



Debt 101 – The Basics

Wisconsin Government Finance Officers Association

Baird Public Finance

Bradley D. Viegut
Managing Director
414.298.7540
bviegut@rwbaird.com

Agenda

History / Philosophy of Municipal Debt

Types of Debt

Historical Interest Rates / The Yield Curve

Structuring Debt

Debt Issuance

History

Philosophy

Types of Debt

State Trust Fund Loans

Bank Loans

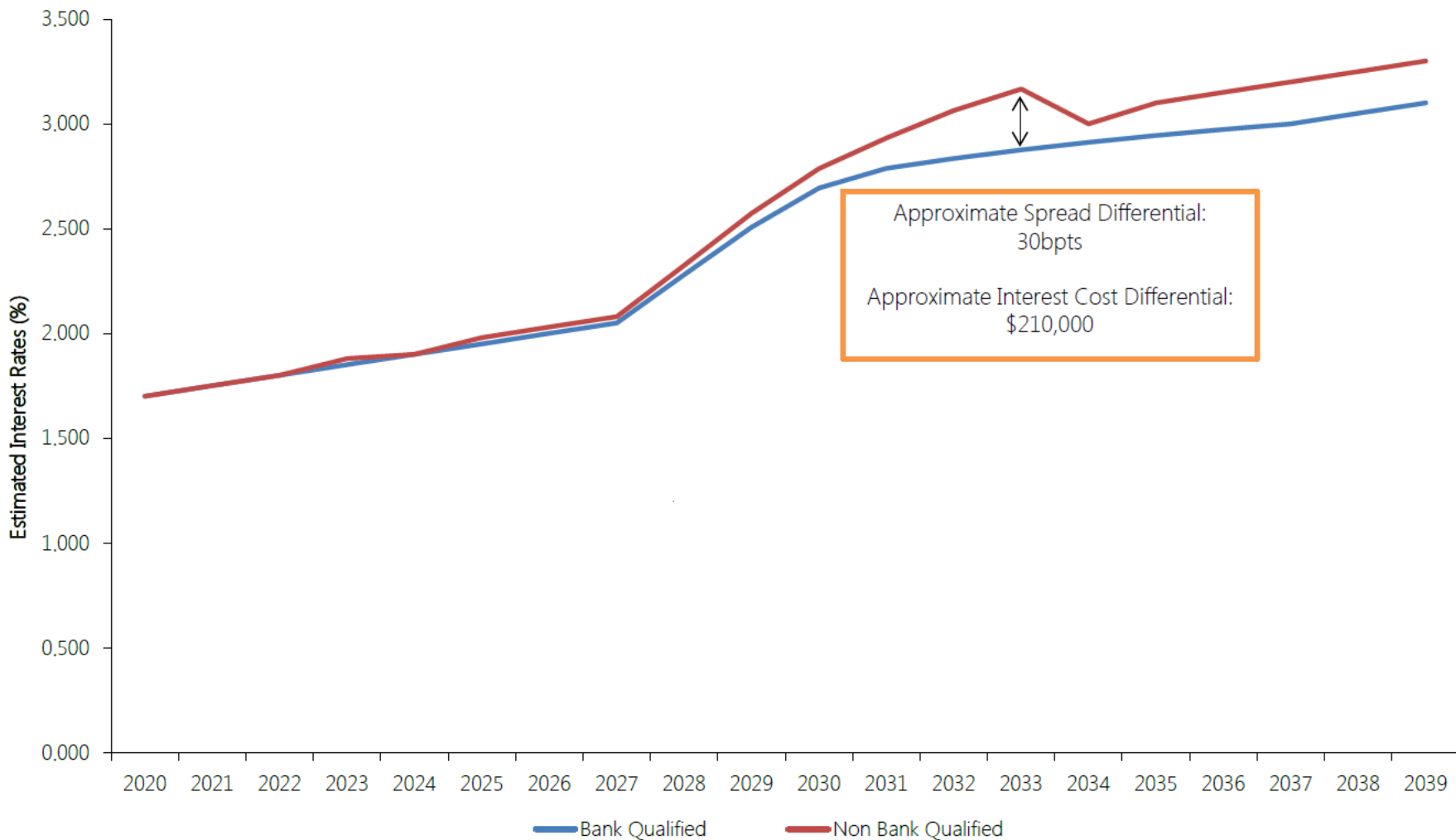
Open Market Issues

- Bonds/Notes
 - Primary Market
 - Secondary Market

Tax Status

- Taxable
- Tax-Exempt (single)
- Tax-Exempt (double)

Bank Qualification – BQ & NBQ



Note: Assumes twenty year \$10 million Aa2 borrowing
Source: Data from Baird Municipal Underwriting Desk as of 4/4/2019

Security/Pledge of Repayment

General Obligation

Pledge of Future General Obligation
Issuance (BANs/NANs)

Excerpt from Official Statement

CONSTITUTIONAL AND STATUTORY CONSIDERATIONS AND LIMITATIONS CONCERNING THE CITY'S POWER TO INCUR INDEBTEDNESS

The Constitution and laws of the State limit the power of the City (and other municipalities of the State) to issue obligations and to contract indebtedness. Such constitutional and legislative limitations include the following, which are presented in summary form and are generally applicable to the City.

Purpose

The City may not borrow money or issue notes or bonds therefor for any purpose except those specified by statute, which include among others the purposes for which the Notes are being issued.

General Obligation Bonds

The principal amount of every sum borrowed by the City and secured by an issue of bonds may be payable at one time in a single payment or at several times in two or more installments; however, no installment may be made payable later than the termination of twenty years immediately following the date of the bonds. The Common Council is required to levy a direct, annual, irrevocable tax sufficient in amount to pay the interest on such bonds as it falls due and also to pay and discharge the principal thereof at maturity. Bonds issued by the City to refinance or refund outstanding notes or bonds issued by the City may be payable no later than twenty years following the original date of such notes or bonds.

Refunding Bonds

In addition to being authorized to issue bonds, the City is authorized to borrow money using refunding bonds for refunding outstanding municipal obligations. To evidence such indebtedness, the City must issue its refunding bonds (with interest) payable within a period not exceeding twenty years following the initial date of refunding bonds or the debt to be refunded (if general obligation). Such refunding bonds constitute a general obligation of the City. Refunding bonds are not subject to referendum.

Bond or Note Anticipation Notes

In anticipation of issuing general obligation bonds or notes, the City is authorized to borrow money using bond or note anticipation notes. The bond or note anticipation notes shall in no event be a general obligation of the City, and do not constitute an indebtedness of the City, nor a charge against its general credit or taxing power. The bond or note anticipation notes are payable only from (a) proceeds of the bond or note anticipation notes set aside for payment of interest on the bond or note anticipation notes as they become due, and, (b) proceeds to be derived from the issuance and sale of general obligation bonds or promissory notes which proceeds constitute a special trust fund to be held and expended solely for the payment of the principal of and interest on the bond or note anticipation notes. The maximum term of any bond or note anticipation notes (including any refunding) is five years.

