San Francisco
Water Power Sewer
Services of the San Francisco Public Utilities Commission

525 Golden Gate Avenue, 4th Floor
San Francisco, CA 94102

November 21, 2023

Angela Calvillo
Clerk of the Board
1 Dr. Carlton B. Goodlett Place
City Hall, Room 244
San Francisco, CA 94102-4689

Dear Ms. Calvillo,

Please see the enclosed Certificates as required under 2002 Proposition E related to the following authorizing legislation:

- Water Enterprise: File No. 230665 and Board of Supervisors Ordinance No. 180-23

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Nikolai J. Sklaroff
Capital Finance Director
San Francisco Public Utilities Commission
Office: (415) 551-2973

London N. Breed
Mayor

Tim Paulson
President

Anthony Rivera
Vice President

Newsha K. Ajami
Commissioner

Sophie Maxwell
Commissioner

Kate H. Stacy
Commissioner

Dennis J. Herrera
General Manager

San Francisco Planning

49 South Van Ness Avenue, Suite 1400
San Francisco, CA 94103
628.652.7600
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Certificate of City and County of San Francisco Planning Department Regarding Proposed Sale of Water Revenue Bonds and Other Forms of Indebtedness in an amount not to exceed $358,985,453, exclusive of financing costs, for Capital Projects budgeted in Fiscal Year 2023-24

I, Lisa M. Gibson, Environmental Review Officer of the Planning Department of the City and County of San Francisco (the Planning Department), hereby certify as follows:

1. As the Environmental Review Officer (ERO) of the Planning Department, I am authorized to certify as to the compliance of the San Francisco Public Utilities Commission (SFPUC) with applicable requirements of the California Environmental Quality Act (CEQA).

2. After consultation with the SFPUC, I understand that the SFPUC proposes to sell Water Revenue Bonds and Other Forms of Indebtedness to finance certain improvements to the Water Enterprise of the City and County of San Francisco (the "City") and to finance certain improvements to the Water Enterprise-related infrastructure of the SFPUC's Hetch Hetchy Water and Power System (the "Bonds"). The improvements proposed for financing include those projects described in the following document, attached to this Certificate as Exhibit A.

3. I understand that Section 8B.124 of the City Charter grants authority to the City's Board of Supervisors to approve the issuance of indebtedness, including revenue bonds, by ordinance upon two-thirds vote of its members and under certain conditions. The ordinance relating to the Bonds is attached hereto as Exhibit B (the Ordinance).

4. I understand that one of the conditions to the Board of Supervisor's authorization of such indebtedness is the delivery of a certificate of the Planning Department regarding the additional projects to be financed.

5. The San Francisco Planning Commission certifies Environmental Impact Reports as they are completed pursuant to CEQA. In addition, the Planning Department approves Initial Study/Mitigated Negative Declarations, and the ERO approves Categorical Exemptions.

6. Based on a preliminary review of the additional Projects and discussions with the SFPUC regarding the requirements for undertaking such additional Projects, I certify that the Projects under the jurisdiction of the SFPUC to be funded with proceeds of the Bonds, as described in the Ordinance, (a) are not considered to be projects under CEQA, (b) are projects under CEQA and a CEQA determination has already been issued, or (c) are projects under CEQA and will undergo CEQA review prior to approval. Pursuant to the provisions of Chapter 31 of the San Francisco Administrative Code, any additional Project to be financed will comply with applicable requirements of CEQA prior to any draw on the Revenue Bonds funds to finance the acquisition or construction of such facilities.

In witness whereof, the undersigned has executed this certification as of this 15th day of August, 2023.

Lisa M. Gibson
Environmental Review Officer

EXHIBIT A
WATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2023-2024 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number and Name	CEQA Compliance[1,2]
Regional Water	10033123: SVWTP Ozone	Addendum to add the Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project issued 7/13/23 (Case No. 2006.0137ENV-04) to the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project Final EIR certified 12/3/09 (Case No. 2006.0137E).
Regional Water	CUW272020402: SVWTP Short Term Improvements	Addendum to add the Sunol Valley Water Treatment Plant Ozonation Facility and Other Site Improvements Project issued 7/13/23 (Case No. 2006.0137ENV-04) to the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project Final EIR certified 12/3/09 (Case No. 2006.0137E).
Regional Water	10037277: Sunol Valley Chloramination Facility	Common Sense Exemption issued 12/30/22 (Case No.2022-010476ENV)[3] for reliability upgrades and to commission the dechlorination facility.
Regional Water	10037350: Regional Groundwater Treatment Improvements	Environmental review will begin when project scope is defined.
Regional Water	CUW27701: Sunol Long Term Improvements	Final Mitigated Negative Declaration Sunol Long Term Improvements Project adopted 12/2/15 (Case No. 2012.0054E).
Regional Water	CUW2770304: Millbrae Yard Laboratory and Shop Improvements	Environmental review will begin when project scope is defined.

[1] Projects that are not funded by Proposition E or Proposition A bonds are not included in this table.
[2] Projects that are funded by Proposition E or Proposition A bonds but do not have a FY23-24 appropriation are not included in this table.
[3] The Case No. in the Categorical Exemption Form seems to have a typo with an extra zero and is 20022-010476ENV.

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FY 2023-2024 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number and Name	CEQA Compliance[1,2]
Local Water	10037519: San Francisco Zoo Recycled Water Pipeline Project	Categorical Exemption issued 7/26/21 (Case No. 2021-006486ENV).
Local Water	Water Bottling Plant: Water Bottling Plant	Environmental review will begin when project scope is defined.
Local Water	10036916: Local Water - Lead Component Services Program	This includes multiple projects: • WD-2889 (LSLR CSO #1-#4) - Statutory Exemption issued 3/23/23 (Case No. 2023-002476ENV). • WD-2889 (LSLR CSO #5-08) - Statutory Exemption issued 5/8/23/23 (Case No. 2023-003979ENV). • Environmental review will occur for additional projects as scopes are defined.
Local Water	CUW280: Local Water Conveyance / Distribution System	This includes multiple projects: • WD-2874 (Joost) - Categorical Exemption issued 6/27/23 (Case No. 2023-004838ENV) • WD-2720 (Precita) - Statutory Exemption issued 12/2/20 (Case Number 2020-010808ENV) • WD-2801 (Hampshire) - Categorical Exemption issued 1/25/23 (Case No. 2020-008459ENV) • WD-2765 (Jersey) - Categorical Exemption issued 6/4/20 (Case No. 2017-015503ENV) • WD-2848 (Gold Mine) - Categorical Exemption issued 9/23/20 (Case No. 2020-006601ENV) • WD-2844 (Parnassus) - Categorical Exemption issued 2/18/21 (Case No. 2020-011667ENV) • WD-2896 (Webster) - Statutory Exemption issued 5/23/23 (Case No. 2023-004517ENV)

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FY 2023-2024 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number and Name	CEQA Compliance[1,2]
		• WD-2780 (21st Street) - Categorical Exemption issued 2/14/18 (Case No. 2018-001551ENV) • WD-2875 (Grand View) - Categorical Exemption for Water issued 12/8/21 (Case No. 2021-009298ENV) and Statutory Exemption for Sewer issued 9/9/21 (Case No. 2021-009064ENV) • WD-2876 (San Bruno) - Categorical Exemption issued 11/10/21 (Case No. 2021-000634ENV) • WD-2891 (Bay Corridor Transmission & Distribution Phase 4 and Water Improvements Project) - Categorical Exemption issued 5/30/2023 (Case No. 2023-001209ENV) (Case No. 2023-001209ENV). • Environmental review will occur for additional projects as scopes are defined.
Local Water	CUW28003: Local Water Conveyance Joint Transit Project	This includes multiple projects: • L-Taraval Transit Improvements Sewer Replacement - Categorical Exemption issued 4/14/17 (Case No. 2017-004381ENV). • WD-2766 (8-Inch Ductile Iron Water Pipe Main Installation on Taraval Street from 14th Avenue to 48th Avenue, and Various Streets) - Categorical Exemption issued 5/24/18 (Case No. 2017-016132ENV). • Geary Boulevard Sewer and Water Improvements - Phase 2 of SFMTA Geary Bus Rapid Transit (BRT) - Environmental review underway (Case No. 2023-005315ENV). • N-Judah - Environmental review will begin when project scope is defined.
Local Water	10033816: Potable Emergency Firefighting Water System	Categorical Exemption issued 6/3/19 (Case No. 2019-000535ENV). However, project was subsequently revised and an Initial Study is now underway under (Case No. 2023-005928ENV).

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FY 2023-2024 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number and Name	CEQA Compliance[1,2]
Local Water	10033818: Town of Sunol Pipeline	Environmental review is underway for this project via an addendum (Case No. 2007.0039ENV-03) to the San Antonio Backup Pipeline Project Final Environmental Impact Report certified 9/20/12 (Case No. 2007.0039E).
Local Water	10037794: Reservoir Roof and Tank Coatings	This includes multiple individual projects: • WD-2886 (University Mound North Basin Reservoir Roof Coating) - Not a project under CEQA Guidelines section 15378. • Sutro Reservoir roof coating - Environmental review will begin when project scope is defined. • La Grande tank recoating - Environmental review will begin when project scope is defined. • Environmental review will occur for additional projects when their scope is defined.
Local Water	New: Sunset Reservoir Perimeter Fencing Replacement	Environmental review will begin when project scope is defined.
Local Water	CUW28301: College Hill Reservoir	Categorical Exemption issued 11/14/19 (Case No. 2019-013203ENV).
Local Water	10033819: Lombard Geotechnical Improvements	Categorical Exemption issued 12/21/22 (Case No. 2022-009692ENV) for potholing to inform design; environmental review of full project will begin when project scope is defined.
Local Water	CUW284_N06: Lake Merced Pump Station (LMPS) and APS Suction Valve Automation	Environmental review will begin when project scope is defined.
Local Water	CUW28403: Bay Bridge West Pump Station (PS)	Environmental review will begin when project scope is defined.

