

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

City of Nashua: Taking of Pennichuck Water Works, Inc.

Docket No. DW 04-048

LIMITED UPDATE TESTIMONY OF
PENNICHUCK WATER WORKS, INC., PENNICHUCK EAST UTILITY, INC.,
PITTSFIELD AQUEDUCT COMPANY, INC., PENNICHUCK WATER
SERVICE CORPORATION AND PENNICHUCK CORPORATION

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November 14, 2006

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LIMITED UPDATE TESTIMONY
OF
DONALD L. WARE

November 14, 2006

1 **I. Introduction and Overview**

2 **Q. What is the purpose of this testimony?**

3 A. As provided in the procedural schedule for this case, I have prepared this testimony as
4 part of PWW's limited financial update. It is intended to update certain information
5 relied upon in previous testimony filed by the Company. This updated information was
6 derived as a result of information obtained through discovery in this case and based on
7 fiscal year 2005 and first half 2006 data, which were not available when I originally
8 submitted testimony.

9 **Q. What subject will you be addressing in this update?**

10 A. I will update my prior testimony detailing corrections to George Sansoucy's estimates of
11 the cost for Nashua to operate the utility under its proposed arrangement with Veolia and
12 four other contractors.

13 **II. Errors in Nashua's Cost Projections**

14 **Q. Nashua has continued to claim that the contract it has negotiated with Veolia will
15 allow it to achieve significant savings for Nashua customers. What errors have you
16 found in the City's cost projections?**

17 A. Mr. Guastella has already addressed the significant impact on Mr. Sansoucy's revenue
18 requirement analysis if one simply changes Nashua's assumption that it will be able to
19 purchase the PWW assets for the extremely low price proposed by Mr. Sansoucy. Over
20 and above that, Mr. Sansoucy's estimates of the costs to operate and maintain do not
21 accurately reflect the costs that Nashua will incur to operate the Pennichuck Water Works
22 facilities. Mr. Sansoucy's errors occurred in what he projected Nashua will pay to
23 Veolia, Beck and the other third party contractors above and beyond their annual fixed

1 fees. He also underestimated some of the costs that will be incurred by the City for the
2 staffing and services it will need to provide. I outlined some of those differences in my
3 May 22 testimony in Attachment DLW-23. Since that time, as a result of more thorough
4 analysis of the proposed Nashua contracts with Veolia and Beck, I have refined my
5 analysis of Nashua's projected costs to operate Pennichuck Water Works. Attachment
6 DLW-23 Revised sets forth a comprehensive list of the adjustments I have identified that
7 need to be made to Mr. Sansoucy's assumed O&M expenses in order to reflect the true
8 cost of operating the PWW assets. The following are the reasons for the changes to the
9 adjustments to DLW-23 that are set forth on DLW-23 Revised:

- 10 a. Unplanned Maintenance: DLW-23 included an estimate of \$1,000,000 for
11 unplanned maintenance. I have reduced this estimate to \$921,000 to match the
12 unplanned maintenance cost estimate developed in my response to Nashua DR 5-
13 24.
- 14 b. Property Tax: Mr. Sansoucy estimated \$1,400,000 for property tax. In 2005,
15 PWW paid \$1,801,000 in property tax. Thus, my adjustment for property tax in
16 DLW-23 Revised includes an additional \$401,000 in costs to reflect the actual
17 cost of property taxes that will be incurred by Nashua.
- 18 c. Property Insurance: Mr. Sansoucy estimated that the City would incur \$200,000
19 in property insurance costs. In 2005, PWW paid \$303,000 in property insurance.
20 Thus, DLW-23 Revised includes an additional \$103,000 in property insurance
21 costs to reflect the actual cost of property insurance that will be incurred by
22 Nashua.
- 23 d. Purchased Water: Mr. Sansoucy estimated the cost of purchased water at
24 \$200,000. In 2005, PWW spent \$182,000 on purchased water. Thus, DLW-23
25 Revised includes a reduction of \$18,000 in purchased water costs to reflect the
26 actual cost Nashua would incur.
- 27 e. Billings/Mailings: Mr. Sansoucy estimated that the City would incur \$100,000 in
28 billing and mailing costs associated with producing water bills. In 2005, PWW
29 paid \$135,000 for billings and mailings. Thus, DLW-23 Revised includes an
30 additional \$35,000 in billing and mailing costs.
- 31 f. Sludge: Mr. Sansoucy's \$100,000 estimate for the cost to dispose of sludge from
32 the water treatment plant does not reflect the actual cost of this disposal. In 2005,
33 PWW spent \$165,000 on sludge disposal. Thus, I have reduced my adjustment to

1 Mr. Sansoucy's estimate by \$2,000 for a total adjustment of \$65,000 for these
2 costs.

- 3 g. Utilities/Elec. and Heat: Mr. Sansoucy estimated \$500,000 for utilities, electric
4 and heat. In 2005, PWW paid \$1,012,000 for utilities, electric and heat. I have
5 reduced that adjustment to \$512,000 to reflect PWW's actual expense in 2005.
- 6 h. Customer Service: Nashua is responsible for providing customer service under its
7 arrangement with Veolia. Mr. Sansoucy estimated \$0 for Nashua to provide this
8 customer service. PWW estimates that a minimum of four customer service staff
9 will be necessary for Nashua to carry out the customer service functions necessary
10 to provide the same level of service currently provided by PWW. Thus, DLW-23
11 Revised includes an additional \$192,000 to reflect the direct salary and benefit
12 costs associated with these staff.
- 13 i. Print Annual Consumer Confidence Report: Mr. Sansoucy's estimate failed to
14 include the costs associated with printing the annual consumer confidence report,
15 which is required by federal law. In 2005, PWW paid \$4,000 to print the annual
16 consumer confidence reports. Thus, DLW-23 Revised includes an additional
17 \$4,000 to reflect the cost to print the annual consumer confidence report.
- 18 j. Hydrant Checking/Painting: Mr. Sansoucy did not include any costs associated
19 with checking and painting hydrants. The Veolia base fee includes money to
20 check each hydrant only once a year. The Insurance Services Organization (ISO)
21 requires that hydrants be checked twice a year in order to get the full community
22 insurance rating for this activity. In 2005, PWW paid \$24,000 to complete two
23 inspections. Thus, DLW-23 Revised includes an additional \$12,000 to reflect the
24 cost of checking each hydrant twice in accordance with the ISO requirements.
- 25 k. Permitting/Police: Mr. Sansoucy's estimate failed to include the costs associated
26 with maintaining the necessary operating permits for each PWW water system
27 and to provide police protection for Veolia's repair and maintenance activities
28 that will take place within the public right of way. In 2005, PWW paid
29 approximately \$15,000 for permits and police protection for traffic control. Thus,
30 DLW-23 Revised includes an additional \$15,000 to reflect the cost permitting and
31 police protection that will be incurred by Nashua.
- 32 l. Maintenance of Non-Rolling Stock: Mr. Sansoucy failed to include any costs for
33 maintaining non-rolling stock such as emergency generators. In 2005, PWW paid
34 approximately \$3,000 for annual maintenance of non-rolling stock. Thus, DLW-
35 23 Revised includes an additional \$3,000 to reflect the cost of maintaining non-
36 rolling stock that will be incurred by Nashua.
- 37 m. Vehicle Repair: Under the Veolia contract, Nashua is required to provide and
38 maintain all the vehicles necessary for running the water utility, yet Mr. Sansoucy
39 did not include any of those costs in his estimate. In 2005, PWW paid
40 approximately \$113,000 for repair of its heavy equipment and rolling stock.

1 Thus, DLW-23 Revised includes an additional \$113,000 to reflect the cost of
2 repairing heavy equipment and rolling stock that will be incurred by Nashua.

3 n. IT Support: Under the Veolia contract, Nashua is required to provide and
4 maintain all the computers and connectivity necessary for running the water
5 utility, yet Mr. Sansoucy did not include any of the costs associated with
6 maintaining the operations and connectivity of the computers in his estimate.
7 Based on its experience, PWW estimates that it will take 1.5 employees to
8 maintain the operations and connectivity of the computers necessary to complete
9 the computer related tasks detailed in the draft Veolia contract with Nashua.
10 Thus, DLW-23 Revised includes an additional \$135,000 to reflect the cost of the
11 direct salaries and benefits associated with these staff.

12 o. IT License Fees: Under the Veolia contract Nashua will be responsible for annual
13 user fees for the proprietary software used to run the water utility, yet Mr.
14 Sansoucy did not include any of these costs in his estimate. In 2005, PWW paid
15 \$149,000 for annual user fees associated with the licensing of this software.
16 Thus, DLW-23 Revised includes an additional \$149,000 to reflect the costs that
17 will be incurred by Nashua for annual software licensing fees.

18 p. GIS Support: DLW-23 contained an estimate for GIS of \$200,000. This estimate
19 was an amortization of the estimated implementation cost of creating the GIS
20 system that Nashua is obligated to provide under the Veolia contract. While
21 Nashua will still be obligated to incur this \$1 million expense, I have removed the
22 amortization cost from DLW-23. Revised since this cost will be capitalized.
23 However, the data that makes a GIS system worthwhile must be maintained on a
24 constant basis. Whereas Nashua must maintain the functionality and accuracy of
25 the GIS program in its contract with Veolia, I have revised this adjustment to
26 \$90,000 to reflect the direct salary and benefits of one staff person to maintain the
27 GIS system.

28 **Q. Based on these updates, what do you project for the total annual cost for Nashua to**
29 **operate the PWW assets?**

30 A. Pennichuck projects it will cost Nashua approximately \$11,241,000 to operate and
31 maintain the PWW assets each year based on the proposed operations contracts with
32 Veolia and RW Beck. Thus, Mr. Sansoucy has underestimated the annual operating costs
33 by \$3,245,000 per year. The result is that actual operating costs are likely to be at least
34 41 percent higher than his projection.

1 **Q. Are there other factors that lead you to believe that the City's projections for its**
2 **O&M costs will be lower than PWW's are not accurate?**

3 A. Yes. Nashua wants to believe that it can expect to incur O&M expenses that are lower
4 than those incurred by PWW, but it provides no basis for such a belief. In fact, it is clear
5 that the labor rates (see DLW-24) charged by Veolia are an average of 28.9% higher than
6 those incurred by PWW. This difference in labor rates is significant because Veolia will
7 be charging Nashua for all unplanned maintenance, the majority of which consists of
8 labor expense. Moreover, the only way for Veolia to make a profit is through labor
9 charges. PWW, on the other hand, makes no profit on labor expense, and charges that
10 expense at cost only. In addition, PWW has an incentive to manage its labor expense in
11 as efficient a manner as possible because it cannot recover for increased labor expenses
12 that occur between rate cases.

13 **Q. Does this conclude your testimony?**

14 A. Yes.

NASHUA'S PROPOSED 2007 OPERATING EXPENSES WITH NEEDED ADJUSTMENTS

\$ (in Thousands)	Veolia Proposal (Jan 2006)	Adjustments based on PWW Experience		Veolia Contract Reference
Veolia Contract	\$4,996			
Veolia - Unplanned Maintenance	\$185	\$921	See DW response to Nashua DR 5-24	Article VIII, Section 8.5
Veolia - Transition Fee	\$0	\$230	(6 year amort.)	Page 17, Section 9.2
Beck - Oversight	\$315			
Beck - Transition Fee	\$0	\$38	(6 year amort.)	
Nashua - Property Taxes (Sansuocy est.)	\$1,400	\$401	(Based on 2005 expense)	
Nashua - Prop. Insurance (Sansuocy est.)	\$200	\$103		Appendix F
Nashua - Purchased Water	\$200	(\$18)	(Based on 2005 expense)	Appendix I, Purchase H2O
Nashua - Billings/Mailings	\$100	\$35	(Based on 2005 expense)	Article VIII, Section 8.17
Nashua - Sludge	\$100	\$65	(Based on 2005 expense)	Appendix I, Sludge Disposal
Nashua - Utilities-Elec and Heat	\$500	\$512	(Based on 2005 expense)	
Nashua - Customer Service	\$0	\$192	(Assume 4 staff w/DOH)	Article VIII, Section 8.17 & 8.18
Nashua - Print Annual Consumer CR	\$0	\$4	(Based on 2005 expense)	Appendix D, Section 14.0
Veolia - Hydrant Checks/painting	\$0	\$12	(Partially in 1/06 Base)	Appendix D, Section 5.b.
Nashua - Permitting/Police	\$0	\$15	(Based on 2005 expense)	Article VIII, Section 8.7
Veolia - Base Engineering Services*	\$0	\$215	(These services are supplemental in Veolia Contract)	
Veolia - Capital Program Management	\$0	\$30		
Nashua - maintenance of non-rolling stock		\$3	(Based on 2005 expense for emergency genset maintenance)	Article VIII, Section 8.15
Nashua - Vehicle Repair		\$113	(Based on 2005 expense)	Appendix H, Section 12.1
Nashua - IS support	\$0	\$135	(Based on 2005 expense, 1.5 staff w/DOH)	
Nashua - IT license fees		\$149		
Veolia - DigSafe or Alternative	\$0	\$0	In Veolia Base Fee	
Nashua - GIS support	\$0	\$90	(Assume 1 staff w/DOH)	Appendix I, GIS
Totals:	\$7,996	\$3,245		
Adjustments	\$3,245			
Adjusted Totals:	\$11,241			
*Hydraulic Modeling, Hydrant Flow tests, Watershed admin, Service and Water main reviews, pressure complaint investigations, maintain distribution mapping, gate valve data base				

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**Comparison of Fees for Construction and Unplanned Maintenance Work
Veolia rates vs. Pennichuck rates with Direct Overhead**

Description	Veolia Rates		Pennichuck		% Difference	
	Regular	Premium	Regular	Premium	Regular	Premium
Plant Maintenance Foreman -	\$ 51.21	\$ 76.81	\$ 35.25	\$ 52.88	45%	45%
Plant Maintenance Technician -	\$ 43.33	\$ 65.00	\$ 32.47	\$ 48.71	33%	33%
CWS/WQ Systems Technician -	\$ 38.95	\$ 58.43	\$ 28.89	\$ 43.34	35%	35%
I&C Technician -	\$ 50.33	\$ 75.50	\$ 42.04	\$ 63.06	20%	20%
Chief Operator -	\$ 46.03	\$ 69.04	\$ 35.25	\$ 52.88	31%	31%
Plant Operator -	\$ 38.95	\$ 58.42	\$ 28.89	\$ 43.34	35%	35%
Production Engineer -	\$ 60.98	\$ 91.47	\$ 56.97	\$ 85.46	7%	7%
Plant/Lab Manager -	\$ 60.98	\$ 91.47	\$ 50.62	\$ 75.93	20%	20%
Water Quality Specialist -	\$ 49.18	\$ 73.77	\$ 40.38	\$ 60.57	22%	22%
T&D Working Foreman -	\$ 45.96	\$ 68.94	\$ 35.25	\$ 52.88	30%	30%
T&D Field Service Technician 1 -	\$ 38.95	\$ 58.43	\$ 28.88	\$ 43.32	35%	35%
T&D Field Service Technician 2 -	\$ 43.33	\$ 65.00	\$ 32.48	\$ 48.72	33%	33%
Average Percentage Difference for Unplanned Maintenance Labor -					28.9%	28.9%

	Veolia Rate	Pennichuck Rate	% Difference
Senior Project Engineer -	\$ 125.00	\$ 64.90	93%
Project Engineer -	\$ 106.00	\$ 56.97	86%
Staff Engineer -	\$ 78.00	\$ 46.15	69%
Field Engineer -	\$ 90.00	\$ 57.47	57%
AutoCAD Technician -	\$ 62.00	\$ 36.27	71%
Senior Resident Inspector -	\$ 95.00	\$ 40.64	134%
Resident Inspector -	\$ 84.00	\$ 38.22	120%
Administrative Support -	\$ 60.00	\$ 31.04	93%
Average Percentage Difference for Engineering Services -			90.3%

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BEFORE THE
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City of Nashua: Taking of Pennichuck Water Works, Inc.

Docket No. DW 04-048

**LIMITED UPDATE TESTIMONY
OF
JOHN F. GUASTELLA**

November 14, 2006

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

2 A. Yes.

3 Q. **What is the purpose of this supplemental testimony?**

4 A. My testimony that was submitted on May 22, 2006 included a discussion of the revenue
5 and rate increase projections submitted by Mr. George E. Sansoucy, and introduced my
6 Attachments JFG-4, JFG-5 and JFG-6 showing adjustments and corrections that I made
7 to Mr. Sansoucy's exhibits. In each of those exhibits I replicated Mr. Sansoucy's
8 Exhibits GES-4, GES-5, GES-6 and GES-7 using his same methodology but with
9 adjustments and corrections. Attachment JFG-4 used what I believe is Mr. Sansoucy's
10 proposed purchase price of \$145 million, and Attachments JFG-5 and JFG-6 also used
11 Mr. Sansoucy's methodology and the same adjustments and corrections as I used in
12 Attachment JFG-4 but utilized purchase prices of \$248.4 million and 196.7 million,
13 respectively. The adjustments that I made to Mr. Sansoucy's figures reflected differences
14 in operating expenses as provided to me by Mr. Ware of PWW. Specifically, Mr. Ware
15 had recommended that operating expenses under an assumed operation of PWW's water
16 system by Nashua would be \$2,764,000 higher than Mr. Sansoucy had estimated for
17 2007. Mr. Ware has since revised his estimate to reflect operating expenses at a level that
18 is \$3,245,000 higher than Mr. Sansoucy's estimate. In order to reflect that change, I have
19 revised my Attachments JFG-4, JFG-5 and JFG-6 to reflect the higher level of operating
20 expenses.

21 Q. **Am I correct that you are not making any revisions to the other corrections that you**
22 **previously made to Mr. Sansoucy's Exhibits?**

23 A. Yes.

1 **Q. Where do you reflect the adjustment to the operating expenses that were provided**
2 **to you by the Company?**

3 A. Each of my revised Attachments JFG-4, JFG-5 and JFG-6 includes a reworking of Mr.
4 Sansoucy's GES Exhibit 4 and a column entitled "Pennichuck Adjustments" that contain
5 those revised adjustments. As before, the adjusted amounts are added to Mr. Sansoucy's
6 amounts, shown in the next column, in order to begin 2007 with the adjusted amounts.

7 **Q. Does this revision to the operating expenses significantly change your findings as**
8 **discussed in your previous testimony?**

9 A. No. As I previously testified and show in Attachment JFG-4, under Mr. Sansoucy's
10 methodology for essentially a \$145 million acquisition price, but with the adjustments
11 and corrections, the differences between the rates of PWW and Nashua are significantly
12 smaller than Mr. Sansoucy's exhibits show. Moreover, the differences in the first 10
13 years are significantly less than after 15, 20 or 30 years when the projections become less
14 and less reliable. In the current revisions, shown in Attachment JFG-4 Revised, the
15 operating expenses do not significantly change the magnitude of those differences.

16 **Q. Is the same true with respect to Attachment JFG-5 which uses a \$248.4 million**
17 **purchase price and Attachment JFG-6 which uses a \$196.7 million purchase price?**

18 A. Yes. As shown on my original Attachment JFG-5, GES Exhibit 7 - Adjusted &
19 Corrected, on the bottom line, the revenue requirement for Nashua would be higher than
20 for PWW for the first 19 years, and even after 30 years the dollar difference, a negative
21 \$33,620, line 12, would still reflect the overall need for higher revenues under Nashua's
22 ownership. As now revised, Attachment JFG-5 Revised shows that the revenue
23 requirement for Nashua would be higher than for PWW for the first 21 years (instead of

1 19 years), and even after 30 years the dollar difference, a negative \$64,574 (instead of
2 \$33,620), line 12, would still reflect the overall need for higher revenues under Nashua's
3 ownership. The magnitude of the percentage differences in each of the years is
4 insignificant.

5 **Q. Is the difference between your original Attachment JFG-6, the \$196.7 purchase**
6 **price, and your currently revised Attachment JFG-6 also insignificant?**

7 A. Yes. I previously testified with respect to my original Attachment JFG-6 that in GES
8 Exhibit 7 - Adjusted & Corrected, on the bottom line, the revenue requirement for Nashua
9 would be higher than for PWW for the first 12 years, and the cumulative dollar
10 difference, as shown on line 16, would not reverse until year 2031. Now, in Attachment
11 JFG-6 Revised, the revenue requirement for Nashua would still be higher than for PWW
12 for the first 12 years, and the cumulative dollar difference, as shown on line 16, would not
13 reverse until year 2034 instead of 2031. Again, the magnitude of the percentage
14 differences in each of the years is insignificant.

15 **Q. Are your conclusions the same as before with respect to the various analyses of the**
16 **impact on rates when considering an acquisition of PWW by Nashua?**

17 A. Yes. As I previously testified, on the basis of my own projections of the rate impact as
18 well as my review of the projections by Mr. Sansoucy, it is my opinion that the rate
19 impact is not a determinative issue with respect to whether the acquisition would be in the
20 best interest of the customers. While the projections as to whether the rates would be
21 higher or lower under an assumed acquisition of PWW by Nashua vary with an ultimate
22 market value determination, the differences go in either direction and are not so

1 significant to make a difference, especially considering the reliability of the projections

2 when extending out to longer periods of time.

3 **Q. Does that conclude your testimony at this time?**

4 **A. Yes.**

**GES Exhibit 4 - Adjusted & Corrected
Revenue Requirements - City of Nashua (2007-2036)**

John F. Guastella

JFG-4 Revised

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Line	Description (All Dollar Figures in Thousands)	Escalation Rate	Pennichuck Adjustments	Sansoucy Amounts	2007	2008	2009	2010	2011	2012	2013	2014
1	Operations and Maintenance Cost											
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$401	\$1,400	\$1,801	\$1,873	\$1,948	\$2,026	\$2,107	\$2,191	\$2,279	\$2,370
3	Oversight (Input Esc. at 3%)	3.00%		\$315	\$315	\$324	\$334	\$344	\$355	\$365	\$376	\$387
4	Beck - Transition Fee		\$38		\$38	\$38	\$38	\$38	\$38	\$38	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$103	\$200	\$303	\$315	\$328	\$341	\$354	\$369	\$383	\$399
6	Purchased Water (Input Esc. at 4%)	4.00%	-\$18	\$100	\$82	\$85	\$89	\$92	\$96	\$100	\$104	\$108
7	Customer Service (Input Esc. at 3%)	3.00%	\$192		\$192	\$198	\$204	\$210	\$216	\$223	\$229	\$236
8	Print Annual Consumer CR	3.00%	\$4		\$4	\$4	\$4	\$4	\$5	\$5	\$5	\$5
9	Billings and Mailings	3.00%	\$35	\$100	\$135	\$139	\$143	\$148	\$152	\$157	\$161	\$166
10	Sludge (Input Esc. at 3%)	3.00%	\$65	\$100	\$165	\$170	\$175	\$180	\$186	\$191	\$197	\$203
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$921	\$185	\$1,106	\$1,139	\$1,173	\$1,209	\$1,245	\$1,282	\$1,321	\$1,360
12	Veolia - Operations (Input Esc. at 3%)	3.00%		\$5,150	\$5,150	\$5,305	\$5,464	\$5,628	\$5,798	\$5,970	\$6,149	\$6,334
13	Veolia - Transition Fee		\$230		\$230	\$230	\$230	\$230	\$230	\$230	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$512	\$500	\$1,012	\$1,052	\$1,095	\$1,138	\$1,184	\$1,231	\$1,281	\$1,332
15	Operational Contingencies (Input Esc. at 4%)	4.00%		\$500	\$500	\$520	\$541	\$562	\$585	\$608	\$633	\$658
16	Veolia - Hydrant Checks & Painting	3.00%	\$12		\$12	\$12	\$13	\$13	\$14	\$14	\$14	\$15
17	Nashua - Permitting/Police	3.00%	\$15		\$15	\$15	\$16	\$16	\$17	\$17	\$18	\$18
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$215		\$215	\$221	\$228	\$235	\$242	\$249	\$257	\$264
19	Capital Program Management	3.00%	\$30		\$30	\$31	\$32	\$33	\$34	\$35	\$36	\$37
20	Maintenance of Non-Rolling Stock	3.00%	\$3		\$3	\$3	\$3	\$3	\$3	\$3	\$4	\$4
21	Vehicle Repair	3.00%	\$113		\$113	\$118	\$120	\$123	\$127	\$131	\$135	\$139
22	Training for Operation of PWW IT Resources	3.00%	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$149		\$149	\$153	\$158	\$163	\$168	\$173	\$178	\$183
24	Veolia-DigSafe or Alternatives	3.00%	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$90		\$90	\$90	\$90	\$90	\$90	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$135		\$135	\$139	\$143	\$148	\$152	\$157	\$161	\$166
27	Total O&M Costs		\$3,245	\$8,550	\$11,795	\$12,175	\$12,568	\$12,974	\$13,394	\$13,739	\$13,920	\$14,384
28												
29	Bond Reserve Requirements				\$2,912	\$2,855	\$2,799	\$3,019	\$2,957	\$2,895	\$3,157	\$3,088
30												
31	Total Annual Bond Payments				\$4,833	\$4,833	\$4,833	\$5,294	\$5,294	\$5,294	\$5,831	\$5,831
32	Total Annual Interest Payments				\$6,815	\$6,588	\$6,361	\$6,783	\$6,534	\$6,286	\$6,795	\$6,521
33	Total Revenue Requirements (A)				\$26,355	\$26,451	\$26,561	\$28,070	\$28,179	\$28,214	\$29,703	\$29,824
Note: (A)												
Total Revenue Requirements (Original GES Exh. 4 Amount)					\$23,110	\$23,111	\$23,123	\$24,532	\$24,536	\$24,551	\$26,131	\$26,138
Difference from Adjusted Revenue Requirement					(\$3,245)	(\$3,340)	(\$3,438)	(\$3,538)	(\$3,643)	(\$3,663)	(\$3,572)	(\$3,686)

