Subject: Analysis of Financing Strategy Options



# MEMORANDUM

FC 14 (01-02-07)

TO: Darin Taylor, Chief Financial Officer FROM:

Charlene Sun.

**Treasury/Debt Officer** 

CC: Expedited Purified Water Program Strategy Committee

Susan Stanton, Chief Operating Officer, Admin. Services

Ed Soong,

Public Resources **Advisory Group** 

**SUBJECT:** Analysis of Financing Strategy Options

DATE:

May 30, 2017

# **Executive Summary**

An analysis was conducted on various financing options potentially available to the District for funding future capital improvements. The following five financing options were incorporated into the analysis.

- Options A, B and C are financing approaches for the District to consider if the District designs, builds and finances the project:
- Options D and E are financing approaches to consider with a Public-Private-Partnership (P3) project delivery model.

Option A (TE):

Traditional tax-exempt bonds;

Option B (WIFIA + TE):

Water Infrastructure Finance and Innovation Act (WIFIA) loan.

supplemented by tax-exempt bonds;

Option C (SRF + TE):

State Water Resources Control Board Clean Water State

Revolving Fund (SRF) loan, supplemented by tax-exempt bonds;

Option D (PAB + Private):

Private activity bonds (PAB) combined with a private subordinate

loan (traditional P3 financing approach)

Option E (WIFIA +

WIFIA loan, supplemented by a combination of PABs and a private

subordinate loan (WIFIA enhanced P3 financing approach) PAB+Private):

There are pros and cons for each option and certain requirements must be met before the District can select the optimal financing option. Assuming an initial project budget of \$600M financed with 70% debt and 30% pay-go, the details of the financing analysis is summarized in Table 1 below.

Table 1 – Summary of Financing 70% of \$600M Project Budget

(\$M)	Opt A (TE)	Opt B (WIFIA + TE)	Opt C (SRF + TE)	Opt D (PAB + Private)	Opt E (WIFIA + PAB+Private)
30-Year NPV Cost*	\$359.9	\$314.2	\$284.7	\$420.4	\$351.5
Vs. Option A		-45.7	-75.2	+60.5	-8.3
Minimum Requirements	grand til grand til sall program typeswak (1 00 yaw)	<ul> <li>(1) Min. WIFIA loan size \$140M**;</li> <li>(2) Refund District senior debt (min. cost est. \$6M+)</li> <li>(3) Availability of WIFIA</li> </ul>	<ul> <li>(1) Min. SRF loan size \$60M**;</li> <li>(2) Availability of SRF</li> <li>(3) Additional finance FTEs to administer the SRF program</li> </ul>	(1) P3 RFP; (2) Availability of PABs	(1) P3 RFP; (2) Availability of WIFIA
		(4) Additional finance FTEs to administer the WIFIA program	Map palianent aucitev		
Pros	Most flexible	Lower financing cost	Lowest financing cost	Risk transfer	Risk transfer with lower financing cost
Cons	More costly	<ul> <li>(1) Risk of higher cost to refund senior debt</li> <li>(2) Risk of not securing the min. WIFIA loan</li> <li>(3) Likely limitation on commercial paper (+\$5M) and variable rate exposure (+\$4.3M)</li> <li>(4) Administrative burden of WIFIA</li> </ul>	(1) Lack of SRF loan capacity (2) Possible limitation on commercial paper (+\$5M) and variable rate (+\$4.3M) exposure (3) Administrative burden of SRF loan	More costly	Risk of not securing the WIFIA loan and lower cost transfer to District

<sup>\*</sup> Debt service and NPV costs based on rate scales for MMD and U.S. Treasury as of 4/5/2017.

<sup>\*\*</sup> Minimum loan sizes for WIFIA and SRF represent the amount of loan required to generate at least \$10-15M in NPV cost savings net of all expenses.

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#### Conclusion

Based on the analysis presented in this memorandum, staff's recommendation is as follows:

- If the Board directs staff to pursue a P3 approach, staff would require the P3 entities to apply for all eligible federal and/or state financings (e.g. WIFIA/SRF) and pass the savings back to the District.
- 2. If the Board directs staff to pursue design-build project delivery method, then staff would try to apply for a minimum of \$60M in SRF loan to the extent SRF loan is available. If SRF is not available, but WIFIA is available, then staff would try to pursue WIFIA and negotiate with the EPA to allow the District a certain time period to refund the senior debt after a minimum of \$140M in WIFIA loan is secured. If the EPA does not have the flexibility to allow for a refunding period, then WIFIA would not be an option for the District.

## **Assumptions**

Each financing scenario assumes \$600 million of capital improvements with 30% (\$180 million) funded from an equity contribution by the District. The analysis considers a variety of borrowing options for the \$420 million of debt funded capital. Each scenario shares certain other common assumptions, including: (i) settlement date of June 1, 2017, (ii) level debt service amortization over 30 years, (iii) alignment of principal payment to June 1st, (iv) interest rates as of April 5, 2017, (v) standard terms for each financing structure (e.g., 10-year par call for tax-exempt bonds), (vi) underwriter's discount of \$5 per bond for publicly sold debt, (vii) costs of issuance ranging from \$300,000 to \$500,000 depending on the size of the financing (except in the cases noted below), and (vii) calculating coverage based on Fiscal Year 2015-16 net available revenues of \$72.8 million, assuming no growth in future years.

Other assumptions unique to each scenario are also described below.

## Option A - Tax-exempt bond issuance

The Tax-Exempt bond issuance is the base case for the analysis, as it is the traditional method for the District to finance capital improvements and is subject to minimal execution risk.

## Option B – WIFIA loan with tax-exempt bond issuance

A WIFIA loan, established as a credit program administered by the Environmental Protection Agency (EPA) for eligible projects, may be a low-cost loan option for the District which can finance up to 49% of project costs. The time required from application submission to EPA approval to funding will vary, as the precise mechanics and administration of the program are still under development.

Under this scenario, 49% of the entire \$600 million capital improvement cost, or \$294 million, is assumed to be financed by WIFIA loans, leaving \$126 million to be financed with tax-exempt bonds after the 30% (\$180 million) District equity contribution. The WIFIA loan rate is assumed to be 2.64%, which is one basis point over the published State and Local Government Obligation rate matching the average life of the loan. It should be noted that the relative benefit of the WIFIA loan option will depend in part on the relationship between tax-exempt rates (including movement in credit spreads) and U.S. Treasury yields. The upfront

cost for the WIFIA loan is assumed to be \$1.5 million (in addition to the cost for the supplemental tax-exempt issue), which costs will likely be payable even if the WIFIA loan is not consummated. Additionally, depending on how the EPA views the District's existing Series 2007B Certificates of Participation, which exist on a senior lien and are floating rate obligations indexed to LIBOR, the EPA may require the District to refinance these obligations into a fixed rate obligations instead of the current assumption of refinancing as parity variable rate debt, resulting in significantly higher debt service costs to the District. For this analysis, such a fixed rate refinancing has not been incorporated into the results. but is estimated to potentially cost the District NPV \$4.3 million. In addition, the EPA may require limitations on both the use of commercial paper to fund construction costs, and on the future issuance of low-cost variable rate obligations. In the current market, the forgone savings are estimated as follows: (1) for every \$100 million of commercial paper issued it is estimated to cost the District approximately \$2.5 million in additional costs per year; and (2) if there are no future issuance (the EPA may allow a limited amount of variable rate exposure) of variable rate obligations, it is estimated to cost the District be approximately \$800,000 in additional costs per year.

## Option C - SRF loan with tax-exempt bond issuance

Another governmental loan program is the SRF loan program administered by the California State Water Resources Control Board (SWRCB). With the relaxation of some past funding requirements and extensive marketing on the part of the SWRCB, demand for this subsidized program has increased over the recent years. For the purposes of the analysis, the same maximum funding ratio as the WIFIA loan (i.e., 49% of overall capital expenditures) was applied to the SRF scenario with the balance funded by tax-exempt bonds. The rate for the SRF loan program is based on one-half of the true interest cost of the most recent State General Obligation Bond issue. As of March 9, 2017, the current rate is 1.8%. The upfront cost for the SRF loan was assumed to be \$60,000 to cover legal, advisory, and other expenses.

## Option D - PABs with private subordinate debt

The financing of the capital improvements by a third party will recover capital costs as an operating expense to the District. The PABs are assumed to be tax-exempt bonds, subject to Alternative Minimum Tax (AMT), which would require a debt service reserve fund equal to maximum annual debt service (MADS). The private subordinate loan is assumed to fund \$60 million (or 10%) of the overall capital expenditures at a borrowing rate of 10%. Both the PABs and the private subordinate debt, issued by a third party, will be included as an operating expense for the purpose of calculating Parity debt service coverage. However, the rating agencies may still require some level of coverage above 1.0x associated with the repayment of PABs and private subordinate debt.

## Option E – A combination of the WIFIA loan, PABs, and private subordinate debt

Option E supplements the WIFIA loan with PABs and private subordinate debt. This option assumes 49% of the overall project fund is financed by the WIFIA loan and 10% by the private subordinate loan, leaving the remaining 11% (or \$66 million) financed by PABs. Like Option D, the WIFIA loan, PABs and the subordinate private loan are not included in the Parity debt service coverage calculations (but some coverage may be required by the rating agencies). The other assumptions are the same as those found in the two earlier options.

# **Results of Analysis**

The results of the analysis are summarized in the Table 2 below.

Table 2 - Detailed Financial Analysis

(\$ in thousands)	Option A	Option B	Option C	Option D	Option E
	Tax Exempt Bonds	49% WIFIA w/ Tax- Exempt Bonds	49% SRF w/ Tax-Exempt Bonds	PABs w/ 10% Private Sub. Debt	49% WIFIA, PABs, 10% Private Sub. Debt
Sources					
Tax Exempt Bonds	368,960	111,600	111,600		
Private Activity Bonds				343,435	63,605
Private Sub. Lien				61,745	61,745
WIFIA Loan		347,400			349,829
SRF Loan			332,655		
Bond Premium	63,970	19,349	19,349	50,715	9,393
Total	432,930	\$478,349	\$463,605	\$455,895	\$484,572
Uses					
Project Fund	430,175	475,383	462,078	430,914	477,997
Reserve Fund	0			22,349	4,143
Costs of Issuance	900	2,400	960	900	2,100
Underwriter's Discount	1,845	558	558	1,717	318
Contingency	10	8	8	15	14
Total	432,930	\$478,349	\$463,605	\$455,895	\$484,572
True Interest Cost Net Interest	3.697% 287,113	2.967% 246,721	2.419% 187,616	4.651% 400,100	3.884% 325,632
Net Debt Service	720,043	725,070	651,221	833,646	806,062
NPV, Net Debt Svc.*	359,873	314,152	284,697	420,357	351,524
Avg. Parity Coverage	1.351	1.348x	1.413x	1.467x	1.322x

<sup>\*</sup> Excludes any cost associated with (1) the defeasance of outstanding variable rate debt and (2) restrictions on commercial paper or variable rate debt.