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FY 2023-2024 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number and Name	CEQA Compliance[1,2]
Local Water	10015231: Harding Park PS	Environmental review will begin when project scope is defined.
Local Water	10015425: Automated Water Meter Program (AWMP) Completion (FY21) & Replacement. Planning (FY22-26)	Environmental review will begin when project scope is defined.
Local Water	10037413: AWMP Renewal and Meters	Environmental review will begin when project scope is defined.
Local Water	10037414: Large Meter Renewals	Environmental review will begin when project scope is defined.
Local Water	10037415: BCC Meter Program	Environmental review will begin when project scope is defined.
Hetch Hetchy Water (HHW)	10034364: HHW - R&R SJPL Life Extension Program	Rehabilitation of the Existing San Joaquin Pipelines Final Mitigated Negative Declaration adopted 11/8/10 (Case No. 2007.1129E).
Hetch Hetchy Water	10035575: HHW - SJPL Valve and Safe Entry Improvement	This includes multiple projects: • SJPL Valve and Safe Entry Phase 1 - Categorical Exemption for geotechnical investigation issued 8/26/20 (Case No. 2020-006923ENV). • SJPL Valve and Safe Entry Improvements Phase 1 (Phase 1A, 1B, and 2) - Minor Project Modification for full project issued 1/27/22 (Modification to Case No. 2007.0118E) to the San Joaquin Pipeline System Project Environmental Impact Report certified 7/9/09 (Case No. 2007.0118E). • SJPL Valve and Safe Entry Phase 2 - Minor Project Modification for geotechnical investigation to inform detailed design issued 2/21/23 (Modification to Case No. 2007.0118E) to the San Joaquin Pipeline System

Program	Project Number and Name	CEQA Compliance[1,2]
		Project Environmental Impact Report certified 7/9/09 (Case No. 2007.0118E). • SJPL Valve and Safe Entry Improvements Phase 3 (Tesla Surge Tower) – Addendum issued 8/10/22 (Modified Project Case No. 2007-0427ENV-3) to the San Joaquin Regional Water Quality Improvement Project Environmental Impact Report certified 12/18/08 (Case No. 2007.0427E).
Hetch Hetchy Water	CUH10221: HHW - Mountain Tunnel Improvement Project (Tunnel)	Mountain Tunnel Improvement Project Final Mitigated Negative Declaration adopted 10/23/19 (Case No. 2017-014249ENV).
Joint Water/Power Projects (also listed with the Water Enterprise Capital Improvement Projects)		
Hetch Hetchy Water (HHW)	10014106: HHW - R&R Communications Systems Upgrades	This includes multiple projects: • J102130060 – HHWP Warnerville AT&T Fiber and Radio Frequency Laboratories Project - Common Sense Exemption issued 8/2/2023 (Case No. 2023-004408ENV). • J102130080 Moccasin Control and Server Building and Kirkwood Powerhouse OSI SCADA System Upgrade - Not a project under CEQA Guidelines section 15378. • Environmental review will occur for additional projects when their scope is defined.
Hetch Hetchy Water	10014110: HHW - Moccasin Wastewater Treatment Plant	Categorical Exemption issued 2/22/23 (Case No. 2022-006804ENV).
Hetch Hetchy Water	CUH102MT: HHW - Mt. Tunnel Imp. Project (Flow Control)	Mountain Tunnel Improvement Project Final Mitigated Negative Declaration adopted 10/23/19 (Case No. 2017-014249ENV).

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FY 2023-2024 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number and Name	CEQA Compliance[1,2]
Hetch Hetchy Water	10035086: HHW – Bridge Replacement (2 Bridges)	This includes two projects: • O'Shaughnessy (OSH) Dam Adit Access Bridge – Categorical Exemption for geotechnical investigation issued 1/27/21 (Case No. 2020-011359ENV) to inform design. Environmental review of full project is underway (Case No. 2023-001726ENV). • Eleanor Bridge - Environmental review will begin when the project scope is defined.
Hetch Hetchy Water	CUH10116: HHW - Moccasin Penstock Rehabilitation	Categorical Exemption issued 4/3/17 (Case No 2017-004072ENV); however, the project scope is being reevaluated and additional environmental review is underway (Case No. 2022-012307ENV).
Hetch Hetchy Water	10032903: HHW - O'Shaughnessy Dam Outlet Works Phase 1	This includes multiple projects: • SFPUC O'Shaughnessy Dam Outlet Works & Spillway Access and Drainage Improvements Project - Categorical Exemption issued 7/16/20 (Case No. 2020-004917ENV). • Bulkhead System Pilot (Trial Diving) Project - Categorical Exemption issued 11/30/21 (Case No. 2021-011153ENV). • Instream Flow Release (IFR) Valve Installation Project - Categorical Exemption issued 12/2/22 (Case No. 2022-004533ENV). • Bulkhead System Project - Categorical Exemption issued 12/2/22 (Case No. 2022-011322ENV).
Hetch Hetchy Water	CUH102 N02: HHW - Moccasin Engineering and Records Building	Environmental review is underway (Case No. 2023-004480ENV).

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FY 2023-2024 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number and Name	CEQA Compliance[1,2]
Hetch Hetchy Water	CUH102 N01: HHW - R&R Water Conveyance Life Extension (Joint)	Environmental review will begin when project scope is defined.

[San Francisco Public Utilities Commission Water Revenue Bond and Other Forms of Indebtedness Issuance - Not to Exceed $358,985,453]

Ordinance authorizing the issuance and sale of tax-exempt or taxable Water Revenue Bonds and other forms of indebtedness (as described below) by the San Francisco Public Utilities Commission ("Commission") in an aggregate principal amount not to exceed $358,985,453 to finance the costs of various capital water projects benefitting the Water Enterprise pursuant to amendments to the Charter of the City and County of San Francisco enacted by the voters on November 5, 2002, as Proposition E; authorizing the issuance of Water Revenue Refunding Bonds and the retirement of outstanding Water Enterprise Commercial Paper; declaring the Official Intent of the Commission to reimburse Itself with one or more issues of tax-exempt bonds or other forms of indebtedness; and ratifying previous actions taken in connection therewith, as defined herein.

NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.
Additions to Codes are in single-underline italics Times New Roman font.
Deletions to Codes are in ~~strikethrough italics Times New Roman font~~.
Board amendment additions are in double-underlined Arial font.
Board amendment deletions are in ~~strikethrough Arial font~~.
Asterisks (* * * *) indicate the omission of unchanged Code subsections or parts of tables.

Be it ordained by the People of the City and County of San Francisco:

Section 1. Findings. The Board of Supervisors ("Board") of the City hereby finds and declares as follows:

A. On November 5, 2002, the voters of the City and County of San Francisco ("City") approved Proposition E ("Proposition E"), which among other things, authorized the San Francisco Public Utilities Commission ("Commission") to issue revenue bonds, including notes, commercial paper or other forms of indebtedness, when authorized by ordinance

approved by a two-thirds vote of the Board of Supervisors, for the purpose of reconstructing, replacing, expanding, repairing or improving water facilities or clean water facilities or combinations of water and clean water facilities under the jurisdiction of the Commission; and

B. The Commission adopted the Amended and Restated Water Indenture dated as of January 1, 2002, as further amended and supplemented from time to time ("Indenture"), between the Commission and U. S. Bank National Association and in connection therewith, has from time to time issued revenue bonds to finance projects benefitting the Water Enterprise; and

C. Pursuant to Section 43.5 of the San Francisco Administrative Code ("Article V"), enacted by Ordinance No. 203-98 adopted by the Board on June 8, 1998, and signed by the Mayor of the City on June 19, 1998, as amended by Ordinance No. 270-06, adopted on October 24, 2006 by the Board and signed by the Mayor on October 31, 2006, the Board established a procedure pursuant to which the Commission may issue short-term indebtedness, including the issuance of commercial paper in anticipation of the issuance of its revenue bonds; and

D. Pursuant to Ordinance No. 311-08, adopted by the Board of Supervisors on December 16, 2008, and Resolution No. 09-175, adopted by this Commission on October 27, 2009, the Water Enterprise's commercial paper program ("Water CP Program") was increased to an aggregate principal amount of $500,000,000, and the Commission has caused its Water Enterprise Commercial Paper to be issued from time to time; and

E. By Resolution 23-0038, adopted by the Commission on February 14, 2023 ("Commission Resolution") the Commission has determined to issue Water Revenue Bonds ("Water Revenue Bonds") and other forms of indebtedness (including without limitation State Revolving Fund (SRF) Loans as described below), as well as interim funding vehicles such as

commercial paper, revolving credit agreements, bond anticipation notes or other forms of notes, which interim funding vehicles will be issued in advance of being paid off by either Water Revenue Bonds and other forms of indebtedness (including without limitation SRF Loans) to finance the costs of various capital projects benefitting the Water Enterprise (the "Capital Improvement Projects" such projects being more fully described in the Commission Resolution), pursuant to Proposition E, and has formally requested this Board to authorize the issuance and sale of Water Revenue Bonds and other forms of indebtedness for such purposes, such Commission Resolution being on file with the Clerk of the Board in File No. 230665; and

F. In order to finance the costs of the Capital Improvement Projects, the Board now desires to authorize the issuance and sale of Water Revenue Bonds and other forms of indebtedness, as described above, for such purposes, including obtaining SRF Loans and/or grants from the State Water Resources Control Board; and

G. The Commission has paid, beginning no earlier than 60 days prior to the adoption of this Ordinance and will pay, on and after the date hereof, certain expenditures ("Expenditures") in connection with the acquisition, construction and/or equipping of the Capital Improvement Projects; and

H. This Board is concurrently considering with this Ordinance, related supplemental appropriation ordinances for fiscal year ending 2023, including expenditures of the proceeds of the Water Revenue Bonds and other forms of indebtedness (including, without limitation and for illustrative purposes only, SRF Loans, commercial paper, revolving credit agreements, and bond anticipation notes); and

I. This Board, on behalf of the Commission, adopts this Ordinance as official action of the Commission in order to comply with Treasury Regulation §1.150-2 and any other regulations of the Internal Revenue Service relating to the qualification for reimbursement of

Commission expenditures incurred prior to the date of issue of the Water Revenue Bonds and other forms of indebtedness (including, without limitation and for illustrative purposes only, SRF Loans, commercial paper, revolving credit agreements, and bond anticipation notes).

