

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 NASHUA COMMUNITY DEVELOPMENT
DIRECTOR KATHERINE HERSH, ALDERMAN BRIAN McCARTHY, AND
JOHN M. HENDERSON, P.E. CONCERNING WATERSHED PROTECTION**

1 **Q. Please state your names and positions as they relate to this proceeding.**

2 A. Alderman Brian McCarthy. I serve as a member of Nashua's Board of
3 Aldermen, as well as the Pennichuck Water Works Special Water Committee and
4 other committees of the Board Aldermen that have played a significant role in
5 matters related to this proceeding. I also serve as a delegate for the City of
6 Nashua to the Merrimack Valley Regional Water District.

7 A. Katherine Hersh. I am Director of the Community Development Division of the
8 City of Nashua. As Director I am responsible for the City of Nashua's activities
9 related to economic development, land use planning, zoning enforcement and
10 administration and other matters set forth in the City's Charter. A copy of my
11 resume is included in Exhibit 1 to this testimony provide additional concerning
12 my experience and qualifications related to this issues we discuss today.

13 A. John M. Henderson, P.E. I am a Senior Project Manager for the firm Tetra Tech,
14 Inc. (Tetra Tech), at its office located at 1 Grant Street in Framingham,
15 Massachusetts. My resume and professional qualifications were included in

1 Nashua's January 12, 2006 testimony describing the R.W. Beck and Tetra Tech's
2 role providing oversight of the water system, including watershed management.

3 **Q. Have you previously submitted testimony in this proceeding?**

4 A. Katherine Hersh. No.

5 A. Alderman McCarthy. Yes. I provided testimony in this proceeding in support of
6 Nashua's Petition on November 22, 2004.

7 A. John M. Henderson, P.E. Yes. I provided testimony in this proceeding on
8 January 12, 2006 in order to explain Tetra Tech's role under the City of Nashua's
9 Professional Services Agreement for oversight services of its water system in
10 specialized areas such as security planning and vulnerability analysis, water
11 system analysis and planning, watershed and water resource management and
12 protection and other areas.

13 **Q. What is the purpose of your testimony today?**

14 A. We respond to Pennichuck's January 12, 2006 testimony, and in particular that of
15 Ms. Eileen Pannetier concerning issues related Pennichuck Brook Watershed.

16

17 In **Part I** of our testimony we discuss Pennichuck's development of real estate
18 and its failure to implement, and in many cases opposition to, measures necessary
19 for the long-term protection of its water supply. We provide significant examples
20 that demonstrate that Pennichuck has consistently opposed or failed to implement
21 measures whenever it would threaten the ability of Pennichuck's wholly owned
22 real estate development affiliate, the Southwood Corporation to develop the
23 approximately 1,500 acres of land that were formerly set aside for protection.

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In Part II of our Testimony, we provide documentation concerning the steps Nashua has taken to protect the Pennichuck Brook Watershed including the acquisition of over 483 acres of land within the watershed for water supply protection and the prevention of storm water pollution. In some cases, Nashua has even acquired property as a result of development projects proposed by Pennichuck. We also explain in Part II the significant role Nashua has played in adopting regulatory measures to protect the Pennichuck Brook Watershed, and in particular, Nashua’s Water Supply Protection District that includes substantial setbacks and other provisions to protect the water supply from stormwater pollution and phosphorus loads. Part II describes how Pennichuck publicly opposed the enactment of these measures due to their impact on Southwood’s ability to maximize the development of vacant land adjacent to the water supply.

Part III of our testimony sets forth the basis for our conclusion that Pennichuck’s real estate development activities combined with its failure to implement necessary watershed protection measures have contributed to water quality and supply problems in the watershed.

Finally in **Part IV**, we respond briefly to several inaccurate statements made in the testimony of John Joyner.

1 **I. PENNICHUCK’S FAILURE TO ACT IN THE LONG TERM BEST**
2 **INTEREST OF THE WATERSHED**

3
4 **Q. What is your opinion of Pennichuck Water Work’s stewardship of the**
5 **watershed?**

6 A. Pennichuck has consistently failed to protect the watershed when given the
7 opportunity to do so whenever steps necessary to protect the watershed would
8 reduce the ability of its real estate development company, the Southwood
9 Corporation to fully develop its holding of land formerly held for water supply
10 protection. Examples of Pennichuck’s failures have been provided in Nashua’s
11 responses to data requests from both Pennichuck Water Works and the
12 Commission’s staff and are included in our testimony today in Exhibit 2.

13
14 These examples fall generally into two categories, the first being lost
15 opportunities to protect the watershed from development, and the second is the
16 company’s public opposition to regulatory initiatives to protect the watershed.

17 **Q. What are examples of the company’s development of or failure to acquire**
18 **land necessary to protect the watershed?**

19 Our responses to data requests document several significant examples, including
20 the property identified as Parcel M which “site overlies a very high yield ground
21 water aquifer”. The company has never purchased or bought land for watershed
22 protection with the small exception of one lot, lot H-632. Even in this case, the
23 company later subdivided the lot it acquired into two lots and sold one of the two
24 lots as a house lot in 2001 that sits within the 300 foot setback from Bowers Pond.

