

Water and Sewer Rate Study

Prepared for the City of Biloxi

By Brown & Mitchell, Inc.

August 25, 2009

Introduction

The City of Biloxi contracted with Brown & Mitchell, Inc. (BMI) to prepare a water and sewer model for the purposes of making long term infrastructure assessments. As part of this project, BMI was tasked with participating in a review of the City's water and sewer rates. Over the course of several months, BMI participated with various members of the City's administration for the purpose of assessing the current rate structure and proposing rate adjustments that would allow the City to provide water and sewer services.

The City's 12,000 customers use an average of 167,435,000 gallons of water per month. Of those users, 9,281 customers, or approximately 77%, use 8,000 gallons or less, making up approximately 19% of the total gallons used. 149 customers, or approximately 1%, use 100,000 gallons or more, making up approximately 52% of the total gallons used.

The City's water and sewer budget is made up of operations and maintenance costs, Harrison County Utility Authority operating expenses and debt service. An analysis of the water and sewer costs per 1,000 gallons prepared by the City of Biloxi show the following:

Cost per 1,000 Gallons	Projected FY 08/09	Projected FY 09/10	Projected FY 10/11	Projected FY 11/12	Projected FY 12/13
Water	\$1.5858	\$1.6090	\$1.6046	\$1.4229	\$1.3784
Sewer	\$5.3444	\$5.0836	\$5.1240	\$5.4921	\$5.1826

Expenditures during this same time are estimated as follows:

Projected FY 08/09	Projected FY 09/10	Projected FY 10/11	Projected FY 11/12	Projected FY 12/13
\$12,638,298	\$12,671,651	\$13,187,834	\$13,907,495	\$13,676,034

Current Rate Structure

Currently, the City's rate structure is as follows:

	Water Usage (1000 Gallons)		
User	0 - 3	4 - 8	> 8
Senior	\$0.90	\$0.90	\$1.30
Commercial/ Residential	\$4.10*	\$1.20	\$1.30
	Sewer Usage (1000 Gallons)		
User	0 - 3	4 - 8	> 8
Senior	\$1.32	\$1.32	\$1.97
Commercial/ Residential	\$7.95*	\$2.65	\$2.76

* Flat rate for a minimum 3,000 gallons usage.

Based on this rate structure, the water and sewer fund for the City is projected to have a \$5,058,172 loss. This is a recovery rate of approximately 61%.

The primary reason for this overall fund shortage is the debt payments due to the Harrison County Utility Authority, which have been differed over the past two years. Currently, this payment is \$6.6M. In order to make this fund solvent, several different rate options were considered.

Alternative Rate Structures

Option #1: 65% Rate Increase

This rate structure would raise current rates by 65% for both water and sewer as follows:

Water Usage (1000 Gallons)			
User	0 - 3	4 - 8	> 8
Senior	\$1.49	\$1.49	\$2.15
Commercial/ Residential	\$6.78*	\$1.98	\$2.15
Sewer Usage (1000 Gallons)			
User	0 - 3	4 - 8	> 8
Senior	\$2.18	\$2.18	\$3.25
Commercial/ Residential	\$13.11*	\$4.37	\$4.55

* Flat rate for a minimum 3,000 gallons usage.

Based on this rate structure, the water and sewer fund for the City is projected to have a \$72,611 net gain. This is a recovery rate of approximately 101%.

Option #2: Flat Rate Increase of \$1.23 for water and sewer

This rate structure would raise current rates by \$1.23 for both water and sewer as follows:

	Water Usage (1000 Gallons)		
User	0 - 3	4 - 8	> 8
Senior	\$2.13	\$2.53	\$2.53
Commercial/ Residential	\$7.80*	\$2.43	\$2.53
	Sewer Usage (1000 Gallons)		
User	0 - 3	4 - 8	> 8
Senior	\$2.55	\$2.55	\$3.20
Commercial/ Residential	\$11.64*	\$3.88	\$3.99

* Flat rate for a minimum 3,000 gallons usage.

Based on this rate structure, the water and sewer fund for the City is projected to have an \$11,329 net loss. This is a recovery rate of approximately 100%.

Option #3: Graduated Increase of HARCUA Surcharge (\$0.25 Step)

This rate structure would add an additional surcharge in order to offset debt service and other expenses associated with wastewater treatment. This surcharge is graduated to increase across the various usage categories, with no charge for those using 8,000 gallons or less.

