

PENNICHUCK WATER WORKS, INC.
MERRIMACK, NEW HAMPSHIRE

SCHEDULES TO ACCOMPANY
REVISED REPORT ON
COST OF SERVICE ALLOCATIONS
AND WATER RATE DESIGN

by

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February 2011

Pennichuck Water Works, Inc. Test Period Ending December 31, 2009 Allocation of Rate Base									
Description	Total Cost	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Allocation Code
Utility Plant In Service at December 31, 2009									
<u>Source of Supply and Pumping Plant</u>									
303 Land and Land Rights	622,003	355,413	266,590	0	0	0	0	0	21
304 Structures and Improvements	34,802,480	19,886,137	14,916,343	0	0	0	0	0	21
305 Collecting and Impounding Reservoirs	2,434,786	2,434,786	0	0	0	0	0	0	20
306 Lake, River and Other Intakes	8,634	4,933	3,701	0	0	0	0	0	21
307 Wells and Springs	858,785	490,710	368,075	0	0	0	0	0	21
308 Infiltration Galleries and Tunnels	1,543	882	661	0	0	0	0	0	21
309 Supply Mains	491,742	280,981	210,761	0	0	0	0	0	21
310 Power Generation Equipment	886,125	269,089	201,789	215,237	0	0	0	0	41
311 Pumping Equipment	5,935,449	2,327,883	1,745,616	1,861,950	0	0	0	0	41
Total Supply and Pumping Plant	45,841,547	26,050,824	17,713,536	2,077,187	0	0	0	0	
(Percent Code 34)	100.00 %	56.83 %	38.64 %	4.53 %	0.00 %	0.00 %	0.00 %	0.00 %	
<u>Water Treatment Plant</u>									
320 Water Treatment Equipment	18,099,878	10,342,270	7,757,608	0	0	0	0	0	21
Total Water Treatment Plant	18,099,878	10,342,270	7,757,608	0	0	0	0	0	
<u>Transmission and Distribution</u>									
330 Distribution Reservoirs and Standpipes	7,789,627	778,963	1,168,444	5,842,220	0	0	0	0	45
331 Transmission and Distribution Mains	54,256,564	21,279,425	15,956,855	17,020,284	0	0	0	0	44
333 Services	9,859,946	0	0	0	0	0	9,859,946	0	25
334 Meters and Meter Installations	5,925,910	0	0	0	0	5,925,910	0	0	24
335 Hydrants	3,240,423	0	0	0	0	0	0	3,240,423	26
Subtotal Transmission and Distribution	81,072,470	22,058,388	17,125,289	22,862,504	0	5,925,910	9,859,946	3,240,423	
Subtotal % (Percent Code 35)	100.00 %	27.21 %	21.12 %	28.20 %	0.00 %	7.31 %	12.16 %	4.00 %	
339 Other Plant and Miscellaneous Eq.	426,760	116,121	90,132	120,346	0	31,196	51,894	17,071	35
Total Transmission and Distribution	81,499,230	22,174,509	17,215,431	22,982,850	0	5,957,106	9,911,840	3,257,494	
Subtotal Above Utility Plant	145,440,655	58,567,603	42,686,675	25,060,037	0	5,957,106	9,911,840	3,257,494	
Subtotal % (Percent Code 29)	100.00 %	40.27 %	29.35 %	17.23 %	0.00 %	4.10 %	6.81 %	2.24 %	

Pennichuck Water Works, Inc.
Test Period Ending December 31, 2009
Allocation of Rate Base

Description	Total Cost	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Allocation Code
Utility Plant in Service at December 31, 2009 - Continued									
<u>General Plant</u>									
340 Office Furniture and Equipment	494,197	199,013	145,047	85,150	0	20,262	33,855	11,070	29
341 Transportation Equipment	2,573,024	1,036,157	755,183	443,332	0	105,494	175,223	57,835	29
343 Tools, Shop and Garage Equipment	205,346	82,693	60,269	35,381	0	8,419	13,984	4,600	29
344 Laboratory Equipment	104,150	104,150	0	0	0	0	0	0	20
345 Power Operated Equipment	351,417	141,516	103,141	60,549	0	14,408	23,931	7,872	29
346 Communication Equipment	1,026,912	413,537	301,399	176,937	0	42,103	69,933	23,003	29
347 Miscellaneous Equipment	3,193,225	1,285,912	937,212	550,193	0	130,922	217,459	71,527	29
348 Other Tangible Equipment	490,811	197,650	144,053	84,567	0	20,123	33,424	10,984	29
Total General Plant	8,439,082	3,460,628	2,446,304	1,436,109	0	341,731	567,809	186,701	
(Percent Code 39)	100.00 %	41.01 %	28.99 %	17.02 %	0.00 %	4.05 %	6.72 %	2.21 %	
Total Utility Plant in Service	154,119,649	62,124,843	45,203,293	26,537,483	0	6,308,673	10,495,787	3,449,570	
(Percent Code 30)	100.00 %	40.31 %	29.33 %	17.22 %	0.00 %	4.09 %	6.81 %	2.24 %	
Accumulated Depreciation Reserve at December 31, 2009									
Source of Supply and Pumping Plant	11,156,569	6,340,278	4,310,898	505,393	0	0	0	0	34
Water Treatment Plant	1,815,537	1,037,396	778,139	0	0	0	0	0	21
Transmission and Distribution	21,349,145	5,809,102	4,508,939	6,020,459	0	1,580,622	2,596,056	853,967	35
General Plant	4,774,851	1,958,166	1,394,229	812,880	0	193,381	320,870	105,525	39
Intangible Plant	117,323	47,246	34,434	20,215	0	4,810	7,990	2,628	29
Subtotal Accumulated Depreciation Reserve	39,213,425	15,192,190	11,016,639	7,358,747	0	1,759,913	2,924,916	982,120	
Subtotal % (Percent Code 28)	100.00 %	38.74 %	28.09 %	18.77 %	0.00 %	4.49 %	7.46 %	2.45 %	
Accumulated Depreciation - Loss	(4,314,363)	(1,671,384)	(1,211,905)	(609,806)	0	(193,715)	(321,851)	(105,702)	28
Accumulated Depreciation - Cost of Removal	(1,784,616)	(695,234)	(504,108)	(336,849)	0	(80,578)	(133,878)	(43,989)	28
Miscellaneous Adjustments	(1,059,479)	(410,442)	(297,608)	(198,864)	0	(47,571)	(79,037)	(25,957)	28
Total Accumulated Depreciation Reserve	32,044,987	12,415,130	9,003,018	6,013,228	0	1,438,949	2,390,150	788,492	
(Percent Code 28)	100.00 %	38.74 %	28.10 %	18.77 %	0.00 %	4.48 %	7.46 %	2.45 %	
Total Depreciated Utility Plant in Service	122,074,662	49,709,713	36,200,275	20,524,255	0	4,871,724	8,105,637	2,663,078	
(Percent Code 27)	100.00 %	40.72 %	29.66 %	16.81 %	0.00 %	3.99 %	6.64 %	2.18 %	

Pennichuck Water Works, Inc.
Test Period Ending December 31, 2009
Allocation of Rate Base

Description	Total Cost	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Allocation Code
Acquisition Adjustment									
Acquisition Adjustment at 12/31/09	844,905	340,581	247,811	145,493	0	34,557	57,538	18,925	30
Accum Amort Acq Adj	310,035	124,975	90,933	53,388	0	12,680	21,113	6,946	30
Contributions in Aid of Construction									
CIAC at 12/31/09	27,089,195	10,911,593	7,939,395	4,661,315	0	1,107,130	1,843,412	808,350	30
Amort of CIAC	4,275,036	1,723,287	1,253,868	736,161	0	174,849	291,130	95,761	30
Subtotal Rate Base Elements	98,745,653	40,305,781	29,357,870	16,506,996	0	3,917,566	6,516,930	2,140,510	
Rate Base Additions									
Working Capital	1,272,195	524,399	282,046	149,228	90,709	148,211	51,851	25,952	46
Materials and Supplies									
Transmission and Distribution	441,179	173,030	129,751	138,398	0	0	0	0	44
Meters	110,863	0	0	0	0	110,683	0	0	24
Water Treatment	14,747	8,428	6,321	0	0	0	0	0	21
Chemicals	107,221	107,221	0	0	0	0	0	0	20
Transportation Equipment	3,918	1,577	1,149	675	0	181	267	87	29
Generator Fuel	9,612	3,770	2,827	3,015	0	0	0	0	41
Customer Billing Materials	28,442	0	0	0	28,442	0	0	0	23
General Supplies	950	383	279	164	0	39	65	20	29
Total Materials and Supplies	716,730	284,407	140,327	142,252	28,442	110,863	332	107	
Prepayments - Property Taxes	350,305	141,208	102,744	60,323	0	14,327	23,856	7,847	30
Prepaid Insurance	421,361	169,851	123,585	72,558	0	17,234	28,695	9,438	30
Other and Deferred Charges	6,383,915	2,573,356	1,872,402	1,099,310	0	281,102	434,745	143,000	30
Total Rate Base Additions	9,144,508	3,703,221	2,521,104	1,523,671	119,150	551,737	539,279	186,344	
Rate Base Deductions									
Customer Advances for Construction	84,000	32,945	24,704	26,351	0	0	0	0	44
Customer Deposits	118,483	0	0	0	0	0	118,483	0	25
Deferred Income Tax	14,769,177	5,953,455	4,331,800	2,543,252	0	604,059	1,005,781	330,830	30
Deferred Tax Liability	838,560	338,036	245,958	144,405	0	34,288	57,108	18,785	30
Unamortized ITC	767,922	309,549	225,232	132,236	0	31,408	52,295	17,202	30
Deferred Rental Credits	3,244	1,308	951	559	0	133	221	72	30
Total Rate Base Deductions	16,561,416	6,635,293	4,828,645	2,846,803	0	669,998	1,233,898	366,889	
Total Rate Base	91,308,743	37,373,709	27,050,329	15,183,864	119,150	3,799,405	5,822,321	1,959,965	
(Percent Code 33)	100.00 %	40.93 %	29.62 %	16.63 %	0.13 %	4.16 %	6.38 %	2.15 %	

Pennichuck Water Works, Inc.
Test Period Ending December 31, 2009
Allocation of Pro Forma Revenue Requirement

