

Mahone Bay Water Utility
Water Rate Study

Prepared By

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in Association with

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**MAHONE BAY WATER UTILITY
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WORKSHEET B-1

Operating Revenue

The Rate Study is based on a growth rate in residential customers (5/8" Meters) of 3 new customers per year for each of the test years

Operating Expenditures

The Utility is requesting the inclusion of a "Water Filter Replacement Reserve" expenditure in all three test years together with a request to establish a Water Filter Replacement Reserve Fund. The reserve fund will be used to replace the water filters at the water treatment plant to avoid having a large expenditure in a single year.

Non-operating Revenue – The non-operating revenue includes a historical appropriation from the Town of Mahone Bay which is being phased out over the test years.

MAHONE BAY WATER UTILITY
GENERAL NOTES ON WORKSHEETS

Worksheet B-1

This worksheet includes a summary of the operating revenues, operating expenditures, non-operating revenues and non-operating expenditures for the year 17/18 (actual) and 18/19 (estimated) as provided by the Utility.

Operating Revenues - The operating revenue for 19/20, 20/21 and 21/22 is based on the Utility's budget. The fire protection rate is based on the rate approved in the last rate hearing.

Operating Expenditures - The projection of expenses for the test years is as derived from Worksheet B-2a/2b/2c/2d/2e. The Depreciation has been calculated based on the addition of the planned infrastructure.

Non-operating Revenues – The non-operating revenue projected during the test years is the proposed transfer from the depreciation fund for principal debt payments.

Non-operating Expenditures – The non-operating expenditures include interest and principal on the existing debt as well as payments on proposed new debt.

Accumulated Surplus (Deficit) The Utility is projected to have a small surplus at the end of 2018/19.

Worksheet B-2

This worksheet takes the information from Worksheet B-1 to develop revenue requirements for the years for 19/20, 20/21 and 21/22.

Worksheet B-2a/2b/2c/2d/2e

This worksheet provides the breakdown of the estimated operating expenditures as provided by the Utility for the year 18/19. The projected expenditures for the years 19/20, 20/21 and 21/22 for all items are based on budgets provided by the Utility.

Worksheet B-3

This worksheet calculates the depreciation per year and the depreciation fund balance based on the proposed capital works for the years 18/19, 19/20, 20/21 and 21/22. The opening depreciation fund balance is taken from the 17/18 financial statements.

Worksheet B-4

This worksheet details the known and projected capital contributions.

Worksheet B-5

This worksheet allocates the assets of the Utility between general service and fire protection. Each year includes the addition of the proposed capital works identified in Worksheet B-3. Production assets are allocated 90% general service and 10% fire protection. Demand assets are allocated 40% general service and 60% fire protection. The Transmission mains in the Utility are allocated 90% general service and 10% fire protection as they do not contribute to fire protection.

Worksheet C-1

This worksheet uses the percentage of total assets allocated to fire protection from worksheet B-5 to determine the allocation of transmission and distribution; depreciation, taxes and return on rate base to the fire protection charge.

Worksheet C-2

This worksheet calculates the return on rate base.

Worksheet C-3

This worksheet allocates expenses among customer charge, base charge, delivery and production.

Worksheet C-4

This worksheet sets out the number and size of meters in the Utility and by use of the capacity ratio establishes the system equivalents.

Worksheet C-5

This worksheet uses the information from Worksheet's C-3 and C-4 to calculate the quarterly base charge for each size of meter.

Worksheet C-6

This worksheet sets out the water consumption by meter size. The data for the current year is based on information provided by the Utility. The rate study is based on the continuation of the current single block rate structure.

Worksheet C-7

This worksheet uses information from Worksheet's C-3 and C-6 to calculate the consumption charge for years 19/20, 20/21 and 21/22 based on a single block rate.

Worksheet C-8

This worksheet is used as a check to determine that the potential revenues will be the same as the requirements on Worksheet C-3.

Worksheet D-1

This worksheet is a comparison of existing and proposed rates.

Worksheet D-2

This worksheet provides a comparative statement of Operations for the current year as well as the test years.

Appendix 1

This appendix provides the debt repayment calculation for the planned capital works.

Mahone Bay Water Utility
Comparative Statement of Operations

Fiscal Years ending March 31st

	2017/18 (Actual)	2018/19 (Budget)	Projection Using Current Rates		
			2019/20 (Budget)	2020/21 (Budget)	2021/22 (Budget)
OPERATING REVENUES					
Metered Sales	450,893	455,000	456,480	457,964	459,453
Public Fire Protection	111,496	111,496	111,496	111,496	111,496
Sprinkler Service	0	1,440	1,440	1,440	1,440
Special Services- Connection Services	0	5,000	5,000	5,000	5,000
Sundry - Tower Lease/Rent	9,513	7,200	7,200	7,200	7,200
Total	571,902	580,136	581,616	583,100	584,589
OPERATING EXPENDITURES					
Source of Supply	7,328	3,000	3,050	3,145	3,230
Power and Pumping	16,532	18,700	19,335	20,011	20,643
Water Treatment	126,710	153,625	142,151	146,416	150,725
Transmission and Distribution	77,391	99,925	102,890	105,974	109,092
Administration and General	141,935	165,100	163,542	168,439	173,435
Depreciation	119,910	122,010	143,965	168,979	174,984
Taxes	642	650	650	650	650
Water Filter Replacement Reserve	0	0	12,000	12,000	12,000
Total	490,448	563,010	587,582	625,614	644,759
OPERATING PROFIT (LOSS)	81,454	17,126	-5,966	-42,514	-60,170
			0		
NON-OPERATING REVENUES					
Interest and other income	0	1,000	1,000	1,000	1,000
Transfer from Deprecitaion	0	0	0	0	0
Appropriation from Town	25,000	25,000	25,000	15,000	0
Other	1,524	500	500	500	500
Total	26,524	26,500	26,500	16,500	1,500
NON-OPERATING EXPENDITURES					
Debt Charges - Principal	58,300	58,300	67,511	67,511	62,511
Debt Charges - Interest	26,169	32,760	31,000	29,000	26,000
New Debt - Principal	0		6,179	6,179	6,179
New Debt - Interest			7,415	7,044	6,673
New Debt - Principal			0	17,656	17,656
New Debt - Interest			0	21,188	20,128
New Debt - Principal			0	0	0
New Debt - Interest			0	0	0
Other Interest Charges	1,158	100	100	100	100
Interfund	0	1,063	1,063	1,063	1,063
Capital out of Revenue	0	0	0	0	0
Earnings					
Total	85,627	92,223	113,267	149,740	140,310
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	22,351	-48,597	-92,734	-175,754	-198,980
SURPLUS AT BEGINNING OF YEAR	43,652	66,003	17,406	-75,328	-251,082
ACCUMULATED SURPLUS (DEFICIT)	66,003	17,406	-75,328	-251,082	-450,062

Worksheet B-2

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Mahone Bay Water Utility				
Statement of Operating Expenditures and Revenue Requirements				
	2018/19 (Budget)	2019/20 (Budget)	2020/21 (Budget)	2021/22 (Budget)
OPERATING EXPENDITURES				
Source of Supply	3,000	3,050	3,145	3,230
Power and Pumping	18,700	19,335	20,011	20,643
Water Treatment	153,625	142,151	146,416	150,725
Transmission and Distribution	99,925	102,890	105,974	109,092
Administration and General	165,100	163,542	168,439	173,435
Depreciation	122,010	143,965	168,979	174,984
Taxes	650	650	650	650
Water Filter Replacement Reserve	0	12,000	12,000	12,000
Total	563,010	587,582	625,614	644,759
NON OPERATING EXPENSES				
Debt Charges - Principal	58,300	67,511	67,511	62,511
Debt Charges - Interest	32,760	31,000	29,000	26,000
New Debt - Principal	0	6,179	6,179	6,179
New Debt - Interest	0	7,415	7,044	6,673
New Debt - Principal	0	0	17,656	17,656
New Debt - Interest	0	0	21,188	20,128
New Debt - Principal	0	0	0	0
New Debt - Interest	0	0	0	0
Other Interest Charges	100	100	100	100
Short Term Interest on Capital Projects	1,063	1,063	1,063	1,063
Capital out of Revenue	0	0	0	0
Earnings	0	0	0	0
Total	92,223	113,267	149,740	140,310
LESS NON-OPERATING REVENUES				
Interest and other income	1,000	1,000	1,000	1,000
Transfer from Depreciation	0	0	0	0
Appropriation from Town	25,000	25,000	15,000	0
Other	500	500	500	500
Total	26,500	26,500	16,500	1,500
LESS OTHER OPERATING REVENUE				
Sprinkler Service	1,440	1,440	1,440	1,440
Special Services- Connection Services	5,000	5,000	5,000	5,000
Sundry - Tower Lease/Rent	7,200	7,200	7,200	7,200
Total	13,640	13,640	13,640	13,640
REVENUE REQUIRED FROM FIRE PROTECTION AND WATER CUSTOMERS				
	615,093	660,710	745,214	769,929

Mahone Bay Water Utility Statement of Operating Expenditures				
	2018/19 (Budget)	2019/20 (Budget)	2020/21 (Budget)	2021/22 (Budget)
SOURCE OF SUPPLY				
Supervision and Engineering	500	500	515	530
Maintenance of Source of Supply Structures	2,500	2,550	2,630	2,700
Other	0	0	0	0
TOTAL SOURCE OF SUPPLY	3,000	3,050	3,145	3,230
POWER AND PUMPING				
Operation Labour	4,200	4,400	4,600	4,800
Power Purchased	11,000	11,330	11,700	12,020
Maintenance of Structures & Improvements	1,000	1,030	1,061	1,093
Maintenance of Pumping Equipment	2,500	2,575	2,650	2,730
Other	0	0	0	0
TOTAL POWER AND PUMPING	18,700	19,335	20,011	20,643
WATER TREATMENT				
WTR - Administration Salaries	8,825	9,090	9,363	9,600
Operation Labour	16,900	17,400	17,922	18,460
Chemical Additives	40,000	41,200	42,436	43,709
Water Testing	10,000	12,000	12,360	12,730
Maintenance of Treatment Plant				
Maintenance of Structures	3,700	3,811	3,925	4,043
Fuel and Electricity	45,000	40,000	41,200	42,400
Internet and SCADA	14,000	3,000	3,090	3,180
Maintenance of Treatment Equipment	15,200	15,650	16,120	16,603
Other	0	0	0	0
TOTAL WATER TREATMENT	153,625	142,151	146,416	150,725

TRANSMISSION AND DISTRIBUTION				
Supervision and Engineering	8,825	9,090	9,363	9,600
Operation Labour & Benefits	63,100	65,000	66,950	68,951
Maintenance of Dist. Reservoirs & Standpipes	3,000	3,080	3,172	3,268
Maintenance - Structures	1,000	1,030	1,061	1,093
Maintenance of Mains -Distribution	10,000	10,300	10,600	10,930
Maintenance of Mains - Transmission	1,000	1,030	1,061	1,093
Maintenance of Services	4,000	4,120	4,250	4,380
Maintenance of Meters	500	515	530	546
Maintenance of Hydrants	2,000	2,060	2,122	2,185
Transportation	6,000	6,150	6,335	6,500
Shop Expenses	500	515	530	546
Water Inventory	0	0	0	0
TOTAL TRANSMISSION AND DISTRIBUTION	99,925	102,890	105,974	109,092
ADMINISTRATION AND GENERAL				
Uncollectible Accounts	1,000	1,030	1,061	1,093
Administraion Salaries	78,000	80,300	82,750	85,230
Administration - Officers and Executives	7,250	7,500	7,725	7,950
Training /Health and Safety	4,750	5,000	5,150	5,300
General Officers Expense	550	567	583	601
Allocated General Office Expense	13,000	13,400	13,790	14,200
Advertising	500	515	530	546
Mileage/Travel	2,000	2,060	2,125	2,185
Telephone /Internet	2,500	2,575	2,652	2,732
Employee Benefits	31,000	31,930	32,880	33,870
Audit Fees	5,100	8,500	8,755	9,018
Legal Fees	750	775	800	824
Regulatory Expenses	1,100	1,590	1,638	1,687
Insurance	7,600	7,800	8,000	8,200
Other - Water Rate Study/Hearing	10,000	0	0	0
TOTAL ADMINISTRATION AND GENERAL	165,100	163,542	168,439	173,435

