

**STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION**

**DW 08-098**

**In the Matter of:  
Aquarion Water Co.  
Permanent Rate Proceeding**

**Direct Testimony  
of  
James J. Cunningham Jr.**

**June 9, 2009**

1   **Q.    Please state your name, current position and business address.**

2   **A.**    My name is James J. Cunningham Jr. and I am employed by the New Hampshire  
3           Public Utilities Commission (Commission) as a Utility Analyst IV. My business  
4           address is 21 S. Fruit Street, Suite 10, Concord New Hampshire, 03301.

5  
6   **Q.    Please summarize your educational and professional background.**

7   **A.**    I am a graduate of Bentley College, Waltham, Massachusetts, and I hold a  
8           Bachelor of Science-Accounting Degree. I joined the Commission in 1988 and  
9           currently hold the position of Utility Analyst IV. In 1995, I completed the  
10          NARUC Annual Regulatory Studies Program at Michigan State University,  
11          sponsored by the National Association of Regulatory Utility Commissioners. In  
12          1998, I completed the Depreciation Studies Program, sponsored by the Society of  
13          Depreciation Professionals, Washington, D.C. After completing the Depreciation  
14          Studies Program, I worked on a number of depreciation related cases filed with  
15          the New Hampshire Commission and I have provided direct testimony to the  
16          Commission pertaining to Depreciation Studies filed by New Hampshire  
17          regulated Water, Natural Gas and Electric Companies. In 2000, I graduated from  
18          the State of New Hampshire Certified Public Managers Program.  
19          Prior to joining the Commission I was employed by the General Electric  
20          Company. While at GE, I graduated from the Corporate Financial Management  
21          Training Program and I held assignments in General Accounting, Government  
22          Accounting & Contracts and Financial Analysis.  
23          I am a member of the Society of Depreciation Professionals (SDP).

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

2     **A.     My testimony provides recommendations on depreciation and amortization**  
3         **expense.**

4

5     **Q.     Please summarize your recommendations for depreciation and amortization**  
6         **expenses.**

7     **A.     In summary, my recommendation for depreciation and amortization expense is**  
8         **\$826,387, a reduction of \$80,021 from the amount proposed. See Attachment**  
9         **JJC-1, Schedule 4. My recommendation for depreciation expense is based on the**  
10        **Whole-Life Technique<sup>1</sup> and amounts to \$721,549, a reduction of \$44,721 from**  
11        **the amount proposed. See Attachment JJC-1, Schedule 1. My recommendation**  
12        **for amortization expense is \$104,838, a reduction of \$35,300 from the amount**  
13        **proposed.**

14

15    **Q.     Why are you recommending a reduction to Aquarion's proposed**  
16        **depreciation expense?**

17    **A.     There are three reasons for my recommended reduction. The first pertains to**  
18        **plant balances, the second pertains to average service lives and the third pertains**  
19        **to net salvage rates.**

20

21    **Q.     Please explain your recommended change to plant balances.**

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<sup>1</sup> The formula for calculating depreciation accrual rates using the Whole-Life Technique is as follows:

$$\frac{1 - \text{Net Salvage Rate (NSR)}}{\text{Average Service Life (ASL)}}$$

1     **A.**     I recommend certain reductions to plant balances based on the NHPUC Audit  
2             Report as follows: Plant Account 314 – Wells & Springs is reduced \$183,784;  
3             and, Plant Account 343 – Transmission & Distribution Mains is reduced  
4             \$142,794.<sup>2</sup>

5  
6     **Q.**     **Please explain your recommended change to Aquarion’s proposed average**  
7             **service lives.**

8     **A.**     My recommendation extends the average service life for Account 390 – General  
9             Plant Structures and Improvements from 35 years to 40 years. I recommend this  
10            change in order to reflect consistency with the average service lives proposed for  
11            all other structures and improvements. Specifically, the Company is proposing a  
12            40-year average service life for structures and improvements for Source of  
13            Supply, Pumping Plant, Water Treatment Plant and Transmission & Distribution  
14            Plant.

15  
16    **Q.**     **Please summarize your recommended changes to negative net salvage.**

17    **A.**     I recommend a reduction of five percentage points to proposed negative net  
18             salvage for several plant accounts: Account 314 – Wells and Springs, Account  
19             326 – Diesel Pumping Equipment and Account 332 – Water Treatment.

20  
21    **Q.**     **Why do you recommend a reduction in negative net salvage for these plant**  
22             **accounts?**

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<sup>2</sup> See Attachment JJC-2, NHPUC Audit Report dated June 2, 2009, Audit Issue #1 and Audit Issue #3.

1     **A.**     Negative net salvage arises at retirement, when cost of removal is greater than  
2             gross salvage. The Company proposes to increase negative net salvage rates for  
3             each of these plant accounts from zero to negative ten percent; but, the Company  
4             is not able to provide any historical data for the past ten years (1998-2008) to  
5             support its proposed increase. I believe that some provision for negative net  
6             salvage is appropriate; however, due to the lack of supporting documentation, I'm  
7             recommending only half of the proposed increase, or negative five percent at this  
8             time.

