Bethlehem Water System – Capital Financing

- Background
- Debt History
- Refinancing Plan
- Capital Plan

Background

- Bethlehem Authority
  - Established 1938 by City Council
  - First Municipal Authority in the Commonwealth of Pennsylvania
  - Owner of record of all City water assets
  - Long-term lease agreement with the City to operate and maintain the water system

Background

- <u>Bethlehem Authority</u>
  - Finance water system capital projects through bonds and other debt instruments
  - Financed construction of Wild Creek dam in 1939-1941
  - Financed construction of Penn Forest dam in 1956-1958
  - All debt is guaranteed by the City
    - All financing efforts require approval by the Authority Board and City Council

Water System

- 37,000 metered customers (population 120,000)
  - 95% Residential
  - 5% Commercial, Industrial
- Serve all or parts of 11 municipalities
- PUC jurisdiction – outside City
  - 2/3 inside City
  - 1/3 outside City
- 23,000 acre watershed
- 550 miles distribution mains
- $23 million operating budget
- 15 MGD consumption
  - 23 Olympic size swimming pools per day
- Capital intensive business

Recent Debt History

- 1992-1994 - $80 million bonds
  - Water Treatment Plant
  - Meter replacement
  - 8 miles of transmission main
  - Storage tanks
- 1996-1998 - $65 million bonds
  - Rebuild Penn Forest dam
- 2014 Refinancing
  - lowered annual debt payments
  - Raised additional $5 million in capital
  - Extended amortization schedule 4 years to 2032

Current Debt Profile

- $90 million outstanding principal and interest
- Annual debt payments = $8.5 million/year (40% total operating budget)
- Amortization schedule through 2032
- Continue to pay down 1990's Capital projects
- 2014 Bond with $28 million principal available for refinancing in 2022

Refinancing Goals

- Take advantage of lower interest rates to reduce borrowing costs
- Cap annual debt service payments at $8.5 million/year or less
- Borrow additional $10 million to fund Water Capital projects for the next several years
  - Fold this borrowing into the overall debt structure

Capital Plan Goals

- Continual investment in the capital intensive enterprise
- Balance pay-go vs. borrowed money
- Balance investment needs throughout entire system
- Levelize annual capital budgets
- Maintain regulatory compliance and customer service

Capital Plan (2022-2025)

REVENUE

- $10 million new bond
- $3 million PennVest Grant
- $11 million pay-go appropriation
- Federal Infrastructure money - TBD

Capital Plan (2022-2025)

EXPENDITURES

- $3 million lead service lines
- $7.5 million distribution system mains
- $4 million tanks/reservoirs
- $6 million water meters
- $3.5 million miscellaneous (equipment, vehicles, security, treatment plant)

City of Bethlehem

Refinancing Discussion

March 8, 2022

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City of Bethlehem
Topics for Discussion
March 2022

Market Update

1) Since the beginning of 2020 concerns over COVID-19 and its possible ramifications have added increased volatility throughout the markets.
    a. Throughout March of 2020, rates increased dramatically, as investors sat on the sidelines or even sold their municipal bonds to raise cash.
    b. In August 2020, rates hit their lowest point in history (dating back to 1993).
    c. While tax-exempt interest rates had remained near historical all-time lows through the beginning of 2022, ongoing concerns regarding COVID-19, and its variants, as well as other global concerns, including but not limited to tensions in Ukraine, have added to recent market volatility.
    d. Due to increased inflationary concerns, the Federal Reserve has begun to suggest that they may raise short-term borrowing rates multiple throughout 2022. The Fed's next meeting is scheduled for March.

2022 Financing Plan – Bethlehem Authority

Refunding Candidate	Series of 2014
Financing Type	Guaranteed Water Revenue Bonds
Amount Outstanding	$28,170,000
Average Rate	3.613%
Call Date	November 15, 2022
Final Maturity	November 15, 2032

1) The Authority's 2014 Bonds will be currently callable in August 2022, and the City and Authority are currently working through a refinancing plan with PFM and PRAG.
    a. The savings will be realized over the life of the loan to help structure the annual debt service to accommodate future new money borrowings.
    b. The final maturity of the new refunding bonds will not extend past the current final maturity of the 2014 Bonds.
    c. During this refinancing, the Maintenance Reserve Fund (under the Indenture) and Debt Service Reserve Fund (for this Series only) are expected to be eliminated. Proceeds currently in each fund will be utilized as a source of proceeds to reduce the borrowing amount or available for water projects.
2) In addition to the 2014 refunding, the Authority will also be issuing approximately $10 million of new money proceeds to fund various capital projects.
    a. Currently structured as a 15-year wrap around the existing debt service structure. If the City and Authority would prefer, the financing team could structure the wrap to extend over 20-years.
3) City will adopt a Parameters Guarantee Ordinance for the Series of 2022 Bonds.