As shown above, the SRF loan supplemented by tax-exempt bonds (Option C) has the lowest net debt service at approximately \$651 million and the lowest net present value (NPV) cost at approximately \$285 million, which are \$69 and \$75 million less than the base case of using all tax-exempt bonds (Option A), respectively. This lower cost reflects the subsidized nature of the SRF funding program. Option D net debt service costs \$60 million **more** than Option A on a NPV basis while Options B, C and E costs \$45M, \$75M, and \$8M, and **less** than Option A, respectively. Lowering net debt service cost generally improves Parity debt service coverage as well. As a result, the SRF loan option also generates the second highest Parity debt service coverage ratio. However, because the PABs with private subordinate loans are treated as an operating cost, Option D actually results in the highest Parity debt service coverage (absent any required adjustments by the rating agencies). Identifying which financing structure from an economic perspective would best suit the District depends on the importance of higher debt service coverage ratios. There may be other considerations to consider in addition to cost and coverage, some of which are noted below.

#### **Additional Considerations**

In addition to cost and coverage, other important factors to take into consideration are the certainty of execution and ongoing administrative requirements. This is of particular significance for the WIFIA loan and SRF loan programs, which are dependent on the approval of another governmental entity, as to both qualification and to the amount of available funding. There can be a significant amount of time and effort expended by the District to secure funding for an SRF or a WIFIA loan. In addition, the costs to pursue a WIFIA loan could be in the hundreds of thousands of dollars and unrecoverable if a loan is not granted to the District.

It is also important to note that the use of alternative financing vehicles may subject the District to different ongoing administrative requirements than traditional fixed rate bonds. (The comparison is made with respect to traditional fixed rate bonds, because the District must already fulfill similar obligations for its existing bonds.) For example, in other Federal loan programs, borrowers have been required to provide annual financial reports which include maintaining an extensive financial plan related to the present and future financial condition of the source of the pledged revenues that is well beyond the scope of the District's audited financial statements. On the other hand, the SRF program has very little annual reporting requirements once the final loan disbursement is made.

Another cost is that the State and Federal sponsors of loan programs to municipalities generally do not look favorably on variable rate debt, including commercial paper programs; therefore, there is a strong possibility that the District would be limited in accessing such low-cost and flexible financing products. On the other hand, it is important to note that the SRF and WIFIA loans do not have any prepayment penalties, unlike the standard 10-year non-call period for traditional fixed rate municipal bonds.

Supplemental analyses were completed for those options which involve WIFIA or SRF loans — to determine the minimum loan amount required to achieve a target amount of NPV savings. For the WIFIA loan, the target was assumed to be \$15 million, after considering the high upfront costs that may be at risk if a WIFIA loan is not secured and the possibility that the outstanding District's Series 2007B senior-lien LIBOR index-based bonds may need to be refunded on a parity basis at higher fixed interest rates. (The NPV cost of such a refunding is estimated to be \$4.3 million.) For the SRF loan, the target was set slightly lower at \$10 million, to reflect the reduction in administrative requirements. Based on the \$15 million and \$10 million NPV savings targets compared to a traditional fixed rate bonds (Option A), the results are the following:

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- (A) WIFIA loan of at least \$140 million would be required to achieve the \$15 million NPV savings threshold when supplemented by tax-exempt bonds;
- (B) SRF loan of at least \$60 million would be required to achieve the \$10 million NPV savings threshold when supplemented by tax-exempt bonds.

Submitted by:

Charlene Sun, Treasury/Debt Officer

Approved by:

Darin Taylor, Chief Financial Officer

amounts in thousands)	Summary		(A) Ta	x-Exempt	Bond Issu	ance	(B) WIFIA Loan (49% WIFIA, w/ Tax-Exempt Bonds										
,	Sources Par Amount Premium	r	Total 368,960 63,970 432,930				Total 459,000 19,349 478,349	Vs. (A) 90,040 -44,620 45,420		Tax-E 111,600 19,349 130,949	xempt Bo	nds	347,400 347,400	FIA Loan			
Underw Addi True Int	Project Fund a Reserve Fund cost of Issuance riter's Discount tional Proceeds erest Cost (TIC) otal Net Interest		430,175 0 900 1,845 10 432,930 3.697% 287,113				246,721	45,208 0 1,500 -1,287 -2 45,420 -0.731% -40,393		129,483 0 900 558 8 130,949 3.697% 86,841			345,900 0 1,500 0 347,400 2.623% 159,880				
	Total DS Total Net DS , Total Net DS <sup>(1)</sup> Loan Issuance Parity Coverage	,	720,043 720,043 359,873 1.351				725,070 725,070 314,152 Approximatel 1.348	5,027 5,027 -45,721 y <b>\$140</b> mi -0.003	in WIFI	217,790 217,790 111,818 A Loans nee	eded to co	ver for \$	507,280 507,280 202,335 15mil Saving	js + \$6mil	l dissavin	gs vs A	
Expendit	tures by Source	FY 2018	Total 832	Exempt Bonds	Cash 832		Total 832			Exempt Bonds			WIFIA Loan		Cash 832		
Assumptions: 30 year ammortization schedule roject Fund Investment Rate @ Rates as of 4/5/2017 Net Revenue from ops (per 2016 CAFR) @ No Net Revenue Growth	0.50% 72,800	2019 2020 2021 2022 2023 2024 2025 2026	324 22,793 25,309 108,789 108,930 108,930 108,930 108,930	0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	324 6,838 7,593 32,637 32,679 32,679 32,679 32,679	6/1/2019 6/1/2021 6/1/2023	324 22,793 25,309 108,789 108,930 108,930 108,930 108,930			15,955 17,716 22,846	6/1/2019 6/1/2021 6/1/2023		53,307 53,376 53,376 53,376 71,194	6/1/2021	324 6,838 7,593 32,637 32,679 32,679 32,679 32,679		
		2027 inancing	25,579 619,346	18,518 433,346 70.0%	7,061 186,000 30.0%		25,579 619,346			130,200 21%			18,518 303,146 49%		7,061 186,000 30%		
Fiscal	Outstanding D	)/S <sup>(2)(3)</sup>				Parity	1	otal								Parity	
Year Ending	Senior	Parity	Principal	Interest	D/S	D/S Coverage	Principal	Interest	D/S	Principal	Interest	D/S	Principal	Interest	D/S	D/S Coverage	
06/30/14 06/30/14 06/30/14 06/30/20 06/30/21 06/30/21 06/30/22 06/30/23 06/30/24 06/30/25 06/30/26 06/30/26 06/30/27 06/30/26 06/30/27 06/30/26 06/30/30 06/30/31 06/30/31 06/30/31 06/30/36 06/30/37 06/30/38 06/30/39 06/30/40 06/30/41 06/30/44 06/30/44 06/30/45 06/30/46 06/30/47 06/30/48 06/30/48	10.037 10,572 10,682 10,674 10,660 10,650 10,645 10,636 10,629 10,612 10,600 10,585 10,577 10,194 10,177 10,166 10,148 7,894 5,308	16,877 19,030 19,227 19,234 19,232 19,234 19,236 19,234 19,236 19,236 19,236 15,829 14,687 14,689 14,694 14,695 14,690 14,690 14,690	435 455 2,550 6,140 6,445 6,765 7,110 7,460 8,230 8,640 9,070 9,520 10,005 11,030 11,580 12,765 12,765 13,405 14,075 14,075 15,515 16,290 17,106 18,860 18,860 19,800 18,980	1,446 1,425 7,876 18,154 17,861 17,552 16,894 16,538 16,165 15,773 15,362 14,930 13,500 13,500 11,845 11,84	1,881 1,880 10,333 10,336 24,004 24,001 23,999 24,002 24,000 24,002 24,000 24,002 24,000 24,000 24,001 24,000 24,001 24,000 24,001 24,000 24,001 24,000 24,001 24,000 24,001 24,000 24,001 24,001 24,001 24,002 23,999 22,119	2.70 2.49 2.29 1.81 1.35 1.35 1.35 1.35 1.35 1.35 1.36 1.46 1.46 1.49 1.65 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.8	435 455 1,070 1,125 1,830 1,930 2,020 2,125 2,230 10,078 10,402 10,732 11,077 11,433 11,800 12,182 12,581 14,311 14,784 15,273 15,779 16,304 16,851 17,421 18,004 18,605 19,235 18,009 18,600	1,446 1,425 3,361 5,426 5,334 5,137 5,031 13,092 13,436 12,367 11,589 11,589 11,589 11,589 6,753 6,753 6,753 6,753 4,928 4,273	1,881 1,880 4,431 7,256 7,264 7,258 7,262 24,167 24,168 24,169 24,167 24,171 24,173 24,168 24,167 24,167 24,174 24,174 24,174 24,174 24,174 24,174 24,174 24,174 24,175 24,168 24,169 24,169 24,169 24,169 24,169 24,169 24,169 24,169 24,169 24,169 24,169 24,174 24,174 24,176 24,169 26	435 455 1,070 1,125 1,830 2,920 2,125 2,230 2,460 2,580 2,710 2,845 2,985 3,135 3,295 3,460 3,635 3,810 4,005 4,205 4,415 5,635 5,910 6,205 4,63	1,446 1,425 3,361 5,426 5,334 5,137 5,031 4,919 4,802 4,679 4,550 4,415 4,272 4,123 3,966 3,802 3,629 3,626 3,056 2,843 3,056 2,843 1,049 739 507	1,881 1,880 4,431 7,256 7,258 7,259 7,262 7,259 7,260 7,257 7,261 7,261 7,262 7,264 7,267 7,261 7,262 7,263 7,263 7,263 7,264 7,267 7,264 7,267 7,268 7,268	7,738 7,942 8,152 8,367 9,287 9,287 9,287 10,306 10,579 10,858 11,144 11,439 11,741 12,051 12,369 12,695 13,030 13,374 13,728	9,171 8,967 8,757 8,542 8,321 7,862 7,862 7,126 6,868 6,603 6,331 6,051 5,767 5,169 4,859 4,541 4,214 3,879 3,535	16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909 16,909	2.70 2.46 2.29 2.12 2.12 2.12 1.96 1.96 1.96 1.96 1.35 1.35 1.45 1.45 1.45 1.45 1.87 1.87 1.87 1.87 1.87 1.87 1.87 1.87	

