

## MEMORANDUM

September 19, 2019

**TO:** MEMBERS, PORT COMMISSION  
Hon. Kimberly Brandon, President  
Hon. Willie Adams, Vice President  
Hon. Gail Gilman  
Hon. Victor Makras  
Hon. Doreen Woo Ho

**FROM :** Elaine Forbes  
Executive Director

**SUBJECT:** Informational presentation on a proposed issuance of Port of San Francisco Series 2020 Refunding Revenue Bonds in the aggregate principal amount not to exceed \$27.00 million (\$27,000,000) to refund the remaining outstanding balance on the Port Commission's 2010 Revenue Bonds to achieve interest cost savings through 2040 (the remaining life of the 2010 Port Revenue Bonds)

**DIRECTOR'S RECOMMENDATION:** Informational Only; No Action Required

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### EXECUTIVE SUMMARY

In February 2010, the Port issued \$36.65 million of Port revenue bonds to finance the design, construction, repair and improvements to various Port facilities including, among others, the James R. Herman Cruise Terminal at Pier 27, improvements to the structure at Pier 33 to facilitate leasing, and repairs and improvements to Piers 19, 35, and 30-32.

The indenture under which the 2010 Port Revenue Bonds (2010 Bonds) were issued provides for the optional redemption, at the sole option of the Port Commission, of any or all of the remaining outstanding bonds at any time on or after March 1, 2020.

This item provides an overview of a staff proposal to issue up to \$27.00 million in new Port revenue refunding bonds to refinance, at a lower interest cost, the remaining outstanding balance on the Port Commission's 2010 Bonds and to solicit Port Commission and public input. The refinancing intends to take advantage of lower interest rates in the market to achieve interest cost savings, currently estimated to be approximately \$12.99 million, over the remaining life of the 2010 Bonds. The maturity date will not be extended by the refunding. Net present value savings are estimated to

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be \$7.91 million. Port staff will return to the Port Commission on October 8, 2019 for approval of this revenue bond issuance and refinancing plan, along with the associated bond documents, including investor disclosure.

## **STRATEGIC PLAN OBJECTIVES**

This refinancing of the Port's 2010 Bonds will support the following Strategic Plan Objective:

Stability – The refunding is expected to generate an estimated debt service cost savings of approximately \$12.99 million through 2040.

The Port can use these savings to provide additional financing for delivery of capital projects or for other strategic needs. Additionally, the refinancing lowers the Port's total operating costs thereby enhancing the Port's overall financial strength.

## **BACKGROUND**

Section 9.112 of Article IX of the City and County of San Francisco Charter entitled "Revenue Bonds of the Port Commission" gives the Port Commission exclusive power to issue debt for Port-related purposes.

On July 1, 2009, the Port made the final payment on a series of revenue bonds originally issued in 1984. Since that time, the Port Commission has authorized the issuance of \$97.03 million in debt, consisting of: (a) \$59.33 million issued directly by the Port in the form of revenue bonds; and (b) \$37.70 million issued by the City on behalf of the Port in the form of Certificates of Participation that the Port is obligated to repay. In addition, in 2015 the Port Commission authorized the transfer of South Beach Harbor from the Office of Investment and Infrastructure [successor agency to the San Francisco Redevelopment Agency (SFRDA)] to the Port. This transfer was completed in April 2019 and included the assumption by the Port of \$6.14 million in outstanding balances on three California Division of Boating and Waterways loans incurred by SFRDA in the 1980's to finance the construction of South Beach Harbor.

