

OneWaterSF

Promoting Resiliency
through Collaboration



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

April 2025

Don Pedro Reservoir

PROMOTING **RESILIENCY** through **Collaboration**

At the San Francisco Public Utilities Commission, we believe that in an increasingly complex world, our ability to adapt and thrive depends on our capacity to work together. This belief is reflected in the theme of this year's OneWaterSF brochure: ***Promoting Resiliency through Collaboration***. This year's brochure highlights projects and programs where partnerships have been an essential element in implementing innovative solutions that balance community and ecosystem to create a more resilient future.

OneWaterSF empowers us to think holistically and develop strategic partnerships to optimize resource efficiency and implement new technologies. Since the adoption of the OneWaterSF vision and guiding principles almost 10 years ago and throughout its evolution over the years, we have seen the positive impact of this approach on our projects and programs. A prime example is our expanded commercial water savings equipment rebate program. This initiative reduces water consumption and provides cost savings to businesses, benefiting both the environment and the local economy.

A cornerstone of the OneWaterSF framework is collaboration and the cultivation of various partnerships, sometimes nontraditional, and recognizing them as essential for exchanging innovative ideas and driving resource stewardship. Our work on the Alameda Watershed, aimed at restoring steelhead populations while balancing water supply needs, exemplifies this collaborative approach. The partnership between public agencies and non-profits produced innovative solutions with multiple benefits, ultimately creating a more resilient future for both the environment and the communities we serve, fulfilling the mission of the SFPUC.

Through the OneWaterSF framework, we have broadened our understanding of resources beyond water and energy to encompass financial resources, data, human capital and community partnerships. A compelling example is the SFPUC's commitment to wind development through a new power purchase agreement. This initiative will not only expand CleanPowerSF's clean energy portfolio and enhance grid resilience but also create new green jobs. By adopting this expanded view, OneWaterSF enables us to transform our work, delivering tangible benefits to our customers and the environment, including cost savings for our ratepayers.

Promoting resiliency through collaboration necessitates engaging within the SFPUC, actively partnering with external stakeholders and collaborating closely with our customers at every stage. It means listening, learning, and adapting to meet the evolving needs of the communities we serve and managing resources in more sustainable ways to meet the needs of generations to come. I invite you to explore the projects featured in this year's OneWaterSF brochure and to join us in this vital work.



A handwritten signature in black ink, appearing to read "D. J. Herrera".

DENNIS J. HERRERA

Vision and Guiding Principles of **OneWaterSF**



OneWaterSF provides a framework for how we approach our work at the SFPUC. It encourages us to collaborate and think holistically, maximizing the efficient use of our resources—not just water and energy resources, but also financial resources, human resources, and community partnerships. This integrated view fosters innovation and collaboration, enabling us to deliver projects and implement programs that provide environmental, economic, and social benefits.

Through OneWaterSF, we recognize that connected activities and ideas yield more powerful outcomes than isolated efforts. Collaboration is essential for building resilience. Engaging with partners results in taking a more holistic view of our work and allows us to create more opportunities for innovation and to identify more ways in which we can adapt to future changes.

The OneWaterSF Vision and Guiding Principles serve as a foundation for developing and implementing projects that advance this philosophy.

OneWaterSF Vision

With the OneWaterSF approach, the SFPUC will optimize our resources to create a more resilient future that balances community and ecosystem needs.

OneWaterSF Guiding Principles

- 1 Practice a culture of collaboration.** Work across traditional boundaries to foster collaboration that results in the efficient use of our resources.
- 2 Connect with a community of partners.** Elevate and sustain partnerships with our communities to engage and exchange ideas that result in better stewardship of our resources.
- 3 Pursue multiple benefits.** Identify approaches and solutions across our enterprises and operations that provide benefit to multiple resource areas.
- 4 Expand the culture of innovation.** Encourage new ideas and partnerships that test creative business practices, pilot state-of-the-art technologies, and discover inventive solutions.
- 5 Match the right resource to the right use.** Reimagine what resources are available to serve our customers in the most sustainable and reliable way.
- 6 Plan for future uncertainties.** Build flexibility into our work so that the SFPUC can be resilient to a wide variety of situations, responsive to challenges, and adapt to future conditions.
- 7 Advance healthy communities.** Ensure affordable and reliable services in the communities we serve and promote the equitable distribution of both benefits and impacts of our operations, programs and policies.
- 8 Support balanced ecosystems.** Consider ways in which our work can better conserve resources and support ecosystems, including air quality and the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean.