	Water Usage (1000 Gallons)					
User	0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
Senior	\$0.90	\$0.90	\$1.30	\$1.30	\$1.30	\$1.30
Commercial/ Residential	\$4.10*	\$1.20	\$1.30	\$1.30	\$1.30	\$1.30
	Sewer Usage (1000 Gallons)					
User	0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
Senior	\$1.32	\$1.32	\$1.97	\$1.97	\$1.97	\$1.97
Commercial/ Residential	\$7.95*	\$2.65	\$2.76	\$2.76	\$2.76	\$2.76

* Flat rate for a minimum 3,000 gallons usage.

HARCUA (1000 Gallons)					
0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
\$0.00	\$0.00	\$3.27	\$3.52	\$3.77	\$4.02

Based on this rate structure, the water and sewer fund for the City is projected to have a \$3,040 net gain. This is a recovery rate of approximately 100%.

Option #4: Graduated Increase of HARCUA Surcharge (\$0.50 Step)

This rate structure would add an additional surcharge in order to offset debt service and other expenses associated with wastewater treatment. This surcharge is graduated to increase across the various usage categories, with no charge for those using 8,000 gallons or less.

Water Usage (1000 Gallons)						
User	0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
Senior	\$0.90	\$0.90	\$1.30	\$1.30	\$1.30	\$1.30
Commercial/ Residential	\$4.10*	\$1.20	\$1.30	\$1.30	\$1.30	\$1.30
Sewer Usage (1000 Gallons)						
User	0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
Senior	\$1.32	\$1.32	\$1.97	\$1.97	\$1.97	\$1.97
Commercial/ Residential	\$7.95*	\$2.65	\$2.76	\$2.76	\$2.76	\$2.76

* Flat rate for a minimum 3,000 gallons usage.

HARCUA (1000 Gallons)					
0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
\$0.00	\$0.00	\$2.68	\$3.18	\$3.68	\$4.18

Based on this rate structure, the water and sewer fund for the City is projected to have a \$5,928 net gain. This is a recovery rate of approximately 100%.

Preferred Option: HARCUA Surcharge with Flat Rate Increase of \$0.20

This rate structure would add an additional surcharge in order to offset debt service and other expenses associated with wastewater treatment, along with a flat rate increase in order to avoid yearly rate increases. An additional \$2.58 per 1,000 gallons of sewer would be assessed as debt service.

Water Usage (1000 Gallons)						
User	0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
Senior	\$1.10	\$1.10	\$1.50	\$1.50	\$1.50	\$1.50
Commercial/ Residential	\$4.71*	\$1.40	\$1.50	\$1.50	\$1.50	\$1.50
Sewer Usage (1000 Gallons)						
User	0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
Senior	\$1.52	\$1.52	\$2.17	\$2.17	\$2.17	\$2.17
Commercial/ Residential	\$8.55*	\$2.85	\$2.96	\$2.96	\$2.96	\$2.96

* Flat rate for a minimum 3,000 gallons usage.

HARCUA (1000 Gallons)					
0 - 3	4 - 8	9 - 20	21 - 40	41 - 100	> 100
\$2.58	\$2.58	\$2.58	\$2.58	\$2.58	\$2.58

Based on this rate structure, the water and sewer fund for the City is projected to have an \$826,871 net gain. This is a recovery rate of approximately 106%.

The following table shows the projected revenue and expenses based on the rates in the preferred option, a 3% yearly increase in City of Biloxi expenses and projected HARCUA total operating expenses.

	Projected FY 09/10	Projected FY 10/11	Projected FY 11/12	Projected FY 12/13
City of Biloxi Revenue	\$8,712,351.78	\$8,712,351.78	\$8,712,351.78	\$8,712,351.78
City of Biloxi Expenses	\$6,532,277.51	\$6,728,245.84	\$6,930,093.21	\$7,137,996.01
Gross Revenue	\$2,180,074.27	\$1,984,105.95	\$1,782,258.57	\$1,574,355.78

HARCUA Revenue	\$5,065,357.49	\$5,065,357.49	\$5,065,357.49	\$5,065,357.49
HARCUA Expenses	\$6,221,278.00	\$6,420,336.00	\$7,682,521.00	\$7,354,678.00
Gross Revenue	\$(1,155,921.00)	\$(1,354,979.00)	\$(2,617,164.00)	\$(2,289,321.00)
Total Expenses	\$12,753,555.51	\$13,148,581.84	\$14,612,614.21	\$14,492,674.01
Net Revenue/Loss	\$1,024,153.27	\$629,126.95	\$(834,905.43)	\$(714,965.22)

This rate structure would have a positive net gain in the first few years, building up a reserve, with a net loss in the following years, with an overall net gain of \$103,409.57.

