2023-24

San Francisco Public Utilities Commission
Water Enterprise | FY 2023-24

Green Bond Report 2023-24

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

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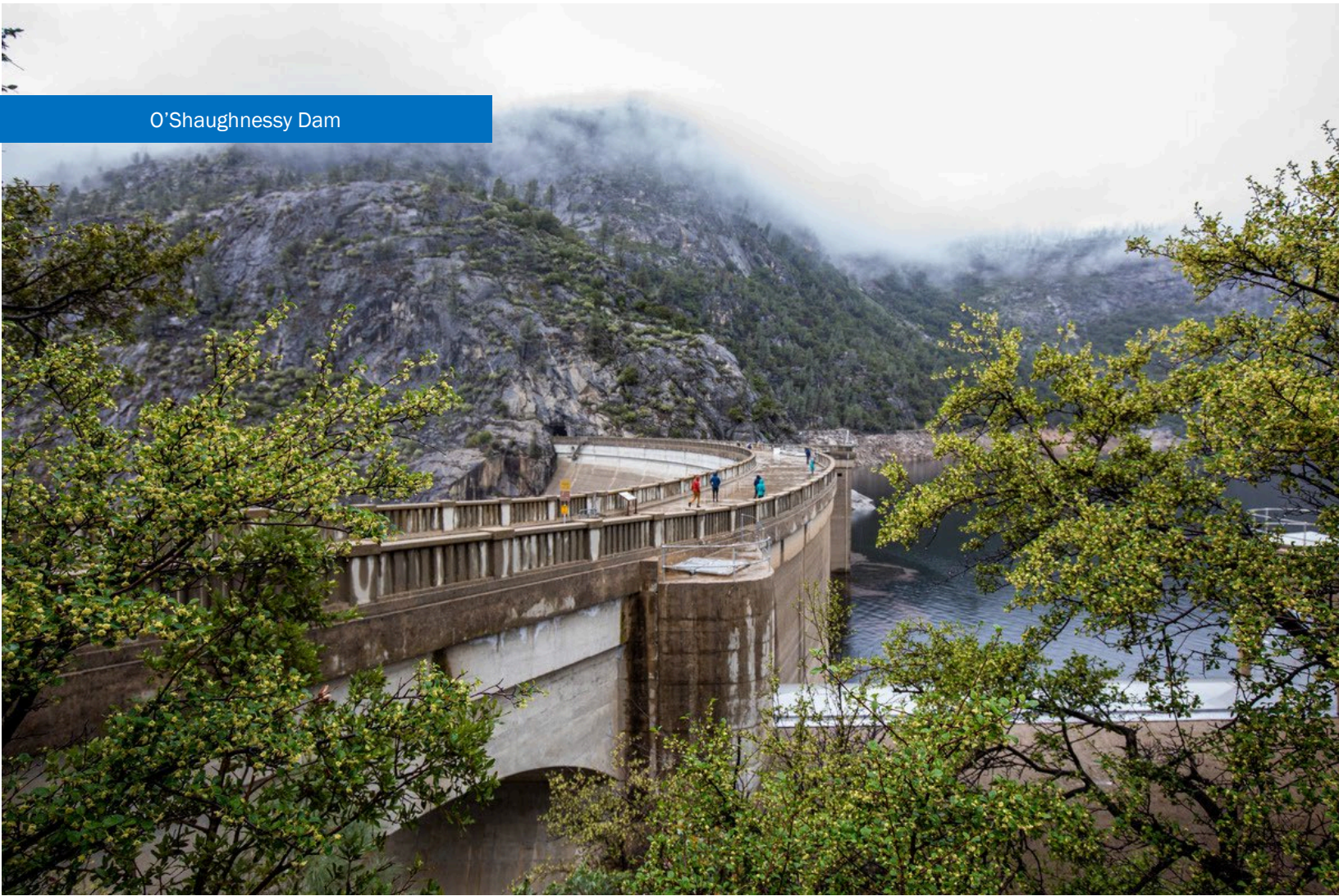
Note: Green Bond Verification Reports are available at https://sfpuc.org/about-us/reports/debt-management-and-disclosure-reports



O'Shaughnessy Dam

Introduction

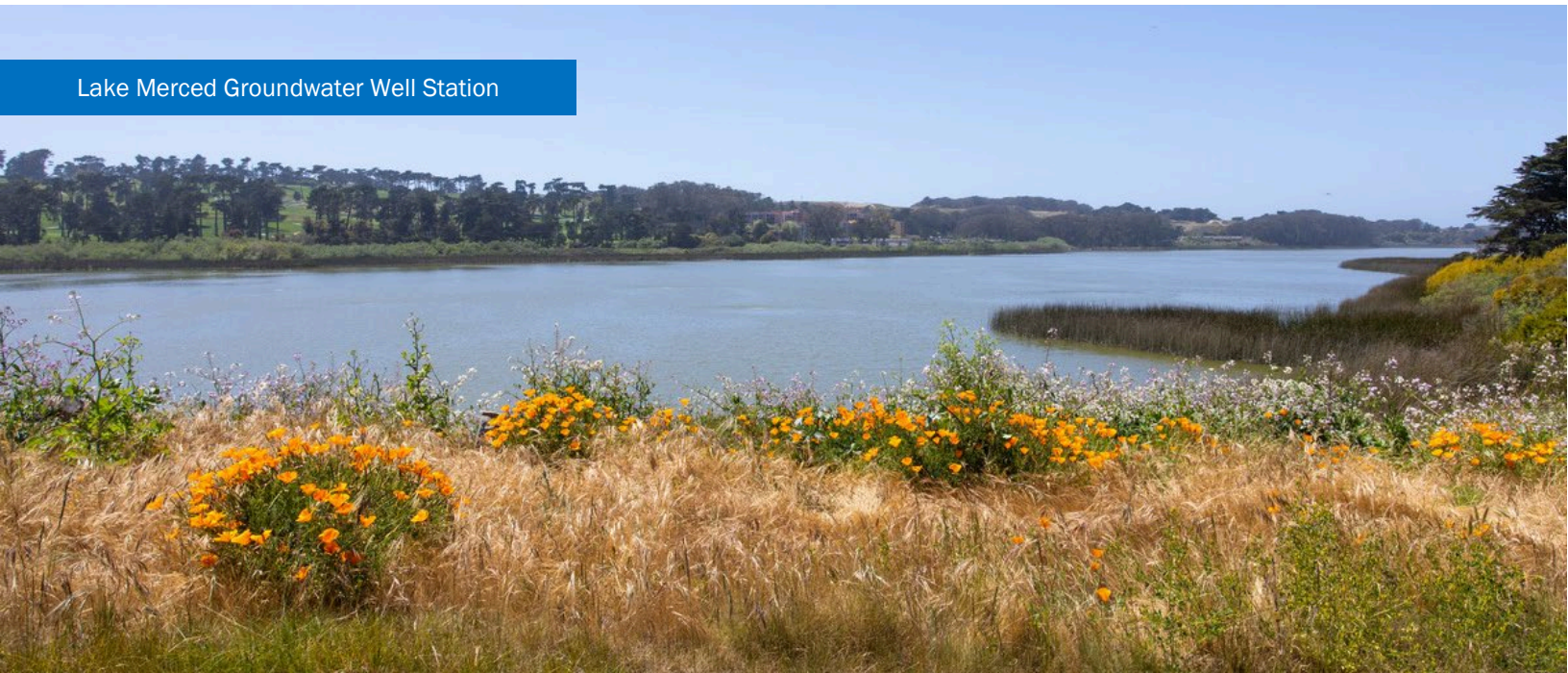
The San Francisco Public Utilities Commission (SFPUC) is a department of the City and County of San Francisco (City or San Francisco) responsible for the maintenance, operation and development of three utility enterprises: the Water Enterprise, the Wastewater Enterprise and Power Enterprise. Since the release of its first Climate Action Plan in 2004, San Francisco has been leading the way on local climate action, environmental justice, and developing and implementing innovative programs and outreach campaigns to engage with all San Franciscans.

These Climate Action Plans impact all San Francisco departments, including the SFPUC, and influence operating and capital investment activities. The SFPUC provides top quality drinking water and wastewater services to the City of San Francisco, wholesale water to three other Bay Area counties, and clean, reliable energy to San Francisco residents, businesses, and municipal departments. Located in the State of California (State), the SFPUC is governed by Federal, State and local laws and regulations, as well as policies and programs within the SFPUC, created to achieve additional climate and social inclusion goals. Notably, the SFPUC was the first utility in the nation to pass Environmental Justice and Community Benefits Policies with the goal of proactively providing diverse communities with opportunities in workforce and economic development, the arts, urban agriculture, and education.

The SFPUC views green bonds as an important tool to help meet these goals and finance low-carbon, climate-resilient infrastructure. Since issuing its first series of green bonds in Fiscal Year 2015, the SFPUC has sold more than $4.3 billion in certified green bonds from its Water and Wastewater enterprises and more than $100 million in self-designated green bonds from its Power Enterprise. Impacts from the projects financed by green bonds issued by the SFPUC's three enterprises include increased water storage, application of green infrastructure to manage stormwater, upgrades to renewable energy generation facilities, and the construction of green infrastructure to divert stormwater from treatment plants.

In addition to providing project spending and project impact information, this report highlights associated project co-benefits and describes the context in which climate and social inclusion inform the SFPUC's capital planning decisions. This report reflects activities through June 30, 2024.

Lake Merced Groundwater Well Station



This report speaks only as of June 30, 2024. The SFPUC has not undertaken, and does not undertake, to provide any updates to this report in the future. The publication of this report does not constitute or imply any representation (i) that the information in the report is material to investors, (ii) regarding any other material financial, operating or other information about the SFPUC or its outstanding bonds or other indebtedness or (iii) that no other material circumstances or material events have occurred or that no other material information exists concerning the SFPUC or its outstanding bonds or other indebtedness. This report is not a recommendation to buy, sell or hold any bonds or obligations of the SFPUC.

GREEN BOND DESIGNATION AND CERTIFICATION

Generally, the SFPUC designates certain of its bonds as "Green Bonds" when the proceeds of such bonds are used to finance or refinance environmentally beneficial projects based upon criteria applied by the SFPUC. With respect to the Water Enterprise, the SFPUC considers projects included in its Water System Improvement Program (WSIP) to be environmentally beneficial projects. Investors' criteria for determining whether bonds finance or refinance environmentally beneficial projects and/or are appropriately designated as "Green Bonds" may differ from the criteria applied by the SFPUC.

The following bonds (Bonds or Green Bonds) issued by the SFPUC's Water Enterprise from Fiscal Year 2015 through Fiscal Year 2024 have been certified by the Climate Bonds Initiative (CBI) under the Climate Bonds Standard established by the CBI:

Water Revenue Bonds, 2016 Sub-Series C (Green Bonds – Federally Taxable)
Water Revenue Bonds, 2017 Sub-Series A (WSIP) (Green Bonds)
Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds)
Water Revenue Bonds, 2017 Sub-Series G (Refunding – Federally Taxable) (Green Bonds)
Water Revenue Bonds, 2019 Sub-Series A (Refunding – Federally Taxable) (Green Bonds)
Water Revenue Bonds, 2020 Sub-Series A (WSIP) (Green Bonds)
Water Revenue Bonds, 2020 Sub-Series E (Refunding – Federally Taxable) (WSIP) (Green Bonds)
Water Revenue Bonds, 2023 Sub-Series C (Refunding) (Green Bonds)[1]

The explanation of the significance of such certification may be obtained from the CBI[2]. Such Bonds have been certified by CBI based upon verification by Morningstar Sustainalytics (Sustainalytics), a verifier approved by the Climate Bonds Standard Board and retained by the SFPUC. Sustainalytics has verified that bonds issued by the SFPUC to finance and refinance projects included in the WSIP meet the requirements of the Water Infrastructure Criteria of the Climate Bonds Standard Version 2.1. Verification by Sustainalytics and the certification of such Bonds by CBI based upon such verification reflect only the views of Sustainalytics and CBI. Verification reports by Sustainalytics are available at https://sfpuc.org/about-us/reports/debt-management-and-disclosure-reports. The website is provided for convenience only and the information available on such website is not incorporated by reference into this report.