9

10    **Q.**     **Do you have any other recommendations with respect to net salvage?**

11    **A.**     Yes. I recommend a change for Account 391 – Office Furniture & Equipment. I  
12             noticed that the Company proposed zero net salvage for this account. However, I  
13             believe it's reasonable to expect some *positive* net salvage at the time of  
14             retirement. Positive net salvage arises at retirement when gross salvage is greater  
15             than cost of removal. Therefore, I'm recommending a nominal net salvage rate of  
16             positive three percent. By way of comparison to other New Hampshire Water  
17             Utilities, I note that the Commission's currently approved net salvage rate for this  
18             account for Pennichuck Water Works (PWW) is three percent.<sup>3</sup>

19

20    **Q.**     **Do you have any other comments pertaining to net salvage?**

21    **A.**     Yes. During the course of my review, I learned that the Company has not  
22             properly accounted for cost of removal. It appears that, during the period 1999 to  
23             2008, the Company did not segregate the cost of removal and recorded cost of

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<sup>3</sup> Reference Docket No. DW 06-073.

1 removal as part of the new asset. This practice was uncovered by the Company's  
2 depreciation consultant, Mr. Jay W. Shutt, PE, during the preparation of the  
3 Depreciation Study. Specifically, Mr. Shutt noted that the Company recorded  
4 costs of removal as a charge to plant-in-service, rather than as a charge to  
5 accumulated depreciation reserves. This practice resulted in the overstatement of  
6 proposed plant-in-service and the overstatement of proposed depreciation  
7 expense. The amount of the overstatement of plant is not known and, according  
8 to the Company, is not possible to provide.<sup>4</sup> Given that the amount of  
9 overstatement to plant is not known and cannot be calculated, I have not made  
10 any adjustments to reduce depreciation expense. However, I'd note that, going  
11 forward, the Company is implementing procedures to segregate and account for  
12 the cost of removal.<sup>5</sup>

13  
14 **Q. Please explain your recommendation for amortization expense.**

15 **A.** My recommendation for amortization expense has three components:  
16 organization costs (account 301) and other water source plant (account 317);  
17 depreciation reserve variances; and, CIAC. With respect to organization costs  
18 (account 301), the Company is proposing no depreciation or amortization  
19 expense. I recommend \$885 in amortization expense. I believe that organization

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<sup>4</sup> See Attachment JJC-3, Company response to Staff data requests 2-1 and 2-2. Staff requested a schedule summarizing the original cost, gross salvage and cost of removal by plant account for the plant retired during the 1999-2008 time period. In response, the Company indicated that it was not segregating gross salvage and cost of removal during the 1999-2008 time period; hence, it was not possible to provide the requested schedule.

<sup>5</sup> See Attachment JJC-3, Company response to Staff data request 2-2 which indicates that the Company is implementing procedures that will segregate gross salvage and cost of removal going forward.

1 costs should be amortized over a term of twenty years. The cost basis is \$17,700.<sup>6</sup>  
2 Therefore, with a term of twenty years, my testimony recommends an  
3 amortization amount of \$885. With respect to other water source plant (account  
4 317), I recommend amortization accounting, with a term of twenty years. By  
5 comparison, the Company is proposing depreciation expense based on an average  
6 service life of twenty years.<sup>7</sup> Since the amortization term and the average service  
7 life are both twenty years, the amounts are the same. However, consistent with  
8 past practice and given that the assets are not tangible assets, I recommend that  
9 the Company utilize amortization accounting.  
10

11 **Q. What is your recommendation for Amortization of Depreciation Reserve**  
12 **Variances and how does it compare to the Company's proposal?**

13 **A.** I have analyzed the depreciation reserves accumulated through the end of the test  
14 year, March 31, 2008, and calculate that Aquarion has a *deficit* in its depreciation  
15 reserve account amounting to \$612,111. A deficit arises when historical  
16 accumulated depreciation reserves are less than the reserves that would have been  
17 accumulated had the Company used the updated accrual rates. To cure this  
18 deficit, I'm recommending an amortization adjustment to increase depreciation  
19 reserves over a ten-year period, or \$61,211 per year. I believe that a ten-year  
20 amortization is reasonable because it is consistent with the generally accepted  
21 practice of updating depreciation studies every five to ten years.

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<sup>6</sup> See Attachment JJC-4, Shutt Depreciation Study, Table 5-1.

<sup>7</sup> See Attachment JJC-4, Shutt Depreciation Study, Table 5-1.

1 By comparison, the Depreciation Study prepared by the Company's consultant,  
2 Mr. Shutt, indicates that Aquarion has accumulated a deficit of \$973,963.<sup>8</sup> To  
3 cure this deficit, Aquarion proposes an amortization adjustment to increase the  
4 depreciation reserves over a ten-year period by \$97,396 per year.  
5 Based on the above, my recommendation yields an amortization adjustment that is  
6 \$36,185 less than proposed by Aquarion (i.e.  $\$97,396 - \$61,211 = \$36,185$ ).  
7 Please refer to Attachment JJC-1, Schedule 2 for the details of these amounts.  
8

9 **Q. What are the reasons for the differences between the Company's proposed**  
10 **and your recommended amount for accumulated depreciation reserve**  
11 **variance?**

12 **A.** The reasons are primarily attributable to different assumptions with respect to  
13 average service lives and net salvage rates. My testimony, as noted above, as  
14 compared to the Company's proposal, recommends slightly longer average  
15 service lives and slightly increased net salvage rates (i.e. lower reserves) than  
16 proposed.  
17

18 **Q. What is your recommendation for the amortization of Contributions in Aid**  
19 **of Construction (CIAC)?**

20 **A.** With respect to CIAC, I recommend a credit amortization of (\$32,213), no change  
21 from the amount proposed. This amortization amount mirrors the depreciation  
22 accrual rates that I'm recommending for Account 343 – Transmission &

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<sup>8</sup> See Attachment JJC-4, Shutt Depreciation Study, Table 5-1.



