



San Francisco Water Power Sewer

Services of the San Francisco Public Utilities Commission

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

February 3, 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. 220502 and Board of Supervisors Ordinance No. 112-22

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

Newsha K. Ajami
President

Sophie Maxwell
Vice President

Tim Paulson
Commissioner

Anthony Rivera
Commissioner

Kate H. Stacy
Commissioner

Dennis J. Herrera
General Manager

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.





**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 \$141,418,472, exclusive
of financing costs, for Capital Projects budgeted in Fiscal Year 2022-23**

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 2nd day of August, 2022.

Lisa M. Gibson
Environmental Review Officer

EXHIBIT A
WATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2022-2023 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
Regional Water	15482/10027758	Water Quality Monitoring Station	A CEQA Categorical Exemption determination was issued on April 10, 2018 (Case No. 2018-004300ENV).
Regional Water	15481	UW Sunol Valley Water Treatment	CUW2720210/10033123; SVWTP Ozone – The Planning Commission certified the Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project Final EIR on December 3, 2009. Environmental review is underway (Case No. 2006.0137E_3). CUW272020402/10015064; SVWTP Short Term Improvements The project scope is currently being defined; environmental review will proceed once the project scope has been identified. 10038328; SVWTP Long Term Improvements – The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUW2720205/10037628; SVWTP Polymer Feed Facility The project scope is currently being defined; environmental review will proceed once the project scope has been identified.
Regional Water	15479	Reg Groundwater Treatment Program	10037350; Regional Groundwater Treatment Improvements- The project scope is currently being defined; environmental review will proceed once the project scope has been identified.
Regional Water	15485/10015072	UW Water Transmission Program	Pipeline and Tunnel Inspection and Repair R&R Bay Division Pipeline 3 and 4 Railroad Crossing Project. A CEQA Categorical Exemption determination was issued on July 1, 2022 (Case No. 2022-004847ENV). Future projects under this program will undergo CEQA review prior to approval.

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FY 2022-2023 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
Regional Water	15488	UW Pipeline Improvements	CUWTBD/10036840; BDPL 1-4 Lining Repair - The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUWTBD/10036839; BDPL4 PCCP Repair - The project scope is currently being defined; environmental review will proceed once the project scope has been identified.
Regional Water	15517	UW Sunol Long Term Improvement	CUW27701/10015124; Sunol Long Term Improvements The Final Mitigated Negative Declaration (MND) was issued on December 2, 2015 (Case No. 2012.0054E).
Regional Water	15519	UW Millbrae Yard Upgrade	CUWTBD/10034526; Millbrae Warehouse Settlement & Admin. Bldg. HVAC A CEQA Categorical Exemption determination was issued on November 21, 2017 (Case No. 2017-014580ENV). CUW2770304/10015128 Millbrae Yard Laboratory and Shop Improvements The project scope is currently being defined; environmental review will proceed once the project scope has been identified.
Local Water	15527	UW New Services	The project scope is currently being defined; environmental review will proceed once the project scope has been identified.
Local Water	15528	UW Renew Services	10015136; Renew Services – The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUW-TBD; GIS Program – This is not a project under CEQA §15378. CUW-TBD; Lead Component Services Program – The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUW-TBD; Water Loss Reduction Program – Planning report only. This is not a project under CEQA §15378

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FY 2022-2023 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
			CUW- TBD; Water Quality Distribution System – The project scope is currently being defined; environmental review will proceed once the project scope has been identified.
Local Water	15531	UW Pipeline Replacement	CUW280; Local Water Conveyance / Distribution System – The project scope is currently being defined; environmental review will proceed once the project scope has been identified CUW28003; Local Water Conveyance Joint Transit Project The project scope is currently being defined; environmental review will proceed once the project scope has been identified.
Local Water	15534	UW Systems Monitoring and Control	CUW-TBD; Customer Service System – This is not a project under CEQA §15378.
Local Water	21396/10037249,	New CDD Headquarter	New City Distribution Division (CDD) Headquarters Environmental Review is underway (Case Number 2022-000702ENV)
Hetch Hetchy Water (HHW)		Water Infrastructure	CUW20071129E/10034364; R&R SJPL Life Extension Program. The Rehabilitation of Existing San Joaquin Pipelines Final Mitigated Negative Declaration (MND) was issued on November 8, 2010 (Case No. 2007.1129E). 10035575; SJPL Valve and Safe Entry Improvement The San Joaquin Pipeline System Project Environmental Impact Report was certified on July 9, 2009 (Case No. 2007.0118E). A Categorical Exemption determination was issued for the geotechnical work on 8/26/2020 (Case No. 2020-006923ENV). CUWTBD/10014072; HHW- Water Project Development - CUH100-PD The project scope is currently being defined; environmental review will proceed once the project scope has been identified. 10014114; Mountain Tunnel Improvement Project The Mountain Tunnel Improvement Project Final Mitigated Negative Declaration (MND) was issued on October 23, 2019 (Case No. 2017-

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FY 2022-2023 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
			<p>014249ENV).</p> <p>Joint Water/Power Projects (also listed with the Power Enterprise Capital Improvement Projects) CUWTBD/10037306; Early Intake Dam Interim Improvement – The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUWTBD/TBD; Early Intake Dam-Long term – The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUWTBD/10014095; R&R Hetch Hetchy Facilities The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUWTBD/10014096; R&R Dam/Reservoir Cond Assmt & Rehab (Joint) Future projects under this program will undergo CEQA review prior to approval. 10014102; R&R Road & Bridge Improvements Future projects under this program will undergo CEQA review prior to approval. 10014104; R&R Facilities Security Project The project scope is currently being defined; environmental review will proceed once the project scope has been identified. 10014106; R&R Communications Systems Upgrades The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUWTBD/10014110; Moccasin Wastewater Treatment Plant The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUWTBD/10014115; Cherry Dam Spillway - Short Term Improvements</p>

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			<p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUH102-PD/10014116; Joint Project Development</p> <p>The individual projects are projects under CEQA and will undergo CEQA review prior to approval CUWTBD/10030759; Eleanor Dam Rehabilitation –</p> <p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified. R&R Power Distribution Improvements</p> <p>Future projects under this program will undergo CEQA review prior to approval. 10037077; Moccasin Old Powerhouse Hazard Mitigation</p> <p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUH10116/10014088; Moccasin Penstocks Rehabilitation</p> <p>A Categorical Exemption determination was issued on April 3, 2017 (Case No 201-004072ENV). 10037351; Moccasin Dam Long Term Improvement –</p> <p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified. 10037305; R&R HH Reservoir Boat Ramp & Access Improvement –</p> <p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified. 10032903; O'Shaughnessy Dam Outlet Works Phase 1 –</p> <p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUH102 N02; Moccasin Engineering and Records Building</p> <p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified. CUH102 N01; HHW-R&R Water Conveyance Life Extension (Joint)</p>

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Program	Project Number	Project Title	CEQA Compliance
			<p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified. HHW N01; Wildfire Mitigation</p> <p>The project scope is currently being defined; environmental review will proceed once the project scope has been identified.</p>
HHW		CUWTBD/10035086; Bridge Replacement (4 Bridges)	<p>OSH Adit Access Bridge project.</p> <p>The project scopes are currently being defined; environmental review will proceed once the project scope has been identified.</p> <p>A Categorical Exemption determination was issued for the O'Shaughnessy Dam Bridge Geotech Investigation (OSH Adit Access Bridge) on January 27, 2021 (Case No. 2020-011359ENV).</p>

1 [SFPUC Water Revenue Bond and Other Forms of Indebtedness Issuance - Various Capital
2 Water Projects Benefitting the Water Enterprise - Not to Exceed \$141,418,472]

