No		\$ -	
iOS Charging Station	Charging Station for multiple iPads to allow for upgrades across multiple devices concurrently.		DW17-183	26,101	2/2/2018	\$ 1,200	Yes	Merrimack	No		\$ -	
Digital Signage for Distribution	Digital Signage for Distribution allowing notices and schedules to be more prominently displayed		DW17-183	26,101	2/2/2018	\$ 2,000	Yes	Merrimack	No		\$ -	
VDI Pilot	A pilot to determine whether a Virtual Desktop Infrastructure would be feasible for our environment		DW17-183	26,101	2/2/2018	\$ 12,000	Yes	Merrimack	No		\$ -	
Misc Hardware	Misc Hardware		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Merrimack	No		\$ -	
Misc Software	Misc Software		DW17-183	26,101	2/2/2018	\$ 12,000	Yes	Merrimack	No		\$ -	
Website upgrades	Website upgrades		DW17-183	26,101	2/2/2018	\$ 8,000	Yes	Merrimack	No		\$ -	
Implement Customer Balances over the phone	Implement Customer Balances over the phone		DW17-183	26,101	2/2/2018	\$ 4,000	No	Merrimack	No		\$ -	
Pennichuck Water Works Projected 2019 Total Capital Expenditure Budget -						\$ 14,978,170				with QCPAC projects -	\$ 416,669	

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

Total Projected PWW QCPAC Capex for 2019 - \$ 14,968,170
Amount funded by SRF/DWGTF - \$ 8,819,800
Amount to be funded by 2020 Bond Issue - \$ 6,088,370

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Community	Taxable	Tax Rate (l)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes		DW17-183	26,101	2/2/2018	\$ 46,000	Yes	Various	Yes	\$ 28.85	\$ 1,327	
Renewed Services (20)	Replacement of failed services		DW17-183	26,101	2/2/2018	\$ 92,000	Yes	Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants (Run rate) (8 YTD)		DW17-183	26,101	2/2/2018	\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Radios (2750)	Replace out of warrantee failed radio meter readers		DW17-183	26,101	2/2/2018	\$ 275,000	Yes	Various	Yes	\$ 28.85	\$ 7,934	
Meters (Growth) 5/8"-2" - Core & CWS (480)	Meters (Growth) 5/8"-2" - Core & CWS (480)		DW17-183	26,101	2/2/2018	\$ 48,000	Yes	Various	Yes	\$ 28.85	\$ 1,385	
Meters 5/8"-6" Lead Meter Exchange - Core & CWS (1000)	Meters 5/8"-6" Lead Meter Exchange - Core & CWS (1000)		DW17-183	26,101	2/2/2018	\$ 100,000	Yes	Various	Yes	\$ 28.85	\$ 2,885	
New Utility Vehicle (2)	New Utility Vehicles to replace existing high mileage/maintenance vehicles		DW17-183	26,101	2/2/2018	\$ 130,000	Yes	Merimack	No	\$ 28.92	\$ -	
New Utility Van (2)	New Utility Vans to replace existing high mileage/maintenance vans		DW17-183	26,101	2/2/2018	\$ 70,000	Yes	Merimack	No	\$ 28.92	\$ -	
Proteus Meter Upgrade	Proteus Meter Upgrade		DW17-183	26,101	2/2/2018	\$ 22,000	Yes	Nashua	Yes	\$ 27.81	\$ 612	
Trimble Units for Meter Reading (2)	Replacement of CE Meter Reading Equipment (2)		DW17-183	26,101	2/2/2018	\$ 16,000	Yes	Merimack	No	\$ 28.92	\$ -	
Residual paving from 2019 main replacement	Residual paving from prior year main replacement		DW17-183	26,101	2/2/2018	\$ 1,012,000	Yes	Nashua	Yes	\$ 27.81	\$ 28,144	
Brook Street	Replace 225 LF of 4 inch and 915 LF of 6 inch CI with 1140 LF of 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 422,730	Yes	Nashua	Yes	\$ 27.81	\$ 11,756	
Hamilton Street	Replace 410 LF of 6 inch CI with 4 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 97,130	Yes	Nashua	Yes	\$ 27.81	\$ 2,701	
Ash Street	Replace 510 LF of 6 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 191,510	Yes	Nashua	Yes	\$ 27.81	\$ 5,326	
Burnitt Street	Replace 425 LF of 4 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 157,080	Yes	Nashua	Yes	\$ 27.81	\$ 4,568	
Burnitt Street	Replace 125 LF of 4 inch CI with 4 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 43,010	Yes	Nashua	Yes	\$ 27.81	\$ 1,196	
Verona Street	Replace 675 LF of 6 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 251,130	Yes	Nashua	Yes	\$ 27.81	\$ 6,984	
Sarasota Ave	Replace 250 LF of 6 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 92,620	Yes	Nashua	Yes	\$ 27.81	\$ 2,576	
Allid Street	Replace 1860 LF of 6 & 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 966,570	Yes	Nashua	Yes	\$ 27.81	\$ 26,880	
Lawndale Avenue	Replace 1085 LF of 6 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 546,920	Yes	Nashua	Yes	\$ 27.81	\$ 15,210	
Taylor Road (Lynn St to Fifield St)	Replace 725 LF of 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 365,750	Yes	Nashua	Yes	\$ 27.81	\$ 10,172	
Temple St (south to gorman)	Replace 900 LF of 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 457,160	Yes	Nashua	Yes	\$ 27.81	\$ 12,714	
School Street (High to W. Pearl Alleyway)	Replace 400 LF of 4 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 151,140	Yes	Nashua	Yes	\$ 27.81	\$ 4,203	
Water Main Replacement - City Sewer Projects	Replacement of various sections of CI pipe		DW17-183	26,101	2/2/2018	\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
Kessler Farm Tank Replacement	Kessler Farm Tank Replacement		DW17-183	26,101	2/2/2018	\$ 3,388,000	Yes	Nashua	Yes	\$ 27.81	\$ 94,220	
Replace Engineering Pickup	Replace Pickup with > 150,000 miles		DW17-183	26,101	2/2/2018	\$ 35,000	Yes	Merimack	No	\$ 28.92	\$ -	
Replace Engineering SUV	Replace SUV with > 150,000 miles		DW17-183	26,101	2/2/2018	\$ 30,000	Yes	Merimack	No	\$ 28.92	\$ -	
Investment in developer installed services at 1x annual revenue	Per tariff		DW17-183	26,101	2/2/2018	\$ 60,000	Yes	Various	Yes	\$ 28.85	\$ 1,731	
Bowers Dam reconstruction	Bowers Dam reconstruction		DW17-183	26,101	2/2/2018	\$ 900,000	Yes	Merimack	Yes	\$ 28.92	\$ 26,028	
WTP Perimeter fence	WTP Perimeter fence		DW17-183	26,101	2/2/2018	\$ 80,000	Yes	Merimack	Yes	\$ 28.92	\$ 2,314	
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		DW17-183	26,101	2/2/2018	\$ 55,000	Yes	Various	Yes	\$ 28.85	\$ 1,587	
Well Pump replacements	Well Pump replacements		DW17-183	26,101	2/2/2018	\$ 18,750	Yes	Various	Yes	\$ 28.85	\$ 541	
Chemical Feed pump replacements	Chemical Feed pump replacements		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS		DW17-183	26,101	2/2/2018	\$ 18,750	Yes	Various	Yes	\$ 28.85	\$ 541	
Misc. Structural Improvements	Misc. Structural Improvements		DW17-183	26,101	2/2/2018	\$ 27,500	Yes	Various	Yes	\$ 28.85	\$ 793	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased		DW17-183	26,101	2/2/2018	\$ 17,500	Yes	Various	Yes	\$ 28.85	\$ 505	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		DW17-183	26,101	2/2/2018	\$ 27,500	Yes	Various	Yes	\$ 28.85	\$ 793	
Well Rehabilitation	Well Rehabilitation		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
WTP Structural/HVAC	WTP Structural/HVAC		DW17-183	26,101	2/2/2018	\$ 7,500	Yes	Nashua	Yes	\$ 27.81	\$ 209	
Purchase new lab equipment	Purchase new lab equipment		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		DW17-183	26,101	2/2/2018	\$ 7,500	Yes	Various	Yes	\$ 28.85	\$ 216	
Replace Vehicle	Replace Vehicle		DW17-183	26,101	2/2/2018	\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW17-183	26,101	2/2/2018	\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Carbon Media changecout - filters 3 & 4	Carbon Media changecout - filters 3 & 4		DW17-183	26,101	2/2/2018	\$ 1,000,000	Yes	Nashua	Yes	\$ 27.81	\$ 27,810	
Arsenic treatment to respond to new MCL	Arsenic treatment to respond to new MCL		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Various IT Projects	Maintain and replace aging software and hardware		DW17-183	26,101	2/2/2018	\$ 300,000	Yes	Merimack	No	\$ 28.92	\$ -	
Pennichuck Water Works Projected 2020 Total Capital Expenditure Budget -						\$ 12,461,750				QCPAC projects -	\$ 326,236	

Total Projected PWW QCPAC Capex for 2020 - \$ 12,461,750

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 #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Community	Taxable	Tax Rate (l)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes			Future Financing Petition		\$ 46,000	Yes	Various	Yes	\$ 28.85	\$ 1,327	
Renewal Services (20)	Replacement of failed services			Future Financing Petition		\$ 92,000	Yes	Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants (Run rate) (8 YTD)			Future Financing Petition		\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves			Future Financing Petition		\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Radios (2750)	Replace out of warrantee failed radio meter readers			Future Financing Petition		\$ 275,000	Yes	Various	Yes	\$ 28.85	\$ 7,934	
Meters (Growth) 5/8"-2" - Core & CWS (480)	Meters (Growth) 5/8"-2" - Core & CWS (480)			Future Financing Petition		\$ 48,000	Yes	Various	Yes	\$ 28.85	\$ 1,385	
Meters 5/8"-6" Meter Exchange - Core & CWS (1000)	Meters 5/8"-6" Lead Meter Exchange - Core & CWS (1000)			Future Financing Petition		\$ 100,000	Yes	Various	Yes	\$ 28.85	\$ 2,885	
New Utility Vehicle (2)	New Utility Vehicles to replace existing high mileage/maintenance vehicles			Future Financing Petition		\$ 130,000	Yes	Merrimack	No	\$ 28.92	\$ -	
New Utility Van (2)	New Utility Vans to replace existing high mileage/maintenance vans			Future Financing Petition		\$ 70,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Protectus Meter Upgrade	Protectus Meter Upgrade			Future Financing Petition		\$ 22,000	Yes	Nashua	Yes	\$ 27.81	\$ 612	
New Vac/Valve Trailer	Replacement of 10yr old Vac for safety & Maintenance Reasons			Future Financing Petition		\$ 70,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Residual paving from prior year main replacement	Residual paving from prior year main replacement			Future Financing Petition		\$ 653,350	Yes	Nashua	Yes	\$ 27.81	\$ 18,170	
Benson Avenue	Replace 550 LF of 4 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 210,650	Yes	Nashua	Yes	\$ 27.81	\$ 5,858	
Spaulding Street	Replace 950 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 362,450	Yes	Nashua	Yes	\$ 27.81	\$ 10,080	
Alstead Avenue	Replace 240 LF of 4 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 80,300	Yes	Nashua	Yes	\$ 27.81	\$ 2,233	
Spaulding Avenue	Replace 430 LF of 6, 2, & 125 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 104,720	Yes	Nashua	Yes	\$ 27.81	\$ 2,912	
St Lazare Street	Replace 415 LF of 2 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 100,980	Yes	Nashua	Yes	\$ 27.81	\$ 2,808	
Inguils St (St Camille to end)	Replace 200 LF of 1.5 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 48,730	Yes	Nashua	Yes	\$ 27.81	\$ 1,355	
Nix Avenues	Replace 400 LF of 2 & 1.5 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 96,140	Yes	Nashua	Yes	\$ 27.81	\$ 2,674	
Copp Street	Replace 350 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 136,620	Yes	Nashua	Yes	\$ 27.81	\$ 3,799	
Gray Avenue	Replace 360 LF of 6 inch CI with 6 inch DIPCL			Future Financing Petition		\$ 112,530	Yes	Nashua	Yes	\$ 27.81	\$ 3,129	
Coburn Woods (all side streets)	Replace 4400 LF of 2 inch PVC with 4 inch DIPCL			Future Financing Petition		\$ 1,320,000	Yes	Nashua	Yes	\$ 27.81	\$ 36,709	
City Sewer Projects	Replace CI with DICLP			Future Financing Petition		\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
Sawyer Street	Replace 1600 LF of 6 inch CI with 12 inch DIPCL			Future Financing Petition		\$ 528,000	Yes	Nashua	Yes	\$ 27.81	\$ 14,684	
Woodward Street	Replace 360 LF 8 inch CI with 470 LF 8 inch DIPCL			Future Financing Petition		\$ 155,100	Yes	Nashua	Yes	\$ 27.81	\$ 4,313	
Blossom Street	Replace 2400 LF of 6 inch CI and 8 inch CI with 2400 LF of 8 inch DIPCL			Future Financing Petition		\$ 792,000	Yes	Nashua	Yes	\$ 27.81	\$ 22,026	
Lanwood Street	Replace 960 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 316,800	Yes	Nashua	Yes	\$ 27.81	\$ 8,810	
Balcom Street	Replace 1240 LF 6 inch CI with 1240 LF 8 inch DIPCL			Future Financing Petition		\$ 409,200	Yes	Nashua	Yes	\$ 27.81	\$ 11,380	
Euclid Avenue	Replace 425 LF 6 inch CI with 425LF 8 inch DIPCL			Future Financing Petition		\$ 140,250	Yes	Nashua	Yes	\$ 27.81	\$ 3,900	
Fairview Street	Replace 800 LF 6 inch CI with 800 LF 8 inch DIPCL			Future Financing Petition		\$ 264,000	Yes	Nashua	Yes	\$ 27.81	\$ 7,342	
Sargent Street	Replace 1900 LF 6 inch CI with 1900 LF 16 inch DIPCL			Future Financing Petition		\$ 627,000	Yes	Nashua	Yes	\$ 27.81	\$ 17,437	
Courtland Street	Replace 1170 LF 4 inch CI with 1170 LF 16 inch DIPCL			Future Financing Petition		\$ 386,100	Yes	Nashua	Yes	\$ 27.81	\$ 10,737	
Replace Engineering Pickup	Replace Engineering Pickup with > 150,000 Miles			Future Financing Petition		\$ 36,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Replace Engineering SUV	Replace Engineering SUV with > 150,000 Miles			Future Financing Petition		\$ 30,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Milford Booster Station	Replace/Relocate/Upgrade the Milford Booster Station (>2MGD)			Future Financing Petition		\$ 660,000	Yes	Amherst	Yes	\$ 28.85	\$ 19,041	
Investment in developer installed services at 1xannual revenue	Per tariff			Future Financing Petition		\$ 60,000	Yes	Various	Yes	\$ 28.85	\$ 1,731	
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild			Future Financing Petition		\$ 55,000	Yes	Various	Yes	\$ 28.85	\$ 1,587	
Well Pump replacements	Well Pump replacements			Future Financing Petition		\$ 18,750	Yes	Various	Yes	\$ 28.85	\$ 541	
Chemical Feed pump replacements	Chemical Feed pump replacements			Future Financing Petition		\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS			Future Financing Petition		\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Misc. Structural Improvements	Misc. Structural Improvements			Future Financing Petition		\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased			Future Financing Petition		\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical			Future Financing Petition		\$ 30,000	Yes	Various	Yes	\$ 28.85	\$ 866	
Well Rehabilitation	Well Rehabilitation			Future Financing Petition		\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
WTP Structural/HVAC	WTP Structural/HVAC			Future Financing Petition		\$ 10,000	Yes	Nashua	Yes	\$ 27.81	\$ 278	
Purchase new lab equipment	Purchase new lab equipment			Future Financing Petition		\$ 20,000	Yes	Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects			Future Financing Petition		\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Carbon Media changeout - filters 5 & 5	Carbon Media changeout - filters 5 & 5			Future Financing Petition		\$ 1,000,000	Yes	Nashua	Yes	\$ 27.81	\$ 27,810	
Various projects	Various projects			Future Financing Petition		\$ 300,000	Yes	Merrimack	No	\$ 28.85	\$ -	
Replacement of CMMS System (Synergen)	Replacement of CMMS System (Synergen)			Future Financing Petition		\$ 1,000,000	Yes	Merrimack	No	\$ 28.85	\$ -	
Pennichuck Water Works Projected 2021 Total Capital Expenditure Budget -						\$ 11,897,670		Projected Property Tax Expense associated with		\$ 280,650		

Total Projected PWW QCPAC Capex for 2021 - \$ 11,897,670

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

Pennichuck Water Works
Accrued Liabilities - Retainage
Account # 241350-2000-001

PWW QCPAC Filing
Exhibit 2
Page 6

Accrued Liabilities - Retainage	Balance	January-18	February-18	March-18	April-18	May-18	June-18	July-18	August-18	September-18	October-18	November-18	December-18	Balance
2018 Main St Area Improvement #s														
1806801/1806802/1806803/1806804/1806435/ 1806794/1806795/1806796/1806797/1806798/ 1806799/1806835	-	-	-	-	-	-	-	(20,420.50)	(25,173.63)	-	(7,475.46)	(18,821.11)	40,329.97	(31,560.73)
2018 Misc Water Main Improvement #s														
1806433/1806828/1806829/180630/180631/ 1806836/1813532	-	-	-	-	-	-	-		(17,779.21)	(25,885.53)	-	(19,591.54)	(10,501.99)	(73,758.27)
N. Granese & Sons														
Bedford Water Expansion PWW #1800734	-	-	-	-	-	-	-	-	-	(13,038.50)	(9,790.00)	-	-	(22,828.50)
NE Earth Mechanics														
Shakespeare HP System Expansion #1813926	-	-	-	-	-	-	-	-	-	-	(19,289.07)	-	(402.00)	(19,691.07)
RWC Enterprises														
Ferryalls Ct #1825319	-	-	-	-	-	-	-	-	-	-	(3,018.00)		(6,149.45)	(9,167.45)
Kinsley St #1825911	-	-	-	-	-	-	-	-	-	-	(6,625.00)		-	(6,625.00)
W. F. Grace														
Marshall St. Water Main #1813935	-	-	-	-	-	-	-	(2,839.05)	-	(17,664.10)	-	(13,112.55)	-	(33,615.70)
TOTAL	-	-	-	-	-	-	-	(23,259.55)	(42,952.84)	(56,588.13)	(46,197.53)	(51,525.20)	23,276.53	(197,246.72)

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19
Request No. Staff 1-2

Date of Response: 3/27/19
Witness: Donald L. Ware

REQUEST: Exhibit 2, page 2: 2018 QCPAC Additions

Mast Road Replacement (PWW/PEU) Interconnection – Order 26,049 (March 11, 2019) at 2 states, “PEU will pay all costs associated with the installation of the interconnection. Those costs are estimated to be in the range of \$2.7 million. PEU will also purchase from PWW the existing unused chlorination station for \$15,000 and will use it as the pumping station for the service interconnection.” Please justify the Company’s explanation for this cost submitted as \$33,925, “...50% paid by PEU per Order #26,049 in DW 17-071. Full value of project is taxable to PWW.”

RESPONSE:

Attached please find a copy of the special contract approved by the NHPUC in Order #26,049. Please see Para. 5(g)(i) which states “Pennichuck will pay for all the costs associated with the interconnection. These costs are estimated at about \$2,700,000 and include **50% of the cost to replace about** 650 lineal feet of 8” AC water main on Mast Road that will continue to be owned and operated by PWW”. Special Contract, p. 6 (emphasis added). The \$33,925 represents the principal and interest payments that PWW funded and needs to recover associated with its 50% share of the replacement of the 650 lineal feet of 8” AC water main. This section of water main not only serves PEU but also provides water service to the Town of Merrimack waste water treatment plant. The special agreement required that the cost of replacing this section of water main would be split between PWW and PEU. PWW pays the property tax on this water main because it is the owner of the line.

SPECIAL CONTRACT – WATER

CONTRACT NO. NHPUC 1

PENNICHUCK WATER WORKS, INC.

WITH

PENNICHUCK EAST UTILITY, INC.

Date of Execution: October 10, 2018

Effective Date: October 10, 2018

Date of Termination: **Twenty Years After the Execution Date or Until Terminated Pursuant to the Terms Contained Herein**

Authorized by NHPUC Order No. 26,049, in Docket No. DW 17-071, Dated August 23, 2017.

WHOLESALE WATER SUPPLY CONTRACT

Between

PENNICHUCK WATER WORKS, INC.

AND

PENNICHUCK EAST UTILITY, INC.

WHEREAS, Pennichuck East Utility, Inc (“PEU”) is desirous of attaining a source of supply for its Litchfield customers as well as some of its customers in Londonderry, Pelham, and Windham; and

WHEREAS, Pennichuck Water Works, Inc. (“PWW”) currently provides water indirectly to PEU seasonally through the Town of Hudson’s (“Town”) distribution system between PWW and PEU through an interconnection between PWW and the Town via a Wholesale Water Supply contract dated July 12, 2005; and

WHEREAS, PEU desires to purchase water directly from PWW via an interconnection to PWW’s existing 24” water main in Merrimack along the D.W. Highway; and

WHEREAS, PWW is the franchise holder for supplying water to portions of Merrimack, New Hampshire, under the laws of the State of New Hampshire, and the rules and regulations of the New Hampshire Public Utilities Commission (“NHPUC”); and

WHEREAS, PEU is duly authorized under the law of the State of New Hampshire to supply water to all or a portion of the Town of Litchfield as well as to the portions of Londonderry, Pelham and Windham currently provide water from the Town; and

WHEREAS, PWW and PEU (together, “Parties” or individually, “Party”) now desire to enter into this Wholesale Water Supply Contract (“Agreement”) to set forth the terms, conditions, and rates with respect to PWW’s supply of water to PEU for the purpose of supplying PEU’s Litchfield, Londonderry, Pelham, and Windham customers.

NOW, THEREFORE, in consideration of the mutual agreements and promises set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Term

This Agreement shall be binding upon the Parties as of the Execution Date and in accordance with the NHPUC Order 26,049 as issued by the NHPUC on August 23, 2017 (the “Approval Date”). The initial term of this Agreement shall commence on the Execution Date hereof and shall continue for a period of Twenty (20) years (the “Initial Term”). Upon completion of the Initial Term, this Agreement shall automatically renew for two (2) additional successive terms of five (5) years each (each a “Renewal Term”) (the Initial Term and any Renewal Term being referred to herein collectively as the “Term”), unless written notice not to renew this Agreement is delivered by PEU to PWW no later than six (6) months prior to the conclusion of the then existing Term. The second additional term shall automatically renew for the last successive term unless either Party hereto delivers written notice to the other Party hereto of its intent not to renew this Agreement. Such notice must be delivered

no later than six (6) months prior to the conclusion of the then existing Term. This Agreement shall continue during the Term until nonrenewal or termination in accordance with the provisions of this Agreement.

2. Delivery Point and Metering

The water to be sold by PWW to PEU under this Agreement shall be delivered by PWW to PEU at the point of interconnection ("Interconnection Point") between PEU's water system and the PWW's water system as shown on the attached plan, which is made a part hereof as Attachment A. PEU owns the pipes and other facilities from the point ten feet outside of the receiving side of the PEU Merrimack River Booster Station ("Booster Station") in Merrimack, continuing through the Booster Station and under the Merrimack River to the point of PEU's interconnection with the Litchfield water distribution system on Route 3A. PWW will retain ownership of the water main from its connection on the D.W. Highway in Merrimack to the point of interconnection located ten feet outside the PEU Booster Station as described above.

PEU shall purchase and install a meter in the PEU Merrimack River Booster Station according to PWW's specifications and shall contribute the meter to PWW. PWW will be responsible for maintaining and testing the metering equipment ("Meter") within the PEU Booster Station, which shall be used to measure the quantity of water taken by PEU on a monthly basis. PEU shall maintain the Booster Station to ensure that the station remains warm (in excess of 45°F), dry, and accessible year-round. PEU shall provide PWW with a station key and PWW shall be allowed to access the Meter as reasonably necessary to read, operate, and maintain the Meter.

- (a) The Meter shall be inspected and calibrated by PWW in accordance with the applicable regulations of the NHPUC. A copy of any inspection and calibration reports shall be available at PWW's principal office for examination by PEU during normal business hours on reasonable prior written notice from PEU.
- (b) PEU may have the accuracy of the Meter tested by an independent third party at PEU's expense at any time, but not more frequently than once each month, provided that PEU gives PWW at least seven (7) days advance written notice of its desire to test the Meter for each test. PWW shall have the right to be present during any such test and shall be provided a written copy of all test results (whether or not PWW was present). If the Meter reads within the specifications established by the NHPUC, then the cost of such test shall be borne by PEU. If the Meter does not meet the specifications established by the NHPUC, then PWW shall have the option to re-test the Meter using an independent third party inspector at its sole cost within seven (7) days of receiving the results from PEU. If there is a discrepancy between the tests, then PWW's independent inspector's test results shall control. If PWW accepts the results provided by PEU or if PWW's independent results also reflect that the Meter does not meet the specifications established by the NHPUC, then PWW shall adjust its next bill to PEU accordingly. If the Meter test reflects that there was a deficiency of more than five percent (5%) from

the specifications established by the NHPUC, then the cost of the PEU test shall be paid by PWW.

- (c) In the case of missing or inaccurate flow records due to a faulty Meter or other malfunctioning-related circumstances, PWW shall calculate the payments due from PEU using a reasonable estimate of the flow based on past records and other relevant data for a comparable period. The estimate based on past records shall be provided to PEU and shall be binding on the Parties.

3. Quantity of Water

- (a) Maximum Daily Demand Subject to the provisions of Section 3(b), PEU shall have the right to take up to, but not in excess of, seven hundred thousand gallons of water per day (700,000 gallons per day (“GPD”)) at the Interconnection Point (provided, however, that water taken for non-training firefighting purposes and other declared emergencies shall not be counted toward such maximum quantity).
- (b) Maximum Peak Demand At all times, PEU’s peak draw at the Interconnection Point shall be limited to six hundred twenty five (625) gallons per minute (or 900,000 GPD maximum peak demand hour (provided, however, that water taken for non-training firefighting purposes and other declared emergencies shall not be counted toward such allowable draw). If PWW, in its sole discretion, determines: (i) that its water supply is inadequate to serve the needs of PEU; or (ii) that, due to circumstances beyond PWW’s reasonable control, its water supply is impaired, PWW may, upon twenty-four (24) hours’ notice to PEU, reduce the maximum volume that may be taken by PEU. PWW will promptly notify PEU when such circumstances cease to exist, and, thereupon, the rights of PEU to take water as set forth in this Section 3(a) shall be restored. In exercising its discretion concerning a reduction in the amount of water thereafter to be taken by PEU, PWW shall afford at least as favorable treatment to PEU as to its other wholesale water supply customers, except insofar as its special contracts, existing on the Effective Date, with such customers or the rules of the NHPUC require a different standard to be applied with respect to such customers. PWW will promptly employ its commercially reasonable efforts to cure such inadequacy or impairment. PEU shall not be entitled to compel PWW to supply it with any specific quantity of water nor shall it be entitled to any damages as a result of PWW’s determination that its supply is inadequate or impaired.

4. Increase in Quantity of Water

If PEU wishes to increase the maximum quantity of water that it is permitted to purchase under Section 3, it shall provide PWW with written notice sufficient for PWW to evaluate the capacity of its facilities to produce water to meet such increased demand in light of existing and reasonably anticipated additions to demand on PWW’s own system. Such notice shall be given at least one (1) year in advance of the desired implementation date of the increase. PWW shall respond to such a request within ninety (90) days, indicating whether it agrees to provide the additional supply. If PWW agrees to increase the maximum quantity of water that may be taken by PEU, PWW and PEU shall negotiate in good faith to determine the price of any such increase based on the cost of the incremental capacity. If, despite such

good faith negotiations, the parties are unable to agree on the cost of the incremental capacity, PWW shall not be required to increase the maximum quantity provided for in Section 3. Any increase in the maximum quantity of water to be purchased under this Agreement shall be reflected in a written amendment to this Agreement, signed by the Parties. Such amendment shall become effective upon approval of the NHPUC.

5. **Fees and Construction Expenses**

PEU shall pay PWW the following amounts for the water supplied or to be supplied by PWW under this Agreement:

- (a) The Base Monthly Fixed Fee ("BMFF") will be \$10,101. PWW may only adjust the BMFF in the event a new cost of service allocation study ("Cost of Service Study") is obtained by PWW and approved by the NHPUC in direct response to a regulatory change by the United States Environmental Protection Agency or the New Hampshire Department of Environmental Services which requires a material investment in, or upgrade to, the material water supply facilities that serve PEU including, for example, improvements to PWW's Nashua water treatment plant, its raw water source of supply facilities, the dams along Pennichuck Brook and any distribution facilities necessary to serve PEU. The BMFF shall only be adjusted to the extent that the material upgrade required by the regulatory change as adjudicated by the NHPUC is directly attributable to PEU's cost of service.
- (b) PEU shall pay a fixed annual fee of \$121,213.
- (c) The initial volumetric rate for purposes of calculating the monthly volumetric charge will be \$1.2635 per one hundred cubic feet ("CCF") for 300,000 GPD even if PEU uses less than 300,000 GPD. For volumes over 300,000 GPD, PEU will pay a volumetric rate of \$1.2635 per CCF. This rate is subject to final approval of the volumetric rate by the NHPUC (the "Volumetric Rate") as part of the proceeding to approve this Agreement. Thereafter, the Volumetric Rate may only be adjusted by the same percentage and at the same time as any future change in the volumetric rates for general metered service, as adjudicated by the NHPUC, which PWW charges to its core system customers in the City of Nashua.
- (d) The monthly fixed meter charge ("MFMC") shall be set at \$38.75 per month and reflects the cost to read and bill PEU on a monthly basis in addition to the cost to test the PEU wholesale meter on an annual basis. Thereafter, the MFMC may only be adjusted by the same percentage and at the same time as any future change in the volumetric rates for general metered service, as adjudicated by the NHPUC, which PWW charges to its core system customers in the City of Nashua.
- (e) Minimum Annual Purchase Volume – PEU agrees to purchase a minimum of 146,390 CCF (or 300,000 GPD) per calendar year January 1 through December 31st from PWW. If at the end of any calendar year PEU has not

purchased its minimum guaranteed amount of 146,390 CCF from PWW, then PEU will be obligated to pay PWW for the difference between the 146,390 CCF and the volume of water purchased by PEU during that calendar year at the wholesale water rate in effect between PWW and PEU as of June 30th of that year.

(f) Invoices, Payments, and Disconnection of Service

(i) PWW shall bill PEU in arrears on a monthly basis for water taken by PEU pursuant to this Agreement. Payment shall be due on delivery of each invoice and amounts unpaid after thirty (30) days shall be subject to one (1%) percent interest per month on the unpaid balance from the date of such invoice. The procedures set forth in NHPUC rule Puc 1203.11 shall govern disconnection of service for non-payment.

(ii) With respect to payments relating to the minimum guaranteed purchase of 146,390 CCF, in the event that PEU does not use the allotted base volume of 300,000 GPD or 109,500,000 gallons per year (146,390 CCF per year) over the course of the contract year, then PEU will be required to make a payment within forty-five (45) days of the end of the contract year for the shortage in usage between the minimum required usage of 146,690 CCF and the actual usage for that contract year.

(g) Construction and Regulatory Expenses

(i) PEU will pay for all the costs associated with the interconnection. These costs are estimated at about \$2,700,000 and include 50% of the cost to replace about 650 lineal feet of 8" AC water main on Mast Road that will continue to be owned and operated by PWW.

(ii) PEU will buy the existing, unused MRI chlorination station from PWW for \$15,000 (estimated net book value for this PWW asset). PEU will use this building for the pumping station required for the interconnection. PEU will own, operate, and maintain this building.

(iii) PEU will buy a six-inch turbine meter and contribute it to PWW.

(iv) PEU will pay 100% of the costs of the COSS which was required to develop the special contract, estimated at \$5,000.

(v) PEU will pay 100% of the legal costs associated with obtaining regulatory approval of the Wholesale Water Supply Contract, estimated at \$7,500.

6. Assignment and Sale

This Agreement and all of the provisions hereof shall be binding upon, and shall inure to the benefit of, the Parties and their respective successors and permitted assigns, but neither this Agreement nor any of the rights, interests, or obligations hereunder shall be assigned by

either Party hereto without the prior written consent of the other Party and approval of the NHPUC. For the avoidance of doubt, PEU agrees and acknowledges that any water provided to it by PWW shall be used only to provide service to customers within the Towns of Litchfield, Londonderry, Pelham, and Windham who are served by PEU's water system. No water shall be sold by PEU, either directly or indirectly, to any private or investor owned water utility, municipality, village district, or individual doing business or residing outside of PEU for any purpose without PWW's prior written consent.

7. Termination

- (a) Subject to the provisions of Section 7(b) of this Agreement, either Party may terminate this Agreement at any time in the event of any material breach of this Agreement by the other Party which is not cured, if curable, within the applicable cure period, or in the event that any covenant, warranty, or representation made herein by a Party is untrue or inaccurate in any material respect (any of the foregoing events, a "Material Breach").
- (b) In the event either Party wishes to terminate this Agreement by reason of a Material Breach by the other Party per Section 7(a), the Party wishing to terminate shall provide prior written notice of breach to the other Party ("Notice of Breach"). The Notice of Breach shall contain details of the alleged Material Breach and shall provide a thirty (30) day period from the date of the Notice of Breach in which to cure same, or such longer time period as the Party giving notice, at its sole and absolute discretion, may wish to provide (the "Cure Period"). The Party giving the Notice of Breach may terminate this Agreement pursuant to Section 7(a) above by written notice to the other Party in the event that the other Party fails to cure the Material Breach within the Cure Period, provided, however, that any such termination shall not be effective until six (6) months from the date of the Notice of Breach. Accordingly, in no event may this Agreement be terminated on less than six (6) months prior written notice, except as may be determined by a final order of the NHPUC.

8. Severability

If any provision contained in this Agreement shall for any reason be held invalid, illegal or unenforceable by a court of competent jurisdiction and venue in any respect, then such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein, unless the invalidity of any such provision substantially deprives either party of the practical benefits intended to be conferred by this Agreement. Notwithstanding the foregoing, any provision of this Agreement held invalid, illegal, or unenforceable only in part or degree shall remain in full force and effect to the extent not held invalid or unenforceable, and the determination that any provision of this Agreement is invalid, illegal, or unenforceable as applied to particular circumstances shall not affect the application of such provision to circumstances other than those as to which it is held invalid, illegal, or unenforceable.

9. Amendment and Modification

No waiver or modification of this Agreement or of any covenant, condition, or limitation contained herein shall be valid unless in a writing of subsequent date hereto referencing this Section 9, duly executed by the Parties hereto and subject to any required approval of the NHPUC. No evidence of any waiver or modification shall be offered or received in evidence in any proceeding, arbitration, or litigation between the Parties hereto arising out of or affecting this Agreement, or the rights or obligations of the parties hereunder, unless such waiver or modification is in writing and duly executed as aforesaid.

10. Governing Law

This Agreement shall be governed, construed and interpreted by, and in accordance with, the laws of the State of New Hampshire. Any actions concerning enforcement of this Agreement or in any way relating to the subject matter of this Agreement shall be adjudicated by the NHPUC, or its successor for resolution of the dispute. Each Party hereto expressly agrees to submit to such jurisdiction and venue as required by the NHPUC or its successor.

11. Notices

All notices, requests, demands, and other communications given pursuant to this Agreement shall be in writing and shall be deemed to have been given if they are delivered by hand or by nationally recognized overnight courier or mailed by certified or registered mail with postage prepaid to PEU or PWW, as the case may be, at the following address or to such other address as the receiving party may have given written notice to the other Party:

Notices to PWW should be delivered as follows:

Pennichuck Water Works, Inc.
25 Manchester Street
Merrimack, NH 03054
Attn: Mr. Donald L. Ware, COO

Notices to PEU should be delivered as follows:

Pennichuck East Utility, Inc.
25 Manchester Street
Merrimack, NH 03054
Attn: Mr. Larry D. Goodhue, CEO

12. Action Necessary to Complete Transaction

PEU and PWW each covenant and agree to execute and deliver all such other documents or instruments and take any action that may be reasonably necessary or advisable to evidence or effectuate the consummation of the transactions contemplated hereby, assist and facilitate the provision of the services to be provided hereunder, and otherwise to carry out the intent of the Parties hereunder.

13. Headings

The headings in each section of this Agreement are for convenience of reference only, and do not form a part hereof and in no way modify or shall be used to interpret or construe the meaning of this Agreement.

14. Compliance with the Law

Each Party hereto agrees that it is responsible at its own expense for compliance with all laws, and shall indemnify, defend and save harmless the other Party from any claim by a third Party arising out of or related to non-compliance with law.

15. Integration

This Agreement constitutes the entire agreement and understanding between the Parties regarding the subject matter hereof, and supersedes all prior or contemporaneous understandings, agreements, statements, and representation, whether written or oral, between or made by the Parties.

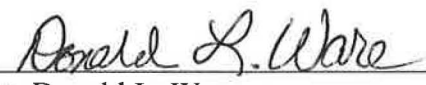
16. Counterparts

This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement may be executed on signature pages exchanged by facsimile, in which event each party shall promptly deliver to the others such number of original executed copies as the others may reasonably request.

IN WITNESS WHEREOF, the parties have caused this Wholesale Water Supply Contract to be executed by their authorized representatives as of the Execution Date.

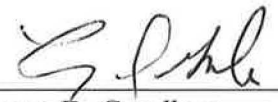
PENNICHUCK WATER WORKS, INC.


Witness

By: 
Name: Donald L. Ware
Title: Chief Operating Officer

PENNICHUCK EAST UTILITY, INC.


Witness

By: 
Name: Larry D. Goodhue
Title: Chief Executive Officer

<END OF DOCUMENT>

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19
Request No. Staff 1-3

Date of Response: 3/27/19
Witness: Donald L. Ware

REQUEST: Exhibit 2, page 3: 2019 QCPAC Additions

Please provide a current status update for the Northwest System DGWTF loan approved in DW 18-133. Please provide supporting documentation.

RESPONSE:

The DWGTF loan for the Northwest System was closed on February 12, 2019. No funds have yet been drawn on the loan but will begin to be drawn in the coming weeks, as the construction season opens up. The loan documents for this new indebtedness are attached as an exhibit to this response, as requested.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF ENVIRONMENTAL SERVICES

Drinking Water & Groundwater Trust Fund

Loan Agreement
(Pennichuck Water Works, Inc. DWGT-10)

THIS LOAN AGREEMENT (the “Agreement”), dated February 12, 2019, has two parties:

- (1) the State of New Hampshire (the “State”), whose address is c/o Department of Environmental Services, 29 Hazen Drive, P.O. Box 95, Concord, New Hampshire 03302-0095, and
- (2) the following person which is borrowing funds from the State:

Pennichuck Water Works, Inc.
25 Manchester Street
P.O. Box 1947
Merrimack NH 03054-1947
(the “Borrower”)

FUNDAMENTAL PREMISES FOR THIS AGREEMENT

A. Pursuant to New Hampshire Revised Statute Annotated (“RSA”) 6-D:1 the State has established the drinking water and groundwater trust fund for financing drinking water improvement projects within the State.

B. The Borrower is a New Hampshire corporation and a water utility subject to regulation by the Public Utilities Commission (“PUC”). The Borrower owns and operates a community public water system which serves the City of Nashua and several outlying communities in southern New Hampshire. The Borrower intends to borrow up to \$3,375,000 to finance the replacement of water mains in the Nashua water distribution area (the “Project”).

C. The State has determined that the Borrower’s request for a loan financing the cost of the Project and made in accordance with this Agreement is eligible for funding from the Drinking Water and Groundwater Trust Fund in accordance with guidelines adopted pursuant to RSA 6-D:1.

TERMS AND CONDITIONS OF THIS AGREEMENT

The State and the Borrower agree as follows:

1. Definitions. The following terms shall have the meanings indicated:

“Construction Contract” means the agreement between the Borrower and a contractor for construction of the Improvements.

“Contractor” means the contractor who enters into the Construction Contract.

“State” means the State of New Hampshire.

“DWGWT” means the Drinking Water and Groundwater Trust Fund under RSA 6-D:1.

“Engineer” means the engineer who enters into the Engineering Contract.

“Engineering Contract” means the agreement between the Borrower and an engineer for engineering the design of the Improvements or construction supervision services.

“Event of Default” has the meaning provided in Section 8.

“Guarantor” means Pennichuck Corporation.

“Guaranty” means the Guaranty made by the Guarantor of even date of this Agreement.

“Hazardous Materials” has the meaning provided in Section 10.1(a).

“Improvements” means the improvements to be constructed in accordance with the Plans.

“Legal Requirements” has the meaning provided in Section 10.1(b).

“Loan Proceeds” has the meaning provided in Section 2.

“Note” means the Borrower’s Promissory Note of even date in the principal amount of \$3,375,000 payable to the order of the State in the form attached hereto as Exhibit C.

“Plans” mean the plans, specifications, and drawings furnished and acceptable to the State.

“Premises” means the real property and real property interests of the Borrower described in Exhibit A attached hereto on or in which the Improvements will be constructed.

“PUC” means the Public Utilities Commission of the State.

“Total Budget” means the budget for all costs of constructing and equipping the Improvements set forth in Exhibit B attached hereto.

2. The State’s Agreement to Disburse Proceeds. Provided the terms, covenants and agreements hereof shall be observed and performed, the State agrees to make disbursements to the Borrower of, and the Borrower agrees to borrow from the State, an amount not to exceed the total principal amount of the Note (such disbursements made, from time to time hereafter, being hereinafter referred to as the “Loan Proceeds”).

3. Representations of the Borrower. The Borrower represents and warrants as follows:

(a) Recitals. The Recitals set forth at the beginning of this Agreement are true and correct;

(b) Plans. The Borrower will file the Plans with all governmental authorities having jurisdiction with respect to the Improvements;

(c) Approvals and Property Rights. The Borrower will obtain all necessary approvals of the Plans and all necessary permits, licenses and approvals for the construction of the Improvements from all governmental authorities having jurisdiction over the Improvements and the Premises and all property rights in the Premises necessary or appropriate for the construction, ownership and operation of the Improvements, and the Borrower has obtained all necessary governmental approvals to borrow funds in accordance with the Agreement which approvals are in full force and effect;

(d) No Violation. Construction of the Improvements will not violate any zoning, environmental, subdivision or land use ordinance, regulation or law;

(e) Utilities. All utility services necessary for the operation of the Improvements for their intended purpose are available at the boundary of the Premises, including, without limitation, water supply, storm and sanitary sewer facilities, electric, gas (if applicable), and telephone facilities, and all necessary governmental regulatory consents to the connecting of such facilities to the Improvements (when constructed) have been obtained, and all such utilities are of sufficient capacity to adequately meet all needs and requirements necessary for the operation of the Improvements for their intended purposes;

(f) Litigation. No litigation or proceedings are pending or threatened against the Borrower or the Guarantor or affecting the Improvements or the Premises that could affect the validity or priority of the Note or the Guaranty or that could affect the Borrower’s or the Guarantor’s ability to perform its obligations under this Agreement, the Note, and the Guaranty;

(g) Financial Statements. The balance sheets and financial statements of the Borrower and the Guarantor, which were submitted in connection with the Borrower’s request for the loan contemplated herein, were prepared in accordance with generally accepted principles of accounting applied on a basis consistent with that of preceding periods and are complete and correct and fairly present the financial condition of the Borrower and the Guarantor, respectively, as of said dates.

