

STATE OF INDIANA  
INDIANA UTILITY REGULATORY COMMISSION

PETITION OF THE CITY OF FORT  
WAYNE, INDIANA, FOR AUTHORITY  
TO ISSUE LONG-TERM DEBT TO  
FINANCE WATER SYSTEM  
IMPROVEMENTS AND TO ADJUST  
ITS RATES AND CHARGES FOR  
WATER SERVICE.

CAUSE NO.  
45125

Verified Direct Testimony and Attachments of

**Michael P. Gorman**

On behalf of

**General Motors LLC**

October 30, 2018



# STATE OF INDIANA

# INDIANA UTILITY REGULATORY COMMISSION

**PETITION OF THE CITY OF FORT WAYNE, INDIANA, FOR AUTHORITY TO ISSUE LONG-TERM DEBT TO FINANCE WATER SYSTEM IMPROVEMENTS AND TO ADJUST ITS RATES AND CHARGES FOR WATER SERVICE.**

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**INDIANA UTILITY REGULATORY COMMISSION**

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**CAUSE NO.**  
**45125**

**Verified Direct Testimony of Michael P. Gorman**

1    **Q     PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2    A     Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,  
3           Chesterfield, MO 63017.

4    **Q     WHAT IS YOUR OCCUPATION?**

5    A     I am a consultant in the field of public utility regulation and a Managing Principal of  
6           Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

7    **Q     PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

8    A     This information is provided in Appendix A to this testimony.

9    **Q     ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

10   A     I am testifying on behalf of General Motors LLC ("GM"). GM receives water service at  
11           its truck assembly plant from the Fort Wayne Municipal Water Utility ("Fort Wayne" or  
12           "City") and purchases a substantial amount of water from the water utility.

**Q PLEASE SUMMARIZE YOUR RESULTS AND RECOMMENDATIONS.**

**A** My testimony outlines several adjustments to Fort Wayne's proposed water rate increase that it proposes to implement in five steps, over a five-year (2019-2023) period. My recommendations are set forth as follows:

1. Fort Wayne's proposal to increase revenues by \$15.6 million over the five-step period should be adjusted to a more reasonable and cost-effective level.
2. I recommend a five-step revenue increase of no more than \$9.8 million. This amount should further be reduced by new revenue for a new customer, a Walmart milk processing plant, that was identified by the City but has not yet been reflected in the estimated revenue deficiency. Based on its responses to discovery, I understand that the City has agreed to make this adjustment to its filing.

I recommend the Commission direct Fort Wayne to supplement its filings to estimate the annual normal revenue from the new Walmart milk processing plant that started taking service in 2018. This additional revenue should be included as revenue at current rates, and used to reduce the claimed revenue deficiency.

3. I propose two adjustments to reduce the revenue requirement. First, I recommend a moderate modification to the last two years of the City's five-year Capital Improvement Program ("CIP"). The adjustment I propose to the City's capital program relates to the City's proposal to significantly scale up its annual spend on infrastructure main replacements. The City's CIP includes a proposal to materially increase the "pace" of main replacements. Specifically, the City's CIP targets 15 miles of main replacement per year, which is over a 54% increase from the current pace of replacing 9 miles of main per year. Indeed, toward year 4, the pace is increased beyond 15 miles per year. The current 9 miles/year pace for main replacement was reflected in the City's last rate case.

Importantly, this substantial increase in annual main replacement spend is layered on top of substantial non-recurring capital improvements the City proposes to make for Water Filtration plant improvements. For the reasons outlined below, this overlapping of two concurrent major capital programs produces significant cost burdens on customers over the proposed five-step annual increases, and does not appear to reflect adequate consideration for the impact on customers' rates to achieve this necessary infrastructure modernization. Accordingly, for years 2022 and 2023, I recommend that the City modify its main replacement goal to a goal of 15 miles of main per year, rather than its current proposal of replacing more than 15 miles in those years.

A second adjustment I propose is to more accurately align the City's composite debt service coverage annual cost with the life of the assets that underlie its new CIP. Based on the City's proposed debt service structure of a proposed new 2019 bond issue of \$41 million and a 2022 bond issue of \$44.6 million, the City's debt service schedule will be highly skewed for higher debt service costs during the period 2019-2032. This proposed composite debt service structure will

1 substantially increase costs to retail customers over the first 13 years and require  
2 those customers to largely pay for water filtration plant improvements, and main  
3 replacement programs that have economic lives in the range of 30 to 60 years,  
4 and in some cases longer. The proposed structuring of the City's composite debt  
5 service coverage creates intergenerational inequities by overcharging customers  
6 over the next 13 years, for facilities that will be used to provide service to  
7 customers over the next 30 to 60 years. The City's proposed layering of new debt  
8 service to support the ongoing capital program simply does not reasonably  
9 balance the cost of the new infrastructure investments with the expected useful  
10 life of the updated infrastructures.

11 4. I also show that my recommended reduced revenue requirement will support a  
12 very large CIP, and maintain adequate financial integrity for the City such that it  
13 will support continued access to external debt capital markets and will maintain  
14 strong credit standing for the City water utility.

15 5. Finally, I respond to the City's proposal to allocate its rate increase. The City  
16 proposes to implement its rate increase on an across-the-board basis, with all  
17 customers receiving an increase of approximately 33% over the next five years,  
18 except Outside City customers (who will receive an increase of approximately  
19 27%). The City has not conducted a class cost of service study, nor has it  
20 considered cost-causation principles in offering this proposal.

21 I recommend modifying the allocation in this case to better align the increased  
22 costs with the drivers of the need for the rate increase. Specifically, a large  
23 portion of the main replacement programs are for small mains, which do not serve  
24 large customers like GM. Accordingly, I recommend a below-system-average  
25 increase for customers served from 10 inches or larger meters. To accomplish  
26 this, I propose a larger increase to the volumetric pricing structures for volume  
27 rate blocks 1 and 2, and a below-system-average increase for the third volumetric  
28 rate block.

## 29 I. MODIFICATIONS TO CIP

30 **Q PLEASE PROVIDE AN OVERVIEW OF YOUR PROPOSED MODIFICATIONS TO**  
31 **THE CIP.**

32 **A** I recommend two changes to the CIP. First, I recommend adjusting the CIP to reflect  
33 a modification in the pace of annual main replacements. To accomplish this, I limit  
34 the CIP investments for main replacements to approximately \$15 million to \$19 million  
35 per year, rather than substantially scaling up the main replacement cost in Steps 4  
36 and 5 as reflected in the City's filing. I believe moderation in a scale-up of main

1 replacement will ensure that the CIP can be implemented effectively, and  
2 economically, without placing at risk ratepayer money if there is a limit to  
3 cost-effective pace of main replacement.

4 Second, I recommend modifying the proposed debt service cost structure of  
5 the 2019 bond issue to delay (or limit to the extent possible) principal payments until  
6 after the first 10 years of the capital program, which would have the effect of  
7 levelizing debt service cost over approximately the next 13 years.

8 **Q HAVE YOU DEVELOPED A SCHEDULE SHOWING YOUR PROPOSED CHANGE**  
9 **IN THE CIP AND THE RESULTING REVENUE REQUIREMENT IMPACTS BASED**  
10 **ON YOUR ADJUSTMENTS TO THE CITY'S COST OF SERVICE FOR ITS WATER**  
11 **OPERATIONS OVER THE FIVE-STEP INCREASE?**

12 A Yes. This is outlined on my Attachment MPG-1. On this schedule, I relied on the  
13 City's spreadsheet analysis of its proposed cost of service study<sup>1</sup> but I made the two  
14 adjustments discussed above.

15 **I.A. Modifications to Main Replacement Program**

16 **Q PLEASE DESCRIBE THE CITY'S PROPOSED CIP AS SUPPORTED IN ITS RATE**  
17 **FILING IN THIS PROCEEDING.**

18 A A copy of the City's proposed CIP is provided in my Attachment MPG-2. As shown in  
19 Attachment MPG-2, the City's five-year CIP totals approximately \$160.0 million, and  
20 includes significant capital expenditures for filtration plant improvements, with all  
21 water dam and reservation improvements, distribution pumping and storage,

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<sup>1</sup>The use of cost of service study in my testimony refers to my Attachment MPG-1, and reflects the proposed revenue requirement that covers the City's proposed cost of serving its customers. This study is distinguishable from a "class" cost of service study that assigns the revenue requirement across various rate classes of customers based on the cost to serve those classes.

1 distribution system (main replacement), and general water maintenance. With my  
2 proposed change, the CIP spend over this five-year period is reduced to \$142 million.

