

# Pennsbury School District

**MAXIMUM PARAMETERS BOND SALE DOCUMENT**  
*General Obligation Bonds*  
*Series A of 2019*

**October 17, 2019**

**Prepared by:**

**Zach Williard**

*Director*

**&**

**Ben Kapenstein**

*Senior Analyst*



**PFM Financial Advisors LLC**

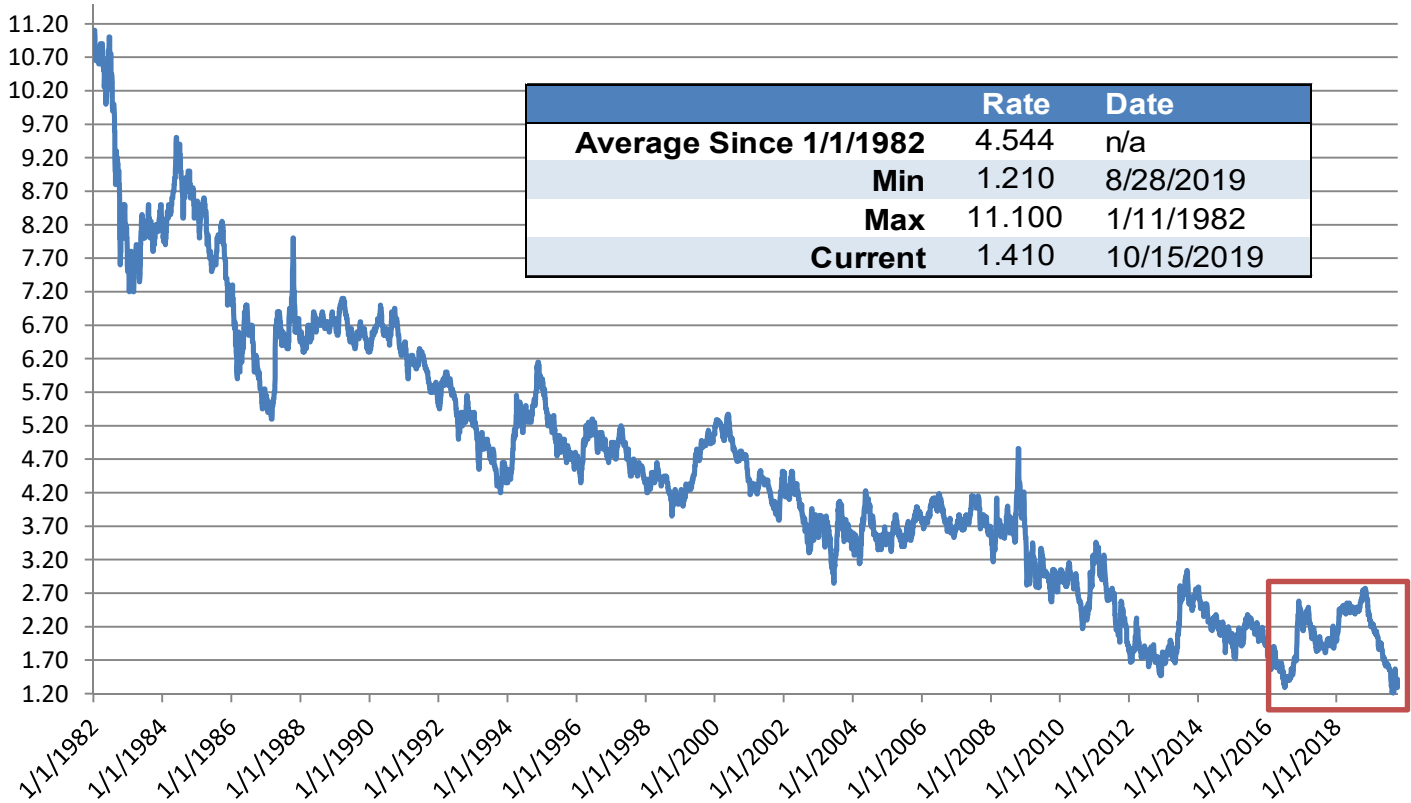
213 Market Street  
Harrisburg, PA 17101

717.232.2723 (P)