Neither the Borrower nor the Guarantor has any contingent obligations, liabilities for taxes or unusual forward or long-term commitments except as set forth in the foregoing financial statements specifically mentioned. Since the date of such financial statements, there has been no material adverse change in the financial condition of the Borrower or the Guarantor;

(h) Due Organization and Authority. Each of the Borrower and the Guarantor is a duly organized and validly existing New Hampshire corporation in good standing under the laws of the State of New Hampshire. Each of the Borrower and the Guarantor has the power and authority to own its properties and to carry on business as now being conducted and is qualified to do business in every jurisdiction where such qualification is necessary and has the power to execute and deliver, and perform its obligations under this Agreement, the Note and the Guaranty, as the case may be;

(i) No Conflict; No Required Approvals. The execution and delivery and performance by each of the Borrower and the Guarantor of their respective obligations under this Agreement, the Note and the Guaranty, as the case may be, have been duly authorized by all requisite corporate action and will not violate any provision of law, any order of any court or other agency of government, or any indenture, agreement or other instrument to which the Borrower or the Guarantor is a party, or by which it is bound, or be in conflict with, result in a breach of, or constitute (with due notice or lapse of time or both) a default under, or, except as may be provided by this Agreement, result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of the Borrower or the Guarantor pursuant to, any such indenture, agreement or instrument. Neither the Borrower nor the Guarantor is required to obtain any consent, approval or authorization from, or to file any declaration or statement with, any governmental instrumentality or other agency in connection with or as a condition to the execution, delivery or performance of this Agreement, the Note, or the Guaranty, as the case may be, except for approval and authorization from the Public Utilities Commission, which approval and authorization has been obtained;

(j) Bankruptcy. Any borrowings made by the Borrower under this Agreement do not and will not render the Borrower insolvent. Neither the Borrower nor the Guarantor is contemplating either the filing of a petition by it under any state or federal bankruptcy or insolvency laws or the liquidating of all or a major portion of its property, and neither the Borrower nor the Guarantor has knowledge of any person contemplating the filing of any such petition against it, including the properties and assets reflected in its financial statements referred to herein;

(k) No Material Misstatement. No statement of fact made by or on behalf of the Borrower, and no statement of fact made on behalf of the Guarantor, in this Agreement or in any certificate or schedule furnished to the State pursuant thereto, contains any untrue statement of a material fact or omits to state any material fact necessary to make statements contained therein or herein not misleading. There is no fact presently known to the Borrower that has not been disclosed to the State that materially affects adversely, nor as far as the Borrower can foresee, will materially affect adversely the property, business, operations or conditions (financial or otherwise) of the Borrower or the Guarantor;

(l) Taxes. Each of the Borrower and the Guarantor has filed all federal, state and local tax returns required to be filed, except that they have filed for lawful extensions for filing returns

for the most recent tax year, and has paid or made adequate provision for the payment of all federal, state and local taxes, charges and assessments;

(m) Enforceability. This Agreement and the Note, upon execution and delivery, will be the valid and binding obligations of the Borrower, and the Guaranty, upon execution and delivery, will be the valid and binding obligations of the Guarantor, in each case enforceable in accordance with their respective terms, and will not violate any other agreements or instruments to which the Borrower or the Guarantor, as the case may be, is a party or by which the Borrower or the Guarantor, as the case may be, is bound;

(n) No Broker. The making of the loan contemplated hereunder or the State's acquisition of the Note or the Guaranty will not subject the State to any claim for a brokerage commission; and

(o) Total Budget. The Borrower covenants and represents that Exhibit B attached hereto contains a complete and full enumeration of all costs (including, without limitation, hard, soft and acquisition costs) that the Borrower anticipates will be incurred in connection with the construction, the development and equipping of the Improvements and in connection with the starting up of the operation of the Improvements.

Each of the foregoing representations and warranties shall survive the making of the loan hereunder, and the Borrower shall indemnify and hold harmless the State from and against any loss, damage or liability attributable to the breach thereof, including all fees and expenses incurred in the defense or settlement of any claim arising therefrom against the State.

4. Conditions Precedent. The State's obligation to advance any of the Loan Proceeds shall be subject to the satisfaction of the following conditions precedent:

(a) Title. The Borrower shall demonstrate to the satisfaction of the State that it holds all property rights and privileges, including without limitation with respect to the Premises, necessary and appropriate for the proper construction and operation of the Improvements;

(b) Loan Documents. The Borrower and the Guarantor shall have executed and delivered to the State the Note and the Guaranty, each of which shall be in form and substance satisfactory to the State;

(c) Construction Contract. The Borrower shall prepare public bid offers for the Construction Contract. The Borrower shall receive authorization to award contracts from the State and enter into the Construction Contract with the Contractor in accordance with the requirements of such bid. The State will not advance Loan Proceeds for "hard costs" of labor and materials of the Project for equipping and construction of the Improvements excluding land acquisition expenses, if applicable, prior to the execution and delivery of the Construction Contract, but the State may advance Loan Proceeds for "soft costs" in the Total Budget, such as engineering fees, closing expenses and publication expenses before execution and delivery of the Construction Contract;

(d) Engineering Contract. The Borrower shall prepare a request for proposals for the Engineering Contract, and the Borrower shall have entered into the Engineering Contract in accordance with the requirements of such request for proposals;

(e) Assurances. The State shall receive written assurances from the Engineer and the Contractor that the State shall have the same rights as the Borrower to the continued use of the Plans, and all services related thereto for the construction of the Improvements;

(f) Opinion. The State shall receive the written opinion of counsel for the Borrower, which opinion shall be satisfactory to the State, covering such matters as shall reasonably be requested by the State;

(g) Plans. The Borrower shall deliver a complete copy of the Plans to the State which Plans shall be satisfactory to the State in all respects;

(h) Environmental Review. The State shall have received an environmental report with respect to the Premises, which report shall be satisfactory to the State;

(i) Additional Instruments. The State shall have received such additional instruments, certificates, opinions, surveys and other documents as the State may reasonably request; and

(j) No Event of Default. No Event of Default (as defined herein) nor any event which with the giving of notice or passage of time, or both, would constitute an Event of Default shall have occurred.

5. Covenants of the Borrower. Until payment in full of all sums required to be paid by the Borrower to the State under the Note and pursuant to the provisions of this Agreement the Borrower shall:

(a) Construction. Enter into the Construction Contract, which shall be binding upon the Borrower and the Contractor and cause the Improvements and any utility facilities necessary for the operation of the Borrower's business or the occupancy of the Premises and the Improvements and not currently available to the Premises to be constructed, equipped and completed, with all reasonable dispatch, but in any event within twelve (12) months from the date hereof, in accordance with the Plans and all laws, rules, regulations and requirements of governmental authorities having jurisdiction with respect to the Improvements;

(b) Changes. Make no significant changes in or amendments to the Plans without first obtaining the written approval of the State and any governmental agency whose approval is required. Minor changes in project work that are consistent with the objectives of the project and within the scope of this agreement do not require the approval of the State;

(c) Inspection. Permit the State and its representatives to enter upon the Premises and inspect the Improvements at all reasonable times and examine all detailed plans, drawings and specifications and any books and records relating to the Premises and the Improvements;

(d) Inadequate Loan Proceeds. If for any reason the amount of undistributed Loan Proceeds shall at any time be or become insufficient to pay for the completion of the Improvements, including: (i) all items set forth in the Total Budget, (ii) all incurred cost overruns and incurred costs for items not included in the Total Budget and (iii) all cost overruns and costs not included in the Total Budget that the State deems likely to be incurred (regardless of how such condition may be caused), then prior to any further disbursement of Loan Proceeds, either (A) expend from funds other than Loan Proceeds an amount equal to such deficiency for amounts shown on the Total Budget, or (B) provide the State with an unconditional and irrevocable letter of credit in an amount equal to such deficiency from a bank and in form and substance satisfactory to the State;

(e) [Intentionally left blank];

(f) Insurance. Maintain or cause to be maintained liability, casualty and/or builder's risk insurance on the Improvements and any material or equipment used or to be used to construct the Improvements or to be installed as or become part of the Improvements, and worker's compensation insurance with such companies, in such amounts and covering such risks as shall be satisfactory to the State and furnish such insurance policies to the State (premiums prepaid or, after failure by the Borrower to prepay the premiums or to procure such insurance policies, the State may procure any such insurance policies that it deems satisfactory at the expense of the Borrower), insuring the interests of the Borrower and the State, as their respective interests may appear and, upon request, certificates evidencing such insurance coverage shall be promptly delivered to the State;

(g) Casualty. If the Improvements shall be damaged or destroyed by fire or any other casualty, proceed with the restoration thereof and diligently prosecute the work of restoration to completion, provided that the Loan Proceeds shall not be advanced to pay any part of the cost of such restoration;

(h) [Intentionally left blank]

(i) Expenses. Pay, as may be demanded by the State, (i) the State's extraordinary, reasonable expenses (including attorneys' fees) that the State incurs in the approval, making and administration of the loan hereunder and (ii) the State's reasonable expenses that incurs in enforcement of this Agreement, the Note, the Guaranty and related documentation;

(j) Cooperation. Cooperate fully with the State with respect to any proceedings before any court, board or governmental agency that may in any way affect the rights of the State hereunder or any rights obtained by the State and, in connection therewith, permit the State, at its election, to participate in any such proceedings;

(k) Preserve Licenses. Do or cause to be done all things necessary to preserve, renew and keep in full force and effect its existence, rights, licenses, permits and franchises and comply with all laws and regulations applicable to it and in particular, as soon as practical following execution of this Agreement by the State, provide evidence to the State that it has filed executed copies of this Agreement, the Note and the Guaranty with the PUC;

(l) Taxes. Pay and discharge or cause to be paid and discharged all taxes, assessments and governmental charges or levies imposed upon it or upon its respective income and profits or upon any of its property, real, personal or mixed, or upon any part thereof, before the same shall become in default; provided that the Borrower shall not be required to pay and discharge or cause to be paid and discharged any such tax, assessment, charge, levy or claim so long as the validity thereof shall be contested in good faith by appropriate proceedings and it shall have set aside on its books adequate reserves with respect to any such tax, assessment, charge, levy or claim, so contested; and provided, further, that payment with respect to any such tax, assessment, charge, levy or claim shall be made before any of its property shall be seized or sold in satisfaction thereof;

(m) Notice of Proceedings. Give prompt written notice to the State of any proceedings instituted against it by or in any federal or state court or before any commission or other regulatory body, whether federal, state or local, which, if adversely determined, would have an adverse effect upon its business, operations, properties, assets, or condition, financial or otherwise;

(n) Financial Statements and Audit. If requested by the State, furnish to the State such information regarding operation, assets, business affairs and financial conditions, as the State may reasonably request and in particular shall furnish to the State (i) within ninety (90) days of the close of each fiscal year during the term of the loan, annual financial statements of each of the Borrower and the Guarantor, in each case prepared in accordance with generally accepted accounting principles and certified by the Borrower and the Guarantor, respectively, as being correct in all material respects, accompanied by an audit report of the Guarantor's respective independent certified public accountants and otherwise in form and content reasonably acceptable to the State and (ii) within forty-five (45) days of the close of each fiscal quarter during the term of the loan, quarterly financial statements of each of the Borrower and the Guarantor, in each case prepared in accordance with generally accepted accounting principles, subject to year end adjustments and certified by the Borrower and the Guarantor, respectively, as fairly presenting the financial condition of such entity.

(o) [Intentionally left blank]

(p) Construction Loan Notice. Within five (5) business days after execution of this Agreement post a notice provided by the State in a conspicuous place on the Premises and provide the State with written certification that the Borrower has complied with this paragraph;

(q) Two Party Check Requirements. If any contract between the Borrower or its agent and any person furnishing services, material, supplies or other things shall provide that the disbursement of construction funds to pay such persons shall be by two-party check, the Borrower shall provide, or cause its agent to provide, the State with a copy of such contract; and

(r) Negative Pledge. Not incur, create, or grant or permit to exist any security interest in or lien on its real or personal property, other than any security interest related to one or more revolving lines of credit of Borrower or Guarantor of not more than ten million dollars in aggregate and liens for real property taxes or water or sewer charges similar assessments not yet due or contested in good faith, unless (i) prior written notice is provided by the Borrower to the State

describing (x) the grant of security interest or lien, (y) the real or personal property in which a security interest or lien is intended to be granted and (z) any underlying transaction pursuant to which such grant is intended to be made and (ii) the Borrower receives from the State written consent permitting such grant of security interest in or lien on such real or personal property.

(s) [Intentionally left blank]

(t) [Intentionally left blank]

(u) [Intentionally left blank]

(v) [Intentionally left blank]

(w) [Intentionally left blank]

(x) [Intentionally left blank]

(y) [Intentionally left blank]

(z) Asset Management. The Borrower is required to develop an asset management maintenance and renewal plan for the funded asset or incorporate the funded asset into the Borrowers existing asset management program. At a minimum the plan must include a commitment to asset management, financing and implementation strategy and an inventory of the funded asset(s).

6. Loan Disbursements.

6.1 Written Applications. Upon compliance with, and subject to, the provisions of this Agreement, and provided there shall exist no Event of Default under this Agreement and no condition or event which with the giving of notice or lapse of time would constitute such an Event of Default, the State shall, upon written application by the Borrower (made not less than fourteen (14) business days prior to the date of the requested disbursement under this Section 6 and made not more often than once every month), make disbursements to the Borrower from the Loan Proceeds in the amounts hereinafter specified, but not in any event to exceed, when considered in the aggregate with amounts previously advanced by the State pursuant to this Agreement, the amount of the Loan Proceeds.

6.2 Amount of Disbursement. Each such disbursement for costs incurred by the Borrower shall be disbursed by the State from the Loan Proceeds. The amount of each disbursement shall represent the total costs incurred by the Borrower and approved by the State in conformance with the Total Budget as of the date of the disbursement request form, in excess of funds required to be provided and expended by the Borrower under the terms hereof as of the date of said disbursement request form, less any amounts previously advanced by the State from the Loan Proceeds.

6.3 Application Documents. Each application for disbursement of the Loan Proceeds, must be accompanied by the following unless waived by the State in writing:

- (a) Invoices from Engineer for services in accordance with the Engineering Contract;
- (b) A completed disbursement request form signed by the authorized representative of the Borrower with the Contractor's payment estimate and invoices, in form approved by the State and with such backup information as the State may reasonably request;
- (c) A certificate of the inspecting engineer or construction supervisor as may be selected by or otherwise be satisfactory to the State, that all work performed at the site of construction as of the date of such disbursement request form has been performed in good and workmanlike manner, that all materials and fixtures usually furnished and installed at that time have been furnished and installed, all in accordance with the Plans, and that sufficient Loan Proceeds remain undisbursed to complete the Improvements in accordance with the Plans and the Total Budget;
- (d) [Intentionally left blank]
- (e) [Intentionally left blank]
- (f) [Intentionally left blank]
- (g) Any other documents that the State shall reasonably request the Borrower to provide to protect its interests, including without limitation, lien waivers of the Contractor or subcontractors.

6.4 Lien Releases or Waivers. In connection with any disbursement of Loan Proceeds, the State may require lien releases or affidavits from, or the submission of other appropriate forms by, the Borrower, the Contractor, subcontractors or materialmen as may be required by the State.

6.5 Quality of Work. No disbursement shall be made unless all work usually done at the stage of construction when the disbursement is requested is done in a good and workmanlike manner and without defects, and all materials and fixtures usually furnished and installed at that time are furnished and installed, but the State may disburse all or part of any installments before the same shall become due and payable if the State believes it advisable to do so, and all such disbursements or payments shall be deemed to have been made pursuant to this Agreement.

6.6 No Acceptance. The making of any disbursement or any part of a disbursement shall not be deemed an approval or acceptance by the State of the work theretofore done or of materials theretofore furnished.

6.7 Two Party Checks. Disbursements may be made, at the election of the State, by checks payable to the Borrower and the Contractor jointly and delivered, at the State's election, either to the Borrower or the Contractor or each subcontractor or vendor; provided, however, that disbursement shall be by check payable to the Borrower and the Contractor or any subcontractor

for which the Borrower or its agent has supplied the State with a copy of a contract as provided in Section 5(q).

6.8 Limited Duty. The Borrower agrees that the State shall assume no duty with respect to disbursement of the Loan Proceeds except to disburse upon the conditions as set forth in this Agreement.

6.9 Deemed Disbursements. Any sum which, in accordance with any provision of this Agreement shall be payable by the Borrower to the State shall, at the election of the State, be deemed a disbursement by the State to the Borrower pursuant to the provisions of this Agreement, and shall be charged against the Loan Proceeds.

7. Completion of Improvements. Upon completion in full of the Improvements, the Borrower shall promptly deliver to the State:

(a) Engineer's Certificate. A written certificate of the inspecting engineer or construction supervisor that the construction of the Improvements has been fully completed in a good and workmanlike manner in accordance with the Plans;

(b) [Intentionally left blank]

(c) Project Costs. A certificate by the Borrower, in form and substance satisfactory to the State, listing all categories of project costs and expenses in connection with the construction and completion of the Improvements and the amount paid by the Borrower with respect to each; and

(d) Permits. A copy of the applicable certificates, licenses, consents and approvals issued by governmental authorities with respect to the Improvements.

8. Events of Default. The occurrence of any of the following events shall constitute an Event of Default under this Agreement:

(a) [Intentionally left blank]

(b) Assignment. The Borrower attempts to assign its rights under this Agreement or any advance made or to be made hereunder or any interest therein, or if the Premises are conveyed or encumbered in any way except as permitted by this Agreement, in each case without the written consent of the State;

(c) Encroachment or Violation. Any survey, report or examination discloses that the Improvements or any portion thereof encroach upon or project over a street or upon or over adjoining property or violate any setback or other restriction, however created, or any zoning regulations or any building restriction of any governmental authority having jurisdiction with respect to the Improvements;

(d) Casualty. The Improvements or the Premises are materially damaged or destroyed by fire or other casualty or cause and the insurance proceeds therefrom are inadequate to rebuild or restore the Improvements or the Premises to their condition immediately prior to such casualty;

(e) Failure to Construct. The Borrower or the Contractor does not construct the Improvements in accordance with the Plans;

(f) Misrepresentation. Any representation or warranty made herein or in any report, certificate, financial statement or other instrument furnished in connection with this Agreement or any advances made hereunder, by or in behalf of the Borrower, shall prove to be false or misleading in any material respect;

(g) Mechanics' Liens. Any mechanics', laborers', materialmen's or similar statutory liens, or any notice thereof, shall be filed against the Premises and/or the Improvements in an amount in excess of \$200,000 and shall not be discharged within forty-five (45) days of such filing;

(h) Other Defaults. The Borrower shall default in the due observance or performance of any covenant, condition or agreement to be observed or performed by the Borrower under this Agreement provided that in the case of failure to comply with sections 5(d), (e), (g) or (i) the same remains unremedied for a period of thirty (30) days after the date of notice thereof to the Borrower by the State not otherwise specifically referred to in this Section 8;

(i) Other Loan Documents. Any event of default as defined in the Note or the Guaranty, or any event which with the giving of notice or passage of time, or both, would become an event of default under such instruments shall occur;

(j) Cessation of Work. Any substantial cessation occurs at any time in construction of the Improvements except for strikes, riots, or other causes beyond the Borrower's control, or if any substantial change is made in the schedule for the construction of the Improvements from that provided in the Plans or this Agreement without the approval of the State;

(k) Voluntary Bankruptcy. The Borrower or the Guarantor shall (i) apply for or consent to the appointment of a receiver, trustee or liquidator of it or any of its property, (ii) admit in writing its inability to pay its debts as they mature, (iii) make a general assignment for the benefit of creditors, (iv) be adjudicated as bankrupt or insolvent or (v) file a voluntary petition in bankruptcy, or a petition or an answer seeking reorganization or an arrangement with creditors or to take advantage of any bankruptcy, reorganization, arrangement, insolvency, readjustment of debt, dissolution or liquidation law or statute, or an answer admitting the material allegations of a petition filed against it in any proceeding under any such law;

(l) Involuntary Bankruptcy. A petition, order, judgment or decree shall be entered, without the application, approval or consent of the Borrower or the Guarantor by any court of competent jurisdiction, approving a petition seeking reorganization or approving the appointment of a receiver, trustee or liquidator of the Borrower or the Guarantor of all or a substantial part of its

assets, and such order, judgment or decree shall continue unstayed and in effect for any period of sixty (60) days;

(m) Dissolution, Etc. The death, dissolution, termination of existence, merger or consolidation (as applicable) of the Borrower or the Guarantor, a change of control of the Borrower or the Guarantor, or a sale of assets of the Borrower or the Guarantor out of the ordinary course of business without the prior written consent of the State;

(n) Other Obligations to the State. Default by the Borrower or the Guarantor in the payment or performance of any other obligations of the Borrower or the Guarantor owed to the State, whether created prior to, concurrent with, or subsequent to the obligations arising out of this Agreement, the Note or the Guaranty, as the case may be, provided such default continues after any applicable notice and expiration of any applicable grace period;

(o) Other Obligations. Default by the Borrower or the Guarantor in any other obligation for borrowed money in excess of One Hundred Thousand Dollars (\$100,000.00); and

(p) Judgment. Final judgment for the payment of money of more than Two Hundred Thousand Dollars (\$200,000.00) in excess of any insurance proceeds shall be rendered against the Borrower or the Guarantor and shall remain undischarged for a period of thirty (30) days during which execution shall not be effectively stayed.

9. State's Rights and Remedies Upon Default.

9.1 General State Rights. Upon the occurrence of any Event of Default, all obligations on the part of the State to make disbursements under this Agreement shall, if the State so elects, cease, and, at the option of the State (but subject to the terms and conditions set forth in the Note and the Guaranty), the Note shall become immediately due and payable, and the State shall thereupon be authorized and empowered to exercise any rights of foreclosure; but the State may make any disbursements or portions of disbursements, after the occurrence of any such Event of Default, without thereby waiving its right to demand payment of the Borrower's indebtedness evidenced by the Note and guaranteed by the Guaranty and without becoming liable to make any other or further advances as hereinabove contemplated by this Agreement.

9.2 [Intentionally left blank]

9.3 [Intentionally left blank]

9.4 Costs. The Borrower shall be liable to the State for all costs paid or incurred for the construction, completion and/or equipping of the Improvements, and all payments made or liabilities incurred by the State hereunder of any kind whatsoever shall be paid by the Borrower to the State on demand, with interest at the rate specified in the Note to the date of payment. The Borrower shall also reimburse the State for any expenses incurred in collection efforts and in enforcing its remedies, including, without limitation, reasonable attorney's fees.

9.5 Cumulative Rights. Upon the occurrence of any Event of Default, the rights, powers, privileges and other remedies available to the State under this Agreement or at law or in equity may be exercised by the State at any time and from time to time, whether or not the indebtedness evidenced by the Note and guaranteed by the Guaranty shall be due and payable, and whether or not the State shall have instituted any foreclosure proceedings or other action for the enforcement of its rights under the Note.

9.6 Right of Set-Off. Any deposits or other sums at any time credited by or due from the State to the Borrower and any securities or other property of the Borrower at any time in possession of the State may at all times be held or treated as collateral security for the payment of the loan, any and all liabilities of the Borrower or the Guarantor to the State. Upon an Event of Default the State may apply or set-off such deposits or other sums or property against such liabilities.

9.7 Power of Attorney. For the purpose of carrying out the provisions and exercising the rights, powers and privileges granted by this Agreement, the Borrower hereby irrevocably constitutes and appoints the State its true and lawful attorney-in-fact, with full power of substitution, to execute, acknowledge and deliver any instruments and do and perform any acts that are referred to herein in the name and behalf of the Borrower. The power vested in said attorney-in-fact is, and shall be deemed to be, coupled with an interest and cannot be revoked.

10. Hazardous Materials Indemnification.

10.1 Definitions.

(a) The term "Hazardous Materials" shall mean and include asbestos, polychlorinated biphenyls ("PCB's"), other carcinogens, oil and other petroleum products, and any other hazardous or toxic materials, wastes and substances which are defined, determined or identified as such under RSA Chapters 146-A, 146-C, 147-A and 147-B, CERCLA, or any other applicable federal, state or local laws, rules, codes or regulations or any judicial or administrative interpretation thereof; and

(b) The term "Legal Requirements" shall mean all federal, state or local laws, rules, codes or regulations, or any judicial or administrative interpretation thereof, including, without limitation, all orders, decrees, judgments and rulings imposed through any public or private enforcement proceedings, relating to Hazardous Materials or the existence, use, discharge, release, containment, transportation or disposal thereof.

10.2 Indemnification. At all times, both before and after any conveyance or foreclosure of the Improvements, each of the Borrower and the Guarantor shall at its sole cost and expense indemnify, exonerate, protect and save the State harmless against and from any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgment, suits, proceedings, costs, disbursements or expenses of any kind or nature whatsoever, including without implied limitation, attorneys' and experts' fees and disbursements, which may at any time be imposed upon, incurred by or asserted or awarded against the State and arising from or out of:

(a) Any Hazardous Materials on, in, under or affecting all or any portion of the Improvements or any areas surrounding the same before the Borrower is divested of title to the Improvements by conveyance or foreclosure or divested of possession of the Improvements following an Event of Default;

(b) The violation by either the Borrower or the Guarantor of any Legal Requirements with respect to the Improvements; or

(c) The enforcement of this Section 10 of the Agreement or the assertion by either the Borrower or the Guarantor of any defense to the obligations of the Borrower or Guarantor under this Section 10, whether any of such matters arise before or after any taking of title to or possession of all or any portion of the Improvements by the State, and specifically including therein, without limitation, the following to the extent they are a result of the matters described in clauses (a) or (b) above:

(i) costs of removal of any and all Hazardous Materials from all or any portion of the Improvements or the Premises or any areas surrounding the same;

(ii) additional costs required to take necessary precautions to protect against the release of Hazardous Materials (x) on, in, under, or affecting, the Improvements or (y) into the air, any body of water or wetland, any other public domain, or any areas surrounding the Improvements or the Premises;

(iii) costs incurred to avoid the imposition of, or to discharge, any lien on the Improvements or the Premises arising from any failure to comply with Legal Requirements;

(iv) costs incurred to comply with all Legal Requirements relating to the Improvements or any collateral for the loan evidenced by the Note, including, without limitation, fines, penalties or other charges imposed by any lawful authority; and

(v) costs and expenses incurred in ascertaining the existence or extent of any asserted violation of any Legal Requirements relating to the Improvements or the Premises and any remedial action taken on account thereof including, without limitation, the costs, fees and expenses of engineers, geologists, chemists, other scientists, attorneys, surveyors and other professionals, and testing and analyses performed in connection therewith. The foregoing shall not apply to precautionary testing which is not in response to a specific identified potential release at the Premises.

11. Assignments. The State may assign, negotiate or pledge all or any portion of its rights under this Agreement or any of its rights with respect to the Note and the Guaranty, and, in case of such assignment, the Borrower shall accord full recognition thereto. The Borrower hereby consents to the State's delivery of any and all financial or other information concerning the Borrower or the Guarantor to any assignee or participating lender. The Borrower shall not assign or attempt to assign, directly or indirectly, any of its rights under this Agreement or under any instrument referred to herein without the prior written consent of the State.

12. [Intentionally left blank]

13. General Provisions.

13.1 Captions. The captions in this instrument are for convenience and reference only and do not define, limit or describe the scope of the provisions hereof.

13.2 Number and Gender. Whenever the context so requires, reference herein to the neuter gender shall include the masculine and/or feminine gender, and the singular number shall include the plural.

13.3 Binding Effect. The terms, covenants, agreements and conditions contained herein shall extend to, include, and inure to the benefit of and be binding upon the respective heirs, executors, administrators, successors and assigns of the Borrower, as the case may be, and the successors and assigns of the State.

13.4 Notices. Any notice, demand, request or other communication given hereunder or in connection herewith shall be in writing and sent by certified mail, postage prepaid, return receipt requested, addressed to the party to receive the same at its address set forth above or at such other address as such party may hereafter designate by notice given in like fashion. Any such notice, demand, request or other communication shall be deemed given when mailed as aforesaid.

13.5 Governing Law. This Agreement has been made in the State of New Hampshire, and the provisions thereof shall be governed by and construed in accordance with the law of the State of New Hampshire (excluding the laws applicable to conflicts or choice of laws).

13.6 Entire Agreement. This Agreement, together with any and all schedules and exhibits hereto and the Note, contains the full, final and exclusive statement of the agreement of the parties with respect to the subject matter hereof and supersedes all prior understandings, representations or agreements, whether written or oral, with respect to such subject matter.

13.7 Amendment and Waiver. No amendment, modification, termination or waiver of any provision of this Agreement or the Note shall be effective unless it is in a writing executed by the State and, in the case of an amendment, modification or termination, by the Borrower.

13.8 Consent to Jurisdiction. The Borrower hereby consents to the jurisdiction of all state and local courts of the State of New Hampshire and the United States District Court of the District of New Hampshire in connection with any suit to enforce any right of the State under the Note or this Agreement.

13.9 Joint and Several. If the Borrower consists of more than one person or entity, such persons and entities shall have joint and several liability hereunder.

13.10 Severability. If any provision or condition of this Agreement is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of this Agreement.

13.11 Sovereign Immunity. Nothing contained in this Agreement, the Note or the Security Instruments shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State.

IN WITNESS WHEREOF, the State and the Borrower have each duly caused this Agreement to be executed, by their respective officers, thereunto duly authorized, as of the day and year indicated above.

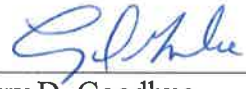
THE STATE OF NEW HAMPSHIRE


Witness

By: 
Robert R. Scott, Commissioner
Department of Environmental Services

PENNICHUCK WATER WORKS, INC.


Witness

By: 
Larry D. Goodhue
Chief Executive Officer
Duly Authorized

JOINDER OF GUARANTOR

The undersigned, being the person named as the Guarantor in the foregoing Loan Agreement, hereby joins therein and agrees to be legally and equitably bound by all of the terms, covenants, warranties, representations, conditions and thereof, this 12th day of February, 2019.

PENNICHUCK CORPORATION


Witness

By: 
Larry D. Goodhue
Chief Executive Officer

LIST OF EXHIBITS

EXHIBIT A THE PREMISES

EXHIBIT B THE TOTAL BUDGET

EXHIBIT C PROMISSORY NOTE

EXHIBIT C
PROMISSORY NOTE

\$3,375,000
(DWGT-10)

Concord, New Hampshire
February 12, 2019

FOR VALUE RECEIVED, Pennichuck Water Works, Inc., a New Hampshire corporation with a principal place of business at 25 Manchester Street, P.O. Box 1947, Merrimack, New Hampshire 03054-1947 (the "Maker"), promises to pay to the State of New Hampshire with an address of c/o Department of Environmental Services, 29 Hazen Drive, P.O. Box 95, Concord, New Hampshire 03302-0095, or its order (the "Payee"), the sum of Three Million Three Hundred Seventy Five Thousand Dollars (\$3,375,000) or such lesser amount as shall be disbursed from time to time to Borrower by State pursuant to a Loan Agreement of near or even date by and between Borrower and State (the "Loan Agreement"), in lawful money of the United States, together with interest thereon at the annual rate of one percent (1%) until June 1, 2020 ("Interest Rate Change Date") and commencing on the Interest Rate Change Date at the annual rate of 2.704% (the interest rate at any given time, the "Applicable Interest Rate") until paid in full as set forth herein. Capitalized terms used but not defined herein have the meaning given to them in the Loan Agreement.

1. Payments. The interest and principal of this Note shall be paid as follows:

(a) Commencing on the first day of the sixth month after the Interest Rate Change Date, interest only shall be paid in six (6) consecutive monthly installments on the first day of each month.

(b) Commencing with the first day of the twelfth month after the Interest Rate Change Date, the principal and interest of the Note shall be paid in Three Hundred and Sixty (360) consecutive equal monthly installments of principal and interest on the first day of each month with the installment amount calculated to amortize the principal balance of the Note over the 360 month period at the Applicable Interest Rate; provided, however, that the Maker shall have the option to elect prior to the first installment payment under paragraph 1(a) to have the interest accruing prior to the Interest Rate Change Date be capitalized and added to the principal amount of the Note rather than paid in the first installment of interest to be paid pursuant to paragraph 1(a); so long as the sum of the principal balance of the Note plus interest accruing prior to the Interest Rate Change Date (such sum being the "Capitalized Amortization Amount") shall not exceed \$3,375,000, and if the sum of unpaid principal plus interest accruing prior to the Interest Rate Change Date exceeds \$3,375,000, such excess amount of interest shall be due and payable with the first payment of interest pursuant to paragraph 1(a) above. If the Maker elects to have such interest capitalized, then the Capitalized Amortization Amount shall be paid in Three Hundred Sixty (360) consecutive equal monthly installments of principal on the first day of each month, commencing with the first day of the thirteenth month after the Interest Rate Change Date, with interest with the installments calculated to amortize the Capitalized Amortization Amount over such 360 month Period at the Applicable Interest Rate.

2. Prepayment. The Maker shall have the right to prepay any or all sums due under this Note without penalty. Prepayments shall be applied first to accrued interest and then to

principal. Partial prepayments of principal shall be applied against the outstanding principal balance; provided, however, that the Maker shall continue to make principal payments in the amounts specified above and on the dates specified above, with interest on the outstanding principal balance recomputed accordingly, until the Maker's obligations under this Note are satisfied in full.

3. Due Date; Late Payment. All payments of principal and interest shall be due on or before the due date specified above; provided, however, that the Maker shall not be deemed in default hereunder if payment is received by the Payee on or before 4:00 p.m. of the seventh day following the due date. The Maker agrees to pay a late charge of five percent (5%) of the amount of any payment due under this Note that is not paid within seven (7) days of its due date.

4. Applicable Interest. The Maker expressly agrees that the Applicable Interest Rate specified in this Note shall be the applicable interest rate due (i) on amounts outstanding during the term hereof and (ii) with respect to any amount outstanding on and after the maturity date hereof.

5. Default; Acceleration. The Maker shall be in default of this Note, and all principal and accrued interest thereon shall immediately become due and payable, without notice or demand, upon the occurrence of any of the following events: (a) failure to make prompt payment of any principal or interest installment due hereunder (or within such grace period as may be provided herein), (b) the failure of the Maker to observe or perform any of the other obligations to the Payee under this Note, and the same remains unremedied for a period of thirty (30) days after the date of notice thereof to the Maker by the Payee, (c) the occurrence of an Event of Default under the Loan Agreement or a default under the Guaranty of even date of Pennichuck Corporation (the "Guaranty") or (d) a default in any other obligation of the Maker to the Payee, whether now existing or hereinafter incurred.

If the Maker shall file a petition under any section of the Bankruptcy Code, shall make an assignment for the benefit of creditors, shall have a receiver appointed over its affairs who shall not be discharged within sixty (60) days from the date of appointment, or shall have filed against it a petition under a section of the Bankruptcy Code, or any debtor-creditor act, which petition shall not be dismissed within sixty (60) days of the date of filing of the same, then the balance of principal and interest remaining unpaid on this Note shall become due and payable forthwith without demand or notice.

6. Costs of Collection. If this Note is not paid in full when it becomes due, or if any payment required hereunder shall not be paid when due, or within such grace period as may be expressly provided herein, the Maker agrees to pay all costs and expenses of collection, including attorneys' fees, regardless of whether legal proceedings have been formally commenced.

7. Waiver of Presentment. The Maker hereby waives presentment, demand for payment, notice of dishonor, and all other notices or demands in connection with the delivery,

acceptance, performance, default, or endorsement of this Note.

8. Non-Forfeiture of Rights. It is agreed and understood that the waiver by the Payee of any particular default in the terms of this Note shall not constitute waiver of any further default and that acceptance of any payment after it is due shall not be deemed a waiver of the right to require prompt payment when due on all other sums and that acceptance of any payment after default shall not cure said default or operate as a waiver of any rights of the Payee hereunder unless otherwise agreed in writing.

9. Payments, Notices. All payments due under this Note, and any notice required to be made hereunder shall be directed to the Payee or to the Maker, as the case may be, at the addresses above specified, or such other address as the Payee and the Maker may hereafter direct, in writing.

10. Binding on Successors, Etc. The obligation of this Note shall be binding upon the heirs, successors and assigns of the Maker herein and shall inure to the benefit of the successors or assigns of the Payee herein or any holder hereof. Notwithstanding the preceding sentence, the Maker shall not assign this Note without the prior written consent of the Payee.

11. Gender. Whenever the content so requires, reference herein to the neuter gender shall include the masculine and/or feminine gender, and the singular number shall include the plural.

12. References. All references herein to the Loan Agreement and the Guaranty shall be construed to refer to such instruments as they may be amended from time to time.

13. Governing Law. The Note has been made in the State of New Hampshire, and the provisions hereof shall be governed by and construed in accordance with the laws of the State of New Hampshire (excluding the laws applicable to conflicts or choice of laws).


14. Jurisdiction. The Maker hereby consents to the jurisdiction of all state and local courts of the State of New Hampshire and the United States District Court of the District of New Hampshire in connection with any suit to enforce any rights of the Payee under this Note.

15. Guaranty. The Maker's obligations hereunder are guaranteed pursuant to the Guaranty.

16. Sovereign Immunity. Nothing contained in this Note, the Loan Agreement, or any guaranty guarantying this Note shall be deemed to constitute a waiver of the sovereign immunity of the Payee, which immunity is hereby reserved to the Payee.

EXECUTED as of the day and year first above written.

PENNICHUCK WATER WORKS, INC.



Witness

By: 

Larry D. Goodhue
Chief Executive Officer

GUARANTY

(Pennichuck Water Works DWGT-10)

THIS GUARANTY is made this 12th day of February, 2019 by Pennichuck Corporation, a New Hampshire corporation with an address of 25 Manchester Street, P.O. Box 1947, Merrimack New Hampshire 03054-1947 ("Guarantor"), to and with the State of New Hampshire with an address of c/o Department of Environmental Services, 29 Hazen Drive, P.O. Box 95, Concord, New Hampshire 03302-0095 ("State").

WHEREAS, contemporaneously herewith, subject to certain terms and conditions, State has agreed to loan to Pennichuck Water Works, Inc. a New Hampshire corporation ("Borrower"), the principal sum of Three Million Three Hundred Seventy Five Thousand Dollars (\$3,375,000), which is to be repaid with interest in accordance with the terms of a certain promissory note of even date issued by Borrower to State (the "Note") in said principal amount;

WHEREAS, Guarantor is the parent company of the Borrower owning 100% of Borrower's issued and outstanding common stock;

WHEREAS, State has advised Guarantor that it will not engage in the aforesaid transactions unless, among other things, Guarantor guarantees all obligations of Borrower under the Note, including but not limited to the punctual payment of both principal and interest due and payable, as hereinafter set forth;

WHEREAS, Guarantor is willing and has agreed to guarantee the payment of the aforesaid obligations as hereinafter provided;

WHEREAS, Guarantor will benefit from the loan evidenced by the Note;

NOW THEREFORE, in order to induce State to engage in the aforesaid loan transaction and to make said loan to Borrower and in consideration of the premises stated above and for other good and valuable consideration, the receipt of which is hereby acknowledged, Guarantor agrees as follows:

1. Guarantor hereby unconditionally and irrevocably, guarantees: (i) the due and punctual payment in full (and not merely the collectability) of the principal of the Note and the interest thereon, when due and payable, according to the terms of the Note and the Loan Agreement of even date between State and Borrower (the "Loan Agreement"); (ii) the due and punctual payment in full (and not merely the collectability) of all other sums and charges which may at any time be due and payable in accordance with, or under the terms of the Note; (iii) the accuracy of the representations and warranties made by Borrower in the Loan Agreement, and certain affidavits and certificates delivered by Borrower to State on or about the date hereof and (iv) the due and punctual performance and observance of all of the other terms, covenants and conditions contained in the Note or the Loan Agreement (collectively, the "Guaranteed Obligations").

2. Guarantor expressly agrees that State may, in its sole and absolute discretion, without notice to or further assent of Guarantor, and without in any way releasing, affecting or impairing the obligations and liabilities of Guarantor, hereunder: (i) waive compliance with, or any default under, or grant any other indulgences with respect to, the Note or the Loan Agreement; (ii) modify, amend or change any provisions of the Note (other than to increase the principal amount due under the Note); (iii) grant extensions or renewals of or with respect to the Note, and/or effect any release, compromise or settlement in connection therewith; (iv) make advances for the purpose of performing any term or covenant contained in the Note with respect to which Borrower shall be in default; (v) assign or otherwise transfer the Note, the Loan Agreement, or this Guaranty, or any interest therein; and (vi) deal in all respects with Borrower as if this Guaranty were not in effect. The obligations of Guarantor under this Guaranty shall be unconditional, irrespective of the genuineness, validity, regularity or enforceability of the Note or any security given therefor or in connection therewith or any other circumstances that might otherwise constitute a legal or equitable discharge of a surety or guarantor.

3. The liability of Guarantor under this Guaranty shall be primary, direct and immediate and not conditional or contingent upon pursuit by State of any remedies it may have against Borrower or any other party with respect to the Note, whether pursuant to the terms thereof or otherwise. No exercise or nonexercise by State of any right given to it under this Guaranty, the Note or the Loan Agreement, and no change, impairment or suspension of any right or remedy of State shall in any way affect any of Guarantor's obligations hereunder or give Guarantor any recourse against State. Without limiting the generality of the foregoing, State shall not be required to make any demand on Borrower and/or any other party, or otherwise pursue to exhaustion its remedies against Borrower or any other party, before, simultaneously with or after, enforcing its rights and remedies hereunder against Guarantor. Any one or more successive and/or concurrent actions may be brought hereon against Guarantor, either in the same action, if any, brought against Borrower and/or any other party, or in separate actions, as often as State, in its sole discretion, may deem advisable.

4. Guarantor hereby expressly waives: (i) presentment and demand for payment and protest of nonpayment; (ii) notice of acceptance of this Guaranty and of presentment, demand and protest; (iii) notice of any default hereunder or under the Note, this Guaranty and the Loan Agreement and of all indulgences; (iv) demand for observance or performance of, and enforcement of, any terms or provisions of this Guaranty, the Note, and the Loan Agreement; and (v) all other notices and demands otherwise required by law that Guarantor may lawfully waive.

5. Any claim against the Borrower or any guarantor to which Guarantor may be or become entitled (including, without limitation, claims by subrogation or otherwise by reason of any payment or performance by Guarantor in satisfaction and discharge, in whole or in part, of his obligations under this Guaranty) shall be and hereby is made subject and subordinate to the prior payment or performance in full of the Guaranteed Obligations. Nothing herein contained shall be construed to give Guarantor any right of subrogation in and to the rights of State under the Note or any instrument or agreement securing the Note until all amounts owing to State under the Note have been paid in full.

In addition to any other security given by Guarantor to State, State is hereby authorized and empowered, at its option, to appropriate and apply to the payment and extinguishment of the Guaranteed Obligations, at any time after such liability becomes payable, any and all moneys or other property of Guarantor and any proceeds thereof (including proceeds of sales provided for below) now or hereafter in the possession of State for any purpose, including safekeeping or pledge for this or any other liability of Guarantor, and including any balance on deposit or otherwise for the account of, to the credit of, or belonging to Guarantor.

6. Any notice, demand, request or other communication given hereunder or in connection herewith (hereinafter "Notices") shall be deemed sufficient if in writing and sent by certified mail, postage prepaid, return receipt requested, addressed to the party to receive such Notice at its address first above set forth or at such other address as such party may hereafter designate by Notice given in like fashion. Notices shall be deemed given when mailed.

7. Any payments made by Guarantor under the provisions of this Guaranty shall, if made to State, be made at its address first set forth above, unless some other address is hereafter designated by State.

8. All rights and remedies afforded to State by reason of this Guaranty, the Note and the Loan Agreement, are separate and cumulative and the exercise of one shall not in any way limit or prejudice the exercise of any other such rights or remedies. No delay or omission by State in exercising any such right or remedy shall operate as a waiver thereof. No waiver of any rights and remedies hereunder, and no modification or amendment hereof, shall be deemed made by State unless in writing and duly executed. Any such written waiver shall apply only to the particular instance specified therein and shall not impair the further exercise of such right or remedy or of any other right or remedy of State, and no single or partial exercise of any right or remedy hereunder shall preclude further exercise of any other right or remedy.

9. The obligations of Guarantor to make payment in accordance with the terms of this Guaranty shall not be impaired, modified, changed, released, or limited in any manner whatsoever by any impairment, modification, change, release or limitation of the liability of Borrower or its estate in bankruptcy or reorganization resulting from the operation of any present or future provision of federal bankruptcy laws or other statute or from the decision of any court.

10. Guarantor hereby covenants and agrees that, if requested by State, Guarantor will, at Guarantor's expense, annually deliver to State within ninety (90) days of the end of each fiscal year audited financial statements of the Guarantor for such fiscal year in form and content satisfactory to State.

11. Guarantor agrees that if this Guaranty shall be enforced by suit or otherwise, or if State shall exercise or endeavor to exercise any of its remedies under the Note, the Guarantor will reimburse State, upon demand, for all expenses incurred in connection therewith, including, without limitation, reasonable attorneys' fees.

12. This Guaranty has been made in the State of New Hampshire, and the provisions hereof shall be governed by and construed in accordance with the laws of the State of New Hampshire (excluding the laws applicable to conflicts or choice of laws).

13. The terms, covenants, agreements and conditions contained herein shall extend to, include, and inure to the benefit of and be binding upon the respective heirs, executors, administrators, successors and assigns of Guarantor, as the case may be, and the successors and assigns of State. Notwithstanding the preceding sentence, Guarantor shall not be permitted to assign its rights and obligations hereunder without the prior written consent of State.

14. Whenever the context so requires, reference herein to the neuter gender shall include the masculine and /or feminine gender, and the singular number shall include the plural.

15. If more than one person executes this Guaranty or if the Guarantor consists of more than one person or entity, all such persons and entities shall have joint and several liability.

16. Guarantor hereby consents to the jurisdiction of all state and local courts of the State of New Hampshire and the United States District Court of the District of New Hampshire in connection with any suit to enforce any rights of the State under this Guaranty.

17. All references herein to the Loan Agreement, the Note and this Guaranty shall be deemed to include such instruments as they may be amended from time to time.

18. If any provision or condition of this Guaranty is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of this Guaranty.

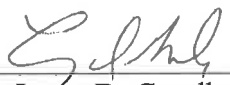
19. Nothing contained in this Guaranty, the Loan Agreement or, the Note shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State.

IN WITNESS WHEREOF, Guarantor has executed this Guaranty as of the day and year first above written.

PENNICHUCK CORPORATION



Witness

By: 

Larry D. Goodhue
Chief Executive Officer

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19
Request No. Staff 1-4

Date of Response: 3/27/19
Witness: Donald L. Ware

REQUEST: Don Ware Testimony, page 28

Please provide a detailed revenue distribution of the 2018 QCPAC (DW 18-022, Order # 26,183) between MOERR, DSRR & 0.1 DSRR from its inception to its most current distribution. Please include beginning and ending balances for each account.