Water & Sewer Rate Comparison
Current Rates

D'Iberville	Usage		
	3,000 Gal.	8,000 Gal.	15,000 Gal.
<i>Water</i>	\$ 25.60	\$ 37.06	\$ 53.55
<i>Sewer</i>	\$ 33.84	\$ 60.14	\$ 96.96
Total	\$ 59.44	\$ 97.20	\$ 150.51

Gulfport*	3,000 Gal.	8,000 Gal.	15,000 Gal.
<i>Water</i>	\$ 6.06	\$ 20.26	\$ 40.14
<i>Sewer</i>	\$ 11.19	\$ 31.74	\$ 60.51
Total	\$ 17.25	\$ 52.00	\$ 100.65

Biloxi**	3,000 Gal.	8,000 Gal.	15,000 Gal.
<i>Water</i>	\$ 4.10	\$ 9.60	\$ 18.70
<i>Sewer</i>	\$ 7.95	\$ 21.20	\$ 40.52
Total	\$ 12.05	\$ 30.80	\$ 59.22

Revised Rates based on
Preferred Option

D'Iberville	Usage		
	3,000 Gal.	8,000 Gal.	15,000 Gal.
<i>Water</i>	\$ 25.60	\$ 37.06	\$ 53.55
<i>Sewer</i>	\$ 33.84	\$ 60.14	\$ 96.96
Total	\$ 59.44	\$ 97.20	\$ 150.51

Gulfport*	3,000 Gal.	8,000 Gal.	15,000 Gal.
<i>Water</i>	\$ 6.06	\$ 20.26	\$ 40.14
<i>Sewer</i>	\$ 11.19	\$ 31.74	\$ 60.51
Total	\$ 17.25	\$ 52.00	\$ 100.65

Biloxi**	3,000 Gal.	8,000 Gal.	15,000 Gal.
<i>Water</i>	\$ 4.71	\$ 11.20	\$ 21.70
<i>Sewer</i>	\$ 11.13	\$ 43.44	\$ 82.22
Total	\$ 15.84	\$ 54.64	\$ 103.92

*Assume tap size of 5/8" or 3/4"

**Residential/Commercial Rates

*Does not include proposed \$10.47 average rate increase.

The following table shows the change in water and sewer charges for various residential and commercial customers based on the preferred option:

Usage	Current Rates			Increased Rates			Diff.
	Water	Sewer	Total	Water	Sewer	Total	
1,000 Gal.	\$4.10	\$7.95	\$12.05	\$4.71	\$11.13	\$15.84	\$3.79
2,000 Gal.	\$4.10	\$7.95	\$12.05	\$4.71	\$13.71	\$18.42	\$6.37
3,000 Gal.	\$4.10	\$7.95	\$12.05	\$4.71	\$16.29	\$21.00	\$8.95
4,000 Gal.	\$4.80	\$10.60	\$15.40	\$5.60	\$21.72	\$27.32	\$11.92
5,000 Gal.	\$6.00	\$13.25	\$19.25	\$7.00	\$27.15	\$34.15	\$14.90
6,000 Gal.	\$7.20	\$15.90	\$23.10	\$8.40	\$32.58	\$40.98	\$17.88
7,000 Gal.	\$8.40	\$18.55	\$26.95	\$9.80	\$38.01	\$47.81	\$20.86
8,000 Gal.	\$9.60	\$21.20	\$30.80	\$11.20	\$43.44	\$54.64	\$23.84
20,000 Gal.	\$25.20	\$54.32	\$79.52	\$29.20	\$109.92	\$139.12	\$59.60
50,000 Gal.	\$64.20	\$137.12	\$201.32	\$74.20	\$276.12	\$350.32	\$149.00
100,000 Gal.	\$129.20	\$275.12	\$404.32	\$149.20	\$553.12	\$702.32	\$298.00

The following table shows the change in water and sewer charges for various senior customers based on the preferred option:

