

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

Impact Report

For the Fiscal Year Ended
June 30, 2025



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

The San Francisco Public Utilities Commission

An Enterprise Department of the City and County of San Francisco,
California

Impact Report

For the Fiscal Year Ended
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The San Francisco Public Utilities Commission

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Letter from the Capital Finance Director

I am pleased to present the San Francisco Public Utilities Commission's (SFPUC) inaugural Impact Report. This report represents an important evolution in how the SFPUC communicates with investors, rating agencies, ratepayers, and other stakeholders about the purpose and value of its long-term capital investments.

For many years, the SFPUC has invested in infrastructure to strengthen the reliability, sustainability, and resilience of San Francisco's water, wastewater, and power systems. With infrastructure investments stretching across seven counties in northern California, from gems such as Yosemite National Park, to the Pacific Ocean, environmental stewardship is an important part of the SFPUC's mission. These investments include projects designed to improve seismic reliability, diversify water supplies, reduce flood risk, support clean energy, harden power infrastructure against wildfire, and protect public health and the environment. They are essential to maintaining services in a changing climate and to protecting the long-term value of public assets entrusted to the SFPUC.

The SFPUC has financed many of these investments through the municipal bond market. Investors and rating agencies evaluate debt levels, rate impacts, affordability, and other financial metrics. The SFPUC believes, however, that a complete credit assessment must also recognize what these investments are designed to accomplish: reducing physical risk, strengthening operational reliability, and improving the long-term resilience of essential infrastructure. Debt issued to fund climate resilience should not be viewed only as increased leverage but should also be understood as a tool for reducing future exposure to climate, regulatory, and operational risks.

This Impact Report is intended to help make that risk-reduction value more visible. It responds to investor interest in transparent information on climate risk, adaptation, mitigation, and environmental outcomes. By expanding beyond the SFPUC's prior green bond reporting, this report provides a broader view of the agency's work across its Water, Power, and Wastewater Enterprises, including work funded from bond proceeds, revenues, and other sources.

In a year when many have hushed or abandoned their commitments to investing in climate resilience, the SFPUC, encouraged by the leadership of Mayor Daniel Lurie and General Manager Dennis Herrera, and working with colleagues and partners across the City and County of San Francisco, remains committed to this work more than ever. We hope this inaugural Impact Report, a collaboration between Capital Finance, External Affairs and leaders in each of our three utility enterprises, provides stakeholders with a clearer understanding of the value these investments create as a foundation for long-term environmental, operational, and financial resilience. We look forward to further discussions with the market on how to further build on this report to help investors and other stakeholders understand the important climate risks that the SFPUC has been mitigating with its decades of proactive leadership and investment in climate resilience and adaptation.



Sincerely,

Nikolai J. Sklaroff
SFPUC Capital Finance Director

Introduction

The SFPUC is a unique agency, structured as a department of the City and County of San Francisco, that delivers water, wastewater, and power utility services. The SFPUC is responsible for the maintenance, operation, and development of four highly-rated credits – Water Enterprise, Wastewater Enterprise, Power Enterprise, and CleanPowerSF – each serving distinct customer groups and supporting essential public infrastructure.

Since 2016, the SFPUC has published annual green bond reports to demonstrate climate impacts of projects funded by proceeds of green bonds issued by the SFPUC's enterprises: Water, Wastewater, and Power (which includes CleanPowerSF). While green bonds are a critical tool for financing low-carbon, climate-resilient, and adaptation infrastructure, they represent only one part of the SFPUC's work to meet climate and resiliency goals.

The SFPUC invests across all service areas to improve infrastructure resilience, mitigate climate risks, and adapt to climate change. The agency delivers substantial environmental benefits through its operations and projects, including those not financed with green bonds. In response to growing investor demand and to provide greater transparency to the many diverse stakeholders who support and benefit from the SFPUC's essential services, the agency is expanding on its green bond reporting. Through a more comprehensive "Impact Report," the SFPUC aims to demonstrate its investments in strategies to mitigate climate change and build climate resilience.

The SFPUC maps these climate mitigation and adaptation strategies to the United Nations' Sustainable Development Goals, an important global framework for protecting the environment as well as human lives. Adopted in 2015, the goals provide guidance for the SFPUC's climate resilience and mitigation work, as do several foundational planning documents developed by the City and County of San Francisco. The SFPUC recognizes that the agency's climate mitigation and adaptation work is only as effective as it is connected to regional and global efforts.

Citywide Climate Resilience Frameworks

The City and County of San Francisco has a long-established history of prioritizing environmental sustainability and climate resilience, as reflected by the [Climate Action Plan](#), the [Hazards and Climate Resilience Plan](#), and the [Guidance for Incorporating Sea Level Rise Into Capital Planning](#).

First launched in 2004 by the Department of Environment in partnership with the SFPUC, the Climate Action Plan established the City's early commitment to reducing greenhouse gas emissions and addressing the localized impacts of a warming planet. Subsequent updates to the Climate Action Plan have expanded this vision to tackle interwoven challenges such as droughts, sea level rise, and wildfires, firmly embedding climate resilience and environmental justice into the City's broader strategic objectives. In September 2023, the [SFPUC partnered with San Francisco Environment to update the Climate Action Plan with a Water Supply Addendum](#) encompassing three key strategies and 15 supporting actions for water resilience against the threat of a warming climate. In April 2026, the City and County of San Francisco published an updated Climate Action Plan, which sets out key objectives the City will aim to achieve by 2030 to help reach San Francisco's goal of attaining net-zero emissions by 2040. The plan also outlines goals related to water use efficiency and conservation and enhancing the resilience of San Francisco's water supply by 2045.

San Francisco's 2025 Hazards and Climate Resilience Plan, an important complement to the City's Climate Action Plan, provides a roadmap to reducing the impacts of climate change and natural hazards on the City's local infrastructure, built environment, and people. Approved by the Federal Emergency Management Agency (FEMA), this plan is updated every five years. The SFPUC participated in shaping this plan, developing objectives and actions related to flood and energy resiliency, and deepening the agency's commitment to climate adaption strategies for water, power, and wastewater systems.

Finally, the SFPUC participated in the development of San Francisco's Guidance for Incorporating Sea Level Rise Into Capital Planning, originally published in 2014 and updated most recently in May 2025. The Guidance, which includes projections and evaluates the short- and long-term vulnerability of City assets to rising seas, was adopted by the City's Planning Commission and now guides projects in the SFPUC's Capital Plan.

SFPUC's Mitigation and Climate Resilience Investments

As outlined, there are many ways that the SFPUC and the City are actively working to not only mitigate but adapt to the realities of climate change. An investment approach that centers climate resilience for the SFPUC is a necessity, informing all long-term planning and infrastructure development.

This commitment is pursued through the [SFPUC's Fiscal Year 2027-2036 10-Year Capital Improvement Plan \(CIP\)](#), which currently outlines \$12.5 billion in planned investments across the Water, Wastewater, and Power Enterprises. The CIP embeds climate risk reduction directly into the core of its asset management and infrastructure upgrades. The SFPUC evaluates capital deliverability through the lens of long-term system resilience.

Beyond economic impacts, capital investments advance environmental objectives. Water and wastewater projects protect San Francisco Bay's ecological health through enhanced treatment processes and pollution reduction. Power investments accelerate the transition to renewable energy, supporting San Francisco's climate action goals and demonstrating leadership in carbon free electricity generation while responding to growing power demands. Water system improvements support drought resilience through diversified supply strategies and enhanced storage capacity. Collectively, these investments safeguard the region's environmental future while ensuring sustainable, reliable utility services for the long term.

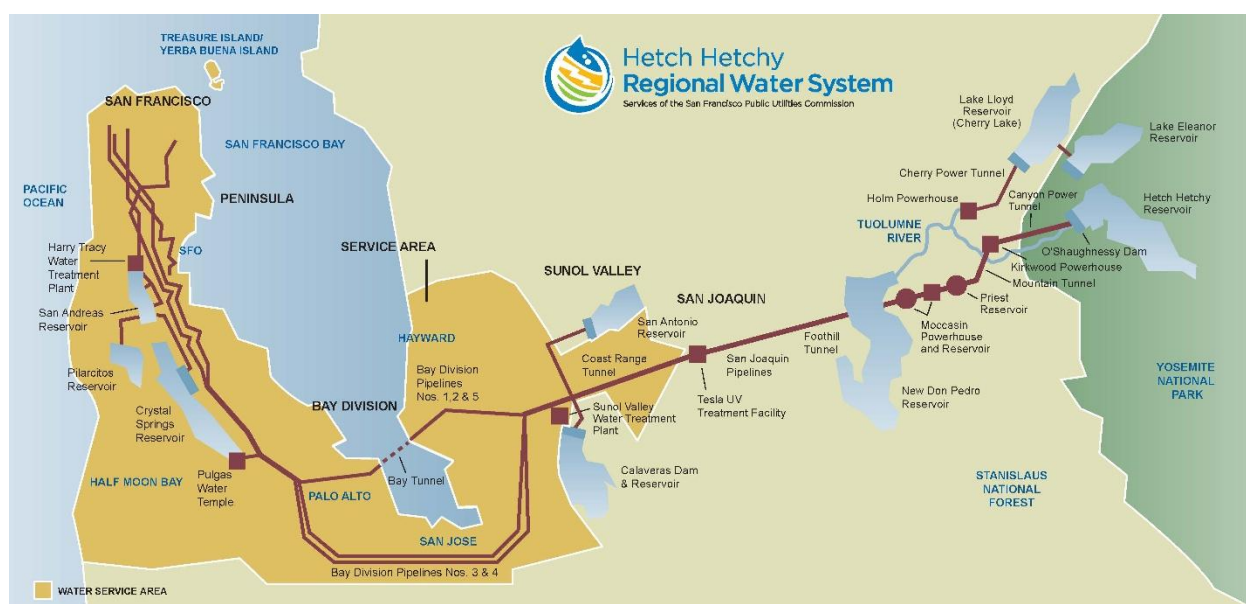
Ultimately, this comprehensive investment approach serves as a critical risk mitigation and adaptation strategy that protects both the physical assets of the utility and the financial interests of ratepayers and investors. By prioritizing proactive investments in seismic reliability, drought-resilient water supplies, and green stormwater infrastructure, the SFPUC is hardening its systems against the specific physical risks posed by climate change. These operational and capital investments ensure that the SFPUC can maintain compliant, reliable service delivery during extreme climate events, thereby securing the utility's long-term financial stability and safeguarding the underlying value of its infrastructure.

WATER ENTERPRISE

Summary

The Water Enterprise operates the Hetch Hetchy Regional Water System, a wholesale and retail drinking water supply system that serves over 2.7 million customers in Alameda, Santa Clara, San Mateo, and San Francisco counties. Approximately one-third of delivered water goes to retail customers in San Francisco, while the other two-thirds consists of deliveries to 28 wholesale customers in Alameda, Santa Clara, and San Mateo counties.

The SFPUC's regional water system supplies high-quality drinking water from the Tuolumne River watershed and from the local Alameda and Peninsula watersheds. The system draws an average of 85% of its supply from the Tuolumne River watershed, collected in Hetch Hetchy Reservoir in Yosemite National Park. This water feeds into an aqueduct system delivering water 167 miles by gravity to Bay Area customers and reservoirs. The remaining 15% of the water supply is drawn from local surface waters in the Alameda and Peninsula watersheds. The percentage split between these water sources varies from year to year depending on the water year hydrology and operational circumstances. Some retail customers also receive local groundwater and recycled water supplies, further diversifying the system. The regional system consists of more than 280 miles of pipelines, 60 miles of tunnels, 11 reservoirs, five pump stations, two water filtration plants, and two treatment facilities for pH adjustment and/or disinfection.



Climate Resilience and Mitigation

To support the continued delivery of high-quality water for future generations, the SFPUC is leading the way to protect and conserve existing supplies, as well as develop new sources. The SFPUC's Water Enterprise has long prepared for the realities of reduced water availability due to climate change impacts, such as increased extreme droughts, greater precipitation variability, and reduced snowpack.