Promissory Notes

In addition to being authorized to issue bonds, the City is authorized to borrow money using promissory notes for any public purpose. To evidence such indebtedness, the City must issue its promissory notes (with interest) payable within a period not exceeding ten years following the date of said notes. Such notes constitute a general obligation of the City. Notes may be issued to refinance or refund outstanding notes or bonds. However, such notes must be payable not later than twenty years following the original date of such notes.

Debt Limit

The City has the power to contract indebtedness for purposes specified by statute so long as the principal amount thereof does not exceed five percent of the equalized value of taxable property within the City. For information with respect to the City's percent of legal debt incurred, see the caption "INDEBTEDNESS OF THE CITY-Debt Limit," herein.

Revenue

- Utility
 - Typical Covenants

Excerpt from Official Statement

SECURITY FOR THE BONDS

Security and Source of Payment

The Bonds are valid and legally binding special obligations of the City and are payable solely from the revenues of the System. No other bonds or obligations secured by the revenues of the System are now outstanding.

The Bonds, together with interest thereon, shall not constitute an indebtedness of the City nor a charge against its general credit or taxing power. The Bonds, together with interest thereon, shall be payable only from and secured by a pledge of income and revenue to be derived from the operation of the System. The City pledges on the Net Revenues of the System for payment of principal of and interest on the Bonds, after payment of Operation and Maintenance Expenses.

It is the express intent and determination of the Common Council that the amounts transferred from the Revenue Fund (described below) and deposited in the Special Redemption Fund shall be sufficient in any event to pay the interest on the Bonds, as the same accrues and the principal amount thereof as the same matures, and to provide any amounts required to be paid monthly into the Reserve Account (defined below) to maintain the Reserve Requirement.

Reserve Account

To additionally secure the payment of principal and interest on the Bonds, a separate account has been created in the Special Redemption Fund to be known as the "Reserve Account," and the City covenants and agrees that the amount on deposit in the Reserve Account will equal the "Reserve Requirement." The Reserve Requirement shall be an amount equal to the least of (a) 10% of the proceeds of the Bonds, (b) maximum annual debt service on the Bonds, in any bond year and (c) 125% of average annual debt service on the Bonds; provided that on an ongoing basis it shall never exceed the remaining maximum annual principal and interest due on the Bonds in any bond year. The Reserve Account shall be used solely for the purpose of paying principal of or interest on the Bonds at any time when there shall be insufficient money in the Special Redemption Fund.

Rate Covenant

The City expressly covenants and agrees that it will charge and collect such lawfully established rates and charges for the services rendered by the System, so that in each year while the Bonds remain outstanding, the Revenues of the System agreed to be set aside for that purpose will be sufficient to make payments into the funds and accounts provided for in the Award Resolution, and to provide for the retirement of the Bonds as the same become due; and will promptly adopt and enforce increased rates whenever such increase is necessary to fulfill any covenant of the Bond Resolution. In each bond year, Net Revenues shall not be less than 125% of the annual debt service requirement on the Bonds.

Excerpt from Official Statement

Additional Security (Service to the City)

The City has pledged to the System to be paid in monthly installments, as the service accrues, the reasonable cost and value of any services rendered. The amount of such reasonable cost and value shall be charged against the City and shall be paid for, as the service accrues, out of the current revenues of the City collected or in the process of collection, exclusive of the revenues derived from the System, and out of taxes levied to meet its necessary operating expenses. Such compensation for such service rendered to the City shall be paid into the Revenue Fund and shall be subject to apportionment to the Operation and Maintenance, Depreciation and Special Redemption Funds in the manner provided in the Award Resolution. The amount of such reasonable cost and value shall be equal to an amount as may be necessary from year to year to pay the balance of an amount which, together with other Revenues of the System, will produce in each bond year Net Revenues equivalent to not less than 125% of the annual debt service requirement on the Bonds. Such payment out of the tax levy shall be subject to (a) approval of the Wisconsin Public Service Commission, or successors to its function, if applicable, (b) yearly appropriations therefor, and (c) applicable levy limits, if any.

Flow of Funds

All Revenues of the System shall be deposited as collected into special funds to be known as the "Storm Water System Revenue Fund" and transferred to the following funds in the following manner and order of priority on the tenth day of each month, or as soon as possible thereafter.

1. Money transferred to the Storm Water System Operation and Maintenance Fund (the "Operation and Maintenance Fund") shall be retained therein in an amount not exceeding the estimated Operation and Maintenance Expenses of the System for the current and for the next succeeding month. Any balance thereafter remaining of the amounts so transferred to the Operation and Maintenance Fund shall be used first to remedy any deficiency in the Special Redemption Fund and next to accumulate a reserve in the Operation and Maintenance Fund equal to estimated Operation and Maintenance Expenses for one month, and any money then available in the Operation and Maintenance Fund shall be transferred to the Storm Water System Surplus Fund.
2. Money in the Special Redemption Fund shall be used to pay the principal and interest on the Bonds and to meet debt service reserve requirements. Money in the Reserve Account of the Special Redemption Fund shall be used whenever necessary to pay principal of or interest on the Bonds whenever the amount on deposit in the Special Redemption Fund shall be insufficient for that purpose. Money in the Reserve Account in excess of the Reserve Requirement shall be transferred to any of the funds the Special Redemption Fund and used to pay principal and interest on the Bonds.
3. Money in the Storm Water System Depreciation Fund shall be used to provide a proper and adequate depreciation account for the System.
4. Money in the Surplus Fund shall first be used whenever necessary to meet the requirements of the Operation and Maintenance Fund, the Special Redemption Fund and the Depreciation Fund. Any money remaining in the Surplus Fund at the end of any Fiscal Year may first be used only as permitted and in the order specified in Section 66.0811(2) of the Wisconsin Statutes and may thereafter be transferred to any of the funds or accounts provided for in the Award Resolution.

