

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

**DW 04-048**

In the Matter of:  
City of Nashua  
Petition for Valuation  
Pursuant to RSA 38:9

**Reply Testimony**

**Of**

**Allan Fuller**

**May 22, 2006**

STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION

*City Of Nashua: Petition For Valuation Pursuant To RSA 38:9*

Docket No. DW04-048

**REPLY TESTIMONY OF ALLAN FULLER**

1   **Q:    Please identify yourself and give a little background.**

2    A:    My name is Allan Fuller. I reside at 70 Arlington St, Nashua, NH 03060. While I  
3       am currently Chairman of the Pennichuck Brook Watershed Council, I am  
4       testifying as a private citizen with a lot of understanding of the Pennichuck Brook  
5       Watershed.

6  
7       I have a doctorate in physics (nuclear magnetic resonance). I have been working  
8       in analytical instrumentation for industry since 1997 specializing in FTIR (Fourier  
9       transform infrared spectroscopy) recently and a working knowledge of most  
10      analytical techniques. I have worked with people from most every high tech  
11      company, government lab, or research university in the North America and  
12      beyond to a lesser degree. My technical background allows me to quickly read  
13      and understand technical documents as well as analytical test results. That  
14      includes environmental publications and the importance of good watershed  
15      protection.

16  
17      I am an instrument rated pilot (fly in the clouds) and own a high performance,  
18      complex, single engine airplane. I served in the army during the Viet Nam War

1 and consider myself pretty patriotic person. My middle name is Melville after  
2 Melville Weston Fuller, Chief Justice of the U.S. Supreme Court from 1890 to  
3 1910. The Fuller family came to North America on the Mayflower. I am proud  
4 of this country and don't have much patience for companies or people that do not  
5 do the right thing. I own my own business ([www.ftir.com](http://www.ftir.com)). I am also a director  
6 and secretary on the Nashua Airport Authority ([www.nashuaairport.com](http://www.nashuaairport.com)). My  
7 success in business is associated with understanding my customer's needs,  
8 presenting my products honestly, and providing strong after sales support.  
9 Business ethics is very important to me and that is how I measure other  
10 companies I deal with.

11  
12 **Q: Do you think Pennichuck has been a good watershed steward?**

13 A: A strong NO! Pennichuck talks a good game and that satisfies the somewhat-  
14 interested people and the non-technical people, but when one looks at the details it  
15 is all too clear they speak with two voices. One voice speaks a good game of  
16 being a good steward of the watershed. The other ignores the stewardship and  
17 allows the watershed to be destroyed or even helps with its destruction. They  
18 have put profits and cooperation with other developers as the number one driver  
19 in their business plan.

20  
21 **Q: You say they have two different voices. One voice is stewardship and the**  
22 **other is exploitation. Please explain.**

1 A: This testimony will be an attempt to explain why many people have come to that  
2 conclusion. I know that the PUC staff thinks Pennichuck is an excellent steward  
3 of the watershed. The PUC staff is flat out wrong and has not looked into the  
4 details. I have been watching Pennichuck Corporation closely since 1998, have  
5 done my homework, and looked back in time. Others have been watching and  
6 researching the corporation a lot longer than that.

7  
8 Pennichuck Corporation is like watching a magician. It is not what they appear to  
9 be doing or say, but what they really are doing or allowing to be done that counts.  
10 Pennichuck Corporation is a two- headed organization. One is a water company  
11 that says the right things and the other is a developer that is motivated by selling  
12 and developing buffer land with little concern about watershed issues other than  
13 their use as a source tool of profit maximization. That developer head is also the  
14 trump card in the decision-making. The developer side works with others  
15 developers in the region and supports their developments even when they are not  
16 in the best interest of protecting the watershed in the long run.

17  
18 In short, Pennichuck talks a good game and that satisfies the non-technical people,  
19 but when one looks at the detail it is clear that they have put profits and  
20 cooperation with other developers and profitably ahead of being good stewards of  
21 the Pennichuck Watershed.

22  
23 **Q: That is a pretty strong charge. Can you support it?**

1     A:     Yes. It requires one to look at some of the details and beyond the superficial  
2           cover that Pennichuck provides for their business practices. It is easy to accept  
3           the smooth words of their people and slick environmental reports created by CEI.  
4           For example, see the CEI - PWW Watershed Report 2004 for an excellent  
5           description of problems in the watershed. Unfortunately, many of the problems  
6           are a result of Pennichuck's developments or allowing others to develop in the  
7           watershed where common sense says it should not be allowed. Pennichuck has a  
8           number of sweet talking people often saying the right things. On top of that, these  
9           people are really nice and likeable as well. It is hard to believe that these people  
10          would be so nice, say the right things, and not be good stewards of the watershed.

11

12    **Q:     What is the Pennichuck Brook Watershed Council, or, for short, PBWC?**

13    A:     The PBWC is a group of people that have an interest in protecting the drinking  
14          water supply for the people in 5 communities that are within the Pennichuck  
15          Watershed. It was conceived of in January 2001 when NH DES had a public  
16          meeting to discuss modifying the buffers around the open - water ponds, brook  
17          and tributaries in the watershed. The meeting was initially planned to be held at  
18          the treatment plant at Pennichuck Water Works (PWW). The public interest was  
19          so great that the meeting was moved to a larger room at a junior high school in  
20          Nashua. (Some people think the company was trying to keep the meeting stealth  
21          so that new, less restrictive rules would slip in.) The buffers were weaker in  
22          many ways than what was already in place by Nashua's Watershed Protection  
23          District as defined in the Ordinance No. O-98-46 and the buffers Pennichuck was

1 required to maintain per the PUC's Order 16,373 (1983) allowing the creation of  
2 Pennichuck's affiliate Southwood.

