

FILED

December 18, 2017

**INDIANA UTILITY
REGULATORY COMMISSION**

HAMMOND WATER WORKS DEPARTMENT

INDIANA UTILITY REGULATORY COMMISSION

CAUSE NO. 45026

DIRECT TESTIMONY

OF

KARL CENDER

SPONSORING ATTACHMENTS KC-1 THROUGH KC-2

HAMMOND WATER WORKS DEPARTMENT

CAUSE NO. 45026

DIRECT TESTIMONY OF KARL CENDER

1 **Q. Please state your name and business address.**

2 A. Karl Cender. Cender & Company, LLC, Municipal Finance Advisors, 233 E. 84th Drive,
3 Suite 103, Merrillville, Indiana 46410.

4 **Q. How are you employed?**

5 A. I am a Certified Public Accountant, sole owner of my firm.

6 **Q. How long have you been employed by Cender and Company?**

7 A. I have been employed by the firm for 14.8 years.

8 **Q. Please describe your firm and its area of expertise.**

9 A. Our firm employs accountants and consultants that provide municipal finance consulting
10 services including: utility ratemaking services, cost of service studies, budget consulting
11 services, economic and redevelopment consulting services, and accounting services. In
12 addition, we also provide municipal advisory services to assist clients in structuring bond
13 financing transactions and providing municipal advice.

14 **Q. Please describe your educational background and relevant professional experience.**

15 A. I have earned a Bachelor of Arts degree in Accounting from Goshen College, Goshen,
16 Indiana. For the past twenty-five years, I have worked and provided municipal advisory
17 services to municipal entities including municipal utilities.

18 **Q. Have you testified as an expert witness before?**

19 A. I had previously testified as an expert witness while employed by Crowe Horwath (before

1 joining Cender and Company) in the 1990s.

2 **Q. Have you reviewed the Petition initiating this Cause?**

3 A. Yes.

4 **Q. Does the Petition accurately state the facts and Hammond Waterworks**
5 **Department's (HWWD) intentions?**

6 A. Yes. In April of 2014, HWWD contracted with CDM Smith Engineering to redesign the
7 obsolete and no longer serviceable electrical system at the HWWD Filtration Plant. That
8 design was completed and sent out for bids in June of 2016. In November of 2016, the
9 low bid accepted for the project was for \$4.97 Million by Meade Industries, Inc. HWWD
10 now seeks (i) financing for this project from the Hammond Local Public Improvement
11 Bond Bank (the "Bond Bank"), (ii) reimbursement of expended engineering costs to
12 CDM Smith Engineering, which has been cleared as a permissible reimbursement by the
13 Bond Bank (iii) reimbursement of expended costs for painting the elevated water storage
14 tank at 173rd and Harrison Street, which has been cleared as a permissible reimbursement
15 by the Bond Bank, (iv) the bond issuance costs, and (v) the construction management
16 costs with CDM Smith Engineering. The total amount of financing sought is \$7,500,000
17 and is calculated as follows: \$4,970,000 to Meade Industries for the project; \$863,000 to
18 reimburse the engineering expense paid to CDM Smith Engineering; \$300,000 for the
19 construction management by CDM Smith Engineering; reimbursement for the tank
20 painting in the amount of \$550,000; cost of issuance \$315,000; and contingency
21 \$502,000.

22 **Q. How did you arrive at the calculated contingency amount?**

23 A. We have used 10% of the bid costs of \$4,970,000 for the project, which is \$497,000 and
24 rounded up by \$5,000 to total \$502,000. Due to the unique nature of the project, a

1 complete renovation and upgrade of the electrical system of the plant, and that the project
2 will take three years to complete, HWWD believes it is necessary to maintain a
3 contingency of \$502,000 for possible change orders and unanticipated costs.

