PIEDMONT UNIFIED SCHOOL DISTRICT

MEMORANDUM

TO: Board of Education

FROM: Randall Booker, Superintendent
Song Chin-Bendib, Assistant Superintendent, Business Services

DATE: November 8, 2017

RE: **POTENTIAL REFUNDING OF OUTSTANDING GENERAL OBLIGATION BONDS (ELECTION OF 2006, SERIES E CABS)**

Blake Boehm, Director/Principal at KNN Public Finance, LLC, financial advisor to the District, provided a power point presentation to the Board on October 11, 2017, about options to refinance the District's outstanding General Obligation Bonds, Election of 2006, Series E CABs.

The Board directed staff and KNN to include the detailed powerpoint information in the current Board background so that the public can have further input before decision on the next step is being made.

Below is the analysis by KNN Public Finance about the various options to refinance existing CABs, or to hold off on refunding the Series E CABs for the time being.

I. Summary

KNN Public Finance, the District's Municipal Advisor, has received a refunding proposal from bond underwriter, Stifel, Nicolaus & Co., Inc., regarding the District's outstanding Election of 2006, Series E Capital Appreciation Bonds ("Series E CABs"). KNN has analyzed the refunding proposal and determined a CAB to CAB refunding is viable based on current market rates. Our analysis concludes that an ***advance*** refunding of the Series E CABs could generate taxpayer savings of approximately $11.3 million over the remaining life of the bonds, or present value savings of 30.09% (as a % of bonds refunded). Furthermore, our analysis shows the proposed refunding could help reduce tax rates for the 2006 authorization which are currently projected to exceed the statutory maximum of $60/$100,000 of assessed value as early as 2023.

KNN also analyzed an advance refunding of the Election of 2006, Series E bonds by replacing with Current Interest Bonds (CIB). At current interest rates, refunding the Election of 2006, Series E bonds and replacing with current interest bonds provide taxpayer savings of approximately $19.5 million over the life of the bonds or a net present value savings of 51.08% (as a % of bonds refunded). However, the analysis shows that a CAB to CIB refunding would increase annual debt service payments on the front-end (2024 – 2034) for the new bonds resulting in higher tax rates, although the refunding will have a more significant impact on reducing total interest cost and reducing long-term tax rates.

This memorandum is intended to provide PUSD's Board with information regarding the proposed refunding strategy and allow Board members to make informed decisions on how best to proceed. KNN's position remains neutral with regard to the refunding proposal. In light of the information contained within this memo, our view is that the District has three plausible options for consideration:

(i) Hold-off on refunding the Series E CABs for the time being, allowing District staff and KNN to continue monitoring market conditions and assessed valuation growth to see if there may be a future opportunity to replace the outstanding CABs with CIBs and stay at or below the maximum tax rate promised to voters.

(ii) Take advantage of the current low interest rate environment and refund the Series E CABs today with new CABs at lower yields which would lock-in taxpayer savings and help mitigate future tax rate constraint for the 2006 authorization.

(iii) Take advantage of the current low interest rate environment and refund the Series E CABs today with current interest bonds (CIBs) at lower yields which would lock-in taxpayer savings. However, the annual interest payments from the new bonds will cause the annual tax rate to increase in the earlier years.

Below are some highlights from our refunding analysis:

- <u>Refunding candidate</u>: The Election of 2006, Series E CABs are callable beginning August 1, 2023 and can be refunded on an advance basis.
- <u>Estimated savings</u>: Refunding the Series E CABs with new CABs could generate nominal savings of approximately $11.30M over the remaining life of the bonds, equating to present value savings of approximately $4.78M. On the other hand, a CAB to CIB refunding of the Series E bonds could generate nominal savings of $19.54M, equating to present value savings of $8.11M.
- <u>Savings threshold</u>: KNN recommends the minimum present value savings necessary to consider an advance refunding transaction should be approximately 5% (as a % of bonds refunded). Based on our preliminary analysis, we estimate present value savings could be over 30% for a CAB to CAB refunding and 50% for a CAB to CIB refunding in today's interest rate environment (subject to change based on market conditions at the time of the transaction).
- <u>Advance vs Current refunding</u>: While an advance refunding of the Series E CABs exceeds the minimum savings threshold of 5%, the District may consider waiting for a current refunding (i.e. refund within 90 days of the call date on August 1, 2023) to potentially achieve greater taxpayer savings.
- A current refunding of the Series E CABs, assuming rates remain unchanged, could generate nominal savings of approximately $16.75M over the remaining life of the bonds, equating to present value savings of approximately $7.08M or 31.20% (as a % of bonds refunded) for a CAB to CAB refunding while a CAB to CIB refunding will generate nominal savings of 22.89M over the life of the bonds. This will equate to present value savings of approximately $11.76M or 51.80% of refunded bonds.
- <u>Escrow efficiency (Negative Arbitrage)</u>: The primary benefit of advance refunding transactions is to secure taxpayer savings at current market rates and to hedge against unfavorable market movements prior to the call date. However, advance refunding transactions have a longer escrow period and therefore are less efficient due to the

