TOWN OF BERLIN

WATER & WASTEWATER USER RATE STUDY

DBF #0050A111.A01

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1. INTRODUCTION

This study intends to provide background, recommendations, and conclusions for the Town of Berlin's water and wastewater systems regarding user rates and special connection charges. The study will review operating revenues and expenses trends, compare rates to other utility providers, compare special connection charges with other utility providers, review rate design methods, and make recommendations for rates and charges.

2. BACKGROUND

The Town of Berlin operates a wastewater collection and treatment system for the Town's customers. The collection system consists of gravity sewer mains ranging from 4" to 15" and forcemains ranging from 1.25" to 10". The Town operates approximately 14 pumping stations of varying age, condition, and flow. The Town treats wastewater at the treatment plant on Bottle Branch Road and discharges wastewater via spray irrigation.

The Town of Berlin's water system collects groundwater as it's source water through three (3) well sites. Water is pumped into the Town's two elevated storage tanks and distributed through water mains of 4" to 12" in diameter.

3. CUSTOMER CLASSIFICATIONS/TYPE

The Town serves a mix of residential and commercial customers in their water and sewer systems. The majority of users are residential; making up approximately 85% of all customers. While commercial user represents approximately 15% of the customer base.

Except for a clause in the adopted resolution regarding non-residential metered water customers exceeding EDU allocations and out-of-town customers; all customers are charged the same rate. Variable rates based on classification are a common tool for developing rates. In the publication *Developing Rates for Small Systems* by the American Water Works Association, they recommend using variable rates if the cost of delivering water to each customer classification varies. Although it is difficult to calculate, the cost to each customer classification should be the basis for variable rates. Small-scale businesses and residential customers may have the same cost of service whereas a large institution or school may vary in cost.

Keeping the current same rate charge for all customer classifications is recommend, however, variable customer classification charges can be considered in the future.

4. NUMBER OF SPECIAL CONNECTIONS

For water and sewer, the Town collects a special connection charge for new connections to the systems. Using data from the *Wastewater Rates and Fees* presentation prepared by URS in 2009, connections for the years 1999 through 2008 are available. For the year 2009 through 2017, connections were estimated based on special connection charge revenues. This data is provided in the table below.

Table 1: Annual Connections

Year	Connections
1999	19
2000	32
2001	32
2002	40
2003	55
2004	81
2005	108
2006	100
2007	47
2008	31
2009	17
2010	3
2011	35
2012	3
2013	19
2014	57
2015	60
2016	34
2017	134

Reviewing the data from the table shows that the Town averaged 47.7 connections per year. Removing the peak years of 2005 and 2006 brings the average connections to 41.1. The previous rate study presentation shows an average of 42 with this methodology. For planning purposes, a range of 30 to 40 connections should be used.

5. COMPARISON OF SPECIAL CONNECTION CHARGES WITH OTHER UTILITY PROVIDERS

Special connection charges for other water and sewer providers were collected and tabulated. See the table below for the special connection charge comparison.

Table 2: Special Connection Charge Comparison

Utility Provider	Water	Sewer	Total Cost
City of Harrington, DE	$1,170.00	$2,520.00	$3,690.00
Town of Federalsburg	$2,500.00	$2,500.00	$5,000.00
Cambridge MUC	*See total	*See total	$5,640.00
Somerset County Sanitary District	$1,000.00	$5,000.00	$6,000.00
Town of Bridgeville, DE	$500.00	$6,000.00	$6,500.00
Easton Utilities Commission	$2,350.00	$4,700.00	$7,050.00
City of Pocomoke	$4,500.00	$4,500.00	$9,000.00
Town of Denton	$4,000.00	$5,000.00	$9,000.00
Town of Snow Hill	$3,500.00	$7,000.00	$10,500.00
Mystic Harbour	$3,000.00	$7,700.00	$10,700.00
City of Salisbury	$5,363.00	$5,340.00	$10,703.00
Town of Delmar	$4,000.00	$7,000.00	$11,000.00
Town of Trappe	$6,610.00	$6,610.00	$13,220.00
Town of Centreville	$5,097.00	$8,677.00	$13,774.00
Ocean Pines	$3,000.00	$11,573.00	$14,573.00
City of Fruitland	$8,700.00	$7,800.00	$16,500.00
Town of Berlin	**$4,425.00**	**$12,261.00**	**$16,686.00**

Costs for water and sewer were calculated by researching rates for each utility provider and summing various fees including: impact fees, tap installation fees, transmission fees, capacity unit fees, and special connection fees.

Many municipalities use the special connection charge for future capital improvements. The Town of Berlin's special connection charge is based on the debt service repayments for the wastewater treatment plant (sewer portion) and debt service repayments and capital expenditures for the water system. Berlin's special connection charges are high due to the State's mandate for strict effluent requirements. The Town's spray irrigation is the largest in the state of Maryland and thus, had a large capital cost.

6. REVENUE AND EXPENSE TRENDS

Reviewing the data from the Town's audits, a revenue and expense trend was able to be derived. To provide a clearer picture, hauler fees, sales and service (tanker filling), depreciation expense, capital grants, interest income, and loss on disposal of assets has been removed from the analysis. See below for the revenue and expense trend charts.