RESPONSE:

The revenues projected to be collected via the 1.69% QCPAC were as follows:

Property Taxes (MOERR)	- \$122,079
Principal and Interest (DSRR)	- \$365,418
0.1 DSRR	- <u>\$ 36,542</u>
Total projected Annual 2018 QCPAC Revenues	- \$523,739

Consequently the 2018 QCPAC revenues collected were split among the various revenue accounts as follows:

MOERR percentage – $(\$122,079/\$523,739) = 23.30\%$
DSRR percentage – $(\$365,418/\$523,739) = 69.73\%$
0.1 DSRR percentage – $(\$36,542/\$523,739) = 6.97\%$

The balances for these accounts were as follows:

MOERR account balance as of 1/1/2018 – \$0
DSRR account balance as of 1/1/2018 – \$0
0.1 DSRR account balance as of 1/1/2018 – \$0

MOERR account balance as of 3/18/2019 – \$134,451
DSRR account balance as of 3/18/2019 – \$1,320,661
0.1 DSRR account balance as of 3/18/2019 – \$648,639

Please note that the activity in each of these accounts reflects not only credits and debits to each account based on QCPAC revenues but also the revenues distributed to each account in accordance with DW16-806.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19
Request No. Staff 1-5

Date of Response: 3/27/19
Witness: Donald L. Ware

REQUEST: Don Ware Testimony, page 29

Regarding the FALOC interest, please address the following:

- a) When is the current FALOC interest payment due?
- b) Please provide the accounting entries associated with the current FALOC interest payment.
- c) If the Company uses the 0.1 DSRR money to pay the FALOC interest, how long does the Company estimate the time remaining before the account balance is unable to cover debt service coverage payments due? Please provide support documentation.
- d) Is the FALOC proposal included in the current QCPAC calculations? If so, please explain. If not, does the Company propose to change the QCPAC calculation in future filings?

RESPONSE:

- a) The FALOC interest is charged on a monthly basis.
- b) The Company does not have a separate journal entry it can provide that would contain just the current FALOC interest payment. The entry for the FALOC interest is a subset of all of the monthly cash transaction entries posted from the Company's bank accounts and cash transactions. Each month when we are assessed the interest on the monthly account statement, we debit interest expense and credit cash.
- c) If the Company was to use the FALOC ratably during the year, the average outstanding balance in the FALOC would be \$5 million. The interest rate on the FALOC is a variable interest rate, but based upon a current rate estimated at 4.2%, the annual cost of the FALOC interest would be \$210,000. In accordance with estimated annual revenues nearly equivalent to the allowed revenue under DW 16-806, the money collected in the DSRR 0.1 account each year would be approximately \$680,000. As such, the DSRR 0.1 funds generated each year would be consumed at about 31%, for the FALOC interest.
- d) It is not included in the QCPAC calculations currently, but the Company does propose being allowed to use the FALOC for the payment of the accrued interest on the FALOC, and as includable in the annual QCPAC surcharge going forward.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19
Request No. Staff 1-6

Date of Response: 3/27/19
Witness: Donald L. Ware

REQUEST: John Boisvert Testimony, page 42

How does the Asset Management approach the Company is transitioning to compare to NHDES's Asset Management program? Has the Company spoken with NHDES personnel about their Asset Management program? If so, please detail why the NHDES system is not suitable for this company. If not, please explain why the company has chosen not to speak with NHDES or if it plans to speak with NHDES about this program in the future.

RESPONSE: As is detailed below, the Company has had regular conversations and meetings with NHDES personnel and the Company's approach has received favorable comments from NHDES. The Company's approach and that of the NHDES to Asset Management share the same fundamental basis. The NHDES has set up guidelines and support materials for a broad range of water and wastewater utilities (mostly municipal owned). There is not a one size fits all approach to Asset Management. The Company, based on our ownership structure (private corporation with municipal owner) and our business structure (owner of three water utilities regulated by the Commission) requires the Company's to adopt approaches and procedures to Asset Management that are different from those used by municipal utilities. However, the objective of the Company's Asset Management being "...a systematic process of operating, maintaining, upgrading and disposing of assets cost-effectively while maintaining a level of service that is acceptable to the customers." is consistent with NHDES Asset Management plan goals and objectives. The Company engages the NHDES and has been engaged by the NHDES on a regular basis on the topic of Asset Management. NHDES staff have visited the Company offices on several occasions to observe our progress and solicit input for NHDES staff to assist other utilities with their asset management programs. Company staff have presented at and participated in seminars and conferences on Asset Management organized by the NHDES at the request of the NHDES. The NHDES has supported Company's Asset Management efforts with the award of two \$15,000 grants, one in 2013 and one in 2015.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19
Request No. Staff 1-7

Date of Response: 3/27/19
Witness: Donald L. Ware

REQUEST: Re: Mr. Boivert's Testimony Page 44, Line 13 and Exhibit 2, Page 2 Capital Expenditures: Please clarify the proposed pipe replacement estimates for the following projects:

- A) Elm Street:
Testimony indicates replace 875 LF of 6 inch CI with 12 inch DIPCL while Exhibit 2 Page 2 indicates 1570 LF.
- B) Monroe Street:
Testimony indicates replace 310 LF of 4 inch CI with 8 inch DIPCL while Exhibit 2, Page 2 indicates 485 LF.
- C) W. Pearl Street:
Testimony indicates replace 260 LF of 8 inch CI with 8 inch DIPCL while Exhibit 2, Page 2 indicates 325 LF.
- D) Chase Street:
Testimony indicates replace 470 LF of 6 inch CIP with 470 LF of 6 inch DIPCL while Exhibit 2, Page 2 indicates replace 470 LF of 6 inch CIP with 470 LF of 4 inch HDPE.

RESPONSE: The pipe lengths provided in the testimony are incorrect. Exhibit 2 includes the correct footages.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 2

Date Request Received: 4/11/19
Request No. Staff 2-1

Date of Response: 4/23/19
Witness: Donald L. Ware

REQUEST: Follow up to Staff 1-4

Please provide general ledger detail, beginning balance to balance provided, for the MOERR, DSRR and 0.1 DSRR balances reported:

MOERR	\$134,451
DSRR	\$1,320,661
0.1 DSRR	\$648,639

RESPONSE:

Please see the attached for the general ledger detail, beginning balance to balance provided, for the MOERR, DSRR and 0.1 DSRR balances reported.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 2

Date Request Received: 4/11/19
Request No. Staff 2-2

Date of Response: 4/23/19
Witness: Donald L. Ware

REQUEST: Please provide an update on the 30-year bond interest rate, which was due to be established the first week of April. Please provide supporting detail.

RESPONSE:

The updated all-in total interest cost after the closing of the bond deal is 4.222191%. This interest rate is for the \$8,250,000 par amount issued which includes the project costs of \$8,229,377. Please see the attached for the final pricing numbers as well as a Schedule A that has been modified to reflect this final interest rate.

SOURCES AND USES OF FUNDS

Pennichuck Corporation (NH)
 BFA of NH, Water Facility Revenue Bonds (Pennichuck Water Works, Inc. Project), Series 2019
 MMD Date: March 27, 2019
 Treasury Date: March 28, 2019
 Pricing Date: March 28, 2019
 S&P 'A+' Rating, Negative Outlook
 FINAL PRICING NUMBERS

Dated Date 04/04/2019
 Delivery Date 04/04/2019

Sources:	Water Facility Revenue Bonds (Pennichuck Water Works, Inc. Project), Series 2019A (AMT)	Water Facility Revenue Bonds (Pennichuck Water Works, Inc. Project), Series 2019B (Taxable)	Total
Bond Proceeds:			
Par Amount	8,080,000.00	170,000.00	8,250,000.00
Net Premium	325,990.35		325,990.35
	8,405,990.35	170,000.00	8,575,990.35
Uses:	Water Facility Revenue Bonds (Pennichuck Water Works, Inc. Project), Series 2019A (AMT)	Water Facility Revenue Bonds (Pennichuck Water Works, Inc. Project), Series 2019B (Taxable)	Total
Project Fund Deposits:			
Capital Expenditure Reimbursement	8,173,410.00	55,967.00	8,229,377.00
Delivery Date Expenses:			
Cost of Issuance	173,416.26	74,164.74	247,581.00
Underwriter's Discount	55,308.59	35,736.26	91,044.85
	228,724.85	109,901.00	338,625.85
Other Uses of Funds:			
Additional Proceeds	3,855.50	4,132.00	7,987.50
	8,405,990.35	170,000.00	8,575,990.35

BOND SUMMARY STATISTICS

Pennichuck Corporation (NH)
 BFA of NH, Water Facility Revenue Bonds (Pennichuck Water Works, Inc. Project), Series 2019
 MMD Date: March 27, 2019
 Treasury Date: March 28, 2019
 Pricing Date: March 28, 2019
 S&P 'A+' Rating, Negative Outlook
 FINAL PRICING NUMBERS

Dated Date	04/04/2019
Delivery Date	04/04/2019
Last Maturity	04/01/2049
Arbitrage Yield	3.907912%
True Interest Cost (TIC)	4.018242%
Net Interest Cost (NIC)	4.069233%
All-In TIC	4.263475%
Average Coupon	4.222191%
Average Life (years)	18.618
Duration of Issue (years)	12.411
Par Amount	8,250,000.00
Bond Proceeds	8,575,990.35
Total Interest	6,485,338.40
Net Interest	6,250,392.90
Total Debt Service	14,735,338.40
Maximum Annual Debt Service	525,798.00
Average Annual Debt Service	491,314.42
Underwriter's Fees (per \$1000)	
Average Takedown	10.000000
Other Fee	1.035739
Total Underwriter's Discount	11.035739
Bid Price	102.847824

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Taxable Term Bond	170,000.00	100.000	3.380%	0.992	15.30
Serial Bonds	1,490,000.00	113.307	5.000%	6.321	917.80
Term Bond Due 2034	1,170,000.00	113.821	5.000%	13.099	1,064.70
Term Bond Due 2039	1,460,000.00	98.833	3.875%	18.070	1,985.60
Term Bond Due 2049	3,960,000.00	99.572	4.125%	25.835	6,692.40
	8,250,000.00			18.618	10,675.80

	TIC	All-In TIC	Arbitrage Yield
Par Value	8,250,000.00	8,250,000.00	8,080,000.00
+ Accrued Interest			
+ Premium (Discount)	325,990.35	325,990.35	325,990.35
- Underwriter's Discount	-91,044.85	-91,044.85	
- Cost of Issuance Expense		-247,581.00	
- Other Amounts			
Target Value	8,484,945.50	8,237,364.50	8,405,990.35
Target Date	04/04/2019	04/04/2019	04/04/2019
Yield	4.018242%	4.263475%	3.907912%

	DW16-806 Approved Step Revenue Requirements (11)		Requested QCPAC For 2017 Capital Additions pro formas		Requested QCPAC Surcharge for 2017 Capital Additions		Projected QCPAC For 2018 Capital Additions pro formas (7,8,14)		Projected QCPAC Surcharge for 2018 Capital Additions		QCPAC For 2019 Capital Additions pro formas (7,8)		QCPAC Surcharge for 2019 Capital Additions		QCPAC For 2020 Capital Additions pro formas (7,8)		QCPAC Surcharge for 2020 Capital Additions		QCPAC For 2021 Capital Additions pro formas (7,8)		QCPAC Surcharge for 2021 Capital Additions
City Bond Fixed Revenue Requirement (CBFRR)	\$7,729,032				\$7,729,032	\$	-	\$	7,729,032	\$	-	\$	7,729,032	\$	-	\$	7,729,032	\$	-	\$	7,729,032
Operating Expense Revenue Requirement	\$16,442,012	(1)(11)	\$122,079	(4)	\$16,564,090	\$	198,464	\$	16,762,554	\$	416,669	\$	17,179,222	\$	326,226	\$	17,505,448	\$	280,650	\$	17,786,098
Annual Principal and Interest Payments	\$6,218,648	(2)	\$365,418	(5)(10)	\$6,584,066	\$	\$488,828	\$	7,072,893	\$	\$891,274	\$	7,964,167	\$	\$857,436	\$	8,821,603	\$	\$818,624	\$	9,640,227
Principal and Interest Coverage Requirement	1.10	(3)			1.10				1.10				1.10				1.10				1.10
Principal and Interest Revenue Requirement	\$6,840,513				\$7,242,472	\$		\$	7,780,182	\$		\$	8,760,584	\$		\$	9,703,763	\$		\$	10,604,249
Proposed Revenue Requirement	\$31,011,556				\$31,535,594	\$		\$	32,271,768	\$		\$	33,668,839	\$		\$	34,938,244	\$		\$	36,119,379
Current Water Revenues excluding CBFRR	\$20,694,038				\$23,282,524	\$		\$	23,806,562	\$		\$	24,542,736	\$		\$	25,939,807	\$		\$	27,209,212
Add: City Bond Fixed Revenue Requirement	\$7,729,032				\$7,729,032	\$		\$	7,729,032	\$		\$	7,729,032	\$		\$	7,729,032	\$		\$	7,729,032
Current Water Revenues with CBFRR	\$28,423,070				\$31,011,556	\$		\$	31,535,594	\$		\$	32,271,768	\$		\$	33,668,839	\$		\$	34,938,244
Percent QCPAC Surcharge (9)					1.69%				2.33%				4.33%				3.77%				3.38%
Cumulative QCPAC Surcharge (13)									4.06%				8.57%				12.66%				16.47%
Cumulative QCPAC monthly increase in average single family residential bill					\$0.91	\$		\$	2.19	\$		\$	4.63	\$		\$	6.84	\$		\$	8.89
Average monthly single family residential bill with QCPAC					\$54.90	\$		\$	56.18	\$		\$	58.61	\$		\$	60.82	\$		\$	62.87

Notes:

(1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense, Amortization Expense and Payroll Tax Expenses approved in DW16-806

(2) Annual Principal and interest payments for PWV debt associated with all plant in service as approved in DW16-806

(3) Principal and interest coverage of 1.10 is as approved in DW16-806

(4) Reflects the net increase in property taxes associated with the plant placed in service between 1/1/2017 and 12/31/2017 that was not included in DW16-806.

(5) Portion of Annual Principal and interest payments for debt associated with plant placed in service between 1/1/2017 and 12/31/2017 based on a 30 year bond with an actual total all in interest rate of 4.898453% that was not recovered in DW16-806

(7) QCPAC operating expenses are based on the property taxes for plant added during the year

(8) QCPAC Principal and Interest expenses are based on 30 year bond with interest rate of 5.5% for 2019 through 2021 Capital Expenditures unless funding is via an SRF/DWGTf financing.

(9) QCPAC percent revenue surcharges based on increase in revenues from the previous year, inclusive of QCPAC surcharges.

(10) Portion of QCPAC Principal and Interest associated with SRF loan of \$ 767,357 for 2017 work completed on Amherst Street project based on the fact that \$ 27,746.00 of P&I was recovered in DW16-806 leaving \$ 25,178.00 of remaining P&I on this SRF loan to be collected via the QCPAC surcharge. The remaining P&I is based on the amortization schedule for this loan provided by the NHDES and is the P&I payment due the State in 2018 after principal forgiveness.

(11) Reduction in revenues associated with fixed contracts as follows: Hudson Annual Fixed Chg \$ 32,800 Milford Annual Fixed Chg \$ 81,000.00 A-B Annual Fixed Chg \$ 371,430.48

(12) QCPAC Principal and Interest expenses for DWGTf financing are based on a 30 year bond with interest rate of 3.38%

(13) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW16-806

(14) Portion of Annual Principal and interest payments for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 30 year bond with an actual total all in interest rate of 4.222191% Average Coupon rate as the all-in TIC (Total Interest Cost) for the \$ 8,250,000.00 which includes the 2018 capital project costs of \$ 8,229,376.70 plus Cost of Issuance and net Premium/Discount on the issued bonds.

Impact on Single Family Residential Home:

Monthly meter charge granted in DW16-806, inclusive of Step increase - \$ 22.58

Average Single Family Consumption (CCF) - 8.58

Consumption Charge granted in DW16.806, inclusive of Step increase - \$ 3.66

Ave. Single Family monthly bill with rates granted in DW16-806, inclusive of step - \$ 53.98

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Funded in DW16-806 Step	Estimated Project Cost as of 1/18/2017	Estimated Project Cost as of 11/15/2017	Final Unaudited Project Costs as of 1/19/2018	Community	Taxable	Tax Rate (1)	QCPAC Eligible Annual Tax Expense	Explanation for Change/Addition/Deletion since 1/18/2017
Heavy Dump Truck Replacement (#12)	Heavy Dump Truck Replacement (#12)	1702309	DW14-130	25,734	11/7/2014	Yes	\$ 130,000	Paid 2014 Bond		Merrimack			\$ -	P&I and property taxes recovered in DW16-806 Step Increase
Replace Aging Services	9 Renewed Services with 2014 Bond Funds	Monthly 21, 22, 23	DW14-130	25,735	11/7/2014	Partial	\$ 80,000	Paid 2014 Bond		Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase
	23 Renewed Services with 2018 Bond Funds		DW17-183	26,101	2/2/2018	No		\$ 40,000	\$ 100,454	Nashua	Yes	\$ 29.82	\$ 2,996	P&I and property taxes to be recovered in 2018 QCPAC
Replace Aging Hydrants	3 Hydrants replaced with 2014 Bond Funds	Monthly 31	DW14-130	25,735	11/7/2014	Partial	\$ 42,000	Paid 2014 Bond		Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase
	5 Hydrants replaced with 2018 Bond Funds		DW17-183	26,101	2/2/2018	No		\$ 11,000	\$ 18,643	Nashua	Yes	\$ 29.82	\$ 556	P&I and property taxes to be recovered in 2018 QCPAC
Replace Aging Valves	3 Valve Replacements	Monthly 12, 13	DW17-183	26,101	2/2/2018	No		\$ 50,000	\$ 53,122	Nashua	Yes	\$ 29.82	\$ 1,584	Based on final valve replacement expenditure in 2017.
New Services	2 New Services for Single Family Residential, owner build, per Tariff	Monthly 20	DW14-130	25,735	11/7/2014	Partial	\$ -	Paid 2014 Bond		Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase
	5 New Services for Single Family Residential, owner build, per Tariff		DW17-183	26,101	2/2/2018	No		\$ 34,537	\$ 29,648	Nashua	Yes	\$ 29.82	\$ 884	P&I and property taxes to be recovered in 2018 QCPAC
Replace Leaded Brass Meters with Lead free brass meters	410 New Meters for Lead Meter exchanges - 5/8"-6"	Monthly 50	DW14-130	25,735	11/7/2014	Partial	\$ 832,000	Paid 2014 Bond		Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase
	1,410 New Meters for Lead Meter exchanges - 5/8"-6" (NEED ACTUAL 332)		DW17-183	26,101	2/2/2018	No		\$ 247,266	\$ 267,950	Nashua	Yes	\$ 29.82	\$ 7,990	P&I and property taxes to be recovered in 2018 QCPAC
Replace Aging meter reading Radios	Replace 99 failed radios	Monthly 54	DW14-130	25,735	11/7/2014	Partial	\$ 28,000	Paid 2014 Bond		Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase
	Replace 238 failed radios		DW17-183	26,101	2/2/2018	Remainder		\$ 22,729	\$ 22,802	Nashua	Yes	\$ 29.82	\$ 680	P&I and property taxes to be recovered in 2018 QCPAC
Ferromagnetic Pipe locators (3)	Ferromagnetic Pipe locators (3)		DW17-183	26,101	2/2/2018	No	\$ 10,500	\$ 10,500		Merrimack			\$ -	None acquired
Heavy Dump Truck Replacement (#86)	Heavy Dump Truck Replacement (#86)	1708349	DW17-183	26,101	2/2/2018	No	\$ 100,000	\$ 100,000	\$ 102,176	Merrimack	No	\$ -	\$ -	
Service Truck replacement (#47)	Service Truck replacement (#47)	1715542	DW17-183	26,101	2/2/2018	No	\$ 60,000	\$ 38,950	\$ 47,889	Merrimack	No	\$ -	\$ -	
Replacement of Foreman truck	Replacement of Foreman truck		Deferred. No Bond sought. No QCPAC sought.				\$ 90,000	\$ 75,000	\$ -	Merrimack		\$ -	\$ -	Deferred until 2018
Replace Dump Truck Body	#312 - Replace Dump Truck Body	1720997							\$ 15,740	Merrimack	No			Project added at end of year using existing truck chassis for new dump body.
Medium Duty Dump Truck Replacement (#71)	Medium Duty Dump Truck Replacement (#71)	1708350	DW17-183	26,101	2/2/2018	No	\$ 70,000	\$ 70,000	\$ 90,160	Merrimack	No	\$ -	\$ -	
Replace Truck #70	Replace Truck #70	1707209	DW17-183	26,101	2/2/2018	No	\$ -	\$ 32,034	\$ 32,034	Merrimack	No			Truck replaced when transmission failed rather than repair transmission on a 10 year old truck
Replace Truck #58	Replace 2006 Truck with 104,000 miles	1702097							\$ 6,242	Merrimack	No			
20 Ton Tag Trailer replacement	20 Ton Tag Trailer replacement		Deferred. No Bond sought. No QCPAC sought.				\$ 20,000	\$ -						Deferred
Variable Message Signs - 2	Customer Notification	1702307	DW14-130	25,734	11/7/2014	Yes	\$ 30,000	Paid 2014 Bond						P&I and property taxes recovered in DW16-806 Step Increase
Replacement Radio Meter Reading Equipment (4)	Replace 10 year old radio meter reading handheld units		DW14-130	25,734	11/7/2014	Yes	\$ 25,000	Paid 2014 Bond						P&I and property taxes recovered in DW16-806 Step Increase
Pipe Saws (5)	Pipe Saws (5)	1800440	DW17-183	26,101	2/2/2018	No	\$ 20,000	\$ -	\$ 9,384	Merrimack	No			
Metal Detectors (6)	Metal Detectors (6)	1708348	DW17-183	26,101	2/2/2018	No	\$ 7,000	\$ 6,360	\$ 6,360	Merrimack	No			
Replacement Excavator	Replacement Excavator	1702312	DW17-183	26,101	2/2/2018	No	\$ 75,000	\$ 69,554	\$ 69,554	Merrimack	No			
Complete construction of 16 DW Highway	Final billing for the completion of work by contractor at 16 DW Highway	1701990	DW17-183	26,101	2/2/2018	No	\$ -	\$ 67,050	\$ 65,140	Merrimack	Yes	\$ 28.17	\$ 1,835	Billing from final work on 16 DW not carried over in original budget
MRX meter reading device	MRX meter reading device	1708487	DW17-183	26,101	2/2/2018	No	\$ -	\$ 8,190	\$ 8,190	Various	No			Existing 8 year old meter reading device failed
GPS Units	Trimble Devices	1713734							\$ 21,287	Merrimack	No			Devices purchased early to support field deployment of GIS.
Raw Water Transmission Main project	Finalization of 2016 project	1601365, 1701991	DW15-046	25,774	4/13/2015	Yes	\$ -	Paid for by SRF	\$ 176,829	Merrimack	Yes	\$ 28.17	\$ 4,981	Charges are for Internal engineering, OH, Union Labor, truck and AFDUC. These expenses are not eligible for SRF funding.
Nashua & Amherst Paving	Final paving associated with watermain projects					No	\$ 1,100,000					\$ -	\$ -	Budget Placeholder
Nashua & Amherst Paving	Park Street Water Main Replacement project paving	1701989	DW17-183	26,101	2/2/2018	No		\$ 4,908	\$ 4,908	Nashua	Yes	\$ 29.82	\$ 146	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Mulberry Street Water Main Replacement project paving	1701988	DW17-183	26,101	2/2/2018	No		\$ 6,840	\$ 6,840	Nashua	Yes	\$ 29.82	\$ 204	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Contribution to City of Nashua in lieu of final trench restoration - includes Rochette, Ash, and Marquis	1718685, 1718684	DW17-183	26,101	2/2/2018	No		\$ 120,000	\$ 20,040	Nashua	Yes	\$ 29.82	\$ 598	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Chestnut Street Phase I Water Main Replacement project paving	1703643	DW17-183	26,101	2/2/2018	No		\$ 65,780	\$ 131,689	Nashua	Yes	\$ 29.82	\$ 3,927	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Scripture Street Water Main Replacement project paving	1703642	DW17-183	26,101	2/2/2018	No		\$ 11,200	\$ 2,466	Nashua	Yes	\$ 29.82	\$ 74	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Gorman Street Water Main Replacement project paving	1718679	DW17-183	26,101	2/2/2018	No			\$ 400	Nashua	Yes	\$ 29.82	\$ 12	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Water Street Water Main Replacement project paving							\$ 44,561						Paving deferred at City request
Nashua & Amherst Paving	Brook Street Water Main Replacement project paving	1700310	DW17-183	26,101	2/2/2018	No			\$ 9,844	Nashua	Yes	\$ 29.82	\$ 294	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Ash Street Water Main Replacement project paving	1700315	DW17-183	26,101	2/2/2018	No			\$ 22,678	Nashua	Yes	\$ 29.82	\$ 676	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Worcester Street Area Water Main Replacement project paving	1718680	DW17-183	26,101	2/2/2018	No			\$ 3,020	Nashua	Yes	\$ 29.82	\$ 90	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Lovell Street Water Main Replacement project paving	1703644	DW17-183	26,101	2/2/2018	No			\$ 82,060	Nashua	Yes	\$ 29.82	\$ 2,447	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Towells Street Water Main Replacement project paving	1703639	DW17-183	26,101	2/2/2018	No			\$ 17,233	Nashua	Yes	\$ 29.82	\$ 514	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Howard Street Water Main Replacement project paving	1718682	DW17-183	26,101	2/2/2018	No			\$ 2,800	Nashua	Yes	\$ 29.82	\$ 83	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Hoys Water Main Replacement project paving	1718683	DW17-183	26,101	2/2/2018	No			\$ 1,000	Nashua	Yes	\$ 29.82	\$ 30	Budgeted under Final Paving associated with water main replacement projects
Nashua & Amherst Paving	Shedds Ave. Water Main Replacement project paving	1718681	DW17-183	26,101	2/2/2018	No			\$ 2,000	Nashua	Yes	\$ 29.82	\$ 60	Budgeted under Final Paving associated with water main replacement projects
Amherst Street Project	Amherst Street Area Water Main Replacement Project													
Amherst Street Project - Amherst Street water main replacement	Replace 3,150 LF of 6" Unlined CI Water main on Amherst Street	1601318, 1702928	DW16-236	25,887	42486	Partial		Paid for by SRF	\$ 923,785	Nashua	No			Charges are for Internal engineering, OH, Union Labor, truck and AFDUC. These expenses are not eligible for SRF funding. \$767,357 in 2017 construction costs were financed with SRF loan funds. The principal and interest associated with this loan amount must be recovered as part of the 2018 QCPAC surcharge.
Amherst Street Project - Berkshire Street water main replacement	Replace xxx LF of s"/s" Steel/Unlined CI Water main on Berkshire Street	1601320, 1702931	DW16-236	25,887	42486	Yes		Paid for by SRF	\$ 6,058	Nashua				
Amherst Street Project - Terrace Ave. water main replacement	Replace 280 LF of 2"/4" Steel/Unlined CI Water main on Terrace Ave.	1601321, 1702932	DW16-236	25,887	42486	Yes	\$ 75,000		\$ 1,763	Nashua				
Amherst Street Project - Bruce Street water main replacement	Replace 260 LF of 6" Unlined CI Water main on Bruce Street	1601319, 1702930	DW16-236	25,887	42486	Yes	\$ 75,000		\$ 4,183	Nashua				
Sweet Hill	New Supplemental Well required by NHDDES	1503914, 1602428, 1701490	DW17-183	26,101	2/2/2018	No								

Route 101 Widening, Bedford	Relocated water main along Nashua Road	1702838	DW17-183	26,101	2/2/2018	No		\$	43,100	\$	43,740	Bedford	Yes	\$	23.19	\$	1,014	NHDOT project that was added in Spring of 2017	
Route 101 Widening, Bedford	Relocate water main on Bell Hill Road	1702839	DW17-183	26,101	2/2/2018	No		\$	15,400	\$	53,951	Bedford	Yes	\$	23.19	\$	1,251	NHDOT project that was added in Spring of 2017	
Route 101 Widening, Bedford	Relocate Service to 3 Nashua Road	1702840	DW17-183	26,101	2/2/2018	No		\$	67,400	\$	116,205	Bedford	Yes	\$	23.19	\$	2,695	NHDOT project that was added in Spring of 2017. Partial reimbursement from NHDOT of \$26,010.89	
Route 122 @ Nathan Lord Lane Water Main Relocation	Water Main Relocation to accommodate Town of Amherst Storm Drain installation	1715666	DW17-183	26,101	2/2/2018	No	\$	-	\$	54,630	\$	59,558	Amherst	Yes	\$	30.30	\$	1,805	Town of Amherst Storm Drain project added in Fall of 2017
Howard St. Emergency Main Replacement -	Howard St. Emergency Main Replacement -	1600371, 1601379								\$	106,838	Nashua	Yes	\$	29.82	\$	3,186	Emergency project to replace failed 2" steel water main late in 2017.	
Trimble Devices - Used for field locating Assets via GIS program	Upgrade to Ipad device driven units	1703027	DW17-183	26,101	2/2/2018	No	\$	72,000	\$	68,623	\$	47,336	Merrimack	No					
Engineering Replacement Vehicles (2)	Replace 2 Vehicles	1702831, 1702832	DW14-130	25,734	11/7/2014	Yes	\$	64,000	Pd 2014 Bonds	\$	-	Merrimack	No						P&I and property taxes recovered in DW16-806 Step Increase
Complete PWW Core System Hydraulic Model	Distribution Model Phase 2					Deferred. No Bond sought. No QCPAC sought.	\$	25,000	\$	-									Project underway, will not be used and useful in 2017
PWW-PEU Interconnection - DW Highway to River	DW Highway to Merrimack River Booster station					Deferred. No Bond sought. No QCPAC sought.	\$	311,500	\$	-									Deferred to 2018 due to timing of final NHDES permitting
WTP - Conversion to LED Lighting	WTP - Conversion to LED Lighting					Deferred. No Bond sought. No QCPAC sought.	\$	80,000	\$	-									Deferred, staff time not available to complete in 2017
Booster/Well/Chem Feed pump replacements	Booster/Well/Chem Feed pump replacements		DW14-130	25,735	11/7/2014	Partial			Pd 2014 Bonds			Derry	Yes	\$	33.23	\$	-		P&I and property taxes recovered in DW16-806 Step Increase
Booster/Well/Chem Feed pump replacements	Booster/Well/Chem Feed pump replacements	Monthly 60, 61, 62, 63	DW17-183	26,101	2/2/2018	No	\$	60,000	\$	38,000	\$	41,386	Derry	Yes	\$	33.23	\$	1,375	
Booster/Well/Chem Feed pump replacements	Replace VFD on Twin Ridge Well	1701888	DW17-183	26,101	2/2/2018	No			\$	2,089	\$	2,089	Plaistow	Yes	\$	28.39	\$	59	Budgeted under Booster/Well/Chem Feed pump replacement
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS					Deferred. No Bond sought. No QCPAC sought.	\$	15,000	\$	-									Budget place holder. No treatment system installs/replacement YTD
Misc. Structural Improvements	Misc. Structural Improvements					Deferred. No Bond sought. No QCPAC sought.	\$	20,000	\$	-									Budget place holder. No structural improvements YTD
Harris Dam Spillway Reconstruction	Complete Harris Dam Spillway Reconstruction	1701987								\$	6,018	Nashua	Yes	\$	29.82	\$	179		
Replace Vehicle #62	Replace 11 year old truck with 107,863 miles		DW17-183	26,101	2/2/2018	No	\$	60,000	\$	45,000									A new vehicle was purchased and this vehicle was retained and kept in service. #99 was retired.
Replace Vehicle #49	Replace 7 year old truck with 104,875 miles	1800462	DW17-183	26,101	2/2/2018	No	\$	35,000	\$	35,000	\$	27,323	Nashua	No					Retired #49
Replace vehicle #204	Replace 6 year old truck with 175,260 miles	1800481	DW17-183	26,101	2/2/2018	No	\$	60,000	\$	45,000	\$	42,678	Nashua	No					Change from beginning of budget year as to type of vehicle being replaced. #204 retired.
Replace Vehicle #63	Replace 7 year old truck with 110,249 miles		DW17-183	26,101	2/2/2018	No	\$	35,000	\$	35,000									Retired #63
Replace Vehicle #44	Replace 8 year old truck with over 130,000 miles	1800479								\$	42,678	Nashua	No						Retired #44
New Vehicle #119	New Water Supply Vehicle, no replacement	1704173	DW17-183	26,101	2/2/2018	No	\$	-	\$	63,038	\$	62,282	Nashua	No					No vehicle retired.
Replace Vehicle #99	Replace 11 year old truck with over 140,000 miles	1800480	DW17-183	26,101	2/2/2018	No				\$	27,323	Nashua	No						Retired #99
Replace Vehicle #46	Add utility body to vehicle #46	1703002	DW17-183	26,101	2/2/2018	No				\$	2,071	Nashua	No						No vehicle retired.
Install overhead crane and door-WTP process area	Install overhead crane and door-WTP process area	1701887, 1719861	DW17-183	26,101	2/2/2018	No	\$	75,000	\$	75,000	\$	45,731	Nashua	Yes	\$	29.82	\$	1,364	Design cost for WTP crane and door. Door is used and useful.
Merrimack River Station pump/motor rebuild	Merrimack River Station pump/motor rebuild		DW17-183	26,101	2/2/2018	No	\$	75,000	\$	25,000							\$	-	Project deferred until 2018
Misc. equipment purchases	WTP misc. equipment purchases						\$	25,000	\$	-									
Misc. equipment purchases	Purchase New Electric Multi-Meter	1715547	DW17-183	26,101	2/2/2018	No		\$	1,500	\$	1,500	Nashua	No				\$	-	Budgeted under WTP Misc equipment purchased
THM precursor control at Bon Terrain Tank	Install mixer in Bon Terrain Tank	1703024	DW17-183	26,101	2/2/2018	No		\$	2,600	\$	2,600	Amherst	Yes	\$	30.30	\$	79		Budgeted under WTP Misc equipment purchased
Replace VFD on Sludge Chopper Pump at WTP	Replace VFD on Sludge Chopper Pump at WTP	1707190	DW17-183	26,101	2/2/2018	No		\$	3,503	\$	3,503	Nashua	Yes	\$	29.82	\$	104		Budgeted under WTP Misc equipment purchased
WTP - Replace 30" IP Discharge Meter	WTP - Replace 30" IP Discharge Meter	1701885	DW17-183	26,101	2/2/2018	No		\$	17,177	\$	17,177	Nashua	Yes	\$	29.82	\$	512		Budgeted under WTP Misc equipment purchased
Purchase new lab equipment	Purchase new lab equipment					Deferred. No Bond sought. No QCPAC sought.	\$	15,000	\$	-									
Purchase new lab equipment	Hanna Titrator	1707187	DW17-183	26,101	2/2/2018	No		\$	5,900	\$	5,900	Nashua	No						Budgeted under Purchase new lab equipment
WTP structural/HVAC	Replaced Compressor on A/C Unit FWPS	1708347	DW17-183	26,101	2/2/2018	No	\$	10,000	\$	5,568	\$	5,568	Nashua	Yes	\$	29.82	\$	166	
Misc Security upgrades for remote facilities	Misc. Fencing/Security Projects					Deferred. No Bond sought. No QCPAC sought.	\$	25,000	\$	-									Budget place holder. No Misc. Fencing/Security Projects YTD
Complete Fencing around WTP for Security	Perimeter fencing at WTP	1706963	DW17-183	26,101	2/2/2018	No	\$	80,000	\$	5,588	\$	5,588	Nashua	Yes	\$	29.82	\$	167	Main Gate opening mechanism replaced. Fencing deferred
Replace Clarifier (2)Vacuum Blowers and Actuators	Replace Clarifier (2)Vacuum Blowers and Actuators					Deferred. No Bond sought. No QCPAC sought.	\$	25,000	\$	-									Deferred
Misc. SCADA Electrical upgrades	Misc. SCADA Electrical					Deferred. No Bond sought. No QCPAC sought.	\$	30,000	\$	-									Budget Place Holder See below for actual projects
Misc. SCADA Electrical upgrades	Valleyfield - Install Cellular Communication	1701886	DW17-183	26,101	2/2/2018	No	\$	-	\$	5,000	\$	3,249	Plaistow	Yes	\$	28.39	\$	92	Budgeted under Misc. SCADA Electrical upgrades
Misc. SCADA Electrical upgrades	Install Cellular Communication, Cabot Preserve	1716549	DW17-183	26,101	2/2/2018	No				\$	2,642	Bedford	Yes	\$	23.19	\$	61		Project added to allow remote monitoring of water system
Hi-Lo Generator	Hi-Lo Generator	1701899	DW17-183	26,101	2/2/2018	No				\$	47,332	Derry	Yes	\$	33.23	\$	1,573		Permanent standby generator added on site at this Community Water System.
Armory Street Booster Pump VFD replacements	Replace failed VFD's on Armory Street Booster Pumps	1719862	DW17-183	26,101	2/2/2018	No	\$	-	\$	23,500	\$	-	Nashua	Yes	\$	29.82	\$	-	Budgeted under Misc. SCADA Electrical upgrades
Misc. SCADA Electrical upgrades	Replace all SCADA Computers and Upgrade System	1701889	DW17-183	26,101	2/2/2018	No	\$	-	\$	43,000	\$	19,990	Nashua	Yes	\$	29.82	\$	596	Unbudgeted. Security upgrades required hardware replacement
Well Rehabilitations (3)	Well Rehabilitations					Deferred. No Bond sought. No QCPAC sought.	\$	60,000	\$	-							\$	-	Budget place holder. No Well Rehabilitation Projects YTD
WTP Closed Circuit Camera replacement/improvements	Closed Circuit Camera replacement/improvements					Deferred. No Bond sought. No QCPAC sought.	\$	60,000	\$	-									Deferred
WTP - Replace storefront glass, renovate WTP reception	Replace storefront glass, renovate WTP reception					Deferred. No Bond sought. No QCPAC sought.	\$	50,000	\$	-									Deferred
Office renovation-conference room	Office renovation-conference room					Deferred. No Bond sought. No QCPAC sought.	\$	50,000	\$	-									Deferred
Water Supply - Watershed Public Education	Fertilization / Pesticide - Phase 1					Deferred. No Bond sought. No QCPAC sought.	\$	20,000	\$	-									Will not be completed until 2018
Stormwater BMP Notifications and Community Education	Stormwater BMP Notifications and Community Education					Deferred. No Bond sought. No QCPAC sought.	\$	12,000	\$	-									Will not be completed until 2018
St. Joseph's Land Purchase	Watershed protection	1503675	DW17-183	26,101	2/2/2018	No				\$	69,790	Nashua	Yes	\$	29.82	\$	2,081		Project started in 2015. Land purchased from local hospital. Land adjacent to Supply Pond.
Secure reception area	Office Security for Front Reception Desk	1708425	DW17-183	26,101	2/2/2018	No	\$	10,000	\$	20,990	\$	18,824	Merrimack	No					Original estimate did not include bullet proof glass and other security features
Adjustable Desk Tops	Accommodate back issues	1713759	DW17-183	26,101	2/2/2018	No	\$	-	\$	6,088	\$	6,088	Merrimack	No					
Asset Management - Phase 3	Asset Management 2016 Carry over	1600061	DW17-183	26,101	2/2/2018	No	\$	200,000	\$	200,000	\$	161,590	Merrimack	Yes	\$	28.17	\$	4,552	
Conversion to R.A.M. Fixed Assets carry-over	Conversion to R.A.M. Fixed Assets carry-over	1707349	DW17-183	26,101	2/2/2018	No	\$	11,000	\$	11,000	\$	6,929	Merrimack	No	\$	-	\$	-	
Firewall	Firewall replacement	1702081	DW17-183	26,101	2/2/2018	No	\$	50,000	\$	36,426	\$	28,228	Merrimack	No					
Asset Management - Phase 4	Continue progress on Asset Management implementation	1700300	DW17-183	26,101	2/2/2018	No	\$	736,000	\$	350,000	\$	492,133	Various	Yes	\$	28.85	\$	14,198	Reduced level of work than budgeted due to staff time diverted to PFOA response
Click Mobile Upgrade	Upgrade ClickMobile to work on iPads	1707189	DW17-183	26,101	2/2/2018	No	\$	150,000	\$	5,400									2016 Work completed. 2017 work deferred until 2018
Click Mobile Upgrade	Purchase iPads for ClickMobile Platform	1702223	DW17-183	26,101	2/2/2018	No	\$	-	\$	5,160	\$	5,160	Various	Yes	\$	28.85	\$	149	Budgeted for under Upgrade ClickMobile to work on iPADS
Infoview upgrade	Upgrade Infoview to the latest version	1702224	DW17-183	26,101	2/2/2018	No	\$	5,000	\$	3,150	\$	3,150	Various	Yes	\$	28.85	\$	91	
Exchange Upgrade	Upgrade Exchange to the latest version		DW17-183	26,101	2/2/2018	No	\$	31,000	\$	20,420							\$	-	Deferred
Retention Archive Solution	Infrastructure to Archive older stagnant files					Deferred. No Bond sought. No QCPAC sought.	\$	80,000	\$	-									Deferred until 2018
Munis Enhancements	Bill prints/forms, Forms import, Click-Munis import, CSS and Dashboard/Central					Deferred. No Bond sought. No QCPAC sought.	\$	180,000	\$	-									Waiting for vender acceptance of software enhancements
Miscellaneous Software						Deferred. No Bond sought. No QCPAC sought.	\$	15,000	\$	-									Budget place holder.
Miscellaneous Software	Upgrade Synergyn/WAM		DW17-183	26,101	2/2/2018	No	\$	-	\$	10,386									Budgeted for under Misc. Software
Miscellaneous Software	Backflow Data Collection software	1707208	DW17-183	26,101	2/2/2018	No	\$	-	\$	6,700	\$	5,400	Merrimack	No					Budgeted for under Misc. Software
Miscellaneous Software	Munis - Enhancements - SDS Replacement	1502439	DW17-183	26,101	2/2/2018	No				\$	18,700	Merrimack	No						Budgeted for under Misc. Software
Miscellaneous Software	PDF Converter Software	1614048	DW17-183	26,101	2/2/2018	No				\$	5,994	Merrimack	No						Required to make website ADA compliant
Miscellaneous Hardware						Deferred. No Bond sought. No QCPAC sought.	\$	18,000	\$	-									Budget place holder. No Misc. Hardware purchased YTD
Miscellaneous Hardware	LT06 Tape Drive #2	1617689	DW17-183	26,101	2/2/2018	No				\$	19,395	Merrimack	No						
Network Infrastructure	Replacement of virtual servers and network switch stack. Existing hardware no longer supported.	1716547	DW17-183	26,101	2/2/2018	No				\$	113,424	Merrimack	No						
LIMS upgrade	Upgrade to Laboratory Information Systems software					Deferred. No Bond sought. No QCPAC sought.	\$	11,000	\$	-									Release of new version delayed until 2018
Badge Swipe for IT Area	Allow for tracking of traffic after hours into IT area - Security					Deferred. No Bond sought. No QCPAC sought.	\$	2,000	\$	-									Project cancelled for 2017
DigSafe into Click	Track Dig safe work order time electronically					Deferred. No Bond sought. No QCPAC sought.	\$	2,000	\$	-									Project cancelled for 2017
Website Upgrades & Updates	Update Website. Enhance customer usability	1704175	DW17-183	26,101	2/2/2018	No	\$	36,000	\$	21,700	\$	13,250	Merrimack	No					
IT Security Project	ISO 27001 Equivalency Project	1707186	DW17-183	26,101	2/2/2018	No	\$		\$	40,500	\$	31,555	Merrimack	No					Evaluation of IT infrastructure for security
Physical Server for Autodesk Revit						Deferred. No Bond sought. No QCPAC sought.	\$	8,000	\$	-							\$	-	Deferred
Physical Server for Pearl						Deferred. No Bond sought. No QCPAC sought.	\$	12,000	\$	-							\$	-	Deferred
Investment in Developer Installed Services	One times revenue tariffed amount		DW14-130	25,735	11/7/2014	Partial	\$	-	Pd 2014 Bonds										P&I and property taxes recovered in DW16-806 Step Increase
Investment in Developer Installed Services	One times revenue tariffed amount		DW17-183	26,101	2/2/2018	No	\$	-	\$	36,000	\$	43,903	Various	Yes	\$	28.85	\$	1,267	Tariffed investment amount not in original capital budget

Total Projected 2017 PWW Capital Exp	\$	9,729,000	\$	4,163,760	\$	6,058,766	Projected Property Tax -	\$	122,079