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Mahone Bay Water Utility					
Calculation of Depreciation of Tangible Plant at Total Cost					
2018/19					
	Additions to Utility Plant in Service	Capital Cost Contribution from Others	Utility Cost of Plant in Service	Depreciation Rate	Annual Depreciation
			Depreciation rate in previous year		119,910
LAND AND LAND RIGHTS					
Source of Supply Land	0				0
Land - General	0				0
STRUCTURES AND IMPROVEMENTS					0
Source of Supply Structures	0		0	0.02	0
Power and Pumping Structures	0		0	0.04	0
Purification	0	0	0	0.0133	0
Distribution Reservoirs and Standpipes	0	0	0	0.04	0
Water Treatment Plant			0		0
General - Servicing Plan & Fire Plan	0	0	0	0.05	0
Other	0		0	0.05	0
Equipment					0
Electrical Pumping	0	0	0	0.05	0
Purification Equipment	0	0	0	0.1	0
Office Furniture and Equipment	0		0		0
Transportation Equipment	0	0	0	0.1	0
Tools and Work Equipment	0		0	0.1	0
Distribution Mains Equipment			0		0
Backup Generator	50,000	0	50,000	0.04	2,000
Other	0	0	0	0.1	0
Mains					0
Transmission	0	0	0	0.0133	0
Distribution	0	0	0	0.0133	0
Meters	0	0	0	0.05	0
Hydrants	0	0	0	0.0133	0
Sprinkler Connections	0	0	0		0
Services	5,000	0	5,000	0.02	100
Other - Water Rate Study	0	0	0	0.3333	0
TOTAL	55,000	0	55,000		2,100
Source of Funding					
			Depreciation Fund Balance beginning of year		138,084
			Interest on Fund balance		1,381
Outside Funding	0		Fund balance before expenditures		139,465
Depreciation fund	55,000		Depreciation Contribution for the Year		122,010
Long term Debt	0		Less Depreciation Spent During the Year		-55,000
Capital out of revenue	0		Less Transfer from Depreciation		0
TOTAL	55,000		Balance after expenditures and transfer		206,475

Mahone Bay Water Utility					
Calculation of Depreciation of Tangible Plant at Total Cost					
2019/20					
	Additions to Utility Plant in Service	Capital Cost Contribution from Others	Utility Cost of Plant in Service	Depreciation Rate	Annual Depreciation
			Depreciation rate in previous year		122,010
LAND AND LAND RIGHTS					
Source of Supply Land	0		0		0
Land - General	0		0		0
STRUCTURES AND IMPROVEMENTS			0		0
Source of Supply Structures	0		0	0.01333	0
Power and Pumping Structures	5,000		5,000	0.05	250
Purification	0		0	0.05	0
Distribution Reservoirs and Standpipes	0	0	0	0.1	0
Water Treatment Plant	25,000		25,000	0.04	1,000
General - Watershed Protection Study	20,000	0	20,000	0.05	1,000
Other - Transmission Line cutting	10,000		10,000	0.1	1,000
Equipment			0		0
Electrical Pumping	3,500	0	3,500	0.05	175
Purification Equipment	15,000	0	15,000	0.1	1,500
Air Conditioner WTP	5,000		5,000	0.1	500
Transportation Equipment	0	0	0	0.1	0
Tools and Work Equipment	0		0	0.1	0
Distribution Mains Equipment	0		0		0
Meter Shop Equipment		0	0	0	0
Other	0	0	0	0.1	0
Mains			0		0
Transmission	609,030	445,993	163,038	0.0133	8,100
Distribution	615,030	445,993	169,038	0.0133	8,180
Meters	3,000	0	3,000	0.05	150
Hydrants	0	0	0	0.0133	0
Sprinkler Connections	0		0		0
Services	5,000		5,000	0.02	100
			0	0.04	0
TOTAL	1,315,560	891,985	423,575		21,955
Source of Funding					
			Depreciation Fund Balance beginning of year		206,475
			Interest on Fund balance		2,065
Outside Funding	891,985		Fund balance before expenditures		208,540
Depreciation fund	300,000		Depreciation Contribution for the Year		143,965
Long term Debt	123,575		Depreciation Spent During the Year		-300,000
Capital out of revenue	0		Less Transfer from Depreciation		0
TOTAL	1,315,560		Balance after expenditures and transfer		52,505

Mahone Bay Water Utility					
Calculation of Depreciation of Tangible Plant at Total Cost					
2020/21					
	Additions to Utility Plant in Service	Capital Cost Contribution from Others	Utility Cost of Plant in Service	Depreciation Rate	Annual Depreciation
				Depreciation rate in previous year	143,965
LAND AND LAND RIGHTS					
Source of Supply Land	40,000	0	40,000	0	0
Source Water Protection	0	0			0
STRUCTURES AND IMPROVEMENTS		0			0
Source of Supply Structures	0	0	0	0.01333	0
Power and Pumping Structures	0	0	0	0.02	0
Purification	0	0	0	0	0
Distribution Reservoirs and Standpipes	0	0	0	0.02	0
Water Treatment Plant	10,000	0	10,000	0.05	500
General Wellfield Development	0	0	0	0.04	0
Corrison Coating Chemical Room WTP	10,000	0	10,000	0.1	1,000
Equipment		0	0		0
Electrical Pumping	3,500	0	3,500	0.05	175
Purification Equipment	0	0	0	0.05	0
Emergency Generator	0	0	0	0.05	0
Transportation Equipment	0	0	0	0	0
Tools and Work Equipment	0	0	0	0.1	0
GIS System	0	0	0	0.1	0
Distribution Mains Equipment	15,000	0	15,000	0.1	1,500
Meter Pit	0	0	0	0	0
Other	0	0	0	0.04	0
Mains		0	0		0
Transmission	0	0	0	0.01333	0
Distribution	1,625,822	1,186,196	439,626	0.01333	21,672
Meters	0	0	0	0.05	0
Hydrants	5,000	0	5,000	0.01333	67
Sprinkler Connections	0	0	0		0
Services	5,000	0	5,000	0.02	100
Other	0	0	0	0.02	0
TOTAL	1,714,322	1,186,196	528,126		25,014
Source of Funding				Depreciation Fund Balance beginning of year	52,505
				Interest on Fund balance	525
Outside Funding	1,186,196			Fund balance before expenditures	53,030
Depreciation fund	175,000			Depreciation Contribution for the Year	168,979
Long term Debt	353,126			Depreciation Spent During the Year	-175,000
Capital out of revenue	0			Less Transfer from Depreciation	0
TOTAL	1,714,322			Balance after expenditures and transfer	47,008

Mahone Bay Water Utility					
Calculation of Depreciation of Tangible Plant at Total Cost					
2021/22					
	Additions to Utility Plant in Service	Capital Cost Contribution from Others	Utility Cost of Plant in Service	Depreciation Rate	Annual Depreciation
			Depreciation rate in previous year		168,979
LAND AND LAND RIGHTS					
Source of Supply Land	0		0		0
Land - General	0		0		0
STRUCTURES AND IMPROVEMENTS					
Source of Supply Structures	0		0	0.01333	0
Power and Pumping Structures	3,500		3,500	0.05	175
Purification	0		0	0.05	0
Distribution Reservoirs and Standpipes	0	0	0	0.1	0
Water Treatment Plant			0	0.02	0
General Test well	0	0	0	0.04	0
Other Water Source Structures	0		0		0
Equipment					
Electrical Pumping	0	0	0	0.05	0
Purification Equipment	0	0	0	0.143	0
Office Furniture and Equipment	0		0		0
Transportation Equipment	40,000	0	40,000	0.1	4,000
Tools and Work Equipment	0		0	0.1	0
GIS System	0		0	0.2	0
Distribution Mains Equipment	15,000		15,000	0.1	1,500
Meter Shop Equipment	0	0	0	0.05	0
Other	0		0	0.1	0
Mains					
Transmission	0	0	0	0.01333	0
Distribution	6,000	0	6,000	0.01333	80
Meters	3,000		3,000	0.05	150
Hydrants	0		0	0.01333	0
Sprinkler Connections	0		0		0
Services	5,000	0	5,000	0.02	100
Other					
	0				0
TOTAL	72,500	0	72,500	1	6,005
Source of Funding					
			Depreciation Fund Balance beginning of year		47,008
			Interest on Fund balance		470
Outside Funding	0		Fund balance before expenditures		47,479
Depreciation fund	72,500		Depreciation Contribution for the Year		174,984
Long term Debt	0		Depreciation Spent During the Year		-72,500
Capital out of revenue	0		Less Transfer from Depreciation		0
TOTAL	72,500		Balance after expenditures and transfer		149,962

Mahone Bay Water Utility			
Calculation of Amortization on Capital Contributions (to Plant)			
2019/20			
	Capital Contributions to Utility Plant in Service	Amortization Rate	Annual Amortization
LAND AND LAND RIGHTS			
Source of Supply Land	0	0.00	0
Land - General	0	0.00	0
STRUCTURES AND IMPROVEMENTS	0	0.00	0
Source of Supply Structures	0	0.01	0
Power and Pumping Structures	0	0.05	0
Purification	0	0.05	0
Distribution Reservoirs and Standpipes	0	0.10	0
Water Treatment Plant	0	0.04	0
General - Watershed Study	0	0.05	0
Other Water Source Structures	0	0.10	0
Equipment	0	0.00	0
Electrical Pumping	0	0.05	0
Purification Equipment	0	0.10	0
Office Furniture and Equipment	0	0.10	0
Transportation Equipment	0	0.1000	0
Tools and Work Equipment	0	0.10	0
GIS System	0	0.00	0
Distribution Mains Equipment	0	0.00	0
Meter Shop Equipment	0	0.00	0
Other Equipment	0	0.10	0
Mains	0	0.00	0
Transmission	445,993	0.0133	5,932
Distribution	445,993	0.0133	5,932
Meters	0	0.050	0
Hydrants	0	0.0133	0
Sprinkler Connections	0	0.00	0
Services	0	0.02	0
Other	0	0.04	0
TOTAL	891,985		11,863

Mahone Bay Water Utility			
Calculation of Amortization on Capital Contributions (to Plant)			
2020/21			
	Capital Contributions to Utility Plant in Service	Amortization Rate	Annual Amortization
LAND AND LAND RIGHTS			
Source of Supply Land	0	0.00	0
Land - General	0	0.00	0
STRUCTURES AND IMPROVEMENTS		0.00	0
Source of Supply Structures	0	0.01	0
Power and Pumping Structures	0	0.02	0
Purification	0	0.00	0
Distribution Reservoirs and Standpipes	0	0.0200	0
Water Treatment Plant	0	0.05	0
General - Watershed Study	0	0.04	0
Other Water Source Structures	0	0.10	0
Equipment	0	0.00	0
Electrical Pumping	0	0.05	0
Purification Equipment	0	0.05	0
Office Furniture and Equipment	0	0.05	0
Transportation Equipment	0	0.00	0
Tools and Work Equipment	0	0.10	0
GIS System	0	0.10	0
Distribution Mains Equipment	0	0.10	0
Meter Shop Equipment	0	0.00	0
Other Equipment	0	0.04	0
Mains	0	0.00	0
Transmission	0	0.0133	0
Distribution	1,186,196	0.0133	15,812
Meters	0	0.05	0
Hydrants	0	0.01	0
Sprinkler Connections	0	0.00	0
Services	0	0.02	0
Other	0	0.02	0
TOTAL	1,186,196		15,812

