STATE OF NEW HAMPSHIRE

BEFORE THE

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

RE: PENNICHUCK WATER WORKS, INC.

DW 08-073

PREFILED DIRECT TESTIMONY

OF

DONALD L. WARE

JUNE 2008

1 **Professional and Educational Background**

2 **Q. What is your name and what is your position with Pennichuck Water Works,**
3 **Inc.?**

4 **A.** My name is Donald L. Ware. I am the President of Pennichuck Water Works, Inc.
5 (the "Company"). I have been employed with the Company since April 1995. I am
6 a licensed professional engineer in New Hampshire, Massachusetts and Maine.

7 **Q. Please describe your educational background.**

8 **A.** I have a Bachelor in Science degree in Civil Engineering from Bucknell University
9 in Lewisburg, Pennsylvania. I have a Masters in Business Administration from the
10 Whittemore Business School at the University of New Hampshire.

11 **Q. Please describe your professional background.**

12 **A.** Prior to joining the Company, I served as the General Manager of the Augusta
13 Water District in Augusta, Maine from 1986 to 1995. I served as the District's
14 engineer between 1982 and 1986. Prior to my engagement with the District I
15 served as a design engineer for the State of Maine Department of Transportation
16 for six months and before that as a design engineer for Buchart-Horn Consulting
17 Engineers from 1979 to 1982.

18 **Q. What are your responsibilities as President of the Company?**

19 **A.** As President of the Company I am responsible for the overall operations of the
20 Company, including water quality and supply, distribution, engineering and water
21 system capital improvements. With regard to capital improvements overseen by
22 the Company's Engineering Department, I work directly with the Company's Chief
23 Engineer and each of the Company's Department managers in the selection and
24 implementation of new capital improvement projects.

1 **Q. What is the purpose of your testimony?**

2 **A.** I will be providing details of the Company's capital expenditures, both revenue and
3 non-revenue producing, that were made during the test year and included in the
4 Company's rate request. In addition, I will describe capital improvements that
5 have been or will be made in 2008 that form the basis for the Company's request
6 for two step increases for assets being placed into service as of May 2008 and
7 November 2008.

8 **Overview of Capital Expenditures**

9 **Q. Did the Company make capital expenditures in 2007?**

10 **A.** Yes. The Company made capital expenditures in 2007, some of which were
11 included in the Company's last rate case. By way of background, in the
12 Company's last rate case, DW 06-073, the Company was awarded a step
13 increase for significant additions to the Company's water treatment plant that were
14 placed into service on January 5, 2007. These additions totaled approximately
15 $20.9 Million and are not included in this rate filing.

16 **Q. How much did the Company spend, in total, for capital expenditures during**
17 **2007 that were not captured in the step increase granted as part of DW 06-**
18 **073?**

19 **A.** The Company added $9.7 Million of new assets during 2007 of which $1.7 Million
20 were Contributions in Aid of Construction and of which $7.0 Million were non-
21 revenue producing projects (excluding retirements).

22 **Q. What do you mean by non-revenue producing projects?**

1 **A.** Non-revenue producing projects are projects that do not result in new customers
2 or additional revenues to the Company. Examples of typical non-revenue
3 producing projects are those projects that are the result of government regulations
4 such as the Safe Drinking Water Act (SDWA), the City of Nashua's sanitary and
5 storm water separation project sometimes referred to as the combined sewer
6 overflow project (CSO), City and State road reconstruction projects and other
7 State or Federal mandates. Capital expenditures to enhance customer service or
8 replacements of aging infrastructure can also be non-revenue producing projects.
9 **Q. Are all of the capital expenditures completed during 2007 (and described**
10 **further below) currently used and useful?**
11 **A.** Yes.
12 **Q. What were the major focal points of the Company's capital projects in 2007?**
13 **A.** The Company's focus was multifaceted —the continued reconstruction of the
14 water treatment plant to insure compliance with all State and Federal Drinking
15 Water Regulations, replacing aging infrastructure, primarily water mains and
16 services, completing a major watershed study and initiating the installation of radio
17 meter readers in the Company's core water system. The Company spent a total
18 of $8.0 Million in capital improvements within these areas during 2007. Each of
19 these major areas are described in more detail below.
20 **<u>SDWA Compliance Capital Expenditures</u>**
21 **Q. Can you please describe the work that the Company completed during 2007**
22 **at the Water Treatment plant in order to maintain compliance with the Safe**
23 **Drinking Water Act (SDWA)?**

A. Yes. The projects listed below were completed as part of the Water Treatment plant upgrades during 2007 and in order to meet SDWA requirements:

1. A duplicate raw water automatic cleaning screen was added to the raw water inlet. Prior to this plant addition there was only one screen that was rated for 20 mgd which resulted in flows over 20 mgd being redirected through a manual screen.