[1] The Water Revenue Bonds, 2025 Series A was subsequently issued in the following fiscal year on April 17, 2025 and will be included in the next annual report.

[2] https://www.climatebonds.net/ The website is provided for convenience only and the information available on the website is not incorporated by reference into this report.

Water Enterprise Green Bond Impact Report

The Green Bonds have been issued to finance and refinance projects in the Water System Improvement Program (WSIP). The WSIP is a $4.8 billion program consisting of 87 capital projects to repair, replace, and upgrade critical portions of the Regional and Local Water System. These projects were designed to meet specific objectives, which include the following:

- Improve the water system to provide high-quality water that reliably meets all current and foreseeable local, State, and federal requirements.
- Reduce vulnerability of the water system to damage from earthquakes.
- Increase system reliability to deliver water by providing the redundancy needed to accommodate outages.
- Provide improvements related to water supply/drought protection.
- Enhance sustainability through improvements that optimize protection of the natural and human environment.

The Local Program consists of 35 projects that are located within the city limits of San Francisco and benefit only San Francisco residents. Local Program projects are typically smaller in size than Regional Program projects and include improvements to existing in-city distribution pipelines, storage reservoirs/tanks, pump stations and miscellaneous facilities. The costs of Local Program projects are absorbed into the retail rates of San Francisco customers. The Local Program was completed in June 2020.

The Regional Program consists of 52 projects that are located mostly outside of the city limits of San Francisco and benefit both San Francisco residents and the 27 wholesale customers. These projects are typically much larger than Local Program projects and include a wide variety of improvements such as upgrades to, and the addition of, new treatment, transmission (pipelines, tunnels, pump stations), and storage (dams and reservoirs) facilities spread over seven different counties (Tuolumne, Stanislaus, San Joaquin, Alameda, Santa Clara, San Mateo, and San Francisco). The costs of projects within the Regional Program are incorporated into the rates paid by both retail customers and wholesale customers. As of June 30, 2024, the Regional Program is 99% complete.

The ongoing Regional Program projects are the Alameda Creek Recapture project and the Regional Groundwater Storage and Recovery project. The Alameda Creek Recapture Project includes construction of facilities in and around an existing quarry pit in Sunol Valley to recapture water that will be released from Calaveras Reservoir and/or bypassed around the Alameda Creek Diversion Dam during future operations of Calaveras Reservoir. Construction of the facility started in June 2021. In April 2023, the SFPUC terminated the project's construction contract due to concerns regarding worsening pond slope erosion, anticipated facility operating and maintenance complexity, and excessive change orders to redesign the facility to accommodate the erosive slope conditions. The project is being re-evaluated for short-term and long-term slope stability remediation and to consider improvements for operation and maintenance sustainability. The SFPUC will work with the quarry operator to stabilize the pond banks and re-evaluate the facility design to simplify operation and maintenance requirements. It is anticipated that a new construction contract will be issued using a design/build project delivery method and explore the possibility of adding initial operation and maintenance scope as part of the contract. The project is anticipated to be completed in 2032.

The Regional Groundwater Storage and Recovery Project has been divided into two phases. The Phase 1 construction contract, which includes the construction of up to 16 new groundwater recovery wells and test wells, chemical treatment equipment, pumping systems and pipelines, and other associated facilities, was completed in September 2022 and closed out in January 2023. Phase 2 has been divided into two construction contracts (Phases 2A and 2B); Phase 2 will provide improvements to the wells installed under Phase 1 to provide corrosion protection and other operational improvements, as well as to complete installation and connection of the South San Francisco Main Well. The Phase 2A contract to install cathodic protection and other improvements to some of the wells started construction in June 2022 and is anticipated to be completed in early 2025. The Phase 2B contract for installation of the South San Francisco Main Well facility and pipeline started construction in 2024 and is anticipated to be completed in 2026.

The Regional Program is further divided into the following categories of projects:

- San Joaquin Regional Projects: These projects are designed to improve water delivery reliability by augmenting three existing transmission pipelines that transmit the Hetch Hetchy water supply across the San Joaquin Valley and enhance water quality by building the Tesla Disinfection Facility, a new advanced disinfection/treatment facility for the SFPUC's largest source of supply.

- Sunol Valley Regional Projects: The projects within this region are designed to address delivery and seismic vulnerabilities associated with the delivery of Hetch Hetchy water through the Sunol Valley and water originating from the Alameda Watershed. Projects include the construction of a new Calaveras Dam, a fourth Alameda Siphon, a new (second) Irvington Tunnel, and other connecting large-diameter pipelines, as well as upgrades to the existing Sunol Valley Water Treatment Plant and San Antonio Pump Station. All these facilities are within or near the Calaveras Fault influence zone.

- Bay Division Regional Projects: The projects within this region address the seismic vulnerability of the four Bay Division Pipelines, which transmit the blend of Hetch Hetchy and Sunol Valley water across the San Francisco Bay to the Peninsula and serve a large number of wholesale customers. The projects in this region address the crossing of the Hayward Fault and system vulnerability associated with the proximity of the San Andreas Fault; and add system redundancy and operational flexibility.

- Peninsula Regional Projects: The projects within this region are generally designed to address facility seismic vulnerabilities and meet water quality and delivery goals for facilities delivering and treating water from the Crystal Springs, San Andreas and Pilarcitos Reservoirs. Projects include the construction of a new Crystal Springs Bypass Tunnel and large-diameter pipelines, as well as upgrades to the existing Harry Tracy Water Treatment Plant, the Pulgas Balancing Reservoir, and the Lower Crystal Springs Dam. All these facilities are located within the San Andreas Fault influence zone.

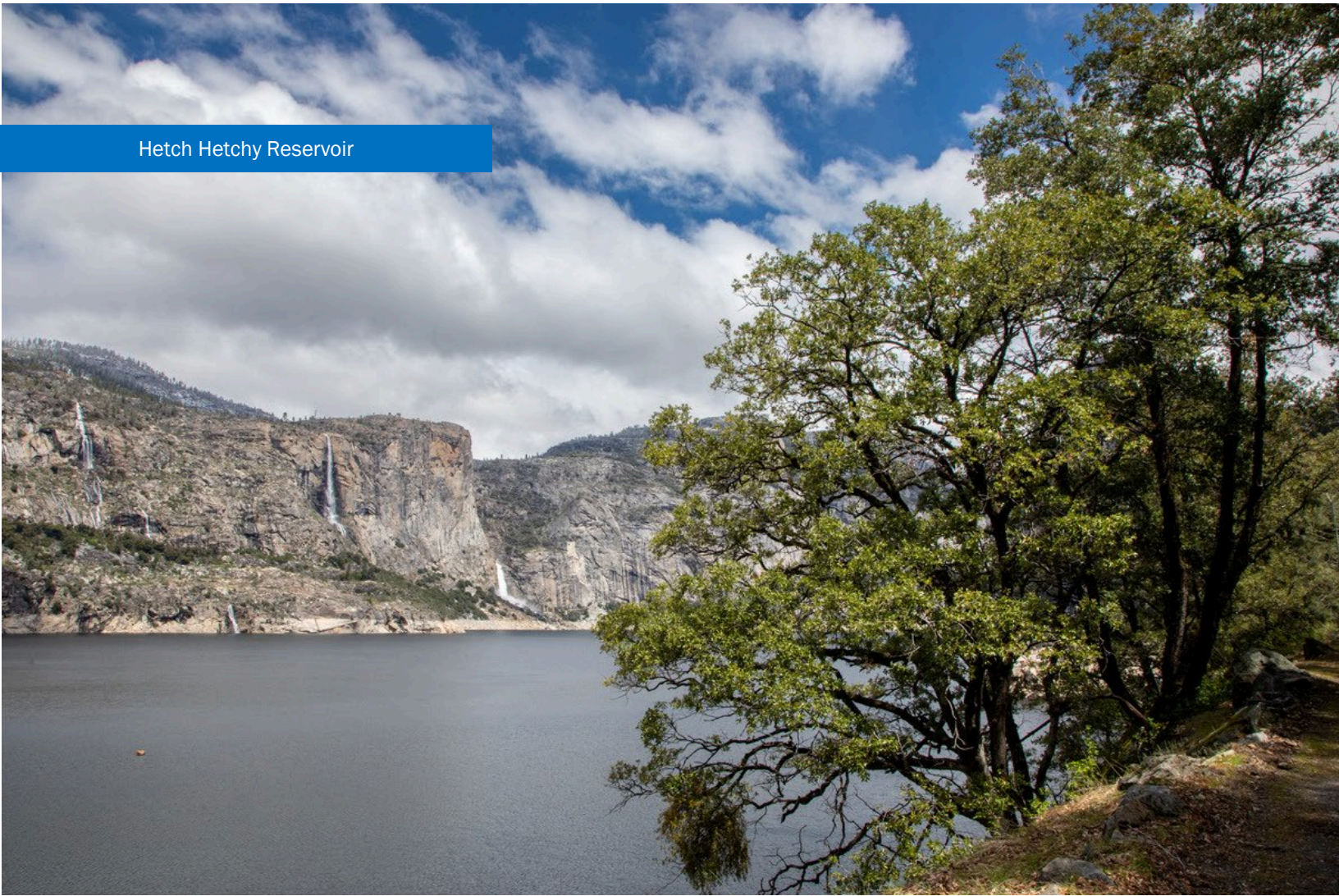
- San Francisco Regional Projects: The projects within this region include the seismic retrofit of the Sunset and University Mound Terminal Reservoirs, and a groundwater storage and recovery project. The two reservoir projects are located within the City but can be used to supply water back to the Northern Peninsula, which can benefit the Wholesale Customers. The groundwater project includes improvements in both San Mateo and San Francisco counties.

- **Support Projects** (formally System Wide Region): In July 2011, the System Wide Region was renamed as Support Projects. These projects include:
  1. System security upgrades, which involves the development and integration of security components at critical water system facilities.
  2. The Programmatic Environmental Impact Report (PEIR), which was prepared in compliance with CEQA to identify and analyze potential programmatic environmental impacts of the proposed system improvements.
  3. The Watershed Environmental Improvement Program, which consists of conservation easements and/or fee title purchase of property from willing landowners to permanently protect Alameda Creek Watershed lands.
  4. The Bioregional Habitat Restoration project (formerly Habitat Reserve Program), which is intended to provide a coordinated and consolidated approach to compensate for habitat impacts that would result from the implementation of the WSIP projects in the San Joaquin, Sunol Valley, Bay Division and Peninsula Regions of the RegionalWater System.
  5. Vegetation Restoration of WSIP Construction Sites, which was added to the Program in March 2014 to provide maintenance, monitoring and reporting of onsite habitat restoration installed at the various WSIP construction sites, and
  6. Regional Program management.

Green Bond Spending Details

Proceeds from each issuance of Bonds are separately tracked and allocated to designated eligible projects. Spending by bond series is detailed below.

In the indenture pursuant to which Bonds have been issued, the SFPUC has reserved the right to reallocate the use of the bond proceeds among various projects. In the following tables, a reduction in the allocation of bond proceeds to a particular project does not necessarily mean that such project will not proceed or that the scope of such project has been reduced. Further, the amount of bond proceeds allocated to a particular project does not necessarily reflect the total cost of such project. The "Estimated Use of Proceeds" column represents total projected spending for the bonds by project at the time of bond issuance. The "Spending from Prior Years" column represents the proceeds spent in years prior to the reported fiscal year. The "Fiscal Year 2023-24 Spending" column represents proceeds spent in the reported fiscal year. The "Total Expended" column represents all proceeds spent in the reported fiscal year and all prior years.