Description	Total Cost	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Allocation Code
Pro Forma Operation and Maintenance Expenses									
Source of Supply									
601 Operation Labor and Expenses	43,471	24,839	18,632	0	0	0	0	0	21
602 Purchased Water	237,044	135,447	101,597	0	0	0	0	0	21
603 Miscellaneous Expenses	10,737	6,135	4,602	0	0	0	0	0	21
610 Maintenance Super & Eng'g	395,162	225,796	169,366	0	0	0	0	0	21
Total Source of Supply	686,414	392,217	294,197	0	0	0	0	0	
Pumping Expenses									
623 Fuel or Power Purchased	935,016	794,763	93,502	46,751	0	0	0	0	43
624 Pumping Labor and Expenses	229,700	90,088	67,555	72,057	0	0	0	0	41
626 Miscellaneous Expenses	82,521	32,365	24,269	25,887	0	0	0	0	41
631 Maint. of Structures and Imp.	82,784	32,472	24,350	25,972	0	0	0	0	41
633 Maint. of Pumping Equipment	210,533	82,571	61,918	66,044	0	0	0	0	41
Total Pumping Expenses	1,540,564	1,032,259	271,594	236,711	0	0	0	0	
Water Treatment Expenses									
641 Chemicals	538,587	538,587	0	0	0	0	0	0	20
642 Operation Labor and Expenses	407,801	233,017	174,784	0	0	0	0	0	21
643 Miscellaneous Expenses	(31,020)	(17,725)	(13,285)	0	0	0	0	0	21
652 Maint. of Treatment Equipment	82,660	47,232	35,428	0	0	0	0	0	21
Total Water Treatment Expenses	998,028	801,111	196,917	0	0	0	0	0	
Transmission and Distribution									
662 Trans & Dist Operation	40,394	15,842	11,880	12,672	0	0	0	0	44
663 Trans & Dist Lines Expenses	117,229	0	0	0	0	117,229	0	0	24
664 Meter Expenses	3,785	0	0	0	0	0	3,785	0	25
Customer Installation Expenses									
Subtotal Trans & Dist Operation	161,408	15,842	11,880	12,672	0	117,229	3,785	0	
Subtotal % (Percent Code 37)	100.00 %	9.81 %	7.38 %	7.85 %	0.00 %	72.63 %	2.35 %	0.00 %	
660 Operation Super & Eng'g	895,084	87,808	65,878	70,264	0	650,100	21,034	0	37
665 Miscellaneous Expenses	(128,358)	(12,593)	(9,447)	(10,076)	0	(83,226)	(3,016)	0	37
Total Trans & Dist Operation	928,134	91,057	68,311	72,860	0	674,103	21,803	0	
Trans & Dist Maintenance									
673 Maint. of Trans & Dist Mains	334,654	131,251	98,422	104,981	0	0	0	0	44
675 Maintenance of Services	152,214	0	0	0	0	0	152,214	0	25
676 Maintenance of Meters	23,149	0	0	0	0	23,149	0	0	24
677 Maintenance of Hydrants	100,545	0	0	0	0	0	0	100,545	26
Subtotal Trans & Dist Maintenance	610,562	131,251	98,422	104,981	0	23,149	152,214	100,545	
Subtotal % (Percent Code 38)	100.00 %	21.50 %	16.12 %	17.19 %	0.00 %	3.79 %	24.93 %	16.47 %	

Pennichuck Water Works, Inc.
Test Period Ending December 31, 2009
Allocation of Pro Forma Revenue Requirement

Description	Total Cost	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Allocation Code
Pro Forma Operation and Maintenance Expenses - Continued									
678 Trans & Dist Maintenance - Continued Maintenance of Misc. Equip.	95,530	20,539	15,399	16,422	0	3,621	23,816	15,733	38
Total Trans & Dist Maintenance	706,092	151,780	113,821	121,403	0	26,770	176,030	116,278	
Total Transmission and Distribution	1,634,226	242,847	182,132	194,263	0	700,873	197,833	116,278	
Customer Accounts Expenses									
902 Meter Reading Expenses	92,650	0	0	0	0	92,650	0	0	24
903 Customer Records Expenses	267,849	0	0	0	267,849	0	0	0	23
904 Uncollectible Accounts	74,675	0	0	0	74,675	0	0	0	23
Total Customer Accounts	434,974	0	0	0	342,324	92,650	0	0	
Subtotal Above O&M Expenses	3,583,559	999,637	749,741	384,223	342,324	793,523	197,833	116,278	
Less Purchased Water, Power, & Chemicals									
Subtotal % (Percent Code 47)	100.00 %	27.90 %	20.92 %	10.72 %	9.55 %	22.14 %	5.52 %	3.25 %	
Administrative and General Expenses									
920 Admin. and Gen'l Salaries	2,797,855	780,602	585,311	299,930	267,195	619,445	154,442	90,930	47
921 Office Supplies and Other Exp.	403,855	112,676	84,486	43,293	38,568	89,413	22,293	13,126	47
922 Admin. Expenses Transferred	(1,017,995)	(284,021)	(212,965)	(109,129)	(97,219)	(225,384)	(56,193)	(33,084)	47
923 Outside Services Employed	142,869	39,860	28,888	15,316	13,644	31,631	7,886	4,644	47
924 Property Insurance	359,715	145,001	105,504	61,943	0	14,712	24,497	8,058	30
926 Employee Pensions and Benefits	3,201,516	1,231,943	930,681	590,906	253,560	69,793	116,215	38,418	48
928 Regulatory Commission Exp.	70,344	19,626	14,716	7,541	6,718	15,574	3,883	2,286	47
930 Misc. General Expense	(1,303,118)	(363,570)	(272,612)	(139,694)	(124,448)	(288,510)	(71,932)	(42,352)	47
950 Maintenance of General Plant	368,763	102,885	77,145	39,531	35,217	81,644	20,356	11,985	47
Total Admin. and Gen'l Expenses	5,023,804	1,785,002	1,342,154	779,637	393,235	408,318	221,447	94,011	
Total O&M Expense	10,318,010	4,253,436	2,286,994	1,210,611	735,559	1,201,841	419,280	210,289	
(Percent Code 46)	100.00 %	41.22 %	22.17 %	11.73 %	7.13 %	11.65 %	4.06 %	2.04 %	

Pennichuck Water Works, Inc.
Test Period Ending December 31, 2009
Allocation of Pro Forma Revenue Requirement

Description	Total Cost	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Allocation Code
Pro Forma Depreciation Expense									
301 Organization	1,343	541	394	231	0	55	91	31	29
302 Franchise	10,653	4,250	3,127	1,836	0	437	725	238	29
303 Land and Land Rights	0	0	0	0	0	0	0	0	21
304 Structures and Improvements	889,321	508,158	381,163	0	0	0	0	0	21
305 Collecting and Impounding Reservoirs	43,608	43,608	0	0	0	0	0	0	20
306 Lake, River and Other Intakes	285	163	122	0	0	0	0	0	21
307 Wells and Springs	28,175	16,099	12,076	0	0	0	0	0	21
308 Infiltration Galleries and Tunnels	38	22	16	0	0	0	0	0	21
309 Supply Mains	7,407	4,232	3,175	0	0	0	0	0	21
310 Power Generation Equipment	41,805	16,396	12,295	13,114	0	0	0	0	41
311 Pumping Equipment	232,679	91,257	68,431	72,991	0	0	0	0	41
320 Water Treatment Equipment	734,941	419,945	314,996	0	0	0	0	0	21
330 Distribution Reservoirs and Standpipes	168,009	16,801	25,201	126,007	0	0	0	0	45
331 Transmission and Distribution Mains	786,970	313,356	234,977	250,637	0	0	209,658	0	44
333 Services	209,658	0	0	0	0	252,122	0	0	25
334 Meters and Meter Installations	252,122	0	0	0	0	0	0	72,244	24
335 Hydrants	72,244	0	0	0	0	0	0	427	26
339 Other Plant and Miscellaneous Eq.	10,669	2,903	2,253	3,009	0	780	1,267	876	35
340 Office Furniture and Equipment	39,127	15,756	11,484	6,742	0	1,604	2,665	876	29
341 Transportation Equipment	217,989	87,776	63,974	37,556	0	8,937	14,844	4,862	29
343 Tools, Shop and Garage Equipment	12,085	4,867	3,547	2,082	0	495	823	271	29
344 Laboratory Equipment	4,900	4,900	0	0	0	0	0	0	20
345 Power Operated Equipment	17,009	6,850	4,992	2,931	0	697	1,158	381	29
346 Communication Equipment	51,525	20,749	15,123	8,878	0	2,113	3,509	1,153	29
347 Miscellaneous General Equipment	296,505	119,523	87,112	51,140	0	12,169	20,212	6,649	29
348 Other Tangible Equipment	18,032	7,261	5,262	3,107	0	739	1,228	405	29
114 Acquisition Adjustment	(27,026)	(10,894)	(7,927)	(4,654)	0	(1,105)	(1,840)	(606)	30
Cost of Removal Adjustment	(69,701)	(28,096)	(20,443)	(12,003)	0	(2,851)	(4,747)	(1,561)	30
Total Depreciation Expense	4,062,652	1,666,463	1,221,360	563,604	0	276,192	249,623	85,390	
Amortization Expense									
Amortization of CIAC	(480,385)	(193,843)	(140,897)	(82,722)	0	(19,648)	(32,714)	(10,761)	30
Other Amortization	494,189	199,208	144,946	85,099	0	20,212	33,654	11,070	30
Total Amortization Expense	13,804	5,565	4,049	2,377	0	564	940	309	
Pro Forma Taxes Other Than Income Taxes									
Payroll Taxes	520,118	200,141	151,198	91,125	41,193	11,339	18,880	6,242	48
Property Taxes	2,844,093	1,146,454	834,172	489,753	0	116,323	193,683	63,708	30
Total Taxes Other Than Income Taxes	3,364,211	1,346,595	985,370	580,878	41,193	127,662	212,563	69,950	

Pennichuck Water Works, Inc.
Test Period Ending December 31, 2009
Allocation of Pro Forma Revenue Requirement

