

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)	CAUSE NO. 45125
TO ADJUST ITS RATES AND CHARGES)	
FOR WATER SERVICE)	
)	

CITY OF NEW HAVEN'S DIRECT WORK PAPERS

The City of New Haven ("New Haven"), by Counsel, hereby submits the attached
Direct Work Papers of Gregory T. Guerrettaz in this Cause.

Mr. Seelye's work papers are the Exhibits to his filed testimony.

Respectfully submitted,

/s/ Robert M. Glennon _____
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Work Papers was served upon the following by electronic delivery this 1st day of November 2018, to:

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Daily Treasury Yield Curve Rates

Date	1 mo	2 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
10/15/18	2.17	N/A	2.31	2.47	2.67	2.85	2.94	3.01	3.10	3.16	3.27	3.31
10/16/18	2.19	2.22	2.30	2.46	2.66	2.87	2.95	3.02	3.10	3.16	3.26	3.30
10/17/18	2.20	2.23	2.31	2.47	2.66	2.89	2.97	3.04	3.13	3.19	3.29	3.33
10/18/18	2.19	2.23	2.32	2.47	2.67	2.87	2.95	3.03	3.11	3.17	3.28	3.32
10/19/18	2.19	2.23	2.31	2.48	2.67	2.92	2.99	3.05	3.14	3.20	3.31	3.35
10/22/18	2.18	2.25	2.34	2.49	2.68	2.92	2.99	3.05	3.13	3.20	3.31	3.35
10/23/18	2.21	2.23	2.33	2.48	2.67	2.89	2.95	3.01	3.10	3.17	3.29	3.33
10/24/18	2.20	2.23	2.34	2.47	2.64	2.84	2.89	2.94	3.02	3.10	3.24	3.28
10/25/18	2.19	2.24	2.34	2.47	2.66	2.86	2.92	2.98	3.07	3.14	3.27	3.31
10/26/18	2.16	2.21	2.33	2.47	2.63	2.81	2.85	2.91	3.00	3.08	3.23	3.27
10/29/18	2.17	2.21	2.34	2.49	2.64	2.81	2.86	2.91	3.00	3.08	3.23	3.27
10/30/18	2.21	2.26	2.33	2.48	2.66	2.84	2.90	2.94	3.03	3.12	3.26	3.30
10/31/18	2.20	2.26	2.34	2.49	2.69	2.87	2.93	2.98	3.07	3.15	3.30	3.34

Extended Term Financing

In an effort to allow all Indiana utilities to address the issue of aging water and sewer infrastructure, while achieving more affordable customer user rates, the Indiana Finance Authority's State Revolving Fund (SRF) Loan Programs recently received special approval as required from the EPA to offer an Extended Term Financing Program with loan terms up to 35 years for water and sewer pipe projects, having a useful life at least equal to or greater than the loan term.

In order to provide this accommodation to borrowers, an interest rate premium will be assessed at the rate of 10 basis points per each five years that the loan is extended beyond 20 yrs. This increase will be assessed after any interest rate incentives (Lead Remediation, Nonpoint Source, Green Project Reserve/Sustainability/Climate Resilient Projects, and Brownfields) are applied.

SRF Interest Rates

Below are the current SRF Program interest rates, effective April 1, 2018 through June 30, 2018. The interest rates vary based on three ranges of average monthly user rates for an equivalent dwelling unit (User Rates) within each of the three Medium Household Income tiers, creating nine possible interest rates for SRF Borrowers.

Drinking Water SRF Interest Rates	User Rates (Over \$45)	User Rates(\$25 to \$45)	User Rates (Under \$25)
Tier III (MHI*: under \$39,404)	2.00%	2.00%	2.12%
Tier II (MHI: \$39,405 to \$41,566)	2.00%	2.00%	2.37%
Tier I (MHI: over \$49,255)	2.00%	2.12%	2.62%

Wastewater SRF Interest Rates	User Rates (Over \$50)	User Rates(\$30 to \$50)	User Rates (Under \$30)
Tier III (MHI*: under \$39,404)	2.00%	2.00%	2.12%
Tier II (MHI: \$39,405 to \$41,566)	2.00%	2.00%	2.37%
Tier I (MHI: over \$49,255)	2.00%	2.12%	2.62%

*MHI reflected in the 2011-2015 American Community Survey

Note: Up to an additional .50% reduction may be permitted if a project is financed that includes green/sustainable, climate resiliency, or lead line replacement components.