Mahone Bay Water Utility
Calculation of Amortization on Capital Contributions (to Plant)
2021/22

	Capital Contributions to Utility Plant in Service	Amortization Rate	Annual Amortization
LAND AND LAND RIGHTS			
Source of Supply Land	0	0.00	0
Land - General	0	0.00	0
STRUCTURES AND IMPROVEMENTS	0	0.00	0
Source of Supply Structures	0	0.01	0
Power and Pumping Structures	0	0.05	0
Purification	0	0.05	0
Distribution Reservoirs and Standpipes	0	0.10	0
Water Treatment Plant	0	0.02	0
General - Watershed Study	0	0.04	0
Other Water Source Structures	0	0.00	0
Equipment	0	0.00	0
Electrical Pumping	0	0.05	0
Purification Equipment	0	0.14	0
Office Furniture and Equipment	0	0.00	0
Transportation Equipment	0	0.10	0
Tools and Work Equipment	0	0.10	0
GIS System	0	0.20	0
Distribution Mains Equipment	0	0.10	0
Meter Shop Equipment	0	0.05	0
Other Equipment	0	0.10	0
Mains	0	0.00	0
Transmission	0	0.0133	0
Distribution	0	0.0133	0
Meters	0	0.05	0
Hydrants	0	0.01	0
Sprinkler Connections	0	0.00	0
Services	0	0.02	0
Other	0	0.00	0
TOTAL	0		0

Mahone Bay Water Utility
Allocation of the Total Cost of Utility Plant in Service
Between General Service and Fire Protection
2018/19

	Utility Plant in Service Previous Year	Additions	Utility Plant in Service	Percent	General Service	Percent	Fire Protection
Intangible Plant							
Organization and Working Capital	9,651		9,651	100.0%	9,651	0.0%	0
Tangible Plant							
LAND AND LAND RIGHTS							
Source of Supply Land	165,514		165,514	100.0%	165,514	0.0%	0
Land - Reservoir and Pumping	933		933	90.0%	840	10.0%	93
STRUCTURES AND IMPROVEMENTS							
Source of Supply Structures	-	-	-	90.0%	0	10.0%	0
Power and Pumping Structures	99,812	-	99,812	90.0%	89,831	10.0%	9,981
Purification	1,882,898	-	1,882,898	90.0%	1,694,608	10.0%	188,290
Distribution Reservoirs and Standpipes	746,781	-	746,781	40.0%	298,712	60.0%	448,069
Water Treatment Plant	-	-	-	90.0%	0	10.0%	0
General - Servicing Plan & Fire Plan	-	-	-	90.0%	0	10.0%	0
Other	9,981	-	9,981	90.0%	8,983	10.0%	998
Equipment							
Electrical Pumping	32,764	-	32,764	90.0%	29,488	10.0%	3,276
Purification Equipment	794,277	-	794,277	90.0%	714,849	10.0%	79,428
Office Furniture and Equipment	-	-	-	90.0%	0	10.0%	0
Transportation Equipment	25,691	-	25,691	90.0%	23,122	10.0%	2,569
Tools and Work Equipment	33,573	-	33,573	90.0%	30,216	10.0%	3,357
Distribution Mains Equipment	-	-	-	90.0%	0	10.0%	0
Distribution Mains Equipment	-	50,000	50,000	90.0%	45,000	10.0%	5,000
Other	9,282	-	9,282	90.0%	8,354	10.0%	928
Mains							
Transmission	122,150	-	122,150	90.0%	109,935	10.0%	12,215
Distribution	1,551,840	-	1,551,840	40.0%	620,736	60.0%	931,104
Meters							
	87,604	-	87,604	100.0%	87,604	0.0%	0
Hydrants							
	56,743	-	56,743	0.0%	0	100.0%	56,743
Sprinkler Connections		-	-	0.0%	0	100.0%	0
Services							
	93,058	5,000	98,058	100.0%	98,058	0.0%	0
Other							
	-	-	-	90.0%	0	10.0%	0
TOTAL	5,722,552	55,000	5,777,552	69.8%	4,035,500	30.2%	1,742,052

Mahone Bay Water Utility Allocation of the Total Cost of Utility Plant in Service Between General Service and Fire Protection 2019/20							
	Utility Plant in Service Previous Year	Additions	Utility Plant in Service	Percent	General Service	Percent	Fire Protection
Intangible Plant							
Organization and Working Capital	9,651		9,651	100.0%	9,651	0.0%	0
Tangible Plant	-	-					
LAND AND LAND RIGHTS	-	-	-				
Source of Supply Land	165,514	-	165,514	100.0%	165,514	0.0%	0
Land - General	933	-	933	90.0%	840	10.0%	93
STRUCTURES AND IMPROVEMENTS	-	-	-		0		0
Source of Supply Structures	-	-	-	90.0%	0	10.0%	0
Power and Pumping Structures	99,812	5,000	104,812	90.0%	94,331	10.0%	10,481
Purification	1,882,898	-	1,882,898	90.0%	1,694,608	10.0%	188,290
Distribution Reservoirs and Standpipes	746,781	-	746,781	40.0%	298,712	60.0%	448,069
Water Treatment Plant	-	25,000	25,000	90.0%	22,500	10.0%	2,500
Wells	-	20,000	20,000	90.0%	18,000	10.0%	2,000
Other Water Source Structures	9,981	10,000	19,981	90.0%	17,983	10.0%	1,998
Equipment	-	-	-		0		0
Electrical Pumping	32,764	3,500	36,264	90.0%	32,638	10.0%	3,626
Purification Equipment	794,277	15,000	809,277	90.0%	728,349	10.0%	80,928
Office Furniture and Equipment	-	5,000	5,000	90.0%	4,500	10.0%	500
Transportation Equipment	25,691	-	25,691	90.0%	23,122	10.0%	2,569
Tools and Work Equipment	33,573	-	33,573	90.0%	30,216	10.0%	3,357
Distribution Mains Equipment	-	-	-	40.0%	0	60.0%	0
Distribution Mains Equipment	50,000	-	50,000	90.0%	45,000	10.0%	5,000
Other	9,282	-	9,282	90.0%	8,354	10.0%	928
Mains	-	-	-		0		0
Transmission	122,150	609,030	731,180	90.0%	658,062	10.0%	73,118
Distribution	1,551,840	615,030	2,166,870	40.0%	866,748	60.0%	1,300,122
Meters	87,604	3,000	90,604	100.0%	90,604	0.0%	0
Hydrants	56,743	-	56,743	0.0%	0	100.0%	56,743
Sprinkler Connections	-	-	-	0.0%	0	100.0%	0
Services	98,058	5,000	103,058	100.0%	103,058	0.0%	0
Other	-	-	-	90.0%	0	10.0%	0
TOTAL	5,777,552	1,315,560	7,093,112	69.3%	4,912,789	30.7%	2,180,323

Mahone Bay Water Utility Allocation of the Total Cost of Utility Plant in Service Between General Service and Fire Protection 2020/21							
	Utility Plant in Service Previous Year	Additions	Utility Plant in Service	Percent	General Service	Percent	Fire Protection
Intangible Plant							
Organization and Working Capital	9,651		9,651	100.0%	9,651	0.0%	0
Tangible Plant	-						
LAND AND LAND RIGHTS	-		-				
Source of Supply Land	165,514	40,000	205,514	100.0%	205,514	0.0%	0
Land - General	933	0	933	90.0%	840	10.0%	93
STRUCTURES AND IMPROVEMENTS	-	0	-		0		0
Source of Supply Structures	-	0	-	90.0%	0	10.0%	0
Power and Pumping Structures	104,812	0	104,812	90.0%	94,331	10.0%	10,481
Purification	1,882,898	0	1,882,898	90.0%	1,694,608	10.0%	188,290
Distribution Reservoirs and Standpipes	746,781	0	746,781	40.0%	298,712	60.0%	448,069
Water Treatment Plant	25,000	10,000	35,000	90.0%	31,500	10.0%	3,500
General	20,000	0	20,000	90.0%	18,000	10.0%	2,000
Other Water Source Structures	19,981	10,000	29,981	90.0%	26,983	10.0%	2,998
Equipment	-	0	-		0		0
Electrical Pumping	36,264	3,500	39,764	90.0%	35,788	10.0%	3,976
Purification Equipment	809,277	0	809,277	90.0%	728,349	10.0%	80,928
Office Furniture and Equipment	5,000	0	5,000	90.0%	4,500	10.0%	500
Transportation Equipment	25,691	0	25,691	90.0%	23,122	10.0%	2,569
Tools and Work Equipment	33,573	0	33,573	90.0%	30,216	10.0%	3,357
Distribution Mains Equipment	-	15,000	15,000	40.0%	6,000	60.0%	9,000
Distribution Mains Equipment	50,000	0	50,000	90.0%	45,000	10.0%	5,000
Other	9,282	0	9,282	90.0%	8,354	10.0%	928
Mains	-	0	-		0		0
Transmission	731,180	0	731,180	90.0%	658,062	10.0%	73,118
Distribution	2,166,870	1,625,822	3,792,692	40.0%	1,517,077	60.0%	2,275,615
Meters	90,604	0	90,604	100.0%	90,604	0.0%	0
Hydrants	56,743	5,000	61,743	0.0%	0	100.0%	61,743
Sprinkler Connections	-	0	-	0.0%	0	100.0%	0
Services	103,058	5,000	108,058	100.0%	108,058	0.0%	0
Other	-	0	-	90.0%	0	10.0%	0
TOTAL	7,093,112	1,714,322	8,807,434	64.0%	5,635,268	36.0%	3,172,166

Mahone Bay Water Utility Allocation of the Total Cost of Utility Plant in Service Between General Service and Fire Protection 2021/22							
	Utility Plant in Service Previous Year	Additions	Utility Plant in Service	Percent	General Service	Percent	Fire Protection
Intangible Plant							
Organization and Working Capital	9,651		9,651	100.0%	9,651	0.0%	0
Tangible Plant							
LAND AND LAND RIGHTS							
Source of Supply Land	205,514	0	205,514	100.0%	205,514	0.0%	0
Land - General	933	0	933	90.0%	840	10.0%	93
STRUCTURES AND IMPROVEMENTS							
Source of Supply Structures	-	0	-		0		0
Power and Pumping Structures	104,812	3,500	108,312	90.0%	97,481	10.0%	10,831
Purification	1,882,898	0	1,882,898	90.0%	1,694,608	10.0%	188,290
Distribution Reservoirs and Standpipes	746,781	0	746,781	40.0%	298,712	60.0%	448,069
Water Treatment Plant	35,000	0	35,000	90.0%	31,500	10.0%	3,500
General	20,000	0	20,000	90.0%	18,000	10.0%	2,000
Other Water Source Structures	29,981	0	29,981	90.0%	26,983	10.0%	2,998
Equipment							
Electrical Pumping	39,764	0	39,764	90.0%	35,788	10.0%	3,976
Purification Equipment	809,277	0	809,277	90.0%	728,349	10.0%	80,928
Office Furniture and Equipment	5,000	0	5,000	90.0%	4,500	10.0%	500
Transportation Equipment	25,691	40,000	65,691	90.0%	59,122	10.0%	6,569
Tools and Work Equipment	33,573	0	33,573	90.0%	30,216	10.0%	3,357
Distribution Mains Equipment	15,000	15,000	30,000	40.0%	12,000	60.0%	18,000
Distribution Mains Equipment	50,000	0	50,000	90.0%	45,000	10.0%	5,000
Other	9,282	0	9,282	90.0%	8,354	10.0%	928
Mains							
Transmission	731,180	0	731,180	90.0%	658,062	10.0%	73,118
Distribution	3,792,692	6,000	3,798,692	40.0%	1,519,477	60.0%	2,279,215
Meters							
	90,604	3,000	93,604	100.0%	93,604	0.0%	0
Hydrants							
	61,743	0	61,743	0.0%	0	100.0%	61,743
Sprinkler Connections	-	0	-	0.0%	0	100.0%	0
Services							
	108,058	5,000	113,058	100.0%	113,058	0.0%	0
Other							
	-	0	-	90.0%	0	10.0%	0
TOTAL	8,807,434	72,500	8,879,934	64.1%	5,690,818	35.9%	3,189,116