Description	Total Cost	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Allocation Code
Net Operating Income and Income Taxes									
Net Operating Income	7,733,642	3,165,390	2,290,705	1,286,105	10,054	321,720	483,408	166,272	33
Income Taxes	3,084,413	1,262,450	913,803	512,938	4,010	128,312	198,788	68,314	33
Total	10,818,055	4,427,830	3,204,308	1,799,043	14,064	450,032	680,192	232,586	
Total Revenue Requirement	28,576,732	11,899,889	7,702,101	4,156,513	790,816	2,056,291	1,572,698	598,524	
Percents	100.00 %	40.94 %	26.95 %	14.55 %	2.77 %	7.20 %	5.50 %	2.09 %	
Less Other Revenue	(364,634)	(149,261)	(98,269)	(53,054)	(10,100)	(26,254)	(20,055)	(7,621)	
Net Water Revenues	28,212,098	11,550,608	7,603,832	4,103,459	780,716	2,030,037	1,552,543	590,903	
Percents	100.00 %	40.94 %	26.95 %	14.55 %	2.77 %	7.20 %	5.50 %	2.09 %	

Pennichuck Water Works, Inc.									
Test Period Ending December 31, 2009									
Allocation of Year 2008 Salaries and Wages - Development of Allocation Code 48									
Description	Total Cost	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Allocation Code
Salaries and Wages									
Source of Supply	308,606	176,337	132,269	0	0	0	0	0	21
Pumping	721,507	282,975	212,195	226,337	0	0	0	0	41
Water Treatment	517,662	295,792	221,870	0	0	0	0	0	21
Transmission and Distribution	743,323	202,258	156,990	209,617	0	54,337	90,388	29,733	35
Customer Accounts	186,961	0	0	0	186,961	0	0	0	23
Subtotal Salaries and Wages	2,488,059	957,362	723,324	435,954	186,961	54,337	90,388	29,733	
Subtotal % (Percent Code 48)	100.00 %	38.48 %	29.07 %	17.52 %	7.92 %	2.18 %	3.63 %	1.20 %	
Administrative and General	887,334	341,446	257,948	155,461	70,277	19,344	32,210	10,648	48
Total Salaries and Wages	3,375,393	1,298,808	981,272	591,415	267,238	73,681	122,598	40,381	
(Percent Code 48)	100.00 %	38.48 %	29.07 %	17.52 %	7.92 %	2.18 %	3.63 %	1.20 %	

PENNICHUCK WATER WORKS, INC.
Explanation of Factors Used in the Allocation to Cost Functions

<u>Allocation Code</u>	<u>Description</u>
20	This code allocates items 100 percent to Base Cost. Base Costs are costs which tend to vary with the quantity of water used and do not contain elements necessary to meet variations in demand.
21	This code allocates items to Base Cost and Extra Capacity Cost - Maximum Day in accordance with the ratio of the average annual system production per day to the maximum daily system production. Extra capacity costs are those costs associated with meeting rate of use requirements in excess of the average.
22	This code allocates items to Base Cost and Extra Capacity Cost - Maximum Hour in accordance with the ratio of the average annual system delivery per day to the maximum hourly system delivery.
23	This code allocates items 100 percent to Customer Cost - Commercial. Costs allocated by this code are commercial costs associated with serving customers irrespective of the amount of water used or the demand imposed on the system. They include billing, customer accounting, and collection expenses.
24	This code allocates items 100 percent to Customer Cost - Meters. Items allocated by this code are associated with the maintenance and capital charges for customer meters.
25	This code allocates items 100 percent to Customer Cost - Services. Items allocated by this code are associated with the maintenance and capital charges for customer water services.
26	This code allocates items 100 percent to Fire Hydrant Cost.
27	This code allocates items to the Cost Functions in accordance with the composite allocation of the depreciated cost of plant in service.
28	This code allocates items to the Cost Functions in accordance with the composite allocation of the accumulated depreciation reserve.
29	This code allocates items to the Cost Functions in accordance with the composite allocation of the original cost of non-general utility plant. It is used to allocate general plant items.
30	This code allocates items to the Cost Functions in accordance with the composite allocation of the total utility plant in service.
33	This code allocates items to the Cost Functions in accordance with the composite allocation of all rate base items.

PENNICHUCK WATER WORKS, INC.
Explanation of Factors Used in the Allocation to Cost Functions

<u>Allocation Code</u>	<u>Description</u>
34	This code allocates items to the Cost Functions in accordance with the composite allocation of the original cost of supply and pumping plant.
35	This code allocates items to the Cost Functions in accordance with the composite allocation of the original cost of transmission and distribution plant.
37	This code allocates items to the Cost Functions in accordance with the composite allocation of transmission and distribution operation expenses.
38	This code allocates items to the Cost Functions in accordance with the composite allocation of transmission and distribution maintenance expenses.
39	This code allocates items to the Cost Functions in accordance with the composite allocation of the original cost of general plant.
41	This code allocates items to Base Cost, Extra Capacity Cost - Maximum Day, and Extra Capacity Cost - Maximum Hour to recognize the pumping requirements of the system.
43	This code is used to allocate purchased power expenses to Base Cost, Extra-Capacity Cost - Maximum Day, and Extra Capacity Cost - Maximum Hour. It gives recognition to the demand element in purchased power costs.
44	This code allocates transmission and distribution mains costs to Base Cost, Extra Capacity Cost - Maximum Day, and Extra Capacity Cost - Maximum Hour functions.
45	This code allocates distribution storage costs to Base Cost, Extra Capacity Cost - Maximum Day, and Extra Capacity Cost - Maximum Hour.
46	This code allocates items to the Cost Functions in accordance with the composite allocation of the total pro forma operation and maintenance expenses.
47	This code allocates certain administrative and general expenses based on the composite allocation of previously allocated functional expenses.
48	This code allocates items to the Cost Functions in accordance with the composite allocation of the total labor expenses.

Pennichuck Water Works, Inc.
Summary of Functional Cost Allocation Factors

Allocation Code	Description	Base Cost	Extra Cap Max Day	Extra Cap Max Hour	Customer Commercial	Customer Meters	Customer Services	Fire Hydrants	Check Total
20	Base Cost	100.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00 %
21	Base/Ex Cap - Max Day	57.14	42.86	0.00	0.00	0.00	0.00	0.00	100.00 %
22	Base/Ex Cap - Max Hour	39.22	0.00	60.78	0.00	0.00	0.00	0.00	100.00 %
23	Commercial	0.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00 %
24	Meters	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00 %
25	Services	0.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00 %
26	Fire Hydrants	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00 %
27	Depreciated Plant	40.72	29.66	16.81	0.00	3.99	6.64	2.18	100.00 %
28	Depreciation Reserve	38.74	28.09	18.77	0.00	4.49	7.46	2.45	100.00 %
29	Subtotal Plant in Service	40.27	29.35	17.23	0.00	4.10	6.81	2.24	100.00 %
30	Total Utility Plant in Service	40.31	29.33	17.22	0.00	4.09	6.81	2.24	100.00 %
33	Total Rate Base	40.93	29.62	16.63	0.13	4.16	6.38	2.15	100.00 %
34	Supply and Pumping Plant	56.63	38.84	4.53	0.00	0.00	0.00	0.00	100.00 %
35	T&D Plant	27.21	21.12	28.20	0.00	7.31	12.16	4.00	100.00 %
37	T&D Operation	9.81	7.36	7.85	0.00	72.63	2.35	0.00	100.00 %
38	T&D Maintenance	21.50	16.12	17.19	0.00	3.79	24.93	16.47	100.00 %
39	General Plant	41.01	28.99	17.02	0.00	4.05	6.72	2.21	100.00 %
41	Pumping	39.22	29.41	31.37	0.00	0.00	0.00	0.00	100.00 %
43	Purchased Power	85.00	10.00	5.00	0.00	0.00	0.00	0.00	100.00 %
44	T&D Mains	39.22	29.41	31.37	0.00	0.00	0.00	0.00	100.00 %
45	Distribution Storage	10.00	15.00	75.00	0.00	0.00	0.00	0.00	100.00 %
46	Total O&M Expense	41.22	22.17	11.73	7.13	11.65	4.06	2.04	100.00 %
47	Admin & Gen'l Expense	27.90	20.92	10.72	9.55	22.14	5.52	3.25	100.00 %
48	Labor Benefits	38.48	29.07	17.52	7.92	2.18	3.63	1.20	100.00 %
System Factors:			Base	Max Day	Max Hour				
Max Day - Average Day		175 %	57.14 %	42.86 %					
Max Hour - Average Day		255 %	39.22 %	60.78 %					
Pumping and T&D Mains		255 %	39.22 %	29.41 %	31.37 %				

Pennichuck Water Works, Inc.

Allocation of Functional Costs to Classes

<u>Functional Cost Component</u>	<u>Amount</u>	<u>Water Service</u>	<u>Municipal Fire</u>	<u>Private Fire</u>	<u>Allocation Code</u>
Base Cost	11,550,608	11,435,102	82,009	33,497	60
Extra Capacity - Max Day	7,603,832	5,651,168	1,389,980	562,684	61
Extra Capacity - Max Hour	4,103,459	2,601,183	1,068,951	433,325	62
Customer - Commercial	780,716	756,748	156	23,812	63
Customer - Meters	2,030,037	2,030,037	0	0	64
Customer - Services	1,552,543	1,552,543	0	0	65
Fire Hydrants	590,903	0	590,903	0	70
Net Revenue Requirement	28,212,098	24,026,781	3,131,999	1,053,318	

PENNICHUCK WATER WORKS, INC.
Explanation of Factors Used in the Allocation to Customer Groups

<u>Allocation Code</u>	<u>Description</u>
60	This code allocates Base Cost to the customer groups in accordance with the percentage of water used by each individual customer group.
61	This code allocates Extra Capacity Cost - Maximum Day to the customer groups in accordance with the ratio of the excess maximum day demand of each individual customer group to the total non-coincident excess daily demand for all customer groups.
62	This code allocates Extra Capacity Cost - Maximum Hour to the customer groups in accordance with the ratio of the excess maximum hour demand of each individual customer group to the total non-coincident excess hourly demand for all customer groups.
63	This code allocates Customer Cost - Commercial to the customer groups in accordance with the percentage of bills issued to each individual customer group.
64	This code allocates Customer Cost - Meters to the customer groups in accordance with the ratio of the number of equivalent meters in each individual customer group to the total number of equivalent meters for all customer groups.
65	This code allocates Customer Cost - Services to the customer groups on a basis similar to that for the allocation of Customer Cost - Meters.
70	This code allocates items entirely to the public fire service class.