City of Bethlehem
Topics for Discussion (cont.)
March 2022

Estimated Timeline

March 10, 2022	Authority to Select Underwriter(s)
Week of March 14th, 2022	Kick off Call with Working Group
Week of March 28th, 2022 (or later)	Distribute Draft Documents for Review
Week of April 4th, 2022 (or later)	First Reading of City Ordinance
Week of April 11th, 2022 (or later)	Publish Debt Act Notice for Ordinance
Week of April 18th, 2022 (or later)	Enactment of City Ordinance Publish Post Enactment Notice
Week of May 9th, 2022 (or later)	Adopt Bond Resolution
Week of May 16, 2022 (or later)	Pricing of the Bonds
August 17, 2022 (or later)	Settlement of the Bonds
November 15, 2022	Call Date of the 2014 Bonds

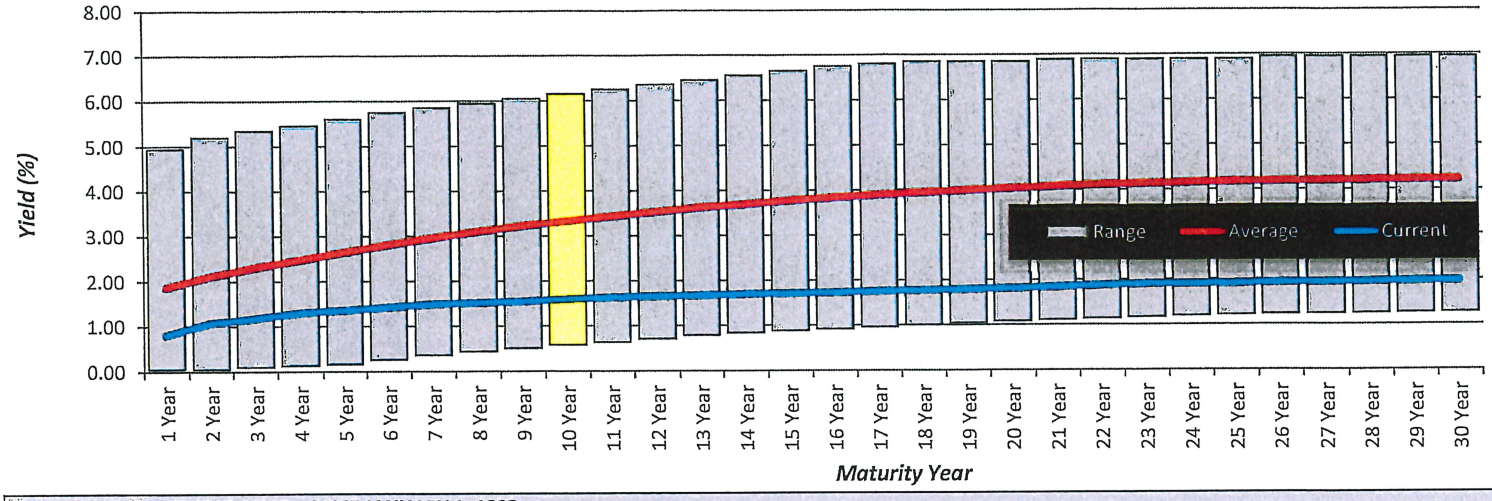
Financing Team

Issuer	Bethlehem Authority
Guarantor	City of Bethlehem
Special Counsel to the City	TBD
Authority Bond Counsel	Eckert Seamans Cherin & Mellott, LLC
Authority Solicitor	Broughal & Devito, L.L.P.
Financial Advisor to the City	PFM Financial Advisors LLC
Financial Advisor to the Authority	Public Resources Advisory Group, Inc.
Trustee	The Bank of New York Mellon
Underwriter(s)	TBD