Chart 1: Sewer Revenues & Expenses

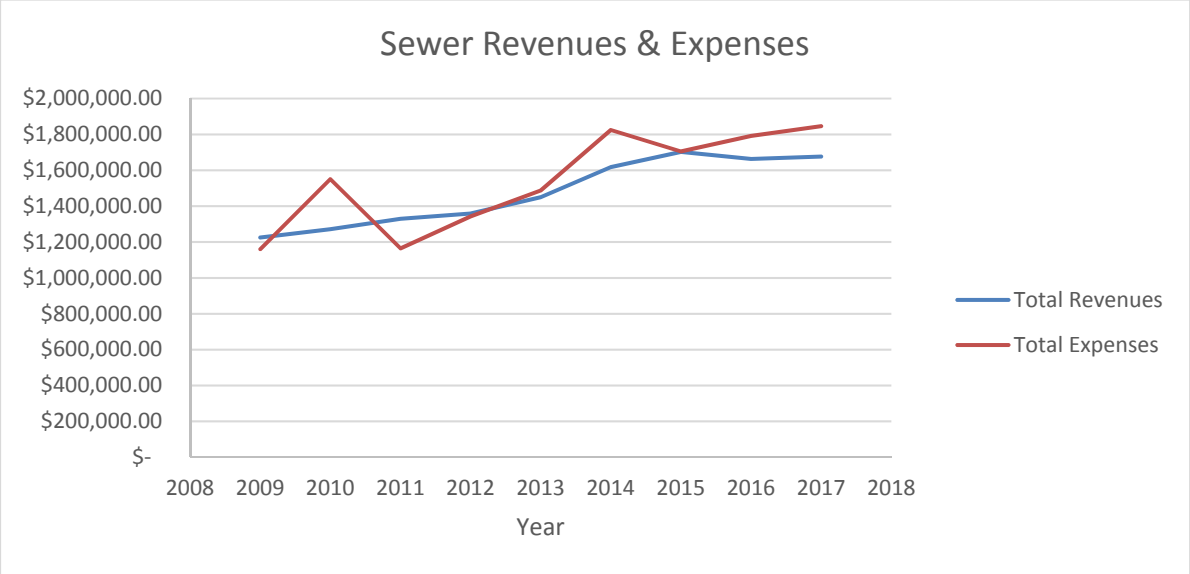


Chart 2: Water Revenues & Expenses

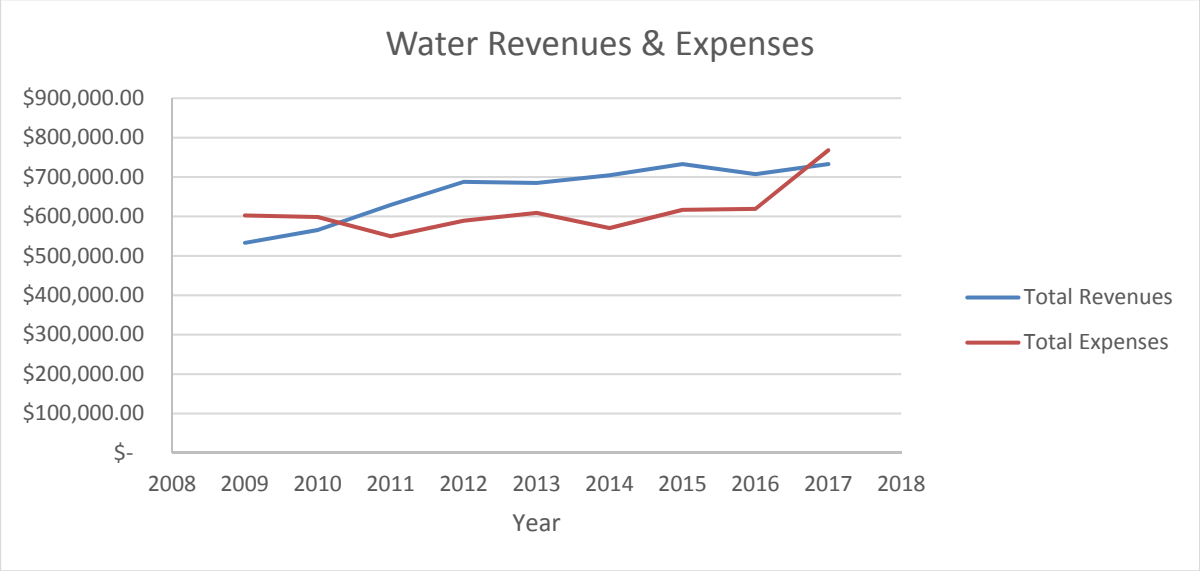


Table 3: Revenues & Expenses: Water and Sewer Accounts

Year	Water			Sewer		
	Revenues	Expenses	Net Position	Revenues	Expenses	Difference
2009	$ 532,979.00	$ 602,602.00	$ (69,623.00)	$ 1,225,533.00	$ 1,160,244.00	$ 65,289.00
2010	$ 565,600.00	$ 598,402.00	$ (32,802.00)	$ 1,271,501.00	$ 1,551,140.00	$ (279,639.00)
2011	$ 629,197.00	$ 549,707.00	$ 79,490.00	$ 1,330,094.00	$ 1,164,729.00	$ 165,365.00
2012	$ 687,774.00	$ 589,152.00	$ 98,622.00	$ 1,359,148.00	$ 1,343,101.00	$ 16,047.00
2013	$ 684,869.00	$ 609,138.00	$ 75,731.00	$ 1,450,411.00	$ 1,487,632.00	$ (37,221.00)
2014	$ 704,541.00	$ 570,329.00	$ 134,212.00	$ 1,617,638.00	$ 1,824,780.00	$ (207,142.00)
2015	$ 732,849.00	$ 616,859.00	$ 115,990.00	$ 1,702,818.00	$ 1,705,261.00	$ (2,443.00)
2016	$ 707,244.00	$ 619,303.00	$ 87,941.00	$ 1,663,663.00	$ 1,792,168.00	$ (128,505.00)
2017	$ 732,707.00	$ 767,937.00	$ (35,230.00)	$ 1,676,988.00	$ 1,846,386.00	$ (169,398.00)

Analyzing the revenues and expenses in this manner shows that the water system ran a loss in three (3) of the nine (9) years and the wastewater ran a loss in six (6) out of the nine (9) years. If a 10% reserve is added to the expenses the calculations show the water system running a loss in three (3) years and the sewer system running a loss in eight (8) of the nine (9) years.

For further analysis, only the last five (5) years will be used. The last rate change went into effect in January 1, 2013. In the last five (5) years, three (3) of the sewer budgets showed a loss and one (1) of the water budgets showed a loss. A calculation was run to increase the revenues from service charges at a rate of 5%, 10%, and 15%. The tables below show the results of these calculations. If a 15% increase to rates is provided, the sewer system shows a net positive. A 10% increase to the water rates shows a net positive. See the table below for a summary.

Table 4: Revenue & Expense Positions: Sewer Account

Year	Sewer Account - Net Position			
	Current Rate	5% Increase in Service Charge	10% Increase in Service Charge	15% Increase in Service Charge
2013	$ (37,221.00)	$ 33,622.15	$ 104,763.30	$ 175,904.45
2014	$ (207,142.00)	$ (127,992.30)	$ (48,842.60)	$ 30,307.10
2015	$ (2,443.00)	$ 81,017.80	$ 164,478.60	$ 247,939.40
2016	$ (128,505.00)	$ (46,391.25)	$ 35,722.50	$ 117,836.25
2017	$ (169,398.00)	$ (86,803.80)	$ (4,209.60)	$ 78,384.60

Summary of table: 5 out of 5 years at the current rate are operating at a loss. With a 5% increase to service charges 3 out of 5 years operates at a loss. With a 10% increase to service charges, 2 years operate at a loss. A 15% increase to service charges show a net positive for all years.

Table 5: Revenue & Expense Positions: Water Account

Year	Water Account - Net Position			
	Current Rate	5% Increase in Service Charge	10% Increase in Service Charge	15% Increase in Service Charge
2013	$ 75,731.00	$ 106,529.65	$ 137,328.30	$ 168,126.95
2014	$ 134,212.00	$ 165,877.45	$ 197,542.90	$ 229,208.35
2015	$ 115,990.00	$ 148,745.25	$ 181,500.50	$ 214,255.75
2016	$ 87,941.00	$ 119,939.95	$ 151,938.90	$ 183,937.85
2017	$ (35,230.00)	$ (1,483.00)	$ 32,264.00	$ 66,011.00

Summary of table: 1 out of 5 years at the current rate are operating at a loss. With a 10% increase to service charges each year shows a positive position.

7. RATE COMPARISON WITH OTHER UTILITY PROVIDERS

The following tables compare the sewer rates for other municipal utility providers in the vicinity of the Town of Berlin. The table has a usage of 7,500 gallons per month or 22,500 gallons per quarter as a baseline. The rates do not include debt service, front-footage, or annual EDU assessments. As noted on Table 6, the Town of Berlin ranks in the highest one-third for annual sewer service costs for the entities in the comparison. Table 7 has a comparison for water utility rates, the Town has the lowest cost for annual water service costs for the entities compared. The Town's current water and sewer rates are provided in Appendix B.

Table 6: Sewer Utility Rate Comparison

Entity	Estimated Usage (based on billing frequency)	Sewer Rate	Frequency (#/year)	Yearly Sewer Cost
Town of Snow Hill	22,500	$ 100.35	4	$ 401.40
Easton Utilities Commission	7,500	$ 33.75	12	$ 405.00
Mystic Harbour	22,500	$ 113.88	4	$ 455.50
Ocean Pines	22,500	$ 114.88	4	$ 459.50
West Ocean City	N/A	$ 115.50	4	$ 462.00
Town of Delmar	22,500	$ 123.75	4	$ 495.00
City of Pocomoke	7,500	$ 43.16	12	$ 517.86
City of Harrington, DE	22,500	$ 129.60	4	$ 518.40
Cambridge MUC	7,500	$ 45.68	12	$ 548.10
Town of Centreville	22,500	$ 144.55	4	$ 578.20
Town of Denton	22,500	$ 169.23	4	$ 676.90
Town of Berlin	**7,500**	**$ 58.45**	**12**	**$ 701.40**
City of Fruitland	22,500	$ 190.00	4	$ 760.00
City of Salisbury	22,500	$ 210.61	4	$ 842.44
Town of Federalsburg	22,500	$ 210.69	4	$ 842.76
Somerset County Sanitary District	22,500	$ 213.18	4	$ 852.70
Town of Bridgeville, DE	7,500	$ 80.75	12	$ 969.00
Town of Trappe	7,500	$ 87.81	12	$ 1,053.72