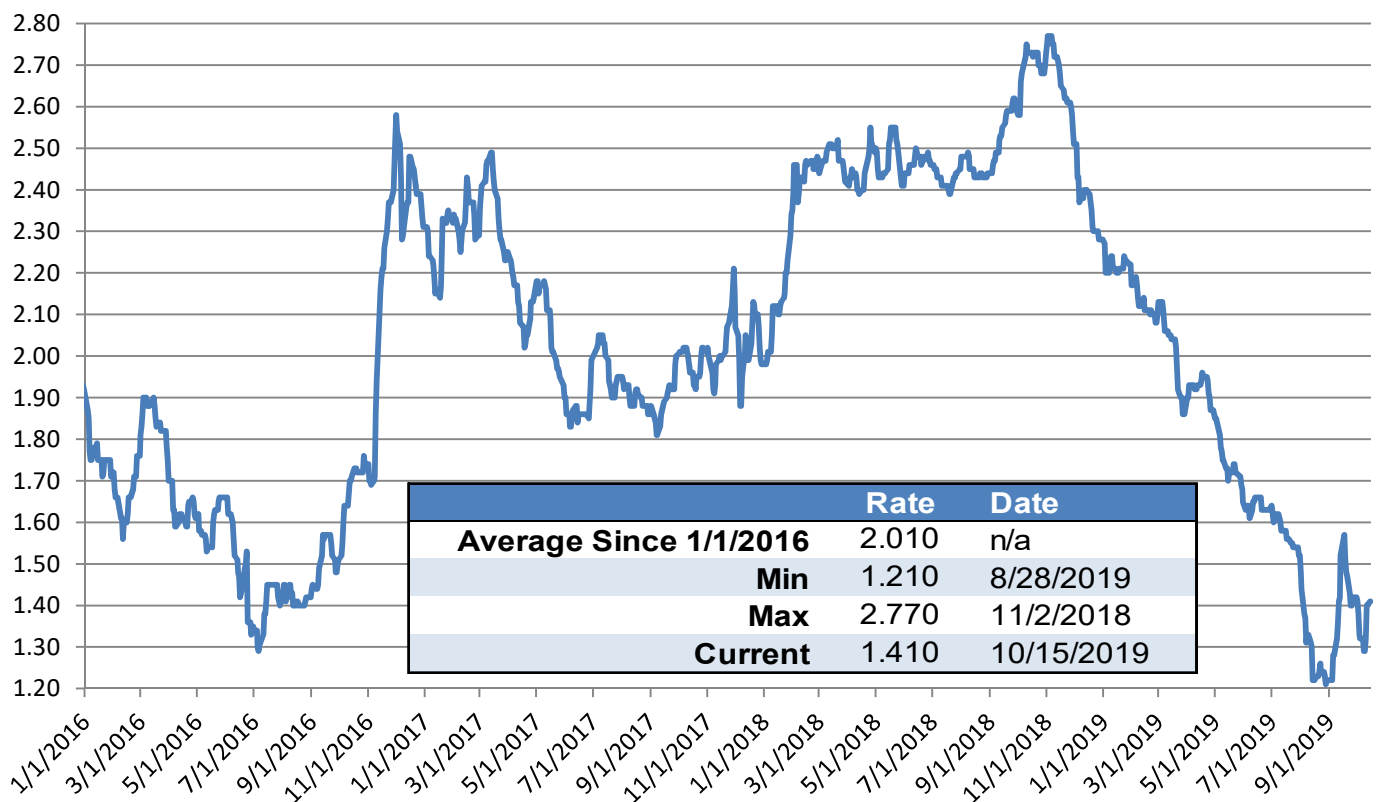
717.232.8610 (F)

[www.pfm.com](http://www.pfm.com)