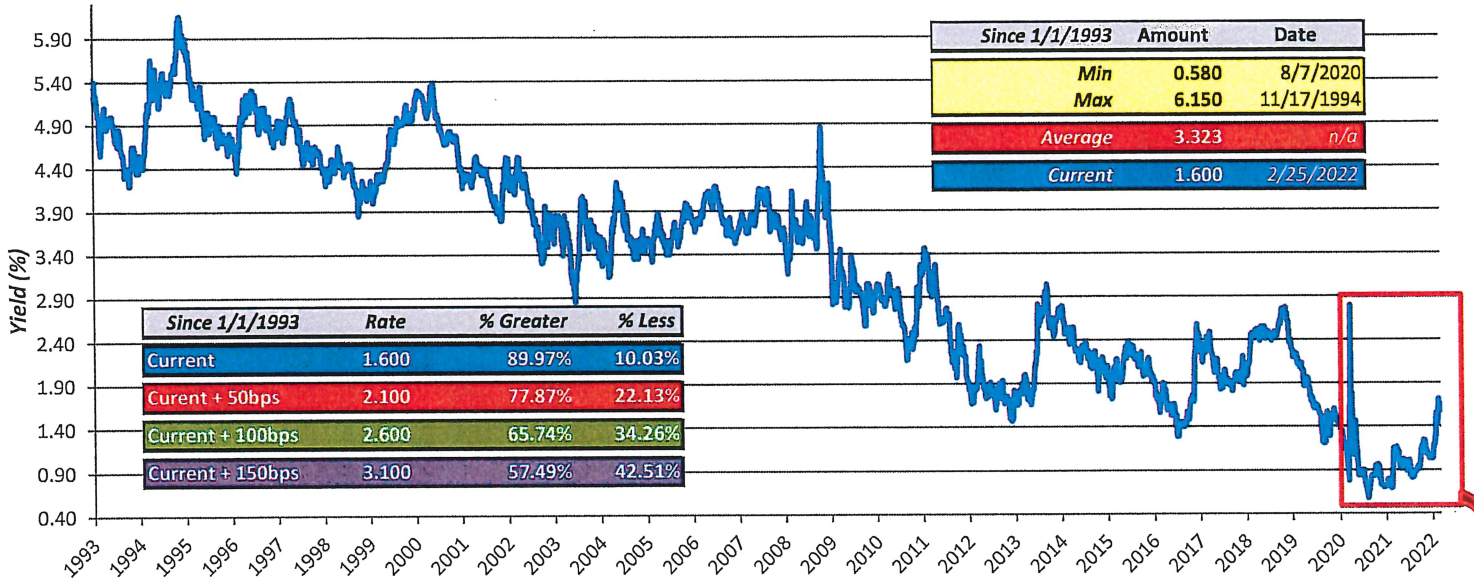
MUNICIPAL MARKET UPDATE

February 25, 2022

HISTORICAL MMD CURVE ILLUSTRATION - SINCE JANUARY 1, 1993



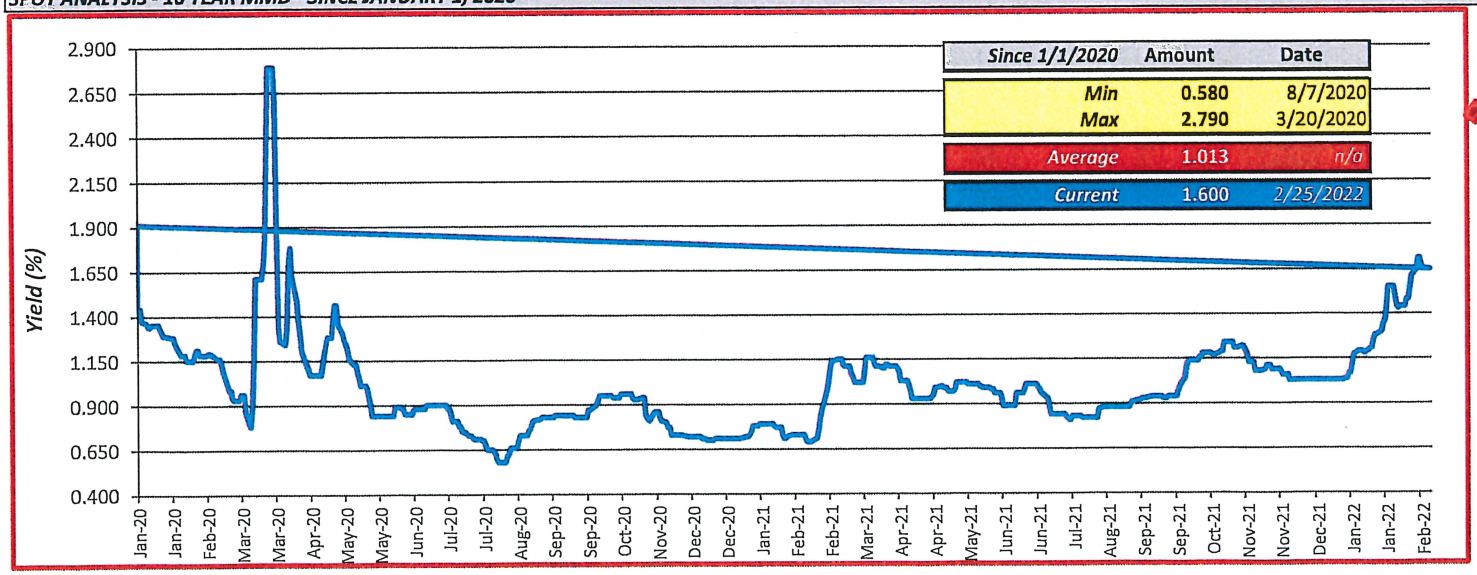
SPOT ANALYSIS - 10 YEAR MMD - SINCE JANUARY 1, 1993