3

4 **Q: There are a number of questions that come to mind. What took place at that**  
5 **meeting that motivated the start of the Pennichuck Brook Watershed**  
6 **Council?**

7 A: Paul Suska, an Environmental Program Manager from the DES Water Division,  
8 organized and ran the meeting. He is a very sincere professional who is truly  
9 interested in protecting and preserving our drinking water supply as well as  
10 optimal conservation of our regional resources. At the request of the company,  
11 Paul and PWW had been working on revising the buffer rules for the watershed.  
12 It was clear that Paul had not been advised by the company of the currently  
13 existing community rules or even the buffer rules put in place by NH PUC on the  
14 lands owned by the company as defined by the PUC Order # 16,373 of April 29  
15 1983. That order allowed Pennichuck Corporation to be redefined from a water  
16 company into a water company and an unregulated real estate development  
17 company. The PUC created Pennichuck's unregulated affiliate Southwood and  
18 allowed them to develop 1490 acres of watershed protection land.

19

20 That order allowed PC to transfer some or all of their buffer lands to Southwood.  
21 We are not sure what has been transferred to Southwood. CEO Arel, during oral  
22 testimony at the PUC hearings regarding the Philadelphia Suburban acquisition  
23 said that all the buffer land from the high water mark around the ponds was

1 transferred to Southwood. CEO Arel further said, to the shock of me at this PUC  
2 hearing, that Southwood was selling green space easements to developers close to  
3 the buffer lands. The developer could then use these green space easements to  
4 increase the density of the buildings and increase the impervious pavement in  
5 their development to meet the town requirements for green space. If true, that is a  
6 total outrage and disregard of the need to protect the ponds from pollution. This  
7 is another small example of Pennichuck putting profit ahead of watershed  
8 stewardship.

9  
10 Last October, CEO Correll told me in private conversation that Southwood only  
11 transferred the land beyond the so-called “buffer” land as defined in the Sasaki  
12 Report (Sasaki Associates, Watertown, MA). Either Don Correll is correct or Mo  
13 Arel is correct. Since CEO Arel was testifying at an official meeting of the PUC  
14 and was under oath, I have to assume that his statements are correct. It is  
15 something that needs to be checked.

16  
17 It is this land beyond the Sasaki (and PUC) “buffer” land that was referred to as  
18 land “not necessary for protection” of the water supply resources and that was the  
19 land that was allowed to be developed by Southwood. The Sasaki Report was  
20 commissioned by Pennichuck Corporation in 1980 to study the watershed (Some  
21 people assume that study was done in order to obtain that very favorable  
22 determination that there was land that could be developed). That report was used  
23 by PUC as the justification and protection criteria in their Order 16,373.

1

2 One question that raises concerns about whether Pennichuck is a good steward is  
3 in how that land transfer was handled. Was all or part of the land above the  
4 critical (high water mark) transferred to Southwood as CEO Arel testified? Or is  
5 CEO Correll correct in stating that the buffer land was not transferred to  
6 Southwood?

7

8 Think about it. If Pennichuck Water Works only owns to the high water mark  
9 around the ponds, how can they maintain the ponds, remove the trees that fall into  
10 the ponds, work around the banks of the ponds without buying easements from  
11 Southwood. Was that the intent of the PUC order 16,373?

12

13 That is not the only detail in the PUC order 16,373 that may have has been  
14 violated in spirit and intent. The buffers around the ponds are 300 feet except  
15 Supply Pond. The required buffer per the Order 16,373 (1983) around Supply  
16 Pond is 500 feet. Supply Pond as the name implies was the pond where the water  
17 going to the treatment plant was drawn. Sasaki Associates reasoned that a 500-  
18 foot buffer of soil and vegetation around Supply Pond was necessary (per their  
19 literature citations as discussed in the Sasaki Report) to capture certain dangerous  
20 chemicals (pollution) from making it into the water in Supply Pond.

21

22 A little detail that is missed by most people is that the water is no longer drawn  
23 from Supply Pond. It is drawn from Harris Pond. Harris Pond has a 300 foot

1       buffer. Supply Pond still has a 500-foot buffer, but the water is not drawn from  
2       Supply Pond any more. The intent of the order was to provide 500 feet buffer  
3       around the pond where the water is drawn. If Pennichuck were a good steward of  
4       the land, they would have increased the buffer around Harris Pond to 500 feet.

5  
6       In fact, the draw point may be closer to Manchester Street than 500 feet and  
7       Harris Pond has been developed to the 300 foot buffers allowed by the wording of  
8       the PUC order 16,373 and recommended by the Sasaki Report and not to the 500  
9       foot buffer around the pond where the water was being supplied.

10  
11       This is another example of Pennichuck not being a good steward of the watershed.  
12       It appears that they have violated the spirit and intent of the Sasaki Report  
13       recommendations and the spirit and intent of the PUC order.

14  
15       Maybe the PUC staff does not think this is a big deal.

16  
17       Even Eileen Pannetier, Comprehensive Environmental, Inc., Merrimac, (a  
18       company that Pennichuck contracts for a lot of environmental consulting and well  
19       done reports) has recommended in a few reports that the buffers around all the  
20       ponds should be at least 400 feet. Pennichuck's most recent reports for their  
21       annual meeting held in early May 2006 states that one of the major risks to the  
22       company is the possibility of water contamination.

23

1 Let me quote from Page 20 of Pennichuck's own April 2006 10Q prepared for  
2 their recent stockholder's meeting:

3

4 "Our water supply is subject to contamination from the migration of naturally  
5 occurring substances in groundwater and surface systems, as well as pollution  
6 resulting from man-made sources. In the event that our water supply is  
7 contaminated, we may have to interrupt the use of that water supply until we are  
8 able to substitute the flow of water from an uncontaminated water source through  
9 our interconnected transmission and distribution facilities. In addition, we may  
10 incur significant costs in order to treat the contaminated source through expansion  
11 of our current treatment facilities or development of new treatment methods. Our  
12 inability to substitute water supply from an uncontaminated water source, or to  
13 adequately treat the contaminated water source in a cost-effective or timely  
14 manner, may have an adverse effect on our operating results, financial condition  
15 and cash flows."