Excerpt from Official Statement

Parity Bonds

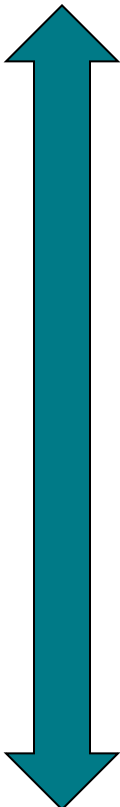
Additional Parity Bonds may be issued providing the following conditions are met:

1. The Net Revenues of the System for the last completed Fiscal Year must have been at least equal to 1.25 times the highest combined annual interest and principal requirements on all bonds then outstanding payable from the Revenues of the System and the bonds proposed to be issued in any Fiscal Year; provided, however, that if prior to the authorization of such additional bonds the City shall have adopted and put into effect a revised schedule of rates, then for purposes of computation the Net Revenues of the System for the last completed Fiscal Year shall include such additional revenues as would, in the written opinion of an independent certified public accountant, consulting engineer employed for that purpose, or the Wisconsin Public Service Commission, have resulted from such rates had they been in effect for such period.
2. The payments required to be made into the funds listed in "Security for the Bonds – Flow of Funds" above must be current.
3. The additional bonds must have principal maturing on May 1 of each year and interest falling due on November 1 and May 1 of each year.
4. The proceeds of the additional bonds must be used only for the purpose of providing improvements and extensions to the Storm Water System or to refund obligations issued for such purpose.
5. If the additional bonds are to be secured by the Reserve Account, the amount on deposit in the Reserve Account is increased to an amount equal to the Reserve Requirement applicable upon the issuance of Parity Bonds, as defined in the Bond Resolution and described under "Security for the Bonds – Reserve Account" above.

Community Development Authority

- Typical Covenants

Bond Rating



	Moody's Long-term	S&P Long-term	Fitch Long-term	Rating Description
Strongest	Aaa	AAA	AAA	Prime
	Aa1	AA+	AA+	High grade
	Aa2	AA	AA	
	Aa3	AA-	AA-	
	A1	A+	A+	Upper medium grade
	A2	A	A	
	A3	A-	A-	
	Baa1	BBB+	BBB+	Lower medium grade
	Baa2	BBB	BBB	
	Baa3	BBB-	BBB-	
	Ba1	BB+	BB+	Non-investment grade speculative
	Ba2	BB	BB	
	Ba3	BB-	BB-	
	B1	B+	B+	Highly speculative
	B2	B	B	
Weaker	B3	B-	B-	

Municipal Interest Rates (Past 30 Years)

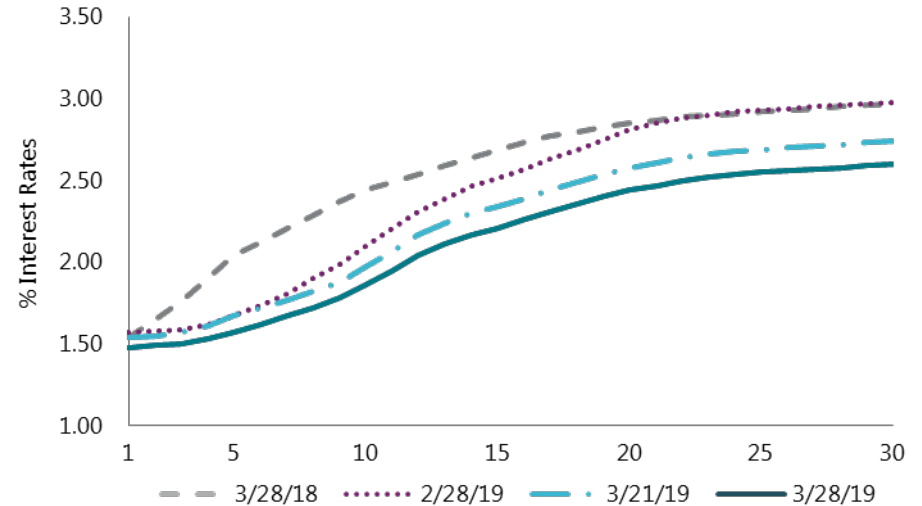


Interest Rates

Where have rates gone?

Maturity	Annual	Monthly	Weekly	Current	Difference		
	3/28/18	2/28/19	3/21/19	3/28/19	Year over Year	Month over Month	Week over Week
1	1.54	1.57	1.54	1.48	-0.06	-0.09	-0.06
2	1.65	1.58	1.55	1.49	-0.16	-0.09	-0.06
3	1.76	1.59	1.57	1.50	-0.26	-0.09	-0.07
4	1.90	1.62	1.61	1.53	-0.37	-0.09	-0.08
5	2.04	1.67	1.67	1.57	-0.47	-0.10	-0.10
6	2.12	1.74	1.72	1.62	-0.50	-0.12	-0.10
7	2.21	1.81	1.77	1.67	-0.54	-0.14	-0.10
8	2.29	1.90	1.82	1.72	-0.57	-0.18	-0.10
9	2.37	1.99	1.88	1.78	-0.59	-0.21	-0.10
10	2.44	2.10	1.97	1.86	-0.58	-0.24	-0.11
11	2.49	2.21	2.07	1.95	-0.54	-0.26	-0.12
12	2.54	2.31	2.17	2.04	-0.50	-0.27	-0.13
13	2.59	2.39	2.24	2.11	-0.48	-0.28	-0.13
14	2.64	2.47	2.30	2.17	-0.47	-0.30	-0.13
15	2.69	2.51	2.34	2.21	-0.48	-0.30	-0.13
16	2.73	2.57	2.39	2.26	-0.47	-0.31	-0.13
17	2.77	2.63	2.44	2.31	-0.46	-0.32	-0.13
18	2.80	2.69	2.49	2.36	-0.44	-0.33	-0.13
19	2.83	2.75	2.54	2.40	-0.43	-0.35	-0.14
20	2.85	2.81	2.58	2.44	-0.41	-0.37	-0.14
21	2.87	2.85	2.61	2.47	-0.40	-0.38	-0.14
22	2.89	2.88	2.64	2.50	-0.39	-0.38	-0.14
23	2.90	2.90	2.66	2.52	-0.38	-0.38	-0.14
24	2.91	2.92	2.68	2.54	-0.37	-0.38	-0.14
25	2.92	2.93	2.69	2.55	-0.37	-0.38	-0.14
26	2.93	2.94	2.70	2.56	-0.37	-0.38	-0.14
27	2.94	2.95	2.71	2.57	-0.37	-0.38	-0.14
28	2.95	2.96	2.72	2.58	-0.37	-0.38	-0.14
29	2.96	2.97	2.73	2.59	-0.37	-0.38	-0.14
30	2.97	2.98	2.74	2.60	-0.37	-0.38	-0.14
	Average:				-0.42	-0.27	-0.12

AAA MMD Historical Yield Curve Range



Average Week over Week: -0.12%
 Average Month over Month: -0.27%
 Average Year over Year: -0.42%

Source: Thomson Municipal Market Monitor (TM3) as of March 28, 2019

BOND PRICING

General Obligation Refunding Bonds, Series 2019 - FINAL NBQ; Callable 3/1/2029 or Any Date Thereafter