Mahone Bay Water Utility
Allocation of Fire Protection Charges
 Projected Expenses for 2019/20

	Estimated Expenses	PerCent Allocation to fire Protection	Fire Protection Charge
Source of Supply	3,050	10.0%	305
Power and Pumping	19,335	10.0%	1,934
Water Treatment	142,151	10.0%	14,215
Transmission and Distribution	102,890	30.7%	31,627
Adminstration and General	163,542	10.0%	16,354
Depreciation	143,965	30.7%	44,253
Taxes	650	10.0%	65
Water Filter Replacement Reserve	12,000	10.0%	1,200
Return on Rate Base including transfer from Depreciation Fund	73,127	30.7%	22,478
Total	660,710	20.0%	132,431

Mahone Bay Water Utility
Allocation of Fire Protection Charges
 Projected Expenses for Year 2020/21

	Estimated Expenses	PerCent Allocation to fire Protection	Fire Protection Charge
Source of Supply	3,145	10.0%	315
Power and Pumping	20,011	10.0%	2,001
Water Treatment	146,416	10.0%	14,642
Transmission and Distribution	105,974	36.0%	38,169
Adminstration and General	168,439	10.0%	16,844
Depreciation	168,979	36.0%	60,861
Taxes	650	10.0%	65
Water Filter Replacement Reserve	12,000	10.0%	1,200
Return on Rate Base including transfer from Depreciation Fund	119,600	36.0%	43,076
Total	745,214	23.8%	177,172

Mahone Bay Water Utility
Allocation of Fire Protection Charges
 Projected Expenses for Year 2021/22

	Estimated Expenses	PerCent Allocation to fire Protection	Fire Protection Charge
Source of Supply	3,230	10.0%	323
Power and Pumping	20,643	10.0%	2,064
Water Treatment	150,725	10.0%	15,072
Transmission and Distribution	109,092	35.9%	39,179
Adminstration and General	173,435	10.0%	17,343
Depreciation	174,984	35.9%	62,843
Taxes	650	10.0%	65
Water Filter Replacement Reserve	12,000	10.0%	1,200
Return on Rate Base including transfer from Depreciation Fund	125,170	35.9%	44,953
Total	769,929	23.8%	183,044

Mahone Bay Water Utility				
Calculation of rate Base and required Return on rate Base				
Years Ending March 31st				
	2018/19	2019/20	2020/21	2021/22
	(Estimate)	(Estimate)	(Estimate)	(Estimate)
RATE BASE				
Utility plant in Service March 31st	5,777,552	7,093,112	8,807,434	8,879,934
Less Accumulated Depreciaton on actual cost of plant in service	(974,960)	(1,118,925)	(1,287,904)	(1,462,888)
Less unamortized amount of capital contribution for plant in service	(2,299,784)	(3,143,542)	(4,265,698)	(4,201,659)
Estimated Rate Base at Year End	2,502,808	2,830,645	3,253,832	3,215,387
REQUIRED RETURN				
Non-operating Expenditures (B-2)	92,223	113,267	149,740	140,310
Less Non-operating Revenue	(26,500)	(26,500)	(16,500)	(1,500)
Less Other Operating Revenue (B-2)	(13,640)	(13,640)	(13,640)	(13,640)
Return on Rate Base	52,083	73,127	119,600	125,170
Required Rate of Return (Req'd Return/Est Rate Base)	2.08%	2.58%	3.68%	3.89%

NOTE: Donated assets prior to 2007 (\$639,286) have been removed from the Utility Plant in Service

Mahone Bay Water Utility
Calculation of Revenue Required for Each Billing/Cost Category
2019/20

	Total Revenue Required	Fire Protection Revenue	Revenue Required from Metered Rates	Charge		Commodity Charge		
				Customer	Base	Delivery	Production	
Source of Supply	3,050	305	2,745				100%	2,745
Power and Pumping	19,335	1,934	17,402				100%	17,402
Water Treatment	142,151	14,215	127,936				100%	127,936
Transmission and Distribution	102,890	31,627	71,263		50%	35,632	50%	35,632
Administration and General	163,542	16,354	147,187	10%	14,719	90%	0%	0
Depreciation	143,965	44,253	99,712		40%	39,885	30%	29,914
Taxes	650	65	585		100%	585		
Water Filter Replacement Reserve	12,000	1,200	10,800		0%	0		100%
Return on Rate Base	73,127	22,478	50,649		40%	20,260	30%	15,195
SUBTOTAL	660,710	132,431	528,279		14,719	228,830		80,740
TOTAL	660,710	132,431	528,279		14,719	228,830		80,740

Mahone Bay Water Utility
Calculation of Revenue Required for Each Billing/Cost Category
2020/21

	Total Revenue Required	Fire Protection Revenue	Revenue Required from Metered Rates	Charge		Commodity Charge		
				Customer	Base	Delivery	Production	
Source of Supply	3,145	315	2,831				100%	2,831
Power and Pumping	20,011	2,001	18,010				100%	18,010
Water Treatment	146,416	14,642	131,774				100%	131,774
Transmission and Distribution	105,974	38,169	67,805		50%	33,903	50%	33,903
Administration and General	168,439	16,844	151,595	10%	15,160	90%	0%	0
Depreciation	168,979	60,861	108,118		40%	43,247	30%	32,435
Taxes	650	65	585		100%	585		
Water Filter Replacement Reserve	12,000	1,200	10,800		0%	0		100%
Return on Rate Base	119,600	43,076	76,524		40%	30,610	30%	22,957
SUBTOTAL	745,214	177,172	568,042		15,160	244,780		89,295
TOTAL	745,214	177,172	568,042		15,160	244,780		89,295

Mahone Bay Water Utility
Calculation of Revenue Required for Each Billing/Cost Category
2021/22

	Total Revenue Required	Fire Protection Revenue	Revenue Required from Metered Rates	Charge		Commodity Charge		
				Customer	Base	Delivery	Production	
Source of Supply	3,230	323	2,907				100%	2,907
Power and Pumping	20,643	2,064	18,579				100%	18,579
Water Treatment	150,725	15,072	135,652				100%	135,652
Transmission and Distribution	109,092	39,179	69,913		50%	34,957	50%	34,957
Administration and General	173,435	17,343	156,091	10%	15,609	90%	0%	0
Depreciation	174,984	62,843	112,141		40%	44,856	30%	33,642
Taxes	650	65	585		100%	585		
Water Filter Replacement Reserve	12,000	1,200	10,800		0%	0		100%
Return on Rate Base	125,170	44,953	80,217		40%	32,087	30%	24,065
SUBTOTAL	769,929	183,044	586,885		15,609	252,967		92,664
TOTAL	769,929	183,044	586,885		15,609	252,967		92,664

Mahone Bay Water Utility Service Connections and Equivalents 2018/19			
Meter Size	Number of Services	Capacity Ratio	System Equivalents
Unmetered	1	1	1
5/8"	469	1	469
3/4"	1	1.5	2
1"	2	2.5	5
1.5"	13	5	65
2"	2	8	16
3"	0	16	0
4"	0	25	0
6"	0	50	0
TOTAL	488		558

Mahone Bay Water Utility Service Connections and Equivalents 2019/20			
Meter Size	Number of Services	Capacity Ratio	System Equivalents
Unmetered	0	1	0
5/8"	472	1	472
3/4"	1	1.5	2
1"	2	2.5	5
1.5"	13	5	65
2"	2	8	16
3"	0	16	0
4"	0	25	0
6"	0	50	0
TOTAL	490		560

**Mahone Bay Water Utility
Service Connections and Equivalents
2020/21**

Meter Size	Number of Services	Capacity Ratio	System Equivalents
Unmetered	0	1	0
5/8"	475	1	475
3/4"	1	1.5	2
1"	2	2.5	5
1.5"	13	5	65
2"	2	8	16
3"	0	16	0
4"	0	25	0
6"	0	50	0
TOTAL	493		563

**Mahone Bay Water Utility
Service Connections and Equivalents
2021/22**

Meter Size	Number of Services	Capacity Ratio	System Equivalents
Unmetered	0	1	0
5/8"	478	1	478
3/4"	1	1.5	2
1"	2	2.5	5
1.5"	13	5	65
2"	2	8	16
3"	0	16	0
4"	0	25	0
6"	0	50	0
TOTAL	496		566

Mahone Bay Water Utility
Service Connections and Equivalents
2019/20

Meter Size	Capacity Ratio	Base Charge	Customer Charge	Total Base Charge	
				Annual	Bi Monthly
Unmetered	1	408.99	30.04	439.03	73.17
5/8"	1	408.99	30.04	439.03	73.17
3/4"	1.5	613.48	30.04	643.52	107.25
1"	2.5	1,022.47	30.04	1,052.51	175.42
1.5"	5	2,044.95	30.04	2,074.99	345.83
2"	8	3,271.92	30.04	3,301.95	550.33
3"	16	6,543.83	30.04	6,573.87	1,095.64
4"	25	10,224.74	30.04	10,254.77	1,709.13
6"	50	20,449.47	30.04	20,479.51	3,413.25
TOTAL					

Mahone Bay Water Utility
Service Connections and Equivalents
2020/21

Meter Size	Capacity Ratio	Base Charge	Customer Charge	Total Base Charge	
				Annual	Bi Monthly
Unmetered	1	435.17	30.75	465.91	77.65
5/8"	1	435.17	30.75	465.91	77.65
3/4"	1.5	652.75	30.75	683.50	113.92
1"	2.5	1,087.91	30.75	1,118.66	186.44
1.5"	5	2,175.83	30.75	2,206.58	367.76
2"	8	3,481.32	30.75	3,512.07	585.35
3"	16	6,962.64	30.75	6,993.39	1,165.57
4"	25	10,879.13	30.75	10,909.88	1,818.31
6"	50	21,758.26	30.75	21,789.01	3,631.50
TOTAL					

Mahone Bay Water Utility
Service Connections and Equivalents
2021/22

Meter Size	Capacity Ratio	Base Charge	Customer Charge	Total Base Charge	
				Annual	Bi Monthly
Unmetered	1	447.33	31.47	478.80	79.80
5/8"	1	447.33	31.47	478.80	79.80
3/4"	1.5	671.00	31.47	702.47	117.08
1"	2.5	1,118.33	31.47	1,149.80	191.63
1.5"	5	2,236.67	31.47	2,268.14	378.02
2"	8	3,578.66	31.47	3,610.13	601.69
3"	16	7,157.33	31.47	7,188.80	1,198.13
4"	25	11,183.33	31.47	11,214.80	1,869.13
6"	50	22,366.66	31.47	22,398.13	3,733.02
TOTAL					

Mahone Bay Water Utility Water Consumption by Block				
Meter Size	Actual		2019/20	
	Current Consumption		Consumption	
	1st Block per 1,000 Gallons	2nd Block per 1,000 Gallons	1st Block per 1,000 Gallons	2nd Block per 1,000 gallons
Unmetered	0		0	
5/8"	12,269,241		12,224,245	
3/4"	28,690		28,403	
1"	13,640		13,504	0
1.5"	5,568,040		5,512,360	
2"	2,405,000		2,380,950	
3"	0		0	
4"	0		0	0
6"	-	0	0	0
TOTAL	20,284,611	0	20,159,461	0
	TOTAL BOTH BLOCKS	20,284,611	TOTAL BOTH BLOCKS	20,159,461