The SFPUC offers a variety of incentives and services, as well as educational assistance aimed at promoting efficient water use among its retail water customers. In addition, the SFPUC has helped to develop and implement local requirements that mandate water efficiency. Together, these voluntary assistance services and requirements have resulted in a significant reduction of SFPUC retail water use.

SFPUC Water Conservation Highlights (FY2024-2025):

- 1,292 Water-wise Evaluations
- 1,516 Water Conservation Devices Distributed (e.g., aerators, toilet flappers, fill valves, pre-rinse valves, nozzles, and soil moisture meters)
- 1,413 Fixture Rebates and Installations
- 13,786 Leak Alert Notifications
- FY2024-2025 conservation activities are estimated to have a potential savings of 253 million gallons of water over 30 years

The SFPUC has also expanded supply strategies to include recycled water, groundwater, and onsite water reuse programs to increase the resilience of the water system and supply in the face of climate change. By diversifying in this way, the SFPUC's water supplies are less vulnerable to risks like earthquakes, droughts, and maintenance activities as the agency meets the long-term water-supply needs of SFPUC customers. The SFPUC is also investing in projects to provide recycled water irrigation to Golden Gate Park and other open space areas in San Francisco. Building upon a foundation of successful water recycling projects in partnership with other municipalities for the last two decades, this will allow the SFPUC to further diversify and enhance the sustainability of its drinking water supply.

Regional Water System Storage Capacity for Upcountry

RWS Reservoir	Storage Capacity in Acre-Feet ^{ab}	Storage Capacity in Billions of Gallons (BG)
Hetch Hetchy	360,360	117.4
Cherry ^c	273,345	89.1
Lake Eleanor	27,100	8.8
Water Bank ^d	570,000	185.7
Subtotal Upcountry	1,230,805	401.1^e

Regional Water System Storage Capacity for Local

RWS Reservoir	Storage Capacity in Acre-Feet (AF) ^a	Storage Capacity in Billions of Gallons (BG)
Calaveras (Alameda)	96,670	31.5
San Antonio (Alameda)	53,266	17.4
Crystal Springs (Peninsula) ^f	68,953	22.5
San Andreas (Peninsula) ^g	18,675	6.1
Pilarcitos (Peninsula) ^h	3,125	1.0
Subtotal Local	240,689	78.4ⁱ

^a Storage values are rounded to whole numbers for larger reservoirs.

^b Three other regulating reservoirs are also part of the RWS: Early Intake, Priest, and Moccasin Reservoirs.

^c Storage capacity shown includes flashboards, which are structures placed in a spillway to increase the capacity of a reservoir.

^d The SFPUC may draw against a credit of up to 740,000 AF in storage in a water bank account in Don Pedro Reservoir; 170,000 AF of this water bank storage is only available under certain circumstances and for a limited time. For this reason, the SFPUC considers 570,000 AF in contributing to total storage for planning purposes.

^e Rows above do not sum to total due to rounding.

^f Crystal Springs Reservoir has a maximum storage capacity of 22.5 BG (at 294.6 feet). Based on permit conditions, the reservoir is currently operated at 286.6 feet (8 feet below capacity).

^g San Andreas Reservoir has a maximum storage capacity of 6.1 BG (at 451.8 feet). Since August 2020, in response to safety concerns about the seismic stability of the dam and a directive from the Division of Safety of Dams, the SFPUC has held the maximum water level at approximately 447.8 feet (4 feet below capacity).

^h Pilarcitos Reservoir has a maximum storage capacity of 1.0 BG (at 696.5 feet). Since April 2025, in response to safety concerns about the seismic stability of the dam and a directive from the Division of Safety of Dams, the SFPUC has held the maximum water level at approximately 681.5 feet (15 feet below capacity).

ⁱ Rows above do not sum to total due to rounding.

Total Regional Water System Storage

RWS Reservoir	Storage Capacity in Acre-Feet (AF) ^j	Storage Capacity in Billions of Gallons (BG)
Total RWS Storage ^k	1,471,494	479.5

In-City Potable Water System Storage Capacity

In-City Reservoir	Storage Capacity in Acre-Feet (AF)	Storage Capacity in Millions of Gallons (MG)
Sunset South	267.9	87.3
Sunset North	266.4	86.8
University Mound South	250.1	81.5
University Mound North	182.3	59.4
Sutro	96.4	31.4
Summit	43.0	14.0
College Hill	41.4	13.5
Stanford Heights	39.6	12.9
Merced Manor	29.2	9.5
Lombard	19.0	6.2
Potrero	4.0	1.3
Hunters Point	3.1	1.0
Storage Tanks	38.7	12.6
Total In-City Storage	1,281.0^l	417.4

Water Capital Program

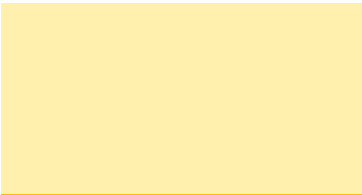
The Water System Improvement Program is a \$4.8 billion, multi-year capital program that began in 2002 to upgrade the SFPUC's regional and local drinking water systems. Now 99% complete, the program has been focused on seismic resilience and investing in our water supply.

The \$2.5 billion Water Capital Plan (FY2027-2036) addresses unavoidable infrastructure requirements driven by factors largely outside SFPUC control. Federal and state regulatory agencies continue to impose increasingly stringent requirements for drinking water quality, dam safety, and environmental protection. Simultaneously, critical infrastructure, much of it constructed many decades ago, is reaching the end of its design life, requiring systematic renewal and replacement to maintain reliable service. The Water Enterprise Capital Plan invests in maintaining the regional water system serving 2.7 million Bay Area residents and thousands of businesses, addressing water quality standards, transmission system reliability, and treatment plant modernization. Many of these assets in the Sierra Nevada and nearby foothills, responsible for providing the overwhelming majority of SFPUC's ratepayers' water, are approaching or have exceeded 100 years of age. Together, these investments support continued delivery of safe, reliable drinking water to millions of Bay Area residents.

^j Storage values are rounded to whole numbers for larger reservoirs.

^k For planning purposes, the total RWS storage is 1,471,494 AF. This includes 63,700 AF in dead storage (i.e., the volume in a reservoir below the lowest controllable level).

^l Rows above do not sum to total due to rounding.



POWER ENTERPRISE

Summary

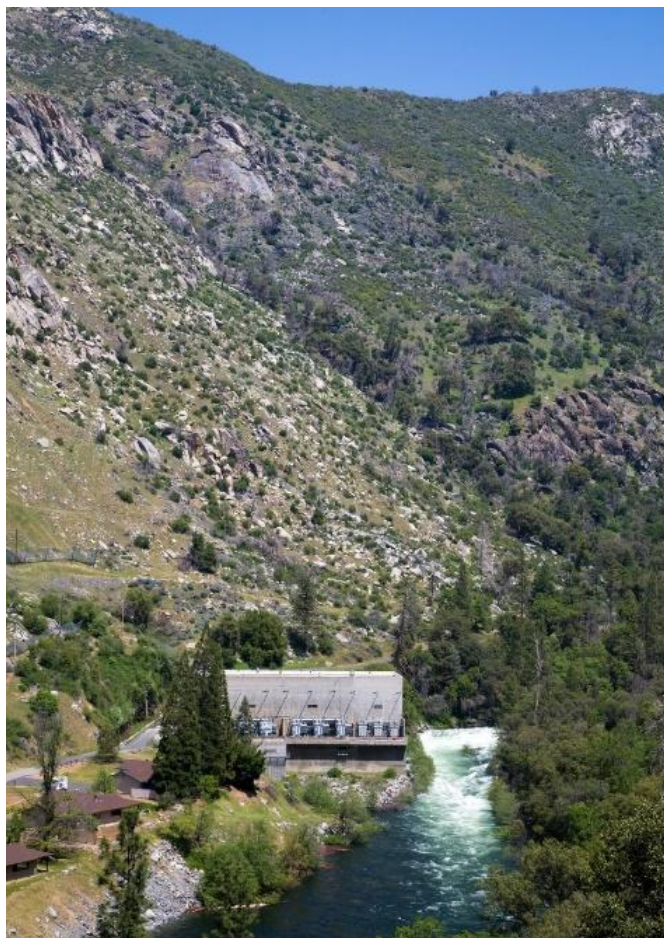
The SFPUC's Power Enterprise includes San Francisco's public power utility, Hetch Hetchy Power, serving nearly 9,000 accounts with a peak demand of 150 megawatts, and CleanPowerSF, San Francisco's community choice aggregation program, serving more than 385,000 accounts with a peak demand of 550 megawatts.

Hetch Hetchy Power

The Hetch Hetchy Power System is the publicly owned power utility for San Francisco, responsible for all power utility wholesale and retail transactions and in-city power operations. Consisting of power generation, transmission, and some local distribution facilities, the system uses the force of gravity from its water system to generate greenhouse gas-free hydroelectric power. Hetch Hetchy Power provides electricity to vital city services like Muni's electric buses, San Francisco public schools, and local fire stations.

Hetch Hetchy Power's generation portfolio includes three major hydroelectric powerhouses — Holm, Kirkwood, and Moccasin — in the Sierra Nevada Mountain range, and 30 solar arrays in San Francisco. The Kirkwood Powerhouse is considered a small hydroelectric facility and deemed renewable under the Renewables Portfolio Standard in California.

Hetch Hetchy Power customers include San Francisco International Airport, libraries, police stations, City Hall, San Francisco Municipal Transportation Agency, Port of San Francisco, Treasure Island, Hunter's Point Shipyard, and the Transbay Transit Center. Hetch Hetchy Power also owns, operates and maintains approximately 60% of the streetlights in the City.



CleanPowerSF

San Francisco's community choice aggregation program, CleanPowerSF, provides San Francisco residents and businesses with electricity supply from renewable sources such as solar, wind, geothermal and hydropower. Pacific Gas & Electric Company delivers the energy via its electrical grid. Customers pay CleanPowerSF for generation and PG&E for transmission and distribution services. Launched in 2016, the program currently powers over 385,000 residents and businesses in San Francisco.

CleanPowerSF offers three electricity products — Green, SuperGreen, and SuperGreen Saver. In 2023, the Green product included 56.5% California Renewable Portfolio Standard (RPS)-certified renewable energy supplemented with 43.5% large hydroelectric energy. In 2024, the Green product was 89% California RPS-eligible, and 11% large hydroelectric energy. CleanPowerSF's SuperGreen product offers 100% California RPS certified solar and wind energy, while the SuperGreen Saver product provided 100% California RPS eligible solar energy to eligible customers at a 20% discount. While the state of California does not recognize large hydroelectric power as RPS-eligible, the City of San Francisco

classifies it as “renewable” given that it doesn’t emit any air pollution when electricity is produced. Over the last 10 years, CleanPowerSF has helped San Francisco reduce greenhouse gas emissions from electricity use by 99.7% from 1990 levels.

2025 Electric Power Generation Mix^m Percent of Total Retail Sales (kWh)

Specific Purchases	PG&E	CleanPowerSF Green	CleanPowerSF SuperGreen
Total Renewable Procurements	33%	84%	100%
Biomass & Biowaste (Renewable Procurement)	3%	3%	0%
Geothermal (Renewable Procurement)	0%	18%	0%
Eligible Hydroelectric (Renewable Procurement)	2%	1%	0%
Solar (Renewable Procurement)	21%	42%	50%
Wind (Renewable Procurement)	7%	19%	50%
Coal	0%	0%	0%
Large Hydroelectric	6%	16%	0%
Natural Gas	28%	0%	0%
Nuclear	33%	0%	0%
Other	0%	0%	0%
Unspecified Sources of Power ⁿ	0%	0%	0%
Total	100%	100%	100%

Climate Resilience and Mitigation

For over a century, the SFPUC has provided clean, publicly-owned power to San Francisco. The SFPUC Power Enterprise continues to make progress on the City’s ambitious climate goals, while seeking to keep cleaner energy affordable and accessible through SFPUC’s Hetch Hetchy Power and CleanPowerSF programs. These two public power programs provide more than 75% of all electricity used in San Francisco.