# 10 Year MMD (AAA Fixed Rate Bond Rates) 1/1/1982 - 10/15/2019



# 10 Year MMD (AAA Fixed Rate Bond Rates) 1/1/2016 - 10/15/2019



**PENNSBURY SCHOOL DISTRICT  
SUMMARY OF OUTSTANDING INDEBTEDNESS**

<b>Debt Service Requirements</b>															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Fiscal Year Ended	G.O. Bonds Series of 2012	G.O. Bonds Series A of 2013	G.O. Bonds Series A of 2014	G.O. Bonds Series of 2015	G.O. Bonds Series A of 2015	G.O. Bonds Series B of 2015	G.O. Bonds Series of 2016	G.O. Bonds Series A of 2016	G.O. Bonds Series of 2017	G.O. Bonds Series A of 2017	G.O. Bonds Series of 2018	G.O. Bonds Series A of 2018	G.O. Bonds Series of 2019	Debt Service Sub Total	
6/30/2020	3,523,306	721,680	318,098	264,061	256,169	826,100	5,617,400	1,481,300	430,968	523,738	267,573	675,554	437,343	15,343,288	
6/30/2021	2,625,831	734,230	318,000	263,993	256,100	830,400	6,306,200	1,479,375	428,838	524,575	391,230	685,356	433,888	15,278,015	
6/30/2022	1,071,781	750,233	317,875	263,899	256,005	829,400	6,316,950	1,477,725	431,388	535,263	408,430	2,350,906	440,588	15,450,441	
6/30/2023	1,045,397	877,460	317,750	263,786	255,890	827,000		1,480,750	433,513	243,009	410,264	9,062,413	437,188	15,654,418	
6/30/2024	1,014,531	889,660	317,625	263,674	255,775	828,800		1,478,450	430,263	242,918	307,979	9,221,609	463,488	15,714,771	
6/30/2025	10,393,125	741,185	317,500	263,561	265,545	829,600		1,481,100	431,613	242,818	306,673		459,488	15,732,206	
6/30/2026	10,393,500	340,193	332,138	362,324	349,223	829,400		1,478,700	831,413	242,718	305,298		282,238	15,747,141	
6/30/2027			2,409,888	2,584,060	2,352,513	833,200		3,478,125	1,099,669	470,318	308,823		281,675	13,818,269	
6/30/2028			2,687,638	2,592,333	2,349,158	830,800		3,198,750	1,102,044	475,334	307,210		281,050	13,824,315	
6/30/2029			2,680,819	2,619,744	2,323,138	832,400		3,201,125	1,103,444	473,950	305,485		280,425	13,820,529	
6/30/2030			2,682,150	2,598,400	2,342,456	832,800		3,203,125	1,102,713	476,300	308,610		284,738	13,831,291	
6/30/2031						832,000		2,692,625	2,391,800	852,650	2,163,385		1,259,063	10,191,523	
6/30/2032								3,640,750	2,386,038	857,775	2,089,143		1,214,944	10,188,649	
6/30/2033								3,882,375		990,200	2,008,031		2,060,138	8,940,744	
6/30/2034								2,939,125		1,004,700	1,935,956		2,079,675	7,959,456	
6/30/2035								3,786,000		1,067,250			2,172,600	7,025,850	
6/30/2036								3,003,625		1,791,975				4,795,600	
6/30/2037								2,003,875		1,390,550				3,394,425	
6/30/2038															
6/30/2039															
6/30/2040															
<b>TOTAL</b>	<b>30,067,472</b>	<b>5,054,640</b>	<b>12,699,479</b>	<b>12,339,834</b>	<b>11,261,970</b>	<b>9,961,900</b>	<b>18,240,550</b>	<b>45,386,900</b>	<b>12,603,699</b>	<b>12,406,038</b>	<b>11,824,088</b>	<b>21,995,838</b>	<b>12,868,524</b>	<b>216,710,930</b>	