4 **Q. Was your firm retained by HWWD in connection with these proceedings?**

5 A. Yes. We were retained by HWWD to advise it regarding financing options for intended
6 electrical system upgrades to the HWWD Filtration Plant. Under my supervision, we
7 have prepared financial statements detailing HWWD's cost of issuance, revenues, cash
8 flow, and debt service on the proposed bonds and coverage. These financial statements,
9 collectively, have been attached as Attachment KC- 1.

10 **Q. Does HWWD seek a rate increase in connection with this bond issue?**

11 A. No, it does not.

12 **Q. How does HWWD plan to fund the financing?**

13 A. HWWD plans to issue a revenue bond for approximately \$7.5 million to be issued
14 through the Bond Bank. *See* HWWD Proposed Waterworks Revenue Bonds, Series 2017
15 Sources & Uses, attached as Attachment KC-2. The Bond Bank is a governmental entity
16 established by statute and can be the issuer of any governmental entity bonds for
17 qualified entities within Lake County, Indiana. The Bond Bank and HWWD have
18 entered into a placement agreement with Huntington Capital Markets to market and place
19 the bonds.

20 **Q. If not through a rate increase, what will be the principal source of payment for the**
21 **additional debt?**

22 A. HWWD is pledging net operating revenues.

23 **Q. What are the sources of HWWD's operating revenues?**

24 A. In addition to serving direct customers within the service area, HWWD also has contracts

1 with certain cities and towns (including the City of Hammond, which acts as a re-seller)
2 to provide water to local communities on a wholesale basis. HWWD's operating
3 revenues are based on sales to direct customers as well as sales to the following
4 communities in Indiana: Town of Griffith, Town of Highland, Town of Munster and City
5 of Whiting. In Illinois, the communities include: Burnham, Chicago Heights, Calumet
6 City, Ford Heights, Lansing, Lynwood, and South Holland.

7 **Q. Will the City of Hammond be levying a tax to pay the principal of or interest on the**
8 **bonds?**

9 A. No.

10 **Q. Please identify each of your financial statements.**

11 A. Certainly. We have prepared specific financial statements to assist the Commission and
12 investors assess the ability of HWWD to secure and repay the bonds. These statements
13 are (1) Statement of Revenues, Expenses and Other Changes in Fund Net Assets; (2)
14 Schedule of Net Revenues, Debt Service on Proposed Bonds and Coverage; (3) Schedule
15 of Cash Flow, Debt Service on Proposed Revenue Bonds and Coverage; and (4)
16 Preliminary Bond Debt Service Schedule.

17 **Q. Please walk us through the Statement of Revenues, Expenses and Other Changes in**
18 **Fund Net Assets and explain the relevance of this statement.**

19 A. This statement documents a comparison of the past revenue realization of HWWD for
20 years 2014 through 2016 inclusive. Operating revenues and operating expenses for 2016
21 are based on HWWD's unaudited financial reports. Operating revenues and operating
22 expenses for 2014 and 2015 are based on HWWD's audited financial reports.

23 **Q. HWWD has asked for reimbursement of expended engineering costs to CDM Smith**
24 **Engineering and expended costs for painting the elevated water storage tank at**

1 **173rd and Harrison. Can you please identify on this financial statement where those**
2 **expenses are?**

3 A. In 2016, 2015 and 2014, HWWD expended \$258,900, \$396,980 and \$189,860,
4 respectively, related to engineering services to CDM Smith Engineering. The \$845,740
5 expended for engineering services was charged to a Construction in Progress account
6 under Capital Assets. The expenditures related to painting the elevated water storage
7 tank to date were charged to Construction in Progress account under Capital Assets in the
8 balance sheet. There is still some work to be done to complete the tank painting.