The Port's current outstanding debt totals \$87.92 million as of September 6, 2019:

**Port of San Francisco  
Outstanding Debt Obligations**

<b>Date</b>	<b>Debt Issuance</b>	<b>Original Amount</b>	<b>Currently Outstanding</b>
Feb. 3, 2010	Port Revenue Bonds, Series 2010	\$36,650,000	\$29,865,000
Oct. 31, 2013	Certificates of Participation Series 2013, for Port Projects*	37,700,000	30,010,000
May 29, 2014	Port Revenue Bonds, Series 2014	22,675,000	20,280,000
Apr. 30, 2019	Cal Division of Boating & Waterways loans for South Beach Harbor**	<u>6,143,932</u>	<u>5,884,454</u>
<i>Subtotal</i>		<i>\$103,168,932</i>	<i>\$86,039,454</i>
Incurring Prior to June 2009	Cal Division of Boating & Waterways loans for Hyde Street Harbor	<u>3,500,000</u>	<u>1,883,830</u>
<i>Grand Total</i>		<i>\$106,668,932</i>	<i>\$87,923,284</i>

\* issued by the City and County of San Francisco on behalf of the Port, and the Port is responsible for repayment.

\*\* Debt assumed by the Port as part of the acquisition on April 30, 2019 of South Beach Harbor from the Office of Investment and Infrastructure, successor agency to the San Francisco Redevelopment Agency.

On October 13, 2009, the Port Commission approved resolution 09-63 authorizing the issuance of the first of two series of currently outstanding Port revenue bonds. The bonds were issued on February 3, 2010 in the amount of \$36.65 million to finance the design, construction, reconstruction repair and/or improvements to Pier 19, 23, 33, 30-32, 35 and 50, and Phase I of the James R. Herman Cruise Terminal. The 2010 Bonds were issued in two series; Series A, Non AMT-Tax Exempt and Series B, Taxable reflecting the mix of public and private capital improvements financed. The debt service on the bonds is approximately \$2.8 million annually through 2030, dropping to approximately \$1.9 million annually thereafter through 2040. The bonds were issued pursuant to an Indenture of Trust (Master Indenture) and a First Supplement to Indenture of Trust, both documents dated as of February 1, 2010.

The 2010 Bonds were structured with an optional redemption feature to allow the Port Commission, at its sole discretion, as of March 1, 2020, to redeem prior to maturity any or all of those bonds maturing on or after March 1, 2021, for a redemption price equal to the principal amount of the bonds to be redeemed plus the accrued, but unpaid interest, without premium.

On November 15, 2016, the Port Commission approved resolution 16-42 adopting the most recent update to the Port's municipal debt policy (Debt Policy). The objectives of the Debt Policy are: (i) to maintain unfettered, cost-effective access to the capital markets through prudent debt management policies; (ii) provide financial support for the

Port's objectives under the Port's Strategic Plan and the Port 10 Year Capital Plan (Capital Plan) through Commission debt; (iii) provide guidelines for the overall management of Commission debt; and (iv) achieve the highest practical credit ratings and the lowest possible costs commensurate with a prudent level of risk.

The Debt Policy provides for the issuance of refunding bonds to refinance previously issued and currently outstanding debt in order to achieve debt service savings, and or certain other specified reasons. The Debt Policy also specifies that refunding bonds issued solely to achieve debt service savings shall not be issued unless: (i) the estimated net present value of the savings, as determined by the Port's financial advisors, is at least 3% of the principal amount of the refunded bonds; and (ii) it is unlikely, in the judgment of the Port's financial advisors, that a future refunding would realize greater savings.

Port staff, in consultation with Public Financial Management, Inc. and Backstrom McCarley Berry & Co., the Port's financial advisors (FAs), have recently determined that the Port can realize significant debt service savings by refinancing the Port's 2010 Bonds on March 1, 2020, when they first become eligible for refunding. The FAs have estimated that under current market conditions a refinancing would generate total savings of approximately \$13 million in debt service savings over the remaining life of the 2010 Bonds, or approximately \$8 million on a fully discounted net present value basis, assuming the Port maintains its current credit rating<sup>1</sup>. This equates to 26% of the principal amount of the 2010 Bonds, which is significantly above the Debt Policy threshold for the issuance of refunding bonds. The table below illustrates some of the preliminary estimated benefits of refunding. A more detailed table showing annual debt service savings is attached.