Hetch Hetchy Reservoir

Green Bond Proceeds

Water Revenue Bonds, 2016 Sub-Series C (Green Bonds – Federally Taxable)
As of June 30, 2024

Project	Project Number	Estimated Use of Proceeds	Spending from Prior Years*	Fiscal Year 2023-24 Spending	Total Expended*
Bond/Commercial Paper Expense	CUW30001	$3,084,618	$8,607,094	-	$8,607,094
Adit Leak Repairs	CUW35701	19,471,358	-	-	-
Regional Groundwater Storage & Recovery	CUW30103	9,752,541	15,607,774	-	15,607,774
Recycled Water Project	CUW30201	-	1,910	987,656	989,566
New Irvington Tunnel	CUW35901	3,534,658	(209,051)	-	(209,051)
Upper Alameda Creek Filter Gallery	CUW35201	1,856,862	2,453,723	-	2,453,723
Seismic Bay Division Pipeline @ Hayward Fault Ph 2	CUW35302	3,181,724	679,623	-	679,623
Lower Crystal Springs Dam Improvements	CUW35401	-	1,092	-	1,092
New Crystal Springs Bypass Tunnel	CUW35601	170	170	-	170
Alameda Siphon #4	CUW35902	74,987	19,471,358	-	19,471,358
Security Systems Upgrades	CUW36302	1,225,367	178,464	-	178,464
Harry Tracy Water Treatment Plant Long Term Improvements	CUW36701	35,659,426	33,505,436	-	33,505,436
Peninsula Pipeline Seismic Upgrade	CUW36702	1,109	6,794	-	6,794
Bay Division Pipeline Reliability Upgrade – Tunnel	CUW36801	83,385,032	81,724,603	-	81,724,603
Bay Division Pipeline Project Reliability – Pipeline	CUW36802	42,522,804	42,027,030	-	42,027,030
Crystal Springs Pump Station & Crystal Springs – San Andreas Pipeline	CUW37101	11,682	381,634	-	381,634
San Joaquin Pipeline System	CUW37301	-	10	-	10
Rehab Existing San Joaquin Pipelines	CUW37302	-	1,673	-	1,673
Calaveras Dam Replacement	CUW37401	32,848,192	22,263,983	-	22,263,983

*Negative amounts reflect accounting reallocations.

Water Revenue Bonds, 2016 Sub-Series C (Green Bonds – Federally Taxable)
As of June 30, 2024

Project	Project Number	Estimated Use of Proceeds	Spending from Prior Years	Fiscal Year 2023-24 Spending	Total Expended
San Antonio Backup Pipeline	CUW37403	41,041	6,534	-	6,534
Bay Division Pipeline No 3 & 4 Cross Connection	CUW38001	-	1,818	-	1,818
Sunol Valley Water Treatment Plant Expansion/ Treated Water Reservoir	CUW38101	-	477	-	477
Tesla Treatment Facility	CUW38401	-	212	-	212
Habitat Reserve Program	CUW38802	18,914,745	19,094,712	-	19,094,712
SFPUC/EBMUD Intertie	CUW38901	173	173	-	173
Mitigation Planning	CUW38804	1,155,323	-	-	-
Program Environmental Impact Report	CUW38801	66,883	-	-	-
Program Management Services – Water System Improvement Program	CUW39201	-	-	-	-
Vegetation Restoration Water System Improvement Program Sites	CUW38803	32,940	-	-	-
Watershed Env. Improvement Program	CUW39401	-	5,488,700	-	5,488,700
Bay Division Pipeline Upgrade	CUWBDP01	-	1,075,332	-	1,075,332
Peninsula Water System Improvements	CUWPWI01	-	2,683,569	-	2,683,569
San Joaquin Water System Improve Projects	CUWSJI01	-	286,542	-	286,542
Sunol Valley Water System Improvements	CUWSVI01	-	2,472,475	-	2,472,475
Total		**$256,821,634**	**$257,813,864**	**$987,656**	**$258,801,520**

Water Revenue Bonds, 2017 Sub-Series A (WSIP) (Green Bonds)
As of June 30, 2024

Project	Project Number	Estimated Use of Proceeds	Spending from Prior Years	Fiscal Year 2023-24 Spending	Total Expended
Lake Merced Water Level Restoration	CUW30101	-	-	$913	$913
Regional Groundwater Storage & Recovery	CUW30103	11,831,464	11,856,417	-	11,856,417
Recycled Water Project	CUW30201	532,280	-	2,504,495	2,504,995
Harding Park Recycled Water Project	CUW30204	-	34	-	34
Recycled-Water Project-Eastside	CUW30205	19,703	19,703	-	19,703
Lake Merced Pump Station Upgrade	CUW30901	630,939	630,939	-	630,939
Sutro Reservoir – Rehab/ Seismic Upgrade	CUW33701	23,855	23,855	-	23,855
Upper Alameda Creek Filter Gallery	CUW35201	-	264,536	-	264,536
Seismic Bay Division Pipeline @ Hayward Fault Ph 2	CUW35302	4,345,357	4,345,357	-	4,345,357
Lower Crystal Springs Dam Improvements	CUW35401	-	1,140	-	1,140
New Irvington Tunnel	CUW35901	4,792,673	4,792,673	-	4,792,673
Security Systems Upgrades	CUW36302	2,069,680	2,069,680	-	2,069,680
Harry Tracy Water Treatment Plant Long Term Improvements	CUW36701	18,158,415	18,158,415	-	18,158,415
Peninsula Pipeline Seismic Upgrade	CUW36702	321,836	321,836	-	321,836
Bay Division Pipeline Reliability Upgrade - Tunnel	CUW36801	1,282,153	1,282,153	-	1,282,153
Bay Division Pipeline Reliability – Pipeline	CUW36802	259,886	259,886	-	259,886
Crystal Springs Pump Station & Crystal Springs – San Andreas Pipeline	CUW37101	51,297	51,297	-	51,297
San Joaquin Pipeline System	CUW37301	163,320	163,320	-	163,320
Rehab Existing San Joaquin Pipelines	CUW37302	-	259	-	259
Calaveras Dam Replacement	CUW37401	73,965,437	73,965,437	-	73,965,437

Water Revenue Bonds, 2017 Sub-Series A (WSIP) (Green Bonds)
As of June 30, 2024

Project	Project Number	Estimated Use of Proceeds	Spending from Prior Years	Fiscal Year 2023-24 Spending	Total Expended
San Antonio Backup Pipeline	CUW37403	83,650	83,650	-	83,650
Crystal Springs Pipeline #2 Replace (In City)	CUW37801	-	663	-	663
Bay Division Pipeline No 3 & 4 Cross Connection	CUW38001	-	1,240	-	1,240
Sunol Valley Water Treatment Plant Expansion/ Treated Water Reservoir	CUW38101	-	552	-	552
Tesla Treatment Facility	CUW38401	-	1,616	-	1,616
Habitat Reserve Program	CUW38802	2,349,645	2,349,645	-	2,349,645
Vegetation Restoration WSIP Sites	CUW38803	21,163	21,163	-	21,163
Baden and San Pedro Valve Lot	CUW39101	-	2,674	-	2,674
Watershed Environmental Improve Program	CUW39401	532,628	532,628	-	532,628
Bay Division Pipeline Upgrade	CUWBDP01	1,589,685	1,589,685	-	1,589,685
Peninsula Water System Improvements	CUWPWI01	2,098,561	2,098,561	-	2,098,561
San Joaquin Water System Improve Projects	CUWSJI01	490,141	490,141	-	490,141
Sunol Valley Water System Improvements	CUWSVI01	878,913	878,913	-	878,913
Total		**$125,960,401**	**$126,258,068**	**$2,505,408**	**$128,763,476**

Water Revenue Bonds, 2020 Sub-Series A (WSIP) (Green Bonds)
As of June 30, 2024

Project	Project Number	Estimated Use of Proceeds	Spending from Prior Years	Fiscal Year 2023-24 Spending	Total Expended
Bond/Commercial Paper Expense	CUW30001	-	$5,330,495	-	$5,330,495
Lake Merced Water Level Restoration	CUW30101	-	471,183	3,203	474,386
San Francisco Groundwater Supply	CUW30102	3,663,690	9,894,369	397,359	10,291,728
Regional Groundwater Storage & Recovery	CUW30103	21,118,965	18,947,007	466,239	19,413,246
Lake Merced Pump Station Upgrade	CUW30901	-	108,468	-	108,468
Sutro Reservoir – Rehab/ Seismic Upgrade	CUW33701	-	-	-	-
Upper Alameda Creek Filter Gallery	CUW35201	989,340	5,861,839	-	5,861,839
New Irvington Tunnel	CUW35901	9,274,204	-	-	-
Crystal Springs Pump Station & Crystal Springs – San Andreas Pipeline	CUW37101	1,061,331	-	-	-
Rehab Existing San Joaquin Pipelines	CUW37302	-	7,594	-	7,594
Calaveras Dam Replacement	CUW37401	129,317,619	128,314,499	-	128,314,499
Habitat Reserve Program	CUW38802	108,307	520,593	-	520,593
Watershed Environmental Improve Program	CUW39401	11,520,275	6,114,895	-	6,114,895

Water Revenue Bonds, 2020 Sub-Series A (WSIP) (Green Bonds)
As of June 30, 2024

Project	Project Number	Estimated Use of Proceeds	Spending from Prior Years	Fiscal Year 2023-24 Spending*	Total Expended
Bay Division Pipeline Upgrade	CUWBDP01	362,676	105,867	-	105,867
Peninsula Water System Improvements	CUWPWI01	379,339	890,392	-	890,392
San Joaquin Water System Improve Projects	CUWSJI01	99,390	906,823	-	906,823
Sunol Valley Water System Improvements	CUWSVI01	1,515,147	427,921	-	427,921
Building & Grounds - Regional	CUW27700	-	85,283	(30,608)	54,675
Recycled Water Project	CUW30201	-	1,235,569	-	1,235,569
Security Systems Upgrades	CUW36302	-	1,317	-	1,317
Bay Division Pipeline Reliability Upgrade - Tunnel	CUW36801	-	560	-	560
Sunol Valley Water Treatment Plant Expansion/ Treated Water Reservoir	CUW38101	-	14,820	-	14,820
San Antonio Pump Station Upgrade	CUW386	-	836	-	836
Total		**$179,410,283**	**$179,240,330**	**$836,193**	**$180,076,523**

*Negative amounts reflect accounting reallocations.

Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2017D
Water System Improvement Program Financing Costs	CUW30001	$6,186,666
Lake Merced Water Level Restoration	CUW30101	76,065
San Francisco Groundwater Supply	CUW30102	5,861,124
Regional Groundwater Storage & Recovery	CUW30103	11,662,612
Westside Enhanced Water Recycling Project-	CUW30201	224,619
Harding Park Recycled Water Project	CUW30204	397,958
Recycled-Water Project- Eastside	CUW30205	403,721
Lake Merced Pump Station Upgrade	CUW30901	2,337,855
East/West Transmission Main	CUW31501	28,069
Forest Hill Pump Station Upgrade	CUW32001	1,112,242
Forest Knolls Pump Station Upgrade	CUW32101	7,470
McLaren Park Pump Station Upgrade	CUW32301	5,353
Sutro Reservoir – Rehab/Seismic Upgrade	CUW33701	11,590,033
Le Grande Pump Station Upgrade	CUW33801	45,522
Upper Alameda Creek Filter Gallery	CUW35201	1,142,093
Seismic Bay Division Pipeline @ Hayward Fault Phase 2	CUW35302	17,176,100
Lower Crystal Springs Dam Improvements	CUW35401	815,302
New Crystal Springs Bypass Tunnel	CUW35601	20,647
Sunset Reservoir – Upgrade/Rehab North Basin	CUW35801	17,096
New Irvington Tunnel	CUW35901	57,937,418
Alameda Siphon #4	CUW35902	631,907
Structural Rehab (Roof) - Pulgas Phase 3	CUW36103	181,583
Existing Dechlorination Modifications - Pulgas Phase 5	CUW36105	89,584
Installation of Supervisory Control and Data Acquisition (SCADA) System Phase 2	CUW36301	249,506
Security Systems Upgrades	CUW36302	2,120,548
Lawrence Livermore Water Quality Improve	CUW36401	10,107

Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2017D
Harry Tracy Water Treatment Plant Long Term Improvements	CUW36701	20,044,784
Peninsula Pipeline Seismic Upgrade	CUW36702	8,758,742
Bay Division Pipeline Reliability Upgrade - Tunnel	CUW36801	35,714,358
Bay Division Pipeline Reliability – Pipeline	CUW36802	7,502,792
Crystal Springs Pump Station & Crystal Springs – San Andreas Pipeline	CUW37101	36,587,850
University Mound Reservoir - Upgrade (North Basin)	CUW37201	147,093
San Joaquin Pipeline System	CUW37301	1,618,466
Rehab Existing San Joaquin Pipelines	CUW37302	96,453
Calaveras Dam Replacement	CUW37401	48,044,405
San Antonio Backup Pipeline	CUW37403	14,976,671
Crystal Springs Pipeline #2 Replace (In City)	CUW37801	6,524,771
San Andreas #3 Pipeline Installation	CUW37901	53,518
Bay Division Pipeline No 3 & 4 Cross Connection	CUW35301	1,330,315
Sunol Valley Water Treatment Plant Expansion/Treated Water Reservoir	CUW38101	12,423,360
Tesla Treatment Facility	CUW38401	2,208,334
San Antonio Pump Station Upgrade	CUW38601	14,076
Habitat Reserve Program	CUW38802	17,745,619
Vegetation Restoration Water System Improvement Program Sites	CUW38803	585,228
SFPUC/EBMUD Intertie	CUW38901	80,161
Baden and San Pedro Valve Lot	CUW39101	86,134
Watershed Environmental Improve Program	CUW39401	687,129
Other Water System Improvement Program Projects	--	26,780
Total		**$335,588,236**

Water Revenue Bonds, 2017 Sub-Series G (Refunding – Federally Taxable) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2017G
Water System Improvement Program Financing Costs	CUW30001	$495,370
Lake Merced Water Level Restoration	CUW30101	5,683
San Francisco Groundwater Supply	CUW30102	150,924
Regional Groundwater Storage & Recovery	CUW30103	394,643
Westside Enhanced Water Recycling Project -	CUW30201	27,564
Harding Park Recycled Water Project	CUW30204	48,825
Recycled-Water Project- Eastside	CUW30205	47,845
Lake Merced Pump Station Upgrade	CUW30901	254,280
Forest Hill Pump Station Upgrade	CUW32001	135,593
Sutro Reservoir – Rehab/Seismic Upgrade	CUW33701	1,010,822
Le Grande Pump Station Upgrade	CUW33801	5,586
Upper Alameda Creek Filter Gallery	CUW35201	37,483
Seismic Bay Division Pipeline @ Hayward Fault Phase 2	CUW35302	1,451,902
Lower Crystal Springs Dam Improvements	CUW35401	99,659
New Irvington Tunnel	CUW35901	6,441,819
Alameda Siphon #4	CUW35902	77,519
Structural Rehab (Roof) - Pulgas Phase 3	CUW36103	22,283
Existing Dechlorination Modifications- Pulgas Phase 5	CUW36105	10,993
Installation of Supervisory Control and Data Acquisition (SCADA) System Phase 2	CUW36301	30,618
Security Systems Upgrades	CUW36302	183,153
Harry Tracy Water Treatment Plant Long Term Improvements	CUW36701	681,830
Peninsula Pipeline Seismic Upgrade	CUW36702	228,439
Bay Division Pipeline Project Reliability Upgrade – Tunnel	CUW36801	3,610,135
Bay Division Pipeline Reliability – Pipeline	CUW36802	834,831
Crystal Springs Pump Station & Crystal Springs – San Andreas Pipeline	CUW37101	3,364,069
University Mound Reservoir - Upgrade (North Basin)	CUW37201	18,050

Water Revenue Bonds, 2017 Sub-Series G (Refunding – Federally Taxable) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2017G
San Joaquin Pipeline System	CUW37301	99,222
Rehab Existing San Joaquin Pipelines	CUW37302	10,081
Calaveras Dam Replacement	CUW37401	851,556
San Antonio Backup Pipeline	CUW37403	1,391,486
Crystal Springs Pipeline #2 Replace (In City)	CUW37801	788,021
San Andreas #3 Pipeline Installation	CUW37901	6,567
Bay Division Pipeline No 3 & 4 Cross Connection	CUW35301	157,346
Sunol Valley Water Treatment Plant Expansion/Treated Water Reservoir	CUW38101	1,517,992
Tesla Treatment Facility	CUW38401	244,012
Habitat Reserve Program	CUW38802	1,865,984
Vegetation Restoration Water System Improvement Program Sites	CUW38803	32,319
SFPUC/EBMUD Intertie	CUW38901	9,837
Baden and San Pedro Valve Lot	CUW39101	10,570
Watershed Environmental Improve Program	CUW39401	73,839
Other Water System Improvement Program Projects	--	15,865
Total		**$26,744,612**

Water Revenue Bonds, 2019 Sub-Series A (Refunding – Federally Taxable) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2019A
Forest Knolls Pump Station Upgrade	CUW32101	$9,650
McLaren Park Pump Station Upgrade	CUW32301	6,916
Sunset Reservoir - Upgrade/Rehab North Basin	CUW35801	22,085
Lawrence Livermore Water Quality Improve	CUW36401	13,057
Bay Division Pipeline No 3&4 Cross Connection	CUW38001	1,744,840
San Antonio Pump Station Upgrade	CUW38601	18,358
Vehicle Service & Facility Upgrade	CUW30301	6,172
Summit Reservoir Rehab/Seismic Upgrade	CUW30701	2,794
Lincoln Way Transmission Line	CUW31201	3,012
Mount Davidson Pump Station Upgrade	CUW32401	435
Palo Alto Pump Station Upgrade	CUW32501	900
Sky View/Aqua Vista Pump St Upgrades	CUW32601	5,888
Forest Knolls Tank Rehab/Upgrade	CUW33001	5,919
Mount Davidson Tank Rehab/Upgrade	CUW33301	289
Stanford Heights Res Rehab/Upgrade	CUW33401	6,117
Standby Power Fac Various Locations	CUW35501	1,159
Harry Tracy Water Treatment Plant Phase 3	CUW36603	1,911
Bond/Commercial Paper Expense	CUW30001	9,166,636
Hs Ch County Expense Claim	NA	1,241
Lake Merced Water Level Restoration	CUW30101	176,600
San Francisco Groundwater Supply	CUW30102	14,081,939
Regional Groundwater Storage & Recovery	CUW30103	21,231,931
Westside Enhanced Water Recycling Project	CUW30201	290,174
Harding Park Recycled Water Project	CUW30204	514,145
Recycled Water Project - Eastside	CUW30205	529,103
Lake Merced Pump Station Upgrade	CUW30901	3,165,312

Water Revenue Bonds, 2019 Sub-Series A (Refunding – Federally Taxable) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2019A
East/West Transmission Main	CUW31501	36,260
Forest Hill Pump Station Upgrade	CUW32001	1,440,834
Sutro Reservoir - Rehab/Seismic Upgrade	CUW33701	16,804,090
Le Grande Pump Station Upgrade	CUW33801	58,808
Upper Alameda Creek Filter Gallery	CUW35201	1,938,123
Seismic Bay Division Pipeline @ Hayward Fault Phase 2	CUW35302	25,108,430
Lower Crystal Springs Dam Improvements	CUW35401	1,054,983
New Crystal Springs Bypass Tunnel	CUW35601	26,672
New Irvington Tunnel	CUW35901	77,819,684
Alameda Siphon #4	CUW35902	816,442
Structural Rehab (Roof) - Pulgas Phase 3	CUW36103	234,578
Existing Dechlorination Modifications - Pulgas Phase 5	CUW36105	115,729
Installation of Supervisory Control and Data Acquisition (SCADA) System Phase 2	CUW36301	322,324
Security Systems Upgrades	CUW36302	3,082,496
Harry Tracy Water Treatment Plant Long Term Improvements	CUW36701	33,809,324
Peninsula Pipeline Seismic Upgrade	CUW36702	15,082,622
Bay Division Pipeline Reliability Upgrade - Tunnel	CUW36801	49,576,450
Bay Division Pipeline Reliability - Pipeline	CUW36802	10,074,720
Crystal Springs Pump Station & Crystal Springs-San Andreas Pipeline	CUW37101	52,277,372
University Mound Reservoir - Upgrade (North Basin)	CUW37201	190,022
San Joaquin Pipeline System	CUW37301	2,533,233
Rehab Existing San Joaquin Pipelines	CUW37302	132,416
Calaveras Dam Replacement	CUW37401	84,520,102
San Antonio Backup Pipeline	CUW37403	21,334,584
Crystal Springs Pipeline #2 Replace (In City)	CUW37801	8,485,386
San Andreas #3 Pipeline Installation	CUW37901	69,138
Sunol Valley Water Treatment Plant Expansion/Treated Water Reservoir	CUW38101	16,078,187
Tesla Treatment Facility	CUW38401	2,972,943
Habitat Reserve Program	CUW38802	24,311,999
Vegetation Restoration Water System Improvement Program Sites	CUW38803	931,843
SFPUC/EBMUD Intertie	CUW38901	103,556
Baden And San Pedro Valve Lot	CUW39101	111,272
Watershed Environmental Improve Program	CUW39401	934,326
Total		**$503,395,531**

Water Revenue Bonds, 2020 Sub-Series E (Refunding – Federally Taxable) (WSIP) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2020E
Bond/Commercial Paper Expense	CUW30001	$3,386,148
Lake Merced Water Level Restoration	CUW30101	99,921
San Francisco Groundwater Supply	CUW30102	10,664,500
Regional Groundwater Storage & Recovery	CUW30103	23,606,542
Westside Enhanced Water Recycling Project	CUW30201	10,890
Harding Park Recycled Water Project	CUW30204	43,613
Recycled Water Project - Eastside	CUW30205	42,183
North University Mound System Upgrade	CUW30401	20
Lake Merced Pump Station Upgrade	CUW30901	936,562
East/West Transmission Main	CUW31501	15
Hunters Point Reservoir Rehab/Seismic Upgrade	CUW31901	7,751
Forest Hill Pump Station Upgrade	CUW32001	20,775
McLaren Park Pump Station Upgrade	CUW32301	4,558
Palo Alto Pump Station Upgrade	CUW32501	20
Sutro Reservoir - Rehab/Seismic Upgrade	CUW33701	5,287,199
Le Grande Pump Station Upgrade	CUW33801	9,594
Vista Francisco Pump Station Upgrade	CUW34001	13
Upper Alameda Creek Filter Gallery	CUW35201	1,355,066
Seismic Bay Division Pipeline @ Hayward Fault Phase 2	CUW35302	11,695,244
Lower Crystal Springs Dam Improvements	CUW35401	358,315
New Crystal Springs Bypass Tunnel	CUW35601	61,889
Sunset Reservoir - Upgrade/Rehab North Basin	CUW35801	9
New Irvington Tunnel	CUW35901	9,577,496
Alameda Siphon #4	CUW35902	103,787
Structural Rehab (Roof) - Pulgas Phase 3	CUW36103	16,529
Existing Dechlorination Modifications - Pulgas Phase 5	CUW36105	15,029
Installation of Supervisory Control and Data Acquisition (SCADA) System Phase 2	CUW36301	1,732
Security Systems Upgrades	CUW36302	1,642,173
Lawrence Livermore Water Quality Improve	CUW36401	536
Harry Tracy Water Treatment Plant Long Term Improvements	CUW36701	36,759,511
Peninsula Pipeline Seismic Upgrade	CUW36702	11,070,354
Bay Division Pipeline Reliability Upgrade - Tunnel	CUW36801	10,850,022
Bay Division Pipeline Reliability - Pipeline	CUW36802	1,779,839
Crystal Springs Pump Station & Crystal Springs-San Andreas Pipeline	CUW37101	14,878,591
University Mound Reservoir - Upgrade (North Basin)	CUW37201	20,960
San Joaquin Pipeline System	CUW37301	2,355,904
Rehab Existing San Joaquin Pipelines	CUW37302	37,854
Calaveras Dam Replacement	CUW37401	81,915,938

Water Revenue Bonds, 2020 Sub-Series E (Refunding – Federally Taxable) (WSIP) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2020E
San Antonio Backup Pipeline	CUW37403	5,780,212
Crystal Springs Pipeline #2 Replace (In City)	CUW37801	670,891
San Andreas #3 Pipeline Installation	CUW37901	1,240
Bay Division Pipeline No 3&4 Cross Connection	CUW38001	174,656
Sunol Valley Water Treatment Plant Expansion/Treated Water Reservoir	CUW38101	531,013
Tesla Treatment Facility	CUW38401	400,682
San Antonio Pump Station Upgrade	CUW38601	15,619
Habitat Reserve Program	CUW38802	5,814,189
Vegetation Restoration Water System Improvement Program Sites	CUW38803	520,689
Baden And San Pedro Valve Lot	CUW39101	8,346
Watershed Environmental Improve Program	CUW39401	364,181
Bay Division Pipeline Upgrade	CUWBDP01	729,357
Peninsula Water System Improvements	CUWPWI01	473,950
San Joaquin Water Sys Improve Projects	CUWSJI01	114,655
Sunol Valley Water System Improvements	CUWSVI01	140,954
SFPUC Revenue Bond Oversight Committee	PPRBOC	2,608
Total		**$244,360,324**