16

17 Let me just comment that Pennichuck's own disregard for proactive protection of  
18 the watershed, their development of their buffer land, and allowing so many  
19 access points, public roads, walking trails to the banks of ponds in the reservoir  
20 has allowed the water supply to be so vulnerable to contamination. This should  
21 not be a surprise to the PUC, the ratepayers of Nashua, or the drinkers of this  
22 resource so necessary for life. Pennichuck has not and is not a good steward of  
23 the watershed and it appears that their lack of protective stewardship has

1        jeopardized their business of providing safe, secure drinking water for 10% of the  
2        residents of New Hampshire. This should be a major concern for the PUC.

3        Having secure, safe, clean, and abundant drinking water is truly in the “Public  
4        Good”.

5  
6        It maybe that with luck and the grace of god there will not be a major incident  
7        with the drinking water coming for Nashua’s water supply or even the wells in  
8        the Pennichuck Watershed. And if such an incident happens, Pennichuck and the  
9        oversight by the PUC must take the moral responsibility for the failure.

10

11    **Q:     I can see why the red flag has been raised in your eyes as to why Pennichuck**  
12        **has not been a good steward of the watershed. Lets stop here for a moment**  
13        **for a little background on a private water company wanting to develop**  
14        **watershed protection lands which had been paid for by the ratepayers. Why**  
15        **was this redefinition of buffer land even conceived?**

16    **A:**    There was a trend in the later 1970’s and early 1980’s to try to extract untapped  
17        assets from corporations to bring more revenue to the stockholders. A popular  
18        and funny movie called the “The Color of Money” was great satire on the  
19        technique. It used a Rhode Island wire company as an example. Some water  
20        companies were not satisfied with just being a water company in business to  
21        provide drinking water and protecting the watershed for the public good. They  
22        were sitting on protection land and that protection land if developed could  
23        produce more revenue in the short run than being a regulated water company.

1       There is an interesting story about Bridgeport Hydraulics in Connecticut. That  
2       water company wanted to develop condos on their buffer land in Weston, CT and  
3       the actor Paul Newman and others started a campaign to buy the buffer land and  
4       save their watershed. They did. In 1998, I suggested that at the end of a public  
5       hearing on a proposed water supply protection ordinance that the City of Nashua  
6       or the watershed communities buy PWW. Stephen Densberger, then VP of  
7       Finance at Pennichuck and a Nashua City Alderman said, “Make my day!”

8  
9       Maybe it was then that CEO Arel came up with the idea of selling Pennichuck to  
10      Philadelphia Suburban. Mr. Densberger was walking next to then CEO Arel at  
11      the time. That is an aside, but it does point out that PC was not the only water  
12      company that was trying to get a bigger return on assets than the PUC rules would  
13      allow a regulated water company in business for the public good.

14      .

15      **Q:    Let get back to the motivation for starting the PBWC. How did it happen?**

16      A:    It was clear that the watershed needed to be protected by the 5 communities  
17      involved. I met with Mayor Streeter, Kathy Hersh (then aldermanic president),  
18      Andrew Singelakis (then head of Nashua Regional Planning) and a few from the  
19      Mayor’s staff. I suggested that the city and NRPC start a watershed commission  
20      or council. The short of the meeting was that Mayor Streeter said, great idea, you  
21      should do it. So I met with Hollis, Merrimack, Amherst, and Milford people and  
22      proceeded to form the PBWC. Incidentally, we started well before Pennichuck  
23      Corporation announced their proposed acquisition by Philadelphia Suburban.

1

2 Q: How big is the watershed?

3 A: It is small. That is why protection is so important. It is 27.5 square miles and less  
4 that 87% the size of the city of Nashua. It is bordered on the north by the  
5 Souhegan River watershed and on the south by the Nashua River watershed. If it  
6 were a rectangle, it would be less than 4 miles by 7 miles or if it were a circle it  
7 would be less than 3 miles in radius. It is small and resides totally in those 5  
8 towns I mentioned. The distribution of the watershed in each town is: 40% in  
9 Hollis, 22% in Nashua, 18% in Merrimack, 11% in Amherst, and 8% in Milford.

10

11 **Q: Why is the watershed so important to protect?**

12 A: This small watershed provides drinking water for over 10% of New Hampshire  
13 residents.

14

15 **Q: Please tell me more about this watershed and the source of its water?**

16 A: This watershed is mostly made up of one big aquifer within the watershed,  
17 which in effect acts as the water-holding reservoir. The aquifer is basically a big  
18 sand pit filled with water. Most of the aquifer is what is called a stratified drift  
19 aquifer that was produced by glacial outwash during the last ice age. It is  
20 replenished by rainwater. Whatever chemicals and pollution one puts into the  
21 watershed will ultimately end up in well water and surface water. Soluble  
22 contaminants that are put into this sand box of water will contaminate everyone's  
23 drinking water over time.

1

2 As I have said, the watershed supplies drinking water, either through private wells  
3 or through water provided by PWW, for over 10% of New Hampshire's  
4 population.

5

6 The migration of water in that sand pit is pretty high because the sand and gravel  
7 is so porous. That is both good and bad. The good part is that one can extract a  
8 lot of ground water quickly and the sand filters chemical out of the water. The  
9 bad part is that the soluble pollutants can also travel far and fast carried along by  
10 the water.

11

12 **Q: PWW supplements its water mostly in the summer by pumping at most 16.2**  
13 **million gallons per day from the Merrimack River. How does that affect the**  
14 **need to protect the Pennichuck Watershed?**

15 A: That is a good question. It complicates the situation from a quality point of view  
16 and today it is, unfortunately, totally necessary from a supply point of view during  
17 the summer. The volume from the Pennichuck Watershed is decreasing as the  
18 brook and ponds have been allowed to silt up and development has been allowed  
19 to increase rapidly very close to the brooks, streams, and ponds with negligible  
20 consideration for water issues.