3 **Ordinance authorizing the issuance and sale of tax-exempt or taxable Water Revenue**
4 **Bonds and other forms of indebtedness (as described below) by the San Francisco**
5 **Public Utilities Commission (SFPUC) in an aggregate principal amount not to exceed**
6 **\$141,418,472 to finance the costs of various capital water projects benefitting the Water**
7 **Enterprise pursuant to amendments to the Charter of the City and County of San**
8 **Francisco enacted by the voters on November 5, 2002, as Proposition E; authorizing**
9 **the issuance of Water Revenue Refunding Bonds and the retirement of outstanding**
10 **Water Enterprise Commercial Paper; declaring the Official Intent of the SFPUC to**
11 **reimburse itself with one or more issues of tax-exempt bonds or other forms of**
12 **indebtedness; and ratifying previous actions taken in connection therewith, as defined**
13 **herein.**

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

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

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

24 A. On November 5, 2002, the voters of the City and County of San Francisco
25 ("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

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

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

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

16 D. Pursuant to Ordinance No. 311-08, adopted by the Board of Supervisors on
17 December 16, 2008, and Resolution No. 09-175, adopted by this Commission on October 27,
18 2009, the Water Enterprise’s commercial paper program (“Water CP Program”) was increased
19 to an aggregate principal amount of \$500,000,000, and the Commission has caused its Water
20 Enterprise Commercial Paper to be issued from time to time; and

21 E. By Resolution 22-0030, adopted by the Commission on February 8, 2022
22 (“Commission Resolution”) the Commission has determined to issue Water Revenue Bonds
23 (“Water Revenue Bonds”) and other forms of indebtedness (including without limitation State
24 Revolving Fund (SRF) Loans as described below), as well as interim funding vehicles such as
25

1 commercial paper, revolving credit agreements, bond anticipation notes or other forms of
2 notes, which interim funding vehicles will be issued in advance of being paid off by either
3 Water Revenue Bonds and other forms of indebtedness (including without limitation SRF
4 Loans) to finance the costs of various capital projects benefitting the Water Enterprise (the
5 "Capital Improvement Projects" such projects being more fully described in the Commission
6 Resolution), pursuant to Proposition E, and has formally requested this Board to authorize the
7 issuance and sale of Water Revenue Bonds and other forms of indebtedness for such
8 purposes, such Commission Resolution being on file with the Clerk of the Board in File
9 No. 220502; and

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

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

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

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

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

4 Section 2. Authorization to Issue Water Revenue Bonds and other forms of
5 indebtedness. The Board hereby authorizes the issuance and sale of taxable or tax-exempt
6 Water Revenue Bonds or other forms of indebtedness (including SRF Loans, commercial
7 paper, revolving credit agreements, and bond anticipation notes) in one or more series from
8 time to time by the Commission pursuant to Proposition E and in accordance with the
9 Commission Resolution, in an aggregate principal amount not to exceed \$141,418,472
10 (inclusive of financing costs, but exclusive of refunding indebtedness), bearing a maximum
11 rate or rates of interest of not to exceed twelve percent (12%) per annum, to finance a portion
12 of the costs of the design, acquisition and construction of the Capital Improvement Projects.
13 Without limiting the foregoing, the Commission shall be authorized to incur state and federal
14 at such time, in such amounts, and upon such other terms and conditions as the Commission
15 may deem advantageous, and to approve any financing documentation related thereto
16 consistent with this Ordinance. The Commission is hereby further authorized to determine the
17 timing, amount and manner of sale (i.e., competitive or negotiated) of each series of Water
18 Revenue Bonds, bond anticipation notes, revolving credit agreements, or commercial paper,
19 pursuant to this authorization; provided however, the Commission's authorization to issue
20 Water Revenue Bonds, bond anticipation notes, revolving credit agreements, or commercial
21 paper is subject to approval by the Commission of the form of substantially final offering
22 document related to such obligations (if any) and the approval of any related agreements,
23 financing documents and the filing with its Board and the Clerk of the Board any certifications
24 required by Proposition E prior to the issuance of any bonds or incurrence of any
25 indebtedness herein authorized. The Commission shall also file, within 30 days of closing any

1 Water Revenue Bond or other form of indebtedness (including SRF Loans or other federal
2 loans and bond anticipation notes) transactions) authorized hereby, with the Clerk of the
3 Board of Supervisors for inclusion in Board File No. 220502 a report showing the results of the
4 transaction, including (i) principal amount sold and method of sale, (ii) true interest cost, (iii)
5 final maturity, (iv) the facilities constructed and/or improved, and (v) a statement about the
6 remaining bonding authorization under this Ordinance (“Bond Report”), provided that the
7 failure to file such Bond Report shall not affect the validity of any debt authorized hereunder.

8 Section 3. Authorization to Issue Water Revenue Refunding Bonds; Commercial
9 Paper Retirement. The Board further authorizes and approves the issuance by the
10 Commission of Water Revenue Refunding Bonds (“Refunding Bonds”) without limitation as to
11 principal amount, in one or more series on one or more dates, at a maximum interest rate or
12 rates of interest not to exceed twelve percent (12%) per annum, provided that each such
13 Refunding Bond issue is permitted under the applicable policies and procedures of the City
14 and authorized by Section 9.109 of the Charter (including related ordinances and resolutions
15 of the Board). The Refunding Bonds may be issued as taxable or tax-exempt obligations, or
16 any combination thereof. Refunding Bonds authorized hereunder shall be subject to the
17 further following conditions, that: (i) three percent (3%) net present value debt service savings
18 or greater is achieved to ensure ratepayer savings (exclusive of any issuance to refund
19 commercial paper, revolving credit notes, or bond anticipation notes); (ii) that the maturity of
20 the refunded bonds is not extended; (iii) this authorization is subject to a 5-year term through
21 June 30, 2027, at which time this Board may consider an extension; principal payments and
22 term may be adjusted, where permitted under federal and state tax law, only if and when the
23 underlying capital asset funded through said refunded bonds has a useful life not in excess of
24 any limit permitted under federal and state tax law than the refunded term; and (iv) the
25 Commission shall within 30 days of any executed refunding transaction provide a refunding

1 savings report ("Bond Refunding Savings Report") prepared by its financial advisors (that
2 reflects at least a three percent (3%) net present value debt service savings) to the Board,
3 together with a copy of the final Official Statement (if any) with respect to such series of
4 Refunding Bonds, provided that the failure to deliver such Bond Refunding Savings Report
5 shall in no way affect the validity of any Refunding Bonds. Notwithstanding the foregoing, the
6 Commission is authorized to issue Refunding Bonds for non-economic factors, including by
7 way of illustration, eliminating onerous covenants and obsolete provisions contained in the
8 Commission's indenture or other security documents. The Commission shall request a waiver
9 of the savings requirement for any Refunding Bonds issued for non-economic reasons. In
10 furtherance of the purpose of managing the Commission outstanding indebtedness, the
11 General Manager is hereby authorized and directed, in consultation the City Attorney, from
12 Available Water Enterprise Revenues to retire outstanding Water Enterprise Commercial
13 Paper at such times and in such amounts advantageous to the Commission.

14 Section 4. Declaration of Official Intent. The Board, on behalf of the Commission,
15 hereby declares the official intent of the Commission to reimburse the Commission with
16 proceeds of the Water Revenue Bonds or other forms of indebtedness (including SRF Loans
17 or other federal loans, commercial paper, revolving credit notes, or bond anticipation notes)
18 for the Expenditures with respect to the Capital Improvement Projects made on and after a
19 date that is no more than 60 days prior to the adoption of this Ordinance. The Commission
20 reasonably expects on the date hereof that it will reimburse the Expenditures with proceeds of
21 the Water Revenue Bonds or other forms of indebtedness (including, without limitation and for
22 illustrative purposes only, SRF Loans, commercial paper, revolving credit notes or bond
23 anticipation notes). Each said Expenditure was and will be either (A) of a type properly
24 chargeable to a capital account under general federal income tax principles (determined in
25 each case as of the date of the Expenditure), (B) a cost of issuance with respect to such

1 obligations, (C) a nonrecurring item that is not customarily payable from current revenues, or
2 (D) a grant to pay a party that is not related to or an agent of the issuer so long as such grant
3 does not impose any obligation or condition (directly or indirectly) to repay any amount to or
4 for the benefit of the Commission. The Commission will make a reimbursement allocation,
5 which is a written allocation by the Issuer that evidences the Commission's use of proceeds of
6 the Water Revenue Bonds or other forms of indebtedness to reimburse an Expenditure, no
7 later than 18 months after the later of the date on which the Expenditure is paid or the
8 component of the Capital Improvement Projects is placed in service or abandoned, but in no
9 event more than three years after the date on which the Expenditure is paid. The
10 Commission recognizes that exceptions are available for certain "preliminary expenditures,"
11 costs of issuance, certain de minimis amounts, expenditures by "small issuers" (based on the
12 year of issuance and not the year of expenditure) and expenditures for construction projects
13 of at least 5 years.