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1 In order to illustrate this point, we are preparing a detailed Exhibit showing the
2 proximity of the company's real estate development operations to its water
3 supply, as well as the location of key conservation parcels that the company has
4 failed to acquire, as well as those acquired by Nashua for watershed protection.
5 We have not completed this exhibit for the Commisison's review but expect to
6 provide it shortly.

7 **Q. What about Pennichuck's opposition to regulatory measures intended to**
8 **protect the watershed?**

9 A. There are many examples, including several discussed below. Perhaps the most
10 telling example is the company's public opposition to Nashua's Water Supply
11 Protection District adopted by the Board of Aldermen in December of 1998 and
12 discussed in Part II as shown in Exhibit 3 to our testimony. The fact that the
13 company continued to oppose the development of buffers, even those less than its
14 own consultant determined to be necessary for supply protection.

15
16 A more recent example is the company's opposition to HB 1289 before the New
17 Hampshire Senate in April of this year documented in Exhibit 4. HB 1289 would
18 have implemented on a permanent statutory basis the 1998 final recommendation
19 for setbacks and buffers of 400 and 200 feet for the surface waters and tributaries.
20 HB 1289 had strong public support from the NH DES and other resource
21 management agencies. However, rather than work to ensure that the final bill
22 achieved the protections recommended by its own consultants, the company and
23 its lobbyists worked behind the scenes arguing that the bill would result in "the

1 taking of over 500 acres of land that could have been developed”¹ that resulted in
2 Senate finding the bill inexpedient to legislate. The reference to the “over 500
3 acres of land” is not without significance. According to Pennichuck CEO Donald
4 Correll’s recent presentation to shareholders,² the remaining Southwood
5 Corporation real estate developments are approximately 500 acres.

6
7 A third example and one that is also discussed below is the company’s failure to
8 implement the setback/buffer recommendations within its own watershed
9 regulations under its authority under RSA 485:23 & 24 into Env-Ws 386
10 regulations. See Exhibit 5, attached. This was initially proposed by the
11 company’s own consultant, CEI. However, despite its authority to do so, the
12 company pressured its consultants to change their recommendation and have not
13 implemented meaningful water supply protections within its water supply
14 regulatory authority.

15 **Q. Are there other examples?**

16 A. Yes there are. We understand that many of these have been documented in Allan
17 Fuller’s testimony. We urge the Commission to examine closely Dr. Fuller’s
18 testimony in that regard.

19 **Q. Ms. Eileen Pannetier states in her testimony that PWW hired**
20 **Comprehensive Environmental Inc in 1997 to develop its watershed**
21 **management plan and that “PWW gave CEI great latitude in its work, with**
22 **the instructions to come up with an implementable, effective program to deal**

¹ Exhibit 4, April 17, 2006 Letter from Donald Ware.

² A transcript of the presentation is included with the Reply Testimony of George E. Sansoucy, P.E. and Glenn C. Walker.

1 **with water quality threats, both future and past.”³ What is your reaction to**
2 **that statement?**

3 A Katherine Hersh. While I respect Ms. Pannetier as a person and her professional
4 qualifications, that statement is false. When CEI was developing a watershed
5 plan for Pennichuck, I was also evaluating the potential for setbacks and buffers
6 that could be adopted by the City of Nashua and was anxious to see what CEI’s
7 recommendations would be. So I called CEI and spoke to Eileen Pannetier. I did
8 not know her at the time. However, as a result of the phone call, she sent me a
9 copy of the draft recommendations, a copy of which is attached as Exhibit 6.

10 **Q. What discussions did you have concerning her recommendations contained**
11 **in the draft Report she provided you?**

12 A. Katherine Hersh. I spoke again with Ms. Pannetier after I reviewed the draft
13 recommendations that she provided me. She expressed to me that she was very
14 upset *because Pennichuck management was pressuring her to make changes in*
15 *her recommendations*

16 **Q. What impact would Ms. Pannetier’s recommendations setback and buffers**
17 **have on Pennichuck’s ability to develop real estate within the watershed?**

18 A. At the time of the recommendations, Pennichuck’s wholly owned real estate
19 development subsidiary, the Southwood Corporation, held significant real estate
20 adjacent to Pennichuck’s water supply land and tributaries thereto. At the time of
21 CEI’s draft recommendations for setbacks and buffers, the regulations were
22 significantly less stringent than what CEI initially recommended. These buffers
23 would have reduced Southwood’s ability to maximize development of real estate

³ Page 5, Lines 8 to 10.

1 in areas adjacent where tributaries and wetlands feeding into its water supply
2 system were present.

