

PWV Proforma 2018 Test Year							Total RSF Funds Required	Available RSF funds on 12/31/2018
Proformed Revenue Requirement ¹ - \$ 35,931,515								
	CBFRR	Material Operating Expense Revenue Requirement (MOERR)	Operating Expense Revenue Requirement (NOERR) ⁶	1.0 Debt Service Revenue Requirement (1.0 DSRR) ¹	0.1 Debt Service Revenue Requirement (0.1 DSRR)			
Revenue Requirement ² -	\$ 7,729,032	\$ 19,916,041	\$ 587,517	\$ 6,999,023	\$ 699,902			
Percentage of Revenues -	21.51%	55.43%	1.64%	19.48%	1.95%			
1 Year coverage -	\$ 199,417	\$ 1,202,766		\$ 180,582				
3 Years coverage -	\$ 598,252	\$ 5,782,321		\$ 541,747	\$ -			
Calculated Rate Stabilization Fund by Revenue Category for 3 years ^{3,4} -	\$ 660,000	\$ 6,360,000	No Stabilization Fund	\$ 600,000	No Stabilization Fund	\$ 7,620,000	\$ 2,199,352	
Calculated Rate Stabilization Fund by Revenue Category for 1 year ^{3,4} -	\$ 220,000	\$ 1,320,000		\$ 200,000		\$ 1,740,000		
Requested Rate Stabilization Fund levels ⁸ -	\$ 400,000	\$ 3,120,000		\$ 400,000		\$ 3,920,000		
Based on largest variance from five year ave of -	4.62%							

Inflation @ 3.5%

Revenue Type	2014 PWV Billed Revenue	2015 PWV Billed Revenue	2016 PWV Billed Revenue	2017 PWV Billed Revenue	2018 PWV Billed Revenue
Total Volumetric Charges, includes Unbilled water sales, Unbilled/and Billed Recoupment and abatements	\$ 15,340,557	\$ 16,357,423	\$ 17,011,648	\$ 15,457,194	\$ 17,516,995
Total Meter Charge (fixed) includes fixed portion of special contracts	\$ 8,243,956	\$ 8,429,316	\$ 8,672,702	\$ 8,766,739	\$ 9,437,913
WICA/QCPAC revenues	\$ 109,727	\$ 367,548	\$ 711,119	\$ 705,661	\$ -
Total Private Fire Protection Charges (fixed)	\$ 1,039,276	\$ 1,058,281	\$ 1,068,586	\$ 1,089,205	\$ 1,210,960
Total Municipal Fire Protection Charges (fixed)	\$ 3,060,346	\$ 3,075,100	\$ 3,082,703	\$ 3,116,640	\$ 3,442,774
Total Billed Revenue	\$ 27,793,862	\$ 29,287,668	\$ 30,546,758	\$ 29,135,439	\$ 31,608,641
% of Revenues that are variable	55.2%	55.9%	55.7%	55.2%	55.4%
% of Revenues that are fixed	44.8%	44.1%	44.3%	44.8%	44.6%

Calculation of MOER RSF	
Inflation	Revenue Shortfall
Yr 1 - \$ 692,370	\$ 510,397
Yr 2 - \$ 1,408,808	\$ 510,276
Yr 3 - \$ 2,150,321	\$ 510,150
\$ 4,251,499	\$ 1,530,822
Totals -	\$ 5,782,321

Maximum percentage of revenues that were variable during the previous 5 years - 55.9%

Expense Type	2014 PWV Actual Variable Expenses	2015 PWV Actual Variable Expenses	2016 PWV Actual Variable Expenses	2017 PWV Actual Variable Expenses	2018 PWV Actual Variable Expenses
Purchased Water	\$ 393,060	\$ 462,177	\$ 481,728	\$ 437,664	\$ 472,407
Electric	\$ 898,211	\$ 1,164,461	\$ 1,264,668	\$ 1,053,878	\$ 1,152,305
Chemicals	\$ 696,650	\$ 668,919	\$ 703,435	\$ 765,438	\$ 898,982
Sludge Disposal	\$ 303,057	\$ 316,654	\$ 348,455	\$ 385,873	\$ 378,140
Total Variable Costs	\$ 2,290,978	\$ 2,612,211	\$ 2,798,286	\$ 2,642,853	\$ 2,901,834
Variable Expenses as a Percent of Total Revenues	8.2%	8.9%	9.2%	9.1%	9.2%