Lead Line Replacement Incentive

One of the newest incentives offered by the Indiana SRF Drinking Water Program is the Lead Line Replacement Incentive Program. This Program offers a reduced interest rate incentive for communities to include lead line replacement as part of their SRF financed projects. Lead line replacement projects include replacing complete lead and galvanized pipe service lines (both public and privately owned). Based on the type and cost of these components, a community may be eligible for improved ranking on the SRF Project Priority List as well as an interest rate as low as 0% on its SRF loan.

Lead line replacement projects will follow the same process as a traditional SRF Loan Program financed project and will be required to provide:

1. A description of the project or components that may qualify as lead line replacement.
2. All proposed lead line replacement locations in the PER graphics.
3. The costs associated with the lead line replacement portion of the project, including both construction and design costs.

For more information, please visit the SRF Web site at www.srf.in.gov or contact the SRF Program Administrator, Shelley Love, at 317/232-4396 or slove@ifa.in.gov, with questions.

Asset Management Program Requirements

Pursuant to SB 362, effective July 1, 2018, communities seeking funds from SRF will be required to complete an Asset Management Program (AMP) for their existing utility as well as for the proposed improvements which they are seeking funds.

Borrowers will be required to develop and certify that they have an AMP which satisfies the requirements of the SRF Loan Program requirements prior to the completion of the SRF funded project. If the borrower has an existing AMP which satisfies the requirements of the SRF Loan Program requirements, they will provide the certification indicating such prior to completing a financing with the SRF Loan Program. SRF may also ask to view AMPs while on site during inspections. As with previously required SRF Fiscal Sustainability Plans (currently for WW only), SRF will require each borrower provide a certification that the AMP is completed prior to the approval of the last disbursement related to the main project.

The Indiana Historic Buildings, Bridges, and Cemeteries Map

The Indiana Historic Buildings, Bridges, and Cemeteries map (IHBBC) replaces the former SHAARD GIS map, and can be accessed online within the Indiana DNR Division of Historic Preservation and Archaeology website via the [SHAARD Online Database link](#). At the SHAARD Database page, click on the Indiana Historic Buildings, Bridges, and Cemeteries Map link. This will allow you to launch the app and the user can begin to explore the map.

For returning users, this map has many new features and improvements. A User Guide is available and will be updated as new features and updates are added to the map. Contact Megan Copenhaver with DNR (mcopenhaver@dnr.IN.gov) for specific questions or suggestions concerning the map.

At this point, Hancock, Marion and Morgan counties are the only counties that have not been entered into SHAARD. For these counties, please submit both Interim Report maps and IHBBC maps until further notice.

For the counties whose surveys have been completed, the SRF Loan Program prefers that prospective borrowers submit IHBBC maps rather than Interim Report maps. Please provide maps on an aerial image that clearly illustrate the identified historical sites and their associated numbers along with the proposed project disturbance area.

of the Utility. The Net Revenues of the Utility that are pledged to the payment of the Bonds are more fully described in the Ordinance. The Flow of Funds is described in Section 11 through 13 of the Ordinance with a description of the Debt Service Reserve in Section 12 of the Ordinance. The Rate Covenant is described in Section 16 of the Ordinance and the Additional Bond Provisions are detailed in Section 17 thereof. The City shall not be obligated to pay the Bonds or the interest thereon except from the Net Revenues, and the Bonds shall not constitute an indebtedness of the City within the meaning of the provisions and limitations of the constitution of the State of Indiana (the "State").

ESTIMATED SOURCES AND USES OF FUNDS

Sources of Funds

Par Amount of Bonds	\$ 40,000,000
Original Issue Discount	(185,773)
Premium	766,098
	<hr/>
Total Sources of Funds	\$ 40,580,325

19,813,840

Uses of Funds

Project Fund	\$ 19,813,840
2012 BAN Principal (1)	17,840,000
2012 Estimated BAN Interest (1)	83,491
Underwriter's Discount	557,670
Debt Service Reserve Requirement (2)	1,998,824
Cost of Issuance (3)	286,500
	<hr/>
Total Uses of Funds	\$ 40,580,325

52.5%
77.5%

- (1) See Appendix C. Schedule A-6.
- (2) The debt service reserve is funded at the maximum annual debt service on the Bonds and Prior Bonds.
- (3) Includes legal fees, financial advisory fees, rating agency fees, and other miscellaneous expenses.