Project Name/Description	Project Description	Work Order #	Financing Docket No.	Approved Budgeted Amount	Estimated Project Cost as of 6/30/2018	Estimated Project Cost as of 9/30/2018	Estimated Project Cost as of 11/30/2018	Final Project cost as of 12/31/2018	Community	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Replace Forman Truck	Existing Truck has been a safety and maintenance problem	1708351 & 1813525	2019 Docket	\$ 90,000	\$ 97,685	\$ 120,756	\$ 120,756	\$ 92,018	Merriamack	No	\$ 28.92	\$ -	Additional labor, metal and other hardware to properly outfit the truck. Project reduced by \$16,000 for trade in value.
Single Family New Services	Single Family, Owner Build, New Homes	20 workorders	2019 Docket	\$ 46,000	\$ 46,000	\$ 46,000	\$ 37,403	\$ 40,850	Various	Yes	\$ 28.40	\$ 1,160	10 New Services installed in 2018
Renewed Services	Replacement of failed services	workorders	2019 Docket	\$ 92,000	\$ 92,000	\$ 37,758	\$ 40,000	\$ 47,818	Various	Yes	\$ 28.40	\$ 1,358	18 failed services replaced in 2018.
Hydrants	Replacement of non functional hydrants (Run rate) (8 YTD)	30 & 31 workorders	2019 Docket	\$ 50,000	\$ 50,000	\$ 50,000	\$ 45,000	\$ 35,560	Various	Yes	\$ 28.40	\$ -	8 failed hydrants replaced in 2018.
Valve Replacements	Replacement of Failed Gate Valves	workorders	2019 Docket	\$ 30,000	\$ 30,000	\$ 20,000	\$ 32,000	\$ 14,412	Various	Yes	\$ 28.40	\$ 409	5 failed gate valves replaced in 2018.
Replace failed meter reading radios	Replace out of warranty failed radio meter readers	54 workorders	2019 Docket	\$ 50,000	\$ 50,000	\$ 50,000	\$ 60,000	\$ 46,153	Various	Yes	\$ 28.40	\$ 1,311	602 failed radios replaced in 2018.
New Meters (growth) 5/8" 2" (CORE & CWS)	New meters for new customers.	50 workorders	2019 Docket	\$ 114,000	\$ 114,000	\$ 40,000	\$ 40,000	-	Various	Yes	\$ 28.40	\$ -	2,303 New meters installed in 2018. The new meters installed were for new customers and also to replace meters that had had content in excess of 0.25% by weight of the brass meter body.
New Meters for Lead Meter exchanges (PWW-CORE & CWS) 5/8"-6"	Replace High lead brass meter with new no lead brass meter (2071 YTD)	50 workorders	2019 Docket	\$ 532,000	\$ 532,000	\$ 360,000	\$ 340,000	\$ 326,902	Various	Yes	\$ 28.40	\$ 9,284	Purchase deferred until 2019
Terramagnetic Pipe locators (3)	Ongoing small equipment replacement - run rate	-	2019 Docket	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	
Service Truck replacement (#76)	Replace 2008 Pick up with 156,000+ miles	1900417	2019 Docket	\$ 60,000	\$ 60,000	\$ 60,000	\$ 61,905	\$ 61,905	Merriamack	No	\$ 28.92	\$ -	
Service Truck - New	Service Truck for 1 new cop employee	1900416	2019 Docket	\$ 35,000	\$ 35,000	\$ 35,000	\$ 62,215	\$ -	Merriamack	No	\$ 28.92	\$ -	
Replacement of Meter Supervisor Truck (#14)	Replace 7 year old pick up with 167,000+ miles with small SUV	1825491	2019 Docket	\$ 28,000	\$ 28,000	\$ 28,000	\$ 31,563	\$ 25,563	Merriamack	No	\$ 28.92	\$ -	Vehicle spec was changed to Heavy Duty Quad Cab
Replace Valve/water trailer unit	Existing unit has reach the end of its usable life	-	2019 Docket	\$ 65,000	\$ 65,000	\$ -	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	Project deferred until 2019
Trimble units for Meter Reading (6 units)	Replace CE meter reading equipment	1830144	2019 Docket	\$ 39,000	\$ 39,000	\$ 48,000	\$ 58,820	\$ 58,820	Merriamack	No	\$ 28.92	\$ -	
Pipe Saws (5)	Ongoing small equipment replacement - run rate	1819287	2019 Docket	\$ 6,000	\$ 6,000	\$ 5,000	\$ 5,000	\$ 5,000	Merriamack	No	\$ 28.92	\$ -	
Metal Detectors (6)	Ongoing small equipment replacement - run rate	-	2019 Docket	\$ 7,000	\$ 7,000	\$ 7,000	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	Purchase deferred until 2019
Add Air Conditioning to Mechanics Bay	Security Project	1805724	2019 Docket	\$ 52,000	\$ 62,641	\$ 62,641	\$ 62,641	\$ 62,641	Merriamack	Yes	\$ 28.92	\$ 1,812	Updated quotes with higher materials cost, steel surcharge & Freight.
Four trench boxes	Replace 22 year old trench boxes	1818578	2019 Docket	\$ 20,000	\$ 22,456	\$ 22,456	\$ 22,456	\$ 22,456	Merriamack	No	\$ 28.92	\$ -	
Vehicle Lift Replacement	Replace 9000lb Amneco lift with new 12000lb Rotary Lift in Mechanics Bay	1805726	2019 Docket	\$ -	\$ -	\$ 7,974	\$ 7,974	\$ 7,974	Merriamack	Yes	\$ 28.92	\$ 231	
Utility Truck	Replace Vehicle #4 2011 F-350 w/ 140,000 miles and higher maintenance needs	-	2019 Docket	\$ -	\$ -	\$ 65,000	\$ 62,215	\$ -	Merriamack	No	\$ 28.92	\$ -	Purchase deferred until 2019
Utility Van	Replace Vehicle #721 2011 Ford F-2500 Van - High mileage & maintenance costs	1826440	2019 Docket	\$ -	\$ -	\$ 35,000	\$ 31,648	\$ 32,052	Merriamack	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018
Utility Van	Replace Vehicle #727 2011 Ford F-2500 Van - High Mileage & maintenance costs	1826449	2019 Docket	\$ -	\$ -	\$ 35,000	\$ 31,704	\$ 32,097	Merriamack	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018
Utility Van	Replace Vehicle #236 2011 Ford F-2500 Van - High mileage & maintenance costs	1826438	2019 Docket	\$ -	\$ -	\$ 35,000	\$ 31,740	\$ 32,097	Merriamack	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018
Road Plates (2)	8x8 and 8x10 17" Steel Road Plates	1830146	2019 Docket	\$ -	\$ -	\$ 5,300	\$ 5,380	\$ 5,380	Merriamack	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018
Interconnection of BWC (Bedford) to PWW	Interconnection of BWC (Bedford) to PWW	1800734	2019 Docket	\$ 85,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 258,923	Bedford	Yes	\$ 24.76	\$ 6,411	Original budget done prior to design; increased scope of work to remove all AC water main from Back River Rd.
Ilm St	Replace 1570 LF of 8 & 6 inch CI with 12 inch DIPCL	1812907	2019 Docket	\$ 416,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	City Sewer delayed until 2019
Monroe Street	Replace 485 LF of 4 inch (HDPE/CI) with 8 inch DIPCL	1812908	2019 Docket	\$ 122,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	City Sewer delayed until 2019
West Pearl Street	Replace 325 LF of 8 inch CI with 8 inch DIPCL	1812909	2019 Docket	\$ 100,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	City Sewer delayed until 2019
Collis St	Residual paving from prior year main replacement	1812910	2019 Docket	\$ 143,000	\$ 66,000	\$ 60,000	\$ 61,887	\$ 61,887	Nashua	Yes	\$ 27.81	\$ 1,721	Restoration turned over to City of Nashua with multiple utilities contributing
Orange St (Concord St to Lock St)	Residual paving from prior year main replacement	1812911	2019 Docket	\$ 96,000	\$ 96,000	\$ 65,000	\$ 98,256	\$ 98,256	Nashua	Yes	\$ 27.81	\$ 2,732	Based on revised paving contribution estimate
Temple Street	Residual paving from prior year main replacement	1812923	2019 Docket	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Buchanan St	Residual paving from prior year main replacement	1800533	2019 Docket	\$ 36,600	\$ 36,600	\$ 38,000	\$ 33,330	\$ 33,330	Nashua	Yes	\$ 27.81	\$ 927	
Lincoln Ave	Residual paving from prior year main replacement	1813071 & 1807535	2019 Docket	\$ 52,300	\$ 52,300	\$ 54,000	\$ 70,337	\$ 69,988	Nashua	Yes	\$ 27.81	\$ 1,946	
Nutt St	Residual paving from prior year main replacement	1812912	2019 Docket	\$ 39,600	\$ 39,600	\$ 41,000	\$ 29,134	\$ 29,134	Nashua	Yes	\$ 27.81	\$ 810	
Circle Ave	Residual paving from prior year main replacement	1812913	2019 Docket	\$ 11,000	\$ 11,000	\$ 19,400	\$ 9,136	\$ 9,136	Nashua	Yes	\$ 27.81	\$ 254	
Draft St	Residual paving from prior year main replacement	1812914	2019 Docket	\$ 47,000	\$ 47,000	\$ 49,000	\$ 46,218	\$ 46,218	Nashua	Yes	\$ 27.81	\$ 1,285	
Zellwood Ave	Residual paving from prior year main replacement	1812915	2019 Docket	\$ 25,000	\$ 25,000	\$ 27,000	\$ 26,076	\$ 26,077	Nashua	Yes	\$ 27.81	\$ 725	
Faxon St	Residual paving from prior year main replacement	1812916	2019 Docket	\$ 6,000	\$ 6,000	\$ 7,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Hfield St	Residual paving from prior year main replacement	1812917 & 1806835	2019 Docket	\$ 4,400	\$ 4,400	\$ 6,400	\$ 28,673	\$ 59,273	Nashua	Yes	\$ 27.81	\$ 1,648	
Fowell Ave	Residual paving from prior year main replacement	1807533	2019 Docket	\$ 59,400	\$ 59,400	\$ 61,000	\$ 57,308	\$ 57,309	Nashua	Yes	\$ 27.81	\$ 1,505	
Terrace Street	Residual paving from prior year main replacement	1812918	2019 Docket	\$ 5,200	\$ 5,200	\$ 5,200	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Beard St	Residual paving from prior year main replacement	1812919	2019 Docket	\$ 16,100	\$ 17,700	\$ 17,700	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Green St	Residual paving from prior year main replacement	1812920	2019 Docket	\$ 3,100	\$ 3,100	\$ 3,100	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Warren St	Residual paving from prior year main replacement	1807535	2019 Docket	\$ 11,000	\$ 11,000	\$ 11,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Lewell St	Residual paving from prior year main replacement	1812921	2019 Docket	\$ 23,000	\$ 23,000	\$ 23,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Lemon St	Residual paving from prior year main replacement	1812922	2019 Docket	\$ 4,400	\$ 4,400	\$ 4,400	\$ 4,400	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Lawnside Ave	Residual paving from prior year main replacement	1900349	2019 Docket	\$ -	\$ -	\$ 8,193	\$ 8,193	\$ 8,193	Nashua	Yes	\$ 27.81	\$ 228	
Main Street	Residual paving from prior year main replacement	xxxx	2019 Docket	\$ -	\$ -	\$ 6,402	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Mulvanity St - Emergency Replacement	Residual paving from prior year main replacement	1812925	2019 Docket	\$ 51,700	\$ 21,670	\$ 21,670	\$ 21,670	\$ 20,101	Nashua	Yes	\$ 27.81	\$ 559	Paving shared with other impacted Utilities and City
Proctor Street Emergency Replacement	Residual paving from prior year main replacement	1812924	2019 Docket	\$ -	\$ 11,600	\$ 11,600	\$ 10,896	\$ 10,896	Nashua	Yes	\$ 27.81	\$ 303	
Reserve for Contingent Liability for Paving Costs	Reserve for Contingent Liability for Paving Costs	n/a	2019 Docket	\$ (634,800)	\$ (634,800)	\$ (634,800)	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Contingent Paving obligation paid
Asset Management	Asset Management	1800341	2019 Docket	\$ 330,000	\$ 361,000	\$ 461,000	\$ 380,000	\$ 386,820	Various	Yes	\$ 28.40	\$ 10,986	Reduced based on anticipated work to be completed in 2018
Asset Management - Outside GIS Consulting Services	Outside GIS Consulting Services	1800341	2019 Docket	\$ 73,000	\$ 73,000	\$ -	\$ -	\$ -	Various	No	\$ 28.40	\$ -	Earned in Asset Management Budget
Asset Management - Water Modeling Consulting	Water Modeling Consulting	1800341	2019 Docket	\$ 50,000	\$ 50,000	\$ 10,000	\$ 10,000	\$ -	Various	No	\$ 28.40	\$ -	Used on an as-needed basis
Asset Management - Trimble R2 Units	Trimble R2 Units	1800341	2019 Docket	\$ 13,000	\$ -	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	Replacement not needed in 2018
Asset Management - Water Level Well Monitoring Equipment	Water Level Well Monitoring Equipment	1800341	2019 Docket	\$ 5,000	\$ 5,000	\$ -	\$ -	\$ -	Various	No	\$ 28.40	\$ -	Replacement not needed in 2018
Gilman Street	Replace 1470 LF of 8 inch CI with 12 inch DIPCL	1806433	2019 Docket	\$ 475,100	\$ 435,000	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Project deferred until 2019
Bitter Street	Replace 500LF of 6 inch CI with 12 inch DIPCL	1702858 & 1806829	2019 Docket	\$ 161,500	\$ 215,000	\$ 225,000	\$ 191,000	\$ 168,793	Nashua	Yes	\$ 27.81	\$ 4,604	
Woodward Street	Replace 300 LF of 6 inch CI with 12 inch DIPCL	1702857 & 1806829	2019 Docket	\$ 95,500	\$ 110,000	\$ 130,000	\$ 142,373	\$ 145,417	Nashua	Yes	\$ 27.81	\$ 4,044	Increased due to conditions encountered during construction and additional temporary paving
Factory Street	Replace 625 LF of 8 inch and 950 LF CI 950 LF of 16 inch DIPCL	1702856 & 1806839	2019 Docket	\$ 487,000	\$ 520,000	\$ 540,000	\$ 602,707	\$ 607,926	Nashua	Yes	\$ 27.81	\$ 16,906	Increased due to conditions encountered during construction and additional temporary paving
Pennichuck Street	Replace 100 LF of 12 inch CI with 12 inch DIPCL	1720993 & 1806835	2019 Docket	\$ 39,900	\$ 42,000	\$ 76,000	\$ 76,000	\$ 78,146	Nashua	Yes	\$ 27.81	\$ 2,173	Increased due to conditions encountered during construction and additional temporary paving
Early Street	Replace 385 LF of 6" CI with 8" DIPCL	1806836	2019 Docket	\$ -	\$ 119,000	\$ 119,000	\$ 161,436	\$ 161,622	Nashua	Yes	\$ 27.81	\$ 4,495	Added to Misc Replacements to improve fire protection near hospital
Poosa Avenue	Replace 310 LF of 6 inch CI and 2 PVC with 6 inch and 4 inch DIPCL	1720991 & 1806803	2019 Docket	\$ 46,200	\$ 38,346	\$ 38,346	\$ 115,917	\$ 114,888	Nashua	Yes	\$ 27.81	\$ 3,195	Reduce based on bid numbers does not include final paving
Russell Avenue	Replace 775 LF of 8 inch and 275 LF of 6 inch CI with 775 LF of 8 inch and 225 LF of 4 inch DIPCL	1720992 & 1806802	2019 Docket	\$ 227,800	\$ 197,574	\$ 197,574	\$ 255,478	\$ 256,860	Nashua	Yes	\$ 27.81	\$ 7,145	Final Paving completed in 2018
Taylor Street (Main St to Lynn)	Replace 2084 LF of 6 inch CI with 8 inch DIPCL	1806803	2019 Docket	\$ 171,280	\$ 142,294	\$ 152,600	\$ 631,568	\$ 631,468	Nashua	Yes	\$ 27.81	\$ 18,117	Amount of replacement pipe increased from 790 LF to 2084 LF; includes final paving
Burnett Street	Replace 335 LF of 6 inch CI with 12 inch DIPCL	1806804	2019 Docket	\$ 172,800	\$ 143,424	\$ 143,424	\$ 203,563	\$ 203,647	Nashua	Yes	\$ 27.81	\$ 5,663	Final Paving completed in 2018
Field Street	Replace 325 LF of 6 inch CI with 6 inch DIPCL	1806435	2019 Docket	\$ 71,700	\$ 59,511	\$ 59,511	\$ 67,384	\$ 67,384	Nashua	Yes	\$ 27.81	\$ 1,877	Final Paving completed in 2018
Fernwood Street	Replace 450 LF of 6 inch CI with 6 inch DIPCL	1806794	2019 Docket	\$ 159,000	\$ 131,970	\$ 131,970	\$ 113,479	\$ 113,579	Nashua	Yes	\$ 27.81	\$ 3,159	Final Paving completed in 2018
Revere Street	Replace 760 LF of 6 inch CI with 8 inch DIPCL	1806795	2019 Docket	\$ 191,000	\$ 158,530	\$ 158,530	\$ 182,994	\$ 183,064	Nashua	Yes	\$ 27.81	\$ 5,091	Final Paving completed in 2018
Stevens Street	Replace 760 LF of 8 inch CI and 160 LF of 6 inch CI with 760 LF of 8 inch and 160 LF of 4 inch DIPCL	1806797	2019 Docket	\$ 40,000	\$ 33,200	\$ 40,200	\$ 264,258	\$ 264,358	Nashua	Yes	\$ 27.81	\$ 7,352	The \$40,200 in the Board approved budget was a copy and paste error. The correct budget for this project based on the distribution engineer's original estimate was \$xxx,xxx
Eversgreen Street	Replace 310 LF of 1.5 and 1.25 inch CI with 4 inch DIPCL	1806798	2019 Docket	\$ 69,300	\$ 57,519	\$ 57,519	\$ 71,593	\$ 71,695	Nashua	Yes	\$ 27.81	\$ 1,994	Final Paving completed in 2018
Morton Street	Replace 290 LF of 1.5 inch CI with 550 LF of 4 inch DIPCL	1806799	2019 Docket	\$ 94,000	\$ 78,020	\$ 78,020	\$ 103,934	\$ 104,035	Nashua	Yes	\$ 27.81	\$ 2,893	Final Paving completed in 2018
Park Avenue	Replace 300 LF of 8 inch CI and 160 LF of 2 inch CI with 300 LF of DIPCL and 160 LF of 4 inch DIPCL	1806796	2019 Docket	\$ 132,000	\$ 109,560	\$ 109,560	\$ 180,970	\$ 180,796	Nashua	Yes	\$ 27.81	\$ 5,028	Final Paving completed in 2018. Original budget assumed paving would be completed in 2019.
Coburn Woods (all side streets)	Replace 4400 LF of 2 inch PVC with 4 inch DIPCL	n/a	2019 Docket	\$ 1,024,400	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Deferred to future, time frame undetermined
Northwest High Pressure System Improvements	Leaving of dead end mains. Parallel watermain required to rebuild Kessler Tank	2019 Docket											Project needed to be deferred to complete other water main replacement projects that came up in 2018
Northwest High Pressure System Improvements	Add 2700 LF of 24 inch DIPCL on Manchester St	1806805	2019 Docket	\$ 600,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Deferred to 2019 to take advantage of low interest DWGTF Loan - design and survey
Northwest High Pressure System Improvements	Add 2200 LF of 12 inch DIPCL to close loop between Rac 101A and Rac 121 (Amherst)	1806810	2019 Docket	\$ 500,000	\$ -	\$ -	\$ -	\$ -	Amherst	Yes	\$ 31.59	\$ -	Deferred to

Project Name/Description	Project Description	Work Order #	Financing Docket No.	Approved Budgeted Amount	Estimated Project Cost as of 6/30/2018	Estimated Project Cost as of 9/30/2018	Estimated Project Cost as of 11/30/2018	Final Project cost as of 12/31/2018	Community	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Replace Ranger Pickup	Replace 2005 Ranger Pickup with 186,885 miles	1817796	2019 Docket	\$ 30,000	\$ 34,050	\$ 34,054	\$ 34,054	\$ 34,054	Merriamack	No	\$ 28.92	\$ -	Added after approved budget. Opportunity to replace 8 inch A/C pipe. 50% paid for by PEU per Order #26,049 in Dw17-071. Full value of project, \$67,850 is taxable to PWW
Main Road Replacement (PEU-PWW) Interconnection	PWW share of PWW-PEU Interconnection budget	1807148	2019 Docket	\$ -	\$ 57,000	\$ 67,850	\$ 67,850	\$ 33,925	Merriamack	Yes	\$ 28.92	\$ 1,962	
Marshall Street	Replace 1074 LF of 8" CI with 1074 LF of 8" DI/DPL	1813935	2019 Docket	\$ -	\$ 270,000	\$ 325,000	\$ 354,813	\$ 355,362	Nashua	Yes	\$ 27.81	\$ 9,883	RR crossing on Marshall St was to be lowered and fire protection concerns
Ferralls Court	Replace 116 LF of 1.25" steel pipe with 4" PVC	1825310	2019 Docket	\$ -	\$ 60,000	\$ 62,000	\$ 77,391	\$ 78,552	Nashua	Yes	\$ 27.81	\$ 2,185	Paving program to overlay street. Found leak. Main found on poor condition
Savall Court	Replace 100 LF of 1.25 inch steel pipe with 4 inch PVC	1825910	2019 Docket	\$ -	\$ 55,000	\$ -	\$ 55,000	\$ -	Nashua	Yes	\$ 27.81	\$ -	Paving program, same era as Ferry & Allen G.
Lovevill Street	Replace 400 LF of 1.25" steel pipe with 8" DI/DPL	1825912	2019 Docket	\$ -	\$ 210,000	\$ 86,000	\$ 139,276	\$ 139,417	Nashua	Yes	\$ 27.81	\$ 3,877	Gas replacement will compromise 1933 era water line. Based on revised contractor estimate. Final paving completed in 2018
Shakespeare High Pressure System	Expand HHP system to address pressure issues to 4 streets	1813926	2019 Docket	\$ -	\$ 273,000	\$ 230,000	\$ 230,000	\$ 211,941	Nashua	Yes	\$ 27.81	\$ 5,894	Project developed in response to a combination of low pressure and pressure surges causing customer plumbing issues.
Lakeside Avenue	Replace 275 LF of 1.25" steel pipe with 4" PVC	n/a	2019 Docket	\$ -	\$ 75,000	\$ -	\$ -	\$ -	Nashua	Yes	\$ 29.82	\$ -	Gas Company with late start. Project requires temporary water. Deferred to 2019
Cheshire Street	Replace 394 LF of 8" AC with 394 LF of 12" DI/DPL	1825913	2019 Docket	\$ -	\$ -	\$ 123,000	\$ 183,586	\$ 183,707	Nashua	Yes	\$ 27.81	\$ 5,109	Eliminate AC water main located in Street that City added to their 2018 street paving project. Final paving completed in 2018.
Investment in developer installed services at 13xannual revenue	Per tariff (224)	n/a	2019 Docket	\$ -	\$ -	\$ 133,175	\$ 133,175	\$ 141,179	Various	Yes	\$ 28.40	\$ 4,009	Tariffed investment not included in Board approved budget
Chase Street	Replace 430 LF of 6" CI with 4" HDPE	1829925	2019 Docket	\$ -	\$ -	\$ -	\$ 134,600	\$ -	Nashua	Yes	\$ 27.81	\$ -	Completed in conjunction with a City of Nashua Sewer Replacement. City covering Street reconstruction
Booster/Well/Chem Feed pump replacements	Booster/Well/Chem Feed pump replacements (13 YTD)	60, 61, 62 & 63 workorders	2019 Docket	\$ 60,000	\$ 60,000	\$ 60,000	\$ 48,354	\$ 50,899	Various	Yes	\$ 28.40	\$ 1,446	
Replace 2 Submersible Jet Pumps	Replace two submersible jet pumps in the headworks at the WTP	1818297	2019 Docket	\$ -	\$ -	\$ 14,707	\$ 14,707	\$ 14,707	Nashua	Yes	\$ 27.81	\$ 409	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	n/a	2019 Docket	\$ 15,000	\$ 15,000	\$ 15,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Misc. Structural Improvements	Misc. Structural Improvements	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 20,000	\$ -	\$ -	Nashua	Yes	\$ 28.40	\$ -	
Misc. Structural Improvements	WTP - Replace FWTS oil Tank Leak Monitor	1820031	2019 Docket	\$ -	\$ -	\$ 1,200	\$ 3,331	\$ 3,331	Nashua	Yes	\$ 27.81	\$ 93	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 5,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Replacement of 18" Backwash Actuator	The replacement of the electric valve actuator for the 18" backwash water control valve	1819988	2019 Docket	\$ -	\$ -	\$ 4,456	\$ 4,456	\$ 4,456	Nashua	Yes	\$ 27.81	\$ 124	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	2019 Docket	\$ 30,000	\$ 30,000	\$ 10,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Miscellaneous SCADA/Electrical	WTP - Replace High Lift #4, Soft Starter Mechanism	1813113	2019 Docket	\$ -	\$ -	\$ 5,265	\$ 5,265	\$ 5,265	Nashua	Yes	\$ 27.81	\$ 146	
Miscellaneous SCADA/Electrical	WTP - Replace Turbiditymeter Controller - Filters 1A/1B	1805725	2019 Docket	\$ -	\$ -	\$ 3,246	\$ 3,246	\$ 3,246	Nashua	Yes	\$ 28.40	\$ 92	
Miscellaneous SCADA/Electrical	Install CMI units on 4 meters at this location	1814856	2019 Docket	\$ -	\$ -	\$ 3,272	\$ 3,272	\$ 3,572	Nashua	Yes	\$ 27.81	\$ 99	
Miscellaneous SCADA/Electrical	Replacement of the variable frequency drive unit for pump #2 at this location	1819080	2019 Docket	\$ -	\$ -	\$ 9,765	\$ 9,765	\$ 9,765	Nashua	Yes	\$ 28.40	\$ 27	
Well Rehabilitation	Well Rehabilitation	n/a	2019 Docket	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	No well rehabilitations projected to occur
WTP Structural/HVAC	WTP Structural/HVAC	n/a	2019 Docket	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	
WTP Structural/HVAC	The rebuilding of the heating/AC roof top unit for WTP Finished Water Pump Station	1818208	2019 Docket	\$ -	\$ -	\$ 6,094	\$ 6,094	\$ 6,094	Nashua	Yes	\$ 27.81	\$ 169	
Purchase new lab equipment	Purchase new lab equipment	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 5,000	\$ -	\$ -	Nashua	No	\$ 27.81	\$ -	
Purchase new lab equipment	Replace Combined Filter Effluent Chlorine Analyzer	1820254	2019 Docket	\$ -	\$ -	\$ 3,575	\$ 3,575	\$ 3,575	Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	2019 Docket	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	None projected through year end
Purchase new vehicle #212	Vehicle needed for new Community Water System Operator	1816162	2019 Docket	\$ 65,000	\$ 65,000	\$ 39,513	\$ 39,513	\$ 41,478	Nashua	No	\$ 27.81	\$ -	Project reduced by \$6,000 for trade in value.
Replace Vehicle	Replacement of vehicle #62	1825490	2019 Docket	\$ 65,000	\$ 65,000	\$ 50,000	\$ 49,374	\$ 42,774	No	\$ 27.81	\$ -	Project reduced by \$2,500 for trade in value.	
Replace Vehicle	Replacement of vehicle #38	1819990	2019 Docket	\$ 40,000	\$ 40,000	\$ 27,306	\$ 30,081	\$ 27,581	Nashua	No	\$ 27.81	\$ -	deferred to 2019 due to resource availability
WTP Perimeter Fence	WTP Perimeter Fence	n/a	2019 Docket	\$ 80,000	\$ 80,000	\$ -	\$ -	\$ -	Merriamack	Yes	\$ 28.92	\$ -	Not Eligible for 2018 QCPAC as this is engineering only
Boilers Dam Spillway reconstruction engineering	Boilers Dam Spillway reconstruction engineering	1824545	2019 Docket	\$ 90,000	\$ 90,000	\$ 50,000	\$ -	\$ -	Nashua	No	\$ 28.92	\$ -	Equipment will not be installed until 2019.
WTP Camera system upgrade	Existing Camera system is outdated	1819073	2019 Docket	\$ 50,000	\$ 50,000	\$ 4,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Study is not QCPAC Qualified
Dredging feasibility study	Dredging feasibility study	1807145	2019 Docket	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,873	\$ -	Various	No	\$ 28.40	\$ -	Study is not QCPAC Qualified
Sewerwater Protection Study	Sewerwater Protection Study	1807146	2019 Docket	\$ 15,000	\$ 15,000	\$ -	\$ -	\$ -	Nashua	No	\$ 28.40	\$ -	Study is not QCPAC Qualified
Purchase replacement/Aeration system compressor	Harris Pond raw water aeration system, replace 1 of 2	1829485	2019 Docket	\$ -	\$ -	\$ 17,000	\$ 17,000	\$ 16,889	Nashua	Yes	\$ 27.81	\$ 470	Replaced existing compressor which was not replaceable
Purchase new lab equipment	Purchase bench top Zeta potential analyzer	1826397	2019 Docket	\$ -	\$ -	\$ 75,000	\$ 75,000	\$ 38,375	Nashua	Yes	\$ 27.81	\$ 1,067	Devices used to verify and correlate streaming current monitors and further optimize treatment process.
Purchase and install 2 raw water streaming current monitors	Replacement of two older units, 1 currently not operational	1829848	2019 Docket	\$ -	\$ -	\$ 55,000	\$ -	\$ 10,695	Nashua	Yes	\$ 27.81	\$ 297	Device used to optimize water treatment at Nashua Facility - Purchase in new lab equipment line above
Aquatic Vegetation Assessment and Management	Aquatic Vegetation Assessment and Management	1807147	2019 Docket	\$ 7,500	\$ 7,500	\$ 7,500	\$ -	\$ -	Various	No	\$ 28.40	\$ -	Study is not QCPAC Qualified
WTP - Replace Filter to Waste Valve Actuator	Replace valve actuator that controls flow of water from filters during waste/backwash	1800482	2019 Docket	\$ -	\$ -	\$ 6,276	\$ -	\$ 6,276	Nashua	Yes	\$ 27.81	\$ 175	
Website Upgrades	Improved Customer Service Experience	1814346, 1704175 & 1826896	2019 Docket	\$ 10,000	\$ 19,068	\$ 19,068	\$ -	\$ 4,500	Merriamack	No	\$ 28.92	\$ -	Project deferred until 2019
SHM Appliances	Aggregate Real-time monitoring of system alerts and logs	n/a	2019 Docket	\$ 26,000	\$ -	\$ -	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	Project Cancelled due to reduced need
Windows Server Licensing Renewal	Purchase Windows server for virtual servers	1813466	2019 Docket	\$ -	\$ -	\$ 22,925	\$ 22,925	\$ 22,925	Merriamack	No	\$ 28.92	\$ -	The assimilation of multiple new Windows Server licenses from multiple projects into one Enterprise License to cover all virtual servers. Project finished
AD Change Auditor	Needled to track changes to Authentication Server	n/a	2019 Docket	\$ 4,000	\$ 4,000	\$ -	\$ -	\$ -	Nashua	No	\$ 28.92	\$ -	Due to the licensing model moving from Purchase to Subscription based, this will become an expense item
Fiber Server Replacement	Replace older hardware	n/a	2019 Docket	\$ 13,000	\$ -	\$ -	\$ -	\$ -	Nashua	No	\$ 28.92	\$ -	Project Cancelled due to reduced need
Storage Upgrade	Replace non-supported hardware and increase speed	1817426	2019 Docket	\$ 70,000	\$ 52,000	\$ 52,000	\$ 45,785	\$ 45,197	Merriamack	No	\$ 28.92	\$ -	Project Complete
Munns FER Enhancements	Needled as Business process change	n/a	2019 Docket	\$ 64,000	\$ 64,000	\$ 64,000	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	Project deferred until 2019
Click Mobile Application Changes	Needled as Business process change	n/a	2019 Docket	\$ 30,000	\$ 30,000	\$ 30,000	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	Deferred to 2019
ClickMobile Move to iPads	Move to a more functional device	1702223, 1707189 & 1807440	2019 Docket	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 249,578	Merriamack	No	\$ 28.92	\$ -	Hardware purchases and Contractor charges
Implement iPads for Meter Techs	Configuration and deployment of 6 devices	1825224	2019 Docket	\$ 4,000	\$ 4,000	\$ 6,000	\$ 6,000	\$ 4,680	Merriamack	No	\$ 28.92	\$ -	Deferred until 2019
Miscellaneous Hardware	Run Rate replacements	n/a	2019 Docket	\$ 15,000	\$ 15,000	\$ 2,500	\$ 2,500	\$ -	Merriamack	No	\$ 28.92	\$ -	
Miscellaneous Hardware	Purchase network switch for core routing @ Manchester Street	1813280	2019 Docket	\$ -	\$ -	\$ 4,203	\$ 4,203	\$ 4,203	Merriamack	No	\$ 28.92	\$ -	
Miscellaneous Hardware	Castle/Ware Laptops	1818947	2019 Docket	\$ -	\$ -	\$ 4,642	\$ 4,642	\$ 4,642	Merriamack	No	\$ 28.92	\$ -	Replaced desktops. Allows for remote access via VPN
Miscellaneous Hardware	Replacement Printer - Engineering	1817323	2019 Docket	\$ -	\$ 2,249	\$ 2,249	\$ 2,249	\$ 2,249	Merriamack	No	\$ 28.92	\$ -	Replaced failed engineering printer
Miscellaneous Software	Run Rate replacements	n/a	2019 Docket	\$ 12,000	\$ 12,000	\$ 12,000	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	No plans for the rest of the year. Will request from contingency fund if something comes up
LIMS upgrade	Allow for Electronic Data Collection in the Field	1817795	2019 Docket	\$ 11,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 939	Merriamack	No	\$ 28.92	\$ -	No additional project costs expected
Physical Server for Pearl	Physical Server for Pearl	n/a	2019 Docket	\$ 12,000	\$ -	\$ -	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	Project Cancelled due to reduced need
Corporate Job Scheduler	Centralized nightly job management and notification	n/a	2019 Docket	\$ 4,000	\$ 4,000	\$ 4,000	\$ -	\$ -	Merriamack	No	\$ 28.92	\$ -	deferred
Consulting	Consulting	n/a	2019 Docket	\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000	Merriamack	No	\$ 28.92	\$ -	
Laptops for L.G. & D.W.	Laptops for L.G. & D.W.	1813464	2019 Docket	\$ 4,000	\$ 5,442	\$ 5,442	\$ 5,442	\$ 5,442	Merriamack	No	\$ 28.92	\$ -	Three Lap tops acquired for L.G., G.T. and J.B. Replaced desktops. Allows for remote access via VPN. Project Complete
Additional Computers	Additional Computers	1814843	2019 Docket	\$ 4,000	\$ 5,717	\$ 5,717	\$ 5,717	\$ 6,798	Merriamack	No	\$ 28.92	\$ -	Project Complete
Replaces 43 desktop computers at Main office	Computers are 7 years old and running on unsupported Windows 7 platform	1825498	2019 Docket	\$ -	\$ -	\$ 41,267	\$ 41,267	\$ 40,641	Merriamack	No	\$ 28.92	\$ -	Moved project from 2019 to 2018
Office 365 Exchange Migration	Office 365 Exchange Migration	1817818	2019 Docket	\$ -	\$ 16,400	\$ 6,200	\$ 6,200	\$ 7,337	Merriamack	No	\$ 28.92	\$ -	
VPN Update	VPN appliances to better support our mobile workforce	1824579	2019 Docket	\$ -	\$ -	\$ -	\$ 3,366	\$ -	Nashua	Yes	\$ 27.81	\$ -	
Berkshire St	Water Main Replacement	1817715	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 5,239	Nashua	Yes	\$ 27.81	\$ 146	2018 Spring clean up associated with water main project completed in 2017.
Bedford Water System Expansion	5/8" Meters	1820043	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 10,947	Bedford	Yes	\$ 24.76	\$ 271	Meters and Radios for PFOA customers in Bedford
GIS/GeoSync/Work	GIS/GeoSync/Work	1813962	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 13,360	Various	Yes	\$ 28.40	\$ 379	
PH1 Phase 2 Install Overhead Crane and Door-WTP Process Area Design	PH1 Phase 2 Install Overhead Crane and Door-WTP Process Area Design	1814354	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 12,412	Nashua	Yes	\$ 27.81	\$ 345	
New Virtual Server	New Virtual Server	1819083	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 16,321	Merriamack	Yes	\$ 28.92	\$ 472	
Replace VFD	Replace VFD, Booster #2, Orchard Ave Station	1819288	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 1,719	Nashua	Yes	\$ 27.81	\$ 48	
Unintended RC32S	Backup and Disaster Recovery Device	1617283	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 27,998	Merriamack	No	\$ 28.92	\$ -	
W. Allds St. Water Main Replacement - Main Street Nashua Intersections	W. Allds St. Water Main Replacement - Main Street Nashua Intersections	1700632	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 27,969	Nashua	Yes	\$ 27.81	\$ 778	
W Allds Street Phase II (Main to end) Int with Main Street Nashua Inter	W Allds Street Phase II (Main to end) Int with Main Street Nashua Inter	n/a	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 6,531	Nashua	Yes	\$ 27.81	\$ 182	
ERIC Walker	ERIC Walker	1900419	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 2,953	Merriamack	No	\$ 28.92	\$ -	
Utility Truck Replacement	Replacement of #47 with Truck #315	1900418	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 6,215	Merriamack	No	\$ 28.92	\$ -	
Additional Trench Boxes	Additional Trench Boxes	1826437	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 22,241	Merriamack	No	\$ 28.92	\$ -	
Overhead Crane and Door	WTP Process Area Installation	1807303	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 19,761	Nashua	Yes	\$ 27.81	\$ 530	
Sweet Hill Well #3	Sweet Hill Well #3 (2018 Carrover)	1813054	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 2,408	Plastow	Yes	\$ 28.93	\$ 70	
SCADA System Upgrade	WTP - 2018 replace all SCADA computers and upgrade system	1813303	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 20,642	Nashua	Yes	\$ 27.81	\$ 574	
Amherst Water System Expansion	Meters and Radios	1806832	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 16,646	Amherst	Yes	\$ 31.59	\$ 526	Meters and Radios for PFOA customers in Amherst
#353 Service Truck Replacement (#47)	#353 Service Truck Replacement (#47)	1813948	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 1,103	Merriamack	No	\$ 27.81	\$ -	
Retainage	Retainage	n/a	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 197,247	Nashua	Yes	\$ 27.81	\$ 5,485	Please see the "Retainage Support" tab for breakdown of amount. This is retainage on projects completed above. The \$\$ held in retainage will need to be recovered in 2020 QCPAC.
				\$ 10,008,000	\$ 9,102,095	\$ 6,807,066	\$ 8,600,675	\$ 8,					

Project Name/Description	Project Description	Work Order #	Financing Docket No.	Approved Budgeted Amount	Estimated Project Cost as of 6/30/2018	Estimated Project Cost as of 9/30/2018	Estimated Project Cost as of 11/30/2018	Final Project cost as of 12/31/2018	Community	Taxable	Tax Rate (I)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
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1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

Total PWW Capex for 2018 - \$ 8,229,377

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Community	Taxable	Tax Rate (I)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes		DW17-183	26,101	2/2/2018	\$ 46,000	Yes	Various	Yes	\$ 28.85	\$ 1,327	
Renewed Services (20)	Replacement of failed services		DW17-183	26,101	2/2/2018	\$ 92,000	Yes	Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants		DW17-183	26,101	2/2/2018	\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Radios (2750)	Replace out of warrantee failed radio meter readers		DW17-183	26,101	2/2/2018	\$ 275,000	Yes	Various	Yes	\$ 28.85	\$ 7,934	
Meters (Growth) 5/8" 2" - Core & CWS (480)	Meters (Growth) 5/8" 2" - Core & CWS (480)		DW17-183	26,101	2/2/2018	\$ 48,000	Yes	Various	Yes	\$ 28.85	\$ 1,385	
Meters 5/8"-4" Lead Meter Exchange - Core & CWS (3000)	Meters 5/8"-4" Lead Meter Exchange - Core & CWS (3000)		DW17-183	26,101	2/2/2018	\$ 300,000	Yes	Various	Yes	\$ 28.85	\$ 8,635	
Entrance Security Gate & Perimeter Fence	Entrance Security Gate & Perimeter Fence		DW17-183	26,101	2/2/2018	\$ 75,000	Yes	Merrimack	Yes	\$ 28.92	\$ 2,169	
Replace 13 yr Vac Trailer - Safety & Maint issue	Replace 13 yr Vac Trailer - Safety & Maint issue		DW17-183	26,101	2/2/2018	\$ 100,000	Yes	Merrimack	Yes	\$ 28.92	\$ 2,892	
Protectus Meter Upgrade	Spirobrook Rd Protectus Meter Upgrade		DW17-183	26,101	2/2/2018	\$ 21,000	Yes	Nashua	Yes	\$ 27.81	\$ 584	
Gilman Street	Replace 1470 LF of 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
Elm Street	Replace 875 LF of 6 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 559,350	Yes	Nashua	Yes	\$ 27.81	\$ 15,556	
Monroe Street	Replace 310 LF of 4 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 122,270	Yes	Nashua	Yes	\$ 27.81	\$ 3,400	
W. Pearl Street	Replace 260 LF of 8 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 138,050	Yes	Nashua	Yes	\$ 27.81	\$ 3,839	
Harvard Street	Replace 800 LF of 8 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 247,500	Yes	Nashua	Yes	\$ 27.81	\$ 6,883	
West Hollis Street Check Valve Pit	Install at the int of W. Hollis St and Panther Dr.		DW17-183	26,101	2/2/2018	\$ 88,000	Yes	Nashua	Yes	\$ 27.81	\$ 2,447	
NWS Improvements - Manchester Street	Add 2700 LF of 24 inch DIPCL on Manchester St.					\$ 660,000	Yes	Nashua	Yes	\$ 27.81	\$ 18,355	
NWS Improvements - Route 101A and Route 121 (Amherst)	Add 2200 LF of 12 inch DIPCL to close loop					\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
NWS Improvements - Tucker Road	Replace 825 LF of 16 inch AC with 825 LF of 24 inch DIPCL		DW GTF- Financing			\$ 522,500	Yes	Nashua	Yes	\$ 27.81	\$ 14,531	
NWS Improvements - Deerwood Drive & Amherst St. Intersection	Replace 1300 LF of 12 inch AC with 1300 LF of 24 inch DIPCL					\$ 467,500	Yes	Nashua	Yes	\$ 27.81	\$ 13,001	
NWS Improvements - Deerwood Dr. Northwest Blvd Loop	Add 3400 LF of 20 inch HDPE including RRP pipe jacking					\$ 635,800	Yes	Nashua	Yes	\$ 27.81	\$ 17,682	
NWS Improvements Ponemah Rd/Route 101A Loop	Add 2200 LF of 12 inch DIPCL to close two loop major dead ends					\$ 484,000	Yes	Nashua	Yes	\$ 27.81	\$ 13,460	
City of Nashua Sewer - Chase Street	Replace 470 LF of 6 inch CIP with 470 LF of 6 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 176,000	Yes	Nashua	Yes	\$ 27.81	\$ 4,895	
City of Nashua Sewer - Ash Street	Replace 710 LF of 6 inch CIP with 710 LF of 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 242,000	Yes	Nashua	Yes	\$ 27.81	\$ 6,730	
City of Nashua Sewer - Lake Street	Replace 2950 LF of 6 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 990,000	Yes	Nashua	Yes	\$ 27.81	\$ 27,532	
Merrimack River Intake	Year Round Raw Water Intake from Merrimack River		DW GTF- Financing			\$ 5,500,000	Yes	Merrimack	Yes	\$ 28.92	\$ 159,060	
Asset Management Outside GIS Consulting Services	Outside GIS Consulting Services		DW17-183	26,101	2/2/2018	\$ 60,000	Yes	Various	No		\$ -	
Asset Management Water Modeling Consulting	Water Modeling Consulting		DW17-183	26,101	2/2/2018	\$ 36,000	Yes	Various	No		\$ -	
Asset Management Trunk R2 Units	Trunk R2 Units		DW17-183	26,101	2/2/2018	\$ 14,000	Yes	Various	Yes	\$ 28.85	\$ 404	
Investment in developer installed services at 1x annual revenue	Per tariff		DW17-183	26,101	2/2/2018	\$ 60,000	Yes	Various	Yes	\$ 28.85	\$ 1,731	
Bower Dam reconstruction and engineering	Bower Dam reconstruction and engineering		DW17-183	26,101	2/2/2018	\$ 25,000	No	Merrimack	No		\$ -	Design Engineering Work for 2020 Dam rehabilitation
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Well Pump replacements	Well Pump replacements		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Chemical Feed pump replacements	Chemical Feed pump replacements		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Upgrade SCADA historian software, new hardware	upgrade SCADA historian software, new hardware		DW17-183	26,101	2/2/2018	\$ 150,000	Yes	Various	Yes	\$ 28.85	\$ 4,328	
Twin Ridge rebuild softener system, install radon treatment	Twin Ridge rebuild softener system, install radon treatment		DW17-183	26,101	2/2/2018	\$ 50,000	Yes	Plaistow	Yes	\$ 28.85	\$ 1,443	
Misc. Structural Improvements	Misc. Structural Improvements		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased		DW17-183	26,101	2/2/2018	\$ 17,500	Yes	Various	Yes	\$ 28.85	\$ 505	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		DW17-183	26,101	2/2/2018	\$ 30,000	Yes	Various	Yes	\$ 28.85	\$ 866	
WTP Structural/HVAC	WTP Structural/HVAC		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Purchase new lab equipment	Purchase new lab equipment		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Nashua	Yes	\$ 28.85	\$ 577	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Replace Ferric Chloride Feed pump	Replace Ferric Chloride Feed pump		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Carbon media changeout-filters 1 & 2	Carbon media changeout-filters 1 & 2		DW17-183	26,101	2/2/2018	\$ 1,000,000	Yes	Nashua	Yes	\$ 28.85	\$ 28,850	
Add 3rd pump at Main Dunstable Booster, replace 1 existing	Add 3rd pump at Main Dunstable Booster, replace 1 existing		DW17-183	26,101	2/2/2018	\$ 120,000	Yes	Nashua	Yes	\$ 28.85	\$ 3,462	
Replace Kessler Farm booster pump package	Replace 20 year old package booster station pumps and piping. Piping is steel which is beginning to pit		DW17-183	26,101	2/2/2018	\$ 75,000	Yes	Nashua	Yes	\$ 28.85	\$ 2,164	
Stump Pond Subwatershed assessment	Stump Pond Subwatershed assessment		DW17-183	26,101	2/2/2018	\$ 25,000	No	Merrimack	No		\$ -	Study - Amortized expense
Stump Pond Stormwater BMP	Stump Pond Stormwater BMP		DW17-183	26,101	2/2/2018	\$ 20,000	No	Merrimack	No		\$ -	BMP Engineering and Design
Public Education Watershed signage	Public Education Watershed signage		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Merrimack	Yes	\$ 28.85	\$ 577	
Replace 2 Hach Turbidimeters and associated control module	Replace 2 Hach Turbidimeters and associated control module		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Fiber Conduit between WTP and Dist	Install Fiber Conduit between Water Treatment Plant and Distribution to eliminate ongoing Comcast		DW17-183	26,101	2/2/2018							
Munis FER Enhancements	Ethernet line to one of the buildings		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Nashua	No		\$ -	
Wireless Access Points for Main Office	Munis FER Enhancements		DW17-183	26,101	2/2/2018	\$ 35,000	Yes	Merrimack	No		\$ -	
KVM for Data Center	Wireless Access Points for Main Office		DW17-183	26,101	2/2/2018	\$ 14,000	Yes	Merrimack	No		\$ -	
IOS Charging Station	Keyboard/Voice remote for Data Center so our multiple servers can be accessed by one console without		DW17-183	26,101	2/2/2018	\$ 2,500	Yes	Merrimack	No		\$ -	
Digital Signage for Distribution	Changing Station for multiple iPads to allow for upgrades across multiple devices concurrently.		DW17-183	26,101	2/2/2018	\$ 1,200	Yes	Merrimack	No		\$ -	
VDI Pilot	Digital Signage for Distribution allowing notices and schedules to be more prominently displayed		DW17-183	26,101	2/2/2018	\$ 2,000	Yes	Merrimack	No		\$ -	
Misc Hardware	A pilot to determine whether a Virtual Desktop Infrastructure would be feasible for our environment		DW17-183	26,101	2/2/2018	\$ 12,000	Yes	Merrimack	No		\$ -	
Misc Software	Misc Hardware		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Merrimack	No		\$ -	
Website upgrades	Misc Software		DW17-183	26,101	2/2/2018	\$ 12,000	Yes	Merrimack	No		\$ -	
Implement Customer Balances over the phone	Website upgrades		DW17-183	26,101	2/2/2018	\$ 8,000	Yes	Merrimack	No		\$ -	
	Implement Customer Balances over the phone		DW17-183	26,101	2/2/2018	\$ 4,000	No	Merrimack	No		\$ -	
Pennichuck Water Works Projected 2019 Total Capital Expenditure Budget -						\$ 14,978,170				QCPAC projects -	\$ 416,669	