Table 7: Water Utility Rate Comparison

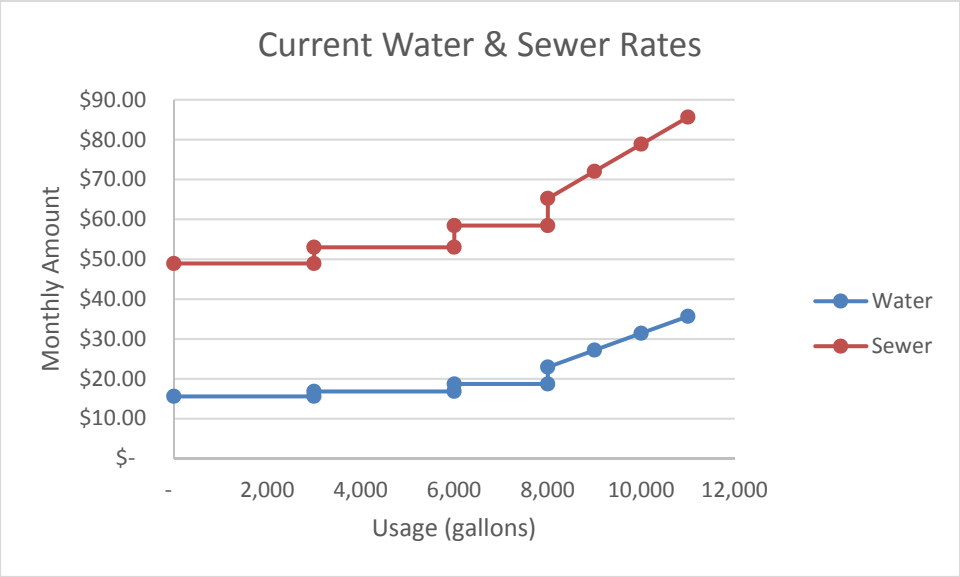
Entity	Estimated Usage (based on billing frequency)	Water Rate	Frequency (#/year)	Yearly Water Cost
Town of Berlin	**7,500**	**$ 18.70**	**12**	**$ 224.40**
City of Harrington, DE	7,500	$ 24.38	12	$ 292.50
Cambridge MUC	7,500	$ 24.44	12	$ 293.28
Somerset County Sanitary District	22,500	$ 79.55	4	$ 318.20
City of Salisbury	22,500	$ 84.98	4	$ 339.90
Town of Bridgeville, DE	7,500	$ 29.83	12	$ 357.90
Town of Delmar	22,500	$ 90.00	4	$ 360.00
Town of Federalsburg	22,500	$ 92.08	4	$ 368.30
City of Fruitland	22,500	$ 93.50	4	$ 374.00
Easton Utilities Commission	7,500	$ 33.25	12	$ 399.00
City of Pocomoke	7,500	$ 33.83	12	$ 405.90
Town of Denton	22,500	$ 102.63	4	$ 410.50
Town of Snow Hill	22,500	$ 103.95	4	$ 415.80
Mystic Harbour	22,500	$ 113.88	4	$ 455.50
Ocean Pines	22,500	$ 114.88	4	$ 459.50
Town of Centreville	22,500	$ 129.65	4	$ 518.60
Town of Trappe	7,500	$ 44.43	12	$ 533.16

8. ALTERNATIVE RATE DESIGN METHODS

The Town currently bills rates based on an increasing block rate design method, as shown in chart 6 below. Increasing block rate design methods help to reduce water usage by incentivizing users to use less water. Other user rate design methods, as outlined in *Developing Rates for Small Systems* by the American Water Works Association, are shown below in Chart's 4 through 7. These rate design methods include: uniform, increasing block, decreasing block, and seasonal. An increasing block rate design method is most appropriate for the Town of Berlin.

As visible in Chart 3: Current Water & Sewer Rates, the increasing block rate does not have a large impact on water and sewer bills until the user consumes over 8,000 gallons in the month. This impact is especially apparent for water, where users can receive nearly 3,000 gallons of water for only a $1.24 increase on their bill. This report recommends applying higher increases in cost for the increases in consumption between 3,000 gallons and 8,000 gallons.

Chart 3: Current Water & Sewer Rates



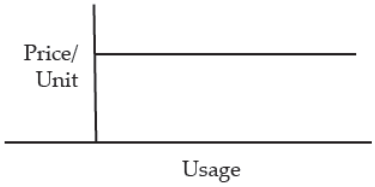


Chart 4: Uniform Rate Design

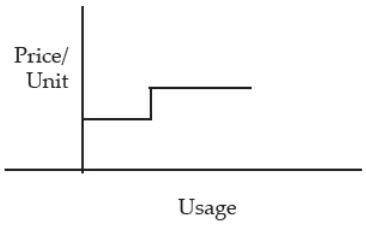


Chart 6: Increasing Block Rate Design

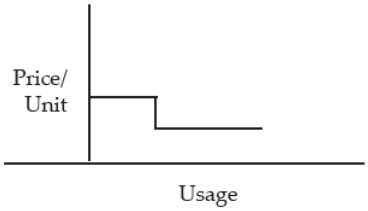


Chart 5: Decreasing Block Rate Design

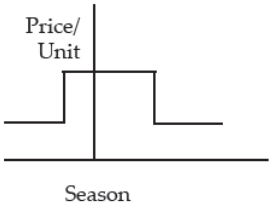


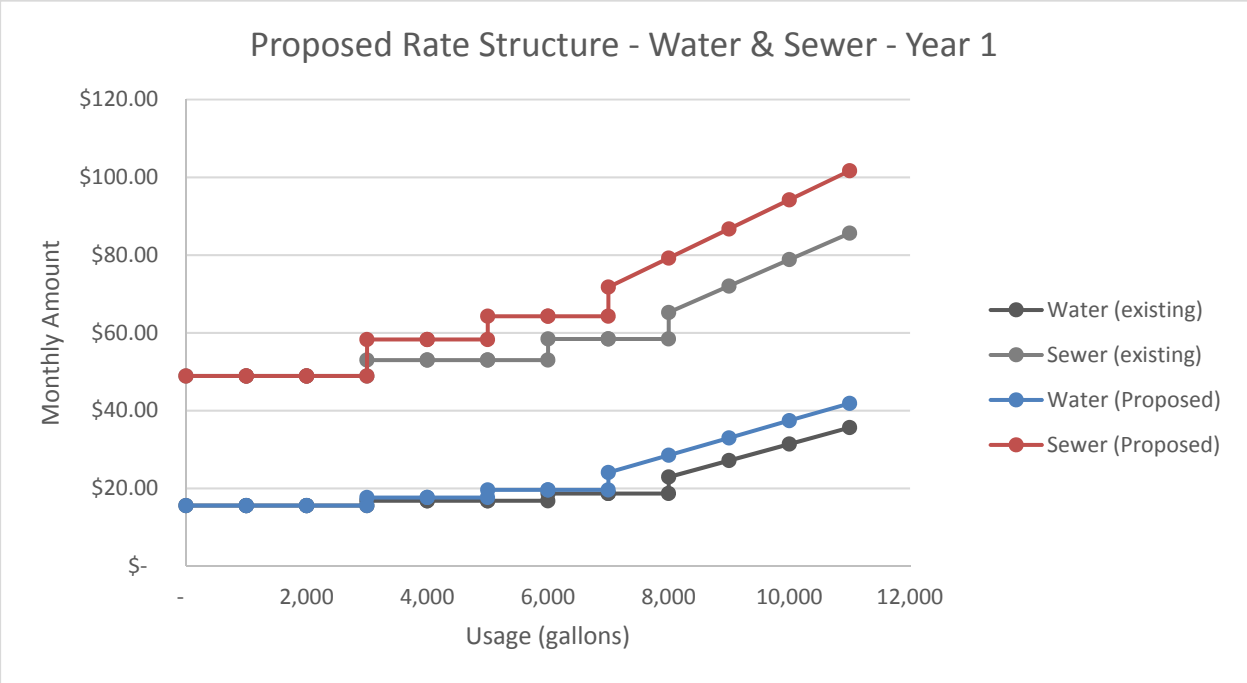
Chart 7: Seasonal Rate Design

Additionally, this report recommends that the Town change their current tiering of usage. See the table below for the existing and proposed range. The proposed tiering will clearly cover all usage scenarios.

Table 8: Existing and Proposed Rate Tiers

Existing Tiers	Proposed Tiers
Number of Gallons	**Number of Gallons**
0 – 2,000	0 – 2,999
3,000 – 5,000	3,000 – 4,999
6,000 – 8,000	5,000 – 6,999
> 8,000	>= 7,000

Chart 8: Proposed Water & Sewer Rates



As noted in Chart 8, the base rate for water and sewer is unchanged. The proposed tiering increases rates for customers who use higher amounts of water and therefore promotes water conservation. Rate increases will be discussed further in Section 13 – Conclusions.

9. DEBT OBLIGATIONS

The Town currently only has debt obligations on the sewer system. The debts are summarized in the following table.

Table 9: Sewer Debt Obligations

Description	FY 2016 Principal Balance	FY 2017 Total Payments	FY 2018 Total Payments
1996 RDA Bond	$ 527,898.17	$ 127,040.00	$ 0.00
2007 B-6 MDHCD 20 Year Bond	$ 768,392.88	$ 87,970.36	$ 0.00
2010 Brooks Bounds Real Property	$ 455,214.64	$ 48,540.00	$ 48,540.00
2010 RDA Bond Wastewater Project	$ 5,445,725.00	$ 227,903.09	$ 227,903.42
Wastewater Improvement Bond 2011	$ 2,350,661.00	$ 100,746.00	$ 100,746.00
MDE Loan Phase II Spray Irrigation Project	$ 2,890,924.02	$ 182,558.39	$ 182,558.29
2012 MDHCD 9 Year Bond	$ 338,700.00	$ 73,060.68	$ 73,129.68
Bank of Ocean City Route 818 Loan	$ 312,980.32	$ 312,980.32	$ 0.00
Totals	**$ 13,090,496.03**	**$ 1,160,798.84**	**$ 632,877.39**

10. CAPITAL IMPROVEMENTS

The two tables below summarized the capital improvements for the Town over the next five (5) year planning period.