John F. Guastella
 JFG-4 Revised
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**GES Exhibit 4 - Adjusted & Corrected
Revenue Requirements - City of Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2015	2016	2017	2018	2019	2020	2021	2022
1	Operations and Maintenance Cost									
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$2,465	\$2,563	\$2,666	\$2,773	\$2,883	\$2,999	\$3,119	\$3,243
3	Oversight (Input Esc. at 3%)	3.00%	\$399	\$411	\$423	\$436	\$449	\$463	\$476	\$491
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$415	\$431	\$449	\$466	\$485	\$505	\$525	\$546
6	Purchased Water (Input Esc. at 4%)	4.00%	\$112	\$117	\$121	\$126	\$131	\$137	\$142	\$148
7	Customer Service (Input Esc. at 3%)	3.00%	\$243	\$251	\$258	\$266	\$274	\$282	\$290	\$299
8	Print Annual Consumer CR	3.00%	\$5	\$5	\$5	\$6	\$6	\$6	\$6	\$6
9	Billings and Mailings	3.00%	\$171	\$176	\$181	\$187	\$192	\$198	\$204	\$210
10	Sludge (Input Esc. at 3%)	3.00%	\$209	\$215	\$222	\$228	\$235	\$242	\$250	\$257
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$1,401	\$1,443	\$1,488	\$1,531	\$1,577	\$1,624	\$1,673	\$1,723
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$6,524	\$6,720	\$6,921	\$7,129	\$7,343	\$7,563	\$7,790	\$8,024
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$1,385	\$1,440	\$1,498	\$1,558	\$1,620	\$1,685	\$1,752	\$1,823
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$884	\$712	\$740	\$770	\$801	\$833	\$866	\$900
16	Veolia - Hydrant Checks & Painting	3.00%	\$15	\$16	\$16	\$17	\$17	\$18	\$18	\$19
17	Nashua - Permitting/Police	3.00%	\$19	\$20	\$20	\$21	\$21	\$22	\$23	\$23
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$272	\$281	\$289	\$298	\$307	\$316	\$325	\$335
19	Capital Program Management	3.00%	\$38	\$39	\$40	\$42	\$43	\$44	\$45	\$47
20	Maintenance of Non-Rolling Stock	3.00%	\$4	\$4	\$4	\$4	\$4	\$4	\$5	\$5
21	Vehicle Repair	3.00%	\$143	\$147	\$152	\$156	\$161	\$166	\$171	\$176
22	Training for Operation of PWW IT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$189	\$194	\$200	\$206	\$212	\$219	\$225	\$232
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$171	\$176	\$181	\$187	\$192	\$198	\$204	\$210
27	Total O&M Costs		\$14,865	\$15,361	\$15,875	\$16,405	\$16,955	\$17,522	\$18,110	\$18,717
28										
29	Bond Reserve Requirements		\$3,020	\$3,325	\$3,250	\$3,174	\$3,531	\$3,447	\$3,362	\$3,772
30										
31	Total Annual Bond Payments		\$5,631	\$6,454	\$6,454	\$6,454	\$7,170	\$7,170	\$7,170	\$7,993
32	Total Annual Interest Payments		\$6,246	\$6,850	\$6,547	\$6,243	\$6,951	\$6,614	\$6,277	\$7,099
33	Total Revenue Requirements (A)		\$29,962	\$31,990	\$32,126	\$32,276	\$34,607	\$34,753	\$34,919	\$37,581
Note: (A)										
Total Revenue Requirements (Original GES Exh. 4 Amount)			\$26,159	\$27,931	\$27,942	\$27,968	\$29,951	\$29,963	\$29,991	\$32,215
Difference from Adjusted Revenue Requirement			(\$3,803)	(\$4,059)	(\$4,184)	(\$4,308)	(\$4,656)	(\$4,790)	(\$4,928)	(\$5,366)

**GES Exhibit 4 - Adjusted & Corrected
Revenue Requirements - City of Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2023	2024	2025	2026	2027	2028	2029	2030
1	Operations and Maintenance Cost									
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$3,373	\$3,508	\$3,648	\$3,794	\$3,946	\$4,104	\$4,268	\$4,439
3	Oversight (Input Esc. at 3%)	3.00%	\$505	\$521	\$536	\$552	\$569	\$586	\$604	\$622
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$568	\$590	\$614	\$638	\$664	\$690	\$718	\$747
6	Purchased Water (Input Esc. at 4%)	4.00%	\$154	\$160	\$166	\$173	\$180	\$187	\$194	\$202
7	Customer Service (Input Esc. at 3%)	3.00%	\$308	\$317	\$327	\$337	\$347	\$357	\$368	\$379
8	Print Annual Consumer CR	3.00%	\$6	\$7	\$7	\$7	\$7	\$7	\$8	\$8
9	Billings and Mailings	3.00%	\$217	\$223	\$230	\$237	\$244	\$251	\$259	\$266
10	Sludge (Input Esc. at 3%)	3.00%	\$265	\$273	\$281	\$289	\$298	\$307	\$316	\$326
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$1,775	\$1,828	\$1,883	\$1,939	\$1,998	\$2,057	\$2,119	\$2,183
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$8,264	\$8,512	\$8,768	\$9,031	\$9,301	\$9,581	\$9,868	\$10,164
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$1,895	\$1,971	\$2,050	\$2,132	\$2,217	\$2,306	\$2,398	\$2,494
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$936	\$974	\$1,013	\$1,053	\$1,096	\$1,139	\$1,185	\$1,232
16	Veolia - Hydrant Checks & Painting	3.00%	\$19	\$20	\$20	\$21	\$22	\$22	\$23	\$24
17	Nashua - Permitting/Police	3.00%	\$24	\$25	\$26	\$26	\$27	\$28	\$29	\$30
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$345	\$355	\$366	\$377	\$388	\$400	\$412	\$424
19	Capital Program Management	3.00%	\$48	\$50	\$51	\$53	\$54	\$56	\$57	\$59
20	Maintenance of Non-Rolling Stock	3.00%	\$5	\$5	\$5	\$5	\$5	\$6	\$6	\$6
21	Vehicle Repair	3.00%	\$181	\$187	\$192	\$198	\$204	\$210	\$217	\$223
22	Training for Operation of PWW IT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$239	\$246	\$254	\$261	\$269	\$277	\$285	\$294
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$217	\$223	\$230	\$237	\$244	\$251	\$259	\$266
27	Total O&M Costs		\$19,345	\$19,995	\$20,667	\$21,362	\$22,080	\$22,824	\$23,593	\$24,388
28										
29	Bond Reserve Requirements		\$3,678	\$3,585	\$4,057	\$3,952	\$3,847	\$4,388	\$4,270	\$4,153
30										
31	Total Annual Bond Payments		\$7,993	\$7,993	\$8,932	\$8,932	\$8,932	\$10,003	\$10,003	\$10,003
32	Total Annual Interest Payments		\$6,723	\$6,348	\$7,297	\$6,877	\$6,457	\$7,547	\$7,077	\$6,607
33	Total Revenue Requirements (A)		\$37,739	\$37,921	\$40,953	\$41,123	\$41,316	\$44,762	\$44,943	\$45,151

Note: (A)

Total Revenue Requirements (Original GES Exh. 4 Amount)	\$32,232	\$32,263	\$34,751	\$34,770	\$34,807	\$37,560	\$37,615	\$37,656
Difference from Adjusted Revenue Requirement	(\$5,507)	(\$5,658)	(\$6,202)	(\$6,353)	(\$6,509)	(\$7,172)	(\$7,328)	(\$7,495)

GES Exhibit 4 - Adjusted & Corrected Revenue Requirements - City of Nashua (2007-2036)

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2031	2032	2033	2034	2035	2036
1	Operations and Maintenance Cost		\$4,617	\$4,801	\$4,993	\$5,193	\$5,401	\$5,617
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$640	\$679	\$700	\$721	\$742	\$772
3	Oversight (Input Esc. at 3%)	3.00%	\$0	\$0	\$0	\$0	\$0	\$0
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$777	\$808	\$840	\$874	\$908	\$945
6	Purchased Water (Input Esc. at 4%)	4.00%	\$210	\$219	\$227	\$236	\$246	\$256
7	Customer Service (Input Esc. at 3%)	3.00%	\$390	\$402	\$414	\$426	\$439	\$452
8	Print Annual Consumer CR	3.00%	\$8	\$8	\$8	\$9	\$9	\$9
9	Billings and Mailings	3.00%	\$274	\$283	\$291	\$300	\$309	\$318
10	Sludge (Input Esc. at 3%)	3.00%	\$335	\$345	\$356	\$367	\$378	\$389
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$2,248	\$2,316	\$2,385	\$2,457	\$2,530	\$2,606
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$10,469	\$10,783	\$11,106	\$11,440	\$11,783	\$12,136
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$2,594	\$2,698	\$2,806	\$2,918	\$3,035	\$3,156
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$1,282	\$1,333	\$1,386	\$1,442	\$1,499	\$1,559
16	Veolia - Hydrant Checks & Painting	3.00%	\$24	\$25	\$26	\$27	\$27	\$28
17	Nashua - Permitting/Police	3.00%	\$30	\$31	\$32	\$33	\$34	\$35
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$437	\$450	\$464	\$478	\$492	\$507
19	Capital Program Management	3.00%	\$61	\$63	\$65	\$67	\$69	\$71
20	Maintenance of Non-Rolling Stock	3.00%	\$6	\$6	\$6	\$7	\$7	\$7
21	Vehicle Repair	3.00%	\$230	\$237	\$244	\$251	\$259	\$266
22	Training for Operation of PWWT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$303	\$312	\$321	\$331	\$341	\$351
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$274	\$283	\$291	\$300	\$309	\$318
27	Total O&M Costs		\$25,211	\$26,062	\$26,942	\$27,853	\$28,795	\$29,770
28								
29	Bond Reserve Requirements		\$4,769	\$4,637	\$4,505	\$5,206	\$5,058	\$4,910
30								
31	Total Annual Bond Payments		\$11,221	\$11,221	\$11,221	\$12,603	\$12,603	\$12,603
32	Total Annual Interest Payments		\$7,854	\$7,327	\$6,799	\$8,221	\$7,629	\$7,036
33	Total Revenue Requirements (A)		\$49,055	\$49,247	\$49,467	\$53,883	\$54,085	\$54,319
Note: (A)								
Total Revenue Requirements (Original GES Exh. 4 Amount)								
Difference from Adjusted Revenue Requirement								
			\$40,769	\$40,793	\$40,840	\$44,317	\$44,345	\$44,399
			(\$8,286)	(\$8,454)	(\$8,627)	(\$9,566)	(\$9,740)	(\$9,920)

GES Exhibit 5
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014
1	Purchase Bond Amount								
2	Beginning of Year Bond Balance	95,000	91,833	88,666	85,499	82,332	79,165	75,998	72,831
3	Bond Payments - 30 Years	3,167	3,167	3,167	3,167	3,167	3,167	3,167	3,167
4	Bond Interest Payment	4,465	4,316	4,167	4,018	3,870	3,721	3,572	3,423
5	End of Year Bond Balance	91,833	88,866	85,499	82,332	79,165	75,998	72,831	69,664
6	Treatment System Bond								
7	Beginning of Year Bond Balance	30,000	29,000	28,000	27,000	26,000	25,000	24,000	23,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	1,410	1,363	1,316	1,269	1,222	1,175	1,128	1,081
10	End of Year Bond Balance	29,000	28,000	27,000	26,000	25,000	24,000	23,000	22,000
11	Reconstruction Bond								
12	Beginning of Year Bond Balance	20,000	19,333	18,666	17,999	17,332	16,665	15,998	15,331
13	Bond Payments - 30 Years	667	667	667	667	667	667	667	667
14	Bond Interest Payment	940	909	877	846	815	783	752	721
15	End of Year Bond Balance	19,333	18,666	17,999	17,332	16,665	15,998	15,331	14,664
16	Repair & Replacement Bond								
17	Beginning of Year Bond Balance				20,248	19,573	18,898	18,223	17,548
18	Bond Payments - 30 Years				675	675	675	675	675
19	Bond Interest Payment				952	920	888	856	825
20	End of Year Bond Balance				19,573	18,898	18,223	17,548	16,873
21	Repair & Replacement Bond								
22	Beginning of Year Bond Balance							22,776	22,017
23	Bond Payments - 30 Years							759	759
24	Bond Interest Payment							1,070	1,035
25	End of Year Bond Balance							22,017	21,258
26	Repair & Replacement Bond								
27	Beginning of Year Bond Balance								
28	Bond Payments - 30 Years								
29	Bond Interest Payment								
30	End of Year Bond Balance								
31	Repair & Replacement Bond								
32	Beginning of Year Bond Balance								
33	Bond Payments - 30 Years								
34	Bond Interest Payment								
35	End of Year Bond Balance								
36	Repair & Replacement Bond								
37	Beginning of Year Bond Balance								
38	Bond Payments - 30 Years								
39	Bond Interest Payment								
40	End of Year Bond Balance								
41	Repair & Replacement Bond								
42	Beginning of Year Bond Balance								
43	Bond Payments - 30 Years								
44	Bond Interest Payment								
45	End of Year Bond Balance								
46	Repair & Replacement Bond								
47	Beginning of Year Bond Balance								
48	Bond Payments - 30 Years								
49	Bond Interest Payment								
50	End of Year Bond Balance								
51	Repair & Replacement Bond								
52	Beginning of Year Bond Balance								
53	Bond Payments - 30 Years								
54	Bond Interest Payment								
55	End of Year Bond Balance								
56	Repair & Replacement Bond								
57	Beginning of Year Bond Balance								
58	Bond Payments - 30 Years								
59	Bond Interest Payment								
60	End of Year Bond Balance								
61									
62	Total Beginning of Year Balance	145,000	140,166	135,332	150,746	145,237	139,728	156,995	150,727
63	Total End of Year Balance	140,166	135,332	130,498	145,237	139,728	134,219	150,727	144,459
64	Total Annual Bond Payments	4,834	4,834	4,834	5,509	5,509	5,509	6,268	6,268
65	Total Annual Interest Payments	6,815	6,588	6,361	7,085	6,826	6,567	7,379	7,084
66	Total Annual Expense	11,649	11,422	11,195	12,594	12,335	12,076	13,647	13,352

**GES Exhibit 5
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2015	2016	2017	2018	2019	2020	2021	2022
1	Purchase Bond Amount								
2	Beginning of Year Bond Balance	69,664	66,497	63,330	60,163	56,996	53,829	50,662	47,495
3	Bond Payments - 30 Years	3,167	3,167	3,167	3,167	3,167	3,167	3,167	3,167
4	Bond Interest Payment	3,274	3,125	2,977	2,828	2,679	2,530	2,381	2,232
5	End of Year Bond Balance	66,497	63,330	60,163	56,996	53,829	50,662	47,495	44,328
6	Treatment System Bond								
7	Beginning of Year Bond Balance	22,000	21,000	20,000	19,000	18,000	17,000	16,000	15,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	1,034	987	940	893	846	799	752	705
10	End of Year Bond Balance	21,000	20,000	19,000	18,000	17,000	16,000	15,000	14,000
11	Reconstruction Bond								
12	Beginning of Year Bond Balance	14,664	13,997	13,330	12,663	11,996	11,329	10,662	9,995
13	Bond Payments - 30 Years	667	667	667	667	667	667	667	667
14	Bond Interest Payment	689	658	627	595	564	532	501	470
15	End of Year Bond Balance	13,997	13,330	12,663	11,996	11,329	10,662	9,995	9,328
16	Repair & Replacement Bond								
17	Beginning of Year Bond Balance	16,873	16,198	15,523	14,848	14,173	13,498	12,823	12,148
18	Bond Payments - 30 Years	675	675	675	675	675	675	675	675
19	Bond Interest Payment	793	761	730	698	666	634	603	571
20	End of Year Bond Balance	16,198	15,523	14,848	14,173	13,498	12,823	12,148	11,473
21	Repair & Replacement Bond								
22	Beginning of Year Bond Balance	21,258	20,499	19,740	18,981	18,222	17,463	16,704	15,945
23	Bond Payments - 30 Years	759	759	759	759	759	759	759	759
24	Bond Interest Payment	999	963	928	892	856	821	785	749
25	End of Year Bond Balance	20,499	19,740	18,981	18,222	17,463	16,704	15,945	15,186
26	Repair & Replacement Bond								
27	Beginning of Year Bond Balance		25,619	24,765	23,911	23,057	22,203	21,349	20,495
28	Bond Payments - 30 Years		854	854	854	854	854	854	854
29	Bond Interest Payment		1,204	1,164	1,124	1,084	1,044	1,003	963
30	End of Year Bond Balance		24,765	23,911	23,057	22,203	21,349	20,495	19,641
31	Repair & Replacement Bond								
32	Beginning of Year Bond Balance					28,818	27,857	26,896	25,935
33	Bond Payments - 30 Years					961	961	961	961
34	Bond Interest Payment					1,354	1,309	1,264	1,219
35	End of Year Bond Balance					27,857	26,896	25,935	24,974
36	Repair & Replacement Bond								
37	Beginning of Year Bond Balance								32,417
38	Bond Payments - 30 Years								1,081
39	Bond Interest Payment								1,524
40	End of Year Bond Balance								31,336
41	Repair & Replacement Bond								
42	Beginning of Year Bond Balance								
43	Bond Payments - 30 Years								
44	Bond Interest Payment								
45	End of Year Bond Balance								
46	Repair & Replacement Bond								
47	Beginning of Year Bond Balance								
48	Bond Payments - 30 Years								
49	Bond Interest Payment								
50	End of Year Bond Balance								
51	Repair & Replacement Bond								
52	Beginning of Year Bond Balance								
53	Bond Payments - 30 Years								
54	Bond Interest Payment								
55	End of Year Bond Balance								
56	Repair & Replacement Bond								
57	Beginning of Year Bond Balance								
58	Bond Payments - 30 Years								
59	Bond Interest Payment								
60	End of Year Bond Balance								
61									
62	Total Beginning of Year Balance	144,459	163,810	156,688	149,566	171,262	163,179	155,096	179,430
63	Total End of Year Balance	138,191	156,888	149,566	142,444	163,179	155,096	147,013	170,266
64	Total Annual Bond Payments	6,268	7,122	7,122	7,122	8,083	8,083	8,083	9,164
65	Total Annual Interest Payments	6,790	7,699	7,364	7,030	8,049	7,869	7,290	8,433
66	Total Annual Expense	13,058	14,821	14,486	14,152	16,132	15,752	15,373	17,597

**GES Exhibit 5
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2023	2024	2025	2026	2027	2028	2029
1	Purchase Bond Amount							
2	Beginning of Year Bond Balance	44,328	41,161	37,994	34,827	31,660	28,493	25,326
3	Bond Payments - 30 Years	3,167	3,167	3,167	3,167	3,167	3,167	3,167
4	Bond Interest Payment	2,083	1,935	1,786	1,637	1,488	1,339	1,190
5	End of Year Bond Balance	41,161	37,994	34,827	31,660	28,493	25,326	22,159
6	Treatment System Bond							
7	Beginning of Year Bond Balance	14,000	13,000	12,000	11,000	10,000	9,000	8,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	658	611	564	517	470	423	376
10	End of Year Bond Balance	13,000	12,000	11,000	10,000	9,000	8,000	7,000
11	Reconstruction Bond							
12	Beginning of Year Bond Balance	9,328	8,661	7,994	7,327	6,660	5,993	5,326
13	Bond Payments - 30 Years	667	667	667	667	667	667	667
14	Bond Interest Payment	438	407	378	344	313	282	250
15	End of Year Bond Balance	8,661	7,994	7,327	6,660	5,993	5,326	4,659
16	Repair & Replacement Bond							
17	Beginning of Year Bond Balance	11,473	10,798	10,123	9,448	8,773	8,098	7,423
18	Bond Payments - 30 Years	675	675	675	675	675	675	675
19	Bond Interest Payment	539	508	476	444	412	381	349
20	End of Year Bond Balance	10,798	10,123	9,448	8,773	8,098	7,423	6,748
21	Repair & Replacement Bond							
22	Beginning of Year Bond Balance	15,186	14,427	13,668	12,909	12,150	11,391	10,632
23	Bond Payments - 30 Years	759	759	759	759	759	759	759
24	Bond Interest Payment	714	678	642	607	571	535	500
25	End of Year Bond Balance	14,427	13,668	12,909	12,150	11,391	10,632	9,873
26	Repair & Replacement Bond							
27	Beginning of Year Bond Balance	19,641	18,787	17,933	17,079	16,225	15,371	14,517
28	Bond Payments - 30 Years	854	854	854	854	854	854	854
29	Bond Interest Payment	923	883	843	803	763	722	682
30	End of Year Bond Balance	18,787	17,933	17,079	16,225	15,371	14,517	13,663
31	Repair & Replacement Bond							
32	Beginning of Year Bond Balance	24,974	24,013	23,052	22,091	21,130	20,169	19,208
33	Bond Payments - 30 Years	961	961	961	961	961	961	961
34	Bond Interest Payment	1,174	1,129	1,083	1,038	993	948	903
35	End of Year Bond Balance	24,013	23,052	22,091	21,130	20,169	19,208	18,247
36	Repair & Replacement Bond							
37	Beginning of Year Bond Balance	31,338	30,255	29,174	28,093	27,012	25,931	24,850
38	Bond Payments - 30 Years	1,081	1,081	1,081	1,081	1,081	1,081	1,081
39	Bond Interest Payment	1,473	1,422	1,371	1,320	1,270	1,219	1,168
40	End of Year Bond Balance	30,255	29,174	28,093	27,012	25,931	24,850	23,769
41	Repair & Replacement Bond							
42	Beginning of Year Bond Balance			36,466	35,250	34,034	32,818	31,602
43	Bond Payments - 30 Years			1,216	1,216	1,216	1,216	1,216
44	Bond Interest Payment			1,714	1,657	1,600	1,542	1,485
45	End of Year Bond Balance			35,250	34,034	32,818	31,602	30,386
46	Repair & Replacement Bond							
47	Beginning of Year Bond Balance						41,020	39,853
48	Bond Payments - 30 Years						1,367	1,367
49	Bond Interest Payment						1,928	1,864
50	End of Year Bond Balance						39,653	38,286
51	Repair & Replacement Bond							
52	Beginning of Year Bond Balance							
53	Bond Payments - 30 Years							
54	Bond Interest Payment							
55	End of Year Bond Balance							
56	Repair & Replacement Bond							
57	Beginning of Year Bond Balance							
58	Bond Payments - 30 Years							
59	Bond Interest Payment							
60	End of Year Bond Balance							
61								
62	Total Beginning of Year Balance	170,266	161,102	188,404	178,024	167,644	196,284	186,537
63	Total End of Year Balance	161,102	151,938	178,024	167,644	157,264	186,537	174,790
64	Total Annual Bond Payments	9,164	9,184	10,380	10,380	10,380	11,747	11,747
65	Total Annual Interest Payments	8,003	7,572	8,855	8,367	7,879	9,319	8,767
66	Total Annual Expense	17,167	16,736	19,235	18,747	18,259	21,066	20,514

GES Exhibit 5
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements

Line	Description (All Dollar Figures in Thousands)	2030	2031	2032	2033	2034	2035	2036
1	Purchase Bond Amount							
2	Beginning of Year Bond Balance	22,159	18,992	15,825	12,658	9,491	6,324	3,157
3	Bond Payments - 30 Years	3,167	3,167	3,167	3,167	3,167	3,167	3,167
4	Bond Interest Payment	1,041	893	744	595	446	297	148
5	End of Year Bond Balance	18,992	15,825	12,658	9,491	6,324	3,157	(10)
6	Treatment System Bond							
7	Beginning of Year Bond Balance	7,000	6,000	5,000	4,000	3,000	2,000	1,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	329	282	235	188	141	94	47
10	End of Year Bond Balance	6,000	5,000	4,000	3,000	2,000	1,000	-
11	Reconstruction Bond							
12	Beginning of Year Bond Balance	4,659	3,992	3,325	2,658	1,991	1,324	657
13	Bond Payments - 30 Years	667	667	667	667	667	667	667
14	Bond Interest Payment	219	188	156	125	94	62	31
15	End of Year Bond Balance	3,992	3,325	2,658	1,991	1,324	657	(10)
16	Repair & Replacement Bond							
17	Beginning of Year Bond Balance	6,748	6,073	5,398	4,723	4,048	3,373	2,698
18	Bond Payments - 30 Years	675	675	675	675	675	675	675
19	Bond Interest Payment	317	285	254	222	190	159	127
20	End of Year Bond Balance	6,073	5,398	4,723	4,048	3,373	2,698	2,023
21	Repair & Replacement Bond							
22	Beginning of Year Bond Balance	9,873	9,114	8,355	7,596	6,837	6,078	5,319
23	Bond Payments - 30 Years	759	759	759	759	759	759	759
24	Bond Interest Payment	464	428	393	357	321	286	250
25	End of Year Bond Balance	9,114	8,355	7,596	6,837	6,078	5,319	4,560
26	Repair & Replacement Bond							
27	Beginning of Year Bond Balance	13,663	12,809	11,955	11,101	10,247	9,393	8,539
28	Bond Payments - 30 Years	854	854	854	854	854	854	854
29	Bond Interest Payment	642	602	562	522	482	441	401
30	End of Year Bond Balance	12,809	11,955	11,101	10,247	9,393	8,539	7,685
31	Repair & Replacement Bond							
32	Beginning of Year Bond Balance	18,247	17,286	16,325	15,364	14,403	13,442	12,481
33	Bond Payments - 30 Years	961	961	961	961	961	961	961
34	Bond Interest Payment	858	812	767	722	677	632	587
35	End of Year Bond Balance	17,286	16,325	15,364	14,403	13,442	12,481	11,520
36	Repair & Replacement Bond							
37	Beginning of Year Bond Balance	23,769	22,688	21,607	20,526	19,445	18,364	17,283
38	Bond Payments - 30 Years	1,081	1,081	1,081	1,081	1,081	1,081	1,081
39	Bond Interest Payment	1,117	1,066	1,016	965	914	863	812
40	End of Year Bond Balance	22,688	21,607	20,526	19,445	18,364	17,283	16,202
41	Repair & Replacement Bond							
42	Beginning of Year Bond Balance	30,386	29,170	27,954	26,738	25,522	24,306	23,090
43	Bond Payments - 30 Years	1,216	1,216	1,216	1,216	1,216	1,216	1,216
44	Bond Interest Payment	1,428	1,371	1,314	1,257	1,200	1,142	1,085
45	End of Year Bond Balance	29,170	27,954	26,738	25,522	24,306	23,090	21,874
46	Repair & Replacement Bond							
47	Beginning of Year Bond Balance	38,286	36,919	35,552	34,185	32,818	31,451	30,084
48	Bond Payments - 30 Years	1,367	1,367	1,367	1,367	1,367	1,367	1,367
49	Bond Interest Payment	1,799	1,735	1,671	1,607	1,542	1,478	1,414
50	End of Year Bond Balance	36,919	35,552	34,185	32,818	31,451	30,084	28,717
51	Repair & Replacement Bond							
52	Beginning of Year Bond Balance		46,142	44,604	43,066	41,528	39,990	38,452
53	Bond Payments - 30 Years		1,538	1,538	1,538	1,538	1,538	1,538
54	Bond Interest Payment		2,169	2,096	2,024	1,952	1,880	1,807
55	End of Year Bond Balance		44,604	43,066	41,528	39,990	38,452	36,914
56	Repair & Replacement Bond							
57	Beginning of Year Bond Balance					51,904	50,174	48,444
58	Bond Payments - 30 Years					1,730	1,730	1,730
59	Bond Interest Payment					2,439	2,358	2,277
60	End of Year Bond Balance					50,174	48,444	46,714
61								
62	Total Beginning of Year Balance	174,790	209,185	195,900	182,615	221,234	206,219	191,204
63	Total End of Year Balance	163,043	195,900	182,615	169,330	206,219	191,204	176,189
64	Total Annual Bond Payments	11,747	13,285	13,285	13,285	15,015	15,015	15,015
65	Total Annual Interest Payments	8,215	9,832	9,207	8,583	10,398	9,692	8,987
66	Total Annual Expense	19,962	23,117	22,492	21,868	25,413	24,707	24,002