The City’s Climate Action Plan outlined a City goal of using 100% renewable electricity by 2025. CleanPowerSF reached this historic milestone two years ahead of schedule, delivering 100% renewable electricity to all customers on its default Green service in 2023, and repeating this groundbreaking target in 2024 and 2025. This historic milestone was made possible through an energy mix of solar, geothermal, wind and hydroelectric power.

^m As reported to the California Energy Commission’s Power Source Disclosure Program. PG&E data is subject to an independent audit and verification that will not be completed until later in 2026. The San Francisco Public Utilities Commission attests to the veracity of CleanPowerSF’s data by October 2026. The figures above may not sum to 100% due to rounding. Please visit pge.com/ccca for any updates to the Power Content Label data.

ⁿ Unspecified sources of power refer to electricity that is not traceable to a specific generating facility, such as electricity traded through open market transactions. Unspecified sources of power are typically a mix of all resource types, and may include renewables.

Power Capital Program

The SFPUC's Power Capital Program encompasses capital investments for both the Hetch Hetchy Power Enterprise and CleanPowerSF.

In FY 2024-25 and FY 2025-26, the Hetch Hetchy Power Enterprise capital budget totaled \$137.5 million, with \$88.4 million (64%) funded by debt and \$49.1 million (36%) funded by revenue sources, including Power operating revenue, Distributed Antenna System revenue, Low Carbon Fuel Standards revenue, and Power Cap-and-Trade revenue. The \$1.2 billion Power FY2025-2034 Ten-Year Capital Plan reflected a consistent and growing investment funded by \$746 million in Power bonds and \$534 million in revenues. Key to Power's Capital Program is the \$828 million investment in distribution services for retail customers.

This includes improvements to the SFO substations to meet projected increases in demand, investments in distribution services to redevelopments, the Carbon Free Steam project to decarbonize the Cordia Steam Loop, customer connections to the PUC owned and operated distribution grid, electrification projects along the northern waterfront and South Beach areas, and a backup distribution loop to increase resiliency of the Bay Corridor Transmission and Distribution System. Additionally, the Capital Plan includes \$48 million for streetlights, \$10 million for energy efficiency, \$10 million for renewable/generation power, and \$60 million for the public power expansion project.



The CleanPowerSF Ten-Year Capital Plan for FY 2024-25 through FY 2033-34 totals \$49 million, all funded by program revenues. The Local Renewable Energy Program is expected to support the development of new solar photovoltaic and battery-storage projects on select SFPUC sites. The initial renewable energy facilities developed under this program are expected to be structured as power purchase agreements with third parties that would develop and operate the projects for an initial period. The agreements are expected to include a buy-out option for the City.

WASTEWATER ENTERPRISE

Summary

San Francisco is the only coastal city in California with a combined sewer system that collects and treats both sewage and stormwater (collectively referred to as *wastewater*), helping to keep pollutants from entering the bay and ocean. Combined sewer systems are common in other major cities across the country. The SFPUC's Wastewater Enterprise is responsible for the operation and maintenance of San Francisco's combined sewer system. The system collects, treats, and discharges wastewater from San Francisco, parts of Daly City, the Bayshore Sanitary District, and Brisbane. This work is crucial for the protection of both public health, as well as for the environmental safety of San Francisco Bay and the Pacific Ocean.

San Francisco wastewater is treated at one of three facilities: the Southeast Treatment Plant, the Oceanside Treatment Plant, and the North Point Wet Weather Facility, the last of which is operated only in wet weather. The sewer system currently handles 55 million gallons per day on average. It can handle up to 128 million gallons per day in dry weather and treat up to 565 million gallons per day in wet weather. The Wastewater Enterprise operates pump stations, discharge points, and the massive underground transport and storage structures around the City that have a capacity up to 200 million gallons, equivalent to approximately 1.5 to 3 days of dry weather storage depending on the specific storage box sections and related upstream service area.

The Wastewater Enterprise serves both residential and commercial accounts as well as some municipal customers. The SFPUC operates, cleans, inspects, and maintains more than 1,000 miles of sewer pipes. The agency regularly monitors areas of the San Francisco shoreline for water quality where water recreation is common and provides water quality reports to the public using a 24-hour hotline, website, and via email.

Managing stormwater is an important priority for the City and the SFPUC. Although no sewer system can handle the most intense storms, the SFPUC is pursuing a variety of approaches to enhance the City's flood resilience in the face of increasingly severe rainstorms in coordination with other City agencies through ClimateSF. In addition, SFPUC's RainReadySF Program, which is a combination of planned infrastructure improvements, coordinated City services, and innovative programs, provides residents and businesses with resources to reduce the risk of flooding during a major rainstorm.

Climate Resilience and Mitigation

System resiliency projects are intended to help safeguard wastewater infrastructure against extreme weather events, seismic risks, and sea level rise. These investments support uninterrupted access to critical services even if climate-induced disruptions become more frequent and severe. The Ocean Beach Climate Adaptation Project exemplifies this approach. This project includes comprehensive shoreline protection to address erosion that threatens vital wastewater assets, including the Lake Merced Transport/Storage Facility, Westside Pump Station and Force Main, and Oceanside Treatment Plant. The solution integrates buried seawall protection with enhanced coastal access, roadway improvements, and safety upgrades designed to protect vital infrastructure while maintaining public coastal access. Finally, SFPUC is participating in a flood study with SF Port and the U.S. Army Corps of Engineers (USACE), to analyze the coastal flood risk and effects of sea level rise for the 7.5 miles of waterfront between Aquatic Park and Heron's Head Park. The San Francisco Waterfront Flood Study is one of several coordinated waterfront resilience activities being undertaken in partnership with federal, state, and local agencies to plan for anticipated seismic activity, flooding, and sea level rise. The study will identify vulnerabilities and recommend strategies to reduce current and future flood risks for consideration for federal investment and implementation.

Green infrastructure projects, such as rain gardens and living roofs, provide climate-resilient approaches to stormwater management. Rather than relying solely on concrete and pipes, these projects work with natural systems to improve water quality, create community amenities, and reduce flooding. This represents a smart, sustainable approach to flood defense that builds resilience alongside environmental benefits.

Nutrient reduction in San Francisco Bay addresses one of the region's most pressing water quality challenges after the Bay experienced harmful algal blooms and fish kills in both 2022 and 2023 following conditions linked to climate change. The SFPUC is currently building a new wastewater treatment plant on Treasure Island that includes nitrogen reduction, which is designed to reduce 80% of nitrogen during the tertiary treatment process. In addition, at a much larger scale, the SFPUC has initiated the Southeast Water Pollution Control Plant Nutrient Reduction Project to meet anticipated regulatory requirements for nutrient reduction and protect bay water quality.

Wastewater Capital Program

The SFPUC's multi-billion-dollar Wastewater Capital Plan includes funding aimed at upgrading and modernizing our aging combined sewer system to ensure it continues to be reliable, sustainable and able to meet the challenges of today and tomorrow. New facilities are being built to modern standards to prepare for sea level rise and ensure we can operate within 72 hours of a major seismic event. By prioritizing sustainability and climate action, the SFPUC is seeking to protect the environment and support a clean and healthy future for generations to come.

Federal and state regulatory agencies continue to impose increasingly stringent requirements for collection, storage, treatment, and environmental protection. SFPUC's compliance with these requirements is a significant driver of the current \$5.9 billion Wastewater Capital Plan (FY2027-2039). Some examples of infrastructure projects responsive to these requirements include designing and constructing nutrient reduction treatment technologies and increasing collection system conveyance capacity in identified low-lying areas. Simultaneously, critical infrastructure, much of it constructed many decades ago, is reaching the end of its design life, requiring systematic renewal and replacement to maintain reliable service. These regulatory requirements, coupled with the need to maintain and modernize aging treatment facilities like the Southeast Outfall and the Southeast Treatment Plant Biosolids Digesters, drive the substantial investment required.

CASE STUDIES

CASE STUDIES

1. Case Study: Advanced Quantitative Precipitation Information

Climate Risk Addressed	Drought (see 2025 Hazards and Climate Resilience Plan , p. 180) Flooding (see 2025 Hazards and Climate Resilience Plan , p. 139)
Funding Source	California Department of Water Resources Grant
United Nations Sustainable Development Goals	SDG #6 – Clean Water and Sanitation SDG #9 – Industry, Innovation and Infrastructure SDG #13 – Climate Action

Overview

The SFPUC, in partnership with a coalition of Bay Area water, wastewater, and flood control agencies, is taking part in a regional effort to improve precipitation observations and forecasting through the Advanced Quantitative Precipitation Information (AQPI) system. This system strengthens decision-making for water management, flood preparedness, and climate resilience across one of the nation's most complex metropolitan regions. This new technology provides greater detail that allows the SFPUC to more efficiently and proactively deploy resources to address localized flooding. This radar also allows us to better operate our reservoirs to maintain critical water supplies, and or capture water supply, coming our way in the form of precipitation.

Context and Challenge

Weather radar is used by meteorologists, hydrologists, and water managers as a tool to monitor the strength of incoming storm events and estimate the precipitation falling across the landscape. The Bay Area's unique geography and storm patterns create gaps in traditional weather radar systems. The national [Next Generation Weather Radar \(NEXRAD\)](#) network—designed primarily for midwestern, midlatitude storms—struggles to accurately capture California's precipitation. High elevation radar placement and mountainous terrain impede the capture of accurate data from the Bay Area's low-elevation atmospheric rivers, and these gaps limit the region's ability to anticipate flooding.

The Advanced Quantitative Precipitation Information (AQPI) System

AQPI is the result of a decade-long collaboration among local, state, and federal agencies and leading researchers. Funded in 2016 by a \$19.7 million California Department of Water Resources grant, the system deploys five strategically located Xband radars to provide high resolution, short-range precipitation imaging. A complementary Cband radar installed on Mt. Barnabe in 2025 extends long-range coverage over the Pacific Ocean, enabling the detection of incoming atmospheric rivers. Overlapping radar footprints create a more complete picture of precipitation events across the Bay Area.



Outcomes and Benefits

The AQPI system is intended to deliver accurate, timely monitoring and forecasting of precipitation, which is expected to improve streamflow planning, and coastal flooding forecasts. By filling a critical observational gap in a densely populated, climate-vulnerable region, the project enhances operational readiness for managing water, wastewater, and emergency services. A [2020 study](#) of potential benefits of the AQPI system found that its largest value was in avoiding flood damages, with benefits estimated at two to 10 times the system's costs. Enhanced storm forecasting improves the SFPUC's ability to manage reservoirs to maintain or capture critical water supplies, supporting more efficient system operations and

adaptation to greater climate variability.

Strategic Alignment and Future Implications

AQPI supports the SFPUC's OneWaterSF approach, which integrates water, energy, financial, and natural resource planning for long-term reliability. It also advances goals in the City's [2025 Hazards and Climate Resilience Plan](#), which highlights increasing risks from extreme precipitation, stormwater flooding, and aging infrastructure. Recent regional climate studies underscore the need for localized modeling—precisely the gap AQPI addresses. This technology is also in support of SFPUC's water supply management; knowing where rainfall is forecasted allows the agency to plan to capture rainwater in reservoirs, or preserve the existing reservoir supply if rain is predicted not to fall on the watershed. The system's design offers a scalable model that could be replicated across California, the United States, and globally to improve resilience in other regions facing similar weather forecasting challenges.