3 **Q. What happened to the recommendations contained in the copy of the report**
4 **that Ms. Pannetier provided to you?**

5 A. The recommendations concerning the need for buffers to protect the water supply
6 were substantially diluted, as shown in the final recommendation in Exhibit 7.
7 For example, the Draft CEI Report provided by Ms. Pannetier began with the
8 following discussion concerning the dire need to restrict development within the
9 Pennichuck Brook Watershed:

10 A phosphorus and hydrologic analysis of the watershed along with
11 limited sampling data show excess levels of phosphorus in most of
12 the ponds. These excess levels were identified considering the
13 detention the chain ponds provide to one another in series. This is
14 the result of the *overwhelming detriment of development* which has
15 increased nutrient loadings into the ponds and has likely added to
16 the filling of the ponds, reducing both their capacity and detention
17 benefit. Based on the identified phosphorus levels in the ponds,
18 *actions need to be taken to reduce the existing loadings into the*
19 *system and to minimize additional loadings from future*
20 *development.*⁴

21 The Draft report went on to note that phosphorus loads were the most important
22 parameter to control “due to the impacts it has on a surface drinking water supply,
23 which include the filling of ponds and taste and odor problems” and that the
24 phosphorus concentration for Harris Pond was “approximately the desired
25 phosphorus level (0.02 mg/l) for an unfiltered surface drinking water supply.”

⁴ Exhibit 6, Page 8-1 (emphases added).

1 Furthermore, not only did actions need to be taken to restrict future development,
2 “the pollutant loadings entering the pond need to be reduced to an acceptable
3 level that the pond can handle [...] to reach a recommended water quality goal of
4 roughly 0.0025 mg/l of phosphorus.”⁵

5 Based on the problems identified above, the Draft CEI report made two critical
6 recommendations to Pennichuck:

- 7 1. *Require a 300-foot setback/buffer from all tributaries to the chain*
8 *pond system including the ponds themselves. This buffer may not*
9 *be applicable to all locations of the watershed, but should be*
10 *applied wherever possible. If possible, the setback should be*
11 *incorporated into the watershed regulations.*
- 12 2. Work with local planning departments and conservation
13 commissions to incorporate a 300 foot buffer in local subdivision
14 and planning regulations to the extent possible.

15 Exhibit 6, Page 8-3 (emphasis added).

16 **Q. How were those recommendations presented in the final Watershed**
17 **Management Plan?**

18 A. The tone of the report to state that water quality deterioration is essentially a
19 foregone conclusion that could only be solved through treatment and remedial
20 measures instead of preventative measures that would impact Southwood’s ability
21 to continue to develop real estate.

22 **Q. What about the specific recommendation that Pennichuck “require a 300-**
23 **foot setback/buffer from all tributaries” in its watershed regulations and in**
24 **local subdivision and planning regulations?**

⁵ Exhibit 6, Page 8-1. I note, however, that even CEI’s recommended target goal of 0.025 mg/l phosphorus was itself greater than that “desired for an unfiltered surface water supply” but selected only based on what was “realistically achievable for the Pennichuck water supply system”. See Exhibit 6, Page 8-1.

1 A. The first of the two recommendations that Pennichuck *require* a 300-foot setback
2 from all tributaries be included in its own watershed regulations⁶ and local
3 subdivision and planning regulations was replaced with a vague recommendation
4 for buffer guidelines. The specific recommendation was reworded as follows in
5 the final Watershed Management Plan:

6 Although the distance of a buffer for pollutant removal varies
7 considerably from site to site based on site-specific conditions, as
8 outlined in Section 7.0, *a general guideline* would be to use a
9 minimum 400' buffer around the chain ponds and a 200' buffer
10 from the Ordinary High Water (OHW) mark from all tributaries
11 and wetlands that are directly tributary to the chain ponds.

12 Exhibit 7, Page 9-8 (emphasis added). This recommendation is significantly
13 weaker than that originally recommended by CEI in that: (a) it suggests that
14 buffers are only “general guideline[s]” as opposed to “required” for protection of
15 water quality; (b) it eliminates reference Pennichuck’s responsibility to establish
16 those setbacks through its own authority under RSA 485.

17 **Q. But isn’t the final Watershed Management Plan recommendation essentially**
18 **the equivalent of what was contained in the first draft?**

19 A. No it is not. The prior draft clearly stated the imperative nature of taking actions
20 that would require these buffers be achieved, and that Pennichuck should
21 implement those buffers through its own authority under RSA 485:23 & 24 to
22 have the New Hampshire Department of Environmental Services adopt
23 regulations.

⁶ See Exhibit 5, RSA 485:23 and Env-Ws 386.50.

1 **Q. Did the City of Nashua adopt its own Watershed Protection District to**
2 **achieve the same buffers?**

3 A. Katherine Hersh. The City of Nashua adopted fairly stringent buffers under its
4 zoning authority to control development as best as it could. However, Nashua
5 represents only a small piece (approximately 17%) of the watershed and its
6 authority to adopt zoning ordinances that would substantially restrict or prevent
7 development adjacent is limited by the constitutionally, politically, and
8 financially. Furthermore, Pennichuck Water Works, Inc., played a significant
9 role opposing Nashua's efforts to adopt Nashua's Water Supply Protection
10 District and the setbacks it required.