2. Each of the plant's six water filters is being rebuilt. The first filter rebuild was completed in October of 2007. The remaining five filters are being rebuilt one at a time. To date, two of the remaining five filter rebuilds have been completed. The rebuild of the fourth filter is underway and should be completed in August of this year. The fifth filter rebuild should be completed by the end of November of 2008 and the last filter rebuild should be completed by the end of February 2009. (The Company has not included the investment in the 6th filter as part of this rate case).

2. The rehabilitation of the Snow Station has been completed. The rehabilitation included the installation of a 480V emergency generator which is large enough to run the Snow Station pumps as well as a rebuild of the Snow Station pumps to accommodate the different suction characteristics that resulted from the addition of the finished water storage tank.

3. The plant's offices, control room and laboratory were reconstructed and expanded to accommodate the plant's current staff office and conference needs, provide adequate lab facilities to track and manage over 8,000

water samples per year and to provide for a conference/training room for the existing staff.

4. The existing Ferric, Sodium Hydroxide, and Sodium Hypochlorite feed and storage facilities have been replaced with new paced feed pumps and high density polyethylene tanks. The new feed pumps provide more precise and paced feed rates than the original feed pumps. The existing fiberglass chemical tanks are crazed and are nearing the end of their useful life.

5. A new 480 V electric service has been installed replacing the existing 4160 V electrical service. The new service is larger to accommodate the new treatment plant equipment and is also a low voltage entrance vs. the existing high voltage service entrance. The low voltage motors associated with this type of power are more readily available, easier to service and less expensive to purchase in comparison to the high voltage equipment.

Q. How much did the Company invest in the above referenced improvements to the water treatment plant during 2007?

A. The Company completed a total of $5.8 Million of improvements at the water treatment plant that were used and useful in 2007. The costs of the projects described above are broken down in detail on Schedule 3, Attachment A, Exhibit 2.

Q. Has the Company been accruing Allowance for Funds used during Construction (AFUDC) for improvements at the water treatment plant? If so, how was the AFUDC calculated?

A. Yes. AFUDC was calculated on a month by month basis on each discrete part of the water treatment plant construction. For example, when work began on Filter

1 #1 in March of 2007, the Company calculated AFUDC on the balance of the work
2 completed in March of 2007. Each month thereafter, until the completion of the
3 Filter #1 in October of 2007 the Company calculated AFUDC on the balance of
4 the work completed on Filter #1 through the end of the month. The Company
5 stopped calculating AFUDC on Filter #1 in October 2007 when this filter was put
6 into service and became used and useful. A total of $1.6 Million was invested in
7 the upgrade of Filter #1, excluding AFUDC. The Company has not earned a
8 return on the investment in Filter #1 since it stopped calculating AFUDC on this
9 filter in October of 2007.

10 **Q. Can you please describe the work that the Company has completed to date**
11 **(through the end of May 2008) at the Water Treatment plant in order to**
12 **maintain compliance with the SDWA?**

13 **A.** Yes. The projects listed below have been completed as part of the Water
14 Treatment plant upgrades completed through the end of May 2008, and are the
15 basis for the Company's proposed first step increase:

16 1. The addition of a second, parallel raw water intake line with a duplicate raw
17 water inlet control valve and separate chemical feed facilities. The original
18 plant design required that the plant be shut down to service the inlet control
19 valve. Each of the completed raw water intakes have flow meters that
20 allow for the accurate regulation of the flows and pacing of chemicals to
21 each of the pulsators. The original plant configuration had no method to
22 measure flow to each of the pulsators or balance the flow to the pulsators.
23 The maldistribution of flow between the pulsators did not allow for proper
24 dosing of the coagulant aid before the water entered the pulsators.

