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Insights and applications for better financial management

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April, 2018

TO: City of Northville
c/o: Pat Sullivan, City Manager
Sandi Wiktorowski, Finance Director/Treasurer

RE: Financial Planning Consulting Services – April 2018

Enclosed please find a hard copy of the report and a USB drive with a digital copy of the report and three Excel files (the financial model used for the project, a parking proforma model and calculations for funding of the street improvement projects).

An integral part of this project has been the development of interactive and dynamic forecasting tools, which we hope will serve the City for many years to come. The final printed report outlines the approach taken in developing the tools, key findings regarding the specific financial components reviewed and recommendations for addressing these key findings. We trust the attached report and Excel files will provide the City with tools it needs to proceed to important policy discussions around future revenue and expenses.

Thank you very much for the opportunity to work with the City of Northville. Throughout the project the Northville staff has been exceedingly helpful, especially Sandi Wiktorowski. We have been impressed by the budgetary detail and planning efforts the City has undertaken over the recent years and hope this report contributes to the City's continued success. If you have any questions or if there are any additional services we may provide, please let us know.

Sincerely,

A handwritten signature in black ink, appearing to read "Jaymes Vettraino".

Jaymes Vettraino
Vettraino Consulting, LLC

A handwritten signature in black ink, appearing to read "John Kaczor".

John Kaczor
Municipal Analytics, LLC

City of Northville
Financial Planning Consulting Services
March 2018

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I. Scope of Work and Project Process

The City of Northville issued a request for proposal for a “Financial Planning Consulting Services.” Jaymes Vettraino, Vettraino Consulting, LLC and John Kaczor, Municipal Analytics, LLC (the consultants) submitted a proposal in advance of the RFP deadline. During its meeting of October 2, 2017, the City acted to select the consultants to perform the requested services.

The study was conducted during the period of November 2017 through February 2018. The consultants utilized a shared drive to receive documents from the City to consider while developing this report.

The goals of this project are: (1) to identify and analyze significant future capital costs, liabilities and other expenditures; (2) identify funding options to meet obligations; (3) develop an Excel based financial model that integrated identified expenditures and revenue data; (4) develop specific additional data as directed by the City; and (5) provide an analysis to assist the City in its consideration of investment and revenue generating options.

The consultants utilized a five (5) phase approach to evaluate specific financial goals and objectives presented by the City of Northville. Throughout the project, the consultants and City worked together to refine and focus the areas of study. Below is a brief outline of the phases of the project:

Phase 1: Preliminary Assessment and Refining of Objectives

The consultants met and received feedback from City Council and senior City staff. Based on these meetings, the goals and objectives of the project were clarified and established. The project focused on integrating known and likely future expenditures and known and potential future revenue generating sources into one financial projection tool. The areas of focus were: 1) General Fund operating millage; 2) Streets improvements; 3) Pension and OPEB liabilities; 4) Water/Sewer review; 5) Use of fund balance, operational review, and capital improvement plan expenditures; 6) Review of the parking system; and 7) Other observations.

Phase 2: Analysis of Current and Projected Conditions, with Available Data

The City staff was extremely helpful in providing a significant amount of background data for the project. The consultants developed a customized Excel model to integrate the various data points for the areas to be reviewed. The model includes an initial analysis of individual Funds, a high-level analysis of the water/sewer rates and projected property tax revenue, with various built-in scenario options for the City to test.

Phase 3: Development of Additional Data and Analysis

During a meeting with City Council and staff on February 8, 2018, the consultants reviewed preliminary findings and a draft Excel model. City Council members offered numerous comments and suggestions. Three specific requests required the consultants to work with the City to develop or request additional data:

1. Alternate scenarios for funding of the road infrastructure (developed by the engineering firm Spalding DeDecker);
2. Customize scenario projections for funding the City's pension obligations (calculations requested of MERS); and
3. Development of a parking proforma to address the question of the financial impact if the City were to change its parking system from a free parking system to fee-per hour system; and/or utilize future special assessments or additional contribution from the DDA and/or General Fund (developed by the consultants with the assistance of City and DDA staff).

Phase 4: Development of Alternatives and Recommendations

As part of the development of the financial model, graphical and data sorting tools were included to provide for the development of alternatives and recommendations. The consultants have used these tools to sort and review data and develop their findings and recommendations. The City can use the financial model now and into the future to test various alternative scenarios, based on different assumptions or financial projections.

Phase 5: Delivery of the Final Report

The consultants presented an executive summary of the project during a City Council meeting on March 22, 2018. Hard copies of this report were delivered to the City along with the Excel based financial model used for the project and an additional parking proforma model.

II. Development of the Financial Model

Developing a comprehensive financial forecast requires a detailed understanding of the City's financial framework, budgeting practices, anticipated needs and revenue trends. To adequately develop the necessary knowledge for this project, input from a variety of internal and external sources was required. Our approach to developing the five-year financial forecast included substantial data collection and analysis, prior to developing assumptions and setting up the forecasting spreadsheet. The scope of review included:

- Collection and review of a wide range of financial and operational documents including audited financial statements, current budget documents, capital improvement plans, debt schedules, pension and OPEB valuation reports, financial policies, water reliability study, pavement condition assessments, strategic plans and other documents.
- Interviews and discussions with City staff, engineers, and legal counsel.

Following the initial data collection and review process, the consultants began setting up the spreadsheet file that would become the basis for the financial forecast model. In addition to one workbook containing all line items of the included funds, the spreadsheet contains more detailed worksheets related to assumptions, debt service, capital improvements, property tax calculations, water and sewer rates, pension, and retiree healthcare. Several additional worksheets present summary data by Fund. Primary financial information is summarized on a dashboard, which allows the City to test different scenarios and immediately see the impact on future forecasts.

The initial model was developed using FY 2018 budget and 3-year forecast prepared by the City's Finance Department. Two additional years of revenues and expenditures were forecasted using assumptions developed through the data review and collection process summarized above. After completing the model and running a number of scenarios, the model was updated with FY 2019 draft budget numbers, and three years of City-forecasted values. The forecast was extended to FY 2024, including two years of additional forecasting using the assumptions in the model spreadsheet.

While the forecast model is a useful tool to understand the longer-term financial outlook for the City, it is not intended to be a budget or plan. Rather, the model is intended to illustrate likely financial trends, based on a number of assumptions. As the City adjusts its policies, modifies its levels of service and accounts for current revenue realities and expenditure requirements, the forecast will change. Having a longer-term horizon over which decisions can be made provides the City with greater opportunities to make smaller adjustments earlier, instead of being forced to make major adjustments when budget issues become critical.

The financial model has been used extensively in this study to test the likely impacts of various scenarios.

III. Key Findings and Recommendations

Consistent with the preliminary assessment and refining of objectives phase of the project, the consultants have developed key findings and recommendations for the following areas:

- 1) General fund operating millage
- 2) Streets improvements
- 3) Pension and OPEB liabilities
- 4) Water/Sewer review
- 5) Use of fund balance; operational review, and capital improvement plan expenditures
- 6) Review of the parking system
- 7) Other observations

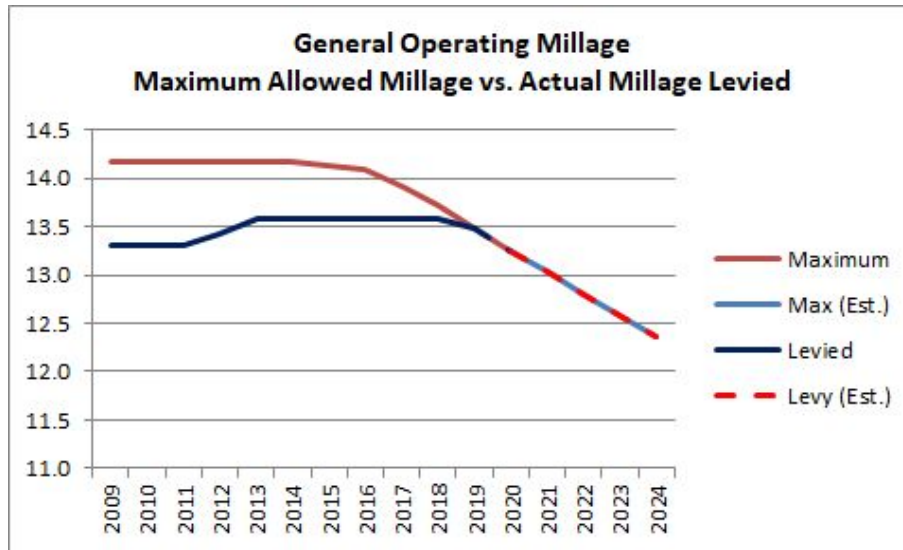
The key findings were developed in cooperation with the staff and elected officials; the recommendations are based on the experience and knowledge of the consultants. Each of the recommendations should be reviewed in detail by the staff and elected officials. The consultants have developed the recommendations based on their professional opinion; the City will need to consider these within the context of the goals, objectives, timing and appropriateness for the City of Northville.