Water Revenue Bonds, 2023 Sub-Series C (Refunding) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2023C
Hetch Hetchy Water Treatment Plan	CUW14301	132,430
CO2 Pipeline Replacement	CUW14308	80,552
Utility Water System Pumps	CUW14309	30,293
Bond/Commercial Paper Expense	CUW30001	8,482,115
Revenue Bond Oversight Committee	CUW30002	7,838
Lake Merced Water Level Restoration	CUW30101	1,026,516
San Francisco Groundwater Supply	CUW30102	15,880,740
Regional Groundwater Storage & Recovery	CUW30103	22,496,454
Recycled Water Project	CUW30201	1,398,348
Harding Park Recycled Water Project	CUW30204	404,250
Recycled Water Project - Eastside	CUW30205	263,900
Vehicle Service & Facility Upgrade	CUW30301	465,307
North University Mound System Upgrade	CUW30401	1,149,570
Fire Protection At City Distribution Division	CUW30501	215,695
Crocker Amazon Pump Station Upgrade	CUW30601	433,566
Summit Res Rehab/Seismic Upgrade	CUW30701	1,423,099
Key Motorized/Other Critical Valves	CUW30801	1,416,930
Lake Merced Pump Station Upgrade	CUW30901	5,251,908
Sunset Circulation Improvements	CUW31101	625,220
Lincoln Way Transmission Line	CUW31201	1,679,050
Noe Valley Transmission Main Phase 2	CUW31301	644,696
La Grande Tank Rehab/Seismic Upgrade	CUW31401	794,317
East/West Transmission Main	CUW31501	3,493,017
Fulton & 6th 30" Main Replacement	CUW31601	602,004
Forest Hill Tank Rehab/Seismic Upgrade	CUW31801	378,011
Hunters Point Res Rehab/Seismic Upgrade	CUW31901	91,767
Forest Hill Pump Station Upgrade	CUW32001	775,357
Forest Knolls Pump Station Upgrade	CUW32101	724,652
Lincoln Park Pump Station Upgrade	CUW32201	526,435
McLaren Park Pump Station Upgrade	CUW32301	3,287,532
Mount Davidson Pump Station Upgrade	CUW32401	495,710
Palo Alto Pump Station Upgrade	CUW32501	734,416
Sky View/Aqua Vista Pump Station Upgrades	CUW32601	601,787
Summit Pump Station Upgrade	CUW32701	839,094
McLaren #1 Tank Rehab/Seismic Upgrade	CUW32801	600,223
Potrero Heights Tank Rehab/Upgrade	CUW32901	76,985

Water Revenue Bonds, 2023 Sub-Series C (Refunding) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2023C
Forest Knolls Tank Rehab/Upgrade	CUW33001	397,253
Lincoln Park Tank Rehab/Seismic Upgrade	CUW33101	333,728
McLaren #2 Tank Rehab/Seismic Upgrade	CUW33201	573,621
Mount Davidson Tank Rehab/Upgrade	CUW33301	298,902
Stanford Heights Reservoir Rehab/Upgrade	CUW33401	2,834,747
Potrero Heights Reservoir Rehab/Upgrade	CUW33501	869,203
Sutro Reservoir - Rehab/Seismic Upgrade	CUW33701	12,151,117
Le Grande Pump Station Upgrade	CUW33801	195,698
Potrero Heights Pump Station Upgrade	CUW33901	77,997
Vista Francisco Pump Station Upgrade	CUW34001	576,103
Bay Division Pipeline #1&2 Repair of Caisson/Pipe Bridge	CUW35101	126,592
Upper Alameda Creek Filter Gallery	CUW35201	2,324,110
Seismic Upgrade Bay Division Pipeline @ Hayward Fault	CUW35301	3,022,233
Seismic Bay Division Pipeline @ Hayward Fault Phase 2	CUW35302	19,397,685
Lower Crystal Springs Dam Improvements	CUW35401	1,775,118
Standby Power Facilities - Various Locations	CUW35501	1,508,329
New Crystal Springs Bypass Tunnel	CUW35601	8,420,243
Adit Leak Repairs (Crystal Springs/Calaveras Reservoir)	CUW35701	362,763
Sunset Reservoir - Upgrade/Rehab North Basin	CUW35801	7,944,217
New Irvington Tunnel	CUW35901	47,362,965
Alameda Siphon #4	CUW35902	4,179,289
Sunol Quarry Reservoirs	CUW36001	10,100
Inlet/Outlet Work - Pulgas Balancing Phase 1	CUW36101	226,197
Discharge Channel Mods - Pulgas Phase 2	CUW36102	353,804
Structural Rehab (Roof) - Pulgas Phase 3	CUW36103	998,797
Laguna Creek Sedimentation - Pulgas Phase 4	CUW36104	67,745
Existing Dechlor Mods - Pulgas Phase 5	CUW36105	313,711
Water System Automation (Hetch Hetchy)	CUW36201	26,543
Installation Of Supervisory Control and Data Acquisition System (SCADA) Phase 2	CUW36301	1,043,273
Security Systems Upgrades	CUW36302	2,638,544
Lawrence Livermore Water Quality Improvements	CUW36401	473,674
Cross Connection Controls	CUW36501	506,408

Water Revenue Bonds, 2023 Sub-Series C (Refunding) (Green Bonds)
As of June 30, 2024

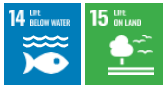
Project	Project Number	Refunded by 2023C
Harry Tracy Water Treatment Plant Short Term Improvements Phase A	CUW36601	376,102
Harry Tracy Water Treatment Plant Phase 2	CUW36602	178,396
Harry Tracy Water Treatment Plant Phase 3	CUW36603	2,105,362
Harry Tracy Water Treatment Plant Long Term Improvements	CUW36701	37,294,780
Peninsula Pipeline Seismic Upgrade	CUW36702	15,774,408
Bay Division Pipeline Reliability Upgrade - Tunnel	CUW36801	34,685,671
Bay Division Pipeline Reliability - Pipeline	CUW36802	14,801,518
Relocation Of Bay Division Pipeline 1 & 2	CUW36803	345,239
Capuchino Valve Lot Capacity Improvements	CUW36901	365,593
Pipeline Repair & Readiness Improvements	CUW37001	646,465
Crystal Springs Pump Station & Crystal Springs - San Andreas Pipeline	CUW37101	38,219,837
University Mound Reservoir - Upgrades (North Basin)	CUW37201	3,953,114
San Joaquin Pipeline System	CUW37301	7,101,705
Rehab Existing San Joaquin Pipelines	CUW37302	2,291,804
Calaveras Dam Replacement	CUW37401	96,444,131
Calaveras Reservoir Upgrades	CUW37402	210,715
San Antonio Backup Pipeline	CUW37403	15,120,942
Mountain Tunnel Lining (Hetchy)	CUW37601	4,881
Early Intake (Hetchy)	CUW37701	11,051
Crystal Springs Pipeline #2 Replacement (In City)	CUW37801	5,318,675
San Andreas #3 Pipeline Installation	CUW37901	2,954,179
Bay Division Pipeline No. 3&4 Cross Connection	CUW38001	2,511,723
Sunol Valley Water Treatment Plant Expansion/Treated Water Reservoir	CUW38101	10,856,055
Sunol Valley Water Treatment Plant Calaveras Road Improvements	CUW38102	6,192
Sunol Valley Water Treatment Plant New Pipeline	CUW38103	14,173
Sunol Valley Water Treatment Plant Treated Water Reservoirs	CUW38201	656,133
Foothill Tunnel Repairs (Hetchy)	CUW38301	4,400
Tesla Treatment Facility	CUW38401	11,449,530
San Antonio Pump Station Upgrade	CUW38601	1,224,661
Tesla Portal Disinfection Station	CUW38701	141,619
Programmatic Environmental Impact Report (PEIR)	CUW38801	190,386

Water Revenue Bonds, 2023 Sub-Series C (Refunding) (Green Bonds)
As of June 30, 2024

Project	Project Number	Refunded by 2023C
Habitat Reserve Program	CUW38802	15,195,440
Vegetation Restoration Water System Improvement Program Sites	CUW38803	833,907
SFPUC/EBMUD Intertie	CUW38901	1,002,111
Baden and San Pedro Valve Lots Improvements	CUW39101	2,502,049
Program Management Services - Water System Improvement Program	CUW39201	513,375
Bay Division Pipeline #4 Slip Lining - Pre-Stressed Concrete Cylinder Pipe	CUW39301	239,913
Watershed Environmental Improvement Program	CUW39401	591,545
Total		**$525,058,272**

Project Impacts Aligned with the United Nations Sustainable Development Goals (SDGs)[1]

The links provided in this section are provided for convenience only and the information available on such pages is not incorporated by reference into this report.

Project Name	Project Number	UN SDGs[2]	Project and Environmental Impact Description	California Environmental Quality Act
Watershed and Environmental Improvement Program	CUW39401		Proactively manage, protect, and restore environmentalresources affected by Water System Improvement Program operations.	Program Environmental Impact Report
Baden & San Pedro Valve Lots Improvements	CUW39101		Implement structural upgrades to ensure operational flexibility in the event of an emergency, impacting a service population of 805,000.	Mitigated Negative Declaration
SFPUC/EBMUD Intertie	CUW38901		Improve water delivery and supply reliability to City of Hayward, a population of 155,000.	Program Environmental Impact Report
Vegetation Restoration of WSIP Sites	CUW38803		Restore and re-vegetate habitat areas temporarily impacted by construction at Water System Improvement Program sites to pre-construction condition.	Program Environmental Impact Report
Bioregional Habitat Reserve Program	CUW38802		Coordinate and consolidate approach to preserve, enhance, restore, or create about 2,350 acres of various habitats.	Program Environmental Impact Report
Program Environmental Impact Report	CUW38801		Analyze the environmental impact of the entire Water System Improvement Project.	Program Environmental Impact Report
Tesla Treatment Facility	CUW38401		Improve sustainable infrastructure by combining ultraviolet (UV) water treatment with a chemical treatment, impacting 2.7 million customers.	Final Environmental Impact Report

Determinations that project impacts align with certain United Nations Sustainable Development Goals (SDGs) are based on criteria the SFPUC has deemed to be appropriate and may differ from criteria applied by investors.

[1] For more project information, including environmental impacts, budget and schedule, please see Water Infrastructure Improvements.
[2] Developed in consultation with SFPUC senior management and ICMA Green and Social Bonds: A High-Level Mapping to the Sustainable Development Goals; SDG impacts have not been verified by a third-party.