21

22 The watershed produced about 12 million gallons of water per day and now has  
23 decreased to maybe less than 6 million gallons per day during the summer. PWW

1 needs the supplemental water from the Merrimack in order to meet peak demand  
2 of over 22 million gallons per day when lawn-watering demand is high. Water  
3 from the Merrimack River has pollution and nutrients in the water. Wastewater  
4 from Derry and Manchester treatment plants is being dumped into the Merrimack  
5 River. Of course, the lower the water in the Merrimack River in the summer time,  
6 the higher the concentration of wastewater pollution. The old saying dilution is  
7 the solution for pollution problems. During the summer, the dilution is reduced  
8 and concentration is increased and the problem gets worse. It is an ugly thought  
9 that higher levels of pollution are being pumped into the Pennichuck reservoir  
10 during the summer time.

11

12 Some of that water from the Merrimack may have raw sewage or barely treated  
13 sewage in it. During high rain events, the Manchester Waste Water Treatment  
14 Plant is overloaded and the combined sewer overflows with raw sewage from  
15 people toilets along with the rainwater flushing the streets of debris and  
16 contaminants. That overflow is dumped directly into the Merrimack River.  
17 Pennichuck then pumps as much as 16 million gallons of that mixture of water and  
18 pollution into the pond just down stream of where the Everett Turnpike crosses  
19 the watershed. That mixture of pond water and Merrimack River water is  
20 ultimately drawn out of Harris Pond and into the treatment plant and people's  
21 homes. That is a pretty unpleasant thought.

22

1 If PWW had been good stewards of the watershed, we would not have to rely on  
2 the Merrimack River for any supplemental water and the water from Harris Pond  
3 would be cleaner than it is with less threat of a contamination event or even a  
4 potential terrorist event.

5  
6 **Q: Why has the capacity of the Pennichuck Watershed decreased?**

7 A: Simply, the reduced capacity is associated with the affects of development and the  
8 ponds filling up with silt and organic matter.

9  
10 There are a number of things that take place when development and impervious  
11 surfaces increase in and around a watershed. There is a lot written about it and  
12 info can be found on a number of web sites such as EPA, NH-DES, the Center for  
13 Watershed Protection, and countless more sites. Basically, development increases  
14 the percentage of rain that runs off directly into the brook, streams, and ponds  
15 carrying with it pollution from the impervious surfaces that dripped from cars and  
16 trucks, dirt and silt, road salt, and various other spills and discarded substances  
17 from many other sources. The rain that goes directly into the brook, streams, and  
18 ponds goes quickly to fill up the ponds as well. The sediment tends to settle  
19 downward on the bottom of the ponds while the excess water just leaves the  
20 watershed by running over the dams and into the Merrimack River and out to the  
21 sea. Flash runoff is one of the results of added impervious surface.

22

1 In the past the rainwater would infiltrate into the ground filling the (sandpit)  
2 aquifer with water. That ground water would be filtered by the soils in the  
3 watershed and over time the rainwater would seep into the brooks, streams, and  
4 ponds. The effect of the infiltration of the rainwater would be to spread the runoff  
5 from a rain event evenly over many days, increasing the holding capacity of the  
6 entire watershed and filter out much of the pollution.

7  
8 There are a few other things that take place with increased impervious surface.  
9 The impervious surface and ground below it gets hot from the sun. The hot  
10 pavement heats up the rain runoff. The water going into the brooks, streams and  
11 ponds is then warmer than the plus or minus 50 degree Fahrenheit water seeping  
12 out of the ground into the surface water. The higher water temperature with  
13 higher pollution and nutrients increases water plant growth, oxygen demand,  
14 which impacts fish health and even their viability. For example, trout need  
15 temperature to be 70 degrees or less and abundant dissolved oxygen for them to  
16 reproduce and survive.

17  
18 People's recreational activities and the resultant pollution from man's use of the  
19 lands near the brooks, streams and ponds that constitute the drinking water supply  
20 have had egregious consequences for this watershed. I have seen computer  
21 monitors, beer bottles, discarded food garbage, and all imaginable kinds of trash  
22 in brooks close to the drinking water pond where the drinking water is withdrawn.  
23 I have seen and photographed the discolored ice associated with pollutants from

1 vehicular traffic on roads (Everett Turnpike for example) that has been collected  
2 and is waiting for ice out to fall into the water supply - as well as the huge  
3 vegetation blooms everywhere in the water supply system in warm weather.  
4 Many of my photographs documenting the watershed and the impact of  
5 development are in Exhibit 01 – Photographs of the Pennichuck Watershed and  
6 many photos are posted at my website,  
7 [http://www.ftir.com/html/pennichuck\\_photos.html](http://www.ftir.com/html/pennichuck_photos.html)

8  
9 The net effect of development close to the surface water is: decreased water  
10 quality, increased siltation, decreased pond depth, increased water temperature,  
11 increased aquatic plant growth, reduced oxygen in the water, algae blooms,  
12 increased turbidity, and excess rain water going over the dam producing  
13 decreased rain water capture by both the aquifer and the watershed for our present  
14 and future use.

15  
16 **Q: It is easy to make these general statements, but has there been any scientific**  
17 **studies of impervious surface and the effect on watershed health?**

18 A: Absolutely. What I am saying is easily supported by volumes of scientific study.  
19 I would direct you to the web site for The Center for Watershed Protection:  
20 [www.cwp.org](http://www.cwp.org). There are other sites, but this is a good one. There has been a  
21 well-documented correlation of the percent of impervious surface and the health  
22 and ability of a watershed to survive. I will offer a summary of what I wrote for a

1 Nashua Aldermanic presentation in 2002 regarding protecting the Pennichuck  
2 Watershed:

3 1. “The amount of impervious cover in our drinking waters watershed is an  
4 important measure of present and future watershed quality and health.  
5 Currently the Pennichuck Watershed is over 20% covered over by cement,  
6 blacktop, structures etc. - and rising.