1) General fund operating millage

The City Charter of Northville provides for a maximum property tax levy of 20 mills. This millage limitation has been split between a general operating levy maximum of 18.0800 mills and a dedicated levy of 1.9200 mills for streets, drainage and sidewalk improvements.

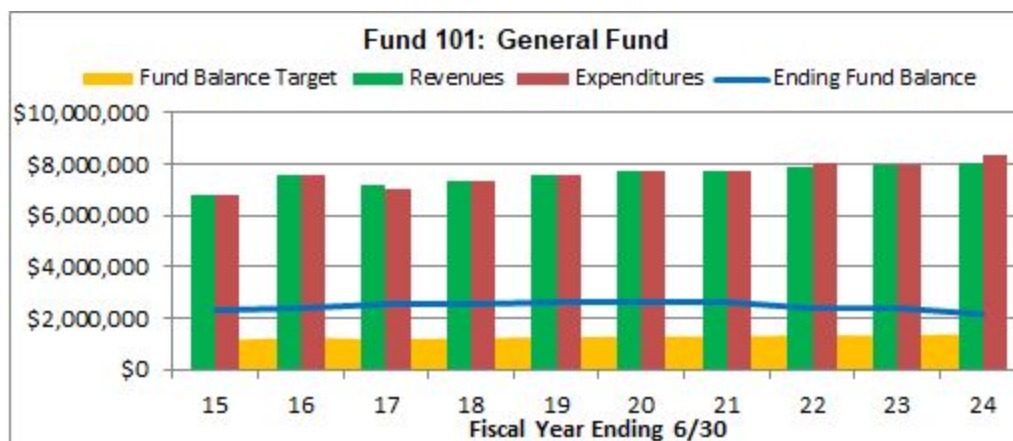
Due to the limitations imposed by the Headlee Amendment to the Michigan Constitution, the maximum general operating levy currently permitted is 13.4872 (FY 2019). In FY 2018, the City levied 13.5864 mills. As the City prepares for FY 2019, the allowable millage will, for the first time, require the City to reduce its levy, which will constrict the property tax revenues received in the General Fund. Going forward, the City is expected to levy the maximum allowable millage rate. With no un-levied millage capacity, the City's bond rating may be negatively impacted. Having excess taxing capacity provides municipalities with a revenue enhancement option in the event of sudden economic changes, unplanned major expenditures and loss of other major revenues.

As seen in the chart below, the forecasted trend for the general operating levy is negative, and could decline further over the next five year by 9%, compared to the 2018 levy. Based on current estimates of taxable value in the City, the five-year cumulative Headlee reductions could result in a loss of \$1.4 million to the General Fund.



The City has only one remedy which would permit it to levy a higher millage. The remedy is referred to as a “Headlee override,” which must be approved by voters. Units of government can request voters approve an override up to the maximum Charter limit (20 mills for the City of Northville). Any millage approved by voters would still be subject to Headlee rollbacks, so it would be important to anticipate the millage rate needed to sustain long-term fiscal health, then factor in any anticipated rollbacks over a 10- or 20-year period.

The City’s General Fund is not in immediate danger from the Headlee reduction. As noted below, revenues are projected to be near expenses in the very near future, however in FY 2022 (and beyond) the Headlee reduction is projected to erode the General Fund fund balance and a Headlee override or significant reductions in expenditures on public services will be necessary.



Recommendation:

A. It is recommended the City begin now to develop a timeline and plan to place a Headlee override question on the ballot. The City does not have an immediate need to consider a Headlee override, so a

thoughtful and measured approach can be taken. One approach would be to form a Community Advisory Committee to assist in developing the timeline, both based on the financial need and the best time to place the question on the ballot, and to develop a communication plan with voters to inform them of the need and reason for the request. Consideration should be given to the millage maximum that would be requested, remembering that any override would be subject to Headlee reductions over time. Including excess capacity in the millage rate request will also help ensure greater financial stability in the even of a loss of other revenues. The City's bond rating will also be more favorable if there is excess millage capacity.

2) Streets improvements

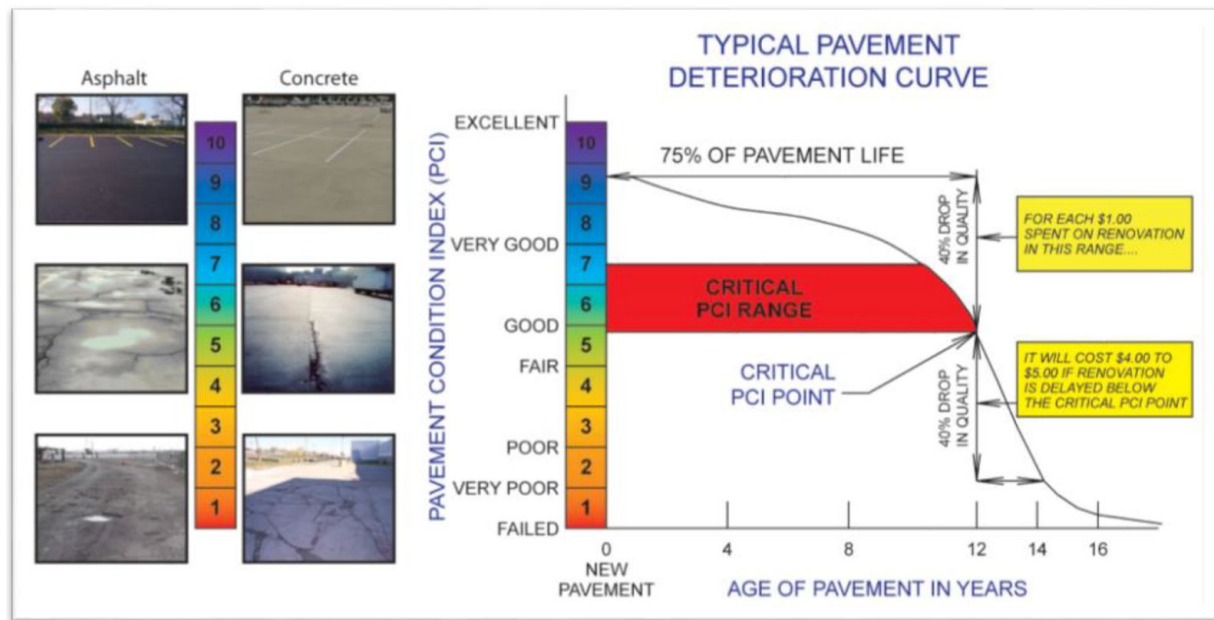
The City of Northville maintains street infrastructure with funding from multiple sources, including a Street Improvement Millage, Major Streets Fund and Local Streets Fund. The Street Improvement Millage was approved in 1997 at a rate of 1.92 mills. Based on a review of the City Charter and an opinion from the City Attorney, it is understood that the Street Improvement Millage is subject to the City's Headlee limitation.¹ When combined with the City Operating Millage the City is at its maximum authorized millage rate under Headlee. The Street Improvement Millage is currently at a Headlee reduced rate of 1.7097 and will be further reduced to 1.6802 mills for the 2019 fiscal year. The City anticipates continued erosion of the millage every year in the future (if property values continue to increase). The Street Improvement Millage generates revenue of approximately \$600,000. The City has used approximately \$100,000 from the Street Improvement Millage (specifically designating \$35,000 for crack sealing and \$25,000 for sidewalk improvements) and all of its Major and Local Streets funds for operational maintenance activities, leaving \$500,000 available for capital investment in the streets.