**GES Exhibit 6 - Corrected
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014
	<i>Prior Year-End Balance</i>				\$130,501			\$128,444	
	<i>Bond Issue</i>				\$20,248			\$22,776	
	<i>Reserve Reinvestment</i>				<u>-\$6,424</u>			<u>-\$6,654</u>	
1	Total Beginning of Year Balance	\$145,000	\$140,167	\$135,334	\$144,325	\$139,031	\$133,737	\$144,566	\$138,735
2	Total End of Year Balance	\$140,167	\$135,334	\$130,501	\$139,031	\$133,737	\$128,444	\$138,735	\$132,904
3	Total Annual Bond Payment	\$4,833	\$4,833	\$4,833	\$5,294	\$5,294	\$5,294	\$5,831	\$5,831
4	Total Annual Interest Payment	\$6,815	\$6,588	\$6,361	\$6,783	\$6,534	\$6,286	\$6,795	\$6,521
5	Total Annual Expense	\$11,648	\$11,421	\$11,194	\$12,077	\$11,828	\$11,580	\$12,626	\$12,352
6									
7	Bond Payment Coverage	\$14,560	\$14,276	\$13,993	\$15,096	\$14,785	\$14,475	\$15,783	\$15,440
8	Bond Reserve Required	\$2,912	\$2,855	\$2,799	\$3,019	\$2,957	\$2,895	\$3,157	\$3,088
9	Bond Reserve Retained	\$728	\$714	\$700	\$755	\$739	\$724	\$789	\$772
10	Bond Reserve Reinvested	\$2,184	\$2,141	\$2,099	\$2,264	\$2,218	\$2,171	\$2,368	\$2,316

**GES Exhibit 6 - Corrected
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2015	2016	2017	2018	2019	2020	2021	2022
	<i>Prior Year-End Balance</i>		\$127,072			\$126,382			\$126,377
	<i>Bond Issue</i>		\$25,619			\$28,818			\$32,417
	<i>Reserve Reinvestment</i>		<u>-\$6,948</u>			<u>-\$7,312</u>			<u>-\$7,754</u>
1	Total Beginning of Year Balance	\$132,904	\$145,743	\$139,289	\$132,836	\$147,888	\$140,718	\$133,547	\$151,040
2	Total End of Year Balance	\$127,072	\$139,289	\$132,836	\$126,382	\$140,718	\$133,547	\$126,377	\$143,047
3	Total Annual Bond Payment	\$5,831	\$6,454	\$6,454	\$6,454	\$7,170	\$7,170	\$7,170	\$7,993
4	Total Annual Interest Payment	\$6,246	\$6,850	\$6,547	\$6,243	\$6,951	\$6,614	\$6,277	\$7,099
5	Total Annual Expense	\$12,077	\$13,304	\$13,001	\$12,697	\$14,121	\$13,784	\$13,447	\$15,092
6									
7	Bond Payment Coverage	\$15,097	\$16,629	\$16,251	\$15,871	\$17,652	\$17,231	\$16,809	\$18,864
8	Bond Reserve Required	\$3,020	\$3,325	\$3,250	\$3,174	\$3,531	\$3,447	\$3,362	\$3,772
9	Bond Reserve Retained	\$755	\$831	\$813	\$794	\$883	\$862	\$840	\$943
10	Bond Reserve Reinvested	\$2,265	\$2,494	\$2,437	\$2,380	\$2,648	\$2,585	\$2,522	\$2,829

**GES Exhibit 6 - Corrected
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2023	2024	2025	2026	2027	2028	2029	2030
	<i>Prior Year-End Balance</i>			\$127,062			\$128,455		
	<i>Bond Issue</i>			\$36,466			\$41,020		
	<i>Reserve Reinvestment</i>			<u>-\$8,277</u>			<u>-\$8,892</u>		
1	Total Beginning of Year Balance	\$143,047	\$135,055	\$155,251	\$146,319	\$137,387	\$160,583	\$150,580	\$140,577
2	Total End of Year Balance	\$135,055	\$127,062	\$146,319	\$137,387	\$128,455	\$150,580	\$140,577	\$130,574
3	Total Annual Bond Payment	\$7,993	\$7,993	\$8,932	\$8,932	\$8,932	\$10,003	\$10,003	\$10,003
4	Total Annual Interest Payment	\$6,723	\$6,348	\$7,297	\$6,877	\$6,457	\$7,547	\$7,077	\$6,607
5	Total Annual Expense	\$14,716	\$14,341	\$16,229	\$15,809	\$15,389	\$17,550	\$17,080	\$16,610
6									
7	Bond Payment Coverage	\$18,394	\$17,926	\$20,286	\$19,761	\$19,236	\$21,938	\$21,350	\$20,763
8	Bond Reserve Required	\$3,678	\$3,585	\$4,057	\$3,952	\$3,847	\$4,388	\$4,270	\$4,153
9	Bond Reserve Retained	\$920	\$896	\$1,014	\$988	\$962	\$1,097	\$1,067	\$1,038
10	Bond Reserve Reinvested	\$2,758	\$2,689	\$3,043	\$2,964	\$2,885	\$3,291	\$3,203	\$3,115

**GES Exhibit 6 - Corrected
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2031	2032	2033	2034	2035	2036	Total
	<i>Prior Year-End Balance</i>	\$130,574			\$133,444			
	<i>Bond Issue</i>	\$46,142			\$51,904			
	<i>Reserve Reinvestment</i>	<u>-\$9,609</u>			<u>-\$10,434</u>			
1	Total Beginning of Year Balance	\$167,107	\$155,886	\$144,665	\$174,914	\$162,311	\$149,708	
2	Total End of Year Balance	\$155,886	\$144,665	\$133,444	\$162,311	\$149,708	\$137,104	
3	Total Annual Bond Payment	\$11,221	\$11,221	\$11,221	\$12,603	\$12,603	\$12,603	\$241,002
4	Total Annual Interest Payment	\$7,854	\$7,327	\$6,799	\$8,221	\$7,629	\$7,036	\$205,309
5	Total Annual Expense	\$19,075	\$18,548	\$18,020	\$20,824	\$20,232	\$19,639	\$446,311
6								
7	Bond Payment Coverage	\$23,844	\$23,185	\$22,525	\$26,030	\$25,290	\$24,549	\$557,889
8	Bond Reserve Required	\$4,769	\$4,637	\$4,505	\$5,206	\$5,058	\$4,910	\$111,578
9	Bond Reserve Retained	\$1,192	\$1,159	\$1,126	\$1,301	\$1,264	\$1,227	\$27,893
10	Bond Reserve Reinvested	\$3,577	\$3,478	\$3,379	\$3,905	\$3,794	\$3,683	\$83,685

**GES Exhibit 7 - Adjusted & Corrected
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Total Operating Revenue Required PWW	\$26,153	\$26,021	\$25,912	\$26,616	\$28,479	\$28,366	\$31,421	\$31,280	\$31,164	\$34,615
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
3	Rate Increase Required for PWW - Total Amount	\$7,553	\$7,421	\$7,312	\$10,016	\$9,879	\$9,766	\$12,821	\$12,680	\$12,564	\$16,015
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	41%	40%	39%	54%	53%	53%	69%	68%	68%	86%
5											
6	Total Revenue Requirement for City of Nashua Ownership	\$26,355	\$26,451	\$26,561	\$28,070	\$28,179	\$28,214	\$29,703	\$29,824	\$29,962	\$31,990
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
8	Rate Increase for City of Nashua Ownership - Total Amount	\$7,755	\$7,851	\$7,961	\$9,470	\$9,579	\$9,614	\$11,103	\$11,224	\$11,362	\$13,390
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	42%	42%	43%	51%	52%	52%	60%	60%	61%	72%
10											
11	Rate Comparison										
12	Difference between City and PWW - Total Amount	(\$202)	(\$430)	(\$649)	\$546	\$300	\$152	\$1,718	\$1,456	\$1,202	\$2,625
13	Difference between PWW - Percent above \$18.6 Million	41%	40%	39%	54%	53%	53%	69%	68%	68%	86%
14	Difference between City - Percent above \$18.6 Million	42%	42%	43%	51%	52%	52%	60%	60%	61%	72%
15											
16	Cumulative Difference PWW to City - Total (A)	(\$202)	(\$632)	(\$1,281)	(\$736)	(\$436)	(\$284)	\$1,434	\$2,890	\$4,093	\$6,717
Note: (A)											
	Cumulative Difference PWW to City - (Original GES Exh.7 Amount)	\$3,043	\$5,953	\$8,742	\$12,826	\$16,768	\$20,583	\$25,873	\$31,015	\$36,019	\$42,703
	Difference from Adjusted Cumulative Difference PWW to City	\$3,245	\$6,585	\$10,023	\$13,562	\$17,204	\$20,867	\$24,439	\$28,125	\$31,926	\$35,986
	Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)	-0.8%	-1.6%	-2.4%	1.9%	1.1%	0.6%	6.8%	4.9%	4.0%	8.2%

**GES Exhibit 7 - Adjusted & Corrected
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
1	Total Operating Revenue Required PWW	\$34,464	\$34,344	\$38,237	\$38,080	\$37,951	\$42,344	\$42,177	\$39,378	\$44,721	\$44,834
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
3	Rate Increase Required for PWW - Total Amount	\$15,864	\$15,744	\$19,637	\$19,480	\$19,351	\$23,744	\$23,577	\$20,778	\$26,121	\$26,234
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	85%	85%	106%	105%	104%	128%	127%	112%	140%	141%
5											
6	Total Revenue Requirement for City of Nashua Ownership	\$32,126	\$32,276	\$34,607	\$34,753	\$34,919	\$37,581	\$37,739	\$37,921	\$40,953	\$41,123
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
8	Rate Increase for City of Nashua Ownership - Total Amount	\$13,526	\$13,676	\$16,007	\$16,153	\$16,319	\$18,981	\$19,139	\$19,321	\$22,353	\$22,523
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	73%	74%	86%	87%	88%	102%	103%	104%	120%	121%
10											
11	Rate Comparison										
12	Difference between City and PWW - Total Amount	\$2,338	\$2,068	\$3,630	\$3,327	\$3,032	\$4,763	\$4,438	\$1,457	\$3,768	\$3,711
13	Difference between PWW - Percent above \$18.6 Million	85%	85%	106%	105%	104%	128%	127%	112%	140%	141%
14	Difference between City - Percent above \$18.6 Million	73%	74%	86%	87%	88%	102%	103%	104%	120%	121%
15											
16	Cumulative Difference PWW to City - Total (A)	\$9,056	\$11,123	\$14,754	\$18,080	\$21,113	\$25,876	\$30,314	\$31,771	\$35,539	\$39,251
Note: (A)											
	Cumulative Difference PWW to City - (Original GES Exh.7 Amount)	\$49,225	\$55,601	\$63,887	\$72,005	\$79,965	\$90,093	\$100,038	\$107,152	\$117,122	\$127,185
	Difference from Adjusted Cumulative Difference PWW to City	\$40,169	\$44,478	\$49,133	\$53,925	\$58,852	\$64,217	\$69,724	\$75,381	\$81,583	\$87,934
	Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)	7.3%	6.4%	10.5%	9.6%	8.7%	12.7%	11.8%	3.8%	9.2%	9.0%

**GES Exhibit 7 - Adjusted & Corrected
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
1	Total Operating Revenue Required PWW	\$44,987	\$50,939	\$51,024	\$51,156	\$57,798	\$57,854	\$57,961	\$65,382	\$65,408	\$65,491	\$1,256,557
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$558,000
3	Rate Increase Required for PWW - Total Amount	\$26,387	\$32,339	\$32,424	\$32,556	\$39,198	\$39,254	\$39,361	\$46,782	\$46,808	\$46,891	\$698,557
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	142%	174%	174%	175%	211%	211%	212%	252%	252%	252%	125%
5												
6	Total Revenue Requirement for City of Nashua Ownership	\$41,316	\$44,762	\$44,943	\$45,151	\$49,055	\$49,247	\$49,467	\$53,883	\$54,085	\$54,319	\$1,135,535
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$558,000
8	Rate Increase for City of Nashua Ownership - Total Amount	\$22,716	\$26,162	\$26,343	\$26,551	\$30,455	\$30,647	\$30,867	\$35,283	\$35,485	\$35,719	\$577,535
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	122%	141%	142%	143%	164%	165%	166%	190%	191%	192%	104%
10												
11	Rate Comparison											
12	Difference between City and PWW - Total Amount	\$3,671	\$6,177	\$6,081	\$6,005	\$8,743	\$8,607	\$8,494	\$11,499	\$11,323	\$11,172	\$121,022
13	Difference between PWW - Percent above \$18.6 Million	142%	174%	174%	175%	211%	211%	212%	252%	252%	252%	125%
14	Difference between City - Percent above \$18.6 Million	122%	141%	142%	143%	164%	165%	166%	190%	191%	192%	104%
15												
16	Cumulative Difference PWW to City - Total (A)	\$42,922	\$49,099	\$55,180	\$61,185	\$69,928	\$78,535	\$87,029	\$98,527	\$109,850	\$121,022	

Note: (A)
Cumulative Difference PWW to City - (Original GES Exh.7 Amount)
Difference from Adjusted Cumulative Difference PWW to City
Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)

**GES Exhibit 4 - Adjusted & Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua (2007-2036)**

John F. Guastella
JFG-5 Revised
DW 04-048 - 13 pages

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	Pennichuck Adjustments	Sansoucy Amounts	2007	2008	2009	2010	2011	2012	2013	2014
1	Operations and Maintenance Cost											
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$401	\$1,400	\$1,801	\$1,873	\$1,948	\$2,026	\$2,107	\$2,191	\$2,279	\$2,370
3	Oversight (Input Esc. at 3%)	3.00%		\$315	\$315	\$324	\$334	\$344	\$355	\$365	\$376	\$387
4	Beck - Transition Fee		\$38		\$38	\$38	\$38	\$38	\$38	\$38	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$103	\$200	\$303	\$315	\$328	\$341	\$354	\$369	\$383	\$399
6	Purchased Water (Input Esc. at 4%)	4.00%	-\$18	\$100	\$82	\$85	\$89	\$92	\$96	\$100	\$104	\$108
7	Customer Service (Input Esc. at 3%)	3.00%	\$192		\$192	\$198	\$204	\$210	\$216	\$223	\$229	\$236
8	Print Annual Consumer CR	3.00%	\$4		\$4	\$4	\$4	\$4	\$5	\$5	\$5	\$5
9	Billings and Mailings	3.00%	\$35	\$100	\$135	\$139	\$143	\$148	\$152	\$157	\$161	\$166
10	Sludge (Input Esc. at 3%)	3.00%	\$65	\$100	\$165	\$170	\$175	\$180	\$186	\$191	\$197	\$203
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$921	\$185	\$1,106	\$1,139	\$1,173	\$1,209	\$1,245	\$1,282	\$1,321	\$1,360
12	Veolia - Operations (Input Esc. at 3%)	3.00%		\$5,150	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796	\$5,970	\$6,149	\$6,334
13	Veolia - Transition Fee		\$230		\$230	\$230	\$230	\$230	\$230	\$230	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$512	\$500	\$1,012	\$1,052	\$1,095	\$1,138	\$1,184	\$1,231	\$1,281	\$1,332
15	Operational Contingencies (Input Esc. at 4%)	4.00%		\$500	\$500	\$520	\$541	\$562	\$585	\$608	\$633	\$658
16	Veolia - Hydrant Checks & Painting	3.00%	\$12		\$12	\$12	\$13	\$13	\$14	\$14	\$14	\$15
17	Nashua - Permitting/Police	3.00%	\$15		\$15	\$15	\$16	\$16	\$17	\$17	\$18	\$18
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$215		\$215	\$221	\$228	\$235	\$242	\$249	\$257	\$264
19	Capital Program Management	3.00%	\$30		\$30	\$31	\$32	\$33	\$34	\$35	\$36	\$37
20	Maintenance of Non-Rolling Stock	3.00%	\$3		\$3	\$3	\$3	\$3	\$3	\$3	\$4	\$4
21	Vehicle Repair	3.00%	\$113		\$113	\$116	\$120	\$123	\$127	\$131	\$135	\$139
22	Training for Operation of PWW IT Resources	3.00%	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$149		\$149	\$153	\$158	\$163	\$168	\$173	\$178	\$183
24	Veolia-DigSafe or Alternatives	3.00%	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$90		\$90	\$90	\$90	\$90	\$90	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$135		\$135	\$139	\$143	\$148	\$152	\$157	\$161	\$166
27	Total O&M Costs		\$3,245	\$8,550	\$11,795	\$12,175	\$12,568	\$12,974	\$13,394	\$13,739	\$13,920	\$14,384
28												
29	Bond Reserve Requirements				\$4,989	\$4,892	\$4,794	\$4,883	\$4,782	\$4,681	\$4,821	\$4,715
30												
31	Total Annual Bond Payments				\$8,280	\$8,280	\$8,280	\$8,588	\$8,588	\$8,588	\$8,989	\$8,989
32	Total Annual Interest Payments				\$11,875	\$11,286	\$10,896	\$10,942	\$10,538	\$10,134	\$10,296	\$9,873
33	Total Revenue Requirements (A)				\$36,739	\$36,633	\$36,538	\$37,387	\$37,302	\$37,142	\$38,026	\$37,961

Note: (A)

Total Revenue Requirements (Original GES Exh. 4 Amount)
Difference from Adjusted Revenue Requirement

\$23,110 \$23,111 \$23,123 \$24,532 \$24,536 \$24,551 \$26,131 \$26,138
(\$13,829) (\$13,522) (\$13,415) (\$12,855) (\$12,766) (\$12,591) (\$11,895) (\$11,823)

**GES Exhibit 4 - Adjusted & Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2015	2016	2017	2018	2019	2020	2021	2022
1	Operations and Maintenance Cost									
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$2,465	\$2,563	\$2,666	\$2,773	\$2,883	\$2,999	\$3,119	\$3,243
3	Oversight (Input Esc. at 3%)	3.00%	\$399	\$411	\$423	\$436	\$449	\$463	\$476	\$491
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$415	\$431	\$449	\$466	\$485	\$505	\$525	\$546
6	Purchased Water (Input Esc. at 4%)	4.00%	\$112	\$117	\$121	\$126	\$131	\$137	\$142	\$148
7	Customer Service (Input Esc. at 3%)	3.00%	\$243	\$251	\$258	\$266	\$274	\$282	\$290	\$299
8	Print Annual Consumer CR	3.00%	\$5	\$5	\$5	\$6	\$6	\$6	\$6	\$6
9	Billings and Mailings	3.00%	\$171	\$176	\$181	\$187	\$192	\$198	\$204	\$210
10	Sludge (Input Esc. at 3%)	3.00%	\$209	\$215	\$222	\$228	\$235	\$242	\$250	\$257
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$1,401	\$1,443	\$1,486	\$1,531	\$1,577	\$1,624	\$1,673	\$1,723
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$6,524	\$6,720	\$6,921	\$7,129	\$7,343	\$7,563	\$7,790	\$8,024
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$1,385	\$1,440	\$1,498	\$1,558	\$1,620	\$1,685	\$1,752	\$1,823
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$884	\$712	\$740	\$770	\$801	\$833	\$866	\$900
16	Veolia - Hydrant Checks & Painting	3.00%	\$15	\$16	\$16	\$17	\$17	\$18	\$18	\$19
17	Nashua - Permitting/Police	3.00%	\$19	\$20	\$20	\$21	\$21	\$22	\$23	\$23
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$272	\$281	\$289	\$298	\$307	\$316	\$325	\$335
19	Capital Program Management	3.00%	\$38	\$39	\$40	\$42	\$43	\$44	\$45	\$47
20	Maintenance of Non-Rolling Stock	3.00%	\$4	\$4	\$4	\$4	\$4	\$4	\$5	\$5
21	Vehicle Repair	3.00%	\$143	\$147	\$152	\$156	\$161	\$166	\$171	\$176
22	Training for Operation of PWW IT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$189	\$194	\$200	\$206	\$212	\$219	\$225	\$232
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$171	\$176	\$181	\$187	\$192	\$198	\$204	\$210
27	Total O&M Costs		\$14,865	\$15,361	\$15,875	\$16,405	\$16,955	\$17,522	\$18,110	\$18,717
28										
29	Bond Reserve Requirements		\$4,610	\$4,806	\$4,694	\$4,583	\$4,838	\$4,720	\$4,601	\$4,920
30										
31	Total Annual Bond Payments		\$8,989	\$9,489	\$9,489	\$9,489	\$10,097	\$10,097	\$10,097	\$10,824
32	Total Annual Interest Payments		\$9,451	\$9,734	\$9,288	\$8,842	\$9,254	\$8,779	\$8,305	\$8,854
33	Total Revenue Requirements (A)		\$37,915	\$39,390	\$39,346	\$39,319	\$41,144	\$41,118	\$41,113	\$43,315

Note: (A)

Total Revenue Requirements (Original GES Exh. 4 Amount)	\$26,159	\$27,931	\$27,942	\$27,968	\$29,951	\$29,963	\$29,991	\$32,215
Difference from Adjusted Revenue Requirement	(\$11,756)	(\$11,459)	(\$11,404)	(\$11,351)	(\$11,193)	(\$11,155)	(\$11,122)	(\$11,100)

**GES Exhibit 4 - Adjusted & Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2023	2024	2025	2026	2027	2028	2029	2030
1	Operations and Maintenance Cost									
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$3,373	\$3,508	\$3,848	\$3,794	\$3,946	\$4,104	\$4,268	\$4,439
3	Oversight (Input Esc. at 3%)	3.00%	\$505	\$521	\$536	\$552	\$569	\$586	\$604	\$622
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$568	\$590	\$614	\$638	\$664	\$690	\$718	\$747
6	Purchased Water (Input Esc. at 4%)	4.00%	\$154	\$160	\$166	\$173	\$180	\$187	\$194	\$202
7	Customer Service (Input Esc. at 3%)	3.00%	\$308	\$317	\$327	\$337	\$347	\$357	\$368	\$379
8	Print Annual Consumer CR	3.00%	\$6	\$7	\$7	\$7	\$7	\$7	\$8	\$8
9	Billings and Mailings	3.00%	\$217	\$223	\$230	\$237	\$244	\$251	\$259	\$266
10	Sludge (Input Esc. at 3%)	3.00%	\$265	\$273	\$281	\$289	\$298	\$307	\$316	\$326
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$1,775	\$1,828	\$1,883	\$1,939	\$1,998	\$2,057	\$2,119	\$2,183
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$8,284	\$8,512	\$8,768	\$9,031	\$9,301	\$9,581	\$9,868	\$10,164
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$1,895	\$1,971	\$2,050	\$2,132	\$2,217	\$2,306	\$2,398	\$2,494
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$936	\$974	\$1,013	\$1,053	\$1,096	\$1,139	\$1,185	\$1,232
16	Veolia - Hydrant Checks & Painting	3.00%	\$19	\$20	\$20	\$21	\$22	\$22	\$23	\$24
17	Nashua - Permitting/Police	3.00%	\$24	\$25	\$26	\$26	\$27	\$28	\$29	\$30
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$345	\$355	\$366	\$377	\$388	\$400	\$412	\$424
19	Capital Program Management	3.00%	\$48	\$50	\$51	\$53	\$54	\$56	\$57	\$59
20	Maintenance of Non-Rolling Stock	3.00%	\$5	\$5	\$5	\$5	\$5	\$6	\$6	\$6
21	Vehicle Repair	3.00%	\$181	\$187	\$192	\$198	\$204	\$210	\$217	\$223
22	Training for Operation of PWW IT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$239	\$246	\$254	\$261	\$269	\$277	\$285	\$294
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$217	\$223	\$230	\$237	\$244	\$251	\$259	\$266
27	Total O&M Costs		\$19,345	\$19,995	\$20,667	\$21,362	\$22,080	\$22,824	\$23,593	\$24,388
28										
29	Bond Reserve Requirements		\$4,793	\$4,665	\$5,054	\$4,917	\$4,779	\$5,243	\$5,095	\$4,946
30										
31	Total Annual Bond Payments		\$10,824	\$10,824	\$11,680	\$11,680	\$11,680	\$12,679	\$12,679	\$12,679
32	Total Annual Interest Payments		\$8,346	\$7,837	\$8,535	\$7,986	\$7,437	\$8,298	\$7,701	\$7,105
33	Total Revenue Requirements (A)		\$43,308	\$43,321	\$45,936	\$45,945	\$45,976	\$49,042	\$49,068	\$49,118

Note: (A)

Total Revenue Requirements (Original GES Exh. 4 Amount)	\$32,232	\$32,263	\$34,751	\$34,770	\$34,807	\$37,590	\$37,615	\$37,656
Difference from Adjusted Revenue Requirement	(\$11,076)	(\$11,058)	(\$11,185)	(\$11,175)	(\$11,169)	(\$11,452)	(\$11,453)	(\$11,462)

**GES Exhibit 4 - Adjusted & Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2031	2032	2033	2034	2035	2036
1	Operations and Maintenance Cost							
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$4,617	\$4,801	\$4,993	\$5,193	\$5,401	\$5,617
3	Oversight (Input Esc. at 3%)	3.00%	\$640	\$660	\$679	\$700	\$721	\$742
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$777	\$808	\$840	\$874	\$909	\$945
6	Purchased Water (Input Esc. at 4%)	4.00%	\$210	\$219	\$227	\$236	\$246	\$256
7	Customer Service (Input Esc. at 3%)	3.00%	\$390	\$402	\$414	\$426	\$439	\$452
8	Print Annual Consumer CR	3.00%	\$8	\$8	\$9	\$9	\$9	\$9
9	Billings and Mailings	3.00%	\$274	\$283	\$291	\$300	\$309	\$318
10	Sludge (Input Esc. at 3%)	3.00%	\$335	\$345	\$356	\$367	\$378	\$389
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$2,248	\$2,316	\$2,385	\$2,457	\$2,530	\$2,606
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$10,469	\$10,783	\$11,106	\$11,440	\$11,783	\$12,136
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$2,594	\$2,698	\$2,806	\$2,918	\$3,035	\$3,156
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$1,282	\$1,333	\$1,386	\$1,442	\$1,499	\$1,559
16	Veolia - Hydrant Checks & Painting	3.00%	\$24	\$25	\$26	\$27	\$27	\$28
17	Nashua - Permitting/Police	3.00%	\$30	\$31	\$32	\$33	\$34	\$35
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$437	\$450	\$464	\$478	\$492	\$507
19	Capital Program Management	3.00%	\$61	\$63	\$65	\$67	\$69	\$71
20	Maintenance of Non-Rolling Stock	3.00%	\$6	\$6	\$6	\$7	\$7	\$7
21	Vehicle Repair	3.00%	\$230	\$237	\$244	\$251	\$259	\$266
22	Training for Operation of PWW IT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$303	\$312	\$321	\$331	\$341	\$351
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$274	\$283	\$291	\$300	\$309	\$318
27	Total O&M Costs		\$25,211	\$26,062	\$26,942	\$27,853	\$28,795	\$29,770
28								
29	Bond Reserve Requirements		\$5,493	\$5,330	\$5,188	\$5,807	\$5,629	\$5,451
30								
31	Total Annual Bond Payments		\$13,835	\$13,835	\$13,835	\$15,165	\$15,165	\$15,165
32	Total Annual Interest Payments		\$8,139	\$7,488	\$6,838	\$8,064	\$7,351	\$6,638
33	Total Revenue Requirements (A)		\$52,678	\$52,715	\$52,783	\$56,889	\$56,940	\$57,024