1 Distribution Mains. CIAC credit amortization amounts are calculated by  
2 multiplying the test year cost basis for CIAC by the depreciation accrual rate for  
3 Account 343. I'm recommending no change in depreciation accrual rates for  
4 Account 343; therefore, no adjustment is required. Please refer to Attachment  
5 JJC-1, Schedule 3 for the computation of proposed and recommended  
6 amortization amounts.

7  
8 **Q. Please summarize your overall recommendation for depreciation and**  
9 **amortization expense.**

10 **A.** Overall, my recommendation for depreciation and amortization expense is  
11 \$826,387, a reduction of \$80,021 from the proposed amount of \$906,408. See,  
12 Attachment JJC-1, Schedule 4.  
13 My recommendation for depreciation expense is \$721,549, a reduction of \$44,721  
14 from the proposed amount of \$766,270.  
15 My recommendation for amortization of organization costs and other water source  
16 plant is \$75,840, an increase of \$885 from the proposed amount of \$74,955.  
17 My recommendation for Amortization of Depreciation Reserve Variances is  
18 \$61,211, a reduction of \$36,185 from the amount proposed of \$97,396.  
19 My recommendation for amortization of CIAC is \$32,213, the same amount as  
20 proposed. See Attachment JJC-1, Schedule 4 for a summary of these amounts.

21  
22 **Q. Do you believe that your recommendation for depreciation and amortization**  
23 **expense is reasonable?**

1     **A.**     Yes, I believe my recommendation is reasonable. My recommendation adopts the  
2             March 31, 2008 test year-end plant balances. Although average plant balances are  
3             used for rate base purposes, my recommendation for depreciation expense adopts  
4             the higher year-end plant balances.

5             In addition, my recommendation incorporates the issues addressed in the NHPUC  
6             Audit Report.

7             Further, as noted above, the plant balances appear to be overstated at the end of  
8             the test year as a result of the Company's practice of charging costs of removal to  
9             the plant account rather than to the depreciation reserve account. Although this  
10            practice may have overstated the proposed plant in service balance at March 31,  
11            2008, I have not made any adjustments to reduce depreciation expense.

12           Finally, the Company proposes to increase negative net salvage rates for certain  
13           accounts (i.e. Wells & Springs, Diesel Pumping Equipment and Water Treatment)  
14           due to estimated increases in cost of removal. However, the Company has not  
15           segregated the cost of removal for the 1999-2008 time period; hence, there is  
16           inadequate historical data to support the estimated increases in cost of removal.

17           In spite of inadequate supporting data, my recommendation provides for fifty  
18           percent of the proposed increase in cost of removal for these accounts.

19

20    **Q.**     **Does that complete your testimony?**

21    **A.**     Yes, it does, thank you.

Aquarion Water Company of New Hampshire  
Staff Recommended Depreciation and Amortization Expense