Pennichuck Water Works, Inc.

Summary of Class Allocation Factors

<u>Allocation Code</u>	<u>Functional Cost Component</u>	<u>Water Service</u>	<u>Municipal Fire</u>	<u>Private Fire</u>	<u>Check Total</u>
60	Base Cost	99.00	0.71	0.29	100.00 %
61	Extra Capacity - Max Day	74.32	18.28	7.40	100.00 %
62	Extra Capacity - Max Hour	63.39	26.05	10.56	100.00 %
63	Customer - Commercial	96.93	0.02	3.05	100.00 %
64	Customer - Meters	100.00	0.00	0.00	100.00 %
65	Customer - Services	100.00	0.00	0.00	100.00 %
70	Fire Hydrants	0.00	100.00	0.00	100.00 %

Pennichuck Water Works, Inc.

Customer Class Allocation Factors

Customer Class	Annual Consumption				Maximum Day				Maximum Hour				Customer Costs		
	(1) CCFT	(2) MGD	(3) %	(4) % of AvDay	(5) Amount MGD	(6) Excess (5)-(2)	(7) %	(8) % of AvDay	(9) Amount MGD	(10) Excess (9)-(5)	(11) %	(12) Bills	(13) %		
General Water	4,258,586	8.727	84.34	190	16,581	7,854	53.98	325	28,363	11,782	56.14	307,680	96.92		
Anheuser-Busch	551,400	1.130	10.92	CA	1,500	0.370	2.54	CA	2,000	0.500	2.38	24	0.01		
Hudson	143,376	0.294	2.84	CA	1,578	1,284	8.82	CA	2,000	0.422	2.01	12	0.00		
Milford	45,237	0.093	0.90	CA	1,399	1,306	8.98	CA	2,000	0.601	2.86	12	0.00		
Total Water Service	4,998,599	10.244	99.00		21,058	10,814	74.32		34,363	13,305	63.39	307,728	96.93		
Municipal Fire	35,934	0.074	0.71		2,733	2,659	18.28		8,199	5,466	26.05	60	0.02		
Private Fire	14,557	0.030	0.29		1,107	1,077	7.40		3,321	2,214	10.56	9,684	3.05		
Total Fire Service	50,491	0.104	1.00		3,840	3,736	25.68		11,520	7,680	36.61	9,744	3.07		
Grand Total	5,049,090	10.348	100.00		24,898	14,550	100.00		45,883	20,985	100.00	317,472	100.00		
Allocation Code			60				61				62		63		

Fire Requirements: 1.0% of total water consumption

Fire Demand 8,000 gpm for 8 hours

Fire Req'mnts split 71.17% Municipal and 28.83% Private

CA: Max Day and Max Hour Contract Amounts for Anheuser-Busch, Hudson, and Milford

Note: Proposed Max Day and Max Hour Amounts for Anheuser-Busch

Pennichuck Water Works, Inc.

Fire Service Capacity Units

	<u>Number</u>	<u>Capacity Ratio</u>	<u>Capacity Units</u>	<u>%</u>
Municipal Hydrants	2,468	1.00	2,468.00	71.17
Private Fire Services				
2"	29	0.11	3.19	
4"	105	0.44	46.20	
6"	369	1.00	369.00	
8"	284	1.78	505.52	
10"	6	2.78	16.68	
12"	13	4.00	52.00	
16"	1	7.11	7.11	
Total Private	807		999.70	28.83
Grand Total	3,275		3,467.70	100.00

Note:

Capacity ratios are based on the cross-sectional area of municipal hydrant branches and private fire service connections. The cross-sectional area of a 6" branch is taken as unity. All hydrant branches are considered as 6".

Capacity costs include the following functional costs:

Base Costs, Extra Capacity Costs - Maximum Day, and
Extra Capacity Costs - Maximum Hour.

Pennichuck Water Works, Inc.
Calculation of Revenues Under Present Rates

General Service - Metered

Residential

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Present Rate</u>	<u>Present Revenue</u>
5/8"	23,188	278,256	\$ 18.18	\$ 5,058,694.08
3/4"	325	3,900	26.16	102,024.00
1"	205	2,460	42.13	103,639.80
1 1/2"	131	1,572	82.10	129,061.20
2"	45	540	134.41	72,581.40
3"	19	228	246.48	56,197.44
4"	3	36	406.51	14,634.36
6"	0	0	806.63	0.00
8"	0	0	1,286.90	0.00
10"	0	0	1,847.05	0.00
Subtotal	23,916	286,992		\$ 5,536,832.28
<u>CCFT</u>				
Volume	3,190,170		\$ 2.90	\$ 9,251,493.00
Total Residential Revenue				\$ 14,788,325.28

Commercial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Present Rate</u>	<u>Present Revenue</u>
5/8"	605	7,260	\$ 18.18	\$ 131,986.80
3/4"	175	2,100	26.16	54,936.00
1"	255	3,060	42.13	128,917.80
1 1/2"	233	2,796	82.10	229,551.60
2"	150	1,800	134.41	241,938.00
3"	17	204	246.48	50,281.92
4"	2	24	406.51	9,756.24
6"	1	12	806.63	9,679.56
8"	0	0	1,286.90	0.00
10"	0	0	1,847.05	0.00
Subtotal	1,438	17,256		\$ 857,047.92
<u>CCFT</u>				
Volume	766,150		\$ 2.90	\$ 2,221,835.00
Total Commercial Revenue				\$ 3,078,882.92

Pennichuck Water Works, Inc.
Calculation of Revenues Under Present Rates

General Service - Metered

Industrial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Present Rate</u>	<u>Present Revenue</u>
5/8"	30	360	\$ 18.18	\$ 6,544.80
3/4"	17	204	26.16	5,336.64
1"	39	468	42.13	19,716.84
1 1/2"	29	348	82.10	28,570.80
2"	35	420	134.41	56,452.20
3"	13	156	246.48	38,450.88
4"	2	24	406.51	9,756.24
6"	2	24	806.63	19,359.12
8"	0	0	1,286.90	0.00
10"	0	0	1,847.05	0.00
Subtotal	167	2,004		\$ 184,187.52
	<u>CCFT</u>			
Volume	222,313		\$ 2.90	\$ 644,707.70
Total Industrial Revenue				\$ 828,895.22

Municipal

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Present Rate</u>	<u>Present Revenue</u>
5/8"	17	204	\$ 18.18	\$ 3,708.72
3/4"	10	120	26.16	3,139.20
1"	16	192	42.13	8,088.96
1 1/2"	27	324	82.10	26,600.40
2"	37	444	134.41	59,678.04
3"	8	96	246.48	23,662.08
4"	2	24	406.51	9,756.24
6"	2	24	806.63	19,359.12
8"	0	0	1,286.90	0.00
10"	0	0	1,847.05	0.00
Subtotal	119	1,428		\$ 153,992.76
	<u>CCFT</u>			
Volume	79,953		\$ 2.90	\$ 231,863.70
Total Municipal Revenue				\$ 385,856.46
Grand Total GWS Revenue				\$ 19,081,959.88

Pennichuck Water Works, Inc.
Calculation of Revenues Under Present Rates

Service to Contract Customers

Town of Milford

		<u>Present Rate</u>	<u>Present Revenue</u>
Annual Fixed Fee		\$ 81,000.00	\$ 81,000.00
Volume	<u>CCFT</u> 45,237	\$ 1.8249	\$ 82,553.00
Total Milford Revenue			\$ 163,553.00

Town of Hudson

		<u>Present Rate</u>	<u>Present Revenue</u>
Annual Demand Charge		\$ 32,800.00	\$ 32,800.00
Volume	<u>CCFT</u> 143,376	\$ 1.8419	\$ 264,084.25
Total Hudson Revenue			\$ 296,884.25

Anheuser-Busch

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Present Rate</u>	<u>Present Revenue</u>
6"	2	24	\$ 806.63	\$ 19,359.12
Volume	<u>CCFT</u> 551,400		\$ 1.4956	\$ 824,673.84
Total Anheuser-Busch Revenue				\$ 844,032.96
Grand Total Contract Revenue				\$ 1,304,470.22

Pennichuck Water Works, Inc.
Calculation of Revenues Under Present Rates

Fire Protection Service

Private Fire Protection

<u>Size</u>	<u>Number</u>	<u>Number of Bills</u>	<u>Present Rate</u>	<u>Present Revenue</u>
2"	29	348	\$ 55.70	\$ 19,383.60
4"	105	1,260	55.70	70,182.00
6"	369	4,428	93.46	413,840.88
8"	284	3,408	137.60	468,940.80
10"	6	72	137.60	9,907.20
12"	13	156	137.60	21,465.60
16"	1	12	137.60	1,651.20
Total	807	9,684		\$ 1,005,371.28

Municipal Fire Protection

<u>Size</u>	<u>Number</u>	<u>of Bills</u>	<u>Rate</u>	<u>Revenue</u>
Hydrant	2,468	60	\$ 17.16	\$ 508,210.56
Inch-Feet	18,448,150		0.11828	2,182,047.18
Total Municipal Fire Revenue				\$ 2,690,257.74

Pennichuck Water Works, Inc.
Calculation of Revenues Under Present Rates

Total Present Rate Revenue

Grand Total GWS Revenue	\$ 19,081,959.88
Grand Total Contract Revenue	\$ 1,304,470.22
Grand Total Private Fire Revenue	\$ 1,005,371.28
Grand Total Municipal Fire Revenue	\$ 2,690,257.74
Grand Total Revenue	\$ 24,082,059.12
Total Customer Charge Revenue	\$ 6,751,419.60
Total Volume Charge Revenue	\$ 13,521,210.50
Total Contract Fixed Fee Revenue	\$ 113,800.00
Total Private Fire Revenue	\$ 1,005,371.28
Total Municipal Fire Revenue	\$ 2,690,257.74
Grand Total Revenue	\$ 24,082,059.12

Note: All bills are monthly bills.

Pennichuck Water Works, Inc.