Usage	Current Rates			Increased Rates			Diff.
	Water	Sewer	Total	Water	Sewer	Total	
1,000 Gal.	\$0.90	\$1.32	\$2.22	\$1.10	\$4.10	\$5.20	\$2.98
2,000 Gal.	\$1.80	\$2.64	\$4.44	\$2.20	\$8.20	\$10.40	\$5.96
3,000 Gal.	\$2.70	\$3.96	\$6.66	\$3.30	\$12.30	\$15.60	\$8.94
4,000 Gal.	\$3.60	\$5.28	\$8.88	\$4.40	\$16.40	\$20.80	\$11.92
5,000 Gal.	\$4.50	\$6.60	\$11.10	\$5.50	\$20.50	\$26.00	\$14.90
6,000 Gal.	\$5.40	\$7.92	\$13.32	\$6.60	\$24.60	\$31.20	\$17.88
7,000 Gal.	\$6.30	\$9.24	\$15.54	\$7.70	\$28.70	\$36.40	\$20.86
8,000 Gal.	\$7.20	\$10.56	\$17.76	\$8.80	\$32.80	\$41.60	\$23.84
20,000 Gal.	\$26.00	\$39.40	\$65.40	\$30.00	\$95.00	\$125.00	\$59.60
50,000 Gal.	\$65.00	\$98.50	\$163.50	\$75.00	\$237.50	\$312.50	\$149.00
100,000 Gal.	\$130.00	\$197.00	\$327.00	\$150.00	\$475.00	\$625.00	\$298.00

83% of seniors and 77% of residential or commercial customers use 8,000 gallons of water or less per month, and would see a total increase of \$23.84 or less per month.

The following table shows the effect of each option on typical businesses in Biloxi.

