

STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION

ORIGINAL	
N.H.P.U.C. Case No.	DW 08-073
Exhibit No.	# 9
Witness	Panel 2
DO NOT REMOVE FROM FILE	

Pennichuck Water Works, Inc.

Docket No. DW 08-073

AMENDED PRE-FILED DIRECT TESTIMONY OF BONALYN J. HARTLEY

September 5, 2008

## TABLE OF CONTENTS.

I.	Background and Qualifications.....	1
II.	Overview of Rate Case Schedules .....	2
III.	Pro-Forma Adjustments.....	5
IV.	Cost-Containment Efforts .....	13
V.	Increases in Property Tax and Depreciation .....	17
VI.	Effect of Taxes .....	<del>19</del> 18
VII.	PWW Balance Sheet .....	19
VIII.	Computation of Rate Base .....	21
IX.	Impact of Rate Increase.....	24
X.	Water Conservation .....	25
XI.	Request for Step Increase.....	26

1    **I.    Background and Qualifications**

2    **Q.    Please state your name and business address.**

3    A.    Bonalyn J. Hartley. My business address is 25 Manchester Street, Merrimack, New Hampshire.

4    **Q.    Please state your position with Pennichuck Water Works, Inc. ("Company") and**  
5    **summarize your professional and educational background.**

6    A.    I serve as Vice President of Administration for the Company and of Pennichuck Corporation  
7    ("the Parent"), which holds all the Company's common stock. I was appointed to this position in  
8    April 2001. Prior to that, I served in various capacities including Vice President-Controller,  
9    Manager of Systems and Administration and Office Manager. I have been with the Company for  
10    over 29 years, in total. In 1989, I attended the Annual Utility Rate Seminar sponsored by the  
11    National Association of Regulatory Commissioners and the University of Utah. I am a graduate  
12    of Rivier College with a B. S. in Business Management. In addition, I am a Director of the New  
13    England Chapter of the National Association of Water Companies.

14   **Q.    Ms. Hartley, what are your duties as Vice President of Administration for the Company?**

15   A.    As Vice President of Administration, I am primarily responsible for the management of  
16    administrative services for the Company including regulatory affairs, information technology,  
17    human resource functions and customer service. I also serve as a liaison to the accounting  
18    department particularly in the area of government and regulatory matters, system acquisitions and  
19    information technology.

20   **Q.    Have you testified before the New Hampshire Public Utilities Commission on any previous**  
21   **occasions?**

1 A. Yes. I have testified before the Commission in a number of cases, including the following rate  
2 cases: DR 91-055, DR 92-220, DR 97-058, DW 01-081, DW 04-056, DW 07-32, DW 05-072  
3 and DW 06-073.

4 **II. Overview of Rate Case Schedules**

5 **Q. Are you familiar with the pending rate application of Pennichuck Water Works, Inc. and**  
6 **with the various schedules?**

7 A. Yes, I am. These schedules and exhibits are found under Sections 12, 13 and 14 in the binder  
8 marked Pennichuck Water Works, Inc, DW 08-073, Rules 1601.04 and 1601.08 filed by the  
9 Company. I either prepared the schedules and exhibits or they were prepared under my  
10 supervision (excluding the schedules filed pursuant to Section 1604.08 which were directed by  
11 Mr. Patterson and the related attachments prepared by Mr. Walker).

12 **Q. Please provide an overview of how these schedules and exhibits are organized for this rate**  
13 **filing.**

14 A. Contained in the rate case binder are the following schedules as required by PUC 1604.06:

15 **Section #12: Schedule A, Combined Computation of Revenue Deficiency**

16 **Section #13: Supporting Schedules & Exhibits**

17 **Schedule A, Computation of Revenue Deficiency**

18 **Schedule 1, Operating Income Statement**

19 **Schedule 1, Attachments A – H, Pro Forma Adjustments to Income/ Expense**

20 **Schedule 1A, Property Taxes**

21 **Schedule 1B, Payroll Summary**

22 **Schedule 1C, 2007 Management Fee Pro Forma Adjustment/Allocation**

23 **Schedule 2, Assets and Deferred Charges**

1       **Schedule 2A, Stockholders Equity and Liabilities**  
2       **Schedule 2, Attachment A, Accumulated Depreciation**  
3       **Schedule 2, Attachment B, Materials and Supplies**  
4       **Schedule 2, Attachment C, Other Deferred Charges and Other Assets**  
5       **Schedule 2, Attachment D, Analysis of Deferred Charges**  
6       **Schedule 2B, Contributions in Aid of Construction**  
7       **Schedule 3, Computation of Rate Base**  
8       **Schedule 3, Attachments A through E, Pro Forma Adjustments to Rate Base**  
9       **Schedule 3A, Computation of Working Capital**  
10       **Schedule 3B, Computation of Thirteen Month Average Balance**  
11       **Schedule 3C, Computation of 13 Month Avg Unfunded FAS 106 & 158 Costs**  
12       **Section #14:**  
13       **Step Increase, Supporting Schedules & Exhibit**  
14       **Step Increase, Schedule A with Revised Step 2, Computation of Revenue Deficiency**  
15       **Step Increase, Schedule 1 with Revised Step 2,**  
16       **Step Increase, Schedule 1 with Revised Step 2, Attachments A – D, Adjustments to**  
17       **Income/Expenses**  
18       **Step Increase, Schedule 3 with Revised Step 2, Computation of Rate Base**  
19       **Step Increase Schedule 3 with Revised Step 2, Attachments A – C, Adjustments to Rate**  
20       **Base**  
21       Additional schedules and exhibits are attached to the above schedules that support figures  
appearing on the written testimony and/or in accompanying exhibits.

1 Q. Ms. Hartley would you please summarize Section #12, Schedule A, entitled "Pennichuck  
2 Water Works, Inc., Computation of Revenue Deficiency, For the Twelve Months Ended  
3 December 31, 2007"?

4 A. Yes, this exhibit shows the pro forma revenue deficiency as of December 31, 2007. The thirteen  
5 month average rate base of \$72,945,003 is increased by \$3,974,060 on a pro forma basis for plant  
6 in service, resulting in a total rate base of \$76,919,063. The overall rate of return of 7.81%  
7 (discussed in Mr. Patterson's and Mr. Walker's testimony and shown in Section 15, Schedule 1)  
8 is then multiplied by the total pro forma rate base of \$76,919,063, resulting in a required net  
9 operating income of \$6,008,497. As shown in Schedule 1, the pro forma net operating income  
10 for the twelve months ended December 31, 2007 is \$4,079,767, resulting in a net operating  
11 income deficiency of \$1,928,730. Utilizing a tax factor of 60.39%, which accounts for the  
12 impact of both the New Hampshire Business Profits Tax at 8.5% and Federal Income Taxes at  
13 34%, the resulting revenue deficiency is \$3,193,791, or a required revenue increase of 14.72%.  
14 This increase will permit the Company to provide adequate and reliable service for all of our  
15 customers while still maintaining the ability to attract new debt and equity capital.

16 Q. Ms. Hartley, is the Company seeking an additional increase over the 14.72%?

17 A. Yes. As explained later in my testimony, the Company is requesting an overall increase of  
18 23.56~~25.27~~% increase. This increase, as explained later in my testimony, would be phased in  
19 through an initial increase of 14.72% and two step increases of 5.05% and 53.80~~51~~%.

20 Q. Has the Company modified its proposed rate increase since it initially filed the case in June  
21 2008?

22 A. Yes. As described in the Supplemental Testimony of Donald L. Ware, the Company has  
23 decreased its request for a rate increase in Step 2 based on certain capital additions that will be

1 deferred. As a result, I am amending my testimony and the related schedules to reflect this  
2 change. The Company is also submitting a revision to Mr. Palko's cost of service study to reflect  
3 this change.

4 **Q. Ms. Hartley, would you please summarize Schedule 1 entitled, "Pennichuck Water Works,**  
5 **Inc., Operating Income Statement for the Twelve Months Ended December 31, 2007"?**

6 A. Yes, this exhibit shows the actual operating results of the Company for the twelve months ended  
7 December 31, 2007, which is the period the Company is using for the test year in this case.

8 **Q. Would you please explain the term "test year"?**

9 A. The test year (which in this case is the calendar year 2007) is the period for which the Company's  
10 costs are examined to determine if they are reasonable and establish a level of rates that will  
11 enable the Company to earn a reasonable return on its investment. Consistent with Commission  
12 practice, certain of the Company's financial documents have been adjusted or pro formed, to  
13 reflect annualization or normalization of known changes in conditions occurring during the test  
14 year and the twelve months after.

15 **III. Pro-Forma Adjustments**

16 **Q. Does Schedule 1 show such adjustments?**

17 A. Yes, Column 2 also reflects pro forma adjustments to recognize a \$390,072 increase in total  
18 revenues and \$487,530 in net increases in operating expenses that have occurred or will occur  
19 within the twelve months after the end of the test year. Each adjustment will be explained later  
20 in full detail. Column 1 is the actual operating income statement for the test year and shows that  
21 operating revenues were \$21,547,912, total operating expenses were \$9,757,849 and the resultant  
22 net operating income was \$4,680,242. Column 3 presents the actual figures as adjusted by the

1 pro forma adjustments. Columns 4 and 5 present comparative data for the twelve months ended  
2 December 31, 2006 and 2005 respectively.

3 **Q. Please explain each of the pro forma adjustments made to the operating revenues and**  
4 **expenses as shown in Schedule 1, Column 2.**

5 A. Operating revenues have been increased by \$390,072 as a result of; (i) a 20.36% step  
6 increase which was authorized in DW 06-073 and effective January 5, 2007. A pro forma  
7 adjustment of \$26,205 is made to recognize the period from January 1<sup>st</sup> to January 4<sup>th</sup>; (ii) a  
8 3.07% subsequent step increase authorized in DW 06-073 effective June 1, 2007 for a pro forma  
9 adjustment of \$206,644 to recognize the period from January through May 2007; and (iii) a  
10 11.07% permanent increase authorized in DW 06-073 effective July 18, 2006 resulting in a credit  
11 of \$187,034 to customers for the difference between the temporary rate increase awarded in 2006  
12 and permanent rates. A final pro forma adjustment is made to decrease revenues by \$(29,812) to  
13 reflect the impact of the elimination of significant metered leakage from the Coburn Woods  
14 Association distribution system during 2007. The Company worked with the Association to  
15 install 224 individual meters. After installation, the Company compared the total of these meters  
16 against a master 6" meter in order to accurately assess the amount of unaccounted for water. It  
17 then worked with the Association throughout 2007 to locate and repair leaks which resulted in  
18 the overall system leakage dropping from 74% or 57 gallons per minute at the beginning of 2007  
19 to less than 3% or under 1 gallon per minute at the end April of 2008 with the result being a  
20 projected decrease in revenues from the Coburn Woods Association of \$29,812.

21 **Q. Ms. Hartley please continue.**

22 A. The operating expenses have been increased by \$487,530 to reflect known changes that occurred  
23 during the test year or have occurred or will occur within the twelve months following the test



1 year. Schedule 1, Attachments A through H provide in detail the nature and specific computation  
2 for each pro forma adjustment to each operating account.

3 **Q. Please explain the pro forma adjustment for union employees.**

4 A. On February 16, 2007, the Company negotiated a three year contract with the United  
5 Steelworkers of America for employees hired in the Company's Production and Distribution  
6 Departments. Schedule 1, Attachments B, pages 1 and 2 reflect pro forma adjustments for the  
7 4% union wage increase effective February 16, 2007 and the 4% union wage increase effective  
8 February 16, 2008. Additionally, adjustments are made to reflect three replacements in the  
9 Production Department that were the result of one termination, one retirement, and one death in  
10 December of 2006 and one replacement in the Distribution Department that was the result of one  
11 termination.

12 **Q. Please explain the pro forma adjustments to payroll for the salaried employees of the**  
13 **Company.**

14 A. Payroll adjustments are reflected for average annual increases of 4.0% that occurred on April 1,  
15 2007 and 4.1% on April 1, 2008 for all salaried employees including executives. Adjustments  
16 are also included to recognize those employees leaving the Company or transferring within the  
17 Company as well as new hires. In 2007, the Company replaced 4 accounting administrators that  
18 were the result of 3 terminations in 2007 and one termination in December of 2006. One  
19 software support employee was terminated and one cad technician was terminated, neither of  
20 which was replaced.. In February 2008, a Lead Electrician was hired to support the upgrades to  
21 the Water Treatment Plant. In 2007, the Company replaced 2 Customer Service Representatives  
22 for 2 terminated employees and, in 2008 hired one Customer Service Representative to replace a  
23 temporary employee in 2007. The Company hired a Customer Service Representative on

1 February 11, 2008 and anticipates hiring two additional Customer Service Representatives on  
2 June 1 and October 1, 2008. The Company will be hiring an additional Utility Technician on  
3 October 1, 2008. The additional Customer Service personnel are necessary to support the  
4 additional billing and collection efforts associated with PWW's conversion of customers from  
5 quarterly to monthly billing during 2008. The Company is requesting that the additional  
6 positions be annualized for the full year to reflect the impact of increased billings from 124,000  
7 to 300,000 billings by February of 2009. The impact of these changes on salaries and wages are  
8 detailed on Schedule 1, Attachment H.

9 **Q. Ms. Hartley please explain the pro forma salary adjustments for executives of the**  
10 **Company.**

11 A. Effective April 1, 2007, there is a total pro forma salary adjustment of \$5,812 for five executives  
12 of the Company, reflecting an average annual salary increase of 3.2%. For April 1, 2008, there is  
13 a total pro forma adjustment of \$22,500 for seven executives reflecting an average annual salary  
14 increase of 3.5%.

15 **Q. What portion of the pro forma adjustments represents salary and wages**  
16 **for the test year?**

17 A. The total salary and wage adjustments before any income tax benefit are \$466,867 as compared  
18 to the actual payroll of \$6,712,770 for the twelve months ended December 31, 2007. This is  
19 shown in detail on Schedule 1B entitled "Pennichuck Water Works, Inc., Payroll Summary".

20 **Q. Ms. Hartley would you please summarize Schedule 1B for the Commission?**

21 A. Yes. Schedule 1B itemizes the various classifications of labor by Operations and Maintenance,  
22 Construction and Jobbing. Column 1 details a total payroll expense of \$6,712,770 that was  
23 actually incurred during the twelve months ended December 31, 2007. As previously stated, the

1 total payroll adjustments in Column 7 are \$466,867, of which \$424,457 is for operating labor and  
2 \$4,139 is for capitalized labor in construction. As shown in Columns 2-6, adjustments include  
3 payroll increases effective February 16, 2007 and February 16, 2008 for union employees, salary  
4 increases that were effective April 1, 2007 and April 1, 2008 for salaried employees, and  
5 adjustments for new hires and terminations for 2007 and 2008.

6 **Q. What other types of expenses are included in the pro forma adjustments to the Operating**  
7 **Income Statement?**

8 A. Other operating expenses for which pro forma adjustments have been made are related to  
9 increases in operating and maintenance expenses for the Production Account resulting in a total  
10 pro forma adjustment of \$152,770, which includes the following items: (i) in 2008, the Company  
11 incurred increases in costs of all chemicals utilized at the Treatment Plant which represents an  
12 annual expense of \$20,515; and (ii) purchased water costs for the Company increased over the  
13 2007 test year expenses as the result of a July 1, 2007 increase in rates charged to the Company  
14 by the Merrimack Village District and a January 1, 2008 increase in rates charged to the  
15 Company by the Town of Milford. These increase charges result in a total pro forma adjustment  
16 of \$9,504 as detailed in Schedule 1, Attachment B, Page 1.

17 **Q. Ms. Hartley please explain the adjustments made to the Distribution Account.**

18 A. The cost of fuel has increased significantly from 2007 to May 2008 and continues  
19 to increase. The majority of the Company's fuel costs is related to this department as most of our  
20 labor personnel are utilizing trucks and other vehicles to service our customers and the system.  
21 Therefore, the Company is making a pro forma adjustment to reflect an increase from \$204,385  
22 to \$282,347 for 2007 and 2008 respectively. This was calculated utilizing \$3.698 per gallon for  
23 gasoline and \$4.19 for diesel (the average price for a gallon of gas/diesel in the Nashua area on

1 May 1, 2008). Based on the Company's Work Order percentage of 63.30%, the total fuel  
2 increase of \$77,962 results in an allocation of \$49,350.

3 **Q. Please explain Schedule 1, Attachment B, Page 3.**

4 A. The schedule reflects pro forma adjustments for engineering salaries of \$4,670 and  
5 \$15,229 representing salary increases and adjustments of 5.3% on April 1, 2007 and adjustments  
6 of 4.2% on April 1, 2008 respectively. An adjustment of \$(8,875) is made to reflect the impact  
7 of the personnel hirings and terminations during the test year and in 2008. Total pro forma  
8 adjustments for engineering salaries is \$11,023.

9 **Q. Does this complete the adjustments that have been made to the operating expenses in the**  
10 **Distribution Account?**

11 A. Yes.

12 **Q. Ms. Hartley would you please explain other adjustments made for administrative expenses**  
13 **found on Schedule 1, Attachment C, Page 1?**

14 A. Yes, there are adjustments to recognize salary adjustments, increases in wages, and personnel  
15 hirings and terminations during the test year and in 2008. The schedule reflects pro forma  
16 adjustments for accounting salaries of \$5,347 and \$17,710 representing salary increases and  
17 adjustments of 3.9% on April 1, 2007 and salary increases and adjustments of 4.6% on April 1,  
18 2008 respectively. An adjustment of \$257 is made to reflect the impact of the personnel hirings  
19 and terminations during the test year and in 2008. Total pro forma adjustments for accounting  
20 salaries are \$23,314. The schedule reflects pro forma adjustments for customer service are  
21 \$3,751 and \$13,013 representing salary increases and adjustments of 4.8% on April 1, 2007 and  
22 salary increases and adjustments of 4.3% on April 1, 2008 respectively. An adjustment of  
23 \$165,175 is made to reflect the impact of the personnel hirings and terminations during the test

1 year and in 2008. Total pro forma adjustments for customer service salaries are \$181,939. In  
2 June 2008, the Company began converting its quarterly customers to monthly accounts and as  
3 previously stated is planning to hire two additional customer service employees to support this  
4 major initiative. The new hire planned for June 1, 2008 will be trained in billing and receivables  
5 and the utility technician is a union position that will be required to meet the increased collection  
6 activity. The billing, receivables, collections and customer calls will increase by approximately 3  
7 times for bills and receipts annually. The Company is proposing that the new positions be  
8 recognized for a full 12 months. The schedule also reflects pro forma adjustments for  
9 Information Technology salaries of \$1,706 and \$7,095 representing salary increases and  
10 adjustments of 3.2% on April 1, 2007 and salary increases and adjustments of 4% on April 1,  
11 2008 respectively. An adjustment of (\$3,527) is made to reflect the impact of the personnel  
12 hirings and terminations during the test year and in 2008. Total pro forma adjustments for  
13 Information Technology are \$5,273. Finally, there are pro forma adjustments of \$10,110 and  
14 \$28,312 for other administrative salaries and executive salaries for salary increases on April 1,  
15 2007 and April 1, 2008 that when included with other adjustments result in a total pro forma  
16 administrative salary adjustment of \$248,947.

17 **Q. Would you please continue?**

18 A. Yes. On Schedule 1, Attachment C, Page 2, for purpose of calculating an adjustment for  
19 benefits, total operating expense payroll dollars of \$424,457 (Schedule 1B) is multiplied by  
20 38.6% benefit percentage, resulting in a pro forma adjustment of \$163,841. An adjustment is  
21 included for a reduction of \$29,629 for charitable contributions as reflected in the documents  
22 submitted in Rule 1604.01, Section 5. Other adjustments are made to the test year to recognize an  
23 increase of \$6,080 in regulatory commission expense, an \$8,941 adjustment for computer

1 maintenance expense, and an adjustment of \$12,051 for membership fees of \$1,460 and \$10,591  
2 for NAWC and the AWWA Research Foundation. The Company eliminated or negotiated for  
3 one year "only" reduced membership fees in NAWC and AWWARF for 2007 until the  
4 Company's earnings and cash flow improved as a result of the temporary and permanent rates  
5 requested in the pending PWW rate case (DR 08-073). Note: I would include a sentence or two  
6 about why membership in these organizations is important.

7 Customer billing expenses have been adjusted to recognize the transition from quarterly to  
8 monthly billing. The amount of billing materials and postage will increase by \$133,420 and, the  
9 Company is proposing that this expense be recognized for twelve months as the conversion will  
10 be completed by January 2009. In 2008, the Company purchased a scanner to assist in the  
11 processing of customer remittances and an adjustment of \$2,887 has been made to reflect the  
12 increase in maintenance cost for this equipment. Additionally, during the test year, there were  
13 expenses that were non-recurring in nature and pro forma adjustments are made to eliminate the  
14 following from the test year: commission expense for auction bonds of \$(4,550), obsolete  
15 inventory for obsolete customer education supplies of \$(3,937) and for obsolete customer  
16 conservation materials of \$(4,806), and for book to CPR true-ups of \$10,329.

17 **Q. Ms. Hartley are there any other adjustments for the Administrative and General**  
18 **Accounts?**

19 **A.** Yes, there are pro forma adjustments to reflect expenses allocated through the Management Fee  
20 to other Pennichuck Corporation subsidiaries. The allocation from Pennichuck Water Works to  
21 all affiliates which is reflected in Rule 1604.01, Section 26. The allocable percentage rate is  
22 based on certain criteria including revenues, employees, square footage utilized, number of  
23 customers, and assets. Therefore, the pro forma payroll of \$424,457 and the pro forma benefits

1 at 38.6% of \$163,841 totaling \$588,298 have been multiplied by 28.1% resulting in a deduction  
2 to the Administrative and General Accounts of \$(165,312).

3 During the test year there were expenses that were non-recurring in nature and adjustments have  
4 been made as a reduction to the Management Fee to recognize these items as follows: an  
5 adjustment of \$(286) associated with Great American Insurance Claim, an adjustment of  
6 \$(25,312) associated with 2007 retention bonuses, and an adjustment of \$(58,071) for 2007  
7 bonuses paid above plan levels due to achievement of specified goals. Other adjustments for  
8 items not included in the test year are reductions to the Management Fee and include: an  
9 adjustment of \$(36,363) to allocate water treatment plant office salaries to affiliates through the  
10 work order allocation, an adjustment of \$(54,949) to allocate depreciation for leasehold  
11 improvement related to the HECOP III fit-up allowance, and an adjustment of \$(45,191) to adjust  
12 depreciation of leasehold improvements over 10 years versus the 5 years on the Company's  
13 books. Additional adjustments for items not included in the test year to increase the  
14 Management Fee include: an adjustment of \$35,112 to annualize the board costs associated with  
15 the search for President and CEO in 2006 and an adjustment of \$39,451 for allocation of work  
16 order overhead to eliminate contractor invoices (Schedule 1C). The total pro forma adjustment  
17 for all Administrative and General Accounts is a net increase of \$232,651 including the  
18 adjustment for the total management fee allocation or \$(310,922).

19 **IV. Cost-Containment Efforts**

20 **Q. Ms. Hartley, what actions has the Company taken to contain costs?**

21 A. The Company consistently reviews and analyzes its costs to determine their necessity, whether  
22 there are alternative options or whether they can be eliminated. For example, in the area of  
23 Customer Accounting and Collections, the Company upgraded its utility billing program in 2006

1 to provide cost effective and convenient payment options for customers, and in early 2008 the  
2 Company began offering online payment via its web site at [www.pennichuck.com](http://www.pennichuck.com). Processes  
3 have been initiated for electronic check deposits to the Company's bank account with software  
4 entitled "payment concentrator" for customers that make online payments through their own  
5 banks and with remote deposit equipment for customers paying in person at the Company's  
6 headquarters. In 2008, the Company purchased new remittance equipment that assists in the  
7 processing of customer payments by mail and that scans customer check for electronic deposits  
8 in the Company's bank account. In the future, the Company also plans to provide electronic bill  
9 presentation.

