ERIE COUNTY WATER AUTHORITY

INTEROFFICE MEMORANDUM

January 26, 2021

To: Jerome D. Schad, Chair
Mark S. Carney, Vice Chair
Peggy A. LaGree, Treasurer

From: Karen A. Prendergast, Chief Financial Officer KAP

Subject: Water Infrastructure Finance and Innovation Act (WIFIA)

In July of 2020, a representative of EPA's WIFIA program emailed me about applying for low interest financing through the program. The Authority attended an informational meeting with representatives of the WIFIA program to get more detail on what types of projects where eligible for financing.

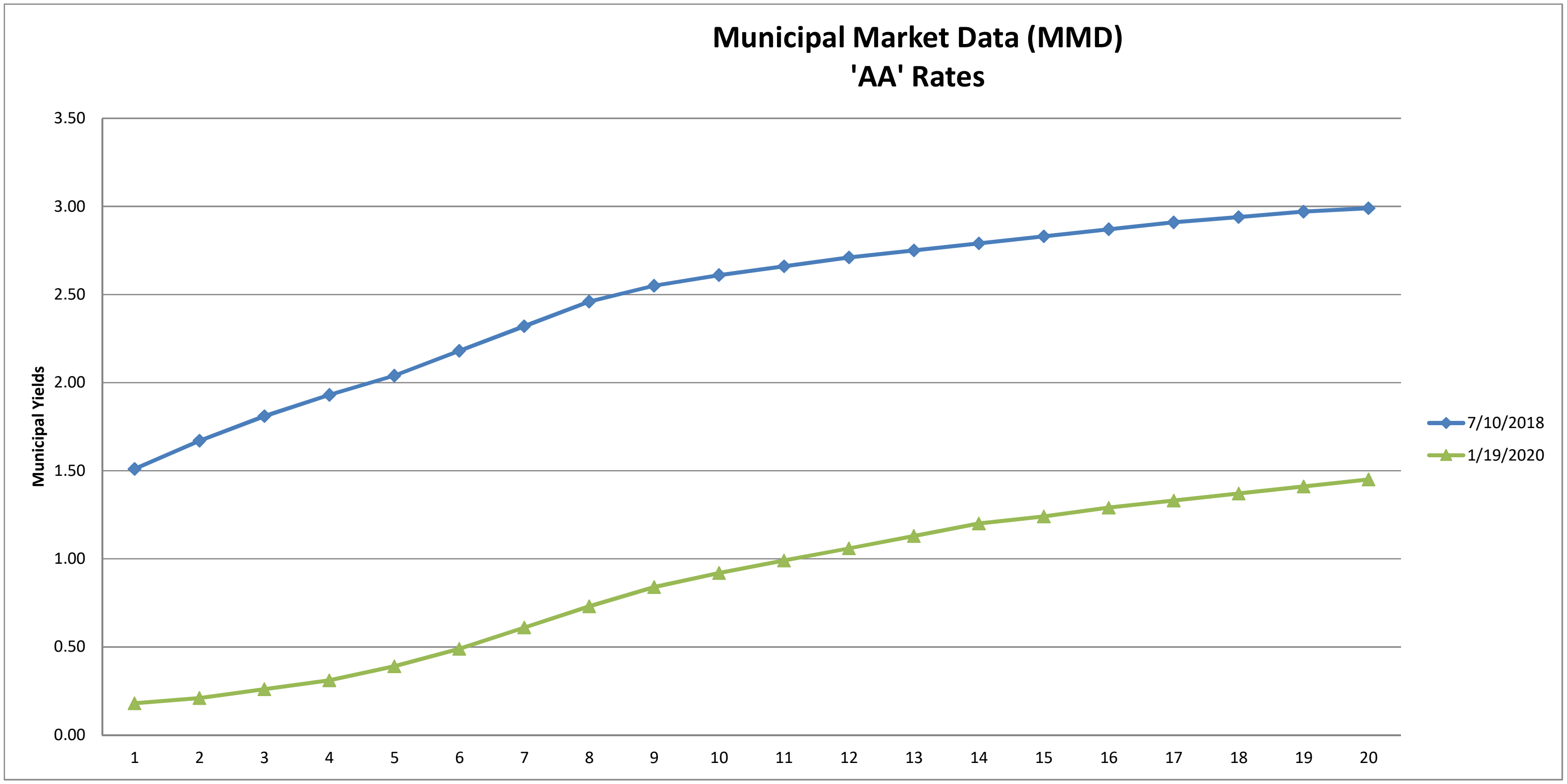
After discussing it with Executive Staff, the Engineering and Finance Departments submitted a Letter of Interest to the EPA on October 14, 2020. The Letter outlined $46,700,000 in projects including,

- Contract MP-085 – Sturgeon Point Piping and Filter Valve Improvements
- Contract GHD-009 – Powdered Activated Carbon System Upgrades
- Contract MP-086 – Ball Pump Station Improvements

On January 8th Russ Stoll received an invitation from the EPA to apply for $24,000,000 in financing to support the included projects. Information received with the invitation indicates the rate on the loan would be significantly lower than the Authority could obtain on its own.