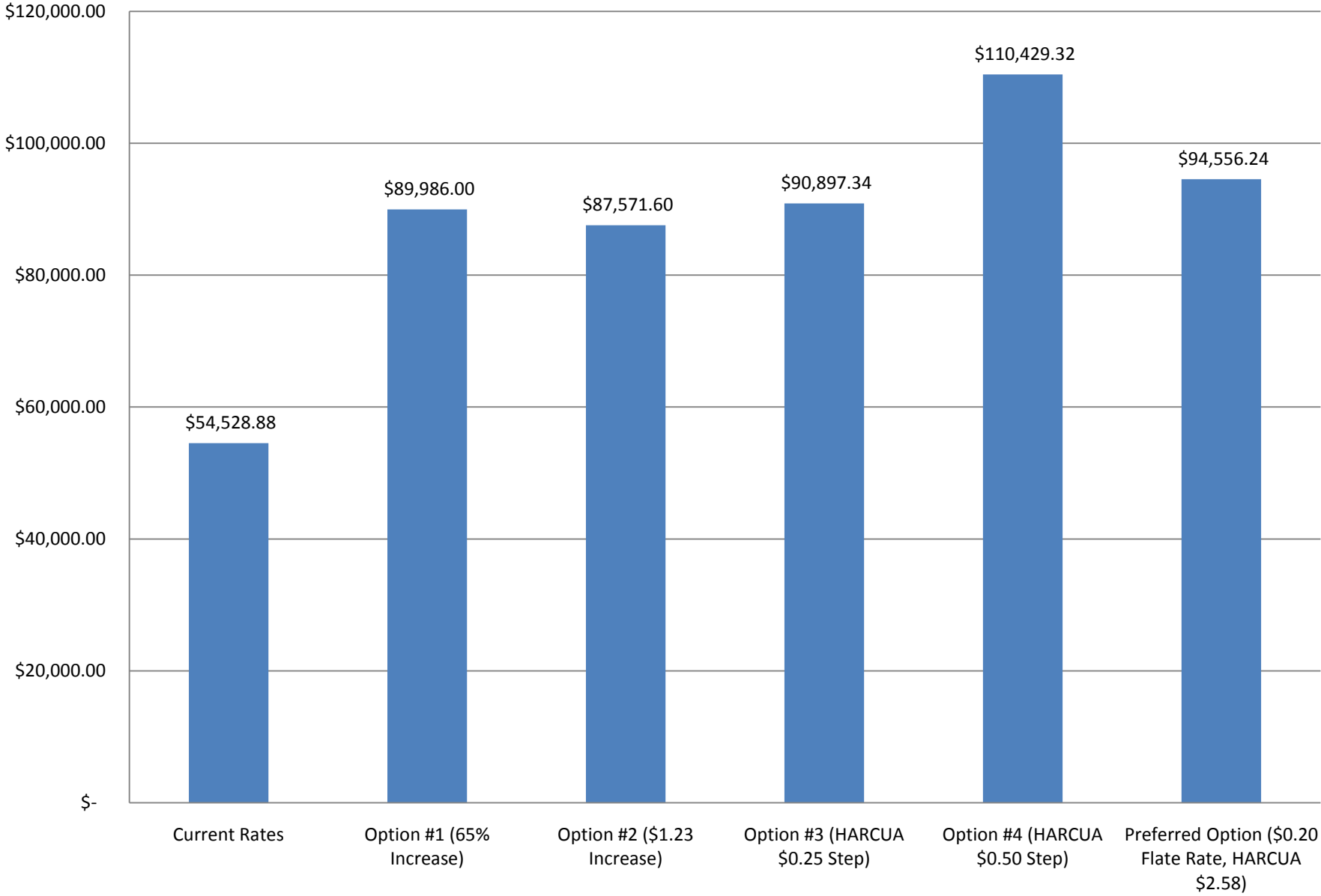
Water Bill

Customer	Avg. Bill (1,000 Gal.)	Current Rates	Option #1 (65% Increase)	Option #2 (\$1.23 Increase)	Option #3 (HARCUA Surcharge - \$0.25)	Option #4 (HARCUA Surcharge - \$0.50)	Preferred Option
Casino A (8" Main)	9,158	\$ 11,904.60	\$ 7,783.74	\$ 11,264.34	\$ 0	\$ 0	\$ 1,831.60
Casino A (10" Main)	4,260	\$ 5,537.20	\$ 3,620.44	\$ 5,239.80	\$ 0	\$ 0	\$ 852.00
Casino A (Fire Line)	14	\$ 17.40	\$ 11.34	\$ 17.22	\$ 0	\$ 0	\$ 2.80
Casino B (2" Main)	104	\$ 134.40	\$ 87.84	\$ 127.92	\$ 0	\$ 0	\$ 20.80
Casino B (3" Main)	66	\$ 85.00	\$ 55.54	\$ 81.18	\$ 0	\$ 0	\$ 13.20
Casino B (6" Main)	1,258	\$ 1,634.60	\$ 1,068.74	\$ 1,547.34	\$ 0	\$ 0	\$ 251.60
Casino B (6" Main)	1,439	\$ 1,869.90	\$ 1,222.59	\$ 1,769.97	\$ 0	\$ 0	\$ 287.80
Casino B (8" Main)	207	\$ 268.30	\$ 175.39	\$ 254.61	\$ 0	\$ 0	\$ 41.40
Casino B (Marina)	53	\$ 68.10	\$ 44.49	\$ 65.19	\$ 0	\$ 0	\$ 10.60
Casino B (Pool Bar)	28	\$ 35.60	\$ 23.24	\$ 34.44	\$ 0	\$ 0	\$ 5.60
Casino B (Sprinkler)	118	\$ 152.60	\$ 99.74	\$ 145.14	\$ 0	\$ 0	\$ 23.60
Casino B (Sprinkler)	387	\$ 502.30	\$ 328.39	\$ 476.01	\$ 0	\$ 0	\$ 77.40
Gas Station	21	\$ 26.50	\$ 17.29	\$ 25.83	\$ 0	\$ 0	\$ 4.20
Hotel (6" Main)	219	\$ 283.90	\$ 185.59	\$ 269.37	\$ 0	\$ 0	\$ 43.80
Hotel (Sprinkler)	17	\$ 21.30	\$ 13.89	\$ 20.91	\$ 0	\$ 0	\$ 3.40
Restaurant	105	\$ 135.70	\$ 88.69	\$ 129.15	\$ 0	\$ 0	\$ 21.00