Note: (A)

Total Revenue Requirements (Original GES Exh. 4 Amount)	\$40,769	\$40,793	\$40,840	\$44,317	\$44,345	\$44,399
Difference from Adjusted Revenue Requirement	(\$11,909)	(\$11,922)	(\$11,943)	(\$12,572)	(\$12,595)	(\$12,625)

GES Exhibit 5
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	Purchase Bond Amount (A)									
2	Beginning of Year Bond Balance	198,400	191,787	185,174	178,561	171,948	165,335	158,722	152,109	145,496
3	Bond Payments - 30 Years	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613
4	Bond Interest Payment	9,325	9,014	8,703	8,392	8,082	7,771	7,460	7,149	6,838
5	End of Year Bond Balance	191,787	185,174	178,561	171,948	165,335	158,722	152,109	145,496	138,883
6	Treatment System Bond									
7	Beginning of Year Bond Balance	30,000	29,000	28,000	27,000	26,000	25,000	24,000	23,000	22,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	1,410	1,363	1,316	1,269	1,222	1,175	1,128	1,081	1,034
10	End of Year Bond Balance	29,000	28,000	27,000	26,000	25,000	24,000	23,000	22,000	21,000
11	Reconstruction Bond									
12	Beginning of Year Bond Balance	20,000	19,333	18,666	17,999	17,332	16,665	15,998	15,331	14,664
13	Bond Payments - 30 Years	667	667	667	667	667	667	667	667	667
14	Bond Interest Payment	940	909	877	846	815	783	752	721	689
15	End of Year Bond Balance	19,333	18,666	17,999	17,332	16,665	15,998	15,331	14,664	13,997
16	Repair & Replacement Bond									
17	Beginning of Year Bond Balance				20,248	19,573	18,898	18,223	17,548	16,873
18	Bond Payments - 30 Years				675	675	675	675	675	675
19	Bond Interest Payment				952	920	888	856	825	793
20	End of Year Bond Balance				19,573	18,898	18,223	17,548	16,873	16,198
21	Repair & Replacement Bond									
22	Beginning of Year Bond Balance							22,776	22,017	21,258
23	Bond Payments - 30 Years							759	759	759
24	Bond Interest Payment							1,070	1,035	999
25	End of Year Bond Balance							22,017	21,258	20,499
26	Repair & Replacement Bond									
27	Beginning of Year Bond Balance									
28	Bond Payments - 30 Years									
29	Bond Interest Payment									
30	End of Year Bond Balance									
31	Repair & Replacement Bond									
32	Beginning of Year Bond Balance									
33	Bond Payments - 30 Years									
34	Bond Interest Payment									
35	End of Year Bond Balance									
36	Repair & Replacement Bond									
37	Beginning of Year Bond Balance									
38	Bond Payments - 30 Years									
39	Bond Interest Payment									
40	End of Year Bond Balance									
41	Repair & Replacement Bond									
42	Beginning of Year Bond Balance									
43	Bond Payments - 30 Years									
44	Bond Interest Payment									
45	End of Year Bond Balance									
46	Repair & Replacement Bond									
47	Beginning of Year Bond Balance									
48	Bond Payments - 30 Years									
49	Bond Interest Payment									
50	End of Year Bond Balance									
51	Repair & Replacement Bond									
52	Beginning of Year Bond Balance									
53	Bond Payments - 30 Years									
54	Bond Interest Payment									
55	End of Year Bond Balance									
56	Repair & Replacement Bond									
57	Beginning of Year Bond Balance									
58	Bond Payments - 30 Years									
59	Bond Interest Payment									
60	End of Year Bond Balance									
61										
62	Total Beginning of Year Balance	248,400	240,120	231,840	243,808	234,853	225,898	239,719	230,005	220,291
63	Total End of Year Balance	240,120	231,840	223,560	234,853	225,898	216,943	230,005	220,291	210,577
64	Total Annual Bond Payments	8,280	8,280	8,280	8,955	8,955	8,955	9,714	9,714	9,714
65	Total Annual Interest Payments	11,675	11,286	10,896	11,459	11,038	10,617	11,267	10,810	10,354
66	Total Annual Expense	19,955	19,566	19,176	20,414	19,993	19,572	20,981	20,524	20,068
(A)	Purchase Proposals:									
	Purchase Price	Nashua's		PWW's						
	Amount to Buy-out BFA Bond for Capital Reconstruction (CWIP)	\$95,000		\$198,400						
		\$50,000		\$50,000						
		\$145,000		\$248,400						

GES Exhibit 5
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements

Line	Description (All Dollar Figures in Thousands)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1	Purchase Bond Amount (A)										
2	Beginning of Year Bond Balance	138,883	132,270	125,657	119,044	112,431	105,818	99,205	92,592	85,979	79,366
3	Bond Payments - 30 Years	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613
4	Bond Interest Payment	6,528	6,217	5,906	5,595	5,284	4,973	4,663	4,352	4,041	3,730
5	End of Year Bond Balance	132,270	125,657	119,044	112,431	105,818	99,205	92,592	85,979	79,366	72,753
6	Treatment System Bond										
7	Beginning of Year Bond Balance	21,000	20,000	19,000	18,000	17,000	16,000	15,000	14,000	13,000	12,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	987	940	893	846	799	752	705	658	611	564
10	End of Year Bond Balance	20,000	19,000	18,000	17,000	16,000	15,000	14,000	13,000	12,000	11,000
11	Reconstruction Bond										
12	Beginning of Year Bond Balance	13,997	13,330	12,663	11,996	11,329	10,662	9,995	9,328	8,661	7,994
13	Bond Payments - 30 Years	667	667	667	667	667	667	667	667	667	667
14	Bond Interest Payment	658	627	595	564	532	501	470	438	407	376
15	End of Year Bond Balance	13,330	12,663	11,996	11,329	10,662	9,995	9,328	8,661	7,994	7,327
16	Repair & Replacement Bond										
17	Beginning of Year Bond Balance	16,198	15,523	14,848	14,173	13,498	12,823	12,148	11,473	10,798	10,123
18	Bond Payments - 30 Years	675	675	675	675	675	675	675	675	675	675
19	Bond Interest Payment	761	730	698	666	634	603	571	539	508	476
20	End of Year Bond Balance	15,523	14,848	14,173	13,498	12,823	12,148	11,473	10,798	10,123	9,448
21	Repair & Replacement Bond										
22	Beginning of Year Bond Balance	20,499	19,740	18,981	18,222	17,463	16,704	15,945	15,186	14,427	13,668
23	Bond Payments - 30 Years	759	759	759	759	759	759	759	759	759	759
24	Bond Interest Payment	963	928	892	856	821	785	749	714	678	642
25	End of Year Bond Balance	19,740	18,981	18,222	17,463	16,704	15,945	15,186	14,427	13,668	12,909
26	Repair & Replacement Bond										
27	Beginning of Year Bond Balance	25,619	24,765	23,911	23,057	22,203	21,349	20,495	19,641	18,787	17,933
28	Bond Payments - 30 Years	854	854	854	854	854	854	854	854	854	854
29	Bond Interest Payment	1,204	1,164	1,124	1,084	1,044	1,003	963	923	883	843
30	End of Year Bond Balance	24,765	23,911	23,057	22,203	21,349	20,495	19,641	18,787	17,933	17,079
31	Repair & Replacement Bond										
32	Beginning of Year Bond Balance				28,818	27,857	26,896	25,935	24,974	24,013	23,052
33	Bond Payments - 30 Years				961	961	961	961	961	961	961
34	Bond Interest Payment				1,354	1,309	1,264	1,219	1,174	1,129	1,083
35	End of Year Bond Balance				27,857	26,896	25,935	24,974	24,013	23,052	22,091
36	Repair & Replacement Bond										
37	Beginning of Year Bond Balance							32,417	31,336	30,255	29,174
38	Bond Payments - 30 Years							1,081	1,081	1,081	1,081
39	Bond Interest Payment							1,524	1,473	1,422	1,371
40	End of Year Bond Balance							31,336	30,255	29,174	28,093
41	Repair & Replacement Bond										
42	Beginning of Year Bond Balance										36,466
43	Bond Payments - 30 Years										1,216
44	Bond Interest Payment										1,714
45	End of Year Bond Balance										35,250
46	Repair & Replacement Bond										
47	Beginning of Year Bond Balance										
48	Bond Payments - 30 Years										
49	Bond Interest Payment										
50	End of Year Bond Balance										
51	Repair & Replacement Bond										
52	Beginning of Year Bond Balance										
53	Bond Payments - 30 Years										
54	Bond Interest Payment										
55	End of Year Bond Balance										
56	Repair & Replacement Bond										
57	Beginning of Year Bond Balance										
58	Bond Payments - 30 Years										
59	Bond Interest Payment										
60	End of Year Bond Balance										
61											
62	Total Beginning of Year Balance	236,196	225,628	215,060	233,310	221,781	210,252	231,140	218,530	205,920	229,776
63	Total End of Year Balance	225,628	215,060	204,492	221,781	210,252	198,723	218,530	205,920	193,310	215,950
64	Total Annual Bond Payments	10,568	10,568	10,568	11,529	11,529	11,529	12,610	12,610	12,610	13,826
65	Total Annual Interest Payments	11,101	10,605	10,108	10,966	10,424	9,882	10,864	10,271	9,678	10,799
66	Total Annual Expense	21,669	21,173	20,676	22,495	21,953	21,411	23,474	22,881	22,288	24,625

(A) Purchase Proposals:
Purchase Price
Amount to Buy-out BFA Bond for
Capital Recostruction (CWIP)

GES Exhibit 5
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements

Line	Description (All Dollar Figures in Thousands)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1	Purchase Bond Amount (A)											
2	Beginning of Year Bond Balance	72,753	66,140	59,527	52,914	46,301	39,688	33,075	26,462	19,849	13,236	6,623
3	Bond Payments - 30 Years	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613
4	Bond Interest Payment	3,419	3,109	2,798	2,487	2,176	1,865	1,555	1,244	933	622	311
5	End of Year Bond Balance	66,140	59,527	52,914	46,301	39,688	33,075	26,462	19,849	13,236	6,623	10
6	Treatment System Bond											
7	Beginning of Year Bond Balance	11,000	10,000	9,000	8,000	7,000	6,000	5,000	4,000	3,000	2,000	1,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	517	470	423	376	329	282	235	188	141	94	47
10	End of Year Bond Balance	10,000	9,000	8,000	7,000	6,000	5,000	4,000	3,000	2,000	1,000	-
11	Reconstruction Bond											
12	Beginning of Year Bond Balance	7,327	6,660	5,993	5,326	4,659	3,992	3,325	2,658	1,991	1,324	657
13	Bond Payments - 30 Years	667	667	667	667	667	667	667	667	667	667	667
14	Bond Interest Payment	344	313	282	250	219	188	156	125	94	62	31
15	End of Year Bond Balance	6,660	5,993	5,326	4,659	3,992	3,325	2,658	1,991	1,324	657	(10)
16	Repair & Replacement Bond											
17	Beginning of Year Bond Balance	9,448	8,773	8,098	7,423	6,748	6,073	5,398	4,723	4,048	3,373	2,698
18	Bond Payments - 30 Years	675	675	675	675	675	675	675	675	675	675	675
19	Bond Interest Payment	444	412	381	349	317	285	254	222	190	159	127
20	End of Year Bond Balance	8,773	8,098	7,423	6,748	6,073	5,398	4,723	4,048	3,373	2,698	2,023
21	Repair & Replacement Bond											
22	Beginning of Year Bond Balance	12,909	12,150	11,391	10,632	9,873	9,114	8,355	7,596	6,837	6,078	5,319
23	Bond Payments - 30 Years	759	759	759	759	759	759	759	759	759	759	759
24	Bond Interest Payment	607	571	535	500	464	428	393	357	321	286	250
25	End of Year Bond Balance	12,150	11,391	10,632	9,873	9,114	8,355	7,596	6,837	6,078	5,319	4,560
26	Repair & Replacement Bond											
27	Beginning of Year Bond Balance	17,079	16,225	15,371	14,517	13,663	12,809	11,955	11,101	10,247	9,393	8,539
28	Bond Payments - 30 Years	854	854	854	854	854	854	854	854	854	854	854
29	Bond Interest Payment	803	763	722	682	642	602	562	522	482	441	401
30	End of Year Bond Balance	16,225	15,371	14,517	13,663	12,809	11,955	11,101	10,247	9,393	8,539	7,685
31	Repair & Replacement Bond											
32	Beginning of Year Bond Balance	22,091	21,130	20,169	19,208	18,247	17,286	16,325	15,364	14,403	13,442	12,481
33	Bond Payments - 30 Years	961	961	961	961	961	961	961	961	961	961	961
34	Bond Interest Payment	1,038	993	948	903	858	812	767	722	677	632	587
35	End of Year Bond Balance	21,130	20,169	19,208	18,247	17,286	16,325	15,364	14,403	13,442	12,481	11,520
36	Repair & Replacement Bond											
37	Beginning of Year Bond Balance	28,093	27,012	25,931	24,850	23,769	22,688	21,607	20,526	19,445	18,364	17,283
38	Bond Payments - 30 Years	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081
39	Bond Interest Payment	1,320	1,270	1,219	1,168	1,117	1,066	1,016	965	914	863	812
40	End of Year Bond Balance	27,012	25,931	24,850	23,769	22,688	21,607	20,526	19,445	18,364	17,283	16,202
41	Repair & Replacement Bond											
42	Beginning of Year Bond Balance	35,250	34,034	32,818	31,602	30,386	29,170	27,954	26,738	25,522	24,306	23,090
43	Bond Payments - 30 Years	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216
44	Bond Interest Payment	1,657	1,600	1,542	1,485	1,428	1,371	1,314	1,257	1,200	1,142	1,085
45	End of Year Bond Balance	34,034	32,818	31,602	30,386	29,170	27,954	26,738	25,522	24,306	23,090	21,874
46	Repair & Replacement Bond											
47	Beginning of Year Bond Balance			41,020	39,653	38,286	36,919	35,552	34,185	32,818	31,451	30,084
48	Bond Payments - 30 Years			1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367
49	Bond Interest Payment			1,928	1,864	1,799	1,735	1,671	1,607	1,542	1,478	1,414
50	End of Year Bond Balance			39,653	38,286	36,919	35,552	34,185	32,818	31,451	30,084	28,717
51	Repair & Replacement Bond											
52	Beginning of Year Bond Balance						46,142	44,604	43,066	41,528	39,990	38,452
53	Bond Payments - 30 Years						1,538	1,538	1,538	1,538	1,538	1,538
54	Bond Interest Payment						2,169	2,096	2,024	1,952	1,880	1,807
55	End of Year Bond Balance						44,604	43,066	41,528	39,990	38,452	36,914
56	Repair & Replacement Bond											
57	Beginning of Year Bond Balance									51,904	50,174	48,444
58	Bond Payments - 30 Years									1,730	1,730	1,730
59	Bond Interest Payment									2,439	2,358	2,277
60	End of Year Bond Balance									50,174	48,444	46,714
61												
62	Total Beginning of Year Balance	215,950	202,124	229,318	214,125	198,932	229,881	213,150	196,419	231,592	213,131	194,670
63	Total End of Year Balance	202,124	188,298	214,125	198,932	183,739	213,150	196,419	179,688	213,131	194,670	176,209
64	Total Annual Bond Payments	13,826	13,826	15,193	15,193	15,193	16,731	16,731	16,731	18,461	18,461	18,461
65	Total Annual Interest Payments	10,150	9,500	10,778	10,064	9,350	10,804	10,018	9,232	10,885	10,017	9,149
66	Total Annual Expense	23,976	23,326	25,971	25,257	24,543	27,535	26,749	25,963	29,346	28,478	27,610

(A) Purchase Proposals:
Purchase Price
Amount to Buy-out BFA Bond for
Capital Reconstruction (CWIP)

**GES Exhibit 6 - Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	<i>Prior Year-End Balance</i>				\$223,560			\$207,038			\$192,088
	<i>Bond Issue</i>				\$20,248			\$22,776			\$25,619
	<i>Reserve Reinvestment</i>				<u>-\$11,006</u>			<u>-\$10,760</u>			<u>-\$10,610</u>
1	Total Beginning of Year Balance	\$248,400	\$240,120	\$231,840	\$232,802	\$224,214	\$215,626	\$219,054	\$210,065	\$201,077	\$207,097
2	Total End of Year Balance	\$240,120	\$231,840	\$223,560	\$224,214	\$215,626	\$207,038	\$210,065	\$201,077	\$192,088	\$197,608
3	Total Annual Bond Payment	\$8,280	\$8,280	\$8,280	\$8,588	\$8,588	\$8,588	\$8,989	\$8,989	\$8,989	\$9,489
4	Total Annual Interest Payment	\$11,675	\$11,286	\$10,896	\$10,942	\$10,538	\$10,134	\$10,296	\$9,873	\$9,451	\$9,734
5	Total Annual Expense	\$19,955	\$19,566	\$19,176	\$19,530	\$19,126	\$18,722	\$19,285	\$18,862	\$18,440	\$19,223
6											
7	Bond Payment Coverage	\$24,944	\$24,458	\$23,970	\$24,413	\$23,908	\$23,403	\$24,106	\$23,577	\$23,050	\$24,029
8	Bond Reserve Required	\$4,989	\$4,892	\$4,794	\$4,883	\$4,782	\$4,681	\$4,821	\$4,715	\$4,610	\$4,808
9	Bond Reserve Retained	\$1,247	\$1,223	\$1,199	\$1,221	\$1,195	\$1,170	\$1,205	\$1,179	\$1,153	\$1,202
10	Bond Reserve Reinvested	\$3,742	\$3,669	\$3,595	\$3,662	\$3,587	\$3,511	\$3,616	\$3,536	\$3,457	\$3,604

**GES Exhibit 6 - Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	<i>Prior Year-End Balance</i>			\$178,630			\$166,595			\$155,921	
	<i>Bond Issue</i>			\$28,818			\$32,417			\$36,466	
	<i>Reserve Reinvestment</i>			<u>-\$10,581</u>			<u>-\$10,619</u>			<u>-\$10,784</u>	
1	Total Beginning of Year Balance	\$197,608	\$188,119	\$196,887	\$186,790	\$176,692	\$188,393	\$177,569	\$166,745	\$181,603	\$169,923
2	Total End of Year Balance	\$188,119	\$178,630	\$186,790	\$176,692	\$166,595	\$177,569	\$166,745	\$155,921	\$169,923	\$158,243
3	Total Annual Bond Payment	\$9,489	\$9,489	\$10,097	\$10,097	\$10,097	\$10,824	\$10,824	\$10,824	\$11,680	\$11,680
4	Total Annual Interest Payment	\$8,288	\$8,842	\$9,254	\$8,779	\$8,305	\$8,854	\$8,346	\$7,837	\$8,535	\$7,986
5	Total Annual Expense	\$18,777	\$18,331	\$19,351	\$18,876	\$18,402	\$19,678	\$19,170	\$18,661	\$20,215	\$19,666
6											
7	Bond Payment Coverage	\$23,471	\$22,914	\$24,189	\$23,596	\$23,003	\$24,598	\$23,963	\$23,326	\$25,269	\$24,583
8	Bond Reserve Required	\$4,694	\$4,583	\$4,838	\$4,720	\$4,601	\$4,920	\$4,793	\$4,665	\$5,054	\$4,917
9	Bond Reserve Retained	\$1,174	\$1,146	\$1,209	\$1,180	\$1,150	\$1,230	\$1,198	\$1,166	\$1,263	\$1,229
10	Bond Reserve Reinvested	\$3,520	\$3,437	\$3,829	\$3,540	\$3,451	\$3,690	\$3,595	\$3,489	\$3,791	\$3,688

**GES Exhibit 6 - Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
	<i>Prior Year-End Balance</i>		\$146,563			\$138,484			\$131,659			
	<i>Bond Issue</i>		\$41,020			\$46,142			\$51,904			
	<i>Reserve Reinvestment</i>		<u>-\$11,063</u>			<u>-\$11,463</u>			<u>-\$11,994</u>			
1	Total Beginning of Year Balance	\$158,243	\$176,520	\$163,841	\$151,163	\$173,163	\$159,328	\$145,494	\$171,569	\$156,404	\$141,239	
2	Total End of Year Balance	\$146,563	\$163,841	\$151,163	\$138,484	\$159,328	\$145,494	\$131,659	\$156,404	\$141,239	\$126,074	
3	Total Annual Bond Payment	\$11,680	\$12,679	\$12,679	\$12,679	\$13,835	\$13,835	\$13,835	\$15,165	\$15,165	\$15,165	\$328,877
4	Total Annual Interest Payment	\$7,437	\$8,298	\$7,701	\$7,105	\$8,139	\$7,488	\$6,838	\$8,064	\$7,351	\$6,638	\$265,908
5	Total Annual Expense	\$19,117	\$20,975	\$20,380	\$19,784	\$21,974	\$21,323	\$20,673	\$23,229	\$22,516	\$21,803	\$594,785
6												
7	Bond Payment Coverage	\$23,896	\$26,218	\$25,475	\$24,730	\$27,467	\$26,653	\$25,841	\$29,036	\$28,145	\$27,254	\$743,485
8	Bond Reserve Required	\$4,779	\$5,243	\$5,095	\$4,946	\$5,493	\$5,330	\$5,168	\$5,807	\$5,629	\$5,451	\$148,700
9	Bond Reserve Retained	\$1,195	\$1,311	\$1,274	\$1,237	\$1,373	\$1,333	\$1,292	\$1,452	\$1,407	\$1,363	\$37,176
10	Bond Reserve Reinvested	\$3,584	\$3,932	\$3,821	\$3,709	\$4,120	\$3,997	\$3,876	\$4,355	\$4,222	\$4,088	\$111,524

**GES Exhibit 7 - Adjusted & Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Total Operating Revenue Required PWW	\$28,153	\$26,021	\$25,912	\$28,618	\$28,479	\$28,366	\$31,421	\$31,280	\$31,164	\$34,615
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
3	Rate Increase Required for PWW - Total Amount	\$7,553	\$7,421	\$7,312	\$10,016	\$9,879	\$9,766	\$12,821	\$12,680	\$12,564	\$16,015
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	41%	40%	39%	54%	53%	53%	69%	68%	68%	86%
5											
6	Total Revenue Requirement for City of Nashua Ownership	\$36,739	\$36,633	\$36,538	\$37,387	\$37,302	\$37,142	\$38,026	\$37,961	\$37,915	\$39,390
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
8	Rate Increase for City of Nashua Ownership - Total Amount	\$18,139	\$18,033	\$17,938	\$18,787	\$18,702	\$18,542	\$19,426	\$19,361	\$19,315	\$20,790
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	98%	97%	96%	101%	101%	100%	104%	104%	104%	112%
10											
11	Rate Comparison										
12	Difference between City and PWW - Total Amount	(\$10,586)	(\$10,612)	(\$10,828)	(\$8,771)	(\$8,823)	(\$8,776)	(\$6,605)	(\$6,681)	(\$6,751)	(\$4,775)
13	Difference between PWW - Percent above \$18.6 Million	41%	40%	39%	54%	53%	53%	69%	68%	68%	86%
14	Difference between City - Percent above \$18.6 Million	98%	97%	96%	101%	101%	100%	104%	104%	104%	112%
15											
16	Cumulative Difference PWW to City - Total (A)	(\$10,586)	(\$21,196)	(\$31,824)	(\$40,596)	(\$49,419)	(\$58,195)	(\$64,800)	(\$71,481)	(\$78,231)	(\$83,007)
Note: (A)											
	Cumulative Difference PWW to City - (Original GES Exh.7 Amount)	\$3,043	\$5,953	\$8,742	\$12,826	\$16,768	\$20,583	\$25,873	\$31,015	\$36,019	\$42,703
	Difference from Adjusted Cumulative Difference PWW to City	\$13,629	\$27,151	\$40,566	\$53,422	\$66,187	\$78,778	\$90,673	\$102,496	\$114,250	\$125,710
	Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)	-28.8%	-29.0%	-29.1%	-23.5%	-23.7%	-23.6%	-17.4%	-17.6%	-17.8%	-12.1%

**GES Exhibit 7 - Adjusted & Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	Total Operating Revenue Required PWW	\$34,464	\$34,344	\$38,237	\$38,080	\$37,951	\$42,344	\$42,177	\$39,378	\$44,721	\$44,834	\$44,987
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
3	Rate Increase Required for PWW - Total Amount	\$15,864	\$15,744	\$19,637	\$19,480	\$19,351	\$23,744	\$23,577	\$20,778	\$26,121	\$26,234	\$26,387
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	85%	85%	106%	105%	104%	128%	127%	112%	140%	141%	142%
5												
6	Total Revenue Requirement for City of Nashua Ownership	\$39,346	\$39,319	\$41,144	\$41,118	\$41,113	\$43,315	\$43,308	\$43,321	\$45,936	\$45,945	\$45,976
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
8	Rate Increase for City of Nashua Ownership - Total Amount	\$20,746	\$20,719	\$22,544	\$22,518	\$22,513	\$24,715	\$24,708	\$24,721	\$27,336	\$27,345	\$27,376
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	112%	111%	121%	121%	121%	133%	133%	133%	147%	147%	147%
10												
11	Rate Comparison											
12	Difference between City and PWW - Total Amount	(\$4,882)	(\$4,975)	(\$2,907)	(\$3,038)	(\$3,162)	(\$971)	(\$1,131)	(\$3,943)	(\$1,215)	(\$1,111)	(\$989)
13	Difference between PWW - Percent above \$18.6 Million	85%	85%	106%	105%	104%	128%	127%	112%	140%	141%	142%
14	Difference between City - Percent above \$18.6 Million	112%	111%	121%	121%	121%	133%	133%	133%	147%	147%	147%
15												
16	Cumulative Difference PWW to City - Total (A)	(\$87,888)	(\$92,864)	(\$95,770)	(\$98,809)	#####	#####	#####	(\$108,015)	(\$109,230)	(\$110,340)	(\$111,329)
Note: (A)												
	Cumulative Difference PWW to City - (Original GES Exh.7 Amount)	\$49,225	\$55,601	\$63,887	\$72,005	\$79,965	\$90,093	\$100,038	\$107,152	\$117,122	\$127,185	\$137,365
	Difference from Adjusted Cumulative Difference PWW to City	\$137,113	\$148,465	\$159,657	\$170,814	\$181,935	\$193,034	\$204,110	\$215,167	\$226,352	\$237,525	\$248,694
	Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)	-12.4%	-12.7%	-7.1%	-7.4%	-7.7%	-2.2%	-2.6%	-9.1%	-2.6%	-2.4%	-2.2%