3 **Q WHAT ADJUSTMENTS DO YOU PROPOSE TO MAKE TO THE CITY'S CIP?**

4 A My adjustment largely relates to the City's proposal to substantially increase annual  
5 spend in main replacement programs during the next five-year period. The City's  
6 current plan is to replace its aging main infrastructure by approximately nine miles of  
7 mains per year. The City proposes to increase this pace of main replacement to  
8 15 miles per year in this general rate case by a phase-in of main replacements from  
9 14 miles per year in the first two steps, 15 miles per year by year 3, and more than 15  
10 miles per year in the last two annual periods.<sup>2</sup> This phase-in of the ramp-up in capital  
11 improvements was reflected by the City in its capital improvement budget by a line  
12 item that stated "deferred main replacement," which reduced or increased annual  
13 capital spend from the 15 miles/year pace.

14 As shown on my Attachment MPG-2, in the bottom frame, I outline my  
15 proposed adjustment to the City's capital program. I do not make any adjustments to  
16 the capital program during the first three years, but reduce the annual capital program  
17 for main replacements in years 4 and 5. In those years, the City again substantially  
18 increases the annual cost of main replacement from around \$15 million to \$17 million  
19 a year, up to \$26 million and \$22 million per year, respectively. The City simply has  
20 not justified an increase in main replacement in 2022 and 2023 at this significant  
21 level. The City's testimony outlines that its plan is to replace mains at a pace of  
22 approximately 15 miles per year. The average spend during 2019-2021 in the City's  
23 budget suggests this can be accomplished at a cost of \$15-19 million per year, before

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<sup>2</sup>See Schipper Direct at 16-17.

1        deferrals. Thus, the City's proposed CIP spend in 2022 and 2023 is approximately  
2        \$13 million more than necessary to maintain this 15-mile per year pace in 2019-2021.

3                As a means of mitigating impact on customers, while managing annual capital  
4        spend budget for infrastructure modernization, I recommend the Commission  
5        moderate the City's planned spend in 2022 and 2023 to maintain the already  
6        aggressive increase in main replacement capital improvements budgeted in 2019-  
7        2021. As such, I recommend reducing capital spend for distribution main investments  
8        by approximately \$8 million in 2022, and \$5 million in 2023. This will lower the five-  
9        year main replacement budget from around \$103 million as proposed by the City,  
10       down to \$90 million with this adjustment.

11    **Q        HOW DOES YOUR ALTERNATIVE CIP PLAN IMPACT THE CITY'S PROPOSED**  
12       **BUILDOUT OF INFRASTRUCTURE MODERNIZATION, IMPACT ON**  
13       **CUSTOMERS' RATES, AND SUPPORT FOR THE UTILITY'S FINANCIAL**  
14       **INTEGRITY AND ACCESS TO EXTERNAL CAPITAL?**

15    **A** As explained above, under this alternative plan, the City's significant increase in  
16       annual CIP spending was not modified in 2019-2021. However, I did modify the  
17       proposed capital expenditures in 2022 and 2023. In these years, the City's capital  
18       expenditures for distribution main replacement increased from around \$15 million to  
19       \$17 million, up to about \$26 million per year. This increase is on top of the City's  
20       already large increase to accelerate main replacement of 15 miles per year from the  
21       currently approved 9 miles per year.

22                Also, the City funds its CIP over this five-year period with approximately 49%  
23       rate revenue funding, and 51% bond funding. More importantly, the City's debt



1 service coverage ratio over this time period, a measure of financial integrity and credit  
2 standing, is a very strong 1.7x to over 2.0x over this five-year period.

3 For these reasons, my proposal would support a substantial increase in the  
4 City's CIP, including its proposal to increase the pace of main replacements, but in a  
5 manner that produces significantly less rate impact on customers, while still  
6 maintaining the financial integrity of the utility during this five-year rate period.

7 **Q WHY DO YOU BELIEVE IT IS APPROPRIATE TO MODIFY THE CITY'S REVENUE**  
8 **REQUIREMENT TO SUPPORT A LOWER AND SLOWER INCREASE TO THE**  
9 **PACE OF MAIN REPLACEMENTS?**

10 **A** I want to first state that I am not objecting to the City's plan to replace mains as a  
11 general concept. The City is intending to replace largely end-of-life mains that are in  
12 need of replacement. Replacing the mains will improve public safety by reducing risk  
13 of outages during fire events, and improve the efficiency of the system by eliminating  
14 leaks (cost savings) and minimizing service interruptions (improved revenue stability).  
15 However, while all of these are objectives that should be supported, these objectives  
16 should be implemented in a manner that more effectively manages rate impacts on  
17 the City's water customers.

18 With a retail rate impact on customers in mind, I recommend a managed pace  
19 for main replacements. The City's current main replacement pace of nine miles per  
20 year should be gradually increased over the next five years up to 15 miles per year,  
21 before any additional increase in the pace can be considered. Accordingly, the  
22 aggressive increase in 2019-2022 should not be again aggressively increased in  
23 2022 and 2023. Instead, I propose to maintain approximately the same level of main  
24 replacement investments in 2022 and 2023 as that planned for the third year of the

1 main replacement program. This level of main replacements will still allow for  
2 approximately \$90 million of main replacements over the five-year period, or an  
3 annual average spend of approximately \$18.0 million per year. This is clearly a  
4 significant increase in the annual main replacement spend relative to the last  
5 proceeding.

6 After this five-year period, if the City can show that it can effectively manage  
7 this significant increase in the pace of main replacements, then after 2023 it can  
8 request to further accelerate the pace of main replacements, if the City can maintain  
9 cost and quality control so it can manage rate affordability for its customers.  
10 However, to the extent there is a limit in the pace of cost efficiently replacing mains  
11 each year, then the City should be directed to adjust its main replacement pace to  
12 achieve a level that ensures an efficient and cost-effective CIP. This will protect  
13 customers from excessive costs.

14 **Q WHY DO YOU THINK THE CITY SHOULD BE REQUIRED TO JUSTIFY THAT IT**  
15 **CAN EFFECTIVELY MANAGE SUCH A LARGE INCREASE IN MAIN**  
16 **REPLACEMENT BEFORE THE COMMISSION APPROVES ANY FURTHER**  
17 **INCREASES IN MAIN REPLACEMENT IN FUTURE PROCEEDINGS?**

18 **A** I believe an effective oversight of main replacement is required, to ensure customers'  
19 dollars are managed effectively and infrastructure is replaced and upgraded properly  
20 for the following reasons:

21 First, the City must be able to determine whether or not it can effectively  
22 manage an increased pace of main replacement. Increasing the annual pace of main  
23 replacement will place greater demands on Fort Wayne's engineering expertise, labor  
24 and contract personnel. There needs to be clear evidence that the City can manage

1 a material increase to the annual pace of main replacements, without straining its  
2 supply of qualified engineering expertise, internal labor, and contract labor. This limit  
3 to the pace of main replacement is necessary to protect customers from excess costs  
4 if an overly aggressive pace for annual main replacement cannot be efficiently  
5 managed.

6 A phased up approach in the main replacement pace will allow Fort Wayne to  
7 increase its internal resources (engineering and contract or management) and  
8 external contract support to test their ability to efficiently accomplish this expanded  
9 pace of main replacement while continuing to manage CIP costs.

10 Second, the City also has a combination of abnormally large capital  
11 investments in both water filtration and main replacements. At the end of the five-  
12 year period, the City will have accomplished many of the near-term planned major  
13 capital improvements on filtration plant. After this is accomplished, the City can then  
14 (again) direct more of its resources to expanding the pace of main replacement,  
15 without substantially increasing its cost of service.

16 This phase-in is certainly relevant in recognizing that of the \$162 million  
17 capital improvement, approximately \$38 million is for filtration plant improvement and  
18 \$103 million is for distribution main replacement. Once the non-recurring annual  
19 improvements to water filtration are completed, the City can divert these capital  
20 resources to further accelerated main replacements, to pursue and manage a faster  
21 pace of main replacement, if the City later proves a pace of 15 miles per year, or  
22 more, can be implemented effectively and cost efficiently. This will produce a more  
23 reasonable cost to its customers, and ensure customer interests are protected.

**I.B. Debt Service Modification**

**Q PLEASE DESCRIBE THE CITY'S PROPOSAL FOR DEBT SERVICE COST.**

A The combination of the City's modification to its consolidated debt ratio is outlined at page 18 of City witness Eric Walsh's testimony, a copy of which is outlined on my Attachment MPG-3, page 1. As shown on that schedule, the City proposes a \$41 million 2019 bond issue and a \$44.6 million 2022 bond issue. The City's proposal would increase debt service starting in 2019-2034 by the combination of these two new debt issuances, along with reduced debt service on embedded debt service requirements. In effect, the City has a debt service requirement in 2018 of about \$12.2 million that increases to over \$13 million with the 2019 bond issue, and over \$16 million with the 2022 bond issue staying at this level until around the year 2032. After that, the consolidated debt service coverage requirement decreases to about \$6.5 million by 2035.