14 Section 5. General Authority. The Controller, Treasurer, the City Attorney and other
15 officers of the City, including the Director of the Office of Public Finance, and their duly
16 authorized deputies and agents are hereby authorized and directed, jointly and severally, to
17 take such actions and to execute and deliver such certificates, agreements, requests or other
18 documents, as they may deem necessary or desirable to facilitate the issuance, sale and
19 delivery of the Water Revenue Bonds or other forms of indebtedness, including Refunding
20 Bonds, and to obtain bond insurance or other credit or liquidity enhancements with respect to
21 any such obligations, and otherwise to carry out the provisions of this Ordinance. The
22 Commission is hereby directed to provide the final form to the Clerk of the Board of any
23 disclosure document prepared in connection with the execution of any Water Revenue
24 Bonds, other forms of indebtedness, or Refunding Bonds, and the final executed Installment
25 Sale Agreement or other document reflecting the incurrence of an SRF Loan or other federal

1 loan, within 30 days of the closing of such transactions provided that the failure to deliver
2 such document shall not affect the validity of the obligations authorized hereunder. The
3 Commission is further directed as a part of the two-year budget review to provide to this
4 Board of Supervisors a written report about Water Revenue Bonds authorized hereunder,
5 detailing the total amount authorized, the total amount sold, the remaining authorized but
6 unissued amount, and the bond authorization no longer necessary due to changes in projects
7 and project financing.

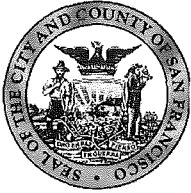
8 Section 6. Ratification of Prior Actions. All actions authorized and directed by this
9 Ordinance in connection with the issuance of the Water Revenue Bonds, other forms of
10 indebtedness (including, without limitation and for illustrative purposes only, SRF Loans,
11 federal loan, commercial paper,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

14 Section 7. File Documents. All documents referred to as on file with the Clerk of the
15 Board are in File No. 220502.

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

18
19 APPROVED AS TO FORM:
20 DAVID CHIU, City Attorney

21
22 By: /s/ Mark D. Blake
23 Mark D. Blake
24 Deputy City Attorney
25 n:\financlas2022\1300183\01597863.docx



City and County of San Francisco
Tails
Ordinance

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

File Number: 220502

Date Passed: June 14, 2022

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 (SFPUC) in an aggregate principal amount not to exceed \$141,418,472 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 SFPUC 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.

May 25, 2022 Budget and Appropriations Committee - AMENDED, AN AMENDMENT OF THE WHOLE BEARING SAME TITLE

May 25, 2022 Budget and Appropriations Committee - RECOMMENDED AS AMENDED

June 07, 2022 Board of Supervisors - PASSED ON FIRST READING

Ayes: 11 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton


June 14, 2022 Board of Supervisors - FINALLY PASSED

Ayes: 10 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai and Walton

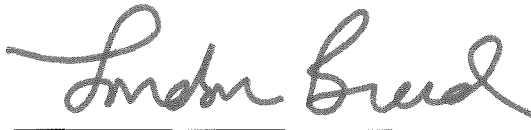
Excused: 1 - Stefani

File No. 220502

I hereby certify that the foregoing
Ordinance was FINALLY PASSED on
6/14/2022 by the Board of Supervisors of
the City and County of San Francisco.



Angela Calvillo
Clerk of the Board



London N. Breed
Mayor

6/24/22

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.

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

- 15482/10027758 - Water Quality Monitoring Station
- 15481 UW - Sunol Valley Water Treatment
- 15479 - Reg Groundwater Treatment Program
- 15485/10015072 - UW Water Transmission Program
- 15488 UW - Pipeline Improvements
- 15517 UW - Sunol Long Term Improvement
- 15519 UW - Millbrae Yard Upgrade
- 15527 UW - New Services
- 15528 UW - Renew Services
- 15531 UW - Pipeline Replacement
- 15534 UW - Systems Monitoring and Control
- 21396/10037249 - New CDD Headquarter
- CUWTBD/10035086 - Bridge Replacement (4 Bridges)
- CUW20071129E/10034364 - R&R SJPL Life Extension Program.
- 10035575 - SJPL Valve and Safe Entry Improvement
- CUWTBD/10014072 - HHW- Water Project Development - CUH100-PD
- 10014114 - Mountain Tunnel Improvement Project
- CUWTBD/10037306 - Early Intake Dam Interim Improvement

Reference: Engineer's Certificate for Bond Financed Project

- CUWTBD/TBD - Early Intake Dam-Long term
- CUWTBD/10014095 - R&R Hetch Hetchy Facilities
- CUWTBD/10014096 - R&R Dam/Reservoir Cond Assmt & Rehab (Joint)
- 10014102 - R&R Road & Bridge Improvements
- 10014104 - R&R Facilities Security Project
- 10014106 - R&R Communications Systems Upgrades
- CUWTBD/10014110 - Moccasin Wastewater Treatment Plant
- CUWTBD/10014115 - Cherry Dam Spillway
- CUH102-PD/10014116 - Joint Project Development
- CUWTBD/10030759 - Eleanor Dam Rehabilitation –
- 10037077 - Moccasin Old Powerhouse Hazard Mitigation
- CUH10116/10014088 - Moccasin Penstocks Rehabilitation
- 10037351 - Moccasin Dam Long Term Improvement
- 10037305 - R&R HH Reservoir Boat Ramp & Access Improvement –
- 10032903 - O'Shaughnessy Dam Outlet Works Phase 1
- CUH102 N02 - Moccasin Engineering and Records Building
- CUH102 N01 - HHW-R&R Water Conveyance Life Extension (Joint)
- HHW N01 - Wildfire Mitigation

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 2023-2032 Capital Plan Summary
- Hetchy Power Capital Plan and Project Pages – Hetch Hetchy Enterprise Fiscal Years 2023-2032 Ten Year CIP Capital Projects 1/20/22
- Water Enterprise FY 2023-2032 Capital Plan Summary
- Water Capital Datasheet
- Hetch Hetchy Capital Datasheet
- Hetch Hetchy Capital Improvement Program Quarterly Report 3rd Quarter / Fiscal Year 2021-2022
- HHW_CIP Project List by Authority 7-7-22
- HHW_CIP Project List by Authority _rev071922
- Water Enterprise Revenue Bonds and Other Forms of Indebtedness FY 2022-2023 Capital Improvement Projects
- Power Enterprise Revenue Bonds and Other Forms of Indebtedness FY 2022-2023 Capital Improvement Projects

Reference: Engineer's Certificate for Bond Financed Project

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 2nd day of September, 2022.

Stantec Consulting Services Inc.



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



San Francisco
Water
Power
Sewer



Water Financial Projections

August 10, 2022



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

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TO: San Francisco Public Utilities Commission

DATE: August 10, 2022

ATTN: Edward Kwong, Senior Administrative Analyst

FROM: Alex Handlers & Douglas Dove, P.E.

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 VIII B, 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 2022-23 through 2031-32. 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 table 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.