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

Total Projected PWW QCPAC Capex for 2019 - \$ 14,908,170
Amount funded by SRF/DW/GTF - \$ 8,819,800
Amount to be funded by 2020 Bond Issue - \$ 6,088,370

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Community	Taxable	Tax Rate (I)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes		DW17-183	26,101	2/2/2018	\$ 46,000	Yes	Various	Yes	\$ 28.85	\$ 1,327	
Rosewell Services (20)	Replacement of failed services		DW17-183	26,101	2/2/2018	\$ 92,000	Yes	Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants (Run rate) (8 YTD)		DW17-183	26,101	2/2/2018	\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Radios (2750)	Replace out of warranty failed radio meter readers		DW17-183	26,101	2/2/2018	\$ 275,000	Yes	Various	Yes	\$ 28.85	\$ 7,934	
Meters (Growth) 5/8"-2" - Core & CWS (480)	Meters (Growth) 5/8"-2" - Core & CWS (480)		DW17-183	26,101	2/2/2018	\$ 48,000	Yes	Various	Yes	\$ 28.85	\$ 1,385	
Meters 5/8"-6" Lead Meter Exchange - Core & CWS (1000)	Meters 5/8"-6" Lead Meter Exchange - Core & CWS (1000)		DW17-183	26,101	2/2/2018	\$ 100,000	Yes	Various	Yes	\$ 28.85	\$ 2,885	
New Utility Vehicle (2)	New Utility Vehicles to replace existing high mileage/maintenance vehicles		DW17-183	26,101	2/2/2018	\$ 130,000	Yes	Merrimack	No	\$ 28.92	\$ -	
New Utility Van (2)	New Utility Vans to replace existing high mileage/maintenance vans		DW17-183	26,101	2/2/2018	\$ 70,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Protectus Meter Upgrade	Protectus Meter Upgrade -		DW17-183	26,101	2/2/2018	\$ 22,000	Yes	Nashua	Yes	\$ 27.81	\$ 612	
Trimble Units for Meter Reading (2)	Replacement of CE Meter Reading Equipment (2)		DW17-183	26,101	2/2/2018	\$ 16,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Residual paving from 2019 main replacement	Residual paving from prior year main replacement		DW17-183	26,101	2/2/2018	\$ 1,012,000	Yes	Nashua	Yes	\$ 27.81	\$ 28,144	
Brook Street	Replace 225 LF of 4 inch and 915 LF of 6 inch CI with 1140 LF of 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 422,730	Yes	Nashua	Yes	\$ 27.81	\$ 11,756	
Hamilton Street	Replace 410 LF of 6 inch CI with 4 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 97,130	Yes	Nashua	Yes	\$ 27.81	\$ 2,701	
Ash Street	Replace 510 LF of 6 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 191,510	Yes	Nashua	Yes	\$ 27.81	\$ 5,326	
Burnitt Street	Replace 425 LF of 4 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 157,080	Yes	Nashua	Yes	\$ 27.81	\$ 4,368	
Burnitt Street	Replace 125 LF of 4 inch CI with 4 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 43,010	Yes	Nashua	Yes	\$ 27.81	\$ 1,196	
Vernon Street	Replace 675 LF of 6 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 251,130	Yes	Nashua	Yes	\$ 27.81	\$ 6,984	
Sarasota Ave	Replace 250 LF of 6 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 92,620	Yes	Nashua	Yes	\$ 27.81	\$ 2,576	
Allid Street	Replace 1860 LF of 6 & 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 966,570	Yes	Nashua	Yes	\$ 27.81	\$ 26,880	
Lawndale Avenue	Replace 1085 LF of 6 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 546,920	Yes	Nashua	Yes	\$ 27.81	\$ 15,210	
Taylor Road (Lynn St to Ffield St)	Replace 725 LF of 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 365,750	Yes	Nashua	Yes	\$ 27.81	\$ 10,172	
Temple St (south to gorman)	Replace 900 LF of 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 457,160	Yes	Nashua	Yes	\$ 27.81	\$ 12,714	
Schoold Street (High to W. Pearl Alleyway)	Replace 400 LF of 4 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 151,140	Yes	Nashua	Yes	\$ 27.81	\$ 4,203	
Water Main Replacement - City Sewer Projects	Replacement of various sections of CI pipe		DW17-183	26,101	2/2/2018	\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
Kessler Farm Tank Replacement	Kessler Farm Tank Replacement		DW17-183	26,101	2/2/2018	\$ 3,388,000	Yes	Nashua	Yes	\$ 27.81	\$ 94,220	
Replace Engineering Pickup	Replace Pickup with > 150,000 miles		DW17-183	26,101	2/2/2018	\$ 35,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Replace Engineering SUV	Replace SUV with > 150,000 miles		DW17-183	26,101	2/2/2018	\$ 30,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Investment in developer installed services at 1x annual revenue	Per tariff		DW17-183	26,101	2/2/2018	\$ 60,000	Yes	Various	Yes	\$ 28.85	\$ 1,731	
Bowers Dam reconstruction	Bowers Dam reconstruction		DW17-183	26,101	2/2/2018	\$ 900,000	Yes	Merrimack	Yes	\$ 28.92	\$ 26,028	
WTP Perimeter fence	WTP Perimeter fence		DW17-183	26,101	2/2/2018	\$ 80,000	Yes	Merrimack	Yes	\$ 28.92	\$ 2,314	
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		DW17-183	26,101	2/2/2018	\$ 55,000	Yes	Various	Yes	\$ 28.85	\$ 1,587	
Well Pump replacements	Well Pump replacements		DW17-183	26,101	2/2/2018	\$ 18,750	Yes	Various	Yes	\$ 28.85	\$ 541	
Chemical Feed pump replacements	Chemical Feed pump replacements		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS		DW17-183	26,101	2/2/2018	\$ 18,750	Yes	Various	Yes	\$ 28.85	\$ 541	
Misc. Structural Improvements	Misc. Structural Improvements		DW17-183	26,101	2/2/2018	\$ 27,500	Yes	Various	Yes	\$ 28.85	\$ 793	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased		DW17-183	26,101	2/2/2018	\$ 17,500	Yes	Various	Yes	\$ 28.85	\$ 505	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		DW17-183	26,101	2/2/2018	\$ 27,500	Yes	Various	Yes	\$ 28.85	\$ 793	
Well Rehabilitation	Well Rehabilitation		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
WTP Structural/HVAC	WTP Structural/HVAC		DW17-183	26,101	2/2/2018	\$ 7,500	Yes	Nashua	Yes	\$ 27.81	\$ 209	
Purchase new lab equipment	Purchase new lab equipment		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		DW17-183	26,101	2/2/2018	\$ 7,500	Yes	Various	Yes	\$ 28.85	\$ 216	
Replace Vehicle	Replace Vehicle		DW17-183	26,101	2/2/2018	\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW17-183	26,101	2/2/2018	\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Carbon Media changeout - filters 3 & 4	Carbon Media changeout - filters 3 & 4		DW17-183	26,101	2/2/2018	\$ 1,000,000	Yes	Nashua	Yes	\$ 27.81	\$ 27,810	
Arsenic treatment to respond to new MCL	Arsenic treatment to respond to new MCL		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Various IT Projects	Maintain and replace aging software and hardware		DW17-183	26,101	2/2/2018	\$ 300,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Pennichuck Water Works Projected 2020 Total Capital Expenditure Budget -						\$ 12,461,750		Projected Property Tax Expense associated		\$	326,226	

Total Projected PWW QCPAC Capex for 2020 - \$ 12,461,750

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 #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Community	Taxable	Tax Rate (1)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes			Future Financing Petition		\$ 46,000	Yes	Various	Yes	\$ 28.85	\$ 1,327	
Renewed Services (20)	Replacement of failed services			Future Financing Petition		\$ 92,000	Yes	Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants (Run rate) (8 YTD)			Future Financing Petition		\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves			Future Financing Petition		\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Radios (2750)	Replace out of warrantee failed radio meter readers			Future Financing Petition		\$ 275,000	Yes	Various	Yes	\$ 28.85	\$ 7,934	
Meters (Growth) 5/8"-2" - Core & CWS (480)	Meters (Growth) 5/8"-2" - Core & CWS (480)			Future Financing Petition		\$ 48,000	Yes	Various	Yes	\$ 28.85	\$ 1,385	
Meters 5/8"-6" Meter Exchange - Core & CWS (1000)	Meters 5/8"-6" Lead Meter Exchange - Core & CWS (1000)			Future Financing Petition		\$ 100,000	Yes	Various	Yes	\$ 28.85	\$ 2,885	
New Utility Vehicle (2)	New Utility Vehicles to replace existing high mileage/maintenance vehicles			Future Financing Petition		\$ 130,000	Yes	Merrimack	No	\$ 28.92	\$ -	
New Utility Van (2)	New Utility Vans to replace existing high mileage/maintenance vans			Future Financing Petition		\$ 70,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Protectus Meter Upgrade	Protectus Meter Upgrade			Future Financing Petition		\$ 22,000	Yes	Nashua	Yes	\$ 27.81	\$ 612	
New Vac/Valve Trailer	Replacement of 10yr old Vac for safety & Maintenance Reasons			Future Financing Petition		\$ 70,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Residual paving from prior year main replacement	Residual paving from prior year main replacement			Future Financing Petition		\$ 653,350	Yes	Nashua	Yes	\$ 27.81	\$ 18,170	
Benson Avenue	Replace 550 LF of 4 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 210,650	Yes	Nashua	Yes	\$ 27.81	\$ 5,858	
Spaulling Street	Replace 950 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 362,450	Yes	Nashua	Yes	\$ 27.81	\$ 10,080	
Alstead Avenue	Replace 240 LF of 4 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 80,300	Yes	Nashua	Yes	\$ 27.81	\$ 2,233	
Spaulling Avenue	Replace 430 LF of 6, 2, & 1.25 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 104,720	Yes	Nashua	Yes	\$ 27.81	\$ 2,912	
St Lazare Street	Replace 415 LF of 2 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 100,980	Yes	Nashua	Yes	\$ 27.81	\$ 2,808	
Ingalls St (St Camille to end)	Replace 200 LF of 1.5 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 48,730	Yes	Nashua	Yes	\$ 27.81	\$ 1,355	
Nye Avenues	Replace 400 LF of 2 & 1.5 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 96,140	Yes	Nashua	Yes	\$ 27.81	\$ 2,674	
Copp Street	Replace 350 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 136,620	Yes	Nashua	Yes	\$ 27.81	\$ 3,799	
Gray Avenue	Replace 360 LF of 6 inch CI with 6 inch DIPCL			Future Financing Petition		\$ 112,550	Yes	Nashua	Yes	\$ 27.81	\$ 3,129	
Coburn Woods (all side streets)	Replace 4400 LF of 2 inch PVC with 4 inch DIPCL			Future Financing Petition		\$ 1,320,000	Yes	Nashua	Yes	\$ 27.81	\$ 36,709	
City Sewer Projects	Replace CI with DIPCL			Future Financing Petition		\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
Sawyer Street	Replace 1600 LF of 6 inch CI with 12 inch DIPCL			Future Financing Petition		\$ 528,000	Yes	Nashua	Yes	\$ 27.81	\$ 14,684	
Woodward Street	Replace 360 LF 8 inch CI with 470 LF 8 inch DIPCL			Future Financing Petition		\$ 155,100	Yes	Nashua	Yes	\$ 27.81	\$ 4,313	
Blosson Street	Replace 2400 LF of 6 inch CI and 8 inch CI with 2400 LF of 8 inch DIPCL			Future Financing Petition		\$ 792,000	Yes	Nashua	Yes	\$ 27.81	\$ 22,026	
Lanwood Street	Replace 960 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 316,800	Yes	Nashua	Yes	\$ 27.81	\$ 8,810	
Balcom Street	Replace 1240 LF of 6 inch CI with 1240 LF 8 inch DIPCL			Future Financing Petition		\$ 409,200	Yes	Nashua	Yes	\$ 27.81	\$ 11,380	
Euclid Avenue	Replace 425 LF 6 inch CI with 425LF 8 inch DIPCL			Future Financing Petition		\$ 140,250	Yes	Nashua	Yes	\$ 27.81	\$ 3,900	
Fairview Street	Replace 800 LF 6 inch CI with 800 LF 8 inch DIPCL			Future Financing Petition		\$ 264,000	Yes	Nashua	Yes	\$ 27.81	\$ 7,342	
Sargent Street	Replace 1900 LF 6 inch CI with 1900 LF 16 inch DIPCL			Future Financing Petition		\$ 627,000	Yes	Nashua	Yes	\$ 27.81	\$ 17,437	
Courtland Street	Replace 1170 LF 4 inch CI with 1170 LF 16 inch DIPCL			Future Financing Petition		\$ 386,100	Yes	Nashua	Yes	\$ 27.81	\$ 10,737	
Replace Engineering Pickup	Replace Engineering Pickup with > 150,000 Miles			Future Financing Petition		\$ 36,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Replace Engineering SUV	Replace Engineering SUV with > 150,000 Miles			Future Financing Petition		\$ 30,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Milford Booster Station	Replace/Relocate/Upgrade the Milford Booster Station (>2MGD)			Future Financing Petition		\$ 660,000	Yes	Amherst	Yes	\$ 28.85	\$ 19,041	
Investment in developer installed services at 1xannual revenue	Per tariff			Future Financing Petition		\$ 60,000	Yes	Various	Yes	\$ 28.85	\$ 1,731	
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild			Future Financing Petition		\$ 55,000	Yes	Various	Yes	\$ 28.85	\$ 1,587	
Well Pump replacements	Well Pump replacements			Future Financing Petition		\$ 18,750	Yes	Various	Yes	\$ 28.85	\$ 541	
Chemical Feed pump replacements	Chemical Feed pump replacements			Future Financing Petition		\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS			Future Financing Petition		\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Misc. Structural Improvements	Misc. Structural Improvements			Future Financing Petition		\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased			Future Financing Petition		\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical			Future Financing Petition		\$ 30,000	Yes	Various	Yes	\$ 28.85	\$ 866	
Well Rehabilitation	Well Rehabilitation			Future Financing Petition		\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
WTP Structural/HVAC	WTP Structural/HVAC			Future Financing Petition		\$ 10,000	Yes	Nashua	Yes	\$ 27.81	\$ 278	
Purchase new lab equipment	Purchase new lab equipment			Future Financing Petition		\$ 20,000	Yes	Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects			Future Financing Petition		\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Carbon Media changeout - filters 5 & 5	Carbon Media changeout - filters 5 & 5			Future Financing Petition		\$ 1,000,000	Yes	Nashua	Yes	\$ 27.81	\$ 27,810	
Various projects	Various projects			Future Financing Petition		\$ 300,000	Yes	Merrimack	No	\$ 28.85	\$ -	
Replacement of CMMS System (Synergen)	Replacement of CMMS System (Synergen)			Future Financing Petition		\$ 1,000,000	Yes	Merrimack	No	\$ 28.85	\$ -	
Pennichuck Water Works Projected 2021 Total Capital Expenditure Budget -						\$ 11,897,670		Projected Property Tax Expense associated			\$ 280,650	

Total Projected PWW QCPAC Capex for 2021 - \$11,897,670

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

Pennichuck Water Works

Accrued Liabilities - Retainage
Account # 241350-2000-001

PWW QCPAC Filing
Exhibit 2
Page 6

Accrued Liabilities - Retainage	Balance	January-18	February-18	March-18	April-18	May-18	June-18	July-18	August-18	September-18	October-18	November-18	December-18	Balance
2018 Main St Area Improvement #s														
1806801/1806802/1806803/1806804/1806435/ 1806794/1806795/1806796/1806797/1806798/ 1806799/1806835	-	-	-	-	-	-	-	(20,420.50)	(25,173.63)	-	(7,475.46)	(18,821.11)	40,329.97	(31,560.73)
2018 Misc Water Main Improvement #s														
1806433/1806828/1806829/180630/180631/ 1806836/1813532	-	-	-	-	-	-	-		(17,779.21)	(25,885.53)	-	(19,591.54)	(10,501.99)	(73,758.27)
N. Granese & Sons														
Bedford Water Expansion PWW #1800734	-	-	-	-	-	-	-	-	-	(13,038.50)	(9,790.00)	-	-	(22,828.50)
NE Earth Mechanics														
Shakespeare HP System Expansion #1813926	-	-	-	-	-	-	-	-	-	-	(19,289.07)	-	(402.00)	(19,691.07)
RWC Enterprises														
Ferryalls Ct #1825319	-	-	-	-	-	-	-	-	-	-	(3,018.00)		(6,149.45)	(9,167.45)
Kinsley St #1825911	-	-	-	-	-	-	-	-	-	-	(6,625.00)		-	(6,625.00)
W. F. Grace														
Marshall St. Water Main #1813935	-	-	-	-	-	-	-	(2,839.05)	-	(17,664.10)	-	(13,112.55)	-	(33,615.70)
TOTAL	-	-	-	-	-	-	-	(23,259.55)	(42,952.84)	(56,588.13)	(46,197.53)	(51,525.20)	23,276.53	(197,246.72)

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-1

Date of Response: 5/23/19
Witness: Donald L. Ware

REQUEST: Re: Exhibit 1 – Schedule A – Computation of QCPAC; Note (14)

Note (14) states that the average monthly single-family consumption is 8.58 ccf. Please provide a copy of the data used by the Company to arrive at this statement.

RESPONSE:

The average monthly single-family home with a 5/8" meter used 8.58 CCF during the last test year (2015). The customer service department just calculated this usage for 2018 and the revised average monthly single-family used 7.77 CCF per month. The data supporting this calculation comes from the Company's billing package and is calculated as follows:

- a) Total 2018 sales in CCF to single-family residential customers with a 5/8" meter = 2,153,212
- b) Total number of single-family residential customers with a 5/8" meters = 23,094
- c) Ave. Annual sales to a single-family residential customer with a 5/8" meter = 93.24 CCF
- d) Ave. monthly sales to a single-family residential customer with a 5/8" meter = 7.77 CCF

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-2

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Exhibit 2, Page 2 – 2018 QCPAC Additions; Stevens Street Main Replacement - \$264,358:

- a) The explanation relative to this project reads as follows: *“The \$40,200 in the Board approved budget was a copy and paste error. The correct budget for this project based on the distribution engineer’s original estimate was \$xxx,xxx.”* Please provide further explanation regarding this explanation.
- b) The estimated cost for this project included in the budget approved in Commission Order No. 26,183 (10/29/18) was \$33,200. The actual cost of this project was \$264,358, for a cost variance of \$231,158. Please provide a detailed explanation for this cost variance.

RESPONSE:

- a) The original Steven’s Street project scope for 2018 assumed that the only work to be completed on Stevens Street would be the replacement of the water main leading into Stevens Street at both ends where this Street intersected with Lawndale Ave. and Main Street. The remainder of the planned Steven’s Street replacement project (about 900 feet of water main replacement) was not expected to be completed until 2019. The original Steven’s Street budget of \$40,000 reflected only the replacement of the Steven’s Street water main at those intersections. The portion of the budget that was cut provided only the \$40,000 of work to be completed in 2018 and did not include the total project budget for this Street of \$293,000 that was expected to occur over the fall of 2018 and the Spring of 2019. This was reflected in PWW’s 2018 QCPAC filing (DW 18-022) which correctly identified the approved budget for this project as \$293,000.
- b) As work on this project progressed, it turned out that the contractor was not only able to complete the above referenced intersection work but also replace all the water main along Stevens Street resulting in the final replacement cost of \$264,358 to replace the entire length of pipe from Lawndale Avenue to Main Street. Please note that the work on Stevens Street was part of a much larger project that included Taylor Street, Russell Avenue, Fossa Avenue, Burnett Street, Park Avenue, Field Street, Revere Street, Fernwood Street, Stevens Street, Evergreen Street, Fifield Street and Morton Street.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-3

Date of Response: 5/23/19
Witness: Donald L. Ware

REQUEST: Re: Exhibit 2, Page 2 – 2018 QCPAC Additions; Cheshire Street Main Replacement - \$183,707:

An estimated cost for this project was not included in the budget approved in Commission Order No. 26,183. Please provide a detailed explanation for the inclusion of this project in the Company's proposed 2018 capital projects.

RESPONSE:

This water main replacement was completed in 2018 in response to the City completing paving of Cheshire Street in the fall of 2018. The existing water main in this street was an 8" AC (Asbestos-Cement) water main. It has been the Company's policy for over 20 years to replace AC water main prior to any Street repaving or reconstruction project. When the Company was informed that Cheshire Street was going to be repaved in 2018, it added this water main to its list of replacement projects to ensure that this section of AC water main was removed from service.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-4

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Exhibit 2, Page 2 – 2018 QCPAC Additions; Lincoln Avenue Residual Paving - \$69,988: The estimated cost for this project included in the budget approved in Commission Order No. 26,183 was \$52,300. The actual cost of this project was \$69,988, for a cost variance of \$17,688. Please provide a detailed explanation for this cost variance.

RESPONSE:

The estimated amount for Lincoln Street was for paving only. The actual work completed in 2018 included paving plus the connection of the eastern end of Lincoln Avenue to the water main in Fifield Street. The work involved for this connection involved cutting in a 16"x16"x6" Tee, two 16" butterfly valves and a 6" gate valve. This work was completed in December of 2017 and was not included in the 2018 QCPAC. This work accounted for the difference between the final paving cost of \$48,017 and the 2018 audited expenditure on this job of \$69,988.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-5

Date of Response: 5/23/19
Witness: Donald L. Ware

REQUEST: Re: Exhibit 2, Page 2 – 2018 QCPAC Additions; ClickMobile Move to iPads - \$249,378: The estimated cost for these devices included in the budget approved in Commission Order No. 26,183 was \$140,000. The actual cost incurred for these devices was \$249,378, for a cost variance of \$109,378. Please provide a detailed explanation for this cost variance.

RESPONSE:

As the developer was converting the code from Windows to IOS, there was more in-depth differences in programming than expected to keep the existing functionality. Additionally, there were numerous code changes made to the “log in” procedure to make the application as user friendly as possible.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-6

Date of Response: 5/23/19
Witness: Donald L. Ware

REQUEST: Re: Exhibit 2, Page 3 – 2019 QCPAC Additions: The amount indicated as the projected 2019 Capital Expenditure Budget is \$14,978,170. The combined total of the estimated SRF/DWGTF and 2020 Bond Issue financings indicated is \$14,908,170 (\$8,819,800 + \$6,088,370); a difference of \$70,000.

- a) Please provide a detailed explanation for this variance.
- b) If this variance is the result of an error, please provide a corrected Exhibit 2, Page 3 schedule as well as a corrected Exhibit 1 schedule.

RESPONSE:

- a) The \$70,000 difference reflects three projects that are not QCPAC eligible (as noted in Exhibit 2, Page 3). Those projects were as follows:
 1. Bowers Dam reconstruction and engineering – This budgeted amount for this project is \$25,000. The project is the engineering design and evaluation for the reconstruction of the Bowers Pond Dam Spillway required by the NHDES. The reconstruction will not occur until 2020 - hence the engineering for this project is not QCPAC eligible in 2019.
 2. Stump Pond subwatershed assessment – The budgeted amount for this project is \$25,000. This study of the Stump Pond subwatershed is an evaluation of the ability to permit a stormwater BMP on the outlet of Stump Pond. Stump Pond is the largest source of nutrients into the Pennichuck Brook watershed. Where this is only a feasibility study, it would not be capitalized. Therefore, it is not eligible for the QCPAC.
 3. Stump Pond BMP Design – The budgeted amount for this project is \$20,000. This project will be undertaken if the Stump Pond Subwatershed assessment determines that a Best Management Practice (BMP) treatment system can be permitted and installed on the overflow from Stump Pond. The BMP construction will not occur until 2020 or after - hence the engineering for this project is not QCPAC eligible in 2019.
- b) The variance was not an error as explained in a) above.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-7

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Exhibit 2, Page 3 – 2019 QCPAC Additions; Elm Street Main Replacement Project - \$559,350: The estimated cost per linear foot of the Elm Street main replacement project is \$639/LF ($\$559,350 \div 875$ LF). The estimated costs per linear foot of other 2019 main replacement projects are as follows: Gilman Street - \$374/LF; Monroe Street - \$394/LF; West Pearl Street - \$531/LF; Harvard Street - \$309/LF. Please provide a detailed explanation as to why the estimated relative cost per linear foot of the Elm Street main replacement project is higher than that of the other anticipated 2019 main replacement projects.

RESPONSE:

Elm Street replacement project is part of the delayed 2017 Water Main Replacements Project awarded to Defelice Corporation. Elm Street is unique among the streets that are part of this project. The reasons for the high project estimate are:

- 1) Elm Street is a very confined work area which slows the rate of the replacement work when compared against replacement work on other streets.
- 2) Elm Street is a high traffic area requiring temporary paving daily, further slowing the pace of work and greatly increasing the estimated cost per foot when compared to the other streets where no temporary paving is required, or the street is only required to have temporary paving installed at the end of each week or at the end of the project.
- 3) The budget estimate included a greater level of contingency costs to account for unknown conflicts with the other underground facilities along this street. While the horizontal location of other utilities is known, the vertical locations are not resulting in conflicts that occur in the field. These conflicts are substantially more expensive to correct when working in a confined area.
- 4) The estimate assumes that the Company's work will extend beyond the limits of the City's sewer work resulting in higher pavement restoration costs for this project versus other budgeted projects.

It is important to note that this estimate, in conjunction with all other project estimates included in the 2019 and after budgets, are very high-level estimates that are completed before any design work has been completed. Detailed estimates cannot be completed until the project design is completed where details like the need for night work, temporary water mains, temporary pavement, vertical utility conflicts and ledge have been determined. Additionally, final project costs are impacted by the bid environment and how determined a contractor is to get work. All

of the Company's water main projects are constructed by Contractors who were selected because they were the low bidder on the project. The final project cost will ultimately reflect the lowest cost required to complete the replacement.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-8

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Exhibit 2, Page 3 – 2019 QCPAC Additions; West Pearl Street Main Replacement Project - \$138,050: The estimated cost per linear foot of the West Pearl Street main replacement project is \$531/LF ($\$138,050 \div 260 \text{ LF}$). The estimated costs per linear foot of other 2019 main replacement projects are as follows: Gilman Street - \$374/LF; Monroe Street - \$394/LF; Harvard Street - \$309/LF. Please provide a detailed explanation as to why the estimated relative cost per linear foot of the West Pearl Street main replacement project is higher than that of other anticipated 2019 main replacement projects.

RESPONSE:

West Pearl Street is also part of the delayed 2017 Water Main Replacements Project awarded to Defelice Corporation - the low bidder. The estimated budgeted cost for West Pearl Street is higher than the above referenced streets for the following reasons:

- 1) West Pearl Street is a high traffic area requiring temporary paving daily, further slowing the pace of work and greatly increasing the estimated cost per foot when compared to the other streets where no temporary paving is required or the street is only required to have temporary paving installed at the end of each week or at the end of the project.
- 2) Significant costs associated with anticipating avoiding potential vertical conflicts with the many known telephone duct banks in West Pearl St.
- 3) Contingency costs were included for other potential unknown subsurface conditions (other non-telephone buried utilities and the potential for ledge that has been found in this area).

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-9

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Exhibit 2, Page 3 – 2019 QCPAC Additions; Northwest High-Pressure System Improvements: The estimated cost per linear foot of the Tinker Road main replacement project is \$633/LF ($\$522,500 \div 825$ LF). The estimated costs per linear foot of other 2019 Northwest High Pressure System Improvement projects are as follows: Manchester Street - \$244/LF; Route 101A/Route 121 (Amherst) - \$250/LF; Deerwood Drive/Amherst Street Intersection - \$359/LF; Deerwood Drive/Northwest Boulevard Loop - \$187/LF; Ponemah Road/Route 101A Loop - \$220/LF. Please provide a detailed explanation as to why the relative estimated cost per linear foot of the Tinker Road main replacement project is higher than that of the other anticipated 2019 Northwest High Pressure System Improvement projects.

RESPONSE:

Tinker Road is unique among the list of streets as noted in this data request based on the following facts:

- 1) Tinker Road is the only road of those listed above that requires a temporary water main installation.
- 2) The temporary water main required along Tinker Road must be a 12" pipe as opposed to the normal 2 to 8-inch diameter typically used due to the high domestic flows that must pass through this temporary line.
- 3) Due to limited space in the right of way, the company needs to replace the main in the same trench as the existing 16-inch asbestos cement water main. The existing water main has to be excavated carefully, removed and disposed of by a contractor certified to handle asbestos pipe.
- 4) Asbestos Cement Pipe must be disposed of at a landfill certified to accept hazardous materials further adding to the high per unit cost of this estimate.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-10

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Mr. Boisvert's Testimony; Page 46; Line 5: Mr. Boisvert includes Salvail Court in the list of major water main projects completed in 2018. Exhibit 2, Page 2, however, reports no amount under the list of Final Project costs as of 12/31/18 relative to the Salvail Court project. Please provide a detailed explanation regarding this apparent difference.

RESPONSE:

At the time the testimony was prepared, the Company thought the work on Salvail Court could be completed before the end of the year. However, temperatures fell rapidly, and the work had to be deferred to the Spring 2019. The work has since been completed.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-11

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Mr. Boisvert's Testimony; Page 46; Lines 14 – 20: Please provide a detailed explanation regarding how the Company's payment to the City of \$1,568,000 for paving is reflected in the 2018 – 2021 budgets included in Exhibit 2, Pages 2 – 5 of its filing.

RESPONSE:

The Table below lists the streets associated with the payment to the City. The paving contribution for each street is included in the "Final Project Cost as of 12/31/2018" column of Exhibit 2 referenced in the request. The pavement contribution per foot of trench will vary from street to street based on the trench width and the trench repair requirements (high traffic v. low traffic conditions) as well as other complexities. The Company's contribution to the City was less than the amount it would have cost using the project low bid for pavement repair.

Paving Contribution 2018				
Project	From	To	Length	Contribution
Carry over paving from 2015				
Orange St	Concord St	Lock St	662	\$ 98,235.72
Gillis St	Arlington St	Alds St	1175	\$ 61,887.02
Gilman St - work not yet completed	Ritter St	Woodward St	1600	\$ 127,264.00
Woodward St	Kinsley St	Gilman St	350	\$ 27,839.00
Ritter St	Kinsley St	Gilman St	500	\$ 39,770.00
Early St	Gilman St	Monroe St	420	\$ 33,406.80
Factory St	Main St	Chestnut St	1100	\$ 106,700.00
Taylor St	Main St	Lynn St	2084	\$ 202,148.00
Evergreen St	Stevens St	corner	312	\$ 24,816.48
Morton St	Park Ave	End	547	\$ 43,508.38
Fossa Ave	All		340	\$ 27,043.60
Russell Ave	All		1233	\$ 98,072.82
Park Ave	All		600	\$ 47,724.00
Stevens St	All		980	\$ 77,949.20
Field St	Main St	End	300	\$ 23,862.00
Fernwood St	All		465	\$ 36,986.10
Revere St	All		731	\$ 58,143.74
Burnett St	E. Dunstable Rd	Lawndale Ave	600	\$ 47,724.00
Cheshire St	Country Hill Emergency Access	End	475	\$ 64,505.00
Lovewell St	Pine St	Madison St	415	\$ 56,357.00
Lincoln Ave	Main St	Fifield St	801	\$ 48,016.75
Buchanan St	Main St	Nutt St	556	\$ 33,329.98
Nutt St	Faxon St	Lincoln Ave	486	\$ 29,133.76
Fowell Ave	Main St	Dead End	956	\$ 57,308.38
Zellwood St	Pratt St	Fowell Ave	435	\$ 26,076.51
Pratt St	Main St	Lawndale Ave	771	\$ 46,218.37
Fifield St	Intersection with Lincoln		100	\$ 9,991.00
Lawndale Ave	intersection with Pratt St		82	\$ 8,192.62
Main St	Intersection with Temple St		40	\$ 6,402.00
			Total:	\$ 1,568,612.21

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-12

Date of Response: 5/23/19
Witness: Donald L. Ware

REQUEST: Re: Mr. Boisvert's Testimony; Page 52, Lines 10 – 15; Page 53, Lines 4 – 5; and Page 54, Lines 2 – 4: Please provide a detailed explanation as to why the cost to change out the activated carbon filter media at the Company's treatment plant is budgeted for \$1 million per year for the next three years. Please include a detailed cost breakdown of the \$1 million per year budget between materials, labor, equipment, other costs, etc.

RESPONSE:

The Company's water treatment plant has twelve filters. These filters were rebuilt and loaded with new carbon media in 2007, 2008 and 2009 (four filters each year). The carbon media was changed out in 2013, 2014 and 2015 (four filters each year) at an average cost of about \$525,000 for each changeout. The carbon in the filters that was last changed out in 2013 is fully exhausted and will be replaced this summer. The estimated cost in the 2019, 2020 and 2021 for exchanging the exhausted carbon with new carbon was budgeted at \$1,000,000 per year based on 294,840 pounds of carbon being exchanged each year at an estimated cost of \$3.39 per pound. The budgeted cost included bid preparation, the purchase, delivery and installation of the new carbon as well as the removal and disposal of the spent carbon.

On Wednesday, May 15, 2019, for the carbon exchange that is budgeted for in 2019 were opened. The low bid for this project came in at \$1.68 per pound resulting in the cost for the 2019 filter change out of \$495,331, exclusive of internal and external engineering required to prepare the bid and test the carbon as part of the installation process. Based on the bids, the Company is updating the expected project cost from \$1,000,000 in 2019 to \$525,000. This change in price will be evidenced in our project update based on what we know regarding the work to be performed in 2019.

Pennichuck Water Works, Inc.
DW 19-029

2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-13

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Mr. Boisvert's Testimony; Page 53; Lines 7 – 21: Please provide a general anticipated timeline of events relative to the Kessler Farm Tank project from present until actual construction of the tank in 2020, ie, engineering, design, bidding process, preparatory projects, etc.

RESPONSE:

The 2019 Northwest High Pressure System Improvement pipeline work is underway and will be completed in December 2019 ahead of the construction of the Kessler Farm Tank Replacement project in 2020. Engineering, design, and permitting phase will begin July 2019 with anticipated completion by the end of September. The bidding phase for tank replacement will be in October and November 2019. The Company anticipates awarding the tank replacement contract in early January. Construction will start in the March 2020 timeframe and be complete by December 2020.

**Pennichuck Water Works, Inc.
DW 19-029**

2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-14

Date of Response: 5/23/19
Witness: Donald L. Ware

REQUEST: Re: Company's response to Staff Data Request 1-5: For purposes of example, please provide the projected impact on the Company's proposed 2019 QCPAC under a scenario that provides for the inclusion of the capitalized interest incurred under the FALOC for the Company's 2018 QCP's. Please detail all relevant calculations.

RESPONSE:

The Company incurred \$152,537.59 in interest expense on the PWW FALOC between January 1, 2018 and the repayment of the FALOC on April 5, 2019 with the funds derived from the proceeds of the Bond sold on April 4, 2019. If the Company had rolled the FALOC interest into the April 4, 2019 bond sale, the amount bonded for would have increased from \$8,250,000 to \$8,402,538. Based on an all-in total interest cost of 4.221191%, the resultant increase in the average annual principal and interest payment would increase from \$490,053 per year to \$499,113 per year resulting in an additional annual revenue requirement of \$9,967 (1.1 x \$9,060 P&I). This additional expense would have changed the cumulative QCPAC from 4.06% to 4.10%, resulting in an additional \$0.02 surcharge per month to the average single-family residential bill.

**Pennichuck Water Works, Inc.
DW 19-029**

2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-15

Date of Response: 5/23/19
Witness: Donald L. Ware

REQUEST: Re: Company's response to Staff Data Request 2-2: Please provide the repayment terms of the 30-year bond, ie, repayment frequency, level of principal and interest payments, etc.

RESPONSE:

A complete copy of the bond repayment schedule is attached as the response to this data request. The annual total principal and interest payments average \$491,177 per year over the 30 years of the 2019A and 2019B series bonds.

**Pennichuck Water Works, Inc.
DW 19-029**

Annual Period Ending	Series 2019A Bonds			Series 2019B Bonds			Series 2014A, 2014B, 2015A, 2015B, 2018A and 2018B Bonds	Corporate Bonds	SRF Debt	Total
	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Total Debt Service	Total Debt Service	Total Debt Service	Debt Service
December 31,										
2019	-	\$ 173,521	\$ 173,521	-	\$2,825	\$ 2,825	\$ 5,101,188	\$ 622,000	\$ 877,540	\$ 6,777,074
2020	-	352,925	352,925	\$170,000	2,873	172,873	5,106,100	592,400	1,340,620	7,564,918
2021	\$ 135,000	349,550	484,550	-	-	-	5,098,356	2,488,800	1,343,495	9,415,201
2022	140,000	342,675	482,675	-	-	-	5,105,423	-	1,329,909	6,918,007
2023	150,000	335,425	485,425	-	-	-	5,106,796	-	1,328,082	6,920,303
2024	155,000	327,800	482,800	-	-	-	5,092,730	-	1,331,865	6,907,395
2025	165,000	319,800	484,800	-	-	-	5,107,608	-	1,335,691	6,928,099
2026	175,000	311,300	486,300	-	-	-	5,100,933	-	1,339,528	6,926,761
2027	180,000	302,425	482,425	-	-	-	5,107,566	-	1,343,406	6,933,397
2028	190,000	293,175	483,175	-	-	-	5,097,258	-	1,347,314	6,927,747
2029	200,000	283,425	483,425	-	-	-	5,099,318	-	1,294,375	6,877,118
2030	210,000	273,175	483,175	-	-	-	5,102,981	-	1,127,709	6,713,865
2031	220,000	262,425	482,425	-	-	-	5,103,306	-	1,107,463	6,693,194
2032	235,000	251,050	486,050	-	-	-	4,905,075	-	992,514	6,383,639
2033	245,000	239,050	484,050	-	-	-	4,909,406	-	921,564	6,315,020
2034	260,000	226,425	486,425	-	-	-	4,907,506	-	924,177	6,318,108
2035	270,000	214,694	484,694	-	-	-	4,899,344	-	926,857	6,310,895
2036	280,000	204,038	484,038	-	-	-	4,899,606	-	849,078	6,232,722
2037	290,000	192,994	482,994	-	-	-	2,257,234	-	555,800	3,296,028
2038	305,000	181,466	486,466	-	-	-	2,264,006	-	460,231	3,210,703
2039	315,000	169,453	484,453	-	-	-	2,258,540	-	460,231	3,203,224
2040	325,000	156,647	481,647	-	-	-	2,256,000	-	460,231	3,197,878
2041	340,000	142,931	482,931	-	-	-	2,260,250	-	460,231	3,203,412
2042	355,000	128,597	483,597	-	-	-	2,256,188	-	460,231	3,200,016
2043	370,000	113,644	483,644	-	-	-	2,263,597	-	460,231	3,207,472
2044	385,000	98,072	483,072	-	-	-	2,252,306	-	460,231	3,195,609
2045	400,000	81,881	481,881	-	-	-	2,262,097	-	460,231	3,204,209
2046	420,000	64,969	484,969	-	-	-	779,568	-	460,231	1,724,768
2047	435,000	47,334	482,334	-	-	-	336,328	-	460,231	1,278,893
2048	455,000	28,978	483,978	-	-	-	337,219	-	-	821,197
2049	475,000	9,797	484,797	-	-	-	-	-	-	484,797
Total:*	\$8,080,000	\$6,479,641	\$14,559,641	\$170,000	\$5,698	\$175,698	\$112,633,830	\$3,703,200	\$26,219,297	\$157,291,669

* Columns contain rounded amounts and may not sum to the stated totals.

2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-16

Date of Response: 5/23/19
Witness: John J. Boisvert

REQUEST: Re: Company's response to Staff Tech 3 in DW 18-022 regarding Reserve for Contingent Liability for Paving Costs - \$(634,800): In that response, the Company indicated that this item was related to paving expenses that had not yet been billed by the City of Nashua during 2018. The Company further indicated that this expense would most likely be included in its 2019 Capex expenditures. Please provide a detailed update as to the status of repayment of this expense and whether or not it is included in the Company's proposed Capex for 2019.

RESPONSE:

The \$634,800 paving obligation was fully satisfied through the payment to the City at the end of 2018. Most of pavement expense of \$1,568,612 paid to City was recognized in the final 2018 QCPAC additions, with the exception of the contribution to the City for paving work to be completed on Gilman Street. The Gilman Street water main replacement project, inclusive of pavement costs, is in the Company's 2019 Capital Budget as presented in the 2019 QCPAC filing.

**Pennichuck Water Works, Inc.
DW 19-029**

2019 QCPAC - Qualified Capital Project Adjustment Charge
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19
Request No. Staff 3-17

Date of Response: 5/23/19
Witness: Donald L. Ware

REQUEST: Pursuant to *Pennichuck Water Works, Inc.*, Order No. 26,070 at 9, n. 4 (November 7, 2017), “[t]he evaluation of prudence of the individual projects takes place in the following year’s QCPAC proceeding.” (referring to the year subsequent to budget approval). Staff contends that the prudence review for previously completed projects that the proposed current-year’s QCPAC charge is based upon requires more than Audit Staff’s verification that the costs associated with the projects were prudent. That is supported by inclusion of and Staff’s reliance on engineering reports in past dockets, verifying the project’s prudence. *See* Staff Recommendation of February 15, 2018, (Docket No. DW 17-179) at 16-19.

In the interest of supplementing the record, please explain the Company’s position on the prudence of the 2018 capital projects which the 2019 QCPAC surcharge is based upon. While assumed, please verify that the Company argues all of the projects completed in 2018 were prudent and provide a specific argument justifying that position.