Table 10: Water System Capital Improvements

Project Description	Estimated Cost
500,000 Gallon Elevated Storage Tank	$2,400,000
Production Well	$300,000
Miscellaneous Watermain Upgrades	$200,000
Total Estimated Water System Improvements	**$2,900,000**

The production well and miscellaneous watermain upgrades may be funded in full, however, the elevated storage tank may be financed. Assuming a loan term of 20-years at an interest rate of 2.5% (the current Federal Discount Rate, checked August 3, 2018) the annual payment would be $152,616 for the elevated storage tank. Without financing the annual reserve amount would be $580,000. With financing the elevated storage tank, the annual reserve amount would be $252,616. All calculations assume a five (5) year planning period.

Table 11: Sewer System Capital Improvements

Project Description	Estimated Cost
Route 346 West Pump Station Improvements	$150,000
Broad Street Pump Station Improvements	$250,000
William Street Pump Station Improvements	$125,000
Miscellaneous Sewer Main Upgrades	$250,000
Total Estimated Sewer System Improvements	**$775,000**

The annual reserve amount for the sewer system is $155,000. This calculation assumes a five (5) year planning period.

11. INFLATION AND USER RATES

It is necessary that the Town's revenues keep pace with inflation. If rates are not periodically reviewed, expenses can out-weigh revenues. Reviewing published inflation data is a good practice for ensuring fair

rates and increases. Over the past 10-years, the Employment Cost Index (ECI), prepared by the Bureau of Labor Statistics has averaged an annual increase of 2.00%. The Consumer Price Index for all Urban Consumers (CPI-U) has data available for 10-years. The data shows an average annual increase of 1.71%. Additionally, a tabulation of the unadjusted annual inflation rate in the U.S. was compiled and averaged for the last 10 years, yielding 2.68%. Another tracking index is the Municipal Cost Index (MCI) which is published by the American City and County magazine. This index estimates the rate of inflation for purchases by American municipalities. The MCI over the last 10 years yielded 1.97%. A summary of the inflation rates and indices is provided below and data sources are provided in Appendix A.

To keep pace with inflation including rising wages, energy costs, fuel, equipment, and contracted services, the Town could raise rates at a rate of 1.5 to 3.0% per year. The average rate increase of all the inflation data is 2.09%; therefore 2% is recommended. Raising of rates may be done on a schedule at the Town's discretion; annually, biennial, every 3 years, etc.

Table 12: Inflation Indices Summary

Inflation Data or Index	10-Year Annual Average Increase (%)
Employment Cost Index (ECI)	2.00%
Consumer Price Index for Urban Consumers (CPI-U)	1.71%
Unadjusted Annual Inflation Rate	2.68%
Municipal Cost Index (MCI)	1.97%

12. SPECIAL WATER & SEWER USAGE

The Town currently has special water usage and sewage treatment items in their user rates. The rates have a hydrant permit which allows tankers to fill-up using the Town's water. The Town's rates also have a special water usage item for swimming pool filling. Lastly, the Town accepts septage and has a rate per gallon. It is recommended that the Town reassess these costs to ensure they are incentivizing water conservation and not causing an unnecessary strain on the Town's water and sewer system and the Town's resources.

13. CONCLUSIONS

The Town needs to ensure that revenues from monthly billings exceeds expenses. The sewer system requires a minimum of a 15% to show a net positive for the last five (5) years of revenues and expenses. Additional revenues may be required to fund capital improvements or establish reserve funds. The water system needs a 10% increase to show a net positive over the last five (5) years. Inflation and rising costs should be considered for future rates.

Recommended rate increases and a schedule for implementing rate increases is shown below. Although rate increases are shown as 5% and 10% for water and sewer, respectively, there is no change proposed to the base rate. Chart 9 shows the new rates with the unchanged base rates. The Town is able to achieve the necessary revenues by raising rates for high volume users. These new rates and the re-tiering will promote water conservation.

Table 13: User Rate Increase Implementation

Utility	Year 1	Year 2	Year 3	Year 4	Year 5
Water System	5% Increase[1]	No Change	No Change	No Change	No Change
Sewer System	10% Increase[1]	No Change	7% Increase	No Change	3% Increase