**GES Exhibit 7 - Adjusted & Corrected
Using the PWW Proposed Purchase Price
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
1	Total Operating Revenue Required PWW	\$50,939	\$51,024	\$51,156	\$57,798	\$57,854	\$57,961	\$65,382	\$65,408	\$65,491	\$1,256,557
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$558,000
3	Rate Increase Required for PWW - Total Amount	\$32,339	\$32,424	\$32,556	\$39,198	\$39,254	\$39,361	\$46,782	\$46,808	\$46,891	\$698,557
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	174%	174%	175%	211%	211%	212%	252%	252%	252%	125%
5											
6	Total Revenue Requirement for City of Nashua Ownership	\$49,042	\$49,068	\$49,118	\$52,678	\$52,715	\$52,783	\$56,889	\$56,940	\$57,024	\$1,321,131
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$558,000
8	Rate Increase for City of Nashua Ownership - Total Amount	\$30,442	\$30,468	\$30,518	\$34,078	\$34,115	\$34,183	\$38,289	\$38,340	\$38,424	\$763,131
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	164%	164%	164%	183%	183%	184%	206%	206%	207%	137%
10											
11	Rate Comparison										
12	Difference between City and PWW - Total Amount	\$1,897	\$1,956	\$2,038	\$5,120	\$5,139	\$5,178	\$8,493	\$8,468	\$8,467	(\$64,574)
13	Difference between PWW - Percent above \$18.6 Million	174%	174%	175%	211%	211%	212%	252%	252%	252%	125%
14	Difference between City - Percent above \$18.6 Million	164%	164%	164%	183%	183%	184%	206%	206%	207%	137%
15											
16	Cumulative Difference PWW to City - Total (A)	#####	#####	#####	#####	(\$95,179)	(\$90,001)	(\$81,509)	(\$73,041)	(\$64,574)	
Note: (A)											
	Cumulative Difference PWW to City - (Original GES Exh.7 Amount)	\$150,714	\$164,123	\$177,623	\$194,652	\$211,713	\$228,834	\$249,899	\$270,961	\$292,053	
	Difference from Adjusted Cumulative Difference PWW to City	\$260,146	\$271,599	\$283,061	\$294,970	\$306,892	\$318,835	\$331,408	\$344,002	\$356,627	
	Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)	3.9%	4.0%	4.1%	9.7%	9.7%	9.8%	14.9%	14.9%	14.8%	

**GES Exhibit 4 - Adjusted & Corrected
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua (2007-2036)**

John F. Guastella
JFG-6 Revised
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Line	Description (All Dollar Figures in Thousands)	Escalation Rate	Pennichuck Adjustments	Sansoucy Amounts	2007	2008	2009	2010	2011	2012	2013	2014
1	Operations and Maintenance Cost											
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$401	\$1,400	\$1,801	\$1,873	\$1,948	\$2,026	\$2,107	\$2,191	\$2,279	\$2,370
3	Oversight (Input Esc. at 3%)	3.00%		\$315	\$315	\$324	\$334	\$344	\$355	\$365	\$376	\$387
4	Beck - Transition Fee		\$38		\$38	\$38	\$38	\$38	\$38	\$38	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$103	\$200	\$303	\$315	\$328	\$341	\$354	\$369	\$383	\$399
6	Purchased Water (Input Esc. at 4%)	4.00%	-\$18	\$100	\$82	\$85	\$89	\$92	\$96	\$100	\$104	\$108
7	Customer Service (Input Esc. at 3%)	3.00%	\$192		\$192	\$198	\$204	\$210	\$216	\$223	\$229	\$236
8	Print Annual Consumer CR	3.00%	\$4		\$4	\$4	\$4	\$4	\$5	\$5	\$5	\$5
9	Billings and Mailings	3.00%	\$35	\$100	\$135	\$139	\$143	\$148	\$152	\$157	\$161	\$166
10	Sludge (Input Esc. at 3%)	3.00%	\$65	\$100	\$165	\$170	\$175	\$180	\$186	\$191	\$197	\$203
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$921	\$185	\$1,106	\$1,139	\$1,173	\$1,209	\$1,245	\$1,282	\$1,321	\$1,360
12	Veolia - Operations (Input Esc. at 3%)	3.00%		\$5,150	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796	\$5,970	\$6,149	\$6,334
13	Veolia - Transition Fee		\$230		\$230	\$230	\$230	\$230	\$230	\$230	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$512	\$500	\$1,012	\$1,052	\$1,095	\$1,138	\$1,184	\$1,231	\$1,281	\$1,332
15	Operational Contingencies (Input Esc. at 4%)	4.00%		\$500	\$500	\$520	\$541	\$562	\$585	\$608	\$633	\$658
16	Veolia - Hydrant Checks & Painting	3.00%	\$12		\$12	\$12	\$13	\$13	\$14	\$14	\$14	\$15
17	Nashua - Permitting/Police	3.00%	\$15		\$15	\$15	\$16	\$16	\$17	\$17	\$18	\$18
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$215		\$215	\$221	\$228	\$235	\$242	\$249	\$257	\$264
19	Capital Program Management	3.00%	\$30		\$30	\$31	\$32	\$33	\$34	\$35	\$36	\$37
20	Maintenance of Non-Rolling Stock	3.00%	\$3		\$3	\$3	\$3	\$3	\$3	\$3	\$4	\$4
21	Vehicle Repair	3.00%	\$113		\$113	\$116	\$120	\$123	\$127	\$131	\$135	\$139
22	Training for Operation of PWWT Resources	3.00%	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$149		\$149	\$153	\$158	\$163	\$168	\$173	\$178	\$183
24	Veolia-DigSafe or Alternatives	3.00%	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$90		\$90	\$90	\$90	\$90	\$90	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$135		\$135	\$139	\$143	\$148	\$152	\$157	\$161	\$166
27	Total O&M Costs		\$3,245	\$8,550	\$11,795	\$12,175	\$12,568	\$12,974	\$13,394	\$13,739	\$13,920	\$14,384
28												
29	Bond Reserve Requirements				\$3,951	\$3,874	\$3,797	\$3,951	\$3,870	\$3,788	\$3,989	\$3,902
30												
31	Total Annual Bond Payments				\$6,557	\$6,557	\$6,557	\$6,941	\$6,941	\$6,941	\$7,410	\$7,410
32	Total Annual Interest Payments				\$9,245	\$8,937	\$8,829	\$8,862	\$8,536	\$8,210	\$8,545	\$8,197
33	Total Revenue Requirements (A)				\$31,548	\$31,543	\$31,551	\$32,728	\$32,741	\$32,678	\$33,864	\$33,893

Note: (A)

Total Revenue Requirements (Original GES Exh. 4 Amount)	\$23,110	\$23,111	\$23,123	\$24,532	\$24,536	\$24,551	\$26,131	\$26,138
Difference from Adjusted Revenue Requirement	(\$8,438)	(\$8,432)	(\$8,428)	(\$8,196)	(\$8,205)	(\$8,127)	(\$7,733)	(\$7,755)

**GES Exhibit 4 - Adjusted & Corrected
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2015	2016	2017	2018	2019	2020	2021	2022
1	Operations and Maintenance Cost									
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$2,465	\$2,563	\$2,666	\$2,773	\$2,883	\$2,999	\$3,119	\$3,243
3	Oversight (Input Esc. at 3%)	3.00%	\$389	\$411	\$423	\$438	\$449	\$463	\$476	\$491
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$415	\$431	\$449	\$466	\$485	\$505	\$525	\$546
6	Purchased Water (Input Esc. at 4%)	4.00%	\$112	\$117	\$121	\$126	\$131	\$137	\$142	\$148
7	Customer Service (Input Esc. at 3%)	3.00%	\$243	\$251	\$258	\$266	\$274	\$282	\$290	\$299
8	Print Annual Consumer CR	3.00%	\$5	\$5	\$5	\$6	\$6	\$6	\$6	\$6
9	Billings and Mailings	3.00%	\$171	\$176	\$181	\$187	\$192	\$198	\$204	\$210
10	Sludge (Input Esc. at 3%)	3.00%	\$209	\$215	\$222	\$228	\$235	\$242	\$250	\$257
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$1,401	\$1,443	\$1,486	\$1,531	\$1,577	\$1,624	\$1,673	\$1,723
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$6,524	\$6,720	\$6,921	\$7,129	\$7,343	\$7,563	\$7,790	\$8,024
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$1,385	\$1,440	\$1,498	\$1,558	\$1,620	\$1,685	\$1,752	\$1,823
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$884	\$712	\$740	\$770	\$801	\$833	\$866	\$900
16	Veolia - Hydrant Checks & Painting	3.00%	\$15	\$16	\$16	\$17	\$17	\$18	\$18	\$19
17	Nashua - Permitting/Police	3.00%	\$19	\$20	\$20	\$21	\$21	\$22	\$23	\$23
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$272	\$281	\$289	\$298	\$307	\$316	\$325	\$335
19	Capital Program Management	3.00%	\$38	\$39	\$40	\$42	\$43	\$44	\$45	\$47
20	Maintenance of Non-Rolling Stock	3.00%	\$4	\$4	\$4	\$4	\$4	\$4	\$5	\$5
21	Vehicle Repair	3.00%	\$143	\$147	\$152	\$158	\$161	\$166	\$171	\$176
22	Training for Operation of PWW IT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$189	\$194	\$200	\$206	\$212	\$219	\$225	\$232
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$171	\$176	\$181	\$187	\$192	\$198	\$204	\$210
27	Total O&M Costs		\$14,865	\$15,361	\$15,875	\$16,405	\$16,955	\$17,522	\$18,110	\$18,717
28										
29	Bond Reserve Requirements		\$3,815	\$4,066	\$3,972	\$3,878	\$4,185	\$4,083	\$3,982	\$4,346
30										
31	Total Annual Bond Payments		\$7,410	\$7,972	\$7,972	\$7,972	\$8,634	\$8,634	\$8,634	\$9,409
32	Total Annual Interest Payments		\$7,848	\$8,292	\$7,917	\$7,542	\$8,102	\$7,696	\$7,290	\$7,976
33	Total Revenue Requirements (A)		\$33,938	\$35,691	\$35,738	\$35,797	\$37,876	\$37,935	\$38,016	\$40,448

Note: (A)

Total Revenue Requirements (Original GES Exh. 4 Amount)	\$26,159	\$27,931	\$27,942	\$27,968	\$29,951	\$29,963	\$29,991	\$32,215
Difference from Adjusted Revenue Requirement	(\$7,779)	(\$7,760)	(\$7,794)	(\$7,829)	(\$7,925)	(\$7,972)	(\$8,025)	(\$8,233)

**GES Exhibit 4 - Adjusted & Corrected
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2023	2024	2025	2026	2027	2028	2029	2030
1	Operations and Maintenance Cost									
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$3,373	\$3,508	\$3,648	\$3,794	\$3,946	\$4,104	\$4,268	\$4,439
3	Oversight (Input Esc. at 3%)	3.00%	\$505	\$521	\$536	\$552	\$569	\$586	\$604	\$622
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$568	\$590	\$614	\$638	\$664	\$690	\$718	\$747
6	Purchased Water (Input Esc. at 4%)	4.00%	\$154	\$160	\$166	\$173	\$180	\$187	\$194	\$202
7	Customer Service (Input Esc. at 3%)	3.00%	\$308	\$317	\$327	\$337	\$347	\$357	\$368	\$379
8	Print Annual Consumer CR	3.00%	\$8	\$7	\$7	\$7	\$7	\$7	\$8	\$8
9	Billings and Mailings	3.00%	\$217	\$223	\$230	\$237	\$244	\$251	\$259	\$266
10	Sludge (Input Esc. at 3%)	3.00%	\$265	\$273	\$281	\$289	\$298	\$307	\$316	\$326
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$1,775	\$1,828	\$1,883	\$1,939	\$1,998	\$2,057	\$2,119	\$2,183
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$8,264	\$8,512	\$8,768	\$9,031	\$9,301	\$9,581	\$9,868	\$10,164
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$1,895	\$1,971	\$2,050	\$2,132	\$2,217	\$2,306	\$2,398	\$2,494
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$936	\$974	\$1,013	\$1,053	\$1,096	\$1,139	\$1,185	\$1,232
16	Veolia - Hydrant Checks & Painting	3.00%	\$19	\$20	\$20	\$21	\$22	\$22	\$23	\$24
17	Nashua - Permitting/Police	3.00%	\$24	\$25	\$26	\$26	\$27	\$28	\$29	\$30
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$345	\$355	\$366	\$377	\$388	\$400	\$412	\$424
19	Capital Program Management	3.00%	\$48	\$50	\$51	\$53	\$54	\$56	\$57	\$59
20	Maintenance of Non-Rolling Stock	3.00%	\$5	\$5	\$5	\$5	\$5	\$6	\$6	\$6
21	Vehicle Repair	3.00%	\$181	\$187	\$192	\$198	\$204	\$210	\$217	\$223
22	Training for Operation of PWW IT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$239	\$246	\$254	\$261	\$269	\$277	\$285	\$294
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$217	\$223	\$230	\$237	\$244	\$251	\$259	\$266
27	Total O&M Costs		\$19,345	\$19,995	\$20,667	\$21,362	\$22,080	\$22,824	\$23,593	\$24,388
28										
29	Bond Reserve Requirements		\$4,236	\$4,125	\$4,555	\$4,434	\$4,313	\$4,816	\$4,683	\$4,550
30										
31	Total Annual Bond Payments		\$9,409	\$9,409	\$10,307	\$10,307	\$10,307	\$11,341	\$11,341	\$11,341
32	Total Annual Interest Payments		\$7,534	\$7,092	\$7,816	\$7,431	\$6,947	\$7,921	\$7,388	\$6,855
33	Total Revenue Requirements (A)		\$40,524	\$40,621	\$43,445	\$43,534	\$43,647	\$46,902	\$47,005	\$47,134
Note: (A)										
	Total Revenue Requirements (Original GES Exh. 4 Amount)		\$32,232	\$32,263	\$34,751	\$34,770	\$34,807	\$37,590	\$37,615	\$37,656
	Difference from Adjusted Revenue Requirement		(\$8,292)	(\$8,358)	(\$8,694)	(\$8,764)	(\$8,840)	(\$9,312)	(\$9,390)	(\$9,478)

**GES Exhibit 4 - Adjusted & Corrected
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	Escalation Rate	2031	2032	2033	2034	2035	2036
1	Operations and Maintenance Cost							
2	Taxes - Ad Valorem (Input Esc. at 4%)	4.00%	\$4,617	\$4,801	\$4,993	\$5,193	\$5,401	\$5,617
3	Oversight (Input Esc. at 3%)	3.00%	\$640	\$660	\$679	\$700	\$721	\$742
4	Beck - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0
5	Insurance (Input Esc. at 4%)	4.00%	\$777	\$808	\$840	\$874	\$909	\$945
6	Purchased Water (Input Esc. at 4%)	4.00%	\$210	\$219	\$227	\$236	\$246	\$256
7	Customer Service (Input Esc. at 3%)	3.00%	\$390	\$402	\$414	\$426	\$439	\$452
8	Print Annual Consumer CR	3.00%	\$8	\$8	\$9	\$9	\$9	\$9
9	Billings and Mailings	3.00%	\$274	\$283	\$291	\$300	\$309	\$318
10	Sludge (Input Esc. at 3%)	3.00%	\$335	\$345	\$356	\$367	\$378	\$389
11	Unplanned Maintenance (Input Esc. at 3%)	3.00%	\$2,248	\$2,316	\$2,385	\$2,457	\$2,530	\$2,606
12	Veolia - Operations (Input Esc. at 3%)	3.00%	\$10,469	\$10,783	\$11,106	\$11,440	\$11,783	\$12,136
13	Veolia - Transition Fee		\$0	\$0	\$0	\$0	\$0	\$0
14	Utilities (Input Esc. at 4%)	4.00%	\$2,594	\$2,698	\$2,806	\$2,918	\$3,035	\$3,156
15	Operational Contingencies (Input Esc. at 4%)	4.00%	\$1,282	\$1,333	\$1,386	\$1,442	\$1,499	\$1,559
16	Veolia - Hydrant Checks & Painting	3.00%	\$24	\$25	\$26	\$27	\$27	\$28
17	Nashua - Permitting/Police	3.00%	\$30	\$31	\$32	\$33	\$34	\$35
18	Base Engineering Services (Supplemental in Veolia Contract)	3.00%	\$437	\$450	\$464	\$478	\$492	\$507
19	Capital Program Management	3.00%	\$61	\$63	\$65	\$67	\$69	\$71
20	Maintenance of Non-Rolling Stock	3.00%	\$6	\$6	\$6	\$7	\$7	\$7
21	Vehicle Repair	3.00%	\$230	\$237	\$244	\$251	\$259	\$266
22	Training for Operation of PWW IT Resources	3.00%	\$0	\$0	\$0	\$0	\$0	\$0
23	IT License Fees	3.00%	\$303	\$312	\$321	\$331	\$341	\$351
24	Veolia-DigSafe or Alternatives	3.00%	\$0	\$0	\$0	\$0	\$0	\$0
25	Nashua - GIS		\$0	\$0	\$0	\$0	\$0	\$0
26	Nashua - IS Support	3.00%	\$274	\$283	\$291	\$300	\$309	\$318
27	Total O&M Costs		\$25,211	\$26,062	\$26,942	\$27,853	\$28,795	\$29,770
28								
29	Bond Reserve Requirements		\$5,131	\$4,984	\$4,837	\$5,506	\$5,343	\$5,180
30								
31	Total Annual Bond Payments		\$12,528	\$12,528	\$12,528	\$13,865	\$13,865	\$13,865
32	Total Annual Interest Payments		\$7,996	\$7,407	\$6,818	\$6,142	\$7,489	\$6,837
33	Total Revenue Requirements (A)		\$50,868	\$50,981	\$51,125	\$55,386	\$55,512	\$55,672

Note: (A)

Total Revenue Requirements (Original GES Exh. 4 Amount)	\$40,769	\$40,793	\$40,840	\$44,317	\$44,345	\$44,399
Difference from Adjusted Revenue Requirement	(\$10,097)	(\$10,188)	(\$10,285)	(\$11,069)	(\$11,167)	(\$11,273)

GES Exhibit 5
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	Purchase Bond Amount (A)									
2	Beginning of Year Bond Balance	146,700	141,810	136,920	132,030	127,140	122,250	117,360	112,470	107,580
3	Bond Payments - 30 Years	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890
4	Bond Interest Payment	6,895	6,665	6,435	6,205	5,976	5,746	5,516	5,286	5,056
5	End of Year Bond Balance	141,810	136,920	132,030	127,140	122,250	117,360	112,470	107,580	102,690
6	Treatment System Bond									
7	Beginning of Year Bond Balance	30,000	29,000	28,000	27,000	26,000	25,000	24,000	23,000	22,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	1,410	1,363	1,316	1,269	1,222	1,175	1,128	1,081	1,034
10	End of Year Bond Balance	29,000	28,000	27,000	26,000	25,000	24,000	23,000	22,000	21,000
11	Reconstruction Bond									
12	Beginning of Year Bond Balance	20,000	19,333	18,666	17,999	17,332	16,665	15,998	15,331	14,664
13	Bond Payments - 30 Years	667	667	667	667	667	667	667	667	667
14	Bond Interest Payment	940	909	877	846	815	783	752	721	689
15	End of Year Bond Balance	19,333	18,666	17,999	17,332	16,665	15,998	15,331	14,664	13,997
16	Repair & Replacement Bond									
17	Beginning of Year Bond Balance				20,248	19,573	18,898	18,223	17,548	16,873
18	Bond Payments - 30 Years				675	675	675	675	675	675
19	Bond Interest Payment				952	920	888	856	825	793
20	End of Year Bond Balance				19,573	18,898	18,223	17,548	16,873	16,198
21	Repair & Replacement Bond									
22	Beginning of Year Bond Balance							22,776	22,017	21,258
23	Bond Payments - 30 Years							759	759	759
24	Bond Interest Payment							1,070	1,035	999
25	End of Year Bond Balance							22,017	21,258	20,499
26	Repair & Replacement Bond									
27	Beginning of Year Bond Balance									
28	Bond Payments - 30 Years									
29	Bond Interest Payment									
30	End of Year Bond Balance									
31	Repair & Replacement Bond									
32	Beginning of Year Bond Balance									
33	Bond Payments - 30 Years									
34	Bond Interest Payment									
35	End of Year Bond Balance									
36	Repair & Replacement Bond									
37	Beginning of Year Bond Balance									
38	Bond Payments - 30 Years									
39	Bond Interest Payment									
40	End of Year Bond Balance									
41	Repair & Replacement Bond									
42	Beginning of Year Bond Balance									
43	Bond Payments - 30 Years									
44	Bond Interest Payment									
45	End of Year Bond Balance									
46	Repair & Replacement Bond									
47	Beginning of Year Bond Balance									
48	Bond Payments - 30 Years									
49	Bond Interest Payment									
50	End of Year Bond Balance									
51	Repair & Replacement Bond									
52	Beginning of Year Bond Balance									
53	Bond Payments - 30 Years									
54	Bond Interest Payment									
55	End of Year Bond Balance									
56	Repair & Replacement Bond									
57	Beginning of Year Bond Balance									
58	Bond Payments - 30 Years									
59	Bond Interest Payment									
60	End of Year Bond Balance									
61										
62	Total Beginning of Year Balance	196,700	190,143	183,586	197,277	190,045	182,813	198,357	190,366	182,375
63	Total End of Year Balance	190,143	183,586	177,029	190,045	182,813	175,581	190,366	182,375	174,384
64	Total Annual Bond Payments	6,557	6,557	6,557	7,232	7,232	7,232	7,991	7,991	7,991
65	Total Annual Interest Payments	9,245	8,937	8,629	9,272	8,932	8,592	9,323	8,947	8,572
66	Total Annual Expense	15,802	15,494	15,186	16,504	16,164	15,824	17,314	16,938	16,563
(A)	Purchase Proposals:									
	Purchase Price	Nashua's \$95,000		Mid-Point \$148,700		PWW's \$198,400				
	Amount to Buy-out BFA Bond for Capital Reconstruction (CWIP)	<u>\$50,000</u>		<u>\$50,000</u>		<u>\$50,000</u>				
		\$145,000		\$198,700		\$248,400				

GES Exhibit 5
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements

Line	Description (All Dollar Figures in Thousands)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
1	Purchase Bond Amount (A)											
2	Beginning of Year Bond Balance	102,690	97,800	92,910	88,020	83,130	78,240	73,350	68,460	63,570	58,680	53,790
3	Bond Payments - 30 Years	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890
4	Bond Interest Payment	4,826	4,597	4,367	4,137	3,907	3,677	3,447	3,218	2,988	2,758	2,528
5	End of Year Bond Balance	97,800	92,910	88,020	83,130	78,240	73,350	68,460	63,570	58,680	53,790	48,900
6	Treatment System Bond											
7	Beginning of Year Bond Balance	21,000	20,000	19,000	18,000	17,000	16,000	15,000	14,000	13,000	12,000	11,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	987	940	893	846	799	752	705	658	611	564	517
10	End of Year Bond Balance	20,000	19,000	18,000	17,000	16,000	15,000	14,000	13,000	12,000	11,000	10,000
11	Reconstruction Bond											
12	Beginning of Year Bond Balance	13,997	13,330	12,663	11,996	11,329	10,662	9,995	9,328	8,661	7,994	7,327
13	Bond Payments - 30 Years	667	667	667	667	667	667	667	667	667	667	667
14	Bond Interest Payment	658	627	595	564	532	501	470	438	407	376	344
15	End of Year Bond Balance	13,330	12,663	11,996	11,329	10,662	9,995	9,328	8,661	7,994	7,327	6,660
16	Repair & Replacement Bond											
17	Beginning of Year Bond Balance	16,198	15,523	14,848	14,173	13,498	12,823	12,148	11,473	10,798	10,123	9,448
18	Bond Payments - 30 Years	675	675	675	675	675	675	675	675	675	675	675
19	Bond Interest Payment	761	730	698	666	634	603	571	539	508	476	444
20	End of Year Bond Balance	15,523	14,848	14,173	13,498	12,823	12,148	11,473	10,798	10,123	9,448	8,773
21	Repair & Replacement Bond											
22	Beginning of Year Bond Balance	20,499	19,740	18,981	18,222	17,463	16,704	15,945	15,186	14,427	13,668	12,909
23	Bond Payments - 30 Years	759	759	759	759	759	759	759	759	759	759	759
24	Bond Interest Payment	963	928	892	856	821	785	749	714	678	642	607
25	End of Year Bond Balance	19,740	18,981	18,222	17,463	16,704	15,945	15,186	14,427	13,668	12,909	12,150
26	Repair & Replacement Bond											
27	Beginning of Year Bond Balance	25,619	24,765	23,911	23,057	22,203	21,349	20,495	19,641	18,787	17,933	17,079
28	Bond Payments - 30 Years	854	854	854	854	854	854	854	854	854	854	854
29	Bond Interest Payment	1,204	1,164	1,124	1,084	1,044	1,003	963	923	883	843	803
30	End of Year Bond Balance	24,765	23,911	23,057	22,203	21,349	20,495	19,641	18,787	17,933	17,079	16,225
31	Repair & Replacement Bond											
32	Beginning of Year Bond Balance				28,818	27,857	26,896	25,935	24,974	24,013	23,052	22,091
33	Bond Payments - 30 Years				961	961	961	961	961	961	961	961
34	Bond Interest Payment				1,354	1,309	1,264	1,219	1,174	1,129	1,083	1,038
35	End of Year Bond Balance				27,857	26,896	25,935	24,974	24,013	23,052	22,091	21,130
36	Repair & Replacement Bond											
37	Beginning of Year Bond Balance							32,417	31,336	30,255	29,174	28,093
38	Bond Payments - 30 Years							1,081	1,081	1,081	1,081	1,081
39	Bond Interest Payment							1,524	1,473	1,422	1,371	1,320
40	End of Year Bond Balance							31,338	30,255	29,174	28,093	27,012
41	Repair & Replacement Bond											
42	Beginning of Year Bond Balance										36,466	35,250
43	Bond Payments - 30 Years										1,216	1,216
44	Bond Interest Payment										1,714	1,657
45	End of Year Bond Balance										35,250	34,034
46	Repair & Replacement Bond											
47	Beginning of Year Bond Balance											
48	Bond Payments - 30 Years											
49	Bond Interest Payment											
50	End of Year Bond Balance											
51	Repair & Replacement Bond											
52	Beginning of Year Bond Balance											
53	Bond Payments - 30 Years											
54	Bond Interest Payment											
55	End of Year Bond Balance											
56	Repair & Replacement Bond											
57	Beginning of Year Bond Balance											
58	Bond Payments - 30 Years											
59	Bond Interest Payment											
60	End of Year Bond Balance											
61												
62	Total Beginning of Year Balance	200,003	191,158	182,313	202,286	192,480	182,674	205,285	194,398	183,511	209,090	196,987
63	Total End of Year Balance	191,158	182,313	173,468	192,480	182,674	172,868	194,398	183,511	172,624	196,987	184,884
64	Total Annual Bond Payments	8,845	8,845	8,845	9,806	9,806	9,806	10,887	10,887	10,887	12,103	12,103
65	Total Annual Interest Payments	9,400	8,984	8,569	9,507	9,047	8,586	9,648	9,137	8,625	9,827	9,258
66	Total Annual Expense	18,245	17,829	17,414	19,313	18,853	18,392	20,535	20,024	19,512	21,930	21,361