Bond Component	Maturity Date	Amount	Rate	Yield	Price	Yield to Maturity	Call Date	Call Price	Premium (-Discount)
Serial Bond:									
	03/01/2021	285,000	5.000%	1.650%	106.149				17,524.65
	03/01/2022	510,000	5.000%	1.700%	109.210				46,971.00
	03/01/2023	535,000	5.000%	1.740%	112.154				65,023.90
	03/01/2024	550,000	5.000%	1.830%	114.709				80,899.50
	03/01/2025	575,000	5.000%	1.910%	117.085				98,238.75
	03/01/2026	620,000	5.000%	1.980%	119.312				119,734.40
	03/01/2027	650,000	5.000%	2.060%	121.262				138,203.00
	03/01/2028	685,000	5.000%	2.120%	123.178				158,769.30
	03/01/2029	720,000	5.000%	2.200%	124.722				177,998.40
	03/01/2030	750,000	4.000%	2.390%	114.081 C	2.512%	03/01/2029	100.000	105,607.50
	03/01/2031	780,000	3.000%	2.650%	103.020 C	2.701%	03/01/2029	100.000	23,556.00
	03/01/2032	805,000	3.000%	2.840%	101.367 C	2.872%	03/01/2029	100.000	11,004.35
	03/01/2033	830,000	4.000%	2.670%	111.472 C	2.984%	03/01/2029	100.000	95,217.60
	03/01/2034	860,000	3.000%	3.000%	100.000				
	03/01/2035	885,000	3.000%	3.050%	99.372				(5,557.80)
	03/01/2036	915,000	3.000%	3.100%	98.691				(11,977.35)
	03/01/2037	940,000	3.000%	3.150%	97.959				(19,185.40)
	03/01/2038	970,000	3.125%	3.200%	98.941				(10,272.30)
	03/01/2039	1,000,000	3.125%	3.250%	98.178				(18,220.00)
		13,865,000							1,073,535.50

Dated Date	04/17/2019	
Delivery Date	04/17/2019	
First Coupon	03/01/2020	
Par Amount	13,865,000.00	
Premium	1,073,535.50	
Production	14,938,535.50	107.742773%
Underwriter's Discount	(116,400.00)	(0.839524%)
Purchase Price	14,822,135.50	106.903249%
Accrued Interest		
Net Proceeds	14,822,135.50	

Selecting the appropriate type of debt

- Projects
- Capacity to issue debt
- Future capital needs

Structuring debt

- Establish Goals

Debt 101

Level Debt Service

FINANCING PLAN

CIP				
\$2,500,000				
G.O. PROMISSORY NOTES				
<i>Dated March 6, 2019</i>				
<i>(First interest 12/1/19)</i>				
YEAR DUE	PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) TIC= 2.42%	LESS: BID PREMIUM	TOTAL
2019		\$72,765	(\$72,765)	\$0
2020	\$290,000	\$93,050	(\$65,305)	\$317,745
2021	\$235,000	\$82,550		\$317,550
2022	\$245,000	\$71,725		\$316,725
2023	\$260,000	\$59,100		\$319,100
2024	\$270,000	\$47,200		\$317,200
2025	\$285,000	\$36,100		\$321,100
2026	\$295,000	\$24,500		\$319,500
2027	\$305,000	\$14,025		\$319,025
2028	\$315,000	\$4,725		\$319,725
2029				
2030				
2031				
2032				
2033				
2034				
2035				
2036				
2037				
2038				
2039				
	\$2,500,000	\$505,740	(\$138,070)	\$2,867,670

Overall Taxpayer Impact		
General Fund		
COMBINED DEBT SERVICE	COMBINED DEBT MILL RATE (b)	YEAR DUE
	\$0	2019
\$317,745	\$0.24	2020
\$317,550	\$0.24	2021
\$316,725	\$0.23	2022
\$319,100	\$0.23	2023
\$317,200	\$0.22	2024
\$321,100	\$0.22	2025
\$319,500	\$0.22	2026
\$319,025	\$0.21	2027
\$319,725	\$0.21	2028
\$0	\$0.00	2029
\$0	\$0.00	2030
\$0	\$0.00	2031
\$0	\$0.00	2032
\$0	\$0.00	2033
\$0	\$0.00	2034
\$0	\$0.00	2035
\$0	\$0.00	2036
\$0	\$0.00	2037
\$0	\$0.00	2038
\$0	\$0.00	2039
\$2,867,670		

(b) Mill rate based on 2018 Assessed Valuation (TID-OUT) of \$1,286,985,757 with 2% growth thereafter.

Debt 101

Level Debt Service with Existing Debt

FINANCING PLAN

YEAR DUE	NET GENERAL FUND EXISTING DEBT SERVICE (a)	CIP				Overall Taxpayer Impact General Fund		YEAR DUE
		PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) TIC= 2.42%	LESS: BID PREMIUM	TOTAL	COMBINED DEBT SERVICE	COMBINED DEBT MILL RATE (b)	
		\$2,500,000						
		G.O. PROMISSORY NOTES						
		<i>Dated March 6, 2019</i>						
		<i>(First interest 12/1/19)</i>						
2019	\$4,789,085 (c)		\$72,765	(\$72,765)	\$0	\$4,789,085	\$3.72	2019
2020	\$5,023,592	\$290,000	\$93,050	(\$65,305)	\$317,745	\$5,341,337	\$4.07	2020
2021	\$4,912,219	\$235,000	\$82,550		\$317,550	\$5,229,769	\$3.91	2021
2022	\$3,929,408	\$245,000	\$71,725		\$316,725	\$4,246,133	\$3.11	2022
2023	\$3,596,869	\$260,000	\$59,100		\$319,100	\$3,915,969	\$2.81	2023
2024	\$2,851,021	\$270,000	\$47,200		\$317,200	\$3,168,221	\$2.23	2024
2025	\$2,307,853	\$285,000	\$36,100		\$321,100	\$2,628,953	\$1.81	2025
2026	\$1,739,717	\$295,000	\$24,500		\$319,500	\$2,059,217	\$1.39	2026
2027	\$1,368,855	\$305,000	\$14,025		\$319,025	\$1,687,880	\$1.12	2027
2028	\$794,741	\$315,000	\$4,725		\$319,725	\$1,114,466	\$0.72	2028
2029	\$84,180					\$84,180	\$0.05	2029
2030	\$83,997					\$83,997	\$0.05	2030
2031						\$0	\$0.00	2031
2032						\$0	\$0.00	2032
2033						\$0	\$0.00	2033
2034						\$0	\$0.00	2034
2035						\$0	\$0.00	2035
2036						\$0	\$0.00	2036
2037						\$0	\$0.00	2037
2038						\$0	\$0.00	2038
2039						\$0	\$0.00	2039
	<u>\$31,481,537</u>	<u>\$2,500,000</u>	<u>\$505,740</u>	<u>(\$138,070)</u>	<u>\$2,867,670</u>	<u>\$34,349,206</u>		

(a) Net of bid premium related to February 27, 2018 G.O. Promissory Notes.

(b) Mill rate based on 2018 Assessed Valuation (TID-OUT) of \$1,286,985,757 with 2% growth thereafter.