Sources					10	(C) SRF Loan (49% SRF, w/ Tax-Exempt Bonds)												
		Total				Total	Vs. (A)		Tax-Ex	empt Bor	nds	s	RF Loan					
Par Amount Premium		368,960 63,970				444,255 19,349	75,295 -44,620		111,600 19,349			332,655						
Transan	-	432,930				463,605	30,675		130,949		-	332,655						
Uses		400 475				460.070	24.002		400 400			222 505						
Reserve Fund		430,175				402,070	0 0		129,403			332,393						
st of Issuance		900				960	60		900			60						
onal Proceeds		10				8	-1,207		8									
	_	432,930				463,605	30,675		130,949			332,655						
rest Cost (TIC)																		
Total DS		720,043				651,221	-68,822		217,790			433,431						
141																		
Loan Issuance		308,073						in SRF L		ed to cove	er for \$15		js vs A					
arity Coverage		1.351				1.413	0.062											
									l ax Exempt			SRF						
ires by Source	FY	Total	Bonds	Cash		Total			Bonds		-	Loan		Cash				
	2018 2019	832 324	0	832 324	6/1/2019	832 324				6/1/2019		0		832 324				
	2020	22,793	15,955	6,838		22,793			15,955			0	SM Jana4	6,838				
0.50%	2021 2022	25,309 108,789	17,716 76,152	7,593 32,637	0/1/2021	25,309 108,789			17,716 22,846	0/1/2021		53,307	0/1/2021	7,593 32,637				
	2023	108,930	76,251	32,679	6/1/2023	108,930			22,875	6/1/2023		53,376		32,679				
72,800	2025	108,930	76,251	32,679		108,930			22,875			53,376		32,679				
Sound!	2026	108,930	76,251 18 518	32,679		108,930			5,057			71,194		32,679 7.061				
9/ of E			433,346	186,000		619,346			130,200		-	303,146	-	186,000				
			10.076	30.076			Total	==0;==	2170			4370		3070				
		Dringing	Interest	nie	Parity D/S			DIS	Drineinal	Internet	D/S	Principa	Interact	D/S	Pari D/S			
		rillicipal	IIIterest		Coverage	Finicipal	IIIrei ear	D10	ттыра	miterest	010	1	TITLE COL		Cover			
10,037 10,572	16,877 19,030				2.70 2.46										2.7			
10,687	19,227	435	1,446	1,881	2.29	435	1,446	1,881	435	1,446	1,881				2.2			
10,682	19,234	2,435	1,425 7,898	10,333	1.81	1,070	3,361	4,431	1,070	3,361	4,431				2.1			
10,660	19,242	2,560 5,850	7,776 18 154	10,336	1.81	1,125 1,830	3,308 5,426	4,433 7,256	1,125 1,830	3,308 5.426	4,433 7,256				2.1			
10,645	19,236	6,140	17,861	24,001	1.35	1,930	5,334	7,264	1,930	5,334	7,264				1.9			
10,636	19,234	6,445	17,554												1.9			
10,612	19,230	7,110	16,894	24,004	1.35	2,230	5,031	7,261	2,230	5,031	7,261				1.9			
10,600		7,460													1.4			
10,577	19,236	8,230	15,773	24,003	1.35	11,347	10,359	21,707	2,580	4,679	7,259	8,767	5,680	14,448	1.4			
10,194 10.177															1.5 1.5			
10,166	15,829	9,520	14,476	23,996	1.46	12,234	9,471	21,705	2,985	4,272	7,257	9,249	5,198	14,448	1.5			
										4,123 3,966	7,258 7,261	9,416 9,585	5,032 4,863	14,448 14,448	1.6			
5,308	14,694	11,030	12,975	24,005	1.65	13,218	8,491	21,709	3,460	3,802	7,262	9,758	4,690	14,448	1.7			
	14,695 14,692	11,580 12,155	12,424 11,845	24,004 24,000	1.88 1.88	13,568	8,143 7,782	21,711	3,635 3,810	3,629 3,447	7,264	9,933	4,514	14,448	2.0 2.0			
	14,697	12,765	11,237	24,002	1.88	14,299	7,410	21,709	4,005	3,256	7,261	10,294	4,154	14,448	2.0			
	14,695 14,690	13,405 14,075	10,599 9,928	24,004	1.88	14,684	7,024 6,625	21,709	4,205 4,415	2,846	7,261	10,479	3,968	14,448	2.0			
	14,696	14,775	9,225	24,000	1.88	15,495	6,213	21,708	4,635	2,625	7,260	10,860	3,588	14,448	2.0			
	14,696 14,690	15,515 16,290	8,486 7,710	24,001 24,000	1.88 1.88	15,921 16,365	5,785 5,343	21,706 21,708	4,865 5,110	2,393 2,150	7,258	11,056	3,392	14,448 14,448	2.0			
	14,692	17,105	6,896	24,001	1.88	16,827	4,885	21,712	5,370	1,895	7,265	11,457	2,991	14,448	3.3			
		17,960 18,860	5,142	24,000	3.03	17,298	3,919	21,709	5,635	1,344	7,254	11,873	2,574	14,448	3.3			
		19,800	4,199	23,999	3.03	18,292	3,409	21,701	6,205	1,049	7,254	12,087	2,361	14,448	3.3			
		18,910 19,855	2,264	22,119	3.29	17,401	2,428	19,829	4,875	507	5,382	12,526	1,922	14,448	3.6			
		12,400	1,271	13,671	5.33	15,317	1,959	17,276	2,565	263 135	2,828	12,752	1,696	14,448	4.2			
		13,020	051	13,671	5.33	15,676	1,601	17,277	∠,095	135	2,030	13,215	1,233	14,448	5.0			
						13,453	995	14,448				13,453	995	14,448	5.0 5.0			
						13,695	506	14,448				13,941	506	14,448	5.0			
202.131	490.490	368.960	351,083	720.043		14,192	255	14,448	111.600	106,190	217,790	14,192	255 100,776	14,448	5.0			
d Issuance Scena						Additional A			, 0 0 0		,	,	,	,				
iii c	Project Fund Reserve Fund Reserve Fund sto of Issuance ter's Discount onal Proceeds  rest Cost (TIC) tal Net Interest Total DS Total Net DS Total Ne	Project Fund   Reserve Fund   Reserve Fund   Reserve Fund   Stories and Stories and Proceeds   Project Fund Fund Fund Fund Fund Fund Fund Fund	Project Fund   430,175	Project Fund   430,175   Reserve Fund   5tof Issuance   100   432,930   rest Cost (TIC)   3.697%   ratio   720,043   rotal Net Dis   720,043   rot	Project Fund   430,175   Reserve Fund   5 to   1,845   1,000	Uses	Project Fund Reserve Fund stor fissuance	Project Fund	Project Fund   430,175	Project Fund   430,175	Project Fund	Project Fund	Project Fund	Project Fund	Project Fund			