(A) Purchase Proposals:
Purchase Price
Amount to Buy-out BFA Bond for
Capital Reconstruction (CWIP)

GES Exhibit 5
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua
Unadjusted Bond Payment Requirements

Line	Description (All Dollar Figures in Thousands)	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1	Purchase Bond Amount (A)										
2	Beginning of Year Bond Balance	48,900	44,010	39,120	34,230	29,340	24,450	19,560	14,670	9,780	4,890
3	Bond Payments - 30 Years	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890	4,890
4	Bond Interest Payment	2,298	2,068	1,839	1,609	1,379	1,149	919	689	460	230
5	End of Year Bond Balance	44,010	39,120	34,230	29,340	24,450	19,560	14,670	9,780	4,890	-
6	Treatment System Bond										
7	Beginning of Year Bond Balance	10,000	9,000	8,000	7,000	6,000	5,000	4,000	3,000	2,000	1,000
8	Bond Payments - 30 Years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	Bond Interest Payment	470	423	376	329	282	235	188	141	94	47
10	End of Year Bond Balance	9,000	8,000	7,000	6,000	5,000	4,000	3,000	2,000	1,000	-
11	Reconstruction Bond										
12	Beginning of Year Bond Balance	6,660	5,993	5,326	4,659	3,992	3,325	2,658	1,991	1,324	657
13	Bond Payments - 30 Years	667	667	667	667	667	667	667	667	667	667
14	Bond Interest Payment	313	282	250	219	188	156	125	94	62	31
15	End of Year Bond Balance	5,993	5,326	4,659	3,992	3,325	2,658	1,991	1,324	657	(10)
16	Repair & Replacement Bond										
17	Beginning of Year Bond Balance	8,773	8,098	7,423	6,748	6,073	5,398	4,723	4,048	3,373	2,698
18	Bond Payments - 30 Years	675	675	675	675	675	675	675	675	675	675
19	Bond Interest Payment	412	381	349	317	285	254	222	190	159	127
20	End of Year Bond Balance	8,098	7,423	6,748	6,073	5,398	4,723	4,048	3,373	2,698	2,023
21	Repair & Replacement Bond										
22	Beginning of Year Bond Balance	12,150	11,391	10,632	9,873	9,114	8,355	7,596	6,837	6,078	5,319
23	Bond Payments - 30 Years	759	759	759	759	759	759	759	759	759	759
24	Bond Interest Payment	571	535	500	464	428	393	357	321	286	250
25	End of Year Bond Balance	11,391	10,632	9,873	9,114	8,355	7,596	6,837	6,078	5,319	4,560
26	Repair & Replacement Bond										
27	Beginning of Year Bond Balance	16,225	15,371	14,517	13,663	12,809	11,955	11,101	10,247	9,393	8,539
28	Bond Payments - 30 Years	854	854	854	854	854	854	854	854	854	854
29	Bond Interest Payment	763	722	682	642	602	562	522	482	441	401
30	End of Year Bond Balance	15,371	14,517	13,663	12,809	11,955	11,101	10,247	9,393	8,539	7,685
31	Repair & Replacement Bond										
32	Beginning of Year Bond Balance	21,130	20,169	19,208	18,247	17,286	16,325	15,364	14,403	13,442	12,481
33	Bond Payments - 30 Years	961	961	961	961	961	961	961	961	961	961
34	Bond Interest Payment	993	948	903	858	812	767	722	677	632	587
35	End of Year Bond Balance	20,169	19,208	18,247	17,286	16,325	15,364	14,403	13,442	12,481	11,520
36	Repair & Replacement Bond										
37	Beginning of Year Bond Balance	27,012	25,931	24,850	23,769	22,688	21,607	20,526	19,445	18,364	17,283
38	Bond Payments - 30 Years	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081
39	Bond Interest Payment	1,270	1,219	1,168	1,117	1,066	1,016	965	914	863	812
40	End of Year Bond Balance	25,931	24,850	23,769	22,688	21,607	20,526	19,445	18,364	17,283	16,202
41	Repair & Replacement Bond										
42	Beginning of Year Bond Balance	34,034	32,818	31,602	30,386	29,170	27,954	26,738	25,522	24,306	23,090
43	Bond Payments - 30 Years	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216
44	Bond Interest Payment	1,600	1,542	1,485	1,428	1,371	1,314	1,257	1,200	1,142	1,085
45	End of Year Bond Balance	32,818	31,602	30,386	29,170	27,954	26,738	25,522	24,306	23,090	21,874
46	Repair & Replacement Bond										
47	Beginning of Year Bond Balance		41,020	39,653	38,286	36,919	35,552	34,185	32,818	31,451	30,084
48	Bond Payments - 30 Years		1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367
49	Bond Interest Payment		1,926	1,864	1,799	1,735	1,671	1,607	1,542	1,478	1,414
50	End of Year Bond Balance		39,653	38,286	36,919	35,552	34,185	32,818	31,451	30,084	28,717
51	Repair & Replacement Bond										
52	Beginning of Year Bond Balance					46,142	44,604	43,066	41,528	39,990	38,452
53	Bond Payments - 30 Years					1,538	1,538	1,538	1,538	1,538	1,538
54	Bond Interest Payment					2,169	2,096	2,024	1,952	1,880	1,807
55	End of Year Bond Balance					44,604	43,066	41,528	39,990	38,452	36,914
56	Repair & Replacement Bond										
57	Beginning of Year Bond Balance								51,904	50,174	48,444
58	Bond Payments - 30 Years								1,730	1,730	1,730
59	Bond Interest Payment								2,439	2,358	2,277
60	End of Year Bond Balance								50,174	48,444	46,714
61											
62	Total Beginning of Year Balance	184,884	213,801	200,331	186,861	219,533	204,525	189,517	228,413	209,675	192,937
63	Total End of Year Balance	172,781	200,331	186,861	173,391	204,525	189,517	174,509	209,675	192,937	176,199
64	Total Annual Bond Payments	12,103	13,470	13,470	13,470	15,008	15,008	15,008	16,738	16,738	16,738
65	Total Annual Interest Payments	8,690	10,049	9,416	8,782	10,318	9,813	8,907	10,641	9,855	9,068
66	Total Annual Expense	20,793	23,519	22,886	22,252	25,326	24,821	23,915	27,379	26,593	25,806

(A) Purchase Proposals:
Purchase Price
Amount to Buy-out BFA Bond for
Capital Reconstruction (CWIP)

**GES Exhibit 6 - Corrected
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	<i>Prior Year-End Balance</i>				\$177,029			\$167,737			\$159,576
	<i>Bond Issue</i>				\$20,248			\$22,776			\$25,619
	<i>Reserve Reinvestment</i>				<u>-\$8,716</u>			<u>-\$8,706</u>			<u>-\$8,779</u>
1	Total Beginning of Year Balance	\$196,700	\$190,143	\$183,588	\$188,561	\$181,620	\$174,678	\$181,807	\$174,397	\$166,986	\$176,416
2	Total End of Year Balance	\$190,143	\$183,586	\$177,029	\$181,620	\$174,678	\$167,737	\$174,397	\$166,986	\$159,576	\$168,444
3	Total Annual Bond Payment	\$6,557	\$6,557	\$6,557	\$6,941	\$6,941	\$6,941	\$7,410	\$7,410	\$7,410	\$7,972
4	Total Annual Interest Payment	\$9,245	\$8,937	\$8,629	\$8,862	\$8,536	\$8,210	\$8,545	\$8,197	\$7,848	\$8,292
5	Total Annual Expense	\$15,802	\$15,494	\$15,186	\$15,803	\$15,477	\$15,151	\$15,955	\$15,607	\$15,258	\$16,264
6											
7	Bond Payment Coverage	\$19,753	\$19,368	\$18,983	\$19,754	\$19,347	\$18,939	\$19,944	\$19,509	\$19,073	\$20,330
8	Bond Reserve Required	\$3,951	\$3,874	\$3,797	\$3,951	\$3,870	\$3,788	\$3,989	\$3,902	\$3,815	\$4,066
9	Bond Reserve Retained	\$988	\$969	\$949	\$988	\$967	\$947	\$997	\$975	\$954	\$1,017
10	Bond Reserve Reinvested	\$2,963	\$2,905	\$2,848	\$2,963	\$2,903	\$2,841	\$2,992	\$2,927	\$2,861	\$3,049

**GES Exhibit 6 - Corrected
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	<i>Prior Year-End Balance</i>			\$152,501			\$146,479			\$141,483	
	<i>Bond Issue</i>			\$28,818			\$32,417			\$36,466	
	<i>Reserve Reinvestment</i>			<u>-\$8,937</u>			<u>-\$9,187</u>			<u>-\$9,531</u>	
1	Total Beginning of Year Balance	\$168,444	\$160,473	\$172,382	\$183,748	\$155,113	\$169,709	\$180,300	\$150,891	\$168,418	\$158,111
2	Total End of Year Balance	\$160,473	\$152,501	\$163,748	\$155,113	\$146,479	\$160,300	\$150,891	\$141,483	\$158,111	\$147,805
3	Total Annual Bond Payment	\$7,972	\$7,972	\$8,634	\$8,634	\$8,634	\$9,409	\$9,409	\$9,409	\$10,307	\$10,307
4	Total Annual Interest Payment	\$7,917	\$7,542	\$8,102	\$7,696	\$7,280	\$7,976	\$7,534	\$7,092	\$7,916	\$7,431
5	Total Annual Expense	\$15,889	\$15,514	\$16,736	\$16,330	\$15,924	\$17,385	\$16,943	\$16,501	\$18,223	\$17,738
6											
7	Bond Payment Coverage	\$19,861	\$19,392	\$20,921	\$20,413	\$19,906	\$21,731	\$21,179	\$20,626	\$22,778	\$22,172
8	Bond Reserve Required	\$3,972	\$3,878	\$4,185	\$4,083	\$3,982	\$4,346	\$4,236	\$4,125	\$4,555	\$4,434
9	Bond Reserve Retained	\$993	\$970	\$1,046	\$1,021	\$995	\$1,087	\$1,059	\$1,031	\$1,139	\$1,109
10	Bond Reserve Reinvested	\$2,979	\$2,908	\$3,139	\$3,062	\$2,987	\$3,259	\$3,177	\$3,094	\$3,416	\$3,325

**GES Exhibit 6 - Corrected
Using a Mid-Point Purchase Price
Revenue Requirements - City of Nashua
Adjusted Bond Payment Requirements**

Line	Description (All Dollar Figures in Thousands)	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
	<i>Prior Year-End Balance</i>		\$137,498			\$134,517			\$132,538			
	<i>Bond Issue</i>		\$41,020			\$46,142			\$51,904			
	<i>Reserve Reinvestment</i>		<u>-\$9,977</u>			<u>-\$10,536</u>			<u>-\$11,213</u>			
1	Total Beginning of Year Balance	\$147,805	\$166,541	\$157,200	\$145,858	\$170,123	\$157,595	\$145,066	\$173,229	\$159,344	\$145,460	
2	Total End of Year Balance	\$137,498	\$157,200	\$145,858	\$134,517	\$157,595	\$145,066	\$132,538	\$159,344	\$145,460	\$131,575	
3	Total Annual Bond Payment	\$10,307	\$11,341	\$11,341	\$11,341	\$12,528	\$12,528	\$12,528	\$13,885	\$13,885	\$13,885	\$284,954
4	Total Annual Interest Payment	\$6,947	\$7,921	\$7,388	\$6,855	\$7,996	\$7,407	\$6,818	\$8,142	\$7,489	\$6,837	\$235,597
5	Total Annual Expense	\$17,254	\$19,262	\$18,729	\$18,196	\$20,524	\$19,935	\$19,346	\$22,027	\$21,374	\$20,722	\$520,551
6												
7	Bond Payment Coverage	\$21,567	\$24,078	\$23,412	\$22,746	\$25,655	\$24,919	\$24,183	\$27,533	\$26,717	\$25,902	\$650,691
8	Bond Reserve Required	\$4,313	\$4,816	\$4,683	\$4,550	\$5,131	\$4,984	\$4,837	\$5,506	\$5,343	\$5,180	\$130,140
9	Bond Reserve Retained	\$1,078	\$1,204	\$1,171	\$1,137	\$1,283	\$1,246	\$1,209	\$1,377	\$1,336	\$1,295	\$32,537
10	Bond Reserve Reinvested	\$3,235	\$3,612	\$3,512	\$3,413	\$3,848	\$3,738	\$3,628	\$4,129	\$4,007	\$3,885	\$97,603

**GES Exhibit 7 - Adjusted & Corrected
Using a Mid-Point Purchase Price
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Total Operating Revenue Required PWW	\$26,153	\$26,021	\$25,912	\$28,616	\$28,479	\$28,366	\$31,421	\$31,280	\$31,164	\$34,615	\$34,464
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
3	Rate Increase Required for PWW - Total Amount	\$7,553	\$7,421	\$7,312	\$10,016	\$9,879	\$9,766	\$12,821	\$12,680	\$12,564	\$16,015	\$15,864
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	41%	40%	39%	54%	53%	53%	69%	68%	68%	86%	85%
5												
6	Total Revenue Requirement for City of Nashua Ownership	\$31,548	\$31,543	\$31,551	\$32,728	\$32,741	\$32,678	\$33,864	\$33,893	\$33,938	\$35,691	\$35,736
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
8	Rate Increase for City of Nashua Ownership - Total Amount	\$12,948	\$12,943	\$12,951	\$14,128	\$14,141	\$14,078	\$15,264	\$15,293	\$15,338	\$17,091	\$17,136
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	70%	70%	70%	76%	76%	76%	82%	82%	82%	92%	92%
10												
11	Rate Comparison											
12	Difference between City and PWW - Total Amount	(\$5,395)	(\$5,522)	(\$5,639)	(\$4,112)	(\$4,262)	(\$4,312)	(\$2,443)	(\$2,613)	(\$2,774)	(\$1,076)	(\$1,272)
13	Difference between PWW - Percent above \$18.6 Million	41%	40%	39%	54%	53%	53%	69%	68%	68%	86%	85%
14	Difference between City - Percent above \$18.6 Million	70%	70%	70%	76%	76%	76%	82%	82%	82%	92%	92%
15												
16	Cumulative Difference PWW to City - Total (A)	(\$5,395)	(\$10,917)	(\$16,556)	(\$20,669)	(\$24,931)	(\$29,243)	(\$31,686)	(\$34,299)	(\$37,072)	(\$38,149)	(\$39,420)
Note: (A)												
	Cumulative Difference PWW to City - (Original GES Exh.7 Amount)	\$3,043	\$5,953	\$8,742	\$12,826	\$16,768	\$20,583	\$25,873	\$31,015	\$36,019	\$42,703	\$49,225
	Difference from Adjusted Cumulative Difference PWW to City	\$8,438	\$16,870	\$25,298	\$33,495	\$41,699	\$49,826	\$57,559	\$65,314	\$73,091	\$80,852	\$88,645
	Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)	-17.1%	-17.6%	-17.9%	-12.6%	-13.0%	-13.2%	-7.2%	-7.7%	-8.2%	-3.0%	-3.6%

**GES Exhibit 7 - Adjusted & Corrected
Using a Mid-Point Purchase Price
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Total Operating Revenue Required PWW	\$34,344	\$38,237	\$38,080	\$37,951	\$42,344	\$42,177	\$39,378	\$44,721	\$44,834	\$44,987	\$50,939
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
3	Rate Increase Required for PWW - Total Amount	\$15,744	\$19,637	\$19,480	\$19,351	\$23,744	\$23,577	\$20,778	\$26,121	\$26,234	\$26,387	\$32,339
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	85%	106%	105%	104%	128%	127%	112%	140%	141%	142%	174%
5												
6	Total Revenue Requirement for City of Nashua Ownership	\$35,797	\$37,876	\$37,935	\$38,016	\$40,448	\$40,524	\$40,621	\$43,445	\$43,534	\$43,647	\$46,902
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600
8	Rate Increase for City of Nashua Ownership - Total Amount	\$17,197	\$19,276	\$19,335	\$19,416	\$21,848	\$21,924	\$22,021	\$24,845	\$24,934	\$25,047	\$28,302
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	92%	104%	104%	104%	117%	118%	118%	134%	134%	135%	152%
10												
11	Rate Comparison											
12	Difference between City and PWW - Total Amount	(\$1,453)	\$361	\$145	(\$65)	\$1,896	\$1,653	(\$1,243)	\$1,276	\$1,300	\$1,340	\$4,037
13	Difference between PWW - Percent above \$18.6 Million	85%	106%	105%	104%	128%	127%	112%	140%	141%	142%	174%
14	Difference between City - Percent above \$18.6 Million	92%	104%	104%	104%	117%	118%	118%	134%	134%	135%	152%
15												
16	Cumulative Difference PWW to City - Total (A)	(\$40,874)	(\$40,512)	(\$40,368)	(\$40,432)	(\$38,536)	(\$36,883)	(\$38,126)	(\$36,850)	(\$35,549)	(\$34,209)	(\$30,172)
Note: (A)												
	Cumulative Difference PWW to City - (Original GES Exh.7 Amount)	\$55,601	\$63,887	\$72,005	\$79,965	\$90,093	\$100,038	\$107,152	\$117,122	\$127,185	\$137,365	\$150,714
	Difference from Adjusted Cumulative Difference PWW to City	\$96,475	\$104,399	\$112,373	\$120,397	\$128,629	\$136,921	\$145,278	\$153,972	\$162,734	\$171,574	\$180,886
	Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)	-4.1%	1.0%	0.4%	-0.2%	4.7%	4.1%	-3.1%	2.9%	3.0%	3.1%	8.6%

**GES Exhibit 7 - Adjusted & Corrected
Using a Mid-Point Purchase Price
Revenue Requirements
Difference Between PWW and Nashua (2007-2036)**

Line	Description (All Dollar Figures in Thousands)	2029	2030	2031	2032	2033	2034	2035	2036	Total
1	Total Operating Revenue Required PWW	\$51,024	\$51,156	\$57,798	\$57,854	\$57,961	\$65,382	\$65,408	\$65,491	\$1,256,557
2	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$558,000
3	Rate Increase Required for PWW - Total Amount	\$32,424	\$32,556	\$39,198	\$39,254	\$39,361	\$46,782	\$46,808	\$46,891	\$698,557
4	Rate Increase Required for PWW - Percent Increase (Line 3 / Line 2)	174%	175%	211%	211%	212%	252%	252%	252%	125%
5										
6	Total Revenue Requirement for City of Nashua Ownership	\$47,005	\$47,134	\$50,866	\$50,981	\$51,125	\$55,386	\$55,512	\$55,672	\$1,228,337
7	Existing Revenue	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$18,600	\$558,000
8	Rate Increase for City of Nashua Ownership - Total Amount	\$28,405	\$28,534	\$32,266	\$32,381	\$32,525	\$36,786	\$36,912	\$37,072	\$670,337
9	Rate Increase for City of Nashua Ownership - Percent Increase (Line 8 / Line 7)	153%	153%	173%	174%	175%	198%	198%	199%	120%
10										
11	Rate Comparison									
12	Difference between City and PWW - Total Amount	\$4,019	\$4,022	\$6,932	\$6,873	\$6,836	\$9,996	\$9,896	\$9,819	\$28,220
13	Difference between PWW - Percent above \$18.6 Million	174%	175%	211%	211%	212%	252%	252%	252%	125%
14	Difference between City - Percent above \$18.6 Million	153%	153%	173%	174%	175%	198%	198%	199%	120%
15										
16	Cumulative Difference PWW to City - Total (A)	(\$26,153)	(\$22,131)	(\$15,199)	(\$8,326)	(\$1,490)	\$8,505	\$18,401	\$28,220	
Note: (A)										
	Cumulative Difference PWW to City - (Original GES Exh.7 Amount)	\$164,123	\$177,623	\$194,652	\$211,713	\$228,834	\$249,899	\$270,961	\$292,053	
	Difference from Adjusted Cumulative Difference PWW to City	\$190,276	\$199,754	\$209,851	\$220,039	\$230,324	\$241,394	\$252,560	\$263,833	
	Percentage Difference Between PWW's and Nashua's Annual Revenue Requirement ((Line 1 - Line 6) / Line 6)	8.6%	8.5%	13.6%	13.5%	13.4%	18.0%	17.8%	17.6%	

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

City of Nashua: Taking of Pennichuck Water Works, Inc.

Docket No. DW 04-048

**LIMITED UPDATE TESTIMONY
OF
ROBERT F. REILLY**

November 14, 2006

1 **Q. Please state your name, business address and by whom you are employed.**

2 A. My name is Robert F. Reilly. My business address is 8600 West Bryn Mawr Avenue,
3 Suite 950-N, Chicago, Illinois 60631-3505. I am an appraiser and am employed by
4 Willamette Management Associates (“Willamette”).

5 **Q. Did you previously provide testimony in this docket?**

6 A. Yes. I was retained by counsel for Pennichuck Water Works, Inc. (“PWW”) to estimate
7 the fair market value of the PWW operating assets. In that capacity, I have submitted
8 testimony in this docket twice.

9 In January 2006 I submitted my appraisal report, dated January 11, 2006, (the
10 “Willamette Report”), and testimony that summarized the results of my appraisal (the
11 “Willamette Appraisal”). In that testimony (the “January Testimony”), I concluded that,
12 as of December 31, 2004, the fair market value of the PWW operating assets was
13 \$248,400,000.

14 In May 2006 I submitted rebuttal testimony that analyzed the January 12, 2006
15 appraisal report prepared by George E. Sansoucy, P.C., LLC (“the Sansoucy Report”)
16 and formed an opinion as to whether the appraisal presented in the Sansoucy Report (“the
17 Sansoucy Appraisal”) estimates the fair market value of the PWW operating assets. In
18 that testimony (the “Rebuttal Testimony”), I summarized the results of my analysis and
19 concluded that the Sansoucy Appraisal is not a reliable indicator of the fair market value
20 of the PWW operating assets. My testimony, along with the attached rebuttal report
21 dated May 22, 2006 (“the Willamette Rebuttal Report”), discussed the 14 fundamental
22 errors in the Sansoucy Appraisal that render the report not reliable for valuation purposes.

1 Q. What is the purpose of your limited update testimony?

2 A. At the request of counsel for PWW, I performed two updates.

3 First, I have updated the Willamette Appraisal to bring the valuation date forward.
4 The Willamette Appraisal was prepared and filed in January 2006 and was based on
5 financial information as of December 31, 2004. In my January 2006 testimony, I noted
6 that I would update the appraisal report closer to the date of hearing based on the most
7 current financial and asset information available as of that time. The most recent and
8 available financial statements of PWW for a complete fiscal year are dated as of
9 December 31, 2005, and I have used this recent financial information to update the
10 Willamette Appraisal. A copy of the update to the appraisal report (the "Updated
11 Willamette Appraisal"), together with appendices and exhibits, is attached hereto as
12 Attachment RFR-3. I concluded that, as of December 31, 2005 the fair market value of
13 the PWW operating assets is \$273,400,000.

14 Second, as an update to my Rebuttal Testimony, I performed an analysis of the
15 deposition of George E. Sansoucy ("Sansoucy") dated July 11, 2006 and July 12, 2006
16 ("the Sansoucy Deposition") and the deposition of Glenn C. Walker ("Walker") dated
17 July 13, 2006 ("the Walker Deposition"). The Depositions both reinforce and
18 supplement the criticisms that were outlined in the Rebuttal Testimony. I prepared a
19 report describing my analysis and the conclusions I reached. A copy of that report,
20 together with appendices and exhibits is attached hereto as Attachment RFR-4.

21 Q. Does that conclude your testimony?

22 A. Yes.

Robert F. Reilly
RFR- 3
DW 04-048
25 Pages



Willamette Management Associates

November 14, 2006

Joe A. Conner, Esq.
Baker, Donelson, Bearman, Caldwell & Berkowitz, PC
1800 Republic Centre
633 Chestnut Street
Chattanooga, Tennessee 37450

Thomas J. Donovan, Esq.
McLane, Graf, Raulerson & Middleton, PA
City Hall Plaza
900 Elm Street
Manchester, New Hampshire 03105

Dear Messrs. Conner and Donovan:

We understand that you represent Pennichuck Water Works, Inc. ("Pennichuck") and its parent Pennichuck Corporation in a condemnation proceeding ("the dispute") with the City of Nashua, New Hampshire ("Nashua" or "the City"). We understand that the City has filed a petition to condemn the Pennichuck subsidiary of Pennichuck Corporation.

We understand that the dispute is pending before the New Hampshire Public Utilities Commission ("the PUC").

We understand that the dispute involves the valuation of all of the Pennichuck business operations, including all of the tangible property and intangible property of the operating business, as of a contemporaneous date.

At your request, we have estimated the fair market value of the Pennichuck operating assets as of December 31, 2005, based on an update of the December 31, 2004 valuation. This valuation update should not be considered independent of the December 31, 2004 valuation.

PURPOSE AND OBJECTIVE OF THE ANALYSIS

The objective of this analysis is to estimate the fair market value of the Pennichuck operating assets as of December 31, 2005, based on an update of the December 31, 2004 valuation. The Pennichuck operating assets consist of the Pennichuck water source, storage, treatment, and distribution property, both tangible and intangible.

The purpose of this analysis is to provide an independent valuation opinion to assist you in your representation of Pennichuck in the dispute. No other purpose is intended or inferred.

DEFINITION OF VALUE AND PREMISE OF VALUE

For the purpose of this analysis, we define fair market value as the price at which an asset would change hands between a willing buyer and a willing seller, when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, and both parties have reasonable knowledge of the relevant facts.