(c) The City will make principal payments of \$5,354,537 in 2019.

Debt 101

No Future Issues

FINANCING PLAN

YEAR DUE	NET GENERAL FUND EXISTING DEBT SERVICE (a)	CIP				Overall Taxpayer Impact General Fund			YEAR DUE
		PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) TIC= 2.42%	LESS: BID PREMIUM	TOTAL	COMBINED DEBT SERVICE	COMBINED DEBT MILL RATE (b)		
		\$2,500,000							
		G.O. PROMISSORY NOTES							
		Dated March 6, 2019 (First interest 12/1/19)							
2019	\$4,789,085 (c)		\$72,617	(\$72,617)	\$0	\$4,789,085	\$3.72	2019	
2020	\$5,023,592		\$98,650	(\$92,433)	\$6,217	\$5,029,809	\$3.83	2020	
2021	\$4,912,219		\$98,650		\$98,650	\$5,010,869	\$3.74	2021	
2022	\$3,929,408	\$315,000	\$90,775		\$405,775	\$4,335,183	\$3.17	2022	
2023	\$3,596,869	\$330,000	\$74,650		\$404,650	\$4,001,519	\$2.87	2023	
2024	\$2,851,021	\$345,000	\$59,500		\$404,500	\$3,255,521	\$2.29	2024	
2025	\$2,307,853	\$360,000	\$45,400		\$405,400	\$2,713,253	\$1.87	2025	
2026	\$1,739,717	\$370,000	\$30,800		\$400,800	\$2,140,517	\$1.45	2026	
2027	\$1,368,855	\$385,000	\$17,625		\$402,625	\$1,771,480	\$1.17	2027	
2028	\$794,741	\$395,000	\$5,925		\$400,925	\$1,195,666	\$0.78	2028	
2029	\$84,180					\$84,180	\$0.05	2029	
2030	\$83,997					\$83,997	\$0.05	2030	
2031						\$0	\$0.00	2031	
2032						\$0	\$0.00	2032	
2033						\$0	\$0.00	2033	
2034						\$0	\$0.00	2034	
2035						\$0	\$0.00	2035	
2036						\$0	\$0.00	2036	
2037						\$0	\$0.00	2037	
2038						\$0	\$0.00	2038	
2039						\$0	\$0.00	2039	
	<u>\$31,481,537</u>	<u>\$2,500,000</u>	<u>\$594,592</u>	<u>(\$165,050)</u>	<u>\$2,929,542</u>	<u>\$34,411,079</u>			

(a) Net of bid premium related to February 27, 2018 G.O. Promissory Notes.
 (b) Mill rate based on 2018 Assessed Valuation (TID-OUT) of \$1,286,985,757 with 2% growth thereafter.
 (c) The City will make principal payments of \$5,354,537 in 2019.

Library Borrowing Planned

FINANCING PLAN

YEAR DUE	NET GENERAL FUND EXISTING DEBT SERVICE (a)	CIP				LIBRARY			Overall Taxpayer Impact General Fund		YEAR DUE
		PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) TIC= 2.42%	LESS: BID PREMIUM	TOTAL	PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) AVG= 4.00%	TOTAL	COMBINED DEBT SERVICE	COMBINED DEBT MILL RATE (b)	
		\$2,500,000				\$4,300,000					
		G.O. PROMISSORY NOTES				G.O. BONDS					
		Dated March 6, 2019 (First interest 12/1/19)				Dated March 1, 2020 (First interest 12/1/20)					
2019	\$4,789,085 (c)		\$72,617	(\$72,617)	\$0				\$4,789,085	\$3.72	2019
2020	\$5,023,592		\$98,650	(\$92,433)	\$6,217		\$129,000	\$129,000	\$5,158,809	\$3.93	2020
2021	\$4,912,219		\$98,650		\$98,650		\$172,000	\$172,000	\$5,182,869	\$3.87	2021
2022	\$3,929,408	\$315,000	\$90,775		\$405,775		\$172,000	\$172,000	\$4,507,183	\$3.30	2022
2023	\$3,596,869	\$330,000	\$74,650		\$404,650		\$172,000	\$172,000	\$4,173,519	\$3.00	2023
2024	\$2,851,021	\$345,000	\$59,500		\$404,500		\$172,000	\$172,000	\$3,427,521	\$2.41	2024
2025	\$2,307,853	\$360,000	\$45,400		\$405,400	\$215,000	\$167,700	\$382,700	\$3,095,953	\$2.14	2025
2026	\$1,739,717	\$370,000	\$30,800		\$400,800	\$220,000	\$159,000	\$379,000	\$2,519,517	\$1.70	2026
2027	\$1,368,855	\$385,000	\$17,625		\$402,625	\$230,000	\$150,000	\$380,000	\$2,151,480	\$1.43	2027
2028	\$794,741	\$395,000	\$5,925		\$400,925	\$240,000	\$140,600	\$380,600	\$1,576,266	\$1.02	2028
2029	\$84,180					\$250,000	\$130,800	\$380,800	\$464,980	\$0.30	2029
2030	\$83,997					\$260,000	\$120,600	\$380,600	\$464,597	\$0.29	2030
2031						\$270,000	\$110,000	\$380,000	\$380,000	\$0.23	2031
2032						\$285,000	\$98,900	\$383,900	\$383,900	\$0.23	2032
2033						\$295,000	\$87,300	\$382,300	\$382,300	\$0.23	2033
2034						\$305,000	\$75,300	\$380,300	\$380,300	\$0.22	2034
2035						\$320,000	\$62,800	\$382,800	\$382,800	\$0.22	2035
2036						\$330,000	\$49,800	\$379,800	\$379,800	\$0.21	2036
2037						\$345,000	\$36,300	\$381,300	\$381,300	\$0.21	2037
2038						\$360,000	\$22,200	\$382,200	\$382,200	\$0.20	2038
2039						\$375,000	\$7,500	\$382,500	\$382,500	\$0.20	2039
	\$31,481,537	\$2,500,000	\$594,592	(\$165,050)	\$2,929,542	\$4,300,000	\$2,235,800	\$6,535,800	\$40,946,879		

(a) Net of bid premium related to February 27, 2018 G.O. Promissory Notes.
 (b) Mill rate based on 2018 Assessed Valuation (TID-OUT) of \$1,286,985,757 with 2% growth thereafter.
 (c) The City will make principal payments of \$5,354,537 in 2019.