Comparison of Present Rate Revenues and Cost of Service Indications

	<u>Present Rates</u>		<u>Revised Cost of Service</u>		<u>As Filed Cost of Service</u>	
	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>
Water Service Revenue	20,386,430.10	84.65	24,026,781	85.17	24,095,638	85.96
Private Fire Revenue	1,005,371.28	4.18	1,053,318	3.73	983,043	3.51
Municipal Fire Revenue	2,690,257.74	11.17	3,131,999	11.10	2,952,920	10.53
Total Revenues	24,082,059.12	100.00	28,212,098	100.00	28,031,601	100.00

Pennichuck Water Works, Inc.

Rate Design

Municipal Fire Protection

Functional Allocations:	
Fire Hydrants	590,903
Customer - Commercial	156
Total	591,059
Number of Hydrants	2,468
Annual Cost per Hydrant	239.49
Monthly Charge per Hydrant	19.96

Functional Allocations:	
Base Cost	82,009
Extra Capacity - Max Day	1,389,980
Extra Capacity - Max Hour	1,068,951
Total	2,540,940
Number of Inch-Feet	18,448,150
Annual Charge per Inch-Foot	0.13773

Pennichuck Water Works, Inc.

Rate Design

Private Fire Protection

Total Private Fire Protection Rev Reqmt	1,053,318
Present Private Fire Protection Revenue	1,005,371
Increase Required	4.77 %

<u>Size</u>	<u>Present Monthly Charge</u>	<u>Proposed Monthly Charge</u>	<u>Increase</u>
2"	55.70	58.36	4.78 %
4"	55.70	58.36	4.78 %
6"	93.46	97.92	4.77 %
8"	137.60	144.16	4.77 %
10"	137.60	144.16	4.77 %
12"	137.60	144.16	4.77 %
16"	137.60	144.16	4.77 %

Pennichuck Water Works, Inc.

Rate Design

Customer Charges

Functional Allocations (Water Service):

Customer - Commercial	756,748
Customer - Meters	2,030,037
Customer - Services	<u>1,552,543</u>
Subtotal	4,339,328

Add: 75% of A&G Expenses

75% A&G Base Cost	1,338,752
75% A&G Max Day Cost	1,006,616
75% A&G Max Hour Cost	<u>584,728</u>
Subtotal	2,930,096

Add: 40% of T&D Expenses

40% T&D Base Cost	97,139
40% T&D Max Day Cost	72,853
40% T&D Max Hour Cost	<u>77,705</u>
Subtotal	247,697

Add: 75% of Base Fixed Costs

75% Depreciation Expense (Less A-B)	1,189,754
75% Amortization Expense	4,174
75% Property Taxes (Less A-B)	<u>818,499</u>
Subtotal	2,012,427

Total for Customer Charge 9,529,548

Present Customer Charge Revenue 6,751,420

Increase Required 41.15 %

<u>Meter Size</u>	<u>Present Monthly Charge</u>	<u>Proposed Monthly Charge</u>	<u>Increase</u>
5/8"	18.18	25.66	41.14 %
3/4"	26.16	36.92	41.13 %
1"	42.13	59.46	41.13 %
1 1/2"	82.10	115.88	41.14 %
2"	134.41	189.72	41.15 %
3"	246.48	347.91	41.15 %
4"	406.51	573.79	41.15 %
6"	806.63	1,138.56	41.15 %
8"	1,286.90	1,816.46	41.15 %
10"	1,847.05	2,607.11	41.15 %

Pennichuck Water Works, Inc.

Rate Design

Volumetric Charges

Net Water Revenue Requirement	28,212,098
Less Proposed Revenues:	
From Municipal Fire Protection	(3,131,999)
From Private Fire Protection	(1,053,328)
From Customer Charges	(9,529,235)
From Contract Fixed Fees	(113,800)
From A-B Carrying Charge	(371,469)
From A-B Volume Charge - Minimum	(288,607)
From A-B Volume Charge - Excess	(213,112)
Net Required From Volume Charges	13,510,548
Present Volume Charge Revenue	12,696,537
Increase Required	6.41 %

	<u>Present Charge</u>	<u>Proposed Charge</u>	<u>Increase</u>
General Water	2.900	3.086	6.41 %
Anheuser-Busch	1.4956	0.9099	(39.16) %
Hudson	1.8419	1.9600	6.41 %
Milford	1.8249	1.9419	6.41 %

Pennichuck Water Works, Inc.

Ratios of Present Rates

Customer Charges

<u>Meter Size</u>	<u>Monthly Present Rate</u>	<u>Present Ratio to 5/8"</u>	<u>AWWA Capacity Ratios</u>	<u>Present Ratio as % of AWWA</u>	
5/8"	18.18	1.00	1.00	100.00	%
3/4"	26.16	1.44	1.50	95.93	%
1"	42.13	2.32	2.50	92.70	%
1 1/2"	82.10	4.52	5.00	90.32	%
2"	134.41	7.39	8.00	92.42	%
3"	246.48	13.56	15.00	90.39	%
4"	406.51	22.36	25.00	89.44	%
6"	806.63	44.37	50.00	88.74	%
8"	1,286.90	70.79	80.00	88.48	%
10"	1,847.05	101.60	115.00	88.35	%

Private Fire Protection

<u>Size</u>	<u>Monthly Present Rate</u>	<u>Present Ratio to 6"</u>	<u>Ratios of Areas</u>	<u>Present Ratio as % of Areas</u>	
2"	55.70	0.60	0.11	536.38	%
4"	55.70	0.60	0.44	134.09	%
6"	93.46	1.00	1.00	100.00	%
8"	137.60	1.47	1.78	82.82	%
10"	137.60	1.47	2.78	53.00	%
12"	137.60	1.47	4.00	36.81	%
16"	137.60	1.47	7.11	20.70	%

Pennichuck Water Works
Transmission and Distribution Inch-Feet
Inch-Feet of Mains in Service at December 31, 2009
Reduce Larger Mains to 4" Size

<u>Actual Mains in Service</u>			<u>Reduce Larger Mains to 4" Size</u>		
<u>Size</u>	<u>Length</u>	<u>In-Ft</u>	<u>Size</u>	<u>Length</u>	<u>In-Ft</u>
1"	3,423	3,423.0	1"	3,423	3,423.0
1 1/4"	6,361	7,951.3	1 1/4"	6,361	7,951.3
1 1/2"	4,937	7,405.5	1 1/2"	4,937	7,405.5
2"	118,073	236,146.0	2"	118,073	236,146.0
3"	35,254	105,762.0	3"	35,254	105,762.0
4"	185,566	742,264.0	4"	185,566	742,264.0
6"	243,653	1,461,918.0	4"	243,653	974,612.0
8"	1,042,710	8,341,680.0	4"	1,042,710	4,170,840.0
10"	35,834	358,340.0	4"	35,834	143,336.0
12"	373,504	4,482,048.0	4"	373,504	1,494,016.0
14"	535	7,490.0	4"	535	2,140.0
16"	137,423	2,198,768.0	4"	137,423	549,692.0
20"	2,343	46,860.0	4"	2,343	9,372.0
24"	77,886	1,869,264.0	4"	77,886	311,544.0
30"	8,840	265,200.0	4"	8,840	35,360.0
42"	570	23,940.0	4"	570	2,280.0
72"	1,325	95,400.0	4"	1,325	5,300.0
Total	2,278,237	20,253,859.8	Total	2,278,237	8,801,443.8

Inch-Feet Based on Actual Size of Mains	20,253,859.8
Inch-Feet Based on Reduced Size of Mains	8,801,443.8
Difference	11,452,416.0
	43.46%

Pennichuck Water Works, Inc.
Rate Design

Development of Unit Production Cost

Source of Supply

Base Cost	\$ 392,217
Extra Capacity Max Day Cost	294,197
Extra Capacity Max Hour Cost	0
Less Purchased Water Base	(135,447)
Less Purchased Water Max Day	(101,597)
Less Purchased Water Max Hr	0

Pumping

Base Cost	588,283
Extra Capacity Max Day Cost	155,614
Extra Capacity Max Hour Cost	135,879

Water Treatment

Base Cost	801,111
Extra Capacity Max Day Cost	196,917
Extra Capacity Max Hour Cost	0

Total Production Cost \$ 2,327,174

Water Use in CCF 5,049,090

Unit Production Cost per CCF \$ 0.4609

Note: Pumping Costs are at the Water Treatment Plant.
See next page for details.

Pennichuck Water Works, Inc.
Rate Design

Allocation of Pumping Costs at Water Treatment Plant
For Use in Development of Unit Production Cost

<u>Pumping Expenses:</u>	<u>Total</u>	<u>At WTP</u>	<u>Base Cost</u>	<u>Extra Cap Max Day</u>	<u>Extra Cap Max Hour</u>	<u>Allocation Code</u>
Fuel or Power Purchased	935,016	531,315	451,617	53,132	26,566	43
Pumping Labor and Expenses	229,700	229,700	90,088	67,555	72,057	41
Miscellaneous Expenses	82,521	82,521	32,365	24,269	25,887	41
Maint. of Structures and Imp.	82,794	19,473	7,637	5,727	6,109	41
Maint. of Pumping Equipment	210,533	16,767	6,576	4,931	5,260	41
Total Pumping Expenses	1,540,564	879,776	588,283	155,614	135,879	
WTP Pumping is	57.11%	of Total Pumping				

Pennichuck Water Works, Inc.
Rate Design

Allocation of Administrative and General Costs to Anheuser-Busch

	<u>Total</u>	<u>Allocation to A-B</u>	<u>A-B Charge</u>
		<u>%</u>	<u>\$ per CCF</u>
<u>Administrative and General Costs:</u>			
Base Cost	1,785,002	10.92	194,922
Extra Capacity Max Day Cost	1,342,154	2.54	34,091
Extra Capacity Max Hour Cost	779,637	2.38	18,555
Total A-B Share of Admin and General			247,568 \$ 0.4490

Anheuser-Busch Annual Volume = 551,400 CCF

Development of Anheuser-Busch Volumetric Rate

Unit Production Cost per CCF	\$ 0.4609
Total A-B Share of Admin and General	<u>0.4490</u>
Anheuser-Busch Volumetric Rate	\$ 0.9099

Pennichuck Water Works, Inc.
Summary of Proposed Rates

General Service - Metered
Schedule G-M

<u>Meter Size</u>	<u>Monthly Proposed Charge</u>
5/8"	\$ 25.66
3/4"	36.92
1"	59.46
1 1/2"	115.88
2"	189.72
3"	347.91
4"	573.79
6"	1,138.56
8"	1,816.46
10"	2,607.11
Volumetric Charge per 100 cu. ft.	\$ 3.086