5/26/2017

Sources ar Amount Premium  Uses eject Fund elsuance Discount Proceeds  Cost (TIC) at Interest Total DS tal Net DS Net DS (II) elsuance Coverage  0.50%  72,800  % of Fi	FY 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 inancing	Total 368,960 63,970 432,930 430,175 0 900 1,845 10 432,930 3.697% 287,113 720,043 720,043 720,043 359,873 1.351  Total 832 22,2793 25,309 108,789 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930	I ax Exempt Bonds 0 15,955 17,716 76,251 76,251 76,251 76,251 76,251 18,518	Cash 832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2019 6/1/2021 6/1/2023	Total 405,180 50,715 455,895  430,914 22,349 900 1,717 15 455,895 4.651% 400,100 855,996 833,646 420,357  1.467  Total 832 324 22,793 25,309 108,789 108,930 108,930		1	343,435 50,715 394,150 369,173 22,349 900 1,717 11 394,150 3.877% 276,071 670,221 647,872 335,155 Provate Activity Debt 0 0 15,955	6/1/20.19	Debt	\$ubb. Loan  Subb. Loan  Subb. Loan  Sub. Loan		Cash 832 324 6,838	
Premium  Uses oject Fund save Fund Issuance Discount Proceeds  Cost (TIC) at Interest Total DS tal Net DS Net DS Issuance Coverage  0.50%  72,800  % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	63,970 432,930 430,175 0 900 1,845 10 432,930 3.697% 287,113 720,043 720,043 359,873 1.351  Total 832 324 22,793 25,309 108,789 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930	I ax Exempt Bonds 0 0 15,955 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	50,745 456,895 430,914 22,349 900 1,717 15 455,895 4.651% 400,100 855,996 833,646 420,357 1.467 Total 832 224 22,793 25,309 108,789 108,930	-13,255 22,965 22,349 0 -128 5 22,965 0.953% 112,987 135,953 113,604 60,484		369,173 369,173 22,349 900 1,717 11 394,150 3.877% 276,071 670,221 647,672 335,155	6/1/20.19		0 61,745 61,741 0 0 4 61,745 9.762% 124,030 185,775 185,775 85,202 Sub. Loan 0		832 324	×
Uses oject Fund lssuance Discount Proceeds Cost (TIC) at Interest Total DS tal Net DS Net DS Net DS lssuance Coverage  0.50% 72,800 % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	432,930  430,175 0 900 1,845 10 432,930 3.697% 287,113 720,043 720,043 359,873  1.351  Total  832 24 22,793 25,309 108,789 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930	I ax Exempt Bonds 0 0 15,955 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	455,895 430,914 22,349 900 1,717 15 455,895 4.6519,400,100 855,996 833,646 420,357 1.467  Total 832 224 22,793 25,309 108,789 108,789	22,349 0 -128 5 22,965 0.953% 112,987 135,953 113,604 60,484		394,150 369,173 22,349 900 1,717 11 394,150 3.877% 670,221 647,872 335,155 Private Activity Debt 0 15,955	6/1/20,19		61,745 61,741 0 0 4 61,745 9.762% 124,030 185,775 185,775 85,202  Sub. Loan 0		832 324	× .
ject Fund erve Fund Issuance Discount Proceeds Cost (TIC) at Interest Total DS tal Net DS Net DS Net DS Net DS 10 Issuance Coverage  0.50% 72,800 % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	0 900 1,845 10 432,930 3,697% 287,113 720,043 359,873 1.351 Total 832 244 22,793 25,309 108,789 108,930 108,93	I ax Exempt Bonds 0 0 15,955 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	22,349 900 1,717 15 455,895 4.651% 400,100 855,996 833,646 420,357 1.467 Total 832 324 22,793 25,309 108,789	0 -128 5 22,965 0.953% 112,987 135,953 113,604 60,484		22,349 900 1,717 11 394,150 3.877% 276,071 670,221 647,872 335,155 Provate Activity Debt 0 0 15,955	6/1/20,19		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		832 324	
Prove Fund Issuance Discount Proceeds Cost (TIC) of Interest Total DS tal Net DS tal Net DS (I) Issuance Coverage  0.50% 72,800 % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	0 900 1,845 10 432,930 3,697% 287,113 720,043 359,873 1.351 Total 832 244 22,793 25,309 108,789 108,930 108,93	I ax Exempt Bonds 0 0 15,955 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	22,349 900 1,717 15 455,895 4.651% 400,100 855,996 833,646 420,357 1.467 Total 832 324 22,793 25,309 108,789	0 -128 5 22,965 0.953% 112,987 135,953 113,604 60,484		22,349 900 1,717 11 394,150 3.877% 276,071 670,221 647,872 335,155 Provate Activity Debt 0 0 15,955	6/1/20,19		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		832 324	
Discount Proceeds  Cost (TIC) at Interest Total DS tal Net DS Net DS Issuance Coverage  0.50%  72,800  % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	1,845 10 432,930 287,113 720,043 - 720,043 359,873 1.351 Total 832 324 22,793 25,309 108,793 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930	I ax Exempt Bonds 0 0 15,955 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	1,717 15 455,896 4,651% 400,100 855,996 833,646 420,357 1,467 Total 832 22,793 25,309 108,793 108,930	-128 5 22,965 0.953% 112,987 135,953 113,604 60,484		1,717 11 394,150 3.877% 276,071 670,221 647,872 335,155 Private Activity Debt 0 15,955	6/1/20,19		0 4 61,745 9.762% 124,030 185,775 185,775 85,202 Sub. Loan 0		832 324	\$1
Proceeds Cost (TIC) at Interest Total DS tal Net DS Net DS Net DS Susuance Coverage  0.50%  72,800  % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	10 432,930 3.697% 287,113 720,043 720,043 359,873 1.351 Total 832 224,2793 25,309 108,789 108,930 108,930 108,930 108,930 108,930 108,930 108,930	I ax Exempt Bonds 0 0 15,955 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	15 455,895 4.651% 400,100 855,996 833,646 420,357 1.467 Total 832 324 22,793 25,309 108,789 108,789	5 22,965 0.953% 112,987 135,953 113,604 60,484		11 394,150 3.877% 276,71 670,221 647,872 335,155 Private Activity Debt 0 15,955	6/1/20,19		4 61,745 9.762% 124,030 185,775 185,775 85,202 Sub. Loan 0		832 324	¥
at Interest Total DS tal Net DS Net DS (1) Issuance Coverage  0.50%  72,800  % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	3.697% 287,113 720,043 720,043 359,873 1.351 Total 832 324 22,793 25,309 108,799 108,890 108,930 108,930 108,930 25,579	Exempt Bonds 0 0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	4.651% 400,100 855,996 833,646 420,357 1.467  Total 832 324 22,793 25,309 108,769 108,930	0.953% 112,987 135,953 113,604 60,484		3.877% 276,071 670,221 647,872 335,155 Private Activity Debt 0 0 15,955	6/1/20.19	<u> </u>	9.762% 124,030 185,775 185,775 85,202 Sub. Loan 0		832 324	
at Interest Total DS tal Net DS Net DS (1) Issuance Coverage  0.50%  72,800  % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	287,113 720,043 720,043 720,043 359,873  1.351  Total  832 324 22,793 25,309 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930 108,930	Exempt Bonds 0 0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	400,100 855,996 833,646 420,357 1.467 Total 832 324 22,793 25,309 108,769 108,930	112,987 135,953 113,604 60,484		276,071 670,221 647,872 335,155 Private Activity Debt 0 0 15,955	6/1/20,19		124,030 185,775 185,775 85,202 Sub. Loan 0		832 324	
Total DS tal Net DS Net	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	720,043 720,043 359,873 1.351 Total 832 324 22,793 25,309 108,789 108,930 108,930 108,930 108,930 108,930 25,579	Exempt Bonds 0 0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	855,996 833,646 420,357 1.467 Total 832 324 22,793 25,309 108,789 108,930	135,953 113,604 60,484		670,221 647,872 335,155 Private Activity Debt 0 0 15,955	6/1/20,19		185,775 185,775 85,202 Sub. Loan 0 0		832 324	
Net DS (1) Issuance Coverage  9 Source  0.50%  72,800  % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	359,873 1.351 Total 832 324 22,793 25,309 108,799 108,930 108,930 108,930 25,579	Exempt Bonds 0 0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	1.467 Total 832 324 22,793 25,309 108,789 108,930	60,484		Private Activity Debt  0 0 15,955	6/1/2019		85,202 Sub. Loan 0 0		832 324	\$4 1
lssuance Coverage  y Source  0.50%  72,800  % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	1.351 Total 832 324 22,793 25,309 108,930 108,930 108,930 108,930 25,579	0 0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	1.467  Total  832 324 22,793 25,309 108,789 108,930			Private Activity Debt 0 0 15,955	6/1/20.19		Sub. Loan	:	832 324	
0.50% 72,800 % of Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	Total 832 324 22,793 25,309 108,789 108,930 108,930 108,930 25,579	0 0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	Total 832 324 22,793 25,309 108,789 108,930	0.116		Activity Debt 0 0 15,955	6/1/20,19		0	:	832 324	
0.50% 72,800 % af Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	832 324 22,793 25,309 108,789 108,930 108,930 108,930 108,930 25,579	0 0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	832 324 22,793 25,309 108,789 108,930			Activity Debt 0 0 15,955	6/1/20.19		0	:	832 324	
0.50% 72,800 % af Fi	2018 2019 2020 2021 2022 2023 2024 2025 2026 2027	832 324 22,793 25,309 108,789 108,930 108,930 108,930 108,930 25,579	80nds 0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	832 324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	832 324 22,793 25,309 108,789 108,930			Debt 0 0 15,955	6/1/2019		0		832 324	
<b>72,800</b> % of Fi	2019 2020 2021 2022 2023 2024 2025 2026 2027	324 22,793 25,309 108,789 108,930 108,930 108,930 25,579	0 15,955 17,716 76,152 76,251 76,251 76,251 76,251	324 6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	324 22,793 25,309 108,789 108,930			0 15,955	6/1/20,19		0		324	
<b>72,800</b> % of Fi	2020 2021 2022 2023 2024 2025 2026 2027	22,793 25,309 108,789 108,930 108,930 108,930 108,930 25,579	15,955 17,716 76,152 76,251 76,251 76,251 76,251	6,838 7,593 32,637 32,679 32,679 32,679	6/1/2021	22,793 25,309 108,789 108,930			15,955	U11/20,19					
<b>72,800</b> % of Fi	2022 2023 2024 2025 2026 2027 inancing	108,789 108,930 108,930 108,930 108,930 25,579	76,152 76,251 76,251 76,251 76,251	32,637 32,679 32,679 32,679		25,309 108,789 108,930									
<b>72,800</b> % of Fi	2023 2024 2025 2026 2027 inancing	108,930 108,930 108,930 108,930 25,579	76,251 76,251 76,251 76,251	32,679 32,679 32,679	6/1/2023	108,930			17,716 76,152	6/1/2021		0		7,593 32,637	
% of Fi	2025 2026 2027 2027 inancing	108,930 108,930 25,579	76,251 76,251	32,679		108 030			76,251	6/1/2023		0		32,679	
% of Fi	2026 2027 inancing	108,930 25,579	76,251			108,930			76,251 76,251			0	6/1/2026	32,679 32,679	
	inancing		18,518			108,930			32,769			43,482	W 11EUEU	32,679	
		,	433,346	7,061		25,579 619,346			371,346			18,518 62,000		7,061 186,000	
standing D	- (31131		70.0%	30.0%					60%			10%		30%	
	IS LENGT			- 2007	Parity		Total	7-1-2-2							Pari
enior	Parity	Principal	Interest	D/Ş	D/S	Principal	Interest	DIS	Principal	Interest	D/S	Principal	Interest	DIS	D/S
10,037	16,877				Coverage 2.70										Covera 2.7
10,572	19,030	405	4.440	4 004	2.46		4 500	0.000							2.4
10,687 10,682	19,227 19,234	435 455	1,446 1,425	1,881 1,880	2.29	470 495	1,568 1,545	2,038	470 495	1,568 1,545	2,038 2,040				2.3
10,674 10,660	19,232 19,242	2,435 2,560	7,898 7,776	10,333 10,336	1.81 1.81	2,645	8,569	11,214	2,645	8,569	11,214				2.0
10,650	19,234	5,850	18,154	24,004	1.35	2,775 5,490	8,437 16,853	11,212 22,343	2,775 5,490	8,437 16,853	11,212 22,343				2.0 1.6
10,645	19,236	6,140	17,861	24,001	1.35	5,765	16,578	22,343	5,765	16,578	22,343	ACO	6 17E	6 625	1.6 1.4
10,629	19,222	6,765	17,232	23,997	1.35	6,860	22,116	28,976	6,355	15,987	22,343	505	6,129	6,634	1.4
10,612	19,230	7,110	16,894	24,004	1.35	7,230	21,747	28,977	6,675	15,669	22,344	555	6,078	6,633	1.4