Section 2. Authorization to Issue Water Revenue Bonds and other forms of indebtedness. The Board hereby authorizes the issuance and sale of taxable or tax-exempt Water Revenue Bonds or other forms of indebtedness (including without limitation SRF Loans, commercial paper, revolving credit agreements and bond anticipation notes) in one or more series from time to time by the Commission pursuant to Proposition E and in accordance with the Commission Resolution, in an aggregate principal amount not to exceed $358,985,453 (inclusive of financing costs), bearing a maximum rate or rates of interest of not to exceed twelve percent (12%) per annum, to finance a portion of the costs of the design, acquisition and construction of the Capital Improvement Projects. Without limiting the foregoing, the Commission shall be authorized to incur state and federal at such time, in such amounts, and upon such other terms and conditions as the Commission may deem advantageous, and to approve any financing documentation related thereto consistent with this Ordinance. The Commission is hereby further authorized to determine the timing, amount and manner of sale (i.e., competitive or negotiated) of each series of Water Revenue Bonds, bond anticipation notes, revolving credit agreements, or commercial paper, pursuant to this authorization; provided however, the Commission's authorization to issue Water Revenue Bonds, bond anticipation notes, revolving credit agreements, or commercial paper is subject to approval by the Commission of the form of substantially final offering document related to such obligations (if any) and the approval of any related agreements, financing documents and the filing with its Board and the Clerk of the Board any certifications required by Proposition E prior to the issuance of any bonds or incurrence of any indebtedness herein authorized. The Commission shall also file, within 30 days of closing any Water Revenue

Bond or other form of indebtedness (including SRF Loans or other federal loans and bond anticipation notes) transactions) authorized hereby, with the Clerk of the Board of Supervisors a report showing the results of the transaction, including (i) principal amount sold and method of sale, (ii) true interest cost, (iii) final maturity, (iv) the facilities constructed and/or improved, and (v) a statement about the remaining bonding authorization under this Ordinance ("Bond Report"), provided that the failure to file such Bond Report shall not affect the validity of any debt authorized hereunder.

Section 3. Authorization to Issue Water Revenue Refunding Bonds; Commercial Paper Retirement. Notwithstanding Section 2 immediately above, the Board further authorizes and approves the issuance by the Commission of Water Revenue Refunding Bonds ("Refunding Bonds") without limitation as to principal amount, in one or more series on one or more dates, at a maximum interest rate or rates of interest not to exceed twelve percent (12%) per annum, provided that each such Refunding Bond issue is permitted under the applicable policies and procedures of the City and authorized by Section 9.109 of the Charter (including related ordinances and resolutions of the Board). The Refunding Bonds may be issued as taxable or tax-exempt obligations, or any combination thereof. Refunding Bonds authorized hereunder shall be subject to the further following conditions, that: (i) three percent (3%) net present value debt service savings or greater is achieved to ensure ratepayer savings (exclusive of any issuance to refund commercial paper, revolving credit notes, or bond anticipation notes); (ii) that the maturity of the refunded bonds is not extended; (iii) this authorization is subject to a 5-year term through June 30, 2028, at which time this Board may consider an extension; (iv) principal payments and term may be adjusted, where permitted under federal and state tax law, only if and when the underlying capital asset funded through said refunded bonds has a useful life not in excess of any limit permitted under federal and state tax law than the refunded term; and (v) the Commission shall within 30 days

of any executed refunding transaction provide a refunding savings report ("Bond Refunding Savings Report") prepared by its municipal advisors (that reflects at least a three percent (3%) net present value debt service savings) to the Board, together with a copy of the final Official Statement (if any) with respect to such series of Refunding Bonds, provided that the failure to deliver such Bond Refunding Savings Report shall in no way affect the validity of any Refunding Bonds. Notwithstanding the foregoing, the Commission is authorized to issue Refunding Bonds that do not meet all of the foregoing conditions provided that the Commission makes a finding, by resolution, that significant non-economic factors exist that justify the waiver of the three percent (3%) net present value debt service savings test and other conditions set forth above. Such non-economic factors may include, by way of illustration and not limitation, eliminating onerous covenants and obsolete provisions contained in the Commission's indenture or other security documents, or restructuring a series of bonds in response to then-current market conditions. In furtherance of the purpose of managing the Commission outstanding indebtedness, the General Manager is hereby authorized and directed, in consultation the City Attorney, from Available Water Enterprise Revenues to retire outstanding Water Enterprise Commercial Paper at such times and in such amounts advantageous to the Commission.

Section 4. Declaration of Official Intent. The Board, on behalf of the Commission, hereby declares the official intent of the Commission to reimburse the Commission with proceeds of the Water Revenue Bonds or other forms of indebtedness (including SRF Loans or other federal loans, commercial paper, revolving credit notes, or bond anticipation notes) for the Expenditures with respect to the Capital Improvement Projects made on and after a date that is no more than 60 days prior to the adoption of this Ordinance. The Commission reasonably expects on the date hereof that it will reimburse the Expenditures with proceeds of the Water Revenue Bonds or other forms of indebtedness (including, without limitation and for

illustrative purposes only, SRF Loans, commercial paper, revolving credit notes or bond anticipation notes). Each said Expenditure was and will be either (A) of a type properly chargeable to a capital account under general federal income tax principles (determined in each case as of the date of the Expenditure), (B) a cost of issuance with respect to such obligations, (C) a nonrecurring item that is not customarily payable from current revenues, or (D) a grant to pay a party that is not related to or an agent of the issuer so long as such grant does not impose any obligation or condition (directly or indirectly) to repay any amount to or for the benefit of the Commission. The Commission will make a reimbursement allocation, which is a written allocation by the Issuer that evidences the Commission's use of proceeds of the Water Revenue Bonds or other forms of indebtedness to reimburse an Expenditure, no later than 18 months after the later of the date on which the Expenditure is paid or the component of the Capital Improvement Projects is placed in service or abandoned, but in no event more than three years after the date on which the Expenditure is paid. The Commission recognizes that exceptions are available for certain "preliminary expenditures," costs of issuance, certain de minimis amounts, expenditures by "small issuers" (based on the year of issuance and not the year of expenditure) and expenditures for construction projects of at least 5 years.

Section 5. General Authority. The Controller, Treasurer, the City Attorney and other officers of the City, including the Director of the Office of Public Finance, and their duly authorized deputies and agents are hereby authorized and directed, jointly and severally, to take such actions and to execute and deliver such certificates, agreements, requests or other documents, as they may deem necessary or desirable to facilitate the issuance, sale and delivery of the Water Revenue Bonds or other forms of indebtedness, including Refunding Bonds, and to obtain bond insurance or other credit or liquidity enhancements with respect to any such obligations, and otherwise to carry out the provisions of this Ordinance. The

Commission is hereby directed to provide the final form to the Clerk of the Board of any disclosure document prepared in connection with the execution of any Water Revenue Bonds, other forms of indebtedness, or Refunding Bonds, and the final executed Installment Sale Agreement or other document reflecting the incurrence of an SRF Loan or other federal loan, within 30 days of the closing of such transactions provided that the failure to deliver such document shall not affect the validity of the obligations authorized hereunder. The Commission is further directed as a part of the two-year budget review to provide to this Board of Supervisors a written report about Water Revenue Bonds authorized hereunder, detailing the total amount authorized, the total amount sold, the remaining authorized but unissued amount, and the bond authorization no longer necessary due to changes in projects and project financing.

Section 6. Ratification of Prior Actions. All actions authorized and directed by this Ordinance in connection with the issuance of the Water Revenue Bonds, other forms of indebtedness (including, without limitation and for illustrative purposes only, SRF Loans, federal loan, commercial paper, revolving credit notes, or bond anticipation notes) or Refunding Bonds and heretofore taken are hereby ratified, approved and confirmed by this Board.

Section 7. File Documents. All documents referred to as on file with the Clerk of the Board are in File No. 230665.

Section 8. Effective Date. Pursuant to Charter Section 8B.124, this Ordinance shall take effect thirty (30) days after its adoption.

APPROVED AS TO FORM:
DAVID CHIU, City Attorney

By: /s/ Mark D. Blake
Mark D. Blake
Deputy City Attorney

City and County of San Francisco
Tails
Ordinance

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230665 **Date Passed:** July 25, 2023

Ordinance authorizing the issuance and sale of tax-exempt or taxable Water Revenue Bonds and other forms of indebtedness (as described below) by the San Francisco Public Utilities Commission ("Commission") in an aggregate principal amount not to exceed $358,985,453 to finance the costs of various capital water projects benefitting the Water Enterprise pursuant to amendments to the Charter of the City and County of San Francisco enacted by the voters on November 5, 2002, as Proposition E; authorizing the issuance of Water Revenue Refunding Bonds and the retirement of outstanding Water Enterprise Commercial Paper; declaring the Official Intent of the Commission to reimburse itself with one or more issues of tax-exempt bonds or other forms of indebtedness; and ratifying previous actions taken in connection therewith, as defined herein.

June 14, 2023 Budget and Appropriations Committee - RECOMMENDED

July 11, 2023 Board of Supervisors - CONTINUED ON FIRST READING

Ayes: 10 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Safai, Stefani and Walton
Excused: 1 - Ronen

July 18, 2023 Board of Supervisors - PASSED ON FIRST READING

Ayes: 10 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Ronen, Safai, Stefani and Walton
Noes: 1 - Preston

July 25, 2023 Board of Supervisors - FINALLY PASSED

Ayes: 10 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Ronen, Safai, Stefani and Walton
Noes: 1 - Preston

File No. 230665

I hereby certify that the foregoing Ordinance was FINALLY PASSED on 7/25/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

London N. Breed
Mayor

7/28/23

Date Approved

Stantec Consulting Services Inc.
1340 Treat Blvd, Suite 300, Walnut Creek, CA 94597

Certificate of the Consulting Engineers
in connection with Section 8B.124 of the Charter of the City and County of San Francisco and the Indenture of the San Francisco Public Utilities Commission (SFPUC)
authorizing the Sale of Revenue Bonds and / or Other Forms of Indebtedness, including Commercial Paper

This Certificate has been prepared by Stantec Consulting Services, Inc., (Stantec), an independent consulting firm, at the request of the San Francisco Public Utilities Commission (SFPUC) in connection with the issuance by the SFPUC of its Revenue Bonds and/or other forms of Indebtedness, including Commercial Paper and State and Federal loans.