[1]*No change to base rate proposed*

Chart 9: Proposed Water & Sewer Rates – Year 1

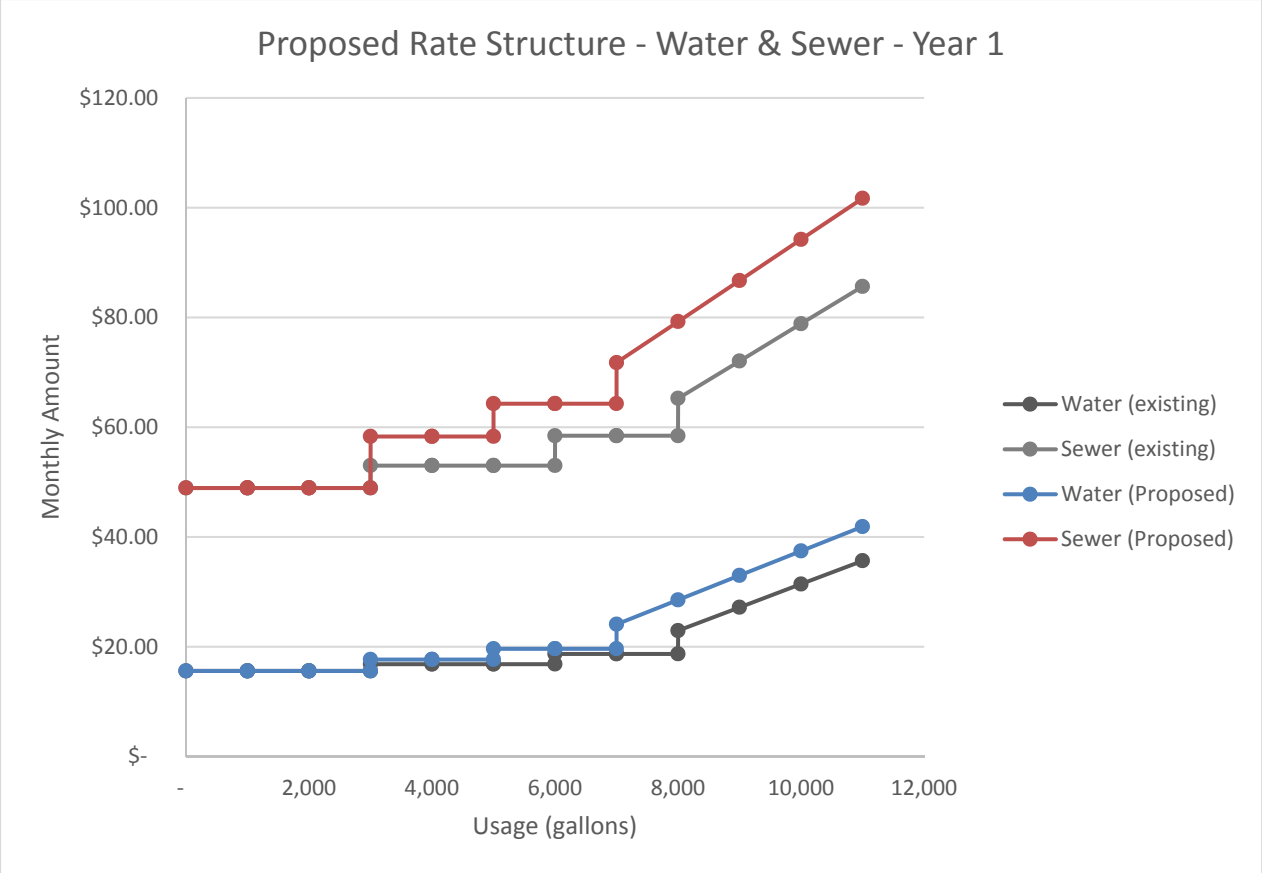


Chart 10: Proposed Water & Sewer Rates – Year 3

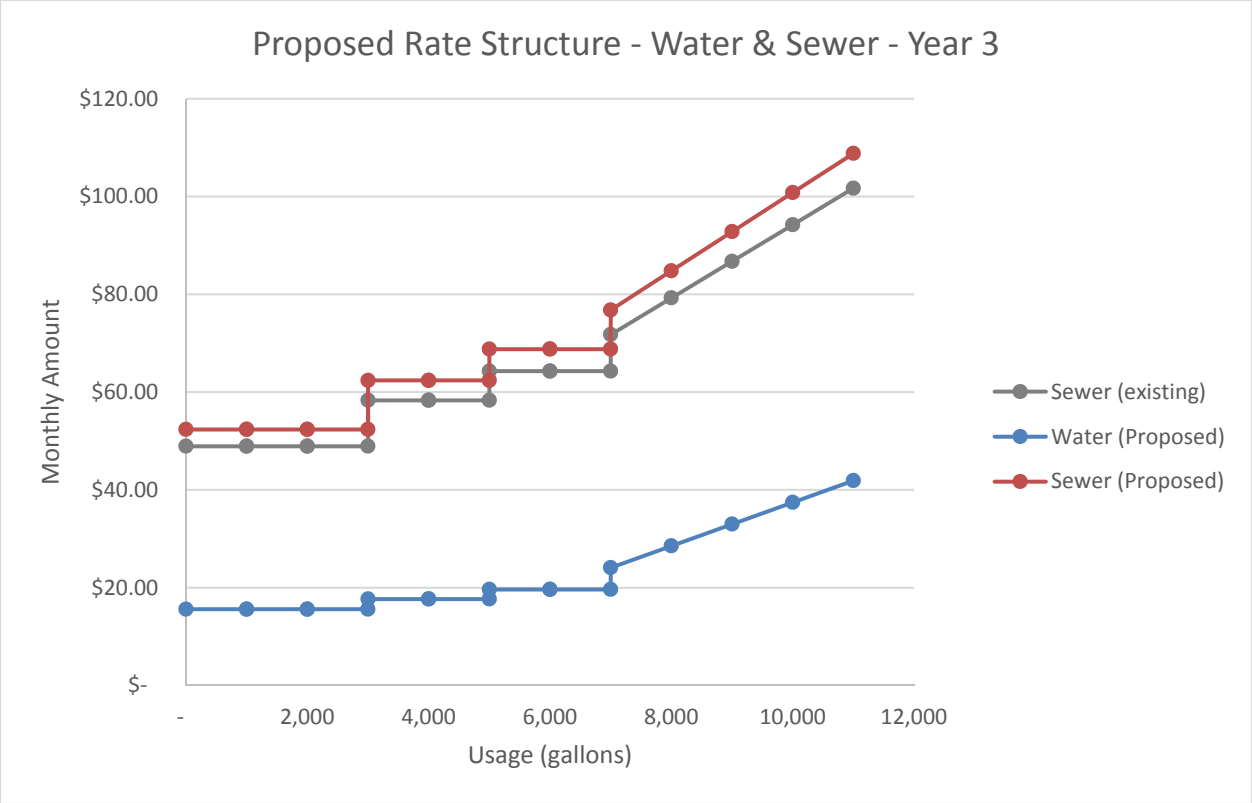
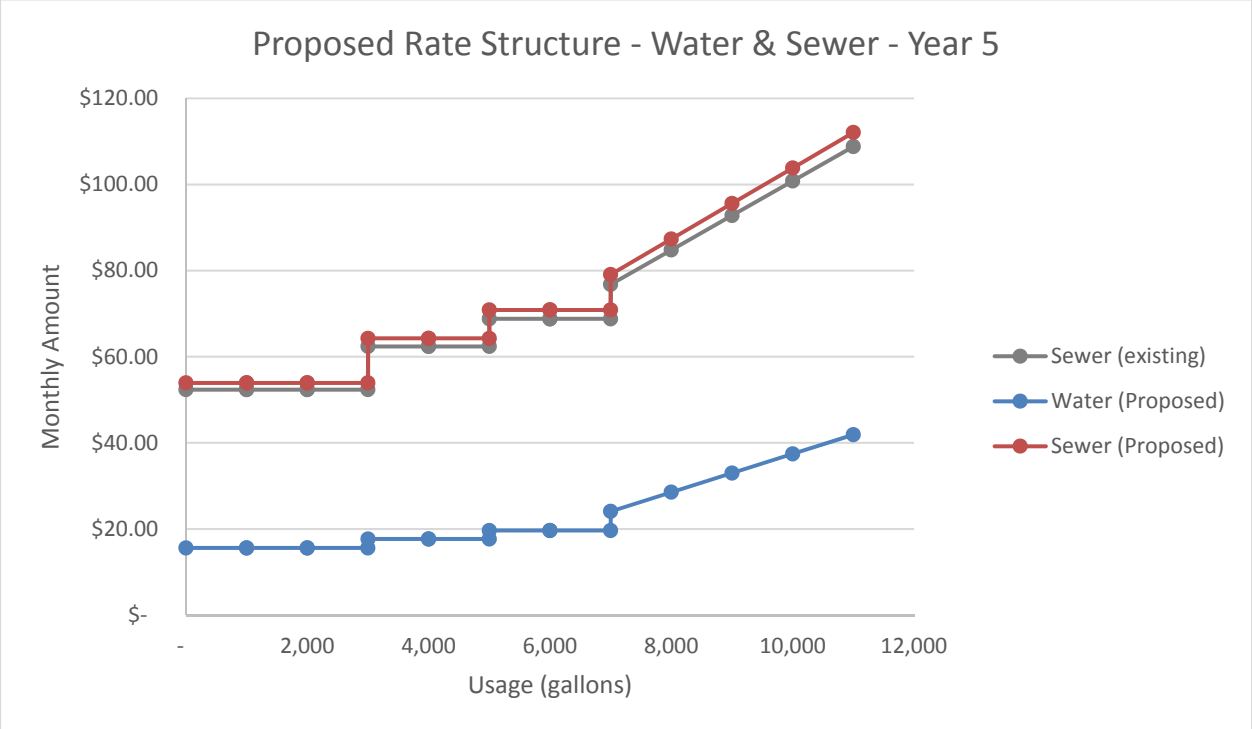


Chart 11: Proposed Water & Sewer Rates – Year 5

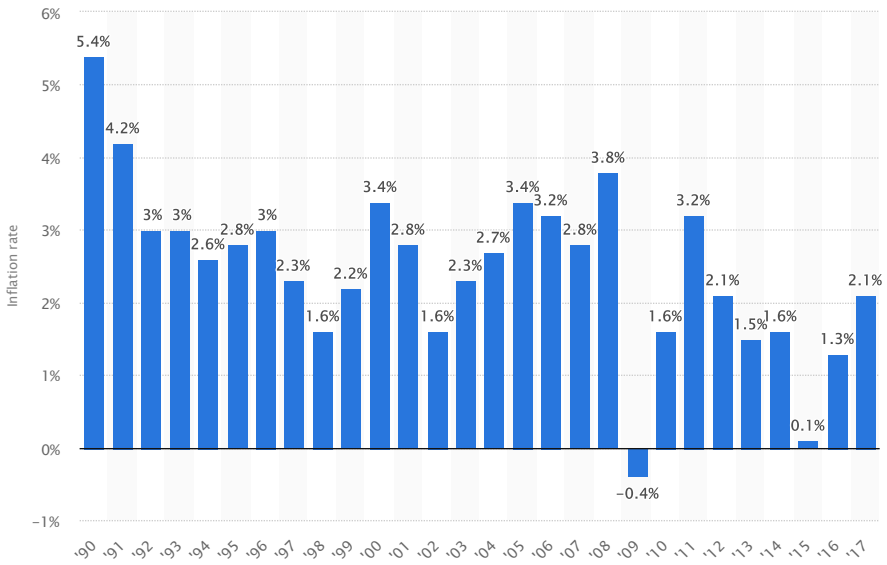


The Town's special connection charges must also be reviewed. The sewer debt obligations cannot be met with the assumption of 30 to 40 new connections each year. Using both the water and sewer special connection charges and having 40 new connections covers the debt obligation.

For capital improvements the Town should reserve approximately $252,616 for the water system each year and $155,000 for the sewer system each year. Funds can be allocated from monthly revenues and/or special connection charges.

APPENDIX A
INFLATION RATE DATA SOURCES

Annual inflation rate in the United States from 1990 to 2017



Data visualized by tableau

About this statistic

Show source

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DESCRIPTION SOURCE

This statistic shows the ur
rate in the U.S. from 1990
represents U.S. city avera
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information.