Project Name	Project Number	UN SDGs[2]	Project and Environmental Impact Description	California Environmental Quality Act
Sunol Valley Water Treatment Plant Expansion/TreatedWater Reservoir	CUW38101		Increase water supply to 160 million gallons per day, impacting 2.7 million customers.	Final Environmental Impact Report
San Andreas #3 Pipeline Installation	CUW37901		Installation of water pipeline to San Francisco service area of 805,000. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
Crystal Springs Pipeline #2 Replace (In City)	CUW37801		Improve seismic reliability of a pipeline delivering water to the San Francisco Peninsula. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
San Antonio Backup Pipeline	CUW37403		Increase operational flexibility and delivery reliability during climate and seismic emergencies, impacting 2.7 million customers. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
Calaveras Dam Replacement	CUW37401		Replace a seismically vulnerable old dam with a new dam, including a fish ladder that supports and restores native aquatic resources. Dam provides water supply to 2.7 million customers.	Final Environmental Impact Report
Rehab Existing San Joaquin Pipelines	CUW37302		Establish a program of routine maintenance to ensure water delivery reliability to the entire San Francisco Peninsula, impacting 2.7 million customers. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Mitigated Negative Declaration

Project Name	Project Number	UN SDGs[2]	Project and Environmental Impact Description	California Environmental Quality Act
San Joaquin Pipeline System	CUW37301		Improve delivery reliability and provide operational flexibility during maintenance activities or unplanned outages resulting from seismic or extreme weather, impacting 2.7 million customers. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
University Mound Reservoir - Upgrade (North Basin)	CUW37201		Upgrade supply and delivery reliability to a San Francisco reservoir supplying about 25 of San Francisco's tap water.	Categorical Exemption
Crystal Springs/San Andreas Transmission Upgrade	CUW37101		Improve water supply reliability between two reservoirs holding 28.7 billion gallons of water on the San Francisco Peninsula.	Final Environmental Impact Report
Bay Division Pipeline Reliability-Pipeline	CUW36802		Upgrade seismic and delivery reliability to the pipelines delivering San Francisco Peninsula's main source of water, impacting 2.7 million customers. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
Bay Division Pipeline Reliability Upgrade -Bay Tunnel	CUW36801		Upgrade seismic and delivery reliability to the tunnel connected to San Francisco Peninsula's main source of water, impacting 2.7 million customers, while avoiding negative impact on biodiversity, Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
Peninsula Pipeline Seismic Upgrade	CUW36702		Ensure seismic and supply reliability of pipelines on the San Francisco Peninsula, including preparedness for pipeline ruptures from landslides. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
Harry Tracy Water Treatment Plant Long Term Improvements	CUW36701		Improve seismic and delivery reliability for the water treatment plant for San Francisco Peninsula's sole source of emergency water.	Final Environmental Impact Report

Project Name	Project Number	UN SDGs[2]	Project and Environmental Impact Description	California Environmental Quality Act
Security Systems Upgrades	CUW36302		Establish necessary security features to protect important water service delivery systems.	Program Environmental Impact Report
Installation of Supervisory Control and Data Acquisition (SCADA) System Phase 2	CUW36301		Establish a common software platform to monitor flow and pressure in key locations in San Francisco.	Categorical Exemption
Existing Dechlorination Modifications - Pulgas Phase 5	CUW36105		Ensure safe drinking water for Peninsula residents.	Program Environmental Impact Report
Structural Rehab (Roof) - Pulgas Phase 3	CUW36103		Protect water quality and delivery reliability for Peninsula residents.	Mitigated Negative Declaration
Alameda Siphon #4	CUW35902		Provide redundancy to ensure continued water service to 2.7 million customers in case of major weather or seismic event.	Mitigated Negative Declaration
New Irvington Tunnel	CUW35901		Guarantee water service to 2.7 million customers in four Bay Area counties within 24 hours of a major weather or seismic event. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
Adit Leak Repairs	CUW35701		Upgrade supply and delivery reliability for water reservoir serving the Peninsula region.	Program Environmental Impact Report
New Crystal Springs Bypass	CUW35601		Guarantee water service to more than 1 million people in San Mateo and San Francisco counties within 36 hours of a major weather or seismic event.	Final Environmental Impact Report

Project Name	Project Number	UN SDGs[2]	Project and Environmental Impact Description	California Environmental Quality Act
Lower Crystal Springs Dam Improvements	CUW35401		Guarantee water service to more than 1 million people in San Mateo and San Francisco counties within 36 hours of a major weather or seismic event.	Final Environmental Impact Report
Bay Division Pipeline No 3&4 Cross Connection	CUW35301		Seismic and supply reliability improvements to ensure delivery of water impacting 2.7 million customers. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Mitigated Negative Declaration
Alameda Creek Recapture Project	CUW35201		Recapture an estimated annual average of 7,178-acre feet of water to maintain water supply while protecting native fish populations.	Draft Environmental Impact Report
Regional Groundwater Storage and Recovery	CUW30103		Store 7.5 years of drinking water supply to use in drought years impacting 2.7 million customers.	Final Environmental Impact Report
Bay Division Pipeline Upgrade	CUW36802		Enhance delivery reliability of pipeline that delivers water to ratepayers on San Francisco Peninsula, impacting 2.7 million customers. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Program Environmental Impact Report
Forest Hill Pump Station Upgrade	CUW32001		Modernize existing mechanical and electrical systems with seismic upgrades to reliably deliver drinking water to San Francisco customers, impacting a service population of 805,000.	Categorical Exemption
Harding Park Recycled Water Project	CUW30204		Construct infrastructure to produce and deliver recycled water to irrigate 163 acres of public golf course greens.	Final Environmental Impact Report

Project Name	Project Number	UN SDGs[2]	Project and Environmental Impact Description	California Environmental Quality Act
Lake Merced Pump Station Upgrade	CUW30901		Modernize mechanical and electrical systems with seismic upgrades to reliably deliver drinking water to over 60 of San Francisco ratepayers.	Categorical Exemption
Lake Merced Water Level Restoration	CUW30101		Maintain lake levels for San Francisco's emergency source of water.	Program Environmental Impact Report
Le Grande Pump Station Upgrade	CUW33801		Modernize existing mechanical and electrical systems with seismic upgrades to reliably deliver drinking water.	Categorical Exemption
Westside Enhanced Water Recycling Project	CUW30201		Conserve water supplies by transitioning to recycled water for non-drinking purposes.	Final Environmental Impact Report
Recycled Water Project - Eastside	CUW30205		Serve about 2 million gallons per day of high-quality recycled water for non-potable uses such as irrigation and toilet flushing.	Program Environmental Impact Report
San Francisco Groundwater Supply	CUW30102		Add groundwater to San Francisco's water supply to support reliability in the event of droughts and emergencies, impacting a service population of 805,000.	Final Environmental Impact Report
Seismic Upgrade of Bay Division Pipeline at Hayward Fault	CUW35302		Improve seismic and supply delivery reliability for the pipeline responsible for delivering water to the San Francisco Peninsula, impacting 2.7 million customers. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Final Environmental Impact Report
Sutro Reservoir - Rehab/SeismicUpgrade	CUW33701		Structural upgrades to ensure the water supply and reliability for San Francisco, impacting a service population of 805,000.	Categorical Exemption
Bay Division Pipeline No 3&4 Cross Connection	CUW38001		Seismic and supply reliability improvements to ensure delivery of water impacting 2.7 million customers. Water transmission is largely gravity fed requiring minimal fossil fuel consumption.	Mitigated Negative Declaration

Case Study: Watershed and Environmental Improvement Program

The SFPUC initiated the Watershed and Environmental Improvement Program (WEIP) in Fiscal Year 2006, a $50 million commitment over ten years to protect and restore lands and natural resources within the Alameda Creek, San Mateo Creek, Pilarcitos Creek, and Tuolumne River watersheds, and other SFPUC lands and rights-of-way, that affect or are affected by operations of the SFPUC regional water system. The WEIP was developed in parallel to the Water System Improvement Program (WSIP), which included $20 million of WSIP Green Bond funds dedicated to WEIP investments and $30 million from the operating and Water capital program budgets, approximately $3 million annually. This $50 million investment over a ten-year period was intended to support implementation of the Water Enterprise Environmental Stewardship Policy by funding projects-above the existing level of effort in watershed management at that time. This investment was also in addition to any new environmental mitigation requirements. The WEIP is now in its 18th year of implementation, with over $54 million invested.

The highest priority for the $20 million WSIP Green Bond funds was to permanently protect these watershed lands through fee title purchase of property from willing landowners. Only about 40% of the land in the Alameda Creek watershed above SFPUC reservoirs is protected by public ownership.

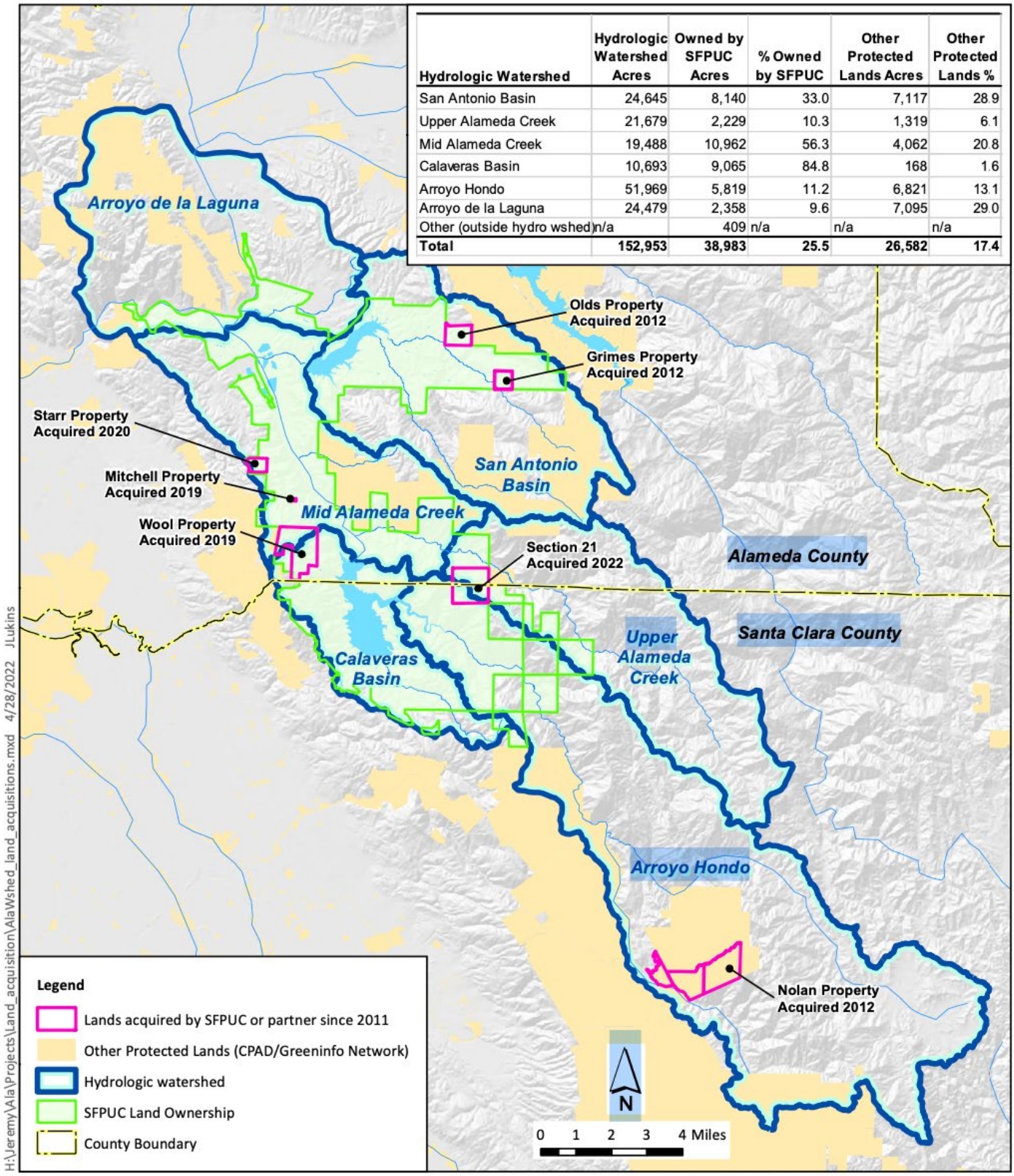
The SFPUC identified high priority and critical watershed lands that would be important to protect to support ecosystem health, ensure high water quality and provide a reliable water supply. The SFPUC worked with willing landowners and partner organizations to purchase a total of 3,183.82 acres in the Alameda Creek watershed. The SFPUC continues to identify land acquisition opportunities in the watershed, please see below for table of land acquisitions and map to date.

Property Acquisitions in the Upper Alameda Creek Watershed

Property Name	Total Acreage	Cost	Year Acquired
Grimes Property	160	$800,000	2010
Olds Property	259.32	$1,300,000	2012
Nolan Ranch*	1,155	2,600,000	2012
Wool Ranch	787	$9,650,000	2019
Mitchell Property	5	$1,200,000	2019
Starr	164.5	$1,282,500	2020
Section 21	653	$3,167,500	2021
Total	**3,183.82**	**$20,000,000**	

* SFPUC contributed to the purchase but does not own fee title.