Achieving Our Vision

CleanPowerSF's Largest Wind Energy Development

SFPUC's CleanPowerSF is leading the charge in advancing clean and renewable energy solutions, powering San Francisco's residents and businesses through innovative and collaborative partnerships. Working with partners in California and throughout the United States, CleanPowerSF is building a robust and sustainable energy portfolio to address California's transition away from fossil fuels. This shift to renewable sources, such as wind and solar power, is not just about reducing climate change impacts—it's about fostering resilience in the face of increasingly variable environmental challenges from climate change. Demonstrating its commitment to these principles, SFPUC achieved a major milestone with its largest-ever single-source power purchase agreement with Scout Clean Energy for electricity produced by Gonzaga Ridge, a new wind project in Merced County, nearly doubling the amount of clean wind energy for CleanPowerSF customers.

The Voyager wind project in Kern County, CA powering CleanPowerSF customers. Source: Terra-Gen, LLC



Gonzaga Ridge will provide 147.5 megawatts of clean wind energy, enough electricity to power approximately 120,000 average San Francisco homes, as well as 50 megawatts of reliable energy storage. The 50-megawatt 4-hour battery energy storage system will store energy produced during the day for use in the evening, when power from the grid is more costly and reliant on natural gas. The Gonzaga Ridge project is expected to offset approximately 593,000 tons of carbon dioxide and create 200 jobs during the project's development and construction. In addition, all 378 tons of turbine blades from the decommissioned site will avoid landfills and be recycled in a process that will produce 360,000 pounds of concrete additives. The project will be developed by Scout Clean Energy, a Colorado-based company that has developed several other wind and solar projects throughout the Western and Midwest United States, and is expected to come online in May 2026.

With the addition of Gonzaga Ridge, CleanPowerSF has now secured contracts to purchase energy from more than 600 megawatts of new solar, wind, and geothermal projects. This would be enough to power more than 500,000 average San Francisco homes. Additionally, CleanPowerSF energy storage contracts now total over 300 megawatts. CleanPowerSF's energy portfolio is more than 95% clean and renewable. CleanPowerSF has helped San Francisco reduce greenhouse gas emissions from electricity use by 98% from 1990 levels. The Gonzaga Ridge project is a monumental step in SFPUC's commitment to clean energy and reducing its carbon footprint, paving the way for a more resilient and adaptable system.

The Gonzaga Ridge wind project demonstrates how CleanPowerSF continues to ***expand a culture of innovation*** by investing in advanced renewable energy and storage technologies that strengthen grid reliability and resilience. This project also ***pursues multiple benefits***—from significantly reducing greenhouse gas emissions and supporting California's clean energy transition to creating jobs, recycling turbine materials, and delivering cost-effective, clean power to thousands of San Francisco homes.

San Francisco skyline



Achieving Our Vision

Wawona Area Stormwater Improvement Project

The increased variability and intensity of weather events as a result of climate change pose a significant threat to San Francisco. The City's resilience was strengthened through the completion of the Wawona Area Stormwater Improvement Project and Vicente Street Water Main Replacement Project in February 2024. The project is a crucial step in San Francisco's concerted efforts to minimize storm-related flood risk for local residents and businesses in low-lying areas. The project made major upgrades to San Francisco's combined sewer system across 25 city blocks in the West Portal and Parkside neighborhoods to help address naturally occurring flooding in low-lying areas. Through strategic planning, the City also maximized community benefit and minimized community disruption by using stormwater construction as an opportunity to simultaneously upgrade 22 blocks of aging drinking water pipelines and six blocks of the Emergency Firefighting Water System. The Wawona project also far exceeded San Francisco's local hire requirements, ensuring that the people who live and work in the City continue to participate in the major upgrades taking place in their communities. The project employed 108 San Francisco residents, who contributed roughly 89% of the total hours on the Project.