10 **Q. Has the Company implemented other efficiency measures?**

11 A. Yes. Our centralized and automated customer appointment schedule for back flows, pressure  
12 complaints, and meter appointments improves efficiency and responsive customer service. This  
13 program calculates travel time and automatically reschedules and determines the most efficient  
14 travel route. It also provides for automatic scheduling for routine appointments such as backflow  
15 testing. Managers can now view "real time" employee work schedules for easy rescheduling and  
16 efficiency. Automation has improved Company response and efficiency in all areas. For  
17 example, the SCADA system at the Treatment Plant allows operators to monitor remote facilities  
18 by computer and the OPS 32 program allows operators to record data in the field on Palm Pilots.  
19 In 2005, we implemented a new Laboratory Information System (LIMS) which provides for  
20 automatic tracking of water testing and sampling. This new system will eliminate redundancy,  
21 improve laboratory reporting, and monitoring of water quality. Sample results from outside  
22 laboratories are now imported electronically thereby increasing accuracy and efficiency. In  
23 2007, the Company developed software interfaces between its BNA fixed asset program and



1       MUNIS utility billing program to its MACOLA accounting program, and in 2008, the Company  
2       developed a software interface from its Synergen work order program to MACOLA creating  
3       added efficiencies. The Company has standardized its desk top computers and software suites  
4       allowing for easier maintenance and training while increasing processing power and productivity.  
5       To better service customers, the Company has installed and implemented a Voice Over Internet  
6       Protocol (VOIP) telephone system which provides automated messaging for property transfers,  
7       payment information, and sales of property to facilitate customer service. In addition, customers  
8       are able to easily access off-duty emergency number for quick response. The system provides  
9       emergency messaging for special circumstances that may affect a large group of customers. The  
10      system also has a call feature that provides for automated phone messages to be delivered to  
11      customers for emergency and collections and can deliver over 1,200 messages in one hour.

12   **Q.   Are there other improvements that the Company has made to enhance service to**  
13      **customers?**

14   **A.**   Yes. In 2008, the Company launched its new web site that is designed to be very friendly and  
15      easy for customers to access, send messages and make payments online. The web site provides  
16      customer's with rate information by system, consumer confidence reports by supply,  
17      conservation tips, restrictions for lawn irrigation by supply, payment locations and options,  
18      environmental and engineering services, investor information and general information about the  
19      Company.     The Company is in the process of conducting a pilot study to begin developing  
20      automatic entry of work order information in the field. In the future, this new program will  
21      create efficiency, accuracy and eliminate redundancy.

22   **Q.   What other initiatives has the Company undertaken to save costs?**

1 A. All employee benefits are reviewed annually and savings negotiated where possible. The  
2 Company recognizes that the escalating cost of rising health care benefits poses challenges. In  
3 2007, the Company negotiated a more favorable contract with Harvard Pilgrim Health Insurance  
4 that helped to mitigate premium increases proposed by Anthem Blue Cross and Blue Shield.  
5 Health benefits for union employees are now prescribed in the Company's 2007 contract with the  
6 United Steelworkers Union. In 2008, union employees make a weekly contribution of \$25.18 to  
7 their health care premium and non-union employees are required to contribute 10% of their total  
8 premium through payroll deduction. This helped to mitigate the impact of the 8% increase in  
9 health care costs from Harvard Pilgrim in 2008. In reviewing the historic medical usage by our  
10 employee group, it was determined that further savings could be accomplished by having the  
11 Company self-insure for certain medical deductibles along with increasing employee co-pays.

12 **Q. Please explain the conversion to monthly billing and its impact on customers and the**  
13 **Company.**

14 A. In 2008, as described in Mr. Ware's testimony, the Company began a program to install Neptune  
15 Radio Read Units for all meters in PWW which will be completed by year end. This major  
16 project is necessary to convert customers from quarterly to monthly billing and has many  
17 advantages for both the customer and the Company. For customers; the frequency of water bills  
18 has increased which will make it easier for customers to budget monthly for this expense. It will  
19 also allow for early leak detection which will prevent undue water usage, meter repairs will be  
20 accelerated thereby eliminating the time between actual meter reads, and conservation signals to  
21 customers during peak summer usage. From the Company's perspective, monthly reading will  
22 provide more accurate unaccounted for water reports, improved cash flows, improved budgeting

1 and forecasting of unbilled water, encouragement for timely water conservation, timely meter  
2 repairs, and improved accuracy and efficiency in meter reading time.

3 **Q. Will the installations of the radio read program provide some efficiencies?**

4 A. Yes. As detailed in Mr. Ware's testimony, the meter department labor is primarily dedicated to  
5 reading meters. The radio read program will provide an opportunity to redeploy this labor for  
6 periodic testing of small meters and repairs. The Company's meter testing program has lagged  
7 in the area of small meter testing and needs to be accelerated to meet the NHPUC prescribed  
8 testing frequency. Absent the labor savings achieved by reading meters with radio read units, the  
9 Company would have to hire more union labor to complete the required testing. As described  
10 earlier in my testimony, there will be additional costs for Customer Service and Collections due  
11 to the conversion from quarterly to monthly billing. The Company believes that the benefits far  
12 out weigh this additional cost to service our customers.

13  
14 **V. Increases in Property Tax and Depreciation**

15 **Q. Are there any expense adjustments included in the pro forma adjustments to the operating**  
16 **income statement that are not related to any changes from the Company's operations?**

17 A. Yes, one of the major expenses included in the pro forma adjustments to the operating income  
18 statement is a \$599,805 increase for property taxes shown on Schedule 1, Attachment D, Page 1.  
19 This adjustment is due to the difference in the actual liability for real estate taxes and the amount  
20 actually accrued during the test year as well as the increase in taxable property owned by the  
21 Company. Schedule 1A, Pages 1-5 reflects the pro forma adjustment of \$26,980 for the net  
22 increase in property taxes for some of the communities served by the Company and for the State  
23 of New Hampshire property tax. An additional adjustment reflects the increase of taxable utility

1 property of \$668,813 in some of the communities served by the Company which is shown on  
2 Schedule 1A, Attachment A, Pages 1-7. These taxable additions were placed in service in 2007  
3 at a total cost of \$27,890,506; the related property taxes are not reflected in the test year. Finally,  
4 there is an adjustment for the decrease in taxable utility property of \$(95,988) related to  
5 retirements of plant items in various communities. These taxable dispositions were retired  
6 during 2007 at a total cost of \$3,999,668 and related property taxes as found on Schedule 1A,  
7 Attachment B, Pages 1-4.

8 **Q. Are there any other pro forma adjustments that you have made to the operating income**  
9 **statement?**

10 A. Yes. There is also a pro forma adjustment for the increase in net depreciation expense of  
11 \$290,681 as shown on Schedule 1, Attachment E entitled "Pennichuck Water Works, Inc.,  
12 Depreciation Expense". This adjustment is primarily attributable to the additional one-half year  
13 depreciation expense of \$459,806 for depreciable assets placed in service during 2007 and a  
14 reduction of \$(95,281) in depreciation expense to reflect the disposal of assets in the test year.  
15 An adjustment of \$(69,701) is made to reflect depreciation expense related to treatment of cost of  
16 removal (COR) as agreed by the settling parties in Order 24,751 (DW 06-073) . An adjustment  
17 of \$(4,143) is made to adjust the estimated useful life of filter media. In addition, there is a net  
18 increase in amortization expense of \$6,385 as shown in Schedule 1, Attachment F entitled  
19 "Pennichuck Water Works, Amortization of Deferred Charges" which is primarily due to a one-  
20 half year amortization expense pro forma of \$75,746 for certain projects and studies completed  
21 during 2007 and a reduction of \$(77,765) for the completed amortization of certain deferred  
22 assets during the test year. In 2008, the Company engaged consultants to perform compensation  
23 studies for non union employees and executives. The Company is proposing to amortize the

1 studies over 3 years and has made an adjustment of \$12,667. An adjustment of \$(4,263) is made  
2 to eliminate the non-recurring final amortization of the 1998 Theoretical Depreciation Reserve  
3 taken in 2007. The explanations and calculations for these amortization expenses are shown on  
4 the Schedule noted above.

5 **VI. Effect of Taxes**

6 **Q. Please explain Schedule 1, Attachment G entitled, "Pennichuck Water Works, Inc., Income  
7 Taxes".**

8 A. This schedule calculates the New Hampshire Business Profits Tax and the Federal Income Tax  
9 benefits derived from the pro forma adjustments to operating expenses for a total tax benefit of  
10 \$(84,518) and \$(309,336) respectively.

11 **VII. PWW Balance Sheet**

12 **Q. Please explain Schedule 2 entitled "Pennichuck Water Works, Inc., Balance Sheet"?**

13 A. This schedule shows the comparative balance sheets for Pennichuck Water Works as of  
14 December 31, 2007, 2006, and 2005. On Schedule 2, it should be noted that plant in service  
15 increased to \$134.4 million reflecting \$30.6 million of net plant additions since 2005. Other  
16 assets and deferred charges of \$5.9 million reflect expenses for abandoned property,  
17 implementation of the Sarbanes-Oxley Act, water tank inspections, the Supplemental Employee  
18 Retirement Plan (SERP) for the former President of the Company, the long term investment for  
19 funding the water line study for Berkley Street, relocation expenses, employee recruiter fees,  
20 2006 rate case expenses, VEBA Trusts, the Manchester Source Development Charge for  
21 additional capacity and the Bedford interconnect, and costs for the Filtration Media Study for the  
22 Treatment Plant (Schedule 2, Attachment C, Pages 1-2). On Schedule 2A, Stockholder's Equity

1 has increased from \$36.9 million in 2005 to \$40.3 million in 2007 while Long Term Debt and  
2 Liabilities have increased from \$58.3 million in 2005 to \$85.3 million in 2007.

3 **Q. Would you now explain Schedule 2, Attachment A?**

4 A. This schedule provides the breakout of the 'Accumulated Depreciation" item  
5 as shown on the Company's balance sheet, by account classification, for the years ending  
6 December 31, 2007 and December 31, 2006.

7 **Q. Would you please explain Schedule 2, Attachment B?**

8 A. This schedule details all of the materials and supplies on the Company's balance sheet at  
9 December 31, 2007, the 13 month average for the same, and the comparative balances as of  
10 December 31, 2006 and 2005.

11 **Q. Would you please explain Schedule 2B?**

12 A. This schedule details the customer advances and contribution in aid of construction on the  
13 Company's balance sheet for the five years from 2003 through 2007.

14 **Q. Would you please explain Schedule 2, Attachment C, Pages 1-2?**

15 A. Yes. This schedule explains the "Other Deferred Debits and Other Assets" included in the  
16 Company's balance sheet and shows the comparative balances for these deferred charges and  
17 other assets as of December 31, 2007 and 2006. Included in the December 31, 2007 balance are  
18 \$23,352 for abandoned property for wells primarily located in the Cabot Preserve and Dunlap  
19 Woods systems, \$2,932 for inspection of the Fifield Tank, \$10,162 for the study of the mast road  
20 crossing, \$673,797 for costs associated with accounting requirements for compliance with the  
21 Sarbanes-Oxley Act of 2002, \$102,993 for Bond Defeasance premium, \$2,512 for a study related  
22 to Berkley Street; and additional expenses of \$96,085 for recruiter fees, \$53,072 for Union  
23 Contract negotiations, \$470,919 for the SERP plan for the former President of the Company,

1 \$194,665 related to demolition of the Merrimack Dam, \$179,868 for the Pennichuck Brook  
2 watershed study, \$6,875 for catch basin marking, \$588,318 for VEBA Trusts, \$18,972 for web  
3 site upgrade, \$31,667 for the 2004 compensation study, \$378,974 for MSDC charges and  
4 \$28,261 for the Filtration Media Study for the Treatment Plant. It should be noted that costs of  
5 \$6,851,229 as of December 31, 2007 for defense of the eminent domain action by the City of  
6 Nashua are included in this account. These costs and no other eminent domain costs are included  
7 in this case and are reduced by the same amount of \$6,851,229 as reflected on Schedule 2,  
8 Attachment C, Page 1.  
9

10 **VIII. Computation of Rate Base**

11 **Q. Please explain Schedule 3, entitled “Pennichuck Water Works, Computation of Rate Base,**  
12 **For the Twelve Months ended December 31, 2007”?**

13 A. The overall purpose of this schedule is to calculate a pro forma rate base for the Company in  
14 order to determine the basis on which to compute its allowed rate of return. Column 1 of this  
15 exhibit shows the test year rate base account calculated on an actual “13 month average” rate  
16 base for the twelve months ended December 31, 2007 for a total of \$128,961,502 for Plant in  
17 Service. Schedule 3B details how the average was calculated. Column 2 of Schedule 3  
18 represents a “year end” rate base for the twelve months ended December 31, 2007. This  
19 information is also detailed on Schedule 3B. Column 3 details the pro forma adjustments to the  
20 “test year average” rate base. The computation detail for each adjustment is shown on Schedule  
21 3, Attachment A through E inclusive. The net pro forma adjustment to the rate base for plant in  
22 service is \$5,102,807 to annualize those non-revenue producing capital additions that were  
23 included in the “13 month average” for plant in service for the twelve months ended December

1 31, 2007. Schedule 3, Attachment A, Exhibit 2, Pages 1-5 details these non-revenue producing  
2 items and shows that the total cost for these assets placed in service during 2007 is \$27,232,123  
3 and that by utilizing "the 13 month average" only \$20,672,916 is currently reflected in the test  
4 year resulting in an adjustment of \$6,559,207. Schedule 3, Attachment A, Exhibit 4, Pages 1-4  
5 details retirements in service which were calculated as part of the thirteen month average of plant  
6 in service for the test year ending 2007 is \$4,253,147 and that by utilizing "the 13 month  
7 average" only \$2,796,747 is currently reflected in the test year for a reduction of \$(1,456,400). It  
8 should be noted that all of these projects are non-revenue producing items that are critical  
9 infrastructure improvements, upgrades to the system or mandated to maintain compliance with  
10 the SDWA. These asset additions do not provide additional revenue opportunities for the  
11 Company.

12 **Q. Please continue to explain adjustments to rate base shown on Schedule 3.**

13 A. The reduction of \$(94,292) for Deferred Debits is detailed on Schedule 3, Attachment B includes  
14 a reduction of \$(75,746) to reflect the one-half year amortization expense pro forma for the  
15 deferred charges placed in service during 2007. Schedule 2, Attachment D, Pages 1-2 reflects  
16 those items that are included. There is a pro forma adjustment to remove the deferred expense of  
17 \$(43,879) for rate case expenses related to DW 06-073. The Company is recovering these  
18 expenses from customers over a twelve month period. An adjustment of \$25,333 is proposed to  
19 recognize the unamortized balance of a compensation study to be performed in 2008. Schedule  
20 3, Attachment C shows an adjustment of \$360,382 for Accumulated Depreciation that includes  
21 the amount of \$459,806 for the additional one-half year pro forma depreciation expense for the  
22 capital assets added to the core system in 2007 and a one-half year depreciation expense of  
23 \$(95,281) for capital assets retired in the test year as shown on Schedule 3, Attachment A,



1 Exhibit 1, Pages 1-12 and Schedule, Attachment A, Exhibit 3, Pages 1-7. There is also an  
2 adjustment of \$(4,143) for the estimated useful life of filter media noted in Schedule 1,  
3 Attachment E. Additionally, a working capital pro forma adjustment is made to rate base to  
4 reflect the pro formed operations and maintenance expenses of \$487,530 on Schedule 1 for the  
5 twelve months ended December 31, 2007. This is calculated at 63.5 days divided by 365 days  
6 resulting in 17.40% which is then multiplied by \$487,530 resulting in pro forma working capital  
7 of \$84,830.

8 **Q. Are there any further adjustments to rate base?**

9 A. Yes, an adjustment of \$758,902 is made to reduce rate base for unfunded FAS 106 and 158 costs.  
10 Schedule 3, Attachment E shows a pro forma adjustment of \$206,567 to comply with  
11 Commission Order No. 20,806 in DA 92-199 by calculating unfunded FAS 106 costs of  
12 \$342,055 by the tax factor of 60.39%. And, an additional pro forma adjustment of \$552,335 to  
13 account for FAS 158 that required recognition of the over funded or under funded status for  
14 defined benefit and other post retirement plans by calculating the unfunded FAS 158 costs of  
15 \$914,614 by the tax factor of 60.39%. The total rate base for the test year 13 month average is  
16 \$72,945,003 and accounting for the pro forma adjustments of \$3,974,060 results in a pro forma  
17 rate base of \$76,919,063.

18 **Q. Please summarize what the rate base exhibits show.**

19 A. The most striking conclusion from these exhibits is the fact that the Company continues to make  
20 substantial capital investments in order to maintain the reliability of its systems and to comply  
21 with various governmental requirements. It should be noted that regulated public utilities often  
22 do not have the advantage enjoyed by other companies of deciding when, on the basis of  
23 financial considerations, to make these investments. Pennichuck has a commitment to the

1 communities it serves to provide a safe and reliable product at all times regardless of capital  
2 limitations or other considerations. The costs associated with these projects when combined  
3 with increased expenses places the Company in a position where financial relief through a rate  
4 increase is critical in order for the Company to maintain its credit worthiness and still preserve  
5 adequate earnings that will attract capital (as described in Mr. Patterson's testimony).

6 **Q. Are all of the pro forma capital additions included in the pro forma adjusted rate base**  
7 **presented by you used and useful?**

8 A. Yes.

9 **Q. Were the expenses incurred by the Company in making these rate base additions prudently**  
10 **invested?**

11 A. Yes, as discussed in Mr. Ware's testimony, all of these investments are prudently incurred.

12 **IX. Impact of Rate Increase**

13 **Q. How is the Company proposing to adjust its current rate levels to achieve the 14.72%**  
14 **revenue increase being sought in this case?**

15 A. The Company is recommending that it collect revenues from each customer class in accordance  
16 with the recommendations for each Customer Class as detailed on Schedule 9, page 1 of the Cost  
17 of Service study. This will result in the Company collecting 86.2% of its required revenues from  
18 Water Service Revenues (both general water service (GWS) and contract water service), 3.68%  
19 from Private Fire Revenue and 10.12% from Municipal Fire Revenues. This revenue collection  
20 allocation would result in the Company collecting \$19,725,694 or an increase of 14.52% from its  
21 GWS customers, \$1,734,267 or an increase of 14.34%. from Contract revenues, \$915,696 or an  
22 increase of 85.29% from Private Fire revenues and \$2,520,792 or an increase of 2.20 % from  
23 Municipal Fire revenues resulting in an overall revenue increase of 14.72%. The above

1 allocation will result in an average annual residential water bill for a single family home of  
2 approximately \$517.37 based on average usage per 9.53 one hundred cu.ft. This will represent  
3 an increase of \$4.88 per month for residential customers over current rates.

4 **Q. What efforts does the Company make to assist customers who are having difficulty paying**  
5 **their water bills?**

6 A. The Company follows the Commission's regulations prior to disconnecting any customer's  
7 service. In addition to the fourteen day notice of disconnection that a regulated utility must  
8 provide to its customers, the Company makes courtesy calls to customers two to three days prior  
9 to any scheduled disconnection (for non-payment) in an effort to help customers avoid  
10 termination of service. These calls are highly effective in assisting customers to avoid  
11 disconnections. These courtesy calls have significantly reduced the number of disconnections,  
12 which saves customers money and disruption to their lives. Once a disconnection occurs, the  
13 Company works closely with the customer to restore service. For example, the Company will  
14 reconnect a customer's service as late as 8:00 p.m. on weekdays, and customers may submit  
15 overdue payments to the Company representative at the time of reconnection. The Company also  
16 works with its customers on establishing reasonable payment plans to avoid disconnection of  
17 service.

18 **Q. Does the Company provide any assistance to customers experiencing**  
19 **financial hardship?**

20 A. Yes. The Company maintains a hardship fund for customers who are unable to pay their bills  
21 due to tragic experiences. The Customer Service Department may allocate money to pay a  
22 customer's bill in such circumstance.

23 **X. Water Conservation**

1 Q. Ms. Hartley did you include a 'step-up' rate to encourage water conservation at this time?

2 A. No, I did not. As stated previously, the Company is in the process of converting its customers  
3 from quarterly to monthly billing. Currently the majority of customers in the Pennichuck  
4 systems will not receive their quarterly water bill for the summer months of June through August  
5 until later in September or October of that year. Therefore, a conservation 'step-up' rate would  
6 have little or no impact on water usage since the water bill would arrive long after the usage,  
7 providing no time to conserve water. The Company recommends that conservation rates be  
8 studied at some future date when the radio read program is completed and how such measures  
9 would impact actual usage.

10 Q. Does the Company undertake any efforts to encourage conservation?

11 A. Yes. The Company provides educational materials to customers about ways to conserve water.  
12 This information is included in our customer handbook, web site and newsletters. In addition,  
13 we mail water conservation pamphlets to all of our customers at the start of the summer season.  
14 The Company has lawn irrigation policies for some of its community systems that require  
15 'odd/even' lawn irrigation policies or in complete water bans when it is necessary. During peak  
16 summer usage, customers can access the web site for current updated status of lawn irrigation  
17 programs for their system. The Company also polices these systems for compliance when water  
18 supplies are critical.

19 XI. Request for Step Increase

20 Q. Ms. Hartley would you please explain why the Company is seeking an initial increase of  
21 14.72% and subsequent step increases of 5.05% and 3.805.51%?

22 A. Yes. The Company is seeking an initial increase of 14.72% based on a test year ending  
23 December 31, 2007. As explained in Mr. Ware's testimony, the Company has embarked on a

1 significant capital project (upgrade of the water treatment plant) to meet federal drinking water  
2 regulations. While there are significant capital expenditures in the test year associated with this  
3 project, the expenses with this project will continue into 2008 and 2009. As explained in both  
4 Mr. Ware's and Mr. Patterson's testimony, the Company is requesting a step increase to  
5 recognize the major upgrades to the Treatment Plant and other additions totaling \$12.314.9  
6 million during 2008 becoming used and useful by December 31, 2008. The Company is  
7 respectfully requesting the Commission approve step increases totaling 8.8510.56% once these  
8 additional improvements are used and useful (in May and November 2008, respectively).

9 **Q. Ms. Hartley would you please summarize Section #14, Step Increase, Schedule A, with**  
10 **Revised Step 2 entitled Pennichuck Water Works, Inc, for the Twelve Months Ended**  
11 **December 31, 2007?**

12 **A.** Yes, this exhibit shows the pro forma revenue deficiency for two step increases as of December  
13 31, 2007. The '13 month average' rate base pro forma test year of \$76,919,063 is increased by  
14 \$7,179,944 on a pro forma basis as of May 2008 and by \$5,445,5398,151,558 on a pro forma  
15 basis for plant in service as of November 2008, resulting in a total pro forma rate base of  
16 \$84,099,007 and \$89,544,54692,250,566 respectively for the two step increases. The overall rate  
17 of return of 7.81% (discussed in Mr. Patterson's and Mr. Walker's testimony and shown in  
18 Section 15, Schedule 1) is then multiplied by the total pro forma rate base for the first step  
19 increase of \$84,099,007 and the second step increase of \$89,544,54692,250,566, resulting in a  
20 cumulative required operating income of \$6,569,355 and \$6,994,7317,206,110 respectively. As  
21 shown in Step Increase, Schedule A, the pro forma net operating income for the twelve months  
22 ended December 31, 2007 is \$3,979,196 for the first step increase and \$3,907,057893,596 for the  
23 second step increase resulting in a cumulative net operating income deficiency of \$2,590,159 and

1 | \$3,087,674~~3,312,514~~ respectively. Utilizing a tax factor of 60.39%, which accounts for the  
2 | impact of both the New Hampshire Business Profits Tax at 8.5% and Federal Income Taxes at  
3 | 34%, the resulting cumulative revenue deficiency is calculated to be \$4,289,054 for the first step  
4 | increase, or a required cumulative revenue increase of 19.76% and \$5,112,890~~485,203~~ for the  
5 | second step increase, or a required cumulative revenue increase of 23.56~~25.27~~%. As also  
6 | indicated, the resulting incremental revenue deficiency is calculated to be \$1,095,263 for the first  
7 | step increase, or a required incremental revenue increase of 5.05% and \$823,836~~1,196,149~~ for  
8 | the second step increase, or a required incremental revenue increase of 3.80~~5.51~~%. This increase  
9 | will permit the Company to provide adequate and reliable service at affordable rates for all of its  
10 | customers while still maintaining its ability to attract new debt and equity capital.