Hydrologic Watershed	Hydrologic Watershed Acres	Owned by SFPUC Acres	% Owned by SFPUC	Other Protected Lands Acres	Other Protected Lands %
San Antonio Basin	24,645	8,140	33.0	7,117	28.9
Upper Alameda Creek	21,679	2,229	10.3	1,319	6.1
Mid Alameda Creek	19,488	10,962	56.3	4,062	20.8
Calaveras Basin	10,693	9,065	84.8	168	1.6
Arroyo Hondo	51,969	5,819	11.2	6,821	13.1
Arroyo de la Laguna	24,479	2,358	9.6	7,095	29.0
Other (outside hydro wshed)	n/a	409	n/a	n/a	n/a
Total	**152,953**	**38,983**	**25.5**	**26,582**	**17.4**



Hetch Hetchy Regional Water System

Services of the San Francisco Public Utilities Commission
Natural Resources and Lands Management Division

Author: JGL Date: 4-28-22

Data Sources: Protected Lands layers courtesy of Greeninfo Network. Other layers from SFPUC GIS

Southern Alameda Creek Watershed

SFPUC Land Acquisitions 2011 - Present

Appendix A: State, City and SFPUC Legal, Regulatory, Policies and Programs

The links provided in this Appendix are provided for convenience only and the information available on such pages is not incorporated by reference into this report.

State of California

The State of California has enacted legislation, regulations and executive orders that put the State oncourse to achieve significant greenhouse gas reductions while also addressing the impacts of climate change. Described below are selected policies and programs related to the SFPUC's capital planning:

- Assembly Bill 32 (Nunez, 2006) and Senate Bill 32 (Pavley, 2016)
    - Landmark legislation requiring California to reduce its overall greenhouse gas emissions to 1990 levels by 2020 and 40% below 1990 levels by 2030, and appointing the California Air Resources Board to develop policies to achieve this goal.
- Assembly Bill 1482 (Gordon, 2015), Senate Bill 246 (Wiechowski, 2015), Senate Bill 379 (Jackson, 2015), Assembly Bill 2800 (Quirk, 2016), Senate Bill 1035 (Jackson, 2018); Senate Bill 30 (Lara, 2018)
    - State laws calling for preparation of state climate adaptation strategy, establishing the Office of Planning and Research's Integrated Climate Adaptation and Resiliency Program, requiring local governments to include adaptation and resiliency strategies in general plans, requiring state agencies to account for climate change when planning new infrastructure, and establishing a risk transfer/insurance working group.
- Climate Change Scoping Plan
    - California's comprehensive plan outlining the state's approach to achieving its greenhouse gas emission reduction targets, including SB 32's goal of reducing emissions 40% below 1990 levels by 2030

In August 2018, then-California State Treasurer John Chiang signed the Green Bond Pledge, making California the first state to pledge to use 'green' financing to combat climate change.

City and County of San Francisco

San Francisco has long been a leader in the fight against climate change. Between 1990 and 2019, San Francisco's carbon footprint was reduced by 41% while population increased 22% and the GDP increased 199%.

The San Francisco Climate Action Plan was first released in 2004 and San Francisco has been leading the way on local climate action and environmental justice, and launching innovative community programs and outreach campaigns for residents and businesses. Since then, the Climate Action Plan has been updated to put racial equity, environmental justice, resilience, public health, economic recovery, and a just transition to a fossil fuel-free jobs at the core of its climate action solutions. The 2021 San Francisco Climate Action Plan (Plan) is the result of a multi-year process developed by the San Francisco Department of the Environment with support and collaboration from many individuals and institutions, including the SFPUC. The Plan charts a pathway to achieve net-zero greenhouse gas emissions and works toward addressing racial and social equity, public health, economic recovery, resilience and providing safe and affordable

housing to all. The Plan aligns to the goals set forth in San Francisco's Climate Action Framework, as shown below:

San Francisco's leadership further strengthened the City's commitment to climate action in 2019 when the Board of Supervisors unanimously approved the Climate Emergency Resolution 160-19, aligning San Francisco's climate goals with the Paris Agreement by limiting global warming to 1.5 °C above pre-industrial levels.

In 2023, the San Francisco Department of the Environment collaborated with the SFPUC to issue a Water Supply Addendum to the Climate Action Plan to introduce a new Water Supply chapter that focuses on how San Francisco plans to address and secure water supplies that are being impacted by multiple challenges, including climate change. Specifically, the new chapter encompasses three key strategies and 15 supporting actions for water resilience against the threat of a warming climate.

- Invest and implement demand management programs.
  - Continue to implement current conservation measure noted in the SFPUC's 2020 Retail Water Conservation Plan, and on our website at www.sfpuc.org/savewater.
  - Continue to implement current conservation measures and upcoming new measures noted in the SFPUC's 2020 Retail Water Conservation Plan.
  - Prepare updated 2025 Retail Water Conservation Plan and implement current conservation assistance measures noted in the plan.
  - Continue to implement conservation assistance measures outlined in 2025 and future-year Water Conservation Plans.

- Invest and implement innovative programs to reduce water use and develop new water supplies.
  - Continue to implement the pilot atmospheric water generation project to test the viability of the technology to produce water for irrigation in a community garden setting.
  - Continue to encourage breweries to reuse process water onsite via SFPUC's Onsite Water Refuse Grant Program.
  - Continue to encourage the integration of heat recovery in onsite water reuse systems. Explore opportunities for other pilot atmospheric water generation projects.
  - Continue to implement the Innovations Program.
  - Implement demonstration facilities for purified water.

- Invest and implement supply augmentation programs.
  - Continue to implement the San Francisco Groundwater Supply Project, which allows the SFPUC to supplement drinking water sources by blending a small amount of groundwater with water from the San Francisco Regional Water System.
  - Continue to implement San Francisco's Onsite Water Reuse Program, which requires new development projects of 100,000 gross square feet or more to install and operate an onsite water reuse system.
  - Continue planning, evaluation of technical viability, energy efficiency, and future climate scenarios.
  - Implement demonstration facilities for purified water.
  - Design and construction of alternative water supply projects.
  - Continue to operate and monitor groundwater projects for maximum benefit and sustainability.

The San Francisco Environment Department is updating the City's Climate Action Plan. The updated 2025 Plan will focus on actions through 2030, with clear metrics and reporting to track progress towards goals. The 2025 Plan will include broad strategies that City departments are using to reduce emissions, and certain actions within each strategy.

The San Francisco Mayor and Board of Supervisors have also led the initiatives described below that require the SFPUC to consider climate change and social inclusion in its capital planning:

- Local Hire Ordinance was adopted in December 2010 by the San Francisco Board of Supervisors. The ordinance requires that local residents perform a minimum 30 of trade hours and 50% for apprenticeship hours and promotes the employment of local residents on locally sponsored projects.

- Guidance for Incorporating Sea Level Rise into Capital Planning also takes place as part of the City's Capital Planning Review process. City projects undergo a sea- level vulnerability assessment and must respond to anticipated consequences through redesign or relocation. The SFPUC actively participated in the Mayor's Sea Level Rise Coordinating Committee and Working Group to develop the Sea Level Rise Guidance. The objective is to work with other City agencies towards a more holistic, integrated

and coordinated response to climate change.

San Francisco Public Utilities Commission

Overview

The SFPUC is a department of the City and County of San Francisco responsible for the maintenance, operation and development of three utility enterprises:

- **The Water Enterprise** serves more than 2.7 million people and is responsible for managing the transmission, treatment, storage, and distribution of potable water to San Francisco and 27 wholesale customer entities in San Mateo, Santa Clara and Alameda Counties.
- **The Wastewater Enterprise** operates and maintains a combined sewer system and provides wastewater and stormwater collection, treatment and disposal services to customers in San Francisco and three municipal sewer service providers in northern San Mateo County.
- **The Power Enterprise** provides hydroelectric, solar and other power to municipal customers in SanFrancisco and other public agencies and retail customers. The Power Enterprise also operates CleanPowerSF, a Community Choice Aggregation program that gives electricity consumers in San Francisco a choice of having their electricity supplied from clean renewable sources, such as solar, wind, and geothermal, at competitive rates.

Headquarteredin San Francisco, the SFPUC has approximately 2,300 employees and a combined annual operating and capital budget of over $3.5 billion.

Financial Policies

The San Francisco City Charter requires the SFPUC to exercise prudent financial stewardship of SFPUC assets by establishing "rates, fees and charges at levels sufficient to improve or maintain financial condition and bond ratings at or above levels equivalent to highly rated utilities of each enterprise under its jurisdiction, meet requirements and covenants under all bond resolutions and indentures, and provide sufficient resources for the continued financial health (including appropriate reserves), operation, maintenance and repair of each enterprise, consistent with good utility practice."

To serve the financial objectives and parameters established by the Commission, the SFPUC has established a 10-Year Financial Plan as well as Debt Management Policies and Procedures for debt financing associated with the Water, Wastewater and Power Enterprises. In addition, the SFPUC maintains a Fund Balance Reserve Policy, a Debt Service Coverage Policy, and a Capital Financing Policy. Last, the Debt Policy of The City and County of San Francisco, established by the Controller's Office of Public Finance, summarizes the City's existing debt policies and formally establishes them for all future debt.[5]

[5] For information about SFPUC's Investor Relations and Financial Reports, see: https://sfpuc.org/about-us/reports/debt-management-and-disclosure-reports

Environmental, Social, and Governance Policies and Programs

With the useful life of capital assets typically extending 30 years or more, climate mitigation and adaptation criteria are included in the SFPUC's capital planning and project selection process. Described below are SFPUC-level policies and programs that contribute to capital planning decisions informed by climate adaptation and/or mitigation and social inclusion.

The activities below have been organized into three categories: environmental, social, and governance (ESG):

Environmental

- CleanPowerSF: The SFPUC began serving customers through CleanPowerSF, a Community Choice Aggregation program, in 2016. CleanPowerSF gives residential and commercial electricity consumers in San Francisco a choice of having their electricity supplied from clean renewable sources, such as solar, wind, and geothermal, at competitive rates. CleanPowerSF is currently the largest supplier of electricity in San Francisco, serving over 380,000 accounts, approximately 58% of the total load within San Francisco. CleanPowerSF and Hetch Hetchy Power together serve approximately 75% of the load in San Francisco. In 2023, CleanPowerSF met a historic milestone of delivering 100% renewable electricity to all of its 380,000 residential and business customers two years ahead of the City's 2025 target.
- GoSolarSF: GoSolarSF is operated by the SFPUC Power Enterprise and provides rebates to help CleanPowerSF and Hetch Hetchy residential and business electric customers install solar panel systems. Together, these systems produce 23.5 megawatts of renewable solar electric power. Today, GoSolarSF continues to serve low-income customers through the Disadvantaged Communities – Single-family Solar Homes (DAC-SASH) program.
- Water Enterprise Stewardship Policy: The purpose of the Water Enterprise Environmental Stewardship Policy is to establish a long-term management policy for natural resources associated with the operation of the water system within the Tuolumne River, Alameda Creek, and Peninsula watersheds.
- Green Infrastructure: Green infrastructure projects divert stormwater from the sewer system while beautifying San Francisco's neighborhoods, providing ecological function and urban habitat, and contributing to bike and pedestrian friendly design. Green infrastructure technologies include rain gardens, permeable pavement, and rainwater harvesting systems. The SFPUC has completed 272 green infrastructure projects which collectively contribute to diverting an estimated 63 million gallons of stormwater from the sewer system annually.
- OneWaterSF: The objective of OneWaterSF is to optimize the use of finite water and energy resources with community and ecosystem needs, creating a more resilient and reliable future for the SPFUC.

Social

- Community Benefits: The SFPUC's Community Benefits Program focuses on Workforce Development, Education, Art, Environmental Justice/Land Use, Neighborhood Partnerships, and Small Business Opportunities. The SFPUC was the first utility in the nation to adopt a Community Benefits Policy and an Environmental Justice Policy with the goal of proactively providing diverse communities with opportunities in workforce and economic development, the arts, urban agriculture and education.

