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**City of New Baltimore  
Macomb County, Michigan**

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**Water and Sewer Fund Financial Forecast  
(Cash Needs Basis)  
For the Years Ending June 30, 2016 to 2021**

# **City of New Baltimore, Macomb County, Michigan**

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June 16, 2016

To the City Council  
City of New Baltimore  
Macomb County, Michigan

As outlined in our engagement letter dated November 9, 2015, we have created a utility rate model using Microsoft Excel. That model has been delivered to the City's Finance Department. For the creation of the model, we obtained source documents including the City's audited financial statements, the City's budget, and various supporting documents to accumulate historical information about volume of water and sewer purchased and sold, administrative costs, future debt service, and future capital needs of the system. We met with various City employees in order to formulate the assumptions used in the model to forecast future performance of the system.

The purpose of the model is not just to calculate what the water and sewer rates charged to customers should be to cover costs in a one year period. Rather, the model calculates, based on management's assumptions, what the rate should be in order to achieve and then maintain a targeted level of modified working capital over an extended period of time.

On the following pages, we explain some of the more important or sensitive assumptions and estimates used in the model. Finally, based on the assumptions, we include a summary of the suggested rate changes as calculated by the model.

The following information is intended solely for the information and use of the City Council and management of the City and is not intended to be and should not be used by anyone other than these specified parties.

Very truly yours,

PLANTE & MORAN, PLLC

A handwritten signature in black ink, appearing to read "B. J. Camiller".

Brian J. Camiller

## **City of New Baltimore Summary of Significant Forecast Assumptions/ Significant Accounting Policies**

The assumptions disclosed herein are those that management believes are significant to the forecast.

All forecasted revenue and expenditures are reported using the cash flow basis. Revenue is recognized when it is received in cash. Expenditures are recorded when there is a cash outflow.

Significant assumptions include the following:

### **WATER AND SEWER**

- The model projects operations on a cash basis so as to provide an analysis of sufficient modified working capital over a five year period.
- The model calculates the total revenue required to operate the systems and achieve working capital targets as described below. The model does not evaluate whether the rates and revenue sources comply with any applicable law, statute, or ordinance.
- The City records the water-related activities in a separate fund from the sewer-related activities. As such, the City already segregates the costs of the two systems. While the model does use various assumptions in forecasting future activity, there are no assumptions related to allocating water versus sewer costs or revenues in addition to those already performed by the City.
- ✱ • For healthcare fringe benefit expenses, the model assumes an inflation factor of 5.8 percent per year based on an estimate from the Centers for Medicare & Medicaid Services (CMS.gov). For all other administrative costs, the model assumes an inflation rate of 2 percent per year.
- All capital outlay, including system improvements, repairs to the respective plants, and any vehicle will be funded by water and sewer rates annually.
- The model seeks to achieve modified working capital targets at the end of a five year period. Those targets include:
  - 120 days of operating expenses
  - 1 year of debt service payments (Sewer only)
  - An emergency capital replacement reserve equal to 2 percent of the net book value of the System's capital assets.
  - A long-term planned capital replacement reserve (Water only)

**City of New Baltimore  
Summary of Significant Forecast Assumptions/  
Significant Accounting Policies**

**WATER**

- The City's currently has two separate commodity rates for Water customers, \$3.35 per thousand gallons for normal usage as measured by the primary meter and \$3.74 per thousand gallons as measured by a secondary meter (a "sprinkler" meter).
- The City also has two separate fixed "Readiness to Serve" (RTS) charges for water service in addition to the variable commodity charge to its customers, one for the primary meter and one for the sprinkler meter. These charges are flat quarterly rates of \$11.25 for the primary meter plus an additional \$2.81 for the sprinkler meter. Based on these existing rates and very consistent revenue over the past several years, the model forecasts water revenue of \$230,000 per year. Based on the Water Fund's administrative costs typically associated with a readiness to serve charge, the City could justify increasing the RTS charge by approximately 17%, generating another \$40,000 per year, which would be offset by a corresponding decrease to the commodity rate.
- The model assumes the City's dedicated debt millage will generate enough tax revenue to pay for the debt of the Water system, which includes the 2012B and 2013 Unlimited Tax General Obligation bonds.
- The assumption for water consumption (units sold) is based off the five year average of fiscal years 2010-11 through 2014-15, the last five years for which the City has complete data. To date, consumption for 2015-16 has been trending higher than in previous years. The model assumes the City will sell 325,000 units (1,000 gallons) in each of the next 5 years.
- The City has developed a 5 year plan for Water system capital improvements. The plan includes the replacement of several water mains, plant repairs (including the roof), a new furnace, and an elevated tank. The elevated tank is the largest of the projects at \$1.25 million, but that is not scheduled until fiscal year 2021. The model assumes the system will have adequate cashflow to pay for these items out of current cashflow and will not require any kind of new financing.
- The City currently charges a quarterly fee for the eventual replacement of water meters. The City's charge is based on the replacement cost of the meter, including periodic replacement of the battery, and amortized over 20 years. The model assumes this charge will continue without a rate increase. The accumulated money from this charge is included as part of the City's long-term planned capital improvement target reserve.