11 | **Q. Ms. Hartley, would you please summarize Step Increase, Schedule 1 with Revised Step 2**  
12 | **entitled, "Pennichuck Water Works, Inc., Operating Income Statement for the Twelve**  
13 | **Months Ended December 31, 2005"?**

14 | A. Yes, this exhibit shows in column 1 the actual operating results of the Company for the twelve  
15 | months ended December 31, 2007, column 2 the pro forma adjustments to the test year, column 3  
16 | the pro forma 12 months ending at December 31, 2007, column 4 the resulting net operating  
17 | income for the first step increase, column 5 the pro forma test year with proposed adjustments for  
18 | the first step increase, column 6 pro forma adjustments for the resulting net operating income for  
19 | the second step increase and column 7 for the second step increase pro forma for the test year.

20 | **Q. Please explain each of the pro forma adjustments made to the operating revenues and**  
21 | **expenses as shown in both Step Increases, Schedule 1, Columns 4 and 6.**

22 | A. Depreciation expense has been increased by \$166,535 for the first step increase and  
23 | \$119,455~~41,743~~ for the second step increase accounting to reflect the capital improvements and

1 retirements for the Treatment Plant and adjustments of \$65,964 and ~~\$47,316~~~~56,144~~ to reflect the  
2 tax benefit for step increases one and two respectively. Step Increase, Schedule 1 with Revised  
3 Step 2, Attachments A through C provide in detail the nature and specific computation for each  
4 pro forma adjustment to these accounts.

5 **Q. Please explain each of the adjustments to the Income Statement for the pro forma step**  
6 **increase.**

7 A. The adjustment for depreciation expense is calculated on Step Increase, Schedule 3 with Revised  
8 Step 2, Attachment A, Exhibit 1 at one half year depreciation expense of \$154,764 for the  
9 \$6,970,119 of capital additions to the Treatment Plant for the first step increase and one half year  
10 depreciation expense of ~~\$116,904~~~~142,785~~ for the ~~\$5,366,261~~~~7,976,601~~ of capital additions to the  
11 Treatment Plant for the second step increase. A deduction of one half year depreciation expense  
12 of \$(10,324) and ~~\$(8,497)~~~~12,089~~ for the retirement of assets related to the upgrades at the  
13 treatment plant and other assets for the first step increase and second step increase respectively,  
14 Schedule 3, Attachment A, Exhibit 3. Additionally, there is a pro forma adjustment of \$33,143  
15 for filter media and its estimated useful life. The net pro forma adjustment for the depreciation  
16 expense for the first step increase is \$166,535 and ~~\$119,455~~~~41,743~~ for the second step increase.

17 **Q. Please explain Step Increase, Schedule 1, Attachment D with Revised Step 2 entitled,**  
18 **“Pennichuck Water Works, Inc., Income Taxes”.**

19 A. This schedule calculates the New Hampshire Business Profits Tax and Federal Income Tax  
20 benefits derived from the pro forma adjustments to operating expenses for a total tax benefit of  
21 \$(14,155) and \$(51,809) respectively for the first step increase for a total adjustment of  
22 \$(65,964); and for a total tax benefit of ~~\$(10,154)~~~~2,048~~ and ~~\$(37,162)~~~~44,096~~ respectively for the  
23 second step increase for a total adjustment of ~~\$(47,316)~~~~56,144~~.

1 | Q. Please explain Step Increase, Schedule 3 with Revised Step 2, entitled “Pennichuck Water  
2 | Works, Computation of Rate Base, For the Twelve Months ended December 31, 2007”?

3 | A. The overall purpose of this schedule is to calculate a pro forma rate base for the Company in  
4 | order to determine the basis on which to compute the allowed rate of return for the step increase.  
5 | Column 1 of this exhibit shows the test year rate base account calculated on an actual “13 month  
6 | average” rate base for the twelve months ended December 31, 2007, column 2 represents a “year  
7 | end” rate base for the twelve months ended December 31, 2007, column 3 details the pro forma  
8 | adjustments to the “test year average” rate base, column 4 reflects the pro forma test year, column  
9 | 5 reflects the pro forma adjustments to the pro forma test year for the first step increase, column  
10 | 6 represents the first step increase pro forma test year for rate base, column 7 reflects the pro  
11 | forma adjustments to the pro forma test year for the second step increase, and column 8  
12 | represents the second step increase pro forma test year for rate base. The computation detail for  
13 | each adjustment is shown on Step Increase, Schedule 3, Attachment A through C inclusive. The  
14 | pro forma adjustment to the rate base for plant in service is \$6,356,346 for the first step increase  
15 | and \$4,752,072~~7,197,398~~ for the second step increase, the pro forma adjustment for accumulated  
16 | depreciation \$(84,517) and \$(277,154)~~390,088~~ respectively, the pro forma adjustment for  
17 | accumulated depreciation loss of \$352,397 and \$209,083~~35,283~~ respectively and a pro forma  
18 | adjustment for accumulated depreciation for cost of removal of \$386,684 and \$207,229~~328,790~~  
19 | respectively. The total pro forma adjustment to rate base for the first step increase is \$7,179,944  
20 | resulting in a total first step increase pro forma test year of \$84,099,007 and a total pro forma  
21 | adjustment to rate base for the second step increase is \$5,445,539~~8,151,558~~ resulting in a total  
22 | second step increase pro forma test year of \$89,544,546~~92,250,566~~. Step Increase, Schedule 3  
23 | with Revised Step 2, Attachment A, Exhibit 1 details additions to plant in service totaling



1 | \$6,970,119 and ~~\$5,366,261~~~~7,976,601~~ that are expected to be completed by May 2008 and  
2 | November 2008 respectively. The plant for the first step was constructed in 2007 and 2008 and  
3 | became operational by May 31, 2008. The plant for the second step will be constructed  
4 | beginning June 1, 2008 and become operational by November 30, 2008. All of the  
5 | improvements included in the step increases are necessary to remain in compliance with SDWA,  
6 | maintain or improve customer service or replace aging infrastructure and all of these plant  
7 | additions are non-revenue producing in nature. Step Increase, Schedule 3, Attachment A with  
8 | Revised Step 2, Exhibit 3, details all the retirements of plant in service related to the new  
9 | construction at the Treatment Plant for the constructed plant in 2008. A reduction of \$(613,773)  
10 | and ~~\$(614,189,779,203)~~ has been made to plant in service for retirements that will occur as a  
11 | result of the construction completed in the 2008 for the first and second step increase  
12 | respectively. The total net pro forma plant in service for the step increase is \$6,356,346 and  
13 | ~~\$4,752,072~~~~7,197,398~~ for the first and second step increase respectively. Step Increase, Schedule  
14 | 3 with Revised Step 2, Attachment B, reflects a pro forma adjustment for accumulated  
15 | depreciation for the one half year depreciation expense of \$154,764 and ~~\$116,904~~~~42,785~~ for the  
16 | first and second step increase respectively related to the Treatment Plant upgrades and other  
17 | assets. Also, an additional pro forma adjustment to accumulated depreciation of \$(261,376) and  
18 | ~~\$(405,106)~~~~543,920~~ for the first and second step increase respectively is made to recognize the  
19 | retirements at the Treatment Plant related to the 2008 capital additions. Finally, a pro form  
20 | adjustment of \$33,143 is made to recognize a shorter useful life for filter media. The net pro  
21 | forma adjustment for accumulated depreciation is \$(84,517) and ~~\$(277,154)~~~~390,088~~ for the first  
22 | and second step increases respectively. Step Increase, Schedule 3 with Revised Step 2,

1 Attachment C, reflects the accumulated depreciation loss and cost of removal for the expected  
2 retirements of plant in service, including the cost of removal related to the Merrimack Dam.

3 **Q. Ms. Hartley will all of the pro forma capital additions included in the pro forma adjusted**  
4 **rate base for the step increase be used and useful on May 31, 2008 and November 30, 2008?**

5 A. Yes.

6  
7 **Q. Will the expenses incurred by the Company in making these rate base additions for the**  
8 **step increases be prudent?**

9 A. Yes, as discussed in Mr. Ware's testimony, all of these investments are prudent and necessary.

10 **Q. Ms. Hartley, please explain the impact of the 5.05% for the first step increase and**  
11 **3.805.51% for the second step on the rate request of 14.72% previously described?**

12 A. Section 12, Step Increase, Schedule A with Revised Step 2, reflects the impact of both the  
13 14.72% rate increase and the 5.05% and 3.805.51% step increases resulting in combined increase  
14 of 23.565.27%. Column 7, entitled Step Increase #1 & #2 Pro Forma Test year shows the  
15 combined effect of these increases. The total pro forma rate is multiplied by the overall rate of  
16 return of 7.81% resulting in required operating income of \$6,994,7317,206,110. Accounting for  
17 the adjustments to net operating income for the \$600,475, \$100,571 and \$72,13985,599 pro  
18 forma operating expenses for the proposed increases of 14.72%, 5.05% and 3.805.51%  
19 respectively will result in a net operating income deficiency of \$3,087,674312,514. The  
20 deficiency is then divided by the 60.39% tax factor resulting in a total revenue deficiency of  
21 \$5,112,890485,203 which divided by water revenues of \$21,703,068 results in a rate increase of  
22 23.565.27%.

23 **Q. How is the Company proposing to adjust its current rate levels to achieve the total revenue**  
24 **increase of 23.565.27% in this case?**

1 A. The Company proposes to adjust its current rate levels in accordance with its Cost of Service  
2 Study. As stated previously the Company proposes to collect 86.2% of its required revenues  
3 from Water Service Revenues (both general water service (GWS) and contract water service),  
4 3.68% from Private Fire Revenue and 10.12% from Municipal Fire Revenues. This revenue  
5 collection allocation would result in the Company collecting \$21,555,259.10 or an increase of  
6 23.405.12% from its GWS customers, \$1,859,853.84,116 or an increase of 22.554.20% from  
7 Contract revenues, \$986,814,000,533 or an increase of 99.68102.46% from Private Fire  
8 revenues and \$2,713,607.51,616 or an increase of 10.021.56% from Municipal Fire revenues  
9 resulting in an overall revenue increase of 23.5625.28%. ~~(The difference between the overall~~  
10 ~~revenue increase in the rate filing of 23.565.27% noted above vs. 25.28% in the cost of service~~  
11 ~~study is due a slight difference in the cost study allocation as noted in Schedule 13 Step 2, page 5~~  
12 ~~of 5 of the cost of service study.)~~ The above allocation will result in an average annual  
13 residential water bill for a single family home of approximately \$557.59565.30 based on average  
14 usage per 9.53 one hundred cu.ft. This will represent an increase of \$8.238.88 per month for  
15 residential customers over current rates.

16 Q. Ms. Hartley, is there any other information you would like to discuss at this time?

17 A. Yes, the binder labeled Pennichuck Water Works, DW 08-073, Rule 1601.04 and 1604.08 has  
18 been organized to facilitate the three elements of the Company's proposed rate increase: the  
19 request for temporary rates, the request for the 14.72% rate increase, and the request for the two  
20 step increases of 5.01% and 3.805.51%. Section #3 includes revised tariff pages and Sections #5,  
21 #6, and #7 include the Report of Proposed Rate Changes for the initial and step increase. Section  
22 #2 includes related schedules and reports for the petition for temporary rates.

23 Q. Ms. Hartley does this conclude your testimony at this time?

1 A. Yes.

**STATE OF NEW HAMPSHIRE**  
**BEFORE THE**  
**PUBLIC UTILITIES COMMISSION**

**Pennichuck Water Works, Inc.**

**Docket No. DW 08-073**

**AMENDED PRE-FILED DIRECT TESTIMONY OF BONALYN J. HARTLEY**

**September 5, 2008**

## **TABLE OF CONTENTS.**

I.	Background and Qualifications.....	1
II.	Overview of Rate Case Schedules .....	2
III.	Pro-Forma Adjustments .....	5
IV.	Cost-Containment Efforts .....	13
V.	Increases in Property Tax and Depreciation .....	17
VI.	Effect of Taxes .....	19
VII.	PWW Balance Sheet .....	19
VIII.	Computation of Rate Base .....	21
IX.	Impact of Rate Increase.....	24
X.	Water Conservation .....	25
XI.	Request for Step Increase.....	26

1    **I.    Background and Qualifications**

2    **Q.    Please state your name and business address.**

3    A.    Bonalyn J. Hartley. My business address is 25 Manchester Street, Merrimack, New Hampshire.

4    **Q.    Please state your position with Pennichuck Water Works, Inc. ("Company") and**  
5    **summarize your professional and educational background.**

6    A.    I serve as Vice President of Administration for the Company and of Pennichuck Corporation  
7    ("the Parent"), which holds all the Company's common stock. I was appointed to this position in  
8    April 2001. Prior to that, I served in various capacities including Vice President-Controller,  
9    Manager of Systems and Administration and Office Manager. I have been with the Company for  
10    over 29 years, in total. In 1989, I attended the Annual Utility Rate Seminar sponsored by the  
11    National Association of Regulatory Commissioners and the University of Utah. I am a graduate  
12    of Rivier College with a B. S. in Business Management. In addition, I am a Director of the New  
13    England Chapter of the National Association of Water Companies.

14   **Q.    Ms. Hartley, what are your duties as Vice President of Administration for the Company?**

15   A.    As Vice President of Administration, I am primarily responsible for the management of  
16    administrative services for the Company including regulatory affairs, information technology,  
17    human resource functions and customer service. I also serve as a liaison to the accounting  
18    department particularly in the area of government and regulatory matters, system acquisitions and  
19    information technology.

20   **Q.    Have you testified before the New Hampshire Public Utilities Commission on any previous**  
21   **occasions?**

1 A. Yes. I have testified before the Commission in a number of cases, including the following rate  
2 cases: DR 91-055, DR 92-220, DR 97-058, DW 01-081, DW 04-056, DW 07-32, DW 05-072  
3 and DW 06-073.

4 **II. Overview of Rate Case Schedules**

5 **Q. Are you familiar with the pending rate application of Pennichuck Water Works, Inc. and**  
6 **with the various schedules?**

7 A. Yes, I am. These schedules and exhibits are found under Sections 12, 13 and 14 in the binder  
8 marked Pennichuck Water Works, Inc, DW 08-073, Rules 1601.04 and 1601.08 filed by the  
9 Company. I either prepared the schedules and exhibits or they were prepared under my  
10 supervision (excluding the schedules filed pursuant to Section 1604.08 which were directed by  
11 Mr. Patterson and the related attachments prepared by Mr. Walker).

12 **Q. Please provide an overview of how these schedules and exhibits are organized for this rate**  
13 **filing.**

14 A. Contained in the rate case binder are the following schedules as required by PUC 1604.06:

15 **Section #12: Schedule A, Combined Computation of Revenue Deficiency**

16 **Section #13: Supporting Schedules & Exhibits**

17 **Schedule A, Computation of Revenue Deficiency**

18 **Schedule 1, Operating Income Statement**

19 **Schedule 1, Attachments A – H, Pro Forma Adjustments to Income/ Expense**

20 **Schedule 1A, Property Taxes**

21 **Schedule 1B, Payroll Summary**

22 **Schedule 1C, 2007 Management Fee Pro Forma Adjustment/Allocation**

23 **Schedule 2, Assets and Deferred Charges**



1       **Schedule 2A, Stockholders Equity and Liabilities**  
2       **Schedule 2, Attachment A, Accumulated Depreciation**  
3       **Schedule 2, Attachment B, Materials and Supplies**  
4       **Schedule 2, Attachment C, Other Deferred Charges and Other Assets**  
5       **Schedule 2, Attachment D, Analysis of Deferred Charges**  
6       **Schedule 2B, Contributions in Aid of Construction**  
7       **Schedule 3, Computation of Rate Base**  
8       **Schedule 3, Attachments A through E, Pro Forma Adjustments to Rate Base**  
9       **Schedule 3A, Computation of Working Capital**  
10       **Schedule 3B, Computation of Thirteen Month Average Balance**  
11       **Schedule 3C, Computation of 13 Month Avg Unfunded FAS 106 & 158 Costs****Section #14:**  
12       **Step Increase, Supporting Schedules & Exhibit**  
13       **Step Increase, Schedule A with Revised Step 2, Computation of Revenue Deficiency**  
14       **Step Increase, Schedule 1 with Revised Step 2,**  
15       **Step Increase, Schedule 1 with Revised Step 2, Attachments A – D, Adjustments to**  
16               **Income/Expenses**  
17       **Step Increase, Schedule 3 with Revised Step 2, Computation of Rate Base**  
18       **Step Increase Schedule 3 with Revised Step 2, Attachments A – C, Adjustments to Rate**  
19       **Base**  
20       Additional schedules and exhibits are attached to the above schedules that support figures  
21       appearing on the written testimony and/or in accompanying exhibits.

1    **Q.    Ms. Hartley would you please summarize Section #12, Schedule A, entitled “Pennichuck**  
2       **Water Works, Inc., Computation of Revenue Deficiency, For the Twelve Months Ended**  
3       **December 31, 2007”?**

4    A.    Yes, this exhibit shows the pro forma revenue deficiency as of December 31, 2007. The thirteen  
5       month average rate base of \$72,945,003 is increased by \$3,974,060 on a pro forma basis for plant  
6       in service, resulting in a total rate base of \$76,919,063. The overall rate of return of 7.81%  
7       (discussed in Mr. Patterson’s and Mr. Walker’s testimony and shown in Section 15, Schedule 1)  
8       is then multiplied by the total pro forma rate base of \$76,919,063, resulting in a required net  
9       operating income of \$6,008,497. As shown in Schedule 1, the pro forma net operating income  
10      for the twelve months ended December 31, 2007 is \$4,079,767, resulting in a net operating  
11      income deficiency of \$1,928,730. Utilizing a tax factor of 60.39%, which accounts for the  
12      impact of both the New Hampshire Business Profits Tax at 8.5% and Federal Income Taxes at  
13      34%, the resulting revenue deficiency is \$3,193,791, or a required revenue increase of 14.72%.  
14      This increase will permit the Company to provide adequate and reliable service for all of our  
15      customers while still maintaining the ability to attract new debt and equity capital.

16   **Q.    Ms. Hartley, is the Company seeking an additional increase over the 14.72%?**

17   A.    Yes. As explained later in my testimony, the Company is requesting an overall increase of  
18       23.56% increase. This increase, as explained later in my testimony, would be phased in through  
19       an initial increase of 14.72% and two step increases of 5.05% and 3.80%.

20   **Q.    Has the Company modified its proposed rate increase since it initially filed the case in June**  
21       **2008?**

22   A.    Yes. As described in the Supplemental Testimony of Donald L. Ware, the Company has  
23       decreased its request for a rate increase in Step 2 based on certain capital additions that will be

1 deferred. As a result, I am amending my testimony and the related schedules to reflect this  
2 change. The Company is also submitting a revision to Mr. Palko's cost of service study to reflect  
3 this change.

4 **Q. Ms. Hartley, would you please summarize Schedule 1 entitled, "Pennichuck Water Works,**  
5 **Inc., Operating Income Statement for the Twelve Months Ended December 31, 2007"?**

6 A. Yes, this exhibit shows the actual operating results of the Company for the twelve months ended  
7 December 31, 2007, which is the period the Company is using for the test year in this case.

8 **Q. Would you please explain the term "test year"?**

9 A. The test year (which in this case is the calendar year 2007) is the period for which the Company's  
10 costs are examined to determine if they are reasonable and establish a level of rates that will  
11 enable the Company to earn a reasonable return on its investment. Consistent with Commission  
12 practice, certain of the Company's financial documents have been adjusted or pro formed, to  
13 reflect annualization or normalization of known changes in conditions occurring during the test  
14 year and the twelve months after.

15 **III. Pro-Forma Adjustments**

16 **Q. Does Schedule 1 show such adjustments?**

17 A. Yes, Column 2 also reflects pro forma adjustments to recognize a \$390,072 increase in total  
18 revenues and \$487,530 in net increases in operating expenses that have occurred or will occur  
19 within the twelve months after the end of the test year. Each adjustment will be explained later  
20 in full detail. Column 1 is the actual operating income statement for the test year and shows that  
21 operating revenues were \$21,547,912, total operating expenses were \$9,757,849 and the resultant  
22 net operating income was \$4,680,242. Column 3 presents the actual figures as adjusted by the

1 pro forma adjustments. Columns 4 and 5 present comparative data for the twelve months ended  
2 December 31, 2006 and 2005 respectively.

3 **Q. Please explain each of the pro forma adjustments made to the operating revenues and**  
4 **expenses as shown in Schedule 1, Column 2.**

5 A. Operating revenues have been increased by \$390,072 as a result of; (i) a 20.36% step  
6 increase which was authorized in DW 06-073 and effective January 5, 2007. A pro forma  
7 adjustment of \$26,205 is made to recognize the period from January 1<sup>st</sup> to January 4<sup>th</sup>; (ii) a  
8 3.07% subsequent step increase authorized in DW 06-073 effective June 1, 2007 for a pro forma  
9 adjustment of \$206,644 to recognize the period from January through May 2007; and (iii) a  
10 11.07% permanent increase authorized in DW 06-073 effective July 18, 2006 resulting in a credit  
11 of \$187,034 to customers for the difference between the temporary rate increase awarded in 2006  
12 and permanent rates. A final pro forma adjustment is made to decrease revenues by \$(29,812) to  
13 reflect the impact of the elimination of significant metered leakage from the Coburn Woods  
14 Association distribution system during 2007. The Company worked with the Association to  
15 install 224 individual meters. After installation, the Company compared the total of these meters  
16 against a master 6" meter in order to accurately assess the amount of unaccounted for water. It  
17 then worked with the Association throughout 2007 to locate and repair leaks which resulted in  
18 the overall system leakage dropping from 74% or 57 gallons per minute at the beginning of 2007  
19 to less than 3% or under 1 gallon per minute at the end April of 2008 with the result being a  
20 projected decrease in revenues from the Coburn Woods Association of \$29,812.

21 **Q. Ms. Hartley please continue.**

22 A. The operating expenses have been increased by \$487,530 to reflect known changes that occurred  
23 during the test year or have occurred or will occur within the twelve months following the test

1 year. Schedule 1, Attachments A through H provide in detail the nature and specific computation  
2 for each pro forma adjustment to each operating account.

3 **Q. Please explain the pro forma adjustment for union employees.**

4 A. On February 16, 2007, the Company negotiated a three year contract with the United  
5 Steelworkers of America for employees hired in the Company's Production and Distribution  
6 Departments. Schedule 1, Attachments B, pages 1 and 2 reflect pro forma adjustments for the  
7 4% union wage increase effective February 16, 2007 and the 4% union wage increase effective  
8 February 16, 2008. Additionally, adjustments are made to reflect three replacements in the  
9 Production Department that were the result of one termination, one retirement, and one death in  
10 December of 2006 and one replacement in the Distribution Department that was the result of one  
11 termination.