I asked our financial consultant, Rick Ganci of Capital Markets Advisors, to prepare and present a comparative analysis of accepting WIFIA financing and going to the bond market.

cc T. McCracken
M. Murphy
R. Stoll
L. Kowalski


Municipal Market Data (MMD)
'AA' Rates
Municipal Yields
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
7/10/2018
1/19/2020

Erie County Water Authority

$18,810,000 Revenue Bonds - 2021(Stand Alone)

MMD' Aa' Rates plus 25 bps as of 1-19-21

Project Summary

Dated 07/15/2021 | Delivered 07/15/2021

Sources Of Funds

Par Amount of Bonds	$18,810,000.00
Reoffering Premium	3,976,263.56
Planned Issuer Equity contribution	23,817,000.00
Total Sources	**$46,603,263.56**

Uses Of Funds

Total Underwriter's Discount (0.400%)	75,240.00
Costs of Issuance	225,000.00
Construction Costs	42,030,000.00
Contingency	4,270,000.00
Rounding Amount	3,023.56
Total Uses	**$46,603,263.56**

Flow of Funds Detail

State and Local Government Series (SLGS) rates for

Date of OMP Candidates

Bond Statistics

Average Life	15.007 Years
Average Coupon	4.0000000%
Net Interest Cost (NIC)	2.6180825%
Bond Yield for Arbitrage Purposes	1.2240349%
True Interest Cost (TIC)	2.3010888%
All Inclusive Cost (AIC)	2.3872123%

Erie County Water Authority

$18,810,000 Revenue Bonds - 2021(Stand Alone)

MMD' Aa' Rates plus 25 bps as of 1-19-21

Net Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Net New D/S
12/31/2021	-	-	-	-	-
12/31/2022	451,665.00	4.000%	752,400.00	1,204,065.00	1,204,065.00
12/31/2023	469,732.00	4.000%	734,333.40	1,204,065.40	1,204,065.40
12/31/2024	488,521.00	4.000%	715,544.12	1,204,065.12	1,204,065.12
12/31/2025	508,062.00	4.000%	696,003.28	1,204,065.28	1,204,065.28
12/31/2026	528,384.00	4.000%	675,680.80	1,204,064.80	1,204,064.80
12/31/2027	549,520.00	4.000%	654,545.44	1,204,065.44	1,204,065.44
12/31/2028	571,500.00	4.000%	632,564.64	1,204,064.64	1,204,064.64
12/31/2029	594,360.00	4.000%	609,704.64	1,204,064.64	1,204,064.64
12/31/2030	618,135.00	4.000%	585,930.24	1,204,065.24	1,204,065.24
12/31/2031	642,860.00	4.000%	561,204.84	1,204,064.84	1,204,064.84
12/31/2032	668,575.00	4.000%	535,490.44	1,204,065.44	1,204,065.44
12/31/2033	695,318.00	4.000%	508,747.44	1,204,065.44	1,204,065.44
12/31/2034	723,130.00	4.000%	480,934.72	1,204,064.72	1,204,064.72
12/31/2035	752,055.00	4.000%	452,009.52	1,204,064.52	1,204,064.52
12/31/2036	782,138.00	4.000%	421,927.32	1,204,065.32	1,204,065.32
12/31/2037	813,423.00	4.000%	390,641.80	1,204,064.80	1,204,064.80
12/31/2038	845,960.00	4.000%	358,104.88	1,204,064.88	1,204,064.88
12/31/2039	879,798.00	4.000%	324,266.48	1,204,064.48	1,204,064.48
12/31/2040	914,990.00	4.000%	289,074.56	1,204,064.56	1,204,064.56
12/31/2041	951,590.00	4.000%	252,474.96	1,204,064.96	1,204,064.96
12/31/2042	989,654.00	4.000%	214,411.36	1,204,065.36	1,204,065.36
12/31/2043	1,029,240.00	4.000%	174,825.20	1,204,065.20	1,204,065.20
12/31/2044	1,070,409.00	4.000%	133,655.60	1,204,064.60	1,204,064.60
12/31/2045	1,113,226.00	4.000%	90,839.24	1,204,065.24	1,204,065.24
12/31/2046	1,157,755.00	4.000%	46,310.20	1,204,065.20	1,204,065.20
Total	**$18,810,000.00**	**-**	**$11,291,625.12**	**$30,101,625.12**	**$30,101,625.12**

Erie County Water Authority

$18,810,000 Revenue Bonds - 2021(Stand Alone)