<b>Local Effort Requirements</b>															
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Fiscal Year Ended	G.O. Bonds Series of 2012	G.O. Bonds Series A of 2013	G.O. Bonds Series A of 2014	G.O. Bonds Series of 2015	G.O. Bonds Series A of 2015	G.O. Bonds Series B of 2015	G.O. Bonds Series of 2016	G.O. Bonds Series A of 2016	G.O. Bonds Series of 2017	G.O. Bonds Series A of 2017	G.O. Bonds Series of 2018	G.O. Bonds Series A of 2018	G.O. Bonds Series of 2019	Debt Service Sub Total	
6/30/2020	3,290,034	694,198	298,195	248,749	241,336	826,100	5,054,729	1,481,300	405,057	523,738	267,573	557,338	437,343	14,325,687	
6/30/2021	2,451,979	706,270	298,103	248,684	241,271	830,400	5,674,535	1,479,375	403,055	524,575	391,230	565,425	433,888	14,248,789	
6/30/2022	1,000,820	721,663	297,986	248,595	241,181	829,400	5,684,208	1,477,725	405,452	535,263	408,430	1,939,518	440,588	14,230,829	
6/30/2023	976,183	844,045	297,869	248,490	241,073	827,000		1,480,750	407,449	243,009	410,264	7,476,569	437,188	13,889,887	
6/30/2024	947,361	855,781	297,752	248,384	240,965	828,800		1,478,450	404,394	242,918	307,979	7,607,908	463,488	13,924,177	
6/30/2025	9,705,014	712,960	297,635	248,278	250,169	829,600		1,481,100	405,663	242,818	306,673		459,488	14,939,395	
6/30/2026	9,705,364	327,238	311,356	341,313	329,001	829,400		1,478,700	781,426	242,718	305,298		282,238	14,934,050	
6/30/2027			2,259,106	2,434,213	2,216,293	833,200		3,478,125	1,033,554	470,318	308,823		281,675	13,315,305	
6/30/2028			2,519,477	2,442,005	2,213,132	830,800		3,198,750	1,035,786	475,334	307,210		281,050	13,303,545	
6/30/2029			2,513,085	2,467,827	2,188,619	832,400		3,201,125	1,037,102	473,950	305,485		280,425	13,300,019	
6/30/2030			2,514,333	2,447,721	2,206,819	832,800		3,203,125	1,036,415	476,300	308,610		284,738	13,310,861	
6/30/2031						832,000		2,692,625	2,248,000	852,650	2,163,385		1,259,063	10,047,722	
6/30/2032								3,640,750	2,242,584	857,775	2,089,143		1,214,944	10,045,195	
6/30/2033								3,882,375		990,200	2,008,031		2,060,138	8,940,744	
6/30/2034								2,939,125		1,004,700	1,935,956		2,079,675	7,959,456	
6/30/2035								3,786,000		1,067,250			2,172,600	7,025,850	
6/30/2036								3,003,625		1,791,975				4,795,600	
6/30/2037								2,003,875		1,390,550				3,394,425	
6/30/2038															
6/30/2039															
6/30/2040															
<b>TOTAL</b>	<b>28,076,755</b>	<b>4,862,153</b>	<b>11,904,898</b>	<b>11,624,257</b>	<b>10,609,859</b>	<b>9,961,900</b>	<b>16,413,473</b>	<b>45,386,900</b>	<b>11,845,937</b>	<b>12,406,038</b>	<b>11,824,088</b>	<b>18,146,757</b>	<b>12,868,524</b>	<b>205,931,538</b>	

<b>Principal *:</b>	<b>21,545,000</b>	<b>4,010,000</b>	<b>9,850,000</b>	<b>9,975,000</b>	<b>8,965,000</b>	<b>7,820,000</b>	<b>16,755,000</b>	<b>27,950,000</b>	<b>9,320,000</b>	<b>8,940,000</b>	<b>8,550,000</b>	<b>19,380,000</b>	<b>9,040,000</b>	<b>162,100,000</b>
---------------------	-------------------	------------------	------------------	------------------	------------------	------------------	-------------------	-------------------	------------------	------------------	------------------	-------------------	------------------	--------------------

<b>PE%:</b>	23.28%	13.39%	22.00%	20.39%	20.36%	0.00%	35.22%	0.00%	21.14%	0.00%	0.00%	61.53%	0.00%
<b>PE% Status:</b>		Perm.	Perm.	Perm.	Perm.	Temp	Perm.	Temp	Est	Est	Est	Perm.	Est
<b>AR%:</b>	28.44%	28.44%	28.44%	28.44%	28.44%	28.44%	28.44%	28.44%	28.44%	28.44%	28.44%	28.44%	28.44%
<b>Call Date:</b>	8/1/2022	2/1/2019	2/1/2020	2/1/2021	2/1/2021	2/1/2021	Non-callable	4/1/2025	7/15/2022	4/1/2023	8/1/2023	Non-callable	8/1/2024
<b>Purpose:</b>	Adv Ref Port. 04A	Cur Ref 2008	Cur Ref Port. 09A	Cur Ref 2010	Cur Ref 2010	New Money	Cur Ref 06	New Money	Cur Ref 2011	New Money	Cur Ref 2013	Cur Ref 2004A	Cur Ref 2014
<b>Bank Qualified?</b>	Non-BQ	BQ	BQ	BQ	BQ	BQ	Non-BQ	Non-BQ	BQ	BQ	BQ	Non-BQ	BQ