12 **Q. Please explain the pro forma adjustments to payroll for the salaried employees of the**  
13 **Company.**

14 A. Payroll adjustments are reflected for average annual increases of 4.0% that occurred on April 1,  
15 2007 and 4.1% on April 1, 2008 for all salaried employees including executives. Adjustments  
16 are also included to recognize those employees leaving the Company or transferring within the  
17 Company as well as new hires. In 2007, the Company replaced 4 accounting administrators that  
18 were the result of 3 terminations in 2007 and one termination in December of 2006. One  
19 software support employee was terminated and one cad technician was terminated, neither of  
20 which was replaced.. In February 2008, a Lead Electrician was hired to support the upgrades to  
21 the Water Treatment Plant. In 2007, the Company replaced 2 Customer Service Representatives  
22 for 2 terminated employees and, in 2008 hired one Customer Service Representative to replace a  
23 temporary employee in 2007. The Company hired a Customer Service Representative on

1 February 11, 2008 and anticipates hiring two additional Customer Service Representatives on  
2 June 1 and October 1, 2008. The Company will be hiring an additional Utility Technician on  
3 October 1, 2008. The additional Customer Service personnel are necessary to support the  
4 additional billing and collection efforts associated with PWW's conversion of customers from  
5 quarterly to monthly billing during 2008. The Company is requesting that the additional  
6 positions be annualized for the full year to reflect the impact of increased billings from 124,000  
7 to 300,000 billings by February of 2009. The impact of these changes on salaries and wages are  
8 detailed on Schedule 1, Attachment H.

9 **Q. Ms. Hartley please explain the pro forma salary adjustments for executives of the**  
10 **Company.**

11 A. Effective April 1, 2007, there is a total pro forma salary adjustment of \$5,812 for five executives  
12 of the Company, reflecting an average annual salary increase of 3.2%. For April 1, 2008, there is  
13 a total pro forma adjustment of \$22,500 for seven executives reflecting an average annual salary  
14 increase of 3.5%.

15 **Q. What portion of the pro forma adjustments represents salary and wages**  
16 **for the test year?**

17 A. The total salary and wage adjustments before any income tax benefit are \$466,867 as compared  
18 to the actual payroll of \$6,712,770 for the twelve months ended December 31, 2007. This is  
19 shown in detail on Schedule 1B entitled "Pennichuck Water Works, Inc., Payroll Summary".

20 **Q. Ms. Hartley would you please summarize Schedule 1B for the Commission?**

21 A. Yes. Schedule 1B itemizes the various classifications of labor by Operations and Maintenance,  
22 Construction and Jobbing. Column 1 details a total payroll expense of \$6,712,770 that was  
23 actually incurred during the twelve months ended December 31, 2007. As previously stated, the

1 total payroll adjustments in Column 7 are \$466,867, of which \$424,457 is for operating labor and  
2 \$4,139 is for capitalized labor in construction. As shown in Columns 2-6, adjustments include  
3 payroll increases effective February 16, 2007 and February 16, 2008 for union employees, salary  
4 increases that were effective April 1, 2007 and April 1, 2008 for salaried employees, and  
5 adjustments for new hires and terminations for 2007 and 2008.

6 **Q. What other types of expenses are included in the pro forma adjustments to the Operating**  
7 **Income Statement?**

8 A. Other operating expenses for which pro forma adjustments have been made are related to  
9 increases in operating and maintenance expenses for the Production Account resulting in a total  
10 pro forma adjustment of \$152,770, which includes the following items: (i) in 2008, the Company  
11 incurred increases in costs of all chemicals utilized at the Treatment Plant which represents an  
12 annual expense of \$20,515; and (ii) purchased water costs for the Company increased over the  
13 2007 test year expenses as the result of a July 1, 2007 increase in rates charged to the Company  
14 by the Merrimack Village District and a January 1, 2008 increase in rates charged to the  
15 Company by the Town of Milford. These increase charges result in a total pro forma adjustment  
16 of \$9,504 as detailed in Schedule 1, Attachment B, Page 1.

17 **Q. Ms. Hartley please explain the adjustments made to the Distribution Account.**

18 A. The cost of fuel has increased significantly from 2007 to May 2008 and continues  
19 to increase. The majority of the Company's fuel costs is related to this department as most of our  
20 labor personnel are utilizing trucks and other vehicles to service our customers and the system.  
21 Therefore, the Company is making a pro forma adjustment to reflect an increase from \$204,385  
22 to \$282,347 for 2007 and 2008 respectively. This was calculated utilizing \$3.698 per gallon for  
23 gasoline and \$4.19 for diesel (the average price for a gallon of gas/diesel in the Nashua area on

1 May 1, 2008). Based on the Company's Work Order percentage of 63.30%, the total fuel  
2 increase of \$77,962 results in an allocation of \$49,350.

3 **Q. Please explain Schedule 1, Attachment B, Page 3.**

4 A. The schedule reflects pro forma adjustments for engineering salaries of \$4,670 and  
5 \$15,229 representing salary increases and adjustments of 5.3% on April 1, 2007 and adjustments  
6 of 4.2% on April 1, 2008 respectively. An adjustment of \$(8,875) is made to reflect the impact  
7 of the personnel hirings and terminations during the test year and in 2008. Total pro forma  
8 adjustments for engineering salaries is \$11,023.

9 **Q. Does this complete the adjustments that have been made to the operating expenses in the**  
10 **Distribution Account?**

11 A. Yes.

12 **Q. Ms. Hartley would you please explain other adjustments made for administrative expenses**  
13 **found on Schedule 1, Attachment C, Page 1?**

14 A. Yes, there are adjustments to recognize salary adjustments, increases in wages, and personnel  
15 hirings and terminations during the test year and in 2008. The schedule reflects pro forma  
16 adjustments for accounting salaries of \$5,347 and \$17,710 representing salary increases and  
17 adjustments of 3.9% on April 1, 2007 and salary increases and adjustments of 4.6% on April 1,  
18 2008 respectively. An adjustment of \$257 is made to reflect the impact of the personnel hirings  
19 and terminations during the test year and in 2008. Total pro forma adjustments for accounting  
20 salaries are \$23,314. The schedule reflects pro forma adjustments for customer service are  
21 \$3,751 and \$13,013 representing salary increases and adjustments of 4.8% on April 1, 2007 and  
22 salary increases and adjustments of 4.3% on April 1, 2008 respectively. An adjustment of  
23 \$165,175 is made to reflect the impact of the personnel hirings and terminations during the test



1 year and in 2008. Total pro forma adjustments for customer service salaries are \$181,939. In  
2 June 2008, the Company began converting its quarterly customers to monthly accounts and as  
3 previously stated is planning to hire two additional customer service employees to support this  
4 major initiative. The new hire planned for June 1, 2008 will be trained in billing and receivables  
5 and the utility technician is a union position that will be required to meet the increased collection  
6 activity. The billing, receivables, collections and customer calls will increase by approximately 3  
7 times for bills and receipts annually. The Company is proposing that the new positions be  
8 recognized for a full 12 months. The schedule also reflects pro forma adjustments for  
9 Information Technology salaries of \$1,706 and \$7,095 representing salary increases and  
10 adjustments of 3.2% on April 1, 2007 and salary increases and adjustments of 4% on April 1,  
11 2008 respectively. An adjustment of (\$3,527) is made to reflect the impact of the personnel  
12 hirings and terminations during the test year and in 2008. Total pro forma adjustments for  
13 Information Technology are \$5,273. Finally, there are pro forma adjustments of \$10,110 and  
14 \$28,312 for other administrative salaries and executive salaries for salary increases on April 1,  
15 2007 and April 1, 2008 that when included with other adjustments result in a total pro forma  
16 administrative salary adjustment of \$248,947.

17 **Q. Would you please continue?**

18 A. Yes. On Schedule 1, Attachment C, Page 2, for purpose of calculating an adjustment for  
19 benefits, total operating expense payroll dollars of \$424,457 (Schedule 1B) is multiplied by  
20 38.6% benefit percentage, resulting in a pro forma adjustment of \$163,841. An adjustment is  
21 included for a reduction of \$29,629 for charitable contributions as reflected in the documents  
22 submitted in Rule 1604.01, Section 5. Other adjustments are made to the test year to recognize an  
23 increase of \$6,080 in regulatory commission expense, an \$8,941 adjustment for computer

1 maintenance expense, and an adjustment of \$12,051 for membership fees of \$1,460 and \$10,591  
2 for NAWC and the AWWA Research Foundation. The Company eliminated or negotiated for  
3 one year “only” reduced membership fees in NAWC and AWWARF for 2007 until the  
4 Company’s earnings and cash flow improved as a result of the temporary and permanent rates  
5 requested in the pending PWW rate case (DR 08-073). Note: I would include a sentence or two  
6 about why membership in these organizations is important.

7 Customer billing expenses have been adjusted to recognize the transition from quarterly to  
8 monthly billing. The amount of billing materials and postage will increase by \$133,420 and, the  
9 Company is proposing that this expense be recognized for twelve months as the conversion will  
10 be completed by January 2009. In 2008, the Company purchased a scanner to assist in the  
11 processing of customer remittances and an adjustment of \$2,887 has been made to reflect the  
12 increase in maintenance cost for this equipment. Additionally, during the test year, there were  
13 expenses that were non-recurring in nature and pro forma adjustments are made to eliminate the  
14 following from the test year: commission expense for auction bonds of \$(4,550), obsolete  
15 inventory for obsolete customer education supplies of \$(3,937) and for obsolete customer  
16 conservation materials of \$(4,806), and for book to CPR true-ups of \$10,329.

17 **Q. Ms. Hartley are there any other adjustments for the Administrative and General**  
18 **Accounts?**

19 **A.** Yes, there are pro forma adjustments to reflect expenses allocated through the Management Fee  
20 to other Pennichuck Corporation subsidiaries. The allocation from Pennichuck Water Works to  
21 all affiliates which is reflected in Rule 1604.01, Section 26. The allocable percentage rate is  
22 based on certain criteria including revenues, employees, square footage utilized, number of  
23 customers, and assets. Therefore, the pro forma payroll of \$424,457 and the pro forma benefits

1 at 38.6% of \$163,841 totaling \$588,298 have been multiplied by 28.1% resulting in a deduction  
2 to the Administrative and General Accounts of \$(165,312).

3 During the test year there were expenses that were non-recurring in nature and adjustments have  
4 been made as a reduction to the Management Fee to recognize these items as follows: an  
5 adjustment of \$(286) associated with Great American Insurance Claim, an adjustment of  
6 \$(25,312) associated with 2007 retention bonuses, and an adjustment of \$(58,071) for 2007  
7 bonuses paid above plan levels due to achievement of specified goals. Other adjustments for  
8 items not included in the test year are reductions to the Management Fee and include: an  
9 adjustment of \$(36,363) to allocate water treatment plant office salaries to affiliates through the  
10 work order allocation, an adjustment of \$(54,949) to allocate depreciation for leasehold  
11 improvement related to the HECOP III fit-up allowance, and an adjustment of \$(45,191) to adjust  
12 depreciation of leasehold improvements over 10 years versus the 5 years on the Company's  
13 books. Additional adjustments for items not included in the test year to increase the  
14 Management Fee include: an adjustment of \$35,112 to annualize the board costs associated with  
15 the search for President and CEO in 2006 and an adjustment of \$39,451 for allocation of work  
16 order overhead to eliminate contractor invoices (Schedule 1C). The total pro forma adjustment  
17 for all Administrative and General Accounts is a net increase of \$232,651 including the  
18 adjustment for the total management fee allocation or \$(310,922).

19 **IV. Cost-Containment Efforts**

20 **Q. Ms. Hartley, what actions has the Company taken to contain costs?**

21 **A.** The Company consistently reviews and analyzes its costs to determine their necessity, whether  
22 there are alternative options or whether they can be eliminated. For example, in the area of  
23 Customer Accounting and Collections, the Company upgraded its utility billing program in 2006

1 to provide cost effective and convenient payment options for customers, and in early 2008 the  
2 Company began offering online payment via its web site at [www.pennichuck.com](http://www.pennichuck.com). Processes  
3 have been initiated for electronic check deposits to the Company's bank account with software  
4 entitled "payment concentrator" for customers that make online payments through their own  
5 banks and with remote deposit equipment for customers paying in person at the Company's  
6 headquarters. In 2008, the Company purchased new remittance equipment that assists in the  
7 processing of customer payments by mail and that scans customer check for electronic deposits  
8 in the Company's bank account. In the future, the Company also plans to provide electronic bill  
9 presentation.

10 **Q. Has the Company implemented other efficiency measures?**

11 A. Yes. Our centralized and automated customer appointment schedule for back flows, pressure  
12 complaints, and meter appointments improves efficiency and responsive customer service. This  
13 program calculates travel time and automatically reschedules and determines the most efficient  
14 travel route. It also provides for automatic scheduling for routine appointments such as backflow  
15 testing. Managers can now view "real time" employee work schedules for easy rescheduling and  
16 efficiency. Automation has improved Company response and efficiency in all areas. For  
17 example, the SCADA system at the Treatment Plant allows operators to monitor remote facilities  
18 by computer and the OPS 32 program allows operators to record data in the field on Palm Pilots.  
19 In 2005, we implemented a new Laboratory Information System (LIMS) which provides for  
20 automatic tracking of water testing and sampling. This new system will eliminate redundancy,  
21 improve laboratory reporting, and monitoring of water quality. Sample results from outside  
22 laboratories are now imported electronically thereby increasing accuracy and efficiency. In  
23 2007, the Company developed software interfaces between its BNA fixed asset program and

1       MUNIS utility billing program to its MACOLA accounting program, and in 2008, the Company  
2       developed a software interface from its Synergen work order program to MACOLA creating  
3       added efficiencies. The Company has standardized its desk top computers and software suites  
4       allowing for easier maintenance and training while increasing processing power and productivity.  
5       To better service customers, the Company has installed and implemented a Voice Over Internet  
6       Protocol (VOIP) telephone system which provides automated messaging for property transfers,  
7       payment information, and sales of property to facilitate customer service. In addition, customers  
8       are able to easily access off-duty emergency number for quick response. The system provides  
9       emergency messaging for special circumstances that may affect a large group of customers. The  
10      system also has a call feature that provides for automated phone messages to be delivered to  
11      customers for emergency and collections and can deliver over 1,200 messages in one hour.

12   **Q.    Are there other improvements that the Company has made to enhance service to**  
13   **customers?**

14   **A.    Yes.** In 2008, the Company launched its new web site that is designed to be very friendly and  
15       easy for customers to access, send messages and make payments online. The web site provides  
16       customer's with rate information by system, consumer confidence reports by supply,  
17       conservation tips, restrictions for lawn irrigation by supply, payment locations and options,  
18       environmental and engineering services, investor information and general information about the  
19       Company.     The Company is in the process of conducting a pilot study to begin developing  
20       automatic entry of work order information in the field. In the future, this new program will  
21       create efficiency, accuracy and eliminate redundancy.

22   **Q.    What other initiatives has the Company undertaken to save costs?**

1 A. All employee benefits are reviewed annually and savings negotiated where possible. The  
2 Company recognizes that the escalating cost of rising health care benefits poses challenges. In  
3 2007, the Company negotiated a more favorable contract with Harvard Pilgrim Health Insurance  
4 that helped to mitigate premium increases proposed by Anthem Blue Cross and Blue Shield.  
5 Health benefits for union employees are now prescribed in the Company's 2007 contract with the  
6 United Steelworkers Union. In 2008, union employees make a weekly contribution of \$25.18 to  
7 their health care premium and non-union employees are required to contribute 10% of their total  
8 premium through payroll deduction. This helped to mitigate the impact of the 8% increase in  
9 health care costs from Harvard Pilgrim in 2008. In reviewing the historic medical usage by our  
10 employee group, it was determined that further savings could be accomplished by having the  
11 Company self-insure for certain medical deductibles along with increasing employee co-pays.

12 **Q. Please explain the conversion to monthly billing and its impact on customers and the**  
13 **Company.**

14 A. In 2008, as described in Mr. Ware's testimony, the Company began a program to install Neptune  
15 Radio Read Units for all meters in PWW which will be completed by year end. This major  
16 project is necessary to convert customers from quarterly to monthly billing and has many  
17 advantages for both the customer and the Company. For customers; the frequency of water bills  
18 has increased which will make it easier for customers to budget monthly for this expense. It will  
19 also allow for early leak detection which will prevent undo water usage, meter repairs will be  
20 accelerated thereby eliminating the time between actual meter reads, and conservation signals to  
21 customers during peak summer usage. From the Company's perspective, monthly reading will  
22 provide more accurate unaccounted for water reports, improved cash flows, improved budgeting

1 and forecasting of unbilled water, encouragement for timely water conservation, timely meter  
2 repairs, and improved accuracy and efficiency in meter reading time.

3 **Q. Will the installations of the radio read program provide some efficiencies?**

4 A. Yes. As detailed in Mr. Ware's testimony, the meter department labor is primarily dedicated to  
5 reading meters. The radio read program will provide an opportunity to redeploy this labor for  
6 periodic testing of small meters and repairs. The Company's meter testing program has lagged  
7 in the area of small meter testing and needs to be accelerated to meet the NHPUC prescribed  
8 testing frequency. Absent the labor savings achieved by reading meters with radio read units, the  
9 Company would have to hire more union labor to complete the required testing. As described  
10 earlier in my testimony, there will be additional costs for Customer Service and Collections due  
11 to the conversion from quarterly to monthly billing. The Company believes that the benefits far  
12 out weigh this additional cost to service our customers.

13  
14 **V. Increases in Property Tax and Depreciation**

15 **Q. Are there any expense adjustments included in the pro forma adjustments to the operating**  
16 **income statement that are not related to any changes from the Company's operations?**

17 A. Yes, one of the major expenses included in the pro forma adjustments to the operating income  
18 statement is a \$599,805 increase for property taxes shown on Schedule 1, Attachment D, Page 1.  
19 This adjustment is due to the difference in the actual liability for real estate taxes and the amount  
20 actually accrued during the test year as well as the increase in taxable property owned by the  
21 Company. Schedule 1A, Pages 1-5 reflects the pro forma adjustment of \$26,980 for the net  
22 increase in property taxes for some of the communities served by the Company and for the State  
23 of New Hampshire property tax. An additional adjustment reflects the increase of taxable utility

property of \$668,813 in some of the communities served by the Company which is shown on Schedule 1A, Attachment A, Pages 1-7. These taxable additions were placed in service in 2007 at a total cost of \$27,890,506; the related property taxes are not reflected in the test year. Finally, there is an adjustment for the decrease in taxable utility property of \$(95,988) related to retirements of plant items in various communities. These taxable dispositions were retired during 2007 at a total cost of \$3,999,668 and related property taxes as found on Schedule 1A, Attachment B, Pages 1-4.

**Q. Are there any other pro forma adjustments that you have made to the operating income statement?**

**A.** Yes. There is also a pro forma adjustment for the increase in net depreciation expense of \$290,681 as shown on Schedule 1, Attachment E entitled "Pennichuck Water Works, Inc., Depreciation Expense". This adjustment is primarily attributable to the additional one-half year depreciation expense of \$459,806 for depreciable assets placed in service during 2007 and a reduction of \$(95,281) in depreciation expense to reflect the disposal of assets in the test year. An adjustment of \$(69,701) is made to reflect depreciation expense related to treatment of cost of removal (COR) as agreed by the settling parties in Order 24,751 (DW 06-073) . An adjustment of \$(4,143) is made to adjust the estimated useful life of filter media. In addition, there is a net increase in amortization expense of \$6,385 as shown in Schedule 1, Attachment F entitled "Pennichuck Water Works, Amortization of Deferred Charges" which is primarily due to a one-half year amortization expense pro forma of \$75,746 for certain projects and studies completed during 2007 and a reduction of \$(77,765) for the completed amortization of certain deferred assets during the test year. In 2008, the Company engaged consultants to perform compensation studies for non union employees and executives. The Company is proposing to amortize the



1 studies over 3 years and has made an adjustment of \$12,667. An adjustment of \$(4,263) is made  
2 to eliminate the non-recurring final amortization of the 1998 Theoretical Depreciation Reserve  
3 taken in 2007. The explanations and calculations for these amortization expenses are shown on  
4 the Schedule noted above.

5 **VI. Effect of Taxes**

6 **Q. Please explain Schedule 1, Attachment G entitled, "Pennichuck Water Works, Inc., Income**  
7 **Taxes".**

8 A. This schedule calculates the New Hampshire Business Profits Tax and the Federal Income Tax  
9 benefits derived from the pro forma adjustments to operating expenses for a total tax benefit of  
10 \$(84,518) and \$(309,336) respectively.

11 **VII. PWW Balance Sheet**

12 **Q. Please explain Schedule 2 entitled "Pennichuck Water Works, Inc., Balance Sheet"?**

13 A. This schedule shows the comparative balance sheets for Pennichuck Water Works as of  
14 December 31, 2007, 2006, and 2005. On Schedule 2, it should be noted that plant in service  
15 increased to \$134.4 million reflecting \$30.6 million of net plant additions since 2005. Other  
16 assets and deferred charges of \$5.9 million reflect expenses for abandoned property,  
17 implementation of the Sarbanes-Oxley Act, water tank inspections, the Supplemental Employee  
18 Retirement Plan (SERP) for the former President of the Company, the long term investment for  
19 funding the water line study for Berkley Street, relocation expenses, employee recruiter fees,  
20 2006 rate case expenses, VEBA Trusts, the Manchester Source Development Charge for  
21 additional capacity and the Bedford interconnect, and costs for the Filtration Media Study for the  
22 Treatment Plant (Schedule 2, Attachment C, Pages 1-2). On Schedule 2A, Stockholder's Equity

1 has increased from \$36.9 million in 2005 to \$40.3 million in 2007 while Long Term Debt and  
2 Liabilities have increased from \$58.3 million in 2005 to \$85.3 million in 2007.

3 **Q. Would you now explain Schedule 2, Attachment A?**

4 A. This schedule provides the breakout of the 'Accumulated Depreciation" item  
5 as shown on the Company's balance sheet, by account classification, for the years ending  
6 December 31, 2007 and December 31, 2006.

7 **Q. Would you please explain Schedule 2, Attachment B?**

8 A. This schedule details all of the materials and supplies on the Company's balance sheet at  
9 December 31, 2007, the 13 month average for the same, and the comparative balances as of  
10 December 31, 2006 and 2005.

11 **Q. Would you please explain Schedule 2B?**

12 A. This schedule details the customer advances and contribution in aid of construction on the  
13 Company's balance sheet for the five years from 2003 through 2007.

14 **Q. Would you please explain Schedule 2, Attachment C, Pages 1-2?**

15 A. Yes. This schedule explains the "Other Deferred Debits and Other Assets" included in the  
16 Company's balance sheet and shows the comparative balances for these deferred charges and  
17 other assets as of December 31, 2007 and 2006. Included in the December 31, 2007 balance are  
18 \$23,352 for abandoned property for wells primarily located in the Cabot Preserve and Dunlap  
19 Woods systems, \$2,932 for inspection of the Fifield Tank, \$10,162 for the study of the mast road  
20 crossing, \$673,797 for costs associated with accounting requirements for compliance with the  
21 Sarbanes-Oxley Act of 2002, \$102,993 for Bond Defeasance premium, \$2,512 for a study related  
22 to Berkley Street; and additional expenses of \$96,085 for recruiter fees, \$53,072 for Union  
23 Contract negotiations, \$470,919 for the SERP plan for the former President of the Company,

1 \$194,665 related to demolition of the Merrimack Dam, \$179,868 for the Pennichuck Brook  
2 watershed study, \$6,875 for catch basin marking, \$588,318 for VEBA Trusts, \$18,972 for web  
3 site upgrade, \$31,667 for the 2004 compensation study, \$378,974 for MSDC charges and  
4 \$28,261 for the Filtration Media Study for the Treatment Plant. It should be noted that costs of  
5 \$6,851,229 as of December 31, 2007 for defense of the eminent domain action by the City of  
6 Nashua are included in this account. These costs and no other eminent domain costs are included  
7 in this case and are reduced by the same amount of \$6,851,229 as reflected on Schedule 2,  
8 Attachment C, Page 1.