The City of San Francisco's Public Utilities Commission (PUC) Power Enterprise (PE) manages bond-funded capital projects. Section 8B.124 of the City Charter requires:

> …the Board of Supervisors may take any and all actions necessary to authorize, issue and repay such bonds, including, but not limited to, modifying schedules of rates and charges to provide for the payment and retirement of such bonds, subject to the following conditions:
>
> (a) Certification by an independent engineer retained by the Public Utilities Commission that:
>
> (1) the projects to be financed by the bonds, including the prioritization, cost estimates and scheduling, meet utility standards; and

This review was performed for Hetch Hetchy Power to provide the required independent evaluation to comply with the City Charter and to access bond issuances for the following capital projects:

Water Projects

- CUW20071129E/10034364 - R&R SJPL Life Extension Program
- 10035575 - SJPL Valve and Safe Entry Improvement
- 10014114 - Mountain Tunnel Improvement Project (Tunnel)
- TBD –2023 January Winter Storm (Water)

Power

- TBD – 2023 January Winter Storm (Power)

Joint Projects

- 10014106 – R&R Communications Systems Upgrades
- CUWTBD/10014110 – Moccasin Wastewater Treatment Plant
- 10014114 – Mountain Tunnel Improvement Project (Flow Control)
- CUWTBD/10035086 – Bridge Replacement

Reference: Engineer's Certificate for Bond Financed Project

- CUH10116/10014088 – Moccasin Penstock Rehabilitation
- 10032903 – O'Shaughnessy Dam Outlet Works Phase 1
- CUH102 N02/10039680 – Moccasin Engineering and Records Building
- CUH102 N01/10039575 – R&R Water Conveyance Life Extension (Joint)
- TBD – eFleet Infrastructure Improvements
- 10040016 – 2023 January Winter Storm (Joint)
- TBD – 2023 March Winter Storm (Joint)

The findings and conclusions in this Certificate are based on solely Stantec's review of the pertinent portions of following Documents and information provided by the SFPUC:

- Hetchy Power Capital Plan and Project Pages – Hetch Hetchy Enterprise FY 2024-2033 Capital Plan Summary
- Hetchy Power Capital Plan and Project Pages – Hetch Hetchy Enterprise Fiscal Years 2024-2033 Ten Year CIP Capital Projects 1/12/23
- Hetchy Power Capital Plan and Project Pages – Storm Recovery Project Description Pages 7/14/23
- Interviews with HHWP Project Managers and Staff

1. Based upon our review of the Documents and information noted above and upon conversations and representations of SFPUC staff, the undersigned certifies that the Projects, including prioritization, cost estimates, and scheduling, appear to meet generally accepted utility standards.

While developing this Certificate, Stantec reviewed the pertinent portions of the Documents (listed above) and consulted with SFPUC staff. This Certification is based on the information provided by the SFPUC. The conclusions and observations contained herein constitute only the opinion of Stantec. The various background documents, statements, and other information supplied by the SFPUC, its employees, and other consultants have been relied upon as being accurate in the performance of these analyses; however, no assurances are given nor warranties implied by Stantec as to the accuracy of such information. Stantec makes no certification and gives no assurances except as explicitly set forth in this document.

Dated this 21st day of July, 2023.

Stantec Consulting Services Inc.

By:_____
W. Anthony Zavanelli, PE, CEM, LEED AP
Principal

Certificate of the Consulting Engineers
in connection with Section 8B.124 of the Charter of the City and County of San Francisco and the Indenture of the San Francisco Public Utilities Commission (SFPUC)
authorizing the Sale of Water Revenue Bonds and / or Other Forms of Indebtedness, including Commercial Paper and State and Federal Loans

This Certificate has been prepared by AECOM Technical Services, Inc., (AECOM), an independent consulting firm, at the request of the San Francisco Public Utilities Commission (SFPUC) in connection with the issuance by the SFPUC of its Water Revenue Bonds and/or other forms of Indebtedness, including Commercial Paper and State and Federal loans.

Proposition E requires certification by an independent consulting engineer that, among other things, "(i) the Projects to be financed with proceeds of bonds under Proposition E, including the prioritization, scheduling and cost estimates thereof, meet generally accepted utility standards."

Section A below includes projects in the Water Enterprise 10-Year Capital Plan and other portions of the Water Enterprise's capital program, and certifies that (i) the anticipated projects to be financed by the proposed Revenue Bonds and/or Commercial Paper Notes (the "Notes"), or State and Federal loans including the prioritization, cost estimates and scheduling, meet generally accepted utility standards.

The findings and conclusions in this Certificate are based on AECOM's review of the following Documents, references and data provided by the SFPUC:

- Water Enterprise Capital Improvement Program Quarterly Report – (Q4, FY2022-23), dated August 28, 2023
- Water System Improvement Program Quarterly Report – (Q4, FY2022-23), dated August 10, 2023
- Water Enterprise 2024-2033 10-Year Capital Improvement Plan and Project Datasheets, January 30, 2023
- Certificate of City and County of San Francisco Planning Department Regarding Proposed Sale of Water Revenue Bonds and Other Forms of Indebtedness in an amount not to exceed $358,985,453, exclusive of financing costs, for Capital Projects budgeted in Fiscal Year 2023-24, August 15, 2023
- Water Enterprise Revenue Bonds and Other Forms of Indebtedness FY 2023-2024 Capital Improvement Projects (Exhibit A, as included with the Environmental Planning Certification dated August 15, 2023)
- Other documents produced by SFPUC to support certification
- Discussions with SFPUC staff

1. Based upon its review of the Documents, and in reliance on the information presented in the Documents, references and data, and in reliance upon conversations and representations of SFPUC staff, the undersigned certifies that the Projects, including prioritization, cost estimates, and scheduling, meet generally accepted utility standards.

2. The Documents contain information about the current status of the Projects, estimated completion dates and cost of completion of some of the Projects.

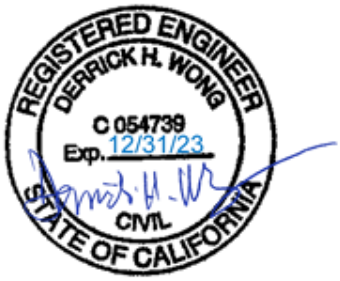
While developing the Certificate, AECOM reviewed the Documents and consulted with SFPUC staff. This Certification is based on the information provided by the SFPUC. The conclusions and observations contained herein constitute only the opinions of AECOM. The various background documents, statements, and other information supplied by the SFPUC, its employees, and other consultants have been relied upon as being accurate in the performance of these analyses; however, no assurances are given nor warranties implied by AECOM as to the accuracy of such information. AECOM makes no certification and gives no assurances except as explicitly set forth in this document.

SECTION A: CERTIFICATION OF PORTIONS OF THE WATER CIP

AECOM's review of the Documents for Section A included a "programmatic approach" such that AECOM certifies that the revenue bonds and/or other forms of indebtedness including commercial paper and state and federal loans are intended to be used by the SFPUC to fund the capital projects included in the Water Enterprise's capital program. Projects may be moved on or off the CIP list, modified, delayed or accelerated as necessary due to scheduling, budgeting, or other constraints.

Based upon our review of the Documents provided by the SFPUC, and in reliance upon conversations and representations of SFPUC staff, AECOM certifies that the projects, as listed in Schedule I, to be financed by the revenue bonds and/or commercial paper program, as identified in the Water Enterprise's capital program including the prioritization, cost estimates and scheduling, meet generally accepted utility standards.

Dated this 15rd day of November, 2023



AECOM Technical Services, Inc.

By:_____

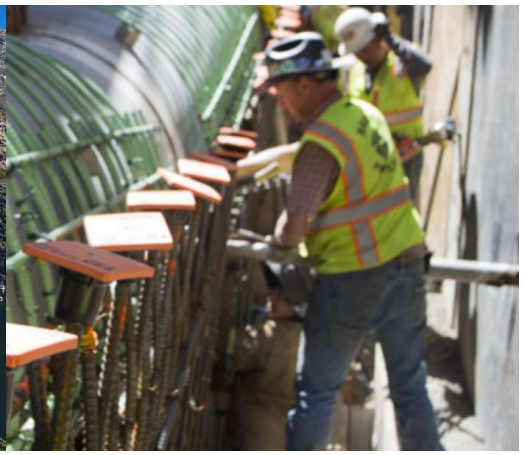
Derrick Wong, P. E.
Civil Engineer

Attachment A
Exhibit A Water Enterprise Revenue Bonds and Other Forms of Indebtedness – FY 2023-2024 Capital Improvement Projects, August 15, 2023

SCHEDULE I

See Exhibit A Above

San Francisco Water Power Sewer



Water Financial Projections

October 12, 2023

BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

2625 Alcatraz Avenue, #602
Berkeley, CA 94705
Tel 510 653 3399
www.bartlewells.com

TO: San Francisco Public Utilities Commission

DATE: October 12, 2023

ATTN: Edward Kwong, SFPUC

FROM: Alex Handlers, Bartle Wells Associates

RE: Water Financial Projections for Proposition E Compliance

Background

Bartle Wells Associates (BWA) was retained by the San Francisco Public Utilities Commission (SFPUC) to develop financial projections in support of San Francisco Charter Article VIIIB, Section 8B.124, as established by Proposition E which was approved by the voters of the City and County of San Francisco on November 5, 2002. This section of the Charter a) authorizes the SFPUC to issue revenue bonds and other forms of indebtedness and b) authorizes the Board of Supervisors to take actions necessary for the issuance and repayment of such debt subject to various conditions including "*that estimated net revenue after payment of operating and maintenance expenses will be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service on the bonds to be issued, and estimated repair and replacement costs.*"

Financial Projections

BWA developed financial projections based on data provided by the SFPUC as well as a number of independent calculations and assumptions which constitute such examination or investigation as is necessary to enable BWA to express an informed opinion as to whether the requirements of Proposition E have been satisfied. Based on the projections, the Water Enterprise will generate net revenues (as defined per the Indenture securing the SFPUC's outstanding Water Revenue Bonds) that are at least 1.25 times Annual Debt Service in each fiscal year from Fiscal Years 2023-24 through 2032-33. In accordance with the requirements of Proposition E, BWA certifies that estimated net revenue after payment of operating and maintenance expenses will be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service on projected bonds to be issued, and estimated repair and replacement costs.

Attached Tables

The attached tables include:

- **Table 1 - SFPUC Water Cash Flow Projections** – This table was developed by Bartle Wells Associates based on information provided by the SFPUC and a number of independent assumptions, and includes projections of future fund balances, revenues, operating and maintenance expenses, debt service, other non-operating expenses, net revenues, and debt service coverage.
- **Table 2 - Cash Flow Assumptions** – This table describes assumptions used in developing the financial projections.
- **Table 3 - 10-Year Capital Improvement Program & Funding Sources** – This table shows projected SFPUC power capital improvements and anticipated sources of funding.
- **Table 4 - Estimated Debt Service** – This tables estimates annual debt service on future bonds per each $100 million of project funding.
- **Table 5 - Projected Bond Issues** – This table shows projected debt issued by fiscal year and calculates annual debt service for each bond issue.
- **Table 6 - Projected Debt Service on Future Financings** – This table projects debt service by fiscal year for each water debt issue and shows a schedule of projected debt payments.
- **Table 7 - Outstanding Debt** – This table shows debt service due on outstanding debt issues.