Submitted by: BARTLE WELLS ASSOCIATES



Alex Handlers
Principal/Vice President



Douglas R. Dove, P.E.
President



SFPUC Water Financial Projections

List of Tables

Table 1 - SFPUC Water Cash Flow Projections

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

Table 4 - Estimated Bond Debt Service

Table 5 - Projected Bond Issues: Water

Table 6 - Projected Debt Service on Future Financings: Water

Table 7 - Projected Bond Issues: Hetchy Water

Table 8 - Projected Debt Service on Future Financings: Hetchy Water

Table 9 - Outstanding Debt & 2022 SRF Loan

Appendix A - State Revolving Fund Loan Projections

Table 1 - SFPUC Water Cash Flow Projections

Years 1 - 5

	2022/23	2023/24	2024/25	2025/26	2026/27
Retail Water Rate Adjustments	0.0%	6.0%	4.0%	4.0%	4.0%
Drought Surcharges on Volumetric Charges	5.0%	5.0%	0.0%	0.0%	0.0%
Retail Water Sales (ccf)	26,358,000	27,309,000	27,838,000	28,455,000	28,346,000
Change in Retail Demand	-	3.6%	1.9%	2.2%	-0.4%
Wholesale Water Sales (ccf)	55,486,000	55,510,000	59,602,000	64,159,000	64,159,000
Change in Wholesale Demand	-	0.0%	7.4%	7.6%	0.0%
Wholesale Water Rate (\$/ccf)	\$4.75	\$5.25	\$5.25	\$5.25	\$5.25
Wholesale Blended Water Rate (\$/ccf)	\$4.70	\$5.21	\$5.25	\$5.25	\$5.25
Net Interest Earnings Rate	-	0.75%	1.0%	1.0%	1.0%
O&M Cost Escalation	-	-	3.0%	3.0%	3.0%
Beginning Fund Reserves					
Unappropriated Fund Reserves (After Budget)	\$126,253,000	\$113,319,000	\$100,673,000	\$73,927,000	\$52,458,000
Fund Reserves Budgeted as Revenues	67,175,000	15,083,000	0	0	0
Wholesale Coverage Reserves	39,841,000	42,119,000	56,967,000	56,938,000	58,042,000
Total	233,269,000	170,521,000	157,640,000	130,865,000	110,500,000
Revenues					
Retail Water Volumetric Charges	262,617,000	288,418,000	305,765,000	325,044,000	336,751,000
Retail Water Drought Surcharges	13,131,000	14,421,000	0	0	0
Retail Water Fixed Charges	49,239,000	52,193,000	54,281,000	56,452,000	58,710,000
Wholesale Volumetric Charges	260,783,000	289,207,000	312,911,000	336,835,000	336,835,000
Wholesale Fixed Service Charges	4,314,000	4,314,000	4,314,000	4,314,000	4,314,000
Interest Income	1,109,000	1,279,000	1,576,000	1,309,000	1,105,000
Capacity Charges	1,520,000	1,520,000	1,520,000	1,520,000	1,580,000
Rental Income	13,136,000	13,596,000	13,964,000	14,321,000	14,688,000
Other Miscellaneous Income	16,525,000	17,033,000	17,508,000	17,975,000	18,455,000
Programmatic Revenues	7,156,000	7,158,000	7,271,000	7,189,000	7,206,000
SRF Loan Reimbursement from Power 27.3%	0	418,000	520,000	637,000	695,000
BABs Interest Subsidies (Net of Sequest.)	21,290,000	20,841,000	20,370,000	19,876,000	19,345,000
Subtotal	650,820,000	710,398,000	740,000,000	785,472,000	799,684,000
Operation & Maintenance Expenses					
Personnel	115,199,000	117,243,000	120,760,000	124,383,000	128,114,000
Non-Personal Services	22,103,000	21,705,000	22,356,000	23,027,000	23,718,000
Materials/Supplies/Equipment	20,256,000	20,452,000	21,066,000	21,698,000	22,349,000
Services of SFPUC Bureaus	62,718,000	63,780,000	65,693,000	67,664,000	69,694,000
Services of Other Departments	14,972,000	15,435,000	15,898,000	16,375,000	16,866,000
Natural Gas & Electricity	11,164,000	11,516,000	11,861,000	12,217,000	12,584,000
Hetch Hetchy Assessment	49,636,000	49,242,000	50,719,000	52,241,000	53,808,000
Other Operating Expenses	2,613,000	2,613,000	2,691,000	2,772,000	2,855,000
Programmatic Projects (Excl S25GG Ls +TI Maint)	22,270,000	22,007,000	25,074,000	26,129,000	26,558,000
Subtotal	320,931,000	323,993,000	336,118,000	346,506,000	356,546,000
Debt Service, Net of Capitalized Interest					
Outstanding Bonds	328,352,000	332,576,000	332,048,000	337,015,000	335,591,000
Outstanding SRF Loans	6,632,000	6,632,000	6,632,000	6,632,000	6,632,000
2022 SRF Loan (Preliminary)	0	1,530,000	1,904,000	2,332,000	2,544,000
Projected Debt: Local & Regional Water	0	0	576,000	10,747,000	11,285,000
Projected Debt: Hetchy Water	0	0	464,000	8,650,000	8,936,000
Subtotal	334,984,000	340,738,000	341,624,000	365,376,000	364,988,000
Non-Operating Expenses					
Local Projects	22,125,000	23,059,000	53,620,000	58,620,000	40,125,000
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	9,178,000	9,139,000	9,063,000	8,985,000	8,904,000
Subtotal	57,653,000	58,548,000	89,033,000	93,955,000	75,379,000
Total Expenses	713,568,000	723,279,000	766,775,000	805,837,000	796,913,000
Revenues Less Expenses	(62,748,000)	(12,881,000)	(26,775,000)	(20,365,000)	2,771,000
Transfer to Wholesale Coverage Reserve	(2,278,000)	(14,848,000)	29,000	(1,104,000)	(4,671,000)
Ending Fund Reserves					
Unappropriated Fund Reserves	128,402,000	100,673,000	73,927,000	52,458,000	50,558,000
Wholesale Coverage Reserves	42,119,000	56,967,000	56,938,000	58,042,000	62,713,000
Total	170,521,000	157,640,000	130,865,000	110,500,000	113,271,000
Annual Revenues	650,820,000	710,398,000	740,000,000	785,472,000	799,684,000
Plus Reserves Budgeted as Revenues	67,175,000	15,083,000	0	0	0
Less Revs Excluded from Coverage Calc	(5,945,000)	(5,910,000)	(6,023,000)	(5,941,000)	(5,921,000)
Less Operating & Maintenance Expenses	(320,931,000)	(323,993,000)	(336,118,000)	(346,506,000)	(356,546,000)
Less Operating Carryforwards/Adjustments	0	0	0	0	0
Net Revenues (Current Basis)	391,119,000	395,578,000	397,859,000	433,025,000	437,217,000
Plus Beginning Fund Rsrvs (Excl Budgeted Rsrvs)	166,094,000	155,438,000	157,640,000	130,865,000	110,500,000
Other Adjustments (per SFPUC)	0	0	0	0	0
Net Revenues (Indenture Basis with Reserves)	557,213,000	551,016,000	555,499,000	563,890,000	547,717,000
Annual Debt Service	334,984,000	340,738,000	341,624,000	365,376,000	364,988,000
Debt Service Coverage, Current Basis	1.17	1.16	1.16	1.19	1.20
Debt Service Coverage, Indenture Basis	1.66	1.62	1.63	1.54	1.50