\* Outstanding as of September 11, 2019

**PENNSBURY SCHOOL DISTRICT  
 PROPOSED SERIES A OF 2019 (NON-BANK QUALIFIED)  
 REFUNDS THE SERIES A OF 2013 & SERIES A OF 2014**

1

	<b>ESTIMATED</b>
	<b>SERIES A OF 2019</b>
<b>Series Refinanced</b>	Series A of 2013 & Series A of 2014
<b>Bond Issue Par Amount</b>	\$12,830,000
<b>Local Effort Savings</b>	<b>\$504,996</b>
<b>Savings as % of Refunded Par</b>	4.27%
<b>Est. Settle Date</b>	11/4/2019

2

3

4

5

Fiscal Year	Existing Local Effort	Estimated Local Effort Savings*	Ending Local Effort
Ending			
6/30/2020	14,325,687	197,517	14,128,170
6/30/2021	14,248,789	5,581	14,243,209
6/30/2022	14,230,829	4,337	14,226,492
6/30/2023	13,889,887	1,080	13,888,807
6/30/2024	13,924,177	4,204	13,919,973
6/30/2025	14,939,395	145,625	14,793,770
6/30/2026	14,934,050	138,724	14,795,327
6/30/2027	13,315,305	1,409	13,313,896
6/30/2028	13,303,545	1,582	13,301,963
6/30/2029	13,300,019	3,118	13,296,901
6/30/2030	13,310,861	1,818	13,309,043
6/30/2031	10,047,722		10,047,722
6/30/2032	10,045,195		10,045,195
6/30/2033	8,940,744		8,940,744
6/30/2034	7,959,456		7,959,456
6/30/2035	7,025,850		7,025,850
6/30/2036	4,795,600		4,795,600
6/30/2037	3,394,425		3,394,425
6/30/2038			
<b>TOTAL</b>	<b>205,931,538</b>	<b>504,996</b>	<b>205,426,542</b>

\*Assumes current estimated market interest rates. Actual rates would be determined at time of pricing.

**PENNSBURY SCHOOL DISTRICT**

SERIES A OF 2013

Bonds to be Refunded

*Optional Redemption: February 1, 2019*

1	2	3	4	5	6	7	8
<u>Date</u>	<u>Principal</u>	<u>Rate</u>	<u>Interest</u>	<u>Semi-Annual Debt Service</u>	<u>Fiscal Year Debt Service</u>	<u>State Aid</u>	<u>Local Effort</u>
2/1/2020			52,790.00	52,790.00	52,790.00	2,010.30	50,779.70
8/1/2020	635,000	2.000	52,790.00	687,790.00			
2/1/2021			46,440.00	46,440.00	734,230.00	27,960.33	706,269.67
8/1/2021	665,000	2.300	46,440.00	711,440.00			
2/1/2022			38,792.50	38,792.50	750,232.50	28,569.72	721,662.78
8/1/2022	810,000	2.500	38,792.50	848,792.50			
2/1/2023			28,667.50	28,667.50	877,460.00	33,414.69	844,045.31
8/1/2023	845,000	3.000	28,667.50	873,667.50			
2/1/2024			15,992.50	15,992.50	889,660.00	33,879.28	855,780.72
8/1/2024	720,000	3.000	15,992.50	735,992.50			
2/1/2025			5,192.50	5,192.50	741,185.00	28,225.18	712,959.82
8/1/2025	335,000	3.100	5,192.50	340,192.50			
2/1/2026					340,192.50	12,954.93	327,237.57
<b>TOTALS</b>	<b>4,010,000</b>		<b>375,750.00</b>	<b>4,385,750.00</b>	<b>4,385,750.00</b>	<b>167,014.45</b>	<b>4,218,735.55</b>

PE% 13.39% (Temporary)  
 AR% 28.44% (2018-2019)