We analyzed the Pennichuck operating assets based on the premise of value in continued use, as a going concern. Based on our analysis, and in our opinion, this premise of value represents the highest and best use of the subject operating assets.

VALUATION ANALYSIS

As part of our analysis, we considered the three generally accepted approaches to the valuation of the operating assets of a going concern business: (1) the asset-based approach, (2) the income approach, and (3) the sales comparison approach. In conducting our analysis, we relied on (1) the asset-based approach and (2) the income approach.

Asset-Based Approach

The asset-based approach is based on the premise that the value of assets operating as a business enterprise is equal to (1) the current value of all of the subject operating assets (both tangible property and intangible property) less (2) the current value of the subject liabilities (both recorded and contingent).

In our asset-based approach analysis, we used the asset accumulation method.

In this analysis, we added the indicated values of the Pennichuck (1) tangible personal property, (2) operating real estate and real property interests, and (3) intangible personal property in order to estimate the fair market value of the Pennichuck total operating assets.

For this valuation update, we relied on the intangible personal property value indications and the operating real estate and real property interests value indications from the December 31, 2004 valuation.

Based on the asset-based approach/asset accumulation method (and after considering the impact of economic obsolescence), the indicated fair market value of the Pennichuck operating assets, as of December 31, 2005, based on an update of the December 31, 2004 valuation, is \$266,400,000, rounded.

Income Approach

The income approach is based on the premise that the value of the operating assets of a going concern business is the present value of the economic income expected to be derived from the assets.

In our income approach analysis, we used the discounted cash flow method.

Based on the income approach/discounted cash flow method, the indicated fair market value of the Pennichuck operating assets, as of December 31, 2005, based on an update of the December 31, 2004 valuation, is \$283,900,000, rounded.

VALUATION SYNTHESIS

In our valuation synthesis, we assigned the greatest weight to the asset-based approach value indication for several reasons.

First, the asset-based approach discretely identifies and individually values all of the tangible property and intangible property subject to the dispute. Second, unlike the other valuation approaches, which indirectly estimate the value of the subject operating assets, the asset-based approach directly values the Pennichuck operating assets. Third, since the Pennichuck operating assets exist for the special purpose of supplying potable water and fire protection to the residents of Nashua and ten surrounding New Hampshire municipalities, the Pennichuck operating assets represent "special-purpose" property. In the appraisal of special-purpose property, the cost approach is commonly used, and the asset-based approach relies principally on the cost approach to value individual tangible property and intangible property.

We also assigned a significant weight to the income approach value indication. This valuation approach is the approach typically relied on by corporate acquirers to price M&A transactions. This is because the income approach enables the acquirer to evaluate (1) whether or not the acquirer can finance the potential acquisition and (2) whether or not the acquirer can earn a fair rate of return on the acquisition price.

Business Operations

For these reasons, we weighted the value indications as follows: (1) asset-based approach/asset accumulation method, 60 percent, and (2) income approach/discounted cash flow method, 40 percent.

Based on our analysis and in our opinion, the fair market value of the Pennichuck operating assets, as of December 31, 2005, based on an update of the December 31, 2004 valuation, is (rounded):

\$273,400,000.

A valuation report, which describes in greater detail the analytical procedures performed and the value conclusions reached in this analysis, accompanies this opinion.

SUMMARY AND CONCLUSION

During this assignment, we were provided with unaudited financial and operational data with respect to Pennichuck. We accepted these data without independent verification or confirmation.

We are independent of Pennichuck and all other parties associated with the dispute. We have no current or prospective financial interest in the subject assets. Our fee for this analysis was in no way influenced by the results of our valuation.

Very truly yours,

WILLAMETTE MANAGEMENT ASSOCIATES

Robert Reilly

Robert F. Reilly

EXHIBIT 1
PENNICHUCK WATER WORKS, INC.
FAIR MARKET VALUE OF OPERATING ASSETS
VALUATION SYNTHESIS AND CONCLUSION
AS OF DECEMBER 31, 2005
(BASED ON AN UPDATE OF THE DECEMBER 31, 2004 VALUATION)
(IN \$000s)

<u>VALUATION APPROACH AND METHOD</u>	<u>Indicated Value</u>	<u>Exhibit Reference</u>
<u>ASSET-BASED APPROACH</u>		
Asset Accumulation Method [a]	266,400	17
<u>INCOME APPROACH</u>		
Discounted Cash Flow Method	<u>283,900</u>	21
Indicated Fair Market Value of Operating Assets [b]	<u>273,400</u>	
Fair Market Value of Total Operating Assets, Rounded	<u>273,400</u>	

Footnotes:

- a. Using the cost approach and, specifically, the reproduction cost new less depreciation (RCNLD) method to value the individual intangible property and the replacement cost new less depreciation method to value the individual tangible property.
- b. In our valuation synthesis and conclusion, we weighted the value indications from each valuation method as follows: (1) asset accumulation method, 60%; (2) discounted cash flow method, 40%.

EXHIBIT 2
PENNICHUCK WATER WORKS, INC.
HISTORICAL AND COMMON-SIZE INCOME STATEMENTS
AS OF DECEMBER 31, 2005

(in \$000s)	Fiscal Years Ended December 31,					Common-Size				
	2005	2004	2003	2002	2001	2005	2004	2003	2002	2001
Operating Revenue	16,952	15,685	15,050	15,071	13,919	100.0%	100.0%	100.0%	100.0%	100.0%
Operating & Maintenance Expenses										
Labor	686	772	807	657	649	4.0%	4.9%	5.4%	4.4%	4.7%
Fuel, Power, & Chemicals	1,471	930	884	1,122	1,216	8.7%	5.9%	5.9%	7.4%	8.7%
Regulatory Expense	43	39	35	23	24	0.3%	0.2%	0.2%	0.1%	0.2%
Supervision and Engineering	977	880	850	850	755	5.8%	5.6%	5.7%	5.6%	5.4%
Administrative and General Salaries	2,293	1,852	1,836	1,658	1,619	13.5%	11.8%	12.2%	11.0%	11.6%
Insurance	414	422	354	270	196	2.4%	2.7%	2.4%	1.8%	1.4%
Pensions	2,213	1,804	2,094	1,571	1,340	13.1%	11.5%	13.9%	10.4%	9.6%
General Office/Customer Accounting	(233)	(269)	(594)	(706)	(369)	-1.4%	-1.7%	-3.9%	-4.7%	-2.7%
Maintenance & Miscellaneous	1,263	1,339	1,225	879	894	7.5%	8.5%	8.1%	5.8%	6.4%
Total Operating & Maintenance Expenses	9,127	7,769	7,490	6,324	6,324	53.8%	49.5%	49.8%	42.0%	45.4%
Depreciation and Amortization Expenses	2,448	2,619	2,446	2,290	2,068	14.4%	16.7%	16.3%	15.2%	14.9%
Non-Income Taxes										
Property Taxes	1,380	1,414	1,533	1,350	1,421	8.1%	9.0%	10.2%	9.0%	10.2%
Payroll Taxes	420	365	358	326	290	2.5%	2.3%	2.4%	2.2%	2.1%
General Taxes	-	-	0	(1)	2	0.0%	0.0%	0.0%	0.0%	0.0%
Total Non-Income Taxes	1,801	1,779	1,891	1,676	1,713	10.6%	11.3%	12.6%	11.1%	12.3%
Operating Income before Income Taxes	3,576	3,518	3,223	4,780	3,814	21.1%	22.4%	21.4%	31.7%	27.4%

Sources: Historical financial statements provided by Pennichuck management.

EXHIBIT J
 PENNICHUCK WATER WORKS, INC.
 HISTORICAL AND COMMON-SIZE BALANCE SHEET
 AS OF DECEMBER 31, 2005

ASSETS	As of					Common Size
	2005	2004	2003	2002	2001	
Current and Accrued Assets	6,279	1,233	1,079	887	61	0.0%
Cash and Cash Equivalents (a)	1	1,079	887	887	61	0.1%
Accounts and Notes Receivable - Net (b)	435	743	574	574	574	0.9%
Prepayments	75	69	69	69	69	0.1%
Prepaid Taxes	-	495	299	275	223	0.4%
Accrued Utility Payables	1,766	1,500	1,389	1,389	1,389	1.9%
Total Current and Accrued Assets	9,927	3,911	3,433	3,433	3,433	4.4%
Liability Total	111,346	109,664	99,419	89,481	83,117	117.0%
Long-Term Debt in Service	(20,183)	(20,819)	(21,703)	(21,873)	(22,111)	(19.8)%
Less: Utility Plant Acquisition Adjustment	(881)	(202)	(203)	(220)	(231)	(0.2)%
Total Non-Utility Total	90,262	71,140	66,993	67,003	59,695	91.7%
Deferred Liabilities	4,173	2,292	1,926	1,926	1,926	4.4%
TOTAL LIABILITIES	94,435	73,432	68,919	69,184	64,378	100.0%
Current and Accrued Liabilities	1,578	469	376	447	179	1.7%
Accounts Payable	469	170	131	134	134	0.2%
Current Deposits	156	170	123	134	134	0.2%
Accrued Interest	466	342	350	348	348	0.4%
Other Current Liabilities	2,152	2,128	1,791	1,792	1,794	2.2%
Total Current and Accrued Liabilities	4,382	3,639	3,609	3,732	3,732	4.4%
Long-Term Liabilities	21,957	29,920	29,984	27,963	22,211	22.8%
Long-Term Debt	21,957	29,920	29,984	27,963	22,211	22.8%
Other Liabilities	-	-	-	-	828	0.8%
Total Long-Term Liabilities	21,957	29,920	29,984	27,963	22,211	22.8%
Deferred Credits	960	933	966	1,012	1,079	1.0%
Payments for Tax Credits	960	933	966	1,012	1,079	1.0%
Deferred Income Taxes	6,363	6,894	6,932	7,193	8,475	8.4%
Advances for Contract Costs	87	137	183	211	275	0.2%
Other Deferred Credits	1,122	1,123	1,107	1,120	1,274	1.2%
Total Deferred Credits	10,670	8,990	9,263	9,112	9,666	11.3%
Planting Reserve	1,057	533	78	613	(482)	1.1%
Contributions in Aid of Construction	22,272	20,412	18,533	17,210	14,796	23.0%
Less: Amounts Available of CIPAC	(2,207)	(2,189)	(1,611)	(1,612)	(1,219)	(2.2)%
Total Net CIPAC	20,065	18,223	16,922	15,598	13,577	21.2%
Current Equity	30	30	30	30	30	0.0%
Common Stock	30	30	30	30	30	0.0%
Additional Paid-in Capital	27,818	12,958	12,058	12,009	18,671	17.3%
Other Comprehensive Income	(899)	(860)	(764)	(643)	-	(0.4)%
Retained Earnings	16,638	8,829	7,026	8,322	11,237	11.2%
Total Current Equity	26,970	20,370	19,379	19,623	29,978	27.0%
TOTAL LIABILITIES AND OWNERS' EQUITY	94,435	73,432	68,919	69,184	64,378	100.0%

Source: Historical financial statements provided by Pennichuck management

EXHIBIT 4
PENNICHUCK WATER WORKS, INC.
HISTORICAL COST AND COMMON-SIZE RATE BASE
AS OF DECEMBER 31, 2005
(IN \$000s)

Rate Base Components	At Historical Cost	Common-Size Analysis [a]
Plant in Service		
Gross Utility Plant in Service	111,346	205.4%
Less: Accum. Depreciation and Amort.	(30,986)	-57.2%
Net Plant in Service	80,360	148.3%
Additions to Rate Base		
Operating Working Capital	1,928	3.6%
Materials & Supplies	562	1.0%
Prepayments	75	0.1%
Unamortized Deferred Charges	2,013	3.7%
Amortization of Contributions	2,507	4.6%
Total Additions to Rate Base	7,087	13.1%
Deductions from Rate Base		
Contributions in Aid of Construction	22,572	41.6%
Customer Advances for Construction	87	0.2%
Customer Deposits	156	0.3%
Investment Tax Credit	900	1.7%
Deferred Income Taxes	8,562	15.8%
Regulatory Liability	971	1.8%
Total Deductions from Rate Base	33,249	61.3%
Rate Base	54,197	100.0%

Footnotes:

a. Expressed as a percentage of rate base.

Sources: Historical cost rate base data provided by Pennichuck management.

EXHIBIT 5
PENNICHUCK WATER WORKS, INC.
FINANCIAL RATIO ANALYSIS
AS OF DECEMBER 31, 2005

FINANCIAL RATIOS	Fiscal Years Ended December 31,				
	2005	2004	2003	2002	2001
SIZE					
Total Assets (\$000s)	94,459	77,573	72,640	68,784	64,278
Net Utility Plant (\$000s)	80,360	71,140	66,975	63,803	59,695
Revenue (\$000s)	16,952	15,685	15,050	15,071	13,919
Operating Income before Taxes (\$000s)	3,576	3,518	3,223	4,780	3,814
ACTIVITY/TURNOVER					
Asset Turnover	0.2	0.2	0.2	0.2	0.2
Net Utility Plant Turnover	0.2	0.2	0.2	0.2	0.2
Working Capital Turnover	3.1	51.8	60.6	33.3	-116.2
PROFITABILITY					
Return on Assets	3.8%	4.5%	4.4%	6.9%	5.9%
Return on Net Utility Plant	4.4%	4.9%	4.8%	7.5%	6.4%
Return on Revenue	21.1%	22.4%	21.4%	31.7%	0.0%

Sources: Exhibits 2 and 3 and Willamette Management Associates calculations.

EXHIBIT 6
PENNICHUCK WATER WORKS, INC.
FINANCIAL FUNDAMENTALS & NORMALIZATION ADJUSTMENTS
AS OF DECEMBER 31, 2005

(in \$000s)	Fiscal Years Ended December 31,				
	2005	2004	2003	2002	2001
Revenue	16,952	15,685	15,050	15,071	13,919
Operating Income before Income Taxes	3,576	3,518	3,223	4,780	3,814
Normalization Adjustments:					
Regulatory Expense	43	39	35	23	24
Property Taxes [a]	1,245	1,276	1,383	1,218	1,282
General Taxes	-	-	0	(1)	2
Total Normalization Adjustments	1,288	1,315	1,419	1,240	1,308
Normalized Operating Income before Income Taxes	4,864	4,833	4,641	6,020	5,123
Depreciation & Amortization Expense	2,448	2,619	2,446	2,290	2,068
NORMALIZED FINANCIAL FUNDAMENTALS					
EBIT [b]	4,864	4,833	4,641	6,020	5,123
EBITDA [c]	7,312	7,451	7,087	8,311	7,190

Footnotes:

- a. Excluding taxes assessed on land.
 - b. Earnings Before Interest and Taxes.
 - c. Earnings Before Interest, Taxes, Depreciation, and Amortization.
- Sources: Exhibit 2 and Willamette Management Associates calculations.

**EXHIBIT 7
 PENNICHUCK WATER WORKS, INC.
 DISTRIBUTION MAPS & AS-BUILT ENGINEERING DRAWINGS
 COST APPROACH
 REPRODUCTION COST NEW LESS DEPRECIATION METHOD
 AS OF DECEMBER 31, 2005**

<u>Main Inventory (in Linear Feet)</u>	<u>As-Built Fee [b]</u>	<u>Indicated Value</u>
2,244,076	\$3.00	6,732,228
Total Reproduction Cost New		6,732,228
Less: Depreciation and Obsolescence [a]		<u>0</u>
Indicated Reproduction Cost New Less Depreciation, Rounded		<u>6,700,000</u>

Footnotes:

a. The reproduction cost new of the maps and drawings considered in our analysis reflects only the cost to reproduce the maps and drawings that are required for the current operations of Pennichuck. The reproduction cost new does not include the costs necessary to reproduce historical maps and drawings that are no longer in active use for reference purposes. Accordingly, this reproduction cost new estimate is implicitly reduced for the amount of curable functional obsolescence (i.e., excess maps and drawings) associated with this intangible personal property. Therefore, we did not adjust the reproduction cost new estimate for any additional amount of functional obsolescence.

b. Pennichuck management provided the as-built fee per linear foot, which Pennichuck charges contractors for the engineering, inspection, and preparation of maps and drawings of transmission and distribution mains, in accordance with the rates approved by the PUC.

Sources: Information provided by Pennichuck management and Willamette Management Associates calculations.

**EXHIBIT 8
 PENNICHUCK WATER WORKS, INC.
 WATER PUMPING RIGHTS
 INCOME APPROACH
 DIRECT CAPITALIZATION METHOD
 AS OF DECEMBER 31, 2005**

<u>Average Annual Pumpage (in Gallons) [a]</u>	<u>Cubic Feet Per Gallon</u>	<u>Average Annual Pumpage (in Cubic Feet)</u>	<u>Average Volumetric Charge (per Cubic Foot) [b]</u>	<u>Indicated Value (\$)</u>
4,934,210	0.133680556	659,608	1.11	734,144
		Direct Capitalization Rate [c]		3%
		Indicated Fair Market Value		24,471,457
		Indicated Fair Market Value, Rounded		24,500,000

Footnotes:

- a. Pennichuck management provided the average annual pumpage from the water sources.
 - b. According to (1) information provided by Pennichuck management and (2) an internal water purchase pro forma, the average volumetric charge that Pennichuck Bedford pays to Manchester Water Works and Merrimack Village District for the water sources is \$1.11 per cubic foot.
 - c. Estimated as the Pennichuck weighted average cost of capital of 5% minus the Pennichuck expected long-term growth rate of 2%.
- Sources: Information provided by Pennichuck management and Willamette Management Associates calculations.

**EXHIBIT 9
PENNICHUCK WATER WORKS, INC.
WATER SYSTEM RECORDS AND REPORTS
COST APPROACH
REPRODUCTION COST NEW LESS DEPRECIATION METHOD
AS OF DECEMBER 31, 2005**

<u>Type of Record</u>	<u>Responsible Personnel</u>	<u>Number of Person-Hours to Reproduce</u>	<u>Average Base Cost per Person-Hour (\$)</u>	<u>Employee Benefits Cost Allocation Factor</u>	<u>Total Cost per Person-Hour (\$)</u>	<u>Number of Records</u>	<u>Indicated Value (\$)</u>
Meter Cards	Utility Technician	0.1	23	1.50	34	24,274	83,204
Gate Valve Records	Engineering Technician	0.5	27	1.50	40	8,450	168,140
Hydrant Records	Engineering Technician	1.0	27	1.50	40	2,445	97,302
Service Records	Utility Technician	0.1	23	1.50	34	24,274	83,204
Station Check Sheets	Water Treatment Plant Operator, Circuit Rider, Administrative	4.0	18	1.50	27	36	3,843
Total Reproduction Cost New							435,696
Less: Depreciation and Obsolescence (a)							0
Indicated Reproduction Cost New Less Depreciation, Rounded							435,696

Footnotes:

a. All of the records and reports considered in our analysis were in active use and contributing to the total value of Pennichuck as of the valuation date. The reproduction cost new of the records and reports reflects only the cost to reproduce the most recent data available. The reproduction cost new does not include costs necessary to reproduce historical records and reports that are no longer in active use for reference purposes. Therefore, we did not reduce the reproduction cost new estimate for any additional amount of functional obsolescence. Sources: Information provided by Pennichuck management and Willamette Management Associates calculations.

**EXHIBIT 10
PENNICHUCK WATER WORKS, INC.
SYNERGEN WORK ORDER DATABASE
COST APPROACH
REPRODUCTION COST NEW LESS DEPRECIATION METHOD
AS OF DECEMBER 31, 2005**

<u>Number of Work Work Orders [a]</u>	<u>Reproduction Time per Work Order (Person-Hours)</u>	<u>Total Reproduction Time (Person-Hours)</u>	<u>Responsible Personnel</u>	<u>Average Base Cost per Person-Hour (\$)</u>	<u>Employee Benefits Cost Allocation Factor</u>	<u>Total Cost per Person-Hour (\$)</u>	<u>Indicated Value (\$)</u>
67,800	4.5	305,100	Engineering, Administrative, Accounting	18	1.50	27	<u>8,149,690</u>
Total Reproduction Cost New							8,149,690
Less: Depreciation and Obsolescence [b]							0
Indicated Reproduction Cost New Less Depreciation, Rounded							<u>8,100,000</u>

Footnotes:

- a. The work order database tracks costs associated with the maintenance of the production, transmission, and distribution system, office and equipment maintenance, and customer accounting.
- b. The reproduction cost new of the work orders considered in our analysis reflects only the cost to reproduce the work orders related to the operating assets in current use as of December 31, 2005. The reproduction cost new does not include the costs necessary to reproduce work orders for retired assets. Accordingly, this reproduction cost new estimate is implicitly reduced for the amount of curable functional obsolescence (i.e., excess work orders) associated with this intangible personal property. Therefore, we did not adjust the reproduction cost new estimate for any additional amount of functional obsolescence.
- Sources: Information provided by Pennichuck management and Willanette Management Associates calculations.

**EXHIBIT 11
PENNICHUCK WATER WORKS, INC.
WATER TREATMENT LABORATORY REPORTS AND TEST DATA
COST APPROACH
REPRODUCTION COST NEW LESS DEPRECIATION METHOD
AS OF DECEMBER 31, 2005**

Type of Laboratory Report and Data	Annual Person-Hours to Perform	Average Base Cost per Person-Hour (\$)	Employee Benefits Cost Allocation Factor	Total Cost per Person-Hour (\$)	Number of Reports Prepared per Year	Total Annual Cost (\$)	Required Years of Records Retained	Indicated Value (\$)
NHDES Monthly Operating Reports	4	17	1.5	25	12	1,212	7	8,481
NHDES Water Use Reports	1	17	1.5	25	64	1,615	7	11,308
City Monthly Sludge Reports	1	17	1.5	25	12	303	5	1,514
NHDES Annual Reports for Sludge Lagoon Activity	2	17	1.5	25	1	50	7	353
NHWSEB DDBP Samples and Chlorine Residuals	2	15	1.5	23	20	923	10	9,231
NHWSEB Water Shed Bacteria Counts	1	23	1.5	35	16	554	1	354
City Sludge Analyzes	2	23	1.5	35	2	138	10	1,385
NHWSEB Emergency Action Plans	10	23	1.5	34	21	7,118	1	7,118
NHDES Performance Evaluation Samples	4	23	1.5	35	2	277	10	2,769
NHWSEB Sampling Waivers	5	22	1.5	33	21	3,438	3	10,313
Total Reproduction Cost New:								53,026
Less: Depreciation and Obsolescence [a]								9
Indicated Reproduction Cost New Less Depreciation, Rounded								<u>100,000</u>

Footnotes:

a Pennichuck may retain lab reports and test data beyond the minimum of one to ten years required by the NHDES, NHWSEB, or City. However, the lab reports and test data that are not required to be retained are nearly obsolete. Accordingly, we did not include in our analysis those lab reports and test data that are not required to be maintained by the NHDES, NHWSEB, or City. Therefore, we did not reduce the reproduction cost new estimate of the lab reports and test data for functional obsolescence.

Sources: Information provided by Pennichuck management and Willamette Management Associates calculations.

**EXHIBIT 12
PENNICHUCK WATER WORKS, INC.
SCADA COMPUTER SOFTWARE SYSTEM
COST APPROACH
REPRODUCTION COST NEW LESS DEPRECIATION METHOD
AS OF DECEMBER 31, 2005**

<u>Functional Design Components</u>	<u>Number of Person-Hours to Reproduce</u>	<u>Cost per Person- Hour (b)</u>	<u>Cost per Component (\$)</u>	<u>Total Number of Components</u>	<u>Indicated Value (\$)</u>
Engineering Drawings	8	\$70	\$560	601	336,560
Database Points (i.e., Blocks)	0.5	\$100	\$50	2,452	122,600
Water Treatment Plant PLC Programs	1400	\$85	\$119,000	1	119,000
Screens	8	\$100	\$800	307	245,600
Remote Sites	60	\$85	\$5,100	20	102,000
Communications	1000	\$100	\$100,000	1	100,000
					Total Reproduction Cost New
					1,025,760
					Less: Depreciation and Obsolescence [a]
					0
					Indicated Reproduction Cost New Less Depreciation, Rounded
					<u>1,000,000</u>

Footnotes:

a. The SCADA system completely satisfies the requirements of the users, in that it is fully functional and actively used as of the valuation date. It is continually updated, maintained, improved, and enhanced. Therefore, we determined that there is no functional obsolescence related to the SCADA system.

b. There is no employee benefit cost allocation factor since outside contractors contribute to the SCADA system maintenance.

Sources: Information provided by Pennichuck management and Willamette Management Associates calculations.