Table 1 - SFPUC Water Cash Flow Projections

Years 6 - 10

	2027/28	2028/29	2029/30	2030/31	2031/32
Retail Water Rate Adjustments	4.0%	4.0%	3.0%	3.0%	3.0%
Drought Surcharges on Volumetric Charges	0.0%	0.0%	0.0%	0.0%	0.0%
Retail Water Sales (ccf)	28,315,000	28,129,000	28,079,000	28,030,000	28,057,000
Change in Retail Demand	-0.1%	-0.7%	-0.2%	-0.2%	0.1%
Wholesale Water Sales (ccf)	64,335,000	64,159,000	64,159,000	64,159,000	64,335,000
Change in Wholesale Demand	0.3%	-0.3%	0.0%	0.0%	0.3%
Wholesale Water Rate (\$/ccf)	\$5.55	\$5.50	\$5.64	\$5.65	\$5.74
Wholesale Blended Water Rate (\$/ccf)	\$5.53	\$5.50	\$5.63	\$5.65	\$5.73
Net Interest Earnings Rate	1.0%	1.0%	1.0%	1.0%	1.0%
O&M Cost Escalation	3.0%	3.0%	3.0%	3.0%	3.0%
Beginning Fund Reserves					
Unappropriated Fund Reserves	\$50,558,000	\$74,167,000	\$79,368,000	\$85,303,000	\$107,509,000
Fund Reserves Budgeted as Revenues	0	0	0	0	0
Wholesale Coverage Reserves	62,713,000	62,783,000	66,146,000	66,380,000	69,392,000
Total	113,271,000	136,950,000	145,514,000	151,683,000	176,901,000
Revenues					
Retail Water Volumetric Charges	349,838,000	361,442,000	371,624,000	382,105,000	393,947,000
Retail Water Drought Surcharges	0	0	0	0	0
Retail Water Fixed Charges	61,058,000	63,500,000	65,405,000	67,367,000	69,388,000
Wholesale Volumetric Charges	355,773,000	352,875,000	361,215,000	362,498,000	368,640,000
Wholesale Fixed Service Charges	4,314,000	4,314,000	4,314,000	4,314,000	4,314,000
Interest Income	1,133,000	1,370,000	1,455,000	1,517,000	1,769,000
Capacity Charges	1,644,000	1,644,000	1,634,000	1,554,000	1,520,000
Rental Income	15,064,000	15,450,000	15,846,000	16,252,000	16,668,000
Other Miscellaneous Income	18,947,000	19,452,000	19,972,000	20,506,000	21,054,000
Programmatic Revenues	7,227,000	7,281,000	7,329,000	7,378,000	7,433,000
SRF Loan Reimbursement from Power 27.3%	1,240,000	1,763,000	2,557,000	2,557,000	2,557,000
BABs Interest Subsidies (Net of Sequest.)	18,772,000	18,164,000	17,524,000	16,859,000	16,041,000
Subtotal	835,010,000	847,255,000	868,875,000	882,907,000	903,331,000
Operation & Maintenance Expenses					
Personnel	131,957,000	135,916,000	139,993,000	144,193,000	148,519,000
Non-Personal Services	24,430,000	25,163,000	25,918,000	26,696,000	27,497,000
Materials/Supplies/Equipment	23,019,000	23,710,000	24,421,000	25,154,000	25,909,000
Services of SFPUC Bureaus	71,785,000	73,939,000	76,157,000	78,442,000	80,795,000
Services of Other Departments	17,372,000	17,893,000	18,430,000	18,983,000	19,552,000
Natural Gas & Electricity	12,962,000	13,351,000	13,752,000	14,165,000	14,590,000
Hetch Hetchy Assessment	55,422,000	57,085,000	58,798,000	60,562,000	62,379,000
Other Operating Expenses	2,941,000	3,029,000	3,120,000	3,214,000	3,310,000
Programmatic Projects (Excl S25GG Ls +TI Maint)	25,693,000	24,858,000	25,201,000	25,262,000	25,596,000
Subtotal	365,581,000	374,944,000	385,790,000	396,671,000	408,147,000
Debt Service, Net of Capitalized Interest					
Outstanding Bonds	333,535,000	332,935,000	333,088,000	331,355,000	331,957,000
Outstanding SRF Loans	6,632,000	6,632,000	6,632,000	6,632,000	6,632,000
2022 SRF Loan (Preliminary)	4,542,000	6,457,000	9,366,000	9,366,000	9,366,000
Projected Debt: Local & Regional Water	20,430,000	21,332,000	36,661,000	36,661,000	36,661,000
Projected Debt: Hetchy Water	13,796,000	14,022,000	17,861,000	17,861,000	17,861,000
Subtotal	378,935,000	381,378,000	403,608,000	401,875,000	402,477,000
Non-Operating Expenses					
Local Projects	31,644,000	43,644,000	41,962,000	29,154,000	37,219,000
Regional Projects	25,000,000	28,643,000	21,357,000	20,000,000	19,959,000
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	8,821,000	8,732,000	8,639,000	8,639,000	8,639,000
Subtotal	66,815,000	82,369,000	73,308,000	59,143,000	67,167,000
Total Expenses	811,331,000	838,691,000	862,706,000	857,689,000	877,791,000
Revenues Less Expenses	23,679,000	8,564,000	6,169,000	25,218,000	25,540,000
Transfer to Wholesale Coverage Reserve	(70,000)	(3,363,000)	(234,000)	(3,012,000)	(20,000)
Ending Fund Reserves					
Unappropriated Fund Reserves	74,167,000	79,368,000	85,303,000	107,509,000	133,029,000
Wholesale Coverage Reserves	62,783,000	66,146,000	66,380,000	69,392,000	69,412,000
Total	136,950,000	145,514,000	151,683,000	176,901,000	202,441,000
Annual Revenues	835,010,000	847,255,000	868,875,000	882,907,000	903,331,000
Plus Reserves Budgeted as Revenues	0	0	0	0	0
Less Revs Excluded from Coverage Calc	(5,903,000)	(5,957,000)	(6,005,000)	(6,054,000)	(6,109,000)
Less Operating & Maintenance Expenses	(365,581,000)	(374,944,000)	(385,790,000)	(396,671,000)	(408,147,000)
Less Operating Carryforwards/Adjustments	0	0	0	0	0
Net Revenues (Current Basis)	463,526,000	466,354,000	477,080,000	480,182,000	489,075,000
Plus Beginning Fund Rsrvs (Excl Budgeted Rsrvs)	113,271,000	136,950,000	145,514,000	151,683,000	176,901,000
Other Adjustments (per SFPUC)	0	0	0	0	0
Net Revenues (Indenture Basis with Reserves)	576,797,000	603,304,000	622,594,000	631,865,000	665,976,000
Annual Debt Service	378,935,000	381,378,000	403,608,000	401,875,000	402,477,000
Debt Service Coverage, Current Basis	1.22	1.22	1.18	1.19	1.22
Debt Service Coverage, Indenture Basis	1.52	1.58	1.54	1.57	1.65

Table 2
SFPUC Water Financial Projections
Cash Flow Assumptions

SFPUC Model Basis	Financial projections are based on SFPUC's Water 10 Year Plan dated June 17, 2022.
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 2022/23 and assume future retail water sales change as shown on the table, with future changes roughly based on SFPUC
Wholesale Water Sales	Wholesale water sales projections based SFPUC estimates for FY 2022/23 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 2022/23, 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 2022/23, and subsequently are calculated based on volume of wholesale water sales multiplied by the projected wholesale rate.
Interest Income	Interest income is based on SFPUC projections for FY 2022/23 and subsequently 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	Operation & Maintenance Expenses other than Programmatic Expenses are based on SFPUC projections for FY 2022/23 and FY 2023/24 and subsequently escalate at the annual rate of 3.0% . 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.
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 (Water) and Table 7 (Hetchy Water), with a schedule of projected debt service by fiscal year shown on Table 6 (Water) and Table 8 (Hetchy Water).
2022 SRF Loan Assumptions	Debt service for the 2022 SRF Loan assumes approximately \$238.2 million of principal, a 30-year term and 1.1% interest rate, with interest-only payments occurring as funds are drawn down, and principal repayment starting FY 2027/28. The projections assume that funds received from SRF reduce the amount of bond funding included in the SFPUC's latest financial model.
Outstanding Debt Service	Outstanding debt service is based on debt service schedules for each issue, as provided by SFPUC, and is shown on a fiscal year basis.
Debt Service Payments	Note that pursuant to the Indenture, as a procedural requirement the SFPUC is required to make monthly prepayments to the trustee of 1/12th principal and 1/6th semi-annual debt service toward each upcoming bond payment. Debt service payments in the cash flow projections reflect the amount coming due each fiscal year; not the amounts procedurally required to be prepaid each fiscal year.
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)