following reasons: (i) proceeds from the sale of the bonds must be kept in escrow and invested until the call date and (ii) rates on the escrow securities are usually lower than the bond yield and therefore an issuer will lose savings over the course of the escrow period (i.e. negative arbitrage). Please refer to the section below for further details on the comparison of an advance refunding versus a current refunding.

- Tax Rate Management: In addition to generating significant taxpayer savings, our analysis has confirmed an advance CAB to CAB refunding would help manage tax rates for the 2006 authorization. Currently, tax rates are expected to exceed the statutory maximum of $60 per $100,000 of AV assuming 3.5% annual assessed valuation growth.

  A CAB to CAB refunding of the Series E Bonds would allow the District to reduce tax rates from 2027 through 2043.

  KNN's analysis of a CAB to CIB refunding of the Series E bonds show that though the tax rate in the front-end (2024-2034) will increase, taxpayers will realize savings in the back-end (2035-2043).

Refunding Information

Below are additional statistics and information regarding a potential advance refunding versus a current refunding:

Refunding Summary

Potential GO Refunding Scenarios				
	CAB to CAB Refunding		CAB to CIB Refunding	
	Advance Refunding	Current Refunding	Advance Refunding	Current Refunding
Dated Date	12/5/2017	5/5/2023	12/5/2017	5/5/2023
Bond Par Amount	$22,911,997	$25,395,207	$26,785,000	$24,625,000
Par amount of refunded bonds	$11,998,678	$11,998,678	$11,998,678	$11,998,678
Average coupon of refunded bonds	6.59%	6.59%	6.59%	6.59%
Net Debt Service	$52,700,000	$47,245,000	$44,451,200	$41,101,306
Net Interest	$29,788,004	$21,849,793	$17,666,200	$16,476,306
Nominal Savings	$11,295,000	$16,750,000	$19,543,800	$22,893,694
Net Present Value Savings	$4,775,179	$7,080,274	$8,109,725	$11,755,090
% PV savings of refunded bonds	30.09%	31.20%	51.08%	51.80%
Value of Negative Arbitrage	$2,289,326	$175,529	$1,711,160	$128,830

Advance Refunding and Current Refunding Break-even Analysis

As shown in the table above, the District could generate substantially more savings by waiting for a current refunding in 2023 assuming rates remain relatively stable. However, should interest rates rise between now and the call date in 2023, the impact could result in less savings or possibly no savings. KNN has calculated the break-even point for interest rate movement at approximately 75 basis points (0.75%) for the CAB to CAB refunding and 70 basis points (0.70%) for the CAB to CIB refunding respectively. If rates increase by more than the basis points indicated above, then the District will achieve more savings by doing an advance refunding today rather than waiting for a current refunding in 2023.

Interest Rate Change (%)	Current Refunding			
	CAB to CAB Refunding		CAB to CIB Refunding	
	PV Savings ($)	PV Savings (%)	PV Savings ($)	PV Savings (%)
0.00	$7,080,273	31.20%	$11,755,090	51.80%
0.25	$6,320,401	27.85%	$10,344,678	45.59%
0.50	$5,530,905	24.37%	$8,991,703	39.62%
0.75	$4,716,696	20.79%	$7,693,810	33.90%
1.00	$3,875,978	17.08%	$6,448,352	28.42%