Library and Future Borrowings Planned

FINANCING PLAN

YEAR DUE	NET GENERAL FUND EXISTING DEBT SERVICE (a)	CIP				LIBRARY			Overall Taxpayer Impact General Fund			YEAR DUE
		PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) TIC= 2.42%	LESS: BID PREMIUM	TOTAL	PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) AVG= 4.00%	TOTAL	FUTURE BORROWINGS (d) (e)	COMBINED DEBT SERVICE	COMBINED DEBT MILL RATE (b)	
2019	\$4,789,085 (c)		\$72,617	(\$72,617)	\$0				\$0	\$4,789,085	\$3.72	2019
2020	\$5,023,592		\$98,650	(\$92,433)	\$6,217		\$129,000	\$129,000	\$0	\$5,158,809	\$3.93	2020
2021	\$4,912,219		\$98,650		\$98,650		\$172,000	\$172,000	\$0	\$5,182,869	\$3.87	2021
2022	\$3,929,408	\$315,000	\$90,775		\$405,775		\$172,000	\$172,000	\$184,583	\$4,691,766	\$3.44	2022
2023	\$3,596,869	\$330,000	\$74,650		\$404,650		\$172,000	\$172,000	\$515,683	\$4,689,202	\$3.37	2023
2024	\$2,851,021	\$345,000	\$59,500		\$404,500		\$172,000	\$172,000	\$1,075,383	\$4,502,904	\$3.17	2024
2025	\$2,307,853	\$360,000	\$45,400		\$405,400	\$215,000	\$167,700	\$382,700	\$1,403,383	\$4,499,336	\$3.10	2025
2026	\$1,739,717	\$370,000	\$30,800		\$400,800	\$220,000	\$159,000	\$379,000	\$1,974,158	\$4,493,676	\$3.04	2026
2027	\$1,368,855	\$385,000	\$17,625		\$402,625	\$230,000	\$150,000	\$380,000	\$2,272,783	\$4,424,263	\$2.93	2027
2028	\$794,741	\$395,000	\$5,925		\$400,925	\$240,000	\$140,600	\$380,600	\$2,568,083	\$4,144,349	\$2.69	2028
2029	\$84,180					\$250,000	\$130,800	\$380,800	\$2,958,408	\$3,423,388	\$2.18	2029
2030	\$83,997					\$260,000	\$120,600	\$380,600	\$2,953,033	\$3,417,630	\$2.14	2030
2031						\$270,000	\$110,000	\$380,000	\$3,041,383	\$3,421,383	\$2.10	2031
2032						\$285,000	\$98,900	\$383,900	\$3,038,383	\$3,422,283	\$2.06	2032
2033						\$295,000	\$87,300	\$382,300	\$2,971,358	\$3,353,658	\$1.97	2033
2034						\$305,000	\$75,300	\$380,300	\$2,970,308	\$3,350,608	\$1.93	2034
2035						\$320,000	\$62,800	\$382,800	\$2,939,708	\$3,322,508	\$1.88	2035
2036						\$330,000	\$49,800	\$379,800	\$2,944,483	\$3,324,283	\$1.84	2036
2037						\$345,000	\$36,300	\$381,300	\$2,949,108	\$3,330,408	\$1.81	2037
2038						\$360,000	\$22,200	\$382,200	\$2,948,658	\$3,330,858	\$1.78	2038
2039						\$375,000	\$7,500	\$382,500	\$2,953,133	\$3,335,633	\$1.74	2039
	<u>\$31,481,537</u>	<u>\$2,500,000</u>	<u>\$594,592</u>	<u>(\$165,050)</u>	<u>\$2,929,542</u>	<u>\$4,300,000</u>	<u>\$2,235,800</u>	<u>\$6,535,800</u>	<u>\$42,662,025</u>	<u>\$83,608,904</u>		

(a) Net of bid premium related to February 27, 2018 G.O. Promissory Notes.

(b) Mill rate based on 2018 Assessed Valuation (TID-OUT) of \$1,286,985,757 with 2% growth thereafter.

(c) The City will make principal payments of \$5,354,537 in 2019.

(d) Assumes future borrowings of \$2,500,000 for CIP in 2020 & thereafter. Future borrowings amortized over 10 years at 3.00%.

(e) This information is provided for information purposes only. It does not recommend any future issuances and is not intended to be, and should not be regarded as, advice.

Debt 101

Refund Prior Debt – (Scoop and Toss)

FINANCING PLAN

YEAR DUE	NET GENERAL FUND EXISTING DEBT SERVICE (a)	EFFECT OF: SCOOP & TOSS DEBT SERVICE	CIP				LIBRARY			FUTURE BORROWINGS (d) (e)	Overall Taxpayer Impact General Fund		YEAR DUE
			PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) TIC= 2.42%	LESS: BID PREMIUM	TOTAL	PRINCIPAL (6/1)	INTEREST (6/1 & 12/1) AVG= 4.00%	TOTAL		COMBINED DEBT SERVICE	COMBINED DEBT MILL RATE (b)	
			\$2,500,000				\$4,300,000						
			G.O. PROMISSORY NOTES				G.O. BONDS						
			Dated March 6, 2019 (First interest 12/1/19)				Dated March 1, 2020 (First interest 12/1/20)						
2019	\$4,789,085 (c)	\$10,340		\$72,617	(\$72,617)	\$0			\$0	\$4,799,426	\$3.73	2019	
2020	\$5,023,592	(\$317,450)		\$98,650	(\$92,433)	\$6,217		\$129,000	\$0	\$4,841,359	\$3.69	2020	
2021	\$4,912,219	(\$317,400)		\$98,650		\$98,650		\$172,000	\$0	\$4,865,469	\$3.63	2021	
2022	\$3,929,408	\$173,950	\$315,000	\$90,775		\$405,775		\$172,000	\$184,583	\$4,865,716	\$3.56	2022	
2023	\$3,596,869	\$176,200	\$330,000	\$74,650		\$404,650		\$172,000	\$515,683	\$4,865,402	\$3.49	2023	
2024	\$2,851,021	\$159,200	\$345,000	\$59,500		\$404,500		\$172,000	\$1,075,383	\$4,662,104	\$3.28	2024	
2025	\$2,307,853	\$158,100	\$360,000	\$45,400		\$405,400	\$215,000	\$167,700	\$1,403,383	\$4,657,436	\$3.21	2025	
2026	\$1,739,717		\$370,000	\$30,800		\$400,800	\$220,000	\$159,000	\$1,974,158	\$4,493,676	\$3.04	2026	
2027	\$1,368,855		\$385,000	\$17,625		\$402,625	\$230,000	\$150,000	\$2,272,783	\$4,424,263	\$2.93	2027	
2028	\$794,741		\$395,000	\$5,925		\$400,925	\$240,000	\$140,600	\$2,568,083	\$4,144,349	\$2.69	2028	
2029	\$84,180						\$250,000	\$130,800	\$2,958,408	\$3,423,388	\$2.18	2029	
2030	\$83,997						\$260,000	\$120,600	\$2,953,033	\$3,417,630	\$2.14	2030	
2031							\$270,000	\$110,000	\$3,041,383	\$3,421,383	\$2.10	2031	
2032							\$285,000	\$98,900	\$3,038,383	\$3,422,283	\$2.06	2032	
2033							\$295,000	\$87,300	\$2,971,358	\$3,353,658	\$1.97	2033	
2034							\$305,000	\$75,300	\$2,970,308	\$3,350,608	\$1.93	2034	
2035							\$320,000	\$62,800	\$2,939,708	\$3,322,508	\$1.88	2035	
2036							\$330,000	\$49,800	\$2,944,483	\$3,324,283	\$1.84	2036	
2037							\$345,000	\$36,300	\$2,949,108	\$3,330,408	\$1.81	2037	
2038							\$360,000	\$22,200	\$2,948,658	\$3,330,858	\$1.78	2038	
2039							\$375,000	\$7,500	\$2,953,133	\$3,335,633	\$1.74	2039	
	<u>\$31,481,537</u>	<u>\$42,940</u>	<u>\$2,500,000</u>	<u>\$594,592</u>	<u>(\$165,050)</u>	<u>\$2,929,542</u>	<u>\$4,300,000</u>	<u>\$2,235,800</u>	<u>\$6,535,800</u>	<u>\$42,662,025</u>	<u>\$83,651,844</u>		