Municipal Fire Protection Service
Schedule FP-M

	<u>Monthly Proposed Charge</u>
Each Hydrant	\$ 19.96
Inch-Foot per year	\$ 0.13773

Private Fire Protection Service
Schedule FP-NM

<u>Connection Size</u>	<u>Monthly Proposed Charge</u>
4" or smaller	\$ 58.36
6"	97.92
8" or larger	144.16

Special Contract Service

Anheuser-Busch

Annual Carrying Chg \$371,469.00
317,185 ccf Required Annual Minimum Use (Take or Pay)
(86,900 ccf/day = 317,185 ccf/year)
Volumetric Charge (for all ccf)
per 100 cu. ft. \$ 0.9099

Hudson

Annual Charge \$ 32,800.00
Volumetric Charge
per 100 cu. ft. \$ 1.9600

Milford

Annual Fixed Fee \$ 81,000.00
Volumetric Charge
per 100 cu. ft. \$ 1.9419

Pennichuck Water Works, Inc.
Calculation of Revenues Under Proposed Rates

General Service - Metered

Residential

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
5/8"	23,188	278,256	\$ 25.66	\$ 7,140,048.96
3/4"	325	3,900	36.92	143,988.00
1"	205	2,460	59.46	146,271.60
1 1/2"	131	1,572	115.88	182,163.36
2"	45	540	189.72	102,448.80
3"	19	228	347.91	79,323.48
4"	3	36	573.79	20,656.44
6"	0	0	1,138.56	0.00
8"	0	0	1,816.46	0.00
10"	0	0	2,607.11	0.00
Subtotal	23,916	286,992		\$ 7,814,900.64
<u>CCFT</u>				
Volume	3,190,170		\$ 3.086	\$ 9,844,864.62
Total Residential Revenue				\$ 17,659,765.26

Commercial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
5/8"	605	7,260	\$ 25.66	\$ 186,291.60
3/4"	175	2,100	36.92	77,532.00
1"	255	3,060	59.46	181,947.60
1 1/2"	233	2,796	115.88	324,000.48
2"	150	1,800	189.72	341,496.00
3"	17	204	347.91	70,973.64
4"	2	24	573.79	13,770.96
6"	1	12	1,138.56	13,662.72
8"	0	0	1,816.46	0.00
10"	0	0	2,607.11	0.00
Subtotal	1,438	17,256		\$ 1,209,675.00
<u>CCFT</u>				
Volume	766,150		\$ 3.086	\$ 2,364,338.90
Total Commercial Revenue				\$ 3,574,013.90

Pennichuck Water Works, Inc.
Calculation of Revenues Under Proposed Rates

General Service - Metered

Industrial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
5/8"	30	360	\$ 25.66	\$ 9,237.60
3/4"	17	204	36.92	7,531.68
1"	39	468	59.46	27,827.28
1 1/2"	29	348	115.88	40,326.24
2"	35	420	189.72	79,682.40
3"	13	156	347.91	54,273.96
4"	2	24	573.79	13,770.96
6"	2	24	1,138.56	27,325.44
8"	0	0	1,816.46	0.00
10"	0	0	2,607.11	0.00
Subtotal	167	2,004		\$ 259,975.56
	<u>CCFT</u>			
Volume	222,313		\$ 3.086	\$ 686,057.92
Total Industrial Revenue				\$ 946,033.48

Municipal

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
5/8"	17	204	\$ 25.66	\$ 5,234.64
3/4"	10	120	36.92	4,430.40
1"	16	192	59.46	11,416.32
1 1/2"	27	324	115.88	37,545.12
2"	37	444	189.72	84,235.68
3"	8	96	347.91	33,399.36
4"	2	24	573.79	13,770.96
6"	2	24	1,138.56	27,325.44
8"	0	0	1,816.46	0.00
10"	0	0	2,607.11	0.00
Subtotal	119	1,428		\$ 217,357.92
	<u>CCFT</u>			
Volume	79,953		\$ 3.086	\$ 246,734.96
Total Municipal Revenue				\$ 464,092.88
Grand Total GWS Revenue				\$ 22,643,905.52

Pennichuck Water Works, Inc.
Calculation of Revenues Under Proposed Rates

Service to Contract Customers

Town of Milford

		<u>Proposed Rate</u>	<u>Proposed Revenue</u>
Annual Fixed Fee		\$ 81,000.00	\$ 81,000.00
Volume	<u>CCFT</u> 45,237	\$ 1.9419	\$ 87,845.73
Total Milford Revenue			\$ 168,845.73

Town of Hudson

		<u>Proposed Rate</u>	<u>Proposed Revenue</u>
Annual Demand Charge		\$ 32,800.00	\$ 32,800.00
Volume	<u>CCFT</u> 143,376	\$ 1.9600	\$ 281,016.96
Total Hudson Revenue			\$ 313,816.96

Anheuser-Busch

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
6"	2	24	\$ 1,138.56	\$ 27,325.44
Volume	<u>CCFT</u> 234,215 (Excess)		0.9099	\$ 213,112.23
	<u>317,185</u> (Min'm Use)		0.9099	\$ 288,606.63
	551,400 (Total CCF)			
Annual Carrying Charge			\$ 371,469.00	\$ 371,469.00
Total Anheuser-Busch Revenue				\$ 900,513.30
Grand Total Contract Revenue				\$ 1,383,175.99

Pennichuck Water Works, Inc.
Calculation of Revenues Under Proposed Rates

Fire Protection Service

Private Fire Protection

<u>Size</u>	<u>Number</u>	<u>Number of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
2"	29	348	\$ 58.36	\$ 20,309.28
4"	105	1,260	58.36	73,533.60
6"	369	4,428	97.92	433,589.76
8"	284	3,408	144.16	491,297.28
10"	6	72	144.16	10,379.52
12"	13	156	144.16	22,488.96
16"	1	12	144.16	1,729.92
Total	807	9,684		\$ 1,053,328.32

Municipal Fire Protection

<u>Size</u>	<u>Number</u>	<u>of Bills</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
Hydrant	2,468	60	\$ 19.96	\$ 591,135.36
Inch-Feet	18,448,150		0.13773	2,540,863.70
Total Municipal Fire Revenue				\$ 3,131,999.06

Pennichuck Water Works, Inc.
Calculation of Revenues Under Proposed Rates

Total Proposed Rate Revenue

Grand Total GWS Revenue	\$ 22,643,905.52
Grand Total Contract Revenue	\$ 1,383,175.99
Grand Total Private Fire Revenue	\$ 1,053,328.32
Grand Total Municipal Fire Revenue	\$ 3,131,999.06
Grand Total Proposed Revenue	\$ 28,212,408.89
Total Customer Charge Revenue	\$ 9,529,234.56
Total Volume Charge Revenue	\$ 14,012,577.95
Total Contract Fixed Fee Revenue	\$ 485,269.00
Total Private Fire Revenue	\$ 1,053,328.32
Total Municipal Fire Revenue	\$ 3,131,999.06
Grand Total Proposed Revenue	\$ 28,212,408.89
Net Water Revenue Requirement	\$ 28,212,098.00
Difference	\$ 310.89 0.001%

Pennichuck Water Works, Inc.

Comparison of Cost of Service Indications and Proposed Rate Revenues

	<u>Cost of Service</u>		<u>Proposed Rates</u>	
	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>
Water Service Revenue	24,026,781	85.17	24,027,081.51	85.17
Private Fire Revenue	1,053,318	3.73	1,053,328.32	3.73
Municipal Fire Revenue	3,131,999	11.10	3,131,999.06	11.10
Total Revenues	28,212,098	100.00	28,212,408.89	100.00

PENNICHUCK WATER WORKS, INC.
MERRIMACK, NEW HAMPSHIRE

ADDENDUM TO
REVISED REPORT ON
COST OF SERVICE ALLOCATIONS
AND RATE DESIGN

by

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AUS Consultants
155 Gaither Drive, Suite A
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February 2011

Addendum To
Revised Report on
Cost of Service Allocations
and Water Rate Design
Pennichuck Water Works, Inc.

The cost of service allocations and related rate design developed in the main body of this revised report were premised upon a net water revenue requirement of \$28,212,098. This amount has been characterized as the “Permanent Rate Increase” by the management of Pennichuck Water Works, Inc.

In addition to the Permanent Rate Increase, one additional revenue requirement level remains to be considered in the rate filing before the New Hampshire Public Utilities Commission. This level and its corresponding revenue requirement are identified as the “Step Rate Increase” of \$28,858,834.

This addendum sets forth the design of rates and charges which will generate the revenue requirement under the Step Rate Increase. Attached hereto are a series of schedules similar in format to Schedules 10, 14, and 15 (i.e., the rate design schedules) of the main report. The schedules attached hereto are identified with “.Step” extensions.

Additionally, Schedule A.Step attached hereto sets forth the allocation of the revenue requirement to the customer classes for the Step Rate Increase. The revenue requirement is ratioed to the revenues from the Permanent Rate Increase on this schedule.

Page 5 of Schedule 15 shows that the step rate design is within 0.003% of its revenue requirement. This difference is considered negligible and is acceptable for rate design purposes.

Finally, a series of schedules illustrating the effect of the step increase is attached hereto. Schedule SE.1 sets forth the difference between the combined rate elements (that is, those designed to generate the step revenue requirement) and the permanent rate elements. This difference is then applied to the billing parameters on Schedule SE.2. As shown on Page 5 of

Schedule SE.2, the movement from the permanent rate increase to the step rate increase generates an additional \$647,429 of revenue.

PENNICHUCK WATER WORKS, INC.
MERRIMACK, NEW HAMPSHIRE

SCHEDULES TO ACCOMPANY
ADDENDUM TO
REVISED REPORT ON
COST OF SERVICE ALLOCATIONS
AND WATER RATE DESIGN

by

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AUS Consultants
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February 2011

PENNICHUCK WATER WORKS, INC.