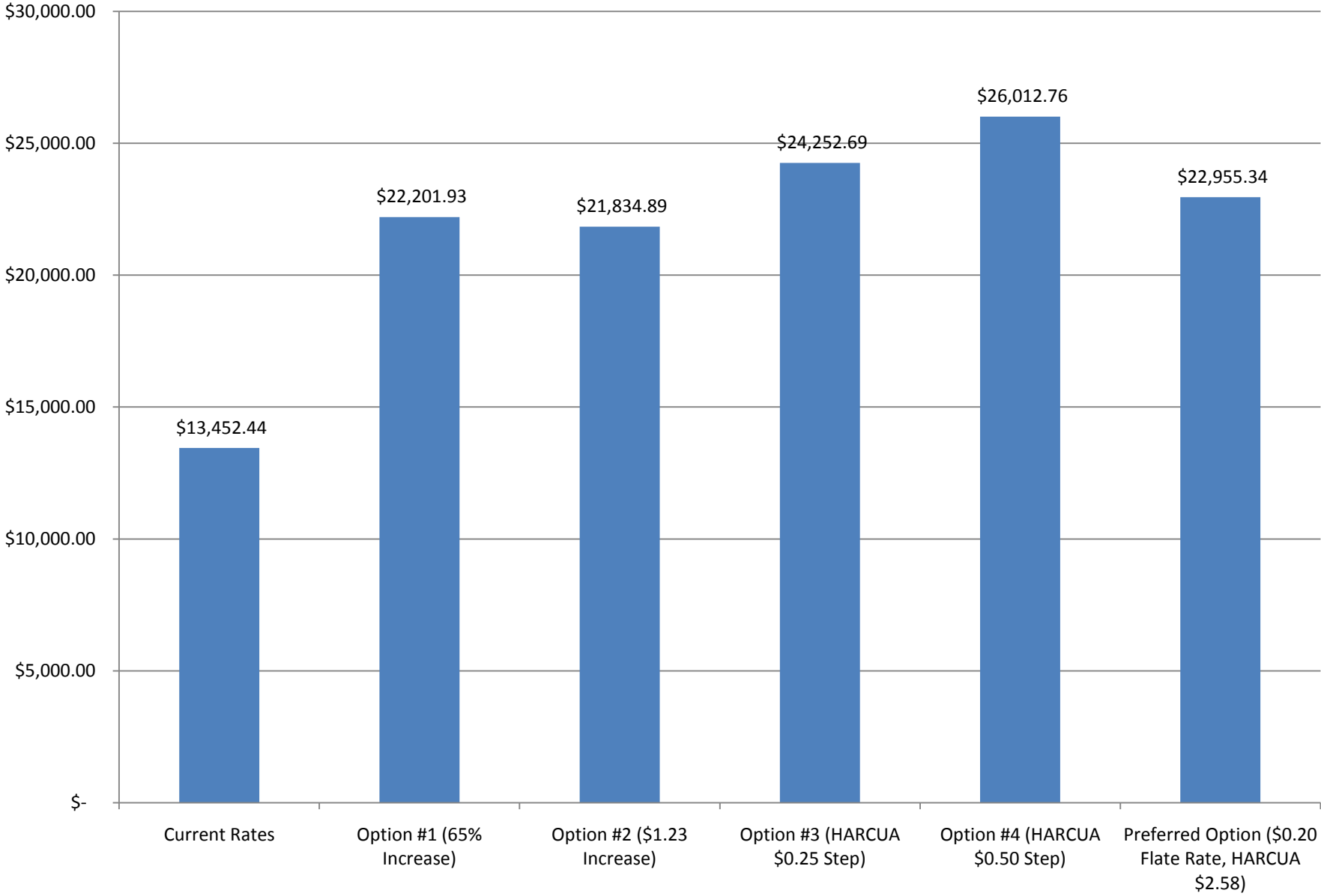
Sewer Bill

Customer	Avg. Bill (1,000 Gal.)	Current Rates	Option #1 (65% Increase)	Option #2 (\$1.23 Increase)	Option #3 (HARCUA Surcharge - \$0.25)	Option #4 (HARCUA Surcharge - \$0.50)	Preferred Option
Casino A (8" Main)	9,158	\$ 25,275.20	\$ 16,392.26	\$ 11,264.34	\$ 36,749.00	\$ 38,179.00	\$ 25,459.24
Casino A (10" Main)	4,260	\$ 11,756.72	\$ 7,624.84	\$ 5,239.80	\$ 17,059.04	\$ 17,705.36	\$ 11,842.80
Casino A (Fire Line)	14	\$ 37.76	\$ 24.50	\$ 17.22	\$ 19.62	\$ 16.08	\$ 38.92
Casino B (2" Main)	104	\$ 286.16	\$ 185.60	\$ 127.92	\$ 351.92	\$ 333.28	\$ 289.12
Casino B (3" Main)	66	\$ 181.28	\$ 117.58	\$ 81.18	\$ 207.66	\$ 191.44	\$ 183.48
Casino B (6" Main)	1,258	\$ 3,471.20	\$ 2,251.26	\$ 1,547.34	\$ 4,991.00	\$ 5,157.00	\$ 3,497.24
Casino B (6" Main)	1,439	\$ 3,970.76	\$ 2,575.25	\$ 1,769.97	\$ 5,718.62	\$ 5,913.58	\$ 4,000.42
Casino B (8" Main)	207	\$ 570.44	\$ 369.97	\$ 254.61	\$ 765.98	\$ 763.82	\$ 575.46
Casino B (Marina)	53	\$ 145.40	\$ 94.31	\$ 65.19	\$ 158.65	\$ 143.60	\$ 147.34
Casino B (Pool Bar)	28	\$ 76.40	\$ 49.56	\$ 34.44	\$ 67.40	\$ 57.60	\$ 77.84
Casino B (Sprinkler)	118	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Casino B (Sprinkler)	387	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Gas Station	21	\$ 57.08	\$ 37.03	\$ 25.83	\$ 42.76	\$ 35.34	\$ 58.38
Hotel (6" Main)	219	\$ 603.56	\$ 391.45	\$ 269.37	\$ 814.22	\$ 813.98	\$ 608.82
Hotel (Sprinkler)	17	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Restaurant	105	\$ 288.92	\$ 187.39	\$ 129.15	\$ 355.94	\$ 337.46	\$ 291.90