The tables are based on information provided by the SFPUC as well as a number of independent calculations and assumptions. BWA takes no responsibility for the accuracy of information provided by the SFPUC, nor for any errors or omissions in information provided.

SFPUC Water Financial Projections

List of Tables

Table 1 - SFPUC Water Cash Flow Projections

Table 2 - Cash Flow Assumptions

Table 3 - 10-Year Water Capital Improvement Program & Funding Sources

Table 4 - Estimated Bond Debt Service

Table 5 - Projected Bond Issues

Table 6 - Projected Debt Service on Future Bond Issues

Table 7 - Outstanding Debt

Table 1 - SFPUC Water Cash Flow Projections

Years 1 - 5

	2023/24	2024/25	2025/26	2026/27	2027/28
Retail Water Rate Adjustments	5.0%	5.0%	5.0%	5.0%	5.0%
Drought Surcharges on Volumetric Charges	0.0%	0.0%	0.0%	0.0%	0.0%
Retail Water Sales (ccf)	26,920,000	27,058,000	27,269,000	26,966,000	26,737,000
Change in Retail Demand	3.7%	0.5%	0.8%	-1.1%	-0.8%
Wholesale Water Sales Excl In-Lieu (ccf)	59,524,000	60,802,000	62,273,000	62,460,000	62,819,000
Change in Wholesale Demand	0.7%	2.1%	2.4%	0.3%	0.6%
Wholesale Water Rate ($/ccf)	$5.21	$5.32	$5.41	$5.41	$5.72
Wholesale Blended Water Rate ($/ccf)	$5.16	$5.26	$5.35	$5.35	$5.66
Net Interest Earnings Rate	2.0%	2.0%	2.0%	2.0%	2.0%
O&M Cost Escalation	-	3.0%	3.0%	3.0%	3.0%
Beginning Fund Reserves					
Unappropriated Fund Reserves (After Budget)	$173,031,000	$169,790,000	$131,417,000	$93,967,000	$85,093,000
Fund Reserves Budgeted as Revenues	15,083,000	0	0	0	0
Wholesale Coverage Reserves	53,993,000	55,661,000	56,182,000	60,953,000	61,323,000
Total	242,107,000	225,451,000	187,599,000	154,920,000	146,416,000
Revenues					
Retail Water Volumetric Charges	280,904,000	296,461,000	313,711,000	325,736,000	339,118,000
Retail Water Drought Surcharges	0	0	0	0	0
Retail Water Fixed Charges	51,974,000	54,573,000	57,302,000	60,167,000	63,175,000
Retail Discount Programs	(7,000,000)	(7,000,000)	(7,000,000)	(7,000,000)	(7,000,000)
Wholesale Volumetric Charges	307,789,000	319,819,000	333,161,000	334,161,000	355,556,000
Wholesale Fixed Service Charges	4,320,000	4,320,000	4,320,000	4,320,000	4,320,000
Interest Income	4,842,000	4,509,000	3,752,000	3,098,000	2,928,000
Capacity Charges	1,997,000	2,061,000	1,520,000	1,580,000	1,644,000
Rental Revenue	13,596,000	13,964,000	14,321,000	14,688,000	15,064,000
Other Miscellaneous Income	16,389,000	17,018,000	17,546,000	18,118,000	18,657,000
Programmatic Revenues	7,158,000	7,265,000	7,176,000	7,196,000	7,220,000
Power Reimb for Mt Tunnel SRF Loan	253,000	435,000	523,000	643,000	719,000
BABs Interest Subsidies (Net of Sequest.)	20,841,000	20,370,000	19,876,000	19,345,000	18,772,000
Subtotal	703,063,000	733,795,000	766,208,000	782,052,000	820,173,000
Operation & Maintenance Expenses					
Personnel	112,645,000	116,498,000	120,489,000	124,622,000	128,901,000
Non-Personal Services	17,980,000	18,519,000	19,075,000	19,647,000	20,236,000
Materials/Supplies/Equipment	20,636,000	21,255,000	21,893,000	22,550,000	23,227,000
Services of SFPUC Bureaus	66,107,000	68,090,000	70,133,000	72,237,000	74,404,000
Services of Other Departments	27,293,000	28,112,000	28,955,000	29,824,000	30,719,000
Hetch Hetchy Assessment	46,266,000	49,477,000	51,029,000	52,585,000	53,965,000
Other Operating Expenses	4,462,000	4,596,000	4,734,000	4,876,000	5,022,000
Programmatic Projects (Excl 525GG Ls +TI Maint)	22,777,000	22,777,000	22,777,000	22,777,000	22,777,000
Subtotal	318,166,000	329,324,000	339,085,000	349,118,000	359,251,000
Debt Service, *Net of Capitalized Interest*					
Outstanding Bonds	327,328,000	331,288,000	336,256,000	334,340,000	331,290,000
Outstanding SRF Loans (projected)	0	695,000	8,206,000	8,868,000	9,513,000
Series 2023AB Bonds (New Money)	16,159,000	21,231,000	21,231,000	21,231,000	21,231,000
Projected Future Debt	0	0	0	1,385,000	22,317,000
Subtotal	343,487,000	353,214,000	365,693,000	365,824,000	384,351,000
Non-Operating Expenses					
Local Projects	22,577,000	53,620,000	58,620,000	40,125,000	31,644,000
Regional Projects	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000
Wholesale Projects	0	0	0	0	0
Hetchy Water Projects	0	0	0	0	0
Treasure Island Facilities Maintenance	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000
525 Golden Gate Lease	9,139,000	9,139,000	9,139,000	9,139,000	9,139,000
Subtotal	58,066,000	89,109,000	94,109,000	75,614,000	67,133,000
Total Expenses	719,719,000	771,647,000	798,887,000	790,556,000	810,735,000
Revenues Less Expenses	(16,656,000)	(37,852,000)	(32,679,000)	(8,504,000)	9,438,000
Transfer to Wholesale Coverage Reserve	(1,668,000)	(521,000)	(4,771,000)	(370,000)	(4,689,000)
Ending Fund Reserves					
Unappropriated Fund Reserves	169,790,000	131,417,000	93,967,000	85,093,000	89,842,000
Wholesale Coverage Reserves	55,661,000	56,182,000	60,953,000	61,323,000	66,012,000
Total	225,451,000	187,599,000	154,920,000	146,416,000	155,854,000
Annual Revenues	703,063,000	733,795,000	766,208,000	782,052,000	820,173,000
Plus Reserves Budgeted as Revenues	15,083,000	0	0	0	0
Less Revs Excluded from Coverage Calc	(5,910,000)	(6,017,000)	(5,928,000)	(5,911,000)	(5,896,000)
Less Operating & Maintenance Expenses	(318,166,000)	(329,324,000)	(339,085,000)	(349,118,000)	(359,251,000)
Less Operating Carryforwards/Adjustments	0	0	0	0	0
Net Revenues (Current Basis)	**394,070,000**	**398,454,000**	**421,195,000**	**427,023,000**	**455,026,000**
Plus Beginning Fund Rsrvs (Excl Budgeted Rsrvs)	227,024,000	225,451,000	187,599,000	154,920,000	146,416,000
Other Adjustments (per SFPUC)	0	0	0	0	0
Net Revenues (Indenture Basis with Reserves)	**621,094,000**	**623,905,000**	**608,794,000**	**581,943,000**	**601,442,000**
Annual Debt Service	343,487,000	353,214,000	365,693,000	365,824,000	384,351,000
Debt Service Coverage, Current Basis	1.15	1.13	1.15	1.17	1.18
Debt Service Coverage, Indenture Basis	1.81	1.77	1.66	1.59	1.56