RESPONSE:

The Company verifies that all projects that were completed in 2018 were prudent. Also, please note that the need for most of the projects included in the current QCPAC request were provided in the prefiled testimony of Mr. John Boisvert that was included with the original filing.

In an effort to provide further explanation in reference to the prudence of the 2018 QCPAC PWW additions tab included in Exhibit DLW-2, Page 2, the Company provides additional explanation to the prudence of the listed projects as follows:

- 1) Replace Foreman’s Truck – The existing truck had experienced numerous equipment failures, including brakes, while on the road. The Foreman who drove this truck took a stand under the Union contract that he would not drive this truck as it was a safety hazard. The Company agrees with the Union and as a result replaced the existing foreman’s truck with a new vehicle.
- 2) New Service, main to stop installed to Single Family, Owner built, residential homes – This type of service installation is required by the Company’s tariff per “First Revised Page 31, Para. 21.B.1.a.”.
- 3) Renewed Services – This is the renewal of the main to stop portion of a customer’s service which is owned by the Company. The Company renews failing services as needed to eliminate leakage and insure continuity of service to its customers.
- 4) Replace failed hydrants – The replacement of failed hydrants is essential to ensure that the fire protection that is being paid for by our customers is available when needed.

- 5) Replace failed valves – The Company replaces failed valves when they are located in the Company’s valve maintenance program. Not replacing a failed valve puts the system at risk for having to shut off a larger portion of a water system and cause a break in service to more customers if a valve cannot be shut to isolate a system leak.
- 6) Replace failed Radio Meter interface units – These units are required to read the Company’s meters. The Company must replace failed radio units in order to complete actual meter readings.
- 7) New Meters – The Company’s tariff, per “Original Page 34, Para. 24.C.2”, is required to provide and install water meters for its new customers.
- 8) New Meters for Lead Meter Exchanges – The Company is required to pull and test meters by NHPUC rule and regulation. Per EPA regulations, when a meter with brass that has a high lead content (all meters manufactured prior to 2002) is taken out of service it must be replaced with a new lead-free brass meter. The majority of meters pulled for testing in 2018 were mostly brass with high lead content which meant those meters had to be pulled from service and replaced with new lead-free brass meters.
- 9) Service Truck Replacements (#76) – The Company replaces distribution service vehicles when they are at least 7 years old and have high mileage and or maintenance expenses. Failure to replace vehicles on this basis results in high maintenance expenses and vehicles being down from repair and unavailable for employees to travel to customer/job sites to complete their daily work tasks.
- 10) New Service Truck – The new vehicle was purchased to provide a new distribution employee with a mode of travel to customer/job sites to complete their daily work tasks.
- 11) Replacement of Meter Supervisor Truck (#14) - The replaced vehicle as 7 years old and had reached the end of its useful life based on mileage (167,000+ miles) and maintenance expenses. Failure to replace this vehicle would have left the meter supervisor without a way to travel to customer/job sites to oversee and plan upcoming work.
- 12) Trimble units for meter reading – The existing CE meter reading equipment that was replaced with the new units had become unsupported by the manufacturer in 2018 so it became necessary to replace this equipment to ensure that service would be available on failed meter reading equipment.
- 13) Replace pipe saws – This is small equipment that is required to repair water mains and services. This is normal run rate equipment replacement. A pipe saw typically lasts 3 to 5 years. The Company has about 20 pipe saws in service. The Company typically replaces about 5 pipe saws each year. These saws are run to failure.
- 14) Add Air Conditioning to the Mechanics Bay – The mechanics bay had no air conditioning. It was originally thought that none was needed and that the garage doors would be left open during the summer months which would provide sufficient cooling. The lack of air conditioning proved to be problematic from two perspectives:
 - a) Safety and security – Keeping the garage doors open provided unrestricted access from outsiders to the entire distribution building.
 - b) Days that the temperature exceeds 80 degrees, the mechanics bay is too hot to work in. If it is a hot and rainy day it is not possible to keep the doors open which results in even hotter working temperatures with no potential for a cooling breeze.
- 15) Replace four trench boxes. Trench boxes are required for the Company’s staff to perform excavations and remain in compliance with OSHA regulations. The existing trench boxes

were 22 years old and were no longer certifiable as OSHA compliant due to dents and tears in the aluminum skin on the trench boxes.

- 16) Upgrade existing vehicle lift – The Company replaced a 20-year-old 9,000 pound vehicle lift that had been moved from its Will Street Distribution facility to its 16 DE Highway distribution facility with a new 12,000 pound vehicle lift. The existing lift was still functional but could not lift the Company's larger equipment to perform service requiring the Company to have to send its larger equipment out to third party vendors for repair and service.
- 17) Replace Utility Vans (#72, #27, #26) – All vehicles were 8+ years old and had high mileage (in excess of 140,000 miles). All these vehicles also were experiencing high maintenance expenses and downtime while repairs were being completed. Failure to replace vehicles would continue to result in high maintenance expenses and vehicles being down from repair and unavailable for employees to travel to customer/job sites to complete their daily work tasks.
- 18) Purchase Steel Road Plates - The Company did not have any road plates which meant that any excavation in a street needed to be backfilled at the end of each day, even if a job was not complete. The road plates allow the Company to stop work at the end of the day and not have to backfill the excavation resulting in savings of time on the job as the time spend backfilling and re excavating can be avoided.
- 19) Bedford Water Company (BWC) interconnection to the Company's Little Pond water system – The existing Bedford Water Company booster station was approaching 50 years in age. The station and its atmospheric storage tanks were going to have to be rebuilt and replaced in the next 5 years at an estimated cost in excess of \$700,000. The connection of the BWC to the Little Pond water system created the following additional benefits:
 - a) The BWC system was connected to the new water main installed down Back River Road by St. Gobain to connect homes with private wells contaminated by PFOA to a public water system. The BWC got its water from two onsite wells. The levels of PFOA in the wells were detected at just below 10 PPT. Given the current monitoring trend and elevated levels of concern regarding PFOA, the interconnection eliminated the potential public concern and future need to add treatment to these wells. The new supply of water to this area is from Manchester Water Works whose supply has been unaffected by PFOA contamination.
 - b) This project removed just over 1,500 lineal feet of 6" Asbestos-Cement water main from service.
- 20) Water main replacement projects – The Company completed a large number of water main replacement projects during 2018 (about 16,800 lineal feet of water main was replaced) and will continue to replace aging water mains going forward. As of the end of 2018, the Company still has in service about 50 miles of unlined cast iron water main (installed between 1852 and 1937), about 6.3 miles of small diameter steel water main (installed during the late 1940's and early 1950's) and about 40 miles of Asbestos-Cement water main (Transite) installed mostly in the 1960's – all which need to be replaced. The Company has been targeting a replacement rate of about 3 to 4 miles of water main replacement per year (an average replacement life of around 150 years old). The rate of replacement is being refined as part of the Company's Asset Management Planning. At present, the Company coordinates the replacement of the targeted replacements with local community sewer, storm drain and paving projects so that when those projects are complete the water main under the

new pavement will not break under the new pavement and result in significant repair costs. Also combining the Company's water main replacement projects with Community projects allows for the Company and Community to share in the cost of the project road reconstruction which results in lower replacement costs for the Company's customers.

- 21) Asset Management – The Company continues to invest in the development and enhancement of its asset management program. A fully functioning Asset Management plan will:
 - a) Allow the Company to make better decisions on capital expenditures, taking into account the risk, criticality and vulnerability associated with an asset failure.
 - b) Provide for accurate geographically located asset maintenance records.
 - c) Provide for quicker notification of activities that will impact customer service levels such as flushing activities, water quality alerts, water shutdowns, either planned or emergency.
 - d) Provide access to NHDES SRF funds. The NHDES will not fund projects to water systems that do not have an asset management program in place.
- 22) Northwest High-Pressure System improvements – The importance of the project is witnessed that the funding for this project is coming out of a competitive award from the Drinking Water and Groundwater Trust Fund. This part of the Nashua Core system has seen the most increase in water demand over the past 20 years. Portions of the current piping are undersized and limit the amount of flow from the pumping station to the two storage tanks in this system. Also, a large portion of this system is feed through a single water main. A failure of that water main will result in having to shut down a very large part of this water system. The improvements will eliminate hydraulic bottle necks and result in a parallel water main that will eliminate the risk of a water main failure resulting in a large number of customers (primarily commercial) being without water during an emergency repair.
- 23) Replace two engineering vehicles (jeeps) with pickup trucks – Both vehicles were over 10 years old and had mileage in excess of 150,000 miles. These vehicles were experiencing high maintenance expenses and downtime while repairs were being completed. Failure to replace these vehicles would continue to result in high maintenance expenses and vehicles being down from repair and unavailable for employees to travel to customer/job sites to complete their daily work tasks.
- 24) Mast Road Replacement (PWW-PEU) Interconnection – The need for this section of water main replacement and the cost sharing arrangement with Pennichuck East was detailed in DW17-07 which resulted in a Special Contract being approved by the NHPUC.
- 25) Shakespeare High Pressure System – This project expanded the Shakespeare High Pressure system to four adjacent streets where customer pressures were in the 20 to 30 psi range. Additionally, the four streets in question were single feed dead end streets that due to their location (highest points in the low-pressure system) received significant pressure surges when the pumps at the Timberline Station failed due to electrical outages. These pressure surges created a number of meter and interior plumbing failures. The streets are no longer dead ends and are not part of the low-pressure system, so they are no longer subject to the pressure surging that results from pump failures.
- 26) One-times annual revenue investment in new water main installations. This investment is required by the Company's tariff per "Frist Revised Page 36, Para. 35.B.2 through Para. 35.B.4."
- 27) Booster/Well/Chem Feed pump replacements – replacement of failed pumps. When a pump fails, it must be replaced. The Company runs all of its small pumps to failure and only

- replaces on an as needed basis. If the failed pumps were not replaced, proper water pressure, water flow and water quality would not be maintained to our customers.
- 28) Replace Finished Water Pump Station Oil Tank Leak monitor – This is a 6,000 gallon underground storage tank. The oil tank leak monitor is a requirement for this type and size of tank installation. Replacement of the failed monitor was required to keep this tank in compliance with the approval by the NHDES for this tank installation.
 - 29) Replace failed 18” backwash actuator – The backwash actuator on one of the filters failed. The filter can not be operated without a functioning backwash actuator. Failure to replace the actuator would have resulted in the loss of service of that filter resulting in reduced plant production capacity.
 - 30) Misc. SCADA/Electrical upgrades – three of the four projects were the replacement of failed equipment that needed to be operational to properly operate the Nashua Water Treatment Plant. The fourth project - the addition of four Cellular Meter Interface Units (CMIUs) at the Badger Hill CWS was necessitated by the NHDES requiring that the Company provide daily flows into this water system. To get daily meter readings from this remote system located in Milford would have required a daily trip to this location (as it does not have remote SCADA due to the fact that radio communication between this location and the WTP are not possible due to a lack of a radio path). The CMIU’s communicate the meter readings, via a cellular phone interface to the plant via email on a daily basis. Collecting the data via cellular phone interface is far less expensive than a daily visit to this station.
 - 31) Replaced Combined Filer Effluent Chlorine Analyzer – This analyzer failed and was replaced. This analyzer is required to prove compliance with the Chlorine Contract time requirements of the Long-Term Enhanced Surface Water Treatment rule.
 - 32) New Service Truck – The new vehicle was purchased to provide a new water supply employee with a mode of travel to customer/job sites to complete their daily work tasks.
 - 33) Service Truck Replacements (#62, #38) – The Company replaces water supply service vehicles when they are at least 7 years old and have high mileage and or maintenance expenses. Failure to replace vehicles on this basis results in high maintenance expenses and vehicles being down from repair and unavailable for employees to travel to customer/job sites to complete their daily work tasks.
 - 34) Replace Harris Pond raw water aerator compressor. – Replacement of failed raw water aerator compressor that was installed in 2007 as part of the upgrades to the water treatment plant to remain in compliance with the Enhanced Surface Water Treatment rule. The aerator is a key component of conditioning the raw water prior to treatment to ensure uniform water temperature and pH.
 - 35) Purchase Zeta Potential analyzer – Zeta potential is a measure of the particle charges in the raw water. This analyzer is used to measure these charges so that the proper coagulant dosage is added to optimize the flocculation and sedimentation process at the water treatment plant. Use of this analyzer will result in using the most appropriate coagulant dosage in order to ensure compliance with the Total Organic Carbon (TOC) removal requirements of the Stage 1 and Stage 2 Disinfectants and Disinfection Byproducts rule and the turbidity limits of the Long-Term Enhanced Surface Water Treatment Rules.
 - 36) Replacement of failed raw water streaming current monitor – Measuring streaming current occurs after the coagulant is added to the raw water. The streaming current monitor is an instream measure as to the effectiveness of the coagulant dosage required to break down the charges on the raw water particles in preparation of for the flocculation and sedimentation

process. If this unit is not functioning, the operator has no way to assess the effectiveness of the coagulant dosage which can result in less than optimal flocculation and sedimentation leading to ineffective removal of TOC resulting in a potential violation of the Stage 1 and Stage 2 Disinfectants and Disinfection Byproducts rule and the turbidity limits of the Long Term Enhanced Surface Water Treatment Rule.

- 37) Information Technology – Software and Hardware upgrades, replacements and additions – The Company invested about \$415,000 in IT equipment during 2018. The investments were made to replace unsupported hardware and software and to enhance the communication and delivery of information between and within the various facilities as well as to and from the field staff.
- 38) Bedford and Amherst Water Expansions – Installation of meters and radios for new customers added as a result of water mains in these two communities be extended to service existing homes whose private wells were contaminated with PFOA. The water mains and services associated with these expansions were paid for by St. Gobain, the party responsible for the contamination. The Company provided and installed the meters and radios in each new customer location in accordance with its tariff per “Original Page 34, Para. 24.C.2”.
- 39) Replace failed Variable Frequency Drive (VFD’s) on pump #2 at the Orchard Avenue Booster Station. We run all small pump VFD’s to failure and only replace on an as needed basis. If the failed pump VFD were not replaced, proper water pressure and flows would not be maintained to our customers.
- 40) TIG welder – A TIG welder uses a tungsten electrode which is non consumable. TIG welding melts the base metal as opposed to using a metal electrode that melts and fills in the metal. TIG welding will work on any metal but is required to weld aluminum. The mechanics shop did not have a TIG welder. With today’s aluminum body trucks, aluminum tool boxes and aluminum shoring having the TIG welder allows the shop to make quick repairs on damaged aluminum which minimized equipment downtime. Without the TIG welder, damaged equipment would have to be sent out for repairs and would be out of service longer.
- 41) Replacement of Truck #4 – This was the replacement of an existing pickup truck used by the distribution department. The replaced truck was 7 years old and had over 130,000 miles with high maintenance expenses.
- 42) Phase I and II of Overhead Crane and Door into WTP process area – There is no elevator from the first floor of the WTP to the second-floor process area. The construction of a door and a small overhead crane allows for heavy equipment to be hoisted from the first to the second floor avoiding the risk of carrying large boxes and equipment up and down the stairs between the first and second floor of the Water Treatment Plant.
- 43) Additional Trench Boxes – This is the same work order as item #15 above. This item has been removed from this exhibit.
- 44) Sweet Hill Well #3 – This was the dollars associated with the work to finish this project that went used and useful in 2017. This third well was necessary to meet the water supply needs of the Sweet Hill water system. One of the two original wells has been dry for the past 5 years. Without this new well, there is no back up the existing well, should either the well or equipment in the well fail.
- 45) Replacement of Truck #47 – This was the replacement of an existing pick up truck used by the distribution department. The replaced truck was 12 years old and had over 160,000 miles. There were the beginnings of body rot on the truck frame. This vehicle was replaced

as part of the normal rotation of vehicles in this department before it faced costly body repair work.

- 46) SCADA system upgrade – This project involved the replacement of the SCADA computers that were installed in 2009. These computers, along with the SCADA software were outdated and no longer supported. The SCADA system at the WTP controls all of the WTP operations as well as all the remote locations owned by Pennichuck. The Pennichuck water systems cannot be run safely for any period of time without SCADA controls, oversight and alarming.

In closing, one of the Company's best arguments for prudence is that there is not benefit gained by the Company for overinvesting or investing poorly. With no equity investment there is no profit and no incentive to create a bottom line by accelerating capital investment or making poor investments. The Company does not issue any bonuses or pay any dividends that would incentivize employees to make recommendations for investment in capital that:

1. Do not provide the water quality, water quantity and water pressure required by rule, regulation and customer expectations.
2. Do not provide for timely and good customer service.
3. Are not designed to replace aging infrastructure in a timely fashion.
4. Are not selected through a bid or proposal process where the lowest responsible bidder is awarded the work.

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19

Date Supplemental Request Received: 6-24-19

Request No. Staff Tech-1

Date of Response: 06-17-19

Updated: 07-01-19

Witness: Donald L. Ware

REQUEST:

Please provide updated Exhibits 1 and 2 that include adjustments 1) discussed during the Technical Session, 2) identified in the Company's previous data responses, and 3) that have not been previously identified but have become currently known. For capex budget year 2019, please provide a detailed narrative regarding the changes made. For capex budget years 2020 and 2021, please provide a brief narrative summarizing the changes made.

RESPONSE:

Attached please find a revised QCPAC schedules with the following changes to the QCPAC schedules filed with the petition:

1. Annual QCPAC increases calculated over DW16-806 Step revenues.
2. 2019 Bond interest rate changes to Total-All in-Cost of 4.22191% to reflect final interest rate of bonds sold on 4/3/2019.
3. Filter replacements budget for 2019, 2020 and 2021 changed from \$1,000,000 to \$525,000 based on recently opened bids for the 2019 phase of this project.
4. Moved \$1,012,000 of paving expenses for 2019 water main replacement projects from 2020 to 2019.
5. Moved \$550,000 of City sewer water main replacement projects from 2020 to 2019.
6. Deleted West Hollis Check Valve pit from 2019 planned Capital Expenditures
7. Radio replacement program delayed for two years (2019 and 2020) resulting in a run rate replacement of failed and new radios of 300 radios per year instead of 2,750 radios resulting in a projected savings of \$245,000 per year in both 2019 and 2020.

FOLLOW-UP REQUEST:

1. Exhibit 1 does not calculate the Annual QCPAC over DW 16-806 Step revenues as stated. Please see the Company's response to Staff DR 1-1.

2. Exhibit 1 excludes Note #14 from the Company's response to Staff DR 2-2 which calculates 2018 bond interest at 4.22191%. The 2018 P&I payments are incorrectly calculated at 5.5%.

4-5. A total of \$1,562,000 ($1,012,000 + 550,000$) was moved to water main replacement projects from 2020 to 2019. Exhibit 2, page 3 from Staff DR 2-2 reported Chase St at \$176,000, Ash Street at \$242,000 and Lake Street at \$990,000 totaling \$1,408,000. The additional monies added to the prior version, $\$1,562,000 + 1,408,000 = \$2,970,000$, however Exhibit 2, page 3 equals \$2,700,000. Please explain the \$270,000 difference.

Exhibit 1, Note #8. The QCPAC P&I expenses at 5.5% currently reads 2018 through 2021, but should read 2019 through 2021.

FOLLOW-UP RESPONSE:

1. An earlier draft of Exhibit 1 was inadvertently submitted with the Company's response. The attached Exhibit 1 has the correct Exhibit 1.

2. An earlier draft of Exhibit 1 was inadvertently submitted with the Company's response. The attached Exhibit 1 has the correct Exhibit 1 and Note #14.

4-5. The engineering staff still estimates that the 2019 project cost for Lake/Chase and Ash will be about \$2,700,000 in 2019, which was inclusive of \$1,012,000 in paving in the 2020 budget. The \$1,408,000 added to the paving cost of \$1,012,000 totals \$2,420,000 which was short of the projected estimate of \$2,700,000 (which is based on bid numbers). To balance the 3 year CIP total an additional \$280,000 was needed from another project over the next three years. The \$550,000 for 2020 Nashua sewer projects was eliminated from 2020 budget to cover the \$280,000 shortfall. The remaining \$270,000 of the 2020 Nashua sewer project was not left in the 2020 total or added to the 2019 total. It is hoped these funds will not be needed for any project and as such is not included anymore in the three year PWW CIP budget.

Exhibit 1, Note #8. An earlier draft of Exhibit 1 was inadvertently submitted with the Company's response. The attached Exhibit 1 has the correct Exhibit 1 and Note #8.

Descoteau, Robyn

From: Richard W. Head <rwh@rathlaw.com>
Sent: Thursday, July 25, 2019 3:30 PM
To: Descoteau, Robyn
Cc: Laflamme, Jayson; Tuomala, Christopher; Buckley, Brian; Brennan, James J; Ware, Don
Subject: RE: DW 19-029 PWW QCPAC Petition

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Thank you Robyn for catching this. We are in agreement with this corrected version of the spreadsheet.

Richard

From: Descoteau, Robyn [<mailto:Robyn.Descoteau@puc.nh.gov>]
Sent: Thursday, July 18, 2019 3:02 PM
To: Richard W. Head
Cc: Laflamme, Jayson; Tuomala, Christopher; Buckley, Brian; Brennan, James J
Subject: RE: DW 19-029 PWW QCPAC Petition

Richard,

I forgot that PWW is responsible for 100% of the taxes for the Mast Road project and did not adjust the tax portion on the previous email. I am sorry. The attached version corrects that oversight. Please let me know if PWW is in agreement.

Thank you,
Robyn

From: Descoteau, Robyn
Sent: Thursday, July 18, 2019 12:09 PM
To: 'Richard W. Head' <rwh@rathlaw.com>
Cc: Laflamme, Jayson <Jayson.Laflamme@puc.nh.gov>; Tuomala, Christopher <Christopher.Tuomala@puc.nh.gov>; Buckley, Brian <Brian.Buckley@oca.nh.gov>; Brennan, James J <James.Brennan@oca.nh.gov>
Subject: RE: DW 19-029 PWW QCPAC Petition

Richard,

I have corrected the Mast Road line item to be \$33,925 in the Excel file attached to the TECH Session response. Please let me know if PWW is in agreement with the changes associated with this correction.

Thank you,
Robyn

From: Richard W. Head <rwh@rathlaw.com>
Sent: Thursday, July 18, 2019 8:44 AM
To: Descoteau, Robyn <Robyn.Descoteau@puc.nh.gov>
Cc: Laflamme, Jayson <Jayson.Laflamme@puc.nh.gov>; Tuomala, Christopher <Christopher.Tuomala@puc.nh.gov>
Subject: RE: DW 19-029 PWW QCPAC Petition

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Good morning Robyn – I have confirmed with Don that the correct number for the Mast Road Replacement should be \$33,925, not \$67,850.

Thank you for identifying this and again our apologies for the mix-up on our end.

Richard

From: Descoteau, Robyn <Robyn.Descoteau@puc.nh.gov>
Sent: Wednesday, July 17, 2019 10:46 AM
To: Richard W. Head <rwh@rathlaw.com>
Cc: Laflamme, Jayson <Jayson.Laflamme@puc.nh.gov>; Tuomala, Christopher <Christopher.Tuomala@puc.nh.gov>
Subject: RE: DW 19-029 PWW QCPAC Petition

Good morning Richard,

Would you please contact PWW regarding the schedule they attached to UPDATED Staff Tech – 1. In their response the Company indicated that they had inadvertently submitted an earlier draft with the original response and were attaching a corrected version. I believe the corrected version still has parts of an earlier draft. In the 2018 Additions, the MAST ROAD REPLACEMENT (PEU-PWW) INTERCONNECTION adjustment described in the 2/14/19 filing is not reflected in the attachment to UPDATED Staff Tech – 1. It is stated as \$67,850, not \$33,925. Please let me know their position.

Thank you,

Robyn J. Descoteau
Utility Analyst, Gas & Water Division
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429
PHONE (603) 271-7092
FAX (603) 271-3878
robyn.descoteau@puc.nh.gov

From: Richard W. Head <rwh@rathlaw.com>
Sent: Monday, July 1, 2019 3:42 PM
To: PUC - Discovery <Discovery@puc.nh.gov>; Noonan, Amanda <Amanda.Noonan@puc.nh.gov>; Leone, Anthony <Anthony.Leone@puc.nh.gov>; Buckley, Brian <Brian.Buckley@oca.nh.gov>; carolann.howe@pennichuck.com; Tuomala, Christopher <Christopher.Tuomala@puc.nh.gov>; donald.ware@pennichuck.com; Brennan, James J <James.Brennan@oca.nh.gov>; jay.kerrigan@pennichuck.com; Laflamme, Jayson <Jayson.Laflamme@puc.nh.gov>; Vercellotti, Joseph <Joseph.Vercellotti@puc.nh.gov>; larry.goodhue@pennichuck.com; Michelle R. Preve <mrp@rathlaw.com>; PUC - OCA Litigation <OCALitigation@oca.nh.gov>; Descoteau, Robyn <Robyn.Descoteau@puc.nh.gov>; Richard W. Head <rwh@rathlaw.com>; Frink, Stephen <Steve.Frink@puc.nh.gov>
Subject: DW 19-029 PWW QCPAC Petition

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To the DW 19-029 Discovery List

Attached are PWW's supplemental responses to Staff's Technical Session Data Requests. The supplemental responses are in red on the attached responses. Please let me know if you have any questions.

Thank you.

-Richard

Richard W. Head
Of Counsel

Rath, Young and Pignatelli, P.C.

National Impact. Uniquely New Hampshire.

One Capital Plaza
Concord, NH 03302-1500
direct (603) 410-4322
email rwh@rathlaw.com
www.rathlaw.com



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	DW16-806 Approved Step Revenue Requirements (11)		Requested QCPAC For 2017 Capital Additions pro formas		Requested QCPAC Surcharge for 2017 Capital Additions		Projected QCPAC For 2018 Capital Additions pro formas (7,8,14)		Projected QCPAC Surcharge for 2018 Capital Additions		QCPAC For 2019 Capital Additions pro formas (7,8)		QCPAC Surcharge for 2019 Capital Additions		QCPAC For 2020 Capital Additions pro formas (7,8)		QCPAC Surcharge for 2020 Capital Additions		QCPAC For 2021 Capital Additions pro formas (7,8)		QCPAC Surcharge for 2021 Capital Additions
City Bond Fixed Revenue Requirement (CBFRR)	\$7,729,032				\$7,729,032	\$	-	\$	7,729,032	\$	-	\$	7,729,032	\$	-	\$	7,729,032	\$	-	\$	7,729,032
Operating Expense Revenue Requirement	\$16,442,012	(1)(11)	\$122,079	(4)	\$16,564,090	\$	198,464	\$	16,762,554	\$	429,380	\$	17,191,934	\$	262,509	\$	17,454,442	\$	267,440	\$	17,721,882
Annual Principal and Interest Payments	\$6,218,648	(2)	\$365,418	(5)(10)	\$6,584,066	\$	\$488,828	\$	7,072,893	\$	\$924,576	\$	7,997,469	\$	\$700,422	\$	8,697,891	\$	\$785,941	\$	9,483,832
Principal and Interest Coverage Requirement	1.10	(3)			1.10				1.10				1.10				1.10				1.10
Principal and Interest Revenue Requirement	\$6,840,513				\$7,242,472	\$		\$	7,780,182	\$		\$	8,797,216	\$		\$	9,567,680	\$		\$	10,432,215
Proposed Revenue Requirement	\$31,011,556				\$31,535,594	\$		\$	32,271,768	\$		\$	33,718,182	\$		\$	34,751,154	\$		\$	35,883,130
Current Water Revenues excluding CBFRR	\$20,694,038				\$23,282,524	\$		\$	23,806,562	\$		\$	24,542,736	\$		\$	25,989,150	\$		\$	27,022,122
Add: City Bond Fixed Revenue Requirement	\$7,729,032				\$7,729,032	\$		\$	7,729,032	\$		\$	7,729,032	\$		\$	7,729,032	\$		\$	7,729,032
Current Water Revenues with CBFRR	\$28,423,070				\$31,011,556	\$		\$	31,535,594	\$		\$	32,271,768	\$		\$	33,718,182	\$		\$	34,751,154
Percent QCPAC Surcharge (9)					1.69%				2.37%				4.66%				3.33%				3.65%
Cumulative QCPAC Surcharge (13)									4.06%				8.73%				12.06%				15.71%
Cumulative QCPAC monthly increase in average single family residential bill					\$0.91	\$		\$	2.19	\$		\$	4.71	\$		\$	6.51	\$		\$	8.48
Average monthly single family residential bill with QCPAC					\$54.90	\$		\$	56.18	\$		\$	58.69	\$		\$	60.49	\$		\$	62.46

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense, Amortization Expense and Payroll Tax Expenses approved in DW16-806
- (2) Annual Principal and interest payments for PWW debt associated with all plant in service as approved in DW16-806
- (3) Principal and interest coverage of 1.10 is as approved in DW16-806
- (4) Reflects the net increase in property taxes associated with the plant placed in service between 1/1/2017 and 12/31/2017 that was not included in DW16-806.
- (5) Portion of Annual Principal and interest payments for debt associated with plant placed in service between 1/1/2017 and 12/31/2017 based on a 30 year bond with an actual total all in interest rate of 4.898453% that was not recovered in DW16-806
- (7) QCPAC operating expenses are based on the property taxes for plant added during the year
- (8) QCPAC Principal and Interest expenses are based on 30 year bond with interest rate of 5.5% for 2019 through 2021 Capital Expenditures unless funding is via an SRF/DWGTF financing.
- (9) QCPAC percent revenue surcharges based on increase in revenues from the step revenues granted in DW16-806
- (10) Portion of QCPAC Principal and Interest associated with SRF loan of \$767,357 for 2017 work completed on Amherst Street project based on the fact that \$27,746.00 of P&I was recovered in DW16-806 leaving \$25,178.00 of remaining P&I on this SRF loan to be collected via the QCPAC surcharge. The remaining P&I is based on the amortization schedule for this loan provided by the NHDES and is the P&I payment due the State in 2018 after principal forgiveness.
- (11) Reduction in revenues associated with fixed contracts as follows: Hudson Annual Fixed Chg \$32,800 Milford Annual Fixed Chg \$81,000.00 A-B Annual Fixed Chg \$371,430.48
- (12) QCPAC Principal and Interest expenses for DWGTF financing are based on a 30 year bond with interest rate of 3.38%
- (13) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW16-806
- (14) Portion of Annual Principal and interest payments for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 30 year bond with an actual total all in interest rate of 4.222191% Average Coupon rate as the all-in TIC (Total Interest Cost) for the \$8,250,000.00 which includes the 2018 capital project costs of \$8,229,376.70 plus Cost of Issuance and net Premium/Discount on the issued bonds.

Impact on Single Family Residential Home:

Monthly meter charge granted in DW16-806, inclusive of Step increase -	\$22.58	
Average Single Family Consumption (CCF) -	8.58	at time of DW16-806 filing
Consumption Charge granted in DW16.806, inclusive of Step increase -	\$3.66	
Ave. Single Family monthly bill with rates granted in DW16-806, inclusive of step -	\$53.98	

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Funded in DW16-806 Step	Estimated Project Cost as of 1/18/2017	Estimated Project Cost as of 11/15/2017	Final Unaudited Project Costs at of 1/19/2018	Community	Taxable	Tax Rate (1)	QCPAC Eligible Annual Tax Expense	Explanation for Change/Addition/Deletion since 1/18/2017	
Heavy Dump Truck Replacement (#12)	Heavy Dump Truck Replacement (#12)	1702309	DW14-130	25,734	11/7/2014	Yes	\$ 130,000	Paid 2014 Bond		Merrimack			\$ -	P&I and property taxes recovered in DW16-806 Step Increase	
Replace Aging Services	9 Renewed Services with 2014 Bond Funds	Monthly 21, 22, 23	DW14-130	25,735	11/7/2014	Partial	\$ 80,000	Paid 2014 Bond	\$ 100,454	Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase	
	23 Renewed Services with 2018 Bond Funds		DW17-183	26,101	2/2/2018	No		\$ 40,000		Nashua	Yes	\$ 29.82	\$ 2,996	P&I and property taxes to be recovered in 2018 QCPAC	
Replace Aging Hydrants	3 Hydrants replaced with 2014 Bond Funds	Monthly 31	DW14-130	25,735	11/7/2014	Partial	\$ 42,000	Paid 2014 Bond	\$ 18,643	Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase	
	5 Hydrants replaced with 2018 Bond Funds		DW17-183	26,101	2/2/2018	No		\$ 11,000		Nashua	Yes	\$ 29.82	\$ 556	P&I and property taxes to be recovered in 2018 QCPAC	
Replace Aging Valves	3 Valve Replacements	Monthly 12, 13	DW17-183	26,101	2/2/2018	No		\$ 50,000	\$ 53,122	Nashua	Yes	\$ 29.82	\$ 1,584	Based on final valve replacement expeditured in 2017.	
New Services	2 New Services for Single Family Residential, owner build, per Tariff	Monthly 20	DW14-130	25,735	11/7/2014	Partial	\$ -	Paid 2014 Bond	\$ 29,648	Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase	
	5 New Services for Single Family Residential, owner build, per Tariff		DW17-183	26,101	2/2/2018	No		\$ 34,537		Nashua	Yes	\$ 29.82	\$ 884	P&I and property taxes to be recovered in 2018 QCPAC	
Replace Leaded Brass Meters with Lead free brass meters	410 New Meters for Lead Meter exchanges - 5/8"-6"	Monthly 50	DW14-130	25,735	11/7/2014	Partial	\$ 832,000	Paid 2014 Bond	\$ 267,950	Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase	
	1,410 New Meters for Lead Meter exchanges - 5/8"-6" (NEED ACTUAL 332		DW17-183	26,101	2/2/2018	No		\$ 247,266		Nashua	Yes	\$ 29.82	\$ 7,990	P&I and property taxes to be recovered in 2018 QCPAC	
Replace Aging meter reading Radios	Replace 99 failed radios	Monthly 54	DW14-130	25,735	11/7/2014	Partial	\$ 28,000	Paid 2014 Bond	\$ 22,802	Nashua			\$ -	P&I and property taxes recovered in DW16-806 Step Increase	
	Replace 238 failed radios		DW17-183	26,101	2/2/2018	Remainder		\$ 22,729		Nashua	Yes	\$ 29.82	\$ 680	P&I and property taxes to be recovered in 2018 QCPAC	
Ferromagnetic Pipe locators (3)	Ferromagnetic Pipe locators (3)		DW17-183	26,101	2/2/2018	No	\$ 10,500	\$ 10,500		Merrimack			\$ -	None acquired	
Heavy Dump Truck Replacement (#86)	Heavy Dump Truck Replacement (#86)	1708349	DW17-183	26,101	2/2/2018	No	\$ 100,000	\$ 100,000	\$ 102,176	Merrimack	No	\$ -	\$ -		
Service Truck replacement (#47)	Service Truck replacement (#47)	1715542	DW17-183	26,101	2/2/2018	No	\$ 60,000	\$ 38,950	\$ 47,889	Merrimack	No	\$ -	\$ -		
Replacement of Foreman truck	Replacement of Foreman truck		Deferred. No Bond sought. No QCPAC sought.				\$ 90,000	\$ 75,000	\$ -	Merrimack		\$ -	\$ -	Deferred until 2018	
Replace Dump Truck Body	#312 - Replace Dump Truck Body	1720997							\$ 15,740	Merrimack	No			Project added at end of year using existing truck chassis for new dump body.	
Medium Duty Dump Truck Replacement (#71)	Medium Duty Dump Truck Replacement (#71)	1708350	DW17-183	26,101	2/2/2018	No	\$ 70,000	\$ 70,000	\$ 90,160	Merrimack	No	\$ -	\$ -		
Replace Truck #70	Replace Truck #70	1707209	DW17-183	26,101	2/2/2018	No	\$ -	\$ 32,034	\$ 32,034	Merrimack	No			Truck replaced when transmission failed rather than repair transmission on a 10 year old truck	
Replace Truck #58	Replace 2006 Truck with 104,000 miles	1702097							\$ 6,242	Merrimack	No				
20 Ton Tag Trailer replacement	20 Ton Tag Trailer replacement		Deferred. No Bond sought. No QCPAC sought.				\$ 20,000	\$ -						Deferred	
Variable Message Signs - 2	Customer Notification	1702307	DW14-130	25,734	11/7/2014	Yes	\$ 30,000	Paid 2014 Bond						P&I and property taxes recovered in DW16-806 Step Increase	
Replacement Radio Meter Reading Equipment (4)	Replace 10 year old radio meter reading handheld units		DW14-130	25,734	11/7/2014	Yes	\$ 25,000	Paid 2014 Bond						P&I and property taxes recovered in DW16-806 Step Increase	
Pipe Saws (5)	Pipe Saws (5)	1800440	DW17-183	26,101	2/2/2018	No	\$ 20,000	\$ -	\$ 9,384	Merrimack	No				
Metal Detectors (6)	Metal Detectors (6)	1708348	DW17-183	26,101	2/2/2018	No	\$ 7,000	\$ 6,360	\$ 6,360	Merrimack	No				
Replacement Excavator	Replacement Excavator	1702312	DW17-183	26,101	2/2/2018	No	\$ 75,000	\$ 69,554	\$ 69,554	Merrimack	No				
Complete construction of 16 DW Highway	Final billing for the completion of work by contractor at 16 DW Highway	1701990	DW17-183	26,101	2/2/2018	No	\$ -	\$ 67,050	\$ 65,140	Merrimack	Yes	\$ 28.17	\$ 1,835	Billing from final work on 16 DW not carried over in original budget	
MRX meter reading device	MRX meter reading device	1708487	DW17-183	26,101	2/2/2018	No	\$ -	\$ 8,190	\$ 8,190	Various	No			Existing 8 year old meter reading device failed	
GPS Units	Trimble Devices	1713734							\$ 21,287	Merrimack	No			Devices purchased early to support field deployment of GIS.	
Raw Water Transmission Main project	Finalization of 2016 project	1601365, 1701991	DW15-046	25,774	4/13/2015	Yes	\$ -	Paid for by SRF	\$ 176,829	Merrimack	Yes	\$ 28.17	\$ 4,981	Charges are for Internal engineering, OH, Union Labor, truck and AFDUC. These expenses are not eligible for SRF funding.	
Nashua & Amherst Paving	Final paving associated with watermain projects					No	\$ 1,100,000						\$ -	\$ -	Budget Placeholder
Nashua & Amherst Paving	Park Street Water Main Replacement project paving	1701989	DW17-183	26,101	2/2/2018	No		\$ 4,908	\$ 4,908	Nashua	Yes	\$ 29.82	\$ 146	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Mulberry Street Water Main Replacement project paving	1701988	DW17-183	26,101	2/2/2018	No		\$ 6,840	\$ 6,840	Nashua	Yes	\$ 29.82	\$ 204	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Contribution to City of Nashua in lieu of final trench restoration - includes Rochette, Ash, and Marquis	1718685, 1718684	DW17-183	26,101	2/2/2018	No		\$ 120,000	\$ 20,040	Nashua	Yes	\$ 29.82	\$ 598	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Chestnut Street Phase I Water Main Replacement project paving	1703643	DW17-183	26,101	2/2/2018	No		\$ 65,780	\$ 131,689	Nashua	Yes	\$ 29.82	\$ 3,927	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Scripture Street Water Main Replacement project paving	1703642	DW17-183	26,101	2/2/2018	No		\$ 11,200	\$ 2,466	Nashua	Yes	\$ 29.82	\$ 74	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Gorman Street Water Main Replacement project paving	1718679	DW17-183	26,101	2/2/2018	No			\$ 400	Nashua	Yes	\$ 29.82	\$ 12	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Water Street Water Main Replacement project paving							\$ 44,561						Paving deferred at City request	
Nashua & Amherst Paving	Brook Street Water Main Replacement project paving	1700310	DW17-183	26,101	2/2/2018	No			\$ 9,844	Nashua	Yes	\$ 29.82	\$ 294	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Ash Street Water Main Replacement project paving	1700315	DW17-183	26,101	2/2/2018	No			\$ 22,678	Nashua	Yes	\$ 29.82	\$ 676	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Worcester Street Area Water Main Replacement project paving	1718680	DW17-183	26,101	2/2/2018	No			\$ 3,020	Nashua	Yes	\$ 29.82	\$ 90	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Lovell Street Water Main Replacement project paving	1703644	DW17-183	26,101	2/2/2018	No			\$ 82,060	Nashua	Yes	\$ 29.82	\$ 2,447	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Towells Street Water Main Replacement project paving	1703639	DW17-183	26,101	2/2/2018	No			\$ 17,233	Nashua	Yes	\$ 29.82	\$ 514	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Howard Street Water Main Replacement project paving	1718682	DW17-183	26,101	2/2/2018	No			\$ 2,800	Nashua	Yes	\$ 29.82	\$ 83	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Hoys Water Main Replacement project paving	1718683	DW17-183	26,101	2/2/2018	No			\$ 1,000	Nashua	Yes	\$ 29.82	\$ 30	Budgeted under Final Paving associated with water main replacement projects	
Nashua & Amherst Paving	Shedds Ave. Water Main Replacement project paving	1718681	DW17-183	26,101	2/2/2018	No			\$ 2,000	Nashua	Yes	\$ 29.82	\$ 60	Budgeted under Final Paving associated with water main replacement projects	
Amherst Street Project	Amherst Street Area Water Main Replacement Project														
Amherst Street Project - Amherst Street water main replacement	Replace 3,150 LF of 6" Unlined CI Water main on Amherst Street	1601318, 1702928	DW16-236	25,887	42486	Partial		Paid for by SRF	\$ 923,785	Nashua					Charges are for Internal engineering, OH, Union Labor, truck and AFDUC. These expenses are not eligible for SRF funding.
Amherst Street Project - Berkshire Street water main replacement	Replace xxx LF of s"/s" Steel/Unlined CI Water main on Berkshire Street	1601320, 1702931	DW16-236	25,887	42486	Yes		Paid for by SRF	\$ 6,058	Nashua	No			\$767,357 in 2017 construction costs were financed with SRF loan funds. The principal and interest associated with this loan amount must be recovered as part of the 2018 QCPAC surcharge.	
Amherst Street Project - Terrace Ave. water main replacement	Replace 280 LF of 2"/4" Steel/Unlined CI Water main on Terrace Ave.	1601321, 1702932	DW16-236	25,887	42486	Yes	\$ 75,000		\$ 1,763	Nashua					
Amherst Street Project - Bruce Street water main replacement	Replace 260 LF of 6" Unlined CI Water main on Bruce Street	1601319, 1702930	DW16-236	25,887	42486	Yes	\$ 75,000		\$ 4,183	Nashua					
</															