*Net 3.81% Effective Reimbursement*

**PENNSBURY SCHOOL DISTRICT**

SERIES A OF 2014

Bonds to be Refunded

*Optional Redemption: February 1, 2020*

1	2	3	4	5	6	7	8	9	10
<u>Date</u>	<u>Principal</u>	<u>Rate</u>	<u>Principal</u>	<u>Rate</u>	<u>Interest</u>	<u>Semi-Annual Debt Service</u>	<u>Fiscal Year Debt Service</u>	<u>State Aid</u>	<u>Local Effort</u>
2/1/2020					156,531.25	156,531.25	156,531.25	9,793.85	146,737.40
8/1/2020	5,000	2.500			156,531.25	161,531.25			
2/1/2021					156,468.75	156,468.75	318,000.00	19,896.62	298,103.38
8/1/2021	5,000	2.500			156,468.75	161,468.75			
2/1/2022					156,406.25	156,406.25	317,875.00	19,888.80	297,986.20
8/1/2022	5,000	2.500			156,406.25	161,406.25			
2/1/2023					156,343.75	156,343.75	317,750.00	19,880.98	297,869.02
8/1/2023	5,000	2.500			156,343.75	161,343.75			
2/1/2024					156,281.25	156,281.25	317,625.00	19,873.16	297,751.84
8/1/2024	5,000	2.500			156,281.25	161,281.25			
2/1/2025					156,218.75	156,218.75	317,500.00	19,865.34	297,634.66
8/1/2025	20,000	3.000			156,218.75	176,218.75			
2/1/2026					155,918.75	155,918.75	332,137.50	20,781.18	311,356.32
8/1/2026	2,130,000	3.000			155,918.75	2,285,918.75			
2/1/2027					123,968.75	123,968.75	2,409,887.50	150,781.84	2,259,105.66
8/1/2027	2,480,000	3.250			123,968.75	2,603,968.75			
2/1/2028					83,668.75	83,668.75	2,687,637.50	168,160.10	2,519,477.40
8/1/2028	2,555,000	3.250			83,668.75	2,638,668.75			
2/1/2029					42,150.00	42,150.00	2,680,818.75	167,733.47	2,513,085.28
8/1/2029	600,000	3.000	2,040,000	3.250	42,150.00	2,682,150.00			
2/1/2030							2,682,150.00	167,816.76	2,514,333.24
TOTALS	7,810,000		2,040,000		2,687,912.50	12,537,912.50	12,537,912.50	784,472.11	11,753,440.39
TOTAL PAR	9,850,000								
PE%	22.00%	(Estimated)							
AR%	28.44%	(2018-2019)							
Net	6.26%	Effective Reimbursement							

**PENNSBURY SCHOOL DISTRICT**  
**AMOUNT TO CALL BONDS & ECROW**

1                      2                      3                      4

**SERIES A OF 2013**

*Optional Redemption Date: February 1, 2019*

<b>AMOUNT TO CALL BONDS</b>			
<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Required</u>
11/4/2019	4,010,000.00	27,274.83	4,037,274.83
TOTALS	4,010,000.00	27,274.83	4,037,274.83

**SERIES A OF 2014**

*Optional Redemption Date: February 1, 2020*

5                      6                      7                      8                      9                      10                      11                      12                      13

<b>ESCROW REQUIREMENTS</b>			
<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Required</u>
2/1/2020	9,850,000.00	156,531.25	10,006,531.25
TOTALS	9,850,000.00	156,531.25	10,006,531.25

<b>ESCROW EARNINGS</b>				
			<u>SETTLE</u>	<u>11/4/2019</u>
<u>Date</u>	<u>Par</u>	<u>Coupon</u>	<u>Earnings</u>	<u>Cash Flow</u>
				<u>Balance</u>
2/1/2020	9,958,584.00	1.980	47,948.13	10,006,532.13
TOTALS	9,958,584.00		47,948.13	10,006,532.13