	<b>2010 Revenue Bonds</b>	<b>2020 Refunding Revenue Bonds</b>	<b>Annual Reduction in Debt Service</b>
Average Coupon Rate	5.75% *	4.27%	
Par Amount	29,865,000 *	23,525,000	
Avg Annual debt service 3/1/2021 - 3/1/2030	2,844,564	2,005,686	838,878
Avg Annual debt service 3/1/2031 - 3/1/2040	1,852,808	1,392,950	459,858

\* refers to the bonds being refunded for the 2010 issuance

Additionally, the Port's FAs are of the opinion (assuming current market conditions) that it is unlikely that the Port could achieve significant additional savings by delaying the refunding beyond the March 1, 2020 date.

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<sup>1</sup> The Port's revenue bond ratings are A1/A/A from Moody's, Standard & Poor's and Fitch Rating; respectively.

## PROPOSED ISSUANCE OF PORT REFUNDING REVENUE BONDS

In light of the substantial debt service savings that can be achieved through a refinancing of the 2010 Bonds, Port Finance staff propose the Port Commission consider issuing 2020 Port Refunding Revenue Bonds (2020 Refunding Bonds) in an amount not to exceed \$27,000,000 (par amount), with the proceeds used to retire \$29,865,000 (aggregate principal) of outstanding 2010 Bonds, on March 1, 2020, and to pay for the cost of issuance. Port staff anticipates that with expected premium generated from the sale of the bonds, only \$23.53 million in new bonds would be required to fully refinance the 2010 Bonds; however, staff will seek authorization to issue the higher amount to provide sufficient flexibility to address any changes in market conditions between now and the date of a sale. Port staff is currently targeting a closing for mid-February 2020. This, of course, is subject to change.

The 2020 Refunding Bonds would be issued pursuant to a Third Supplement to the Indenture of Trust, which would amend and supplement the existing Master Indenture.

### *Proposed Bond and Financing Structure*

Port staff intend to issue the 2020 Refunding Bonds through a negotiated sale with an underwriter and a co-underwriter, selected through a solicitation to the Controller's Office of Public Finance's as-needed pool of qualified underwriters. The solicitation was structured to encourage Local Business Enterprise (LBEs) to respond for the co-underwriting opportunity. The Director of the Controller's Office of Public Finance advised the Port in this selection.

A negotiated sale affords the Port more flexibility to change the sale date or structure of the issue to obtain lower interest rates. Port staff believes that a negotiated sale is more appropriate for this sale given the size of the issuance, the nature of the Port's operations, and the credit quality of the bonds.

The Port's financial advisors and underwriters have advised staff that given the Port's current ratings, in the current market, the Port would not incur an interest rate penalty by issuing its Refunding Bonds without a debt service reserve fund. Eliminating the debt service reserve allows the Port to reduce the size of the new bond issue and therefore reduce annual debt service on the bonds.

### 1. Financing Structure:

#### Debt Service

- A. In the current market, the Port could issue \$23.53 million in Refunding Bonds, without providing a debt service reserve, at an estimated True Interest Cost (TIC) in the current market of 2.82%, assuming A1/A/A ratings. The interest rate reflects a 25 basis point premium over estimated current market rates to account for market fluctuations. The TIC is the rate compounded semi-annually, necessary to discount the amounts payable on the principal and interest dates to the purchase price received by the Port for the new bonds. As such it reflects the

time value of money and the actual interest cost or borrowing rate on the Refunding Bonds.