MMD' Aa' Rates plus 25 bps as of 1-19-21

Pricing Summary

Maturity	Type of Bond	Coupon	Yield	Maturity Value	Price		YTM	Call Date	Call Price	Dollar Price
07/15/2022	Serial Coupon	4.000%	0.180%	451,665.00	103.814%		-	-	-	468,891.50
07/15/2023	Serial Coupon	4.000%	0.210%	469,732.00	107.560%		-	-	-	505,243.74
07/15/2024	Serial Coupon	4.000%	0.260%	488,521.00	111.169%		-	-	-	543,083.91
07/15/2025	Serial Coupon	4.000%	0.310%	508,062.00	114.657%		-	-	-	582,528.65
07/15/2026	Serial Coupon	4.000%	0.390%	528,384.00	117.857%		-	-	-	622,737.53
07/15/2027	Serial Coupon	4.000%	0.490%	549,520.00	120.728%		-	-	-	663,424.51
07/15/2028	Serial Coupon	4.000%	0.610%	571,500.00	123.195%		-	-	-	704,059.43
07/15/2029	Serial Coupon	4.000%	0.730%	594,360.00	125.365%		-	-	-	745,119.41
07/15/2030	Serial Coupon	4.000%	0.840%	618,135.00	127.336%		-	-	-	787,108.38
07/15/2031	Serial Coupon	4.000%	0.920%	642,860.00	126.544%	c	1.178%	07/15/2030	100.000%	813,500.76
07/15/2032	Serial Coupon	4.000%	0.990%	668,575.00	125.857%	c	1.449%	07/15/2030	100.000%	841,448.44
07/15/2033	Serial Coupon	4.000%	1.060%	695,318.00	125.173%	c	1.676%	07/15/2030	100.000%	870,350.40
07/15/2034	Serial Coupon	4.000%	1.130%	723,130.00	124.494%	c	1.869%	07/15/2030	100.000%	900,253.46
07/15/2035	Serial Coupon	4.000%	1.200%	752,055.00	123.819%	c	2.036%	07/15/2030	100.000%	931,186.98
07/15/2036	Serial Coupon	4.000%	1.240%	782,138.00	123.435%	c	2.162%	07/15/2030	100.000%	965,432.04
07/15/2037	Serial Coupon	4.000%	1.290%	813,423.00	122.957%	c	2.280%	07/15/2030	100.000%	1,000,160.52
07/15/2038	Serial Coupon	4.000%	1.330%	845,960.00	122.576%	c	2.378%	07/15/2030	100.000%	1,036,943.93
07/15/2039	Serial Coupon	4.000%	1.370%	879,798.00	122.197%	c	2.466%	07/15/2030	100.000%	1,075,086.76
07/15/2040	Serial Coupon	4.000%	1.410%	914,990.00	121.819%	c	2.545%	07/15/2030	100.000%	1,114,631.67
07/15/2041	Serial Coupon	4.000%	1.450%	951,590.00	121.442%	c	2.616%	07/15/2030	100.000%	1,155,629.93
07/15/2042	Serial Coupon	4.000%	1.490%	989,654.00	121.067%	c	2.681%	07/15/2030	100.000%	1,198,144.41
07/15/2043	Serial Coupon	4.000%	1.520%	1,029,240.00	120.786%	c	2.736%	07/15/2030	100.000%	1,243,177.83
07/15/2044	Serial Coupon	4.000%	1.550%	1,070,409.00	120.507%	c	2.786%	07/15/2030	100.000%	1,289,917.77
07/15/2045	Serial Coupon	4.000%	1.580%	1,113,226.00	120.228%	c	2.833%	07/15/2030	100.000%	1,338,409.36
07/15/2046	Serial Coupon	4.000%	1.600%	1,157,755.00	120.042%	c	2.871%	07/15/2030	100.000%	1,389,792.26
Total	**-**	**-**	**-**	**$18,810,000.00**	**-**	**-**	**-**	**-**	**-**	**$22,786,263.56**

Bid Information

Par Amount of Bonds	$18,810,000.00
Reoffering Premium or (Discount)	3,976,263.56
Gross Production	$22,786,263.56
Total Underwriter's Discount (0.400%)	$(75,240.00)
Bid (120.739%)	22,711,023.56
Total Purchase Price	$22,711,023.56
Bond Year Dollars	$282,290.63
Average Life	15.007 Years
Average Coupon	4.0000000%
Net Interest Cost (NIC)	2.6180825%
True Interest Cost (TIC)	2.3010888%

Erie County Water Authority

$18,810,000 Revenue Bonds - 2021(Stand Alone)