2. The redesigned plant has the ability to add sodium hydroxide and Carbon Dioxide feed facilities to the head works. This will allow the plant operators to increase raw water alkalinity to 30 ppm while maintaining a pH of coagulation between 5.0 and 6.0. The original plant facilities could add alkalinity but had no way to reduce the pH of coagulation to appropriate levels after sufficient alkalinity had been added. The inability to reduce the pH after increasing the alkalinity limited the addition of extra coagulant making proper coagulation under certain conditions impossible.

3. One of the plant's two pulsators was refurbished in during late 2007 and into early 2008. The existing launders in the pulsator were transite and they had softened. The transite launders were replaced with PVC launders. The original pulsator "egg crate" tube settlers were brittle and cracked. The original tube settlers were replaced with new tube settlers that will enhance the pulsator blanket formation and sludge removal while eliminating pulsator hot spots. The existing sludge concentrator was epoxy coated to enhance the sludge concentration process.

4. Filters #2 and #3 were rebuilt as described above between the end of 2007 and May of 2008.

Q. How much did the Company invest in the above referenced improvements to the water treatment plant from January 2008 through May 2008?

A. The Company spent a total of $6.9 Million on the above referenced improvements at the water treatment plant, each of which became used and useful between January 2008 and May 2008. These expenditures are detailed on Schedule 3, Attachment A, Exhibit 2 of Step Increase.

1 **Q. Can you please describe the work that the Company plans to complete at**
2 **the Water Treatment plant through the remainder of 2008?**
3 **A.** Yes. The Company anticipates that work on Filters #4 and #5 will be completed
4 by the end of November 2008. The Company will be investing about $1.6 Million
5 in each filter rebuild. The Company anticipates that Filter #4 will become used
6 and useful in August of 2008 and that Filter #5 will become used and useful in
7 November of 2008.
8 **Q. Will the work at the Water Treatment plant be completed by the end of 2008?**
9 **A.** No. The Company expects all work on the Water Treatment plant to be
10 completed by the late spring of 2009. The work to be completed in 2009 includes
11 the completion of the rebuilds of Filter #6 and Pulsator #2. This will result in an
12 additional investment in the Water Treatment Plant during 2009 in the amount of
13 $2.6 Million, which is not included in the Company's rate request in this case. The
14 Company anticipates filing a subsequent rate case to recover the costs of these
15 expenditures.
16 **Q. In your testimony in DW 06-073, you referenced a Contract 6 which entailed**
17 **the rebuild of the Merrimack River Intake. Do you still plan to rebuild the**
18 **Merrimack River Intake?**
19 **A.** Yes. The Company bid the construction of the two new 350 HP pumps to be used
20 at the Merrimack River Intake in February of 2008. The installation of the new
21 pumps will increase station capacity from 16.8 to 22.0 MGD. The station upgrade
22 will also increase the station capacity with largest pump out of service from 11.6
23 MGD to 22.0 MGD. The estimated cost of the upgrade to the Merrimack River

1 Intake is $520,000. The Company is requesting to recover this investment as part
2 of one of the step increases proposed as part of this rate case.
3 **Q. Has the Company tracked and booked the Cost of Removal associated with**
4 **the rehabilitation of the water treatment plant?**
5 **A.** Yes. Ann estimated total of $0.6 million for the Cost of Removal will be booked on
6 the assets being rehabilitated/replaced as part of the water treatment plant
7 upgrade.
8 **Other Capital Improvements**
9 **Q. Can you please describe the other types of capital improvements that**
10 **Pennichuck completed in 2007?**
11 **A.** Yes. The Company spent a total of $900,235 to replace aging water mains,
12 services, valves and hydrants in 2007. This work resulted in 33 steel water
13 services and a 4,095 lineal feet of water main being replaced during 2007.
14 **Q. Was any of the above referenced replacement work associated with the City**
15 **of Nashua Combined Sewer Overflow projects (CSO)?**
16 A. Yes. About 1500 LF of the replacement main was associated with the Nashua
17 CSO program. The Company worked in a cooperative fashion with the City of
18 Nashua Public Works Department to plan a joint construction project along a part
19 of Kinsley Street in Nashua.
20 **Q. The amount of water main replaced in 2007 is substantially less than the**
21 **Company has replaced in the past. What is the reason for this and what are**
22 **the Company's plans in the future relative to the replacement/rehabilitation**
23 **of water main?**