2. Case Study: Alameda Creek and River Stewardship

Climate Risk Addressed	Biodiversity Loss (see San Francisco Climate Action Plan , p. 80)
Funding Source	Operating Funds
United Nations Sustainable Development Goals	SDG #6 – Clean Water and Sanitation SDG #14 – Life Below Water SDG #15 – Life on Land

Overview

The SFPUC has worked diligently with other river partners – often for years – to remove man-made barriers to fish migration, restore natural spawning habitat, and strategically increase water releases from reservoirs to mimic natural river flows. In spring of 2026 those efforts have produced results: Chinook salmon returned to two Bay Area creeks earlier that year for the first time in decades; Steelhead trout populations are booming on those same two waterways; and the lower Tuolumne River is once again home to sizable numbers of Chinook salmon.

Context and Challenge

Alameda Creek, which stretches from its mouth in the San Francisco Bay near Fremont all the way to Mount Hamilton in Santa Clara County, provides important habitat for native fish and wildlife. The Calaveras and San Antonio Reservoirs are important sources of drinking water for SFPUC customers, and the creeks upstream and downstream are important aquatic habitat for native species. Due to many factors — including the construction of flood control facilities, water diversion structures, and urbanization of open spaces — once-abundant steelhead trout lost access to much of the watershed and have struggled to survive in just a few areas over the past 70 years.

Alameda Creek Stewardship

In the late 1990s, the Alameda Creek Fisheries Restoration Workgroup, including the SFPUC, started to identify barriers to fish migration and make plans to remove such barriers or construct fish ladders. In 2006, the SFPUC removed Sunol and Niles Dams from Alameda Creek. The Alameda Creek Diversion Dam was rebuilt as part of the Calaveras Dam Replacement Project and included the construction of a fish ladder in 2018. In January 2019, the SFPUC started releasing water from Calaveras Dam to support steelhead and other native species based on a schedule developed collaboratively with the Alameda Creek



Fisheries Restoration Workgroup, including the California Department of Fish and Wildlife, National Marine Fisheries Service, and the Alameda Creek Alliance.

Outcomes and Benefits

Due to decades of work by the SFPUC and other organizations to improve fish habitat and remove barriers, the number of juvenile steelhead leaving the watershed for San Francisco Bay and the ocean has increased. During the SFPUC's annual fish trapping surveys between 2015 and 2023, biologists captured and released an average of about 40 steelhead a year. In 2024, they captured and released 2,600 steelhead. In 2025 that number was over 1,400, and 2026 is on pace to meet last year's figure. For the first time in more than 70 years, adult steelhead can enter the watershed, and this past winter Chinook salmon were documented in the upper reaches of Alameda Creek.

Other positive developments have been documented in San Mateo Creek and the Tuolumne River. Over the last three years, the SFPUC's capture and release of juvenile steelhead leaving San Mateo Creek has averaged almost 350 steelhead a year. Chinook salmon were also documented in San Mateo Creek this past winter for the first time in decades.

On the lower Tuolumne River below Don Pedro Reservoir, the SFPUC in partnership with the Turlock and Modesto Irrigation Districts, the U.S. Fish and Wildlife Service, and River Partners has been working to develop and begin implementation of several projects designed to improve spawning and rearing habitat for Chinook salmon and rainbow trout. In 2024 this partnership led to the implementation of the Old La Grange Bridge Project, which created seven acres of new spawning habitat for fall-run and spring-run Chinook salmon. The project is expected to help maintain other restoration projects as 50,000 cubic yards of new spawning gravel moves slowly downstream. In May 2025, approximately 1,000 spring-run Chinook salmon arrived on the lower Tuolumne River for the summer and later spawned, with thousands of juveniles beginning their migration to the ocean over this past winter.

Strategic Alignment and Future Implications

The efforts bring together local, regional, state, and federal partners to pool resources and take tangible actions to increase river flows and expand habitat in our water ways. The SFPUC works closely in collaboration with the Turlock and Modesto Irrigation Districts, the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, the National Marine Fisheries Service, the Alameda Creek Fisheries Restoration Workgroup, River Partners, and more. These partnerships allow this work to continue and deepen, including investing in new spawning habitat projects and other restoration projects that will support healthy rivers and sustainable ecosystems.

3. Case Study: Wildfire Mitigation

Climate Risk Addressed	Wildfire (see 2025 Hazards and Climate Resilience Plan , p. 199)
Funding Source	Operating Budget; Capital Budget
United Nations Sustainable Development Goals	SDG #7 – Affordable and Clean Energy SDG #9 – Industry, Innovation and Infrastructure SDG #13 – Climate Action

Overview

For more than a century, the SFPUC's Hetch Hetchy Power System has delivered clean, greenhouse gas-free electricity to San Francisco. Today, Hetch Hetchy Power supplies nearly 20% of the City's electricity, supporting essential services and major public facilities. As climate driven wildfire risk intensifies across California, safeguarding this system has become critical to maintaining reliable, high-quality service. The SFPUC approved the Wildfire Mitigation Plan initially in 2019. It outlines a comprehensive strategy to protect vital electrical assets, reduce ignition risk, and ensure uninterrupted power delivery. [The SFPUC's 2025 Wildfire Mitigation Plan](#) is an annual update to build on the success of previous Wildfire Mitigation Plan programs and initiatives and incorporate lessons learned to date.

Context and Challenge

The SFPUC manages 324 miles of high voltage transmission lines and 49 miles of distribution lines stretching from the Hetch Hetchy Reservoir to San Francisco. Much of this infrastructure crosses steep, remote terrain in the Sierra Nevada—areas increasingly exposed to extreme drought and prolonged fire seasons.

Rising temperatures, reduced snowpack, and shifting precipitation patterns have created drier, more flammable landscapes. Historic fire management increases in forest fuels due to lack of fire, and the decline in forest health also significantly increase the risk of wildfires. Moreover, major wind events can rapidly intensify fire behavior. These conditions heighten the importance of preventing electrical equipment, such as power lines and tools, from becoming ignition sources.

Innovative Wildfire Mitigation

The primary initiatives of the 2025 Wildfire Mitigation Plan are to: 1) maintain compliance with Public Utilities Code § 8387 and continue to mature our wildfire mitigation initiatives; 2) continue to develop improvements to the Wildfire Analyst™ risk modeling software; 3) continue to track metrics to inform the SFPUC on how the WMP programs and initiatives are performing; and 4) evaluate and assign priorities to system hardening options and create implementation time frames.



The plan integrates industry leading technologies, operational protocols, and asset hardening strategies to minimize sources of ignition, improve grid reliability and resiliency, and measure plan effectiveness.

A cornerstone of the SFPUC's wildfire prevention strategy is its use of the Fire Potential Index, an innovative, Artificial Intelligence-driven tool within the Technosylva Wildfire Analyst platform that performs daily risk analysis on each SFPUC asset. By integrating temperature, humidity, wind, and fuel moisture data from more than 300 weather stations, as well as vegetation conditions and coverage, the system generates a real-time forecast of fire danger that SFPUC staff review each morning to guide operational decisions — making the SFPUC the first publicly-owned utility in California to adopt this approach. Complementing this advanced forecasting capability is a comprehensive suite of preventive measures, including continuous weather and air quality monitoring, and access to over 100 wildfire cameras.

These insights support a broader set of resilience strategies: rigorous vegetation management along transmission and distribution corridors, system hardening through pole replacements and fire-resistant coverings, and ongoing asset maintenance using aerial patrols, drones, and regular substation inspections.

The SFPUC also provides staff with capacity-building in key areas such as vegetation management and basic fire trainings, and maintains robust emergency response procedures. During periods of critical fire weather, the SFPUC may proactively de-energize lines to prevent ignition, supported by real-time power line monitoring. Together, these integrated strategies are intended to create a layered defense that strengthens grid reliability, protects critical assets, and reduces wildfire risk across the system.

Outcomes and Benefits

The SFPUC tracks annual outcome and performance metrics to measure the effectiveness of the Wildfire Mitigation Plan in reducing the risk of SFPUC facilities being the origin or contributing source for the ignition of catastrophic wildfires. From 2019 through 2024, SFPUC successfully completed all intended outcomes each year, including vegetation inspections in High Fire Threat Districts (HFTDs) and aerial

inspections of both high-voltage long distance transmission lines and lower-voltage distribution lines. These activities form the foundation of SFPUC’s preventive approach, ensuring that high risk areas receive consistent, proactive attention.

Performance metrics include the number of reportable ignitions associated with SFPUC electrical facilities in HFTDs, the number of times a circuit or circuit segment is de-energized within an HFTD, and wire down events both inside and outside HFTDs. In 2024, SFPUC recorded one de-energization event—down significantly from seven in 2021—and recorded zero events across all other performance measures.

Strategic Alignment and Future Implications

The Wildfire Mitigation Plan supports the City’s 2025 Hazards and Climate Resilience Plan, which identifies the location of the Hetch Hetchy Power System as a very high wildfire hazard area. It advances the City’s stated resilience goal IN8.2: to mitigate wildfire hazards in SFPUC-owned watersheds to protect source water quality and minimize risk to SFPUC water and power infrastructure.

As wildfire seasons grow longer and more severe, the SFPUC is proactively safeguarding its assets from costly damage, reducing long-term operational risk, and strengthening long-stem performance. This ensures that Hetch Hetchy Power can remain a high-quality, efficient, and reliable source of clean energy for generations to come. The SFPUC’s approach offers a framework for utilities across the state, which increasingly look to SFPUC as a leader in wildfire mitigation and climate resilient operations.

FY27-36 10-Year Capital Plan

	Water	Power	Joint ^o	Total
Renewal and Replacement Wildfire Mitigation	-	\$3.25 million	\$5 million	\$8.75 million
Renewal and Replacement Power Distribution Line High Risk Fire Reduction	-	-	\$8.75 million	\$8.75 million
Total	-	\$3.25 million	\$13.75 million	\$17.5 million

4. Case Study: Headworks Facility

Climate Risk Addressed	Sea Level Rise; Flooding (see 2025 Hazards and Climate Resilience Plan , p. 139)
Funding Source	State Revolving Fund Loan Funded (\$112 Million), WIFIA Funded (\$421 Million), Bond Funded (\$185 Million)
United Nations Sustainable Development Goals	SDG #6 – Clean Water and Sanitation SDG #8 – Decent Work and Economic Growth SDG #9 – Industry, Innovation and Infrastructure SDG #11 – Sustainable Cities and Communities SDG #13 – Climate Action SDG #14 – Life Below Water

Overview

The SFPUC is protecting public health and the environment through upgrades to the Southeast Treatment Plant, San Francisco’s oldest and largest wastewater treatment plant. In 2025, the SFPUC inaugurated the new \$708 million Headworks Facility, which is built to remove grit and trash from wastewater and stormwater with greater efficiency and to withstand sea level rise, among other enhancements. The project received the Water Environment Federation’s 2025 Project Excellence Award

^o Joint Hetch Hetchy projects are 55% allocated to the Power Enterprise and 45% allocated to the Water Enterprise.

and the Envision Gold Award from the Institute for Sustainable Infrastructure in 2019.

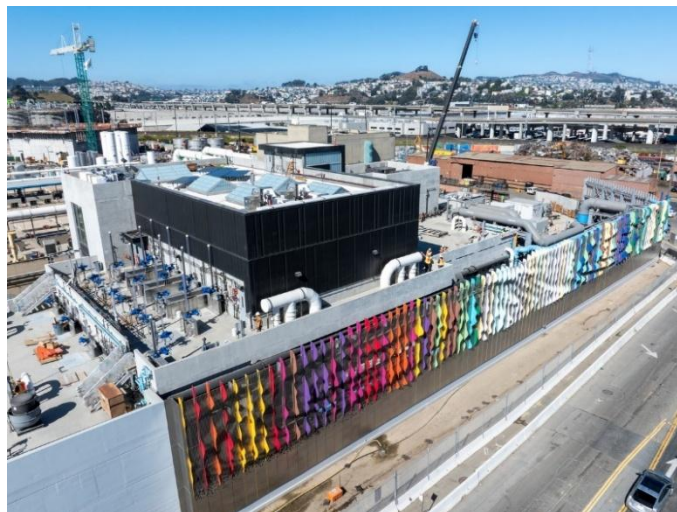
Context and Challenge

Built in 1952, the Southeast Treatment Plant is the City's largest wastewater treatment facility, handling nearly 80% of San Francisco's combined stormwater and wastewater every year. Prior to the SFPUC's recent upgrades, many of the plant's facilities were outdated, seismically vulnerable, and increasingly threatened by rising sea levels.