The monthly inflation rate
be accessed here.

Inflation

Inflation is a fundamental
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simplifies the purchasing
Compared to Norway, wh
was about 7.8 U.S. dollars
have to pay 1.54 U.S. dolla

People need to make sure
standard of living and hav
housing, food, health care

Consumer Price Index Historical Tables for U.S. City Average

CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS (CPI-U)
(not seasonally adjusted)

ALL ITEMS (1982-84=100)	U.S. City Average											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Consumer Price Index												
2008	211.080	211.693	213.528	214.823	216.632	218.815	219.964	219.086	218.783	216.573	212.425	210.228
2009	211.143	212.193	212.709	213.240	213.856	215.693	215.351	215.834	215.969	216.177	216.330	215.949
2010	216.687	216.741	217.631	218.009	218.178	217.965	218.011	218.312	218.439	218.711	218.803	219.179
2011	220.223	221.309	223.467	224.906	225.964	225.722	225.922	226.545	226.889	226.421	226.230	225.672
2012	226.665	227.663	229.392	230.085	229.815	229.478	229.104	230.379	231.407	231.317	230.221	229.601
2013	230.280	232.166	232.773	232.531	232.945	233.504	233.596	233.877	234.149	233.546	233.069	233.049
2014	233.916	234.781	236.293	237.072	237.900	238.343	238.250	237.852	238.031	237.433	236.151	234.812
2015	233.707	234.722	236.119	236.599	237.805	238.638	238.654	238.316	237.945	237.838	237.336	236.525
2016	236.916	237.111	238.132	239.261	240.229	241.018	240.628	240.849	241.428	241.729	241.353	241.432
2017	242.839	243.603	243.801	244.524	244.733	244.955	244.786	245.519	246.819	246.663	246.669	246.524
2018	247.867	248.991	249.554	250.546	251.588							
Percent change from 12 months ago												
2008	4.3	4.0	4.0	3.9	4.2	5.0	5.6	5.4	4.9	3.7	1.1	0.1
2009	0.0	0.2	-0.4	-0.7	-1.3	-1.4	-2.1	-1.5	-1.3	-0.2	1.8	2.7
2010	2.6	2.1	2.3	2.2	2.0	1.1	1.2	1.1	1.1	1.2	1.1	1.5
2011	1.6	2.1	2.7	3.2	3.6	3.6	3.6	3.8	3.9	3.5	3.4	3.0
2012	2.9	2.9	2.7	2.3	1.7	1.7	1.4	1.7	2.0	2.2	1.8	1.7
2013	1.6	2.0	1.5	1.1	1.4	1.8	2.0	1.5	1.2	1.0	1.2	1.5
2014	1.6	1.1	1.5	2.0	2.1	2.1	2.0	1.7	1.7	1.7	1.3	0.8
2015	-0.1	0.0	-0.1	-0.2	0.0	0.1	0.2	0.2	0.0	0.2	0.5	0.7
2016	1.4	1.0	0.9	1.1	1.0	1.0	0.8	1.1	1.5	1.6	1.7	2.1
2017	2.5	2.7	2.4	2.2	1.9	1.6	1.7	1.9	2.2	2.0	2.2	2.1
2018	2.1	2.2	2.4	2.5	2.8							

CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS (CPI-W)
(not seasonally adjusted)

ALL ITEMS (1982-84=100)	U.S. City Average											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Consumer Price Index												
2008	206.744	207.254	209.147	210.698	212.788	215.223	216.304	215.247	214.935	212.182	207.296	204.813
2009	205.700	206.708	207.218	207.925	208.774	210.972	210.526	211.156	211.322	211.549	212.003	211.703
2010	212.568	212.544	213.525	213.958	214.124	213.839	213.898	214.205	214.306	214.623	214.750	215.262
2011	216.400	217.535	220.024	221.743	222.954	222.522	222.686	223.326	223.688	223.043	222.813	222.166
2012	223.216	224.317	226.304	227.012	226.600	226.036	225.568	227.056	228.184	227.974	226.595	225.889
2013	226.520	228.677	229.323	228.949	229.399	230.002	230.084	230.359	230.537	229.735	229.133	229.174
2014	230.040	230.871	232.560	233.443	234.216	234.702	234.525	234.030	234.170	233.229	231.551	229.909
2015	228.294	229.421	231.055	231.520	232.908	233.804	233.806	233.366	232.661	232.373	231.721	230.791
2016	231.061	230.972	232.209	233.438	234.436	235.289	234.771	234.904	235.495	235.732	235.215	235.390
2017	236.854	237.477	237.656	238.432	238.609	238.813	238.617	239.448	240.939	240.573	240.666	240.526
2018	241.919	242.988	243.463	244.607	245.770							
Percent change from 12 months ago												
2008	4.6	4.4	4.3	4.2	4.5	5.6	6.2	5.9	5.4	3.8	0.7	-0.5
2009	-0.5	-0.3	-0.9	-1.3	-1.9	-2.0	-2.7	-1.9	-1.7	-0.3	2.3	3.4
2010	3.3	2.8	3.0	2.9	2.6	1.4	1.6	1.4	1.4	1.5	1.3	1.7
2011	1.8	2.3	3.0	3.6	4.1	4.1	4.1	4.3	4.4	3.9	3.8	3.2
2012	3.1	3.1	2.9	2.4	1.6	1.6	1.3	1.7	2.0	2.2	1.7	1.7

Employment Cost Trends

Source: Bureau of Labor Statistics, Employment Cost Index

Series Id: CIU1020000000000A

Download: xlsx

Year	Qtr1	Qtr2	Qtr3	Qtr4
2008	3.2	3.2	3.1	2.7
2009	2.2	1.8	1.5	1.5
2010	1.5	1.6	1.5	1.6
2011	1.6	1.6	1.6	1.4
2012	1.7	1.7	1.7	1.7
2013	1.6	1.7	1.6	1.9
2014	1.6	1.8	2.1	2.1
2015	2.6	2.1	2.1	2.1
2016	2.0	2.5	2.4	2.3
2017	2.5	2.3	2.5	2.5
2018	2.7			

Series Id: CIU1030000000000A

Download: xlsx

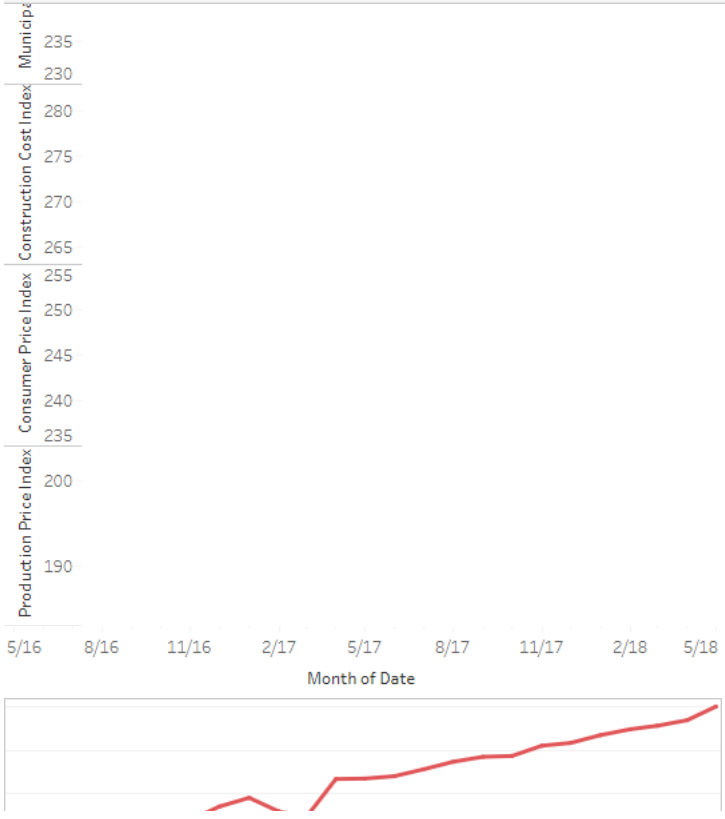
Year	Qtr1	Qtr2	Qtr3	Qtr4
2008	3.5	2.9	2.6	2.2
2009	2.0	1.8	1.5	1.5
2010	2.2	2.5	2.8	2.9
2011	3.0	3.6	3.2	3.2
2012	2.7	2.1	2.4	2.4
2013	2.4	2.2	2.2	2.2
2014	2.1	2.5	2.4	2.6

Municipal Cost Index

cells or graph points for highlighted index numbers. Click second-from-far-right button on bar under table to download cost index data from January 2015 to present. Graph shows two-year view; table shows one-year view.