MMD' Aa' Rates plus 25 bps as of 1-19-21

Proof of All In Cost (AIC) @ 2.3872123%

Date	Cashflow	PV Factor	Present Value	Cumulative PV
07/15/2021	-	1.0000000x	-	-
07/15/2022	1,204,065.00	0.9765486x	1,175,827.97	1,175,827.97
01/15/2023	367,166.70	0.9650299x	354,326.85	1,530,154.82
07/15/2023	836,898.70	0.9536471x	798,106.05	2,328,260.87
01/15/2024	357,772.06	0.9423986x	337,163.89	2,665,424.76
07/15/2024	846,293.06	0.9312828x	788,138.14	3,453,562.90
01/15/2025	348,001.64	0.9202980x	320,265.22	3,773,828.12
07/15/2025	856,063.64	0.9094429x	778,540.97	4,552,369.09
01/15/2026	337,840.40	0.8987157x	303,622.48	4,855,991.57
07/15/2026	866,224.40	0.8881151x	769,307.00	5,625,298.58
01/15/2027	327,272.72	0.8776396x	287,227.49	5,912,526.07
07/15/2027	876,792.72	0.8672876x	760,431.44	6,672,957.50
01/15/2028	316,282.32	0.8570577x	271,072.19	6,944,029.70
07/15/2028	887,782.32	0.8469485x	751,905.87	7,695,935.56
01/15/2029	304,852.32	0.8369585x	255,148.73	7,951,084.30
07/15/2029	899,212.32	0.8270863x	743,726.21	8,694,810.50
01/15/2030	292,965.12	0.8173306x	239,449.36	8,934,259.86
07/15/2030	911,100.12	0.8076900x	735,886.43	9,670,146.29
01/15/2031	280,602.42	0.7981630x	223,966.48	9,894,112.77
07/15/2031	923,462.42	0.7887485x	728,379.60	10,622,492.37
01/15/2032	267,745.22	0.7794450x	208,692.67	10,831,185.04
07/15/2032	936,320.22	0.7702512x	721,201.80	11,552,386.84
01/15/2033	254,373.72	0.7611659x	193,620.60	11,746,007.45
07/15/2033	949,691.72	0.7521877x	714,346.47	12,460,353.92
01/15/2034	240,467.36	0.7433155x	178,743.11	12,639,097.03
07/15/2034	963,597.36	0.7345479x	707,808.40	13,346,905.43
01/15/2035	226,004.76	0.7258837x	164,053.17	13,510,958.60
07/15/2035	978,059.76	0.7173217x	701,583.48	14,212,542.08
01/15/2036	210,963.66	0.7088607x	149,543.84	14,362,085.92
07/15/2036	993,101.66	0.7004995x	695,667.20	15,057,753.12
01/15/2037	195,320.90	0.6922369x	135,208.33	15,192,961.45
07/15/2037	1,008,743.90	0.6840718x	690,053.23	15,883,014.69
01/15/2038	179,052.44	0.6760030x	121,039.98	16,004,054.67
07/15/2038	1,025,012.44	0.6680293x	684,738.37	16,688,793.03
01/15/2039	162,133.24	0.6601497x	107,032.22	16,795,825.25
07/15/2039	1,041,931.24	0.6523631x	679,717.48	17,475,542.73
01/15/2040	144,537.28	0.6446683x	93,178.60	17,568,721.33
07/15/2040	1,059,527.28	0.6370643x	674,986.95	18,243,708.29
01/15/2041	126,237.48	0.6295499x	79,472.79	18,323,181.08
07/15/2041	1,077,827.48	0.6221242x	670,542.55	18,993,723.63
01/15/2042	107,205.68	0.6147861x	65,908.56	19,059,632.19
07/15/2042	1,096,859.68	0.6075345x	666,380.10	19,726,012.29
01/15/2043	87,412.60	0.6003685x	52,479.77	19,778,492.06
07/15/2043	1,116,652.60	0.5932870x	662,495.42	20,440,987.48
01/15/2044	66,827.80	0.5862890x	39,180.40	20,480,167.88
07/15/2044	1,137,236.80	0.5793735x	658,884.91	21,139,052.79
01/15/2045	45,419.62	0.5725397x	26,004.53	21,165,057.32
07/15/2045	1,158,645.62	0.5657864x	655,545.94	21,820,603.26
01/15/2046	23,155.10	0.5591128x	12,946.31	21,833,549.57
07/15/2046	1,180,910.10	0.5525179x	652,473.98	22,486,023.56
Total	**$30,101,625.12**	**-**	**$22,486,023.56**	**-**

Derivation Of Target Amount

Par Amount of Bonds	$18,810,000.00
Reoffering Premium or (Discount)	3,976,263.56
Total Underwriter's Discount (0.400%)	$(75,240.00)
Costs of Issuance	(225,000.00)
Net Issue Proceeds	$22,486,023.56

Erie County Water Authority

$18,810,000 Revenue Bonds - 2021(Stand Alone)

MMD' Aa' Rates plus 25 bps as of 1-19-21

Detail Costs Of Issuance

Dated 07/15/2021 | Delivered 07/15/2021

COSTS OF ISSUANCE DETAIL

Financial Advisor	$75,000.00
Bond Counsel	$75,000.00
Underwriter's Counsel	$35,000.00
Trustee & Counsel Fees	$5,000.00
Rating Agency Fee	$25,000.00
POS/Official Statement	$5,000.00
Miscellaneous	$5,000.00
TOTAL	**$225,000.00**