7 a. Tom Schueler, Center for Watershed Protection, has evaluated  
8 about 350 watersheds and says that

9 i. 0 – 10% Impervious cover - data is fuzzy  
10 ii. 10- 20% Impervious cover - Moderate Impact  
11 iii. > 30% Impervious cover – High Impact

12 2. The effect of impervious cover is:

13 a. Increased volume and velocity of runoff  
14 b. Increased frequency and severity of flooding  
15 c. Peak storm flows many times greater than in natural basins  
16 d. Loss of natural runoff storage capacity in vegetation, wetland and  
17 soil  
18 e. Reduced groundwater recharge (watershed capacity)  
19 f. Decreased base flow”

20 (Exhibit 02 - Allan Fuller Testimony to City)

21

22 **Q: How much impervious surface is there in the watershed today?**

23 A: There has been considerable development throughout the watershed, which has  
24 increased impervious surfaces much too close in many places to the surface water  
25 connected to the brook and chain of PWW ponds in the watershed. NRPC  
26 developed a set of maps of the watershed per my request. One of these maps  
27 showed the amount of impervious surface (development) in the watershed. The

1 areas in brown show the highest areas of impervious surface. (See 2003  
2 Impervious Map in Exhibit 01)  
3  
4 The Amherst St area has from 20% to 80% impervious surface depending what  
5 areas are grouped together. That is in the range of a “high impact” and per the  
6 Center for Watershed Protection our watershed is in a non-supporting condition  
7 and poses a real threat to the health of the water supply. (See Exhibit 03,  
8 Vulnerability Analysis by CWP) This developed area is from 1 mile to 3 miles  
9 from the intake to the treatment plant. Over time it will have increasingly  
10 threatening impacts on the health of the water supply.

11  
12 The critical area around the Bon Terrain well in Amherst has also had  
13 considerable industrial and residential development thereby increasing the  
14 impervious surface area.

15  
16 All this development has taken place with review and support by Pennichuck.  
17 Good stewards? Hardly!

18

19 **Q: So development around the watershed surface water and close to the Bon**  
20 **Terrain Well is a problem. Why is it PC’s problem?**

21 A: Good question. They are the water company and people look to them for  
22 guidance and stewardship. The average person is not an expert in stewardship of  
23 a watershed. Pennichuck has not provided the leadership when it counts.

1

2 For example, Pennichuck has a well in Bon Terrain that pumps just less than 1  
3 million gallons per day. They have talked about increasing the capacity of the  
4 well in the past. The allowed developments are not in the best interest of the  
5 people who drink the water in Amherst Village or other customers of Pennichuck.  
6 Pennichuck's support of protections and lack of guidance to the Planning Boards  
7 in the region has allowed this valuable water source to be comprised.  
8 Pennichuck has been a poor steward of the Bon Terrain aquifer.

9

10 I will quote from a June 2, 2003 letter from Don Ware of Pennichuck regarding  
11 the F.W. Webb warehouse distribution center in the Bon Terrain area:

12 e. "The potential for fuel spillage is of great concern. Whereas it is  
13 unclear as to whether the groundwater under this project drains  
14 into the capture zone of the Bon Terrain well and this data is not  
15 currently available we have assumed that surface water and  
16 groundwater from this site will flow into the Bon Terrain well."

17 and further on:

18 g. "Fertilizer application should only be allowed on an as needed  
19 basis. It should be required that soils be tested prior to any  
20 proposed fertilizer application."

21 h. Pesticides should only be applied on an as needed basis by State  
22 licensed applicators. No pesticides shall be used that contain a  
23 SDWA regulated or unregulated, but listed contaminant. No

1 pesticide shall be used that lists as an environmental hazard the  
2 potential of groundwater contamination when used on highly  
3 permeable soils with shallow groundwater.

4 The important points are that Pennichuck was totally aware of the seriousness of  
5 the developments and the potential impact on the Bon Terrain Well. One has to  
6 question whether the potential risk associated with this development is acceptable  
7 and represents good watershed stewardship. (Exhibit 04 - Webb Letter)

8  
9 Let me quote a little from an April 29, 2003 letter from Don Ware of Pennichuck  
10 to Mr. Charles Teiderman, Zoning Administrator, for the Town of Amherst  
11 (Exhibit 05 - Summerfield Letter), "After a careful review of this project  
12 Pennichuck will not object to the construction of the Summerfield Condominium  
13 project if the following recommendations are implemented:" and further from the  
14 letter I will quote from the start of recommendation #3.

15  
16 "The Developer, in conjunction with Pennichuck, shall develop education  
17 literature for the condominium owners that will be given to each new owner and  
18 at each property sale. The educational literature will stress the fact that the  
19 Condominium's leach field's discharge to the ground water which in turn will  
20 eventually make its way into their water supply."

21  
22 Pennichuck admits that the leach field discharge will get into the water supply and  
23 still it supported the development. Now is that being a good steward. I don't

1 think so. If one did not get into the details of what Pennichuck does in reality, the  
2 average person would never know what is happening. There is more I could write  
3 and document about the Bon Terrain developments that show that Pennichuck  
4 instead of protection of critical watershed land allowed it to be developed and in  
5 the long run harmed. (See Exhibit 01 for photos of Bon Terrain area and  
6 referenced developments)

7  
8 **Q: What is a good steward of a watershed?**

9 A: A good steward is: not unlike a shepherd; one who actively directs and manages  
10 all affairs and interactions; in this case, for the purpose of preservation and  
11 protection to the benefit of the public good.

12  
13 For example, most water companies that are good stewards are raising money to  
14 acquire more protective buffer land around the reservoir and tributaries to those  
15 reservoirs, not selling it. Manchester, NH, Hartford, Ct, Rochester, NY, even  
16 New York City have bought up property or are buying up property around their  
17 reservoirs and the tributaries in order to increase the buffers and protect their  
18 reservoirs. Pennichuck is doing the opposite. Pennichuck is selling off land  
19 around their reservoir. They are doing the opposite of being a good steward of  
20 their watershed.