9 **Q How much debt does HWWD currently have?**

10 A. HWWD has no outstanding debt at this time.

11 **Q. Please walk us through the Schedule of Net Revenues, Debt Service on Proposed**
12 **Bonds and Coverage and explain the relevance of this statement.**

13 A. This statement documents a comparison of the past revenue realization of HWWD for
14 years 2014 through 2016 inclusive. Net operating revenues for 2016 are based on
15 HWWD's unaudited financial reports. Net operating revenues for 2014 and 2015 are
16 based on HWWD's audited financial reports. Since 2014, revenues have increased and
17 expenses have decreased. This statement incorporates the annual fiscal debt service
18 requirements that would accompany the loan in order to project net revenues after
19 estimating the reduction in revenue from debt service on the proposed bonds. Based on
20 2016 operating revenues, HWWD would have net revenue of \$217,394 after payment of
21 the estimated amount of debt service for 2019 based on our amortization schedule, which
22 will be discussed in more detail below.

23 **Q. How do your statements illustrate the Debt Service Reserve and HWWD's ability to**
24 **pay the Debt Service Reserve that will be required by the new bond issuance terms?**

1 A. The debt service reserve will be funded over the next five years. The annual funding of
2 the debt service reserve is anticipated to be \$134,150 per year (\$670,750 estimated
3 maximum annual principal and interest payment divided by 5 years). The debt service
4 reserve funding will be funded from HWWD's Net Revenues. The actual annual funding
5 of the debt service reserve will be established once the final pricing on the loan is known.
6 The debt service reserve will be held in a separate fund by HWWD and included in its
7 financial records.

8 **Q. Please walk us through the Schedule of Cash Flow, Debt Service on Proposed**
9 **Revenue Bonds and Coverage and explain the relevance of this statement.**

10 A. This statement is a comparison of cash flows for 2014 through 2016, inclusive,
11 comparing HWWD's cash receipts and cash disbursements for 2016 with the two
12 preceding calendar years. Net cash flow from operating activities for 2016 is based on
13 HWWD's unaudited financial reports. Net cash flow from operating activities for 2014
14 and 2015 is based on HWWD's audited financial reports. You can see from this
15 statement that we have included cash disbursements for both estimated normal annual
16 capital expenditures that are reoccurring for HWWD as well as, in a separate cash
17 disbursement line item, the estimated debt service on the proposed bonds for the
18 proposed electrical upgrades. Taking both into consideration, based on the 2016 cash
19 flow, HWWD would have coverage of the proposed debt of 233.55%. The annual
20 funding of the debt service reserve will be funded from the net revenues (coverage) and
21 placed in a separate debt service reserve fund in the balance sheet.

22 **Q. The net cash flow from operating activities increased dramatically from 2014 to**
23 **2015. What is that related to?**

24 A. The increase in net cash flow is related directly to the increase in revenues from

1 wholesale contracts, principally from Calumet City, Illinois, a wholesale customer of
2 HWWD.

3 **Q. The increase was less dramatic from 2015 to 2016. Why is that?**

4 A. There was no other significant rate increase for its wholesale customers in 2016.

5 **Q. Please walk us through the Preliminary Bond Debt Service Schedule and explain the**
6 **relevance of this statement.**

7 A. This illustrates the amortization schedule of the proposed loan issued through repayment.
8 The illustration is dated September 10, 2017, and the amortization will be finalized upon
9 the conclusion of this Cause. The loan is amortized semi-annually over fifteen years at
10 an assumed interest rate 5.00%. The interest rate is subject to change depending on
11 fluctuations in the municipal bond open market. As such, the final interest rate is
12 unknown until the closing of the loan occurs, however, we anticipate that the net interest
13 rate will be 4.50% or less.

14 **Q. Why is the par amount of the bonds less than \$7.5 Million?**

15 A. We anticipate being able to have bonds issued at a premium. We anticipate that together,
16 the par amount plus the premium will not exceed \$7.5 Million.