**PENNSBURY SCHOOL DISTRICT**

SERIES A OF 2019

REFUNDS THE SERIES A OF 2013 & SERIES A OF 2014

Settle 11/4/2019

Dated 11/4/2019

	1	2	3	4	5	6	7	8	9	10	11
	<u>Date</u>	<u>Principal</u>	<u>Coupon</u>	<u>Yield</u>	<u>Interest</u>	<u>Semi-Annual Debt Service</u>	<u>Fiscal Year Debt Service</u>	<u>State Aid</u>	<u>Proposed Local Effort</u>	<u>Existing Local Effort</u>	<u>Savings</u>
<b>FY 2020</b>										197,517.10	197,517.10
8/1/2020	440,000	2.000	1.720	371,945.83	811,945.83						
2/1/2021				246,350.00	246,350.00	1,058,295.83	59,503.61	998,792.22	1,004,373.05		5,580.83
8/1/2021	595,000	4.000	1.750	246,350.00	841,350.00						
2/1/2022				234,450.00	234,450.00	1,075,800.00	60,487.80	1,015,312.20	1,019,648.97		4,336.77
8/1/2022	755,000	4.000	1.770	234,450.00	989,450.00						
2/1/2023				219,350.00	219,350.00	1,208,800.00	67,965.84	1,140,834.16	1,141,914.32		1,080.17
8/1/2023	795,000	4.000	1.800	219,350.00	1,014,350.00						
2/1/2024				203,450.00	203,450.00	1,217,800.00	68,471.88	1,149,328.12	1,153,532.55		4,204.43
8/1/2024	520,000	4.000	1.850	203,450.00	723,450.00						
2/1/2025				193,050.00	193,050.00	916,500.00	51,531.02	864,968.98	1,010,594.48		145,625.49
8/1/2025	145,000	2.000	1.950	193,050.00	338,050.00						
2/1/2026				191,600.00	191,600.00	529,650.00	29,780.04	499,869.96	638,593.90		138,723.93
8/1/2026	2,050,000	4.000	2.080	191,600.00	2,241,600.00						
2/1/2027				150,600.00	150,600.00	2,392,200.00	134,503.55	2,257,696.45	2,259,105.66		1,409.21
8/1/2027	2,415,000	4.000	2.180	150,600.00	2,565,600.00						
2/1/2028				102,300.00	102,300.00	2,667,900.00	150,005.03	2,517,894.97	2,519,477.40		1,582.42
8/1/2028	2,505,000	4.000	2.280	102,300.00	2,607,300.00						
2/1/2029				52,200.00	52,200.00	2,659,500.00	149,532.73	2,509,967.27	2,513,085.28		3,118.01
8/1/2029	2,610,000	4.000	2.380	52,200.00	2,662,200.00						
2/1/2030						2,662,200.00	149,684.54	2,512,515.46	2,514,333.24		1,817.78
8/1/2030											
<b>TOTALS</b>	<b>12,830,000</b>			<b>3,558,645.83</b>	<b>16,388,645.83</b>	<b>16,388,645.83</b>	<b>921,466.03</b>	<b>15,467,179.80</b>	<b>15,972,175.94</b>		<b>504,996.14</b>

PE% 19.77% (Estimated)  
 AR% 28.44% (2018-2019)

Net 5.62% Effective Reimbursement

Savings Allocation	Amount	Percentage
School District's Share	504,996.14	4.27%
State's Share	30,020.52	0.25%
<b>Total Savings</b>	<b>535,016.67</b>	<b>4.53%</b>

\*Assumes estimated rates. Actual rates determined at time of pricing.



<b>PENNSBURY SCHOOL DISTRICT</b> SERIES A OF 2019 Estimated Composition of the Issue
--

<b>SOURCES:</b>
-----------------

Bonds	12,830,000.00
Original Issue Premium / (Discount)	1,341,638.95
Accrued Interest	0.00
Total	14,171,638.95

<b>USES:</b>
--------------

Amount to Call Series A of 2013	4,037,274.83
Cost of the Series A Of 2014 Escrow	9,958,584.00
Underwriter's Discount	64,150.00
Total Legal Fees	40,500.00
Financial Advisor Fee	35,500.00
Credit Rating	9,800.00
Word Processing / Financial Printing	10,000.00
Escrow Structuring (PFM Asset Managemen	2,500.00
Disclosure Counsel (McNees)	1,875.00
Paying & Redemption Agent (BNY Mellon)	2,250.00
Miscellaneous Expenses/Rounding	9,205.12
Total	14,171,638.95

Dated Date 11/4/2019

Settlement Date 11/4/2019

<b>OIP/(OID) Calculations</b>		
-------------------------------	--	--

<u>Date</u>	<u>Price</u>	<u>OIP/(OID)</u>
8/1/2020	100.204%	897.60
8/1/2021	103.840%	22,848.00
8/1/2022	105.940%	44,847.00
8/1/2023	107.923%	62,987.85
8/1/2024	109.715%	50,518.00
8/1/2025	100.269%	390.05
8/1/2026	112.016%	246,328.00
8/1/2027	112.897%	311,462.55
8/1/2028	112.140%	304,107.00
8/1/2029	111.389%	297,252.90
TOTAL		1,341,638.95