Erie County Water Authority

$22,883,000 WIFIA Loan - 2021

13yr SLG rate as of 1-19-21 plus 1 bps

Project Summary

Dated 07/15/2021 | Delivered 07/15/2021

Sources Of Funds

Par Amount of Bonds	$22,883,000.00
Planned Issuer Equity contribution	23,817,000.00
Total Sources	**$46,700,000.00**

Uses Of Funds

Costs of Issuance	425,000.00
Construction Costs	42,030,000.00
Contingency	4,245,000.00
Total Uses	**$46,700,000.00**

Flow of Funds Detail

State and Local Government Series (SLGS) rates for

Date of OMP Candidates

Bond Statistics

Average Life	13.686 Years
Average Coupon	1.3300000%
Net Interest Cost (NIC)	1.3300000%
Bond Yield for Arbitrage Purposes	1.3296421%
True Interest Cost (TIC)	1.3296421%
All Inclusive Cost (AIC)	1.5577725%

Erie County Water Authority

$22,883,000 WIFIA Loan - 2021

13yr SLG rate as of 1-19-21 plus 1 bps

Net Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Expenses	Net New D/S
12/31/2021	-	-	-	-	-	-
12/31/2022	777,584.00	1.330%	304,343.90	1,081,927.90	20,000.00	1,101,927.90
12/31/2023	787,925.00	1.330%	294,002.04	1,081,927.04	20,000.00	1,101,927.04
12/31/2024	798,405.00	1.330%	283,522.64	1,081,927.64	20,000.00	1,101,927.64
12/31/2025	809,024.00	1.330%	272,903.84	1,081,927.84	8,000.00	1,089,927.84
12/31/2026	819,784.00	1.330%	262,143.82	1,081,927.82	8,000.00	1,089,927.82
12/31/2027	830,687.00	1.330%	251,240.70	1,081,927.70	8,000.00	1,089,927.70
12/31/2028	841,735.00	1.330%	240,192.56	1,081,927.56	8,000.00	1,089,927.56
12/31/2029	852,930.00	1.330%	228,997.48	1,081,927.48	8,000.00	1,089,927.48
12/31/2030	864,274.00	1.330%	217,653.52	1,081,927.52	8,000.00	1,089,927.52
12/31/2031	875,769.00	1.330%	206,158.68	1,081,927.68	8,000.00	1,089,927.68
12/31/2032	887,417.00	1.330%	194,510.94	1,081,927.94	8,000.00	1,089,927.94
12/31/2033	899,219.00	1.330%	182,708.30	1,081,927.30	8,000.00	1,089,927.30
12/31/2034	911,179.00	1.330%	170,748.68	1,081,927.68	8,000.00	1,089,927.68
12/31/2035	923,297.00	1.330%	158,630.00	1,081,927.00	8,000.00	1,089,927.00
12/31/2036	935,577.00	1.330%	146,350.16	1,081,927.16	8,000.00	1,089,927.16
12/31/2037	948,020.00	1.330%	133,906.98	1,081,926.98	8,000.00	1,089,926.98
12/31/2038	960,629.00	1.330%	121,298.32	1,081,927.32	8,000.00	1,089,927.32
12/31/2039	973,406.00	1.330%	108,521.94	1,081,927.94	8,000.00	1,089,927.94
12/31/2040	986,352.00	1.330%	95,575.64	1,081,927.64	8,000.00	1,089,927.64
12/31/2041	999,470.00	1.330%	82,457.16	1,081,927.16	8,000.00	1,089,927.16
12/31/2042	1,012,763.00	1.330%	69,164.22	1,081,927.22	8,000.00	1,089,927.22
12/31/2043	1,026,233.00	1.330%	55,694.46	1,081,927.46	8,000.00	1,089,927.46
12/31/2044	1,039,882.00	1.330%	42,045.56	1,081,927.56	8,000.00	1,089,927.56
12/31/2045	1,053,712.00	1.330%	28,215.14	1,081,927.14	8,000.00	1,089,927.14
12/31/2046	1,067,727.00	1.330%	14,200.76	1,081,927.76	8,000.00	1,089,927.76
Total	**$22,883,000.00**	**-**	**$4,165,187.44**	**$27,048,187.44**	**$236,000.00**	**$27,284,187.44**