17 **Q. Can you please breakdown the cost of issuance of the debt, that you have calculated**
18 **in the amount of \$315,000?**

19 A. Of the total anticipated cost of issuance of \$315,000, \$115,000 is for the private
20 placement fee for Huntington Capital Markets, \$40,000 for Cender & Company, L.L.C.,
21 financial advisor, and \$2,500 for Bank of New York Mellon as registrar and paying
22 agent. Other costs of issuance will include attorneys' fees incurred with Faegre Baker
23 Daniels LLP, bond counsel and regulatory counsel, and other costs as they arise.

24 **Q. Is it your opinion that HWWD has the ability to service the debt requested?**

1 A. Yes.

2 **Q. Do you believe that the proposed electrical upgrades, reimbursements and other**
3 **expenses to be financed are prudent and in the best interests of the consumers of**
4 **HWWD?**

5 A. Yes. The requested financing will offer reasonable terms and conditions, and prove
6 beneficial to HWWD's customers over time. Indeed, the upgrades are critically
7 necessary to ensure HWWD is able to provide safe drinking water to all of its customers
8 without interruption.

9 **Q. What is the current timeline upon which HWWD needs the requested financing?**


10 A. As the upgrades are currently underway and from a cash flow standpoint, it will be
11 important for HWWD to close on its bond in the next three months in order for it to make
12 timely payments to its contractor, Meade Industries.

13 **Q. Does this conclude your direct testimony in this Cause?**

14 A. Yes, it does.

VERIFICATION

The undersigned, Karl Cender, under penalty of perjury, affirms that he has read the foregoing testimony, and that the statements and attached exhibits therein contained are true to the best of his knowledge, information, and belief.



Karl Cender

WATER UTILITY
CITY OF HAMMOND
STATEMENT OF REVENUES, EXPENSES AND OTHER CHANGES IN FUND NET ASSETS
As Of And For The Years Ended December 31, 2016, 2015 And 2014

	Unaudited 2016	2015	2014
Operating revenues:			
Metered water revenue:			
Residential	\$ 1,542,987	\$ 1,552,355	\$ 1,555,861
Commercial	10,867,668	10,671,226	9,365,407
Other water revenue	<u>443,596</u>	<u>385,762</u>	<u>410,468</u>
Total operating revenues	<u>12,854,251</u>	<u>12,609,343</u>	<u>11,331,736</u>
Operating expenses:			
Water Treatment:			
Salaries and wages	1,030,462	1,022,506	996,710
Employee pensions and benefits	147,407	138,001	149,551
Purchased power	1,074,451	1,034,135	1,162,780
Fuel For Power Production	3,725	7,441	11,074
Chemicals	750,059	558,069	564,649
Materials and supplies	168,973	249,505	214,175
Contractual services	428,689	418,580	483,450
Insurance	383,160	387,735	387,737
Miscellaneous	18,532	24,720	32,635
Transmission and Distribution:			
Salaries and wages	1,082,308	1,086,626	1,080,005
Employee pensions and benefits	160,294	164,368	158,099
Materials and supplies	770,398	926,883	870,730
Contractual services	255,306	213,047	225,610
Transportation expense	36,139	48,665	75,513
Insurance	615,452	629,994	673,151
Miscellaneous	11,678	7,148	13,902
Customer Accounts:			
Salaries and wages	677,799	684,895	675,056
Employee pensions and benefits	100,410	103,239	94,997
Contractual services	503,626	320,178	342,676
Transportation expense	10,511	9,858	10,076
Insurance	235,500	252,840	232,020
Bad debt expense	14,015	26,129	28,423
Miscellaneous	1,918	2,028	21,861
Administrative and General:			
Salaries and wages	735,697	685,974	764,791
Employee pensions and benefits	86,636	83,101	74,744
Contractual services	304,027	36,855	51,644
Materials and supplies	184,246	174,675	206,793
Insurance	430,077	384,969	366,993
Taxes	304,169	305,203	313,880
Depreciation	1,843,317	1,776,669	2,015,477
Change in OPEB/Net Pension obligations	1,381,681	757,861	807,860
Miscellaneous	<u>70,239</u>	<u>172,110</u>	<u>304,920</u>
Total operating expenses	<u>13,820,900</u>	<u>12,694,007</u>	<u>13,411,982</u>
Operating loss	<u>(966,649)</u>	<u>(84,664)</u>	<u>(2,080,246)</u>