11 **II. NASHUA'S EFFORTS TO PROTECT THE FUTURE OF THE**
12 **PENNICHUCK BROOK WATERSHED**

13
14 **Q. What steps has the City of Nashua taken to protect the Pennichuck Brook**
15 **watershed?**

16 A. Nashua's efforts to protect the Pennichuck Brook watershed fall into two
17 categories. First, Nashua has aggressively pursued the acquisition of conservation
18 land important to the long-term protection of both water quality within
19 Pennichuck and ground water recharge. Second, Nashua has adopted significant
20 municipal ordinances for the protection of the Pennichuck Brook water supply
21 including a Water Supply Conservation District with significant setbacks and
22 other protections for wetlands and surface waters, storm water management
23 practices and other land use controls.

24 **Q. What recent land acquisitions has Nashua pursued for the protection of the**
25 **Pennichuck Brook watershed?**

1 A. While Southwood has developed a substantial portion of the 1,500 acres formerly
2 set aside for watershed protection prior to the 1980 Sasiki Report, Nashua has
3 actively pursued a number of the few remaining undeveloped parcels in order to
4 preserve the watershed as best it could using Nashua taxpayer dollars for the
5 benefit of the entire water supply.

6
7 Some of these acquisitions, through direct financial contribution and/or logistical
8 support are documents in the Responses to Data Requests we have provided in
9 this proceeding that are set forth in Exhibit 2, attached. Upon further review, we
10 prepared the following table providing four examples beginning on November 11,
11 2001, in which Nashua actively acquire or sought to protect property important to
12 the long-term protection of the Pennichuck Brook watershed for drinking water
13 supply. As shown in the Table below, these efforts have resulted *in permanent*
14 *conservation measures being put in place on 483 acres.*

15
16 We are very proud of this accomplishment, particularly given that only 17% of
17 the approximately 18,000 acre watershed is located in the City of Nashua. The
18 land acquisition documented below represents permanent protection for 16% of
19 the Pennichuck watershed in Nashua.

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**RECENT NASHUA LAND ACQUISITIONS FOR
PENNICHUCK BROOK WATERSHED PROTECTION**

Date	Purchase price	Parcel	Purchased from	Acres	Funding source	Comments
11/01/01	\$2,000,000	H-577	Pennichuck	253.20	City, LCHIP, DES	Southwood Corporation had concept plans to build either a golf course or 1 million sf of office space. Pennichuck Corp., opposed the Water Supply Protection District Ordinance because the required buffers would have made the cost of the bridge prohibitive.
		H-635		41.52		Conservation easement only
12/09/02		I-9 I-49	Irene West donated to NH Audubon	62.00 13.15	City's contribution of \$9,000 stewardship fees was from the Nashua Conservation Fund	Alderman Brian McCarthy and I met with Irene West and asked that she consider donating land to NH Audubon for watershed protection. (She had already given them some land.) She passed away not long after that and her daughter, Marcia Poulin, called me and said she wanted to honor her mother's wishes. I put her in touch with NH Audubon. The city paid the stewardship fees to NH Audubon and SPNHF.
07/30/03	\$750,000	I-11 H-11 H-10	Jon Tamposi	29.05 43.21 27.85	City, LCHIP, DES	The City's highest priority for land acquisition has been in the Pennichuck Pond area, due to the fact that this land is over a high yield aquifer.
Pending.		H-12	Manoukian	13.51		The City requested that Wal-Mart purchase this property as mitigation for their proposed development in Nashua. The proposal is pending in court.
TOTAL				483.49		Total Acreage Protected through Nashua's financial and other contributions to protection of the Pennichuck Brook watershed.

1 **Q. What regulatory steps such as buffers and setbacks has Nashua taken to**
2 **protect the Pennichuck Brook Watershed for future water supply?**

3 A. The primary regulatory protection is Nashua’s Water Supply Protection District,
4 contained in Article X of Nashua’s zoning ordinance. The location of the Water
5 Supply Protection District, as well as its provisions are set forth in Exhibit 8,
6 attached hereto. The District was established in 1998 by the Board of Aldermen
7 out of concern that adequate steps were not being taken by Pennichuck Water
8 Works to protect Nashua’s water supply.

9 In January of this year, the Nashua Board of Aldermen recodified its ordinances,
10 and specifically eliminating an exemption that allowed for sidewalks and parking
11 lots under (former) Section 16-655. As a result, Nashua’s Water Supply
12 Protection District ordinance is even more stringent today than it was in 1998
13 when Pennichuck strongly and publicly opposed its adoption into law, and
14 includes the following protection measures:

- 15 • Three hundred (300) foot conservation zone setback from the annual high
16 water mark of Supply Pond, Bowers Pond, Holt Pond, Harris Pond, and
17 Pennichuck Pond. Exhibit 8, Section 16-653.
- 18 • One hundred fifty (150) feet conservation zone setback from all water bodies
19 that are connected via surface water to the ponds and the wetlands associated
20 with those water bodies. Exhibit 8, Section 16-653,
- 21 • All uses except for vegetated swales are prohibited within the conservation
22 zone. Exhibit 8, Section 16-655.
- 23 • Fertilizer and pesticide use within 250 feet of the Ponds and associated
24 wetlands is prohibited. Exhibit 8 16-656.