Since 1/1/1993	Amount	Date
Min	0.580	8/7/2020
Max	6.150	11/17/1994
Average	3.323	n/a
Current	1.600	2/25/2022

Since 1/1/1993	Rate	% Greater	% Less
Current	1.600	89.97%	10.03%
Curent + 50bps	2.100	77.87%	22.13%
Current + 100bps	2.600	65.74%	34.26%
Current + 150bps	3.100	57.49%	42.51%

SPOT ANALYSIS - 10 YEAR MMD - SINCE JANUARY 1, 2020



Since 1/1/2020	Amount	Date
Min	0.580	8/7/2020
Max	2.790	3/20/2020
Average	1.013	n/a
Current	1.600	2/25/2022

CITY OF BETHLEHEM
SUMMARY OF OUTSTANDING INDEBTEDNESS

Debt Service Requirements

	GENERAL OBLIGATION														TOTAL
1 Fiscal Year Ending	2 G.O. Notes Series of 2007	3 G.O. Bonds Series B of 2013 (Taxable)	4 G.O. Notes Series A of 2014	5 G.O. Bonds Series A of 2015	6 G.O. Bonds Series B of 2015	7 G.O. Bonds Series A of 2017	8 G.O. Bonds Series B of 2017	9 G.O. Bonds Series C of 2017	10 G.O. Bonds Series E of 2017	11 G.O. Note Series of 2018	12 G.O. Bonds Series of 2019	13 G.O. Bonds Series A of 2019	14 G.O. Bonds Series AA of 2019	15 G.O. Bonds Series of 2020	16 Total Debt Service
12/31/2022	428,018	882,232	349,900	176,131	375,550	506,740	478,339	370,321	2,580,200	125,475	440,846	4,707,085	834,219	603,150	12,858,206
12/31/2023		883,527	647,588	175,300	377,675	506,740	475,939	371,721	2,570,200	123,025	441,396	4,412,522	834,419	601,150	12,421,201
12/31/2024		882,128	107,625	964,469	374,125	506,359	478,139	372,721	2,325,700	125,575	441,646	4,409,802	838,619	603,025	12,429,932
12/31/2025		881,377		1,073,844		510,059	474,739	373,321	2,708,200	127,950	439,946	4,412,494	835,119	603,650	12,440,699
12/31/2026		879,001		1,328,775		508,459	475,939	368,521	2,461,700	125,150	438,146	4,410,782	827,719	601,000	12,425,192
12/31/2027				1,334,813		507,271	476,039	371,646	3,334,838	127,350	440,556	4,413,977	833,619	601,225	12,441,333
12/31/2028				711,563		1,545,371	474,939	368,846	1,153,125	124,375	442,569	5,307,116	834,119	601,250	11,563,272
12/31/2029						2,192,121	478,539	370,896		126,400	438,900	5,865,869	833,394	600,450	10,906,569
12/31/2030						2,056,361	476,294	372,371		123,250	439,650	5,751,669	827,350	604,400	10,651,345
12/31/2031						2,052,455	478,638	368,465		125,100	439,200	5,753,221	840,138	603,100	10,660,316
12/31/2032						1,600,375	475,198	369,185		126,775	442,500	5,237,022	837,250	601,600	9,689,904
12/31/2033							476,223	369,435		123,275	440,350	3,968,942	389,025	604,850	6,372,099
12/31/2034							475,870	368,740		124,775	442,900	3,967,079		196,950	5,576,314
12/31/2035								372,700		126,100					498,800
12/31/2036								370,556		127,250					497,806
12/31/2037								373,050		123,225					496,275
12/31/2038										124,200					124,200
12/31/2039															
12/31/2040															
Totals	**428,018**	**4,408,266**	**1,105,113**	**5,764,894**	**1,127,350**	**12,492,311**	**6,194,831**	**5,932,498**	**17,133,963**	**2,129,250**	**5,728,606**	**62,617,578**	**9,564,988**	**7,425,800**	**142,053,463**
Principal [2]:	425,000	3,865,000	1,060,000	5,050,000	1,075,000	9,900,000	4,975,000	4,515,000	15,130,000	1,585,000	4,770,000	51,790,000	8,300,000	6,475,000	118,915,000