21

1 One has to be blind to what is the right thing to do not to realize that Manchester  
2 is a good steward of their watershed and Pennichuck is a bad steward of their  
3 watershed.

4  
5 Manchester bought camps on their reservoir and increased the buffer around their  
6 reservoir to a minimum distance of about 700 feet and a maximum for about 1  
7 mile. Exhibit 06 - Manchester Watershed Protection Plan describes their  
8 protection plan and they are considered a good steward. By the way, while  
9 Manchester is considered only “good” they are criticized in some areas in Exhibit  
10 07 – Grading Manchester. Manchester’s water supply is considered one of the top  
11 10 watershed systems in the U.S. It is interesting to see the areas where  
12 Manchester needs to improve. One sees by comparison how poorly Pennichuck  
13 measures up and how much they need to improve.

14

15 **Q: What is the wellhead protection area for the Bon Terrain Well and why is it**  
16 **important?**

17 A: Good question. Currently the 56 foot deep Bon Terrain well is located along  
18 Peacock Brook. The well has a 400-foot sanitary protective radius that is  
19 referred to by some as the wellhead protection area. That is the distance that  
20 limits development and other human activities. The well provides the drinking  
21 water for the commercial properties along 101 A in Amherst, and is the primary  
22 water supply for the Amherst Village Water District, and will be the source of

1 water for all future developments in Bon Terrain and is a secondary supply for  
2 parts of Nashua and Milford.

3  
4 The trend is to increase the wellhead protection distances to 1000 feet. A large  
5 wellhead area is very important and critical in Bon Terrain because the soil is so  
6 porous and water flows so quickly. I am not aware of any public attempt by  
7 Pennichuck to increase the wellhead protection around the Bon Terrain Well to  
8 1000 feet. The Summerfield Condo development has 24 septic units with a total  
9 permitted discharge of 8 million gallons of waste per year into the Bon Terrain  
10 Aquifer. The Bon Terrain Well will be drawing water from this discharge over  
11 time. The excerpt from Mr. Ware's (Pennichuck) letter referenced above shows  
12 that Pennichuck is fully aware that the Bon Terrain Well will be drawing from  
13 these septic waste systems. Think about that. Does it make you want to grab  
14 your bottle of water? Need I repeat that Pennichuck has not been a good steward  
15 of the watershed? Maybe I sound like a broken record.

16

17 **Q: Recently two bills to protect the Pennichuck Watershed made it to the New**  
18 **Hampshire House of Representatives. They were HB 1289 and HB 1395.**  
19 **Please explain what happened to those bills?**

20 A: Good question. HB 1289 made it through the House and HB 1395 was sent to  
21 committee.

22

1 HB 1395 would have stopped water companies from selling off watershed buffer  
2 land the way Pennichuck did since the 1980's. It was sent back to committee to  
3 study the impact on various water companies in the state. This probably would  
4 impact Pennichuck the most, but I don't know the behind the scenes background  
5 why it was sent back to committee. I have attached my testimony supporting  
6 better buffers. (Exhibit 08 – Testimony for HB 1395)

7  
8 HB 1289 was a bill that was to put in law the buffer rules developed by a  
9 committee that was the fall out of the public hearing held by Paul Suska of DES in  
10 January of 2001. It has a public trail and is another example of Pennichuck  
11 saying one thing and then doing another thing when it comes to standing up and  
12 being a good steward. They effectively caved in to the developer side of the  
13 company.

14  
15 Paul Suska and State Rep. Balboni, Pennichuck and the towns had worked up  
16 some new improved buffer rules for the Pennichuck Watershed. This was the  
17 result of the slow process started in 2000 by Mr. Suska and Pennichuck and the  
18 public hearing in January of 2001 that motivated us to start the Pennichuck  
19 Brook Watershed Council. The House of Representatives passed HB 1289 with  
20 an overwhelming YES vote. Pennichuck even supported the bill.

21  
22 When the bill came to the Senate Committee hearing, the developers came out in  
23 force. Pennichuck withdrew their support of the bill. The committee voted

1 unanimously not to pass HB1289. Interestingly, Pennichuck Water Works and  
2 not Southwood sent the letter withdrawing their support. I will quote from the  
3 Nashua Telegraph article on the meeting and senate committee vote:

4  
5 “Pennichuck Water Works withdrew its earlier support for the bill (HB 1289).  
6 President Donald Ware said in a statement that the proposal would restrict use on  
7 500 acres the company could privately develop, and officials in neighboring cities  
8 and towns had not endorsed it.

9  
10 “The implementation of buffers around key local community where the nuances  
11 of each water supply and the potential of a regulatory taking can be evaluated,”  
12 Ware wrote.” (See - Exhibit 09 - Watershed buffer hung out to dry)

13  
14 **Q: You discussed the siltation of the ponds in the reservoir. Why is this a**  
15 **Pennichuck problem?**

16 **A:** Good question. The siltation is caused by development and plant growth.  
17 Pennichuck has not take an active position is controlling development and the  
18 sediment that runs into the ponds. There is a gravel pit on the northeast side of  
19 the Everett Turnpike. That gravel pit has had a diesel pump for over two years on  
20 the northeast bank of the pond. It has just been removed after Pennichuck they  
21 were asked why it was there. More importantly, a little lagoon just north of where  
22 the pump was has been filling in over the last few years. There are photos that

1 show that clearly. Pennichuck did not know about the pump. (Exhibit 11 -  
2 Siltation Photos)

3

4 Pennichuck has not removed trees that have fallen into the ponds. Pennichuck  
5 has not dredged the pond to increase their capacity, remove decaying organic  
6 material that reduces the oxygen content in the ponds. The ponds are effectively  
7 dead near the bottoms because there is no oxygen to support fish life and the  
8 requirements for general healthy ponds. Pennichuck has not done much the  
9 address the siltation coming from the gravel pit. Pennichuck has not done much  
10 to clean up trash in the water and the wetlands feeding the ponds. Pennichuck has  
11 not fix the fences that are down for a few years. Pennichuck does not seem to  
12 stop people from walking on the banks of the pond. Pennichuck does not seem to  
13 have any fences between their developments and the ponds. Pennichuck does  
14 seem to stop people from swimming in the ponds. There are photos that show  
15 these things. See Exhibit 01 for photos of trash in watershed.