Under this scenario, the relevant estimated debt service parameters are as follows:

**Refunding Bonds Statistics (Preliminary Estimate)**

Avg. Annual debt service 3/1/2021 - 3/1/2030	\$2.01 million
Avg. Annual debt service 3/1/2031 - 3/1/2040	\$1.39 million
Maximum Annual debt service	\$2.03 million
TIC	2.82%
Minimum debt service coverage FYs 2020-21 to 2023-24 (Port Revenue Bonds)	7.72x
Minimum debt service coverage FYs 2020-21 to 2023-24 (Port Revenue Bonds and Subordinate Debt)	4.09x

- B. To be more conservative, Port staff also reviewed a sale of \$26.30 million in bonds priced at a True Interest Cost of rate of 3.23%. This scenario assumes: (i) that the bonds would be sold at interest rates 75 basis points higher than the current market, and (ii) that the Port would be required by the market to provide a debt service reserve fund for the benefit of the investors. As market conditions fluctuate, Port staff believes that it is prudent to plan for this possibility. As shown in the table below, the Port’s average annual debt service would increase under this scenario by approximately \$227,000 for the first ten years, and \$190,000 for the last ten years when compared to the first refunding scenario summarized above. However, in this scenario, the Port would still realize total savings of approximately \$8.4 million in debt service over the remaining life of the 2010 Bonds, or \$6.2 million on a net present value basis. The Port’s current five-year projections indicate that Port operations would generate more than sufficient cash to cover debt service cost under either scenario. Savings even at this much higher borrowing rate would still be significant.

## Refunding Bonds Statistics (Higher Interest Rates)

Avg. Annual debt service 3/1/2021 - 3/1/2030	\$2.28 million
Avg. Annual debt service 3/1/2031 - 3/1/2040	\$1.58 million
Maximum Annual debt service	\$2.31 million
TIC	3.23%
Minimum debt service coverage FYs 2020-21 to 2023-24 (Port Revenue Bonds)	7.14x
Minimum debt service coverage FYs 2020-21 to 2023-24 (Port Revenue Bonds and Subordinate Debt)	3.92x

### 2. Bond Structure

The bonds would be issued in two series, Series 2020A, a Tax-Exempt issue; and Series 2020B, a Taxable issue. This structure will preserve the tax status of the original bond sale. The 2020 Refunding Bonds would be structured so that the final maturity dates of the new issues would be the same as that of the 2010 Bonds being refinanced: March 1, 2040 for the Series 2020A issue; and March 1, 2030 for the Series 2020B issue. Both bond series will be structured with relatively level debt service. As illustrated in the tables above, the total debt service for the 2020 Refunding Bonds will decline significantly after March 1, 2030, the date when the Series 2020B bonds are fully repaid.

To provide flexibility to react to changing market conditions, and on the advice of its FAs, Port staff proposes a cap of 6% on the stated coupon interest rate payable on the bonds. The bonds would be structured, to achieve a minimum present value savings of 10% of the principal amount of the refinanced principal amount of bonds. This affords flexibility in structuring, while ensuring the savings generated from the refinancing to justify the issuance cost and the allocation of staff resources to the transaction.

### 3. Description of Financing Documents

Any issuance of Refunding Bonds would require Port Commission approval of the following documents:

- i. A Port Resolution authorizing the sale
- ii. Third Supplement to the Indenture of Trust
- iii. Bond Purchase Agreement
- iv. Preliminary Official Statement
- v. Continuing Disclosure Certificate
- vi. Escrow Agreements (one for each series of 2010 Bonds)

Port staff has been working with co-bond counsel, disclosure counsel, the Port's financial advisors, the underwriters and the City Attorney's office to prepare and structure the Refunding Bonds issuance for the Port Commission's consideration.

Copies of the above financing documents are attached to this staff report for the Port Commission's review and comments. Port staff plans to return to the Port Commission on October 8, 2019 for its consideration of staff's proposed refinancing of the 2010 Bonds, as described in this staff report, and consideration of the associated financing documents. The documents are in substantially final form, but minor modifications and updates will continue to be made until bond closing. Additionally, the Port's financial presentation in the Preliminary Official Statement will be updated to reflect the fiscal year end June 30, 2019 financial statements when they become available. The audit of the Port's fiscal year 2018-19 financial results is currently in progress, and audited financial statements for the fiscal year end June 30, 2019 are expected to be released within the next few months.