DESCRIPTION OF THE BONDS

The Bonds are issued pursuant to Indiana law, including, without limitation, Indiana Code 8-1.5 (the "Act"); and pursuant to Ordinance No. S-30-12, adopted by the Common Council of the City (the "Common Council") on March 13, 2012 (the "Ordinance"). The Bonds will be issued as fully registered bonds and will be registered in the name of Cede & Co., as nominee for The Depository Trust Company, New York, New York (the "DTC"). Purchases of beneficial interests in the Bonds will be made in book-entry-only form, in denominations of \$5,000 or integral multiples thereof. Purchasers of beneficial interests in the Bonds (the "Beneficial Owners") will not receive physical delivery of certificates representing their interests in the Bonds.

Interest on the Bonds will be paid semi-annually on June 1 and December 1 in each year beginning June 1, 2013. The principal of the Bonds is payable on each December 1, beginning

**Fort Wayne
Water Utility
Fort Wayne, Indiana**

Comparative Gallons Pumped to Gallons Billed

<u>Calendar Year</u>	<u>NH Gallons Purchased</u>	<u>New Haven % of Total</u>	<u>Total Gallons Pumped</u>	<u>Percent Change</u>	<u>Total Gallons Billed</u>	<u>Percent Change</u>	<u>Water Loss %</u>	<u>Total Number Of Customers</u>	<u>Percent Change</u>
2018*	274,888,422	#DIV/0!		-100%		-100%	#DIV/0!	-	#DIV/0!
2017	358,998,890	2.99%	12,007,800,000	0%	8,470,605,000	-4%	29%	-	#DIV/0!
2016	355,608,924	2.97%	11,985,899,000	3%	8,828,128,000	5%	26%	-	#DIV/0!
2015	342,129,964	2.93%	11,678,159,000	8%	8,419,508,000	8%	28%	-	#DIV/0!
2014	356,142,996	3.29%	10,810,020,000	#DIV/0!	7,792,725,000	#DIV/0!	28%	-	#DIV/0!
2013	360,956,376						#DIV/0!	-	
Change in Gallons Pumped 2013-2017			<u>12,007,800,000</u>						
Change in Gallons Billed 2013-2017			<u>8,470,605,000</u>						

FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

**SCHEDULE OF AMORTIZATION OF \$35,005,000 OUTSTANDING PRINCIPAL
AMOUNT OF WATERWORKS REVENUE BONDS OF 2012**

Principal payable annually on December 1st.

Interest payable semiannually on June 1st and December 1st.

Interest rates as indicated.

Payment Date	Principal		Interest Rates (%)	Debt Service		Bond Year Total
	Balance (-----In \$1,000's-----)	Principal (-----In \$1,000's-----)		Interest (-----In Dollars-----)	Total (-----In Dollars-----)	
6/1/2018	\$35,005			\$491,725.00	\$491,725.00	
12/1/2018	35,005	\$1,180	2.0	491,725.00	1,671,725.00	\$2,163,450.00
6/1/2019	33,825			479,925.00	479,925.00	
12/1/2019	33,825	1,195	2.0	479,925.00	1,674,925.00	2,154,850.00
6/1/2020	32,630			467,975.00	467,975.00	
12/1/2020	32,630	2,125	2.0	467,975.00	2,592,975.00	3,060,950.00
6/1/2021	30,505			446,725.00	446,725.00	
12/1/2021	30,505	2,170	2.0	446,725.00	2,616,725.00	3,063,450.00
6/1/2022	28,335			425,025.00	425,025.00	
12/1/2022	28,335	2,210	3.0	425,025.00	2,635,025.00	3,060,050.00
6/1/2023	26,125			391,875.00	391,875.00	
12/1/2023	26,125	2,280	3.0	391,875.00	2,671,875.00	3,063,750.00
6/1/2024	23,845			357,675.00	357,675.00	
12/1/2024	23,845	2,345	3.0	357,675.00	2,702,675.00	3,060,350.00
6/1/2025	21,500			322,500.00	322,500.00	
12/1/2025	21,500	2,420	3.0	322,500.00	2,742,500.00	3,065,000.00
6/1/2026	19,080			286,200.00	286,200.00	
12/1/2026	19,080	2,490	3.0	286,200.00	2,776,200.00	3,062,400.00
6/1/2027	16,590			248,850.00	248,850.00	
12/1/2027	16,590	2,565	3.0	248,850.00	2,813,850.00	3,062,700.00
6/1/2028	14,025			210,375.00	210,375.00	
12/1/2028	14,025	2,640	3.0	210,375.00	2,850,375.00	3,060,750.00
6/1/2029	11,385			170,775.00	170,775.00	
12/1/2029	11,385	2,720	3.0	170,775.00	2,890,775.00	3,061,550.00
6/1/2030	8,665			129,975.00	129,975.00	
12/1/2030	8,665	2,805	3.0	129,975.00	2,934,975.00	3,064,950.00
6/1/2031	5,860			87,900.00	87,900.00	
12/1/2031	5,860	2,885	3.0 (1)	87,900.00	2,972,900.00	3,060,800.00
6/1/2032	2,975			44,625.00	44,625.00	
12/1/2032	2,975	2,975	3.0 (1)	44,625.00	3,019,625.00	3,064,250.00
Totals	\$35,005			\$9,124,250.00	\$44,129,250.00	\$44,129,250.00