The engineering firm of Spalding DeDecker compared Northville's overall street infrastructure condition to other cities and counties they had data for. The 2016-17 data shows Northville has the highest percentage of streets with a "poor" rating:

Community	2007				2016-2017				Miles
	Good	Fair	Poor	Total	Good	Fair	Poor	Total	
Ann Arbor	15%	26%	59%	100%	29%	30%	41%	100%	339
Birmingham	34%	51%	15%	100%	6%	56%	38%	100%	90
Canton Township	27%	51%	22%	100%	15%	59%	26%	100%	277
Northville (City)	16%	32%	52%	100%	10%	33%	57%	100%	53
Northville Township	13%	57%	30%	100%	13%	72%	15%	100%	106
Novi	13%	65%	22%	100%	13%	33%	54%	100%	246
Plymouth	9%	66%	25%	100%	15%	69%	16%	100%	39
Plymouth Township	29%	60%	11%	100%	23%	62%	15%	100%	167
Royal Oak	11%	67%	22%	100%	4%	60%	36%	100%	241
Oakland County	15%	58%	27%	100%	12%	40%	48%	100%	6152
Wayne County	20%	58%	22%	100%	15%	54%	31%	100%	7660

¹ Memorandum dated December 17, 2014, Miller, Canfield, Paddock and Stone, P.L.C.

Spalding DeDecker completed a comprehensive pavement management system report in 2017/2018.² The report included a field evaluation of every street, a ten-year work plan and ten-year funding plan. An important concept presented in the report is the overall condition of the pavement network represented by a weighted average “Overall Condition Index” (OCI) rating. As of May of 2017, the City’s OCI rating was a 4.57, on a 10-point scale. Spalding DeDecker has expressed an opinion that an OCI score of higher than 5.70 (approximate “critical point on the deterioration curve”) produces a pavement network that has satisfactory driving conditions and allows for efficient use of resources to maintain the pavement.³



The goal of an OCI of 5.70 or higher at the end of a ten-year period cannot be achieved by the City without additional investment in street infrastructure. The consultants worked with Spalding DeDecker to refine the ten-year funding plan based on possible funding scenarios.

Initially, five funding scenarios were tested:

1. No funds allocated to Street Infrastructure
2. Continue to invest \$500k annually
3. Continue to invest \$500k annually, and \$1.75m in years 2 and 3 (total of \$3.5m)
4. Continue to invest \$500k annually, and \$1.50m in years 2 and 3 (total of \$3.0m)
5. Increase annual investment to \$950k

² City of Northville Municipal Pavement Management System Report, 2017 Update, Spalding DeDecker Associates, Inc.

³ Ibid, graph from page 7.

Below is a chart of the resulting OCI for each of the five scenarios:

	1	2		3		4		5	
Year	OCI (No Funds)	OCI (500K)	\$500K Budget	OCI (500K & 1.75 Mil Inj Yr 2/3)	500K & 1.75 Mil Inj Yr 2/3 Budget	OCI (500K & 1.5 Mil Inj Yr 2/3)	500K & 1.5 Mil Inj Yr 2/3 Budget	OCI (950K)	\$950K Budget
2018	4.57	4.57	\$500,014	4.57	\$499,987	4.57	\$499,987	4.57	\$950,005
2019	4.63	4.63	\$500,008	5.24	\$2,250,000	5.14	\$2,000,014	4.77	\$950,014
2020	4.57	4.73	\$500,004	5.97	\$2,250,003	5.77	\$2,000,001	5.04	\$950,007
2021	4.10	4.70	\$499,998	5.79	\$500,043	5.60	\$500,043	5.14	\$949,978
2022	3.78	4.84	\$499,993	5.85	\$499,999	5.67	\$499,999	5.43	\$950,008
2023	3.46	4.78	\$499,987	5.80	\$499,993	5.63	\$499,993	5.47	\$950,015
2024	3.23	4.84	\$500,015	5.71	\$500,016	5.56	\$500,016	5.59	\$949,986
2025	2.98	4.96	\$500,010	5.74	\$499,980	5.58	\$499,980	5.73	\$950,016
2026	2.90	4.95	\$499,988	5.70	\$499,997	5.52	\$499,997	5.81	\$949,990
2027	2.55	5.00	\$499,998	5.76	\$499,983	5.59	\$499,983	5.93	\$950,048
2028	2.51	5.00	\$499,979	5.75	\$499,979	5.58	\$499,979	6.04	\$949,983
2029	2.46	4.99	\$500,016	5.74	\$500,016	5.57	\$500,016	6.14	\$949,967
2030	2.44	5.08	\$499,997	5.82	\$499,997	5.65	\$499,997	6.31	\$949,998
2031	2.28	5.13	\$499,977	5.84	\$499,977	5.67	\$499,977	6.45	\$950,001
2032	2.23	5.20	\$500,015	5.88	\$499,982	5.71	\$499,982	6.68	\$949,974

As highlighted, the most favorable option is Scenario 3: Continue to invest \$500,000 annually, and an additional \$1,750,000 in years 2 and 3 (total of \$3,500,000). The additional funding in years 2 and 3 would come from a combination of use of fund balance and a debt millage. Scenario 5: Increase annual funding by \$450,000 also produces a result of an OCI rating over 5.70 in 2025 and then an increasing rating every year after. The additional \$450,000 annually in street infrastructure would be funded by either transfer from other operating funds of the City or, more likely, an increase the Street Improvement Millage by approximately 1.2 mills (increase the millage from 1.6802 mills to 2.88 mills).

Senario 3 is preferred over Senario 5 based on:

- The annual cost during the ten-year term of senario 3 is lower than senario 5 to achieve the objective. Resulting in a lower millage rate for property owners.
- The increase in the Street Improvement Millage required for scenario 5 would be approved by the voters without an end date. If debt funded, scenario 3 offers a fixed term of 10 years, providing the voters with a clear end date. At the end of the term the City can assess its next infrastructure strategy based on street condition and financial position and determine the next appropriate infrastructure plan.
- Increasing the Street Improvement Millage to fund senario 5 would be a more complex question for the voters to consider because of the need to both increase the millage and override Headlee. The scenario 3 would offer a straightforward question of paying for debt to finance street improvements.
- Any increase to the Street Improvement Millage to fund scenario 5 would be subject to Headlee reductions in future years. A debt millage to fund scenario 3 would not be subject Headlee and would remain at a rate needed to fund the annual debt payment.
- Scenario 3 results in an OCI of over 5.70 five years sooner than the scenario 5, providing evidence to the citizens of the City's investment in infrastructure more quickly.
- Scenario 3 can be flexible and more easily adjusted based on use of fund balance in the Street Improvement Fund; scenario 5 is less flexible, the millage increase would be set going forward.

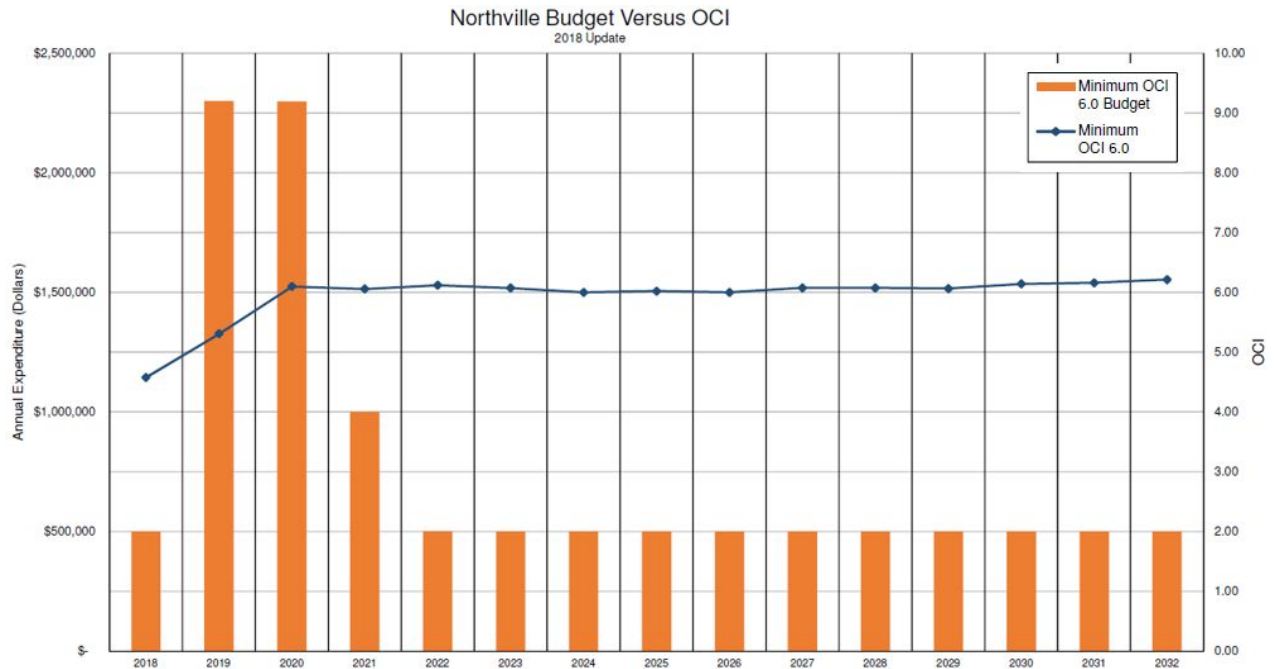
After reviewing the initial five scenarios, the City requested the consultants to develop an additional scenario, based on the principles of scenario 3, to achieve a goal of an OCI rating of 6.0 and to include an assumption that City would utilize \$1,000,000 of fund balance from the Street Improvement fund over three years. A rating of 6.0 would allow the City to communicate to its residents the goal of having roads in the middle of the critical OCI range. The utilization of fund balance is appropriate to improve the roads as soon as possible in order to reduce future maintenance cost. After reviewing several options, the below scenario best matched the City's goals. We have labeled this scenario "3.1," since it was developed based on the initial scenario 3.0:

Senario 3.1


OCI of 6.0 - \$500k annual - Infusion of Funding in Years 2, 3 and 4

Year	Minimum OCI 6.0	Minimum OCI 6.0 Budget
2018	4.57	\$ 499,987
2019	5.31	\$ 2,300,013
2020	6.10	\$ 2,299,984
2021	6.05	\$ 1,000,008
2022	6.12	\$ 500,850
2023	6.07	\$ 500,001
2024	6.00	\$ 500,015
2025	6.02	\$ 499,949
2026	6.00	\$ 499,997
2027	6.07	\$ 499,983
2028	6.07	\$ 499,979
2029	6.06	\$ 500,016
2030	6.14	\$ 499,997
2031	6.16	\$ 499,977
2032	6.21	\$ 499,999

Graphically presented:



In order to accomplish scenario 3.1, the City would need to utilize a combination of its Street Millage, debt and internal financing. One option for funding scenario 3.1 to achieve the objective of a an OCI of 6.0, is to invest \$1,000,000 of fund balance and fund \$3,200,000 from debt proceeds over three years. The below matrix shows a potential financing option for the first five years of scenario 3.1, including the required \$5,700,000 investment is years 2, 3 and 4 (Y2, Y3 and Y4):

Scenario 3.1					
Source	Y1	Y2	Y3	Y4	Y5 and beyond
Street Millage	500,000	500,000	500,000	500,000	500,000
Debt Funding		1,600,000	1,600,000		
Fund Balance		250,000	250,000	500,000	
TOTAL	500,000	2,350,000	2,350,000	1,000,000	500,000
					
		TOTALS			
		Street Millage	1,500,000		
		Debt Funding	3,200,000		
		Fund Balance	1,000,000		
		TOTAL	5,700,000		

Assuming debt issuance of \$3,200,000, issuance cost of \$100,000, ten-year bond, at 3.5% interest rate, the estimated annual debt payment would be \$385,000. If financing with debt, the revenue required to pay the annual debt service would be from a voter-approved Street Debt Millage. The initial levy needed to fund the debt service would be approximately 0.97 mills. The debt millage would be set annually at a rate needed to pay the bond cost and is not subject to Headlee. The debt levy cannot exceed the millage limit approved by voters.

Recommendations:

A. Based on the City's goal to invest in its street infrastructure to achieve the engineer's recommended minimum of 5.70 OCI rating and the City's further goal to achieve a minimum of 6.00 OCI rating, the consultants developed a dynamic Excel spreadsheet to allow the City to test different combinations of debt and use of fund balance to achieve OCI ratings of 5.70 and 6.00. In order to achieve an OCI rating of 6.0, it is recommended the City invest a total of \$4,200,000 during years 2, 3 and 4, while maintaining its current investment of \$500,000 per year during the ten-year period (senario 3.1). As noted above, the investment required during years 2, 3 and 4 would come from \$1,000,000 of fund balance and \$3,200,000 of debt financing. Assuming debt issuance cost of \$100,000, ten-year bond, at 3.5% interest rate, the initial levy needed to fund the debt service would be approximately 0.97 mills . If the City were able to finance the debt for senario 3.1 at a rate of 3.0%, instead of 3.5%, the mill rate needed would be 0.95.

B. It is recommended an educational campaign be developed to inform voters of the need for additional investment in street infrastructure. The information should focus on the current condition of the

pavement network and the goal of improving the average condition of the entire network; focusing both on the drivability of the streets and the future financial savings by investing in the network before the average condition deteriorates further.

3) **Pension and OPEB liabilities**

Legacy costs for retiree benefits have become a major challenge for local governments across the country. Pressure has been increasing to ensure money will be available to pay pensions and retiree healthcare (OPEB) costs when the payments are due to retirees. Recognizing the growing burden of defined benefit pensions and retiree healthcare, the City began closing these generous benefit plans to new hires as early as 1997. All plans have now been closed to new hires. As a result, the amortization period over which the unfunded liabilities can be funded is decreasing. This shorter amortization window requires higher contributions each year, until the plans reach 100% funding.

The rising cost of these benefits is putting substantial pressure on the City's operating funds. Northville recognizes the difficulties it will face to fund these promised benefits in the coming years, and it has requested an evaluation of how best to approach paying for pension and OPEB liabilities in the coming years.

Pension Funding (MERS)

The City of Northville, like many local governments, is facing a significant underfunding of its pension obligations. The City has closed all of its pension funds, which means new hires are no longer added to the system; but the City is obligated to continue to fund the pension system for active or retired employees who were promised benefits. At the time of the most recent actuarial valuation (12/31/16), the pension was underfunded by close to \$8 million. This represents a funded ratio of 61%. This level is just sufficient to avoid additional reporting and potential oversight from the State, which now requires a funded ratio of 60% for public pensions,⁴ but it is still well below the level desired by the City.

Over the past four years, to reduce the unfunded liability of the pension, Northville has contributed an average of over \$300,000 per year above the Annual Required Contribution (ARC). This additional funding, combined with strong investment returns, has helped raise the funded ratio from a low of 58% to its current 61%. Northville is now contributing just over \$1.3 million annually toward the pension, which is twice the amount it contributed in 2011 (\$651,800).

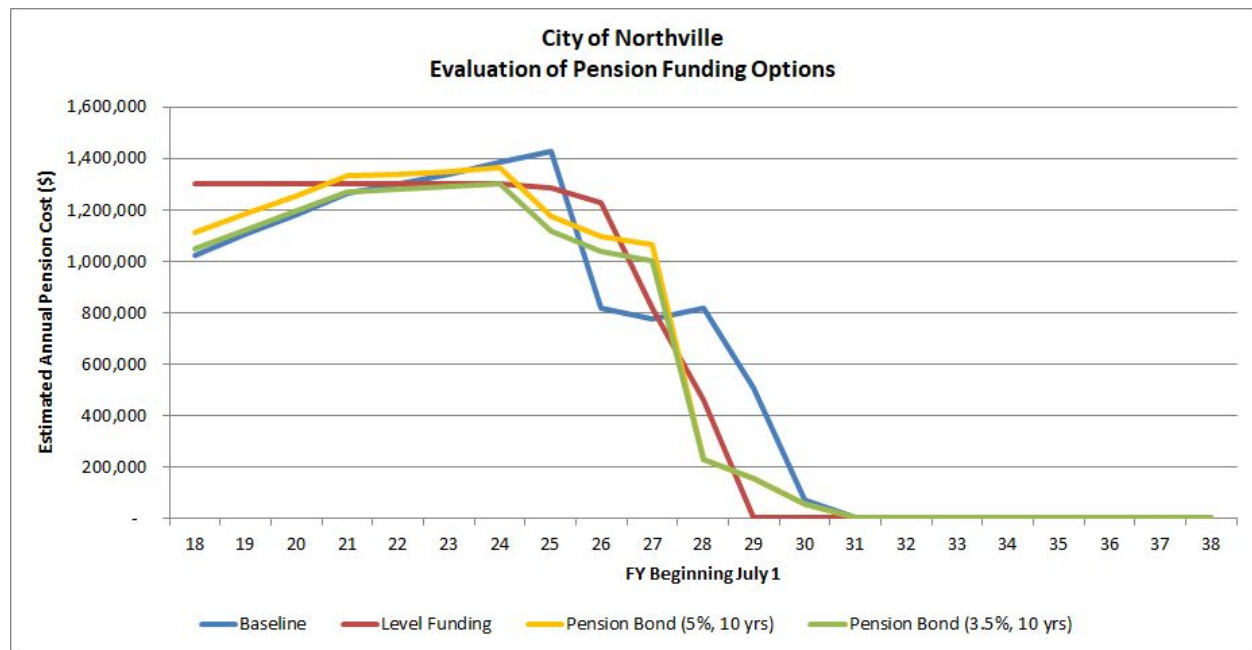
To better understand how the City might optimize its pension funding strategy, the consultants considered three potential options. With the help of MERS, which calculated "ballpark estimates" of the impact of the different funding options, the consulting team considered the following:

- Fund only the ARC each year, with no additional contributions;
- Contribute approximately the same dollar amount the City has contributed in recent years (\$1.3M), until the funded ratio approaches 100%
- Issue pension bonds in an amount sufficient to achieve 90% funding in the 2019 fiscal year.

⁴ Protecting Local Government Retirement and Benefits Act 202 of 2017, <http://legislature.mi.gov/doc.aspx?mcl-38-2805>

In each of the above scenarios, the MERS calculations assumed the rate of return would be 7.75%. This is the default rate of return option with MERS. For the debt financing option, it was assumed a repayment term of 10 years; the cost of issuance would be 3% of the amount needed to achieve 90% funding; and the impact of bond interest rates of 3.5% and 5.0% were both tested.

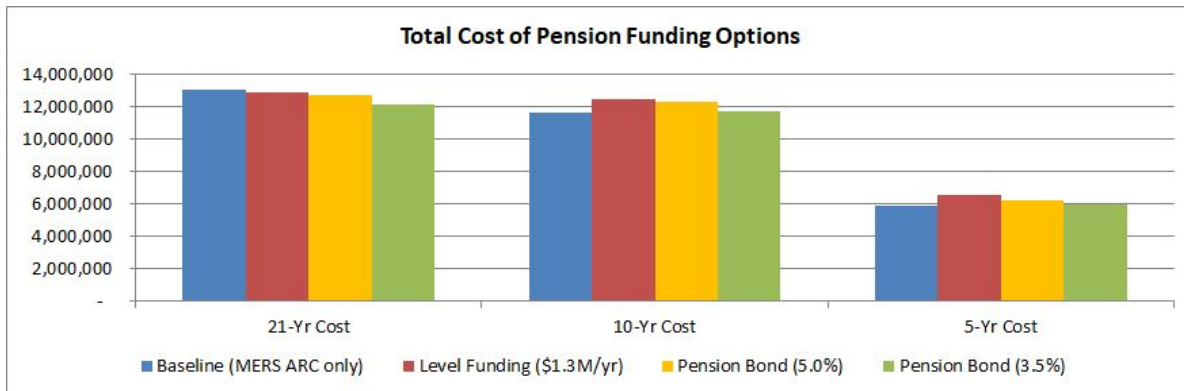
The following chart illustrates the annual cost of pension funding in each of the scenarios described. This includes the ARC, and for the bonding options debt service costs are included. In each case tested, the City can expect its pension costs to fall rapidly after 2028 and remain at a very low rate for the remainder of the benefit period for qualifying retirees.



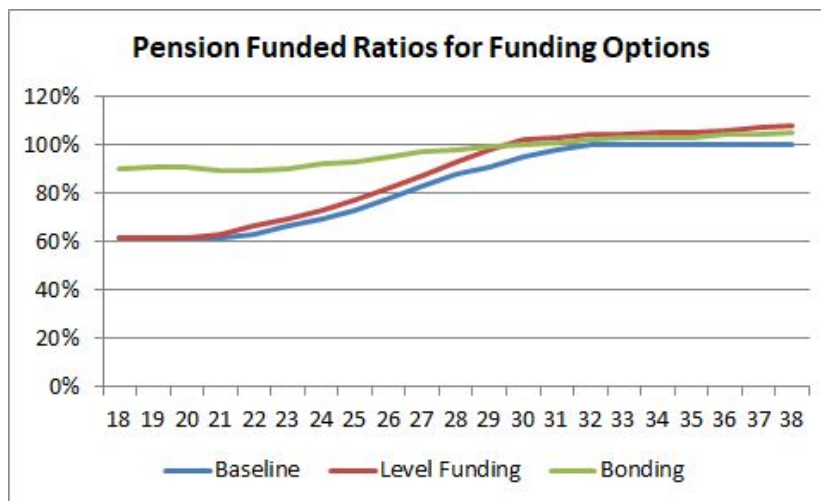
Based on the MERS ballpark estimates, and considering different debt financing options, it appears funding the pension at close to \$1.3 million per year is the least favorable approach, even though this approach is overfunding the ARC. As illustrated in the table below, funding at this level is estimated to be slightly more advantageous over the 21-year estimation period, but it is the most costly option over 5 or 10 years.

Funding Option	21-Yr Cost	10-Yr Cost	5-Yr Cost
Baseline (MERS ARC only)	13,043,196	11,619,540	5,873,508
Level Funding (\$1.3M/yr)	12,902,440	12,433,600	6,500,000
Pension Bond (5.0%)	12,722,575	12,275,899	6,224,733
Pension Bond (3.5%)	12,110,322	11,663,646	5,918,607

The above table is illustrated in the below chart.



Regardless of the interest rate the City pays on a pension bond, debt financing the unfunded liability is the lowest cost option over the long run. However, the baseline option (only paying the ARC each year) is more favorable in the 5 or 10 year timeframe. The most significant advantage of bonding is the rapid improvement in the funded ratio, as seen below. By maintaining a high funded ratio, the City avoids the risk of falling below the 60% minimum funding level required by the State. A significant change in investment returns, or a lower assumed discount rate, could easily result in underfunding in the baseline and level funding scenarios.



OPEB Funding

Other Post Employment Benefits (OPEB) often refers to retiree healthcare benefits. The City no longer offers this benefit to new employees, but it is obligated to fund the benefits promised to employees hired over many years.

The 2016 actuarial valuation of the OPEB plan identified an unfunded accrued liability of \$10.6 million. The funded ratio as of 12/31/16 was 43.3%,⁵ which is just above the State mandated level of 40% for OPEB plans. The lower funding requirement adopted by the State reflects the generally accepted belief that OPEB liabilities are secondary to pension liabilities. This is also reflected in the State mandate that pension contributions be no less than the ARC. There is no minimum annual contribution requirement by the State for OPEB benefits.

Recommendations:

A. Pension - Given the State's recent mandate to fund public pensions at 60% or better and the calculations noted in this report, the City should consider a strategy that increases its funding significantly above this level.

- It is recommended the City consider taking the necessary steps to formally consider bonding to fund the pension to 90%, assuming it is able to finance the debt at close to 3.5%. If the cost of borrowing approaches 5%, bonding may be less desirable. Paying only the ARC, or funding at the current level of about \$1.3 million per year, may risk the funded ratio falling below 60% if there are a couple of years with poor investment rates of return or a change in MERS's actuarial assumptions.
- A hybrid approach may also be an option, although this was not tested by MERS. In this option, the City could borrow \$1 million - \$2 million internally from other funds to provide a significant contribution to the pension plan in one year, and then continue funding the ARC plus the debt repayment. This approach could increase the funded ratio sufficiently to avoid any risk of falling below 60%, and it avoids the cost of borrowing associated with debt issuance. Any interest paid on the loan would be returned to the City's operations rather than be paid to an outside lender. Before moving ahead with this option, the City should request an evaluation of the impact on the ARC and funded ratio, to ensure the costs and benefits are fully understood.