Savings Comparison of Total Debt Service

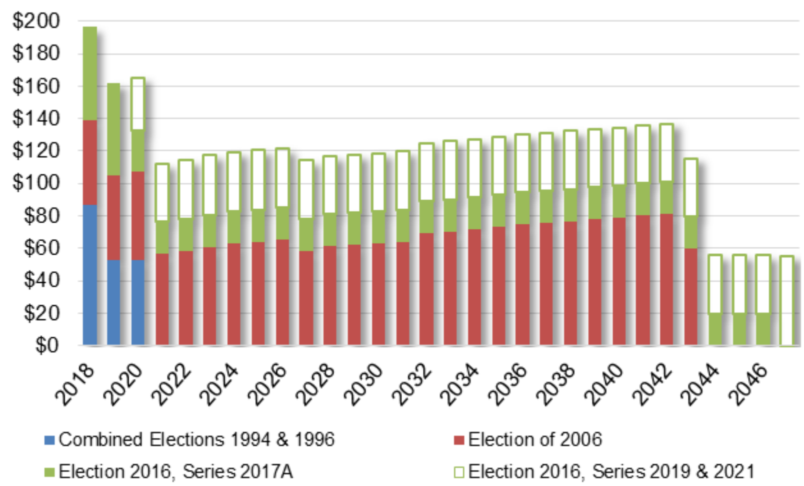
	Prior Bonds	CAB to CAB Refunding		CAB to CIB Refunding	
	Debt Service	Debt Service	Nominal Savings	Debt Service	Nominal Savings
8/1/2024				1,071,400	(1,071,400)
8/1/2025				1,071,400	(1,071,400)
8/1/2026				1,071,400	(1,071,400)
8/1/2027	1,015,000	835,000	180,000	1,071,400	(56,400)
8/1/2028	480,000	395,000	85,000	1,071,400	(591,400)
8/1/2029	400,000	330,000	70,000	1,071,400	(671,400)
8/1/2030	470,000	385,000	85,000	1,071,400	(601,400)
8/1/2031	445,000	365,000	80,000	1,071,400	(626,400)
8/1/2032	415,000	340,000	75,000	1,071,400	(656,400)
8/1/2033	380,000	315,000	65,000	1,071,400	(691,400)
8/1/2034	350,000	290,000	60,000	1,071,400	(721,400)
8/1/2035	5,650,000	4,655,000	995,000	3,071,400	2,578,600
8/1/2036	5,935,000	4,890,000	1,045,000	3,231,400	2,703,600
8/1/2037	6,230,000	5,130,000	1,100,000	3,386,800	2,843,200
8/1/2038	6,545,000	5,390,000	1,155,000	3,562,400	2,982,600
8/1/2039	6,870,000	5,655,000	1,215,000	3,737,000	3,133,000
8/1/2040	7,215,000	5,940,000	1,275,000	3,925,200	3,289,800
8/1/2041	7,575,000	6,240,000	1,335,000	4,121,000	3,454,000
8/1/2042	7,955,000	6,550,000	1,405,000	4,328,600	3,626,400
8/1/2043	6,065,000	4,995,000	1,070,000	3,302,000	2,763,000
	$63,995,000	$52,700,000	$11,295,000	$44,451,200	$19,543,800