Erie County Water Authority

$22,883,000 WIFIA Loan - 2021

13yr SLG rate as of 1-19-21 plus 1 bps

Pricing Summary

Maturity	Type of Bond	Coupon	Yield	Maturity Value	Price	Dollar Price
07/15/2022	Serial Coupon	1.330%	1.330%	777,584.00	100.000%	777,584.00
07/15/2023	Serial Coupon	1.330%	1.330%	787,925.00	100.000%	787,925.00
07/15/2024	Serial Coupon	1.330%	1.330%	798,405.00	100.000%	798,405.00
07/15/2025	Serial Coupon	1.330%	1.330%	809,024.00	100.000%	809,024.00
07/15/2026	Serial Coupon	1.330%	1.330%	819,784.00	100.000%	819,784.00
07/15/2027	Serial Coupon	1.330%	1.330%	830,687.00	100.000%	830,687.00
07/15/2028	Serial Coupon	1.330%	1.330%	841,735.00	100.000%	841,735.00
07/15/2029	Serial Coupon	1.330%	1.330%	852,930.00	100.000%	852,930.00
07/15/2030	Serial Coupon	1.330%	1.330%	864,274.00	100.000%	864,274.00
07/15/2031	Serial Coupon	1.330%	1.330%	875,769.00	100.000%	875,769.00
07/15/2032	Serial Coupon	1.330%	1.330%	887,417.00	100.000%	887,417.00
07/15/2033	Serial Coupon	1.330%	1.330%	899,219.00	100.000%	899,219.00
07/15/2034	Serial Coupon	1.330%	1.330%	911,179.00	100.000%	911,179.00
07/15/2035	Serial Coupon	1.330%	1.330%	923,297.00	100.000%	923,297.00
07/15/2036	Serial Coupon	1.330%	1.330%	935,577.00	100.000%	935,577.00
07/15/2037	Serial Coupon	1.330%	1.330%	948,020.00	100.000%	948,020.00
07/15/2038	Serial Coupon	1.330%	1.330%	960,629.00	100.000%	960,629.00
07/15/2039	Serial Coupon	1.330%	1.330%	973,406.00	100.000%	973,406.00
07/15/2040	Serial Coupon	1.330%	1.330%	986,352.00	100.000%	986,352.00
07/15/2041	Serial Coupon	1.330%	1.330%	999,470.00	100.000%	999,470.00
07/15/2042	Serial Coupon	1.330%	1.330%	1,012,763.00	100.000%	1,012,763.00
07/15/2043	Serial Coupon	1.330%	1.330%	1,026,233.00	100.000%	1,026,233.00
07/15/2044	Serial Coupon	1.330%	1.330%	1,039,882.00	100.000%	1,039,882.00
07/15/2045	Serial Coupon	1.330%	1.330%	1,053,712.00	100.000%	1,053,712.00
07/15/2046	Serial Coupon	1.330%	1.330%	1,067,727.00	100.000%	1,067,727.00
Total	-	-	-	**$22,883,000.00**	-	**$22,883,000.00**

Bid Information

Par Amount of Bonds	$22,883,000.00
Gross Production	$22,883,000.00
Bid (100.000%)	22,883,000.00
Total Purchase Price	$22,883,000.00
Bond Year Dollars	$313,171.99
Average Life	13.686 Years
Average Coupon	1.3300000%
Net Interest Cost (NIC)	1.3300000%
True Interest Cost (TIC)	1.3296421%