Mahone Bay Water Utility Water Consumption by Block				
Meter Size	2020/21		2021/22	
	Current Consumption		Consumption	
	1st Block per 1,000 Gallons	2nd Block per 1,000 Gallons	1st Block per 1,000 Gallons	2nd Block per 1,000 gallons
Unmetered	0		0	
5/8"	12,179,699		12,135,599	
3/4"	28,119		27,838	
1"	13,369		13,235	
1.5"	5,457,236		5,402,664	
2"	2,357,141		2,333,569	
3"	0		0	
4"	0	0	0	0
6"	0	0	0	0
TOTAL	20,035,563	0	19,912,904	0
	TOTAL BOTH BLOCKS	20,035,563	TOTAL BOTH BLOCKS	19,912,904

Mahone Bay Water Utility		
Calculation of Consumption Charge		
2019/20		
NET PRODUCTION EXPENSE	BLOCK 1	BLOCK 2
<u>Total Charge Worksheet C-3</u> Quantity Worksheet C-6	10.12	
NET DELIVERY EXPENSES		
<u>Total Charge Worksheet C-3</u> Quantity Worksheet C-6	4.01	
TOTAL CONSUMPTION CHARGE PER 1,000 imp. Gallons	14.12	

Mahone Bay Water Utility		
Calculation of Consumption Charge		
2020/21		
NET PRODUCTION EXPENSE	BLOCK 1	BLOCK 2
<u>Total Charge Worksheet C-3</u> Quantity Worksheet C-6	10.92	
NET DELIVERY EXPENSES		
<u>Total Charge Worksheet C-3</u> Quantity Worksheet C-6	4.46	
TOTAL CONSUMPTION CHARGE PER 1,000 imp. Gallons	15.38	

Mahone Bay Water Utility		
Calculation of Consumption Charge		
2021/22		
NET PRODUCTION EXPENSE	BLOCK 1	BLOCK 2
<u>Total Charge Worksheet C-3</u> Quantity Worksheet C-6	11.33	
NET DELIVERY EXPENSES		
<u>Total Charge Worksheet C-3</u> Quantity Worksheet C-6	4.65	
TOTAL CONSUMPTION CHARGE PER 1,000 imp. Gallons	15.99	

Worksheet C-8

09-Apr-19

**Mahone Bay Water Utility
Water Consumption by Block
2019/20**

BASE CHARGE

<u>Meter Size</u>	<u>Number</u>	<u>Base Rate</u>	<u>Dollar Revenue</u>
Unmetered	0	439.03	0
5/8"	472	439.03	207,221
3/4"	1	643.52	644
1"	2	1,052.51	2,105
1.5"	13	2,074.99	26,975
2"	2	3,301.95	6,604
3"	0	6,573.87	0
4"	0	10,254.77	0
6"	0	20,479.51	0

TOTAL BASE REVENUE 243,548

CONSUMPTION CHARGE

	Quantity	\$/ 1,000 imp. gallons	
1st Block	20,159,461	14.124	284,731
			-

TOTAL CONSUMPTION REVENUE 284,731

TOTAL OPERATING REVENUES FOR YEAR (BASE + CONSUMPTION) 528,279

**Mahone Bay Water Utility
Water Consumption by Block
2020/21**

BASE CHARGE

<u>Meter Size</u>	<u>Number</u>	<u>Base Rate</u>	<u>Dollar Revenue</u>
Unmetered	0	465.91	0
5/8"	475	465.91	221,309
3/4"	1	683.50	683
1"	2	1,118.66	2,237
1.5"	13	2,206.58	28,685
2"	2	3,512.07	7,024
3"	0	6,993.39	0
4"	0	10,909.88	0
6"	0	21,789.01	0

TOTAL BASE REVENUE 259,940

CONSUMPTION CHARGE

	Quantity	\$/ 1,000 imp. gallons	
1st Block	20,035,563	15.378	308,102

TOTAL CONSUMPTION REVENUE 308,102

TOTAL OPERATING REVENUES FOR YEAR (BASE + CONSUMPTION) 568,042

Mahone Bay Water Utility				
Water Consumption by Block				
2021/22				
BASE CHARGE				
<u>Meter Size</u>	<u>Number</u>	<u>Base Rate</u>	<u>Dollar Revenue</u>	
Unmetered	0	478.80	0	
5/8"	478	478.80	228,868	
3/4"	1	702.47	702	
1"	2	1,149.80	2,300	
1.5"	13	2,268.14	29,486	
2"	2	3,610.13	7,220	
3"	0	7,188.80	0	
4"	0	11,214.80	0	
6"	0	22,398.13	0	
TOTAL BASE REVENUE			268,576	
CONSUMPTION CHARGE				
	Quantity	\$/ 1,000 imp. gallons		
1st Block	19,912,904	15.985		318,309
TOTAL CONSUMPTION REVENUE			318,309	
TOTAL OPERATING REVENUES FOR YEAR (BASE + CONSUMPTION)			586,885	

Mahone Bay Water Utility Comparison of Current Water Rates with Proposed New Rates 2019/20											
Meter Size	Average Bi monthly Consumption		Bi-Monthly Base Charge		Percent Change	Commodity Charge		Percent Change	Bi Monthly Water Bill		Percent Change
	Imp. Gallons		Current	Proposed		Current	Proposed		Current	Proposed	
5/8"	4,316		67.46	73.17	8.5%	55.73	60.97	9.4%	123.19	134.14	8.9%
3/4"	4,734		99.25	107.25	8.1%	61.11	66.86	9.4%	160.36	174.11	8.6%
1"	1,125		162.85	175.42	7.7%	14.53	15.89	9.4%	177.38	191.31	7.9%
1.5"	70,671		321.84	345.83	7.5%	912.37	998.16	9.4%	1,234.21	1,343.99	8.9%
2"	198,413		512.63	550.33	7.4%	2,561.51	2,802.36	9.4%	3,074.14	3,352.69	9.1%
3"			1,021.40	1,095.64	7.3%				-	-	
4"			1,593.77	1,709.13	7.2%				-	-	
6"			-	-					-	-	

Mahone Bay Water Utility Comparison of Current Water Rates with Proposed New Rates 2020/21											
Meter Size	Average Bi monthly Consumption		Base Charge		Percent Change	Commodity Charge		Percent Change	Bi Monthly Water Bill		Percent Change
	Imp. Gallons		Current	Proposed		Current	Proposed		Current	Proposed	
5/8"	4,274		73.17	77.65	6.1%	60.97	65.72	7.8%	134.14	143.37	6.9%
3/4"	4,687		107.25	113.92	6.2%	66.86	72.07	7.8%	174.11	185.98	6.8%
1"	1,114		175.42	186.44	6.3%	15.89	17.13	7.8%	191.31	203.58	6.4%
1.5"	69,965		345.83	367.76	6.3%	998.16	1,075.90	7.8%	1,343.99	1,443.66	7.4%
2"	196,428		550.33	585.35	6.4%	2,802.36	3,020.63	7.8%	3,352.69	3,605.98	7.6%
3"			1,095.64	1,165.57					-	-	
4"			1,709.13	1,818.31					-	-	
6"			-	-					-	-	

Mahone Bay Water Utility Comparison of Current Water Rates with Proposed New Rates 2021/22											
Meter Size	Average Bi-Monthly Consumption		Base Charge		Percent Change	Commodity Charge		Percent Change	Bi Monthly Water Bill		Percent Change
	Imp. Gallons		Current	Proposed		Current	Proposed		Current	Proposed	
5/8"	4,231		77.65	79.80	2.8%	65.72	67.64	2.9%	143.37	147.44	2.8%
3/4"	4,640		113.92	117.08	2.8%	72.07	74.17	2.9%	185.98	191.24	2.8%
1"	1,103		186.44	191.63	2.8%	17.13	17.63	2.9%	203.58	209.26	2.8%
1.5"	69,265		367.76	378.02	2.8%	1,075.90	1,107.20	2.9%	1,443.66	1,485.23	2.9%
2"	194,464		585.35	601.69	2.8%	3,020.63	3,108.52	2.9%	3,605.98	3,710.21	2.9%
3"			1,165.57	1,198.13		-	-				
4"			1,818.31	1,869.13		-	-				
6"			-	-		-	-				

Mahone Bay Water Utility				
Comparative Statement of Operations				
Fiscal Years ending March 31st				
	2018/19 Year	Projection Using Proposed Rates		
		2019/20 Test Yr 1	2020/21 Test Yr 2	2021/22 Test Yr 3
OPERATING REVENUES				
Metered Sales	455,000	528,279	568,042	586,885
Public Fire Protection	111,496	132,431	177,172	183,044
Total	566,496	660,710	745,214	769,929
OPERATING EXPENDITURES				
Source of Supply	3,000	3,050	3,145	3,230
Power and Pumping	18,700	19,335	20,011	20,643
Water Treatment	153,625	142,151	146,416	150,725
Transmission and Distribution	99,925	102,890	105,974	109,092
Administration and General	165,100	163,542	168,439	173,435
Depreciation	122,010	143,965	168,979	174,984
Taxes	650	650	650	650
Water Filter Replacement Reserve	0	12,000	12,000	12,000
Total	563,010	587,582	625,614	644,759
OPERATING PROFIT (LOSS)				
LESS NON-OPERATING REVENUES				
Interest and other income	1,000	1,000	1,000	1,000
Transfer from Depreciation	0	0	0	0
Appropriation from Town	25,000	25,000	15,000	0
Other	500	500	500	500
Total	26,500	26,500	16,500	1,500
OTHER OPERATING REVENUES				
Sprinkler Service	1,440	1,440	1,440	1,440
Special Services- Connection Services	5,000	5,000	5,000	5,000
Sundry - Tower Lease/Rent	7,200	7,200	7,200	7,200
Total	13,640	13,640	13,640	13,640
NON-OPERATING EXPENDITURES				
Debt Charges - Principal	58,300	67,511	67,511	62,511
Debt Charges - Interest	32,760	31,000	29,000	26,000
New Debt - Principal	0	6,179	6,179	6,179
New Debt - Interest	0	7,415	7,044	6,673
New Debt - Principal	0	0	17,656	17,656
New Debt - Interest	0	0	21,188	20,128
New Debt - Principal	0	0	0	0
New Debt - Interest	0	0	0	0
Other Interest Charges	100	100	100	100
Interfund	1,063	1,063	1,063	1,063
Capital out of Revenue	0	0	0	0
Earnings	0	0	0	0
Total	92,223	113,267	149,740	140,310
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES				
	-48,597	0	0	0

Appendix

Loan Calculator
Long Term Debt
2019/20

Interest Rate	6.0%
Term in years	20
Capital \$	123,575

Payment Schedule Based on Series Debt Payments

	Loan Balance	Principal	Interest	Total
Year				
1	123,575	6,179	7,415	13,593
2	117,396	6,179	7,044	13,223
3	111,218	6,179	6,673	12,852
4	105,039	6,179	6,302	12,481
5	98,860	6,179	5,932	12,110
6	92,681	6,179	5,561	11,740
7	86,503	6,179	5,190	11,369
8	80,324	6,179	4,819	10,998
9	74,145	6,179	4,449	10,627
10	67,966	6,179	4,078	10,257
11	61,788	6,179	3,707	9,886
12	55,609	6,179	3,337	9,515
13	49,430	6,179	2,966	9,145
14	43,251	6,179	2,595	8,774
15	37,073	6,179	2,224	8,403
16	30,894	6,179	1,854	8,032
17	24,715	6,179	1,483	7,662
18	18,536	6,179	1,112	7,291
19	12,358	6,179	741	6,920
20	6,179	6,179	371	6,549

Loan Calculator
Long Term Debt
2020/21

Interest Rate	6.0%
Term in years	20
Capital \$	353,126

Payment Schedule Based on Series Debt Payments

	Loan Balance	Principal	Interest	Total
Year				
1	353,126	17,656	21,188	38,844
2	335,470	17,656	20,128	37,784
3	317,813	17,656	19,069	36,725
4	300,157	17,656	18,009	35,666
5	282,501	17,656	16,950	34,606
6	264,845	17,656	15,891	33,547
7	247,188	17,656	14,831	32,488
8	229,532	17,656	13,772	31,428
9	211,876	17,656	12,713	30,369
10	194,219	17,656	11,653	29,309
11	176,563	17,656	10,594	28,250
12	158,907	17,656	9,534	27,191
13	141,250	17,656	8,475	26,131
14	123,594	17,656	7,416	25,072
15	105,938	17,656	6,356	24,013
16	88,282	17,656	5,297	22,953
17	70,625	17,656	4,238	21,894
18	52,969	17,656	3,178	20,834
19	35,313	17,656	2,119	19,775
20	17,656	17,656	1,059	18,716

Loan Calculator
Long Term Debt
2021/22

Interest Rate	6.0%
Term in years	10
Capital \$	-

Payment Schedule Based on Series Debt Payments

	Loan Balance	Principal	Interest	Total
Year				
1	-	-	-	-
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-

**SCHEDULES A, B, AND C
RATES AND CHARGES**

SCHEDULE "A"
TOWN OF MAHONE BAY
WATER UTILITY
SCHEDULE OF RATES FOR WATER AND WATER SERVICES

(Effective for water supplied on and after 1 October 2019)

RATES

The rates set out below are the rates approved by the Board for water and water services when payment is made within 30 days from the date rendered as shown on the bill.