1 **A.** The Company installed less replacement water main in 2007 for several reasons.
2 First, the Company was unable to access the long term debt markets during most
3 of 2007 due to the ongoing eminent domain proceedings. The capital that the
4 Company had access to had to be reserved primarily for the work that had been
5 contracted for at the water treatment plant. Second, the City of Nashua stopped
6 its CSO program so that the planned joint water and sewer replacement projects
7 that had helped reduce paving costs associated with water main replacement
8 projects for the Company were eliminated. The elimination of the Nashua CSO
9 work has caused the Company to rethink its approach relative to the replacement
10 or rehabilitation of its unlined cast iron and steel water mains given the Company's
11 inability to mitigate its paving costs through coordination with CSO work.
12 **Q. What is the Company's new approach to the replacement or rehabilitation of**
13 **its ageing water mains?**
14 A. For the past decade the Company has coordinated its water main replacement
15 program with the City of Nashua CSO program in order to save on paving costs
16 and to replace the old unlined cast iron water mains that would be subject to
17 breakage after the City completed all its CSO construction work around the
18 Company's water mains. At present, and in the foreseeable future, it does not
19 appear that the City of Nashua will be separating its storm water and sewer
20 facilities where they are combined so the ability and need for the Company to
21 coordinate water main replacement projects with the City's CSO work is no longer
22 necessary. The City does not publish its paving list until the spring of each year
23 long after Pennichuck needs to begin work on planning and engineering the water
24 main replacement/rehabilitation work for the year. Additionally, the City is no

1 longer reducing the Company's paving requirements on streets where it will be
2 repaving so there is no motivation for the Company to alter its planned water main
3 replacement/rehabilitation program in an effort to match the City's paving plan.
4 The result is that the Company is developing a 5 year replacement/rehabilitation
5 plan targeting 2 to 2.5 miles of water main replacement/rehabilitation work.
6 **Q. What is the basis of deciding to rehabilitate a main versus replace a water**
7 **main?**
8 A. The Company is developing a plan to replace/rehabilitate its unlined cast iron and
9 steel water mains. The evaluation involves reviewing the break history of the
10 water main, assessing the existing water main's ability to deliver the fire protection
11 flows stipulated by the Insurance Service Organization (ISO) and the soils that are
12 present in the area of the water main being evaluated (to assess whether they are
13 corrosive or not to the exterior of the cast iron water main). If the water main
14 being evaluated for replacement versus rehabilitation has had a low break history
15 and when cleaned and lined can deliver the ISO required fire flows, and test pits
16 and area soils maps show the surrounding soils are non corrosive to the existing
17 water main, the Company will elect to clean and line the existing cast iron water
18 main instead of replacing it. The cost of cleaning and lining an existing water main
19 is about $110 less per lineal foot than replacing the existing water main.
20 **Q. Were there any other projects, exclusive of the replacement of water mains,**
21 **hydrants and water services, that the Company undertook to rehabilitate or**
22 **replace aging infrastructure?**

1 A. Yes, the Company spent $50,344 in 2007 to replace worn booster pumps, worn
2 well pumps, worn air compressors and heaters in large number of booster stations
3 and wells that the Company operates.
4 **Q. Has the Company continued to install radio meter readers? If so, please**
5 **describe those investments.**
6 A. The Company spent $366,079 on the installation of 4,198 radio meter readers in
7 2007, which is necessary to achieve the Company's transition from quarterly to
8 monthly billing of all its water accounts. The planned installation of slightly over
9 21,000 radio meter readers should be completed by the end of September 2008
10 at a total cost of approximately $1,798,000. The installation of radio meter
11 readers will increase the average daily meter reading rate by a factor of over 8
12 and will result in over $100,000 a year savings in meter reading costs, including
13 the return on and depreciation expense associated with the radio installation,
14 versus completing monthly meter reading using the current touch read meter
15 reading system. The savings approach over $200,000 when one takes into
16 consideration the fact that about 75% of the existing touch read meters are the
17 older style Neptune TTA meters with pin box readouts that would need to be
18 replaced with TPA meters and outside touch pads if manual reading was to
19 continue and was to be completed on a monthly basis. The majority of the
20 savings are the result of a reduction in meter reading labor. The meter reading
21 labor will be redeployed into completing meter pull and tests and bringing the
22 Company's small meter testing program into line the NHPUC small meter testing
23 program.