Route 101 Widening, Bedford	Relocated water main along Nashua Road	1702838	DW17-183	26,101	2/2/2018	No		\$	43,100	\$	43,740	Bedford	Yes	\$	23.19	\$	1,014	NHIDOT project that was added in Spring of 2017			
Route 101 Widening, Bedford	Relocate water main on Bell Hill Road	1702839	DW17-183	26,101	2/2/2018	No		\$	15,400	\$	53,951	Bedford	Yes	\$	23.19	\$	1,251	NHIDOT project that was added in Spring of 2017.			
Route 101 Widening, Bedford	Relocate Service to 3 Nashua Road	1702840	DW17-183	26,101	2/2/2018	No		\$	67,400	\$	116,205	Bedford	Yes	\$	23.19	\$	2,695	NHIDOT project that was added in Spring of 2017. Partial reimbursement from NHIDOT of \$26,010.89			
Route 122 @ Nathan Lord Lane Water Main Relocation	Water Main Relocation to accommodate Town of Amherst Storm Drain installation	1715666	DW17-183	26,101	2/2/2018	No		\$	-	\$	54,630	Amherst	Yes	\$	30.30	\$	1,805	Town of Amherst Storm Drain project added in Fall of 2017			
Howard St. Emergency Main Replacement -	Howard St. Emergency Main Replacement -	1690371, 1601379									\$	106,838	Nashua	Yes	\$	29.82	\$	3,186	Emergency project to replace failed 2" steel water main late in 2017.		
Trimble Devices - Used for field locating Assets via GIS program	Upgrade to Ipad device driven units	1703027	DW17-183	26,101	2/2/2018	No		\$	72,000	\$	68,623	Merrimack	No								
Engineering Replacement Vehicles (2)	Replace 2 Vehicles	1702831, 1702832	DW14-130	25,734	11/7/2014	Yes		\$	64,000	Pd 2014 Bonds	\$	-	Merrimack	No					P&I and property taxes recovered in DW16-806 Step Increase		
Complete PWW Core System Hydraulic Model	Distribution Model Phase 2					Deferred. No Bond sought. No QCPAC sought.		\$	25,000	\$	-								Project underway, will not be used and useful in 2017		
PWW-PEU Interconnection - DW Highway to River	DW Highway to Merrimack River Booster station					Deferred. No Bond sought. No QCPAC sought.		\$	311,500	\$	-								Deferred to 2018 due to timing of final NHDES permitting		
WTP - Conversion to LED Lighting	WTP - Conversion to LED Lighting					Deferred. No Bond sought. No QCPAC sought.		\$	80,000	\$	-								Deferred, staff time not available to complete in 2017		
Booster/Well/Chem Feed pump replacements	Booster/Well/Chem Feed pump replacements		DW14-130	25,735	11/7/2014	Partial				Pd 2014 Bonds			Derry	Yes	\$	33.23	\$	-	P&I and property taxes recovered in DW16-806 Step Increase		
Booster/Well/Chem Feed pump replacements	Booster/Well/Chem Feed pump replacements	Monthly 60, 61, 62, 63	DW17-183	26,101	2/2/2018	No		\$	60,000	\$	38,000	\$	41,386	Derry	Yes	\$	33.23	\$	1,375		
Booster/Well/Chem Feed pump replacements	Replace VFD on Twin Ridge Well	1701888	DW17-183	26,101	2/2/2018	No				\$	2,089	\$	2,089	Plaistow	Yes	\$	28.39	\$	59	Budgeted under Booster/Well/Chem Feed pump replacement	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS					Deferred. No Bond sought. No QCPAC sought.		\$	15,000	\$	-								Budget place holder. No treatment system installs/replacement YTD		
Misc. Structural Improvements	Misc. Structural Improvements					Deferred. No Bond sought. No QCPAC sought.		\$	20,000	\$	-								Budget place holder. No structural improvements YTD		
Harris Dam Spillway Reconstruction	Complete Harris Dam Spillway Reconstruction	1701987								\$	-	\$	6,018	Nashua	Yes	\$	29.82	\$	179		
Replace Vehicle #62	Replace 11 year old truck with 107,863 miles		DW17-183	26,101	2/2/2018	No		\$	60,000	\$	45,000								A new vehicle was purchased and this vehicle was retained and kept in service. #99 was retired.		
Replace Vehicle #49	Replace 7 year old truck with 104,875 miles	1800462	DW17-183	26,101	2/2/2018	No		\$	35,000	\$	35,000	\$	27,323	Nashua	No				Retired #49		
Replace vehicle #204	Replace 6 year old truck with 175,260 miles	1800481	DW17-183	26,101	2/2/2018	No		\$	60,000	\$	45,000	\$	42,678	Nashua	No				Change from beginning of budget year as to type of vehicle being replaced. #204 retired.		
Replace Vehicle #63	Replace 7 year old truck with 110,249 miles		DW17-183	26,101	2/2/2018	No		\$	35,000	\$	35,000								Retired #63		
Replace Vehicle #44	Replace 8 year old truck with over 130,000 miles	1800479								\$	-	\$	42,678	Nashua	No				Retired #44		
New Vehicle #119	New Water Supply Vehicle, no replacement	1704173	DW17-183	26,101	2/2/2018	No		\$	-	\$	63,038	\$	62,282	Nashua	No				No vehicle retired.		
Replace Vehicle #99	Replace 11 year old truck with over 140,000 miles	1800480	DW17-183	26,101	2/2/2018	No					\$	27,323	Nashua	No					Retired #99		
Replace Vehicle #46	Add utility body to vehicle #46	1703002	DW17-183	26,101	2/2/2018	No					\$	2,071	Nashua	No					No vehicle retired.		
Install overhead crane and door-WTP process area	Install overhead crane and door-WTP process area	1701887, 1719861	DW17-183	26,101	2/2/2018	No		\$	75,000	\$	75,000	\$	45,731	Nashua	Yes	\$	29.82	\$	1,364	Design cost for WTP crane and door. Door is used and useful.	
Merrimack River Station pump/motor rebuild	Merrimack River Station pump/motor rebuild		DW17-183	26,101	2/2/2018	No		\$	75,000	\$	25,000								Project deferred until 2018		
Misc. equipment purchases	WTP misc. equipment purchases							\$	25,000	\$	-										
Misc. equipment purchases	Purchase New Electric Multi-Meter	1715547	DW17-183	26,101	2/2/2018	No			\$	1,500	\$	1,500	Nashua	No					Budgeted under WTP Misc equipment purchased		
THM precursor control at Bon Terrain Tank	Install mixer in Bon Terrain Tank	1703024	DW17-183	26,101	2/2/2018	No			\$	2,600	\$	2,600	Amherst	Yes	\$	30.30	\$	79	Budgeted under WTP Misc equipment purchased		
Replace VFD on Sludge Chopper Pump at WTP	Replace VFD on Sludge Chopper Pump at WTP	1707190	DW17-183	26,101	2/2/2018	No		\$	3,503	\$	3,503	Nashua	Yes	\$	29.82	\$	104	Budgeted under WTP Misc equipment purchased			
WTP - Replace 30" IP Discharge Meter	WTP - Replace 30" IP Discharge Meter	1701885	DW17-183	26,101	2/2/2018	No			\$	17,177	\$	17,177	Nashua	Yes	\$	29.82	\$	512	Budgeted under WTP Misc equipment purchased		
Purchase new lab equipment	Purchase new lab equipment					Deferred. No Bond sought. No QCPAC sought.		\$	15,000	\$	-										
Purchase new lab equipment	Hanna Titrator	1707187	DW17-183	26,101	2/2/2018	No			\$	5,900	\$	5,900	Nashua	No					Budgeted under Purchase new lab equipment		
WTP structural/HVAC	Replaced Compressor on A/C Unit FWPS	1708347	DW17-183	26,101	2/2/2018	No		\$	10,000	\$	5,568	\$	5,568	Nashua	Yes	\$	29.82	\$	166		
Misc Security upgrades for remote facilities	Misc. Fencing/Security Projects					Deferred. No Bond sought. No QCPAC sought.		\$	25,000	\$	-								Budget place holder. No Misc. Fencing/Security Projects YTD		
Complete Fencing around WTP for Security	Perimeter fencing at WTP	1706963	DW17-183	26,101	2/2/2018	No		\$	80,000	\$	5,588	\$	5,588	Nashua	Yes	\$	29.82	\$	167	Main Gate opening mechanism replaced. Fencing deferred	
Replace Clarifier (2)Vacuum Blowers and Actuators	Replace Clarifier (2)Vacuum Blowers and Actuators					Deferred. No Bond sought. No QCPAC sought.		\$	25,000	\$	-								Deferred		
Misc. SCADA Electrical upgrades	Misc. SCADA Electrical					Deferred. No Bond sought. No QCPAC sought.		\$	30,000	\$	-								Budget Place Holder. See below for actual projects		
Misc. SCADA Electrical upgrades	Valleyfield - Install Cellular Communication	1701886	DW17-183	26,101	2/2/2018	No		\$	-	\$	5,000	\$	3,249	Plaistow	Yes	\$	28.39	\$	92	Budgeted under Misc. SCADA Electrical upgrades	
Misc. SCADA Electrical upgrades	Install Cellular Communication, Cabot Preserve	1716549	DW17-183	26,101	2/2/2018	No					\$	2,642	Bedford	Yes	\$	23.19	\$	61	Project added to allow remote monitoring of water system		
Hi-Lo Generator	Hi-Lo Generator	1701899	DW17-183	26,101	2/2/2018	No				\$	47,332	Derry	Yes	\$	33.23	\$	1,573	Permanent standby generator added on site at this Community Water System.			
Armory Street Booster Pump VFD replacements	Replace failed VFD's on Armory Street Booster Pumps	1719862	DW17-183	26,101	2/2/2018	No		\$	-	\$	23,500	\$	-	Nashua	Yes	\$	29.82	\$	-	Budgeted under Misc. SCADA Electrical upgrades	
Misc. SCADA Electrical upgrades	Replace all SCADA Computers and Upgrade System	1701889	DW17-183	26,101	2/2/2018	No		\$	-	\$	43,000	\$	19,990	Nashua	Yes	\$	29.82	\$	596	Unbudgeted. Security upgrades required hardware replacement	
Well Rehabilitations (3)	Well Rehabilitations					Deferred. No Bond sought. No QCPAC sought.		\$	60,000	\$	-								\$	-	Budget place holder. No Well Rehabilitation Projects YTD
WTP Closed Circuit Camera replacement/improvements	Closed Circuit Camera replacement/improvements					Deferred. No Bond sought. No QCPAC sought.		\$	60,000	\$	-								Deferred		
WTP - Replace storefront glass, renovate WTP reception	Replace storefront glass, renovate WTP reception					Deferred. No Bond sought. No QCPAC sought.		\$	50,000	\$	-								Deferred		
Office renovation-conference room	Office renovation-conference room					Deferred. No Bond sought. No QCPAC sought.		\$	50,000	\$	-								Deferred		
Water Supply - Watershed Public Education	Fertilization / Pesticide - Phase 1					Deferred. No Bond sought. No QCPAC sought.		\$	20,000	\$	-								Will not be completed until 2018		
Stormwater BMP Notifications and Community Education	Stormwater BMP Notifications and Community Education					Deferred. No Bond sought. No QCPAC sought.		\$	12,000	\$	-								Will not be completed until 2018		
St. Joseph's Land Purchase	Watershed protection	1503675	DW17-183	26,101	2/2/2018	No				\$	69,790			Nashua	Yes	\$	29.82	\$	2,081	Project started in 2015. Land purchased from local hospital. Land adjacent to Supply Pond.	
Secure reception area	Office Security for Front Reception Desk	1708425	DW17-183	26,101	2/2/2018	No		\$	10,000	\$	20,990	\$	18,824	Merrimack	No				Original estimate did not include bullet proof glass and other security features		
Adjustable Desk Tops	Accommodate back issues	1713759	DW17-183	26,101	2/2/2018	No		\$	-	\$	6,088	\$	6,088	Merrimack	No						
Asset Management - Phase 3	Asset Management 2016 Carry over	1600061	DW17-183	26,101	2/2/2018	No		\$	200,000	\$	200,000	\$	161,590	Merrimack	Yes	\$	28.17	\$	4,552		
Conversion to R.A.M. Fixed Assets carry-over	Conversion to R.A.M. Fixed Assets carry-over	1707349	DW17-183	26,101	2/2/2018	No		\$	11,000	\$	11,000	\$	6,929	Merrimack	No	\$	-	\$	-		
Firewall	Firewall replacement	1702081	DW17-183	26,101	2/2/2018	No		\$	50,000	\$	36,426	\$	28,228	Merrimack	No						
Asset Management - Phase 4	Continue progress on Asset Management implementation	1700300	DW17-183	26,101	2/2/2018	No		\$	736,000	\$	350,000	\$	492,133	Various	Yes	\$	28.85	\$	14,198	Reduced level of work than budgeted due to staff time diverted to PFOA response	
Click Mobile Upgrade	Upgrade ClickMobile to work on iPads	1707189	DW17-183	26,101	2/2/2018	No		\$	150,000	\$	5,400								2016 Work completed. 2017 work deferred until 2018		
Click Mobile Upgrade	Purchase iPads for ClickMobile Platform	1702223	DW17-183	26,101	2/2/2018	No		\$	-	\$	5,160	\$	5,160	Various	Yes	\$	28.85	\$	149	Budgeted for under Upgrade ClickMobile to work on iPADS	
Infoview upgrade	Upgrade Infoview to the latest version	1702224	DW17-183	26,101	2/2/2018	No		\$	5,000	\$	3,150	\$	3,150	Various	Yes	\$	28.85	\$	91		
Exchange Upgrade	Upgrade Exchange to the latest version		DW17-183	26,101	2/2/2018	No		\$	31,000	\$	20,420								\$	-	Deferred
Retention Archive Solution	Infrastructure to Archive older stagnant files					Deferred. No Bond sought. No QCPAC sought.		\$	80,000	\$	-								Deferred until 2018		
Munis Enhancements	Bill prints/forms, Forms import, Click-Munis import, CSS and Dashboard/Central					Deferred. No Bond sought. No QCPAC sought.		\$	180,000	\$	-									Waiting for vender acceptance of software enhancements	
Miscellaneous Software						Deferred. No Bond sought. No QCPAC sought.		\$	15,000	\$	-									Budget place holder.	
Miscellaneous Software	Upgrade Synegyn/WAM		DW17-183	26,101	2/2/2018	No		\$	-	\$	10,386									Budgeted for under Misc. Software	
Miscellaneous Software	Backflow Data Collection software	1707208	DW17-183	26,101	2/2/2018	No		\$	-	\$	6,700	\$	5,400	Merrimack	No					Budgeted for under Misc. Software	
Miscellaneous Software	Munis - Enhancements - SDS Replacement	1502439	DW17-183	26,101	2/2/2018	No					\$	18,700	Merrimack	No						Budgeted for under Misc. Software	
Miscellaneous Software	PDF Converter Software	1614048	DW17-183	26,101	2/2/2018	No					\$	3,994	Merrimack	No						Required to make website ADA compliant	
Miscellaneous Hardware						Deferred. No Bond sought. No QCPAC sought.		\$	18,000	\$	-									Budget place holder. No Misc. Hardware purchased YTD	
Miscellaneous Hardware	LT06 Tape Drive #2	1617689	DW17-183	26,101	2/2/2018	No					\$	19,395	Merrimack	No							
Network Infrastructure	Replacement of virtual servers and network switch stack. Existing hardware no longer supported.	1716547	DW17-183	26,101	2/2/2018	No					\$	113,424	Merrimack	No							
LIMS upgrade	Upgrade to Laboratory Information Systems software					Deferred. No Bond sought. No QCPAC sought.		\$	11,000	\$	-									Release of new version delayed until 2018	
Badge Swipe for IT Area	Allow for tracking of traffic after hours into IT area - Security					Deferred. No Bond sought. No QCPAC sought.		\$	2,000	\$	-									Project cancelled for 2017	
Digsafe into Click	Track Dig safe work order time electronically					Deferred. No Bond sought. No QCPAC sought.		\$	2,000	\$	-									Project cancelled for 2017	
Website Upgrades & Updates	Update Website. Enhance customer useability	1704175	DW17-183	26,101	2/2/2018	No		\$	36,000	\$	21,700	\$	13,250	Merrimack	No						
IT Security Project	ISO 27001 Equivalency Project	1707186	DW17-183	26,101	2/2/2018	No		\$	-	\$	40,500	\$	31,555	Merrimack	No					Evaluation of IT infrastructure for security	
Physical Server for Autodesk Revit						Deferred. No Bond sought. No QCPAC sought.		\$	8,000	\$	-									Deferred	
Physical Server for Pearl						Deferred. No Bond sought. No QCPAC sought.		\$	12,000	\$	-									Deferred	
Investment in Developer Installed Services	One times revenue tariffed amount		DW14-130	25,735	11/7/2014	Partial		\$	-	Pd 2014 Bonds									P&I and property taxes recovered in DW16-806 Step Increase		
Investment in Developer Installed Services	One times revenue tariffed amount		DW17-183	26,101	2/2/2018	No		\$	-	\$	36,000	\$	43,903	Various	Yes	\$	28.85	\$	1,267	Tariffed investment amount not in original capital budget	

Project Name/Description	Project Description	Work Order #	Financing Docket No.	Approved Budgeted Amount	Estimated Project Cost as of 6/30/2018	Estimated Project Cost as of 9/30/2018	Estimated Project Cost as of 11/30/2018	Final Project cost as of 12/31/2018	Community	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Replace Forman Truck	Existing Truck has been a safety and maintenance problem	1708551 & 1813521	2019 Docket	\$ 90,000	\$ 97,685	\$ 120,756	\$ 120,756	\$ 92,018	Merrimack	No	\$ 28.92	\$ -	Additional labor, metal and other hardware to properly outfit the truck. Project reduced by \$16,000 for trade in value.
Single Family New Services	Single Family, Owner Build, New Homes	20 workorders	2019 Docket	\$ 46,000	\$ 46,000	\$ 46,000	\$ 37,403	\$ 40,850	Various	Yes	\$ 28.40	\$ 1,160	10 New Services installed in 2018
Renewed Services	Replacement of failed services	workorders	2019 Docket	\$ 92,000	\$ 92,000	\$ 37,758	\$ 40,000	\$ 47,818	Various	Yes	\$ 28.40	\$ 1,358	18 failed services replaced in 2018.
Hydrants	Replacement of non functional hydrants (Run rate) (8 YTD)	30 & 31 workorders	2019 Docket	\$ 50,000	\$ 50,000	\$ 50,000	\$ 45,000	\$ 35,560	Various	Yes	\$ 28.40	\$ -	8 failed hydrants replaced in 2018.
Valve Replacements	Replacement of Failed Gate Valves	workorders	2019 Docket	\$ 30,000	\$ 30,000	\$ 20,000	\$ 32,000	\$ 14,412	Various	Yes	\$ 28.40	\$ 1,010	5 failed gate valves replaced in 2018.
Replace failed meter reading radios	Replace out of warranty failed radio meter readers	54 workorders	2019 Docket	\$ 50,000	\$ 50,000	\$ 50,000	\$ 60,000	\$ 46,153	Various	Yes	\$ 28.40	\$ 1,311	602 failed radios replaced in 2018.
New Meters (growth) 5/8"- 2" (CDE & CWS)	New meters for new customers.	30 workorders	2019 Docket	\$ 114,000	\$ 114,000	\$ 40,000	\$ 40,000	-	Various	Yes	\$ 28.40	\$ -	2,303 new meters installed in 2018. The new meters installed were for new customers and also to replace meters that had lead content in excess of 0.25% by weight of the brass meter body.
New Meters for Lead Meter exchanges (PWW-CORE & CWS) 5/8"- 6"	Replace High lead brass meter with new no lead brass meter (2071 YTD)	30 workorders	2019 Docket	\$ 532,000	\$ 532,000	\$ 360,000	\$ 340,000	\$ 326,902	Various	Yes	\$ 28.40	\$ 9,284	2,303 new meters installed in 2018. The new meters installed were for new customers and also to replace meters that had lead content in excess of 0.25% by weight of the brass meter body.
Irrigation/Pipe locators (3)	Ongoing small equipment replacement - run rate	-	2019 Docket	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Purchase deferred until 2019
Service Truck replacement (#76)	Replace 2008 Ford F-350 w/ 136,000+ miles	1900417	2019 Docket	\$ 60,000	\$ 60,000	\$ 60,000	\$ 61,905	\$ 61,905	Merrimack	No	\$ 28.92	\$ -	Purchase deferred until 2019
1 Service Truck - New	Service Truck for 1 new on employees	1900416	2019 Docket	\$ 35,000	\$ 35,000	\$ 35,000	\$ 62,215	\$ 62,215	Merrimack	No	\$ 28.92	\$ -	Vehicle spec was changed to Heavy Duty Quad Cab
Replacement of Meter Supervisor Truck (#14)	Replace 7 year old pick up with 167,000+ miles with small SUV	1825491	2019 Docket	\$ 28,000	\$ 28,000	\$ 28,000	\$ 31,563	\$ 25,563	Merrimack	No	\$ 28.92	\$ -	Project reduced by \$6,000 for trade in value.
Replace Valve/var trailer unit	Existing unit has reach the end of its usable life	-	2019 Docket	\$ 65,000	\$ 65,000	\$ -	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Project deferred until 2019
Trimble units for Meter Reading (6 units)	Replace CE meter reading equipment	1830144	2019 Docket	\$ 39,000	\$ 39,000	\$ 48,000	\$ 56,829	\$ 56,829	Merrimack	No	\$ 28.92	\$ -	Project deferred until 2019
Pipe Saws (5)	Ongoing small equipment replacement - run rate	1819287	2019 Docket	\$ 6,000	\$ 6,000	\$ 5,000	\$ 5,000	\$ 5,000	Merrimack	No	\$ 28.92	\$ -	Project deferred until 2019
Metal Detectors (6)	Ongoing small equipment replacement - run rate	-	2019 Docket	\$ 7,000	\$ 7,000	\$ 7,000	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Purchase deferred until 2019
Add Air Conditioning to Mechanics Bay	Security Project	1805724	2019 Docket	\$ 52,000	\$ 62,641	\$ 62,641	\$ -	\$ -	Merrimack	Yes	\$ 28.92	\$ 1,812	Updated quotes with higher materials cost, steel surcharge & freight.
Four trench boxes	Replace 22 year old trench boxes	1818578	2019 Docket	\$ 20,000	\$ 22,456	\$ 22,456	\$ 22,456	\$ 22,456	Merrimack	No	\$ 28.92	\$ -	Project deferred until 2019
Vehicle Lift Replacement	Replace 9000lb Ammo lift with new 12000lb Rotary Lift in Mechanic's Bay	1805726	2019 Docket	\$ -	\$ -	\$ 7,974	\$ 7,974	\$ 7,974	Merrimack	Yes	\$ 28.92	\$ 231	Project deferred until 2019
Utility Truck	Replace Vehicle #4 2011 F-350 w/ 140,000 miles and higher maintenance needs	-	2019 Docket	\$ -	\$ -	\$ 65,000	\$ 62,215	\$ -	Merrimack	No	\$ 28.92	\$ -	Purchase deferred until 2019
Utility Van	Replace Vehicle #72 2011 Ford E-250 Van - High mileage & maintenance costs	1826440	2019 Docket	\$ -	\$ -	\$ 35,000	\$ 31,648	\$ 32,052	Merrimack	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018
Utility Van	Replace Vehicle #72 2011 Ford E-250 Van - High Mileage & maintenance costs	1826439	2019 Docket	\$ -	\$ -	\$ 35,000	\$ 31,704	\$ 32,097	Merrimack	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018
Utility Van	Replace Vehicle #26 2011 Ford E-250 Van - High mileage & maintenance costs	1826438	2019 Docket	\$ -	\$ -	\$ 35,000	\$ 31,740	\$ 32,097	Merrimack	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018
Road Plots (2)	8x8 and 8x10 1" Steel Road Plates	1830146	2019 Docket	\$ -	\$ -	\$ 5,300	\$ 5,380	\$ 5,380	Merrimack	No	\$ 28.92	\$ -	2019 Capital Budget item moved to 2018
Interconnection of BWC (Bedford) to PWW	Interconnection of BWC (Bedford) to PWW	1800734	2019 Docket	\$ 85,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 258,923	Bedford	Yes	\$ 24.76	\$ 6,411	Original budget done prior to design; increased scope of work to remove all AC water main from Buck River Rd.
Elm St	Replace 1570 LF of 8 & 6 inch CI with 12 inch DIPCL	1812907	2019 Docket	\$ 416,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	City Sewer delayed until 2019
Monroe Street	Replace 485 LF of 4 inch (HDPE) CI with 8 inch DIPCL	1812908	2019 Docket	\$ 122,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	City Sewer delayed until 2019
West Pearl Street	Replace 525 LF of 8 inch CI with 8 inch DIPCL	1812909	2019 Docket	\$ 100,000	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	City Sewer delayed until 2019
Gillis St	Residual paving from prior year main replacement	1812910	2019 Docket	\$ 143,000	\$ 66,000	\$ 60,000	\$ 61,887	\$ 61,887	Nashua	Yes	\$ 27.81	\$ 1,721	Restoration turned over to City of Nashua with multiple utilities contributing
Orange St (Concord St to Lock St)	Residual paving from prior year main replacement	1812911	2019 Docket	\$ 96,000	\$ 96,000	\$ 65,000	\$ 98,236	\$ 98,236	Nashua	Yes	\$ 27.81	\$ 2,732	Based on revised paving contribution estimate
Temple Street	Residual paving from prior year main replacement	1812923	2019 Docket	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Buchanan St	Residual paving from prior year main replacement	1800533	2019 Docket	\$ 36,600	\$ 36,600	\$ 38,000	\$ 33,330	\$ 33,330	Nashua	Yes	\$ 27.81	\$ 927	Residual Paving Costs still outstanding at end of 2018
Lincoln Ave	Residual paving from prior year main replacement	1813071 & 1807532	2019 Docket	\$ 52,300	\$ 52,300	\$ 54,000	\$ 70,337	\$ 69,988	Nashua	Yes	\$ 27.81	\$ 1,946	Residual Paving Costs still outstanding at end of 2018
Niott St	Residual paving from prior year main replacement	1812912	2019 Docket	\$ 39,600	\$ 39,600	\$ 41,000	\$ 29,134	\$ 29,134	Nashua	Yes	\$ 27.81	\$ 810	Residual Paving Costs still outstanding at end of 2018
Circle Ave	Residual paving from prior year main replacement	1812913	2019 Docket	\$ 11,000	\$ 11,000	\$ 19,140	\$ 9,136	\$ 9,136	Nashua	Yes	\$ 27.81	\$ 254	Residual Paving Costs still outstanding at end of 2018
Draft St	Residual paving from prior year main replacement	1812914	2019 Docket	\$ 47,000	\$ 47,000	\$ 49,000	\$ 46,218	\$ 46,218	Nashua	Yes	\$ 27.81	\$ 1,285	Residual Paving Costs still outstanding at end of 2018
Zellwood Ave	Residual paving from prior year main replacement	1812915	2019 Docket	\$ 25,000	\$ 25,000	\$ 27,000	\$ 26,076	\$ 26,077	Nashua	Yes	\$ 27.81	\$ 725	Residual Paving Costs still outstanding at end of 2018
Taxon St	Residual paving from prior year main replacement	1812916	2019 Docket	\$ 6,000	\$ 6,000	\$ 7,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Triphid St	Residual paving from prior year main replacement	1812917 & 1806873	2019 Docket	\$ 4,400	\$ 4,400	\$ 6,400	\$ 28,673	\$ 59,273	Nashua	Yes	\$ 27.81	\$ 1,648	Residual Paving Costs still outstanding at end of 2018
Forsell Ave	Residual paving from prior year main replacement	1807533	2019 Docket	\$ 59,400	\$ 59,400	\$ 61,000	\$ 57,308	\$ 57,369	Nashua	Yes	\$ 27.81	\$ 1,595	Residual Paving Costs still outstanding at end of 2018
Terrace Street	Residual paving from prior year main replacement	1812918	2019 Docket	\$ 5,200	\$ 5,200	\$ 5,200	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Beard St	Residual paving from prior year main replacement	1812919	2019 Docket	\$ 16,100	\$ 17,700	\$ 17,700	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Green St	Residual paving from prior year main replacement	1812920	2019 Docket	\$ 3,100	\$ 3,100	\$ 3,100	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Warren St	Residual paving from prior year main replacement	1807535	2019 Docket	\$ 11,000	\$ 11,000	\$ 11,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Well St	Residual paving from prior year main replacement	1812921	2019 Docket	\$ 23,000	\$ 23,000	\$ 23,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Lemon St	Residual paving from prior year main replacement	1812922	2019 Docket	\$ 4,400	\$ 4,400	\$ 4,400	\$ 4,400	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Lavandale Ave	Residual paving from prior year main replacement	1900349	2019 Docket	\$ -	\$ -	\$ 8,193	\$ 8,193	\$ -	Nashua	Yes	\$ 27.81	\$ 228	Residual Paving Costs still outstanding at end of 2018
Main Street	Residual paving from prior year main replacement	xxxx	2019 Docket	\$ -	\$ -	\$ 6,402	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Residual Paving Costs still outstanding at end of 2018
Mulvanity St - Emergency Replacement	Residual paving from prior year main replacement	1812925	2019 Docket	\$ 51,700	\$ 21,670	\$ 21,670	\$ 20,101	\$ -	Nashua	Yes	\$ 27.81	\$ 559	Paving shared with other impacted Utilities and City
Proctor Street Emergency Replacement	Residual paving from prior year main replacement	1812924	2019 Docket	\$ -	\$ 11,600	\$ 11,600	\$ 10,896	\$ 10,896	Nashua	Yes	\$ 27.81	\$ 303	Contingent Paving obligation paid
Reserve for Contingent Liability for Paving Costs	Reserve for Contingent Liability for Paving Costs	n/a	2019 Docket	\$ 634,800	\$ 634,800	\$ 634,800	\$ -	\$ -	Nashua	No	\$ 27.81	\$ -	Reduced based on anticipated work to be completed in 2018
Asset Management	Asset Management - Outside GIS Consulting Services	1800341	2019 Docket	\$ 330,000	\$ 361,000	\$ 461,000	\$ 380,000	\$ 386,820	Various	Yes	\$ 28.40	\$ 10,986	Carried in Asset Management Budget
Asset Management - Outside GIS Consulting Services	Asset Management - Water Modeling Consulting	1800341	2019 Docket	\$ 73,000	\$ 73,000	\$ -	\$ -	\$ -	Various	No	\$ 28.40	\$ -	Used on as-needed basis
Asset Management - Water Modeling Consulting	Water Modeling Consulting	1800341	2019 Docket	\$ 50,000	\$ 50,000	\$ 10,000	\$ 10,000	\$ -	Various	No	\$ 28.40	\$ -	Replacement not needed in 2018
Asset Management - Trimble R2 Units	Trimble R2 Units	1800341	2019 Docket	\$ 13,000	\$ -	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	Replacement not needed in 2018
Water Level Well Monitoring Equipment	Water Level Well Monitoring Equipment	1800341	2019 Docket	\$ 5,000	\$ 5,000	\$ -	\$ -	\$ -	Various	No	\$ 28.40	\$ -	Project deferred until 2019
Water Level Well Monitoring Equipment	Replace 1470 LF of 8 inch CI with 12 inch DIPCL	1806433	2019 Docket	\$ 475,100	\$ 435,000	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Project deferred until 2019
Bitter Street	Replace 500LF of 6 inch CI with 12 inch DIPCL	1702858 & 1806828	2019 Docket	\$ 161,500	\$ 215,000	\$ 225,000	\$ 191,000	\$ 168,793	Nashua	Yes	\$ 27.81	\$ 4,694	Increased due to conditions encountered during construction and additional temporary paving
Woodward Street	Replace 300 LF of 6 inch CI with 12 inch DIPCL	1702857 & 1806828	2019 Docket	\$ 95,300	\$ 110,000	\$ 130,000	\$ 142,373	\$ 145,417	Nashua	Yes	\$ 27.81	\$ 4,044	Increased due to conditions encountered during construction and additional temporary paving
Victory Street	Replace 625 LF of 8 inch and 950 LF of 30 inch CI with 12 inch DIPCL	1702856 & 1806828	2019 Docket	\$ 487,000	\$ 520,000	\$ 540,000	\$ 602,707	\$ 607,926	Nashua	Yes	\$ 27.81	\$ 16,906	Increased due to conditions encountered during construction and additional temporary paving
Pennichuck Street	Replace 100 LF of 12 inch CI with 12 inch DIPCL	1720993 & 1806833	2019 Docket	\$ 39,900	\$ 42,000	\$ 76,000	\$ 76,000	\$ 78,146	Nashua	Yes	\$ 27.81	\$ 2,173	Increased due to conditions encountered during construction and additional temporary paving
Early Street	Replace 385 LF of 6" CI with 8" DIPCL	1806836	2019 Docket	\$ -	\$ 119,000	\$ 119,000	\$ 161,436	\$ 161,622	Nashua	Yes	\$ 27.81	\$ 4,495	Added to Misc Replacements to improve fire protection near hospital
Fossa Avenue	Replace 310 LF of 6 inch CI and 2 PVC with 6 inch and 4 inch DIPCL	1720991 & 1806800	2019 Docket	\$ 46,200	\$ 38,346	\$ 38,346	\$ 115,917	\$ 114,888	Nashua	Yes	\$ 27.81	\$ 3,195	Reduce based on bid numbers does not include final paving
Russell Avenue	Replace 775 LF of 8 inch and 275 LF of 6 inch CI with 775 LF of 8 inch and 225 LF of 4 inch DIPCL	1720992 & 1806800	2019 Docket	\$ 237,800	\$ 197,374	\$ 197,374	\$ 255,478	\$ 256,860	Nashua	Yes	\$ 27.81	\$ 7,443	Final Paving completed in 2018
Tinker Street (Main St to Lynn)	Replace 2084 LF of 6 inch CI with 8 inch DIPCL	1806803	2019 Docket	\$ 171,800	\$ 142,534	\$ 152,600	\$ 631,368	\$ 631,468	Nashua	Yes	\$ 27.81	\$ 18,117	Amount of replacement pipe increased from 790 LF to 2084 LF, includes final paving
Barnett Street	Replace 535 LF of 6 inch CI with 12 inch DIPCL	1806804	2019 Docket	\$ 172,800	\$ 143,424	\$ 143,424	\$ 205,565	\$ 203,647	Nashua	Yes	\$ 27.81	\$ 5,663	Final Paving completed in 2018
Field Street	Replace 325 LF of 6 inch CI with 6 inch DIPCL	1806435	2019 Docket	\$ 71,700	\$ 59,511	\$ 59,511	\$ 67,384	\$ 67,483	Nashua	Yes	\$ 27.81	\$ 1,877	Final Paving completed in 2018
Fernwood Street	Replace 450 LF of 6 inch CI with 6 inch DIPCL	1806794	2019 Docket	\$ 159,000	\$ 131,970	\$ 131,970	\$ 113,470	\$ 113,579	Nashua	Yes	\$ 27.81	\$ 3,159	Final Paving completed in 2018
Revere Street	Replace 760 LF of 6 inch CI with 8 inch DIPCL	1806795	2019 Docket	\$ 191,000	\$ 158,530	\$ 158,530	\$ 182,994	\$ 183,064	Nashua	Yes	\$ 27.81	\$ 5,091	Final Paving completed in 2018
Stevens Street	Replace 760 LF of 8 inch CI and 160 LF of 6 inch CI with 760 LF of 8 inch and 160 LF of 4 inch DIPCL	1806797	2019 Docket	\$ 40,000	\$ 33,280	\$ 40,200	\$ 264,258	\$ 264,338	Nashua	Yes	\$ 27.81	\$ 7,352	The \$40,200 in the Board approved budget was a copy and paste error. The correct budget for this project based on the distribution engineer's original estimate was \$xxx,xxx
Evanson Street	Replace 310 LF of 1.5 and 1.25 inch CI with 4 inch DIPCL	1806798	2019 Docket	\$ 69,300	\$ 57,519	\$ 57,519	\$ 71,595	\$ 71,695	Nashua	Yes	\$ 27.81	\$ 1,594	Final Paving completed in 2018
Monron Street	Replace 290 LF of 1.5 inch CI with 550 LF of 4 inch DIPCL	1806799	2019 Docket	\$ 94,000	\$ 78,020	\$ 78,020	\$ 103,934	\$ 104,035	Nashua	Yes	\$ 27.81	\$ 2,893	Final Paving completed in 2018
Park Avenue	Replace 300 LF of 8 inch CI and 160 LF of 2 inch CI with 300 LF of DIPCL and 160 LF of 4 inch DIPCL	1806796	2019 Docket	\$ 132,000	\$ 109,560	\$ 109,560	\$ 180,970	\$ 180,796	Nashua	Yes	\$ 27.81	\$ 5,028	Final Paving completed in 2018. Original budget assumed paving would be completed in 2019.
Coburn Woods (all side streets)	Replace 4400 LF of 2 inch PVC with 4 inch DIPCL	n/a	2019 Docket	\$ 1,024,400	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Deferred to future, time frame undetermined
Northwest High Pressure System Improvements	Replacing of dead end mains. Parallel watermain required to rebuild Kessler Tank	n/a	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Project needed to be deferred to complete other water main replacement projects that came up in 2018
Northwest High Pressure System Improvements</													

Project Name/Description	Project Description	Work Order #	Financing Docket No.	Approved Budgeted Amount	Estimated Project Cost as of 6/30/2018	Estimated Project Cost as of 9/30/2018	Estimated Project Cost as of 11/30/2018	Final Project cost as of 12/31/2018	Community	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Replace Ranger Pickup	Replace 2005 Ranger Pickup with 186,885 miles	1817796	2019 Docket	\$ 30,000	\$ 34,050	\$ 34,054	\$ 34,054	\$ 34,054	Merrimack	No	\$ 28.92	\$ -	Added after approved budget. Opportunity to replace 8 inch A/C pipe. PEU paid for 50% bar PWV is responsible for 100% of taxes.
Mast Road Replacement (PEU-PWW) Interconnection	PWW share of PWW-PEU Interconnection budget	1807148	2019 Docket	\$ -	\$ 57,000	\$ 67,850	\$ 67,850	\$ 33,925	Merrimack	Yes	\$ 28.92	\$ 1,962	RR crossing on Marshall St was to be lowered and fire protection concerns
Marshall Street	Replace 1074 LF of 8" CI with 1074 LF of 8" DIPCL	1813935	2019 Docket	\$ -	\$ 27,000	\$ 325,000	\$ 354,813	\$ 355,362	Nashua	Yes	\$ 27.81	\$ 9,883	Paving program to overlay street. Found leak. Main found in poor condition
Terraville Court	Replace 116 LF of 12" steel pipe with 4" PVC	1825319	2019 Docket	\$ -	\$ 60,000	\$ 62,000	\$ 77,391	\$ 78,552	Nashua	Yes	\$ 27.81	\$ 2,185	Improving program, same era as Ferry Alb. Co.
Salvart Court	Replace 100 LF of 1.25 inch steel pipe with 4 inch PVC	1825910	2019 Docket	\$ -	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	Nashua	Yes	\$ 27.81	\$ -	Gas replacement will compromise 1953 en water line. Based on revised contractor estimate. Final paving completed in 2018
Leweswell Street	Replace 400 LF of 1.25" steel pipe with 8" DIPCL	1825912	2019 Docket	\$ -	\$ 210,000	\$ 86,000	\$ 139,276	\$ 139,417	Nashua	Yes	\$ 27.81	\$ 3,877	Project developed in response to a combination of low pressure and pressure surges causing customer plumbing issues.
Shakespeare High Pressure System Lakeside Avenue	Expand HP system to address pressure issues to 4 streets Replace 275 LF of 1.25" steel pipe with 4" PVC	1813926 n/a	2019 Docket 2019 Docket	\$ - \$ -	\$ 273,000 \$ 75,000	\$ 230,000 \$ -	\$ 230,000 \$ -	\$ 211,941 \$ -	Nashua Nashua	Yes Yes	\$ 27.81 \$ 29.82	\$ 5,894 \$ -	Gas Company with late start. Project requires temporary water. Deferred to 2019
Cheshire Street	Replace 394 LF of 8" AC with 394 LF of 12" DIPCL	1825913	2019 Docket	\$ -	\$ -	\$ 123,000	\$ 183,586	\$ 183,707	Nashua	Yes	\$ 27.81	\$ 5,109	Eliminate AC water main located in Street that City added to their 2018 street paving project. Final paving completed in 2018.
Investment in developer installed services at Tsannual revenue	Per tariff (224)	n/a	2019 Docket	\$ -	\$ -	\$ 133,175	\$ 133,175	\$ 141,179	Various	Yes	\$ 28.40	\$ 4,009	Tariffed investment not included in Board approved budget
Chase Street	Replace 430 LF of 6" CI with 4" HDPE	1829925	2019 Docket	\$ -	\$ -	\$ -	\$ 134,600	\$ -	Nashua	Yes	\$ 27.81	\$ -	Completed in conjunction with a City of Nashua Sewer Replacement. City covering Street reconstruction
Booster/Well/Chem Feed pump replacements	Booster/Well/Chem Feed pump replacements (13 YTD)	60, 61, 62 & 63 workorders	2019 Docket	\$ 60,000	\$ 60,000	\$ 60,000	\$ 48,354	\$ 50,899	Various	Yes	\$ 28.40	\$ 1,446	
Replace 2 Submersible Jet Pumps	Replace two submersible jet pumps in the headworks at the WTP	1818297	2019 Docket	\$ -	\$ -	\$ 14,707	\$ 14,707	\$ 14,707	Nashua	Yes	\$ 27.81	\$ 409	
Initial/replace treatment systems in small CWS	Initial/replace treatment systems in small CWS	n/a	2019 Docket	\$ 15,000	\$ 15,000	\$ 15,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Misc. Structural Improvements	Misc. Structural Improvements	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 20,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Misc. Structural Improvements	WTP - Replace PWPS oil Tank Leak Monitor	1820031	2019 Docket	\$ -	\$ -	\$ 1,200	\$ 3,331	\$ 3,331	Nashua	Yes	\$ 27.81	\$ 93	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 5,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Replacement of 18" Backwash Actuator	The replacement of the electric valve actuator for the 18" backwash water control valve	1819988	2019 Docket	\$ -	\$ -	\$ 4,456	\$ 4,456	\$ 4,456	Nashua	Yes	\$ 27.81	\$ 124	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	2019 Docket	\$ 30,000	\$ 30,000	\$ 10,000	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	
Miscellaneous SCADA/Electrical	WTP - Replace High Lift #4, Soft Starter Mechanism	1813113	2019 Docket	\$ -	\$ -	\$ 5,265	\$ 5,265	\$ 5,265	Nashua	Yes	\$ 27.81	\$ 146	
Miscellaneous SCADA/Electrical	WTP - Replace Turbidity Controller - Filters 1A/1B	1805725	2019 Docket	\$ -	\$ -	\$ 3,246	\$ 3,246	\$ 3,246	Nashua	Yes	\$ 28.40	\$ 92	
Miscellaneous SCADA/Electrical	Install CMU units on 4 meters at this location	1814856	2019 Docket	\$ -	\$ -	\$ 3,272	\$ 3,272	\$ 3,572	Nashua	Yes	\$ 27.81	\$ 99	
Miscellaneous SCADA/Electrical	Replacement of the variable frequency drive unit for pump #2 at this location	1819989	2019 Docket	\$ 65,000	\$ 65,000	\$ 9,765	\$ 9,765	\$ 9,765	Nashua	Yes	\$ 28.40	\$ 277	
Well Rehabilitation	Well Rehabilitation	n/a	2019 Docket	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	No well rehabilitations projected to occur
WTP Structural/HVAC	WTP Structural/HVAC	n/a	2019 Docket	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	
WTP Structural/HVAC	The rebuilding of the heating/AC roof top unit for WTP Finished Water Pump Station	1818208	2019 Docket	\$ -	\$ -	\$ 6,094	\$ 6,094	\$ 6,094	Nashua	Yes	\$ 27.81	\$ 169	
Purchase new lab equipment	Purchase new lab equipment	n/a	2019 Docket	\$ 20,000	\$ 20,000	\$ 5,000	\$ -	\$ -	Nashua	No	\$ 27.81	\$ -	
Purchase new lab equipment	Replace Combined Filter Effluent Chlorine Analyzer	1820254	2019 Docket	\$ -	\$ -	\$ 3,575	\$ 3,575	\$ 3,575	Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	2019 Docket	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	Various	Yes	\$ 28.40	\$ -	None projected through year end
Purchase new vehicle #212	Vehicle needed for new Community Water System Operator	1816162	2019 Docket	\$ 65,000	\$ 65,000	\$ 39,513	\$ 39,513	\$ 41,478	Nashua	No	\$ 27.81	\$ -	Project reduced by \$6,000 for trade in value.
Replace Vehicle	Replacement of vehicle #62	1825490	2019 Docket	\$ 65,000	\$ 65,000	\$ 48,374	\$ 48,374	\$ 42,374	Nashua	No	\$ 27.81	\$ -	Project reduced by \$2,500 for trade in value.
Replace Vehicle	Replacement of vehicle #38	1819990	2019 Docket	\$ 40,000	\$ 40,000	\$ 27,306	\$ 30,081	\$ 27,581	Nashua	No	\$ 27.81	\$ -	deferred to 2019 due to resource availability
WTP Perimeter Fence	WTP Perimeter Fence	n/a	2019 Docket	\$ 80,000	\$ 80,000	\$ -	\$ -	\$ -	Merrimack	Yes	\$ 28.92	\$ -	Not Eligible for 2018 QCPAC as this is engineering only
Bowers Dam Spillway reconstruction engineering	Bowers Dam Spillway reconstruction engineering	1824545	2019 Docket	\$ 90,000	\$ 90,000	\$ 50,000	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Equipment will not be installed until 2019.
WTP Camera system upgrade	Existing Camera system is outdated	1819073	2019 Docket	\$ 50,000	\$ 50,000	\$ 4,000	\$ -	\$ -	Nashua	Yes	\$ 27.81	\$ -	Study is not QCPAC Qualified
Dredging feasibility study	Dredging feasibility study	1807145	2019 Docket	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,873	\$ -	Various	No	\$ 28.40	\$ -	Replaced casing compressor which was not repairable
Source water Protection Study	Source water Protection Study	1807146	2019 Docket	\$ 15,000	\$ 15,000	\$ 17,000	\$ 17,000	\$ 16,889	Nashua	Yes	\$ 27.81	\$ 470	
Purchase new lab equipment	Purchase bench top Zeta potential analyzer	1826397	2019 Docket	\$ -	\$ -	\$ 75,000	\$ 75,000	\$ 86,375	Nashua	Yes	\$ 27.81	\$ 1,067	Devices used to verify and correlate streaming current monitors and further optimize treatment process.
Purchase and install 2 raw water streaming current monitors	Replacement of two older units, 1 currently not operational	1829848	2019 Docket	\$ -	\$ -	\$ 55,000	\$ -	\$ 10,695	Nashua	Yes	\$ 27.81	\$ 297	Device used to optimize water treatment at Nashua Facility - Purchase in new lab equipment line above
Aquatic Vegetation Assessment and Management	Aquatic Vegetation Assessment and Management	1807147	2019 Docket	\$ 7,500	\$ 7,500	\$ 7,500	\$ -	\$ -	Various	No	\$ 28.40	\$ -	Study is not QCPAC Qualified
WTP - Replace Filter to Waste Valve Actuator	Replace valve actuator that controls flow of water from filters during waste/backwash p	1800482	2019 Docket	\$ -	\$ -	\$ 6,276	\$ 6,276	\$ 6,276	Nashua	Yes	\$ 27.81	\$ 175	
Website Upgrades	Improved Customer Service Experience	1814346, 1704175 & 1826890	2019 Docket	\$ 10,000	\$ 19,068	\$ 19,068	\$ -	\$ 4,500	Merrimack	No	\$ 28.92	\$ -	Project deferred until 2019
SIEM Appliances	Aggregate Real-time monitoring of system alerts and logs	n/a	2019 Docket	\$ 26,000	\$ -	\$ -	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Project Cancelled due to reduced need
Windows Server Licensing Renewal	Purchase Windows server for virtual servers	1813466	2019 Docket	\$ -	\$ -	\$ 22,925	\$ 22,925	\$ 22,925	Merrimack	No	\$ 28.92	\$ -	The assimilation of multiple new Windows Server licenses from multiple projects into one Enterprise License to cover all virtual servers. Project finished
AD Change Auditor	Needed to track changes to Authentication Server	n/a	2019 Docket	\$ 4,000	\$ 4,000	\$ -	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Due to the licensing model moving from Purchase to Subscription based, this will become an expense item.
File Server Replacement	Replace older hardware	n/a	2019 Docket	\$ 13,000	\$ -	\$ -	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Project Cancelled due to reduced need
Storage Upgrade	Replace non-supported hardware and increase speed	1817426	2019 Docket	\$ 70,000	\$ 52,000	\$ 52,000	\$ 45,785	\$ 45,197	Merrimack	No	\$ 28.92	\$ -	Project Complete
Mums FER Enhancements	Needed as Business process change	n/a	2019 Docket	\$ 64,000	\$ 64,000	\$ 64,000	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Project deferred until 2019
Click Mobile Application Changes	Needed as Business process change	n/a	2019 Docket	\$ 30,000	\$ 30,000	\$ 30,000	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Deferred to 2019
ClickMobile Move to iPad	Move to a more functional device	1702223, 1707189 & 1807440	2019 Docket	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 249,578	Merrimack	No	\$ 28.92	\$ -	Hardware purchases and Contractor charges
Additional iPads for Meter Techs	Configuration and deployment of 6 devices	1825224	2019 Docket	\$ 4,000	\$ 4,000	\$ 6,000	\$ 6,000	\$ 4,680	Merrimack	No	\$ 28.92	\$ -	Deferred until 2019
Improved Customer Service Experience	Run Rate replacements	n/a	2019 Docket	\$ 15,000	\$ 15,000	\$ 2,500	\$ 2,500	\$ -	Merrimack	No	\$ 28.92	\$ -	
Miscellaneous Hardware	Purchase network switch for core routing @ Manchester Street	1813280	2019 Docket	\$ -	\$ -	\$ 4,203	\$ 4,203	\$ 4,203	Merrimack	No	\$ 28.92	\$ -	
Miscellaneous Hardware	Castle/Ware Laptops	1818947	2019 Docket	\$ -	\$ -	\$ 4,642	\$ 4,642	\$ 4,642	Merrimack	No	\$ 28.92	\$ -	Replaced desktops. Allows for remote access via VPN
Miscellaneous Hardware	Replacement Printer - Engineering	1817323	2019 Docket	\$ -	\$ 2,249	\$ 2,249	\$ 2,249	\$ 2,249	Merrimack	No	\$ 28.92	\$ -	Replace failed engineering printer
Miscellaneous Software	Run Rate replacements	n/a	2019 Docket	\$ 12,000	\$ 12,000	\$ 12,000	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	No plans for the rest of the year. Will request from contingency fund if something comes up
ITMS Upgrade	Allow for Electronic Data Collection in the Field	1817795	2019 Docket	\$ 11,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 939	Merrimack	No	\$ 28.92	\$ -	No additional project costs expected
Physical Server for Pearl	Physical Server for Pearl	n/a	2019 Docket	\$ 12,000	\$ -	\$ -	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	Project Cancelled due to reduced need
Corporate Job Scheduler	Centralized nightly job management and notification	n/a	2019 Docket	\$ 4,000	\$ 4,000	\$ 4,000	\$ -	\$ -	Merrimack	No	\$ 28.92	\$ -	deferred
Consulting	Consulting	n/a	2019 Docket	\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000	Merrimack	No	\$ 28.92	\$ -	
Laptops for L.G. & D.W.	Laptops for L.G. & D.W.	1813464	2019 Docket	\$ 4,000	\$ 5,442	\$ 5,442	\$ 5,442	\$ 5,442	Merrimack	No	\$ 28.92	\$ -	Three Lap tops acquired for L.G., G.T. and J.B. Replaced desktops. Allows for remote access via VPN. Project Compl
Additional Computers	Additional Computers	1814845	2019 Docket	\$ 4,000	\$ 5,717	\$ 5,717	\$ 5,717	\$ 6,798	Merrimack	No	\$ 28.92	\$ -	Project Complete
Replace 43 desk top computers at Main office	Computers are 7 years old and running on unsupported Windows 7 platform	1825498	2019 Docket	\$ -	\$ -	\$ 41,267	\$ 41,267	\$ 49,614	Merrimack	No	\$ 28.92	\$ -	Moved project from 2019 to 2018
Office 365 Exchange Migration	Office 365 Exchange Migration	1817818	2019 Docket	\$ -	\$ 16,400	\$ 6,200	\$ 6,200	\$ 7,737	Merrimack	No	\$ 28.92	\$ -	
VPN Update	VPN appliance to better support our mobile workforce	1824579	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 3,366	Nashua	Yes	\$ 27.81	\$ -	
Berkshire St	Water Main Replacement	1817715	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 5,239	Nashua	Yes	\$ 27.81	\$ 146	2018 Spring clean up associated with water main project completed in 2017.
Bedford Water System Expansion	5/8" Meters	1820043	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 10,947	Bedford	Yes	\$ 24.76	\$ 271	Meters and Radon for PFOA customers in Bedford
GIS/GeoSync/Work	GIS/GeoSync/Work	1813962	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 13,560	Various	Yes	\$ 28.40	\$ 379	
2018 Phase 2 Install Overhead Crane and Door-WTP Process Area Design	2018 Phase 2 Install Overhead Crane and Door-WTP Process Area Design	1814354	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 12,412	Nashua	Yes	\$ 27.81	\$ 345	
New Virtual Server	New Virtual Server	1819083	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 16,321	Merrimack	Yes	\$ 28.92	\$ 472	
Replace VFD	Replace VFD, Booster #2, Orchard Ave Station	1819288	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 1,719	Nashua	Yes	\$ 27.81	\$ 48	
Undertakes RC23S	Backup and Disaster Recovery Devices	1617283	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 27,998	Merrimack	No	\$ 28.92	\$ -	
W. Alds St. Water Main Replacement - Main Street Nashua Intersections	W. Alds St. Water Main Replacement - Main Street Nashua Intersections	1700632	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 27,969	Nashua	Yes	\$ 27.81	\$ 778	
W. Alds Street Phase II (Main to end) Int with Main Street Nashua Inter	W. Alds Street Phase II (Main to end) Int with Main Street Nashua Inter	1700636	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 6,531	Nashua	Yes	\$ 27.81	\$ 182	
ITC Widener	ITC Widener	1900419	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 2,995	Merrimack	No	\$ 28.92	\$ -	
Utility Truck Replacement	Replacement of #47 with Truck #315	1900418	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 6,2215	Merrimack	No	\$ 28.92	\$ -	
Additional Trench Boxes	Additional Trench Boxes	1826437	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 22,241	Merrimack	No	\$ 28.92	\$ -	
Overhead Crane and Door	WTP Process Area Installation	1807303	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 19,761	Nashua	Yes	\$ 27.81	\$ 550	
Sweet Hill Well #3	Sweet Hill Well #3 (2018 Garrovoy)	1813054	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 2,408	Platow	Yes	\$ 28.93	\$ 70	
SCADA System Upgrade	WTP - 2018 replace all SCADA computers and upgrade system	1813303	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 20,642	Nashua	Yes	\$ 27.81	\$ 574	
Amherst Water System Expansion	Meters and Radon	1806852	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 16,646	Amherst	Yes	\$ 31.59	\$ 526	Meters and Radon for PFOA customers in Amherst
#353-Service Truck Replacement (#47)	#353-Service Truck Replacement (#47)	1813945	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ 1,103	Merrimack	No	\$ 27.81	\$ -	
Retainage	Retainage	n/a	2019 Docket	\$ -	\$ -	\$ -	\$ -	\$ (197,247)	Nashua	Yes	\$ 27.81	\$ (5,485)	Please see the "Retainage Support" tab for breakdown of amount. This is retainage on projects completed above. The \$\$ held in retainage will need to be recovered in 2020 QCPAC.
Projected Property Tax Expense associated with 2018 QCPAC projects -												\$ 198,464	
				\$ 10,008,000	\$ 9,102,095	\$ 6,807,066	\$ 8,600,675	\$ 8,229,377					