16

17 It is unfortunate that I even have to point out Pennichuck's poor watershed  
18 management practices. The reason for it is that Pennichuck points to all their  
19 fancy studies and suggests that they are addressing the problems that they caused.

20 Are they really addressing the problems or are they talking a good game?

21

22 There have been unfortunate accidents attached documents. I will quote a few  
23 lines from the Nashua Telegraph (Exhibit 11 – College student drowns): By

1       STEPHANIE HOOPER, Telegraph Staff Published: Wednesday, Jun. 8, 2005,  
2       MERRIMACK – A 22-year-old Thomas More College student drowned Tuesday  
3       while attempting to take an afternoon swim with a friend in Bowers Pond.

4  
5       I will quote from my letter to the alderman in 1999 when I asked them to close the  
6       Tinker Rd bridge and the Manchester St bridge and increase buffers. Exhibit 12 -  
7       Request to Alderman. Pennichuck’s Stephen Densberger was an alderman at the  
8       time. The request went nowhere. Pennichuck could have supported the request,  
9       but that was not in their business plan because they wanted to develop their  
10      Tinker Rd properties.

11  
12      “Today is Earth Day 1999. The residents of Nashua dodged an environmental  
13      disaster Tuesday when a truck went off the road at the Tinker Road bridge and  
14      into Bowers Pond. Bowers Pond is a major pond in the Pennichuck watershed.  
15      We were lucky that the truck used diesel fuel and did not dump reformulated  
16      gasoline with MBTE into the watershed. A number of us have been requesting  
17      that we protect our water supply from the encroachment of development.

18  
19      There is no better time than now to slow the traffic flow that crosses the  
20      watershed daily. It was only a matter of time before such an accident would  
21      happen. It is only a matter of time before a worst accident will happen. What  
22      would have happened if a gasoline truck had gone into the pond? If that had

1 happened, it is possible that our water supply could have been destroyed for  
2 maybe years. There are reasons why there are buffer zones around watersheds.

3

4 I formally request that the Aldermen study and pass a resolution to close Tinker  
5 Road 300 feet on each side of the bridge over the watershed and 500 feet on each  
6 side of Manchester Street where it passes over the watershed. It would be wise to  
7 close the Everett Turnpike if that were possible. That may not be possible, but it  
8 is a goal we should think about. The 1983 PUC Order requires that Pennichuck  
9 Water Works not allow roads to cross the "Buffer Zone" or "Critical Area" except  
10 for utility crossings and maintenance of the watershed. Only passive use should  
11 take place in these areas.

12

13 Thank you for considering the request. I think the PUC Order requires it.  
14 Besides, common sense requires that it should be done to protect the water supply  
15 not only for today's residents, but also for future generations.”

16

17 If Pennichuck were good stewards of the watershed, they could have jumped of  
18 this citizen's initiative and situation. Pennichuck is not a good steward and one  
19 would know that if one were aware of the details that have taken place.

20

21 **Q: Obviously from this last letter you were active in protecting the watershed**  
22 **before the Pennichuck Watershed Council was formed. When did you first**

1       **get involved in trying to protect the Pennichuck Watershed and Nashua's**  
2       **drinking water?**

3     A:     I first started to get involved around 1998 when it was clear what Pennichuck was  
4       doing with regards to developing the land. I was busy working, making money,  
5       spending time with my family, and generally not involved in politics. I bought a  
6       plane in 1986. As I flew back to Nashua from business at night, I noticed that the  
7       lights of Amherst St were getting brighter and brighter and it became easier to  
8       find the Nashua Airport. I was able to measure the rapid growth of Amherst St  
9       starting in 1986 and forward. In 1998, I went to a public hearing on a new  
10      ordinance on protecting the Public Water District. I met a number of local  
11      residents who told me stories about the development, the Sasaki Report, etc. I got  
12      a copy of the Sasaki Report from a State Rep named Roland Lefebvre and read it  
13      completely and got concerned. Tom McGreevy (Nashua citizen) and I meet with  
14      EPA in Boston and NH DES to discuss the developments. We got support that  
15      was being done was not right, but it appeared to be technically legal. We walked  
16      the proposed development areas with these people. Shortly after the meetings  
17      with EPA and DES we called a meeting with the local and state public officials.  
18      Exhibit 13 – Agenda 1999 meeting is the talking points of the meeting and shows  
19      the issues in 1999 associated with Pennichuck's poor watershed stewardship. The  
20      people attending included Executive Councilor (now Mayor) Bernie Streeter,  
21      NRPC head Andrew Singelakis, Jay Minkarah (Merrimack Planning Director), a  
22      few State Reps, an alderman, EPA, NH-DES and CEO Arel and 7 other people at  
23      Pennichuck and a number of local citizens. It was a pretty intense meeting where

1 the issues were aired and Pennichuck saw the opposition to their outrageous  
2 development plans. Yes, I have been trying to educate and stop the destruction of  
3 the reservoirs for a few years.

4

5 I even met with then Senator Smith and discussed the watershed problems with  
6 him in 2002. I was looking for guidance and support since he was Chairman of  
7 the Committee on Environment & Public Works. Exhibit 14 – Senator Smith  
8 Presentation - February 2002. He said he supported our attempts to protect the  
9 watershed.