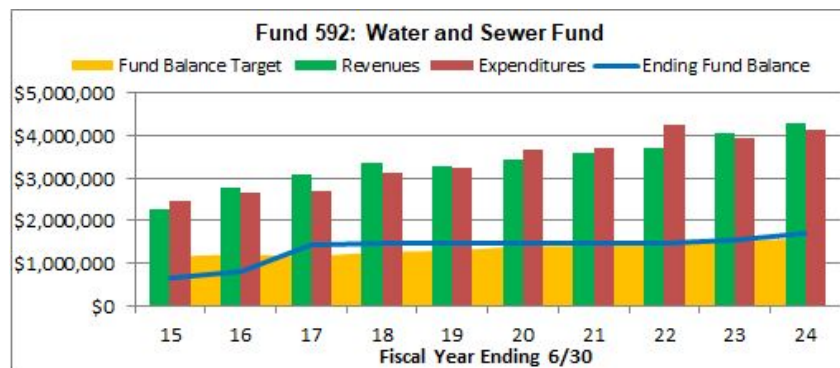
B. OPEB - Consistent with the noted principles that OPEB funding is secondary to pension liability funding, the recommended funding strategy for the City's OPEB liabilities consists of the following:

- Depending on the funding strategy the City chooses for its pension, there may be some additional dollars available to increase contributions to the OPEB trust. Establishing a policy to allocate a certain portion of any savings from annual budgeted vacancies could also boost the funding in the OPEB trust.
- As the City begins to realize lower pension costs in about 10 years, it should allocate a portion of those savings to OPEB.

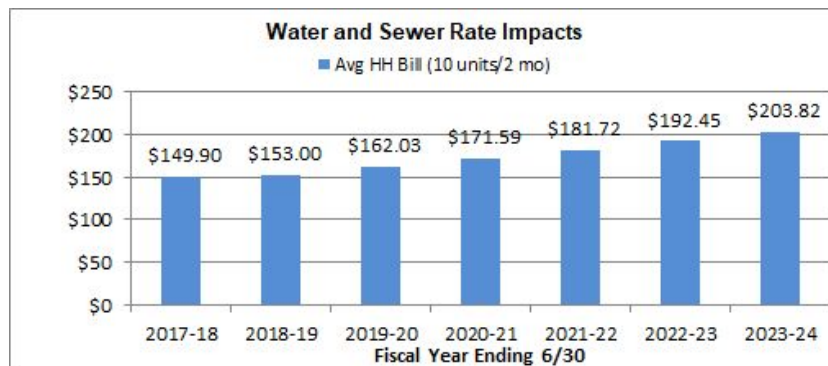
⁵ At the conclusion of this project, mid-April 2018, the City received an updated OPEB valuation, which changed the discount rate used in the calculation from 4.0% to 6.5%, which increased the OPEB plan funded ratio to 72%. The change was based on the actuary's review of performance in the investment portfolio held by MERS for the City's OPEB trust. This new information does not change the consultant's recommendations regarding OPEB funding. The higher funding ratio is further reason to consider the OPEB liability secondary to the Pension Liability for funding and focus.

4) Water/Sewer review

The consultants performed a high-level water/sewer rate analysis as part of the project. Generally, Northville has maintained its rates at a level to support the needs of the system. The system's revenue is substantially dependent on a commodity rate (a rate based on the variable amount of water used by the customer), yet a significant part of the system's costs are fixed. The financial model provides two options to calculate the rate needed to support the projected expenses of the system: a "smooth" rate, where some fund balance is consumed to smooth the rate, while maintaining a target ending fund balance in FY 2024 consistent with best practice; and a "calculated" rate, where the funding needed in each fiscal year drives the rates. Based on a five-year projection (FY 2020 – FY 2024) and using the smooth rate calculation, the estimated annual rate change needed for the system is 5.9% per year.



Based on the above noted smooth rate adjustments, the estimated average customer's bi-monthly bill would increase \$9.03 in FY 2020, \$9.56 in FY 2021, \$10.13 in FY 2022, \$10.73 in FY 2023 and \$11.37 in FY 2024.

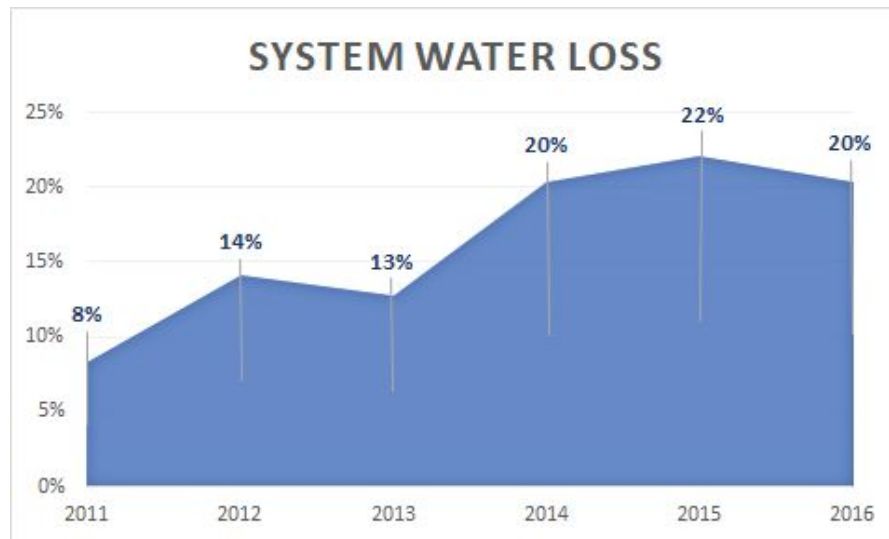


The City has maintained a water infrastructure capital project list and an aggressive sewer system maintenance program. Based on the City's current view of its water/sewer infrastructure, it is appropriate for the street infrastructure needs to guide development of the water/sewer infrastructure plan. Prior to the reconstruction of any street the City should evaluate the condition and useful life of the water/sewer infrastructure under or adjacent to the street. Based on known water infrastructure projects and the streets identified by the street infrastructure capital improvement plan,⁶ three water main replacement projects

⁶ City of Northville Municipal Pavement Management System Report, 2017 Update, Spalding DeDecker Associates, Inc.

have been included in the financial model: N. Center Street (FY 2019), River Street (FY 2019) and E. Cady Street (FY 2020).

Northville's FY 2019 budget includes an increase in its bi-monthly meter replacement charge to \$5.57 per meter. This fee is expected to be fully phased in at \$7.75 per meter during FY 2020 and generate approximately \$100,000 annually. The average remaining useful life of the customer water meters in the system is less than four years.⁷ Recent water loss data also indicates the meters may be "slowing down" (not capturing all the water passing through them), which is often a sign of aging past useful life.⁸



When evaluating a meter replacement project, a water system needs to consider if it will replace the meters and back-end software system-wide over as short a project time as possible, or introduce new meters gradually and run two back-end software systems for several years. Generally, when meters are the age of those in Northville's system and water loss is a concern, a system-wide replacement project is the preferred approach. System-wide water meter replacement programs are a major undertaking and need significant coordination and project management. This is often best accomplished through contracting with a single firm to purchase the meters, coordinate with customers and install the meters. Having one firm to hold accountable for a "turn-key" project is a substantial advantage over a project that is done by City staff.

A system-wide water meter replacement program is projected to cost about \$1,000,000.⁹ If the City utilized debt financing for the project, the annual debt service on a ten-year bond (including issuance cost) is projected to be approximately \$124,000 per year, a little more than the projected annual revenue from the City's meter replacement charge.

⁷ City of Northville Water System Reliability Study, Huron Consultants, January 2016.

⁸ Date for the years 2011, 2012, 2013 and 2014 is from the City of Northville Water System Reliability Study, Huron Consultants, January 2016; data for the years 2015 and 2016 is from the City of Northville Fiscal Year 2018 Annual Budget.