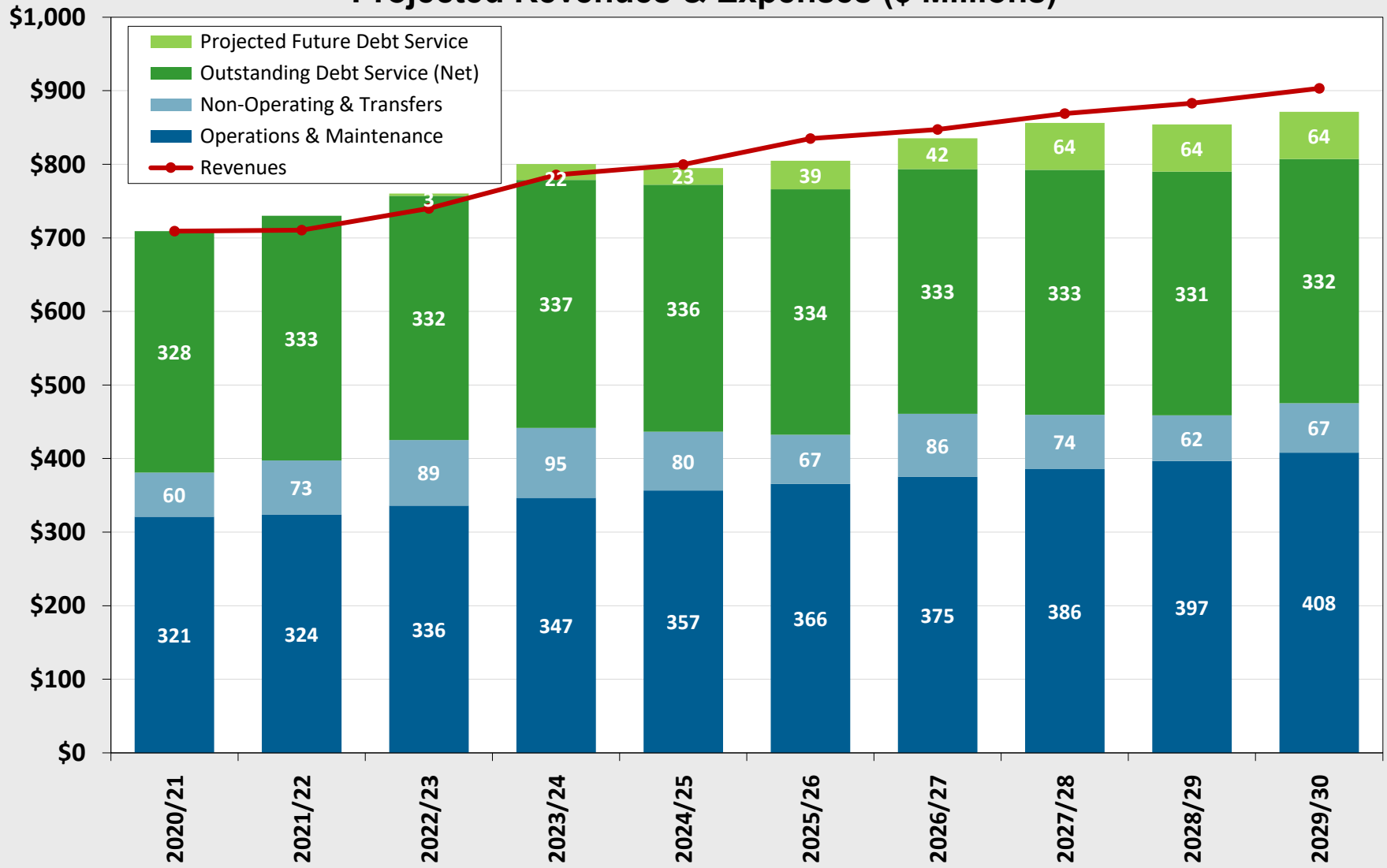


Table 3
San Francisco Public Utilities Commission
10-Year Water Capital Improvement Program & Funding Sources (New Projects)

	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
REGIONAL WATER IMPROVEMENTS										
Water Treatment Program	17,166,000	137,220,000	103,533,000	10,972,000	14,820,000	7,168,000	12,520,000	2,898,000	4,248,000	2,748,000
Water Transmission Program	14,232,000	68,611,000	39,376,000	34,590,000	12,246,000	7,490,000	16,014,000	4,205,000	2,789,000	2,535,000
Water Supply & Storage	-	17,249,000	33,287,000	59,965,000	50,866,000	28,000,000	34,700,000	32,400,000	22,900,000	10,700,000
Watersheds & Land Management	-	11,146,000	3,853,000	4,068,000	433,000	391,000	403,000	411,000	419,000	428,000
Communication & Monitoring Program	-	2,149,000	3,700,000	3,750,000	3,200,000	3,200,000	2,250,000	800,000	800,000	800,000
Buildings and Grounds - Regional	16,181,000	10,642,000	70,306,000	70,051,000	9,143,000	5,902,000	2,355,000	2,365,000	2,365,000	2,365,000
Long Term Monitoring & Perm	-	400,000	1,682,000	3,907,000	2,288,000	1,987,000	1,428,000	1,455,000	1,230,000	1,252,000
Subtotal	47,579,000	247,417,000	255,737,000	187,303,000	92,996,000	54,138,000	69,670,000	44,534,000	34,751,000	20,828,000
LOCAL WATER IMPROVEMENTS										
Local Water Conveyance	50,206,000	84,107,000	93,103,000	58,440,000	55,742,000	58,096,000	57,476,000	57,058,000	59,817,000	58,655,000
Automated Meter Reading System	-	2,498,000	2,498,000	1,624,000	1,624,000	7,014,000	7,014,000	7,014,000	7,014,000	7,014,000
Buildings & Grounds Improvements	2,537,000	46,135,000	121,727,000	111,018,000	66,691,000	914,000	42,000	42,000	42,000	42,000
Other Local Water Improvements	-	8,978,000	13,699,000	3,062,000	2,249,000	1,124,000	390,000	390,000	390,000	390,000
Subtotal	52,743,000	141,718,000	231,027,000	174,144,000	126,306,000	67,148,000	64,922,000	64,504,000	67,263,000	66,101,000
HETCH HETCHY PROJECTS: WATER USES										
Hetchy Water - Water Only	45,723,000	47,144,000	65,720,000	18,258,000	12,491,000	7,921,000	6,140,000	5,659,000	5,679,000	5,699,000
Hetchy Water - Joint Project (45% Water)	18,064,000	29,651,000	47,892,000	50,255,000	26,353,000	21,836,000	18,399,000	11,280,000	18,048,000	10,563,000
Subtotal	63,787,000	76,795,000	113,612,000	68,513,000	38,844,000	29,757,000	24,539,000	16,939,000	23,727,000	16,262,000
TOTAL	164,108,000	465,930,000	600,376,000	429,961,000	258,146,000	151,043,000	159,131,000	125,977,000	125,741,000	103,191,000
FUNDING SOURCES										
Water Bond Financing										
Water Revenue Bonds (Local)	30,618,000	101,884,000	152,328,000	99,193,000	73,997,000	30,484,000	18,270,000	19,356,000	32,722,000	24,799,000
Water Revenue Bonds (Regional)	22,578,000	190,974,000	198,118,000	139,358,000	58,384,000	25,018,000	35,227,000	19,901,000	12,665,000	746,000
Water Revenue Bonds (Hetchy)	63,787,000	76,795,000	113,612,000	68,513,000	38,844,000	29,757,000	24,539,000	16,939,000	23,727,000	16,262,000
Subtotal	116,983,000	369,653,000	464,058,000	307,064,000	171,225,000	85,259,000	78,036,000	56,196,000	69,114,000	41,807,000
Cash Funding & Contributions										
Pay-Go Revenue Funding: Local	20,605,000	21,539,000	52,100,000	57,100,000	38,545,000	30,000,000	42,000,000	40,328,000	27,600,000	35,699,000
Pay-Go Revenue Funding: Regional	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	28,643,000	21,357,000	20,000,000	19,959,000
Capacity Charges	1,520,000	1,520,000	1,520,000	1,520,000	1,580,000	1,644,000	1,644,000	1,634,000	1,554,000	1,520,000
Subtotal	47,125,000	48,059,000	78,620,000	83,620,000	65,125,000	56,644,000	72,287,000	63,319,000	49,154,000	57,178,000
TOTAL	164,108,000	417,712,000	542,678,000	390,684,000	236,350,000	141,903,000	150,323,000	119,515,000	118,268,000	98,985,000
Surplus / (Shortfall)	-	(48,218,000)	(57,698,000)	(39,277,000)	(21,796,000)	(9,140,000)	(8,808,000)	(6,462,000)	(7,473,000)	(4,206,000)

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.