1 **Q. How do the protections of Nashua’s Water Supply Protection District**
2 **compare to the Pennichuck Water Works regulations it has adopted under**
3 **RSA 485:23 & 24 and Env-Ws 368?**

4 A. Nashua’s Water Supply Protection District is significantly more stringent. We
5 have attached a copy of RSA 485:23 & 24, which allow Pennichuck to petition
6 the NHDES to adopt ordinances necessary to protect water supply and the
7 regulations it has adopted thereunder. As noted in the recent letter from NHDES
8 Commissioner Nolin expressing his concern for the impacts of development on
9 water quality within the watershed and his agency’s willingness to support
10 stronger measures to protect water quality. See Exhibit 4, attached. As Exhibit 5
11 shows, while Pennichuck has the authority to adopt nearly any protection measure
12 necessary to protect water quality and has the full support of the NHDES to do so,
13 it has enacted only token measures to protect its water supply that would have
14 virtually no impact on its ability to commercially develop the remaining real
15 estate held by its wholly-owned development company, Southwood Corp. The
16 protections of Pennichuck Water Works’ ordinance are essentially limited to the
17 following:

- 18 • Privies, pig-pen, stables or other buildings or structures in which horses,
19 cattle, swine or other animals or fowls are prohibited within 75 feet of the
20 surface waters/tributaries. Env-Ws 386.50 (g)(1).
- 21 • Discharge of sink-water, urine, or water that has been used for washing or
22 cleansing materials, persons or food, is prohibited within to run into the
23 surface waters used for supply or tributaries thereto or discharged onto the
24 ground within 75 feet of the surface waters/tributaries. Env-Ws 386.50 (g)(2).

- 1 • Deposit of any dead animal or fish or parts thereof, or food, or any article
2 perishable or decable, or any dung, either human or animal kitchen waste,
3 swill or garbage is prohibited within 75 feet of the surface waters/tributaries.
4 Env-Ws 386.50 (g)(3).
- 5 • Sawdust cannot be “thrown” or deposited into the surface waters used for
6 supply or their tributaries. Env-Ws 386.50 (g)(5).
- 7 • Bathing and swimming are prohibited. Env-Ws 386.50 (g)(7).

8
9 These protections would surely be important a century ago when Nashua more
10 closely resembled Old MacDonald’s farm than the highly developed environment
11 that exists today. Today, however, they offer virtually no protection from the
12 types of threats facing the Pennichuck Brook Watershed that were clearly
13 identified in Ms. Pannetier’s initial recommendations to the company.

14 Ironically, Exhibit EP-4 of Ms. Pannetier’s testimony tries to turn the proverbial
15 sow’s ear into a silk purse by holding up the NHDES ordinance as an example of
16 how Pennichuck has “substantially”⁷ implemented Objective 2 (“Buffer Zones”)
17 contained in CEI’s final 1998 Watershed Management Plan recommendations.

18 On Page 381 of Exhibit EP-4 CEI states that: “Buffer zones were recommended
19 by PWW in a request for an update of the watershed regulations to NH DES. *The*
20 *update by the NH DES is on going as of 2004.*” (emphasis added).

21
22 In 2005, the NHDES “updated” as shown in Exhibit 5 and referenced above that
23 essentially offer no protection from the very real and modern threats of
24 stormwater management and development. Pennichuck’s failure to include

⁷ January 12, 2006 Public Interest Testimony of Eileen Pannetier, Page 8, Line 5.

1 stormwater management protections in its own water supply protection ordinance
2 is particularly startling given Ms. Pannetier’s statement that “while we
3 environmental engineers know how to prevent much of the [stormwater] threat,
4 getting planning boards, zoning boards, developers and contractors to use these
5 superior techniques is challenging at best, since the problems themselves are not
6 often recognized outside of environmental circles.” Thus, while Ms. Pannetier is
7 doubtful that municipal zoning boards and developers understand the problems
8 presented by improper stormwater management, she fails to point out that
9 Pennichuck has done nothing to solve the problem.

10
11 However, as a result of Pennichuck’s efforts to update the NH DES regulations
12 protecting its water supply customers can rest assured that Old MacDonald can no
13 longer construct a “pig pen” within 75 feet of Harris Pond under Env-Ws 386.50
14 (g). Sadly, however, the types of protections necessary to protect water supply
15 are no longer the pig-pens of Old MacDonald’s farm. They are precisely the
16 types of development that were advised against in the initial recommendations
17 that were submitted to Pennichuck Water Works, Inc. that were then rejected in
18 favor of “general guidelines”⁸ that the company likely hoped would never be
19 implemented while Southwood’s real estate development of the raw land formerly
20 held for water supply protection continued.

21 **Q. What about the other “substantially” implemented recommendations of**
22 **CEI’s 1998 Watershed Management Plan referenced by Ms. Pannetier in her**
23 **Exhibit EP-4?**

⁸ Exhibit 7, Page 9-8.

1 A. Few of these accomplishments have had any significant impact, with the
2 exception of certain projects such as aeration treatment technology that
3 Pennichuck has an obvious incentive to implement because of its ability to earn a
4 return on investment through its rates approved by the PUC.