1 **Q. Why go to monthly billing? Won't the cost of the extra billings and the**
2 **processing of those bills result in higher annual costs for billing customers?**
3 A. Yes. The costs of billing and processing monthly bills will be higher than those
4 quarterly billings since there will be three times the number of bills to print, mail
5 and process. The extra costs of migrating to monthly billing are mitigated by the
6 following benefits:
7 1. As the cost of water approaches $500 per year, the Company believes that
8 it will be easier for customers to budget and pay for a $40 per month water
9 bill versus a $120 per quarter water bill.
10 2. Reading and billing monthly will flag customer leaks more quickly and
11 minimize the amount of "leaking" water. 3. Getting a monthly bill will
12 allow a pricing signal to be received in a timely fashion that will promote
13 water conservation.
14 4. Monthly meter readings will allow for more accurate leak detection by
15 allowing the comparison of monthly production vs. monthly sales.
16 5. Monthly billing will identify stopped or slowed meters sooner.
17 6. The NHPUC staff recommended in a March 31, 2003 report titled
18 "Investigation into Water Conservation" that the Commission should
19 encourage conservation by allowing utilities to recover the costs associated
20 with monthly versus quarterly billing.
21 **Q. The Company completed another watershed study in 2007. What was the**
22 **reason for this study?**
23 A. The Company completed a three year, $191,072 study in 2007, which was
24 partially funded with a $72,840 grant from the NHDES. The study was titled the

1 "Pennichuck Brook Watershed Restoration Plan". The purpose of the study was
2 to detail the amount and sources of contaminants entering the Pennichuck Brook
3 watershed from storm water and to develop a plan to reduce the incoming
4 contaminants, primarily nutrients and sediments, to a level where the Pond system
5 could process and or pass the contaminants through the Ponds so that the input
6 of these contaminants does not accelerate the Pond systems' rate of
7 eutrophication and the need for costly dredging to restore the Pond systems'
8 storage capacity. The end result of the study was a 10 year plan of capital
9 improvements that the Company will be undertaking in order to improve the health
10 of the Pond system.
11 **Q. Has the Company initiated any of the study recommendations in 2008?**
12 **A.** Yes. The Company is in the process of permitting, designing, and constructing
13 two storm water treatment facilities adjacent to Harris Pond in the vicinity of the
14 intersection of the F.E. Everett Turnpike and Tinker Road in Nashua. The
15 constructed facilities will treat storm water runoff from the Turnpike and from over
16 150 acres of runoff from a residential section of Nashua before it enters Harris
17 Pond. The NHDES is providing a $210,600 grant toward the estimated cost of
18 $368,000 to design and construct of these storm water treatment facilities. The
19 Company is seeking to recover the cost of constructing these storm water
20 treatment facilities as part of the proposed step increase requested as part of this
21 rate case.
22 The Company is also completing the second phase of a Community Based Social
23 Marketing Plan for the Stump Pond sub watershed. The Community Based Social
24 marketing project is an effort to get homeowners to alter their lot management

1 practices with the goal of reducing the amount of nutrients leaving their individual
2 residential lots. The NHDES is funding $35,000 of a $42,000 effort in this area.
3 **Q. Can you please describe the other non revenue producing capital projects**
4 **that the Company will be completing by the end of 2008 and what the**
5 **benefits will be to the Company's customers?**
6 A. The Company will be completing an estimated $4.7 million in non treatment plant
7 related improvements in 2008. The projects and their benefits are as follows:
8 1. Water Main Replacement projects – The Company just accepted bids to
9 replace/rehabilitate 8,790 lineal feet of water main in Nashua of which
10 5,543 lineal feet is slated for cleaning and lining and the remainder for
11 replacement . The project is expected to cost about $1,471,060 (including
12 a 10% contingency on the low bid number) and involves water main work
13 on 13 streets in the French Hill area. The end result will be increased fire
14 protection and the elimination of red water events. Additionally certain
15 streets will see the elimination of pressure drops during peak usage
16 periods.
17 2. The Company will be constructing an addition to the Taylor Falls Booster
18 Station in order to accommodate the addition of a second back up pump
19 with in the station. The Taylor Falls booster station feeds water to the
20 Town of Hudson during the spring, summer and fall of each year. At
21 present there is only one pump is this station. The existing pump is
22 capable of meeting the Hudson water demands but if it fails there is no
23 back up pump to deliver water to Hudson. When the station was built in
24 1995 it was built under a contract with Consumers New Hampshire Water

