

# CITY OF NEW BERN

## Summary Water & Sewer Rate Structures for Fiscal Year 11-12

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## 1. Overview

On August 24, 2010 the City of New Bern recruited the consulting services of Swartz Engineering Economics, Inc. for the completion of a comprehensive water and sewer rate study. The intent of the study was to assess and evaluate the City of New Bern's existing water and sewer rates along with the existing impact fee schedule and provide recommendations. One of the key recommendations of the study was to eliminate the City's current policy of charging each water and sewer customer a minimum of 3,000 gallons of consumption per month. This recommendation was intended better align the City with current industry trends in providing more equity within utility rate structures.

In an effort to initiate this recommendation, the City developed a comprehensive consumption and revenue model that demonstrates the effects of eliminating the existing minimum consumption charge. The model takes into account consumption factors based on historical trends in water and sewer use by billing class and meter size. After careful calibration, the results of the model were determined to be acceptably accurate for projecting revenue changes resulting from adjustments to the existing rate structures.

Utilizing the projection model the City has developed water and sewer rate structures for FY 11-12 that do not include minimum consumption charges. The following report provides a brief summarization of the basic customer service revenue projections for FY 11-12 under the parameters of the existing rate structure as compared to the amended rate structure for FY 11-12. This comparison illustrates the "revenue neutral" approach that was taken in developing the FY 11-12 rates. In addition, the last section of the report is a comparison of water and sewer charges for the average City of New Bern customer under both rate structure scenarios.

## 2. Current Water Rate Structure:

The City's current water rate structure is a demand plus commodity structure. Each customer is charged monthly for a readiness-to-serve rate (demand component) based on the size of their water meter and for their monthly water consumption (commodity component). The commodity component is billed at a unit price per thousand gallons of consumption and the City currently charges a minimum of 3,000 gallons of consumption to each customer monthly. Under this current structure all customers who consume less than 3,000 gallons of water per month are charged the same rate by meter class.

**Table 2.1 - Water Readiness-to-Serve Rates**

Meter Size	Current Rates			
	First Meter		Additional Meter	
	In-City	Out-of-City	In-City	Out-of-City
5/8" & 3/4"	\$23.00	\$46.00	\$31.05	\$62.10
1" & 1 1/4"	\$57.50	\$115.00	\$77.63	\$155.26
1 1/2"	\$115.00	\$230.00	\$155.25	\$310.50
2"	\$184.00	\$368.00	\$248.40	\$496.80
3"	\$379.50	\$759.00	\$512.33	\$1,024.66
4"	\$627.90	\$1,255.80	\$847.67	\$1,695.34
6"	\$1,285.70	\$2,571.40	\$1,735.70	\$3,471.40

**Table 2.2 - Water Consumption Rates**

Gallons	Current Rates			
	First Meter		Additional Meter	
	In-City	Out-of-City	In-City	Out-of-City
<10,000	\$2.80	\$5.60	\$3.78	\$7.56
>10,000	\$3.78	\$7.56	\$5.10	\$10.21

By utilizing a revenue projection model under the parameters of the current rate structure the following are the projected water use revenues for FY 11-12:

- Readiness-to-Serve - \$ 7,400,700
- Consumption - \$ 3,146,900
- **Total** **\$10,547,600**

### 3. FY 11-12 Water Rate Structure:

The amended water rate structure for FY 11-12 is still a demand plus commodity structure. The main difference will be elimination of the 3,000 gallon minimum charge to the commodity component of the monthly rate. This adjustment will make the City's water rate structure more equitable for all users. In addition, for FY 11-12 the additional-meter demand and commodity surcharges will be eliminated in an effort enhance the functionality of this rate class.

**Table 3.1 - Water Readiness-to-Serve Rates**

Meter Size	FY 11-12 Rates (no change)			
	First Meter		Additional Meter	
	In-City	Out-of-City	In-City	Out-of-City
5/8" & 3/4"	\$23.00	\$46.00	\$23.00	\$46.00
1" & 1 1/4"	\$57.50	\$115.00	\$57.50	\$115.00
1 1/2"	\$115.00	\$230.00	\$115.00	\$230.00
2"	\$184.00	\$368.00	\$184.00	\$368.00
3"	\$379.50	\$759.00	\$379.50	\$759.00
4"	\$627.90	\$1,255.80	\$627.90	\$1,255.80
6"	\$1,285.70	\$2,571.40	\$1,285.70	\$1,285.70

**Table 3.2 - Water Consumption Rates**

Gallons	FY 11-12 Rates			
	First Meter		Additional Meter	
	In-City	Out-of-City	In-City	Out-of-City
<10,000 gallons	\$3.22	\$6.44	\$3.22	\$6.44
>10,000 gallons	\$4.35	\$8.69	\$4.35	\$8.69

By utilizing a revenue projection model under the parameters of the FY 11-12 rate structure the following are the projected water use revenues for FY 11-12:

- Readiness-to-Serve - \$ 5,601,300
- Consumption - \$ 4,946,300
- **Total** **\$10,547,600**

#### 4. Current Sewer Rate Structure:

The City's current sewer rate structure is also a demand plus commodity structure. Each customer is charged monthly for a readiness-to-serve rate (demand component) based on the size of their water meter and for their monthly sanitary sewer usage (commodity component). Monthly sanitary sewer usage is based on the customer's monthly water consumption. As with the water rates, the City currently charges a minimum of 3,000 gallons of usage to each customer monthly. Under this current structure all customers who use less than 3,000 gallons of water per month are charged the same rate by meter class.