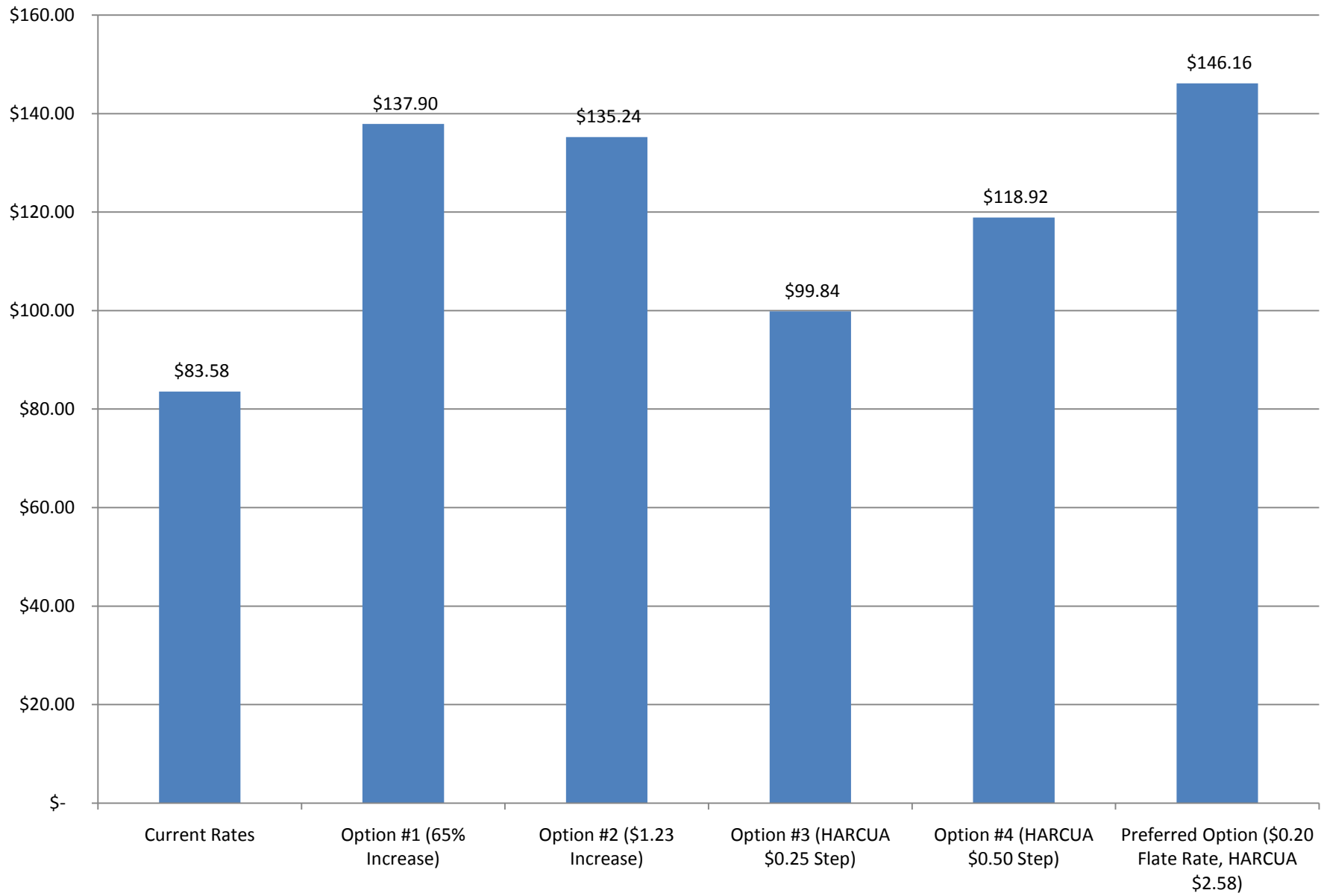
Casino A