(a) Net of bid premium related to February 27, 2018 G.O. Promissory Notes.

(b) Mill rate based on 2018 Assessed Valuation (TID-OUT) of \$1,286,985,757 with 2% growth thereafter.

(c) The City will make principal payments of \$5,354,537 in 2019.

(d) Assumes future borrowings of \$2,500,000 for CIP in 2020 & thereafter. Future borrowings amortized over 10 years at 3.00%.

(e) This information is provided for information purposes only. It does not recommend any future issuances and is not intended to be, and should not be regarded as, advice.

Current Refunding

Illustration of Refinancing

Calendar Year	BEFORE REFINANCING			TOTAL DEBT SERVICE	AFTER REFINANCING					DEBT SERVICE SAVINGS (LOSS)	
	PRINCIPAL (6/1)	RATE	INTEREST (6/1 & 12/1)		PRINCIPAL (6/1)	INTEREST (6/1 & 12/1)	PRINCIPAL (6/1)	INTEREST (6/1 & 12/1)	TOTAL		TOTAL NEW DEBT SERVICE
	\$1,805,000 G.O. Promissory Notes Dated April 23, 2012				\$1,805,000 G.O. Promissory Notes Dated April 23, 2012						
	\$615,000 G.O. Promissory Notes Dated March 6, 2019				\$615,000 G.O. Promissory Notes Dated March 6, 2019						
								TIC=			
								2.24%			
2019	\$215,000	3.000%	\$23,325	\$238,325	\$215,000	\$13,275	\$20,390	\$20,390	\$248,665	(\$10,340)	
2020	\$330,000	3.000%	\$15,150	\$345,150	***		\$27,700	\$27,700	\$27,700	\$317,450	
2021	\$340,000	3.000%	\$5,100	\$345,100	***		\$27,700	\$27,700	\$27,700	\$317,400	
2022							\$150,000	\$23,950	\$173,950	(\$173,950)	
2023							\$160,000	\$16,200	\$176,200	(\$176,200)	
2024							\$150,000	\$9,200	\$159,200	(\$159,200)	
2025							\$155,000	\$3,100	\$158,100	(\$158,100)	
	\$885,000		\$43,575	\$928,575	\$215,000	\$13,275	\$615,000	\$128,240	\$743,240	\$971,515	(\$42,940)

Maturities callable 6/1/2019 or any date thereafter.

CALLABLE MATURITIES

*** REFINANCED WITH 2019 ISSUE

ROUNDING AMOUNT..... \$354
 GROSS SAVINGS (LOSS)..... (\$42,586)

(1) Present value calculated using the All Inclusive Cost (AIC) of 2.47% as the discount rate. Includes estimated investment earnings calculated at estimated investment rate of 1.75%.

(1) PRESENT VALUE SAVINGS \$..... \$4,034
 PRESENT VALUE SAVINGS %..... 0.602%

Debt 101

Example – Storm Water Revenue Bond Financing Plan

\$2,165,000

Storm Water System Revenue Bonds ^(B)

Dated April 30, 2019

(First Interest November 1, 2019)

2019 & 2020 Projects Financed: \$1,826,500

LEVY YEAR	YEAR DUE	EXISTING STORM WATER G.O. DEBT (A)	PRINCIPAL (5/1)	INTEREST (5/1 & 11/1) TIC= 3.53%	TOTAL	DEBT SERVICE COVERAGE (Revenue Only) (Estimated 2018 Net Revenues)	COMBINED STORM WATER REV. & G.O. DEBT	DEBT SERVICE COVERAGE (Revenue & G.O.) (Estimated 2018 Net Revenues)
2018	2019	\$323,340		\$44,505	\$44,505	8.29	\$367,845	1.00
2019	2020	\$328,074	\$70,000	\$87,031	\$157,031	2.35	\$485,105	0.76
2020	2021	\$326,536	\$75,000	\$83,950	\$158,950	2.32	\$485,486	0.76
2021	2022	\$329,193	\$75,000	\$80,763	\$155,763	2.37	\$484,955	0.76
2022	2023	\$329,370	\$80,000	\$77,469	\$157,469	2.34	\$486,839	0.76
2023	2024	\$325,003	\$85,000	\$73,963	\$158,963	2.32	\$483,966	0.76
2024	2025	\$326,709	\$85,000	\$70,350	\$155,350	2.38	\$482,059	0.77
2025	2026	\$327,819	\$90,000	\$66,631	\$156,631	2.36	\$484,451	0.76
2026	2027	\$328,783	\$95,000	\$62,700	\$157,700	2.34	\$486,483	0.76
2027	2028	\$329,702	\$100,000	\$58,556	\$158,556	2.33	\$488,258	0.76
2028	2029	\$329,640	\$105,000	\$54,200	\$159,200	2.32	\$488,840	0.75
2029	2030	\$160,810	\$110,000	\$49,631	\$159,631	2.31	\$320,441	1.15
2030	2031	\$67,216	\$110,000	\$44,956	\$154,956	2.38	\$222,173	1.66
2031	2032	\$59,505	\$115,000	\$40,175	\$155,175	2.38	\$214,680	1.72
2032	2033	\$41,369	\$120,000	\$35,181	\$155,181	2.38	\$196,550	1.88
2033	2034	\$33,988	\$125,000	\$29,975	\$154,975	2.38	\$188,963	1.95
2034	2035	\$26,550	\$135,000	\$24,450	\$159,450	2.31	\$186,000	1.98
2035	2036	\$20,700	\$140,000	\$19,044	\$159,044	2.32	\$179,744	2.05
2036	2037		\$145,000	\$13,878	\$158,878	2.32	\$158,878	2.32
2037	2038		\$150,000	\$8,531	\$158,531	2.33	\$158,531	2.33
2038	2039		\$155,000	\$2,906	\$157,906	2.34	\$157,906	2.34
		<u>\$4,014,307</u>	<u>\$2,165,000</u>	<u>\$1,028,846</u>	<u>\$3,193,846</u>		<u>\$7,208,152</u>	

Estimated 2018 Net Revenues Available for Debt Service: \$368,969

TOTAL Debt Service Reserve Fund: \$162,319

(A) Net of BABs subsidy. Assumes subsidy reduced by 6.2% 2019-2025 (Sequestration).