Call Date:	Unknown	4/1/2023	10/1/2021	8/1/2023	8/1/2023	6/1/2025	6/1/2025	6/1/2025	12/1/2025	Anytime	5/1/2024	4/1/2029	4/1/2025	10/1/2025	
Purpose:	Unknown	Cur Ref 2001	Cur Ref 2005A, 2005B	New Money	Cur Ref 2010	Adv Ref 2011A, 2013A & Cur Ref 2010C Note	New Money	New Money	Adv Ref 2011A Gtd Lease	New Money	New Money	Adv Ref Portion of 2011B, 2014B, & 2014C	Cur Ref 2012 & 2013A	Cur Ref 2012 Pennvest	
Fund Allocations:	911 Fund & Water Fund	General Fund	General Fund	General Fund	General Fund & Sewer Fund	General Fund	General Fund	Sewer Fund	General Fund	Golf Fund	General Fund	General Fund	General Fund & Sewer Fund	Sewer Fund	

[1] Principal & Interest per the Operating & Capital Budgets Book
[2] Outstanding as of February 28, 2022

CITY OF BETHLEHEM
SUMMARY OF OUTSTANDING INDEBTEDNESS

Debt Service Requirements

GUARANTEED DEBT

	CITY OF BETHLEHEM	***BETHLEHEM AUTHORITY***		***BETHLEHEM PARKING AUTHORITY***			***TOTAL***
1 Fiscal Year Ending	2 Bethlehem City Gtd. Sewer Note Series of 2014 (PENNVEST #71405)	3 Bethlehm Auth Water Rev Bonds Series of 1998 (CABs)	4 **Bethlehm Auth Gtd. Water Revenue Series of 2014**	5 Beth. Parking Auth Gtd. Parking Revenue Series A of 2015	6 Beth. Parking Auth Gtd. Parking Revenue Series A of 2016 (Taxable)	7 Beth. Parking Auth Gtd. Parking Revenue Series B of 2016	8 **Total Debt Service**
12/31/2022	625,464	7,205,000	**1,245,550**	61,991	454,615	376,531	**9,969,151**
12/31/2023	625,464	7,230,000	**1,289,500**		454,223	376,531	**9,975,718**
12/31/2024	625,464	7,250,000	**1,272,100**		457,944	376,531	**9,982,039**
12/31/2025	625,464	7,275,000	**1,245,150**		180,294	651,531	**9,977,439**
12/31/2026	625,464	7,300,000	**1,218,900**			831,031	**9,975,395**
12/31/2027	625,464	7,320,000	**1,203,413**			831,256	**9,980,133**
12/31/2028	625,464	6,050,000	**2,473,413**			830,681	**9,979,558**
12/31/2029	625,464		**8,520,550**			834,281	**9,980,295**
12/31/2030	625,464		**8,518,750**			831,906	**9,976,120**
12/31/2031	625,464		**6,472,500**			833,650	**7,931,614**
12/31/2032	625,464		**5,934,500**			833,050	**7,393,014**
12/31/2033	625,464					832,000	**1,457,464**
12/31/2034	625,464					830,500	**1,455,964**
12/31/2035	625,464					833,550	**1,459,014**
12/31/2036	364,854					831,000	**1,195,854**
12/31/2037						833,000	**833,000**
12/31/2038						834,400	**834,400**
12/31/2039						830,200	**830,200**
12/31/2040						830,550	**830,550**
12/31/2041						830,300	**830,300**
12/31/2042						834,450	**834,450**
12/31/2043						832,850	**832,850**
12/31/2044						830,650	**830,650**
12/31/2045						832,850	**832,850**
12/31/2046						834,300	**834,300**
12/31/2047							
12/31/2048							
12/31/2049							
12/31/2050							
Totals	**9,121,349**	**49,630,000**	**39,394,325**	**61,991**	**1,547,076**	**19,257,581**	**119,012,322**
Principal [2]:	**7,968,316**	**12,047,015**	**28,170,000**	**60,000**	**1,455,000**	**13,140,000**	**62,840,331**
Call Date:	Anytime	Non-Callable	11/15/2022	4/1/2021	Non-Callable	10/1/2024	
Purpose:	New Money		Cur Ref 2004, 2010, 1997A & New Money	Cur Ref 2009	Cur Ref 2013 Note & New Money	Cur Ref 2013 Note & New Money	
Fund Allocations:	Sewer Fund	Water Fund	Water Fund	Parking	Parking	Parking	