Account Number	Account Description	Proposed					Staff Recommended					Variance
		Plant Balance at 3/31/08	Average Service Life (ASL)	Net Salvage Rate	Depreciation Accrual Rate	Depreciation Expense	Plant Balance at 3/31/08	Average Service Life (ASL)	Net Salvage Rate	Depreciation Accrual Rate	Depreciation Expense	
Source of Supply												
301	Organization (1)	\$ -	0	0%	0.00%	\$ -	\$ -	0	0%	0.00%	\$ -	
303	Miscellaneous Intangible Plant	\$ 20,727	30	0%	3.33%	\$ 691	\$ 20,727	0	0%	0.00%	\$ -	
310	Land and Land Rights (Supply)	\$ 460,591	0	0%	0.00%	\$ -	\$ 460,591	0	0%	0.00%	\$ -	
311	Structures & Improvements	\$ 611,459	40	-10%	2.75%	\$ 16,815	\$ 611,459	40	-10%	2.75%	\$ 16,815	
312	Collecting & Impounding Reservoirs	\$ -	0	0%	0.00%	\$ -	\$ -	0	0%	0.00%	\$ -	
314	Wells & Springs (2)	\$ 2,775,032	30	-10%	3.87%	\$ 101,751	\$ 2,591,248	30	-5%	3.50%	\$ 90,694	
316	Supply Mains	\$ 182,935	100	-20%	1.20%	\$ 2,195	\$ 182,935	100	-20%	1.20%	\$ 2,195	
317	Other Water Source Plant (1)	\$ -	0	0%	0.00%	\$ -	\$ -	0	0%	0.00%	\$ -	
	Total Source of Supply	\$ 4,050,744				\$ 121,452	\$ 3,866,960				\$ 109,704	
Pumping Plant												
320	Land & Land Rights (Pumping)	\$ 709	0	0%	0.00%	\$ -	\$ 709	0	0%	0.00%	\$ -	
321	Structures & Improvements	\$ 1,275,322	40	-10%	2.75%	\$ 35,071	\$ 1,275,322	40	-10%	2.75%	\$ 35,071	
325	Electric Pumping Equipment, Booster	\$ 880,695	35	-20%	3.43%	\$ 30,195	\$ 880,695	35	-20%	3.43%	\$ 30,195	
326	Diesel Pumping Equipment	\$ 32,297	30	-10%	3.67%	\$ 1,184	\$ 32,297	30	-5%	3.50%	\$ 1,130	
328	Other Pumping Equipment	\$ 34,764	25	-10%	4.40%	\$ 1,530	\$ 34,764	25	-10%	4.40%	\$ 1,530	
	Total Pumping Plant	\$ 2,223,787				\$ 67,980	\$ 2,223,787				\$ 67,927	
Water Treatment Plant												
330	Land & Land Rights (Treatment)	\$ -	0	0%	0.00%	\$ -	\$ -	0	0%	0.00%	\$ -	
331	Structures & Improvements	\$ 176,164	40	-10%	2.75%	\$ 4,845	\$ 176,164	40	-10%	2.75%	\$ 4,845	
332	Water Treatment	\$ 282,411	30	-10%	3.67%	\$ 10,355	\$ 282,411	30	-5%	3.50%	\$ 9,884	
	Total Water Treatment Plant	\$ 458,575				\$ 15,200	\$ 458,575				\$ 14,729	
Transmission & Distribution Plant												
340	Land & Land Rights (T&D)	\$ 154,202	0	0%	0.00%	\$ -	\$ 154,202	0	0%	0.00%	\$ -	
341	Structures & Improvements	\$ 289,440	40	-10%	2.75%	\$ 7,960	\$ 289,440	40	-10%	2.75%	\$ 7,960	
342	Distribution Reservoirs & Standpipes	\$ 1,272,926	60	-20%	2.00%	\$ 25,459	\$ 1,272,926	60	-20%	2.00%	\$ 25,459	
343	Transmission & Distribution Mains (2)	\$ 13,946,093	100	-20%	1.20%	\$ 167,353	\$ 13,803,299	100	-20%	1.20%	\$ 165,640	
345	Services	\$ 4,464,538	65	-20%	1.84%	\$ 81,990	\$ 4,464,538	65	-20%	1.85%	\$ 82,422	
346	Meiers	\$ 740,054	25	5%	3.80%	\$ 28,122	\$ 740,054	25	5%	3.80%	\$ 28,122	
347	Meier Installation	\$ 243,519	25	5%	3.80%	\$ 9,254	\$ 243,519	25	5%	3.80%	\$ 9,254	
348	Hydrants	\$ 592,797	50	-20%	2.40%	\$ 14,227	\$ 592,797	50	-20%	2.40%	\$ 14,227	
349	Other T&D Plant	\$ 98,704	20	0%	5.00%	\$ 4,935	\$ 98,704	20	0%	5.00%	\$ 4,935	
	Total Transmission & Distribution Plant	\$ 21,802,273				\$ 339,299	\$ 21,659,479				\$ 338,018	
General Plant												
389	Land & Land Rights (General)	\$ -	0	0%	0.00%	\$ -	\$ -	0	0%	0.00%	\$ -	
390	Structures & Improvements	\$ 590,808	35	-10%	3.14%	\$ 18,568	\$ 590,808	40	-10%	2.75%	\$ 16,247	
391	Office Furniture & Equipment	\$ 80,398	13	0%	7.69%	\$ 6,184	\$ 80,398	13	3%	7.46%	\$ 5,999	
391HIS	Computer Hardware	\$ 568,558	5	0%	20.00%	\$ 113,712	\$ 568,558	5	0%	20.00%	\$ 113,712	
392	Transportation Equipment	\$ 292,784	8	10%	11.25%	\$ 32,938	\$ 292,784	8	10%	11.25%	\$ 32,938	
393	Stores Equipment	\$ 17,891	20	0%	5.00%	\$ 895	\$ 17,891	20	0%	5.00%	\$ 895	
394	Tools, Shop & Garage Equipment	\$ 142,771	20	0%	5.00%	\$ 7,139	\$ 142,771	20	0%	5.00%	\$ 7,139	
395	Laboratory Equipment	\$ 23,907	15	0%	6.57%	\$ 1,594	\$ 23,907	15	0%	6.67%	\$ 1,594	
396	Power Operated Equipment	\$ 162,947	15	0%	6.67%	\$ 10,863	\$ 162,947	15	0%	6.67%	\$ 10,863	
397	Communications Eq. (non-tele)	\$ 286,606	10	0%	10.00%	\$ 28,661	\$ 286,606	10	0%	10.00%	\$ 28,661	
398	Miscellaneous Equipment	\$ 26,780	15	0%	6.57%	\$ 1,785	\$ 26,780	15	0%	6.67%	\$ 1,785	
	Total General Plant	\$ 2,193,450				\$ 222,338	\$ 2,193,450				\$ 191,171	
	Total Depreciation	\$ 30,728,629				\$ 766,270	\$ 30,402,251				\$ 721,549	
	Reconciliation to Total Utility Plant											
	Plus: Account 301	\$ 17,700	Term			\$ -	\$ 17,700	Term			\$ 885	
	Plus: Account 317	\$ 1,499,100	20			\$ 74,955	\$ 1,499,100	20			\$ 74,955	
	Total Amortization	\$ 1,516,800				\$ 74,955	\$ 1,516,800				\$ 75,840	
	Total Depreciation and Amortization	\$ 32,245,629				\$ 841,225	\$ 31,919,051				\$ 797,389	
											\$ (43,836)	
											\$ (44,721)	