(1) \$5,860,000 of Term Bonds due December 1, 2032.

(See Accountant's Report)

FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

**SCHEDULE OF AMORTIZATION OF \$61,340,000 OUTSTANDING PRINCIPAL
AMOUNT OF WATERWORKS REVENUE BONDS OF 2014**

Principal payable annually on December 1st through 2032.

Principal payable semiannually on June 1st and December 1st, beginning June 1, 2033.

Interest payable semiannually on June 1st and December 1st.

Interest rates as indicated.

Payment Date	Principal Balance (-----In \$1,000's-----)	Principal	Interest Rates (%)	Debt Service		Bond Year Total
				Interest (-----In Dollars-----)	Total	
6/1/2018	\$61,340			\$1,061,512.50	\$1,061,512.50	
12/1/2018	61,340	\$600	2.00	1,061,512.50	1,661,512.50	\$2,723,025.00
6/1/2019	60,740			1,055,512.50	1,055,512.50	
12/1/2019	60,740	610	2.00	1,055,512.50	1,665,512.50	2,721,025.00
6/1/2020	60,130			1,049,412.50	1,049,412.50	
12/1/2020	60,130	695	2.00	1,049,412.50	1,744,412.50	2,793,825.00
6/1/2021	59,435			1,042,462.50	1,042,462.50	
12/1/2021	59,435	715	2.25	1,042,462.50	1,757,462.50	2,799,925.00
6/1/2022	58,720			1,034,418.75	1,034,418.75	
12/1/2022	58,720	3,590	3.00	1,034,418.75	4,624,418.75	5,658,837.50
6/1/2023	55,130			980,568.75	980,568.75	
12/1/2023	55,130	3,710	3.00	980,568.75	4,690,568.75	5,671,137.50
6/1/2024	51,420			924,918.75	924,918.75	
12/1/2024	51,420	3,820	3.00	924,918.75	4,744,918.75	5,669,837.50
6/1/2025	47,600			867,618.75	867,618.75	
12/1/2025	47,600	3,965	3.00	867,618.75	4,832,618.75	5,700,237.50
6/1/2026	43,635			808,143.75	808,143.75	
12/1/2026	43,635	4,090	3.00	808,143.75	4,898,143.75	5,706,287.50
6/1/2027	39,545			746,793.75	746,793.75	
12/1/2027	39,545	4,255	3.25	746,793.75	5,001,793.75	5,748,587.50
6/1/2028	35,290			677,650.00	677,650.00	
12/1/2028	35,290	4,430	3.25	677,650.00	5,107,650.00	5,785,300.00
6/1/2029	30,860			605,662.50	605,662.50	
12/1/2029	30,860	4,615	3.50	605,662.50	5,220,662.50	5,826,325.00
6/1/2030	26,245			524,900.00	524,900.00	
12/1/2030	26,245	4,815	4.00	524,900.00	5,339,900.00	5,864,800.00
6/1/2031	21,430			428,600.00	428,600.00	
12/1/2031	21,430	5,025	4.00	428,600.00	5,453,600.00	5,882,200.00
6/1/2032	16,405			328,100.00	328,100.00	
12/1/2032	16,405	5,195	4.00	328,100.00	5,523,100.00	5,851,200.00
6/1/2033	11,210	2,735	4.00	224,200.00	2,959,200.00	
12/1/2033	8,475	2,745	4.00	169,500.00	2,914,500.00	5,873,700.00
6/1/2034	5,730	2,865	4.00	114,600.00	2,979,600.00	
12/1/2034	2,865	2,865	4.00	57,300.00	2,922,300.00	5,901,900.00
Totals		<u>\$61,340</u>		<u>\$24,838,150.00</u>	<u>\$86,178,150.00</u>	<u>\$86,178,150.00</u>

(See Accountant's Report)