9  
10 **VIII. Computation of Rate Base**

11 **Q. Please explain Schedule 3, entitled “Pennichuck Water Works, Computation of Rate Base,**  
12 **For the Twelve Months ended December 31, 2007”?**

13 A. The overall purpose of this schedule is to calculate a pro forma rate base for the Company in  
14 order to determine the basis on which to compute its allowed rate of return. Column 1 of this  
15 exhibit shows the test year rate base account calculated on an actual “13 month average” rate  
16 base for the twelve months ended December 31, 2007 for a total of \$128,961,502 for Plant in  
17 Service. Schedule 3B details how the average was calculated. Column 2 of Schedule 3  
18 represents a “year end” rate base for the twelve months ended December 31, 2007. This  
19 information is also detailed on Schedule 3B. Column 3 details the pro forma adjustments to the  
20 “test year average” rate base. The computation detail for each adjustment is shown on Schedule  
21 3, Attachment A through E inclusive. The net pro forma adjustment to the rate base for plant in  
22 service is \$5,102,807 to annualize those non-revenue producing capital additions that were  
23 included in the “13 month average” for plant in service for the twelve months ended December

1 31, 2007. Schedule 3, Attachment A, Exhibit 2, Pages 1-5 details these non-revenue producing  
2 items and shows that the total cost for these assets placed in service during 2007 is \$27,232,123  
3 and that by utilizing "the 13 month average" only \$20,672,916 is currently reflected in the test  
4 year resulting in an adjustment of \$6,559,207. Schedule 3, Attachment A, Exhibit 4, Pages 1-4  
5 details retirements in service which were calculated as part of the thirteen month average of plant  
6 in service for the test year ending 2007 is \$4,253,147 and that by utilizing "the 13 month  
7 average" only \$2,796,747 is currently reflected in the test year for a reduction of \$(1,456,400). It  
8 should be noted that all of these projects are non-revenue producing items that are critical  
9 infrastructure improvements, upgrades to the system or mandated to maintain compliance with  
10 the SDWA. These asset additions do not provide additional revenue opportunities for the  
11 Company.

12 **Q. Please continue to explain adjustments to rate base shown on Schedule 3.**

13 A. The reduction of \$(94,292) for Deferred Debits is detailed on Schedule 3, Attachment B includes  
14 a reduction of \$(75,746) to reflect the one-half year amortization expense pro forma for the  
15 deferred charges placed in service during 2007. Schedule 2, Attachment D, Pages 1-2 reflects  
16 those items that are included. There is a pro forma adjustment to remove the deferred expense of  
17 \$(43,879) for rate case expenses related to DW 06-073. The Company is recovering these  
18 expenses from customers over a twelve month period. An adjustment of \$25,333 is proposed to  
19 recognize the unamortized balance of a compensation study to be performed in 2008. Schedule  
20 3, Attachment C shows an adjustment of \$360,382 for Accumulated Depreciation that includes  
21 the amount of \$459,806 for the additional one-half year pro forma depreciation expense for the  
22 capital assets added to the core system in 2007 and a one-half year depreciation expense of  
23 \$(95,281) for capital assets retired in the test year as shown on Schedule 3, Attachment A,

1 Exhibit 1, Pages 1-12 and Schedule, Attachment A, Exhibit 3, Pages 1-7. There is also an  
2 adjustment of \$(4,143) for the estimated useful life of filter media noted in Schedule 1,  
3 Attachment E. Additionally, a working capital pro forma adjustment is made to rate base to  
4 reflect the pro formed operations and maintenance expenses of \$487,530 on Schedule 1 for the  
5 twelve months ended December 31, 2007. This is calculated at 63.5 days divided by 365 days  
6 resulting in 17.40% which is then multiplied by \$487,530 resulting in pro forma working capital  
7 of \$84,830.

8 **Q. Are there any further adjustments to rate base?**

9 A. Yes, an adjustment of \$758,902 is made to reduce rate base for unfunded FAS 106 and 158 costs.  
10 Schedule 3, Attachment E shows a pro forma adjustment of \$206,567 to comply with  
11 Commission Order No. 20,806 in DA 92-199 by calculating unfunded FAS 106 costs of  
12 \$342,055 by the tax factor of 60.39%. And, an additional pro forma adjustment of \$552,335 to  
13 account for FAS 158 that required recognition of the over funded or under funded status for  
14 defined benefit and other post retirement plans by calculating the unfunded FAS 158 costs of  
15 \$914,614 by the tax factor of 60.39%. The total rate base for the test year 13 month average is  
16 \$72,945,003 and accounting for the pro forma adjustments of \$3,974,060 results in a pro forma  
17 rate base of \$76,919,063.

18 **Q. Please summarize what the rate base exhibits show.**

19 A. The most striking conclusion from these exhibits is the fact that the Company continues to make  
20 substantial capital investments in order to maintain the reliability of its systems and to comply  
21 with various governmental requirements. It should be noted that regulated public utilities often  
22 do not have the advantage enjoyed by other companies of deciding when, on the basis of  
23 financial considerations, to make these investments. Pennichuck has a commitment to the

1 communities it serves to provide a safe and reliable product at all times regardless of capital  
2 limitations or other considerations. The costs associated with these projects when combined  
3 with increased expenses places the Company in a position where financial relief through a rate  
4 increase is critical in order for the Company to maintain its credit worthiness and still preserve  
5 adequate earnings that will attract capital (as described in Mr. Patterson's testimony).

6 **Q. Are all of the pro forma capital additions included in the pro forma adjusted rate base**  
7 **presented by you used and useful?**

8 A. Yes.

9 **Q. Were the expenses incurred by the Company in making these rate base additions prudently**  
10 **invested?**

11 A. Yes, as discussed in Mr. Ware's testimony, all of these investments are prudently incurred.

12 **IX. Impact of Rate Increase**

13 **Q. How is the Company proposing to adjust its current rate levels to achieve the 14.72%**  
14 **revenue increase being sought in this case?**

15 A. The Company is recommending that it collect revenues from each customer class in accordance  
16 with the recommendations for each Customer Class as detailed on Schedule 9, page 1 of the Cost  
17 of Service study. This will result in the Company collecting 86.2% of its required revenues from  
18 Water Service Revenues (both general water service (GWS) and contract water service), 3.68%  
19 from Private Fire Revenue and 10.12% from Municipal Fire Revenues. This revenue collection  
20 allocation would result in the Company collecting \$19,725,694 or an increase of 14.52% from its  
21 GWS customers, \$1,734,267 or an increase of 14.34%. from Contract revenues, \$915,696 or an  
22 increase of 85.29% from Private Fire revenues and \$2,520,792 or an increase of 2.20 % from  
23 Municipal Fire revenues resulting in an overall revenue increase of 14.72%. The above

1 allocation will result in an average annual residential water bill for a single family home of  
2 approximately \$517.37 based on average usage per 9.53 one hundred cu.ft. This will represent  
3 an increase of \$4.88 per month for residential customers over current rates.

4 **Q. What efforts does the Company make to assist customers who are having difficulty paying**  
5 **their water bills?**

6 A. The Company follows the Commission's regulations prior to disconnecting any customer's  
7 service. In addition to the fourteen day notice of disconnection that a regulated utility must  
8 provide to its customers, the Company makes courtesy calls to customers two to three days prior  
9 to any scheduled disconnection (for non-payment) in an effort to help customers avoid  
10 termination of service. These calls are highly effective in assisting customers to avoid  
11 disconnections. These courtesy calls have significantly reduced the number of disconnections,  
12 which saves customers money and disruption to their lives. Once a disconnection occurs, the  
13 Company works closely with the customer to restore service. For example, the Company will  
14 reconnect a customer's service as late as 8:00 p.m. on weekdays, and customers may submit  
15 overdue payments to the Company representative at the time of reconnection. The Company also  
16 works with its customers on establishing reasonable payment plans to avoid disconnection of  
17 service.

18 **Q. Does the Company provide any assistance to customers experiencing**  
19 **financial hardship?**

20 A. Yes. The Company maintains a hardship fund for customers who are unable to pay their bills  
21 due to tragic experiences. The Customer Service Department may allocate money to pay a  
22 customer's bill in such circumstance.

23 **X. Water Conservation**

1    **Q.    Ms. Hartley did you include a ‘step-up’ rate to encourage water conservation at this time?**

2    A.    No, I did not. As stated previously, the Company is in the process of converting its customers  
3           from quarterly to monthly billing. Currently the majority of customers in the Pennichuck  
4           systems will not receive their quarterly water bill for the summer months of June through August  
5           until later in September or October of that year. Therefore, a conservation ‘step-up’ rate would  
6           have little or no impact on water usage since the water bill would arrive long after the usage,  
7           providing no time to conserve water. The Company recommends that conservation rates be  
8           studied at some future date when the radio read program is completed and how such measures  
9           would impact actual usage.

10   **Q.    Does the Company undertake any efforts to encourage conservation?**

11   A.    Yes. The Company provides educational materials to customers about ways to conserve water.  
12           This information is included in our customer handbook, web site and newsletters. In addition,  
13           we mail water conservation pamphlets to all of our customers at the start of the summer season.  
14           The Company has lawn irrigation policies for some of its community systems that require  
15           ‘odd/even’ lawn irrigation policies or in complete water bans when it is necessary. During peak  
16           summer usage, customers can access the web site for current updated status of lawn irrigation  
17           programs for their system. The Company also polices these systems for compliance when water  
18           supplies are critical.

19   **XI.   Request for Step Increase**

20   **Q.    Ms. Hartley would you please explain why the Company is seeking an initial increase of**  
21           **14.72% and subsequent step increases of 5.05% and 3.80%?**

22   A.    Yes. The Company is seeking an initial increase of 14.72% based on a test year ending  
23           December 31, 2007. As explained in Mr. Ware’s testimony, the Company has embarked on a



1 significant capital project (upgrade of the water treatment plant) to meet federal drinking water  
2 regulations. While there are significant capital expenditures in the test year associated with this  
3 project, the expenses with this project will continue into 2008 and 2009. As explained in both  
4 Mr. Ware's and Mr. Patterson's testimony, the Company is requesting a step increase to  
5 recognize the major upgrades to the Treatment Plant and other additions totaling \$12.3 million  
6 during 2008 becoming used and useful by December 31, 2008. The Company is respectfully  
7 requesting the Commission approve step increases totaling 8.85% once these additional  
8 improvements are used and useful (in May and November 2008, respectively).

9 **Q. Ms. Hartley would you please summarize Section #14, Step Increase, Schedule A, with**  
10 **Revised Step 2 entitled Pennichuck Water Works, Inc, for the Twelve Months Ended**  
11 **December 31, 2007?**

12 **A.** Yes, this exhibit shows the pro forma revenue deficiency for two step increases as of December  
13 31, 2007. The '13 month average' rate base pro forma test year of \$76,919,063 is increased by  
14 \$7,179,944 on a pro forma basis as of May 2008 and by \$5,445,539 on a pro forma basis for  
15 plant in service as of November 2008, resulting in a total pro forma rate base of \$84,099,007 and  
16 \$89,544,546 respectively for the two step increases. The overall rate of return of 7.81%  
17 (discussed in Mr. Patterson's and Mr. Walker's testimony and shown in Section 15, Schedule 1)  
18 is then multiplied by the total pro forma rate base for the first step increase of \$84,099,007 and  
19 the second step increase of \$89,544,546, resulting in a cumulative required operating income of  
20 \$6,569,355 and \$6,994,731 respectively. As shown in Step Increase, Schedule A, the pro forma  
21 net operating income for the twelve months ended December 31, 2007 is \$3,979,196 for the first  
22 step increase and \$3,907,057 for the second step increase resulting in a cumulative net operating  
23 income deficiency of \$2,590,159 and \$3,087,674 respectively. Utilizing a tax factor of 60.39%,

1 which accounts for the impact of both the New Hampshire Business Profits Tax at 8.5% and  
2 Federal Income Taxes at 34%, the resulting cumulative revenue deficiency is calculated to be  
3 \$4,289,054 for the first step increase, or a required cumulative revenue increase of 19.76% and  
4 \$5,112,890 for the second step increase, or a required cumulative revenue increase of 23.56%.  
5 As also indicated, the resulting incremental revenue deficiency is calculated to be \$1,095,263 for  
6 the first step increase, or a required incremental revenue increase of 5.05% and \$823,836 for the  
7 second step increase, or a required incremental revenue increase of 3.80%. This increase will  
8 permit the Company to provide adequate and reliable service at affordable rates for all of its  
9 customers while still maintaining its ability to attract new debt and equity capital.

10 **Q. Ms. Hartley, would you please summarize Step Increase, Schedule 1 with Revised Step 2**  
11 **entitled, "Pennichuck Water Works, Inc., Operating Income Statement for the Twelve**  
12 **Months Ended December 31, 2005"?**

13 A. Yes, this exhibit shows in column 1 the actual operating results of the Company for the twelve  
14 months ended December 31, 2007, column 2 the pro forma adjustments to the test year, column 3  
15 the pro forma 12 months ending at December 31, 2007, column 4 the resulting net operating  
16 income for the first step increase, column 5 the pro forma test year with proposed adjustments for  
17 the first step increase, column 6 pro forma adjustments for the resulting net operating income for  
18 the second step increase and column 7 for the second step increase pro forma for the test year.

19 **Q. Please explain each of the pro forma adjustments made to the operating revenues and**  
20 **expenses as shown in both Step Increases, Schedule 1, Columns 4 and 6.**

21 A. Depreciation expense has been increased by \$166,535 for the first step increase and \$119,455 for  
22 the second step increase accounting to reflect the capital improvements and retirements for the  
23 Treatment Plant and adjustments of \$65,964 and \$47,316 to reflect the tax benefit for step

1 increases one and two respectively. Step Increase, Schedule 1 with Revised Step 2, Attachments  
2 A through C provide in detail the nature and specific computation for each pro forma adjustment  
3 to these accounts.

4 **Q. Please explain each of the adjustments to the Income Statement for the pro forma step**  
5 **increase.**

6 A. The adjustment for depreciation expense is calculated on Step Increase, Schedule 3 with Revised  
7 Step 2, Attachment A, Exhibit 1 at one half year depreciation expense of \$154,764 for the  
8 \$6,970,119 of capital additions to the Treatment Plant for the first step increase and one half year  
9 depreciation expense of \$116,904 for the \$5,366,261 of capital additions to the Treatment Plant  
10 for the second step increase. A deduction of one half year depreciation expense of \$(10,324) and  
11 \$(8,497) for the retirement of assets related to the upgrades at the treatment plant and other assets  
12 for the first step increase and second step increase respectively, Schedule 3, Attachment A,  
13 Exhibit 3. Additionally, there is a pro forma adjustment of \$33,143 for filter media and its  
14 estimated useful life. The net pro forma adjustment for the depreciation expense for the first step  
15 increase is \$166,535 and \$119,455 for the second step increase.

16 **Q. Please explain Step Increase, Schedule 1, Attachment D with Revised Step 2 entitled,**  
17 **“Pennichuck Water Works, Inc., Income Taxes”.**

18 A. This schedule calculates the New Hampshire Business Profits Tax and Federal Income Tax  
19 benefits derived from the pro forma adjustments to operating expenses for a total tax benefit of  
20 \$(14,155) and \$(51,809) respectively for the first step increase for a total adjustment of  
21 \$(65,964); and for a total tax benefit of \$(10,154) and \$(37,162) respectively for the second step  
22 increase for a total adjustment of \$(47,316).

1    **Q.     Please explain Step Increase, Schedule 3 with Revised Step 2, entitled “Pennichuck Water**  
2       **Works, Computation of Rate Base, For the Twelve Months ended December 31, 2007”?**

3    **A.**    The overall purpose of this schedule is to calculate a pro forma rate base for the Company in  
4           order to determine the basis on which to compute the allowed rate of return for the step increase.  
5           Column 1 of this exhibit shows the test year rate base account calculated on an actual “13 month  
6           average” rate base for the twelve months ended December 31, 2007, column 2 represents a “year  
7           end” rate base for the twelve months ended December 31, 2007, column 3 details the pro forma  
8           adjustments to the “test year average” rate base, column 4 reflects the pro forma test year, column  
9           5 reflects the pro forma adjustments to the pro forma test year for the first step increase, column  
10          6 represents the first step increase pro forma test year for rate base, column 7 reflects the pro  
11          forma adjustments to the pro forma test year for the second step increase, and column 8  
12          represents the second step increase pro forma test year for rate base. The computation detail for  
13          each adjustment is shown on Step Increase, Schedule 3, Attachment A through C inclusive. The  
14          pro forma adjustment to the rate base for plant in service is \$6,356,346 for the first step increase  
15          and \$4,752,072 for the second step increase, the pro forma adjustment for accumulated  
16          depreciation \$(84,517) and \$(277,154) respectively, the pro forma adjustment for accumulated  
17          depreciation loss of \$352,397 and \$209,083 respectively and a pro forma adjustment for  
18          accumulated depreciation for cost of removal of \$386,684 and \$207,229 respectively. The total  
19          pro forma adjustment to rate base for the first step increase is \$7,179,944 resulting in a total first  
20          step increase pro forma test year of \$84,099,007 and a total pro forma adjustment to rate base for  
21          the second step increase is \$5,445,539 resulting in a total second step increase pro forma test year  
22          of \$89,544,546. Step Increase, Schedule 3 with Revised Step 2, Attachment A, Exhibit 1 details  
23          additions to plant in service totaling \$6,970,119 and \$5,366,261 that are expected to be

1 completed by May 2008 and November 2008 respectively. The plant for the first step was  
2 constructed in 2007 and 2008 and became operational by May 31, 2008. The plant for the  
3 second step will be constructed beginning June 1, 2008 and become operational by November  
4 30, 2008. All of the improvements included in the step increases are necessary to remain in  
5 compliance with SDWA, maintain or improve customer service or replace aging infrastructure  
6 and all of these plant additions are non-revenue producing in nature. Step Increase, Schedule 3,  
7 Attachment A with Revised Step 2, Exhibit 3, details all the retirements of plant in service  
8 related to the new construction at the Treatment Plant for the constructed plant in 2008. A  
9 reduction of \$(613,773) and \$(614,189) has been made to plant in service for retirements that  
10 will occur as a result of the construction completed in the 2008 for the first and second step  
11 increase respectively. The total net pro forma plant in service for the step increase is \$6,356,346  
12 and \$4,752,072 for the first and second step increase respectively. Step Increase, Schedule 3  
13 with Revised Step 2, Attachment B, reflects a pro forma adjustment for accumulated depreciation  
14 for the one half year depreciation expense of \$154,764 and \$116,904 for the first and second step  
15 increase respectively related to the Treatment Plant upgrades and other assets. Also, an  
16 additional pro forma adjustment to accumulated depreciation of \$(261,376) and \$(405,106) for  
17 the first and second step increase respectively is made to recognize the retirements at the  
18 Treatment Plant related to the 2008 capital additions. Finally, a pro form adjustment of \$33,143  
19 is made to recognize a shorter useful life for filter media. The net pro forma adjustment for  
20 accumulated depreciation is \$(84,517) and \$(277,154) for the first and second step increases  
21 respectively. Step Increase, Schedule 3 with Revised Step 2, Attachment C, reflects the  
22 accumulated depreciation loss and cost of removal for the expected retirements of plant in  
23 service, including the cost of removal related to the Merrimack Dam.

1 Q. Ms. Hartley will all of the pro forma capital additions included in the pro forma adjusted  
2 rate base for the step increase be used and useful on May 31, 2008 and November 30, 2008?

3 A. Yes.

4  
5 Q. Will the expenses incurred by the Company in making these rate base additions for the  
6 step increases be prudent?

7 A. Yes, as discussed in Mr. Ware's testimony, all of these investments are prudent and necessary.

8 Q. Ms. Hartley, please explain the impact of the 5.05% for the first step increase and 3.80%  
9 for the second step on the rate request of 14.72% previously described?

10 A. Section 12, Step Increase, Schedule A with Revised Step 2, reflects the impact of both the  
11 14.72% rate increase and the 5.05% and 3.80% step increases resulting in combined increase of  
12 23.56%. Column 7, entitled Step Increase #1 & #2 Pro Forma Test year shows the combined  
13 effect of these increases. The total pro forma rate is multiplied by the overall rate of return of  
14 7.81% resulting in required operating income of \$6,994,731. Accounting for the adjustments to  
15 net operating income for the \$600,475, \$100,571 and \$72,139 pro forma operating expenses for  
16 the proposed increases of 14.72%, 5.05% and 3.80% respectively will result in a net operating  
17 income deficiency of \$3,087,674. The deficiency is then divided by the 60.39% tax factor  
18 resulting in a total revenue deficiency of \$5,112,890 which divided by water revenues of  
19 \$21,703,068 results in a rate increase of 23.56%.

20 Q. How is the Company proposing to adjust its current rate levels to achieve the total revenue  
21 increase of 23.56% in this case?

22 A. The Company proposes to adjust its current rate levels in accordance with its Cost of Service  
23 Study. As stated previously the Company proposes to collect 86.2% of its required revenues  
24 from Water Service Revenues (both general water service (GWS) and contract water service),

1 3.68% from Private Fire Revenue and 10.12% from Municipal Fire Revenues. This revenue  
2 collection allocation would result in the Company collecting \$21,555.291 or an increase of  
3 23.40% from its GWS customers, \$1,859,853 or an increase of 22.55% from Contract revenues,  
4 \$986,814 or an increase of 99.68% from Private Fire revenues and \$2,713,607 or an increase of  
5 10.02% from Municipal Fire revenues resulting in an overall revenue increase of 23.56%. The  
6 above allocation will result in an average annual residential water bill for a single family home of  
7 approximately \$557.59 based on average usage per 9.53 one hundred cu.ft. This will represent  
8 an increase of \$8.23 per month for residential customers over current rates.

9 **Q. Ms. Hartley, is there any other information you would like to discuss at this time?**

10 A. Yes, the binder labeled Pennichuck Water Works, DW 08-073, Rule 1601.04 and 1604.08 has  
11 been organized to facilitate the three elements of the Company's proposed rate increase: the  
12 request for temporary rates, the request for the 14.72% rate increase, and the request for the two  
13 step increases of 5.01% and 3.80%. Section #3 includes revised tariff pages and Sections #5, #6,  
14 and #7 include the Report of Proposed Rate Changes for the initial and step increase. Section #2  
15 includes related schedules and reports for the petition for temporary rates.