Table 1 - SFPUC Water Cash Flow Projections

Years 6 - 10

	2028/29	2029/30	2030/31	2031/32	2032/33
Retail Water Rate Adjustments	5.0%	5.0%	4.0%	3.0%	2.0%
Drought Surcharges on Volumetric Charges	0.0%	0.0%	0.0%	0.0%	0.0%
Retail Water Sales (ccf)	26,361,000	26,094,000	25,847,000	25,813,000	25,655,000
Change in Retail Demand	-1.4%	-1.0%	-0.9%	-0.1%	-0.6%
Wholesale Water Sales (ccf)	62,835,000	63,212,000	63,592,000	64,147,000	64,357,000
Change in Wholesale Demand	0.0%	0.6%	0.6%	0.9%	0.3%
Wholesale Water Rate ($/ccf)	$5.75	$6.03	$6.05	$6.05	$6.06
Wholesale Blended Water Rate ($/ccf)	$5.69	$5.97	$5.99	$5.99	$6.00
Net Interest Earnings Rate	2.0%	2.0%	2.0%	2.0%	2.0%
O&M Cost Escalation	3.0%	3.0%	3.0%	3.0%	3.0%
Beginning Fund Reserves					
Unappropriated Fund Reserves (After Budget)	$89,842,000	$82,069,000	$70,576,000	$89,564,000	$104,247,000
Fund Reserves Budgeted as Revenues	0	0	0	0	0
Wholesale Coverage Reserves	66,012,000	66,557,000	70,673,000	71,003,000	71,829,000
Total	155,854,000	148,626,000	141,249,000	160,567,000	176,076,000
Revenues					
Retail Water Volumetric Charges	351,066,000	364,886,000	375,889,000	386,656,000	391,975,000
Retail Water Drought Surcharges	0	0	0	0	0
Retail Water Fixed Charges	66,334,000	69,651,000	72,437,000	74,610,000	76,102,000
Retail Discount Programs	(7,000,000)	(7,000,000)	(7,000,000)	(7,000,000)	(7,000,000)
Wholesale Volumetric Charges	357,531,000	377,376,000	380,916,000	384,241,000	386,142,000
Wholesale Fixed Service Charges	4,320,000	4,320,000	4,320,000	4,320,000	4,320,000
Interest Income	3,117,000	2,973,000	2,825,000	3,211,000	3,522,000
Capacity Charges	1,644,000	1,634,000	1,554,000	1,520,000	1,520,000
Rental Revenue	15,450,000	15,846,000	16,252,000	16,668,000	17,095,000
Other Miscellaneous Income	20,982,000	21,471,000	21,973,000	22,488,000	23,016,000
Programmatic Revenues	7,277,000	7,343,000	7,396,000	7,448,000	7,081,000
Power Reimb for Mt Tunnel SRF Loan	2,569,000	2,569,000	2,569,000	2,569,000	2,569,000
BABs Interest Subsidies (Net of Sequest.)	18,164,000	17,524,000	16,859,000	16,041,000	16,041,000
Subtotal	841,454,000	878,593,000	895,990,000	912,772,000	922,383,000
Operation & Maintenance Expenses					
Personnel	133,333,000	137,922,000	142,676,000	147,600,000	152,700,000
Non-Personal Services	20,843,000	21,468,000	22,112,000	22,775,000	23,458,000
Materials/Supplies/Equipment	23,924,000	24,642,000	25,381,000	26,142,000	26,926,000
Services of SFPUC Bureaus	76,636,000	78,935,000	81,303,000	83,742,000	86,254,000
Services of Other Departments	31,641,000	32,590,000	33,568,000	34,575,000	35,612,000
Hetch Hetchy Assessment	55,477,000	57,221,000	58,947,000	60,676,000	62,689,000
Other Operating Expenses	5,173,000	5,328,000	5,488,000	5,653,000	5,823,000
Programmatic Projects (Excl 525GG Ls +TI Maint)	22,777,000	22,777,000	22,777,000	22,777,000	22,777,000
Subtotal	369,804,000	380,883,000	392,252,000	403,940,000	416,239,000
Debt Service, *Net of Capitalized Interest*					
Outstanding Bonds	330,015,000	331,825,000	328,968,000	329,842,000	320,883,000
Outstanding SRF Loans (projected)	16,198,000	16,198,000	16,198,000	16,198,000	16,198,000
Series 2023AB Bonds (New Money)	29,489,000	29,490,000	29,488,000	29,493,000	29,493,000
Projected Future Debt	24,043,000	50,123,000	50,123,000	50,123,000	50,123,000
Subtotal	399,745,000	427,636,000	424,777,000	425,656,000	416,697,000
Non-Operating Expenses					
Local Projects	43,644,000	41,962,000	29,154,000	37,219,000	24,520,000
Regional Projects	25,000,000	25,000,000	20,000,000	19,959,000	22,000,000
Wholesale Projects	0	0	0	0	0
Hetchy Water Projects	0	0	0	0	0
Treasure Island Facilities Maintenance	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000
525 Golden Gate Lease	9,139,000	9,139,000	9,139,000	9,139,000	9,139,000
Subtotal	79,133,000	77,451,000	59,643,000	67,667,000	57,009,000
Total Expenses	848,682,000	885,970,000	876,672,000	897,263,000	889,945,000
Revenues Less Expenses	(7,228,000)	(7,377,000)	19,318,000	15,509,000	32,438,000
Transfer to Wholesale Coverage Reserve	(545,000)	(4,116,000)	(330,000)	(826,000)	(839,000)
Ending Fund Reserves					
Unappropriated Fund Reserves	82,069,000	70,576,000	89,564,000	104,247,000	135,846,000
Wholesale Coverage Reserves	66,557,000	70,673,000	71,003,000	71,829,000	72,668,000
Total	148,626,000	141,249,000	160,567,000	176,076,000	208,514,000
Annual Revenues	841,454,000	878,593,000	895,990,000	912,772,000	922,383,000
Plus Reserves Budgeted as Revenues	0	0	0	0	0
Less Revs Excluded from Coverage Calc	(5,953,000)	(6,019,000)	(6,072,000)	(6,124,000)	(5,717,000)
Less Operating & Maintenance Expenses	(369,804,000)	(380,883,000)	(392,252,000)	(403,940,000)	(416,239,000)
Less Operating Carryforwards/Adjustments	0	0	0	0	0
Net Revenues (Current Basis)	**465,697,000**	**491,691,000**	**497,666,000**	**502,708,000**	**500,427,000**
Plus Beginning Fund Rsrvs (Excl Budgeted Rsrvs)	155,854,000	148,626,000	141,249,000	160,567,000	176,076,000
Other Adjustments (per SFPUC)	0	0	0	0	0
Net Revenues (Indenture Basis with Reserves)	**621,551,000**	**640,317,000**	**638,915,000**	**663,275,000**	**676,503,000**
Annual Debt Service	399,745,000	427,636,000	424,777,000	425,656,000	416,697,000
Debt Service Coverage, Current Basis	1.16	1.15	1.17	1.18	1.20
Debt Service Coverage, Indenture Basis	1.55	1.50	1.50	1.56	1.62

Table 2
SFPUC Water Financial Projections
Cash Flow Assumptions

SFPUC Model Basis	Financial projections are based on SFPUC's Water 10 Year Plan dated 6/2/23.
Retail Water Rate Adjustments	Retail water rate adjustments are based on the SFPUC's adopted and projected rate increases.
Retail Water Sales	Retail water sales are based on SFPUC estimates for paying customers for FY 2023/24 and assume future retail water sales change as shown on the table, with future changes roughly based on SFPUC projections.
Wholesale Water Sales	Wholesale water sales projections based SFPUC estimates for FY 2023/24 and assume future wholesale water sales change as shown on the table, with future changes roughly based on SFPUC projections.
Wholesale Water Rates	Based on SFPUC wholesale water rate projections.
BABs Subsidies	BABs subsidies are accounted for as a revenue and are calculated based on a 35% federal reimbursement on interest coming due each fiscal year, adjusted to account for a 5.7% reduction of the 35% reimbursement due to sequestration.
Beginning Fund Reserves	Beginning fund reserves based on SFPUC estimates.
Retail Water Charges	Based on SFPUC revenue estimates for FY 2023/24, and subsequently escalate to account for projected rate increases and changes in projected water sales.
Wholesale Water Charges	Based on SFPUC revenue estimates for FY 2023/24, and subsequently are calculated based on volume of wholesale water sales (excluding projected in-lieu water) multiplied by the projected wholesale rate.
Interest Income	Interest income is based on the projected interest rate multiplied by estimated beginning fund reserves. Interest income excludes additional interest earnings on outstanding bond reserve funds.
Other Revenues	Other revenues are based on SFPUC projections.
Operation & Maintenance Expenses	Personnel Expenses, Hetch Hetchy Assessment and Programmatic Expenses are based on SFPUC 10-year projections and exclude the 525 Golden Gate Lease Payment and Treasure Island Facilities Maintenance expenses, which are non-operating expenses. Other Operation & Maintenance Expenses are based on SFPUC projections for FY 2023/24 and subsequently escalate at the annual rate of 3.0%.
Capital Projects	Capital Project expenses and sources of funding are based on SFPUC projections.
Debt Service Assumptions	Debt assumptions are shown on Table 4, which calculates debt service per $100 million of project funding. Future debt service projections are based on SFPUC projections of annual financing requirements and BWA projections of debt service as shown on Table 5 with a schedule of projected debt service by fiscal year shown on Table 6.
Outstanding Debt Service	Outstanding debt service is based on debt service schedules for each issue, as provided by SFPUC and adjusted to account for refundings via the Series 2023C & 2023D refunding bonds, and is shown on a fiscal year basis.
Debt Service Payments	Debt service payments in the cash flow projections reflect the amounts due each fiscal year. Note that pursuant to the Indenture (or supplemental indentures), as a procedural requirement the SFPUC may be required to make monthly prepayments to the trustee of 1/12th principal and 1/6th semi-annual debt service toward each upcoming bond payment.
Non-Operating Expenses	Non-Operating Expenses are based on SFPUC projections and include pay-go capital funding plus 525 Golden Gate Lease Payments and Treasure Island Facility Maintenance.
Net Revenues	Pursuant to the Indenture, Net Revenues are defined as Annual Revenues (excluding interest earnings on any bond funds including the reserve fund, capitalized interest fund, and improvement fund; but including fund reserves available to pay debt service assuming the Commission determined such reserves should be "Revenues" under the Indenture) less Operation and Maintenance Expenses.
Debt Service Coverage, Current Basis	Coverage based on annual Net Revenues (excluding available fund reserves) divided by Annual Debt Service.
Debt Service Coverage, Indenture Basis	Coverage based on annual Net Revenues plus Beginning Fund Reserves (as allowed per Indenture) divided by Annual Debt Service.