MCI
CCI
CPI
PPI

5/17	6/17	7/17	8/17	9/17	10/17	11/17	12/17	1/18	2/18	3/18	4/18	5/18
241.68	241.96	242.75	243.63	244.20	244.29	245.48	245.81	246.71	247.39	247.79	248.43	250.02
274.09	274.28	276.25	277.45	277.25	277.06	278.50	278.67	278.91	279.26	280.67	281.07	282.37
243.85	243.79	244.05	245.03	246.37	246.64	247.59	247.96	249.25	249.62	249.46	250.01	250.54
192.90	193.70	193.40	193.70	194.50	194.80	195.90	196.40	197.80	199.30	198.90	200.00	203.20



New on AC&C

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- Stormwater's new look
- Lessons in emergency alerting for active shooter incidents
- Shred-it awarded national contract with U.S. communities
- Local officials across U.S. denied entry into immigrant children detention facility

(Note: the consumer and producer price indexes are published monthly by the U.S. Department of Labor's Bureau of Labor Statistics. The PPI figure used is the number for all commodities. The municipal cost index incorporates the construction cost index, the consumer price index and the production price index.)

The **Municipal Cost Index**, developed exclusively by *American City & County*, is designed to show the effects of inflation on the cost of providing municipal services. State and local government officials rely on *American City & County*'s Municipal Cost Index to stay on top of price trends, monitor price increases for commodities, make informed government contract decisions and plan budgets intelligently. Since 1978, readers have loyally referred to the Municipal Cost Index to determine the cost of inflation and, hence, the rising cost of doing business as a local government.

About the Municipal Cost Index

Learn more about the Municipal Cost Index, including its history and the factors included in its monthly calculation.

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- 2013
- 2012
- 2011
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APPENDIX B
CURRENT TOWN USER RATES

RESOLUTION 2012-03

A RESOLUTION OF THE MAYOR AND COUNCIL OF THE TOWN OF BERLIN, TO ESTABLISH WATER, SEWER AND SANITATION USAGE RATES AND CONNECTION FEES PURSUANT TO THE AUTHORITY SET FORTH IN THE CODE OF THE TOWN OF BERLIN, MARYLAND.

DEFINITIONS

1. **CONNECTION CHARGES** are designed to recoup only the cost of making individual connections from the water or wastewater mains in the street to the property line of an abutting lot and are due and payable at the time a request is made for service. In the case of new construction this fee is due and payable before a "CERTIFICATE OF OCCUPANCY" is issued.

2. **SPECIAL CONNECTION CHARGES** are designed to pay debt service for capital improvements and are due and payable at the time a request is made for service. In the case of new construction this fee is due and payable before a building permit is issued.

3. **EQUIVALENT DWELLING UNIT** – The Equivalent Dwelling Unit (EDU) is the term used to describe the amount of water usage by a typical family during one twenty-four hour period. Maryland Department of the Environment has approved two hundred fifty gallons per day as the amount of water consumption for planning purposes for the Town of Berlin.

4. **READY TO SERVE CHARGE** is a charge based upon the number of EDU(s) applied to all lots or parcels of land (improved or unimproved) located within the Corporate Limits of the Town of Berlin for which water and/or wastewater service is available, but not being used. Worcester County requires the Town to reserve the appropriate number of EDU's for each lot to supply the property with the level of service necessary to meet the need of the intended use of the property as approved by the Town of Berlin Planning and Zoning Commission.

BE IT RESOLVED by the Mayor and Council of the Town of Berlin, Maryland that the following usage rates are hereby established:

1. Pursuant to Section 102-7 of the Code of the Town of Berlin, the Rates, Fees, and Terms and Conditions for water usage are hereby established:

WATER RATES

(a) For metered customers INSIDE of the Town limits the following monthly water rates will apply:

	Billing Effective January 1	**Billing Effective January 1**	**Billing Effective January 1**	**Billing Effective January 1**
Number of gallons	**2010**	**2011**	**2012**	**2013**
0 - 2000	$14.00	$14.98	$15.28	$15.59
3000 - 5000	$15.12	$16.18	$16.50	$16.83
6000 - 8000	$16.80	$17.98	$18.34	$18.70

Any water consumption over 8,000 gallons per month will be billed at the rate of per thousand gallons.

Billing Effective January 1	**Billing Effective January 1**	**Billing Effective January 1**	**Billing Effective January 1**
2010	**2011**	**2012**	**2013**
$3.81	$4.08	$4.16	$4.24

(a) For non-residential metered customers holding an approved allocation agreement exceeding the EDU allocation for the property, the rates will be doubled that represented in the above paragraph as indicated in excess of 8000 gallons per month.

(b) For metered customers being served OUTSIDE of the Town limits the rates will be doubled that represented in the above paragraph.

(c) A "READY TO SERVE FEE" will be assessed based upon the number of EDU(s) assigned, to all non-metered parcels with service available within the Corporate Limits. This fee will be 50% of the current minimum water service rate. Should a customer request the removal of an existing water meter, to qualify for this class of service the customer must pay for the actual cost to remove the meter.

(d) All applications for water service will be in the property owner's name. Billing will be sent to the property owner and the property owner will be responsible for all payments.

(e) Temporary "SHUT OFF" Fee – Requests for shutoffs, except for emergency reasons, must be made on an application form provided by the Town. Non-emergency disconnection requested prior to 4:00 P.M. on a business day will normally be performed the same day. Requests received after 4:00 P.M. will be honored on the next business day. In the case of a requested EMERGENCY DISCONNECT this documentation must be completed by the end of the next working day.

(1) There will be no charge for this service if it is provided during business hours.

(2) There will be a fee in the amount of $50.00 assessed to provide this service during non-business hours.

(f) "TURN-ON" Fee:

(1) There will be no charge for this service if it is provided during business hours.

(2) There will be a fee in the amount of $50.00 assessed to provide this service during non-business hours.

(g) **The Property Owner is responsible for water meter damage to include meter and pit unless otherwise determined by the Director of Water and Wastewater to be normal wear and tear.**

If a water meter replacement is required, a "minimum" replacement charge, which includes all normal parts and labor of Two Hundred Fifty dollars ($250.00) will be assessed.

2. Pursuant to Section 108-8 of the Code of the Town of Berlin, Maryland, the following Fees for water connection charges are hereby established:

(a) The Town will charge all class of customers a "CONNECTION CHARGE" to install the water service. This charge will include all costs necessary to establish the service to include labor and materials.

(b) SINGLE FAMILY DWELLING UNIT – The "SPECIAL CONNECTION CHARGE" to the Municipal Water Distribution System will be three thousand six hundred dollars ($3,600.00) for each equivalent dwelling units (EDU) for a grandfathered parcel which is currently paying a ready to serve fee and four thousand four hundred twenty five dollars ($4,425.00)per equivalent dwelling unit (EDU) for all other parcels.

(c) MULTI-FAMILY DWELLING UNIT - The "SPECIAL CONNECTON CHARGE" to the Municipal Water Distribution System will be three thousand six hundred dollars ($3,600.00) for each equivalent dwelling unit (EDU) for a grandfathered parcel which is currently paying a ready to serve fee and four thousand four hundred twenty five dollars ($4,425.00) per equivalent dwelling unit (EDU) for all other parcels. This category includes condominiums, townhouses and apartments. One water meter will be required for each unit unless otherwise approved. Developers will be responsible for the extension of mains, services and installation of meter assemblies within the property. These costs are exclusive of the CONNECTION CHARGE.

(d) NON DWELLING UNIT – The "SPECIAL CONNECTION CHARGE" to the Municipal Water Distribution System will be determined by the Town of Berlin based upon the anticipated use of the property. The property owner will be assessed three thousand six hundred dollars ($3,600.00) per equivalent dwelling unit (EDU) for a grandfathered parcel which is currently paying a ready to serve fee and four thousand four hundred twenty five dollars ($4,425.00) per equivalent dwelling unit (EDU) for all other parcels. This category includes all business and commercial buildings, shopping centers, schools, restaurants and fast food establishments, Laundromats and all other Non Dwelling buildings. One water meter will be required for each unit unless otherwise approved. Developers will be responsible for the extension of mains, services and installation of meter assemblies within the property. These costs are exclusive of the Connection Fees. The Town will monitor water flow to the Non Dwelling unit for a period of twenty four months. If the flow exceeds the established EDU's (two hundred fifty gallons per day per EDU), assigned to the property the Non Dwelling unit will be assessed additional SPECIAL CONNECTION CHARGES as appropriate.