# *Maximum Parameters Schedule*

<b>PENNSBURY SCHOOL DISTRICT</b>					
SERIES A OF 2019					
REFUNDS THE SERIES A OF 2013 & SERIES A OF 2014					
<b>MAXIMUM PARAMETERS SCHEDULE</b>					

1	2	3	4	5	6
<u>Date</u>	<u>Principal</u>	<u>Rate*</u>	<u>Interest</u>	<u>Semi-Annual Debt Service</u>	<u>Fiscal Year Debt Service</u>
2/1/2020	100,000	5.000	193,333.33	293,333.33	293,333.33
8/1/2020	790,000	5.000	397,500.00	1,187,500.00	
2/1/2021			377,750.00	377,750.00	1,565,250.00
8/1/2021	905,000	5.000	377,750.00	1,282,750.00	
2/1/2022			355,125.00	355,125.00	1,637,875.00
8/1/2022	1,055,000	5.000	355,125.00	1,410,125.00	
2/1/2023			328,750.00	328,750.00	1,738,875.00
8/1/2023	1,100,000	5.000	328,750.00	1,428,750.00	
2/1/2024			301,250.00	301,250.00	1,730,000.00
8/1/2024	800,000	5.000	301,250.00	1,101,250.00	
2/1/2025			281,250.00	281,250.00	1,382,500.00
8/1/2025	430,000	5.000	281,250.00	711,250.00	
2/1/2026			270,500.00	270,500.00	981,750.00
8/1/2026	2,350,000	5.000	270,500.00	2,620,500.00	
2/1/2027			211,750.00	211,750.00	2,832,250.00
8/1/2027	2,715,000	5.000	211,750.00	2,926,750.00	
2/1/2028			143,875.00	143,875.00	3,070,625.00
8/1/2028	2,825,000	5.000	143,875.00	2,968,875.00	
2/1/2029			73,250.00	73,250.00	3,042,125.00
8/1/2029	2,930,000	5.000	73,250.00	3,003,250.00	
2/1/2030					3,003,250.00
<b>TOTALS</b>	<b>16,000,000</b>		<b>5,277,833.33</b>	<b>21,277,833.33</b>	<b>21,277,833.33</b>

\*Maximum interest rates of 5.00%



Disclosures:

PFM is the marketing name for a group of affiliated companies providing a range of services. All services are provided through separate agreements with each company. This material is for general information purposes only and is not intended to provide or give a specific recommendation. Financial advisory services are provided by PFM Financial Advisors LLC and Public Financial Management Inc. Both are registered municipal advisors with the Securities and Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) under the Dodd-Frank Act of 2010. Investment advisory services are provided by PFM Asset Management LLC which is registered with the SEC under the Investment Advisers Act of 1940. Additional applicable regulatory information is available upon request. Swap advisory services are provided by PFM Swap Advisors LLC which is registered as a municipal advisor with both the MSRB and SEC, a commodity trading advisor with the Commodity Futures Trading Commission, and a member of the National Futures Association. Consulting services are provided through PFM Group Consulting LLC. PFM financial modeling platform for strategic forecasting is provided through PFM Solutions LLC. For more information regarding PFM's services or entities, please visit [www.pfm.com](http://www.pfm.com).

The information and any analyses contained in this presentation are taken from, or based upon, information obtained from the recipient or from publicly available sources, the completeness and accuracy of which has not been independently verified, and cannot be assured by PFM. The information and any analyses in these materials reflect prevailing conditions and PFM's views as of this date, all of which are subject to change. To the extent projections and financial analyses are set forth herein, they may be based on estimated financial performance prepared by or in consultation with the recipient and are intended only to suggest reasonable ranges of results. Opinions, results, and data presented are not indicative of future performance. Actual rates may vary based upon market conditions at the time of pricing. The printed presentation is incomplete without reference to the oral presentation or other written materials that supplement it. To the extent permitted by applicable law, no employee or officer of PFM's financial advisory business, nor any of PFM's affiliated companies, accept any liability whatsoever for any direct or consequential loss arising from negligence or from any use of this presentation or its contents. Any municipal financial product or financial strategy referenced may involve significant risks, including, but not limited to: market, interest rate, or credit risk, and may not be suitable for all clients. The ultimate decision to proceed with any transaction rest solely with the client.