Company. Consumers was obligated to the NHDES at the time to provide an alternate source of supply to the Town of Hudson. Consumers contracted with the Company to construct this station as a back up. At the time the station was constructed Consumers stated that it would never purchase water through this interconnection and they paid to have the least expensive station that could be built and still meet the NHDES requirements of a back up connection. Since the construction of the station, the water demands in Hudson and Litchfield have grown substantially. In addition, since that time, the NHDES substantially reduced the permit on the amount of water that can be pumped annually from the Dame/Ducharme wells. The net result is that the Taylor Falls booster station has gone from pumping no water to over 136,000,000 gallons in 2007 (over a seven month usage period) resulting in an average daily pump run time of 10.8 hours. At present, if the single pump in the Taylor Falls booster station pump fails, the Towns of Hudson and Litchfield would have to be placed on a total ban of all outside water usage to insure that the existing wells could meet the system demands and not exceed their NHDES permitted production limits. The estimated cost of this booster station addition is $185,000.

3. The Company just completed the replacement of the three existing Shakespeare booster pumps. The existing pumps, which were installed in 1993, were no longer large enough to keep up with the higher summer flows and as a result pressure output from this booster station during the summer months dropped from the winter time average of 55 psi to a daily

swing from 25 to 55 psi resulting in unacceptable service to the higher homes in the Shakespeare high pressure zone. The original three 5 HP booster pumps have been replaced with three 7.5 HP booster pumps, any two of which are capable of meeting the peak demands of this pressure zone. The estimated cost of this upgrade is $66,000.

4. The Company is replacing the 5.5 MG steel water storage tank located at the end of Orchard Avenue. This tank, known as the Fifield tank, was constructed in 1958 and is one of two tanks providing storage for the main pressure system for Nashua. The tank had last been painted on the inside and the outside in the early 1980's. This tank was inspected in 2001 by Tank Industry Consultants (TIC). TIC recommended, as a result of its inspection, that both the interior and exterior of the Fifield tank needed to be completely sandblasted and recoated within a two to three year time frame of the 2001 inspection. Based on TIC's recommendation regarding the coating of this tank, and their estimate of $1.3 million dollars to complete this work, the Company initiated and completed a life cycle cost analysis comparing the life cycle cost of maintaining and recoating the existing steel tank every 20 years versus the life cycle cost of demolishing the steel tank and replacing it with a precast, prestressed concrete tank. The life cycle cost analysis identified that the least cost option was to demolish the steel tank and replace it with a precast, prestressed concrete tank. Based on this analysis, the Company is proceeding with the replacement project. The existing steel tank was demolished this spring and the reconstruction of the new concrete tank is underway and should be

completed by the end of November 2008. The estimated cost of this project is $2,323,800.

5. The Company will be removing the Merrimack Village Dam (MVD) during 2008. This dam was acquired by the Company in the 1960's to give it water rights to the Soughegan River. Water from the Soughegan River was pumped into the Stump Pond sub watershed of the Pennichuck Brook watershed in order to provide supplemental flows during the summer months to meet the growing summer water demands from customers within the City of Nashua. The use of the Soughegan as a summer flow supplement was replaced in the mid 1980's by the Merrimack River. Even though the Soughegan River was no longer being used as a supply the Company still owned and was responsible for the operation and maintenance of the MVD. In 2004 the MVD was inspected by the NHDES and deemed to be in need of a total rebuild in order to allow the dam to pass the appropriate flood flows without the danger of failure. The NHDES issued a letter of deficiency to Pennichuck requiring that the dam be rebuilt to today's standards. Pennichuck began working with the NHDES and the Town of Merrimack to evaluate alternatives to rebuilding the dam. It quickly became apparent that no one wanted to take over the ownership of the MVD and the associated liabilities of rebuilding, maintaining and insuring the dam. There also was a developing interest within the environmental community to see the MVD removed to restore the Soughegan to its original condition as a free flowing river. The result of this interest was that it proved far less expensive to demolish the dam than to

rebuild the dam. This interest resulted in $391,500 in grant money being made available to aid in the demolition of the dam. The estimated cost of demolishing the dam is about $549,000 leaving a net demolition cost of about $157,500 versus the estimated cost to reconstruct the dam that was in excess of $750,000.