Project Name/Description	Project Description	Work Order #	Financing Docket No.	Approved Budgeted Amount	Estimated Project Cost as of 6/30/2018	Estimated Project Cost as of 9/30/2018	Estimated Project Cost as of 11/30/2018	Final Project cost as of 12/31/2018	Community	Taxable	Tax Rate (1)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
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1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

Total PWW Capex for 2018 - \$ 8,229,377

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Community	Taxable	Tax Rate (1)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes		DW17-183	26,101	2/2/2018	\$ 46,000	Yes	Various	Yes	\$ 28.85	\$ 1,327	
Renewed Services (20)	Replacement of failed services		DW17-183	26,101	2/2/2018	\$ 92,000	Yes	Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants		DW17-183	26,101	2/2/2018	\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Radios (300)	Replace out of warrantee failed radio meter readers		DW17-183	26,101	2/2/2018	\$ 30,000	Yes	Various	Yes	\$ 28.85	\$ 866	
Meters (Growth) 5/8"-2" - Core & CWS (480)	Meters (Growth) 5/8"-2" - Core & CWS (480)		DW17-183	26,101	2/2/2018	\$ 48,000	Yes	Various	Yes	\$ 28.85	\$ 1,385	
Meters 5/8"-6" Lead Meter Exchange - Core & CWS (3000)	Meters 5/8"-6" Lead Meter Exchange - Core & CWS (3000)		DW17-183	26,101	2/2/2018	\$ 300,000	Yes	Various	Yes	\$ 28.85	\$ 8,655	
Entrance Security Gate & Perimeter Fence	Entrance Security Gate & Perimeter Fence		DW17-183	26,101	2/2/2018	\$ 75,000	Yes	Merrimack	Yes	\$ 28.92	\$ 2,169	
Replace 13 yr Vac Trailer - Safety & Maint issue	Replace 13 yr Vac Trailer - Safety & Maint issue		DW17-183	26,101	2/2/2018	\$ 100,000	Yes	Merrimack	Yes	\$ 28.92	\$ 2,892	
Protectus Meter Upgrade	Spitbrook Rd Protectus Meter Upgrade		DW17-183	26,101	2/2/2018	\$ 21,000	Yes	Nashua	Yes	\$ 27.81	\$ 584	
Gilman Street	Replace 1470 LF of 8 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
Elm Street	Replace 875 LF of 6 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 559,350	Yes	Nashua	Yes	\$ 27.81	\$ 15,556	
Monroe Street	Replace 310 LF of 4 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 122,270	Yes	Nashua	Yes	\$ 27.81	\$ 3,400	
W.Pearl Street	Replace 260 LF of 8 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 138,050	Yes	Nashua	Yes	\$ 27.81	\$ 3,839	
Harvard Street	Replace 800 LF of 8 inch CI with 8 inch DIPCL		DW17-183	26,101	2/2/2018	\$ 247,500	Yes	Nashua	Yes	\$ 27.81	\$ 6,883	
West Hollis Street Check Valve Pit	Install at the int of W. Hollis St and Panther Dr.		DW17-183	26,101	2/2/2018	\$ -	Yes	Nashua	Yes	\$ 27.81	\$ -	
NWS Improvements - Manchester Street	Add 2700 LF of 24 inch DIPCL on Manchester St.		DWGTF Financing			\$ 660,000	Yes	Nashua	Yes	\$ 27.81	\$ 18,355	
NWS Improvements -Route 101A and Route 121 (Amherst)	Add 2200 LF of 12 inch DIPCL to close loop					\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
NWS Improvements - Tinker Road	Replace 825 LF of 16 inch AC with 825 LF of 24 inch DIPCL					\$ 522,500	Yes	Nashua	Yes	\$ 27.81	\$ 14,531	
NWS Improvements - Deerwood Drive & Amherst St. Intersection	Replace 1300 LF of 12 inch AC with 1300 LF of 24 inch DIPCL					\$ 467,500	Yes	Nashua	Yes	\$ 27.81	\$ 13,001	
NWS Improvements - Deerwood Dr. Northwest Blvd Loop	Add 3400 LF of 20 inch HDPE including RR pipe jacking					\$ 635,800	Yes	Nashua	Yes	\$ 27.81	\$ 17,682	
NWS Improvements Ponemah Rd/Route 101A Loop	Add 2200 LF of 12 inch DIPCL to close two loop major dead ends					\$ 484,000	Yes	Nashua	Yes	\$ 27.81	\$ 13,460	
City of Nashua Sewer - Chase Street	Replace 470 LF of 6 inch CIP with 470 LF of 6 inch DIPCL		DW17-183	26,101	2/2/2018	2,700,000	Yes	Nashua	Yes	\$ 27.81	\$ 75,087	
City of Nashua Sewer - Ash Street	Replace 710 LF of 6 inch CIP with 710 LF of 12 inch DIPCL		DW17-183	26,101	2/2/2018		Yes	Nashua	Yes	\$ 27.81	\$ -	
City of Nashua Sewer - Lake Street	Replace 2950 LF of 6 inch CI with 12 inch DIPCL		DW17-183	26,101	2/2/2018		Yes	Nashua	Yes	\$ 27.81	\$ -	
Merrimack River Intake	Year Round Raw Water Intake from Merrimack River		DWGTF Financing			\$ 5,500,000	Yes	Merrimack	Yes	\$ 28.92	\$ 159,060	
Asset Management Outside GIS Consulting Services	Outside GIS Consulting Services		DW17-183	26,101	2/2/2018	\$ 60,000	Yes	Various	No		\$ -	
Asset Management Water Modeling Consulting	Water Modeling Consulting		DW17-183	26,101	2/2/2018	\$ 36,000	Yes	Various	No		\$ -	
Asset Management Trimble R2 Units	Trimble R2 Units		DW17-183	26,101	2/2/2018	\$ 14,000	Yes	Various	Yes	\$ 28.85	\$ 404	
Investment in developer installed services at 1xannual revenue	Per tariff		DW17-183	26,101	2/2/2018	\$ 60,000	Yes	Various	Yes	\$ 28.85	\$ 1,731	
Bower Dam reconstruction and engineering	Bower Dam reconstruction and engineering		DW17-183	26,101	2/2/2018	\$ 25,000	No	Merrimack	No		\$ -	Design Engineering Work for 2020 Dam rehabilitation
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Well Pump replacements	Well Pump replacements		DW17-183	26,101	2/2/2018	\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Chemical Feed pump replacements	Chemical Feed pump replacements		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Upgrade SCADA historian software, new hardware	upgrade SCADA historian software, new hardware		DW17-183	26,101	2/2/2018	\$ 150,000	Yes	Various	Yes	\$ 28.85	\$ 4,328	
Twin Ridge rebuild softener system, install radon treatment	Twin Ridge rebuild softener system, install radon treatment		DW17-183	26,101	2/2/2018	\$ 50,000	Yes	Plaistow	Yes	\$ 28.85	\$ 1,443	
Misc. Structural Improvements	Misc. Structural Improvements		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased		DW17-183	26,101	2/2/2018	\$ 17,500	Yes	Various	Yes	\$ 28.85	\$ 505	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		DW17-183	26,101	2/2/2018	\$ 30,000	Yes	Various	Yes	\$ 28.85	\$ 866	
WTP Structural/HVAC	WTP Structural/HVAC		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Purchase new lab equipment	Purchase new lab equipment		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Nashua	Yes	\$ 28.85	\$ 577	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Replace Ferric Chloride Feed pump	Replace Ferric Chloride Feed pump		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Carbon media changeout-filters 1 & 2	Carbon media changeout-filters 1 & 2		DW17-183	26,101	2/2/2018	\$ 525,000	Yes	Nashua	Yes	\$ 28.85	\$ 15,146	
Add 3rd pump at Main Dunstable Booster, replace 1 existing	Add 3rd pump at Main Dunstable Booster, replace 1 existing		DW17-183	26,101	2/2/2018	\$ 120,000	Yes	Nashua	Yes	\$ 28.85	\$ 3,462	
Replace Kessler Farm booster pump package	Replace 20 year old package booster station pumps and piping. Piping is steel which is beginning to pit		DW17-183	26,101	2/2/2018	\$ 75,000	Yes	Nashua	Yes	\$ 28.85	\$ 2,164	
Stump Pond Subwatershed assessment	Stump Pond Subwatershed assessment		DW17-183	26,101	2/2/2018	\$ 25,000	No	Merrimack	No		\$ -	Study - Amortized expense
Stump Pond Stormwater BMP	Stump Pond Stormwater BMP		DW17-183	26,101	2/2/2018	\$ 20,000	No	Merrimack	No		\$ -	BMP Engineering and Design
Public Education -Watershed signage	Public Education -Watershed signage		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Merrimack	Yes	\$ 28.85	\$ 577	
Replace 2 Hach Turbidimeters and associated control module	Replace 2 Hach Turbidimeters and associated control module		DW17-183	26,101	2/2/2018	\$ 10,000	Yes	Nashua	Yes	\$ 28.85	\$ 289	
Fiber Conduit between WTP and Dist	Install Fiber Conduit between Water Treatment Plant and Distribution to eliminate ongoing Comcast Ethernet line to one of the buildings		DW17-183	26,101	2/2/2018	\$ 40,000	Yes	Nashua	No		\$ -	
Munis FER Enhancements	Munis FER Enhancements		DW17-183	26,101	2/2/2018	\$ 35,000	Yes	Merrimack	No		\$ -	
Wireless Access Points for Main Office	Wireless Access Points for Main Office		DW17-183	26,101	2/2/2018	\$ 14,000	Yes	Merrimack	No		\$ -	
KVM for Data Center	Keyboard Video mouse for Data Center so that multiple servers can be accessed by one console without having to unplug the Mouse/Keyboard / Mouse connections and plug in		DW17-183	26,101	2/2/2018	\$ 2,500	Yes	Merrimack	No		\$ -	
IOS Charging Station	Charging Station for multiple iPads to allow for upgrades across multiple devices concurrently.		DW17-183	26,101	2/2/2018	\$ 1,200	Yes	Merrimack	No		\$ -	
Digital Signage for Distribution	Digital Signage for Distribution allowing notices and schedules to be more prominently displayed		DW17-183	26,101	2/2/2018	\$ 2,000	Yes	Merrimack	No		\$ -	
VDI Pilot	A pilot to determine whether a Virtual Desktop Infrastructure would be feasible for our environment		DW17-183	26,101	2/2/2018	\$ 12,000	Yes	Merrimack	No		\$ -	
Misc Hardware	Misc Hardware		DW17-183	26,101	2/2/2018	\$ 20,000	Yes	Merrimack	No		\$ -	
Misc Software	Misc Software		DW17-183	26,101	2/2/2018	\$ 12,000	Yes	Merrimack	No		\$ -	
Website upgrades	Website upgrades		DW17-183	26,101	2/2/2018	\$ 8,000	Yes	Merrimack	No		\$ -	
Implement Customer Balances over the phone	Implement Customer Balances over the phone		DW17-183	26,101	2/2/2018	\$ 4,000	No	Merrimack	No		\$ -	
Pennichuck Water Works Projected 2019 Total Capital Expenditure Budget -						\$ 15,462,170		QCPAC projects -		\$ 429,380		

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

Total Projected PWW QCPAC Capex for 2019 - \$ 15,392,170
Amount funded by SRF/DWGTF - \$ 8,819,800
Amount to be funded by 2020 Bond Issue - \$ 6,572,370

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Final Project cost as of 12/31/2020	Community	Taxable	Tax Rate (I)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes		DW 17-183	26,101	2/2/2018	\$ 46,000	Yes		Various	Yes	\$ 28.85	\$ 1,327	
Renewed Services (20)	Replacement of failed services		DW 17-183	26,101	2/2/2018	\$ 92,000	Yes		Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants (Run rate) (8 YTD)		DW 17-183	26,101	2/2/2018	\$ 50,000	Yes		Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves		DW 17-183	26,101	2/2/2018	\$ 40,000	Yes		Various	Yes	\$ 28.85	\$ 1,154	
Radios (300)	Replace out of warranty failed radio meter readers		DW 17-183	26,101	2/2/2018	\$ 30,000	Yes		Various	Yes	\$ 28.85	\$ 866	
Meters (Growth) 5/8" 2" - Core & CWS (480)	Meters (Growth) 5/8" 2" - Core & CWS (480)		DW 17-183	26,101	2/2/2018	\$ 48,000	Yes		Various	Yes	\$ 28.85	\$ 1,383	
Meters 5/8" 6" Lead Meter Exchange - Core & CWS (1000)	Meters 5/8" 6" Lead Meter Exchange - Core & CWS (1000)		DW 17-183	26,101	2/2/2018	\$ 100,000	Yes		Various	Yes	\$ 28.85	\$ 2,885	
New Utility Vehicle (2)	New Utility Vehicles to replace existing high mileage/maintenance vehicles		DW 17-183	26,101	2/2/2018	\$ 130,000	Yes		Merrimack	No	\$ 28.92	\$ -	
New Utility Van (2)	New Utility Vans to replace existing high mileage/maintenance vans		DW 17-183	26,101	2/2/2018	\$ 70,000	Yes		Merrimack	No	\$ 28.92	\$ -	
Protectus Meter Upgrade	Protectus Meter Upgrade -		DW 17-183	26,101	2/2/2018	\$ 22,000	Yes		Nashua	Yes	\$ 27.81	\$ 612	
Trimble Units for Meter Reading (2)	Replacement of CE Meter Reading Equipment (2)		DW 17-183	26,101	2/2/2018	\$ 16,000	Yes		Merrimack	No	\$ 28.92	\$ -	
Residual paving from 2019 main replacement	Residual paving from prior year main replacement		DW 17-183	26,101	2/2/2018	\$ -	Yes		Nashua	Yes	\$ 27.81	\$ -	Pavement for 2019 projects moved back to 2019 Capex.
Brook Street	Replace 225 LF of 4 inch and 915 LF of 6 inch CI with 1140 LF of 8 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 422,730	Yes		Nashua	Yes	\$ 27.81	\$ 11,756	
Hamilton Street	Replace 410 LF of 6 inch CI with 4 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 97,150	Yes		Nashua	Yes	\$ 27.81	\$ 2,701	
Ash Street	Replace 510 LF of 6 inch CI with 8 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 191,510	Yes		Nashua	Yes	\$ 27.81	\$ 5,326	
Burnitt Street	Replace 425 LF of 4 inch CI with 8 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 157,080	Yes		Nashua	Yes	\$ 27.81	\$ 4,368	
Burnitt Street	Replace 125 LF of 4 inch CI with 4 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 43,010	Yes		Nashua	Yes	\$ 27.81	\$ 1,196	
Verona Street	Replace 675 LF of 6 inch CI with 8 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 251,130	Yes		Nashua	Yes	\$ 27.81	\$ 6,984	
Sarasota Ave	Replace 250 LF of 6 inch CI with 8 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 92,620	Yes		Nashua	Yes	\$ 27.81	\$ 2,576	
Ald Street	Replace 1860 LF of 6 & 8 inch CI with 12 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 966,570	Yes		Nashua	Yes	\$ 27.81	\$ 26,880	
Lawndale Avenue	Replace 1085 LF of 6 inch CI with 12 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 546,920	Yes		Nashua	Yes	\$ 27.81	\$ 15,210	
Taylor Road (Lynn St to Frisfield St)	Replace 725 LF of 8 inch CI with 12 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 365,750	Yes		Nashua	Yes	\$ 27.81	\$ 10,172	
Temple St (south to gorman)	Replace 900 LF of 8 inch CI with 12 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 457,160	Yes		Nashua	Yes	\$ 27.81	\$ 12,714	
School Street (High to W. Pearl Alleyway)	Replace 400 LF of 4 inch CI with 8 inch DIPCL		DW 17-183	26,101	2/2/2018	\$ 151,140	Yes		Nashua	Yes	\$ 27.81	\$ 4,203	
Water Main Replacement - City Sewer Projects	Replacement of various sections of CI pipe		DW 17-183	26,101	2/2/2018	\$ -	Yes		Nashua	Yes	\$ 27.81	\$ -	
Kessler Farm Tank Replacement	Kessler Farm Tank Replacement		DW 17-183	26,101	2/2/2018	\$ 3,388,000	Yes		Nashua	Yes	\$ 27.81	\$ 94,220	
Replace Engineering Pickup	Replace Pickup with > 150,000 miles		DW 17-183	26,101	2/2/2018	\$ 35,000	Yes		Merrimack	No	\$ 28.92	\$ -	
Replace Engineering SUV	Replace SUV with > 150,000 miles		DW 17-183	26,101	2/2/2018	\$ 30,000	Yes		Merrimack	No	\$ 28.92	\$ -	
Investment in developer installed services at 1x annual revenue	Per tariff		DW 17-183	26,101	2/2/2018	\$ 60,000	Yes		Various	Yes	\$ 28.85	\$ 1,731	
Bowers Dam reconstruction	Bowers Dam reconstruction		DW 17-183	26,101	2/2/2018	\$ 900,000	Yes		Merrimack	Yes	\$ 28.92	\$ 26,028	
WTP Perimeter fence	WTP Perimeter fence		DW 17-183	26,101	2/2/2018	\$ 80,000	Yes		Merrimack	Yes	\$ 28.92	\$ 2,314	
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		DW 17-183	26,101	2/2/2018	\$ 55,000	Yes		Various	Yes	\$ 28.85	\$ 1,587	
Well Pump replacements	Well Pump replacements		DW 17-183	26,101	2/2/2018	\$ 18,750	Yes		Various	Yes	\$ 28.85	\$ 541	
Chemical Feed pump replacements	Chemical Feed pump replacements		DW 17-183	26,101	2/2/2018	\$ 15,000	Yes		Various	Yes	\$ 28.85	\$ 433	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS		DW 17-183	26,101	2/2/2018	\$ 18,750	Yes		Various	Yes	\$ 28.85	\$ 541	
Misc. Structural Improvements	Misc. Structural Improvements		DW 17-183	26,101	2/2/2018	\$ 27,500	Yes		Various	Yes	\$ 28.85	\$ 793	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased		DW 17-183	26,101	2/2/2018	\$ 17,500	Yes		Various	Yes	\$ 28.85	\$ 505	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		DW 17-183	26,101	2/2/2018	\$ 27,500	Yes		Various	Yes	\$ 28.85	\$ 793	
Well Rehabilitation	Well Rehabilitation		DW 17-183	26,101	2/2/2018	\$ 40,000	Yes		Various	Yes	\$ 28.85	\$ 1,154	
WTP Structural/HVAC	WTP Structural/HVAC		DW 17-183	26,101	2/2/2018	\$ 7,500	Yes		Nashua	Yes	\$ 27.81	\$ 209	
Purchase new lab equipment	Purchase new lab equipment		DW 17-183	26,101	2/2/2018	\$ 15,000	Yes		Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		DW 17-183	26,101	2/2/2018	\$ 7,500	Yes		Various	Yes	\$ 28.85	\$ 216	
Replace Vehicle	Replace Vehicle		DW 17-183	26,101	2/2/2018	\$ 65,000	Yes		Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW 17-183	26,101	2/2/2018	\$ 65,000	Yes		Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW 17-183	26,101	2/2/2018	\$ 40,000	Yes		Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle		DW 17-183	26,101	2/2/2018	\$ 40,000	Yes		Nashua	No	\$ 27.81	\$ -	
Carbon Media changeout - filters 3 & 4	Carbon Media changeout - filters 3 & 4		DW 17-183	26,101	2/2/2018	\$ 525,000	Yes		Nashua	Yes	\$ 27.81	\$ 14,600	
Arsenic treatment to respond to new MCL	Arsenic treatment to respond to new MCL		DW 17-183	26,101	2/2/2018	\$ 15,000	Yes		Various	Yes	\$ 28.85	\$ 433	
Various IT Projects	Maintain and replace aging software and hardware		DW 17-183	26,101	2/2/2018	\$ 300,000	Yes		Merrimack	No	\$ 28.92	\$ -	
Pennichuck Water Works Projected 2020 Total Capital Expenditure Budget -						\$ 10,179,750		\$ -			QCPAC projects -	\$ 262,509	

Total Projected PWW QCPAC Capex for 2020 - \$ 10,179,750

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 #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Approved Budgeted Amount	QCPAC Eligible?	Community	Taxable	Tax Rate (l)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 2/9/2019
New Services (10)	Single Family, Owner Build, New Homes			Future Financing Petition		\$ 46,000	Yes	Various	Yes	\$ 28.85	\$ 1,327	
Renewed Services (20)	Replacement of failed services			Future Financing Petition		\$ 92,000	Yes	Various	Yes	\$ 28.85	\$ 2,654	
Hydrants (10)	Replacement of non functional hydrants (Run rate) (8 YTD)			Future Financing Petition		\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
Gates (10)	Replacement of Failed Gate Valves			Future Financing Petition		\$ 40,000	Yes	Various	Yes	\$ 28.85	\$ 1,154	
Radios (2750)	Replace out of warrantee failed radio meter readers			Future Financing Petition		\$ 275,000	Yes	Various	Yes	\$ 28.85	\$ 7,934	
Meters (Growth) 5/8"-2" - Core & CWS (480)	Meters (Growth) 5/8"-2" - Core & CWS (480)			Future Financing Petition		\$ 48,000	Yes	Various	Yes	\$ 28.85	\$ 1,385	
Meters 5/8"-6" Meter Exchange - Core & CWS (1000)	Meters 5/8"-6" Lead Meter Exchange - Core & CWS (1000)			Future Financing Petition		\$ 100,000	Yes	Various	Yes	\$ 28.85	\$ 2,885	
New Utility Vehicle (2)	New Utility Vehicles to replace existing high mileage/maintenance vehicles			Future Financing Petition		\$ 130,000	Yes	Merrimack	No	\$ 28.92	\$ -	
New Utility Van (2)	New Utility Vans to replace existing high mileage/maintenance vans			Future Financing Petition		\$ 70,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Protectus Meter Upgrade	Protectus Meter Upgrade			Future Financing Petition		\$ 22,000	Yes	Nashua	Yes	\$ 27.81	\$ 612	
New Vac/Valve Trailer	Replacement of 10yr old Vac for safety & Maintenance Reasons			Future Financing Petition		\$ 70,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Residual paving from prior year main replacement	Residual paving from prior year main replacement			Future Financing Petition		\$ 653,350	Yes	Nashua	Yes	\$ 27.81	\$ 18,170	
Benson Avenue	Replace 550 LF of 4 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 210,650	Yes	Nashua	Yes	\$ 27.81	\$ 5,858	
Spaulding Street	Replace 950 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 362,450	Yes	Nashua	Yes	\$ 27.81	\$ 10,080	
Alstead Avenue	Replace 240 LF of 4 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 80,300	Yes	Nashua	Yes	\$ 27.81	\$ 2,233	
Spaulding Avenue	Replace 430 LF of 6, 2, & 1.25 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 104,720	Yes	Nashua	Yes	\$ 27.81	\$ 2,912	
St Lazare Street	Replace 415 LF of 2 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 100,980	Yes	Nashua	Yes	\$ 27.81	\$ 2,808	
Ingalls St (St Camille to end)	Replace 200 LF of 1.5 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 48,730	Yes	Nashua	Yes	\$ 27.81	\$ 1,355	
Nve Avenues	Replace 400 LF of 2 & 1.5 inch CI with 4 inch DIPCL			Future Financing Petition		\$ 96,140	Yes	Nashua	Yes	\$ 27.81	\$ 2,674	
Copp Street	Replace 350 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 136,620	Yes	Nashua	Yes	\$ 27.81	\$ 3,799	
Gray Avenue	Replace 360 LF of 6 inch CI with 6 inch DIPCL			Future Financing Petition		\$ 112,530	Yes	Nashua	Yes	\$ 27.81	\$ 3,129	
Coburn Woods (all side streets)	Replace 4400 LF of 2 inch PVC with 4 inch DIPCL			Future Financing Petition		\$ 1,320,000	Yes	Nashua	Yes	\$ 27.81	\$ 36,709	
City Sewer Projects	Replace CI with DICPL			Future Financing Petition		\$ 550,000	Yes	Nashua	Yes	\$ 27.81	\$ 15,296	
Sawyer Street	Replace 1600 LF of 6 inch CI with 12 inch DIPCL			Future Financing Petition		\$ 528,000	Yes	Nashua	Yes	\$ 27.81	\$ 14,684	
Woodward Street	Replace 360 LF 8 inch CI with 470 LF 8 inch DIPCL			Future Financing Petition		\$ 155,100	Yes	Nashua	Yes	\$ 27.81	\$ 4,313	
Blosson Street	Replace 2400 LF of 6 inch CI and 8 inch CI with 2400 LF of 8 inch DIPCL			Future Financing Petition		\$ 792,000	Yes	Nashua	Yes	\$ 27.81	\$ 22,026	
Larwood Street	Replace 960 LF of 6 inch CI with 8 inch DIPCL			Future Financing Petition		\$ 316,800	Yes	Nashua	Yes	\$ 27.81	\$ 8,810	
Balcom Street	Replace 1240 LF 6 inch CI with 1240 LF 8 inch DIPCL			Future Financing Petition		\$ 409,200	Yes	Nashua	Yes	\$ 27.81	\$ 11,380	
Euclid Avenue	Replace 425 LF 6 inch CI with 425LF 8 inch DIPCL			Future Financing Petition		\$ 140,250	Yes	Nashua	Yes	\$ 27.81	\$ 3,900	
Fairview Street	Replace 800 LF 6 inch CI with 800 LF 8 inch DIPCL			Future Financing Petition		\$ 264,000	Yes	Nashua	Yes	\$ 27.81	\$ 7,342	
Sargent Street	Replace 1900 LF 6 inch CI with 1900 LF 16 inch DIPCL			Future Financing Petition		\$ 627,000	Yes	Nashua	Yes	\$ 27.81	\$ 17,437	
Courtland Street	Replace 1170 LF 4 inch CI with 1170 LF 16 inch DIPCL			Future Financing Petition		\$ 386,100	Yes	Nashua	Yes	\$ 27.81	\$ 10,737	
Replace Engineering Pickup	Replace Engineering Pickup with > 150,000 Miles			Future Financing Petition		\$ 36,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Replace Engineering SUV	Replace Engineering SUV with > 150,000 Miles			Future Financing Petition		\$ 30,000	Yes	Merrimack	No	\$ 28.92	\$ -	
Milford Booster Station	Replace/Relocate/Upgrade the Milford Booster Station (>2MGD)			Future Financing Petition		\$ 660,000	Yes	Amherst	Yes	\$ 28.85	\$ 19,041	
Investment in developer installed services at 1xannual revenue	Per tariff			Future Financing Petition		\$ 60,000	Yes	Various	Yes	\$ 28.85	\$ 1,731	
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild			Future Financing Petition		\$ 55,000	Yes	Various	Yes	\$ 28.85	\$ 1,587	
Well Pump replacements	Well Pump replacements			Future Financing Petition		\$ 18,750	Yes	Various	Yes	\$ 28.85	\$ 541	
Chemical Feed pump replacements	Chemical Feed pump replacements			Future Financing Petition		\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS			Future Financing Petition		\$ 15,000	Yes	Various	Yes	\$ 28.85	\$ 433	
Misc. Structural Improvements	Misc. Structural Improvements			Future Financing Petition		\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous Equipment Purchased	Miscellaneous Equipment Purchased			Future Financing Petition		\$ 20,000	Yes	Various	Yes	\$ 28.85	\$ 577	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical			Future Financing Petition		\$ 30,000	Yes	Various	Yes	\$ 28.85	\$ 866	
Well Rehabilitation	Well Rehabilitation			Future Financing Petition		\$ 50,000	Yes	Various	Yes	\$ 28.85	\$ 1,443	
WTP Structural/HVAC	WTP Structural/HVAC			Future Financing Petition		\$ 10,000	Yes	Nashua	Yes	\$ 27.81	\$ 278	
Purchase new lab equipment	Purchase new lab equipment			Future Financing Petition		\$ 20,000	Yes	Nashua	No	\$ 27.81	\$ -	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects			Future Financing Petition		\$ 10,000	Yes	Various	Yes	\$ 28.85	\$ 289	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 65,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Replace Vehicle	Replace Vehicle			Future Financing Petition		\$ 40,000	Yes	Nashua	No	\$ 27.81	\$ -	
Carbon Media changeout - filters 5 & 5	Carbon Media changeout - filters 5 & 5			Future Financing Petition		\$ 525,000	Yes	Nashua	Yes	\$ 27.81	\$ 14,600	
Various projects	Various projects			Future Financing Petition		\$ 300,000	Yes	Merrimack	No	\$ 28.85	\$ -	
Replacement of CMMS System (Synegen)	Replacement of CMMS System (Synegen)			Future Financing Petition		\$ 1,000,000	Yes	Merrimack	No	\$ 28.85	\$ -	
Pennichuck Water Works Projected 2021 Total Capital Expenditure Budget -						\$ 11,422,670		Projected Property Tax Expense associated with		\$	267,440	

Total Projected PWW QCPAC Capex for 2021 - \$ 11,422,670

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

Pennichuck Water Works

Accrued Liabilities - Retainage
Account # 241350-2000-001

PWW QCPAC Filing
Exhibit 2
Page 6

Accrued Liabilities - Retainage	Balance	January-18	February-18	March-18	April-18	May-18	June-18	July-18	August-18	September-18	October-18	November-18	December-18	Balance
2018 Main St Area Improvement #s														
1806801/1806802/1806803/1806804/1806435/ 1806794/1806795/1806796/1806797/1806798/ 1806799/1806835	-	-	-	-	-	-	-	(20,420.50)	(25,173.63)	-	(7,475.46)	(18,821.11)	40,329.97	(31,560.73)
2018 Misc Water Main Improvement #s														
1806433/1806828/1806829/180630/180631/ 1806836/1813532	-	-	-	-	-	-	-		(17,779.21)	(25,885.53)	-	(19,591.54)	(10,501.99)	(73,758.27)
N. Granese & Sons														
Bedford Water Expansion PWW #1800734	-	-	-	-	-	-	-	-	-	(13,038.50)	(9,790.00)	-	-	(22,828.50)
NE Earth Mechanics														
Shakespeare HP System Expansion #1813926	-	-	-	-	-	-	-	-	-	-	(19,289.07)	-	(402.00)	(19,691.07)
RWC Enterprises														
Ferryalls Ct #1825319	-	-	-	-	-	-	-	-	-	-	(3,018.00)		(6,149.45)	(9,167.45)
Kinsley St #1825911	-	-	-	-	-	-	-	-	-	-	(6,625.00)		-	(6,625.00)
W. F. Grace														
Marshall St. Water Main #1813935	-	-	-	-	-	-	-	(2,839.05)	-	(17,664.10)	-	(13,112.55)	-	(33,615.70)
TOTAL	-	-	-	-	-	-	-	(23,259.55)	(42,952.84)	(56,588.13)	(46,197.53)	(51,525.20)	23,276.53	(197,246.72)

Pennichuck Water Works, Inc.
DW 19-029
2019 QCPAC
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19
Request No. Staff Tech-2

Date of Response: 06-17-19
Witness: Donald L. Ware

REQUEST:

Please provide an updated tariff page – Original Page 53 (which is shown in the QCPAC filing as Bates page 32) – reflecting revised wording provided by Staff as follows:

In the paragraph beginning “Principal and Interest” – fifth line, and the sentence beginning “The revenues collected . . .” – the words “debt service” should be inserted before the word “revenues”. Therefore, this sentence should now begin, “The debt service revenues collected . . .”

RESPONSE:

Attached please find the revised tariff page 53 with the updated wording shown above incorporated.

QUALIFIED CAPITAL PROJECT ADJUSTMENT CHARGE

In addition to the net charges provided for in this Tariff, a Qualified Capital Project Adjustment Charge ("QCPAC") surcharge of 4.40% will apply on a service rendered basis to all bills issued after April 5, 2019.

I. General Description

Purpose: To recover the fixed costs (1.1 times principal and interest plus property taxes) of Commission-approved capital expenditures needed to operate maintain, insure regulatory compliance and to replace aging infrastructure which were completed and placed in service and to be recorded in the individual accounts, as noted below, between base rate cases. In addition, QCPAC provides the Company with the resources to complete essential asset replacement for infrastructure for the purpose of improving or protecting water quality and the reliability of service and to comply with evolving regulatory requirements imposed by the Safe Drinking Water Act.

QCPAC Eligible Property will encompass all Assets acquired by the Company as part of its annual capital improvements plan. Any regulatory asset that is recovered through an amortization expense is not eligible for QCPAC treatment.

Computation of the QCPAC

The charge will be effective on a service rendered basis for all bills issued after April 4, 2019 and will be calculated to recover the fixed costs of eligible plant additions not previously reflected in the Company's rate base and placed in service between January 1, 2017 and December 31, 2018. Thereafter, the QCPAC will be updated on an annual basis to reflect eligible plant additions placed in service during the prior calendar year. Thus, changes in the QCPAC surcharge percentage will occur as follows:

<u>Effective Date of QCPAC Change</u>	<u>Date To Which QCPAC Eligible Plant Additions Reflected</u>
April 4, 2019	December 31, 2018

The QCPAC will be applied on a service rendered basis to all bills rendered after April 4, 2019. The QCPAC will be applied uniformly to all customer classes and charges with the exception that the QCPAC will not be applied against the monthly fixed contract charges associated with Anheuser-Busch, Town of Milford and Town of Hudson special contracts.

Issued: September 30, 2019

Effective: April 5, 2019

Issued by: _____

Name: Donald L. Ware

Title: Chief Operating Officer

The fixed costs of eligible infrastructure system improvement projects will consist of principal and interest payments and property taxes calculated as follows:

Principal and Interest: The principal and interest expense will be based on the annual principal and interest associated with the Bonds sold on or before April 4, 2019 to pay for the QCPAC qualified projects that were completed and used in useful by December 31, 2018. The Bond Principal and interest of the Bonds will be multiplied by 1.1 to determine this portion of the QCPAC surcharge. The debt service revenues collected via the QCPAC surcharge shall be divided into two revenue streams with the revenues associated with 1.0 times the QCPAC principal and interest being part of the Company's Debt Service Revenue Requirement ("DSRR") and the revenues associated with 0.1 times the QCPAC principal and interest being part of the Company's 0.1 Debt Service Revenue Requirement ("0.1 DSRR").

Property Taxes: Incremental property taxes associated with the specific capital projects, as determined in the year of the granting of the QCPAC for such projects. The property tax expense will reflect an estimate of the tax expense for such projects based on the tax rate then in effect at the end of the year the QCP was used and useful times the final audited cost of the eligible QCP's.

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

The QCPAC Surcharge Amount approved by the Commission will be recouped back to the effective date of this tariff. The recoupment will be calculated based on actual charges incurred between the effective date of this tariff and the issued date of this tariff and shall be collected as a lump sum on the first bill rendered after the issuance date of this tariff.

Issued: September 30, 2019
Effective: April 5, 2019

Issued by: _____
Name: Donald L. Ware
Title: Chief Operating Officer

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

$$\text{QCPAC} = \frac{1.1 \times (\text{AP} + \text{AI}) + \text{PT}}{\text{BRWR}}$$

Where:

AP = the annual principal payments associated with the bonds issued to fund QCPAC eligible projects that were used and useful before the end of the preceding year.

AI = the annual interest payments associated with the bonds issued to fund QCPAC eligible projects that were used and useful before the end of the preceding year the pre-tax return rate applicable to eligible infrastructure system improvement projects.

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

BRWR= base retail water revenues as approved by the Commission in the Company's last rate proceeding, DW 16-806, or a subsequent docket.

Annual updates: Supporting data for each annual update will be filed with the Commission and the Office of Consumer Advocate no later than the end of the first full week in February of each year.

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

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

Issued: September 30, 2019

Effective: April 5, 2019

Issued by: _____

Name: Donald L. Ware

Title: Chief Operating Officer

Customer Notice: At least thirty (30) days in advance of a QCPAC filing, the Company will notify Customers of the filing by including an explanatory bill insert with the bills. Before sending, the Company will review the notice with the Commission's Consumer Services and External Affairs division. Customers shall also be notified of changes in the QCPAC by including appropriate information with the first bill they receive following any change.

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

Effective Date

June 30
September 30
November 30

Reporting Date

August 15
November 15
January 15

Issued: September 40, 2019
Effective: April 5, 2019

Issued by: _____
Name: Donald L. Ware
Title: Chief Operating Officer

Executive.Director@puc.nh.gov
amanda.noonan@puc.nh.gov
anthony.leone@puc.nh.gov
brian.buckley@oca.nh.gov
carolann.howe@pennichuck.com
Christopher.tuomala@puc.nh.gov
donald.ware@pennichuck.com
james.brennan@oca.nh.gov
jay.kerrigan@pennichuck.com
jayson.laflamme@puc.nh.gov
joseph.vercellotti@puc.nh.gov
larry.goodhue@pennichuck.com
mrp@rathlaw.com
ocalitigation@oca.nh.gov
robyn.descoteau@puc.nh.gov
rwh@rathlaw.com
steve.frink@puc.nh.gov