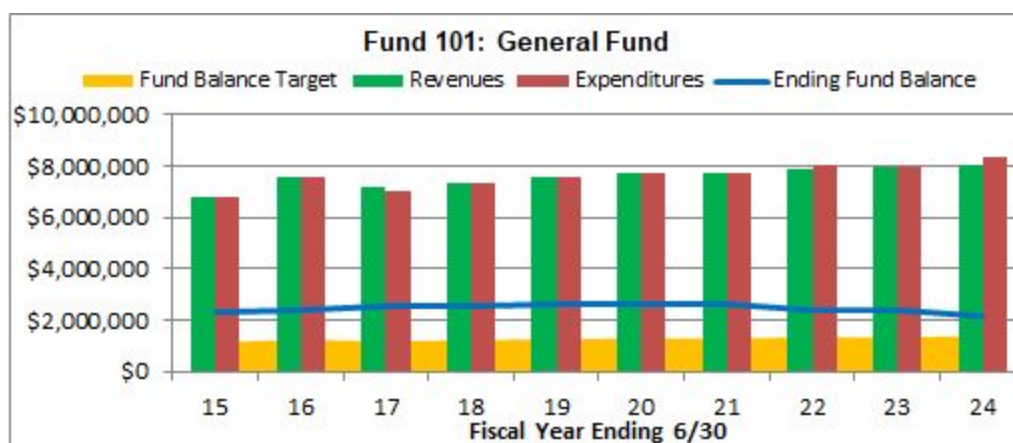
⁹ City of Northville Water System Reliability Study, Huron Consultants, January 2016.

Recommendations:

- A. It is recommended the City adjust its water/sewer rate on an annual basis, based on a five-year smoothing calculation, to avoid rates spikes for its customers. The consultants also recommend Northville perform a formal rate study, with a focus on shifting, over time, to a commodity/fixed rate that more closely matches the variable/fixed costs of the water and sewer systems.
- B. Prior to every street infrastructure project, it is recommended the City work with its public works department and consulting engineers to coordinate water/sewer infrastructure projects with the street infrastructure projects. Based on the current known capital water infrastructure projects, these projects can be funded by the Water Fund without the need for external financing.
- C. There is evidence the water system meters have reached their useful life. The City has already established a meter replacement fee, which is close to matching the cost of the annual debt service for a ten-year bond to fund a system-wide meter replacement project. It is recommended the City move forward with soliciting bids from qualified vendors to provide a “turn-key” meter replacement project. Based on the cost from the vendors and the financing terms available at the time of the project, the City should adjust its meter replacement fee to match the annual debt service of a ten-year bond (or to match an interfund loan, see Section 5, Recommendation A) to complete the project in as short amount of time as possible.

5) Use of fund balance; operational review, and capital improvement plan expenditures

The financial model has been built to include projected fund balances for all Funds and minimum fund balance targets for some Funds. Below is the General Fund graph from the financial model dashboard:



Based on the assumptions used in the base model, the City is projected to maintain a relatively stable General Fund balance through FY 2024. The reserves in the General Fund are in excess of the City's policy of two-months (16.67%) of operating expenditures. While there are no absolute requirements for minimum fund balance, the general rule is to target somewhere between 15%-30% of expenditures. If the City desires to improve its financial stability, it may increase the fund balance target to three-months (25%) of expenditures. With respect to current reserve levels, the City has sufficient reserves to meet its requirements and provide stability in the event of unfavorable economic conditions. The City may consider utilizing some of the available fund balance to support other financial goals in other funds. Loaning cash internally is discussed further in this Section. The dynamic model should be updated annually with the prior year actual revenues and expenditures and current budget, and extended one year to monitor long-term fund balance health.

Throughout the project, the consultants utilized their experience with other municipalities to review the general financial operation of the City. While this was not a comprehensive operational study, and focused on operations through the perspective of finance, the consultants have concluded the City is operating efficiently, with no "low hanging fruit" opportunities to reduce expenses or increase revenue. Based on information from the City, in 2010 the community comprehensively reviewed its operations for opportunities to become more efficient. Overall, the staff of the City has an excellent understanding of the City financials and utilizes good projection modeling tools. The only operation the consultants noted as needing more operational financial clarity was the parking operation; and staff addressed this finding immediately, during the period of this study. It appears the 2010 efforts to become more efficient were implemented and the City staff is highly capable; because of these two points, the consultants were able to focus very narrowly on the analysis and recommendations included in this report.

The financial model incorporates all of the capital improvement plans provided by the City. The City is maintaining three specific large cash balances for capital projects: (1) approximately \$700,000 in the Parking Fund; (2) approximately \$1,200,000 in the Public Improvement Fund for future renovations to Fire Station 1/Municipal Building Renovation Project; and (3) approximately \$400,000 in the Water/Sewer Fund for water main replacements.

The parking system fund balance will need to be maintained as a cash-on-hand balance in the near term. As noted in Section 6 of this report, the Downtown Development Authority is in the process of requesting proposals for a structural and maintenance review of the parking structures. Until the review is complete, the \$700,000 should remain available in case emergency repairs are identified by the report.

Depending on the timeline for the Fire Station 1/Municipal Building Renovation Project, the \$1,200,000 cash fund balance reserved for the project has the potential to be internally invested to fund other City priorities, with a payback agreement drafted between the appropriated Funds and adopted by City Council. The reserve for water main replacements could also be reallocated to help fund meter replacements, as long as the capital improvement plan does not require those funds for water main investment.

In addition to the capital reserves noted above, the City also has about \$1 million of idle cash in its Cemetery Perpetual Care Fund. This fund is intended to be the source of funding to maintain the cemetery after it is fully built out and new revenues from openings/closings, sales, etc., are no longer available. According to the City's 2018 budget report, the cemetery has 30-50 years of space available before it reaches capacity. Based on this long-term horizon, the Perpetual Care Fund will continue to increase its reserves and not require them for Cemetery maintenance for several decades. An opportunity exists to utilize this reserve to finance some other priorities of the City (pension, streets, water meters, etc.). The City could structure the interfund loan to provide a net positive benefit to the Perpetual Care Fund and the fund to which the reserves are loaned.

Recommendations:

A. As of June 30, 2018, the projected fund balance of the Public Improvement Fund is approximately \$2,500,000 (which includes the \$1,200,000 designated for the Fire Station 1/Municipal Building Renovation Project). It is recommended the City review, in detail, the timing for the planned Fire Station 1/Municipal Building Renovation Project and other capital improvements and consider if there are opportunities to provide interfund loans to fund City priorities. If there are timing opportunities, the receiving Fund can save financing costs and the Public Improvement Fund can maintain (or increase) its interest rate¹⁰ (as noted in the scenario outlined in Recommendation B below).

B. An example of internal funding would be, if it is determined the major spending associated with the Fire Station 1/Municipal Building Renovation Project will not happen in the immediate future, a portion of the \$1,200,000 fund balance could be loaned to the Water/Sewer Fund for the water meter replacement project noted in Section 4 of this report. An agreement between the Public Improvement Fund and the Water/Sewer Fund stating the terms of the loan would be prepared. Using assumed agreement terms of \$1,000,000 loan, 10 years, 2.8% interest rate, one payment per year, the schedule would look similar to:

Year	Payments from the Water/Sewer Fund	Accumulated repayments received by the Public Improvement Fund
1	116,037.09	116,037.09
2	116,037.09	232,074.19
3	116,037.09	348,111.28
4	116,037.09	464,148.37
5	116,037.09	580,185.46
6	116,037.09	696,222.56
7	116,037.09	812,259.65
8	116,037.09	928,296.74
9	116,037.09	1,044,333.84
10	116,037.09	1,160,370.93

If the timeline for the Fire Station 1/Municipal Building Renovation Project matches the above cash flow (for example, if the Fire Station 1/Municipal Building Renovation Project is intended to be completed in

¹⁰ The interest rate on a ten-year Treasury Note, as of March 1, 2018, is 2.81% <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield> . The City could set a rate based on the ten-year Treasury Note rate, plus or minus, depending on the City's goals.

phases, do the phases match against the cash flow in the repayment projection), the Water/Sewer Fund would save the costs associated with external financing and the Public Improvement Fund could earn an interest rate equal to or higher than it is currently receiving.

C. Consider a similar strategy for other idle cash identified in the Water/Sewer Fund, Cemetery Perpetual Care Fund and General Fund. If excess cash is not needed for specific purposes over a 5-10 year period, the City could utilize internal borrowing to optimize the value of its internal resources and avoid debt issuance costs and interest payments to external lenders.