When payment is made after 30 days from the date rendered as shown on the bill, the rates will include interest charges of 1.25 % per month, or part thereof.

Each bill shall show the amount payable within 30 days from the date rendered as shown on the bill.

In this Schedule, the word "Utility" means the Water Utility of the Town of Mahone Bay.

1. **RATES:**

(a) <u>Base Charges</u>	<u>Bi Monthly</u>	<u>Monthly</u>
Size of Meter		
5/8"	73.17	36.59
3/4"	107.25	53.63
1"	175.42	87.71
1.5"	345.83	172.92
2"	550.33	275.16
3"	1,095.64	547.82
4"	1,709.13	854.56
6"	3,413.25	1,706.63

(b) Consumption Rate \$14.12 per 1000 gallons

(c) **Minimum Bill**

The minimum bill shall be the Base Charge.

2. PUBLIC FIRE PROTECTION RATE

The Town of Mahone Bay shall pay annually to the water utility for fire protection on or before September 30, 2019 the sum of \$132,431.

3. RATES FOR SPRINKLER SERVICE

Each building having a sprinkler system installed shall pay annually for the service as follows:

Each building serviced by a sprinkler service pipe of 6" or less in diameter	\$200.00
Each building serviced by a sprinkler service pipe of 8" or more in diameter	\$250.00

4. WATER FOR BUILDINGS OR WORKS UNDER CONSTRUCTION

The Utility may furnish water to any person requiring a supply thereof for the construction of a building or other works. This person shall deposit with the Utility such sum as may be determined by the Utility as is sufficient to defray the cost of making the necessary connection to any water service or main together with the cost of the meter to be installed to measure the water consumed. Upon completion of the work and the return of the meter to the Utility, a refund will be made after deducting the cost, if any, of repairing the meter and of testing the same and payment of the base and connection charges and the consumption rates in respect to such installation.

5. PRIVATE HYDRANT RATES

Per hydrant per year \$200.00.

6. RATES FOR WATER SUPPLIED FROM FIRE HYDRANTS

Whenever the use of any fire hydrant is desired for supplying water for any purpose, excepting those of the Fire Department for fire use, the Utility may grant a permit containing such terms and conditions as it may provide, including arrangements regarding supervision of the opening and closing of the hydrant, and a service charge for commercial consumers of \$60.00 for connection and disconnection and a consumption charge for the amount of water used, as estimated by the water utility, at meter consumption rates.

7. CHARGES FOR RE-ESTABLISHING WATER SERVICE

When water service has been suspended for any violation of the Rules and Regulations of the Utility, such water service shall not be re-established until a reconnection charge of \$50.00 has been paid to the Utility. If reconnection is outside of regular working hours, the charge is \$200.00.

A

8. CONNECTION FEE

The Utility shall charge a \$50.00 fee for the creation of a water account, notwithstanding the fact that no physical disconnection of the system may have occurred. This fee shall be \$200.00 if water is turned on after regular working hours of the Utility.

9. DISCONNECTION FEE

Whenever a customer, for any reason requests that the water be turned off from any premises, a charge of \$50.00 shall be made for turning off the water, and no additional charge shall be made for turning it on again when this is requested unless such request is after regular working hours of the Utility when a fee of \$200.00 shall apply.

10. SPECIAL SERVICE CHARGE:

A special service charge of \$50.00 (\$200.00 if such work is performed after regular working hours) shall be made to each customer receiving a necessary or requested service, such as the shutting off or turning on of water service or other special services not provided for elsewhere in the schedules or the rules and regulations. In the case where the shutting off is requested because there is no operable shut off valve serving the dwelling, an isolation valve must be installed.

11. CHARGE FOR NON-NEGOTIABLE CHEQUES

The Utility may charge a \$25.00 administration fee plus any additional bank fees charged by the bank for cheques that, due to non-negotiability, have been rejected by the Utility's bank.

12. CHARGE FOR MISSED APPOINTMENT BY CUSTOMERS

Where an appointment has been made by a customer to have a water service hooked up or a meter inspected, or water turned on to a property, or other visits to the property for the inception or maintenance of water service to the property, and the customer fails to keep the appointment or the plumbing is not completed to allow for installation of a water meter and the Utility's staff have to return to the property, there may be a charge of \$25.00 for each visit if, in the judgment of the Utility, it is required.

SCHEDULE "B"
TOWN OF MAHONE BAY
WATER UTILITY
SCHEDULE OF RATES FOR WATER AND WATER SERVICES

(Effective for water supplied on and after 1 April 2020)

RATES

The rates set out below are the rates approved by the Board for water and water services when payment is made within 30 days from the date rendered as shown on the bill.

When payment is made after 30 days from the date rendered as shown on the bill, the rates will include interest charges of 1.25 % per month, or part thereof.

Each bill shall show the amount payable within 30 days from the date rendered as shown on the bill.

In this Schedule, the word "Utility" means the Water Utility of the Town of Mahone Bay.

1. **RATES:**

(a) <u>Base Charges</u>	<u>Bi Monthly</u>	<u>Monthly</u>
Size of Meter		
5/8"	77.65	38.83
3/4"	113.92	56.96
1"	186.44	93.22
1.5"	367.76	183.88
2"	585.35	292.67
3"	1,165.57	582.78
4"	1,818.31	909.16
6"	3,631.50	1,815.75

(b) Consumption Rate \$15.38 per 1000 gallons

(c) **Minimum Bill**

The minimum bill shall be the Base Charge.

2. PUBLIC FIRE PROTECTION RATE

The Town of Mahone Bay shall pay annually to the water utility for fire protection on or before September 30, 2020 the sum of \$177,172.

3. RATES FOR SPRINKLER SERVICE

Each building having a sprinkler system installed shall pay annually for the service as follows:

Each building serviced by a sprinkler service pipe of 6" or less in diameter	\$200.00
Each building serviced by a sprinkler service pipe of 8" or more in diameter	\$250.00

4. WATER FOR BUILDINGS OR WORKS UNDER CONSTRUCTION

The Utility may furnish water to any person requiring a supply thereof for the construction of a building or other works. This person shall deposit with the Utility such sum as may be determined by the Utility as is sufficient to defray the cost of making the necessary connection to any water service or main together with the cost of the meter to be installed to measure the water consumed. Upon completion of the work and the return of the meter to the Utility, a refund will be made after deducting the cost, if any, of repairing the meter and of testing the same and payment of the base and connection charges and the consumption rates in respect to such installation.

5. PRIVATE HYDRANT RATES

Per hydrant per year \$200.00.

6. RATES FOR WATER SUPPLIED FROM FIRE HYDRANTS

Whenever the use of any fire hydrant is desired for supplying water for any purpose, excepting those of the Fire Department for fire use, the Utility may grant a permit containing such terms and conditions as it may provide, including arrangements regarding supervision of the opening and closing of the hydrant, and a service charge for commercial consumers of \$60.00 for connection and disconnection and a consumption charge for the amount of water used, as estimated by the water utility, at meter consumption rates.

7. CHARGES FOR RE-ESTABLISHING WATER SERVICE

When water service has been suspended for any violation of the Rules and Regulations of the Utility, such water service shall not be re-established until a reconnection charge of \$50.00 has been paid to the Utility. If reconnection is outside of regular working hours, the charge is \$200.00.

B

8. CONNECTION FEE

The Utility shall charge a \$50.00 fee for the creation of a water account, notwithstanding the fact that no physical disconnection of the system may have occurred. This fee shall be \$200.00 if water is turned on after regular working hours of the Utility.

9. DISCONNECTION FEE

Whenever a customer, for any reason requests that the water be turned off from any premises, a charge of \$50.00 shall be made for turning off the water, and no additional charge shall be made for turning it on again when this is requested unless such request is after regular working hours of the Utility when a fee of \$200.00 shall apply.

10. SPECIAL SERVICE CHARGE:

A special service charge of \$50.00 (\$200.00 if such work is performed after regular working hours) shall be made to each customer receiving a necessary or requested service, such as the shutting off or turning on of water service or other special services not provided for elsewhere in the schedules or the rules and regulations. In the case where the shutting off is requested because there is no operable shut off valve serving the dwelling, an isolation valve must be installed.

11. CHARGE FOR NON-NEGOTIABLE CHEQUES

The Utility may charge a \$25.00 administration fee plus any additional bank fees charged by the bank for cheques that, due to non-negotiability, have been rejected by the Utility's bank.

12. CHARGE FOR MISSED APPOINTMENT BY CUSTOMERS

Where an appointment has been made by a customer to have a water service hooked up or a meter inspected, or water turned on to a property, or other visits to the property for the inception or maintenance of water service to the property, and the customer fails to keep the appointment or the plumbing is not completed to allow for installation of a water meter and the Utility's staff have to return to the property, there may be a charge of \$25.00 for each visit if, in the judgment of the Utility, it is required.

SCHEDULE "C"
TOWN OF MAHONE BAY
WATER UTILITY
SCHEDULE OF RATES FOR WATER AND WATER SERVICES

(Effective for water supplied on and after 1 April 2021)

RATES

The rates set out below are the rates approved by the Board for water and water services when payment is made within 30 days from the date rendered as shown on the bill.

When payment is made after 30 days from the date rendered as shown on the bill, the rates will include interest charges of 1.25 % per month, or part thereof.

Each bill shall show the amount payable within 30 days from the date rendered as shown on the bill.

In this Schedule, the word "Utility" means the Water Utility of the Town of Mahone Bay.

1. **RATES:**

(a) <u>Base Charges</u>	<u>Bi Monthly</u>	<u>Monthly</u>
Size of Meter		
5/8"	79.80	39.90
3/4"	117.08	58.54
1"	191.63	95.82
1.5"	378.02	189.01
2"	601.69	300.84
3"	1,198.13	599.07
4"	1,869.13	934.57
6"	3,733.02	1,866.51

(b) Consumption Rate \$15.99 per 1000 gallons

(c) **Minimum Bill**

The minimum bill shall be the Base Charge.

2. PUBLIC FIRE PROTECTION RATE

The Town of Mahone Bay to the water utility for fire protection on or before September 30, 2021 the sum of \$183,044.

For subsequent years, the annual public fire protection rate shall be based on the above or:

(a) the sum of 35.9 % of transmission and distribution, taxes and depreciation expenses of the Utility and return on rate base of the immediately preceding year, plus

(b) 10 % of all other expenses, whichever is the greater.