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

		Projected 30-Yr Bonds 3.75%	Projected 30-Yr Bonds 4.00%	Projected 30-Yr Bonds 4.50%
		Year 1	Years 2 - 3	Years 4 - 10
Funding Target		Per each \$100,000,000	Per each \$100,000,000	Per each \$100,000,000
Assumed Issuance & Payment Dates				
Bond Issuance Date		Oct-1	Oct-1	Oct-1
Principal Payment		Nov-1	Nov-1	Nov-1
Total Debt Issue		\$111,300,000	\$112,080,000	\$113,670,000
Project Funding		\$100,000,000	\$100,000,000	\$100,000,000
Issuance Costs & Reserve Requirement				
Underwriter Discount	0.50%	\$557,000	\$560,000	\$568,000
Issuance Costs	Est.	300,000	300,000	300,000
Reserve Requirement		0	0	0
Capitalized Interest	2.50	10,435,000	11,208,000	12,788,000
Rounding/Contingency		<u>8,000</u>	<u>12,000</u>	<u>14,000</u>
Total		11,300,000	12,080,000	13,670,000
Financing Terms				
Term (Years)		30	30	30
Interest Only (Years)		2.50	2.50	2.50
Principal Amortization (Years)		28	28	28
Est. Average Interest Rate		3.75%	4.00%	4.50%
Annual Debt Service				
Interest Only Period		4,174,000	4,483,000	5,115,000
Principal Amortization Period		6,488,000	6,726,000	7,220,000
<i>Financing costs and interest rates estimated for financial planning purposes.</i>				

Table 5
SFPUC Water Enterprise
Projected Bond Issues: Water

Debt Issuance by FY	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Future Bond Funding Needs for CIP Projects Budgeted in Year										
Water Revenue Bonds (Local)	22,578,000	190,974,000	198,118,000	139,358,000	58,384,000	25,018,000	35,227,000	19,901,000	12,665,000	746,000
Water Revenue Bonds (Regional)	30,618,000	101,884,000	152,328,000	99,193,000	73,997,000	30,484,000	18,270,000	19,356,000	32,722,000	24,799,000
Total	53,196,000	292,858,000	350,446,000	238,551,000	132,381,000	55,502,000	53,497,000	39,257,000	45,387,000	25,545,000
Bond Funding in Year (per SFPUC Projections)										
Water Revenue Bonds (Local)	164,842,000	-	152,220,000	-	172,060,000	-	-	-	134,083,000	97,886,000
Water Revenue Bonds (Regional)	50,800,000	-	61,744,000	-	122,263,000	-	-	-	79,080,000	245,195,000
Less SRF Loan Funding (Water Share \$173M)	(50,000,000)		(70,000,000)		(53,000,000)				-	-
Total	165,642,000	-	143,964,000	-	241,323,000	-	-	-	213,163,000	343,081,000
Financing Terms										
Bond Funding Proceeds	165,642,000		143,964,000		241,323,000				213,163,000	343,081,000
Total Issue Size	184,360,000		161,350,000		270,470,000				242,300,000	389,980,000
Issuance Date	Oct-1		Oct-1		Oct-1				Oct-1	Oct-1
Issuance Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Interest Payments	May-1 & Nov-1		May-1 & Nov-1		May-1 & Nov-1				May-1 & Nov-1	May-1 & Nov-1
Principal Payments (Year 3+)	Nov-1		Nov-1		Nov-1				Nov-1	Nov-1
Average Interest Rate	3.75%		4.00%		4.00%				4.50%	4.50%
Repayment Term (Years)	30.50		30.50		30.50				30.50	30.50
Capitalized Interest (Years)	2.50		2.50		2.50				2.50	2.50
Debt Service per \$100M										
Interest Only Period (2.5 Yrs)	4,174,000		4,483,000		4,483,000				5,115,000	5,115,000
Principal Amort Period (28 Yrs)	6,488,000		6,726,000		6,726,000				7,220,000	7,220,000
Annual Debt Service										
Interest Only Period	6,914,000		6,454,000		10,819,000				10,903,000	17,549,000
Principal Amort Period	10,747,000		9,683,000		16,231,000				15,390,000	24,770,000
Cumulative MADS										
	10,747,000		9,683,000		25,914,000					66,074,000

Table 6
 SFPUC Water Enterprise
 Projected Debt Service on Future Financings: Water

Fiscal Year Ending June 30	2022/23 Bonds	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	Total Net of Cap I
2024											0
2025	576,000										576,000
2026	10,747,000	0									10,747,000
2027	10,747,000	0	538,000								11,285,000
2028	10,747,000	0	9,683,000	0							20,430,000
2029	10,747,000	0	9,683,000	0	902,000						21,332,000
2030	10,747,000	0	9,683,000	0	16,231,000	0					36,661,000
2031	10,747,000	0	9,683,000	0	16,231,000	0	0				36,661,000
2032	10,747,000	0	9,683,000	0	16,231,000	0	0	0			36,661,000
2033	10,747,000	0	9,683,000	0	16,231,000	0	0	0	909,000		37,570,000
2034	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	1,462,000	53,513,000
2035	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2036	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2037	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2038	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2039	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2040	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2041	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2042	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2043	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2044	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2045	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2046	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2047	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2048	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2049	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2050	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2051	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2052	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2053	10,747,000	0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	76,821,000
2054		0	9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	66,074,000
2055			9,683,000	0	16,231,000	0	0	0	15,390,000	24,770,000	66,074,000
2056				0	16,231,000	0	0	0	15,390,000	24,770,000	56,391,000
2057					16,231,000	0	0	0	15,390,000	24,770,000	56,391,000
2058						0	0	0	15,390,000	24,770,000	40,160,000
2059							0	0	15,390,000	24,770,000	40,160,000
2060								0	15,390,000	24,770,000	40,160,000
2061									15,390,000	24,770,000	40,160,000
2062										24,770,000	24,770,000

Table 7
SFPUC Water Enterprise
Projected Bond Issues: Hetchy Water

Debt Issuance by FY	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Future Bond Funding Needs for CIP Projects Budgeted in Year										
Water Revenue Bonds (Hetchy)	63,787,000	76,795,000	113,612,000	68,513,000	38,844,000	29,757,000	24,539,000	16,939,000	23,727,000	16,262,000
Bond Funding in Year (per SFPUC Projections)										
Water Revenue Bonds (Hetchy)	133,316,000	-	76,509,000	-	60,441,000	-	-	-	75,970,000	94,374,000
Financing Terms										
Bond Funding Proceeds	133,316,000		76,509,000		60,441,000				75,970,000	94,374,000
Total Issue Size	148,380,000		85,150,000		67,270,000				84,550,000	105,040,000
Issuance Date	Oct-1		Oct-1		Oct-1				Oct-1	Oct-1
Issuance Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Interest Payments	May-1 & Nov-1		May-1 & Nov-1		May-1 & Nov-1				May-1 & Nov-1	May-1 & Nov-1
Principal Payments (Year 3+)	Nov-1		Nov-1		Nov-1				Nov-1	Nov-1
Average Interest Rate	3.75%		4.00%		4.00%				4.50%	4.50%
Repayment Term (Years)	30.50		30.50		30.50				30.50	30.50
Capitalized Interest (Years)	2.50		2.50		2.50				2.50	2.50
Debt Service per \$100M										
Interest Only Period (2.5 Yrs)	4,174,000		4,483,000		4,483,000				5,115,000	5,115,000
Principal Amort Period (28 Yrs)	6,488,000		6,726,000		6,726,000				7,220,000	7,220,000
Annual Debt Service										
Interest Only Period	5,565,000		3,430,000		2,710,000				3,886,000	4,827,000
Principal Amort Period	8,650,000		5,146,000		4,065,000				5,485,000	6,814,000
Cumulative MADS	8,650,000		5,146,000		9,211,000				14,696,000	21,510,000