10,585	19,236	7,840	16,165	24,005	1.35	8,030	20,947	28,977	7,355	14,986	22,341	675	5,962	6,637	1.4
10,577 10,194	19,236 15,829	8,230 8,640	15,773 15,362	24,003 24,002	1.35 1.46	8,465 8,925	20,512 20,052	28,977 28,977	7,725 8.110	14,618	22,343	740 815	5,894 5,820	6,634	1.4 1.6
10,177	15,824	9,070	14,930	24,000	1.46	9,410	19,565	28,975	8,515	13,826	22,341	895	5,739	6,634	1.6
		9,520 10.005			1.46 1.49	9,925 10,470			8,940 9,385	13,400		985 1.085	5,649 5,551	6,634 6,636	1.6
7,894	14,689	10,500	13,500	24,000	1.56	11,050	17,926	28,976	9,855	12,484	22,339	1,195	5,442	6,637	1.9
5,308					1.65 1.88										2.1
	14,692	12,155	11,845	24,000	1.88	13,005	15,977	28,982	11,415	10,931	22,346	1,590	5,047	6,637	2.9
															2.9 2.9
	14,690	14,075	9,928	24,003	1.88	15,325	13,653	28,978	13,210	9,132	22,342	2,115	4,521	6,636	2.9
	14,696 14,696		9,225 8,486		1.88 1.88										2.9 2.9
	14,690	16,290	7,710	24,000	1.88	18,105	10,872	28,977	15,290	7,051	22,341	2,815	3,821	6,636	2.9
	14,692		6,896 6,040		1.88										2.9
		18,860	5,142	24,002	3.03	21,445	7,530	28,975	17,700	4,640	22,340	3,745	2,890	6,635	
		19,800 18,910	4,199 3,209	23,999 22,119	3.03 3.29	22,705 22,005		28,975 26,934	18,585 17,475						
		19,855	2,264	22,119	3.29	23,335	3,602	26,937	18,350	1,952	20,302	4,985	1,650	6,635	
			1,271 651		5.33 5.33										
		,,		- /		1000	.,	.,		***	,	-,000	-	0,000	
202,131 4	490,490	368,960	351,083	720,043		405,180	450,816 8	355,996	343,435	326,786	370, <b>22</b> 1	61,745	124,030	185,775	
n	10,645 10,632 10,629 10,612 10,600 10,555 10,577 10,194 10,177 10,166 10,148 7,894 5,308	10,645 19,236 10,636 19,234 10,636 19,234 10,629 19,222 10,612 19,230 10,577 19,236 10,177 15,829 10,177 15,829 14,687 7,894 14,695 14,695 14,690 14,696 14,696 14,690 14,696 14,696 14,690 14,696 14,	10,645 19,236 6,140 10,636 19,234 6,445 10,629 19,222 6,765 10,612 19,230 7,110 10,600 19,224 7,460 10,585 19,236 8,630 10,194 15,829 8,640 10,177 15,824 9,070 10,166 15,829 9,520 10,148 14,687 10,005 5,308 14,694 11,030 14,695 11,580 14,695 11,580 14,695 12,165 14,696 15,515 14,696 13,300 18,800 19,800 18,300 18,300 18,300 18,300 13,020	10,645 19,236 6,140 17,651 10,630 19,234 6,445 17,554 10,629 19,222 10,612 19,232 7,110 16,894 10,600 19,236 7,640 16,165 10,577 19,236 8,230 15,773 10,194 15,829 8,640 15,362 10,177 15,824 9,070 14,930 10,166 15,829 9,520 14,476 10,166 15,829 9,520 14,476 10,168 14,687 10,005 14,000 1,3500 15,308 14,689 10,500 13,500 14,695 11,880 12,424 14,695 11,880 12,424 14,695 11,695 11,680 14,075 9,928 14,696 14,696 14,077 9,928 14,696 14,696 14,077 9,928 14,696 14,696 15,515 8,486 14,690 16,290 7,710 14,690 17,105 6,896 17,960 6,040 18,860 5,142 19,800 4,199 18,910 3,209 19,855 2,264 12,400 1,271 13,020 651	10,645 19,236 6,140 17,861 24,001 10,638 19,234 6,445 17,554 23,999 10,629 19,222 6,765 17,232 23,997 10,612 19,230 7,110 16,894 24,004 10,600 19,224 7,460 16,538 23,998 10,585 19,236 7,840 16,165 24,005 10,577 19,236 8,230 15,773 24,003 10,194 15,829 8,640 15,362 24,002 10,177 15,824 9,070 14,930 24,000 10,166 15,829 9,520 14,476 23,996 10,148 14,687 10,005 14,000 24,005 5,308 14,694 11,030 12,975 24,005 14,695 11,580 12,424 24,004 14,692 12,155 11,845 24,000 14,695 13,405 10,599 24,004 14,690 14,075 9,228 24,003 14,696 14,775 9,225 24,005 14,696 14,775 9,225 24,000 14,696 14,775 9,225 24,000 14,696 14,775 9,225 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 14,690 16,290 7,710 24,000 18,860 5,142 24,002 19,800 4,199 23,999 18,910 3,209 22,119 19,855 2,264 22,119 19,855 2,264 22,119 19,850 2,264 22,119 19,850 2,264 22,119 19,850 2,264 22,119 19,855 2,264 22,119 19,855 2,264 22,119 12,400 1,271 13,671 3,671 300,000 Cost of Issuance per issuance Sconario TIC of Additional Assumptions: \$300,000 Cost of Issuance per issuance \$100.000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.000	10,645 19,234 6,445 17,554 23,999 1.35 10,629 19,222 6,765 17,232 23,997 1.35 10,612 19,230 7,110 16,894 24,004 1.35 10,565 19,236 7,840 16,165 24,005 1.35 10,577 19,236 8,230 15,773 24,003 1.35 10,577 19,236 8,230 15,773 24,003 1.35 10,177 15,829 8,640 15,365 24,005 1.46 10,166 15,829 9,520 14,476 23,996 1.46 10,166 15,829 9,520 14,476 23,996 1.46 10,166 15,829 9,520 14,476 23,996 1.46 10,166 15,829 9,520 14,476 23,996 1.46 10,166 15,829 10,005 14,000 24,000 1.49 10,166 15,829 10,500 13,500 24,000 1.56 5,308 14,694 11,030 12,975 24,005 1.65 14,695 11,580 12,424 24,004 1.88 14,695 12,155 11,845 24,000 1.86 14,695 13,405 10,599 24,004 1.88 14,697 12,765 11,237 24,002 1.88 14,696 13,405 10,599 24,004 1.88 14,696 13,405 10,599 24,004 1.88 14,696 15,515 8,486 24,001 1.88 14,696 15,515 8,486 24,001 1.88 14,696 15,515 8,486 24,001 1.88 14,690 16,290 7,710 24,000 3.03 18,800 14,692 17,105 6,896 24,001 1.88 17,980 6,040 24,000 3.03 18,800 5,142 24,002 3.03 19,800 4,199 23,999 3.03 18,910 3,209 22,119 3.29 19,855 2,264 22,119 3.29 19,855 2,264 22,119 3.29 19,855 2,264 22,119 3.29 19,855 2,264 22,119 3.29 19,855 2,264 22,119 3.29 19,855 2,264 22,119 3.29 19,855 2,264 22,119 3.29 19,855 2,264 22,119 3.29 12,400 1,271 13,671 5.33 13,020 651 13,671 5.33	10,645 19,236 6,140 17,861 24,001 1.35 5,765 10,638 19,234 6,445 17,554 23,999 1.35 6,515 10,629 19,222 6,765 17,232 23,997 1.35 7,230 10,600 19,224 7,460 16,538 23,998 1.35 7,610 10,585 19,236 7,840 16,165 24,005 1.35 8,030 10,577 19,236 8,230 15,773 24,003 1.35 8,465 10,194 15,829 8,640 15,362 24,002 1.46 8,925 10,177 15,824 9,070 14,930 24,000 1.46 9,410 10,166 15,829 9,520 14,476 23,996 1.46 9,925 10,148 14,687 10,005 14,000 24,005 1.49 10,470 7,894 14,689 10,500 13,500 24,000 1.56 11,050 14,695 11,580 11,580 12,424 24,004 1.88 12,310 14,695 11,580 12,424 24,004 1.88 12,310 14,697 12,765 11,237 24,003 1.88 13,725 14,695 14,690 14,075 9,928 24,003 1.88 13,725 14,696 15,515 8,486 24,001 1.88 12,310 14,696 15,515 8,486 24,001 1.88 16,190 14,696 15,515 8,486 24,001 1.88 17,120 14,696 15,515 8,486 24,001 1.88 17,120 14,690 16,290 7,710 24,000 1.88 16,190 14,696 15,515 8,486 24,001 1.88 17,120 14,690 16,290 7,710 24,000 1.88 16,190 14,696 15,515 8,486 24,001 1.88 19,105 17,980 6,040 24,000 3.03 20,2600 18,890 16,290 7,710 24,000 1.88 19,105 14,690 16,290 7,710 24,000 1.88 19,105 14,690 16,290 7,710 24,000 1.88 19,105 14,690 16,290 7,710 24,000 1.88 19,105 14,690 16,290 7,710 24,000 1.88 19,105 14,690 16,290 7,710 24,000 1.88 19,105 14,690 16,290 7,710 24,000 1.88 19,105 17,980 6,040 24,000 3.03 20,2600 18,890 351,083 720,043 22,205 18,985 2,264 22,119 3.29 23,335 13,000 4,199 23,999 3.03 22,205 19,855 2,264 22,119 3.29 23,335 12,400 1,271 13,671 5.33 15,580 13,000 651 13,671 5.33 15,580 13,000 651 13,671 5.33 15,580 13,000 651 13,671 5.33 16,630	10,645 19,236 6,140 17,861 24,001 1.35 5,765 16,578 10,638 19,234 6,445 17,554 23,999 1.35 6,515 22,464 10,629 19,222 6,765 17,232 23,997 1.35 6,650 22,116 10,612 19,230 7,110 16,894 24,004 1.35 7,230 21,747 10,600 19,224 7,460 16,538 23,998 1.35 7,610 21,358 10,585 19,236 7,840 16,165 24,005 1.35 8,030 20,947 10,577 19,236 8,230 15,773 24,003 1.35 8,465 20,512 10,177 15,224 8,640 15,362 24,002 1.46 8,925 20,052 10,177 15,824 9,070 14,930 24,000 1.46 9,410 19,565 10,166 15,829 9,520 14,476 23,996 1.46 9,410 19,565 10,166 15,829 9,520 14,476 23,996 1.46 9,410 19,565 5,308 14,694 11,030 12,975 24,005 1.65 11,050 17,926 14,695 11,580 12,424 24,004 1.88 12,310 16,665 14,692 12,155 11,845 24,000 1.88 12,310 16,665 14,697 12,765 11,237 24,003 1.88 13,005 15,977 14,696 14,775 9,928 24,003 1.88 13,725 15,248 14,696 14,775 9,928 24,003 1.88 13,725 15,248 14,696 14,775 9,928 24,000 1.88 14,494 14,690 14,075 9,928 24,000 1.88 14,494 14,690 16,290 7,710 24,000 1.88 14,696 14,775 9,225 24,000 1.88 14,495 14,476 14,696 14,775 9,225 24,000 1.88 13,725 15,248 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 14,775 9,225 24,000 1.88 16,190 12,781 14,696 15,515 8,466 24,001 1.88 17,120 11,855 16,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 18,860 5,142 24,000 3.03 20,260 8,713 30,000 6,700 6,700 6,700 6,700 6,700 6,700 6,700 6,700 6,700 6,700 6,7	10,645 19,236 6,140 17,861 24,001 1.35 5,66 16,578 22,343 10,638 19,234 6,445 17,554 23,999 1.35 6,515 22,464 28,979 10,629 19,222 6,765 17,232 23,997 1.35 6,686 22,146 28,976 10,612 19,230 7,110 16,894 24,004 1.35 7,230 21,747 28,977 10,600 19,224 7,460 16,538 23,998 1.35 7,610 21,358 28,968 10,585 19,236 7,840 16,166 24,005 1.35 8,030 20,947 28,977 10,194 15,829 8,640 15,362 24,002 1.46 8,925 20,052 28,977 10,194 15,829 8,640 15,362 24,002 1.46 8,925 20,052 28,977 10,194 15,829 8,640 15,362 24,002 1.46 9,410 19,565 28,975 10,166 15,829 9,520 14,476 23,996 1.46 9,25 19,049 28,974 10,148 14,687 10,005 14,000 24,005 1.49 10,470 18,504 28,974 10,148 14,687 10,005 14,000 24,005 1.65 11,050 17,926 28,976 14,695 11,580 12,424 24,000 1.86 12,310 16,665 28,975 14,695 11,580 12,424 24,000 1.88 12,310 16,665 28,975 14,695 13,405 10,599 24,000 1.88 13,725 15,248 28,974 14,697 12,765 11,237 24,002 1.88 13,725 15,248 28,974 14,696 14,775 9,928 24,003 1.88 15,325 13,653 28,978 14,696 14,775 9,928 24,003 1.88 15,325 15,248 28,973 14,696 14,775 9,928 24,000 1.88 13,725 15,248 28,973 14,696 14,775 9,928 24,000 1.88 13,725 15,248 28,973 14,696 14,775 9,225 24,000 1.88 15,325 13,653 28,978 14,696 14,775 9,225 24,000 1.88 15,325 13,653 28,978 14,696 14,775 9,225 24,000 1.88 15,325 13,653 28,978 14,696 14,775 9,225 24,000 1.88 15,325 13,653 28,978 14,696 14,775 9,225 24,000 1.88 15,325 13,653 28,978 14,690 16,290 7,710 24,000 1.88 15,325 13,653 28,978 14,696 14,775 9,225 24,000 1.88 15,325 13,653 28,978 14,696 14,775 9,225 24,000 1.88 15,325 13,653 28,978 14,696 14,775 9,225 24,000 1.88 16,190 12,781 28,971 14,690 16,290 7,710 24,000 1.88 11,156 10,872 28,975 14,690 16,290 7,710 24,000 1.88 17,120 11,866 28,976 14,690 16,290 7,710 24,000 1.88 17,120 11,866 28,976 14,690 16,290 7,710 24,000 1.88 17,120 11,866 28,976 18,890 19,860 24,001 1.88 17,120 11,866 28,976 18,890 19,860 24,001 1.88 17,120 11,866 28,976 18,890 19,860 24,001 1.88 17,120 11,866 28,976 18,890 19,860 24,001 188 17,120 11,866 28,976 18,890 19,860 24,001 188 17,120	10,645 19,236 6,140 17,861 24,001 1.35 5,765 16,578 22,343 5,765 10,630 19,234 6,445 17,554 23,999 1.35 6,860 22,116 28,976 6,355 10,629 19,222 6,765 17,232 23,997 1.35 6,860 22,116 28,976 6,355 10,612 19,230 7,110 16,894 24,004 1.35 7,230 21,747 28,977 6,675 10,600 19,224 7,460 16,638 23,998 1.35 7,610 21,358 28,998 7,000 10,585 19,236 7,840 16,165 24,005 1.35 8,030 20,947 28,977 7,355 10,577 19,236 8,230 15,773 24,003 1.35 8,665 20,512 28,977 7,725 10,194 15,829 8,640 15,362 24,002 1.46 8,925 20,052 28,977 7,725 10,194 15,829 9,520 14,476 23,996 1.46 9,420 19,565 28,975 8,515 10,166 15,829 9,520 14,476 23,996 1.46 9,225 19,049 28,974 8,940 10,148 14,687 10,005 14,000 24,005 1.49 10,470 18,504 28,974 9,385 5,308 14,694 11,030 12,975 24,005 1.65 11,660 17,314 28,974 10,345 14,692 12,155 11,845 24,000 1.88 12,310 16,665 28,975 10,865 14,697 12,765 11,237 24,002 1.88 13,705 15,977 28,982 11,415 14,697 12,765 11,237 24,002 1.88 13,705 15,977 28,982 11,415 14,696 14,775 9,928 24,000 1.88 13,705 15,248 28,973 11,980 14,696 14,775 9,225 24,000 1.88 13,705 15,248 28,973 11,980 14,696 14,775 