**Q HOW WOULD YOUR PROPOSED MODIFICATIONS TO THE CITY'S CONSOLIDATED DEBT SERVICE BE IMPACTED BY YOUR PROPOSED RESTRUCTURING OF THE 2019 BOND DEBT SERVICE?**

A This is also shown on my Attachment MPG-3, pages 2 and 3. As shown on this schedule, I delay principal payments under the 2019 bond issue until after 2033. From this period, through the end of the 30-year life, principal payments are fully made. However, from the initial time of the bond issue in 2019 up until 2033, the debt service is based on only interest payments from the 2019 bond series.<sup>3</sup> As shown on Attachment MPG-3, page 2, this levelizes the consolidated debt service over the City

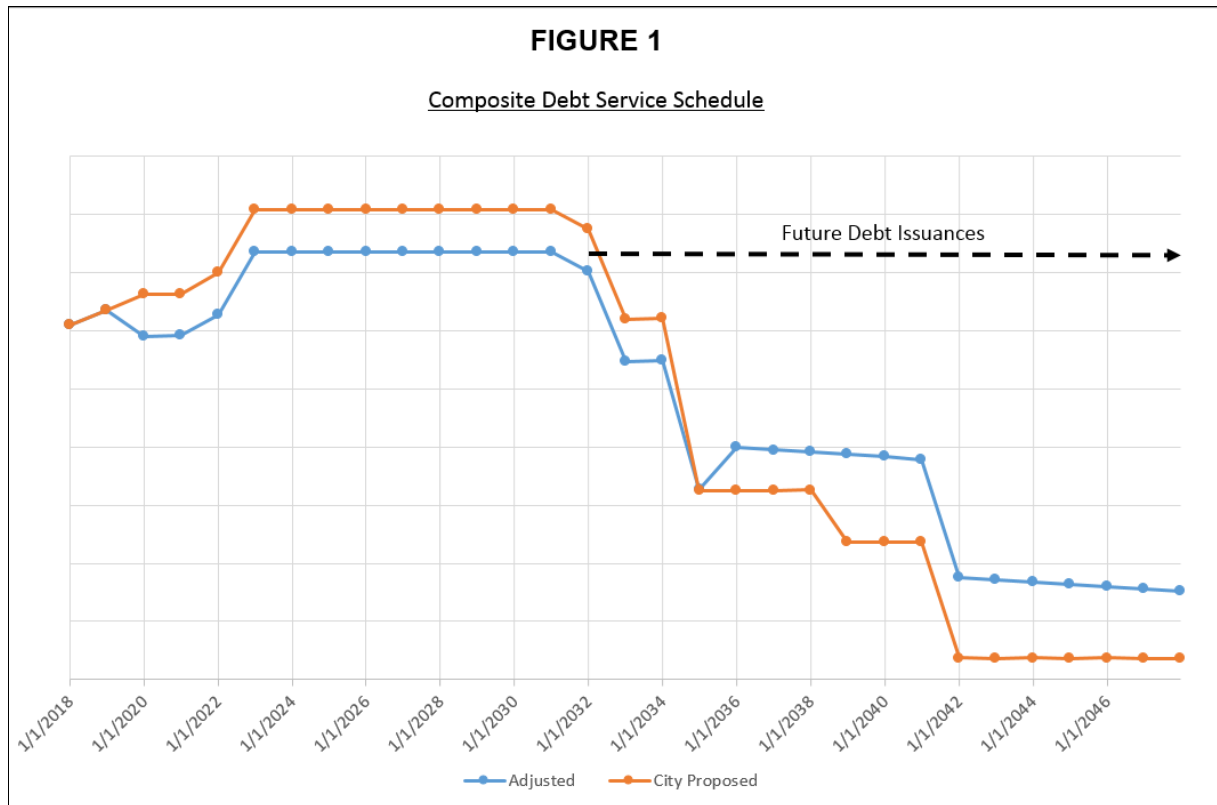
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<sup>3</sup>This debt service structure can be accomplished in several ways, including specific contractual provisions with a lender on principal payments, or combining a series of debt issues, initially a sinking fund provision with a maturity 10 years out, after which it can be refinanced with a declining balance type loan such as an SRF financing.

at a much lower level, but still provides significant opportunity to issue additional bonds later, to increase debt service after 2033, and to later extend the debt service schedule of the City beyond 2046.

**Q PLEASE DESCRIBE YOUR PROPOSED ADJUSTMENT TO THE CITY'S ANNUAL CONSOLIDATED DEBT SERVICE COSTS.**

**A** A graphical comparison of the City's proposed composite debt service structure, and my revised debt service structure, is shown below in Figure 1.



As shown in the figure above, the City's composite debt service structure can be reduced significantly over the next 13 years (2019-2032), by restructuring the principal payments for the 2019 and possibly the proposed 2022 bond issuance, to reduce the City's annual composite debt service cost during the period 2019-2032, and increase it later, the remaining period of 2033-2046, to accommodate an ongoing

1 CIP program. For future bond issues to support the continued improvement in main  
2 and distribution plant infrastructure modernization, the City's composite debt service  
3 will start to substantially decrease after year 2033, which will allow the City to issue  
4 additional bonds to be sold after the five-step CIP proposal in this case, and layer the  
5 new debt service cost on its composite debt service cost to increase debt service  
6 after 2033 and to further extend its debt maturity schedule later. This will levelize and  
7 extend debt service toward the expected useful life of the new water infrastructure  
8 expected economic life, and create rate equity across generations of customers.

9 This adjustment effectively lowered the increase in the consolidated debt  
10 service coverage ratio by the principal payment of the 2019 bond issue by  
11 approximately \$1.45 million over the five-year rate period.

12 **Q WILL THE INTEREST RATE ON THE 2019 BOND BE IMPACTED BY THIS DEBT**  
13 **SERVICE WRAPPED PROPOSAL?**

14 A Yes. Delaying the principal payments on the 2019 bond issue may increase the  
15 interest rates because it will increase the average maturity of the bond. However,  
16 there are other factors that may reduce the interest expense for the CIP in this five-  
17 step increase. The City has indicated it proposes a true-up mechanism to adjust  
18 rates to reflect its actual debt interest based on bonds issued after these bond  
19 interest rates are known and measurable. Hence, I have not changed the interest  
20 rate in this plan recognizing that the actual interest expense will be reconciled and  
21 trued up.

22 However, I believe my estimates are still reasonable because there are  
23 several opportunities for reduced interest expense based on the City's five-year CIP.  
24 Those opportunities include the following:

1. The City has acknowledged in response to OUCC data request No. 10 (Q10-12) that for lead line replacements, it may be able to receive state revolving funds at 0% interest rates for residential service line replacements.
2. The 2022 bond issue may be overstated because it is based on a 20-year public bond market, as opposed to a lower cost SRF funding mechanism. Further, the 2022 bond issue may be able to be issued at a lower interest rate or comparable interest rate but with a term of 30 to 35 years rather than 20 years. This will lower the debt service cost of the 2022 bond issue.
3. There may be opportunities for grants or other zero cost funding mechanisms to supplement the City's CIP budget over the next five years, which could reduce the interest expense included in cost of service in this case.

All of this indicates that there is a lot of uncertainty about what the actual interest expense will be to accomplish the CIP, as proposed by the City, or as modified as I recommend here. However, the City's proposal to reconcile debt interest expense will ensure that rates reflect its actual reasonable and prudent cost of interest to fund the CIP.

**Q UNDER YOUR REVISED CAPITAL PLAN AND DEBT SERVICE STRUCTURE, HOW WILL THE MIX OF RATE REVENUE FUNDING AND BOND FUNDING OF THE CITY'S PROPOSED FIVE-YEAR CAPITAL PROGRAM CHANGE?**

A Under my proposal, I am not changing the principal amount of debt proposed to be used for the 2019 and 2022 bond issue. The City proposed to issue around \$41 million in bonds in 2019, and \$44.6 million of bonds in 2022. Although the full amount of the 2022 bond may not be spent by the end of the year five under my proposal, I have included the debt service of those two bond issues in my capital improvement funding plan. However, with this change there is not a significant change to the amount of rate revenue versus bond funding of the CIP under my proposal compared to that of the City. This is illustrated in Table 1 below.