6. The Company is in the process of permitting a back up and supplemental well supply for the Sweet Hill Community Water System in Plaistow. The Sweet Hill CWS currently has a single well providing water for 29 homes. During the summer months, even while operating under enforced odd/even waters restrictions, this well can not keep up with the summer water demands of this community. Additionally, if this well were to fail, maintaining supply to this CWS would be difficult while a new well was located and drilled. The Company believes the construction of a second well to serve as both a back up and a supplemental summer supply (to allow for odd/even irrigation) is a prudent investment. The Company is currently undergoing the process of attempting to locate a site for the new well. We anticipate identifying the proposed well location by the end of June and completing the drilling and testing of the new well by the end of September and that the new well will become available for use in the October 2008 time frame. The projected cost of locating, permitting, installing and activating the new well is estimated to be about $89,500.

7. The Company needs to replace 20,000 gallon atmospheric tank at the Glen Ridge Community Water System in Derry. The existing tank has reached the end of its useful life. There is significant corrosion on both the interior

and exterior of the existing Glen Ridge buried steel atmospheric tank. The existing tank is cast into one wall of the Glen Ridge booster station and is integral to the station structure making its replacement more difficult. We are planning on replacing this single 20,000 gallon steel tank with two 9,000 gallon precast concrete tanks in October 2008. The estimated cost of this tank replacement project is $93,000.

8. During the past several years the quality of the raw water from the Ashley Commons well has deteriorated significantly. Levels of sulfates, hardness, total dissolved solids and fluoride have all increased. The Company currently treats the water for hardness. The Company has received increasing complaints, and most recently an insurance claim, due to the aggressive nature of the water and the premature failure of water piping and fixtures within the homes at Ashley Commons. As a result of the deteriorating raw water quality, the Company is planning to either rebuild the Ashley Commons Booster Station, storage and treatment systems or to interconnect the Ashley Commons CWS to the Town of Milford water system and abandon the Ashley Commons source of supply. The Company is in the process of completing a detailed analysis of whether on site treatment or and interconnection to the Town of Milford water system will provide the least cost option for correcting the water quality problems that exist at Ashley Commons. This analysis will be completed by early July. The plan is then to design the proposed upgrade/interconnection during the months of July and August and to bid the proposed upgrade in late August with work on the proposed upgrade being completed between

1 late September and the end of November of 2008. The Company's
2 preliminary analysis indicated that an interconnection with the Town of
3 Milford will have the lowest life cycle cost of the two options under
4 consideration. The life cycle cost of the interconnection would be further
5 reduced if the project qualified for a 25% interconnection grant from the
6 NHDES. The Company will be applying to the NHDES for an
7 interconnection grant in early July 2008. The Company will know if this
8 project is eligible for an interconnection grant funding by the end of August.
9 The estimated cost of the interconnection is about $420,000. It is the
10 Company's goal to attempt to correct the water quality problems at Ashley
11 Commons before the end of 2008.

12 **Q. Is the Company seeking to recover any of these investments made in 2008**
13 **as part of this rate case?**

14 A. Yes. The Company is asking for a step increase as part of this rate case to
15 recover the money invested in the above referenced 2008 non revenue producing
16 assets as well as in recovery of the money invested in the rehabilitation of filters
17 #4 and #5.

18 **Q. If the Company is allowed a step increase to recover the costs of the 2008**
19 **non revenue producing assets are there any proforma adjustments that need**
20 **to be made to the Company's expenses?**

21 A. Yes. The Company is seeking recovery of depreciation expense on the assets
22 that are in service and used and useful. The Company is not requesting recovery
23 of any additional operational and property tax expenses that may result from the
24 construction of the non revenue producing assets defined above.

1 **Q. Does this complete your testimony?**

2 A. Yes.