WATER UTILITY
CITY OF HAMMOND
STATEMENT OF REVENUES, EXPENSES AND OTHER CHANGES IN FUND NET ASSETS
As Of And For The Years Ended December 31, 2016, 2015 And 2014

	Unaudited 2016	2015	2014
Nonoperating revenues (expenses):			
Interest and investment revenue	11,476	4,077	3,923
Loss on disposition of assets	(33,961)		
Burnham City Share from prior year	(42,365)		
Ford Heights Share from prior year	(10,139)	-	-
Total nonoperating revenues (expenses)	(74,990)	4,077	3,923
Income before contributions and transfers	(1,041,638)	(80,587)	(2,076,323)
Contributions and transfers:			
Capital Contributions	468,008	417,610	223,600
Transfers to City	(615,000)	(615,000)	(615,000)
Total contributions and transfers	(146,992)	(197,390)	(391,400)
Change in net assets	(1,188,630)	(277,977)	(2,467,723)
Total net assets - beginning	36,494,962	36,772,939	41,321,715
Total net assets - ending	<u>\$ 35,306,332</u>	<u>\$ 36,494,962</u>	<u>\$ 38,853,992</u>

Note: The 2016 unaudited information is provided by the City of Hammond. The 2015 and 2014 information is from the audit report of the Indiana State Board of Accounts.

CITY OF HAMMOND WATERWORKS
Hammond, Indiana

Schedule of Net Revenues, Debt Service on Proposed Bonds and Coverage

	<u>2016 (1)</u>	<u>2015 (2)</u>	<u>2014 (2)</u>
Total Operating Revenues	\$12,854,251	\$ 12,609,343	\$ 11,331,736
Interest Income	<u>11,476</u>	<u>4,077</u>	<u>3,923</u>
Total Revenue	<u>\$12,865,727</u>	<u>\$ 12,613,420</u>	<u>\$ 11,335,659</u>
Total Operating Expenses			
less: Depreciation Expense	<u>11,977,583</u>	<u>10,917,338</u>	<u>11,396,505</u>
Net Operating Revenues	\$ 888,144	\$ 1,696,082	\$ (60,846)
Estimated Annual			
Debt Service on Proposed Bonds	<u>670,750 (3)</u>	<u>670,750 (3)</u>	<u>670,750 (3)</u>
Net Revenues	<u>\$ 217,394</u>	<u>\$ 1,025,332</u>	<u>\$ (731,596)</u>
Coverage Percentage	<u>132.41%</u>	<u>252.86%</u>	<u>-9.07%</u>

- (1) Net Operating Revenues are obtained from Hammond Waterwork's unaudited financial reports.
- (2) Net Operating Revenues obtained from Hammond Waterwork's audited financial reports for 2015 and 2014.
- (3) Proforma annual debt service payment on \$6,995,000 over 15 years at 5% interest. See Exhibit D.

CITY OF HAMMOND WATERWORKS
Hammond, Indiana

Schedule of Cash Flow, Debt Service on Proposed Revenue Bonds and Coverage

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net Cash Flow Provided from Operating Activities	\$ 2,266,535 (1)	\$ 1,881,717 (2)	\$ 553,739 (2)
Less: Normal Annual Capital Expenditures	<u>700,000 (3)</u>	<u>700,000 (3)</u>	<u>655,175 (3)</u>
Net Cash Flow Provided from Operating Activities after Normal Capital Expenditures	1,566,535	1,181,717	(101,436)
Estimated Annual Debt Service on Proposed Bonds	<u>670,750 (4)</u>	<u>670,750 (4)</u>	<u>670,750 (4)</u>
Net Cash Flow from Operating Activities After Debt Service on Proposed Bonds	<u>\$ 1,595,785</u>	<u>\$ 1,210,967</u>	<u>\$ (117,011)</u>
Coverage Percentage	<u>233.55%</u>	<u>176.18%</u>	<u>-15.12%</u>