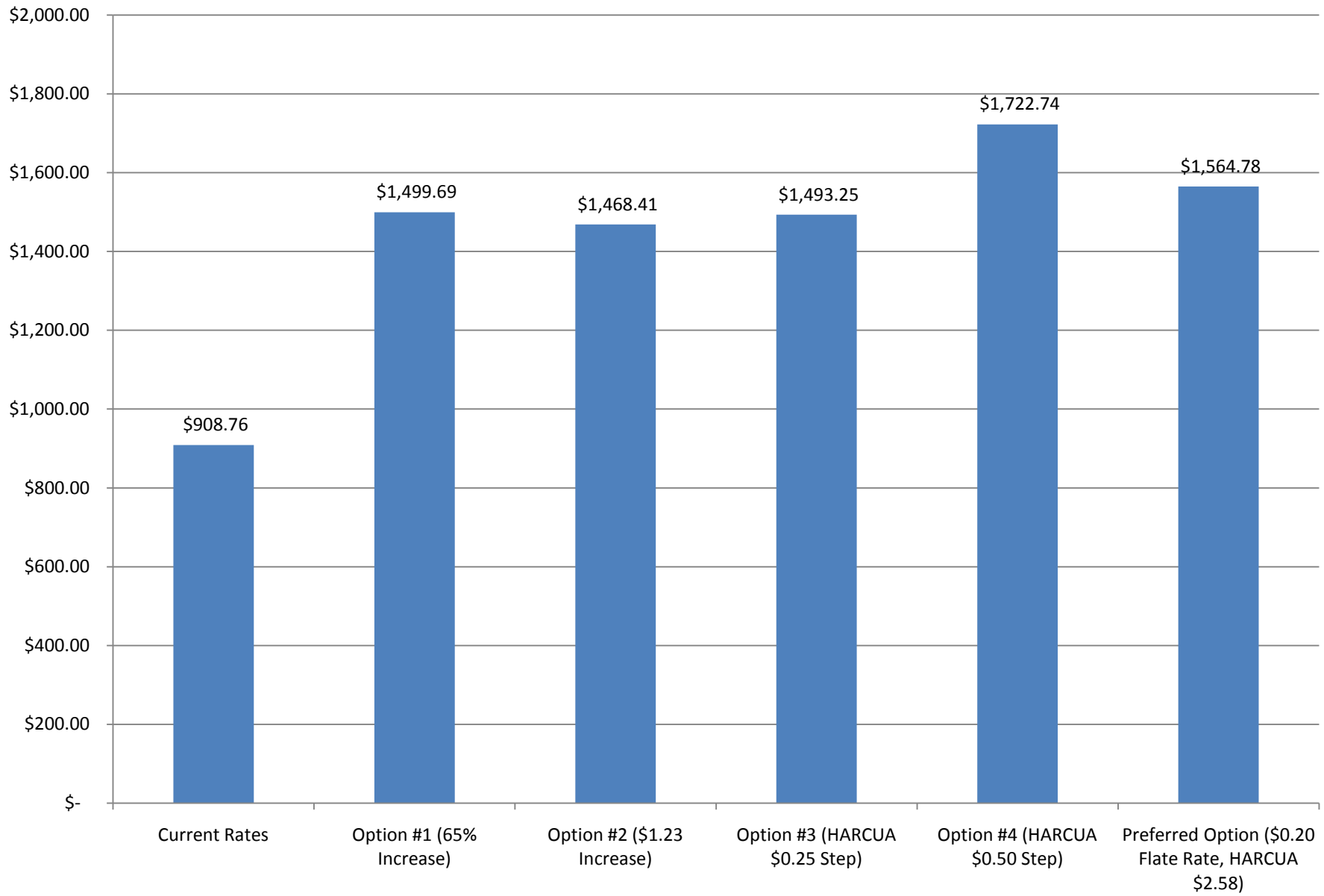
Casino B



Gas Station



Hotel



Restaurant