**City of New Baltimore**  
**Summary of Significant Forecast Assumptions/  
Significant Accounting Policies**

**SEWER**

- The commodity Sewer rate is currently \$4.82 per thousand gallons.
- The City has a fixed “Readiness to Serve” (RTS) charge for sewer service in addition to the variable commodity charge to its customers. This charge is a flat quarterly rate of \$8.34 and is expected to generate approximately \$165,000 per year.
  - Note: Based on the Sewer Fund’s administrative expenses typically associated with a readiness to serve charge, the City could justify increasing rates by approximately 143%, generating another \$236,000 per year, which would be offset by a corresponding decrease to the commodity rate.
- In addition, the City also has a fixed debt service fee of 67.38 per quarter. This is expected to generate \$1.1 million which will pay for the majority of the debt service of the 2007 Michigan Clean Water State Revolving Fund Program bonds. The remainder of the debt service will be paid from the commodity rate. The model assumes this charge will continue at the same rate for all five years of the forecast.
- The assumption for sewer usage (units sold) is based off the five year average of fiscal years 2010-11 through 2014-15, the last five years for which the City has complete data. To date, consumption for 2015-16 has been trending higher than in previous years. The model assumes the City will sell 279,000 units (1,000 gallons) in each of the next 5 years.
- The City has developed a capital improvement plan for the Sewer System through fiscal year 2021-22. The plan includes the replacement of various components of the wastewater treatment plant, repair of an equalization basin and lift station, and other miscellaneous equipment. The model assumes the system will be able to pay for these items out of current cashflow and will not require any kind of new financing.
- The City has received approximately \$800,000 from a recent legal settlement. A portion of that money will be allocated toward Sewer capital improvements in fiscal year 2016-17 and 2017-18.

**City of New Baltimore**  
**Summary of Significant Forecast Assumptions/  
Significant Accounting Policies**

**Proposed Water and Sewer Rates**

Based on the assumptions above, both the Water and Sewer systems have already achieved their target working capital goals:

- As of June 30, 2015, Water's modified working capital is approximately \$3.5 million. By the end of the forecasted five years ending June 30, 2021 that does not substantially change. If the assumptions noted above hold true, the Water system working capital will slowly reduce to \$3.4 million and achieve the target working capital at June 30, 2021. This is forecasted to occur without any change to the water rates over that time.
- Sewer's target working capital at June 30, 2021 is \$2.3 million. As of June 30, 2015, Sewer's modified working capital is \$2.4 million and drops to just under \$2.3 million by the end of 2021. As a result, the model does not suggest a rate increase at this time. Of the two systems, Sewer is presently the closest to needing a rate increase. Expenses of the sewer system should be monitored closely and rates increased in the future if the modified working capital begins to fall short of the targeted amount.

Please note that while the model does not suggest a rate increase for either system, this is not due to the system having flat expenses. The expenses of running both systems will increase over time due to just simple inflation. More importantly, capital needs for both systems will require a large investment of cash in the future as the existing plant and lines age and naturally break down.

If additional large-scale improvements to either system are identified in the future, the current rates above may not provide sufficient working capital in order to achieve targeted levels and finance the projects. It is possible that another source of funding, such as bonds or other issuances of debt, would be required at some time in the future.

## **City of New Baltimore Summary of Significant Forecast Assumptions/ Significant Accounting Policies**

### **Other Considerations**

- The City has a two-tiered rate structure for customers with two water meters. Water flowing through the sprinkler meter is charged a higher rate than the water that flows through the primary meter. The cost to New Baltimore to provide water would not seem to fluctuate depending on whether the customer is watering the lawn instead of taking a very long shower. We recommend the City revisit this issue and consider charging a single unified rate per 1,000 gallons no matter which meter the water flows through.
  
- In the last year, the City has implemented a new flat debt service fee to pay for the debt service on the 2007 SRF bonds. This new charge was offset by a reduction to the commodity rate. Our understanding is that the City intended for this to be similar to the separate debt levy used to pay for the debt service on the Water debt; however, when a property tax is not available, debt service on plant construction would typically be considered part of the cost of providing water or sewer treatment which would be recouped by a City through its commodity rate. We recommend the City revisit this issue at a later date and evaluate whether the new charge is accomplishing what the City intended it to do.