TABLE 1				
<u>CIP Funding Source</u> (\$ Millions)				
<u>Description</u>	<u>City</u>		<u>Adj.</u>	
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>
Rate Revenue	\$77	48%	\$69	49%
Bond Funding	\$82	51%	\$72	50%
TIF/Loan	<u>\$1</u>	<u>1%</u>	<u>\$1</u>	<u>1%</u>
Total	\$160	100%	\$142	100%

1           As shown in the table above, under the City's plan it intended to fund  
2 approximately 52% of its CIP with bond funds and 48% with rate revenue funding.  
3 Under my reduced revenue requirement, I reduced the amount of rate revenue  
4 funding, while leaving the bond funding as proposed. This results in a CIP funding  
5 mix of approximately 51% bonds and 49% rate revenue funding.

6           But more importantly, under my proposed funding scheme of less rate  
7 revenue funding, the City's debt service coverage ratio ranges from 1.7x to over 2.0x  
8 over the five-year period. This level of debt service coverage ratio ensures that the  
9 City will have adequate revenues to ensure a firm ability to make debt service  
10 payments, which will maintain its credit standing and access to capital. All of this is  
11 accomplished, however, while reducing the impact on retail customers.



**II. PROPOSED REVENUE SPREAD**

**Q HOW IS THE CITY PROPOSING TO SPREAD THE REVENUE DEFICIENCY ACROSS RATE CLASSES IN THIS PROCEEDING?**

**A** The City is proposing an equalized percent change to all rate elements for inside City customers and outside City customers. The City's proposed rate spread across all rate elements is shown in Table 2 below.

<b>TABLE 2</b>		
<b><u>Proposed Revenue Spread</u></b>		
<b><u>Year</u></b>	<b><u>Inside City</u></b>	<b><u>Outside City</u></b>
1	5.93%	4.79%
2	5.92%	4.91%
3	5.89%	5.16%
4	5.85%	4.83%
5	5.90%	4.90%

**Q DO YOU BELIEVE THAT THE CITY'S PROPOSAL FOR AN EQUAL SPREAD TO ALL RATE ELEMENTS FOR INSIDE AND OUTSIDE CITY CUSTOMERS IS REASONABLE?**

**A** No. The City has not proposed a class cost of service study in this case to support its allocation of increased revenue necessary for infrastructure replacement and other costs. As such, the City has not made a reasonable effort to identify the most equitable way of adjusting rates to reflect increased cost of providing service to customers. Indeed, adjusting rates to reflect cost of service by customer classes is the most equitable way of adjusting customers' rates. Further, cost-based rates are not only equitable across rate classes but provide more accurate price signals to customers so they can make informed consumption decisions about the cost of

1 receiving utility service. As a result, they can make conservation investments, and  
2 behavioral decisions to reduce their utility bills. Cost-based price signals allow  
3 customers to make economic consumption decisions. Without this cost-based price  
4 signal, the utility system's planning and customer economic decisions are not based  
5 on economics but rather can be skewed by unjustified subsidies imposed across rate  
6 classes which do not encourage economic consumption behavior.

7 **Q DO YOU BELIEVE THAT THERE IS A COST-BASED METHOD OF ALLOCATING**  
8 **THE INCREASE IN THIS CASE GIVEN THAT THE CITY HAS NOT PROVIDED A**  
9 **CLASS COST OF SERVICE STUDY?**

10 **A** Because the City prepared a cost of service study in 2013, I believe the increased  
11 costs can reasonably be allocated based upon the drivers of the need for the rate  
12 increase, as outlined by the City in this proceeding.

13 A large portion of the main replacement programs are for smaller mains.  
14 Indeed, approximately 74% of the total main replacement program of \$103 million is  
15 for mains of 8 inches or less. These mains are used to feed or serve residential and  
16 small commercial customers. Larger customers such as General Motors cannot be  
17 served from a main sized at 8 inches and smaller, because it is served from a 10-inch  
18 meter.<sup>4</sup> Nevertheless, under the City's proposal, General Motors will be paying a  
19 significant portion of the City's cost of replacing these smaller distribution mains that  
20 are used exclusively to serve residential and small commercial customers. This is not  
21 equitable and not based on cost of service.

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<sup>4</sup>City Master Plan "Water Main Replacement Framework."

**Q HOW DO YOU PROPOSE TO SPREAD THE REVENUE DEFICIENCY IN THIS PROCEEDING BASED ON COST OF SERVICE PRINCIPLES?**

A Because the City has not filed a class cost of service study, I propose a below system average increase for larger customers (those customers served from 10 inches or larger meters), and an above system average increase for smaller customers, both inside and outside City customers. To accomplish this, I propose a larger increase to the volumetric pricing structures for volume rate blocks 1 and 2, and a below system average increase for the third volumetric rate block.

**Q HAVE YOU DEVELOPED RATES THAT WILL PRODUCE THIS MORE COST-BASED ALLOCATION OF YOUR PROPOSED REVENUE DEFICIENCY IN THIS PROCEEDING?**

A Yes. In lieu of a class cost of service study, I recommend a larger increase to the utility's volumetric rates Blocks 1 and 2, compared to Block 3. Having a larger increase to Blocks 1 and 2 compared to Block 3 will allow an equal sharing of a significant portion of the CIP program that relates to small mains, which are only used to provide service to smaller customers, and have a limited increase to larger customers reflecting the CIP program's more limited improvements to infrastructure serving these customers. As such, I started with the City's proposed percent increase in Inside and Outside City rate charges.

From this, I proposed 1.6% to 1.2% above the volumetric percent increase change for Blocks 1 and 2 proposed by the City – at the City claimed revenue increase. This change shifts cost to smaller customers to coincide with the significant cost of small main replacement. Finally, I recommend no increase in Block 3 for Inside City customers, and the large industrial customer rate for the City. This will

1 ensure all customers make a strong contribution to the CIP program but will not  
2 require excessive contributions to main replacements that are exclusively used to  
3 provide service to smaller customers. The development of this proposed revenue  
4 spread is shown on my Attachment MPG-4. Under this pricing structure all customers  
5 will pay higher rates based on charges for meter, Block 1 and Block 2 charges, but  
6 Inside City customers and the large industrial rate will not receive an increase in  
7 Block 3 charges.

8 As shown on my Attachment MPG-4, I have used these percent changes in  
9 rate blocks and the City's proof of revenue service to show that these percent  
10 changes in volumetric charges, along with the City's proposed change in meter  
11 charges, will produce the increase in revenues necessary to support my revenue  
12 requirement deficiency as outlined in this table and this testimony and will provide  
13 more accurate price signals.

14 **Q WILL YOUR PROPOSAL TO INCREASE VOLUMETRIC BLOCKS 1 AND 2**  
15 **LARGER THAN VOLUMETRIC BLOCK 3, PRODUCE A RATE STRUCTURE THAT**  
16 **IS REASONABLY CONSISTENT WITH OTHER INDIANA WATER UTILITIES?**

17 **A** Yes. My proposal to implement larger increases in Volume 1 and 2 blocks, with no  
18 increase for the volumetric Block 3 rate, will produce a declining block structure for  
19 the City of Fort Wayne that reasonably aligns with Indiana-American Water Company.  
20 This comparison is shown on page 3 of my Attachment MPG-4. Indiana-American  
21 Water Company rates are normally supported by a class cost of service study.

22 As such, I believe this proposed rate structure is reasonable based on the  
23 City's cost of service impacts in this proceeding and produces a declining block rate  
24 structure for an Indiana water utility that follows class cost of service.

1 Q DOES THIS CONCLUDE YOUR VERIFIED DIRECT TESTIMONY?

2 A Yes, it does.

**Qualifications of Michael P. Gorman**

1    **Q     PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2    A     Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,  
3           Chesterfield, MO 63017.

4    **Q     PLEASE STATE YOUR OCCUPATION.**

5    A     I am a consultant in the field of public utility regulation and a Managing Principal with  
6           the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory  
7           consultants.

8    **Q     PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK  
9           EXPERIENCE.**

10   A     In 1983 I received a Bachelor of Science Degree in Electrical Engineering from  
11           Southern Illinois University, and in 1986, I received a Master's Degree in Business  
12           Administration with a concentration in Finance from the University of Illinois at  
13           Springfield. I have also completed several graduate level economics courses.

14           In August of 1983, I accepted an analyst position with the Illinois Commerce  
15           Commission ("ICC"). In this position, I performed a variety of analyses for both formal  
16           and informal investigations before the ICC, including: marginal cost of energy, central  
17           dispatch, avoided cost of energy, annual system production costs, and working  
18           capital. In October of 1986, I was promoted to the position of Senior Analyst. In this  
19           position, I assumed the additional responsibilities of technical leader on projects, and  
20           my areas of responsibility were expanded to include utility financial modeling and  
21           financial analyses.