3. RATES FOR SPRINKLER SERVICE

Each building having a sprinkler system installed shall pay annually for the service as follows:

Each building serviced by a sprinkler service pipe of 6" or less in diameter	\$200.00
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Each building serviced by a sprinkler service pipe of 8" or more in diameter	\$250.00
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4. WATER FOR BUILDINGS OR WORKS UNDER CONSTRUCTION

The Utility may furnish water to any person requiring a supply thereof for the construction of a building or other works. This person shall deposit with the Utility such sum as may be determined by the Utility as is sufficient to defray the cost of making the necessary connection to any water service or main together with the cost of the meter to be installed to measure the water consumed. Upon completion of the work and the return of the meter to the Utility, a refund will be made after deducting the cost, if any, of repairing the meter and of testing the same and payment of the base and connection charges and the consumption rates in respect to such installation.

5. PRIVATE HYDRANT RATES

Per hydrant per year \$200.00.

6. RATES FOR WATER SUPPLIED FROM FIRE HYDRANTS

Whenever the use of any fire hydrant is desired for supplying water for any purpose, excepting those of the Fire Department for fire use, the Utility may grant a permit containing such terms and conditions as it may provide, including arrangements regarding supervision of the opening and closing of the hydrant, and a service charge for

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commercial consumers of \$60.00 for connection and disconnection and a consumption charge for the amount of water used, as estimated by the water utility, at meter consumption rates.

7. CHARGES FOR RE-ESTABLISHING WATER SERVICE

When water service has been suspended for any violation of the Rules and Regulations of the Utility, such water service shall not be re-established until a reconnection charge of \$50.00 has been paid to the Utility. If reconnection is outside of regular working hours, the charge is \$200.00.

8. CONNECTION FEE

The Utility shall charge a \$50.00 fee for the creation of a water account, notwithstanding the fact that no physical disconnection of the system may have occurred. This fee shall be \$200.00 if water is turned on after regular working hours of the Utility.

9. DISCONNECTION FEE

Whenever a customer, for any reason requests that the water be turned off from any premises, a charge of \$50.00 shall be made for turning off the water, and no additional charge shall be made for turning it on again when this is requested unless such request is after regular working hours of the Utility when a fee of \$200.00 shall apply.

10. SPECIAL SERVICE CHARGE:

A special service charge of \$50.00 (\$200.00 if such work is performed after regular working hours) shall be made to each customer receiving a necessary or requested service, such as the shutting off or turning on of water service or other special services not provided for elsewhere in the schedules or the rules and regulations. In the case where the shutting off is requested because there is no operable shut off valve serving the dwelling, an isolation valve must be installed.

11. CHARGE FOR NON-NEGOTIABLE CHEQUES

The Utility may charge a \$25.00 administration fee plus any additional bank fees charged by the bank for cheques that, due to non-negotiability, have been rejected by the Utility's bank.

12. CHARGE FOR MISSED APPOINTMENT BY CUSTOMERS

Where an appointment has been made by a customer to have a water service hooked up or a meter inspected, or water turned on to a property, or other visits to the property for the inception or maintenance of water service to the property, and the customer fails to keep the appointment or the plumbing is not completed to allow for installation of a water meter and the Utility's staff have to return to the property, there may be a charge of \$25.00 for each visit if, in the judgment of the Utility, it is required.

SCHEDULE D
RULES AND REGULATIONS

TOWN OF MAHONE BAY
WATER UTILITY

**SCHEDULE OF RULES AND REGULATIONS
GOVERNING THE SUPPLY OF WATER AND WATER SERVICES**
(Effective 1 October 2019)

1. In these Rules and regulations, unless the context otherwise requires, the expression:

“Town” means the Town of Mahone Bay

“Utility” means the Water Utility of the Town of Mahone Bay

“Customer” means a person, firm or corporation who, or which, contracts to be supplied with water at a specific location or locations.

“Domestic Service” means the type of service supplied to the owner or the owner’s authorized agent or to the occupant or tenant of any space or area occupied for the distinct purpose of a dwelling house, rooming house, apartment, flat, etc.

“Metered Rate Service” means that type of service charged for at metered rates. Metered rate service is required for all new services

2. **LIABILITY FOR PAYMENT OF WATER BILL:** An agreement is deemed to exist between a customer and the Utility for the supply of water service at such rates and in accordance with these Regulations by virtue of:

a) the customer applying for and receiving approval for water service;

b) the customer consuming or paying for water service from the date that the customer who is a party to an agreement pursuant to clause (a) (the customer of record) moves out of the premises, in which case the customer of record shall remain jointly and severally liable for the water service account up to the date the Utility is notified that the customer of record wishes to terminate the supply of water service.

At the discretion of the Utility, a property owner who rents or leases a property or self contained unit to a tenant or lessee may be required to open an account for the provision of water at the property rented or leased.

c) Any person, business or corporation that receives water service without the consent of the Utility, shall be liable for the cost of such water service which cost shall be determined in the sole discretion of the Utility based upon its reasonable estimate of the amount of water utilized.

3. **DEPOSITS:** When required, an applicant for service shall deposit with the Utility a sum equal to the estimated charges for such service for a period of six months. The estimated charges will be based on the minimum bill for metered customers. This deposit shall be held by the Utility as collateral security for the payment of the customer's bills, but is not to be considered as a payment on account thereof. When the customer ceases to use the service and discharges all of the customer's liability to the utility in respect of such service, the deposit shall be returned to the customer with interest at the rate of 2% per annum, not compounded.
4. **REFUSAL OF SERVICE:** Service may be refused or suspended to any customer who has failed to discharge all of the customer's liabilities to the Utility.
5. **BILLING:** If a contract is entered into or terminated at any time other than a regular billing date, the amount to be charged to the customer shall be the pro rata proportion to the next billing date, of the regular service charge for the billing period, plus the consumption charge, if any.

The Utility charges the base rate for the entire year for seasonal customers. The bi monthly base rate charge will apply for each billing period regardless of water turn-offs.

6. **PAYMENT OF BILLS:** Bills shall be rendered to each customer at intervals of approximately two months and are due and payable when rendered. Bills not paid within 30 days of the date rendered, shall incur an interest charge at the prescribed monthly rate for each month or part thereof.
7. **ADJUSTMENT OF BILLS:**
 - (a) Where meters exist - If the seal of a meter is broken or if a meter does not register correctly, the bill for that water service shall be estimated in accordance with the best data available. Any customer desiring to question a water bill must do so in writing within 30 days of the bill being rendered.
 - (b) Customers Under billed - Should it be necessary for the Utility to make a billing adjustment as a result of a customer being under billed for any reason, such adjustment shall be retroactive for a maximum of four billing periods or one year, whichever is the longest. Notwithstanding the above, in the event that a billing adjustment is the result of the customer's illegal connection to the water system or willful interference or damage of metering equipment (where they exist), the billing adjustment in such circumstances will not be limited to one year or four billing periods, but rather the customer shall be responsible for all payments of such accounts from the date such illegal connection or interference to meter equipment took place.
 - (c) Customer Over billed - In the event a customer has been billed in error for a Service they did not receive, the Utility will reimburse such customer the amount billed to and paid by the customer, together with interest calculated as simple interest paid

on savings accounts by the Utility's bank, respecting the period during which the customer was incorrectly billed by the Utility, such period not to exceed five years.

8. **ESTIMATED READINGS FOR BILLING PURPOSES - METERED CUSTOMERS:** If the Utility is unable to obtain a meter reading for billing purposes, after exercising due diligence in the usual practice of meter reading, the bill for that service shall be estimated in accordance with the best data available, subject, however, to the provision that in no circumstance will an estimated reading be used for more than two (2) consecutive billing periods. If an estimated bill is rendered for two (2) consecutive billing periods, the Utility shall notify the customer by regular mail that arrangements must be made for the Utility to obtain a reading and failing such arrangements, the Utility may suspend service until such arrangements are made. When such meter reading has been obtained the previous estimated bill or bills shall be adjusted accordingly.
9. **SUSPENSION OF SERVICE FOR NON PAYMENT BILLS:** The Utility shall have the right to enter onto customers' premises within reasonable hours to suspend service to customers whose bills remain unpaid for more than forty calendar days after the date rendered.
10. **WATER TO BE SUPPLIED BY METER:** The Utility may at any time install a meter on the premises of any customer. The Utility shall determine the size and type of meter to be installed in each case. All meters shall be the property of the Utility.
11. **INSTALLATION AND REMOVAL OF METERS:** Meters shall be installed and removed only by employees or duly authorized representatives of the Utility and no other person shall install, alter, change or remove a meter without the written permission of the Utility. The plumbing and connections shall be properly prepared to receive the installation of such meters to the approval of and without expense to the Utility.
12. **METER READERS:** Each meter reader shall be provided with an official identification, which he/she shall exhibit on request.
13. **ACCESS TO CUSTOMER'S PREMISES:** Representatives of the Utility shall have right of access to all parts of a customer's property or premises at all reasonable hours for the purpose of inspecting any water pipes or fittings, or appliances, or discontinuing service, or for the purpose of installing, removing, repairing, reading or inspecting meters. The Utility shall have the right to suspend service to any customer who refuses such access.
14. **LOCATION OF METERS:** The Utility shall have the right to refuse service to, or suspend the service of, any customer who does not provide a place which, in the opinion of the Utility, is suitable for the meter. It should be in the building served, at or near the point of entry of the service pipe, in a place where it can be easily read and where it will not be exposed to freezing temperatures.

Where the premises of a customer are of such a nature that a meter cannot be properly installed in a building or if the building is not sufficiently frost-proof as to guarantee the

safety of the meter, the Utility may order the construction of a suitable frost-proof box in which the meter can be installed. Service to such premises may be refused or suspended until such a frost-proof box approved by the Utility is installed.

15. **DAMAGE TO WATER METERS:** Each customer shall be responsible for the meter installed on the customer's service and shall protect it. He shall be liable for any damage to the meter resulting from carelessness, hot water or steam, or the action of frost or from any other cause not the fault of the Utility or its employees. The cost to the Utility occasioned by such damage to the meter shall be paid by the customer. If after the rendering of a bill by the Utility to the customer for such cost the same is not paid within 40 days from the date rendered, the supply of water to the customer concerned may be suspended until all charges are paid.
16. **METER TESTING.** On the request to have their meter tested, the Utility may charge the sum of \$50.00 to defray, in part, the cost of making the test for meters up to 1 ½ inch in size. In the case of meters 1-1/2 inches and larger, the actual cost of the test will be paid by the customer. If the test shows that the meter is over registering by more than one and one half percent (1 ½%) for positive displacement meters and three percent (3%) for turbine or compound meters, the sum so deposited will be refunded to the customer.
17. **PLUMBING TO BE SATISFACTORY:** All plumbing, pipes and fittings, fixtures, and other devices for conveying, distributing, controlling, or utilizing water which are used by a customer and are not the property of the Utility, shall be installed in the manner provided by the Regulations of and be approved by the proper official of the Municipality and/or the operators of the Utility. The water shall not be turned on (except for construction or testing purposes) until the applicant for service has satisfied the Utility that these requirements have been met. The supply of water may be discontinued to any customer at any time if, in the opinion of the proper official of the Municipality and/or the operator of the Utility, the plumbing, pipes, fittings, fixtures, or other devices as hereinbefore mentioned, or any of them, fail to comply with the above requirements, or if any part of the water system of such customer or the meter is in any unsuitable, dirty, unsanitary or inaccessible place. Service shall not be re-established until such condition is corrected to the satisfaction of the Utility.
18. **REMOTE REGISTERING WATER METERS:** When a remote registering water meter is installed on a customer's premises under a general outside register installation program of the Utility, then the cost of the meter and its installation shall be paid by the Utility. The meter shall become the property of the Utility which shall become responsible for its operation, maintenance and replacement. Any damage to the meter caused by the negligence or wrongful acts or omissions by the customer, the customer's agents or members of the customer's family, shall be paid for by the customer, and the failure by the customer to make the payment shall entitle the Utility, after making a forty day written demand for the payment, to disconnect the water service to the customer.
19. **CROSS CONNECTION CONTROL & BACKFLOW PREVENTION:**
 - (a) No owner, consumer, customer or other person hereinafter collectively referred to in

this rule and regulation as “person” shall connect, cause to be connected, or allow to remain connected to the water system, or plumbing installation, without the express written consent of the Utility, any piping fixtures, fittings container or appliance in a manner which, under any circumstances, may allow water, wastewater, or any other liquid, chemical or substance, to ingress or egress the water system.