10

11 It should not be a surprise that the citizens of Nashua voted 78% to buy  
12 Pennichuck. They know that Pennichuck has not been a good steward to the  
13 watershed. Recently, Pennichuck has been mounting a deceptive advertisement  
14 campaign and says they will spend \$5.8 million dollars by the end of 2006 to fight  
15 the purchase of their company by the City and ultimately the ratepayers of  
16 Nashua. That money would have been better spent protecting the watershed.  
17 Pennichuck touts its polls that the residents of Nashua do not support the purchase  
18 but I have not observed that there has been any lessening of the support for the  
19 City's efforts when people are presented with the facts of the issue.

20

21 Our environmental concerns were considered legal though not the proper thing to  
22 do by environmental authorities (NH-DES and EPA). The Security Exchange  
23 Commission did not think some of the transactions were technically legal. (See

1 Exhibit 15 - SEC NEWS DIGEST) I have attached an editorial from the Nashua  
2 Telegraph entitled, "A Feeding Frenzy at the Public Trough" sums up the local  
3 outrage pretty well. Exhibit 16 - A feeding frenzy at the public trough  
4  
5 Maybe the Staff at the PUC think Pennichuck did nothing wrong. If so, then that  
6 is total denial of the fact that the PUC indirectly enabled Pennichuck (by allowing  
7 Pennichuck to create Southwood and sell off the land) to pull off their scam. If I  
8 am remembering correctly, Pennichuck had the same accounting firm advising  
9 them that Enron used before they fell from the good graces of the investor world.  
10  
11 I have given talks at Rivier College and other organizations when asked. The  
12 problem is that people are not educated on the importance of protecting their  
13 water supply and assume that their water company is in business to do just that.  
14 That is a natural assumption and it is shocking to see that the water company  
15 (Pennichuck) is selling of the watershed so that their un-regulated side can make  
16 more profit.  
17  
18 Q: The PUC Staff came out in favor of Pennichuck being a good steward and  
19 keeping Pennichuck a private water company. They said it was in the public good  
20 to keep things the way they are. What do you think of that position and their  
21 reasoning?  
22 A: It appears they are biased in favor of Pennichuck and against the ratepayers of  
23 Nashua. Some people think the PUC Staff has a conflict of interest. Their

1 reasoning is that the PUC uses Pennichuck to bail out the PUC when they are  
2 confronted with a water system problem in a development. They use the  
3 ratepayers of Nashua to pick up the tab. It is not in the public good of the Nashua  
4 ratepayers. It is in the best interest of the developer who has put in an inadequate  
5 water system. The developer gets Pennichuck to pick up the mess. Pennichuck  
6 (funded by the ratepayers of Nashua) even reimburse that developer for all their  
7 expenses associated with putting in the inadequate water system. The developer  
8 gets a win fall profit at the expense of the Nashua ratepayers. Pennichuck gets  
9 their costs covered by the Nashua ratepayers plus a profit that can be anywhere  
10 from 7.38% to 10% depending on how they do the accounting of the costs. Let  
11 me quote from PUC case DW01-081, Order 23,923 concerning a Pennichuck rate  
12 increase that discuss these rate of return principles:

13

14 “Traditional rate-of-return principles permit a utility to recover prudently incurred  
15 operating expenses along with “the opportunity to make a profit on its investment,  
16 in an amount equal to its rate base multiplied by a specified rate of return.”

17 Appeal of Conservation Law Foundation, 127 N.H. 606, 634 (1986). The  
18 Settlement Agreement provides for an 8.58% rate of return and incorporates a  
19 10.0% return on equity, and 7.38% long term debt component.”

20

21 **Q: Are you suggesting that it is in Pennichuck’s interest to run up costs?**

22 A: It sure appears that way. If one were to make a business plan based on a cost plus  
23 rate of return principles extracted from the PUC order quoted above, it would

1        seem that having higher operating expenses produces higher profits. There is  
2        little incentive to protect the Nashua ratepayer's costs. Carrying that further one  
3        can see that destroying the watershed will require Pennichuck to build a bigger,  
4        better, more expensive treatment plant. That increases operating expenses in a  
5        number of accounting categories and hence produces more profit dollars to the  
6        bottom line. From a business plan approach, a destroyed watershed could be  
7        considered a plus for Pennichuck's bottom line. Picking up more failing water  
8        companies from PUC increases their operating expenses and bails out PUC of a  
9        problem water company. The ratepayers of Nashua picks up the short fall in  
10       revenue produced by the ratepayers of the failed water system.

11

12       So one could come to the conclusion that what is in the best interest of the  
13       developer of the failed water system, Pennichuck, and PUC is not in the best  
14       interest of the ratepayers of Nashua who have to make up the short fall.

15

16       One can get pretty upset about the ethics of allowing a company to benignly let a  
17       watershed and reservoir get destroyed. This compromised water supply impacts  
18       the health of the environment and the health of some humans who have an  
19       immune system susceptible to pollution. This compromised water system has a  
20       reduced ability to supply clean and abundant drinking water for future  
21       generations. Carrying this out a little more, one may conclude that a bigger,  
22       better, more expensive treatment plant may help provide clean water to the  
23       Nashua ratepayers, but what will happen to those on wells in the Pennichuck

1       Watershed once those wells get contaminated? They may be the stranded water  
2       users and the big losers in the long run.

3  
4       There is no excuse or moral justification for a water company to not be a  
5       proactive steward of the watershed. Saying the right words means one knows  
6       better. Not doing the right thing when one knows right from wrong is immoral.

7  
8       I am not a lawyer, but one can see why many voters in Nashua were/are not too  
9       happy with what Pennichuck has done with the properties that the people assumed  
10      were in good hands and would be treated with the respect and protection.

11  
12      Thank you for the opportunity to discuss a perspective on the watershed  
13      management that seems to have been overlooked by the PUC Staff. I could  
14      generate more examples, but rational people should not need more examples.