Table 8
 SFPUC Water Enterprise
 Projected Debt Service on Future Financings: Hetchy Water

Fiscal Year Ending June 30	2022/23 Bonds	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	Total Net of Cap I
2024											0
2025	464,000										464,000
2026	8,650,000	0									8,650,000
2027	8,650,000	0	286,000								8,936,000
2028	8,650,000	0	5,146,000	0							13,796,000
2029	8,650,000	0	5,146,000	0	226,000						14,022,000
2030	8,650,000	0	5,146,000	0	4,065,000	0					17,861,000
2031	8,650,000	0	5,146,000	0	4,065,000	0	0				17,861,000
2032	8,650,000	0	5,146,000	0	4,065,000	0	0	0			17,861,000
2033	8,650,000	0	5,146,000	0	4,065,000	0	0	0	324,000		18,185,000
2034	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	402,000	23,748,000
2035	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2036	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2037	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2038	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2039	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2040	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2041	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2042	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2043	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2044	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2045	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2046	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2047	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2048	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2049	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2050	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2051	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2052	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2053	8,650,000	0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	30,160,000
2054		0	5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	21,510,000
2055			5,146,000	0	4,065,000	0	0	0	5,485,000	6,814,000	21,510,000
2056				0	4,065,000	0	0	0	5,485,000	6,814,000	16,364,000
2057					4,065,000	0	0	0	5,485,000	6,814,000	16,364,000
2058						0	0	0	5,485,000	6,814,000	12,299,000
2059							0	0	5,485,000	6,814,000	12,299,000
2060								0	5,485,000	6,814,000	12,299,000
2061									5,485,000	6,814,000	12,299,000
2062										6,814,000	6,814,000

Table 9
 SFPUC Water Enterprise
 Outstanding Debt & 2022 SRF Loan

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	Prior SRF Loans	2022 SRF Loan (Est)	Total Net of Cap I	BABs Interest	BABs Subsidies 35% w/ 5.7% Seq.	Junior Lien 2009 CD Bonds
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	270,313,792	66,135,698	33.01% 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	6,632,026	0	307,605,130	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	6,632,026	0	334,984,169	64,504,785	21,289,804	9,169,820
2024	89,554,429	0	44,712,944	84,798,189	46,799,983	24,134,234	15,250,650	27,325,180	6,632,026	1,530,000	340,737,634	63,144,429	20,840,819	9,130,617
2025	89,051,478	0	44,706,569	84,818,317	46,759,969	24,136,204	15,250,650	27,324,988	6,632,026	1,904,000	340,584,200	61,716,478	20,369,523	9,054,144
2026	88,525,873	0	44,709,944	78,432,089	57,423,300	24,131,369	15,250,650	28,542,090	6,632,026	2,332,000	345,979,340	60,220,873	19,875,899	8,975,953
2027	87,962,528	0	33,366,569	88,909,216	57,422,175	24,134,162	15,250,650	28,545,657	6,632,026	2,544,000	344,766,982	58,612,528	19,345,065	8,895,589
2028	87,356,778	0	31,914,694	90,496,316	55,836,050	24,135,354	15,250,650	28,545,108	6,632,026	4,542,000	344,708,975	56,876,778	18,772,180	8,812,600
2029	86,714,665	0	31,911,944	90,475,997	55,905,300	24,135,836	15,250,650	28,540,410	6,632,026	6,457,000	346,023,829	55,034,665	18,164,191	8,723,073
2030	86,036,065	0	31,910,319	90,464,536	56,754,425	24,136,358	15,250,650	28,536,068	6,632,026	9,366,000	349,086,447	53,096,065	17,524,356	8,630,239
2031	85,330,365	0	31,908,381	90,442,122	46,259,175	24,135,417	15,250,650	38,029,039	6,632,026	9,366,000	347,353,176	51,080,365	16,859,074	8,534,374
2032	95,270,230	0	31,913,568	64,737,580	26,987,150	50,521,743	15,250,650	47,276,287	6,632,026	9,366,000	347,955,234	48,600,230	16,040,506	8,431,226
2033	94,234,614	0	31,911,568	64,723,039	55,309,125	25,553,858	15,250,650	38,642,667	6,632,026	9,366,000	341,623,547	45,634,614	15,061,704	8,322,944
2034	93,155,810	0	31,914,768	64,722,929	65,660,875	25,555,318	15,250,650	29,453,584	6,632,026	9,366,000	341,711,960	42,545,810	14,042,245	8,212,519
2035	92,023,979	0	31,912,768	64,744,534	64,290,500	25,541,023	15,250,650	29,453,908	6,632,026	9,366,000	339,215,386	39,328,979	12,980,529	8,099,257
2036	90,858,609	0	31,908,659	64,787,884	12,039,375	84,031,293	15,250,650	29,443,359	6,632,026	9,366,000	344,317,854	35,978,609	11,874,740	7,975,553
2037	89,634,039	0	31,913,375	64,796,082	13,463,375	98,388,042	15,250,650	16,649,332	6,632,026	9,366,000	346,092,921	32,489,039	10,723,007	7,851,539
2038	88,359,781	0	0	64,797,526	0	101,103,947	15,250,650	30,102,025	6,632,026	9,366,000	315,611,955	28,854,781	9,523,521	7,719,381
2039	87,034,701	0	0	64,791,304	0	51,392,414	15,250,650	80,016,711	6,632,026	9,366,000	314,483,806	25,069,701	8,274,255	7,582,069
2040	85,657,340	0	0	64,787,837	0	51,249,695	15,250,650	80,015,696	6,632,026	9,366,000	312,959,245	21,127,340	6,973,079	7,438,908
2041	84,216,263	0	0	14,568,121	0	51,197,132	15,250,650	80,022,518	6,632,026	9,366,000	261,252,709	17,021,263	5,617,868	7,289,204
2042	31,702,560	0	0	14,569,946	0	51,139,406	15,250,650	80,005,763	6,632,026	9,366,000	208,666,351	14,322,560	4,727,161	7,135,717
2043	31,266,850	0	0	14,568,654	0	62,619,981	15,250,650	22,993,908	6,632,026	9,366,000	162,698,069	13,086,850	4,319,315	0
2044	30,818,976	0	0	14,572,644	0	62,618,816	15,250,650	21,488,890	6,632,026	9,366,000	160,748,002	11,793,976	3,892,602	0
2045	30,341,333	0	0	14,569,557	0	0	39,109,525	21,484,578	6,632,026	9,366,000	121,503,019	10,441,333	3,446,162	0
2046	29,846,313	0	0	14,568,558	0	0	39,610,825	21,482,110	6,632,026	9,366,000	121,505,832	9,026,313	2,979,134	0
2047	29,330,789	0	0	14,568,600	0	0	40,129,225	21,475,947	6,632,026	9,366,000	121,502,586	7,545,789	2,490,488	0
2048	28,786,808	0	0	0	0	0	55,229,925	21,485,316	6,632,026	9,366,000	121,500,074	5,996,808	1,979,246	0
2049	28,221,241	0	0	0	0	0	79,135,050	0	6,632,026	9,366,000	123,354,317	4,376,241	1,444,378	0
2050	27,625,789	0	0	0	0	0	79,730,175	0	6,632,026	9,366,000	123,353,990	2,680,789	884,794	0
2051	27,006,975	0	0	0	0	0	80,352,450	0	6,632,026	9,366,000	123,357,451	906,975	299,347	0
2052	0	0	0	0	0	0	0	0	0	9,366,000	9,366,000	0	0	0
2053	0	0	0	0	0	0	0	0	0	9,366,000	9,366,000	0	0	0
2054	0	0	0	0	0	0	0	0	0	9,366,000	9,366,000	0	0	0
2055	0	0	0	0	0	0	0	0	0	9,366,000	9,366,000	0	0	0
2056	0	0	0	0	0	0	0	0	0	9,366,000	9,366,000	0	0	0
2057	0	0	0	0	0	0	0	0	0	9,366,000	9,366,000	0	0	0
2058	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2059	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