5 **Q. What examples could you provide?**

6 A. **Water Supply Protection District.** The first example of Pennichuck’s failure to
7 implement real solutions to the real problems facing the watershed is illustrated
8 by item one, Stormwater shown on EP-4 (Page 381). The CEI Exhibit then lists 6
9 examples (lettered “1a” through “1f” of how Pennichuck implemented the
10 Watershed Management Plan. First, and in some respects the most shocking on
11 the list, CEI states that “City of Nashua *with PWW’s assistance* passed a
12 watershed overlay district requiring pre+post peak development to attenuate
13 runoff peaks & infiltration volumes for 2 & 10 year, 24 hour storms be controlled
14 & that treatment occur for the first 1.0 inch and 80% removal of Total Suspended
15 Solids (TSS).” This was not a Pennichuck accomplishment in any sense of the
16 word. In fact, Nashua had begun to develop its Water Supply Protection District
17 with little or no assistance from Pennichuck long before CEI’s Watershed
18 Management Plan was completed. Furthermore, as was widely reported
19 *Pennichuck publicly opposed the adoption of the Water Supply Protection District*
20 *referenced in EP-4 because, according to Pennichuck CEO Maurice Aurel, “the*
21 *plan, as written would require the corporations real estate arm, Southwood Corp,*
22 *to seek a variance to access land it hopes to develop near wetlands.”*⁹

⁹ Exhibit 3, Nashua Telegraph, November 24, 1998, Pennichuck Slams Water Proposal – Company Chief Says Plan to Curb Wetlands Pollution Too Strict on Development.

1 **Minimize Parking Lot Impacts.** In Item 1b) CEI correctly points out, since the
2 1998 Watershed Management Plan recommendations were made, Pennichuck has
3 completed a “raingarden” demonstration project at the Pennichuck Plaza in
4 Merrimack.¹⁰ We do not doubt that the Pennichuck Plaza “raingarden” is well
5 intended and provides an example that should be followed. We do not believe
6 that one voluntary demonstration project in one parking lot eight years after the
7 watered down recommendations of the Watershed Management Plan can be
8 considered “substantially” implementing the recommendations that the Watershed
9 Management Plan was intended to address.

10 **Transportation Impacts of Subdivisions (1c) and Use of on-site Infiltration**
11 **(1e).** Exhibit EP-4 notes that Pennichuck completed report in March 2003, which
12 led to the Pennichuck Raingardens. Again, we do not believe that one voluntary
13 demonstration project in one parking lot can be considered a success story given
14 the problems being experienced in the watershed.

15 **Use of Clearing & Grading Plans (1e) and Minimize Lawn Size and**
16 **Encouragement of Native Species.** EP-4 shows that CEI developed standards
17 that were later incorporated into a report by the Nashua Regional Planning
18 Commission and others. While EP-4 states that PWW conducts (or intends to
19 conduct) “Plan review & inspections by PWW when possible”, in our experience
20 Pennichuck has provided relatively little assistance in this area.

21 **Q. What about the other recommendations that Ms. Pannetier states have been**
22 **“substantially” implemented on EP-4?**

¹⁰ See Exhibit 10, attached, showing the location of the project.

1 A. The most important of these would be recommendation number 2 “Buffer Zones”.
2 EP-4 cites the fact that “Buffer zones were recommended by PWW in a request
3 for an update of the watershed regulations to NH DES” under RSA 485 and Env-
4 Ws 386 we have already discussed above. This is not an example of an
5 accomplishment, but rather an example of a failure to act when the need to do so
6 well documented because of Pennichuck’s financial interest in Southwood.

7 **III. PENNICHUCK’S DEVELOPMENT OF AND FAILURE TO PROTECT**
8 **THE WATERSHED ACTIONS HAS IMPAIRED WATER QUALITY AND**
9 **SUPPLY**

10 **Q.** What impact has Pennichcuck’s development of the watershed had on water
11 quality in Pennichuck’s water supply?

12 A. NH DES Commissioner Michael Nolin, in his April 18, 2006 letter of support for
13 HB 1289,¹¹ eloquently and effectively expressed the importance of good
14 watershed management as follows:

15 “DES considers **any** development in a water supply watershed to
16 represent a potential threat to the quality of the water supply
17 source. Studies by the American Water Works Association and the
18 Trust for Public lands indicate that decreased forest cover in a
19 water supply watershed is associated with the need for more
20 extensive treatment of the raw water in order to meet applicable
21 standards for human consumption, and consequently higher
22 treatment costs.

23 Historically, the trend in drinking water regulations has been for
24 increasingly stringent health-based water quality standards for an
25 ever-growing list of contaminants. Making matters more difficult;

¹¹ Exhibit 4.

1 the disinfection of surface waters with chlorine compounds creates
2 byproducts which themselves pose a health risk. Therefore, DES,
3 the U.S. Environmental Protection Agency, and the U.S. water
4 supply profession **do not consider treatment alone to be the**
5 **preferred approach to ensuring safe drinking water. The**
6 **preferred approach, the so-called multiple-barrier approach,**
7 **includes source protection as a key component. ... Source**
8 **protection consists of maintaining a water supply watershed in**
9 **its natural state.”** (emphasis added).