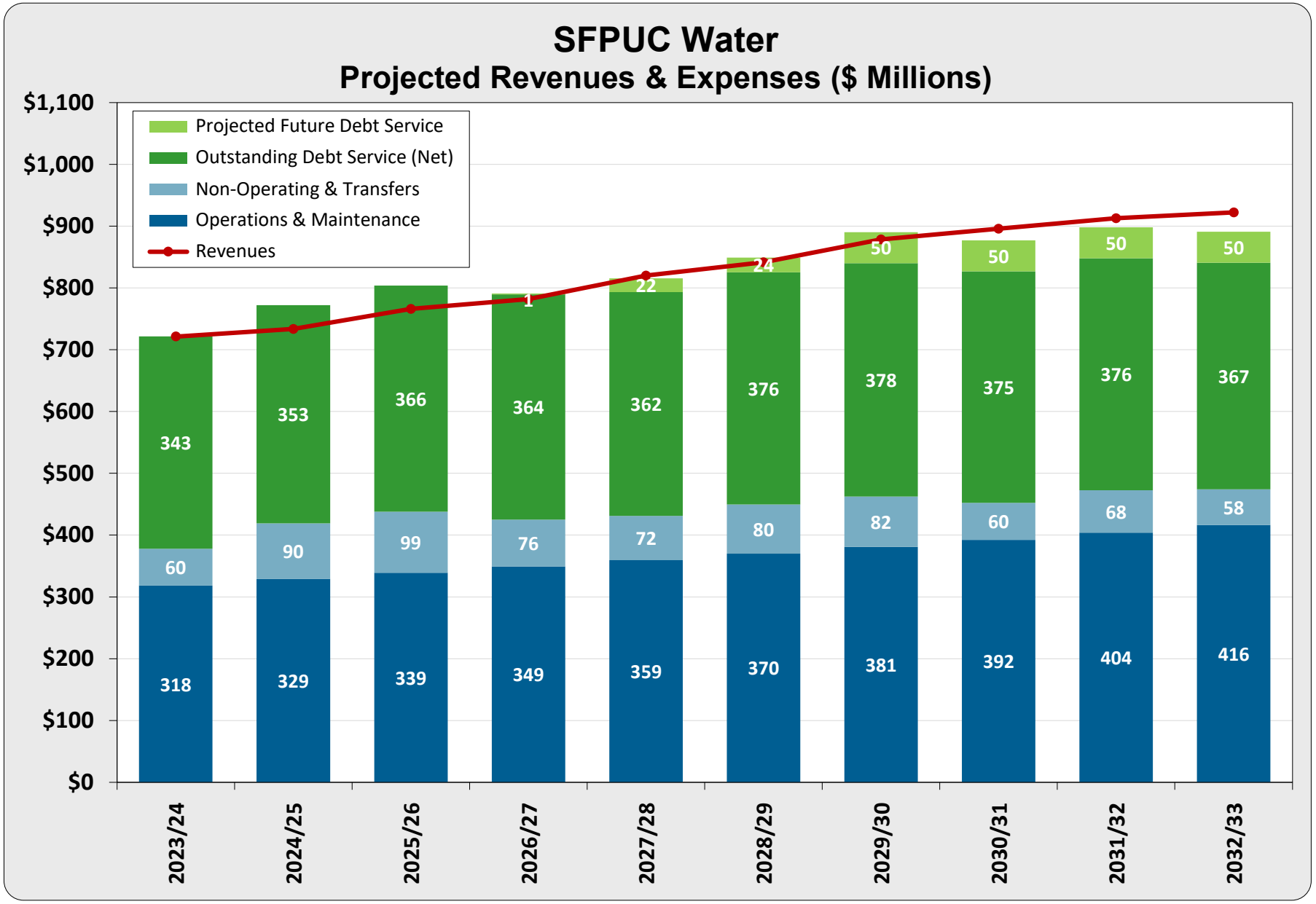

SFPUC Water
Projected Revenues & Expenses ($ Millions)
$1,100
$1,000
$900
$800
$700
$600
$500
$400
$300
$200
$100
$0
Projected Future Debt Service
Outstanding Debt Service (Net)
Non-Operating & Transfers
Operations & Maintenance
Revenues
343
353
366
364
362
376
378
375
376
367
60
90
99
76
72
80
82
60
68
58
318
329
339
349
359
370
381
392
404
416
1
22
24
50
50
50
2023/24
2024/25
2025/26
2026/27
2027/28
2028/29
2029/30
2030/31
2031/32
2032/33

Table 3
San Francisco Public Utilities Commission
10-Year Water Capital Improvement Program & Funding Sources (New Projects)

	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
REGIONAL WATER IMPROVEMENTS										
Water Treatment Program	153,058,000	99,686,000	17,197,000	16,434,000	10,356,000	13,493,000	3,787,000	4,248,000	2,748,000	2,748,000
Water Transmission Program	-	30,491,000	86,576,000	51,240,000	40,464,000	19,710,000	6,968,000	5,551,000	8,335,000	78,150,000
Water Supply & Storage	4,765,000	29,570,000	55,269,000	6,948,000	31,530,000	8,609,000	8,200,000	7,569,000	5,200,000	5,200,000
Watersheds & Land Management	12,158,000	1,513,000	1,283,000	450,000	391,000	403,000	411,000	419,000	428,000	436,000
Communication & Monitoring Program	1,999,000	3,950,000	4,400,000	3,450,000	2,450,000	2,450,000	1,000,000	1,000,000	750,000	750,000
Buildings and Grounds - Regional	9,097,000	19,791,000	19,404,000	93,305,000	91,263,000	5,944,000	3,685,000	2,335,000	2,335,000	2,335,000
Long Term Monitoring & Perm	400,000	2,965,000	7,414,000	4,176,000	3,574,000	2,528,000	2,555,000	2,330,000	2,352,000	3,303,000
Subtotal	181,477,000	187,966,000	191,543,000	176,003,000	180,028,000	53,137,000	26,606,000	23,452,000	22,148,000	92,922,000
LOCAL WATER IMPROVEMENTS										
Water Supply Projects	2,337,000	8,110,000	15,767,000	137,000	-	-	-	-	-	-
Local Water Conveyance	87,790,000	101,549,000	73,469,000	62,715,000	58,049,000	58,877,000	53,828,000	55,328,000	53,665,000	45,215,000
Buildings & Grounds Improvements	-	108,706,000	147,601,000	89,995,000	100,000	100,000	100,000	100,000	100,000	100,000
Automated Meter Reading System	3,114,000	3,050,000	2,964,000	4,824,000	4,830,000	4,140,000	4,236,000	4,344,000	4,344,000	4,345,000
Other Local Water Improvements	15,275,000	27,934,000	12,319,000	3,694,000	2,424,000	1,912,000	490,000	466,000	182,000	-
Subtotal	108,516,000	249,349,000	252,120,000	161,365,000	65,403,000	65,029,000	58,654,000	60,238,000	58,291,000	49,660,000
HETCH HETCHY PROJECTS: WATER USES										
Hetchy Water - Water Only	48,858,000	59,410,000	31,086,000	16,440,000	5,267,000	4,653,000	4,799,000	4,947,000	5,008,000	5,115,000
Hetchy Water - Joint Project (45% Water)	16,664,000	28,791,000	42,488,000	38,527,000	33,689,000	25,185,000	29,400,000	18,485,000	14,430,000	7,963,000
Subtotal	65,522,000	88,201,000	73,574,000	54,967,000	38,956,000	29,838,000	34,199,000	23,432,000	19,438,000	13,078,000
TOTAL	**355,515,000**	**525,516,000**	**517,238,000**	**392,335,000**	**284,387,000**	**148,004,000**	**119,459,000**	**107,122,000**	**99,877,000**	**155,660,000**
FUNDING SOURCES										
Water Bond Financing										
Water Revenue Bonds (Local)	83,140,000	195,729,000	193,501,000	121,239,000	33,759,000	21,385,000	16,692,000	31,083,000	21,072,000	25,140,000
Water Revenue Bonds (Regional)	156,477,000	162,967,000	166,544,000	151,002,000	155,027,000	28,138,000	1,606,000	3,452,000	2,189,000	922,000
Water Revenue Bonds (Wholesale)	-	-	-	-	-	-	-	-	-	70,000,000
Water Revenue Bonds (Hetchy)	65,521,000	88,201,000	73,574,000	54,967,000	38,956,000	29,838,000	34,199,000	23,433,000	19,439,000	13,078,000
Subtotal	305,138,000	446,897,000	433,619,000	327,208,000	227,742,000	79,361,000	52,497,000	57,968,000	42,700,000	109,140,000
Cash Funding & Contributions										
Pay-Go Revenue Funding: Local	20,580,000	51,559,000	57,100,000	38,545,000	30,000,000	42,000,000	40,328,000	27,600,000	35,699,000	23,000,000
Pay-Go Revenue Funding: Regional	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	20,000,000	19,959,000	22,000,000
Capacity Charges	4,797,000	2,061,000	1,520,000	1,580,000	1,644,000	1,644,000	1,634,000	1,554,000	1,520,000	1,520,000
Subtotal	50,377,000	78,620,000	83,620,000	65,125,000	56,644,000	68,644,000	66,962,000	49,154,000	57,178,000	46,520,000
TOTAL	**355,515,000**	**525,517,000**	**517,239,000**	**392,333,000**	**284,386,000**	**148,005,000**	**119,459,000**	**107,122,000**	**99,878,000**	**155,660,000**
Surplus / (Shortfall)	-	1,000	1,000	(2,000)	(1,000)	1,000	-	-	1,000	-

Amounts shown reflect capital improvements projected to be budgeted, but not necessarily funded or financed, each year.
SFPUC plans to reevaluate and adjust future annual capital improvements and/or funding to better align annual projects costs and funding sources.
Note: CIP project costs and funding sources are rounded to the nearest $1,000 resulting in small mismatches some years due to rounding.

Table 4
SFPUC Water Enterprise
Estimated Bond Debt Service
Per $100 Million of Project Funding

		Projected 30-Yr Bonds 5.00%
		All Years
Funding Target		Per each $100,000,000
Assumed Issuance & Payment Dates		
Bond Issuance Date		Oct-1
Principal Payment		Nov-1
Total Debt Issue		$115,080,000
Project Funding		$100,000,000
Issuance Costs & Reserve Requirement		
Underwriter Discount	0.30%	$345,000
Issuance Costs	Est.	300,000
Reserve Requirement		0
Capitalized Interest (Years)	2.50	14,385,000
Rounding/Contingency		50,000
Total		15,080,000
Financing Terms		
Term (Years)		30
Interest Only (Years)		2.50
Principal Amortization (Years)		28
Est. Average Interest Rate		5.00%
Annual Debt Service		
Interest Only Period		5,754,000
Principal Amortization Period		7,724,000

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Financing costs and interest rates estimated for financial planning purposes.