Erie County Water Authority

$22,883,000 WIFIA Loan - 2021

13yr SLG rate as of 1-19-21 plus 1 bps

Proof of All In Cost (AIC) @ 1.5577725%

Date	Cashflow	PV Factor	Present Value	Cumulative PV
07/15/2021	-	1.0000000x	-	-
07/15/2022	1,101,927.90	0.9846024x	1,084,960.86	1,084,960.86
01/15/2023	147,001.02	0.9769927x	143,618.93	1,228,579.79
07/15/2023	954,926.02	0.9694419x	925,745.29	2,154,325.07
01/15/2024	141,761.32	0.9619494x	136,367.22	2,290,692.29
07/15/2024	960,166.32	0.9545148x	916,492.98	3,207,185.27
01/15/2025	136,451.92	0.9471377x	129,238.76	3,336,424.03
07/15/2025	953,475.92	0.9398176x	896,093.43	4,232,517.46
01/15/2026	131,071.91	0.9325540x	122,231.64	4,354,749.10
07/15/2026	958,855.91	0.9253466x	887,274.10	5,242,023.20
01/15/2027	125,620.35	0.9181950x	115,343.97	5,357,367.17
07/15/2027	964,307.35	0.9110985x	878,579.01	6,235,946.18
01/15/2028	120,096.28	0.9040570x	108,573.88	6,344,520.06
07/15/2028	969,831.28	0.8970698x	870,006.36	7,214,526.42
01/15/2029	114,498.74	0.8901367x	101,919.53	7,316,445.94
07/15/2029	975,428.74	0.8832571x	861,554.35	8,178,000.29
01/15/2030	108,826.76	0.8764307x	95,379.11	8,273,379.40
07/15/2030	981,100.76	0.8696570x	853,221.19	9,126,600.59
01/15/2031	103,079.34	0.8629358x	88,950.85	9,215,551.44
07/15/2031	986,848.34	0.8562664x	845,005.09	10,060,556.53
01/15/2032	97,255.47	0.8496486x	82,632.98	10,143,189.51
07/15/2032	992,672.47	0.8430820x	836,904.27	10,980,093.77
01/15/2033	91,354.15	0.8365661x	76,423.78	11,056,517.56
07/15/2033	998,573.15	0.8301005x	828,916.11	11,885,433.67
01/15/2034	85,374.34	0.8236850x	70,321.56	11,955,755.23
07/15/2034	1,004,553.34	0.8173190x	821,040.51	12,776,795.74
01/15/2035	79,315.00	0.8110022x	64,324.64	12,841,120.38
07/15/2035	1,010,612.00	0.8047342x	813,274.07	13,654,394.45
01/15/2036	73,175.08	0.7985147x	58,431.38	13,712,825.83
07/15/2036	1,016,752.08	0.7923433x	805,616.66	14,518,442.49
01/15/2037	66,953.49	0.7862195x	52,640.14	14,571,082.63
07/15/2037	1,022,973.49	0.7801431x	798,065.69	15,369,148.32
01/15/2038	60,649.16	0.7741136x	46,949.34	15,416,097.66
07/15/2038	1,029,278.16	0.7681307x	790,620.20	16,206,717.86
01/15/2039	54,260.97	0.7621941x	41,357.39	16,248,075.25
07/15/2039	1,035,666.97	0.7563034x	783,278.43	17,031,353.69
01/15/2040	47,787.82	0.7504582x	35,862.76	17,067,216.45
07/15/2040	1,042,139.82	0.7446581x	776,037.89	17,843,254.33
01/15/2041	41,228.58	0.7389029x	30,463.92	17,873,718.25
07/15/2041	1,048,698.58	0.7331922x	768,897.60	18,642,615.85
01/15/2042	34,582.11	0.7275256x	25,159.37	18,667,775.22
07/15/2042	1,055,345.11	0.7219028x	761,856.57	19,429,631.79
01/15/2043	27,847.23	0.7163234x	19,947.62	19,449,579.41
07/15/2043	1,062,080.23	0.7107872x	754,913.05	20,204,492.46
01/15/2044	21,022.78	0.7052938x	14,827.24	20,219,319.70
07/15/2044	1,068,904.78	0.6998428x	748,065.31	20,967,385.01
01/15/2045	14,107.57	0.6944339x	9,796.78	20,977,181.78
07/15/2045	1,075,819.57	0.6890669x	741,311.66	21,718,493.44
01/15/2046	7,100.38	0.6837413x	4,854.82	21,723,348.26
07/15/2046	1,082,827.38	0.6784569x	734,651.74	22,458,000.00
Total	**$27,284,187.44**	**-**	**$22,458,000.00**	**-**

Derivation Of Target Amount

Par Amount of Bonds	$22,883,000.00
Costs of Issuance	(425,000.00)
Net Issue Proceeds	$22,458,000.00

Erie County Water Authority

$22,883,000 WIFIA Loan - 2021

13yr SLG rate as of 1-19-21 plus 1 bps

Detail Costs Of Issuance

Dated 07/15/2021 | Delivered 07/15/2021

COSTS OF ISSUANCE DETAIL

Financial Advisor	$75,000.00
Bond Counsel	$75,000.00
Rating Agency Fee	$25,000.00
Application Fee	$100,000.00
Credit Processing Fee	$150,000.00
TOTAL	**$425,000.00**

Erie County Water Authority
Debt Service Present Value Calculation
WIFIA Loan vs Standalone Revenue Bond
Discount Rate: WIFIA Loan AIC Yield

PV of Debt Service on WIFIA Loan

Date	Amount	PV	
07/15/2021			1.5577725%
07/15/2021		-	0.0000
07/15/2022	1,101,927.90	1,084,960.86	2.0000
01/15/2023	147,001.02	143,618.93	3.0000
07/15/2023	954,926.02	925,745.29	4.0000
01/15/2024	141,761.32	136,367.22	5.0000
07/15/2024	960,166.32	916,492.98	6.0000
01/15/2025	136,451.92	129,238.76	7.0000
07/15/2025	953,475.92	896,093.43	8.0000
01/15/2026	131,071.91	122,231.64	9.0000
07/15/2026	958,855.91	887,274.10	10.0000
01/15/2027	125,620.35	115,343.97	11.0000
07/15/2027	964,307.35	878,579.01	12.0000
01/15/2028	120,096.28	108,573.88	13.0000
07/15/2028	969,831.28	870,006.35	14.0000
01/15/2029	114,498.74	101,919.52	15.0000
07/15/2029	975,428.74	861,554.34	16.0000
01/15/2030	108,826.76	95,379.11	17.0000
07/15/2030	981,100.76	853,221.19	18.0000
01/15/2031	103,079.34	88,950.85	19.0000
07/15/2031	986,848.34	845,005.09	20.0000
01/15/2032	97,255.47	82,632.98	21.0000
07/15/2032	992,672.47	836,904.26	22.0000
01/15/2033	91,354.15	76,423.78	23.0000
07/15/2033	998,573.15	828,916.10	24.0000
01/15/2034	85,374.34	70,321.56	25.0000
07/15/2034	1,004,553.34	821,040.51	26.0000
01/15/2035	79,315.00	64,324.64	27.0000
07/15/2035	1,010,612.00	813,274.07	28.0000
01/15/2036	73,175.08	58,431.38	29.0000
07/15/2036	1,016,752.08	805,616.65	30.0000
01/15/2037	66,953.49	52,640.14	31.0000
07/15/2037	1,022,973.49	798,065.68	32.0000
01/15/2038	60,649.16	46,949.34	33.0000
07/15/2038	1,029,278.16	790,620.20	34.0000
01/15/2039	54,260.97	41,357.39	35.0000
07/15/2039	1,035,666.97	783,278.43	36.0000
01/15/2040	47,787.82	35,862.76	37.0000
07/15/2040	1,042,139.82	776,037.88	38.0000
01/15/2041	41,228.58	30,463.92	39.0000
07/15/2041	1,048,698.58	768,897.59	40.0000
01/15/2042	34,582.11	25,159.37	41.0000
07/15/2042	1,055,345.11	761,856.56	42.0000
01/15/2043	27,847.23	19,947.62	43.0000
07/15/2043	1,062,080.23	754,913.04	44.0000
01/15/2044	21,022.78	14,827.24	45.0000
07/15/2044	1,068,904.78	748,065.31	46.0000
01/15/2045	14,107.57	9,796.78	47.0000
07/15/2045	1,075,819.57	741,311.65	48.0000
01/15/2046	7,100.38	4,854.82	49.0000
07/15/2046	1,082,827.38	734,651.73	50.0000
Total	27,284,187.44	22,457,999.89	