16 **Q. Ms. Hartley does this conclude your testimony at this time?**

17 A. Yes.

**PENNICHUCK WATER WORKS, INC.**  
**COMPUTATION OF REVENUE DEFICIENCY**  
**For The Twelve Months Ended December 31, 2007**

**COMBINED**  
**Schedule A**  
**with Revised Step 2**

	TEST YEAR	PRO FORMA ADJUSTMENTS	PRO FORMA TEST YEAR	STEP INCR #1 PRO FORMA ADJUSTMENTS	COMBINED PRO FORMA & STEP INCR #1 FORM TEST YEAR	STEP INCR #2 PRO FORMA ADJUSTMENTS	COMBINED PRO FORMA & STEP INCREASES FORMA TEST YEAR
Consolidated Rate Base	\$ 72,945,003	\$ 3,974,060	\$ 76,919,063	\$ 7,179,944	\$ 84,099,007	\$ 5,445,539	\$ 89,544,546
RATE of Return	7.89%		7.81%		7.81%		7.81%
Income Required	\$ 5,755,361		\$ 6,008,497		\$ 6,569,355		\$ 6,994,731
Adjusted NOI (1)	\$ 4,680,242	\$ (600,475)	\$ 4,079,767	\$ (100,571)	\$ 3,979,196	\$ (72,139)	\$ 3,907,057
Deficiency	\$ 1,075,119		\$ 1,928,730		\$ 2,590,159		\$ 3,087,674
Tax Factor	60.39%		60.39%		60.39%		60.39%
Revenue Deficiency	\$ 1,780,293		\$ 3,193,791	\$ 1,095,263	\$ 4,289,054	\$ 823,836	\$ 5,112,890
Water Revenues	\$ 21,312,996	\$ 390,072	\$ 21,703,068	\$ -	\$ 21,703,068	\$ -	\$ 21,703,068
Proposed Revenue Inc	8.35%		14.72%	5.05%	19.76%	3.80%	23.56%



**PENNICHUCK WATER WORKS, INC.**  
**COMPUTATION OF REVENUE DEFICIENCY**  
**For The Twelve Months Ended December 31, 2007**

**STEP INCREASE**  
**Schedule A**  
**with Revised Step 2**

	TEST YEAR	PRO FORMA ADJUSTMENTS	PRO FORMA TEST YEAR	STEP INCR #1 PRO FORMA ADJUSTMENTS	COMBINED PRO FORMA & STEP INCR #1 FORM TEST YEAR	STEP INCR #2 PRO FORMA ADJUSTMENTS	COMBINED PRO FORMA & STEP INCREASES FORMA TEST YEAR
Consolidated Rate Base	\$ 72,945,003	\$ 3,974,060	\$ 76,919,063	\$ 7,179,944	\$ 84,099,007	\$ 5,445,539	\$ 89,544,546
RATE of Return	7.89%		7.81%		7.81%		7.81%
Income Required	\$ 5,755,361		\$ 6,008,497		\$ 6,569,355		\$ 6,994,731
Adjusted NOI (1)	\$ 4,680,242	\$ (600,475)	\$ 4,079,767	\$ (100,571)	\$ 3,979,196	\$ (72,139)	\$ 3,907,057
Deficiency	\$ 1,075,119		\$ 1,928,730		\$ 2,590,159		\$ 3,087,674
Tax Factor	60.39%		60.39%		60.39%		60.39%
Revenue Deficiency	\$ 1,780,293		\$ 3,193,791	\$ 1,095,263	\$ 4,289,054	\$ 823,836	\$ 5,112,890
Water Revenues	\$ 21,312,996	\$ 390,072	\$ 21,703,068	\$ -	\$ 21,703,068	\$ -	\$ 21,703,068
Proposed Revenue Inc	8.35%		14.72%	5.05%	19.76%	3.80%	23.56%

**PENNICHUCK WATER WORKS, INC.**  
**OPERATING INCOME STATEMENT**  
For The Twelve Months Ended December 31, 2007

STEP INCREASE  
Schedule 1  
with Revised Step 2

	TWELVE MONTHS 12/31/07	PRO FORMA ADJUSTMENTS	PRO FORMA 12 MONTHS 12/31/07	STEP INCREASE #1 PRO FORMA ADJUSTMENTS	COMBINED PRO FORMA & STEP INCR #1 FORMA TEST YEAR	STEP INCREASE #2 PRO FORMA ADJUSTMENTS	COMBINED PRO FORMA & STEP INCREASES FORMA TEST YEAR
Water Sales	\$ 21,312,996	\$ 390,072	\$ 21,703,068	\$ -	\$ 21,703,068	\$ -	\$ 21,703,068
Water Sales for Resale	933	-	933	-	933	-	933
Other Operating Revenue	233,983	-	233,983	-	233,983	-	233,983
Total Revenues	21,547,912	390,072	21,937,983	-	21,937,983	-	21,937,983
Production Expenses	3,449,914	152,770	3,602,684	-	3,602,684	-	3,602,684
Transmission & Distribution Expense	1,221,403	91,086	1,312,489	-	1,312,489	-	1,312,489
Engineering Expense	540,788	11,023	551,811	-	551,811	-	551,811
Customer Acct & Collection Exp	339,032	-	339,032	-	339,032	-	339,032
Administrative & General Expense	5,609,087	543,573	6,152,660	-	6,152,660	-	6,152,660
Inter Div Management Fee	(1,402,374)	(310,922)	(1,713,296)	-	(1,713,296)	-	(1,713,296)
Total Operating Expense	9,757,850	487,530	10,245,379	-	10,245,379	-	10,245,379
Depreciation Exp/Acq Adj (Credit)	3,329,392	290,681	3,620,073	166,535 (1)	3,786,608	119,455 (1)	3,906,063
Amortization Expense: CIAC	(446,433)	-	(446,433)	-	(446,433)	-	(446,433)
Amortization Expense	32,457	6,385	38,842	-	38,842	-	38,842
Gain on Disp/Utility Property	-	-	-	-	-	-	-
Loss on Disposal of Computer Equip	-	-	-	-	-	-	-
Taxes Other Than Income Tax	1,995,154	599,805	2,594,959	-	2,594,959	-	2,594,959
Income Tax	2,199,252	(393,854)	1,805,398	(65,964) (2)	1,739,434	(47,316) (2)	1,692,118
Total Operating Deductions	7,109,822	503,017	7,612,839	100,571	7,713,411	72,139	7,785,549
Net Operating Income	4,680,240	(600,475)	4,079,765	(100,571)	3,979,194	(72,139)	3,907,055

**Notes:**

(1) increase/decrease depreciation for additions/deletions to plant assets per Schedule 1, Attachment B

(2) reflect income tax effect on proforma adjustments calculated on effective tax rate of 39.61% per Schedule 1, Attachment D

**PENNICHUCK WATER WORKS, INC.**  
**Pro Forma Adjustment Income or Expense**  
**PROPERTY AND OTHER TAXES**  
**For The Twelve Months Ended December 31, 2007**

**STEP INCREASE**  
**Schedule 1**  
**Attachment A**  
**with Revised Step 2**

**I PROPERTY TAXES**

**NOT USED**

**PENNICHUCK WATER WORKS, INC.**  
**Pro Forma Adjustment Income or Expense**  
**DEPRECIATION ACCOUNT**  
**For The Twelve Months Ended December 31, 2007**

**STEP INCREASE**  
**Schedule 1**  
**Attachment B**  
**with Revised Step 2**

**I DEPRECIATION**

- A.** In 2008, the Company expects to add depreciable assets and 1/2 year depreciation expense is reflected in the proforma step increase.

(See Schedule 3, Attachment A, Exhibit 1)

Step increase 1	\$ 154,764
Step increase 2	\$ 116,904
Total	<u>\$ 271,668</u>

Therefore: \$ 271,668

- B.** In 2008, the Company expects to retire depreciable assets. The total depreciation expense reduction is reflected in the proforma step increase.

(Schedule 3, Attachment A, Exhibit 3)

Step increase 1	\$ (10,324)
Step increase 2	\$ (8,497)
Total	<u>\$ (18,821)</u>

Therefore: \$ (18,821)

- C.** In 2008, the Company is installing filter media with an estimated useful life significantly less than the group rate of 15 years. In 1999, \$361,096 of media was installed and then replaced in 2005. In 2007 and 2008, the media is being replaced again. The Company is proposing a separate depreciation rate for filter media of 7 years and a pro forma adjustment as follows:

Step Increase 1:

Filter Media #1, 2 and 3

(\$145,000 per filter)

		\$ 435,000
Current Depreciation	15 years	\$ 29,000
Proposed Depreciation	7 years	\$ 62,143
Full Year		<u>\$ 33,143</u>
Pro Forma Adjustment		<u>\$ 22,085</u>

(Filter 1 for full year; Filters 2 & 3 for 1/2 year)

Step Increase 2:

Filter Media #4 and 5

(\$145,000 per filter)

		\$ 290,000
Current Depreciation	15 years	\$ 19,333
Proposed Depreciation	7 years	\$ 41,429
Full Year		<u>\$ 22,095</u>
Pro Forma Adjustment	1/2 year	<u>\$ 11,048</u>

Therefore: \$ 33,143

Total Step Increase 1	\$ 166,535
Total Step Increase 2	\$ 119,455
Total	<u>\$ 285,990</u>

**TOTAL DEPRECIATION EXPENSE PRO FORMA:** \$ 285,990

**PENNICHUCK WATER WORKS, INC.**  
**Pro Forma Adjustment Income or Expense**  
**Amortization Account**  
**For The Twelve Months Ended December 31, 2007**

**STEP INCREASE**  
**Schedule 1**  
**Attachment C**  
**with Revised Step 2**

**I AMORTIZATION**

**NOT USED**

**TOTAL AMORTIZATION EXPENSE PRO FORMA:**

\$ -

**PENNICHUCK WATER WORKS, INC.**  
**Pro Forma Adjustment Income or Expense**  
**INCOME TAXES**  
**For The Twelve Months Ended December 31, 2007**

**STEP INCREASE**  
**Schedule 1**  
**Attachment D**  
**with Revised Step 2**

**I INCOME TAXES**

**A. Step Increase 1**

To reflect the pro forma adjustment to record the income tax effect of the pro forma adjustments for the test year.

Therefore:

Operating Revenues		\$	-	
Less: Expenses				
(Sch1, Attach A) Total Prop & Other Taxes			-	
(Sch1, Attach B) Depreciation			166,535	
(Sch1, Attach C) Amortization			-	
Total		\$	(166,535)	
Pro Forma NHBP Tax @ 8.5%.				
Therefore:	\$ (166,535)	8.5%	\$ (14,155)	\$ (14,155)
			Sub Total	\$ (152,380)
Pro Forma FIT Tax 34%				
Therefore:	\$ (152,380)	34%	\$ (51,809)	
			Sub Total	\$ (51,809)
Total Step Increase 1 Taxes				\$ (65,964)

**B. Step Increase 2**

To reflect the pro forma adjustment to record the income tax effect of the pro forma adjustments for the test year.

Therefore:

Operating Revenues		\$	-	
Less: Expenses				
(Sch1, Attach A) Total Prop & Other Taxes			-	
(Sch1, Attach B) Depreciation			119,455	
(Sch1, Attach C) Amortization			-	
Total		\$	(119,455)	
Pro Forma NHBP Tax @ 8.5%.				
Therefore:	\$ (119,455)	8.5%	\$ (10,154)	\$ (10,154)
			Sub Total	\$ (109,301)
Pro Forma FIT Tax 34%				
Therefore:	\$ (109,301)	34%	\$ (37,162)	
			Sub Total	\$ (37,162)
Total Step Increase 1 Taxes				\$ (47,316)

**TOTAL PRO FORMA INCOME TAXES:**

NHBPT	\$ (24,309)
FIT	\$ (88,971)
TOTAL	\$ (113,280)

**PENNICHUCK WATER WORKS, INC.**  
**COMPUTATION OF RATE BASE**  
For The Thirteen Months Ended December 31, 2007

**STEP INCREASE**  
Schedule 3  
with Revised Step 2

Description	Test Year Average (Sch 3B)	Year End Rate Base	Pro Forma Adjustments Permanent Rates	Pro Forma Test Year	STEP INCREASE #1 PRO FORMA ADJUSTMENTS	COMBINED PRO FORMA & STEP INCR #1 FORMA TEST YEAR	STEP INCREASE #2 PRO FORMA ADJUSTMENTS	COMBINED PRO FORMA & STEP INCREASES FORMA TEST YEAR
Plant in Service	128,961,502	135,008,500	5,102,807	134,064,309	6,356,346 (1)	140,420,655	4,752,072 (1)	145,172,727
Accum Deprec	33,354,306	34,196,424	360,382	33,714,686	(84,517) (2)	33,630,172	(277,154) (2)	33,353,017
Accum Deprec: Loss	2,155,329	2,734,382	-	2,155,329	352,397 (3)	2,507,726	209,083 (3)	2,716,809
Accum Deprec: (X)R	104,260	579,134	-	104,260	386,684 (4)	490,944	207,229 (4)	698,173
Theoretical Reserve	169,788	353,160	-	169,788		169,788		169,788
Acquisition Adjustment	844,905	844,905	-	844,905		844,905		844,905
Accum Amort Acq Adj	239,652	255,984	-	239,652		239,652		239,652
CIAC	25,197,100	26,007,619	-	25,197,100		25,197,100		25,197,100
Amort of CIAC	3,081,574	3,324,563	-	3,081,574		3,081,574		3,081,574
	75,315,794	81,206,775	4,742,425	80,058,219	7,179,944	87,238,163	5,445,539	92,683,701
ADD:								
Working Cap	1,692,044	1,830,829	84,830	1,776,874		1,776,874		1,776,874
Materials & Supplies	795,357	1,135,139	-	795,357		795,357		795,357
Prepayments	377,515	412,019	-	377,515		377,515		377,515
Other & Deferred Charges	6,146,122	5,949,837	(94,292)	6,051,830		6,051,830		6,051,830
	9,011,038	9,327,824	(9,462)	9,001,576		9,001,576		9,001,576
Deduct:								
Customer Advances	85,544	84,000	-	85,544		85,544		85,544
Customer Deposits	173,160	158,677	-	173,160		173,160		173,160
Deferred Income Tax	9,216,029	10,407,200	-	9,216,029		9,216,029		9,216,029
Regulatory Liability	924,151	904,996	-	924,151		924,151		924,151
Unamort ITC	850,512	833,994	-	850,512		850,512		850,512
Deferred Rental Credits	132,433	98,066	-	132,433		132,433		132,433
Unfunded FAS 106 and 158 Costs	-	-	758,902	758,902		758,902		758,902
	11,381,829	12,486,933	758,902	12,140,731		12,140,731		12,140,731
<b>TOTAL Rate Base</b>	<b>72,945,003</b>	<b>78,047,667</b>	<b>3,974,060</b>	<b>76,919,063</b>	<b>7,179,944</b>	<b>84,099,007</b>	<b>5,445,539</b>	<b>89,544,546</b>

**Notes:**

- (1) adjust test year average to year end for non-revenue producing assets per Schedule 3, Attachment A
- (2) adjust for accumulated depreciation proforma for plant additions/retirements per Schedule 3, Attachment B
- (3) adjust for accumulated depreciation: Loss proforma for plant retirements per Schedule 3, Attachment C
- (4) adjust for accumulated depreciation: Cost of Removal proforma for plant replacements/retirements per Schedule 3, Attachment C

PENNICHUCK WATER WORKS, INC.  
PRO FORMA ADJUSTMENTS TO RATE BASE  
Plant in Service  
For The Twelve Months Ended December 31, 2007

STEP INCREASE  
Schedule 3  
Attachment A  
with Revised Step 2

**I PLANT IN SERVICE**

A Schedule 3, Attachment A, Exhibit 1, details additions to plant in service that are expected to be completed in 2008. The additions are capital improvements that are necessitated by SWDA requirements and by the need to replace aging infrastructure. All of these plant additions are considered non-revenue producing in nature. All assets are estimated to be placed in service by November 2008.

Step increase 1	\$ 6,970,119
Step increase 2	\$ 5,366,261
Total	<u>\$ 12,336,380</u>

Therefore: \$ 12,336,380

B Schedule 3, Attachment A, Exhibit 3, details retirements of plant in service that are expected to occur in 2008 as a result of the additions.

Step increase 1	\$ (613,773)
Step increase 2	\$ (614,189)
Total	<u>\$ (1,227,962)</u>

Therefore: \$ (1,227,962)

Total Step Increase 1	\$ 6,356,346
Total Step Increase 2	\$ 4,752,072
Total	<u>\$ 11,108,419</u>

**TOTAL PRO FORMA PLANT IN SERVICE** \$ 11,108,419



**PENNICHUCK WATER WORKS, INC.**  
**PRO FORMA ADJUSTMENTS TO RATE BASE**  
**Accumulated Depreciation**  
**For The Twelve Months Ended December 31, 2007**

**STEP INCREASE**  
**Schedule 3**  
**Attachment B**  
**Revised Step 2**

**I ACCUMULATED DEPRECIATION**

**A** To reflect the accumulated depreciation associated with 2008 plant additions.

(See Schedule 3, Attachment A, Exhibit 1)

Step increase 1	\$ 154,764
Step increase 2	\$ 116,904
Total	<u>\$ 271,668</u>

**Therefore:**

\$ 271,668

**B** To reflect the accumulated depreciation reduction related to the 2008 retirements of plant in service.

(See Schedule 3, Attachment A, Exhibit 3)

Step increase 1	\$ (261,376)
Step increase 2	\$ (405,106)
Total	<u>\$ (666,481)</u>

**Therefore:**

\$ (666,481)

**C.** In 2008, the Company is installing filter media with an estimated useful life significantly less than the group rate of 15 years. In 1999, \$361,096 of media was installed and then replaced in 2005. In 2007 and 2008, the media is being replaced again. The Company is proposing a separate depreciation rate for filter media of 7 years and a pro forma adjustment as follows:

Step Increase 1:

Filter Media #1, 2 and 3

(\$145,000 per filter)

	\$ 435,000
Current Depreciation 15 years	\$ 29,000
Proposed Depreciation 7 years	\$ 62,143
Full Year	<u>\$ 33,143</u>
Pro Forma Adjustment	<u>\$ 22,095</u>

(Filter 1 for full year; Filters 2 & 3 for 1/2 year)

Step Increase 2:

Filter Media #4 and 5

(\$145,000 per filter)

	\$ 290,000
Current Depreciation 15 years	\$ 19,333
Proposed Depreciation 7 years	\$ 41,429
Full Year	<u>\$ 22,095</u>
Pro Forma Adjustment 1/2 year	<u>\$ 11,048</u>

**Therefore:**

\$ 33,143

Total Step Increase 1	\$ (84,517)
Total Step Increase 2	\$ (277,154)
Total	<u>\$ (361,671)</u>

**TOTAL ACCUMULATED DEPRECIATION PRO FORMA:**

\$ (361,671)

**PENNICHUCK WATER WORKS, INC.  
PRO FORMA ADJUSTMENTS TO RATE BASE  
Accumulated Depreciation: Loss & COR  
For The Twelve Months Ended December 31, 2007**

**STEP INCREASE  
Schedule 3  
Attachment C  
Revised Step 2**

**I ACCUMULATED DEPRECIATION: LOSS**

A To reflect the loss on the 2008 retirements of plant in service.

(See Schedule 3, Attachment A, Exhibit 3)

Step increase 1	\$ 352,397
Step increase 2	\$ 209,083
Total	<u>\$ 561,480</u>

Therefore:

\$ 561,480

**II ACCUMULATED DEPRECIATION: COST OF REMOVAL**

A To reflect the cost of removal on replaced assets expected in 2008 related to the step increases, including the removal of the Merrimack Village Dam.

(See Schedule 3, Attachment A, Exhibit 2)

Step increase 1	\$ 386,684
Step increase 2	\$ 207,229
Total	<u>\$ 593,913</u>

Therefore:

\$ 593,913

**TOTAL ACCUMULATED DEPRECIATION: LOSS PRO FORMA:**

\$ 1,155,393

**PENNICHUCK WATER WORKS, INC.**  
**ASSET ACQUISITIONS**  
For The Twelve Months Ended December 31, 2007

STEP INCREASE  
Schedule 3  
Attachment A  
Exhibit 1  
with Revised Step 2

Additions								17.4	6.6
Acct No.	Account Description	Total Cost	Accumulated Depreciation	Depreciation Rate	1/2 Year Depreciation	Property Taxes	State Property Taxes		
304.30	Structures & Improvements - Purification	\$ 672,427	\$ 7,195	2.14%	\$ 7,195	\$ 11,700	\$ 4,438		
309.00	Supply Mains	\$ 362,304	\$ 2,717	1.50%	\$ 2,717	\$ 6,304	\$ 2,391		
310.00	Power Generation Equipment	\$ 2,120	\$ 47	4.40%	\$ 47	\$ 37	\$ 14		
311.20	Electric Pumping Equipment	\$ 283,915	\$ 6,246	4.40%	\$ 6,246	\$ 4,940	\$ 1,874		
320.00	Purification System Equipment	\$ 2,568,688	\$ 85,666	6.67%	\$ 85,666	\$ 44,695	\$ 16,953		
320.20	Water Treatment Equipment	\$ 2,846,428	\$ 47,108	3.31%	\$ 47,108	\$ 49,528	\$ 18,786		
346.00	Communications Equipment	\$ 142,524	\$ 3,748	5.26%	\$ 3,748	\$ 2,480	\$ 941		
		\$ 6,878,407	\$ 152,728	4.44%	\$ 152,728	\$ 119,684	\$ 45,397		
	AFUDC 1/01/08 to 5/01/08	\$ 91,712	\$ 2,036	4.44%	\$ 2,036	\$ 1,820	\$ 605		
	Step Increase #1	\$ 6,970,119	\$ 154,764	4.44%	\$ 154,764	\$ 121,505	\$ 46,003		
304.20	Structures & Improvements - Pumping	\$ 66,000	\$ 805	2.44%	\$ 805	\$ 1,148	\$ 436		
305.00	Collecting & Impounding Reservoirs	\$ -	\$ -	1.79%	\$ -	\$ -	\$ -		
307.00	Wells and Springs	\$ -	\$ -	3.33%	\$ -	\$ -	\$ -		
320.00	Purification System Equipment	\$ 2,556,688	\$ 85,266	6.67%	\$ 85,266	\$ 44,486	\$ 16,874		
330.00	Distribution Reservoirs & Standpipes	\$ 2,323,800	\$ 25,329	2.18%	\$ 25,329	\$ 40,434	\$ 15,337		
309.00	Supply Mains	\$ -	\$ -	1.50%	\$ -	\$ -	\$ -		
311.20	Electric Pumping Equipment	\$ -	\$ -	4.40%	\$ -	\$ -	\$ -		
331.00	Transmission & Distribution Mains	\$ 254,890	\$ 1,912	1.50%	\$ 1,912	\$ 4,435	\$ 1,682		
		\$ 5,201,378	\$ 113,312	4.36%	\$ 113,312	\$ 90,504	\$ 34,329		
	AFUDC 1/01/08 to 11/01/08	\$ 164,883	\$ 3,592	4.36%	\$ 3,592	\$ 3,273	\$ 1,088		
	Step Increase #2	\$ 5,366,261	\$ 116,904	4.36%	\$ 116,904	\$ 93,777	\$ 35,417		
	Total Additions with AFUDC	\$ 12,336,380	\$ 271,668	4.40%	\$ 271,668	\$ 215,282	\$ 81,420		

**Notes:**

- (1) AFUDC was based on 8% (DW 05-094) of the total cost of the additions and assumed the costs would be incurred evenly over the period. The AFUDC for Step Increase #2 excluded the costs for transmission & distribution mains as construction occurs over a short time frame. The depreciation on AFUDC is based on a weighted average rate of each step increase.
- (2) The calculation of property taxes above is for illustrative purposes only. A pro forma adjustment for property taxes is not reflected in the step increase.