The plant's intake and pre-treatment areas play a critical role in San Francisco's combined sewer system. These facilities remove trash, and grit from enormous volumes of stormwater, preventing them from entering the San Francisco Bay.

The Headworks Facility

The new Headworks Facility replaces and consolidates two outdated headworks operations at the Southeast Treatment Plant with a single, modern facility. As the primary intake and pre-treatment area for the plant, the Headworks Facility is the first stop for the majority of San Francisco's combined stormwater and wastewater. In the facility, debris (such as trash) and grit (like sand) are removed, a process that is critical to protecting downstream equipment, helping control odors, and ensuring the plant can operate efficiently. On average, the new Headworks Facility treats about 45 million gallons of wastewater per day, enough to fill 68 Olympic-sized swimming pools. During storms, it can handle flows that surge to more than 5.5 times the normal amount – as much as 250 million gallons per day.



Outcomes and Benefits

The Headworks Facility removes grit with 95% efficiency, a 45% improvement over the previous system. It is engineered to withstand a magnitude 7.8 earthquake and 36 inches of sea level rise.

The project also delivered significant workforce and economic benefits. The SFPUC exceeded local hiring requirements, with 615 San Francisco residents completing more than 414,000 craft hours on the project – 33% of total hours— and earning \$34 million in wages and benefits. In addition, San Francisco Local Business Enterprises received \$106 million in project contracts, supporting jobs and investment in the community.

The neighborhood where the facility is located is also benefiting from the improvements. A major component of the New Headworks Facility includes a state-of-the-art system to minimize odors using advanced odor control equipment – a long-standing request from the community.

The Headworks Facility has also earned national recognition. The project is the recipient of the [Water Environment Federation's 2025 Project Excellence Award](#) for achieving excellence in operations and design. It also earned the Envision Gold Award from the Institute for Sustainable Infrastructure in 2019, the first City of San Francisco project to receive this recognition.

Strategic Alignment and Future Implications

The Headworks Facility supports the City's 2025 Hazards and Climate Resilience Plan, which notes that the City's combined sewer system assets may be vulnerable to future coastal flooding due to sea level

rise, particularly in low-lying areas. The Headworks Facility upgrades align with the HCR plan's Infrastructure objective No. 7, which calls for increasing the resilience of local water and wastewater systems to natural hazards and climate change. Ultimately, the Headworks Facility enhancements will improve long-term reliability, reduce maintenance costs, and ultimately save ratepayer dollars. These improvements ensure the SFPUC's infrastructure can operate more efficiently today, while being better prepared to withstand future climate risks.

5. Case Study: Green Infrastructure Grant Program

Climate Risk Addressed	Flooding (see 2025 Hazards and Climate Resilience Plan , p. 139)
Funding Source	Revenue-Funded
United Nations Sustainable Development Goals	SDG #6 – Clean Water and Sanitation SDG #9 – Industry, Innovation and Infrastructure SDG #11 – Sustainable Cities and Communities SDG #13 – Climate Action SDG #15 – Life on Land SDG #17 – Partnerships for the Goals

Overview

The SFPUC is expanding the City's use of nature-based stormwater solutions through its [Green Infrastructure Grant Program](#). The program funds the design and construction of green infrastructure—such as permeable pavement, rain gardens, bioretention systems, and rainwater harvesting—that slow, clean, and route stormwater before it enters the City's combined sewer system. This work supports the SFPUC's long-term goal of managing one billion gallons of stormwater annually with green infrastructure by 2050, strengthening San Francisco's resilience to increasingly intense precipitation events.

Context and Challenge

San Francisco is the only coastal city in California with a combined sewer system, where both wastewater and stormwater flow through the same network of pipes to treatment plants. During heavy storms, the volume of stormwater can exceed the capacity of the system, particularly because much of the City is paved or covered in hard surfaces that prevent natural infiltration. Stormwater that cannot soak into the ground flows directly into the combined sewer system through roof drains and street catch basins, and during large storms can increase the risk of localized flooding, system strain, and higher treatment costs. As precipitation events become more frequent and intense, green infrastructure is part of an integrated watershed planning approach to stormwater management.

The Green Infrastructure Grant Program

Green infrastructure uses natural processes—soil, plants, and permeable surfaces—to slow, filter, and absorb stormwater at its source. These systems reduce the volume and speed of runoff entering the sewer system. The SFPUC uses projects, policies, partnerships, and programs to advance the implementation of green infrastructure across San Francisco. This section focuses on green infrastructure incentive programs.

The SFPUC launched the Green Infrastructure Grant Program in 2019 to incentivize property owners to implement green stormwater infrastructure retrofits.

The program enables property owners, schools, nonprofits, and public agencies to implement large-scale stormwater management projects on



highly impervious sites. Projects must manage runoff from at least a half-acre of impervious surface and may receive up to \$2.5 million for design and construction. Recent updates to program guidelines now allow projects in the public right-of-way, such as sidewalks and streets, expanding opportunities for community-serving installations.

Through the program, SFPUC funds the design and construction of green infrastructure, while property owners commit to maintaining the installations for 20 years. Eligible project types include permeable pavement, bioretention planters, rain gardens, vegetated roofs, and rainwater harvesting systems.

Outcomes and Benefits

The Green Infrastructure Grant Program advances several core SFPUC objectives. In the combined sewer, green infrastructure reduces the rate and volume of stormwater entering the combined sewer system, buffering its capacity during major storms and lowering wastewater treatment and energy demands. In the separate sewer areas, green infrastructure treats stormwater, protecting water quality in the Bay and Ocean. In all service areas, green infrastructure delivers multiple benefits to ratepayers, including greening, urban habitat, and urban design.

For participating ratepayers in the [Green Infrastructure Grants for Homes](#) program, projects can also reduce the stormwater portion of their sewer service charge through the [Stormwater Credit Program](#). Homeowners benefit from reduced flood risk, improved drainage, and opportunities to capture and reuse water on site. Communities gain from enhanced public spaces and improved street conditions. Green infrastructure also supports environmental sustainability and protects biodiversity by creating habitats for native species.

To date, the Green Infrastructure Grant Program has awarded \$29.65 million to 29 projects, including \$3.4 million in grants to three new projects in FY24-25. Altogether, these projects are expected to capture more than 18 million gallons of stormwater per year. They are also expected to deliver co-benefits to San Francisco ratepayers, including various combinations of increased public access, open space, and recreation; community engagement, collaboration, and placemaking; education and watershed stewardship; green infrastructure job training; diversifying water supplies; climate resilience and biodiversity. Projects receive extra points for being located in environmental justice communities.

Green infrastructure continues to add to the SFPUC's portfolio of sustainable stormwater management, adding an additional 7.4 million gallons of stormwater managed in FY24-25. Overall, the total volume of stormwater managed by green infrastructure in FY24-25 was 293 million gallons, nearly one-third of the way towards the 2050 target of one billion gallons per year.

Strategic Alignment and Future Implications

The Green Infrastructure Grant Program advances the SFPUC's broader climate-resilience strategy and supports the City's 2025 Hazards and Climate Resilience Plan, which emphasizes the need to mitigate risks and adapt critical assets as precipitation patterns shift. Regional climate studies project a general trend toward more frequent and intense wet season storms in the coming decades, making the Bay Area one of the regions in California most likely to experience significant changes in storm behavior. The SFPUC has also aligned investments with other City agencies' bond cycles and performed assessments of green infrastructure opportunities of large public properties.

SFPUC GREEN BOND PROGRAM

SFPUC GREEN BOND PROGRAM

Summary

The SFPUC was an early adopter of green bonds and sustainable financing, issuing its first green bonds in 2015. Since then, the SFPUC has been recognized by *Environmental Finance* and market participants as a leader in labeled bonds and climate action. The SFPUC views green bonds as an important tool for communicating its commitment to meeting climate goals and financing low-carbon, climate-resilient infrastructure. Since issuing its first series of green bonds in Fiscal Year 2015, the SFPUC has sold more than \$5.8 billion in Climate Bonds Initiative certified green bonds from its Water and Wastewater enterprises and more than \$100 million in self-designated green bonds from its Power Enterprise through Fiscal Year 2025. Impacts from projects financed by green bonds issued by the SFPUC's three enterprises have ranged from 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.

Green Bonds 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. The SFPUC does not designate all eligible bonds "Green Bonds"; the SFPUC has issued and will continue to issue bonds the proceeds of which have been and will be used for environmentally beneficial projects that have not been and will not be designated "Green Bonds".

Water Enterprise

With respect to its Water Enterprise, the SFPUC determined that projects included in its Water System Improvement Program are environmentally beneficial projects. While 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 2025 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)
- Water Revenue Bonds, 2025 Sub-Series A (Refunding) (Green Bonds)

Power Enterprise

With respect to its Power Enterprise, the SFPUC determined that projects such as Mountain Tunnel Hydroelectric Conveyance, Warnerville Substation Rehabilitation, and Bay Corridor Projects are environmentally beneficial projects. The following Green Bonds have been issued by the SFPUC's Power Enterprise from Fiscal Year 2015 through Fiscal Year 2025 to finance or refinance environmentally beneficial projects.

- Power Revenue Bonds, 2015 Series A (Green Bonds)
- Power Revenue Bonds, 2021 Series A (Green Bonds)

Wastewater Enterprise

With respect to its Wastewater Enterprise, the SFPUC determined that projects included in its Sewer System Improvement Program are environmentally beneficial projects. The following bonds (Bonds or Green Bonds) issued by the SFPUC's Wastewater Enterprise from Fiscal Year 2015 through Fiscal Year 2025 have been certified by the Climate Bonds Initiative (CBI) under the Climate Bonds Standard established by the CBI:

- Wastewater Revenue Bonds, 2016 Series A (Green Bonds)
- Wastewater Revenue Bonds, 2018 Series A (Green Bonds)
- Wastewater Revenue Bonds, 2018 Series C (Green Bonds)
- Wastewater Revenue Bonds, 2021 Series A (SSIP) (Green Bonds)
- Wastewater Revenue Bonds, 2021 Series A (Green Notes)
- Wastewater Revenue Bonds, 2021 Series B (Green Notes)
- Wastewater Revenue Bonds, 2023 Series A (SSIP) (Green Bonds)
- Wastewater Revenue Bonds, 2023 Series C (Refunding - SSIP) (Green Bonds)

GREEN BONDS PROCEEDS

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 indentures pursuant to which Bonds have been issued, the SFPUC has reserved the right to reallocate the use of 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 the project. The "Prior" column represents proceeds spent in years prior to the reported fiscal year. The "FY 2025" 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.