1           In 1987, I was promoted to Director of the Financial Analysis Department. In  
2           this position, I was responsible for all financial analyses conducted by the Staff.  
3           Among other things, I conducted analyses and sponsored testimony before the ICC  
4           on rate of return, financial integrity, financial modeling and related issues. I also  
5           supervised the development of all Staff analyses and testimony on these same  
6           issues. In addition, I supervised the Staff's review and recommendations to the  
7           Commission concerning utility plans to issue debt and equity securities.

8           In August of 1989, I accepted a position with Merrill-Lynch as a financial  
9           consultant. After receiving all required securities licenses, I worked with individual  
10          investors and small businesses in evaluating and selecting investments suitable to  
11          their requirements.

12          In September of 1990, I accepted a position with Drazen-Brubaker &  
13          Associates, Inc. ("DBA"). In April 1995, the firm of Brubaker & Associates, Inc. was  
14          formed. It includes most of the former DBA principals and Staff. Since 1990, I have  
15          performed various analyses and sponsored testimony on cost of capital, cost/benefits  
16          of utility mergers and acquisitions, utility reorganizations, level of operating expenses  
17          and rate base, cost of service studies, and analyses relating to industrial jobs and  
18          economic development. I also participated in a study used to revise the financial  
19          policy for the municipal utility in Kansas City, Kansas.

20          At BAI, I also have extensive experience working with large energy users to  
21          distribute and critically evaluate responses to requests for proposals ("RFPs") for  
22          electric, steam, and gas energy supply from competitive energy suppliers. These  
23          analyses include the evaluation of gas supply and delivery charges, cogeneration  
24          and/or combined cycle unit feasibility studies, and the evaluation of third-party  
25          asset/supply management agreements. I have participated in rate cases on rate

1 design and class cost of service for electric, natural gas, water and wastewater  
2 utilities. I have also analyzed commodity pricing indices and forward pricing methods  
3 for third party supply agreements, and have also conducted regional electric market  
4 price forecasts.

5 In addition to our main office in St. Louis, the firm also has branch offices in  
6 Phoenix, Arizona and Corpus Christi, Texas.

7 **Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?**

8 A Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of  
9 service and other issues before the Federal Energy Regulatory Commission and  
10 numerous state regulatory commissions including: Arkansas, Arizona, California,  
11 Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas,  
12 Louisiana, Michigan, Mississippi, Missouri, Montana, New Jersey, New Mexico, New  
13 York, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Texas,  
14 Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, and before  
15 the provincial regulatory boards in Alberta and Nova Scotia, Canada. I have also  
16 sponsored testimony before the Board of Public Utilities in Kansas City, Kansas;  
17 presented rate setting position reports to the regulatory board of the municipal utility  
18 in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial customers;  
19 and negotiated rate disputes for industrial customers of the Municipal Electric  
20 Authority of Georgia in the LaGrange, Georgia district.



1    **Q     PLEASE     DESCRIBE     ANY     PROFESSIONAL     REGISTRATIONS     OR**  
2    **ORGANIZATIONS TO WHICH YOU BELONG.**

3    A     I earned the designation of Chartered Financial Analyst (“CFA”) from the CFA  
4     Institute.    The CFA charter was awarded after successfully completing three  
5     examinations which covered the subject areas of financial accounting, economics,  
6     fixed income and equity valuation and professional and ethical conduct.    I am a  
7     member of the CFA Institute’s Financial Analyst Society.

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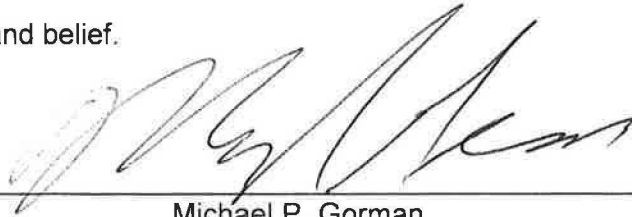
**STATE OF INDIANA**  
**INDIANA UTILITY REGULATORY COMMISSION**

PETITION OF THE CITY OF FORT  
WAYNE, INDIANA, FOR AUTHORITY  
TO ISSUE LONG-TERM DEBT TO  
FINANCE WATER SYSTEM  
IMPROVEMENTS AND TO ADJUST  
ITS RATES AND CHARGES FOR  
WATER SERVICE.

CAUSE NO.  
45125

**Verification**

I, Michael P. Gorman, a Consultant and Managing Principal of Brubaker & Associates, Inc., affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.



Michael P. Gorman  
October 30, 2018

## FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

**Large User Adjusted**  
**Pro Forma Annual Revenue Requirements**  
**and Annual Operating Revenue**  
(See Explanation of References, Page 20)

	2018	Phase I	Phase II	Phase III	Phase IV	Phase V
		(2019)	(2020)	(2021)	(2022)	(2023)
<b>Annual Revenue Requirements</b>						
Operation and maintenance expenses (page 10)	\$24,842,170	\$24,843,894	\$24,843,894	\$24,843,894	\$24,843,894	\$24,843,894
Utility receipts tax (1)	590,386	628,295	664,579	702,816	743,029	785,960
Debt service						
Outstanding bonds (page 29)	12,183,526	12,184,263	10,730,623	10,747,980	10,749,619	10,775,995
<b>Proposed 2019 bonds (page 16)</b>	<b>-</b>	<b>508,683</b>	<b>1,103,169</b>	<b>1,103,169</b>	<b>1,103,169</b>	<b>2,516,289</b>
Proposed 2022 bonds (page 17)	-	-	-	-	732,793	2,859,190
Debt service reserve (2)	-	703,086	703,086	-	255,450	510,900
Lease payments (3)	66,788	66,788	66,788	66,788	66,788	66,788
Payment in lieu of property taxes (4)	2,989,800	3,169,188	3,359,339	3,560,899	3,774,553	4,001,026
<b>Replacements and improvements (page 14)</b>	<b>7,703,360</b>	<b>9,187,000</b>	<b>11,294,500</b>	<b>14,766,000</b>	<b>14,462,500</b>	<b>11,627,000</b>
<b>Total annual revenue requirements</b>	<b>48,376,030</b>	<b>51,291,197</b>	<b>52,765,978</b>	<b>55,791,546</b>	<b>56,731,795</b>	<b>57,987,042</b>
Less other sales (page 5)	(571,148)	(571,148)	(571,148)	(571,148)	(571,148)	(571,148)
Less water charges private (page 5)	(66,863)	(66,863)	(66,863)	(66,863)	(66,863)	(66,863)
Less interest income (5)	(171,684)	(171,684)	(171,684)	(171,684)	(171,684)	(171,684)
Less connectivity revenue (page 5)	(204,854)	(204,854)	(204,854)	(204,854)	(204,854)	(204,854)
Less miscellaneous non-operating revenue (page 5)	(105,668)	(105,668)	(105,668)	(105,668)	(105,668)	(105,668)
Less additional revenue from non-recurring charges (6)	-	(267,573)	(267,573)	(267,573)	(267,573)	(267,573)
<b>Net annual revenue requirements</b>	<b>\$47,255,813</b>	<b>\$49,903,407</b>	<b>\$51,378,188</b>	<b>\$54,403,756</b>	<b>\$55,344,005</b>	<b>\$56,599,252</b>
<b>Annual Revenues</b>						
Test year metered revenues, sales for resale and interdepartmental sales (page 5)	\$40,595,633	\$40,595,633	\$40,595,633	\$40,595,633	\$40,595,633	\$40,595,633
1% annual decrease in outside surcharge for 5 years	-	(58,043)	(124,153)	(201,270)	(286,315)	(382,592)
Test year fire protection revenues (page 5)	5,934,793	5,934,793	5,934,793	5,934,793	5,934,793	5,934,793
Test year forfeited discounts (page 5)	636,098	636,098	636,098	636,098	636,098	636,098
Additional revenue from phased increases	-	-	2,794,926	4,335,817	7,438,502	8,463,796
<b>Total annual operating revenues</b>	<b>\$47,166,524</b>	<b>\$47,108,481</b>	<b>\$49,837,297</b>	<b>\$51,301,071</b>	<b>\$54,318,711</b>	<b>\$55,247,728</b>
<b>Additional revenues required</b>	<b>\$89,289</b>	<b>\$2,794,926</b>	<b>\$1,540,891</b>	<b>\$3,102,685</b>	<b>\$1,025,294</b>	<b>\$1,351,524</b>
Across-The-Board Rate Adjustment	N/A	5.93%	3.09%	6.05%	1.89%	2.45%
<i>Avg. monthly bill (4,000 gallons/535 cu. ft.)</i>	<i>\$22.78</i>	<i>\$24.12</i>	<i>\$25.55</i>	<i>\$27.08</i>	<i>\$28.65</i>	<i>\$30.32</i>
<b>Bond Coverage With PILOT</b>	<b>163%</b>	<b>178%</b>	<b>202%</b>	<b>225%</b>	<b>217%</b>	<b>176%</b>

## FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

### Large User Adjusted Capital Improvement Plan (Per Utility Management)

	2018	2019	2020	2021	2022	2023	Total
Filtration Plant Improvements	\$3,270,444	\$11,308,000	\$5,515,000	\$4,290,000	\$9,595,000	\$4,285,000	\$38,263,444
Raw Water Dams and Reservoirs	392,255	3,475,000	2,265,000	325,000	1,600,000	1,805,000	9,862,255
Distribution Pumping and Storage	1,402,465	1,275,000	1,380,000	250,000	480,000	190,000	4,977,465
Distribution System	4,122,982	15,380,000	19,440,000	15,510,000	17,700,000	18,200,000	90,352,982
General Water Maintenance	1,010,421	954,000	1,094,500	1,001,000	1,087,500	1,147,000	6,294,421
Gross Capital Improvements	10,198,567	32,392,000	29,694,500	21,376,000	30,462,500	25,627,000	149,750,567
Reduced/Deferred Main Replacement	-	(280,000)	(2,625,000)	(5,120,000)	-	-	(8,025,000)
Net Capital Improvements	<u>\$10,198,567</u>	<u>\$32,112,000</u>	<u>\$27,069,500</u>	<u>\$16,256,000</u>	<u>\$30,462,500</u>	<u>\$25,627,000</u>	<u>\$141,725,567</u>
Non-Revenue Funding Sources							
TIF	(\$1,650,000)	(\$325,000)	\$ -	\$ -	\$ -	\$ -	(\$1,975,000)
Equipment Loans	(274,671)	-	-	-	-	-	(274,671)
Future Bond Issues	(570,536)	(22,600,000)	(15,775,000)	(1,490,000)	(16,000,000)	(14,000,000)	(70,435,536)
Cash Funded Capital Improvements	<u>\$7,703,360</u>	<u>\$9,187,000</u>	<u>\$11,294,500</u>	<u>\$14,766,000</u>	<u>\$14,462,500</u>	<u>\$11,627,000</u>	<u>\$69,040,360</u>

## FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

### Large User Adjusted Capital Improvements Plan

#### City Proposed

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>Total</u>
Filtration Plant Improvements	\$3,270	\$11,308	\$5,515	\$4,290	\$9,595	\$4,285	\$38,263
Raw Water Dams and Reservoirs	\$392	\$3,475	\$2,265	\$325	\$1,600	\$1,805	9,862
Distribution Pumping and Storage	\$1,402	\$1,275	\$1,380	\$250	\$480	\$190	4,977
Deferred Main Adjustment	-	(\$280)	(\$2,625)	(\$5,120)	\$5,120	\$500	(2,405)
Distribution System	\$4,123	\$15,380	\$19,440	\$15,510	\$26,210	\$22,430	103,093
General Water Maintenance	\$1,010	\$954	\$1,095	\$1,001	\$1,088	\$1,147	6,294
Gross Capital Improvements	10,199	32,112	27,070	16,256	44,093	30,357	160,086

#### Adjusted

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>Total</u>
Filtration Plant Improvements	\$3,270	\$11,308	\$5,515	\$4,290	\$9,595	\$4,285	\$38,263
Raw Water Dams and Reservoirs	\$392	\$3,475	\$2,265	\$325	\$1,600	\$1,805	9,862
Distribution Pumping and Storage	\$1,402	\$1,275	\$1,380	\$250	\$480	\$190	4,977
Distribution System	\$4,123	\$15,100	\$16,815	\$10,390	\$16,700	\$16,700	79,828
General Water Maintenance	\$1,010	\$954	\$1,095	\$1,001	\$1,088	\$1,147	6,294
Gross Capital Improvements	10,199	32,112	27,070	16,256	29,463	24,127	139,226

**FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY****City Proposed Schedule of Combined Bond Amortization**

Bond Year Ended Dec. 1	Outstanding Bonds	Proposed 2019 Bonds	Bond Year Total	Proposed 2022 Bonds	Bond Year Total
2018	\$12,183,525.56		\$12,183,525.56		\$12,183,525.56
2019	12,184,263.38	\$508,683.48	12,692,946.86		12,692,946.86
2020	10,730,622.94	2,513,169.00	13,243,791.94		13,243,791.94
2021	10,747,980.26	2,515,240.00	13,263,220.26		13,263,220.26
2022	10,749,619.08	2,511,235.00	13,260,854.08	\$732,793.17	13,993,647.25
2023	10,775,995.40	2,516,288.50	13,292,283.90	2,859,190.00	16,151,473.90
2024	10,781,039.86	2,515,131.50	13,296,171.36	2,851,170.00	16,147,341.36
2025	10,827,172.80	2,512,898.50	13,340,071.30	2,809,910.00	16,149,981.30
2026	10,841,955.22	2,514,589.50	13,356,544.72	2,792,500.00	16,149,044.72
2027	10,896,077.76	2,510,070.00	13,406,147.76	2,743,200.00	16,149,347.76
2028	10,942,493.60	2,519,474.50	13,461,968.10	2,687,250.00	16,149,218.10
2029	10,997,043.38	2,517,399.50	13,514,442.88	2,635,487.50	16,149,930.38
2030	11,051,625.60	2,519,114.00	13,570,739.60	2,578,412.50	16,149,152.10
2031	11,077,505.92	2,519,483.50	13,596,989.42	2,550,572.50	16,147,561.92
2032	8,915,450.00	2,518,508.00	11,433,958.00	4,046,585.00	15,480,543.00
2033	5,873,700.00	2,517,737.50	8,391,437.50	4,002,411.25	12,393,848.75
2034	5,901,900.00	2,518,265.00	8,420,165.00	3,998,377.50	12,418,542.50
2035		2,517,380.25	2,517,380.25	3,994,567.50	6,511,947.75
2036		2,520,217.75	2,520,217.75	3,996,576.25	6,516,794.00
2037		2,520,701.50	2,520,701.50	3,992,717.50	6,513,419.00
2038		2,520,176.50	2,520,176.50	3,997,872.50	6,518,049.00
2039		740,008.00	740,008.00	3,996,455.00	4,736,463.00
2040		739,540.50	739,540.50	3,997,772.50	4,737,313.00
2041		743,669.50	743,669.50	3,989,002.50	4,732,672.00
2042		742,260.50	742,260.50		742,260.50
2043		740,515.25	740,515.25		740,515.25
2044		743,299.25	743,299.25		743,299.25
2045		740,545.25	740,545.25		740,545.25
2046		742,387.75	742,387.75		742,387.75
2047		738,759.50	738,759.50		738,759.50
2048		739,660.50	739,660.50		739,660.50
Totals	<u>\$175,477,970.76</u>	<u>\$55,736,409.48</u>	<u>\$231,214,380.24</u>	<u>\$65,252,823.17</u>	<u>\$296,467,203.41</u>
Maximum Annual Debt Service	<u>\$12,190,817.00</u> *		<u>\$13,596,989.42</u>		<u>\$16,151,473.90</u>

\*Occurred in bond year 2016.

**FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY****Large User Schedule of Proposed Combined Bond Amortization**