Table 5
SFPUC Water Enterprise
Projected Bond Issues

Debt Issuance by FY	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Projected Bond Funding (per SFPUC Projections)									
Water Revenue Bonds (Local)	-	169,994,000	-	149,111,000	-	-	-	-	177,661,000
Water Revenue Bonds (Regional)	-	132,939,000	-	129,367,000	-	-	-	-	18,452,000
Water Revenue Bonds (Wholesale)	-	-	-	-	-	-	-	-	-
Water Revenue Bonds (Hetchy)	-	57,067,000	-	81,522,000	-	-	-	-	163,888,000
Less Add'l Proceeds from 2023 Bonds	-	(71,065,000)	-	-	-	-	-	-	-
Total	-	288,935,000	-	360,000,000	-	-	-	-	360,001,000
Financing Terms									
Bond Funding Proceeds		288,935,000		360,000,000					360,001,000
Total Issue Size		332,490,000		414,270,000					414,290,000
Issuance Date		Oct-1		Oct-1					Oct-1
Issuance Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
Interest Payments		May-1 & Nov-1		May-1 & Nov-1					May-1 & Nov-1
Principal Payments (Year 3+)		Nov-1		Nov-1					Nov-1
Average Interest Rate		5.00%		5.00%					5.00%
Repayment Term (Years)		30.50		30.50					30.50
Capitalized Interest (Years)		2.50		2.50					2.50
Debt Service per $100M									
Interest Only Period (2.5 Yrs)		5,754,000		5,754,000					5,754,000
Principal Amort Period (28 Yrs)		7,724,000		7,724,000					7,724,000
Annual Debt Service									
Interest Only Period		16,625,000		20,714,000					20,714,000
Principal Amort Period		22,317,000		27,806,000					27,806,000
Cumulative MADS		22,317,000		50,123,000					77,929,000

Table 6
SFPUC Water Enterprise
Projected Debt Service on Future Bond Issues

Fiscal Year Ending June 30	2023/24 Bonds	2024/25 Bonds	2025/26 Bonds	2026/27 Bonds	2027/28 Bonds	2028/29 Bonds	2029/30 Bonds	2030/31 Bonds	2031/32 Bonds	2032/33 Bonds	Total Net of Cap I
2024											**0**
2025											**0**
2026	0										**0**
2027	0	1,385,000									**1,385,000**
2028	0	22,317,000	0								**22,317,000**
2029	0	22,317,000	0	1,726,000							**24,043,000**
2030	0	22,317,000	0	27,806,000	0						**50,123,000**
2031	0	22,317,000	0	27,806,000	0	0					**50,123,000**
2032	0	22,317,000	0	27,806,000	0	0	0				**50,123,000**
2033	0	22,317,000	0	27,806,000	0	0	0	0			**50,123,000**
2034	0	22,317,000	0	27,806,000	0	0	0	0	1,726,000		**51,849,000**
2035	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2036	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2037	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2038	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2039	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2040	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2041	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2042	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2043	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2044	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2045	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2046	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2047	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2048	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2049	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2050	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2051	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2052	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2053	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2054	0	22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2055		22,317,000	0	27,806,000	0	0	0	0	27,806,000	0	**77,929,000**
2056			0	27,806,000	0	0	0	0	27,806,000	0	**55,612,000**
2057				27,806,000	0	0	0	0	27,806,000	0	**55,612,000**
2058					0	0	0	0	27,806,000	0	**27,806,000**
2059						0	0	0	27,806,000	0	**27,806,000**
2060							0	0	27,806,000	0	**27,806,000**
2061								0	27,806,000	0	**27,806,000**
2062									27,806,000	0	**27,806,000**
2063										0	**0**

Table 7
SFPUC Water Enterprise
Outstanding Debt

After Refundings via 2023C&D Bonds

Fiscal Year Ending	2010 BEG Bonds (BABs)	2011 BC Bonds	2015 A Bonds	2016 ABC Bonds	2017 ABCDEFG Bonds	2019 ABC Bonds	2020 ABCD Bonds	2020 EFGH Bonds	2023 AB Bonds	2023 CD Bonds	SRF Loan Mt. Tunnel	SRF Loan Westside Recyc	Total Net of Cap I	BABs Interest	BABs Subsidies 35% w/ 5.7% Seq.	Junior Lien 2009 CD Bonds
									New $	Refi	Projected				33.01%	
2021	78,055,698	1,618,700	33,759,094	88,121,202	25,374,673	34,474,694	0	8,909,732	0	0	0	0	**270,313,792**	66,135,698	21,828,087	9,167,143
2022	77,837,563	1,611,600	33,755,319	85,350,514	26,500,755	45,304,279	0	30,613,076	0	0	0	0	**300,973,104**	65,507,563	21,620,771	9,168,660
2023	90,029,785	0	33,753,344	95,387,839	46,825,105	24,133,272	15,250,650	22,972,148	0	0	0	0	**328,352,143**	64,504,785	21,289,804	9,169,820
2024	89,554,429	0	41,564,094	80,305,439	42,461,233	17,882,536	15,250,650	22,407,934	16,158,865	17,902,316	0	0	**343,487,496**	63,144,429	20,840,819	9,130,617
2025	89,051,478	0	41,557,719	80,325,567	42,421,219	16,954,291	15,250,650	21,035,040	21,230,625	24,692,850	694,589	0	**353,214,028**	61,716,478	20,369,523	9,054,144
2026	88,525,873	0	41,561,094	73,939,339	53,084,550	16,950,095	15,250,650	22,251,924	21,230,625	24,692,850	1,373,470	6,832,376	**365,692,845**	60,220,873	19,875,899	8,975,953
2027	87,962,528	0	30,217,719	84,416,466	53,083,425	16,950,418	15,250,650	20,035,188	21,230,625	26,423,475	2,035,900	6,832,376	**364,438,769**	58,612,528	19,345,065	8,895,589
2028	87,356,778	0	28,765,844	86,003,566	51,497,300	15,938,551	15,250,650	21,030,306	21,230,625	25,447,475	2,680,637	6,832,376	**362,034,109**	56,876,778	18,772,180	8,812,600
2029	86,714,665	0	16,648,719	85,983,247	51,566,550	15,343,367	15,250,650	16,235,499	29,488,875	42,271,725	9,366,086	6,832,376	**375,701,759**	55,034,665	18,164,191	8,723,073
2030	86,036,065	0	17,585,219	85,971,786	52,415,675	16,957,544	15,250,650	18,979,379	29,489,500	38,628,600	9,366,086	6,832,376	**377,512,880**	53,096,065	17,524,356	8,630,239
2031	85,330,365	0	21,805,531	85,949,372	41,920,425	16,956,798	15,250,650	29,246,978	29,487,875	32,507,850	9,366,086	6,832,376	**374,654,306**	51,080,365	16,859,074	8,534,374
2032	95,270,230	0	27,846,218	42,509,580	17,690,525	43,345,342	15,250,650	35,761,272	29,492,750	52,167,600	9,366,086	6,832,376	**375,532,628**	48,600,230	16,040,506	8,431,226
2033	94,234,614	0	23,822,218	52,262,414	36,580,125	18,377,078	15,250,650	25,829,128	29,492,875	54,525,975	9,366,086	6,832,376	**366,573,538**	45,634,614	15,061,704	8,322,944
2034	93,155,810	0	25,041,968	48,061,929	21,743,000	18,380,709	15,250,650	23,426,734	29,487,250	75,980,350	9,366,086	6,832,376	**366,726,861**	42,545,810	14,042,245	8,212,519
2035	92,023,979	0	31,124,268	43,039,659	41,559,000	18,238,036	15,250,650	24,549,122	29,484,625	54,379,475	9,366,086	6,832,376	**365,847,275**	39,328,979	12,980,529	8,099,257
2036	90,858,609	0	31,120,159	35,150,009	8,949,000	46,556,728	15,250,650	23,709,095	29,488,375	69,787,475	9,366,086	6,832,376	**367,068,561**	35,978,609	11,874,740	7,975,553
2037	89,634,039	0	15,749,125	64,796,082	13,463,375	53,694,448	15,250,650	11,766,295	29,487,000	60,792,850	9,366,086	6,832,376	**370,832,327**	32,489,039	10,723,007	7,851,539
2038	88,359,781	0	0	64,797,526	0	55,045,797	15,250,650	25,220,473	29,489,000	47,282,350	9,366,086	6,832,376	**341,644,038**	28,854,781	9,523,521	7,719,381
2039	87,034,701	0	0	64,791,304	0	30,329,424	15,250,650	43,347,809	29,487,750	49,761,150	9,366,086	6,832,376	**336,201,250**	25,069,701	8,274,255	7,582,069
2040	85,657,340	0	0	64,787,837	0	30,255,745	15,250,650	43,348,679	29,491,500	49,666,075	9,366,086	6,832,376	**334,656,288**	21,127,340	6,973,079	7,438,908
2041	84,216,263	0	0	14,568,121	0	46,360,163	15,250,650	43,354,646	29,488,500	33,634,400	9,366,086	6,832,376	**283,071,204**	17,021,263	5,617,868	7,289,204
2042	31,702,560	0	0	14,569,946	0	46,310,213	15,250,650	43,340,074	29,491,875	33,625,175	9,366,086	6,832,376	**230,488,955**	14,322,560	4,727,161	7,135,717
2043	31,266,850	0	0	14,568,654	0	56,226,297	15,250,650	22,993,908	29,489,625	3,038,750	9,366,086	6,832,376	**189,033,197**	13,086,850	4,319,315	0
2044	30,818,976	0	0	14,572,644	0	56,224,677	15,250,650	21,488,890	29,489,750	3,039,125	9,366,086	6,832,376	**187,083,174**	11,793,976	3,892,602	0
2045	30,341,333	0	0	14,569,557	0	0	39,109,525	21,484,578	29,490,775	0	9,366,086	6,832,376	**151,194,230**	10,441,333	3,446,162	0
2046	29,846,313	0	0	14,568,558	0	0	39,610,825	21,482,110	29,487,931	0	9,366,086	6,832,376	**151,194,199**	9,026,313	2,979,134	0
2047	29,330,789	0	0	14,568,600	0	0	40,129,225	21,475,947	29,490,225	0	9,366,086	6,832,376	**151,193,247**	7,545,789	2,490,488	0
2048	28,786,808	0	0	0	0	0	55,229,925	21,485,316	29,489,638	0	9,366,086	6,832,376	**151,190,148**	5,996,808	1,979,246	0
2049	28,221,241	0	0	0	0	0	79,135,050	0	29,488,150	0	9,366,086	6,832,376	**153,042,903**	4,376,241	1,444,378	0
2050	27,625,789	0	0	0	0	0	79,730,175	0	29,487,481	0	9,366,086	6,832,376	**153,041,907**	2,680,789	884,794	0
2051	27,006,975	0	0	0	0	0	80,352,450	0	29,489,088	0	9,366,086	6,832,376	**153,046,974**	906,975	299,347	0
2052	0	0	0	0	0	0	0	0	29,489,294	0	9,366,086	6,832,376	**45,687,756**	0	0	0
2053	0	0	0	0	0	0	0	0	29,489,294	0	9,366,086	6,832,376	**45,687,756**	0	0	0
2054	0	0	0	0	0	0	0	0	0	0	9,366,086	6,832,376	**16,198,462**	0	0	0
2055	0	0	0	0	0	0	0	0	0	0	9,366,086	6,832,376	**16,198,462**	0	0	0
2056	0	0	0	0	0	0	0	0	0	0	9,366,086	0	**9,366,086**	0	0	0
2057	0	0	0	0	0	0	0	0	0	0	9,366,086	0	**9,366,086**	0	0	0
2058	0	0	0	0	0	0	0	0	0	0	9,366,086	0	**9,366,086**	0	0	0
2059	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0
2060	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0