9,225 24,000 1.88 13,705 15,248 28,973 11,980 14,690 16,290 7,710 24,000 1.88 13,705 15,248 28,973 11,980 14,696 14,775 9,225 24,000 1.88 13,705 15,248 28,973 11,980 14,696 14,775 9,225 24,000 1.88 13,725 15,248 28,973 11,980 14,696 15,765 8,866 24,001 1.88 17,120 11,865 28,976 14,560 14,696 15,765 8,866 24,001 1.88 17,120 11,865 28,976 13,865 18,860 5,142 24,002 3.03 21,445 7,530 28,973 13,980 14,690 16,290 7,710 24,000 1.88 13,105 10,872 28,977 15,290 14,690 16,290 7,710 24,000 1.88 13,105 10,872 28,977 15,290 14,690 16,290 7,710 24,000 1.88 13,105 10,872 28,977 15,290 14,690 16,290 7,710 24,000 1.88 13,105 10,872 28,971 13,865 18,860 5,142 24,002 3.03 21,445 7,530 28,975 18,565 22,646 24,001 1.88 13,105 10,872 28,977 15,290 19,865 2,264 22,119 3.29 22,333 3,602 26,937 15,290 19,865 2,264 22,119 3.29 22,333 3,602 26,937 15,350 22,005 4,929 26,934 17,765 10,995 19,865 2,264 22,119 3.29 22,005 4,929 26,934 17,765 10,995 11,980 22,0	10,645 19,236 6,140 17,861 24,001 1.35 5,765 16,578 22,343 5,765 16,578 10,636 19,234 6,445 17,554 23,999 1.35 6,515 22,464 28,979 6,055 16,290 10,629 19,222 6,765 17,232 23,997 1.35 6,860 22,116 28,976 6,355 15,987 10,612 19,230 7,110 16,894 24,004 1.35 7,230 21,747 28,977 6,675 15,669 10,600 19,224 7,460 16,638 23,998 1.35 7,610 21,358 28,968 7,000 15,336 10,585 19,236 7,640 16,165 24,005 1.35 8,030 20,947 28,977 7,355 14,986 10,1577 19,236 8,230 15,773 24,003 1.35 8,465 20,512 28,977 7,725 14,618 10,194 15,829 8,640 15,362 24,002 1.46 8,925 20,052 28,977 8,110 14,232 10,177 15,824 9,070 14,930 24,000 1.46 9,410 19,565 28,975 8,515 13,826 10,166 15,829 9,520 14,476 23,996 1.46 9,425 19,049 28,974 8,940 13,400 10,148 14,687 10,005 14,000 24,005 1.49 10,470 18,504 28,974 9,385 12,953 7,894 14,689 10,500 13,500 24,000 1.56 11,050 17,326 28,976 9,855 12,484 14,689 11,303 12,975 24,005 1.65 11,650 17,314 28,974 10,345 11,991 14,692 12,155 11,845 24,000 1.88 13,005 15,977 28,882 11,415 10,931 14,697 12,765 11,237 24,002 1.88 13,005 15,977 28,882 11,415 10,931 14,690 14,075 9,928 24,000 1.88 13,005 15,977 28,882 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,725 15,248 28,973 11,980 10,360 14,690 14,075 9,928 24,000 1.88 13,005 15,977 28,892 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,005 15,977 28,892 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,105 15,977 28,892 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,105 15,977 28,892 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,105 15,977 28,892 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,105 15,977 28,892 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,105 15,977 28,892 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,105 15,977 28,892 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,105 15,977 28,982 11,415 10,391 14,690 14,075 9,928 24,000 1.88 13,105 10,970 22,8977 15,290 7,051 14,690 15,900 41,900 23,900 3.03 12,405 7,750 28,977 15,290 7,051 14,690 15,900 41,900 23,900 23,900 23,900 23,900 23,900 23,900 24,900 24,900 24,900 24,900 24,900 24,900	10,645 19,234 6,445 17,554 23,999 1.35 6,515 22,464 28,979 6,055 16,578 22,343 10,636 19,234 6,445 17,554 23,999 1.35 6,515 22,464 28,979 6,055 16,290 22,345 10,629 19,222 6,6765 17,232 23,997 1.35 6,860 22,116 28,976 6,355 15,987 22,342 10,612 19,230 7,110 16,894 24,004 1.35 7,230 21,747 28,977 6,675 15,669 22,344 10,600 19,224 7,460 16,638 23,998 1.35 7,610 21,358 28,968 7,000 15,338 22,346 10,565 19,236 7,400 16,165 24,005 1.35 8,030 20,947 28,977 7,755 14,618 22,341 10,577 19,236 8,230 16,773 24,003 1.35 8,465 20,512 28,977 7,725 14,618 22,343 10,194 15,829 8,640 15,362 24,002 1.46 8,925 20,052 28,977 8,110 14,232 22,342 10,177 15,824 9,070 14,390 24,000 1.46 9,925 19,049 28,974 8,940 13,400 22,340 10,148 14,687 10,005 14,000 24,005 1.49 10,470 18,504 28,974 9,385 12,953 22,338 14,694 11,030 12,975 24,005 1.65 11,660 17,314 28,974 10,345 11,991 22,336 14,695 11,580 12,424 24,004 1.88 13,025 28,975 10,685 11,474 22,339 14,695 11,580 12,424 24,004 1.88 13,025 12,340 14,695 11,580 12,424 24,004 1.88 13,025 15,248 28,973 11,980 10,360 22,340 14,695 12,765 11,237 24,002 1.88 13,025 15,977 28,982 11,415 10,931 22,346 14,695 12,765 11,237 24,002 1.88 13,025 15,977 28,982 11,415 10,931 22,346 14,695 13,405 10,599 24,004 1.88 15,325 13,653 28,976 14,560 7,779 22,339 14,696 15,515 8,486 24,001 1.88 15,325 13,653 28,976 14,560 7,779 22,339 14,696 15,515 8,486 24,001 1.88 15,125 11,865 15,126 8,486 24,001 1.88 15,125 11,865 15,126 8,486 24,001 1.88 11,990 13,000 4,199 23,999 3.03 22,705 4,292 26,934 17,475 28,26 20,301 14,690 14,075 9,225 24,000 3.03 22,705 4,292 28,976 14,560 7,779 22,339 14,690 15,000 14,190 23,999 3.03 22,705 4,292 28,977 15,290 7,051 22,340 14,696 15,515 8,486 24,001 1.88 15,155 8,486 24,001 1.88 11,155 10,877 38,289 12,575 9,761 22,336 14,690 14,075 9,225 24,000 3.03 22,705 4,292 26,934 17,475 28,26 20,301 19,860 5,142 24,000 3.03 22,705 4,292 26,937 13,500 13,500 13,500 22,300 13,800 13,900 4,199 23,999 3.03 22,705 4,292 26,937 13,500 10,955 11,335 13,000 13,000 651 13,671 5.33 16,630 1,133 17,76	10,645 19,236 6,140 17,861 24,001 1,35 6,765 16,578 22,343 5,765 16,290 22,345 460 10,629 19,222 6,765 17,232 23,997 1,35 6,860 22,116 28,976 6,635 15,987 22,342 605 10,601 19,224 7,460 16,538 23,998 1,35 7,610 12,1358 28,968 7,000 19,224 7,460 16,538 23,998 1,35 7,610 12,1358 28,968 7,000 19,224 7,460 16,538 23,998 1,35 7,610 21,358 28,968 7,000 19,234 6,740 16,165 24,005 1,35 8,000 20,947 28,977 7,355 14,986 22,341 675 10,565 19,236 7,840 16,165 24,005 1,35 8,000 20,947 28,977 7,725 14,618 22,341 675 10,577 19,236 8,230 15,773 24,003 1,35 8,465 20,512 28,977 8,100 14,232 22,342 815 10,177 15,824 9,070 14,930 24,000 1,46 9,410 19,565 28,975 8,515 13,826 22,341 895 10,166 15,829 9,520 14,476 23,996 1,46 9,925 19,049 28,974 8,940 13,400 22,340 995 10,148 14,687 10,005 14,000 24,005 1,49 10,470 18,504 28,974 9,385 12,953 22,338 1,085 10,166 15,829 9,520 14,476 23,996 1,46 9,925 19,049 28,974 8,940 13,400 22,340 995 10,468 14,689 10,500 13,500 24,000 1,56 11,050 17,926 28,976 9,855 12,484 22,339 1,195 1,364 14,689 10,500 13,500 24,000 1,56 11,050 17,926 28,976 9,855 12,484 22,339 1,195 1,366 14,694 11,030 12,975 24,005 1,65 11,660 17,314 28,974 10,345 11,991 22,336 1,315 14,692 12,155 11,845 24,000 1,88 13,005 15,977 28,982 11,415 10,931 22,346 1,560 14,690 14,075 9,928 24,003 1,88 13,725 15,248 28,973 11,980 10,360 22,340 1,745 14,695 13,405 10,599 24,004 1,88 14,694 14,690 16,200 7,710 24,000 1,88 16,190 12,721 13,671 5,33 19,800 4,199 23,999 3,03 22,705 6,870 28,975 18,585 3,765 22,340 3,745 14,690 16,200 7,710 24,000 1,88 16,190 12,721 13,671 5,33 19,800 4,199 23,999 3,03 22,705 6,870 38,975 17,700 4,640 22,340 3,745 14,690 16,200 7,710 24,000 1,88 16,190 12,721 13,671 5,33 19,800 4,199 23,999 3,03 22,705 6,870 38,975 17,700 4,640 22,340 3,745 14,690 16,200 7,710 24,000 1,88 16,190 12,721 13,671 5,33 15,580 2,186 17,766 10,095 1,035 11,130 5,485 13,000 6,51 13,671 5,33 15,580 2,186 17,766 10,095 1,035 11,130 5,485 13,000 4,190 32,099 23,199 3,03 22,705 6,209 34,176 10,000 5,000 11,130 6,000 5,000 11,130 6,000	10,645 19,236 6,140 17,861 24,001 1,35 5,765 16,578 22,343 5,765 16,578 22,343 10,636 19,234 6,445 17,554 23,999 1,35 6,850 22,116 28,978 6,355 15,987 22,342 605 6,129 10,612 19,220 7,110 16,894 24,004 1,35 7,230 21,747 28,977 6,675 15,669 22,344 655 6,078 10,600 19,224 7,460 16,165 24,005 1,35 8,003 20,947 28,977 7,355 14,986 22,341 675 5,962 10,577 19,236 8,230 15,73 24,003 1,35 8,465 20,512 28,977 7,755 14,816 22,341 675 5,962 10,577 19,236 8,230 15,73 24,003 1,35 8,465 20,512 28,977 7,725 14,616 22,341 675 5,962 10,577 19,236 8,230 15,73 24,003 1,35 8,465 20,512 28,977 7,725 14,616 22,341 675 5,962 10,177 15,824 9,070 14,930 24,000 1,46 8,925 20,052 28,977 8,110 14,232 22,342 815 5,804 10,166 15,829 9,520 14,476 23,996 1,46 9,940 19,565 28,975 8,516 13,826 22,341 895 5,739 10,166 15,829 9,520 14,476 23,996 1,46 9,940 19,565 28,975 8,516 13,826 22,340 985 5,531 10,166 15,829 9,520 14,000 24,005 1,49 10,470 18,564 28,974 9,385 12,953 22,339 1,985 5,551 1,689 10,500 12,500 24,000 1,56 11,650 17,926 28,976 9,855 12,953 22,339 1,955 5,551 14,689 10,500 12,500 24,000 1,56 11,650 17,926 28,976 9,855 12,953 22,339 1,955 5,551 14,695 11,580 12,424 24,004 1,88 12,310 16,665 28,975 10,865 11,474 22,339 1,495 5,442 14,695 11,580 12,424 24,004 1,88 12,310 16,665 28,975 10,865 11,474 22,339 1,495 5,321 14,695 13,405 10,599 24,004 1,88 13,725 15,248 28,977 10,865 11,474 22,339 1,495 5,914 14,695 13,405 10,599 24,004 1,88 13,725 15,248 28,977 13,865 14,991 12,2336 1,595 5,442 14,695 13,405 10,599 24,004 1,88 13,725 15,248 28,977 13,865 14,600 16,290 7,710 24,000 1,88 13,005 15,977 28,982 11,415 10,931 22,336 1,595 5,442 14,695 13,405 10,599 24,004 1,88 14,995 17,105 6,896 24,001 1,88 14,995 17,105 6,896 24,001 1,88 14,995 17,105 6,896 24,001 1,88 14,995 17,105 6,896 24,001 1,88 13,005 10,872 28,977 13,865 3,475 22,340 3,405 3,330 14,695 12,400 12,71 13,671 5,33 15,580 24,997 13,800 5,495 14,690 16,590 14,990 38,990 30,30 32,240 28,997 14,690 15,895 34,490 34,590 34,590 34,590 34,590 34,590 34,590 34,590 34,590 34,590 34,59	10,685 19,236 6,140 17,861 24,001 1.35 6,5765 16,578 22,343 5,765 16,578 22,343 10,683 19,224 6,465 17,232 23,999 1.35 6,869 22,116 28,978 6,055 16,290 22,345 460 6,175 6,635 10,629 19,222 6,766 17,232 23,999 1.35 6,869 22,116 28,978 6,055 16,290 22,344 555 6,078 6,634 10,601 19,224 7,460 16,538 23,998 1.35 7,610 21,747 28,977 6,655 16,578 22,344 555 6,078 6,634 10,680 19,234 7,460 16,538 23,998 1.35 7,610 21,747 28,977 6,655 16,569 22,344 555 6,078 6,633 10,685 19,236 7,840 15,165 24,005 1.35 8,030 20,947 28,977 7,355 14,986 22,341 675 5,962 6,637 10,577 19,236 8,640 15,362 24,002 1.46 8,255 20,052 28,977 7,355 14,986 22,341 675 5,962 6,637 10,177 15,824 9,070 14,930 24,000 1.46 9,410 19,565 28,975 8,110 14,232 22,342 815 5,820 6,635 10,186 15,829 9,520 14,476 23,996 1.46 9,925 19,049 28,974 8,940 13,400 22,340 985 5,739 6,634 10,186 15,829 9,520 14,476 23,996 1.46 9,925 19,049 28,974 9,885 12,955 22,331 1,085 5,751 6,636 14,689 10,500 13,500 24,000 1.56 11,050 17,926 28,976 9,855 12,484 22,339 1,085 5,542 6,637 14,689 11,580 12,275 24,005 1.65 11,680 17,926 28,976 9,855 12,484 22,339 1,195 5,442 6,637 14,689 11,580 12,724 24,005 1.88 13,026 12,977 12,005 11,474 22,339 1,195 5,442 6,637 14,689 14,075 9,928 24,004 1.88 13,025 15,247 10,345 11,991 22,336 1,155 5,332 6,633 14,689 14,775 9,225 24,000 1.88 13,025 15,248 28,973 11,980 10,350 22,340 1,745 8,888 6,633 14,689 14,775 9,928 24,004 1.88 15,325 13,653 28,978 13,210 9,132 22,342 2,115 5,515 6,635 14,689 14,775 9,928 24,004 1.88 15,325 13,653 28,978 13,610 9,132 22,340 1,045 5,047 6,635 14,689 14,775 9,928 24,004 1.88 15,325 13,653 28,978 13,105 0,132 22,340 1,045 5,142 6,635 14,689 14,775 9,928 24,004 1.88 15,325 13,653 28,978 13,210 9,132 22,345 2,115 6,635 14,689 14,679 9,928 24,004 1.88 15,325 13,653 28,978 13,210 9,132 22,334 1,985 5,142 24,004 1,88 15,325 13,653 28,978 13,850 19,320 22,340 1,045 5,142 24,004 1,88 15,325 13,653 28,978 13,850 19,325 22,330 1,045 5,142 24,004 1,88 14,689 14,675 9,928 24,004 18,8 14,689 14,675 9,928 24,004 18,8 14,689 14,6