Bond Year Ended Dec. 1	Outstanding Bonds	Proposed 2019 Bonds	Bond Year Total	Proposed 2022 Bonds	Bond Year Total
2018	\$12,183,525.56		\$12,183,525.56		\$12,183,525.56
2019	12,184,263.38	\$508,683.48	12,692,946.86		12,692,946.86
2020	10,730,622.94	1,076,269.14	11,806,892.08		11,806,892.08
2021	10,747,980.26	1,076,269.14	11,824,249.40		11,824,249.40
2022	10,749,619.08	1,076,269.14	11,825,888.22	\$732,793.17	12,558,681.39
2023	10,775,995.40	1,076,269.14	11,852,264.54	2,859,190.00	14,711,454.54
2024	10,781,039.86	1,076,269.14	11,857,309.00	2,851,170.00	14,708,479.00
2025	10,827,172.80	1,076,269.14	11,903,441.94	2,809,910.00	14,713,351.94
2026	10,841,955.22	1,076,269.14	11,918,224.36	2,792,500.00	14,710,724.36
2027	10,896,077.76	1,076,269.14	11,972,346.90	2,743,200.00	14,715,546.90
2028	10,942,493.60	1,076,269.14	12,018,762.74	2,687,250.00	14,706,012.74
2029	10,997,043.38	1,076,269.14	12,073,312.52	2,635,487.50	14,708,800.02
2030	11,051,625.60	1,076,269.14	12,127,894.74	2,578,412.50	14,706,307.24
2031	11,077,505.92	1,076,269.14	12,153,775.06	2,550,572.50	14,704,347.56
2032	8,915,450.00	1,076,269.14	9,991,719.14	4,046,585.00	14,038,304.14
2033	5,873,700.00	1,076,269.14	6,949,969.14	4,002,411.25	10,952,380.39
2034	5,901,900.00	1,076,269.14	6,978,169.14	3,998,377.50	10,976,546.64
2035		2,558,120.99	2,558,120.99	3,994,567.50	6,552,688.49
2036		3,980,180.11	3,980,180.11	3,996,576.25	7,976,756.36
2037		3,900,456.47	3,900,456.47	3,992,717.50	7,893,173.97
2038		3,820,732.83	3,820,732.83	3,997,872.50	7,818,605.33
2039		3,741,009.19	3,741,009.19	3,996,455.00	7,737,464.19
2040		3,661,285.55	3,661,285.55	3,997,772.50	7,659,058.05
2041		3,581,561.91	3,581,561.91	3,989,002.50	7,570,564.41
2042		3,501,838.27	3,501,838.27		3,501,838.27
2043		3,422,114.63	3,422,114.63		3,422,114.63
2044		3,342,390.99	3,342,390.99		3,342,390.99
2045		3,262,667.35	3,262,667.35		3,262,667.35
2046		3,182,943.71	3,182,943.71		3,182,943.71
2047		3,103,220.07	3,103,220.07		3,103,220.07
2048		3,023,496.43	3,023,496.43		3,023,496.43
Totals	<u>\$175,477,970.76</u>	<u>\$64,734,739.08</u>	<u>\$240,212,709.84</u>	<u>\$65,252,823.17</u>	<u>\$305,465,533.01</u>
Maximum Annual Debt Service	<u>\$12,190,817.00</u> *		<u>\$12,692,946.86</u>		<u>\$14,715,546.90</u>

\*Occurred in bond year 2016.

**FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY**

**Large User Schedule of Amortization of \$40,010,000 Proposed Principal  
Amount of Waterworks Revenue Bonds of 2019**

Assumed interest rates as indicated.  
Assumes Bonds are dated June 15, 2019

Payment Date	Principal Balance (-----In \$1,000's-----)	Principal	Interest Rates (%)	Debt Service		Bond Year Total
				Interest	Total (-----In Dollars-----)	
12/1/2019	\$40,010			\$508,683	\$508,683	\$508,683.48
6/1/2020	40,010			\$538,135	\$538,135	
12/1/2020	40,010	\$0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2021	40,010			\$538,135	\$538,135	
12/1/2021	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2022	40,010			\$538,135	\$538,135	
12/1/2022	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2023	40,010			\$538,135	\$538,135	
12/1/2023	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2024	40,010			\$538,135	\$538,135	
12/1/2024	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2025	40,010			\$538,135	\$538,135	
12/1/2025	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2026	40,010			\$538,135	\$538,135	
12/1/2026	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2027	40,010			\$538,135	\$538,135	
12/1/2027	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2028	40,010			\$538,135	\$538,135	
12/1/2028	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2029	40,010			\$538,135	\$538,135	
12/1/2029	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2030	40,010			\$538,135	\$538,135	
12/1/2030	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2031	40,010			\$538,135	\$538,135	
12/1/2031	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2032	40,010			\$538,135	\$538,135	
12/1/2032	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2033	40,010	0	2.69	\$538,135	\$538,135	
12/1/2033	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2034	40,010	0	2.69	\$538,135	\$538,135	
12/1/2034	40,010	0	2.69	\$538,135	\$538,135	1,076,269.14
6/1/2035	40,010	0	2.69	\$538,135	\$538,135	
12/1/2035	40,010	1,482	2.69	\$538,135	\$2,019,986	2,558,120.99
6/1/2036	38,528	1,482	2.69	\$518,204	\$2,000,056	
12/1/2036	37,046	1,482	2.69	\$498,273	\$1,980,125	3,980,180.11
6/1/2037	35,564	1,482	2.69	\$478,342	\$1,960,194	
12/1/2037	34,083	1,482	2.69	\$458,411	\$1,940,263	3,900,456.47
6/1/2038	32,601	1,482	2.69	\$438,480	\$1,920,332	
12/1/2038	31,119	1,482	2.69	\$418,549	\$1,900,401	3,820,732.83
6/1/2039	29,637	1,482	2.69	\$398,618	\$1,880,470	
12/1/2039	28,155	1,482	2.69	\$378,687	\$1,860,539	3,741,009.19
6/1/2040	26,673	1,482	2.69	\$358,756	\$1,840,608	
12/1/2040	25,191	1,482	2.69	\$338,825	\$1,820,677	3,661,285.55
6/1/2041	23,710	1,482	2.69	\$318,895	\$1,800,746	
12/1/2041	22,228	1,482	2.69	\$298,964	\$1,780,816	3,581,561.91
6/1/2042	20,746	1,482	2.69	\$279,033	\$1,760,885	
12/1/2042	19,264	1,482	2.69	\$259,102	\$1,740,954	3,501,838.27
6/1/2043	17,782	1,482	2.69	\$239,171	\$1,721,023	
12/1/2043	16,300	1,482	2.69	\$219,240	\$1,701,092	3,422,114.63
6/1/2044	14,819	1,482	2.69	\$199,309	\$1,681,161	
12/1/2044	13,337	1,482	2.69	\$179,378	\$1,661,230	3,342,390.99
6/1/2045	11,855	1,482	2.69	\$159,447	\$1,641,299	
12/1/2045	10,373	1,482	2.69	\$139,516	\$1,621,368	3,262,667.35
6/1/2046	8,891	1,482	2.69	\$119,585	\$1,601,437	
12/1/2046	7,409	1,482	2.69	\$99,655	\$1,581,506	3,182,943.71
6/1/2047	5,927	1,482	2.69	\$79,724	\$1,561,575	
12/1/2047	4,446	1,482	2.69	\$59,793	\$1,541,645	3,103,220.07
6/1/2048	2,964	1,482	2.69	\$39,862	\$1,521,714	
12/1/2048	1,482	1,482	2.69	\$19,931	\$1,501,783	3,023,496.43
Totals	\$40,010			\$24,724,739	\$64,734,739	\$64,734,739.08



FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

General Motors' Proposed Rate Design<sup>1</sup>

Line	Description	Present	GM Proposed Rates					Proposed Annual Percent Increase				
		Rates	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>INSIDE CITY</b>												
<u>Meters</u>												
1	5/8"	\$ 9.18	\$ 9.72	\$ 10.30	\$ 10.91	\$ 11.55	\$ 12.23	5.9%	6.0%	5.9%	5.9%	5.9%
2	5/8" x 3/4"	9.18	9.72	10.30	10.91	11.55	12.23	5.9%	6.0%	5.9%	5.9%	5.9%
3	3/4"	23.40	24.79	26.26	27.81	29.44	31.18	5.9%	5.9%	5.9%	5.9%	5.9%
4	1"	52.42	55.53	58.82	62.28	65.92	69.81	5.9%	5.9%	5.9%	5.8%	5.9%
5	1 1/2"	92.99	98.50	104.33	110.48	116.94	123.84	5.9%	5.9%	5.9%	5.8%	5.9%
6	2"	92.99	98.50	104.33	110.48	116.94	123.84	5.9%	5.9%	5.9%	5.8%	5.9%
7	3"	209.38	221.80	234.93	248.77	263.32	278.86	5.9%	5.9%	5.9%	5.8%	5.9%
8	4"	372.21	394.28	417.62	442.22	468.09	495.71	5.9%	5.9%	5.9%	5.9%	5.9%
9	6"	837.06	886.70	939.19	994.51	1,052.69	1,114.80	5.9%	5.9%	5.9%	5.9%	5.9%
10	8"	1,488.49	1,576.76	1,670.10	1,768.47	1,871.93	1,982.37	5.9%	5.9%	5.9%	5.9%	5.9%
11	10"	2,325.55	2,463.46	2,609.30	2,762.99	2,924.62	3,097.17	5.9%	5.9%	5.9%	5.8%	5.9%
<u>Volume (\$/CCF)</u>												
12	Block 1	\$ 2.07	\$ 2.22	\$ 2.39	\$ 2.57	\$ 2.75	\$ 2.94	7.4%	7.5%	7.4%	7.0%	7.0%
13	Block 2	1.93	2.07	2.23	2.39	2.56	2.74	7.4%	7.5%	7.4%	7.0%	7.0%
14	Block 3	1.88	1.88	1.88	1.88	1.88	1.88	0.0%	0.0%	0.0%	0.0%	0.0%
<b>OUTSIDE CITY</b>												
<u>Meters</u>												
15	5/8"	\$ 10.56	\$ 11.08	\$ 11.64	\$ 12.22	\$ 12.82	\$ 13.45	4.9%	5.1%	5.0%	4.9%	4.9%
16	5/8" x 3/4"	10.56	11.08	11.64	12.22	12.82	13.45	4.9%	5.1%	5.0%	4.9%	4.9%
17	3/4"	26.91	28.26	29.67	31.15	32.68	34.30	5.0%	5.0%	5.0%	4.9%	5.0%
18	1"	60.29	63.30	66.47	69.75	73.17	76.79	5.0%	5.0%	4.9%	4.9%	4.9%
19	1 1/2"	106.93	112.29	117.89	123.74	129.80	136.22	5.0%	5.0%	5.0%	4.9%	4.9%
20	2"	106.93	112.29	117.89	123.74	129.80	136.22	5.0%	5.0%	5.0%	4.9%	4.9%
21	3"	240.78	252.85	265.47	278.62	292.29	306.75	5.0%	5.0%	5.0%	4.9%	4.9%
22	4"	428.04	449.48	471.91	495.29	519.58	545.28	5.0%	5.0%	5.0%	4.9%	4.9%
23	6"	962.61	1,010.84	1,061.28	1,113.85	1,168.49	1,226.28	5.0%	5.0%	5.0%	4.9%	4.9%
24	8"	1,711.77	1,797.51	1,887.21	1,980.69	2,077.84	2,180.61	5.0%	5.0%	5.0%	4.9%	4.9%
25	10"	2,674.37	2,808.34	2,948.51	3,094.55	3,246.33	3,406.89	5.0%	5.0%	5.0%	4.9%	4.9%
<u>Volume (\$/CCF)</u>												
26	Block 1	\$ 2.39	\$ 2.57	\$ 2.76	\$ 2.96	\$ 3.17	\$ 3.39	7.4%	7.5%	7.4%	7.0%	7.0%
27	Block 2	2.23	2.39	2.57	2.76	2.96	3.16	7.4%	7.5%	7.4%	7.0%	7.0%
28	Block 3	2.17	2.27	2.38	2.50	2.62	2.75	4.6%	4.8%	5.0%	4.8%	5.0%
<b>Large Industrial</b>												
29	Meter Charge	\$ 2,674.37	\$ 2,808.34	\$ 2,948.51	\$ 3,094.55	\$ 3,246.33	\$ 3,406.89	5.0%	5.0%	5.0%	4.9%	4.9%
	Volume (\$/CCF)											
30	Block 1	\$ 2.10	\$ 2.22	\$ 2.39	\$ 2.57	\$ 2.75	\$ 2.94	5.8%	7.5%	7.4%	7.0%	7.0%
31	Block 2	1.94	2.07	2.23	2.39	2.56	2.74	6.8%	7.5%	7.4%	7.0%	7.0%
32	Block 3	1.84	1.84	1.84	1.84	1.84	1.84	0.0%	0.0%	0.0%	0.0%	0.0%

Sources and Notes

<sup>1</sup> The impact of this rate design has been estimated based on the 2017 billing units provided in Confidential-Supp Exhibit N.H. 5-5 and GM 2-14(b) Test Year Consumer Detail DR.xlsx. Additionally, to the extent the Commission approves a smaller increase than requested by Fort Wayne, these rates would need to be adjusted accordingly.

# FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

## Volumetric Revenues at General Motors' Proposed Rates<sup>1</sup>

Line	Description	Present	Fort Wayne Proposed					GM Proposed				
		Rates	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Block 1 and 2 Rate Increases												
	Inside City		5.8%	5.9%	6.0%	5.7%	5.8%	7.4%	7.5%	7.4%	7.0%	7.0%
	Outside City		4.6%	4.8%	5.3%	4.7%	4.8%	7.4%	7.5%	7.4%	7.0%	7.0%
Inside City Rates (\$/CCF)												
1	Block 1	\$ 2.07	\$ 2.19	\$ 2.32	\$ 2.46	\$ 2.60	\$ 2.75	\$ 2.22	\$ 2.39	\$ 2.57	\$ 2.75	\$ 2.94
2	Block 2	1.93	2.04	2.16	2.29	2.42	2.56	2.07	2.23	2.39	2.56	2.74
3	Block 3	1.88	1.99	2.11	2.23	2.36	2.50	1.88	1.88	1.88	1.88	1.88
Large Industrial Rates (\$/CCF)												
4	Block 1	\$ 2.10	\$ 2.22	\$ 2.35	\$ 2.49	\$ 2.64	\$ 2.80	\$ 2.22	\$ 2.39	\$ 2.57	\$ 2.75	\$ 2.94
5	Block 2	1.94	2.06	2.18	2.31	2.45	2.59	2.07	2.23	2.39	2.56	2.74
6	Block 3	1.84	1.95	2.07	2.19	2.32	2.46	1.84	1.84	1.84	1.84	1.84
Outside City Rates (\$/CCF)												
7	Block 1	\$ 2.39	\$ 2.50	\$ 2.62	\$ 2.76	\$ 2.89	\$ 3.03	\$ 2.57	\$ 2.76	\$ 2.96	\$ 3.17	\$ 3.39
8	Block 2	2.23	2.33	2.44	2.56	2.69	2.82	2.39	2.57	2.76	2.96	3.16
9	Block 3	2.17	2.27	2.38	2.50	2.62	2.75	2.27	2.38	2.50	2.62	2.75
10	Total Volumetric Revenue	\$ 21,851,329	\$23,080,101	\$24,415,920	\$25,842,073	\$27,286,427	\$28,836,366	\$23,080,079	\$24,415,896	\$25,842,047	\$27,286,400	\$28,836,337
Difference: GM Proposed vs. Fort Wayne Proposed Rate Design												
11	Amount							\$ (22)	\$ (24)	\$ (25)	\$ (27)	\$ (29)
12	Percent							0.0%	0.0%	0.0%	0.0%	0.0%

### Sources and Notes

<sup>1</sup> The impact of this rate design has been estimated based on the 2017 billing units provided in Confidential-Supp Exhibit N.H. 5-5 and GM 2-14(b) Test Year Consumer Detail DR.xlsx. Additionally, to the extent the Commission approves a smaller increase than requested by Fort Wayne, these rates would need to be adjusted accordingly.

# FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

## Rate Structure Comparison Fort Wayne vs. Indiana American

		Indiana American Water Company			Fort Wayne										
Line	Description	Blocks	Rate per	% Decline	Blocks	GM Proposed Rates					% Decline				
			100 gallons <sup>1</sup>	in Block Rates		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
		Area One			Inside City										
1	Block 1	First 150 hundred gallons	\$ 0.41819		First 2,500 CCF	\$ 2.22	\$ 2.39	\$ 2.57	\$ 2.75	\$ 2.94					
2	Block 2	Next 37,250 hundred gallons	0.33731	-19.3%	Next 9,500 CCF	2.07	2.23	2.39	2.56	2.74	-6.8%	-6.8%	-6.8%	-6.8%	-6.8%
3	Block 3	All Additional	0.19230	-43.0%	Additional	1.88	1.88	1.88	1.88	1.88	-9.3%	-15.6%	-21.4%	-26.5%	-31.4%
		Area Two			Outside City										
4	Block 1	First 150 hundred gallons	\$ 0.36259		First 2,500 CCF	\$ 2.57	\$ 2.76	\$ 2.96	\$ 3.17	\$ 3.39					
5	Block 2	Next 37,250 hundred gallons	0.26600	-26.6%	Next 9,500 CCF	2.39	2.57	2.76	2.96	3.16	-6.7%	-6.7%	-6.7%	-6.7%	-6.7%
6	Block 3	All Additional	0.17484	-34.3%	Additional	2.27	2.38	2.50	2.62	2.75	-5.2%	-7.5%	-9.6%	-11.4%	-13.1%
					Large Industrial										
7	Block 1				First 2,500 CCF	\$ 2.22	\$ 2.39	\$ 2.57	\$ 2.75	\$ 2.94					
8	Block 2				Next 9,500 CCF	2.07	2.23	2.39	2.56	2.74	-6.8%	-6.8%	-6.8%	-6.8%	-6.8%
9	Block 3				Additional	1.84	1.84	1.84	1.84	1.84	-11.2%	-17.4%	-23.1%	-28.1%	-32.8%

### Source

<sup>1</sup>General Water Service tariff, effective 8/1/18.