Stormwater improvements on Vicente Street between 19th & 20th Avenues. Source: SFPUC





Stormwater improvements on Vicente Street between 19th & 20th Avenues. Source: SFPUC

The Wawona Area Stormwater Improvement Project demonstrates how SFPUC can ***pursue multiple benefits*** by upgrading critical infrastructure while also enhancing flood protection, water delivery, and emergency response systems. By investing in resilient design and local workforce participation, the project helps ***advance healthy communities*** and ***plan for future uncertainties***—safeguarding neighborhoods from increasingly intense storms while improving long-term public health and safety.

Since the stormwater improvement components of the project were put into service in late 2022, the covered areas have not experienced flooding, including during the historic storms in January 2023. The project was completed in late 2023 and marked with a community celebration in February 2024. The Wawona area project is the first of three planned neighborhood flood resilience infrastructure projects to be completed in San Francisco as part of a \$634 million investment in capital projects to help reduce the risk of flooding.

The Wawona Area Stormwater Improvement Project is an exemplary demonstration of the SFPUC's commitment to San Franciscans, as the project greatly improved the resilience of the neighborhood to the increasing likelihood of more intense storms while minimizing disruptions and including residents in the construction of the project. The Wawona project shows the immense value of collaborative efforts, especially in creating resilient solutions to the impacts of climate change.

Achieving Our Vision

Steelhead Trout Population Rebound in Alameda Creek

Collaboration plays a key role in creating healthier and more resilient watersheds. This is evident by the rebound in the steelhead trout populations resulting from the SFPUC's participation in the Alameda Creek Fisheries Restoration Workgroup. For the last 25 years, the Alameda Creek Fisheries Restoration Workgroup, a coalition of public agencies and non-profit organizations that also includes the Alameda County Water District (ACWD), has worked to eliminate fish migration barriers, providing access to and from San Francisco Bay and the Pacific Ocean and restoring watershed habitat. Steelhead trout are a bellwether species in the Alameda Creek that were once abundant. Over a century of development created barriers, like dams and flood control infrastructure, to fish migration that greatly reduced those numbers.

Fisheries restoration work on Alameda Creek. Source: SFPUC



Years of investment by the SFPUC, ACWD, and others eliminated these migration barriers and opened a pathway to the watershed. The SFPUC removed the Niles and Sunol dams in 2006 and completed a fish ladder over its Alameda Creek Diversion Dam in 2018. The SFPUC also began water releases out of the upgraded Calaveras Dam in 2019 to improve fish spawning and rearing habitat, including mimicking natural flows of the creek. The major barriers to fish passage in lower Alameda Creek were removed in 2023 when ACWD began operating its largest fish ladder. The final barrier for upstream fish migration on Alameda Creek, a cement structure over a PG&E gas pipeline in the Sunol Valley, will be removed in 2025.

SFPUC biologists documented a record number of juvenile steelhead trout in Alameda Creek this year. Between 2015 and 2023, biologists captured and released 295 juvenile steelhead trout during their yearly fish trapping surveys, an average of about 37 a year. This year alone, 2,588 juveniles were captured and released. SFPUC biologists placed tiny transponders in 755 of the fish caught this year before sending them on their way down the creek. The rice-sized transponders can be read at multiple locations along Alameda Creek, including the ACWD's fish ladder downstream. Fifty of those fish were detected migrating down Alameda Creek towards San Francisco Bay and the Pacific Ocean for the first time. SFPUC and ACWD staff will continue to monitor and share data in real time to track the movement of fish up and down the watershed. The collaboration in the Alameda Creek Fisheries Restoration Workgroup has proven key to restoring the natural migrations of steelhead trout and sparking an uptick in the population. The restoration of a natural steelhead run will enhance the overall health of the creek and surrounding watershed, which in turn will help provide high quality water for millions of Bay Area residents.

The Alameda Creek Fisheries Restoration Project exemplifies how SFPUC ***embraces a culture of collaboration*** by bringing together public agencies, non-profits, and community partners to restore a critical watershed. By removing migration barriers and restoring natural flows, the project directly ***supports balanced ecosystems***, and contributes to a healthier, more resilient creek and watershed.



Alameda Creek. Source: SFPUC

Achieving Our Vision

Tuolumne River Habitat Restoration

The SFPUC is committed to collaborating with partners across the watershed to foster resilient ecosystems. The recently completed Tuolumne River Mainstem Channel Restoration Project upstream of Old La Grange Bridge Project exemplifies this commitment. The SFPUC worked alongside Modesto Irrigation District (MID) and Turlock Irrigation District (TID), with guidance from several Tribal, Federal, and State partners, to create a thriving habitat for native fish species.