(1) Staff recommendation reflects 20-year amortization of Organization Costs (Account 301) and Other Water Source Plant (Account 317)

(2) Incorporates reductions to plant balances in accordance with Staff Audit Report as follows:

Account 314	Account 314	Account 343	Total
Proposed	\$ 2,775,032	\$ 13,946,093	\$ 16,721,125
Audit Issue #1	\$ (26,891)	\$ (142,794)	\$ (169,685)
Audit Issue #3	\$ (156,893)	\$ -	\$ (156,893)
Sub-Total Audit Issues	\$ (183,784)	\$ (142,794)	\$ (326,578)
Staff Recommended	\$ 2,591,248	\$ 13,803,299	\$ 16,394,547

Aquarion Water Company of New Hampshire  
Staff Recommended Amortization of Depreciation Reserve Variance

Schedule 2

Account Number	Account Description	Plant Balance At 3/31/08 (1)	Staff Recommendation					Book (Over)/ Under Staff	10-Year Amortization	Variance
			Proposed Depreciation Acc. Rates	Recommended Depreciation Acc. Rates	Percent Adjustment Factor	Proposed Theoretical Reserve	Recommended Theoretical Reserve			
Source of Supply										
301	Organization	\$ -	0.00%	0.00%	0.00%	\$ -	\$ -	\$ -	\$ -	
303	Miscellaneous Intangible Plant	\$ 20,727	3.33%	0.00%	0.00%	\$ 3,624	\$ -	\$ 2,073	\$ (2,073)	\$ (207)
310	Land and Land Rights (Supply)	\$ 460,591	0.00%	0.00%	0.00%	\$ -	\$ -	\$ -	\$ -	
311	Structures & Improvements	\$ 611,459	2.75%	100.00%	100.00%	\$ 82,740	\$ 82,740	\$ 25,217	\$ 57,523	\$ 5,752
312	Collecting & Impounding Reservoirs	\$ -	0.00%	0.00%	0.00%	\$ -	\$ -	\$ -	\$ -	
314	Wells & Springs	\$ 2,775,032	3.67%	3.50%	95.45%	\$ 1,044,100	\$ 996,641	\$ 465,652	\$ 530,989	\$ 53,099
316	Supply Mains	\$ 182,935	1.20%	1.20%	100.00%	\$ 68,879	\$ 68,879	\$ 59,704	\$ 918	\$ 918
317	Other Water Source Plant	\$ -	0.00%	0.00%	0.00%	\$ 285,381	\$ -	\$ 64,354	\$ (64,354)	\$ (6,435)
	Total Source of Supply	\$ 4,050,744				\$ 1,484,724	\$ 1,148,260	\$ 617,000	\$ 531,260	\$ 53,126
Pumping Plant										
320	Land & Land Rights (Pumping)	\$ 709	0.00%	0.00%	0.00%	\$ -	\$ -	\$ -	\$ -	
321	Structures & Improvements	\$ 1,275,322	2.75%	2.75%	100.00%	\$ 488,486	\$ 488,486	\$ 373,821	\$ 114,665	\$ 11,467
325	Electric Pumping Equipment, Booster	\$ 860,695	3.43%	3.43%	100.00%	\$ 389,514	\$ 389,514	\$ 515,790	\$ (126,276)	\$ (12,628)
326	Diesel Pumping Equipment	\$ 32,297	3.67%	3.50%	95.45%	\$ 32,297	\$ 30,829	\$ 22,582	\$ 8,247	\$ 825
328	Other Pumping Equipment	\$ 34,764	4.40%	4.40%	100.00%	\$ 29,160	\$ 29,160	\$ 25,773	\$ 3,387	\$ 339
	Total Pumping Plant	\$ 2,223,787				\$ 939,457	\$ 937,989	\$ 937,986	\$ 23	\$ 2
Water Treatment Plant										
330	Land & Land Rights (Treatment)	\$ -	0.00%	0.00%	0.00%	\$ -	\$ -	\$ -	\$ -	
331	Structures & Improvements	\$ 176,164	2.75%	2.75%	100.00%	\$ 34,403	\$ 34,403	\$ 30,299	\$ 4,104	\$ 410
332	Water Treatment	\$ 282,411	3.67%	3.50%	95.45%	\$ 131,519	\$ 125,541	\$ 195,285	\$ (69,724)	\$ (6,972)
	Total Water Treatment Plant	\$ 458,575				\$ 165,922	\$ 159,944	\$ 225,564	\$ (65,620)	\$ (6,562)
Transmission & Distribution Plant										
340	Land & Land Rights (T&D)	\$ 154,202	0.00%	0.00%	0.00%	\$ -	\$ -	\$ -	\$ -	
341	Structures & Improvements	\$ 288,440	2.75%	2.75%	100.00%	\$ 44,771	\$ 44,771	\$ 136,815	\$ (92,044)	\$ (9,204)
342	Distribution Reservoirs & Standpipes	\$ 1,272,926	2.00%	2.00%	100.00%	\$ 701,225	\$ 701,225	\$ 672,963	\$ 28,232	\$ 2,823
343	Transmission & Distribution Mains	\$ 13,946,093	1.20%	1.20%	100.00%	\$ 2,649,725	\$ 2,649,725	\$ 2,687,969	\$ (38,274)	\$ (3,827)