- (1) Net Cash Flow Provided from Operating Activities from Hammond Waterworks unaudited financial reports.
- (2) Net Cash Flow Provided from Operating Activities from Hammond Waterworks audited financial statements for 2015 and 2014.
- (3) Estimated normal annual capital expenditures to be re-occurring by the Waterworks, not including the proposed electrical system upgrade project.
- (4) Proforma annual debt service payment on \$6,995,000 over 15 years at 5% interest. See Exhibit D.

CITY OF HAMMOND WATERWORKS

Hammond, Indiana

Waterworks Revenue Bonds, Series 2017

Preliminary Bond Debt Service Schedule

Dated: September 10, 2017

Date	Principal	Rate	Interest	Total	Fiscal Total
				\$ -	
01/15/18			\$ 119,497.92	\$ 119,497.92	\$ 119,497.92
07/15/18	\$ 160,000	5.00%	174,875.00	334,875.00	
01/15/19	165,000	5.00%	170,875.00	335,875.00	670,750.00
07/15/19	165,000	5.00%	166,750.00	331,750.00	
01/15/20	170,000	5.00%	162,625.00	332,625.00	664,375.00
07/15/20	175,000	5.00%	158,375.00	333,375.00	
01/15/21	180,000	5.00%	154,000.00	334,000.00	667,375.00
07/15/21	185,000	5.00%	149,500.00	334,500.00	
01/15/22	190,000	5.00%	144,875.00	334,875.00	669,375.00
07/15/22	195,000	5.00%	140,125.00	335,125.00	
01/15/23	200,000	5.00%	135,250.00	335,250.00	670,375.00
07/15/23	205,000	5.00%	130,250.00	335,250.00	
01/15/24	210,000	5.00%	125,125.00	335,125.00	670,375.00
07/15/24	215,000	5.00%	119,875.00	334,875.00	
01/15/25	220,000	5.00%	114,500.00	334,500.00	669,375.00
07/15/25	225,000	5.00%	109,000.00	334,000.00	
01/15/26	230,000	5.00%	103,375.00	333,375.00	667,375.00
07/15/26	235,000	5.00%	97,625.00	332,625.00	
01/15/27	240,000	5.00%	91,750.00	331,750.00	664,375.00
07/15/27	250,000	5.00%	85,750.00	335,750.00	
01/15/28	255,000	5.00%	79,500.00	334,500.00	670,250.00
07/15/28	260,000	5.00%	73,125.00	333,125.00	
01/15/29	265,000	5.00%	66,625.00	331,625.00	664,750.00
07/15/29	275,000	5.00%	60,000.00	335,000.00	
01/15/30	280,000	5.00%	53,125.00	333,125.00	668,125.00
07/15/30	290,000	5.00%	46,125.00	336,125.00	
01/15/31	295,000	5.00%	38,875.00	333,875.00	670,000.00
07/15/31	305,000	5.00%	31,500.00	336,500.00	
01/15/32	310,000	5.00%	23,875.00	333,875.00	670,375.00
07/15/32	320,000	5.00%	16,125.00	336,125.00	
01/15/33	325,000	5.00%	8,125.00	333,125.00	669,250.00
Total	\$ 6,995,000		\$ 3,150,997.92	\$ 10,145,997.92	\$ 10,145,997.92

Note: Maximum annual debt service is \$670,750.