10
11 Prior to 1983, Pennichuck Water Works (PWW) owned and protected almost
12 2,000 acres (10% of the entire watershed). This acreage was some of the most
13 critical acreage in that it was immediately adjacent to the chain of supply ponds;
14 areas which need the greatest level of protection. PWW’s 1980 protected
15 holdings of 10% of the watershed compares with Manchester NH’s watershed
16 protection control area of 25% of the total watershed. Manchester’s watershed
17 has a similar urban/rural mix as Pennichuck Brook. In areas with less
18 development like the Massachusetts Water Resources Authority’s (MWRA) water
19 supply watershed in central MA, as much as 60% of the watershed has been
20 maintained in and/or returned to its “natural state”. It is important to note that the
21 MWRA, in following the DES, US EPA and US water profession preferred
22 approach for multiple-barrier protection including watershed protection, is still to
23 this day actively acquiring additional lands to improve its 60% area of protected
24 lands within their water supply watershed. Both Manchester and the MWRA are
25 in stark contradiction with the actions that PWW has taken to significantly reduce

1 the area of protection within their control and to instead actively promote
2 development of up to 75% percent of their 2,000 acre holding.

3
4 We expect to provide shortly an Exhibit showing the extent of the PWW land
5 holdings that were evaluated in the Sasaki report which found that approximately
6 1,500 acres of the 2,000 acres were not critical for watershed protection and thus
7 could be developed. The boundaries of these holdings will be be superimposed
8 on 2003 aerial photos to show the extent of development that has occurred in the
9 land once held for watershed protection by PWW.

10
11 Increased development within the watershed and particularly within the critical
12 watershed areas immediately adjacent to the water supply chain ponds has led to
13 significant deterioration within the supply ponds. The 1998 Watershed
14 Management Plan prepared for PWW by CEI, concluded that “the existing
15 Pennichuck owned lands should be conserved to minimize the impacts of
16 urbanization and to provide adequate buffer to the chain ponds and their
17 tributaries.” See Eileen Pannetier’s Exhibit EP-1, Section 6.4 Pages 6-15. The
18 CEI report also noted that a more significant reduction in pollutant loading to the
19 supply pond chain can be achieved “if the amount of conservation land owned by
20 Pennichuck Water Works or others were larger.”

21
22 At this point, development within the watershed including the critical areas
23 controlled by Pennichuck has led to undesirable impacts in both the quantity and

1 quality of water within the chain pond system. “Chain pond systems
2 characteristically are cleanest in the most downstream pond ... because upstream
3 ponds collect pollutants and trap them. ... In the Pennichuck watershed, ...some
4 of these ponds are becoming full of sediment, resulting in washover of polluted
5 sediments...[which] ultimately affects both the quantity and quality of water[.]
6 The ponds must be maintained in order to maintain good water quality in the
7 water supply.” Exhibit EP-2, Section 2.6, Page 2-5.

8
9 According to the CEI report, the number of regulated drinking water contaminants
10 [in the ponds] has increased from less than 20 to more than 100 in the ...ten years”
11 between 1988 and 1998. The CEI report concluded that “...raw water bacteria
12 and nutrients are troublesome and may lead to increased [treatment] costs in the
13 future. Even more critical is the increasing inability to store water in the
14 watershed. Urbanization will continue to reduce the available water supply.”
15 Pages 3-5.

16
17 PWW chose to ignore the recommendations of its own consultant and continued
18 to develop critical watershed lands even in the face of the evidence compiled by
19 its consultant that their actions to develop critical areas had already contributed to
20 significant deterioration of water quality and quantity within the supply pond
21 system. By 2003, conditions within the supply pond system had become so bad
22 that PWW undertook a new study to address water quality problems which were
23 adversely impacting their ability to treat and produce a high quality potable water

1 supply. The water quality problems, the resulting study and the recommended
2 treatment solutions were detailed by PWW in a presentation at the 2005 Annual
3 Meeting of the New England Water Works Association. The water quality
4 problems identified by PWW were a result of eutrophication in the epilimnion
5 (upper strata of the ponds) and/or anoxic conditions in the hypolimnion (lower
6 strata of the ponds) which are classic conditions resulting from development of
7 the watershed. The water quality problems identified by PWW which were
8 adversely impacting their ability to treat water included:

- 9 • Water Temperature Fluctuations
- 10 • Habitat Loss
- 11 • Algae Blooms and Byproducts
- 12 • Anaerobic Respiration Products (Fe/Mn)
- 13 • Contamination from Floatables

14 The treatment for these development related problems was a \$0.5 million dollar
15 capital investment in baffles, weirs and aeration equipment to control the flow of
16 pollutants through the pond system to minimize their adverse impacts on water
17 quality. This was a half million dollars of rate payers money that was required as a
18 result of the level of development within the Pennichuck Brook watershed.