PENNICHUCK WATER WORKS, INC.  
ASSET ACQUISITION Details  
For The Twelve Months Ended December 31, 2007

STEP INCREASE  
Schedule 3  
Attachment A  
Exhibit 2  
with Revised Step 2

	Account Number	Contract Amounts	Prorated \$\$ of General Conditions and Engineering	Total Cost	Total 2007 Additions	Total 2008 Additions	Total Cost of Removal	Total 2007 Additions	Total 2008 Additions
Office Renovations	304.30	1,582,694	525,770	2,108,464	1,779,205	329,259	113,369	87,369	26,000
Headworks	304.30	241,718	80,250	321,968	-	321,968			
New Electric Service	304.30	393,000	130,497	523,497	523,497	-			
Site Work	304.30	87,750	29,315	117,065	95,865	21,200			
	304.30	2,305,162	765,832	3,070,994	2,398,566	672,427	113,369	87,369	26,000
Headworks	309.00	272,000	90,304	362,304	-	362,304			
Snow Station	310.00	333,000	110,639	443,639	441,519	2,120	20,201	20,201	
Headworks	311.20	213,149	70,766	283,915	-	283,915			
Filter #1	320.00	1,232,977	409,457	1,642,434	1,630,434	12,000	90,870	90,870	-
Filter #2	320.00	959,667	318,677	1,278,344	-	1,278,344	90,870		90,870
Filter #3	320.00	959,667	318,677	1,278,344	-	1,278,344	90,870		90,870
	320.00	3,152,311	1,046,812	4,199,123	1,630,434	2,568,688	272,610	90,870	181,740
Headworks	320.20	844,500	280,604	1,125,104	-	1,125,104			
Pulsator #1	320.20	1,018,000	338,062	1,356,062	-	1,356,062	166,944		166,944
Chemical Feed Systems	320.20	1,288,000	427,897	1,715,897	1,350,635	365,262	93,168	81,168	12,000
	320.20	3,150,500	1,046,564	4,197,064	1,350,635	2,846,428	260,112	81,168	178,944
Headworks	346.00	107,000	35,524	142,524	-	142,524			
Step Increase #1		9,533,122	3,166,439	12,699,561	5,821,154	6,878,407	666,292	279,608	386,684
Pump Station Impr/Add	304.20	66,000	-	66,000	-	66,000	-		
Watershed Improvements	305.00	-	-	-	-	-	-		
Well Addition	307.00	-	-	-	-	-	-		
Filter #4	320.00	959,667	318,677	1,278,344	-	1,278,344	90,870		90,870
Filter #5	320.00	959,667	318,677	1,278,344	-	1,278,344	90,870		90,870
	320.00	1,919,334	637,354	2,556,688	-	2,556,688	181,740	-	181,740
Tank Replacements (1)	330.00	2,323,800	-	2,323,800	-	2,323,800	-		-
Merrimack River Intake	309.00	-	-	-	-	-	-		-
Merrimack River Intake	311.00	-	-	-	-	-	-		-
Main Replacements	331.00	254,890	-	254,890	-	254,890	25,489	-	25,489
Ashley Commons Interconnect	331.00	-	-	-	-	-	-		-
Merrimack Village Dam	COR						157,500	-	157,500
Step Increase #2		4,564,024	837,354	5,201,378	-	5,201,378	207,229	-	207,229
Total Step Increases		14,097,146	3,803,793	17,900,939	5,821,154	12,079,785	873,521	279,608	593,913

**Notes:**

(1) No cost of removal is associated with tank replacements as the credit received for the resale of materials removed is estimated to exceed the cost of removing the tanks.

**PENNICHUCK WATER WORKS, INC.**  
**ASSET DISPOSITIONS**  
**For The Twelve Months Ended December 31, 2007**

**STEP INCREASE**  
**Schedule 3**  
**Attachment A**  
**Exhibit 3**  
**with Revised Step 2**

Retirements		17.406.6									
Acct No.	Account Description	Original Cost	Accumulated Depreciation	Accumulated Depreciation Loss	Depreciation Rate	1 year Depreciation	1/2 Year Depreciation	Property Taxes	State Property Taxes	Total Taxes	
304.2	Structures	\$ 614	\$ 309	\$ 304	2.44%	\$ 15	\$ 7	\$ 11	\$ 4		
304.3	Structures	\$ 168,668	\$ 80,480	\$ 88,188	2.14%	\$ 3,609	\$ 1,805	\$ 2,935	\$ 1,113		
320.0	Water Treatment Equipment	\$ 63,699	\$ 50,290	\$ 13,408	6.67%	\$ 4,249	\$ 2,124	\$ 1,108	\$ 420		
320.1	Water Treatment Equipment	\$ 13,739	\$ 3,055	\$ 10,684	4.55%	\$ 625	\$ 313	\$ 239	\$ 91		
320.2	Water Treatment Equipment	\$ 367,053	\$ 127,241	\$ 239,812	3.31%	\$ 12,149	\$ 6,075	\$ 6,387	\$ 2,423		
Step Increase #1		\$ 613,773	\$ 261,376	\$ 362,397		\$ 20,648	\$ 10,324	\$ 10,680	\$ 4,051		
304.1	Structures	\$ 43,570	\$ 19,459	\$ 24,111	2.30%	\$ 1,002	\$ 501	\$ 758	\$ 288		
304.2	Structures	\$ -	\$ -	\$ -	2.44%	\$ -	\$ -	\$ -	\$ -		
307.1	Wells & Springs	\$ -	\$ -	\$ -	3.30%	\$ -	\$ -	\$ -	\$ -		
311.2	Pumping Equipment (electric)	\$ -	\$ -	\$ -	4.40%	\$ -	\$ -	\$ -	\$ -		
320.0	Water Treatment Equipment	\$ 12,200	\$ 6,277	\$ 5,923	6.67%	\$ 814	\$ 407	\$ 212	\$ 81		
320.1	Water Treatment Equipment	\$ -	\$ -	\$ -	4.55%	\$ -	\$ -	\$ -	\$ -		
320.2	Water Treatment Equipment	\$ 266,810	\$ 146,489	\$ 120,320	3.31%	\$ 8,831	\$ 4,416	\$ 4,642	\$ 1,761		
330.0	Distribution Reservoirs	\$ 290,012	\$ 231,283	\$ 58,729	2.18%	\$ 6,322	\$ 3,161	\$ 5,046	\$ 1,914		
331.0	Trans & Dist Mains	\$ 1,597	\$ 1,597	\$ -	1.50%	\$ 24	\$ 12	\$ 28	\$ 11		
Step Increase #2		\$ 614,189	\$ 405,106	\$ 209,083		\$ 16,993	\$ 8,497	\$ 10,687	\$ 4,054		
Total		\$ 1,227,962	\$ 666,481	\$ 561,480		\$ 37,641	\$ 18,821	\$ 21,367	\$ 8,105	\$ 29,471	

**Notes:**

(1) The calculation of property taxes above is for illustrative purposes only. A pro forma adjustment for property taxes is not reflected in the step increase.

PENNICHUCK WATER WORKS, INC.  
ASSET DISPOSITION DETAILS  
For the Twelve Months Ended December 31, 2008

STEP INCREASE  
Schedule 3  
Attachment A  
Exhibit 4  
Page 1  
with Revised Step 2

Asset ID	Placed In Service	Disposal Date	Cost	Accum Depr	Accum Depr (Loss)
<i>Asset GL Acct #: 2304-200-001</i>					
20000-002271	SNOW STATION PUMP EXPANSION 2/4/1988	1/1/2008	613.86	309.42	-304.44
<i>Subtotal: 2304-200-001</i>			613.86	309.42	-304.44
<i>Asset GL Acct #: 2304-300-001</i>					
20000-002271	ELECTRIC WORK-TREATMENT PLANT 03/01/1992	03/01/2008	59,832.46	24,692.53	-35,139.93
20000-002382	WTP TURBIDIMETER PROJECT- 12/31/1992	03/01/2008	2,973.76	1,227.21	-1,746.55
20000-01024.21	TUBE SETTLERS/TREATMENT PLANT 10/01/1988	03/01/2008	105,281.58	54,363.91	-50,917.67
20000-002695	SECURITY FENCE - FIFIELD TANK 8/15/1994	5/1/2008	580.00	196.08	-383.92
<i>Subtotal: 2304-300-001</i>			168,667.80	80,479.73	-88,188.07
<i>Asset GL Acct #: 2320-000-001</i>					
20000-002419	CHLORINE HANDLING & SAFETY-WTP 03/31/1993	03/01/2008	6,867.18	6,867.18	0.00
20000-002451	2-FLYGT BACKWASH RETURN-PUMPS 08/31/1993	03/01/2008	13,688.01	13,688.01	0.00
20000-002649	ALUMINUM SULFATE TRANSFER-PUMPS - (2) TRT. PLANT 05/01/1994	03/01/2008	3,582.58	3,343.78	-238.82
20000-003000	LMI METERING PUMP-WTP 01/22/1995	03/01/2008	368.00	294.37	-73.63
20000-003060	VARIABLE FREQUENCY DRIVE-UNITS - WTP 05/31/1996	03/01/2008	17,107.19	13,685.76	-3,421.43
20000-004085	WILDEN DIAPHRAGM PUMP WTP- 11/01/1998	03/01/2008	636.00	427.30	-208.70
20000-004283	WTP CHEMICAL TANK VENTING- 05/01/1999	03/01/2008	3,382.11	2,046.80	-1,335.31
20000-004326	CHEMICAL PUMP PACING - WTP- 07/01/1999	03/01/2008	2,041.53	1,235.50	-806.03
20000-004625	EBARA SLUDGE PUMP- 07/01/2000	03/01/2008	1,925.28	1,035.81	-889.47
20000-005682	REDUNDANT POLYMER FEED LINE 09/01/2004	03/01/2008	5,870.75	1,565.52	-4,305.23
20000-003053	FILTER FASTENER IMPROVEMENT - TRT PLANT 4/30/1996	5/1/2008	7,750.53	5,683.71	-2,066.83
20000-002723	FILTER IMPROVEMENTS - TRT PLANT				

PENNICHUCK WATER WORKS, INC.  
ASSET DISPOSITION DETAILS  
For the Twelve Months Ended December 31, 2008

STEP INCREASE  
Schedule 3  
Attachment A  
Exhibit 4  
Page 2  
with Revised Step 2

Asset ID	Placed in Service	Disposal Date	Cost	Accum Depr	Accum Depr (Loss)
	11/16/1994	5/1/2008	479.70	415.74	-63.96
<i>Subtotal: 2320-000-001</i>			63,699.86	50,290.46	-13,409.41
<i>Asset GL Acct #: 2320-100-001</i>					
20000-003219	SUBMERSIBLE CLEARWELL SAMPLE-PUMP - WTP				
	02/28/1997	03/01/2008	266.16	186.68	-79.48
20000-005622.1	NEW EXTRACTION PIPING PULSATOR 1				
	05/01/2004	03/01/2008	10,170.73	2,389.42	-7,782.31
20000-0036104	CHEMICAL FILL CHECK VALVE REPLACEMENT				
	12/1/2005	5/1/2008	3,302.43	460.35	-2,822.08
<i>Subtotal: 2320-100-001</i>			13,739.32	3,055.45	-10,683.87
<i>Asset GL Acct #: 2320-200-001</i>					
20000-003656	PULSATOR SYSTEM EQUIPMENT-#1				
	07/01/1986	03/01/2008	15,671.00	10,111.34	-5,559.66
20000-005090	WTP FILTER UPGRADES				
	11/1/2002	5/1/2008	6,574.17	1,076.92	-5,497.25
20000-005090.1	WTP FILTER UPGRADES				
	7/1/2002	5/1/2008	177,508.21	29,077.34	-148,430.87
20000-005090.2	WTP FILTER UPGRADES				
	8/1/2002	5/1/2008	69,426.95	11,372.73	-58,054.22
20000-005090.3	WTP FILTER UPGRADES				
	9/1/2002	5/1/2008	590.59	96.74	-493.85
20000-005090.4	WTP FILTER UPGRADES				
	10/1/2002	5/1/2008	3,646.88	597.38	-3,049.50
20000-003647.2	CHEMICAL FEED EQUIPMENT				
	7/1/1980	5/1/2008	50,487.13	40,389.70	-10,097.43
20000-003648.2	CHEMICAL FEED EQUIPMENT				
	7/1/1980	5/1/2008	43,148.18	34,518.54	-8,629.64
<i>Subtotal: 2320-200-001</i>			367,053.11	127,240.70	-239,812.41
<i>Step Increase 1</i>			613,772.95	261,375.75	-352,397.20
<i>Asset GL Acct #: 2304-100-001</i>					
20000-002147	MERRIMACK VILLAGE DAM				
	11/30/1990	11/1/2008	43,569.75	19,459.08	-24,110.67
<i>Subtotal: 2304-100-001</i>			43,569.75	19,459.08	-24,110.67
<i>Asset GL Acct #: 2304-200-001</i>					
<i>Subtotal: 2304-200-001</i>			-	-	-
<i>Asset GL Acct #: 2307-100-001</i>					

PENNICHUCK WATER WORKS, INC.  
ASSET DISPOSITION DETAILS  
For the Twelve Months Ended December 31, 2008

STEP INCREASE  
Schedule 3  
Attachment A  
Exhibit 4  
Page 3  
with Revised Step 2

Asset ID	Placed In Service	Disposal Date	Cost	Accum Depr	Accum Depr (Loss)
<i>Subtotal: 2307-100-001</i>					
<i>Asset GL Acct #: 2311-200-001</i>					
<i>Subtotal: 2311-200-001</i>					
<i>Asset GL Acct #: 2320-000-001</i>					
20000-003053	FILTER FASTENER IMPROVEMENT - TRT PLANT				
	4/30/1995	5/1/2008	7,750.53	5,683.71	-2,066.83
20000-005879	BACKWASH RETURN PUMP RE-BUILD				
	8/1/2005	6/1/2008	4,449.93	693.31	-3,856.62
<i>Subtotal: 2320-000-001</i>					
			12,200.46	6,277.02	-5,923.45
<i>Asset GL Acct #: 2320-100-001</i>					
<i>Subtotal: 2320-100-001</i>					
<i>Asset GL Acct #: 2320-200-001</i>					
20000-00650.14	FILTER SYSTEM EQUIPMENT - FILTER #4				
	7/1/1980	8/1/2008	47,489.17	39,326.53	-8,162.64
20000-00650.15	FILTER SYSTEM EQUIPMENT - FILTER #5				
	7/1/1980	11/1/2006	47,489.17	39,326.53	-8,162.64
20000-005090.1	WTP FILTER UPGRADES				
	7/1/2002	11/1/2008	171,831.20	67,836.01	-103,995.19
<i>Subtotal: 2320-200-001</i>					
			266,809.54	146,489.07	-120,320.47
<i>Asset GL Acct #: 2330-500-001</i>					
20000-000511	ORCHARD AVE TANK (FIFIELD)-RESTORATION				
	07/01/1985	03/01/2006	132,605.15	73,876.61	-58,728.54
20000-000512	FIFIELD TANK-ORCHARD HEIGHTS-.5 MG. 160' DIAM 35' HIGH				
	07/01/1958	03/01/2008	157,406.83	157,406.83	0.00
<i>Subtotal: 2330-500-001</i>					
			290,012.03	231,283.49	-58,728.54
<i>Asset GL Acct #: 2331-000-001</i>					
Various	TRANSMISSION MAINS				
Various	Various	11/1/2008	Adjusted	1,596.94	1,596.94
<i>Subtotal: 2331-000-001</i>					
			1,596.94	1,596.94	-
<i>Step Increase 2</i>					
			614,188.72	405,105.59	-209,083.13
<i>Total 2008 Retirements</i>					
			1,227,961.67	666,481.34	-561,480.32



Pennichuck Water Works, Inc.  
Report of Proposed Rate Changes  
For the Twelve Months Ended December 31, 2007

Pro Forma  
Schedule 9  
Revised Step #2

DOCKET NO: DW 08-073      DATE FILED: 6/23/2008  
TARIFF NO.: 5 or PAGE NOS. 39-42      EFF. DATE: 8/1/2008

<u>Rate or Class of Service</u>	<u>Effect of Proposed Change</u>	<u>Average Number of Customers</u>	<u>Pro Forma Present Rates</u>	<u>Proposed Change</u>		
				<u>Proposed Rates</u>	<u>Amount</u>	<u>%</u>
G-M	Increase	24,787	\$17,225,355	\$17,879,905	654,549	3.80%
Present Rate Adj					-	
Private FP	Increase	780	494,186	524,494	30,308	6.13%
FP - Hydrants	Increase	5	2,466,483	2,549,622	83,139	3.37%
Anheuser-Busch Contract	Increase	2	1,059,315	1,100,588	41,273	3.90%
<u>Milford Contract</u>					-	
Contract Charges	No Increase	1	81,000	81,000	-	0.00%
Volumetric Charges	Increase	-	63,090	65,533	2,443	3.87%
<u>Hudson Contract</u>					-	
Contract Charges	No Increase	1	32,800	32,800	-	0.00%
Volumetric Charges	Increase	-	280,838	291,425	10,587	3.77%
<b>TOTALS</b>		<b>25,576</b>	<b>\$21,703,068</b>	<b>\$22,525,366</b>	<b>\$822,299</b>	<b>3.79%</b>

**Note:**

The Proposed rates and the amount of the increase is based on the Cost of Service Study. On Schedule 13 Step 2 Rev, page 5 of of the Cost of Service Study, a slight difference is noted in the allocation of the proposed revenue vs. the revenue requirement shown in the rate filing schedules.

Signed by:

Title:

  
Bonalyn J. Hartley  
Vice President - Administration

Pennichuck Water Works, Inc.  
Report of Proposed Rate Changes  
For the Twelve Months Ended December 31, 2007

Pro Forma  
Schedule 9  
Combined  
Revised Step #2

DOCKET NO: DW 08-073      DATE FILED: 6/23/2008  
TARIFF NO.: 5 or PAGE NOS. 39-42      EFF. DATE: 8/1/2008

<u>Rate or Class of Service</u>	<u>Effect of Proposed Change</u>	<u>Average Number of Customers</u>	<u>Proposed Change</u>			
			<u>Pro Forma Present Rates</u>	<u>Proposed Rates</u>	<u>Amount</u>	<u>%</u>
G-M	Increase	24,787	\$17,225,355	\$21,255,291	\$4,029,936	23.40%
Present Rate Adj			-	-		
Private FP	Increase	780	494,186	986,814	\$492,628	99.68%
FP - Hydrants	Increase	5	2,466,483	2,713,607	\$247,123	10.02%
Anheuser-Busch Contract	Increase	2	1,059,315	1,327,027	\$267,712	25.27%
<u>Milford Contract</u>						
Contract Charges	No Increase	1	81,000	81,000	-	0.00%
Volumetric Charges	Increase	-	63,090	78,504	\$15,414	24.43%
<u>Hudson Contract</u>						
Contract Charges	No Increase	1	32,800	32,800	-	0.00%
Volumetric Charges	Increase	-	280,838	340,522	\$59,684	21.25%
<b>TOTALS</b>		<b>25,576</b>	<b>\$21,703,068</b>	<b>\$26,815,565</b>	<b>\$5,112,497</b>	<b>23.56%</b>

**Note:**

The Proposed rates and the amount of the increase is based on the Cost of Service Study. On Schedule 13 Step 2 Rev. page 5 of 5 of the Cost of Service Study, a slight difference is noted in the allocation of the proposed revenue vs. the revenue requirement shown in the rate filing schedules.

Signed by:

Title:

  
Bonalyn J. Hartley  
Vice President - Administration

**RATE SCHEDULE  
GENERAL SERVICE - METERED  
SCHEDULE G-M  
3.80% PROPOSED STEP INCREASE 2**

**Availability**

The rate is available for metered water service in the franchised area subject to the terms and conditions of this tariff.

**Character of Service:**

**Nashua Core System:** Water is fully treated, filtered, and purified and is transmitted by gravity and pumps to the individual service pipes.

**Community Water Systems:** Water is ground water from a well size. Water quality meets or exceeds all federal and state standards for drinking water. Outdoor use of water may be restricted during dry summer periods.

**Rates: Quarterly**

The standard customer charge per quarter based on meter size will be shown below.

Meter Size	Quarterly Customer Charge	Proposed Step Increase 2	
5/8"	\$ 46.08	\$ 1.68	(I)
3/4"	\$ 66.33	\$ 2.43	(I)
1"	\$ 106.83	\$ 3.96	(I)
1 1/2"	\$ 208.17	\$ 7.68	(I)
2"	\$ 340.80	\$ 12.60	(I)
3"	\$ 624.96	\$ 23.10	(I)
4"	\$ 1,030.71	\$ 38.13	(I)
6"	\$ 2,045.22	\$ 75.69	(I)
8"	\$ 3,262.92	\$ 120.75	(I)
10"	\$ 4,683.18	\$ 173.28	(I)

In addition to the standard customer charge, the quarterly volumetric charge based on usage will be show below:

Volumetric Charge:	\$ 2.40 per 100 cu. Ft.	
Proposed Step Increase 2	\$ 0.091 per 100 cu. Ft.	(I)

**Terms of Payment:**

Bills under this rate are net; will be rendered quarterly, and are due and payable at the office of the Company on the due date as stated on the water bill.

Issued: \_\_\_\_\_

Issued by: Bonaly J. Harfley  
Bonaly J. Harfley  
Title: Vice President Administration

Effective: August 1, 2008

**RATE SCHEDULE**  
**GENERAL SERVICE - METERED**  
**SCHEDULE G-M**  
**3.80% PROPOSED STEP INCREASE 2**

Monthly

The standard customer charge per month based on meter size will be shown below.

Meter Size	Monthly Customer Charge	Proposed Step Increase 2	
5/8"	\$ 15.36	\$ 0.56	(I)
3/4"	22.11	\$ 0.81	(I)
1"	35.61	\$ 1.32	(I)
1 1/2"	69.39	\$ 2.56	(I)
2"	113.60	\$ 4.20	(I)
3"	208.32	\$ 7.70	(I)
4"	343.57	\$ 12.71	(I)
6"	681.74	\$ 25.23	(I)
8"	1,087.64	\$ 40.25	(I)
10"	1,561.06	\$ 57.76	(I)

In addition to the standard customer charge, the monthly volumetric charge based on usage will be as follows:

Volumetric Charge:	\$ 2.40 per 100 cu. Ft.	
Proposed Step Increase 2	\$ 0.091 per 100 cu. Ft.	(I)

**Terms of Payment:**

Bills under this rate are net; will be rendered monthly, and are due and payable at the office of the Company on the due date as stated on the water bill.

Issued: \_\_\_\_\_

Issued by

Bonglyn J. Hartley

Title: Vice President Administration

Effective: August 1, 2008

Authorized by NHPUC Order No. 24,771 in Docket No. DW 06-073, dated June 29, 2007

**RATE SCHEDULE  
MUNICIPAL FIRE PROTECTION SERVICE  
SCHEDULE FP-M  
3.80% PROPOSED STEP INCREASE 2**

**Availability**

This rate is applicable to general fire protection.

**Character of Service:**

The Company will make every effort to maintain normal pressures at all times on the distribution system, but shall not be held liable for the failure of either the supply or distribution division of its system to adequately furnish its normal quantity of water when such failure is due to the elements, natural causes, breaks, leaks, unusual or concurrent droughts, or the waste or unlawful use of water.

**Rate:**

The charge shall be made up of two parts as follows:

**1) Hydrant charge**

For each hydrant connected to the distribution system

**Proposed  
Step Increase 2**

\$ 41.52 per quarter	\$ 1.59 per quarter	(I)
or	or	
\$ 13.84 per month	\$ 0.53 per month	(I)

**2) Inch-Foot Charge**

The number of "inch-foot" units in the distribution system is to be obtained by multiplying the number of linear feet of pipe of each diameter (4" and larger) by the diameter in inches. The total number of "inch-foot" units in the distribution system will be determined as of January 1st each year, and will be the base for computing the "inch-foot" charge for the entire year with one-fourth to be billed each quarter or one-twelfth to be billed each month.