**EXHIBIT 13
PENNICHUCK WATER WORKS, INC.
TRAINED AND ASSEMBLED WORKFORCE
COST APPROACH
REPRODUCTION COST NEW LESS DEPRECIATION METHOD
AS OF DECEMBER 31, 2005**

Employee Position	Union Designation	Number of Employees	Average Hourly Base Wage Rate (\$)	Employee Benefits Cost Allocation Factor	Total Hourly Rate	Average Annual Cost per Employee (\$)	Recruiting and Advertising Cost (\$)	Interview Cost (\$)	Background Check and Physical Exam Cost (\$)	NHDES Certification	New Hire Training Cost (\$)	Indicated Value (\$)
Water Supply Engineer	Non-Union	1	39.60	1.50	59.40	123,352	8,237	622	261	0	12,355	21,475
Manager	Non-Union	7	34.58	1.50	51.87	107,896	7,193	622	261	0	10,790	132,061
Foreman	Union	6	28.39	1.50	42.58	88,572	5,905	622	261	0	8,857	93,871
Backhoe Operator	Union	2	28.30	1.50	42.44	88,282	5,885	622	261	0	8,828	31,194
Analyst	Non-Union	3	27.15	1.50	40.73	84,717	5,648	622	261	0	8,472	45,008
Community System Operator	Union	1	27.00	1.50	40.50	84,233	5,616	622	261	0	8,423	14,922
Engineering Technician	Non-Union	3	26.53	1.50	39.80	82,777	5,518	622	261	0	8,278	44,038
SCADA Control Technician	Non-Union	1	25.86	1.50	38.79	80,680	5,379	622	261	0	8,068	14,330
Construction Technician	Union	4	24.60	1.50	36.91	76,765	5,118	622	261	0	7,677	54,709
Mechanic	Union	1	23.08	1.50	34.62	72,009	4,800	622	261	0	7,200	12,884
Utility Technician	Union	9	22.85	1.50	34.28	71,296	4,753	622	261	50	7,130	115,342
Water Treatment Plant Operator	Union	10	21.72	1.50	32.58	67,765	4,518	622	261	50	6,776	122,272
Supervisor	Union	3	21.44	1.50	32.15	66,879	4,459	622	261	0	6,688	36,089
Meter Technician	Union	3	21.27	1.50	31.90	66,351	4,423	622	261	0	6,635	35,825
Accountant	Non-Union	3	21.88	1.50	31.62	65,761	4,384	622	261	0	6,576	35,530
Administrator	Non-Union	8	17.03	1.50	25.55	53,141	3,543	622	261	0	5,314	77,920
Circuit Rider	Union	1	15.43	1.50	23.14	48,131	3,209	622	261	0	4,813	8,905
CAD Technician	Non-Union	2	15.04	1.50	22.56	46,935	3,129	622	261	0	4,693	17,411
Meter Reader	Union	3	12.94	1.50	19.41	40,371	2,691	622	261	0	4,037	22,835
Lab Assistant	Non-Union	1	12.13	1.50	18.20	37,851	2,523	622	261	0	3,785	7,192
Customer Service Representative	Union	6	11.70	1.50	17.56	36,516	2,434	622	261	0	3,652	41,815
Maintenance	Non-Union	1	5.50	1.50	8.25	17,163	1,144	622	261	0	1,716	3,744
Total Reproduction Cost New												989,568
Less: Depreciation and Obsolescence (a)												0
Indicated Reproduction Cost New Less Depreciation, Rounded												1,000,000

Footnotes:

- a. The Pennichuck trained and assembled workforce was fully contributing to the total value of Pennichuck as of the valuation date. Therefore, we did not reduce the reproduction cost new of the Pennichuck trained and assembled workforce for any additional amount of functional obsolescence.
- b. Recruiting and advertising cost, through advertisements in two local newspapers, the Pennichuck website, and industry journals, represents 10 percent of annual base salary, per discussion with Pennichuck management.
- c. New hire training cost represents 10 percent of average annual cost per employee, per discussion with Pennichuck management.
- Sources: Information provided by Pennichuck management and Wilkowitz Management Associates calculations

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EXHIBIT 14
PENNICHUCK WATER WORKS, INC.
INTANGIBLE VALUE IN THE NATURE OF GOODWILL
INCOME APPROACH
CAPITALIZED EXCESS EARNINGS METHOD (IN \$000s)
AS OF DECEMBER 31, 2005
(IN \$000s)

Valuation Variables	Value as of 12/31/05	Required Rate of Return	Required Economic Income	Indicated Value of Goodwill
Net Working Capital, Rounded [a]	-	5.0%	[b]	-
Tangible Personal Property, Rounded [c]	418,800	5.0%	[b]	20,940
Operating Real Estate and Real Property, Rounded [d]	12,900	5.0%	[b]	645
Intangible Personal Property [e]:				
Distribution Maps & As-Built Engineering Drawings	6,700			
Water Pumping Rights	24,500			
Water System Records and Reports	400			
Synergen Work Order Database	1,100			
Water Treatment Laboratory Reports and Test Data	100			
SCADA Computer Software System	1,000			
Trained and Assembled Workforce	<u>1,000</u>			
Total Intangible Personal Property, Rounded	41,800	5.0%	[b]	<u>2,090</u>
Total Required Return on Tangible Property and Intangible Property				<u>23,675</u>
Average Projected EBIT for Fiscal Years 2006 through 2009 [f]				10,263
Present Value Factor @ 3%				<u>0.907</u>
Present Value of Average Projected EBIT for Fiscal Years 2006 through 2009				9,309
Less: Required Return on Total Assets				<u>23,675</u>
Equals: Excess Economic Income (Income Shortfall)				(14,366)
Divided by: Direct Capitalization Rate [g]				<u>7.0%</u>
Intangible Value in the Nature of Goodwill (Capitalized Income Shortfall)				\$ <u>(205,233)</u>
Intangible Value in the Nature of Goodwill (Capitalized Income Shortfall)				\$ <u>(205,200)</u>

Footnotes:

- a. Estimate based on net working capital that would be acquired in a transaction of these assets.
b. Equal to the estimated Pennichuck weighted average cost of capital.
c. Based on (1) the appraisal of the tangible personal property of Pennichuck as of December 31, 2004, performed by Ginnett Fleming, Inc., updated by (2) the tangible personal property additions and retirements from January 1, 2005 to December 31, 2005.
d. Based on the appraisal of the operating real estate and real property interests of Pennichuck as of December 31, 2004, performed by Applied Economic Research. This is used as an estimate of the operating real estate and real property interests as of December 31, 2005.
e. Source: Exhibits 7 through 13.
f. Source: Exhibit 19.
g. Equal to the Pennichuck weighted average cost of capital of 3% plus the expected long-term growth rate of 2%.

EXHIBIT 15
PENNICHUCK WATER WORKS, INC.
INTANGIBLE VALUE IN THE NATURE OF GOODWILL
COST APPROACH
INCOME SHORTFALL / ECONOMIC OBSOLESCENCE ANALYSIS
AS OF DECEMBER 31, 2005

Valuation Variables	Indicated Value (\$000s)
Capitalized Income Shortfall [a]	(205,200)
Operating Assets:	
Tangible Personal Property [b]	418,800
Intangible Personal Property [c]:	41,800
Total Operating Assets subject to Economic Obsolescence [d]	460,600
Economic Obsolescence Percent [e]	<u>-44.6%</u>
Economic Obsolescence Percent, Rounded	<u>-45%</u>

Footnotes:

- a. Source: Exhibit 14.
- b. Source: Exhibit 14.
- c. Source: Exhibit 14.
- d. Excludes working capital, real estate, and real property interests
- e. Equals capitalized income shortfall divided by the value of the operating assets subject to economic obsolescence.

EXHIBIT 16
PENNICHUCK WATER WORKS, INC.
COST APPROACH
REPRODUCTION COST NEW LESS DEPRECIATION METHOD
ALLOCATION OF ECONOMIC OBSOLESCENCE
AS OF DECEMBER 31, 2005

	Indicated RCNLD [a] (\$000s)	Less: Economic Obsolescence Percent [b]	Indicated Fair Market Value, adjusted for Economic Obsolescence, Rounded (\$000s)
Tangible Personal Property [c]	418,800	-45%	230,300
Intangible Personal Property [d]:			
Distribution Maps & As-Built Engineering Drawings	6,700	-45%	3,700
Water Pumping Rights [e]	24,500	-45%	13,500
Water System Records and Reports	400	-45%	200
Synergen Work Order Database	8,100	-45%	4,500
Water Treatment Laboratory Reports and Test Data	100	-45%	100
SCADA Computer Software System	1,000	-45%	600
Trained and Assembled Workforce	<u>1,000</u>	-45%	600
Total Indicated Value of Operating Assets, before Economic Obsolescence [f]	<u>\$ 460,600</u>		

Footnotes:

- a. Reproduction cost new less depreciation.
- b. Source: Exhibit 15.
- c. Based on (1) the appraisal of the tangible personal property of Pennichuck as of December 31, 2004, performed by Gannett Fleming, Inc., using the replacement cost new less depreciation method, updated by (2) the tangible personal property additions and retirements from January 1, 2005 to December 31, 2005.
- d. Source: Exhibits 7 through 13.
- e. Valued using an income approach method.
- f. Excludes working capital, real estate, and real property interests.

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EXHIBIT 17
PENNICHUCK WATER WORKS, INC.
ASSET-BASED APPROACH
ASSET ACCUMULATION METHOD
VALUE SUMMARY
AS OF DECEMBER 31, 2005
(BASED ON AN UPDATE OF THE DECEMBER 31, 2004 VALUATION)
(IN \$000s)

<u>Asset Category</u>	<u>Indicated Value</u>	<u>Exhibit Reference</u>
Net Working Capital	-	3
Tangible Personal Property	230,300	16
Operating Real Estate and Real Property Interests:		
Real Estate Owned in Fee	12,000	
Real Property Easements	<u>900</u>	
Total of Real Estate and Real Property	12,900	14
Intangible Personal Property:		
Distribution Maps & As-Built Engineering Drawings	3,700	16
Water Pumping Rights	13,500	16
Water System Records and Reports	200	16
Synergen Work Order Database	4,500	16
Water Treatment Laboratory Reports and Test Data	100	16
SCADA Computer Software System	600	16
Trained and Assembled Workforce	<u>600</u>	16
Total Intangible Personal Property	23,200	
Indicated Fair Market Value of Operating Assets	266,400	
Indicated Fair Market Value of Total Operating Assets, Rounded	<u>266,400</u>	

**EXHIBIT 18
FENNICHUCK WATER WORKS, INC.
PROJECTED INCOME STATEMENTS
AS OF DECEMBER 31, 2005**

REDACTED

**EXHIBIT 19
PENNICHUCK WATER WORKS, INC.
FINANCIAL FUNDAMENTALS & NORMALIZATION ADJUSTMENTS
AS OF DECEMBER 31, 2005**

REDACTED

EXHIBIT 20
PENNICHUCK WATER WORKS, INC.
PRESENT VALUE DISCOUNT RATE
WEIGHTED AVERAGE COST OF CAPITAL
AS OF DECEMBER 31, 2005

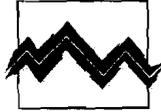
Cost of Equity Capital:		Source
Risk-Free Rate of Return	4.6%	<i>Federal Reserve Statistical Release, December 31, 2005 [a]</i>
Long-term Equity Risk Premium	7.2%	<i>S&P 500, Ibbotson Associates</i>
Small Company Equity Risk Premium	6.5%	<i>S&P 500, Ibbotson Associates [b]</i>
Total Cost of Equity Capital	18.3%	
Cost of Debt Capital:		
Average Cost of Debt	4.7%	Moody's Municipal Bond Yield Average, from
Total Cost of Debt Capital	4.7%	<i>Mergent Bond Record, December 2005 [c]</i>
Capital Structure:		
Market Value of Equity Capital	5%	Willamette Management Associates estimate [d]
Market Value of Debt Capital	95%	Willamette Management Associates estimate [d]
Total Invested Capital	100%	
WACC (Rounded)		
	5%	

Footnotes:

- a. Yield on 20-Year U.S. Treasury Bond as of December 31, 2005.
 - b. Based on rates of return on stocks in the smallest decile in terms of market capitalization.
 - c. Based on average yields of Aaa, Aa, A, and Baa rated municipal bonds as of December 31, 2005.
 - d. Based on typical capital structure of a public entity acquirer. Acquisitions of water utilities by public entities are typically financed using nearly 100 percent debt capital.
- Sources: As indicated above.

EXHIBIT 21
PENNICHUCK WATER WORKS, INC.
INCOME APPROACH
DISCOUNTED CASH FLOW METHOD
VALUE SUMMARY
AS OF DECEMBER 31, 2005
(BASED ON AN UPDATE OF THE DECEMBER 31, 2004 VALUATION)
(IN \$000s)

REDACTED



Willamette Management Associates

November 14, 2006

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Dear Messrs. Conner and Donovan:

We understand that you represent Pennichuck Water Works, Inc. ("PWW") and its parent Pennichuck Corporation in a condemnation proceeding ("the dispute") with the City of Nashua, New Hampshire ("Nashua" or "the City"). We understand that the City has filed a petition to condemn the PWW subsidiary of Pennichuck Corporation.

We understand that the dispute is pending before the New Hampshire Public Utilities Commission ("the PUC").

We understand that the dispute involves the valuation of all of the PWW business operations, including all of the tangible property and all of the intangible property of the PWW operating business, as of December 31, 2004.

INTRODUCTION

In our rebuttal report dated May 22, 2006 ("the Willamette Rebuttal Report"), we formed an opinion as to:

1. the appropriateness of the valuation approaches, methods, and procedures presented in a report dated January 12, 2006 ("the 2004 Sansoucy Report") prepared by George E. Sansoucy, P.E., LLC; and

2. the reliability of the fair market value conclusion presented in the 2004 Sansoucy Report.¹

At your request, we analyzed the deposition of George E. Sansoucy (“Sansoucy”) dated July 11, 2006 and July 12, 2006 (“the Sansoucy Deposition”) and the deposition of Glenn C. Walker (“Walker”) dated July 13, 2006 (“the Walker Deposition”), (collectively, “the Depositions”).

This analysis of the Depositions supplements the Willamette Rebuttal Report.

PURPOSE AND OBJECTIVE OF THE ANALYSIS

The objective of this analysis of the Depositions is to supplement the opinions, comments, and conclusions presented in the Willamette Rebuttal Report.

The purpose of this analysis is to assist you in your representation of PWW in the dispute.

This analysis is not to be considered an appraisal or a review appraisal, as those terms are described by Uniform Standards of Professional Appraisal Practice (“USPAP”).

ANALYSIS PROCEDURES

As part of our analysis, we relied on a collection of documents, including, but not limited to, the following:

1. the documents listed in the Willamette Rebuttal Report;
2. the 2004 Sansoucy Report; and
3. the Sansoucy Deposition and the Walker Deposition.

ANALYSIS SUMMARY

1. Special Purpose Property

The 2004 Sansoucy Report does not address whether the PWW system constitutes special purpose property. Sansoucy testified, however, that “From a valuation perspective, [the operating assets of PWW] are drifting away from special purpose property.”² This is a fundamental error.

Special purpose property is property (1) with a unique physical design, special construction materials, or a layout that restricts its utility to the use for which it was built and (2) that has relatively limited market at any particular time.³

First, PWW was built for the unique purpose of supplying potable water and fire protection to the residents of Nashua and ten surrounding New Hampshire municipalities. Second, the PWW system

¹ “In this appraisal, the term market value is considered to be synonymous with fair market value.” The 2004 Sansoucy Report. 2.

² The Sansoucy Deposition. 294.

³ Appraisal Institute. *The Appraisal of Real Estate*. 25.

represents property that is not frequently exchanged in the market. Since both requirements of special purpose property are met, the operating assets of PWW represent special purpose property.

The 1995 Sansoucy Report concluded that the PWW system qualified as special purpose property. That report stated that the two requirements to qualify as special purpose property were met: “[1] These types of properties [special purpose properties], such as a water utility, are designed, constructed, franchised, and utilized for a specific, monopolistic purpose and regulated by state government, federal government or both. [2] Public utility property is not routinely bought and sold between willing buyers and sellers, and therefore does not lend itself to a recurring and commonly known market system.”⁴

In the Sansoucy Deposition, and in regard to the operating assets of PWW, Sansoucy is asked, “Is it special purpose property in your opinion or not?” He responds, “Yes and no.” He continues, “Yes, it’s special purpose property within its immediate area, No, it is no longer special purpose property in the marketplace by definition of special purpose property in the marketplace.”⁵

Sansoucy contends that the only factor relevant to his determination that the PWW operating assets no longer constitute special purpose property in the marketplace is the fact that some water utility sale transactions have occurred nationally over a period of time.⁶

Furthermore, Sansoucy asserts that it is not necessary for such sale transactions to be comparable to the PWW system, just that such water utility sales be “transparent and identifiable.”⁷

Based on Sansoucy’s flawed analysis, it would be logical to conclude that every water utility system in the nation is “drifting away from special purpose property.” However, the mere fact that some water utility sale transactions have occurred nationally over the last eleven years does not automatically remove the PWW system (or any other water utility system in the nation) from the special purpose property classification.

Sansoucy considers all water utility system sales collectively as evidence of the exchange of water utilities in the marketplace. By doing so, Sansoucy fails to consider each water utility system sale individually. He has no opinion as to whether any (or all) of the water utility system sales are comparable to the PWW system. More importantly, Sansoucy did not consider contemporaneous market characteristics of each water utility system sold.

The detailed market analysis in our appraisal report and the Willamette Rebuttal Report demonstrates that there are no sufficiently comparable sales of water utility systems to support Sansoucy’s contention that the PWW operating assets are “drifting away from special purpose property.”

Therefore, the 2004 Sansoucy Report claim that the PWW system is not special purpose property is fundamentally erroneous. This error affects the proper weighting in the reconciliation of value between the various approaches because the cost approach is typically accorded more weight in valuing special purpose property. In fact, Sansoucy acknowledges that if the property qualifies as special purpose property, the cost approach to valuation is “an appropriate approach to consider and rely upon.”⁸

⁴ The 1995 Sansoucy Report. 8.

⁵ The Sansoucy Deposition. 294.

⁶ The Sansoucy Deposition. 300.

⁷ The Sansoucy Deposition. 295.

⁸ The Sansoucy Deposition. 315.

2. Intangible Personal Property

As noted in the Willamette Rebuttal Report, the 2004 Sansoucy Report fails to value the PWW intangible personal property. This is a fundamental error because the City is attempting to acquire all of the tangible property and all of the intangible property of the PWW operating business.

The 2004 Sansoucy Report does not discretely identify and individually value the PWW intangible property. Sansoucy stated, in regard to the categories of intangible property, "You need to take them one at a time, because they're in different places in the company records."⁹

Sansoucy indicated that some intangible property is valued through his cost approach. As to whether specific categories of intangible personal property (specifically, logs, data sheets, recordings and other records of every test performed on every component of the water treatment, transmission, and distribution facilities) are included in his cost approach value indication, Sansoucy says, "Half and half"¹⁰ As to whether engineering and design studies, either preliminary or final, complete or incomplete, together with all supporting data, work papers, and analyses related to every component of the water treatment, transmission, and distribution facilities are included in his cost approach value indication, Sansoucy says, "Those are generally in."¹¹

Sansoucy testified that other intangible property is not valued through the cost approach. In regard to these categories of intangible personal property (namely, the repair and maintenance records), Sansoucy states, "[Your income and market value indications] are used to make [your economic obsolescence calculation], but you don't pick up the value in that. You pick them up in those valuation methods."¹² In other words, Sansoucy concedes that the value of these particular categories of intangible personal property is excluded in his cost approach value indication. He argues that the value of these particular intangible personal property categories is included only in the income and market approach value indications.

In the Sansoucy Deposition, Sansoucy contends that the value of intangible personal property is included in his cost approach value indication. He states, "So, they're [the intangible personal property] either in the market and income portion of the cost approach or they are found in the original costs and are swept down through the original cost analysis. It's all part of the same approach, which is the cost approach."¹³ This is an error because the asset-based approach directly values all of the tangible and intangible personal property. In contrast, the income and market approaches indirectly estimate the value of the subject personal property.

Most fundamental, however, is the fact that the asset-based approach (1) discretely identifies and (2) individually values the subject personal property. As evidenced in the 2004 Sansoucy Report, and as confirmed in the Sansoucy Deposition, none of the PWW intangible personal property is (1) discretely identified or (2) individually valued.

Therefore, the 2004 Sansoucy Report's failure to properly value the PWW intangible personal property is fundamentally incorrect.

⁹ The Sansoucy Deposition. 350.

¹⁰ The Sansoucy Deposition. 361.

¹¹ The Sansoucy Deposition. 362.

¹² The Sansoucy Deposition. 360.

¹³ The Sansoucy Deposition. 353-354.

3. Continuing Property Records

As noted in the Willamette Rebuttal Report, the 2004 Sansoucy Report relies on inaccurate and incomplete original cost data in the tangible personal property trended original cost analysis.

The 2004 Sansoucy Report uses the *Pennichuck Water Works, Inc. – GAAP Taxable Assets Reports*, also referred to as the Continuing Property Records (“CPR”), as the data source for the original costs used in the tangible personal property trended original cost analysis.¹⁴

As discussed in the Willamette Rebuttal Report, PWW notified Sansoucy in a letter dated November 15, 2005 that (1) the original cost and (2) the acquisition date data within the CPR are not correct.

In the Sansoucy Deposition, Sansoucy is asked, “The trended original cost is problematic, isn’t it?” He responds, “It could be slightly off, sure.”¹⁵ Sansoucy later confirms that he “choose to go with the [CPR] as they were regardless of their accuracy.”¹⁶

Sansoucy (1) understands that the CPR are inaccurate and incomplete yet (2) relies on this inaccurate and incomplete data as the basis of his trended original cost analysis. Moreover, he admits that his tangible personal property trended original cost analysis “could be”¹⁷ incorrect due to his reliance on the CPR.

Therefore, the 2004 Sansoucy Report reliance on inaccurate and incomplete original cost data in the tangible personal property trended original cost analysis is fundamentally flawed.

4. Capital Expenditures and Functional Obsolescence Considered in Cost Approach Valuation Analysis

In the 2004 Sansoucy Report, Sansoucy applies functional obsolescence to items that are not, in fact, subject to functional obsolescence.

Functional obsolescence is the decrease in the value of an asset due to its inability to perform the function (or yield the periodic utility) for which it was originally designed. An asset’s deficiencies are considered curable when the prospective economic benefit of enhancing or modifying the asset exceeds the current cost (in terms of material, labor, and time) to change it. An asset’s deficiencies are considered incurable when the current cost of enhancing or modifying the asset (in terms of material, labor, and time) exceeds the expected future economic benefits of improving it.

According to the 2004 Sansoucy Report, “There is curable functional obsolescence due to deficiencies in the system caused by assets not complying with the required water quality regulations.”¹⁸ In the Sansoucy Deposition, Sansoucy acknowledged that there should not be functional obsolescence deductions for planned capital investments that are not required by water quality regulations.

¹⁴ Although the 2004 Sansoucy Report also refers to the Main Pipe Inventory as a data source, the Report does not indicate what information, if any, was extracted from the Main Pipe Inventory. The Main Pipe Inventory, also referred to as the engineering records, is simply a list of the PWW pipes. No cost information is included in the Main Pipe Inventory. Therefore, it appears that Sansoucy relied exclusively on the CPR as the data source for his original cost information.

¹⁵ The Sansoucy Deposition. 409.

¹⁶ The Sansoucy Deposition. 432.

¹⁷ The Sansoucy Deposition. 409.

¹⁸ The 2004 Sansoucy Report. 41.

Sansoucy included a significant deduction for functional obsolescence based on “the cost to cure.” This “cost to cure” was based on certain planned capital investments for the years 2004 through 2007 “related to the water treatment plant upgrade, meters radio reader program, the Armory pump house, the Shakespeare high pressure project, the [Fifield] tank, the community water systems and the EPA vulnerability upgrades.”¹⁹

In the Sansoucy Deposition, Sansoucy repeatedly contends that the water treatment plant upgrade, meters radio reader program, the Armory pump house, the Shakespeare high pressure project, the Fifield tank, the community water systems, and the EPA vulnerability upgrades are all required due to new water quality regulations.²⁰ Sansoucy is simply incorrect, according to PWW management, because only the water treatment plant upgrade is required due to new water quality regulations.

Sansoucy agrees that capital expenditures not mandated by new water quality regulations would not be subject to functional obsolescence.²¹ Nevertheless, Sansoucy erroneously applies functional obsolescence to the meters radio reader program, the Armory pump house, the Shakespeare high pressure project, the Fifield tank, the community water systems, and the EPA vulnerability upgrades, which are items that are not, in fact, subject to functional obsolescence.

Therefore, the 2004 Sansoucy Report application of functional obsolescence to items that are not, in fact, subject to functional obsolescence is fundamentally wrong.

5. Capital Expenditures Disregarded in Income Approach Valuation Analysis

Capital expenditures are erroneously excluded in the 2004 Sansoucy Report income approach valuation analysis. The measure of cash flow that is capitalized in the 2004 Sansoucy Report yield capitalization method fails to consider either (1) capital expenditures or (2) changes in working capital. Failure to include these capital expenditures has resulted in an inflated value under the 2004 Sansoucy Report income approach valuation analysis. This inflated value conceals the fact that the methodology employed in the 2004 Sansoucy Report income approach valuation analysis will, if applied to the actual cash flow stream, simply approximate rate base.

Fundamentally, the income approach is based on the economic principle that the value of the operating business assets is equal to the present value of the expected economic income to be derived by the owners of the subject assets. As stated in the 2004 Sansoucy Report, “The elements of the income capitalization approach that impact value are the reliability of the anticipated future cash flows and the cost of capital associated with the particular investment.”²²

In preparing the income approach, Walker did not include the effect of the capital expenditures in normalizing the cash flow of PWW for the income approach. Walker testified that he “looked at that as being something that would be [a] function of – future rate cases.”²³ In the Walker Deposition, Walker performed a rudimentary calculation of a corrected measure of cash flow, which adjusted for the capital expenditures that would be made.

Using the original assumptions of the 2004 Sansoucy Report capitalization method, including the PWW tax-affected rate of return as the cost of capital, the capitalization of this corrected measure of cash flow

¹⁹ The 2004 Sansoucy Report. 41.

²⁰ The Sansoucy Deposition. 441. 443.

²¹ The Sansoucy Deposition. 463.

²² The 2004 Sansoucy Report. 53.

²³ The Walker Deposition. 131-133.

results in a number that approximates the PWW rate base as of December 31, 2004.²⁴ This corrected measure of cash flow resulted in a value indication of approximately \$40,000,000. Rate base at that time was \$44,000,000.

The resultant approximation of the PWW rate base upon the capitalization of this corrected measure of cash flow indicates the serious error in disregarding capital expenditures in the 2004 Sansoucy Report income approach valuation analysis. Walker agrees that "Rate base is not fair market value."²⁵

Furthermore, as discussed in the Willamette Rebuttal Report, and as cited in the 1995 Sansoucy Report, "The choice of capitalization rates is dictated by the nature of the income stream to be capitalized. If the appraiser uses the rate of return allowed by the regulatory agency and capitalizes the regulatory agency's forecasted income at that rate, the resulting value estimate will be exactly equal to the utility's rate base. This result is a mathematical certainty and contributes nothing to the valuation process."²⁶

Therefore, the 2004 Sansoucy Report's exclusion of capital expenditures in the income approach valuation analysis is fundamentally invalid.

SUMMARY AND CONCLUSION

For the reasons explained in the Willamette Rebuttal Report, the 2004 Sansoucy Report is fundamentally flawed. Therefore, the 2004 Sansoucy Report is unreliable and fails to provide a reliable conclusion of the fair market value of the PWW operating assets as of December 31, 2004.

For the following reasons, our analysis of the Depositions further supports our conclusion:

1. The 2004 Sansoucy Report claim that the PWW system is not special purpose property is fundamentally erroneous;
2. The 2004 Sansoucy Report failed to properly value the PWW intangible personal property;
3. The 2004 Sansoucy Report reliance on inaccurate and incomplete original cost data in the tangible personal property trended original cost analysis is fundamentally flawed;
4. The 2004 Sansoucy Report application of functional obsolescence to items that are not, in fact, subject to functional obsolescence is fundamentally wrong; and
5. The 2004 Sansoucy Report exclusion of capital expenditures in the income approach valuation analysis is fundamentally invalid.

We are independent of PWW and all other parties associated with the dispute. We have no current or prospective financial interest in the subject assets. Our fee was in no way influenced by the results of this analysis.

This analysis is not to be considered an appraisal or a review appraisal, as those terms are described by USPAP.

²⁴ The Walker Deposition. 137.

²⁵ The Walker Deposition. 138.

²⁶ Woolery, Arlo. *Valuation of Railroad and Utility Property*. Lincoln Institute of Land Policy and Wichita Public Utility & Railroad Workshop. 35.

Very truly yours,

WILLAMETTE MANAGEMENT ASSOCIATES

Robert Reilly

Robert F. Reilly