(b) Where, in the opinion of the Utility, there may be a risk of contamination to the potable water system, notwithstanding the provisions of subparagraph (a), the Utility may require the customer, at the customers sole cost and expense, to install at any point on the customers water service connection or water service pipe, one or more backflow prevention (BFP) devices, which devices shall be of a quality and type approved by the Utility.

(c) All BFP devices shall be maintained in good working order. Such devices must be inspected and tested by a certified tester, approved by the Utility, at the expense of the customer. Such inspections shall take place upon installation, and thereafter annually, or more often if required by the Utility. The customer shall submit a report in a form approved by the Utility on any or all tests performed on a BFP device within 30 days of a test. A record card shall be displayed on or adjacent to the BFP device on which the tester shall record the name and address of the owner of the device; the location, type, manufacturer, serial number and size of the device; and the test date, the tester’s initials, the tester’s name, the name of the tester’s employer, and the tester’s license number.

(d) Installation, maintenance, field-testing and selection of all BFP devices shall fully conform to the latest revision of CSA B64.10 and CSA B64 series.

(e) In the event of any breach, contravention or non-compliance by a person of any of the provision and regulations in a sub-paragraphs (a),(b),(c) or (d) the Utility may:

(i) suspend water service to such person, or

(ii) give notice to the person to correct the breach, contravention or non-compliance within 96 hours, or a specified lesser period. If the person fails to comply with such notice, the Utility may immediately thereafter suspend water service to such person.

20. **DANGEROUS CONNECTIONS:** No connection shall be permitted to any installation; equipment or source in such a manner as may allow any contamination to pass from such installation, equipment or source into the Utility's water supply system. If any such connection exists the Utility may discontinue the supply of water to such customer.

21. **PROHIBITED DEVICES:** Service may be refused or suspended by the Utility to any customer who installs or uses any device or appurtenance, as, for example, booster pumps, quick-opening or quick-closing valves, flushometers, water operated pumps or siphons, standpipes, or large outlets for supplying locomotives or ships, etc., which may occasion sudden large demands of short or long duration, thereby requiring oversize

meters and pipe lines, or affect the stability or regulation of water pressure in the Utility's system. Permission to install or use any such device or appurtenance must be obtained from the Utility, which permission shall specify what special arrangements, such as elevated storage tanks, surge tanks or equalizing tanks, etc., must be provided by the customer.

22. **IMPROPER USE OR WASTE OF WATER:** No customer shall permit the improper use or waste of water, such as providing water to more than one single family dwelling and /or apartment building from a single service, nor shall he sell or give water to any person except upon such conditions and for such purposes as may be approved in writing by the Utility.
23. **SERVICE PIPES:** Upon receipt of an application for service to any premises located on any portion of a street through which portion a main water pipe is laid and which premises are not already provided with water service, the Utility shall install a service pipe which it considers to be of suitable size and capacity from the water main to the street line. No pipe smaller than 3/4" in diameter shall be laid for any service.

The Utility shall supply and install the 3/4" service pipe and fittings between the main pipe and the street line. The necessary excavation for the installation of the service pipe, backfilling and replacement of the street and sidewalk surfaces from the water main in the street to the street-line shall be carried out by the Utility and paid for by the applicant. The applicant shall be responsible for the excavation and the supply and installation of the service pipe including restoration from the street-line to the premise and all such work shall be carried out without cost to the Utility.

For services larger than 3/4" the whole cost shall be borne by the customer, less the cost of a 3/4" service from the main to the street line.

Should any person make application for more than one service to the applicant's premises, the decision as to the necessity of the additional service shall be made by the Utility, and if the additional service is installed, the total cost thereof from the main to the customer's premises shall be paid by such applicant.

All services must be installed in accordance with the Rules and Regulations of the Town and to the satisfaction of the Utility.

When a service has been installed without objection from the customer as to the location of the same, no subsequent removal of or alteration to the position of the pipe shall be made except at the expense of the customer requesting such removal or alteration.

24. **REPAIRS TO SERVICES:** If a leak or other trouble occurs it shall be repaired as soon as possible. If the leak or trouble occurs in a service line providing non-fire protection water supplies between the main and the property line it shall be repaired by the Utility at its expense. If the leak or trouble occurs elsewhere in a service line providing non-fire protection water supplies, it shall be repaired by the customer at his/her expense.

If the leak or trouble occurs in a service line which provides private fire protection services (sprinkler or hydrant) it shall be repaired by the customer at his/her expense.

The Utility may make such repairs for any customer provided the customer agrees to pay the cost of same. When required, each customer desiring the Utility to do such work shall deposit with the Utility a sum equal to the estimated cost of the work.

If a leak occurs on the customer's portion of his/her service pipe and, after being notified of same, he refuses or unduly delays to have repairs made, the Utility may discontinue the supply of water to such service pipe if, in its opinion, such action is necessary in order to prevent wastage of water. The Utility shall notify the customer affected of its intention to discontinue such supply.

25. **UNAUTHORIZED EXTENSIONS, ADDITIONS OR CONNECTIONS:** No person shall, without the written consent of the Utility, make or cause to be made any connections to any pipe or main or any part of the water system or in any way obtain or use water therefrom in any manner other than as set out in these Regulations.
26. **SEASON FOR LAYING PIPES:** The Utility shall not be required to lay any pipe at any season of the year or at any time which, in its opinion, is not suitable.
27. **PRIVATE FIRE PROTECTION:** Fire protection lines within buildings shall be installed so that all pipes will be open and readily accessible for inspection at any time, and no connection for any purpose other than fire protection shall be made thereto. Unless approved by the Utility in writing, no fire protection line shall be connected in any way to a metered service.
28. **LIABILITY OF UTILITY:** The Utility shall not be deemed to guarantee an uninterrupted supply or a sufficient or uniform pressure and shall not be liable for any damage or injury caused or done by reason of the interruption of supply, variation of pressure or on account of the turning off or turning on of the water for any purpose.
29. **INTERFERENCE WITH UTILITY PROPERTY:** No person, unless authorized by the Utility in writing, shall draw water from, open, close, cut, break, or in any way injure or interfere with any fire hydrant, water main, water pipe, or any property of the Utility or obstruct the free access to any hydrant, stop cock, meter, building, etc., provided, however, that nothing in this paragraph contained shall be deemed to prevent an officer or member of the Fire Department engaged in the work of such Department, from using any hydrant or other source of water supply of the Utility for such purpose.
30. **SUSPENDING SERVICE FOR VIOLATION:** Whenever, in the opinion of the Utility, violation of any of these Rules and Regulations is existing or has occurred, the Utility may cause the water service to be suspended from the premises where such violation has occurred or is existing and may keep the same so suspended until satisfied that the cause for such action has been removed.

31. **RESUMPTION OF SERVICE:** In all cases where water service has been suspended for violation of any of these rules, service shall not be restored until the cause for violation has been removed.
32. **SPRINKLER SERVICE MAINS AND HYDRANT SYSTEM:** The customer shall be responsible for the cost of installing and maintaining a sprinkler service pipe from the main in the street to the building. It shall include a proper size control valve so that the service may be shut off if necessary. If requested by the applicant, a domestic service pipe may be connected to the sprinkler service pipe, but only if it is connected outside the building foundation wall and is provided with an approved shutoff valve located outside the building to permit control of the domestic service pipe without the necessity to enter the building. Before any domestic service pipe is connected to a sprinkler service pipe, the applicant must obtain approval from the appropriate authority and provide the Utility with a certified copy of such approval. The utility shall supervise the installation of same. When the private fire protection system includes private hydrants, these hydrants must be flushed during the Utility's regular flushing periods, under the supervision of the Utility's personnel. These hydrants shall be maintained in a manner, or on a regular basis as approved by the Utility. Fire protection lines within buildings shall be so installed that all pipes will be open and readily accessible for inspection at any time and no connection other than for fire protection shall be made thereto.

The location and spacing of hydrants in new construction shall be installed in accordance with the Town of Mahone Bay's Subdivision Regulations. All hydrants in the water system, including those on transmission mains, are available for fire protection.

33. **PRESSURE REDUCING VALVES:** Where, in the opinion of the Utility, it is necessary for proper water service, a customer shall install on the service pipe, between the meter and the shut off valve on the supply side of the meter, a pressure reducing valve of a type satisfactory to the Utility. The customer shall be responsible for the cost of installing and maintaining the pressure reducing valve at all time.
34. **PRESSURE RELIEF VALVES:** Whenever a pressure reducing valve has been installed by a customer in accordance with Regulation 33, the customer shall, for his/her own safety and protection, install on his/her hot water boiler and any other hot water heating device connected to the building's plumbing system, a pressure relief valve of an approved type, as well as an approved temperature limiting device. It shall be the customer's responsibility to maintain and keep in service the pressure relief valve at all times.
35. **EXTENSIONS:** Any owner of property situated on a street or highway in which no water main has been laid (or where the main has been laid, but has not been extended to the point opposite the owner's property), may make application to the Utility requesting permission to have such a servicing extension carried out. The Utility would review the application and either give approval in principle for the extension, or advise the property owner that the extension is not feasible, and will provide the owner with the reason for refusing permission.

After the Utility has applied for and received the approval of the NS Utility and Review Board and approval in principle has been granted, the owner may sign a contract with the Utility requesting that the Utility install the water extension at the owner's expense, or the owner may have the water line extended by a private contractor approved by the Utility. Where the latter is done, the extension must be designed and the construction supervised by a registered professional engineer with the design being approved by the Utility.

In any event, the cost of the extension shall be paid fully by the owner and the ownership of the water line shall be turned over to the Utility before any water services are connected to the extended line.

After the water line has been turned over to the Utility, it shall become a part of the water utility and all of these regulations affecting the operation of the Utility shall apply.

36. **DEPOSITS IN ADVANCE:** When a customer requests the Utility to do work for which they are required to pay and the Utility agrees to do the work, the Utility may require, before the work is started, a sum of money equal to the Utility's estimate of the probable cost of said work. When the actual cost is determined an adjustment in the payment shall be made. Regular service shall not be established by the Utility until all charges are paid in full.

37. **CURB STOP/CONTROL VALVE SERVICE BOX:** The curb stop/control valve service box housing the customers control valve shall be exposed for access by the Utility at all times. The Utility requires all curb stop/control valve service boxes and/or valves to be fully exposed and adjusted to final landscape grade before the installation of a customer's water meter. The customer shall not make any adjustments to the service box. Any adjustment to the service box requested by the customer shall be carried out by the Utility and paid for by the customer.

The customer shall ensure the curb stop/control valve service box and/or the valve box is exposed at all times. In the event that the curb stop/control valve service box is buried, paved over, back-filled or damaged as a result of carelessness, willful obstruction or any other occurrence that, in the opinion of the Utility, results in the requirement for the Utility to expose, re-expose, adjust or repair the curb stop /control valve service box, it shall be at the customer's expense. The Utility may undertake such activities as it deems necessary to gain access to the premises curb stop/control valve service box without expense to the Utility. When such action is undertaken, the reinstatement of the road, right-of-way, driveway, sidewalk, curb or landscape will be charged back to the customer if such activity is undertaken by the Utility.

38. **WATER CONSERVATION DIRECTIVES:** The Utility may enact conservation of water directives to its customers if in the opinion of the Utility such directives will permit the Utility to provide a reliable, continuous water supply to all customers served by the Utility. During such times as these directives may be enacted, customers who do not comply with the directives may have their water supply suspended until the customer agrees to comply

with the directive or upon suspension of the water conservation directive, whichever occurs first. In the event that the water is temporarily suspended for non-compliance of a water conservation directive, the cost of turning on the service will be billed to the customer.