	2014 Actual CCF's sold by PWV	2015 Actual CCF's sold by PWV	2016 Actual CCF's sold by PWV	2017 Actual CCF's sold by PWV	2018 Actual CCF's sold by PWV
Annual Metered Sales (CCF)	4,988,184	5,349,169	5,802,664	5,056,592	5,242,264
Percentage Variance between Current and High Consumption Year	-16.33%	-8.48%	0.00%	-14.75%	-10.69%
Average Consumption (CCF) over the past five years	5,287,775				
Average Consumption (CCF) over the past five years, excluding 2016 consumption ⁷	5,218,620				
Variance between current and 5 Yr Ave Consumption	-6.01%	1.15%	8.87%	-4.57%	-0.87%
Variance between current and 5 Yr Ave Consumption, excluding 2016 Consumption	-4.62%	2.44%	10.07%	-3.20%	0.45%

Largest percentage reduction in volumetric sales at PWV of 4.62% over the past five years from the five year average of volumetric sales excluding 2016
 Results in a Revenue loss of based on 5 year average sales less 2016 \$ 882,357 based on current permanent rate of \$ 3.66 per CCF
 Results in an Operating Expense reduction of \$ 134,054 based on 2018 variable operating expenses
 Results in an Operating Income reduction of \$ 748,303

Notes:

- Based on Debt Service Multiplier of 1.10 per Sch A of 1604.06 schedules
- Revenue requirements per Sch A Perm-Modified of 1604.06 schedules
- Requested Rate Stabilization fund for Operating Expense and P & I Coverage each have a contingency of 10% safety factor
- PWV share of the \$5,000,000 RSF for distribution to the RSF, MOERSF and the P&IRSF is⁵ 78.33% based on % of PWV revenues (2012 Case) to % of all three regulated utilities revenues (2012 Cases) or \$ 3,920,000
- Calculation of RSF Percentage based on Revenue requirements from DW13-126, 13-128 and 13-130

PWV Revenue Requirement -	\$ 27,689,214	per DW13-130 Settlement Agreement
PEU Revenue Requirement -	\$ 6,913,261	per DW13-126 Settlement Agreement
PAC Revenue Requirement -	\$ 745,186	per DW13-128 Settlement Agreement
Total Utility Revenue Requirement -	\$ 35,347,661	

6. For Calculation of Operating Expense Requirement see Exhibit 1.1

7. Inclusive of pro forma to Hudson and Pennichuck East Usage due to the PWV-PEU interconnect - See 1604.06 Schedule 1C

8. Request rate stabilization fund levels based on 2 years of coverage for the MOERR and 1.0 DSRR RSF. The residual of the PWV SRF funds of \$ 3,920,000 shall be used to fund the CBFRR RSF