345	Services	\$ 4,464,538	1.84%	1.85%	100.53%	\$ 1,260,585	\$ 1,267,237	\$ 1,400,931	\$ (133,694)	\$ (13,369)
346	Meters	\$ 740,054	3.80%	3.80%	100.00%	\$ 304,460	\$ 304,460	\$ 293,720	\$ 10,740	\$ 1,074
347	Meter Installation	\$ 243,519	3.80%	3.80%	100.00%	\$ 100,184	\$ 100,184	\$ 17,923	\$ 82,261	\$ 8,226
348	Hydrants	\$ 592,797	2.40%	2.40%	100.00%	\$ 289,593	\$ 289,593	\$ 220,362	\$ 69,231	\$ 6,923
349	Other T&D Plant	\$ 98,704	5.00%	5.00%	100.00%	\$ 16,532	\$ 16,532	\$ 3,697	\$ 12,835	\$ 1,284
	Total Transmission & Distribution Plant	\$ 21,802,273				\$ 5,367,075	\$ 5,373,727	\$ 5,434,440	\$ (60,713)	\$ (6,071)
General Plant										
389	Land & Land Rights (General)	\$ -	0.00%	0.00%	0.00%	\$ -	\$ -	\$ -	\$ -	
390	Structures & Improvements	\$ 590,808	3.14%	2.75%	87.50%	\$ 179,214	\$ 156,812	\$ 117,199	\$ 39,613	\$ 3,961
391	Office Furniture & Equipment	\$ 80,368	7.69%	7.46%	97.00%	\$ 73,116	\$ 70,923	\$ 12,314	\$ 56,609	\$ 5,861
391HS	Computer Hardware	\$ 568,558	20.00%	20.00%	100.00%	\$ 559,740	\$ 559,740	\$ 443,827	\$ 115,913	\$ 11,591
392	Transportation Equipment	\$ 292,784	11.25%	11.25%	100.00%	\$ 175,349	\$ 175,349	\$ 148,330	\$ 27,019	\$ 2,702
393	Stores Equipment	\$ 17,861	5.00%	5.00%	100.00%	\$ 4,215	\$ 4,215	\$ 2,018	\$ 2,197	\$ 220
394	Tools, Shop & Garage Equipment	\$ 142,771	5.00%	5.00%	100.00%	\$ 82,885	\$ 82,885	\$ 68,542	\$ 14,343	\$ 1,434
395	Laboratory Equipment	\$ 23,907	6.67%	6.67%	100.00%	\$ 19,169	\$ 19,169	\$ 16,903	\$ 2,266	\$ 227
396	Power Operated Equipment	\$ 162,947	6.67%	6.67%	100.00%	\$ 58,154	\$ 58,154	\$ 41,384	\$ 16,770	\$ 1,677
397	Communications Eq. (non-tele)	\$ 286,606	10.00%	10.00%	100.00%	\$ 260,810	\$ 260,810	\$ 329,642	\$ (68,832)	\$ (6,893)
398	Miscellaneous Equipment	\$ 26,780	6.67%	6.67%	100.00%	\$ 14,615	\$ 14,615	\$ 15,352	\$ (737)	\$ (74)
	Total General Plant	\$ 2,193,450				\$ 1,427,287	\$ 1,402,672	\$ 1,195,511	\$ 207,161	\$ 20,716
Total Utility Plant										
		\$ 30,728,829				\$ 9,384,445	\$ 9,022,592	\$ 8,410,481	\$ 612,111	\$ 61,211
									\$ 97,396	\$ (36,185)

(1) Staff recommendation reflects reduction to plant balances in accordance with Staff audit report - i.e. Audit Issue #1 and Audit Issue #3

Aquarion Water Company of New Hampshire Staff Recommended CIAC Amortization		Schedule 3	
		Proposed Rates	Staff Recommended
		(1)	Variance
Balance at December 31, 2008		\$ (2,690,300)	\$ (2,690,300)
Depreciation Accrual Rate (Account 343-Transmission & Distribution Mains)		1.20%	1.20%
CIAC Amortization		\$ (32,213)	\$ (32,213)
			\$ -

footnotes:

(1) Derivation of 1.20% Amortization Rate:

CIAC Balance	\$ 2,690,300
Prior Amortization	\$ (36,495)
Pro-forma per Filing (at Sch 1B)	\$ 4,282
	<u>\$ (32,213)</u>
CIAC Amortization Rate (T&D Mains, Account 343)	<u>-1.20%</u>

Aquarion Water Company of New Hampshire Staff Recommendation - Summary		Schedule 4		
		Proposed Rates	Staff Recommended	Variance
Depreciation		\$ 766,270	\$ 721,549	\$ (44,721)
Amortization of Organization and Other Water Source Plant		\$ 74,955	\$ 75,840	\$ 885
Amortization of Depreciation Reserve Variance		\$ 97,396	\$ 61,211	\$ (36,185)
Amortization of CIAC		\$ (32,213)	\$ (32,213)	\$ -
Sub-Total Amortization		\$ 140,138	\$ 104,838	\$ (35,300)
Total Depreciation and Amortization		\$ 906,408	\$ 826,387	\$ (80,021)

**Audit Issue #1**

**Plant Additions**

Background

Audit selected eight specific work orders, chosen from a listing of workorders in excess of \$50,000 since April 1, 2005.