19 **Q. What about water supply?**

20 A. As watersheds become more developed, the impervious area is increased leading
21 to increased stormwater flows and intensity and reductions in the amount of
22 rainfall that is recharged to the groundwater. As the quantity and intensity of
23 stormwater flows are increased, the capacity for sediment and contaminant

1 transport in the streams is increased leading to greater deposition of silts and
2 contaminants in the chain pond system. Water temperatures are also likely to
3 increase as a result of wider shallower stream channels and this in turn affects the
4 biological productivity of the stream leading to increased algal blooms and other
5 Eutrophication symptoms. The net result is the decreased storage capacity and
6 contamination assimilation capacity within the chain pond system.

7

8 At the same time, the reduction in groundwater recharge reduces the base flow of the
9 stream which further reduces the yield capacity of the chain pond system. Studies
10 indicate that 95% of the water supply to streams and chain ponds in rural areas is
11 from groundwater versus 84% in semi-urban areas and only 20% of the supply is
12 from groundwater in urbanized areas.¹² The CEI report prepared for PWW states
13 that “the capacity to supply water from the Pennichuck Pond system has
14 decreased as development has increased.”¹³ Because of Pennichuck Water Works
15 failure to acquire System prepared for the City of Nashua concluded that the pond
16 system is “losing safe yield due to sediment accumulation.”

17

18 A loss of capacity or safe yield is potentially more problematic than the
19 deterioration in raw water quality. Additional treatment can be provided to
20 address deteriorating raw water quality where as, a loss of capacity or safe yield
21 due to development is much more difficult if not impossible to reverse.

¹² Dry Weather Flow in Urban Streams, Center for Watershed Protection Volume 2, Number 1, Fall of 1995.

¹³ Page 2-4 Section 2.2

1 **IV. Testimony of John Joyner**

2 **Q.** Have you reviewed the response by John Joyner to Data Request Nashua 5-10?

3 **A.** Yes.

4 **Q.** What does this relate to?

5 **A.** Katherine Hersh. In 2005, a local State Representative, Casey Crane, contacted
6 the City and said she wanted to sponsor a forum on the public/ private partnership
7 that was the basis for the City's relationship with Veolia and Beck. The City,
8 contrary to Mr. Joyner's testimony, had nothing to do with this forum, although I
9 did attend. I had no contact with Mr. Johnson at Veolia about the forum, nor did
10 any other City officials or consultants. I was concerned that IMG's goal in
11 participating in the forum was to try to sell its services to the City, as it had
12 attempted to do in the past.

13 **Q. To what are you referring?**

14 **A.** Brian McCarthy. Shortly after the Aldermen voted to acquire the Pennichuck
15 assets, I was invited to attend a meeting with some people from IMG. I asked
16 Kathrine Hersh to attend the meeting with me. We had breakfast at the Crown
17 Plaza restaurant. At the meeting, Mr. Joyner and the other representatives of IMG
18 made a strong pitch to get the City's consultant work. Both Ms. Heesh and I were
19 non-committal until the end of the meeting when one of the IMG people advised
20 us that one of IMG representatives at the meeting was Hannah McCarthy's
21 brother. Ms. McCarthy at that time was a member of the Pennichuck Board of
22 Directors and is now the acting CEO. Because I thought such a relationship had
23 the potential for a conflict of interest and was unseemly, I was very upset that

1 nothing had been said earlier and told them the City would not consider using
2 IMG as a consultant.

3 **Q. Is this one of the meetings he referred to in his Response to Nashua 5-13?**

4 A. Yes.

5 **Q. Did he accurately describe what occurred?**

6 A. Brian McCarthy. My recollection of the events described by Mr. Joyner is the
7 following.

8 It was Hannah McCarthy's brother who contacted me to set up a meeting between
9 the City of Nashua and IMG. He introduced himself only as "a lobbyist in
10 Concord", and asked to have me meet with IMG. Director Hersh and I did meet
11 at the Crown Plaza, and I made it clear that we did not represent the city, but
12 rather were entertaining the discussion as a courtesy to their request.

13

14 IMG explained how they could help us to structure the funding for the acquisition,
15 and additionally how they could help us to streamline the operation. When I
16 pressed for details on this point, IMG clarified that they thought we could lay off
17 a large percentage of the staff Pennichuck uses to maintain the system.

18

19 As we were parting, it was made clear to me that the lobbyist, who attended, was
20 Hannah McCarthy's brother. I made it clear to Mr. Joyner that I thought setting
21 up a meeting involving a person with interests opposite to the city's in an
22 adversarial proceeding presented ethical concerns, and that I was not inclined to
23 entertain further discussions.

1

2 Given the apparent current relationship between the Pennichuck and IMG, I am
3 concerned that either: 1) Pennichuck has chosen to submit only partial opinions of
4 IMG on its operation; or 2) Pennichuck now believes it is overstaffed and will
5 follow a massive lay-off recommendation, which would in turn imply that
6 Pennichuck has been deliberately sustaining an inflated rate structure before the
7 PUC for years. No other conclusion is possible if we believe that IMG's opinions
8 are credible.

9 **Q. Does this conclude your testimony.**

10 **A. Yes**