**Pennichuck Water Works, Inc.
Accounts Excluded From MOERR
DW 19-084**

**DLW Exhibit 1
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														Test Year	
														<u>2018 Totals</u>	
921002	SENIOR MANAGEMENT VEHICLES	165.33	-	154.01	199.91	1,462.15	563.18	136.13	202.31	-	259.43	231.32	-	3,373.77	3,373.77
921003	SENIOR MGMT - FUEL PURCHASED	268.27	290.78	581.48	292.31	-	29.40	460.43	518.38	478.78	401.56	412.62	352.66	4,086.67	4,086.67
921004	SENIOR MGMT-VEH REGISTRATION	-	-	-	-	-	-	-	-	990.60	-	-	-	990.60	990.60
923000	OUTSIDE SERVICES	26,089.44	52,203.05	18,573.97	35,287.99	39,854.29	44,858.22	23,959.26	20,603.55	22,444.81	47,134.61	24,067.78	30,282.72	385,359.69	385,359.69
926001	OFFICER'S LIFE INSURANCE	386.19	386.19	386.19	386.19	386.19	386.19	386.19	386.19	2,055.19	386.19	386.19	386.19	6,303.28	6,303.28
926500	MISC EMPLOYEE BENEFITS	4,364.64	1,732.33	1,830.57	1,310.04	365.44	2,627.19	720.54	(7,570.39)	1,452.24	1,883.76	2,924.33	(2,881.77)	8,758.92	8,758.92
926501	MISC EMPLOYEE BENEFITS-WELLNESS	-	-	630.70	(1,105.00)	6,715.00	(1,056.52)	(282.08)	(2,770.73)	853.41	(1,109.16)	10.00	1,485.76	3,371.38	3,371.38
926502	MISC EMPLOYEE BENEFITS-ACTIVITIES	-	-	-	-	-	-	-	948.43	354.49	3,102.63	2,500.00	4,768.88	11,674.43	11,674.43
926505	EMPLOYEE RELATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
926600	TUITION REIMBURSEMENTS	6,510.00	-	2,972.84	-	4,088.37	976.85	3,801.00	-	99.70	5,642.87	1,476.90	6,677.77	32,246.30	32,246.30
926610	TRAINING EDUCATIONAL SEMINARS	1,567.61	1,289.42	2,814.75	3,871.50	2,598.33	6,589.29	484.01	508.27	(2,002.23)	3,233.92	4,340.47	5,313.95	30,609.29	30,609.29
930100	MEETINGS & CONVENTIONS	915.00	5,299.70	5,343.92	5,644.97	526.53	273.33	908.96	33.33	13,381.78	659.00	1,496.66	841.61	35,324.79	35,324.79
930101	MEMBERSHIPS	3,833.91	3,698.91	139.98	4,262.29	3,829.66	3,857.62	2,463.42	3,159.92	2,524.71	2,042.72	3,308.76	2,467.63	35,589.53	35,589.53
930200	PUBLIC RELATIONS	-	429.65	913.96	2,681.64	5,989.22	13,011.91	887.53	535.24	-	443.57	372.60	359.64	25,624.96	25,624.96
930300	MEALS	390.09	610.33	398.83	282.21	411.20	147.01	291.72	396.51	122.94	742.99	382.58	26.93	4,203.34	4,203.34
930410	CHARITABLE CONTRIBUTIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total of Non RSF backed O&M Expenses															587,516.95

	Account Number	DW16-806 Approved Expenses	Change from DW16-896 to actual 2017 expenses	Twelve Months 12/31/17	Change from DW16-806 to actual 2018 expenses	Twelve Months 12/31/18	Reasons for substantial increase in 2018 Operating expenses over 2017 operating expenses.
Operating Expenses							
Production Expenses	926.7	4,401,686	170,158	4,571,844	672,823	5,074,509	2/3 of increase is sludge disposal and purchased water
Transmission & Distribution Expenses	926,950	1,852,190	315,886	2,168,076	996,149	2,848,339	Gates, Meter labor - Cap to Main labor
Engineering Expense	660 to 662	1,110,550	58,810	1,169,360	177,197	1,287,747	AM - Capital to Maint labor
Customer Acct & Collection Exp	902 to 904	466,994	(19,105)	447,889	22,796	489,789	
Administrative & General Expense	920 to 950	6,896,887	144,008	7,040,895	683,484	7,580,371	New employees, CS, Acct
Inter Div Management Fee	930	(2,526,222)	(532,213)	(3,058,435)	(761,841)	(3,288,063)	
Amortization Expense	407	(207,365)	352,807	145,442	342,031	134,666	elimination of deferred credit for return of RSF
Property Taxes	408.1	\$4,837,381	(283,616)	4,553,766	(398,606)	4,438,775	
Payroll Taxes	408.1	\$615,326	41,605	656,931	82,761	698,087	New employees, CS, Acct, Eng
PWW share of Corporate Federal and State Imcome Tax	409 to 410	140,149	(38,263)	101,886	(39,129)	101,021	
Total Operating Expenses -		17,587,575	210,077	17,797,653	1,777,665	19,365,241	
Cumulative Increase in Operating Exp Year over approved DW16-806 Exp-				1.19%		10.11%	
MOES percentage increase sought based on DW16-806 approved revenues -				0.67%		5.64%	
QCPAC Percentage increases -				1.69%		4.06%	
Combined MOES and QCPAC Increases -				2.36%		9.70%	
						Net increase in 2018 over 2017 -	7.35%

Notes:

1. Approved 16-806 Revenue Requirement - \$ 31,496,787
2. 2018 projected increase of 9.70% is cumulative and inclusive of 2017 increase of 2.36%
3. Increases would typically occur about 4 months after the close of the previous year.