RATE DESIGN FOR

STEP RATE INCREASE

Pennichuck Water Works, Inc.
Combined Rate Increase
Combined Permanent and Step Increase
Allocation of Combined Rate Revenue

	<u>Proposed Permanent Rates</u>		<u>Combined Revenue Requirement</u>
	<u>Amount</u>	<u>%</u>	
Total Customer Charge Revenue	\$ 9,529,234.56	33.78%	9,741,223
Total Volume Charge Revenue	14,012,577.95	49.67%	14,324,304
Contract Fixed Fee Revenue:			
Milford	81,000.00		81,000
Hudson	32,800.00		62,403
Anheuser-Busch	371,469.00		371,469
Total Contract Fixed Fee Revenue	485,269.00	1.72%	514,872
Total Private Fire Revenue	1,053,328.32	3.73%	1,076,761
Total Municipal Fire Revenue	3,131,999.06	11.10%	3,201,674
Grand Total Proposed Revenue	\$ 28,212,408.89	100.00%	\$ 28,858,834
Net Water Revenue Requirement	\$ 28,212,098.00		
Difference	\$ 310.89	0.001%	

Pennichuck Water Works, Inc.
Combined Rate Increase
Combined Permanent and Step Increase
Rate Design

Municipal Fire Protection

Total Municipal Fire Protection Rev Reqmt 3,201,674

Permanent Municipal Fire Protection Revenue 3,131,999

Permanent revenue is less than the allocated amount.
An increase of about 2.2% will be developed for municipal fire protection.

<u>Rate Element</u>	<u>Permanent Monthly Rate</u>	<u>Combined Monthly Rate</u>	<u>% Increase</u>
Hydrant	\$ 19.96	\$ 20.40	2.20 %
Inch-Foot	0.13773	0.14079	2.22 %

Pennichuck Water Works, Inc.
Combined Rate Increase
Combined Permanent and Step Increase
Rate Design

Private Fire Protection

Total Private Fire Protection Rev Reqmt 1,076,761

Permanent Private Fire Protection Revenue 1,053,328

Permanent revenue is less than the allocated amount.
An increase of about 2.2% will be developed for municipal fire protection.

<u>Size</u>	<u>Permanent Monthly Charge</u>	<u>Combined Monthly Charge</u>	<u>Increase</u>
2"	\$ 58.36	\$ 59.66	2.23 %
4"	58.36	59.66	2.23 %
6"	97.92	100.10	2.23 %
8"	144.16	147.37	2.23 %
10"	144.16	147.37	2.23 %
12"	144.16	147.37	2.23 %
16"	144.16	147.37	2.23 %

Pennichuck Water Works, Inc.
Combined Rate Increase
Combined Permanent and Step Increase
Rate Design

Customer Charges

Total for Customer Charge	9,741,223
Rate Design Adjustment	0

Net for Customer Charges	9,741,223
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Permanent Customer Charge Revenue	9,529,235
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Increase Required	2.22 %
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Meter Size	Permanent Monthly Charge	Combined Monthly Charge	Increase
5/8"	\$ 25.66	\$ 26.23	2.22 %
3/4"	36.92	37.74	2.22 %
1"	59.46	60.78	2.22 %
1 1/2"	115.88	118.45	2.22 %
2"	189.72	193.93	2.22 %
3"	347.91	355.63	2.22 %
4"	573.79	586.53	2.22 %
6"	1,138.56	1,163.84	2.22 %
8"	1,816.46	1,856.79	2.22 %
10"	2,607.11	2,664.99	2.22 %

Pennichuck Water Works, Inc.
Combined Rate Increase
Combined Permanent and Step Increase
Rate Design

Volumetric Charges

Net Water Revenue Requirement	28,858,834
Less Proposed Revenues:	
From Municipal Fire Protection	(3,201,481)
From Private Fire Protection	(1,076,782)
From Customer Charges	(9,740,865)
From Contract Fixed Fees	(143,403)
From A-B Carrying Charge	(371,469)
From A-B Volume Charge	
Net Required From Volume Charges	14,324,834
Permanent Volume Charge Revenue	14,012,578
Increase Required	2.23 %

	<u>Permanent Charge</u>	<u>Combined Charge</u>	<u>Increase</u>
General Water	\$ 3.086	\$ 3.155	2.24 %
Anheuser-Busch	0.9099	0.9302	2.23 %
Hudson	1.9600	2.0037	2.23 %
Milford	1.9419	1.9852	2.23 %

Pennichuck Water Works, Inc.
Summary of Combined Rates
Combined Permanent and Step Increase
General Service - Metered
Schedule G-M

<u>Meter Size</u>	<u>Combined Monthly Charge</u>
5/8"	\$ 26.23
3/4"	37.74
1"	60.78
1 1/2"	118.45
2"	193.93
3"	355.63
4"	586.53
6"	1,163.84
8"	1,856.79
10"	2,664.99
Volumetric Charge per 100 cu. ft.	\$ 3.155

Municipal Fire Protection Service
Schedule FP-M

	<u>Combined Monthly Charge</u>
Each Hydrant	\$ 20.40
Inch-Foot per year	\$ 0.14079

Private Fire Protection Service
Schedule FP-NM

<u>Connection Size</u>	<u>Combined Monthly Charge</u>
4" or smaller	\$ 59.66
6"	100.10
8" or larger	147.37

Special Contract Service

Anheuser-Busch

Annual Carrying Chg \$ 371,469
317,185 ccf Required Annual Minimum Use (T₂
(86,900 cf/day = 317,185 ccf/year)
Volumetric Charge (for all ccf)
per 100 cu. ft. \$ 0.9302

Hudson

Annual Charge \$ 62,403
Volumetric Charge
per 100 cu. ft. \$ 2.0037

Milford

Annual Fixed Fee \$ 81,000
Volumetric Charge
per 100 cu. ft. \$ 1.9852

Pennichuck Water Works, Inc.
Calculation of Revenues Under Combined Rates
Combined Permanent and Step Increase
General Service - Metered

Residential

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Combined Rate</u>	<u>Revenue</u>
5/8"	23,188	278,256	\$ 26.23	\$ 7,298,654.88
3/4"	325	3,900	37.74	147,186.00
1"	205	2,460	60.78	149,518.80
1 1/2"	131	1,572	118.45	186,203.40
2"	45	540	193.93	104,722.20
3"	19	228	355.63	81,083.64
4"	3	36	586.53	21,115.08
6"	0	0	1,163.84	0.00
8"	0	0	1,856.79	0.00
10"	0	0	2,664.99	0.00
Subtotal	23,916	286,992		\$ 7,988,484.00
<u>CCFT</u>				
Volume	3,190,170		\$ 3.155	\$ 10,064,986.35
Total Residential Revenue				\$ 18,053,470.35

Commercial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Combined Rate</u>	<u>Revenue</u>
5/8"	605	7,260	\$ 26.23	\$ 190,429.80
3/4"	175	2,100	37.74	79,254.00
1"	255	3,060	60.78	185,986.80
1 1/2"	233	2,796	118.45	331,186.20
2"	150	1,800	193.93	349,074.00
3"	17	204	355.63	72,548.52
4"	2	24	586.53	14,076.72
6"	1	12	1,163.84	13,966.08
8"	0	0	1,856.79	0.00
10"	0	0	2,664.99	0.00
Subtotal	1,438	17,256		\$ 1,236,522.12
<u>CCFT</u>				
Volume	766,150		\$ 3.155	\$ 2,417,203.25
Total Commercial Revenue				\$ 3,653,725.37

Pennichuck Water Works, Inc.
Calculation of Revenues Under Combined Rates
Combined Permanent and Step Increase
General Service - Metered

Industrial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Combined Rate</u>	<u>Revenue</u>
5/8"	30	360	\$ 26.23	\$ 9,442.80
3/4"	17	204	37.74	7,698.96
1"	39	468	60.78	28,445.04
1 1/2"	29	348	118.45	41,220.60
2"	35	420	193.93	81,450.60
3"	13	156	355.63	55,478.28
4"	2	24	586.53	14,076.72
6"	2	24	1,163.84	27,932.16
8"	0	0	1,856.79	0.00
10"	0	0	2,664.99	0.00
Subtotal	167	2,004		\$ 265,745.16
Volume	<u>CCFT</u> 222,313		\$ 3.155	\$ 701,397.52
Total Industrial Revenue				\$ 967,142.68

Municipal

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Combined Rate</u>	<u>Revenue</u>
5/8"	17	204	\$ 26.23	\$ 5,350.92
3/4"	10	120	37.74	4,528.80
1"	16	192	60.78	11,669.76
1 1/2"	27	324	118.45	38,377.80
2"	37	444	193.93	86,104.92
3"	8	96	355.63	34,140.48
4"	2	24	586.53	14,076.72
6"	2	24	1,163.84	27,932.16
8"	0	0	1,856.79	0.00
10"	0	0	2,664.99	0.00
Subtotal	119	1,428		\$ 222,181.56
Volume	<u>CCFT</u> 79,953		\$ 3.155	\$ 252,251.72
Total Municipal Revenue				\$ 474,433.28
Grand Total GWS Revenue				\$ 23,148,771.67

Pennichuck Water Works, Inc.
Calculation of Revenues Under Combined Rates
Combined Permanent and Step Increase
Service to Contract Customers

Town of Milford

		<u>Combined Rate</u>	<u>Revenue</u>
Annual Fixed Fee		\$ 81,000.00	\$ 81,000.00
Volume	<u>CCFT</u> 45,237	\$ 1.9852	\$ 89,804.49
Total Milford Revenue			\$ 170,804.49

Town of Hudson

		<u>Combined Rate</u>	<u>Revenue</u>
Annual Demand Charge		\$ 62,403.00	\$ 62,403.00
Volume	<u>CCFT</u> 143,376	\$ 2.0037	\$ 287,282.49
Total Hudson Revenue			\$ 349,685.49

Anheuser-Busch

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Combined Rate</u>	<u>Revenue</u>
6"	2	24	\$ 1,163.84	\$ 27,932.16
Volume	<u>CCFT</u> 234,215 (Excess) 317,185 (Min'm Use) 551,400 (Total CCF)		0.9302 0.9302	\$ 217,866.79 \$ 295,045.49
Annual Carrying Charge			\$ 371,469.00	\$ 371,469.00
Total Anheuser-Busch Revenue				\$ 912,313.44
Grand Total Contract Revenue				\$ 1,432,803.42

Pennichuck Water Works, Inc.
Calculation of Revenues Under Combined Rates
Combined Permanent and Step Increase
Fire Protection Service