**Proposed  
Step Increase 2**

Charge for each "inch-foot" unit  
to be

\$ 0.1137 per year	\$ 0.0037 per year	(I)
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**Terms of Payment:**

Bills under this rate are net; will be rendered monthly or quarterly, and are due and payable at the office of the Company on the due date as stated on the water bill.

Issued: \_\_\_\_\_

Issued by Bonaly J. Hartley  
Bonaly J. Hartley  
Title: Vice President Administration

Effective: August 1, 2008

**RATE SCHEDULE**  
**PRIVATE FIRE PROTECTION SERVICE**  
**SCHEDULE FP-NM**  
**3.80% PROPOSED STEP INCREASE 2**

**Availability**

This rate is available for private fire protection and sprinkler service subject to the Private Fire Protection Regulations of paragraph 13 of this tariff.

**Character of Service:**

The Company will make every effort to maintain normal pressures at all times on the distribution system, but shall not be held liable for the failure of either the supply or distribution division of its system to adequately furnish its normal quantity of water when such failure is due to the elements, natural causes, breaks, leaks, unusual or concurrent droughts, or the waste or unlawful use of water.

**Rate:**

The charge shall be determined by the size of the pipe entering the property as follows:

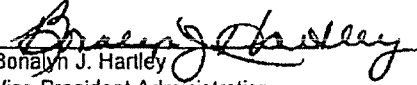
	<u>Per Quarter    Per Month</u>		<u>Proposed Step Increase 2 Per Quarter    Per Month</u>		
4" or smaller connection	\$ 88.05	\$ 29.35	\$ 5.19	\$ 1.73	(I)
6" connection	147.75	49.25	8.73	\$ 2.91	(I)
8" or larger connection	217.53	72.51	12.87	\$ 4.29	(I)

**Terms of Payment:**

Bills under this rate are net; will be rendered monthly or quarterly, and are due and payable at the office of the Company on the due date as stated on the water bill.

Issued: \_\_\_\_\_

Issued by

  
 Bonalyn J. Hartley

Effective: August 1, 2008

Title: Vice President Administration

Authorized by NHPUC Order No. 24,771 in Docket No. DW 06-073, dated June 29, 2007

**RATE SCHEDULE  
GENERAL SERVICE - METERED  
SCHEDULE G-M  
23.56% PROPOSED COMBINED INCREASE**

**Availability**

The rate is available for metered water service in the franchised area subject to the terms and conditions of this tariff.

**Character of Service:**

**Nashua Core System:** Water is fully treated, filtered, and purified and is transmitted by gravity and pumps to the individual service pipes.

**Community Water Systems:** Water is ground water from a well size. Water quality meets or exceeds all federal and state standards for drinking water. Outdoor use of water may be restricted during dry summer periods.

**Rates: Quarterly**

The standard customer charge per quarter based on meter size will be shown below.

Meter Size	Quarterly Customer Charge	Proposed Combined Increase	
5/8"	\$ 46.08	\$ 55.29	(I)
3/4"	\$ 66.33	\$ 79.56	(I)
1"	\$ 106.83	\$ 128.19	(I)
1 1/2"	\$ 208.17	\$ 249.78	(I)
2"	\$ 340.80	\$ 408.96	(I)
3"	\$ 624.98	\$ 749.97	(I)
4"	\$ 1,030.71	\$ 1,236.93	(I)
6"	\$ 2,045.22	\$ 2,454.45	(I)
8"	\$ 3,262.92	\$ 3,915.81	(I)
10"	\$ 4,683.18	\$ 5,620.26	(I)

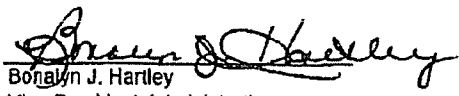
In addition to the standard customer charge, the quarterly volumetric charge based on usage will be show below:

Volumetric Charge:	\$ 2.40 per 100 cu. Ft.	
Proposed Combined Increase	\$ 2.941 per 100 cu. Ft.	(I)

**Terms of Payment:**

Bills under this rate are net; will be rendered quarterly, and are due and payable at the office of the Company on the due date as stated on the water bill.

Issued: \_\_\_\_\_

Issued by   
Bonalyn J. Hartley  
Title: Vice President Administration

Effective: August 1, 2008

Authorized by NHPUC Order No. 24,771 in Docket No. DW 06-073, dated June 29, 2007

**RATE SCHEDULE  
GENERAL SERVICE - METERED  
SCHEDULE G-M  
23.56% PROPOSED COMBINED INCREASE**

Monthly

The standard customer charge per month based on meter size will be shown below.

Meter Size	Monthly Customer Charge	Proposed Combined Increase	
5/8"	\$ 15.36	\$ 18.43	(I)
3/4"	22.11	26.52	(I)
1"	35.61	42.73	(I)
1 1/2"	69.39	83.26	(I)
2"	113.60	136.32	(I)
3"	208.32	249.99	(I)
4"	343.57	412.31	(I)
6"	681.74	818.15	(I)
8"	1,087.64	1,305.27	(I)
10"	1,561.06	1,873.42	(I)

In addition to the standard customer charge, the monthly volumetric charge based on usage will be as follows:

Volumetric Charge:	\$ 2.40 per 100 cu. Ft.	
Proposed Combined Increase	\$ 2.941 per 100 cu. Ft.	(I)

**Terms of Payment:**

Bills under this rate are net; will be rendered monthly, and are due and payable at the office of the Company on the due date as stated on the water bill.

Issued: \_\_\_\_\_

Effective: August 1, 2008

Issued by:   
Bonalyn J. Hartley  
Title: Vice President Administration

Authorized by NHPUC Order No. 24,771 in Docket No. DW 06-073, dated June 29, 2007



**RATE SCHEDULE  
MUNICIPAL FIRE PROTECTION SERVICE  
SCHEDULE FP-M  
23.56% PROPOSED COMBINED INCREASE**

**Availability**

This rate is applicable to general fire protection.

**Character of Service:**

The Company will make every effort to maintain normal pressures at all times on the distribution system, but shall not be held liable for the failure of either the supply or distribution division of its system to adequately furnish its normal quantity of water when such failure is due to the elements, natural causes, breaks, leaks, unusual or concurrent droughts, or the waste or unlawful use of water.

**Rate:**

The charge shall be made up of two parts as follows:

**1) Hydrant charge**

For each hydrant connected to the distribution system

**Proposed  
Combined Increase**

\$ 41.52	per quarter	\$ 52.20	per quarter	(1)
	or		or	
\$ 13.84	per month	\$ 17.40	per month	(1)

**2) Inch-Foot Charge**

The number of "inch-foot" units in the distribution system is to be obtained by multiplying the number of linear feet of pipe of each diameter (4" and larger) by the diameter in inches. The total number of "inch-foot" units in the distribution system will be determined as of January 1st each year, and will be the base for computing the "inch-foot" charge for the entire year with one-fourth to be billed each quarter or one-twelfth to be billed each month.

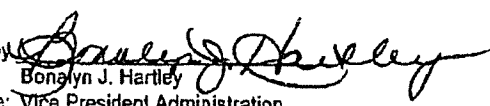
**Proposed  
Combined Increase**

Charge for each "Inch-foot" unit				
to be				
\$ 0.1137	per year	\$ 0.11995	per year	(1)

**Terms of Payment:**

Bills under this rate are net; will be rendered monthly or quarterly, and are due and payable at the office of the Company on the due date as stated on the water bill.

Issued: \_\_\_\_\_

Issued by:   
Bonalyn J. Hartley  
Title: Vice President Administration

Effective: August 1, 2008

Authorized by NHPUC Order No. 24,771 in Docket No. DW 06-073, dated June 29, 2007

**RATE SCHEDULE  
PRIVATE FIRE PROTECTION SERVICE  
SCHEDULE FP-NM  
23.66% PROPOSED COMBINED INCREASE**

**Availability**

This rate is available for private fire protection and sprinkler service subject to the Private Fire Protection Regulations of paragraph 13 of this tariff.

**Character of Service:**

The Company will make every effort to maintain normal pressures at all times on the distribution system, but shall not be held liable for the failure of either the supply or distribution division of its system to adequately furnish its normal quantity of water when such failure is due to the elements, natural causes, breaks, leaks, unusual or concurrent droughts, or the waste or unlawful use of water.

**Rate:**

The charge shall be determined by the size of the pipe entering the property as follows:

	<u>Per Quarter    Per Month</u>		<u>Proposed Combined Increase Per Quarter    Per Month</u>		
4" or smaller connection	\$ 88.05	\$ 29.35	\$ 169.47	\$ 56.49	(1)
6" connection	147.75	49.25	284.37	\$ 94.79	(1)
8" or larger connection	217.53	72.51	418.68	\$ 139.56	(1)

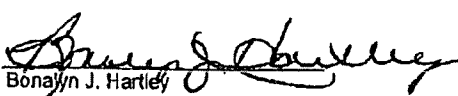
**Terms of Payment:**

Bills under this rate are net; will be rendered monthly or quarterly, and are due and payable at the office of the Company on the due date as stated on the water bill.

Issued: \_\_\_\_\_

Effective: August 1, 2008

Issued by

  
Bonafyn J. Hartley

Title: Vice President Administration

Authorized by NHPUC Order No. 24,771 in Docket No. DW 06-073, dated June 29, 2007

**PENNICHUCK WATER WORKS, INC.  
MERRIMACK, NEW HAMPSHIRE**

**SECOND ADDENDUM TO  
REPORT ON  
COST OF SERVICE ALLOCATIONS  
AND WATER RATE DESIGN**

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**ADDITIONAL RATE DESIGN SCENARIOS**

**by**

**John R. Palko, Principal  
AUS Consultants  
155 Gaither Drive, Suite A  
Mt. Laurel, NJ 08054**

**September 2008**

SECOND ADDENDUM TO  
REPORT ON  
COST OF SERVICE ALLOCATIONS  
AND WATER RATE DESIGN  
PENNICHUCK WATER WORKS, INC.

The cost of service allocations and related rate design developed in the main body of this report were premised upon a net water revenue requirement of \$24,896,859. This amount has been characterized as the "Permanent Rate Increase" by the management of Pennichuck Water Works, Inc.

In addition to the Permanent Rate Increase, three other revenue requirement levels will be considered in the rate filing before the New Hampshire Public Utilities Commission. These levels and the corresponding revenue requirements are identified as the "Temporary Rate Increase" of \$24,150,046; the "Step 1 Rate Increase" of \$25,992,122; and, the "Step 2 Rate Increase" of \$26,815,958. This \$26,815,958 represents a revision to Pennichuck's originally filed Step 2 Rate Increase.

This addendum sets forth the design of rates and charges which will generate the revenue requirements under the Revised Step 2 Rate Increase. Attached hereto are a series of schedules similar in format to Schedules 9, 10, 12, and 13 (i.e., the rate design schedules) of the main report. The schedules attached hereto are identified with ".Step 2.Rev" extensions to reflect the revised Step 2 revenue requirement under consideration.

Page 5 of Schedule 13 set forth herein shows that the revised Step 2 rate design is within 0.001% of its revenue requirement. This difference is each considered negligible and is acceptable for rate design purposes.

**PENNICHUCK WATER WORKS, INC.  
MERRIMACK, NEW HAMPSHIRE**

**SCHEDULES TO ACCOMPANY  
SECOND ADDENDUM TO  
REPORT ON  
COST OF SERVICE ALLOCATIONS  
AND WATER RATE DESIGN**

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**ADDITIONAL RATE DESIGN SCENARIOS**

**by**

**John R. Palko, Principal  
AUS Consultants  
155 Gaither Drive, Suite A  
Mt. Laurel, NJ 08054**

**September 2008**

**PENNICHUCK WATER WORKS, INC.  
MERRIMACK, NEW HAMPSHIRE**

**RATE DESIGN FOR  
REVISED STEP 2 RATE INCREASE**

**September 2008**

Pennichuck Water Works, Inc.

Comparison of Present Rate Revenues and Cost of Service Indications  
Step 2 Rate Increase - Revised September 2008

	<u>Present Rates</u>		<u>Cost of Service</u>	
	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>
Water Service Revenue	19,001,220.57	86.34	23,115,356	86.20
Private Fire Revenue	512,713.68	2.33	986,827	3.68
Municipal Fire Revenue	2,493,950.40	11.33	2,713,775	10.12
Total Revenues	22,007,884.65	100.00	26,815,958	100.00

Note: Above "Cost of Service" amounts result from applying the class percentages developed in the Cost of Service Allocation Study to the revenue being requested for the Step 2 Rate Increase - Revised September 2008.. The following ratios the Step 2 Rate Increase - Revised September 2008 to the Cost of Service Indications for rate design purposes.

	<u>COS Study</u>	<u>Step 2</u>
<u>Municipal Fire:</u>		
Hydrant	476,877	513,376
Inch-Foot	2,043,961	2,200,399
Total	2,520,838	2,713,775
<u>Water Service:</u>		
Customer Charge	6,270,868	6,754,983
Volume Charge	15,082,217	16,246,573
Fixed Fee	113,800	113,800
Total	21,466,885	23,115,356

Pennichuck Water Works, Inc.

Rate Design  
Step 2 Rate Increase - Revised September 2008

Municipal Fire Protection

Total Hydrant Revenue Requirement	513,376
Number of Hydrants	2,458
Annual Cost per Hydrant	208.86
Monthly Charge per Hydrant	17.40
Quarterly Charge per Hydrant	52.20
Total Inch-Foot Revenue Requirement	2,200,399
Number of Inch-Feet	18,344,114
Annual Charge per Inch-Foot	0.11995



Pennichuck Water Works, Inc.

Rate Design  
Step 2 Rate Increase - Revised September 2008

Private Fire Protection

Total Private Fire Protection Rev Reqmt 986,827

Present Private Fire Protection Revenue 512,714

Increase Required 92.47 %

<u>Size</u>	<u>Present Monthly Charge</u>	<u>Proposed Monthly Charge</u>	<u>Proposed Quarterly Charge</u>	<u>Increase</u>	
2"	29.35	56.49	169.47	92.47	%
4"	29.35	56.49	169.47	92.47	%
6"	49.25	94.79	284.37	92.47	%
8"	72.51	139.56	418.68	92.47	%
10"	72.51	139.56	418.68	92.47	%
12"	72.51	139.56	418.68	92.47	%
16"	72.51	139.56	418.68	92.47	%

Pennichuck Water Works, Inc.

Rate Design  
Step 2 Rate Increase - Revised September 2008

Customer Charges

Total for Customer Charge 6,754,983

Present Customer Charge Revenue 5,628,501

Increase Required 20.01 %

<u>Meter Size</u>	<u>Present Monthly Charge</u>	<u>Proposed Monthly Charge</u>	<u>Proposed Quarterly Charge</u>	<u>Increase</u>
5/8"	15.36	18.43	55.29	19.99 %
3/4"	22.11	26.52	79.56	19.95 %
1"	35.61	42.73	128.19	19.99 %
1 1/2"	69.39	83.26	249.78	19.99 %
2"	113.60	136.32	408.96	20.00 %
3"	208.32	249.99	749.97	20.00 %
4"	343.57	412.31	1,236.93	20.01 %
6"	681.74	818.15	2,454.45	20.01 %
8"	1,087.64	1,305.27	3,915.81	20.01 %
10"	1,561.06	1,873.42	5,620.26	20.01 %

Pennichuck Water Works, Inc.

Rate Design  
Step 2 Rate Increase - Revised September 2008

Volumetric Charges

Net Water Revenue Requirement	26,815,958
Less Proposed Revenues:	
From Municipal Fire Protection	(2,713,607)
From Private Fire Protection	(986,814)
From Customer Charges	(6,753,531)
From Contract Fixed Fees	(113,800)
Net Required From Volume Charges	16,248,206
Present Volume Charge Revenue	13,258,920
Increase Required	22.55 %

	<u>Present Charge</u>	<u>Proposed Charge</u>	<u>Increase</u>
General Water	2.40	2.941	22.54 %
Anheuser-Busch	1.2382	1.5174	22.55 %
Hudson	1.5249	1.8688	22.55 %
Milford	1.5108	1.8515	22.55 %

Pennichuck Water Works, Inc.  
Summary of Proposed Rates  
Step 2 Rate Increase - Revised September 2008

General Service - Metered  
Schedule G-M

<u>Meter Size</u>	<u>Quarterly Proposed Charge</u>	<u>Monthly Proposed Charge</u>
5/8"	\$ 55.29	\$ 18.43
3/4"	79.56	26.52
1"	128.19	42.73
1 1/2"	249.78	83.26
2"	408.86	136.32
3"	749.97	249.99
4"	1,236.93	412.31
6"	2,454.45	818.15
8"	3,915.81	1,305.27
10"	5,620.26	1,873.42
Volumetric Charge per 100 cu. ft.	\$ 2.941	\$ 2.941

Municipal Fire Protection Service  
Schedule FP-M

	<u>Quarterly Proposed Charge</u>	<u>Monthly Proposed Charge</u>
Each Hydrant	\$ 52.20	\$ 17.40
Inch-Foot per year	\$0.11995	

Private Fire Protection Service  
Schedule FP-NM

<u>Connection Size</u>	<u>Quarterly Proposed Charge</u>	<u>Monthly Proposed Charge</u>
4" or smaller	\$ 169.47	\$ 56.49
6"	284.37	94.79
8" or larger	418.68	139.56

Special Contract Service

Anheuser-Busch

Volumetric Charge per 100 cu. ft.	\$ 1.5174
--------------------------------------	-----------

Hudson

Annual Charge	\$ 32,800
Volumetric Charge per 100 cu. ft.	\$ 1.8688

Milford

Annual Fixed Fee	\$ 81,000
Volumetric Charge per 100 cu. ft.	\$ 1.8515

Pennichuck Water Works, Inc.  
Calculation of Revenues Under Proposed Rates  
Step 2 Rate Increase - Revised September 2008  
General Service - Metered

Residential

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
5/8"	22,728	90,912	\$ 55.29	\$ 5,026,524.48
3/4"	311	1,244	79.56	98,972.64
1"	200	800	128.19	102,552.00
1 1/2"	130	520	249.78	129,885.60
2"	45	180	408.96	73,612.80
3"	19	76	749.97	56,997.72
4"	3	12	1,236.93	14,843.16
6"	0	0	2,454.45	0.00
8"	0	0	3,915.81	0.00
10"	0	0	5,620.26	0.00
Subtotal	23,436	93,744		\$ 5,503,388.40
<u>CCFT</u>				
Volume	3,706,390		\$ 2.941	\$ 10,900,492.99
Total Residential Revenue				\$ 16,403,881.39

Commercial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
5/8"	593	2,372	\$ 55.29	\$ 131,147.88
3/4"	171	684	79.56	54,419.04
1"	254	1,016	128.19	130,241.04
1 1/2"	219	876	249.78	218,807.28
2"	153	612	408.96	250,283.52
3"	17	68	749.97	50,997.96
4"	3	12	1,236.93	14,843.16
6"	2	8	2,454.45	19,635.60
8"	0	0	3,915.81	0.00
10"	0	0	5,620.26	0.00
Subtotal	1,412	5,648		\$ 870,375.48
<u>CCFT</u>				
Volume	862,696		\$ 2.941	\$ 2,537,188.94
Total Commercial Revenue				\$ 3,407,564.42

Pennichuck Water Works, Inc.  
Calculation of Revenues Under Proposed Rates  
Step 2 Rate Increase - Revised September 2008  
General Service - Metered

Industrial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
5/8"	30	120	\$ 55.29	\$ 6,634.80
3/4"	17	68	79.56	5,410.08
1"	38	152	128.19	19,484.88
1 1/2"	30	120	249.78	29,973.60
2"	33	132	408.96	53,982.72
3"	15	60	749.97	44,998.20
4"	4	16	1,236.93	19,790.88
6"	2	8	2,454.45	19,635.60
8"	1	4	3,915.81	15,663.24
10"	0	0	5,620.26	0.00
Subtotal	170	680		\$ 215,574.00
<u>CCFT</u>				
Volume	288,156		\$ 2.941	\$ 847,466.80
Total Industrial Revenue				\$ 1,063,040.80

Municipal

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
5/8"	17	68	\$ 55.29	\$ 3,759.72
3/4"	9	36	79.56	2,864.16
1"	17	68	128.19	8,716.92
1 1/2"	25	100	249.78	24,978.00
2"	37	148	408.96	60,526.08
3"	8	32	749.97	23,999.04
4"	2	8	1,236.93	9,895.44
6"	1	4	2,454.45	9,817.80
8"		0	3,915.81	0.00
10"		0	5,620.26	0.00
Subtotal	116	464		\$ 144,557.16
<u>CCFT</u>				
Volume	80,329		\$ 2.941	\$ 236,247.59
Total Municipal Revenue				\$ 380,804.75
Grand Total GWS Revenue				\$ 21,255,291.35

Pennichuck Water Works, Inc.  
Calculation of Revenues Under Proposed Rates  
Step 2 Rate Increase - Revised September 2008  
Service to Contract Customers

Town of Milford

		<u>Proposed Rate</u>	<u>Proposed Revenue</u>
Annual Fixed Fee		\$ 81,000.00	\$ 81,000.00
Volume	<u>CCFT</u> 42,400	\$ 1.8515	\$ 78,503.60
Total Milford Revenue			\$ 159,503.60

Town of Hudson

		<u>Proposed Rate</u>	<u>Proposed Revenue</u>
Annual Demand Charge		\$ 32,800.00	\$ 32,800.00
Volume	<u>CCFT</u> 182,214	\$ 1.8688	\$ 340,521.52
Total Hudson Revenue			\$ 373,321.52

Anheuser-Busch

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
6"	2	24	\$ 818.15	\$ 19,635.60
Volume	<u>CCFT</u> 861,600		1.5174	\$ 1,307,391.84
Total Anheuser-Busch Revenue				\$ 1,327,027.44
Grand Total Contract Revenue				\$ 1,859,852.56

Pennichuck Water Works, Inc.  
Calculation of Revenues Under Proposed Rates  
Step 2 Rate Increase - Revised September 2008  
Fire Protection Service

Private Fire Protection

<u>Size</u>	<u>Number</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
2"	25	300	\$ 56.49	\$ 16,947.00
4"	102	1,224	56.49	69,143.76
6"	359	4,308	94.79	408,355.32
8"	274	3,288	139.56	458,873.28
10"	6	72	139.56	10,048.32
12"	13	156	139.56	21,771.36
16"	1	12	139.56	1,674.72
Total	780	9,360		\$ 986,813.76

Municipal Fire Protection

<u>Size</u>	<u>Number</u>	<u>of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
Hydrant	2,458	60	\$ 17.40	\$ 513,230.40
Inch-Feet	18,344,114		0.11995	2,200,376.47
Total Municipal Fire Revenue				\$ 2,713,606.87



Pennichuck Water Works, Inc.  
Calculation of Revenues Under Proposed Rates  
Step 2 Rate Increase - Revised September 2008  
Total Proposed Rate Revenue

Grand Total GWS Revenue	\$ 21,255,291.35
Grand Total Contract Revenue	\$ 1,859,852.56
Grand Total Private Fire Revenue	\$ 986,813.76
Grand Total Municipal Fire Revenue	\$ 2,713,606.87
Grand Total Proposed Revenue	\$ 26,815,564.54
Total Customer Charge Revenue	\$ 6,753,530.64
Total Volume Charge Revenue	\$ 16,247,813.27
Total Contract Fixed Fee Revenue	\$ 113,800.00
Total Private Fire Revenue	\$ 986,813.76
Total Municipal Fire Revenue	\$ 2,713,606.87
Grand Total Proposed Revenue	\$ 26,815,564.54
Net Water Revenue Requirement	\$ 26,815,958.00
Difference	\$ (393.46) -0.001%

Note: For purposes of this calculation, all general service customer charges are treated as quarterly bills and all fire service charges are treated as monthly bills.