The financing documents listed above are described in more detail below:

- A. Third Supplement to Indenture of Trust — This document is a short supplement to the existing Indenture of Trust (the Master Indenture, as previously supplemented; see description below), which provides for the specific terms of the proposed 2020 Refunding Bonds issuance. Those terms include the bonds' maturity and payment terms and schedules.

*2010 Indenture of Trust (Master Indenture)* This is the principal security document for the proposed issuance of 2020 Refunding Bonds. It is entered into between the Port and a Bond Trustee, U.S. Bank National Association, on behalf of the bondholders, and is the contract between the bondholders and the Port. The Master Indenture contains covenants regarding the operation of the Port that are designed to enhance the security of the Bonds and describes the terms under which investors will be repaid. Individual issuances of Port Revenue Bonds are offered for sale under a Supplement to Indenture which describes the terms specific to that particular issuance.

- B. Preliminary Official Statement (POS) — The Preliminary Official Statement is the document that is distributed to potential investors to solicit their interest in purchasing a 2020 Refunding Bonds. It provides information concerning the bond issue and operational and financial information on the Port. As required by the Securities and Exchange Commission (SEC), the document must be accurate in all material respects, and may not have any misleading misstatements or omissions. To assure accuracy of this document, the Commission should carefully review it prior to authorizing its distribution to potential investors. Subsequent to sale of the 2020 Refunding Bonds in the bond market, the bond interest rates, and sales price information will be inserted. After the pricing information is inserted, the preliminary designation will be deleted from the document caption, and the document will be identified as the Official Statement which will be distributed to all purchasers of the 2020 Refunding Bonds upon closing of the transaction.
- C. Bond Purchase Agreement — This document contains the terms and conditions for a sale of 2020 Refunding Bonds to the underwriters in a negotiated sale including the fees paid.

D. Continuing Disclosure Certificate — The continuing disclosure certificate is an agreement between the Port and the Underwriters under which the Port agrees to provide certain financial and operating data, including the Port’s financial statements, on an annual basis and to provide notices of certain specified events to the marketplace for the life of the 2020 Refunding Bonds issuance.

E. Escrow Agreements — The escrow agreements describe the duties and obligations of the Escrow Agent (the same bank as the Bond Trustee under the Indenture) for the 2010 Bonds, and establishes an escrow fund for the deposit of monies from the following sources in an amount sufficient to fully redeem the 2010 Bonds; (i) the proceeds of the 2020 Refunding Bonds, (ii) the 2010 Bonds debt service reserve fund, and (iii) the 2010 Bonds debt service payment otherwise due March 1, 2020. Pursuant to each Agreement, the escrow agent will use the deposited funds plus a small amount of interest earnings generated while the funds are held by the Escrow Agent, to fully repay the outstanding 2010 Bonds on March 1, 2020, without premium.

4. Proposed 2020 Port Refunding Revenue Bonds Parameters

Port Commission of the City and County of San Francisco Refunding Revenue Bonds, Series 2020

- o Not to Exceed Par Amount \$27 million
- o Not to Exceed Interest Rate (coupon rate) 6%
- o Final Maturity March 1, 2040 (20 years)
- o Percent Savings of Refunded Bonds 10% minimum

5. Estimated Sources and Uses of Funds (subject to change)

i. Sources:

Bond Proceeds	
Par Amount	\$23,525,000
Premium received	<u>2,930,876</u>
Bond Proceeds – Total	\$26,455,876
Prior Issue – Debt Service Reserve Fund	2,846,906
Prior Issue – 3/1/2020 Debt Service Payment	<u>1,920,024</u>
Total Sources	\$31,222,806

Estimated Sources and Uses of Funds (cont.)

ii. Uses:

Deposit into Escrow Account	\$30,800,902
Cost of Issuance <sup>2</sup>	<u>421,904</u>
Total Uses	\$31,222,806

<sup>2</sup> Includes fees of rating agencies, financial advisors, legal counsel, underwriters, trustee, escrow agent, disclosure counsel, verification agent, printer, and other miscellaneous expenses associated with an issuance of 2020 Refunding Revenue bonds.