[2] *For these purposes, assumes full amortization starting May 2014. Assumes interest rate of 1.510% for first 5 years followed by interest rate of 3.018% for remaining years*
[3] *Outstanding as of February 28, 2022*

BETHLEHEM AUTHORITY
Summary of 2022 Issuance - 2014 Bonds Refunding & New Money

	1	2
	Series A of 2022	*Series B of 2022*
Est. Pricing	June 30, 2022	June 30, 2022
Est. Settlement	August 17, 2022	August 17, 2022
Purpose	2014 Bonds Refunding	New Money
Structure	Level Savings	Wrap
Bond Proceeds	$29,050,000	$10,000,000
Construction Fund Deposit	-	$9,833,988
Estimated Net Savings	$4,407,532	-
As a % of Principal	15.65%	-
Est. Average Rate	2.298%	2.766%

3	4	5	6	7	8
Fiscal Year Ending	Existing Water Debt Service	Estimated Debt Service Savings [1][2]	Sub-Total New Water Debt Service	Estimated New Money Debt Service [1]	Total New Estimated Water Debt Service
12/31/2022	8,450,550	384,757	8,065,793	71,317	8,137,109
12/31/2023	8,519,500	244,200	8,275,300	296,750	8,572,050
12/31/2024	8,522,100	226,800	8,295,300	296,600	8,591,900
12/31/2025	8,520,150	199,850	8,320,300	296,450	8,616,750
12/31/2026	8,518,900	173,600	8,345,300	296,300	8,641,600
12/31/2027	8,523,413	158,113	8,365,300	296,150	8,661,450
12/31/2028	8,523,413	763,113	7,760,300	296,000	8,056,300
12/31/2029	8,520,550	968,500	7,552,050	295,850	7,847,900
12/31/2030	8,518,750	1,218,700	7,300,050	295,700	7,595,750
12/31/2031	6,472,500	68,200	6,404,300	1,195,550	7,599,850
12/31/2032	5,934,500	1,700	5,932,800	1,623,400	7,556,200
12/31/2033				1,622,600	1,622,600
12/31/2034				1,620,600	1,620,600
12/31/2035				1,622,400	1,622,400
12/31/2036				1,617,850	1,617,850
12/31/2037				1,617,100	1,617,100
12/31/2038					
12/31/2039					
12/31/2040					
TOTAL	89,024,325	4,407,532	84,616,793	13,360,617	97,977,409
	Present Value	*3,874,946*		*9,963,128*	

[1] *Rates based on interpolated November MMD as of February 18, 2022, plus spreads provided RFP results submitted February 18, 2022.*
[2] *Estimated savings does not include the potential release of any monies from the debt service reserve fund or the maintenance reserve fund.*
[3] *Does not include the estimated release of the $2 million reserve fund once 75% bond holder consent is achieved.*
[4] *2014 Bonds call date is November 15, 2022.*