- Water Enterprise
- Wastewater Enterprise
- Power Enterprise

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2016 Series C (Prior)	Water Revenue Bonds, 2016 Series C (FY2025)	Water Revenue Bonds, 2016 Series C (Total)	Water Revenue Bonds, 2017 Series A – WSIP (Prior)	Water Revenue Bonds, 2017 Series A – WSIP (FY2025)	Water Revenue Bonds, 2017 Series – WSIP (Total)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (Prior)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (FY2025)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (Total)	Project Total
Buildings and Grounds – Regional							54,675		54,675	54,675
Bond/Commercial Paper Expense	8,607,094		8,607,094				5,330,495	(16,000)	5,314,495	13,921,589
Lake Merced Water Level Restoration	128,563		128,563	913		913	474,386		474,386	603,862
San Francisco Groundwater Supply							10,291,728		10,291,728	10,291,728
Regional Groundwater Storage and Recovery	15,607,774		15,607,774	11,856,417		11,856,417	19,413,246		19,413,246	46,877,437
Recycled Water Project	989,566	1,163	990,729	2,504,495		2,504,495	1,235,569		1,235,569	4,730,793
Harding Park Recycled Water Project				34		34				34
Recycled Water Project				19,703		19,703				19,703
Lake Merced Pump Station Upgrade				630,939		630,939	108,468		108,468	739,407
Sutro Reservoir Rehab/Seismic Upgrade				23,855		23,855				23,855
Upper Alameda Creek Filter Gallery	2,453,723		2,453,723	264,536		264,536	5,861,839		5,861,839	8,580,098

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2016 Series C (Prior)	Water Revenue Bonds, 2016 Series C (FY2025)	Water Revenue Bonds, 2016 Series C (Total)	Water Revenue Bonds, 2017 Series A – WSIP (Prior)	Water Revenue Bonds, 2017 Series A – WSIP (FY2025)	Water Revenue Bonds, 2017 Series – WSIP (Total)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (Prior)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (FY2025)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (Total)	Project Total
Seismic Bay Division Pipeline @ Hayward Fault Phase 2	679,623		679,623	4,345,357		4,345,357				5,024,980
Lower Crystal Springs Dam Improvement	1,092		1,092	1,140		1,140				2,232
New Crystal Springs Bypass Tunnel	170		170							170
New Irvington Tunnel	(209,051)		(209,051)	4,792,673		4,792,673				4,583,622
Alameda Siphon #4	19,471,358		19,471,358							19,471,358
Security Systems Upgrade	178,464		178,464	2,069,680		2,069,680	1,317		1,317	2,249,462
Harry Tracy Water Treatment Plant Long Term Improvements	33,505,436		33,505,436	18,158,415		18,158,415				51,663,850
Peninsula Pipeline Seismic Upgrade	6,794		6,794	321,836		321,836				328,630
Bay Division Pipeline Reliability Upgrade - Tunnel	81,724,603		81,724,603	1,282,153		1,282,153	560		560	83,007,316
Bay Division Pipeline Reliability Upgrade - Pipeline	42,027,030		42,027,030	259,886		259,886				42,286,916
Crystal Springs Pump Station and Crystal Springs - San Andreas Pipeline	381,634		381,634	51,297		51,297				432,931

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2016 Series C (Prior)	Water Revenue Bonds, 2016 Series C (FY2025)	Water Revenue Bonds, 2016 Series C (Total)	Water Revenue Bonds, 2017 Series A – WSIP (Prior)	Water Revenue Bonds, 2017 Series A – WSIP (FY2025)	Water Revenue Bonds, 2017 Series – WSIP (Total)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (Prior)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (FY2025)	Water Revenue Bonds, 2020 Sub-Series A – WSIP (Total)	Project Total
San Joaquin Pipeline System	10		10	163,320		163,320				163,330
Rehab Existing San Joaquin Pipelines	1,673		1,673	259		259	7,594		7,594	9,526
Calaveras Dam Replacement	22,263,983		22,263,983	73,965,437		73,965,437	128,314,499		128,314,499	224,543,920
San Antonio Backup Pipeline	6,534		6,534	83,650		83,650				90,184
Crystal Springs Pipeline #2 Replace (In City)				663		663				663
Bay Division Pipeline No. 3 and 4 Cross Connection	1,818		1,818	1,240		1,240				3,058
Sunol Valley Water Treatment Plant Expansion/Treated Water Reservoir	477		477	552		552	14,820		14,820	15,849
Tesla Treatment Facility	212		212	1,616		1,616				1,828
San Antonio Pump Station Upgrade							836		836	836
Habitat Reserve Program	7,094,712		7,094,712	2,349,645		2,349,645	520,593		520,593	9,964,950
Vegetation Restoration				21,163		21,163				21,163
SFPUC-EBMUD Intertie	173		173							173

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2016 Series C (Prior)	Water Revenue Bonds, 2016 Series C (FY2025)	Water Revenue Bonds, 2016 Series C (Total)	Water Revenue Bonds, 2017 Series A (WSIP) (Prior)	Water Revenue Bonds, 2017 Series A (WSIP) (FY2025)	Water Revenue Bonds, 2017 Series A (WSIP) (Total)	Water Revenue Bonds, 2020 Sub-Series A (WSIP) (Prior)	Water Revenue Bonds, 2020 Sub-Series A (WSIP) (FY2025)	Water Revenue Bonds, 2020 Sub-Series A (WSIP) (Total)	Project Total
Baden and San Pedro Valve Lot				2,674		2,674				2,674
Watershed Environmental Improvement Program	5,488,700		5,488,700	532,628		532,628	6,114,895		6,114,895	12,136,223
Bay Division Pipeline Upgrade	1,075,332		1,075,332	1,589,685		1,589,685	105,867		105,867	2,770,884
Peninsula Water System Improvements	2,683,569		2,683,569	2,098,561		2,098,561	890,392		890,392	5,672,522
San Joaquin Water System Improvement Project	286,542		286,542	490,141		490,141	906,823		906,823	1,683,506
Sunol Valley Water System Improvements	2,472,475		2,472,475	878,913		878,913	427,921		427,921	3,779,309
Total	246,930,084	1,163	246,931,246	128,763,475		128,763,475	180,076,521	(16,000)	180,060,521	555,755,242

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
Water System Improvement Program Financing Costs	6,186,666	495,370				
Lake Merced Water Level Restoration	76,065	5,683	176,600	99,921	1,026,516	2,665,621
San Francisco Groundwater Supply	5,861,124	150,924	14,081,939	10,664,500	15,880,740	5,872,657
Regional Groundwater Storage & Recovery	11,662,612	394,643	21,231,931	23,606,542	22,496,454	12,059,183
Westside Enhanced Water Recycling Project-	224,619	27,564	290,174	10,890		
Harding Park Recycled Water Project	397,958	48,825	514,145	43,613	404,250	296,667
Recycled Water Project - Eastside	403,721	47,845	529,103	42,183	263,900	142,457
Lake Merced Pump Station Upgrade	2,337,855	254,280	3,165,312	936,562	5,251,908	5,176,819
East/West Transmission Main	28,069		36,260	15	3,493,017	10,719,421
New Crystal Springs Bypass Tunnel	20,647		26,672	61,889	8,420,243	18,109,650
Bay Division Pipeline Reliability Upgrade - Tunnel	35,714,358		49,576,450	10,850,022	34,685,671	16,686,959
Forest Hill Pump Station Upgrade	1,112,242	135,593	1,440,834	20,775	775,357	448,881
Le Grande Pump Station Upgrade	45,522	5,586	58,808	9,594	195,698	213,414

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
Upper Alameda Creek Filter Gallery	1,142,093	37,483	1,938,123	1,355,066	2,324,110	1,415,067
Seismic Bay Division Pipeline @ Hayward Fault Phase 2	17,176,100	1,451,902	25,108,430	11,695,244	19,397,685	10,176,332
Lower Crystal Springs Dam Improvements	815,302	99,659	1,054,983	358,315	1,775,118	2,823,633
New Irvington Tunnel	57,937,418	6,441,819	77,819,684	9,577,496	47,362,965	30,876,319
Alameda Siphon #4	631,907	77,519	816,442	103,787	4,179,289	5,338,124
Structural Rehab (Roof) - Pulgas Phase 3	181,583	22,283	234,578	16,529	998,797	1,099,775
Existing Dechlor Mods - Pulgas Phase 5	89,584	10,993	115,729	15,029	313,711	392,756
Installation Of Scada System Phase II	249,506	30,618	322,324	1,732	1,043,273	1,142,835
Security Systems Upgrades	2,120,548	183,153	3,082,496	1,642,173	2,638,544	2,495,093
Harry Tracy Water Treatment Plant Long Term Improvements	20,044,784	681,830	33,809,324	36,759,511	37,294,780	26,360,345
Peninsula Pipeline Seismic Upgrade	8,758,742	228,439	15,082,622	11,070,354	15,774,408	4,783,588
Bay Division Pipeline Project Reliability Upgrade – Tunnel		3,610,135				
Bay Division Pipeline Reliability - Pipeline	7,502,792	834,831	10,074,720	1,779,839	14,801,518	12,928,879
Crystal Springs Ps & Crystal Springs - San Andreas PI	36,587,850	3,364,069	52,277,372	14,878,591	38,219,837	19,019,556

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
University Mound Reservoir - Upgrade (North Basin)	147,093	18,050	190,022	20,960	3,953,114	4,115,780
San Joaquin Pipeline System	1,618,466	99,222	2,533,233	2,355,904	7,101,705	14,350,826
Rehab Existing San Joaquin Pipelines	96,453	10,081	132,416	37,854	2,291,804	4,352,323
Calaveras Dam Replacement	48,044,405	851,556	84,520,102	81,915,938	96,444,131	73,957,272
San Antonio Backup Pipeline	14,976,671	1,391,486	21,334,584	5,780,212	15,120,942	7,071,947
Crystal Springs PI #2 Replace (In City)	6,524,771	788,021	8,485,386	670,891	5,318,675	5,266,935
San Andreas #3 Pipeline Installation	53,518	6,567	69,138	1,240	2,954,179	3,824,885
Sunol Valley Water Treatment Plant Expansion/Treated Water Reservoir	12,423,360	1,517,992	16,078,187	531,013	10,856,055	8,064,377
Tesla Treatment Facility	2,208,334	244,012	2,972,943	400,682	11,449,530	10,778,530
Habitat Reserve Program	17,745,619	1,865,984	24,311,999	5,814,189	15,195,440	8,190,626
Vegetation Restoration WSIP Sites	585,228	32,319	931,843	520,689	833,907	276,966
SFPUC/EBMUD Intertie	80,161	9,837	103,556		1,002,111	3,272,690
Baden And San Pedro Valve Lots Improvements	86,134	10,570	111,272	8,346	2,502,049	3,079,402

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
Watershed Environmental Improvement Program	687,129	73,839	934,326	364,181	591,545	508,748
Other Water System Improvement Program Projects	26,780	15,865				
Forest Knolls Pump Station Upgrade	7,470		9,650		724,652	1,307,925
McClaren Park Pump Station Upgrade	5,353		6,916	4,558	3,287,532	4,533,168
Sunset Res - Upgrade/Rehab North Basin	17,096		22,085	9	7,944,217	24,633,544
Lawrence Livermore Water Quality Improvements	10,107		13,057	536	473,674	697,090
Bay Division Pipeline No 3&4 Cross Connection	1,330,315	157,346	1,744,840	174,656	2,511,723	2,874,921
San Antonio Pump Station Upgrade	14,076		18,358	15,619	1,224,661	1,341,524
Vehicle Service & Facility Upgrade			6,172		465,307	841,028
Summit Res Rehab/Seismic Upgrade	11,590,033	1,010,822	2,794	5,287,199	1,423,099	4,832,417
Lincoln Way Transmission Line			3,012		1,679,050	5,821,858
Mount Davidson Pump Station Upgrade			435		495,710	752,630

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
Palo Alto Pump Station Upgrade			900	20	734,416	1,578,260
Sky View/Aqua Vista Pump St Upgrades			5,888		601,787	1,907,845
Forest Knolls Tank Rehab/Upgrade			5,919		397,253	626,858
Mount Davidson Tank Rehab/Upgrade			289		298,902	473,357
Stanford Heights Res Rehab/Upgrade			6,117		2,834,747	6,287,788
Standby Power Fac Various Locations			1,159			
Harry Tracy Water Treatment Plant Phase 3			1,911		2,105,362	2,369,679
Hs Ch County Expense Claim			1,241			
Sutro Res - Rehab/Seismic Upgrade			16,804,090		12,151,117	4,958,462
Bond/Commercial Paper Expense			9,166,636	3,386,148	8,482,115	5,634,540
North University Mound System Upgrade				20	1,149,570	1,527,884
Hunters Point Res Rehab/Seismic Upgrade				7,751	91,767	78,368
Vista Francisco Pump Station Upgrade				13	576,103	718,515
Bay Division Pipeline Upgrade				729,357		524,596