6) Review of the parking system

The City of Northville has a well-developed parking system, providing approximately 2,160 parking spaces in public surface lots, a total of 350 spaces in two parking structures and over 350 marked on-street spaces. Most of the parking is located in the City's Downtown Development Authority (DDA) district. The DDA provides a significant contribution to the City for the operational and maintenance costs of the parking system (for FY 2018 the DDA's projected contribution is \$110,650 which is 15% of the DDA's total annual revenue). In addition to the DDA's contribution, the FY 2018 budget includes \$9,210 from the General Fund to fund the parking system. The Parking Fund has a fund balance of just over \$700,000 (FY 2018).

The DDA has recently issued a request for proposal to firms specializing in assessing the structural integrity and maintenance requirements of parking structures. At the conclusion of that project, the DDA anticipates it will receive a multi-year maintenance and capital improvement plan (CIP) for the parking structures. Once the CIP is complete, the City and DDA will be able to better understand the fund balance available to maintain and operate the parking system and will be able to better project the future cash needs of parking system.

The State of Michigan provides cities with very few options to raise revenue to fund public services. Parking enterprises can generate revenue to be self-sustaining operations and to invest in economic development or other priorities of the community. As part of this project the consultants developed a high-level financial proforma to provide the City and DDA with a tool to test under what assumptions the parking system could generate enough income to be self-sustaining. The proforma includes options for a fee to the customer (parking meters); new special assessments; and additional contribution from the DDA and/or the City.

The consultants reviewed the 2006 Parking Analysis of the DDA district, the DDA's updated parking utilization counts, recent City budget documents and met with the DDA Executive Director to develop assumptions to include in a base parking proforma. The City and DDA can change assumptions, fee estimates, special assessments, additional contributions, cost projections and system management policies in the Excel tool in order to test different scenarios.

The Northville parking system has been developed as a “free for the user” system. While the City has utilized special assessments (to fund the construction of the parking structures); offered overnight parking permits for a fee and collected fees associated with a payment-in-lieu of providing on-site parking program; it has not charged the day-to-day consumers of the parking spaces. Consideration of changing from a “free parking” system to “fee parking” system, installing parking meters or creating new special assessments, are major policy decisions to be considered comprehensively and inclusively with all stakeholders. Process, timing, marketing and implementation should be given weight along with the financial implications of a change.

Recommendations:

- A. During the project, the consultants observed that revenue and expenses related to parking were in multiple parts of the City budget. In order to develop a comprehensive understanding of the cost (and revenue potential) of the Northville parking system it is very important to consolidate all parking related revenue/expenses into one Fund or sub-fund.¹¹
- B. The City and DDA should carefully review the data and assumptions in the parking proforma and consider the financial and non-financial impacts of a customer fee parking system, special assessments and additional DDA/City contributions. Initial review of the data indicates the parking system could be financially self-sufficient with the implementation of a customer fee.
- C. In addition to developing a CIP plan for the parking structures, the DDA should engage an engineering firm to provide a multi-year CIP plan for every off-street parking lot. Information from the two reports can then be used to project CIP funding needs for the parking system.

7) Other Observations

Throughout the project the consultants noted several suggestions and/or opportunities for the City to consider, outside of the scope of the project. It is recognized that some of these suggestions may not be viable, but they should at minimum be kept in mind for future consideration.

- A. Funding options noted, but not reviewed in detail:
 - Consider increasing fees for services. As part of its budget process the City should review all fees every year to make sure they are covering the appropriate costs. Maintaining fees at the appropriate level should be part of the annual budget process.
 - Though the City recently considered its Cemetery fees, this is a cost center that should be closely monitored, including benchmarking the fees of other comparable cemeteries every three years.

¹¹ The City has already implemented this recommendation and will be utilizing single Fund (Fund #230) to account for the revenue/expenses of the parking system starting in FY19.

- Study the opportunity to levy a stormwater drainage district charge to fund a stormwater utility. By providing funding for stormwater infrastructure maintenance through a separate funding source the City could avoid utilizing resources from the Streets and General funds and allow those dollars to be allocated to other priorities.
- Review all cost associated with each special event and consider a policy to charge event holders a cost recovery fee.
- If General Fund funding is significantly negatively impacted, consider the use of special assessments to fund public safety and/or infrastructure projects.

B. Cost reductions noted, but not reviewed in detail:

- Consider partnering with a third party for city lighting improvements and energy cost reductions. Several programs are available for the City to consider; the consultants provided information for one that will reduce the City's expenditure on lighting by changing to more energy efficient lighting fixtures at no cost to the City.
- Review any opportunities to increase the number of partners in the dispatch operation. Furthermore, annually review the cost sharing agreement to make sure that it continues to be advantageous to the City.

C. Potential economic development projects:

- The consultants were made aware of several potential economic development opportunities, both large and at the individual lot level. At the time of this report none were certain enough to adjust the assumptions and projections used. The Excel based financial model and parking proforma should be flexible enough for the City to use to project the impact of both incremental and large economic development opportunities. The redevelopment of the Northville Downs property would have a tremendous impact on nearly every component of this report, specifically the General Fund operating revenue and expense; funding available for street improvement; water/sewer revenue and system needs; and parking. If a redevelopment of the Downs project comes to fruition, it is important the City adjust the assumptions used in this report to account for the impact it will have on the future projections.

D. Evaluation of current and potential debt:

- Based on the State limitation on municipal debt capacity, the City is limited to 10% of its total property valuation; Northville has a debt capacity of about \$37 million. Current outstanding debt is about \$1.5 million. If the City opts to bond for the full \$3.5 million in extra street improvements, and bonds just over \$6.5 million for pension funding, the total debt would be about 30% of the maximum allowable.
- The two potential bond issues proposed by the consultants have relatively short repayment periods (10 years). In the instance of pension bonds, the bond proceeds would offset another liability (unfunded pension) on the balance sheet. The pension bond also allows the City to borrow at a low rate (3.5%) and invest it at a higher rate (7.75%).

IV. Conclusion

The City has a number of financial demands, and a range of funding options to satisfy some or all of those demands. In considering which demands to fund and how to fund them, the City must consider how it can optimize its choices to provide the biggest benefit to taxpayers. Based on our review of the City's finances and in summary of the recommendation included in this report, we have concluded the following strategies may be the most efficient use of City resources. The recommendations outlined below are not competing uses of funds, rather each recommendation is not mutually exclusive and can be funded as outlined without impacting other options.

- The General Fund and Street Improvement Fund are estimated to have sufficient revenues for several years, before declining property tax revenues begin to negatively impact operations. A millage override should be approved before the point of critical need, to ensure operations can continue uninterrupted.
- Continue funding street improvements annually at a level of \$500,000, using proceeds from the Street Improvement Millage. Invest \$3.5 million extra in street improvements in FYs 2020 and 2021. Use \$1 million of cash reserves in the Street Improvement Fund and seek voter approval for a Street Debt Millage to fund the remaining \$2.5 million. The impact on taxpayers is estimated to be at most 0.84 mills, and limited to 10 years. This strategy is expected to raise the condition of the City's streets above the critical condition point, which will allow the City to save money on street maintenance in future years.
- Increase contributions to the MERS pension system, to achieve a funded ratio well clear of the 60% required by the State.
 - Further explore the option of using bond proceeds to achieve 90% funded ratio. This strategy works best if the interest rate on the bond is close to 3.5%. At this level of debt cost, bonding would provide a more certain path to achieving full funding, avoid any risk of falling below 60%, and the costs are only slightly more than just funding the ARC each year. A hybrid approach may also be an option, although this was not tested by MERS; whereby the City internally borrows funds from the Cemetery Perpetual Care Fund to provide a significant contribution to the pension plan in one year to improve the funding ratio, and then continue funding the ARC plus the debt repayment.
- Use internal lending to finance the water meter replacement program. The City could borrow from reserves in the Water/Sewer Fund, as well as some General Fund reserves. Again, this approach allows the City to save on financing costs and keep any interest earnings internally.

- Evaluate the option of implementing a self-sustaining fee-based parking system. This could free up funding in the DDA and the General Fund, and ensure funds are available when needed for necessary capital improvements and maintenance. This recommendation must be considered with particular sensitivity to all stakeholders.
- In about 10 years, the City is expected to realize significant savings in its contribution requirements to the pension plan. If the OPEB funding is sufficient at that time, the City could have \$500,000 - \$1 million available to spend on other priorities. The timing of the cost reduction in retiree benefits funding coincides with the final year of the street debt millage. At that time, the City may elect to redirect additional resources to further street improvements, to raise the OCI even higher, fund OPEB liabilities or address future City priorities.