BETHLEHEM AUTHORITY
Summary of Water Fund New Money Options

	1	2	3	4	5
	Series A of 2022	Series B of 2022	2026	2029	TOTAL
Est. Pricing	June 30, 2022	June 30, 2022	May 2026	May 2029	-
Est. Settlement	August 17, 2022	August 17, 2022	June 2026	June 2029	-
Purpose	2014 Bonds Refunding	New Money	New Money	New Money	-
Structure	Level Savings	Wrap	Wrap	Wrap	-
Term	11 Years	15 Years	20 Years	20 Years	
Bond Proceeds	$29,050,000	$10,000,000	$12,980,000	$14,615,000	$66,645,000
Construction Fund Deposit	-	$9,832,137	$12,737,495	$14,349,930	$36,919,563
Estimated Net Savings	$4,407,532	-	-	-	$4,407,532
As a % of Principal	15.65%	-	-	-	-
Est. Average Rate	2.298%	2.925%	3.106%	3.334%	-

6	7	8	9	10	11	12	13
Fiscal Year Ending	Existing Water Debt Service	Estimated Debt Service Savings [1][2]	Sub-Total New Water Debt Service	Estimated New Money Debt Service [1]	Estimated New Money Debt Service [3]	Estimated New Money Debt Service [3]	Total New Estimated Water Debt Service
12/31/2022	8,450,550	384,757	8,065,793	71,317			8,137,109
12/31/2023	8,519,500	244,200	8,275,300	296,750			8,572,050
12/31/2024	8,522,100	226,800	8,295,300	296,600			8,591,900
12/31/2025	8,520,150	199,850	8,320,300	296,450			8,616,750
12/31/2026	8,518,900	173,600	8,345,300	296,300	178,897		8,820,497
12/31/2027	8,523,413	158,113	8,365,300	296,150	397,700		9,059,150
12/31/2028	8,523,413	763,113	7,760,300	296,000	397,550		8,453,850
12/31/2029	8,520,550	968,500	7,552,050	295,850	397,400	206,093	8,451,393
12/31/2030	8,518,750	1,218,700	7,300,050	295,700	397,250	457,400	8,450,400
12/31/2031	6,472,500	68,200	6,404,300	1,195,550	397,100	457,250	8,454,200
12/31/2032	5,934,500	1,700	5,932,800	1,623,400	441,950	457,100	8,455,250
12/31/2033				1,622,600	1,150,450	1,146,950	3,920,000
12/31/2034				1,620,600	1,152,650	1,146,100	3,919,350
12/31/2035				1,622,400	1,154,100	1,144,650	3,921,150
12/31/2036				1,617,850	1,154,800	1,142,600	3,915,250
12/31/2037				1,617,100	1,154,750	1,144,950	3,916,800
12/31/2038					1,153,950	1,146,550	2,300,500
12/31/2039					1,152,400	1,142,400	2,294,800
12/31/2040					1,150,100	1,142,650	2,292,750
12/31/2041					1,152,050	1,142,150	2,294,200
12/31/2042					1,153,100	1,145,900	2,299,000
12/31/2043					1,153,250	1,143,750	2,297,000
12/31/2044					1,147,500	1,145,850	2,293,350
12/31/2045					1,151,000	1,142,050	2,293,050
12/31/2046					1,148,450	1,142,500	2,290,950
12/31/2047						1,142,050	1,142,050
12/31/2048						1,145,700	1,145,700
12/31/2049						1,143,300	1,143,300
12/31/2050							
TOTAL	89,024,325	4,407,532	84,616,793	13,360,617	18,736,397	21,027,943	137,741,749
	Present Value	*3,874,946*		*9,963,128*	*12,931,990*	*14,560,370*	

[1] *Rates based on interpolated November MMD as of February 18, 2022, plus spreads provided RFP results submitted February 18, 2022.*
[2] *Estimated savings does not include the potential release of any monies from the debt service reserve fund or the maintenance reserve fund.*
[3] *Rates based on current market conditions as of February 2022. Municipal bond market is fluid, actual rates/net savings to be locked-in at time of pricing.*
[3] *Does not include the estimated release of the $2 million reserve fund once 75% bond holder consent is achieved.*
[4] *2014 Bonds call date is November 15, 2022.*
[5] *For illustrative purposes only, 2026 and 2029 financings are shown as 20-year terms. Actual term of financings to be determined at time of pricing.*

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