Private Fire Protection

<u>Size</u>	<u>Number</u>	<u>Number of Bills</u>	<u>Combined Rate</u>	<u>Revenue</u>
2"	29	348	\$ 59.66	\$ 20,761.68
4"	105	1,260	59.66	75,171.60
6"	369	4,428	100.10	443,242.80
8"	284	3,408	147.37	502,236.96
10"	6	72	147.37	10,610.64
12"	13	156	147.37	22,989.72
16"	1	12	147.37	1,768.44
Total	807	9,684		\$ 1,076,781.84

Municipal Fire Protection

<u>Size</u>	<u>Number</u>	<u>of Bills</u>	<u>Combined Rate</u>	<u>Revenue</u>
Hydrant	2,468	60	\$ 20.40	\$ 604,166.40
Inch-Feet	18,448,150		0.14079	2,597,315.04
Total Municipal Fire Revenue				\$ 3,201,481.44

Pennichuck Water Works, Inc.
Calculation of Revenues Under Combined Rates
Combined Permanent and Step Increase
Total Proposed Combined Rate Revenue

Grand Total GWS Revenue	\$ 23,148,771.67
Grand Total Contract Revenue	\$ 1,432,803.42
Grand Total Private Fire Revenue	\$ 1,076,781.84
Grand Total Municipal Fire Revenue	\$ 3,201,481.44
Grand Total Proposed Revenue	\$ 28,859,838.37
Total Customer Charge Revenue	\$ 9,740,865.00
Total Volume Charge Revenue	\$ 14,325,838.09
Total Contract Fixed Fee Revenue	\$ 514,872.00
Total Private Fire Revenue	\$ 1,076,781.84
Total Municipal Fire Revenue	\$ 3,201,481.44
Grand Total Proposed Revenue	\$ 28,859,838.37
Net Water Revenue Requirement	\$ 28,858,834.00
Difference	\$ 1,004.37 0.003%

PENNICHUCK WATER WORKS, INC.

SCHEDULES ILLUSTRATING

EFFECT OF STEP INCREASE

Pennichuck Water Works, Inc.
Summary of Permanent and Combined Rates

General Service - Metered
Schedule G-M

<u>Meter Size</u>	<u>Combined Monthly Charge</u>	<u>Permanent Monthly Charge</u>	<u>Effect of Step Increase</u>
5/8"	\$ 26.23	\$ 25.66	\$ 0.57
3/4"	37.74	36.92	0.82
1"	60.78	59.46	1.32
1 1/2"	118.45	115.88	2.57
2"	193.93	189.72	4.21
3"	355.63	347.91	7.72
4"	586.53	573.79	12.74
6"	1,163.84	1,138.56	25.28
8"	1,856.79	1,816.46	40.33
10"	2,664.99	2,607.11	57.88
Volumetric Charge per 100 cu. ft.	\$ 3.155	\$ 3.086	\$ 0.069

Municipal Fire Protection Service
Schedule FP-M

	<u>Combined Monthly Charge</u>	<u>Permanent Monthly Charge</u>	<u>Effect of Step Increase</u>
Each Hydrant	\$ 20.40	\$ 19.96	\$ 0.44
Inch-Foot per year	\$0.14079	\$ 0.13773	\$ 0.00306

Private Fire Protection Service
Schedule FP-NM

<u>Connection Size</u>	<u>Combined Monthly Charge</u>	<u>Permanent Monthly Charge</u>	<u>Effect of Step Increase</u>
4" or smaller	\$ 59.66	\$ 58.36	\$ 1.30
6"	100.10	97.92	2.18
8" or larger	147.37	144.16	3.21

Special Contract Service

<u>Anheuser-Busch</u>			
Annual Carrying Chg	\$371,469	\$ 371,469	\$ -
317,185 ccf Required Annual Minimum Use (Take or Pay)			
(86,900 ccf/day = 317,185 ccf/year)			
Volumetric Charge (for all ccf)			
per 100 cu. ft.	\$ 0.9302	\$ 0.9099	\$ 0.0203
<u>Hudson</u>			
Annual Charge	\$ 62,403	\$ 32,800	\$ 29,603
Volumetric Charge			
per 100 cu. ft.	\$ 2.0037	\$ 1.9600	\$ 0.0437
<u>Milford</u>			
Annual Fixed Fee	\$ 81,000	\$ 81,000	\$ -
Volumetric Charge			
per 100 cu. ft.	\$ 1.9852	\$ 1.9419	\$ 0.0433

Pennichuck Water Works, Inc.
Calculation of Revenues from Step Effect

General Service - Metered

Residential

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Step Effect</u>	<u>Revenue</u>
5/8"	23,188	278,256	\$ 0.57	\$ 158,605.92
3/4"	325	3,900	0.82	3,198.00
1"	205	2,460	1.32	3,247.20
1 1/2"	131	1,572	2.57	4,040.04
2"	45	540	4.21	2,273.40
3"	19	228	7.72	1,760.16
4"	3	36	12.74	458.64
6"	0	0	25.28	0.00
8"	0	0	40.33	0.00
10"	0	0	57.88	0.00
Subtotal	23,916	286,992		\$ 173,583.36
<u>CCFT</u>				
Volume	3,190,170		\$ 0.069	\$ 220,121.73
Total Residential Revenue				\$ 393,705.09

Commercial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Step Effect</u>	<u>Revenue</u>
5/8"	605	7,260	\$ 0.57	\$ 4,138.20
3/4"	175	2,100	0.82	1,722.00
1"	255	3,060	1.32	4,039.20
1 1/2"	233	2,796	2.57	7,185.72
2"	150	1,800	4.21	7,578.00
3"	17	204	7.72	1,574.88
4"	2	24	12.74	305.76
6"	1	12	25.28	303.36
8"	0	0	40.33	0.00
10"	0	0	57.88	0.00
Subtotal	1,438	17,256		\$ 26,847.12
<u>CCFT</u>				
Volume	766,150		\$ 0.069	\$ 52,864.35
Total Commercial Revenue				\$ 79,711.47

Pennichuck Water Works, Inc.
Calculation of Revenues from Step Effect

General Service - Metered

Industrial

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Step Effect</u>	<u>Revenue</u>
5/8"	30	360	\$ 0.57	\$ 205.20
3/4"	17	204	0.82	167.28
1"	39	468	1.32	617.76
1 1/2"	29	348	2.57	894.36
2"	35	420	4.21	1,768.20
3"	13	156	7.72	1,204.32
4"	2	24	12.74	305.76
6"	2	24	25.28	606.72
8"	0	0	40.33	0.00
10"	0	0	57.88	0.00
Subtotal	167	2,004		\$ 5,769.60
Volume	<u>CCFT</u> 222,313		\$ 0.069	\$ 15,339.60
Total Industrial Revenue				\$ 21,109.20

Municipal

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Step Effect</u>	<u>Revenue</u>
5/8"	17	204	\$ 0.57	\$ 116.28
3/4"	10	120	0.82	98.40
1"	16	192	1.32	253.44
1 1/2"	27	324	2.57	832.68
2"	37	444	4.21	1,869.24
3"	8	96	7.72	741.12
4"	2	24	12.74	305.76
6"	2	24	25.28	606.72
8"	0	0	40.33	0.00
10"	0	0	57.88	0.00
Subtotal	119	1,428		\$ 4,823.64
Volume	<u>CCFT</u> 79,953		\$ 0.069	\$ 5,516.76
Total Municipal Revenue				\$ 10,340.40
Grand Total GWS Revenue				\$ 504,866.15

Pennichuck Water Works, Inc.
Calculation of Revenues from Step Effect

Service to Contract Customers

Town of Milford

		<u>Step Effect</u>	<u>Revenue</u>
Annual Fixed Fee		\$ -	\$ -
Volume	<u>CCFT</u> 45,237	\$ 0.0433	\$ 1,958.76
Total Milford Revenue			\$ 1,958.76

Town of Hudson

		<u>Step Effect</u>	<u>Revenue</u>
Annual Demand Charge		\$ 29,603.00	\$ 29,603.00
Volume	<u>CCFT</u> 143,376	\$ 0.0437	\$ 6,265.53
Total Hudson Revenue			\$ 35,868.53

Anheuser-Busch

<u>Meter Size</u>	<u>Number of Meters</u>	<u>Number of Bills</u>	<u>Step Effect</u>	<u>Revenue</u>
6"	2	24	\$ 25.28	\$ 606.72
Volume	<u>CCFT</u> 234,215 (Excess) 317,185 (Min'm Use) 551,400 (Total CCF)		0.0203 0.0203	\$ 4,754.56 \$ 6,438.86
Annual Carrying Charge			\$ -	\$ -
Total Anheuser-Busch Revenue				\$ 11,800.14
Grand Total Contract Revenue				\$ 49,627.43

Pennichuck Water Works, Inc.
Calculation of Revenues from Step Effect

Fire Protection Service

Private Fire Protection

<u>Size</u>	<u>Number</u>	<u>Number of Bills</u>	<u>Step Effect</u>	<u>Revenue</u>
2"	29	348	\$ 1.30	\$ 452.40
4"	105	1,260	1.30	1,638.00
6"	369	4,428	2.18	9,653.04
8"	284	3,408	3.21	10,939.68
10"	6	72	3.21	231.12
12"	13	156	3.21	500.76
16"	1	12	3.21	38.52
Total	807	9,684		\$ 23,453.52

Municipal Fire Protection

<u>Size</u>	<u>Number</u>	<u>of Bills</u>	<u>Step Effect</u>	<u>Revenue</u>
Hydrant	2,468	60	\$ 0.44	\$ 13,031.04
Inch-Feet	18,448,150		0.00306	56,451.34
Total Municipal Fire Revenue				\$ 69,482.38

Pennichuck Water Works, Inc.
Calculation of Revenues from Step Effect

Total Proposed Combined Rate Revenue

Grand Total GWS Revenue	\$	504,866.15
Grand Total Contract Revenue	\$	49,627.43
Grand Total Private Fire Revenue	\$	23,453.52
Grand Total Municipal Fire Revenue	\$	69,482.38
Grand Total Proposed Revenue	\$	647,429.49
Total Customer Charge Revenue	\$	211,630.44
Total Volume Charge Revenue	\$	313,260.15
Total Contract Fixed Fee Revenue	\$	29,603.00
Total Private Fire Revenue	\$	23,453.52
Total Municipal Fire Revenue	\$	69,482.38
Grand Total Proposed Revenue	\$	647,429.49