(B) Includes \$230,000 of storm water revenue supported principal from 4/3/18 NAN. Assumes 4/3/18 NAN interest is paid for with debt service funds on hand.

Debt 101

Example – Water & Sewerage Systems Revenue Bond Financing Plan

				WATER & SEWERAGE PORTION \$1,115,000 Note Anticipation Note - FINAL Dated December 27, 2018 (First Interest June 27, 2019) 2019 & 2020 Water Projects Financed: \$565,000 2019 & 2020 Sewer Projects Financed: \$550,000 Callable: 3/27/19 ; Mature: 6/27/19	FINAL - 2019 BONDS \$8,655,000 Water System & Sewerage System Revenue Bonds ^(A) Dated April 2, 2019 (First Interest November 1, 2019) 2019 & 2020 Water Projects Financed: \$3,732,500 2019 & 2020 Sewer Projects Financed: \$2,548,500						
LEVY YEAR	YEAR DUE	EXISTING WATER & SEWER REVENUE DEBT	EXISTING WATER & SEWER G.O. DEBT	RATE= 2.85%	PRINCIPAL (5/1)	INTEREST (5/1 & 11/1) TIC= 3.11%	TOTAL	COMBINED WATER & SEWER REVENUE DEBT	DEBT SERVICE COVERAGE (Revenue Only) (Estimated 2018 Net Revenues)	* COMBINED WATER & SEWER REV. & G.O. DEBT	DEBT SERVICE COVERAGE (Revenue & G.O.) (Estimated 2018 Net Revenues)
2018	2019	\$426,596	\$303,170	\$9,268		\$174,907	\$174,907	\$601,503	2.22	*	1.48
2019	2020	\$422,773	\$305,921		\$180,000	\$298,575	\$478,575	\$901,348	1.48	*	1.11
2020	2021	\$418,951	\$308,897		\$185,000	\$293,100	\$478,100	\$897,051	1.49	*	1.11
2021	2022	\$424,027	\$305,798		\$185,000	\$287,550	\$472,550	\$896,577	1.49	*	1.11
2022	2023	\$418,004	\$299,289		\$200,000	\$280,775	\$480,775	\$898,779	1.49	*	1.11
2023	2024	\$426,755	\$298,131		\$200,000	\$272,775	\$472,775	\$899,530	1.48	*	1.11
2024	2025	\$420,280	\$299,877		\$215,000	\$264,475	\$479,475	\$899,755	1.48	*	1.11
2025	2026	\$423,655	\$308,096		\$220,000	\$255,775	\$475,775	\$899,430	1.48	*	1.11
2026	2027	\$426,730	\$309,856		\$225,000	\$246,875	\$471,875	\$898,605	1.49	*	1.10
2027	2028	\$188,179	\$272,225		\$480,000	\$232,775	\$712,775	\$900,954	1.48	*	1.14
2028	2029	\$188,153	\$239,117		\$500,000	\$213,175	\$713,175	\$901,328	1.48	*	1.17
2029	2030	\$188,126	\$241,983		\$520,000	\$192,775	\$712,775	\$900,901	1.48	*	1.17
2030	2031	\$188,099	\$240,825		\$540,000	\$171,575	\$711,575	\$899,674	1.48	*	1.17
2031	2032	\$188,071	\$195,244		\$560,000	\$149,575	\$709,575	\$897,646	1.49	*	1.22
2032	2033	\$188,043	\$158,373		\$580,000	\$129,675	\$709,675	\$897,718	1.49	*	1.26
2033	2034	\$188,014	\$122,067		\$600,000	\$111,975	\$711,975	\$899,989	1.48	*	1.31
2034	2035	\$187,985	\$83,000		\$615,000	\$93,750	\$708,750	\$896,735	1.49	*	1.36
2035	2036		\$15,525		\$630,000	\$74,681	\$704,681	\$704,681	1.89	*	1.85
2036	2037				\$650,000	\$54,681	\$704,681	\$704,681	1.89	*	1.89
2037	2038				\$675,000	\$33,556	\$708,556	\$708,556	1.88	*	1.88
2038	2039				\$695,000	\$11,294	\$706,294	\$706,294	1.89	*	1.89
		\$5,312,439	\$4,307,394		\$8,655,000	\$3,844,294	\$12,499,294	\$17,811,733			\$22,119,127
									Estimated 2018 Net Revenues Available for Debt Service:		\$1,335,072
									TOTAL Debt Service Reserve Fund:		\$741,844

Assumes NAN principal & interest to be refinanced with Bonds on 4/12/19

(A) Includes \$945,000 of water & sewer revenue supported principal from 4/3/18 NAN. Assumes 4/3/18 NAN interest is paid for with debt service funds on hand.

Issuance Process - Professional Services

Financial Advisor and/or Underwriter

Bond Counsel

Disclosure Counsel

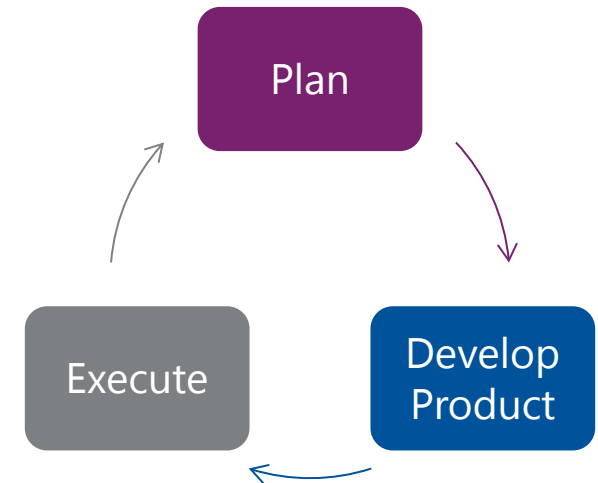
Rating Agency

Paying Agent

Trustee

Issuance Flow

1. Financing Plan Approval
2. Disclosure Document Prepared
3. Rating
4. Insurance Qualification
5. Pricing
6. Award
7. Closing
8. Post Issuance
 - EMMA Disclosure
 - Continuing Disclosures
 - Material Event
 - Arbitrage / Rebate Monitored Compliance
 - Debt Payments



Important Disclosures

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