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
Peninsula Water System Improvements				473,950		692,525
San Joaquin Water System Improvements				114,655		161,747
Sunol Valley Water System Improvements				140,954		290,041
Hetch Hetchy Water Treatment Plan					132,430	470,019
Co2 Pipeline Replacement					80,552	284,905
Utility Water System Pumps					30,293	107,228
Revenue Bond Oversight Committee				2,608	7,838	6,736
Recycled Water Project					1,398,348	4,027,254
Fire Protection At City Distribution Division					215,695	765,855
Crocker Amazon Pump Station Upgrade					433,566	1,538,710
Key Motorized/Other Critical Valves					1,416,930	5,022,731
Sunset Circulation Improvements					625,220	2,189,673
Noe Valley Transmission Main Phase 2					644,696	766,307

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
La Grande Tank Rehab/Seismic Upgrade					794,317	2,816,617
Fulton & 6 th 30" Main Replacement					602,004	2,037,330
Forest Hill Tank Rehab/Seismic Upgrade					378,011	1,328,332
Lincoln Park Pump Station Upgrade					526,435	1,846,990
Summit Pump Station Upgrade					839,094	2,911,606
Mclaren #1 Tank Rehab/Seismic Upgrade					600,223	2,106,240
Potrero Heights Tank Rehab/Upgrade					76,985	265,228
Lincoln Park Tank Rehab/Seismic Upgrade					333,728	1,171,630
Mclaren #2 Tank Rehab/Seismic Upgrade					573,621	1,999,227
Potrero Heights Res Rehab/Upgrade					869,203	3,050,950
Potrero Heights Pump Station Upgrade					77,997	273,774
Bay Division Pipeline #1&2 Repair Of Caisson/Pipe Bridge					126,592	450,810

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
Seismic Upgrade Bay Division Pipeline @ Hayward Fault					3,022,233	10,327,128
Standby Power Facilities - Various Locations					1,508,329	2,578,789
Adit Leak Repairs (Cs/Calv Res)					362,763	1,260,611
Sunol Quarry Reservoirs					10,100	35,966
Inlet/Outlet Work - Pulgas Balancing Phase 1					226,197	790,458
Discharge Channel Mods - Pulgas Phase 2					353,804	618,708
Laguna Creek Sedimentation - Pulgas Phase 4					67,745	223,367
Water System Automation (Hetch Hetchy)					26,543	94,523
Cross Connection Controls					506,408	1,467,795
Harry Tracy Water Treatment Plant Short Term Improvements Phase A					376,102	1,304,016
Harry Tracy Water Treatment Plant Phase 2					178,396	521,744

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
Relocation Of Bay Division Pipeline 1 & 2					345,239	1,109,004
Capuchino Valve Lot Capacity Improvements					365,593	1,265,811
Pipeline Repair & Readiness Improvements					646,465	2,050,173
Calaveras Reservoir Upgrades					210,715	730,782
Mountain Tunnel Lining (Hetchy)					4,881	17,382
Early Intake Res /Adj Weir (Hetchy)					11,051	39,353
Sunol Valley Water Treatment Plant Calaveras Road Improvements					6,192	17,229
Sunol Valley Water Treatment Plant New Pipeline					14,173	43,508
Sunol Valley Water Treatment Plant Treated Water Reservoirs					656,133	2,278,598
Foothill Tunnel Repairs (Hetchy)					4,400	15,671
Tesla Portal Disinfection Station					141,619	479,219

FY2024-2025 Green Bond Report – Water Enterprise: Green Bond Proceeds, Refundings (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Water Revenue Bonds, 2017 Sub-Series D (Refunding) (Green Bonds) (Refunded by 2017D)	Water Revenue Bonds, 2017 Sub-Series G (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2017G)	Water Revenue Bonds, 2019 Sub-Series A (Refunding - Federally Taxable) (Green Bonds) (Refunded by 2019A)	Water Revenue Bonds, 2020 Sub-Series E (Refunding - Federally Taxable) (WSIP) (Green Bonds) (Refunded by 2020E)	Water Revenue Bonds, 2023 Sub-Series C (Refunding) (WSIP) (Green Bonds) (Refunded by 2023C)	Water Revenue Bonds, 2025 Sub-Series A (Refunding) (WSIP) (Green Bonds) (Refunded by 2025A)
Environmental Impact Project (Peir)					190,386	2,925,304
Program Management Services - WSIP					513,375	7,934,721
Bay Division Pipeline #4 Slip Lining - Pre-Stressed Concrete Cylinder Pipe					239,913	631,201
Total	335,588,239	26,744,615	503,395,531	244,360,324	525,058,273	488,021,121

FY2024-2025 Green Bond Report – Wastewater Enterprise: Green Bond Proceeds

Authority-level proceed expenditures by bond series as of June 30, 2025

Authority Description	Wastewater Revenue Bonds, 2016 Series A (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2016 Series A (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2016 Series A (Green Bonds) (Total)	Wastewater Revenue Bonds, 2018 Series A (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2018 Series A (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2018 Series A (Green Bonds) (Total)	Wastewater Revenue Bonds, 2021 Series A (SSIP) (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2021 Series A (SSIP) (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2021 Series A (SSIP) (Green Bonds) (Total)
Wastewater Collection System Improvement	29,320,085		29,320,085	37,584,362		37,584,362	54,930,443		54,930,443
Wastewater Central Bayside System Improvement	5,751,561		5,751,561	9,029,124		9,029,124	1,762,742		1,762,742
Wastewater Sewer System Improvement Program Biosolids-digester Pro	36,885,641		36,885,641	55,959,809		55,959,809	157,613,391		157,613,391
Wastewater Stormwater Management	29,988,744		29,988,744	7,283,077		7,283,077	21,173,316		21,173,316
Wastewater Flood Resilience-hydraulic			-	267,630		267,630	4,188,142		4,188,142
Wastewater Northshore To Channel Force Main	4,921,014		4,921,014	3,276,949		3,276,949	948,072		948,072

FY2024-2025 Green Bond Report – Wastewater Enterprise: Green Bond Proceeds (Continued)

Authority-level proceed expenditures by bond series as of June 30, 2025

Authority Description	Wastewater Revenue Bonds, 2016 Series A (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2016 Series A (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2016 Series A (Green Bonds) (Total)	Wastewater Revenue Bonds, 2018 Series A (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2018 Series A (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2018 Series A (Green Bonds) (Total)	Wastewater Revenue Bonds, 2021 Series A (SSIP) (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2021 Series A (SSIP) (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2021 Series A (SSIP) (Green Bonds) (Total)
Wastewater Sewer System Improvement Program Program-wide Management	52,046,290		52,046,290	43,382,242		43,382,242	13,368,164		13,368,164
Wastewater Treatment Plant Improvement	87,917,089		87,917,089	83,182,373		83,182,373	42,034,196		42,034,196
Wastewater Urban Watershed Assessment	11,883,509		11,883,509	1,052,289		1,052,289	144,027		144,027
Total	258,713,933		258,713,933	241,017,855		241,017,855	296,162,493		296,162,493

FY2024-2025 Green Bond Report – Wastewater Enterprise: Green Bond Proceeds (Continued)

Authority-level proceed expenditures by bond series as of June 30, 2025

Authority Description	Wastewater Revenue Bonds, 2023 Series A (SSIP) (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2023 Series A (SSIP) (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2023 Series A (SSIP) (Green Bonds) (Total)	Wastewater Revenue Bonds, 2024 Series A (SSIP) (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2024 Series A (SSIP) (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2024 Series A (SSIP) (Green Bonds) (Total)	Wastewater Revenue Bonds, 2024 Series C (SSIP) (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2024 Series C (SSIP) (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2024 Series C (SSIP) (Green Bonds) (Total)	Project Total
Wastewater Collection System Improvement	64,526,739		64,526,739					84,104,112	84,104,112	270,465,741
Wastewater Central Bayside System Improvement	225,102		225,102					7,664	7,664	16,776,193
Wastewater Sewer System Improvement Program Biosolids-Digester Project	281,436,082		281,436,082		271,013,111	271,013,111		150,427,336	150,427,336	953,335,370
Wastewater Stormwater Management	34,826,681		34,826,681					(8,094,188)	(8,094,188)	85,177,630
Wastewater Flood Resilience-hydraulic	8,626,364		8,626,364					28,410,844	28,410,844	41,492,980
Wastewater Northshore To Channel Force Main										9,146,035

FY2024-2025 Green Bond Report – Wastewater Enterprise: Green Bond Proceeds (Continued)

Authority-level proceed expenditures by bond series as of June 30, 2025

Authority Description	Wastewater Revenue Bonds, 2023 Series A (SSIP) (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2023 Series A (SSIP) (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2023 Series A (SSIP) (Green Bonds) (Total)	Wastewater Revenue Bonds, 2024 Series A (SSIP) (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2024 Series A (SSIP) (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2024 Series A (SSIP) (Green Bonds) (Total)	Wastewater Revenue Bonds, 2024 Series C (SSIP) (Green Bonds) (Prior)	Wastewater Revenue Bonds, 2024 Series C (SSIP) (Green Bonds) (FY2025)	Wastewater Revenue Bonds, 2024 Series C (SSIP) (Green Bonds) (Total)	Project Total
Wastewater Sewer System Improvement Program Program-wide Management	26,834,450		26,834,450					24,254,885	24,254,885	159,886,031
Wastewater Treatment Plant Improvement	149,065,422		149,065,422					44,413,980	44,413,980	406,613,060
Wastewater Urban Watershed Assessment	114,973		114,973					(262,188)	(262,188)	12,932,610
Total	565,655,813		565,655,813		271,013,111	271,013,111		323,262,445	323,262,445	1,955,825,650

FY2024-2025 Green Bond Report – Wastewater Enterprise: Green Bond Proceeds, Refundings

Authority-level proceed expenditures by bond series as of June 30, 2025

Authority Description	Wastewater Revenue Bonds, 2023 Series C (Refunding) (SSIP) (Refunded by 2023C)
Wastewater Collection System Improvement	\$28,560,056
Wastewater Central Bayside System Improvement	838,453
Wastewater Sewer System Improvement Program Biosolids-digester Pro	79,103,494
Wastewater Stormwater Management	3,565,452
Wastewater Flood Resilience-hydraulic	-
Wastewater Northshore to Channel Force Main	973,503
Wastewater Sewer System Improvement Program Program-wide Management	4,042,310
Wastewater Treatment Plant Improvement	48,077,067
Wastewater Urban Watershed Assessment	5,559,665
Total	170,720,000

FY2024-2025 Green Bond Report – Power Enterprise: Green Bond Proceeds

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Power Revenue Bonds, 2015 Series A (Prior)	Power Revenue Bonds, 2015 Series A (FY2025)	Power Revenue Bonds, 2015 Series A (Total)	Power Revenue Bonds, 2021 Series A (Prior)	Power Revenue Bonds, 2021 Series A (FY2025)	Power Revenue Bonds, 2021 Series A (Total)	Project Total
Other Powerhouse Projects	12,928,747		12,928,747	4,112,006		4,112,006	17,040,753
Oil Containment Project	812,147		812,147				812,147
Kirkwood Penstock	2,559,768		2,559,768				2,559,768
Moccasin Powerhouse & Generator Step-Up Rehabilitation	997,241		997,241				997,241
Moccasin Penstock Rehabilitation	2,241,444		2,241,444	5,461,024		5,461,024	7,702,468
Mountain Tunnel Hydroelectric Conveyance	10,660,653		10,660,653				10,660,653
Warnerville Substation Rehabilitation				15,404,702		15,404,702	15,404,702
O'Shaughnessy Dam Outlet Works				706,236		706,236	706,236
Moccasin Facilities New Construction				7,419,679		7,419,679	7,419,679