Exception

Review of the documentation provided by the Company supported test year balances less than what was reported as used and useful at the end of the test year. The Company noted that most of the variances were the result of "accruals that did not materialize"

The specific variances noted, that is, invoices for goods and services received or provided after the test year are:

Well Capacity Evaluation \$26,580  
New Source Investigation \$311 (should have been expensed in 2005)  
Highland Ave/Ocean Blvd. Main Design \$8,523  
Mill Rd. Water Main \$134,271

Recommendation

The plant in service reported in the filing is overstated by \$169,685.

Company Exit Audit Comment

The Company agrees with Staff's findings with the following clarifications/exceptions:

1. The largest variance was for the Mill Road Water Main replacement project. The March 2008 figures included accrued costs which did in fact materialize later in 2008. The cost of this project per the February 2009 CPR was \$895,437.
2. The Company computes 03/31/2008 costs for the Mill Road Water Main to be \$708,511. The variance identified by staff is attributable to \$52,871 of costs related to paving costs. These costs were invoiced by Pike Industries in March 2008. The overstatement as per Staff should be reduced to \$116,814.

Staff's Exit Audit Comment:

Audit concurs that the costs in total as of 2009 were those provided, however the reader is reminded that the test year ended on March 31, 2008.

Further, a notification dated April 3, 2008, from the Town of North Hampton, based on a revised cost estimate provide by Pike Industries. That project summary was in fact dated March 24, 2008, and reflected a total cost of \$105,742 with an estimated completion date of December 1, 2008.



**Audit Issue #3**

## Retirements

Background

Retirements reported during the test year amount to \$129,526.

Exception

Retirements which should have been posted to the general ledger and noted in the filing should have included:

Mill Road Standpipe	\$74,075 account 101342
4,800' Mill Road Mains	\$73,621 account 101343
700' Ocean Blvd. Mains	\$ 9,197 account 101343
Well #5	\$ 4,391 account 101314

Recommendation

An adjustment needs to be made to the filing crediting the accounts noted and debiting Accumulated Depreciation 111001.

The related depreciation expense was calculated to be an overstatement (using the ½ year convention) in the amount of \$1,293. See Audit Issue #5.

Company Exit Audit Comment

The Company agrees with Staff's recommendations with one exception. The Company incorrectly affirmed that retirements associated with Well #5 should have been made in the test year. Upon further investigation, this is incorrect as Well #5 and the new Replacement Well #5A are both currently in service. The Well #5 retirement should not be recorded at this time. All other retirements were recorded subsequent to the close of the test year.

Staff's Exit Audit Comment:

Audit concurs with the revised retirement as adjusted for Well #5A.

ATTACHMENT JJC-3

AQUARION WATER COMPANY OF NEW HAMPSHIRE

DW 08-098

Aquarion Water Company's Responses to Staff Data Requests—Set 2

Data Request Received: March 5, 2009  
Request No.: Staff 2-1

Date of Response: March 26, 2009  
Witness: J. Shutt

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REQUEST: Reference Depreciation Study, page 3-2: The current forecast for net salvage percents appears to reflect company-specific actual data for the years 1993 through 1998. Please explain why company-specific actual data for the years subsequent to 1998 was not used in the forecast of net salvage.

RESPONSE: Due to transitions in ownership and accounting systems the company does not have company-specific data available for the years subsequent to 1998. It appears that since the time of the acquisition the company has been recording costs of retirement and removal as a part of the new asset. Since this practice was uncovered during the course of my depreciation study, the company is developing and implementing new procedures to capture and record these costs as a cost of retirement.

ATTACHMENT JJC-3

AQUARION WATER COMPANY OF NEW HAMPSHIRE

DW 08-098

Aquarion Water Company's Responses to Staff Data Requests- Set 2

Data Request Received: March 5, 2009  
Request No.: Staff 2-2

Date of Response: March 26, 2009  
Witness: J. Shutt

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REQUEST: Reference Depreciation Study, page 3-2: Please explain how the Company accounts for gross salvage and cost of removal for plant retired during the 1999 to 2008 time period. Please include in your response a schedule that summarizes the original cost, the gross salvage and the cost of removal by plant account for the plant retired during the 1999 through 2008 time period.

RESPONSE: As indicated in my response to Staff 2-1, it was discovered during the course of my depreciation study that the company was not segregating gross salvage and the cost of removal. Therefore, it is not possible to provide the requested schedule. The company is implementing procedures that will segregate gross salvage and cost of removal going forward.