		(A) Tax	-Exempt t	Bond Issua	lice			(C) MU	rupie Loan	Combinati	on (49%	WIFIA, 10%	o Private S	uporain	ate Debt, PA			
Sources Par Amount Premium	-	Total 368,960 63,970 432,930							Private 63,605 9,393 72,998	Activity D	ebt -	Subore 61,745 61,745	dinate Loa	in -	349,829 349,829	FIA Loan		
st of Issuance ter's Discount onal Proceeds	-	430,175 0 900 1,845 10 432,930 3,697% 287,113				477,997 4,143 2,100 318 14 484,572 3.884% 325,632	47,823 4,143 1,200 -1,527 4 51,643 0.187% 38,519	-	67,928 4,143 600 318 9 72,998 3.877% 51,129		-	61,741 0 0 0 4 61,745 9.762% 113,505		-	348,329 0 1,500 0 349,829 2.623% 160,998	;	348,329	
Loan Issuance	:	720,043 720,043 359,873				810,205 806,062 351,524 1.322	90,162 86,019 -8,349 -0.029		124,128 119,985 64,726			175,250 175,250 83,048			510,827 510,827 203,750			
res by Source	FY 2018	Total 832	Lax Exempt Bonds	Cash 832		Total 832			Private Activity Debt	v		0		=	WIFIA Loan	=	Cash 832	
0.50% 72,800	2020 2021 2022 2023 2024 2025 2026	22,793 25,309 108,789 108,930 108,930 108,930 108,930	15,955 17,716 76,152 76,251 76,251 76,251 76,251	6,838 7,593 32,637 32,679 32,679 32,679 32,679	6/1/2019 6/1/2021 6/1/2023	22,793 25,309 108,789 108,930 108,930 108,930 108,930			15,955 17,716 34,529 0 0 0	o/1/2019		0 0 0 0 0 0 43,482	6/1/2025		0 41,624 76,251 76,251 76,251 32,769	6/1/2021	6,838 7,593 32,637 32,679 32,679 32,679 32,679	
	inancing			186,000 30.0%		619,346			68,200 11%			62,000			303,146 49%			
Outstanding D	/S (2)(3)				Parity		Total											Parit
Senior	Parity	Principal	Interest	DIS	D/S	Principal	Interest	DIS	Principal	Interest	D/S	Principal	Interest	DIS	Principal	Interest		D/S Covera
10,572 10,687 10,682 10,674 10,660 10,650 10,645 10,636 10,629 10,612 10,600 10,585 10,577 10,194 10,177 10,166 10,148 7,894 5,308	19,030 19,227 19,234 19,232 19,242 19,234 19,236 19,230 19,230 19,236 15,829 14,691 14,692 14,692 14,692 14,692	435 455 2,435 2,560 5,850 6,140 7,460 7,840 8,230 8,640 9,070 9,520 10,050 11,030 12,155 12,765 13,405 14,075 17,105 17,705 17,705 17,960 18,860 19,880 19,885 12,400 13,020	1,446 1,425 7,898 7,776 18,154 17,851 17,554 17,232 16,893 16,165 15,773 14,930 14,476 14,000 12,975 12,424 11,237 10,599 9,928 8,486 7,710 6,896 6,040 5,142 4,199 2,264 1,271 651	1,881 1,880 10,333 10,336 24,004 24,001 123,999 23,997 24,005 24,005 24,000 24,005 24,000 24,005 24,000 24,000 24,000 24,000 24,000 24,000 24,001 24,000 24,001 24,000 24,001 24,000 24,001 24,000 24,001 24,	2.46 2.29 2.29 1.81 1.81 1.35 1.35 1.35 1.35 1.35 1.35 1.36 1.46 1.46 1.46 1.48 1.88 1.88 1.88 1.88 1.88 1.88 1.88	470 495 1,005 1,055 1,110 1,185 1,790 1,905 2,035 9,962 10,313 10,679 11,066 11,468 11,891 12,341 12,806 13,303 13,822 14,367 14,949 15,553 16,204 16,882 17,604 18,373 19,185 20,045 20,964 21,942 21,954 14,188 14,563 14,188 14,563 14,948 14,188 14,563 14,948 14,188 14,563 14,948 15,342 15,747 16,163	2,839 2,465 2,080 1,685 1,280 865	17,028 17,028 17,028 17,028 17,028 17,028	3,090 3,245 3,405 3,575 3,755 1,900 2,000	1,568 1,545 3,132 3,082 3,029 2,974 2,915 2,854 2,792 2,662 2,579 2,417 2,331 2,241 1,2146 2,047 1,949 1,336 1,196	2,038 4,137 4,139 4,140 4,140 4,137 4,137 4,137 4,136	565 620 685 755 830 910 1,000 1,210 1,345 1,615 1,775 2,145 2,360 2,600 2,860 3,145 3,460 4,185 4,605 5,065 5,570 6,130	6,175 6,118 6,056 5,988 5,912 5,629 5,638 5,527 4,163 4,788 4,593 4,379 4,143 3,883 3,597 3,282 2,556 2,137 1,677 1,170 613	6,740 6,738 6,742 6,738 6,738 6,738 6,738 6,742 6,741 6,743 6,742 6,741 6,742 6,741 6,742 6,742 6,742 6,742	7,792 7,998 8,209 8,426 8,648 8,876 9,111 9,351 9,598 9,852 10,112 10,379 11,823 12,135 12,145 12,784 13,122 13,468 13,824 14,188 14,563 14,948 15,342 15,747 16,163	8,602 8,379 8,151 7,917 7,676 7,429 7,176 6,916 6,694 5,809 5,205 4,893 4,572 4,243 3,906 3,560 3,204 2,839 2,465 1,685 1,280 865	17,028 17,028	2,7C2 2.462 2.373 2.372 2.372 2.372 2.372 2.077 2.077 1.322 1.323 1.444 1.444 1.444 1.454 1.491 1.991
202,131	490,490	368,960	351,083	720,043					63,605	60,523	124,128	61,745	113,505	175,250				4.2
110	Par Amount Premium  Uses  Project Fund st of Issuance ter's Discount Total DS Total Net DS Total	Par Amount Premium	Par Amount   368,960   63,970   432,930	Par Amount Premium	Par Amount Premium	Paramount Premium	Peramount	Per Armount	Paramount	Paramount	Paramount	Premium	Persentum	Premium	Premium	Marchand   196,960	Perentium	Premittion