Tax Rate Comparison of Total Debt Service

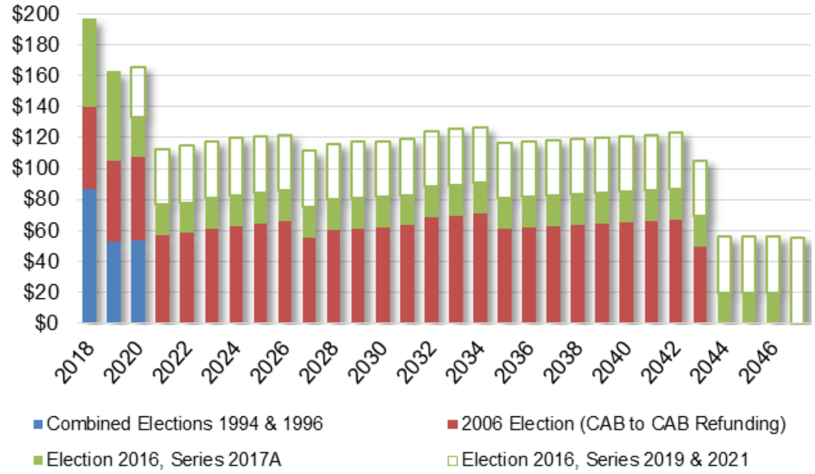
District Assessed Valuation			Pre-Refunding Bonds		Post 2017 Refunding Bonds (CABs to CABs)		Post 2017 Refunding Bonds (CABs to CIBs)	
Actual and Projected AV			Total Debt Service		Total Debt Service		Total Debt Service	
Year Ending	AV Growth Rate	District AV	Combined Tax Per $100,000 of AV	Combined Total Debt Service	Combined Tax Per $100,000 of AV	Combined Total Debt Service	Combined Tax Per $100,000 of AV	Combined Total Debt Service
2017	5.70%	$4,065,039,032	$130.56	$5,307,282	$130.56	$5,307,282	$130.56	$5,307,282
2018	5.44%	4,286,012,864	$196.50	8,421,825	$196.50	8,421,825	$196.50	8,421,825
2019	3.50%	4,436,023,314	$162.32	7,200,433	$162.32	7,200,433	$162.32	7,200,433
2020	3.50%	4,591,284,130	$165.28	7,588,275	$165.28	7,588,275	$165.28	7,588,275
2021	3.50%	4,751,979,075	$112.13	5,328,493	$112.13	5,328,493	$112.13	5,328,493
2022	3.50%	4,918,298,342	$114.31	5,622,294	$114.31	5,622,294	$114.31	5,622,294
2023	3.50%	5,090,438,784	$117.55	5,983,875	$117.55	5,983,875	$117.55	5,983,875
2024	3.50%	5,268,604,142	$119.38	6,289,875	$119.38	6,289,875	$139.72	7,361,275
2025	3.50%	5,453,005,287	$120.85	6,590,175	$120.85	6,590,175	$140.50	7,661,575
2026	3.50%	5,643,860,472	$121.35	6,848,725	$121.35	6,848,725	$140.33	7,920,125
2027	3.50%	5,841,395,588	$114.22	6,672,025	$111.14	6,492,025	$115.19	6,728,425
2028	3.50%	6,045,844,434	$117.08	7,078,625	$115.68	6,993,625	$126.86	7,670,025
2029	3.50%	6,257,448,989	$117.90	7,377,825	$116.79	7,307,825	$128.63	8,049,225
2030	3.50%	6,476,459,704	$118.82	7,695,575	$117.51	7,610,575	$128.11	8,296,975
2031	3.50%	6,703,135,793	$119.91	8,037,675	$118.72	7,957,675	$129.25	8,664,075
2032	3.50%	6,937,745,546	$125.08	8,678,038	$124.00	8,603,038	$134.55	9,334,438
2033	3.50%	7,180,566,640	$126.13	9,056,600	$125.22	8,991,600	$135.76	9,748,000
2034	3.50%	7,431,886,473	$127.15	9,449,950	$126.35	9,389,950	$136.86	10,171,350
2035	3.50%	7,692,002,499	$129.09	9,929,400	$116.15	8,934,400	$95.56	7,350,800
2036	3.50%	7,961,222,587	$130.30	10,373,400	$117.17	9,328,400	$96.34	7,669,800
2037	3.50%	8,239,865,377	$131.37	10,824,650	$118.02	9,724,650	$96.86	7,981,450
2038	3.50%	8,528,260,665	$132.47	11,297,650	$118.93	10,142,650	$97.50	8,315,050
2039	3.50%	8,826,749,789	$133.59	11,791,650	$119.82	10,576,650	$98.10	8,658,650
2040	3.50%	9,135,686,031	$134.70	12,305,400	$120.74	11,030,400	$98.69	9,015,600
2041	3.50%	9,455,435,042	$135.81	12,841,450	$121.69	11,506,450	$99.28	9,387,450
2042	3.50%	9,786,375,269	$137.05	13,412,200	$122.69	12,007,200	$99.99	9,785,800
2043	3.50%	10,128,898,403	$115.57	11,706,200	$105.01	10,636,200	$88.29	8,943,200
2044	3.50%	10,483,409,847	$55.69	5,838,000	$55.69	5,838,000	$55.69	5,838,000
2045	3.50%	10,850,329,192	$55.72	6,046,150	$55.72	6,046,150	$55.72	6,046,150
2046	3.50%	11,230,090,714	$55.74	6,259,300	$55.74	6,259,300	$55.74	6,259,300
2047	3.50%	11,623,143,889	$55.33	6,431,250	$55.33	6,431,250	$55.33	6,431,250
Total Debt Service:				**$252,976,982**		**$241,681,982**		**$233,433,182**

*2016 Average AV - $1,044,226 (CalMuni)