PV of Debt Service on Standalone Revenue Bond

Date	Amount	PV	
07/15/2021			1.5577725%
07/15/2021	-	-	0.0000
07/15/2022	1,204,065.00	1,185,525.29	2.0000
01/15/2023	367,166.70	358,719.20	3.0000
07/15/2023	836,898.70	811,324.66	4.0000
01/15/2024	357,772.06	344,158.62	5.0000
07/15/2024	846,293.06	807,799.26	6.0000
01/15/2025	348,001.64	329,605.47	7.0000
07/15/2025	856,063.64	804,543.66	8.0000
01/15/2026	337,840.40	315,054.43	9.0000
07/15/2026	866,224.40	801,557.84	10.0000
01/15/2027	327,272.72	300,500.16	11.0000
07/15/2027	876,792.72	798,844.56	12.0000
01/15/2028	316,282.32	285,937.23	13.0000
07/15/2028	887,782.32	796,402.71	14.0000
01/15/2029	304,852.32	271,360.22	15.0000
07/15/2029	899,212.32	794,235.65	16.0000
01/15/2030	292,965.12	256,763.62	17.0000
07/15/2030	911,100.12	792,344.64	18.0000
01/15/2031	280,602.42	242,141.86	19.0000
07/15/2031	923,462.42	790,729.86	20.0000
01/15/2032	267,745.22	227,489.36	21.0000
07/15/2032	936,320.22	789,394.70	22.0000
01/15/2033	254,373.72	212,800.42	23.0000
07/15/2033	949,691.72	788,339.60	24.0000
01/15/2034	240,467.36	198,069.35	25.0000
07/15/2034	963,597.36	787,566.41	26.0000
01/15/2035	226,004.76	183,290.36	27.0000
07/15/2035	978,059.76	787,078.17	28.0000
01/15/2036	210,963.66	168,457.59	29.0000
07/15/2036	993,101.66	786,877.40	30.0000
01/15/2037	195,320.90	153,565.10	31.0000
07/15/2037	1,008,743.90	786,964.57	32.0000
01/15/2038	179,052.44	138,606.93	33.0000
07/15/2038	1,025,012.44	787,343.57	34.0000
01/15/2039	162,133.24	123,577.00	35.0000
07/15/2039	1,041,931.24	788,016.11	36.0000
01/15/2040	144,537.28	108,469.18	37.0000
07/15/2040	1,059,527.28	788,985.59	38.0000
01/15/2041	126,237.48	93,277.24	39.0000
07/15/2041	1,077,827.48	790,254.67	40.0000
01/15/2042	107,205.68	77,994.87	41.0000
07/15/2042	1,096,859.68	791,826.05	42.0000
01/15/2043	87,412.60	62,615.69	43.0000
07/15/2043	1,116,652.60	793,702.38	44.0000
01/15/2044	66,827.80	47,133.23	45.0000
07/15/2044	1,137,236.80	795,886.98	46.0000
01/15/2045	45,419.62	31,540.93	47.0000
07/15/2045	1,158,645.62	798,384.34	48.0000
01/15/2046	23,155.10	15,832.10	49.0000
07/15/2046	1,180,910.10	801,196.63	50.0000
Total	30,101,625.12	24,792,085.46	

PV Standalone	$24,792,085.46
PV WIFIA	$22,457,999.89
Net PV Difference	$2,334,085.57