Spawning habitats were created by cleaning, washing, and returning gravel originally removed from the river during the Gold Rush, to the lower Tuolumne River in the form of riffles and gravel bars. In addition to the creation of a spawning habitat, large wood features and boulder clusters were added to increase in-channel habitat complexity and diversity. SFPUC, MID, and TID provided more than 7.5 acres of mainstem restoration, more than 2.5 acres of floodplain habitat, and more than 50,000 cubic yards of spawning gravel. These actions are expected to result in a five-fold increase of trout and salmon habitat upstream of Old La Grange Bridge in Stanislaus County. Project design and implementation was led by McBain and Associates Applied River Sciences in collaboration with experts from the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife and the Tuolumne Band of Me-Wuk and Northern Valley Yokuts Tribes, who all provided valuable input. The project is already showing positive impacts as fish have already been seen spawning in the new gravel.

Tuolumne Meadows



The SFPUC, MID, and TID have made a historic, self-funded commitment of \$80 million to design and implement a collaborative, holistic habitat restoration program along the lower Tuolumne River as part of the Healthy Rivers and Landscapes Program. With the help of experts, River Partners and Applied River Sciences, the partnership aims to develop 77 acres of suitable salmon rearing and floodplain habitat and add approximately 100,000 tons of gravel in specific reaches of the river for optimal spawning and rearing. This commitment to sustained stewardship of the Tuolumne River puts OneWater SF's guiding principles into action, ensuring future generations have access to thriving, resilient ecosystems.

The Tuolumne River Mainstem Channel Restoration Project is anticipated to result in a five-fold increase of trout and salmon and increase habitat complexity diversity, a project that exemplifies SFPUC's objective to **support balanced ecosystems**. This project was made possible through the **collaboration** and dedication of a **community of partners**.

La Grange Bridge, Tuolumne River. Source: SFPUC



Achieving Our Vision

Commercial Equipment Rebate Program

SFPUC knows that working with all customer sectors to utilize more efficient practices is critical to the goal of promoting resiliency throughout its service area. The commercial sector is a major component to building resilient practices, comprising roughly 33% of the City's daily water use. The SFPUC is working to make it easier for local businesses to install water-saving equipment through the expansion of the commercial equipment rebate program.

The Commercial Equipment Retrofit Rebate Program provides funding for businesses to replace inefficient water using equipment with efficient upgrades. This program was updated in FY 2023-2024 to increase the rebate amounts, and lowered the minimum annual water

savings qualification requirement from 149,600 gallons to 74,800 gallons. Now, businesses can receive rebates for medical equipment, restaurant equipment, commercial laundry retrofits, and custom site-specific equipment retrofits or custom projects.

Additionally, to support access to public laundry facilities for San Francisco neighborhoods that rely on them, the SFPUC worked with the Board of Supervisors on a city initiative to support local laundromats and increased its commercial washer rebate to up to \$5,000 per washer for customers installing qualifying high-efficiency, commercial style clothes washers in laundromats, large multi family common area laundry rooms, and other commercial facilities. In FY 2023-2024, 219 residential washer and 53 commercial washer rebates were processed.



In the spirit of ***expanding the culture of innovation*** through adaptive business practices, the SFPUC has updated its Commercial Equipment Rebate Program to extend the reach of the benefits and increase the rebates for public neighborhood laundry facilities, ***advancing healthy communities*** through equitable distribution of program benefits.



Coit Tower, San Francisco

Looking Ahead

As we look ahead, the OneWaterSF vision will continue to guide SFPUC's commitment to a resilient, reliable, and equitable water and energy future. By fostering collaboration across sectors, embracing innovation, and investing in resilience, we are preparing for the challenges and opportunities of tomorrow and reimagining how we deliver essential services in transformative and sustainable ways. With this integrated approach, we tap into the power of collaborative thinking to deliver practical and resilient solutions that help strengthen ecosystems and communities for generations to come.



Services of the San Francisco Public Utilities Commission



OneWaterSF

Promoting Resiliency
through Collaboration



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

April 2025