(e) Although the Town of Berlin as a matter of practice does not extend its water mains beyond the corporate limits, in the event this situation occurs the property owner will be assessed twice the normal connection charge and the special connection charge.

(f) In the event a customer modifies his property to a greater water use then the current service the Town will re-compute the SPECIAL CONNECTION CHARGES stated above with a credit given for the pre-existing condition.

(g) In the event the water meter was removed and sewer service abandoned prior to July 1, 2010, a Special Connection fee will not be assessed in the case of a reconnection, subject to sufficient proof of prior connection by the property owner and approval by the Mayor and Council.

3. Pursuant to Section 86-16 of the Code of the Town of Berlin, the Rates, Fees, and Terms and Conditions for sewer usage are hereby established.

   (a) For metered customers INSIDE of the Town limits the following monthly sewer rates shall apply and be effective as of July 1, 2011:

		Billing Effective July 1	**Billing Effective July 1**	**Billing Effective July 1**	**Billing Effective July 1**
Number of Gallons	**2010**	**2011**	**2012**	**2013**	**2014**
0 - 2000	$ 38.34	$40.26	$42.27	$46.60	$48.93
3000 - 5000	$ 41.54	$43.62	$45.80	$50.49	$53.01
6000 - 8000	$ 45.80	$48.09	$50.49	$55.67	$58.45

Any wastewater usage over 8,000 gallons per month will be billed effective July 1, 2011 at the rate per thousand gallons.

Billing Effective July 1	**Billing Effective July 1**	**Billing Effective July 1**	**Billing Effective July1**
2010	**2011**	**2012**	**2013**	**2014**
$5.33	$5.60	$5.88	$6.48	$6.80

   (b) For metered customers being served OUTSIDE of the Town limits the rates will be doubled that represented in the above paragraph.

   (c) A "READY TO SERVE FEE" will be assessed based upon the number of assigned EDU(s) on all Non-metered parcels within the Corporate limits. This fee will be 50% of the current minimum sewer rate.

   (d) All applications for sewer service will be in the property owner's name. Billing will be sent to the property owner and the property owner will be responsible for all payments.

4. Pursuant to Section 86-17 of the Code of the Town of Berlin, the following Fees for sewer CONNECTION CHARGES are hereby established:

   (a) The Town will charge all class of customers a "CONNECTION CHARGE" to install the wastewater service. This charge will include all costs necessary to establish the service to include labor and materials.

   (b) SINGLE FAMILY DWELLING UNIT – The SPECIAL CONNECTION CHARGE to the Municipal Wastewater Collection System will be eight thousand three hundred thirty eight dollars ($8,338.00) per EDU for a grandfathered parcel which is currently paying a ready to serve fee and twelve-thousand two hundred sixty one dollars ($12,261.00) per EDU for all other parcels.

   (c) MULTI-FAMILY DWELLING UNIT – The SPECIAL CONNECTION CHARGE to the Municipal Wastewater Collection System will be eight thousand three hundred thirty eight dollars ($8,338.00) per EDU for a grandfathered parcel which is currently paying a ready to serve fee and twelve thousand two hundred sixty one dollars ($12,261.00) per EDU for all other parcels. This category includes condominiums, townhouses and apartments. Developers will be responsible for the extension of mains, services and clean outs within the property. These costs are exclusive of the CONNECTION CHARGE.

   (d) NON DWELLING UNIT – The SPECIAL CONNECTION CHARGE to Municipal Wastewater Collection system will be determined by the Town of Berlin based upon the anticipated use of the property. The property owner will be assessed eight thousand three hundred thirty eight dollars ($8,338.00) per equivalent dwelling unit (EDU) for a grandfathered parcel which is currently paying a ready to serve fee and twelve thousand two hundred sixty one dollars ($12,261.00) per equivalent dwelling unit (EDU) for all other parcels. This category includes all business and commercial buildings, shopping centers, schools, restaurants and fast food establishments, laudromats and all other Non Dwelling buildings. Developers will be responsible for the extension of mains, services, and clean outs within the property. These costs are exclusive of the CONNECTION CHARGE. The Town will monitor wastewater flow from the Non Dwelling Unit for a period of twenty four months. If the flow exceeds the established EDU's (two hundred fifty gallons per day per EDU), as assigned to the property, the Non Dwelling unit will be assessed additional SPECIAL CONNECTION CHARGES as applicable.

(e) Although the Town of Berlin as a matter of practice does not extend its Wastewater collection system beyond the corporate limits, in the event this situation occurs, the property owner will be assessed twice the normal SPECIAL CONNECTION CHARGES.

(f) In the event a customer modifies his property to a greater waste-water use then the current service the Town will re-compute the SPECIAL CONNECTION CHARGES as stated above with a credit given for the pre-existing condition.

5. Hydrant Permit: Pursuant to Section 102-10 of the Code of the Town of Berlin, the Rate and Terms of hydrant use is hereby established:

(a) $50.00 permit application Fee, plus $15.00 + $3.81 meter maintenance per 1,000 gallons of usage, plus all terms of the permit applications must be met.

(b) A $200.00 dollar fine, plus all costs of service and/or repair may be imposed upon the property owner for any unauthorized use of and/or tampering with a Town of Berlin water system hydrant, shut-off valve or meter.

6. Swimming Pool: Pursuant to Section 102-9 of the Code of the Town of Berlin, the Rate and term of swimming pools is hereby established:

Swimming pool owners may request the Town of Berlin reduce their sewer system charge by that amount of metered water used to fill their swimming pool. The Town must be notified prior to the filling of the pool using the customers installed water meter. The sewer charge correction will be made at the current Rate of $5.00 per 1,000 gallons, and a $20.00 service fee will normally appear on the next customer's monthly utility bill. This credit is available only once each calendar year unless otherwise approved by the Mayor and Council.

7. Septage Treatment Rates: A "Septage Treatment" Rate of .06 cents per gallon is hereby established effective July 1, 2011. The GENERAL Terms and Conditions of the Town of Berlin's acceptance of "Septage Treatment" are as follows:

(a) All septage haulers must be approved by the Wastewater Superintendent prior to Berlin acceptance of septage for treatment.

(b) All septage haulers must comply to ALL of the Berlin Wastewater Departments DETAILED "Terms and Conditions" for acceptance of septage for treatment.

(c) The Town of Berlin retains the right to terminate acceptance of septage for treatment upon discovery of any violation of its detailed "Terms and Conditions", and for non-payment of its treatment Fee within 60 days of its invoice date.

(d) A Surcharge of $200.00 per shift is established for the acceptance of septage for treatment outside of normal work hours.

(e) A one and one-half percent/month (1.5%) late charge shall be assessed on septage treatment charges more than 30 days in arrears.

8. Pursuant to Berlin Charter Article –X, Section C10-1.F; and Chapter 86-19.B, of the Code of the Town of Berlin, Berlin hereby establishes a "Laboratory Testing Service", as per:

   (a) Establishes a Testing program that meets all State and Federal requirements; and

   (b) Establishes the Senior Laboratory Technician, Laboratory Technician, and Assistant Laboratory Technician job duties & responsibilities, qualifications, and training standards; and

   (c) Establishes a list of Berlin's "Laboratory Testing" services and a Fee Schedule for Berlin's Laboratory Tests; and

   (d) Establishes a set of detailed "Terms and Conditions" for the Administration of the Testing Program; and

   (e) Berlin retains the right to terminate its "Testing Services" upon violation of any provision of its Testing Program.

9. The Berlin Mayor and Council hereby adopt "Design Parameters, Standard Specifications and Details for Installation of Water & Sewer Utilities and roadway Construction Projects", as more specifically set forth in the booklet compiled by the Consulting Engineering Firm of Davis, Bowen and Friedel, dated January 28, 1991, and revised dated January 1999, and as those Standards may be duly amended from time to time.

ADOPTED THIS 26th DAY OF March, 2012 BY THE MAYOR AND COUNCIL OF THE TOWN OF BERLIN, MARYLAND BY THE AFFIRMATIVE VOTE OF 4 TO 0 OPPOSED, WITH 0 ABSTAINING. 1 absent

BY: _____
WILLIAM GEE WILLIAMS, III, MAYOR

BY: _____
ELROY BRITTINGHAM, SR., COUNCIL VICE PRESIDENT

ATTEST: _____
ANTHONY J. CARSON, JR.
TOWN ADMINISTRATOR