**City of New Baltimore  
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<b>Water Summary</b>		Forecast 2017	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021
<b>Working Capital and Use of Cash</b>						
Beginning Working Capital (7/1/16)		\$3,472,260	\$3,751,370	\$3,953,101	\$4,141,619	\$4,256,106
Operating outflows		1,100,403	1,128,151	1,156,788	1,186,349	1,216,875
Capital improvements		205,054	260,000	250,000	300,000	1,250,000
Annual debt service		884,388	916,075	916,150	919,688	916,638
<b>Total Use of Cash Out</b>		<b>2,189,845</b>	<b>2,304,226</b>	<b>2,322,938</b>	<b>2,406,037</b>	<b>3,383,513</b>
Beginning Working Capital Less Total Use of Cash		1,282,415	1,447,144	1,630,163	1,735,581	872,593
Target Working Capital and Reserves Balance		769,050	771,667	774,277	778,071	3,395,709
<b>Target Cash Required to Meet Target Reserves (overage) shortage</b>		<b>(513,366)</b>	<b>(675,476)</b>	<b>(855,886)</b>	<b>(957,510)</b>	<b>2,523,116</b>
<b>Revenue Breakdown</b>						
Target Cash Required to Meet Target Reserves		(513,366)	(675,476)	(855,886)	(957,510)	2,523,116
Property Tax, RTS, and Misc Revenues		(1,380,204)	(1,417,208)	(1,422,705)	(1,431,774)	(1,434,366)
User Fee Required to Meet Target Reserves		(1,893,570)	(2,092,684)	(2,278,591)	(2,389,285)	1,088,750
Forecasted Revenue Generated under Smoothed Rate		1,088,750	1,088,750	1,088,750	1,088,750	1,088,750
<b>Over (Short) of Target Working Capital and Reserves at Year End</b>		<b>2,982,320</b>	<b>\$3,181,434</b>	<b>\$3,367,341</b>	<b>\$3,478,035</b>	<b>(\$0)</b>
<b>Forecasted Working Capital and Reserves at Year End</b>		<b>3,751,370</b>	<b>3,953,101</b>	<b>4,141,619</b>	<b>4,256,106</b>	<b>3,395,709</b>
<b>Flow usage in 1,000 gallons</b>						
		325,000	325,000	325,000	325,000	325,000
Resulting Usage Fee (per 1,000 gallons)	\$3.350	\$ 3.35	\$ 3.35	\$ 3.35	\$ 3.35	\$ 3.35
<b>Annual Average Rate Increase</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>Annual Rate Increase</b>	<b>0.00%</b>					

**City of New Baltimore  
Macomb County, Michigan**

<b>Sewer Summary</b>					
	Forecast 2017	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021
<b>Working Capital and Use of Cash</b>					
Beginning Working Capital (7/1/15)	\$ 2,434,432	\$ 2,888,379	\$ 2,622,760	\$ 2,517,651	\$ 2,517,651
Operating outflows	1,382,101	1,420,068	1,459,354	1,500,015	1,542,112
Capital improvements	538,000	416,300	220,000	195,000	275,000
Annual debt service	1,171,650	1,171,213	1,170,531	1,174,606	1,173,356
Total Use of Cash Out	3,091,751	3,007,581	2,849,885	2,869,621	2,990,468
Beginning Working Capital Less Total Use of Cash	\$ (657,319)	\$ (119,202)	\$ (227,124)	\$ (351,971)	\$ (472,818)
Target Working Capital and Reserves Balance	2,260,985	2,254,619	2,253,444	2,247,395	2,259,743
Target Revenue Required to Meet Target Reserves	\$ 2,918,304	\$ 2,373,821	\$ 2,480,568	\$ 2,599,366	\$ 2,732,560
<b>Revenue Breakdown</b>					
Target Cash Required to Meet Target Reserves	2,918,304	2,373,821	2,480,568	2,599,366	2,732,560
RTS and other revenue (Legal settlement in 2017)	(2,200,918)	(1,397,182)	(1,399,995)	(1,402,864)	(1,405,790)
User Fee Required to Meet Target Reserves	717,386	976,639	1,080,573	1,196,503	1,326,770
Forecasted Revenue Generated under Smoothed Rate	\$ 1,344,780	\$ 1,344,780	\$ 1,344,780	\$ 1,344,780	\$ 1,344,780
Over (Short) of Target Working Capital and Reserves at Year End	\$ 627,394	\$ 368,141	\$ 264,207	\$ 148,277	\$ 18,010
Forecasted Working Capital and Reserves at Year End	\$ 2,888,379	\$ 2,622,760	\$ 2,517,651	\$ 2,395,673	\$ 2,277,752
Flow usage in 1,000 gallons	279,000	279,000	279,000	279,000	279,000
Resulting Usage Fee (per 1,000 gallons)	\$ 4.820	\$ 4.82	\$ 4.82	\$ 4.82	\$ 4.82
Annual Average Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%
Annual Rate Increase	0.00%				