Hammond Waterworks

City of Hammond, Indiana

Proposed Waterworks Revenue Bonds, Series 2017

Sources & Uses

Dated 09/12/2017 | Delivered 09/12/2017

Sources Of Funds

Par Amount of Bonds	\$6,995,000.00
Reoffering Premium	506,551.90

Total Sources	\$7,501,551.90
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Uses Of Funds

Costs of Issuance	315,000.00
Deposit to Project Construction Fund	7,185,000.00
Rounding Amount	1,551.90

Total Uses	\$7,501,551.90
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Hammond Waterworks

City of Hammond, Indiana

Proposed Waterworks Revenue Bonds, Series 2017

Debt Service Schedule

Part 1 of 2

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
09/12/2017	-	-	-	-	-
01/15/2018	-	-	119,497.92	119,497.92	119,497.92
07/15/2018	160,000.00	5.000%	174,875.00	334,875.00	-
01/15/2019	165,000.00	5.000%	170,875.00	335,875.00	670,750.00
07/15/2019	165,000.00	5.000%	166,750.00	331,750.00	-
01/15/2020	170,000.00	5.000%	162,625.00	332,625.00	664,375.00
07/15/2020	175,000.00	5.000%	158,375.00	333,375.00	-
01/15/2021	180,000.00	5.000%	154,000.00	334,000.00	667,375.00
07/15/2021	185,000.00	5.000%	149,500.00	334,500.00	-
01/15/2022	190,000.00	5.000%	144,875.00	334,875.00	669,375.00
07/15/2022	195,000.00	5.000%	140,125.00	335,125.00	-
01/15/2023	200,000.00	5.000%	135,250.00	335,250.00	670,375.00
07/15/2023	205,000.00	5.000%	130,250.00	335,250.00	-
01/15/2024	210,000.00	5.000%	125,125.00	335,125.00	670,375.00
07/15/2024	215,000.00	5.000%	119,875.00	334,875.00	-
01/15/2025	220,000.00	5.000%	114,500.00	334,500.00	669,375.00
07/15/2025	225,000.00	5.000%	109,000.00	334,000.00	-
01/15/2026	230,000.00	5.000%	103,375.00	333,375.00	667,375.00
07/15/2026	235,000.00	5.000%	97,625.00	332,625.00	-
01/15/2027	240,000.00	5.000%	91,750.00	331,750.00	664,375.00
07/15/2027	250,000.00	5.000%	85,750.00	335,750.00	-
01/15/2028	255,000.00	5.000%	79,500.00	334,500.00	670,250.00
07/15/2028	260,000.00	5.000%	73,125.00	333,125.00	-
01/15/2029	265,000.00	5.000%	66,625.00	331,625.00	664,750.00
07/15/2029	275,000.00	5.000%	60,000.00	335,000.00	-
01/15/2030	280,000.00	5.000%	53,125.00	333,125.00	668,125.00
07/15/2030	290,000.00	5.000%	46,125.00	336,125.00	-
01/15/2031	295,000.00	5.000%	38,875.00	333,875.00	670,000.00
07/15/2031	305,000.00	5.000%	31,500.00	336,500.00	-
01/15/2032	310,000.00	5.000%	23,875.00	333,875.00	670,375.00
07/15/2032	320,000.00	5.000%	16,125.00	336,125.00	-
01/15/2033	325,000.00	5.000%	8,125.00	333,125.00	669,250.00
Total	\$6,995,000.00	-	\$3,150,997.92	\$10,145,997.92	-

Hammond Waterworks

City of Hammond, Indiana

Proposed Waterworks Revenue Bonds, Series 2017

Debt Service Schedule

Part 2 of 2

Yield Statistics

Bond Year Dollars	\$63,019.96
Average Life	9.009 Years
Average Coupon	5.0000000%
Net Interest Cost (NIC)	4.1962040%
True Interest Cost (TIC)	4.0014656%
Bond Yield for Arbitrage Purposes	4.0014656%
All Inclusive Cost (AIC)	4.6111066%

IRS Form 8038

Net Interest Cost	3.8608037%
Weighted Average Maturity	9.131 Years