## NEXT STEPS

Port staff plans to return to the Port Commission on October 8, 2019 for approval of a resolution authorizing the issuance of up to \$27.00 million in 2020 Refunding Bonds for the purpose of fully refinancing the Port's outstanding 2010 Bonds, and approving the associated financing documents as described in this staff report.

After Port Commission approval, Port staff will have the following major tasks to complete:

### A. *Rating Agencies' Review*

Port staff will meet with the Credit Rating Agencies (Moody's Investors Services, Standard & Poor's Corporation and Fitch Ratings) in December 2019 to present the Port's credit update (including finances and capital plan) and refinancing plan. Additional credit tasks include:

- Providing any follow-up information, as requested.
- Receiving the ratings from the three Rating Agencies.
- Evaluating the rating impact on the financing.

The Rating Agencies will present the Port's financing to their respective credit committees. Upon issuance of the ratings, the Rating Agencies will publish a summary of the ratings. Additionally, each Rating Agency will periodically review the Port's credit status as long as the bonds are outstanding.

### B. *Preliminary Official Statement (POS) and Continuing Disclosure Certificate*

- Together with disclosure counsel and other members of the financing team, finalize disclosure and marketing documents.

### C. *Third Supplement to the Indenture of Trust and Other Bond Documents*

- Together with co-bond counsel and other members of the financing team, finalize the Third Supplement to the Indenture of Trust and the other bond documents.

### D. *Bond Sale and Pricing*

- The underwriters will pre-market the Port's bonds to investors.
- Port staff, together with our financial advisors, will negotiate interest rates and prices for purchase of the bonds by the underwriters.

### E. *Closing*

- The financing team will execute the final financing documents.
- The Port will deliver the bonds to the underwriters on the closing date in return for the purchase price ("proceeds"). The proceeds will be delivered to the escrow agent and deposited into the escrow account(s) established to redeem the 2010 Bonds.
- The Port will deliver to the escrow agent, funds equal to the March 1, 2020 principal and interest payment due on the 2010 Bonds, for deposit into the escrow account(s) established to redeem the 2010 Bonds.

- On March 1, 2020, the escrow agent will redeem all of the outstanding 2010 Bonds by paying the 2010 Bonds principal and interest due plus any accrued interest. Following that date, the 2010 Bonds will no longer be outstanding.

Financing Schedule (subject to change)

October 8, 2019	Seek Port Commission approval of resolution authorizing 2020 Refunding Bonds issuance for the purpose of refinancing 2010 Bonds, and approval of related bond documents.
Week of October 21, 2019	Introduction of the bond documents and the appropriation ordinance at the Board of Supervisors.
Week of December 2, 2019	Rating Agency Meetings.
Week of December 16, 2019	Receive Ratings.
December 9, 2019 – January 7, 2020	Board of Supervisors Approval Process
January 2020	Post Preliminary Official Statement.
January, 2020	Pricing of the 2020 Refunding Bonds.
Mid-February, 2020	Sale and Closing.
March 1, 2020	Repayment of all outstanding 2010 Bonds. Full defeasance.

**CONCLUSION**

The Port issued its first revenue bonds under the current revenue bond indenture in February 2010. Over the past ten years interest rates have declined significantly – even more so over the course of August 2019. Port Finance staff, in conjunction with the Port’s financial advisors, have determined that the Port can achieve significant debt service cost savings by refinancing its 2010 Bonds on March 1, 2020, the first date that a redemption of the outstanding bonds is allowed.