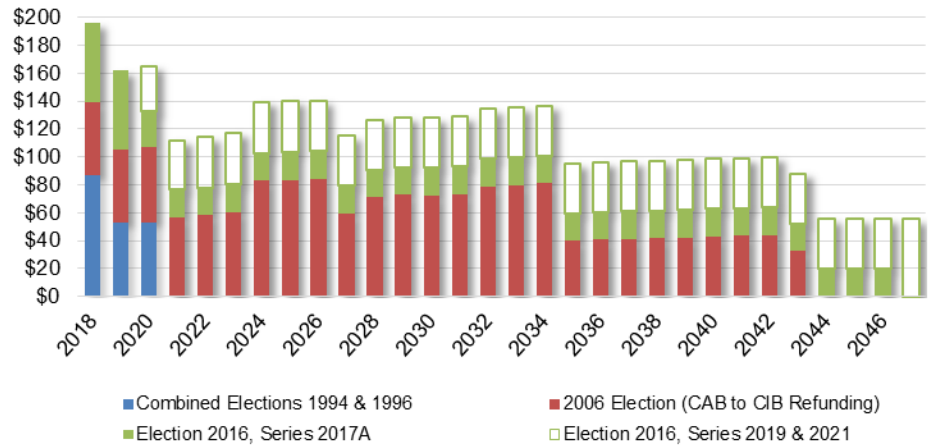
Projected Tax Rate - Pre-Refunding



Projected Tax Rate after CAB to CAB Refunding



Projected Tax Rate after CAB to CIB Refunding



Timeline

The timeline for the transaction is approximately 60 to 90 days. If the Board takes action on financing documents in November, we could sell the bonds in late-November and close the transaction two weeks later.

Method of Sale

In advance of each bond sale, the District should weigh factors such as debt structure, market conditions, and credit considerations to determine the most advantageous method of sale.

- **Negotiated Sale.** In a negotiated sale, an underwriter or underwriting syndicate is selected at the outset of the financing, and interest rates are negotiated between the underwriter and the District (with the assistance from its Financial Advisor) at the time of the sale. Transactions are often sold by negotiated sale in order to provide an opportunity to better educate investors and respond to investor questions and input, among other reasons.

- **Competitive Sale.** In a competitive sale, bonds are offered to underwriters on a pre-selected day/time using an on-line bidding platform. The bonds are sold to the underwriter offering to purchase them at the lowest true interest cost (i.e. overall cost of funds).

Traditionally, the District has utilized competitive sales with a great deal of success. However, the original issuance of the 2013 Series E Bonds were sold via negotiated sale, largely due to the CAB structure. Negotiated sales are typically more conducive for a CAB structure given the unique target market of investors and providing issuers with an opportunity to work with underwriters in advance of the sale to develop a specific pricing strategy. For reference, California Debt and Investment Advisory Commission (CDIAC) has reported 110 General Obligation CAB transactions sold by K-12 issuers since 2014, with only 1 of the 110 being sold competitively. In light of the information mentioned above, it would be prudent for the District to consider a negotiated sale if moving forward with a CAB to CAB refunding.

Financing Team
The professionals involved in this transaction would include the financial advisor (KNN Public Finance), bond counsel, underwriter, rating agency (one or more rating agencies), verification agent (an accounting firm to verify savings and escrow requirements to defease the prior bonds) and potentially other minor participants. All costs associated with the transaction are factored into the savings, and all savings quoted are net of the estimated costs for the transaction.

Estimated Cost of Issuance
In the table below we have provided a detailed breakout of estimated Cost of Issuance including estimated underwriter fees (i.e. underwriter's discount):

Service	Provider	Total Estimated Costs
Bond and Disclosure Counsel	Jones Hall	$55,000.00
Reimbursable Expenses	Jones Hall	$2,500.00
Rating Agency	Standard & Poor's	$21,000.00
Rating Agency	Moody's	$18,500.00
Financial Advisor	KNN Public Finance	$65,000.00
Reimbursable Expenses	KNN Public Finance	$3,000.00
Paying Agent Fees	US Bank	$1,500.00
Escrow Agent	US Bank	$500.00
COI Administration	US Bank	$500.00
Verification Agent	Causey Demgen & Moore P.C.	$3,000.00
Printing & Mailing OS	AVIA	$1,500.00
Contingency	Bond Debt Service Fund	$5,000.00
Total Estimated Cost of Issuance		**$177,000.00**
Total Estimated Underwriters Discount/Fee ($5/Bond)		**$115,000.00**
Total Estimated Costs		**$292,000.00**

II. RECOMMENDATION: Review the information and provide direction to staff to i) hold off on refunding the Series E CABs, ii) proceed with refinancing the existing CABs, and also, the preferred refinancing structure.