- Environmental Justice Policy: The SFPUC aims to prevent, mitigate, and lessen disproportionate environmental impacts of its activities on communities in all SFPUC service areas and to ensure that public benefits are shared across all communities. The SFPUC defines environmental justice as the fair treatment of people of all races, cultures, and incomes and believes that no group of people should bear a disproportionate share of negative environmental consequences resulting from the operations, programs, and/or policies of the SFPUC.

- Social Impact Partnership Program: The SFPUC is the first public utility in the country to implement a social impact program that advances corporate social responsibility as a part of its competitive bidding process. For certain SFPUC contracts, firms responding to Request for Proposals (RFP) may voluntarily pledge Social Impact Partnership commitments to local impacted communities. If selected for the given contract, the firm will be responsible for delivering the Social Impact Partnership commitments that they proposed in their response to the RFP. To date, these commitments have supported scholarships for college students, mentorship for middle-school students, internships for youth and young adults, childcare for working parents, mentorship for small businesses, urban greening, and access to healthy food.

Governance

- SFPUC Commission: The SFPUC Commission consists of five members, nominated by the Mayor and approved by the Board of Supervisors. Their responsibility is to provide operational oversight in areas such as rates and charges for services, approval of contracts, and organizational policy. One seat on the Commission is reserved for a member with experience in environmental justice policy and an understanding of environmental justice issues.

- Boards, Commissions, and Committees: The SFPUC is proud to collaborate with various groups of community members to serve ratepayer needs in a way that is efficient, fair, affordable, and in harmony with the environment. These bodies include:
    - Citizens' Advisory Committee
    - Rate Fairness Board
    - Southeast Community Facility Commission
    - Small Firm Advisory Committee
    - Residential Users Appeal Board

- 2020 Strategic Plan: In August 2016, the SFPUC Strategic Planning Steering Committee identified Environmental Stewardship as one of six goals to guide its work through the year 2020. Within Environmental Stewardship, the 2020 Strategic Plan specifies the goal to sustainably manage the resources entrusted to its care to ensure environmental and community health. This includes the following objectives:
    - Sustainably manage natural resources and physical systems to protect impacted people, water, land, and ecosystems.
    - Develop, coordinate, and communicate a comprehensive and consistent approach to mitigate and adapt to climate change.
    - Be resource efficient in all business operations.
    - Investigate the feasibility of implementing an environmental management system.

United Nations Sustainable Development Goals

Impacts from SFPUC projects financed by Green Bonds are also aligned with several United Nations Sustainable Development Goals (SDGs). To determine project impact, the SFPUC relies on the International Capital Market Association (ICMA) "Green, Social and Sustainability Bonds: A High-Level Mapping tothe Sustainable Development Goals" (June 2020).

Appendix B: SFPUC Green Bonds Program

The links provided in this Appendix are provided for convenience only and the information available on such pages is not incorporated by reference into this report.

Since issuing its first series of green bonds in Fiscal Year 2015, the SFPUC has issued more than $4.3 billion in certified green bonds to finance Water and Wastewater capital projects and $100 million in self-designated green bonds to finance Power capital projects that advance climate change mitigation or adaptation, making the SFPUC one of the largest municipal issuers of green bonds in the United States[6]. In 2017, the SFPUC was recognized by the Climate Bonds Initiative for being the first issuer worldwide to sell bonds under CBI's water criteria. In 2018, the SFPUC became among the first signatories of the State's Green Bond Pledge. In 2019, the combined green bond programs of the City and County of San Francisco and the SFPUC were recognized as a global leader in the C40 report Cities100. Finally, the SFPUC was awarded the 2021 US Municipal Green Bond of the Year by *Environmental Finance*.

The SFPUC adheres to the International Capital Market Association's Green Bond Principles that consist of four core components:

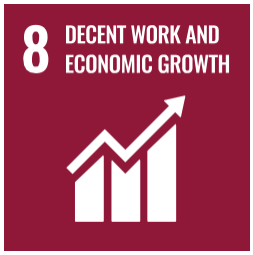
- Use of Proceeds: The SFPUC issues Green Bonds to finance projects with clear environmental benefits. Project categories include sustainable water and wastewater management, climate change adaptation and renewable energy.
- Process for Project Evaluation and Selection: San Francisco's numerous policies and programs described herein aim to ensure sustainable capital planning and project selection. Further, the SFPUC engages third-party verifiers to verify that select projects for the Water Enterprise's Water System Improvement Program (WSIP) and the Wastewater Enterprise's Sewer System Improvement Program (SSIP) meet the required criteria. As part of the certification process, the SFPUC engaged Sustainalytics to provide third-party verification that the bonds are aligned with the Climate Bonds Initiative.
- Management of Proceeds: The SFPUC records Green Bond proceeds in separate capital project funds available only to eligible projects. Non-eligible projects cannot access Green Bond proceeds.
- Reporting: The SFPUC publishes annually Green Bond Reports for the Water, Wastewater, and Power Enterprises that include project spending and management of proceeds reports for each green bond issued throughout project construction. Beginning with the Fiscal Year 2018-19 Green Bond Reports, in addition to project spending, the reports also include project impacts as well as additional information in connection with the climate and sustainability activities of the SFPUC.

[6] Source: S&P Global Ratings "Sustainability Insights | Research: U.S. Muni Sustainable Bonds: Moderate Growth In 2024" Sustainability Insights Research (spglobal.com)

Appendix C: SFPUC Climate and Social Inclusion Impacts Aligned to the United Nations Sustainable Development Goals (UN SDGs)

The links provided in this Appendix are provided for convenience only and the information available on such pages is not incorporated by reference into this report.

United Nations Sustainable Development Goal	SFPUC Program Impact
	Education: The SFPUC is committed to preparing the next generation of environmental stewards and continuing to engage with existing generations to prevent pollution and sustain our natural resources. The SFPUC believes that everyone has a role to play in maintaining the environment and is proud to empower its service area communities with the resources needed to do it.
	Small Business Opportunities: The SFPUC is dedicated to increasing the number of women working in the construction trades. The SFPUC partners with the National Association of Women in Construction and the Women's Business National Council to host the Annual Women in Construction Exposition. The SFPUC is also proud to be a member of the Tuolumne Community Collaborative, a group of more than 25 entitiesincluding education institutions, local contractors, professional services firms, and government agencies that support a pipeline of local workers in the construction industry. The Collaborative features a Pre-Apprenticeship Construction Training Program, and it recently celebrated an inaugural all-female class. Through the program, participants study construction industry best practices, experience hands-on training, learn construction safety, and receive project-specific worker certifications.
 	The Water System Improvement Program: The Water System Improvement Program (WSIP) is a $4.8 billion, multi-year capital program to upgrade the SFPUC's regional and local water systems. The program delivers capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water in an environmentally sustainable manner to 2.7 million people in the greater Bay Area. The program consists of 87 projects - 35 local projects located within San Francisco and 52 regional projects, spread over seven counties from the Sierra foothills to San Francisco. The San Francisco portion is 100% complete as of June 2020. The Regional portion is approximately 99% complete. The forecasted completion date for overall program completion is June 2032. The Sewer System Improvement Program: The Sewer System Improvement Program (SSIP) is a citywide investment to upgrade San Francisco's aging sewer infrastructure to ensure a reliable, sustainable, and seismically safe sewer system now and for generations to come.

United Nations Sustainable Development Goals	SFPUC Program Impact
	Power: For 100 years, the SFPUC has been generating greenhouse gas-free hydropower as San Francisco's full-service, publicly owned electric utility. This clean Hetch Hetchy Power energizes San Francisco's schools, MUNI, streetlights, City Hall, SFO Airport, the Zoo, and other civic institutions and private facilities. In 2016, the SFPUC began serving customers through CleanPowerSF, a community choice aggregation program, giving consumers the option to have their electricity supplied from clean renewable sources like wind and solar to the electric grid. Today, CleanPowerSF powers more than 380,000 San Francisco residents and businesses.
	Workforce Development: As one of the City's largest employers, the SFPUC is fostering a skilled and diverse local workforce that manages water, power and sewer operations and is connected to the local community. SFPUC'sworkforce development programs connect local youth and adults with learning, apprenticeship, job training, employment, and business opportunities. These programs support a strong, inclusive, local economy and a skilled, diverse, local workforce for today and tomorrow. Social Impact Partnership Program: The SFPUC views its capital projects as investments — in the future of its facilities, services, and its communities. As the SFPUC upgrades its systems and operations, private sector partners join the SFPUC in being a good neighbor to the communities affected by the operation and improvement of water, wastewater, and power services. By including community benefits criteria in SFPUC's Requests for Proposals (RFP) with anticipated contracts of $5 million or more, SFPUC provides its contracting community with an opportunity to earn extra points during the bidding process for their demonstrated commitmentto community benefits and environmental justice. Social Impact Partners— professional services and construction firms in fields such as engineering, architecture, resource management and technology— provide resources and opportunities in the communities where SFPUC operates and provides services. These commitments include direct financial contributions, volunteer, and in-kind donations to local schools and nonprofits.
	The Water System Improvement Program: The Water System Improvement Program (WSIP) is a $4.8 billion, multi-year capital program to upgrade the SFPUC's regional and local water systems. The program delivers capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water in an environmentally sustainable manner to 2.7 million people in the greater Bay Area. The program consists of 87 projects - 35 local projects located within San Francisco and 52 regional projects, spread over seven countiesfrom the Sierra foothills to San Francisco. The San Francisco portion is 100% complete as of June 2020. The Regional portion is approximately 99% complete. The forecasted completion date for overall program completion is June 2032. The Sewer System Improvement Program: The Sewer System Improvement Program (SSIP) is a citywide investment to upgrade San Francisco's aging sewer infrastructure to ensure a reliable, sustainable, and seismically safe sewer systemnow and for generations to come.

United Nations Sustainable Development Goals	SFPUC Program Impact
	Environmental Justice and Land Use: The SFPUC works hard every day to provide fundamental environmental benefits through water, power and sewer services. The SFPUC recognizes there are challenges to providing these services as some parts of our community face a greater burden than others due to the location of facilitiesin their neighborhoods. SFPUC works with these communities to understand their needs and lessen the effects caused by operations. The SFPUC is proud to be the first public utility in the nation to develop an Environmental Justice Policy which guides efforts to support environmentally healthy and safe communities where we live, work, learn and play. As part of its mission, the SFPUC also maintains and preserves more than 590,000 acres of land to protect our natural resources and critical infrastructure. The SFPUC often has the opportunity to use land for more than one purpose and when possible, the SFPUC partners with local leaders to support innovative uses which benefit the environment and enhance the quality of life for the SFPUC's service area residents. Grants: From Tuolumne County, to San Francisco, to the Peninsula, the SFPUC is especially committed to providing opportunities in the neighborhoods most impacted by its water, power and sewer operations. As SFPUC upgrades its facilities and completes capital projects, it ensures these efforts support public health, jobs, learning and education opportunities in these communities. SFPUC is proud of leveraging the work done every day to create spaces and programs that help to make these neighborhoods a better place to live,work and play.
   	Power: For 100 years, the San Francisco Public Utilities Commission (SFPUC) has been generating greenhouse gas-free hydropower as San Francisco's full-service, publiclyowned electric utility. This clean Hetch Hetchy Power energizes San Francisco schools, MUNI, streetlights, City Hall, SFO Airport, the Zoo, and other civic institutions and private facilities. In 2016, the City launched CleanPowerSF, a community choice aggregation program, to introduce even more renewable energy from sources like wind and solar to the electric grid. Today, CleanPowerSF powers more than 380,000 San Francisco residents and businesses. The Water System Improvement Program: The Water System Improvement Program (WSIP) is a $4.8 billion, multi-year capital program to upgrade the SFPUC's regional and local water systems. The program will deliver capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water in an environmentally sustainable manner to 2.7 million people in the greater Bay Area. The program consists of 87 projects - 35 local projects located within San Francisco and 52 regional projects, spread over seven countiesfrom the Sierra foothills to San Francisco. The San Francisco portion is 100% complete as of June 2020. The Regional portion is approximately 99% complete. The forecasted completion date for overall program completion is June 2032. The Sewer System Improvement Program: The Sewer System Improvement Program (SSIP) is a citywide investment to upgrade our aging sewer infrastructure to ensure a reliable, sustainable and seismically safe sewer systemnow and for generations to come.