**Aquarion Water Company of New Hampshire**  
**Estimated Survivor Curve, Net Salvage, Original Cost, Calculated Annual and Accrued Depreciation**  
**As Applied to Plant Investment as of March 31,**

Account Number	Account Description	Survivor Curve	Net Salvage Percent	Total Plant Balance 03/31/08 (\$)	Calculated Annual Accrual Amount (\$)	Calculated Annual Accrual Rate (%)	Calculated Accrued Depreciation (\$)	Book Depreciation Reserve 03/31/08 (\$)	Reserve Variance (\$)	Annual Amortization (\$)
<b>Source of Supply Plant</b>										
301	Organization			17,700						
303	Miscellaneous Intangible Plant	SQ 30	0%	20,727	691	3.33%	3,624	2,073	1,551	155
310	Land & Land Rights (Supply)			460,591						
311	Structures & Improvements	R5 40	-10%	611,459	16,815	2.75%	82,740	25,217	57,523	5,752
312	Collecting & Impounding Reservoirs									
314	Wells & Springs	R3 30	-10%	2,775,032	101,751	3.67%	1,044,100	465,652	578,448	57,845
316	Supply Mains	R3 100	-20%	182,935	2,195	1.20%	68,879	59,704	9,175	917
317	Other Water Source Plant	SQ 20	0%	1,499,100	74,955	5.00%	285,381	64,354	221,027	22,103
				5,567,543	196,407		1,484,724	617,000	867,724	86,772
<b>Pumping Plant</b>										
320	Land & Land Rights (Pumping)			709						
321	Structures & Improvements	R5 40	-10%	1,275,322	35,071	2.75%	488,486	373,821	114,665	11,467
325	Electric Pumping Equipment, Booster	R1 35	-20%	880,695	30,195	3.43%	389,514	515,780	(126,276)	(12,628)
326	Diesel Pumping Equipment	R1 30	-10%	32,297	1,184	3.67%	32,297	22,562	9,735	972
328	Other Pumping Equipment	R1 25	-10%	34,764	1,530	4.40%	29,160	25,773	3,387	339
				2,223,786	67,980		938,456	937,666	1,490	149
<b>Water Treatment Plant</b>										
330	Land & Land Rights (Treatment)			176,164	4,845	2.75%	34,403	30,299	4,104	410
331	Structures & Improvements	R5 30	-10%	282,411	10,355	3.67%	131,519	195,265	(63,746)	(6,375)
332	Water Treatment Equipment			458,575	15,200		165,922	225,564	(59,642)	(5,964)
<b>Transmission &amp; Distribution Plant</b>										
340	Land & Land Rights (T & D)			154,202						
341	Structures & Improvements	R5 40	-10%	289,440	7,960	2.75%	44,771	136,815	(92,044)	(9,204)
342	Distribution Reservoirs & Standpipes	R5 60	-20%	1,272,926	25,459	2.00%	701,225	672,993	28,232	2,823
343	Transmission & Distribution Mains	R3 100	-20%	13,946,093	167,353	1.20%	2,648,725	2,687,999	(38,274)	(3,827)
345	Services	R3 65	-20%	4,464,538	81,991	1.85%	1,260,585	1,400,931	(140,346)	(14,035)
346	Meters	R1 25	5%	740,054	28,122	3.80%	304,460	283,720	10,740	1,074
347	Water Installation	R1 25	5%	243,519	9,254	3.80%	100,184	17,923	82,261	8,226
348	Hydrants	S3 50	-20%	592,797	14,227	2.40%	289,593	220,362	69,231	6,923
349	Other T & D Plant	SQ 20	0%	98,704	4,935	5.00%	16,532	3,697	12,835	1,283
				21,802,273	339,300		5,367,075	5,434,440	(67,365)	(6,736)
<b>General Plant</b>										
389	Land & Land Rights (General)			590,808	18,568	3.14%	179,214	117,199	62,015	6,202
390	Structures & Improvements	R1 13	0%	80,398	6,184	7.69%	73,116	12,314	60,802	6,080
391	Office Furniture & Equipment	SQ 5	0%	568,558	113,712	20.00%	559,740	443,827	115,913	11,591
391H/S	Computer Hardware	S6 8	10%	292,784	32,938	11.25%	175,349	148,330	27,019	2,702
392	Transportation Equipment	SQ 20	0%	17,891	895	5.00%	4,215	2,018	2,197	220
393	Stores Equipment	SQ 20	0%	142,771	7,139	5.00%	82,885	68,542	14,343	1,434
394	Tools, Shop & Garage Equipment	SQ 15	0%	23,907	1,594	6.67%	19,169	16,903	2,266	227
395	Laboratory Equipment	SQ 15	0%	162,947	10,863	6.67%	58,154	41,384	16,770	1,677
396	Power Operated Equipment	SQ 10	0%	286,806	28,661	10.00%	260,810	329,642	(68,832)	(6,883)
397	Communications Equipment (non-telephone)	SQ 10	0%	26,780	1,785	6.67%	14,615	15,352	(737)	(74)
398	Miscellaneous Equipment	SQ 15	0%	2,193,452	222,339		1,427,266	1,195,511	231,755	23,176
				32,245,828	841,227	2.61%	9,384,444	8,410,481	973,963	97,396
<b>Total Utility Plant</b>										
<b>Annual Reserve Deficiency Amortization:</b>										
					97,396					
<b>Proposed Depreciation Expense:</b>										
					938,623					