FY2024-2025 Green Bond Report – Power Enterprise: Green Bond Proceeds (Continued)

Project-level proceed expenditures by bond series as of June 30, 2025

Project	Power Revenue Bonds, 2015 Series A (Prior)	Power Revenue Bonds, 2015 Series A (FY2025)	Power Revenue Bonds, 2015 Series A (Total)	Power Revenue Bonds, 2021 Series A (Prior)	Power Revenue Bonds, 2021 Series A (FY2025)	Power Revenue Bonds, 2021 Series A (Total)	Project Total
Cherry Dam Outlet Works Rehabilitation				1,436,222		1,436,222	1,436,222
Bay Corridor Project				43,406,285		43,406,285	43,406,285
O'Shaughnessy Dam Access & Drainage				527,205		527,205	527,205
O'Shaughnessy Dam Outlet Works Phase 1				541,121		541,121	541,121
2018 Moccasin Storm - Power Project				1,121,806		1,121,806	1,121,806
SFO Airport Substation				578,597		578,597	578,597
Renewal and Replacement Powerhouses				697,285		697,285	697,285
Renewal and Replacement Priest Reservoir Landslide				268,179		268,179	268,179
Total	30,200,000		30,200,000	81,680,347		81,680,347	111,880,347

APPENDIX

Appendix

1. San Francisco Climate Action Plan

Learn more at sfenvironment.org/climateplan

Energy Supply	Offer clean energy • Now: Continue to offer 100% clean electricity Expand clean energy • By 2030: Ensure everyone uses 100% clean electricity Make all energy clean • By 2040: Transition all energy uses citywide to 100% clean
Building Operations	Switch from gas to electricity in buildings • By 2030: Reduce emissions 20% (from 2020) by decarbonizing ~ 18,000 buildings • By 2040: All buildings are zero-emission
Transportation	Reduce vehicle miles traveled • By 2030: Reduce from 2019 levels by 25% • By 2040: Reduce by 30% Advance zero-emission vehicles • By 2030: 25% of cars and small trucks in SF are zero-emission • By 2035: 25% of heavier duty vehicles • By 2040: 100% of cars and small trucks are zero-emission
Housing and Land Use	Plan for new housing and surrounding neighborhoods • By 2030: Plan for 82,000 new housing units, including at least 36,000 in well-resourced neighborhoods, prioritizing affordability and transit-oriented development
Circular Economy	Reduce waste generation and disposal • By 2030: Reduce solid waste generation (from 2015) by 15% and reduce disposal to landfill by 50% Reduce embodied carbon • By 2035: Reduce emissions from building materials (from 2026) by 40%
Healthy Ecosystems	Make land absorbent and biodiverse • By 2030: 30-40% of SF land is permeable and 30% of this is biodiverse Provide equitable access to nature • By 2040: Every San Franciscan lives a 10-minute walk from nature Plan more trees • By 2040: Plant 30,000 more trees for 155,000 total street trees
Water Supply	Maximize water use efficiency • Now: Keep indoor/outdoor residential water use under 42 gallons/capita/day Enhance water supply resilience • By 2045: Increase local water sources with 2.5 million gallons per day (mgd) of recycled water and 4mgd of groundwater, and maintain the Hetch Hetchy system

2. San Francisco Climate Action Plan – Energy Goals and Accomplishments

Learn more at sfenvironment.org/climateplan

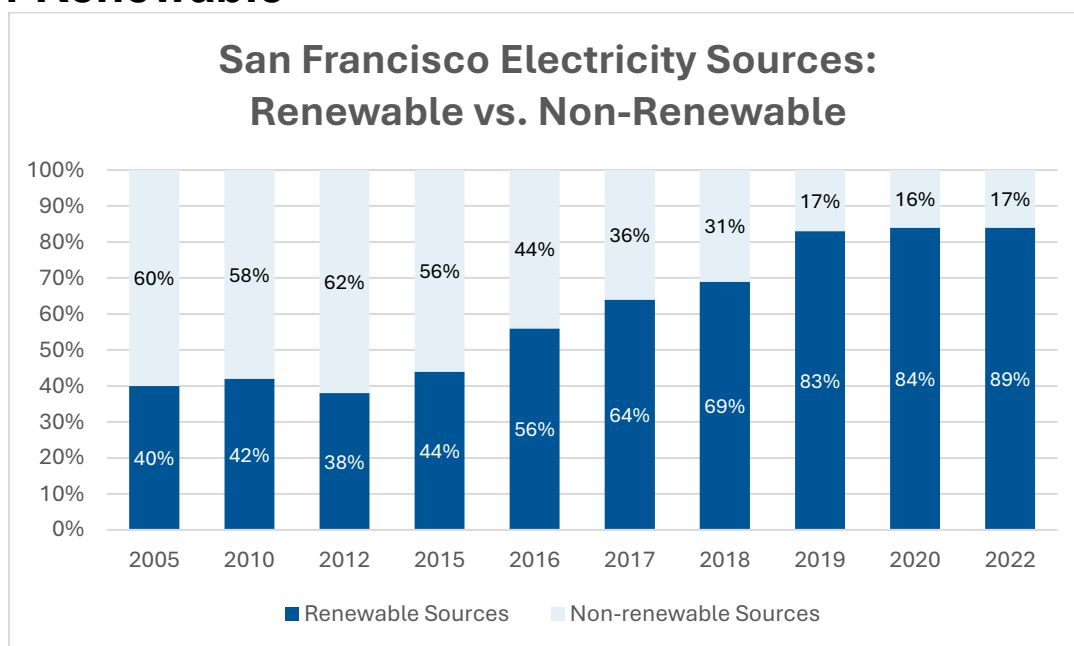
Goals:

- Continue to offer 100% renewable and/or GHG-free electricity to all.
- Ensure all residents and businesses use 100% renewable and GHG-free electricity by 2030.
- Transition all energy uses citywide to 100% renewable and/or GHG-free sources by 2040.

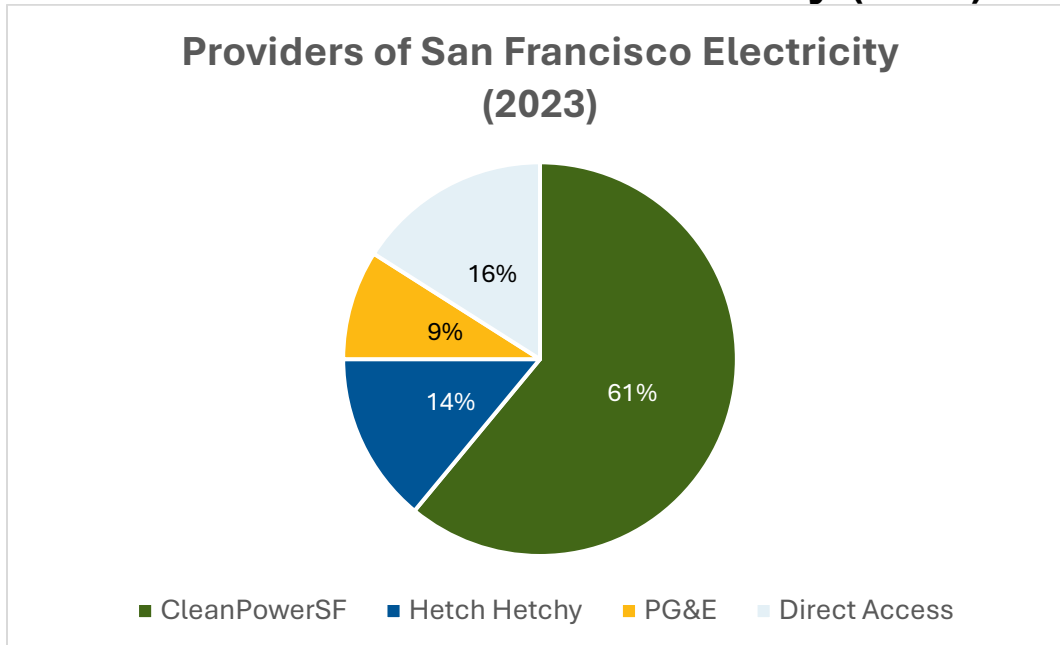
Accomplishments:

- As of 2023, the SFPUC serviced 380,000+ CleanPowerSF customers with 100% renewable electricity.
- In 2025, San Francisco installed its 30th publicly owned-and-operated solar array providing a total of 8.4 megawatts of power.
- In 2024, the SFPUC signed a 150-megawatt contract for new wind energy, CleanPowerSF's largest yet.

3. San Francisco Electricity Sources: Renewable vs. Non-Renewable



4. Providers of San Francisco Electricity (2023)



5. San Francisco Climate Action Plan – Water Goals and Accomplishments

Learn more at sfenvironment.org/climateplan

Goals:

- Maximize water use efficiency to keep combined indoor and outdoor residential water use under the State's 2030 standard for indoor residential water use of 42 gallons per capita per day.
- Enhance the resilience of San Francisco's water supply by 2045 by increasing local water sources to include 2.5 million gallons per day (mgd) of recycled water, 4mgd of groundwater, and by exploring additional new water supplies, while maintaining the Hetch Hetchy gravity-driven water delivery system.

Accomplishments:

- In 2024, San Francisco maintained average indoor and outdoor residential per-capita water use at about 40 gallons/capita/day - about half the statewide average.
- San Francisco saved 10.3 million gallons of potable water in 2024 by using recycled water for irrigation of parks and golf courses.
- In 2024, the SFPUC published the Alternative Water Supply Plan highlighting additional opportunities for the future of water supply in San Francisco, including purified water, which is drinking water that comes from highly treated recycled water.
- The SFPC awarded funding in 2024 for the City's first project to integrate a wastewater heat recovery system with an onsite water reuse system, capturing heat from a building's treated black water for use in its water heating system.

6. United Nations Sustainable Development Goals

The SFPUC recognizes the Sustainable Development Goals (SDGs) as a vital framework for delivering environmental benefits and social equity. As a provider of essential water, power, and sewer services, SFPUC leverages many of these goals to guide its strategic investments and community initiatives.

4 QUALITY EDUCATION 	Preparing the next generation of environmental stewards through community resources and education programs that empower residents to protect natural resources.
5 GENDER EQUALITY 	Increasing female representation in construction trades through partnerships like the National Association of Women in Construction and all-female pre-apprenticeship classes.
6 CLEAN WATER AND SANITATION 	Investing in infrastructure to upgrade regional water system and aging sewer infrastructure, ensuring reliable and safe services for generations.
7 AFFORDABLE AND CLEAN ENERGY 	Providing 100% greenhouse gas-free hydropower via Hetch Hetchy Power and expanding renewable options for customers through CleanPowerSF.
8 DECENT WORK AND ECONOMIC GROWTH 	Fostering a skilled local workforce and requiring community benefit commitments for contracts over \$5 million to support local schools and nonprofits.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	Modernizing infrastructure through investment in capital projects across seven counties to enhance seismic reliability and environmental sustainability.
10 REDUCED INEQUALITIES 	Advancing an Environmental Justice Policy and providing grants to neighborhoods most impacted by operations to support public health and education.

11 SUSTAINABLE CITIES AND COMMUNITIES 	Powering San Francisco's essential services including schools, MUNI, and streetlights with 100% clean energy to build a more resilient city.
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	Protecting over 590,000 acres of land to maintain critical infrastructure and ensure the sustainable management of watershed resources.
13 CLIMATE ACTION 	Reducing the carbon footprint of SFPUC operations and the wider community through large-scale investments in sustainable water, power, and sewer systems.
14 LIFE BELOW WATER 	Ensuring the health of regional water systems and local waterways through environmentally sustainable improvement and wastewater management.
15 LIFE ON LAND 	Stewarding vast natural landscapes and leveraging land use to enhance biodiversity and the quality of life for service area residents.



San Francisco Public Utilities Commission
An Enterprise Department of the City and
County of San Francisco, California

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.