Port staff has prepared a proposal to refinance the 2010 Bonds, the details of which are contained in this staff report. Staff will return to the Port Commission on October 8, 2019 requesting approval of a resolution to authorize the issuance of new 2020 Refunding Bonds to refinance the 2010 Bonds, and financing documents needed to complete the transaction. Staff is currently targeting a mid-February close for bond issuance, with the 2010 Bonds retired on March 1, 2020.

Prepared by: Lawrence Brown  
Financial Analyst

For: Katharine Petrucione, Deputy Director  
Finance and Administration

Attachments:

1. Annual Savings from Refinancing
2. Third Supplement to the Indenture of Trust
3. Bond Purchase Agreement
4. Preliminary Official Statement'
5. Continuing Disclosure Certificate
6. Escrow Agreements

## Attachment 1

### SAVINGS\*

Port of San Francisco  
Refunding Revenue Bonds, Series 2020AB  
Preliminary Estimate

Date	Prior Debt Service	Prior Receipts	Prior Net Cash Flow	Refunding Debt Service	Savings	Present Value to 02/12/2020 @ 2.2066225%
03/01/2020	1,920,023.53	1,920,023.53				-2,222.54
03/01/2021	2,844,342.10		2,844,342.10	2,031,335.58	813,006.52	799,010.04
03/01/2022	2,845,481.56		2,845,481.56	2,002,088.86	843,392.70	810,926.78
03/01/2023	2,846,370.26		2,846,370.26	2,006,861.60	839,508.66	789,414.19
03/01/2024	2,841,658.16		2,841,658.16	1,999,785.26	841,872.90	774,151.05
03/01/2025	2,846,345.26		2,846,345.26	2,006,034.50	840,310.76	755,644.92
03/01/2026	2,844,381.40		2,844,381.40	2,000,756.70	843,624.70	741,822.25
03/01/2027	2,844,743.00		2,844,743.00	2,003,683.10	841,059.90	723,156.45
03/01/2028	2,841,955.80		2,841,955.80	2,000,075.90	841,879.90	707,757.38
03/01/2029	2,845,649.40		2,845,649.40	2,004,354.90	841,294.50	691,504.96
03/01/2030	2,844,712.60		2,844,712.60	2,001,880.50	842,832.10	677,292.48
03/01/2031	1,853,775.00		1,853,775.00	1,392,750.00	461,025.00	362,555.66
03/01/2032	1,851,118.76		1,851,118.76	1,390,000.00	461,118.76	354,694.75
03/01/2033	1,850,643.76		1,850,643.76	1,390,250.00	460,393.76	346,386.06
03/01/2034	1,852,093.76		1,852,093.76	1,393,250.00	458,843.76	337,661.55
03/01/2035	1,855,212.50		1,855,212.50	1,393,750.00	461,462.50	332,145.28
03/01/2036	1,854,743.76		1,854,743.76	1,396,750.00	457,993.76	322,425.19
03/01/2037	1,850,687.50		1,850,687.50	1,392,000.00	458,687.50	315,830.43
03/01/2038	1,853,043.76		1,853,043.76	1,394,750.00	458,293.76	308,634.27
03/01/2039	1,851,300.00		1,851,300.00	1,389,500.00	461,800.00	304,164.99
03/01/2040	1,855,456.26		1,855,456.26	1,396,500.00	458,956.26	295,650.18
	48,893,738.13	1,920,023.53	46,973,714.60	33,986,356.90	12,987,357.70	10,748,606.32

### Savings Summary

PV of savings from cash flow	10,748,606.32
Less: Prior funds on hand	-2,846,906.46
Plus: Refunding funds on hand	4,328.79
Net PV Savings	7,906,028.65

\* Preliminary rates as of 8/29/19 plus 25 basis points. Prepared by PFM Financial Advisors LLC