**Table 4.1 - Sewer Readiness-to-Serve Rates**

Meter Size	Current Rates	
	In-City	Out-of-City
5/8" & 3/4"	\$12.80	\$25.60
1" & 1 1/4"	\$32.00	\$64.00
1 1/2"	\$64.00	\$128.00
2"	\$102.40	\$204.80
3"	\$211.20	\$422.40
4"	\$349.44	\$698.88
6"	\$715.52	\$1,431.04

**Table 4.2 - Sewer Consumption Rates**

	Current Rates	
	In-City	Out-of-City
Per 1,000 gal	\$5.95	\$11.90

By utilizing a revenue projection model under the parameters of the current rate structure the following are the projected sewer use revenues for FY 11-12:

- Readiness-to-Serve - \$ 6,611,900
- Consumption - \$ 4,098,900
- **Total** **\$10,710,800**

## 5. FY 11-12 Sewer Rate Structure:

The amended sewer rate structure for FY 11-12 is still a demand plus commodity structure. As with the water rate, the main difference for FY 11-12 will be elimination of the 3,000 gallon minimum charge to the commodity component of the monthly rate. This adjustment will make the City's sewer rate structure more equitable for all users.

**Table 5.1 - Sewer Readiness-to-Serve Rates**

Meter Size	FY 11-12 Rates	
	In-City	Out-of-City
5/8" & 3/4"	\$15.44	\$30.89
1" & 1 1/4"	\$38.61	\$77.22
1 1/2"	\$77.22	\$154.44
2"	\$123.56	\$247.11
3"	\$254.83	\$509.67
4"	\$421.63	\$843.27
6"	\$863.35	\$1,726.69

**Table 5.2 - Sewer Consumption Rates**

	FY 11-12 Rates	
	In-City	Out-of-City
Per 1,000 gal	\$5.95	\$11.90

By utilizing a revenue projection model under the parameters of the FY 11-12 rate structure the following are the projected sewer use revenues for FY 11-12:

- Readiness-to-Serve - \$ 7,064,800
- Consumption - \$ 3,646,000
- **Total** **\$10,710,800**

## 6. Effect of Rate Adjustments on Customers:

The tables below illustrate the effects that the adjustment in the rate structure will have on the average customer. The comparisons are based on an In-City water and sewer customer with a ¾" water meter. This user class represents the largest portion of the City's customer base.

**Table 6.1 - Adjustment on Total Water Charge**

Monthly Charge for a In-City, 3/4" meter				
Customer Usage	Current Rate	FY 11-12 Rate	Change %	Change \$
0 Use	\$31.40	\$23.00	-26.75%	<b>-\$8.40</b>
1,000	\$31.40	\$26.22	-16.59%	<b>-\$5.18</b>
2,000	\$31.40	\$29.44	-6.43%	<b>-\$1.96</b>
3,000	\$31.40	\$32.66	4.01%	<b>\$1.26</b>
4,000	\$34.20	\$35.88	4.91%	<b>\$1.68</b>
5,000	\$37.00	\$39.10	5.68%	<b>\$2.10</b>
10,000	\$51.00	\$55.20	8.24%	<b>\$4.20</b>

**Table 6.2 - Adjustment on Total Sewer Charge**

Monthly Charge for a In-City, 3/4" meter				
Customer Usage	Current Rate	FY 11-12 Rate	Change %	Change \$
0 Use	\$30.65	\$15.44	-49.61%	<b>-\$15.21</b>
1,000	\$30.65	\$21.39	-30.20%	<b>-\$9.26</b>
2,000	\$30.65	\$27.34	-10.78%	<b>-\$3.31</b>
3,000	\$30.65	\$33.29	8.63%	<b>\$2.64</b>
4,000	\$36.60	\$39.24	7.23%	<b>\$2.64</b>
5,000	\$42.55	\$45.19	6.21%	<b>\$2.64</b>
10,000	\$72.30	\$74.94	3.66%	<b>\$2.64</b>

**Table 6.3 - Adjustment on Combined Water & Sewer Charge**

Monthly Combined Charge for a In-City, 3/4" meter				
Customer Usage	Current Rate	FY 11-12 Rate	Change %	Change \$
0 Use	\$62.05	\$38.44	-38.04%	<b>-\$23.61</b>
1,000	\$62.05	\$47.61	-23.26%	<b>-\$14.44</b>
2,000	\$62.05	\$56.78	-8.49%	<b>-\$5.27</b>
3,000	\$62.05	\$65.95	6.29%	<b>\$3.90</b>
4,000	\$70.80	\$75.12	6.11%	<b>\$4.32</b>
5,000	\$79.55	\$84.29	5.96%	<b>\$4.74</b>
10,000	\$123.30	\$130.14	5.55%	<b>\$6.84</b>