Santa Clara Valley Water District Financing Option Comparison Scale

Tax-Exempt Parity Ratings (4/5/2017): Aa1/ - /AA+

_	à	3 %	8 4	%6	3%	7%	%	%	%	%	%	%0	7%	4%	4%	4%	1%	%	4%	%	% %	2		_	_	3%				_	4%
2006B Refunding	% of Tax	٠ اا			_	_	_				1 -			-												3.70% 82.703%					3.70% 84.054%
6B Ref	Yield	1.20%								3.02%		3.32%	3.32%		3.32%			ന													3.70%
200	+ TSY	15	101	10	15	45	9	45	20	65	85	95	95	95	95	95	95	95	95	95	9	,				70	•				70
nnded	Yield	1.18%	1.42%	1.64%	2.04%	2.04%	2.32%	2.32%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	3.13%	3.13%	3.13%	3.13%	3,13%	3,13%	3.13%	3.13%	3,13%	3.13%	3.13%
2006B Refunded	+TSY Spread	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%	0.125%					0.125%				0.125%	0.125%		0.125%
700					_	_	_	_	_	_	_	_	75.60% 0	_		_	_	_	_	_	_		_	_	_		_	_	_	_	
Inding	% of Tax-	70.83%	70.50%	71.43%	64.56%	66.10%	69.88%	71.97%	71.08%	72.85%	72.05%	72.59%	75.6	78,61%	81.02%	83.43%					83.33%					82.70%					84.05%
2007B Refunding	Yield	1.20%	1.39%	1.61%	2.06%	2.36%	2.49%	2.64%	2.87%	3.02%	3.22%	3.32%	3.32%	3.32%	3.32%	3.32%					3.60%					3.70%					3.70%
200	+TSY Soread	15	10	10	15	45	30	45	20	65	82	92	95	95	95	95					9					70					70
papu	Yield	1.38%	1.58%	1.78%	1.92%	2.03%	2.15%	2.23%	2.30%	2.35%	2.40%	2.45%	2.48%	2.52%	2.54%	2.56%	2.57%	2.58%	2.59%	2.60%	2.62%	2.62%	2.63%	2.63%	2.64%	2.64%	2.64%	2.64%	2.64%	2.65%	2.65%
2007B Refunded	+TSY										,				•					.,		.,					•				
2007	+ TSY Soread	L																		,		,			,		•				
	Yield	0.90%	1.13%	1.35%	1.56%	1.81%	2.01%	2.17%	2.32%	2.49%	2.62%	2.71%	2.81%	2.91%	2.99%	3.07%	3.13%	3.19%	3.24%	3.28%	3.30%	3.32%	3.33%	3.34%	3.35%	3.36%	3.37%	3.38%	3.39%	3.40%	3.41%
AMT		2	15	20	23	25	27	27	28	29	30	30	30	30	30	30	30	30	<u>۾</u>	30	30	30	30	30	<u>0</u>	30	30	30	30	30	90
_	Spread	20																													_
ts	n Yield	5 0.85%	5 0.98%				5 1.74%	5 1.90%	5 2.04%					5 2.61%	5 2.69%	5 2.77%			5 2.94%	5 2.98%	5 3.00%	5 3.02%	5 3.03%	5 3.04%	3.05%	2 3.06%	5 3.07%	5 3.08%	5 3.09%	5 3.10%	5 3.11%
ax Exempts	Coupon												-,			-/				-,	-,	-,	-,	٠,	.,	-,	-,	-,	-,	_,	-,
Тах	Spread	4-	φ	φ	ကု	0	2	co	4	∞	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
															_	-				_				_	_	_	-				-
	Treasury	1.05%	1.29%	1.51%	1.91%	1.91%	2.19%	2.19%	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
	ted ne)																														
4/5/2017	Interpolated MMD (June)	0.89%	1.04%	1.21%	1.36%	1.56%	1.72%	1.87%	2.00%	2.12%	2.21%	2.30%	2.40%	2.50%	2.58%	2.66%	2.72%	2.78%	2.83%	2.87%	2.89%	2.91%	2.92%	2.93%	2.94%	2.95%	2.96%	2.97%	2.98%	2.99%	3.00%
4/5			5%	%	3%	3%	%6	%	%6	7%	%	%6	%6	%	%	%	%	%	%	%	%6	7%	5%	3%	4%	2%	%	%	%	3%	%
	Maturity MMD	0		_	_			_		6 2.11%					1 2.58%		3 2.72%			6 2.87%		8 2.91%									7 3.00%
	Matul	2018	2019	3 2020	1 2021	2022	5 2023	7 2024	3 2025	3 2026	2027	2028	2029	3 2030	1 203	2032	203	2034	3 2035	3 2036	2037	1 203	2039	3 2040	2041	2042	5 2043	2047	3 2045	3 2046	2047
	<u>.</u>	~1	. 7	,	7	<b>-</b> ,	_	.~	~	<b>-</b> 1	Ħ	=	1	H	1,	≓	1,	Ţ,	ñ	15	×	21	2,	75	77	2.	26	2,	78	25	ಹ
	Year																														