



LIVING OUR PURPOSE

OUR PURPOSE IS TO ENHANCE  
THE QUALITY OF LIFE FOR  
OUR CUSTOMERS, COMMUNITIES,  
EMPLOYEES, AND STOCKHOLDERS  
BY BEING THE LEADING  
PROVIDER OF WATER AND  
WASTEWATER SERVICES.

## TABLE OF CONTENTS

<b>CUSTOMERS</b>	<b>2</b>
WATER QUALITY CUSTOMER SERVICE AFFORDABILITY	
<b>COMMUNITIES</b>	<b>7</b>
COMMUNITY SUPPORT ORVILLE SPILLWAY EMERGENCY WATER SUPPLY RELIABILITY DEVELOPING TOMORROW'S LEADERS SUPPLIER DIVERSITY STRATEGIC SOURCING EMERGENCY RESPONSE COORDINATION LOCAL ECONOMIC IMPACT	
<b>EMPLOYEES</b>	<b>13</b>
EMPLOYER OF CHOICE SAFETY SECURITY DIVERSITY AND INCLUSION PROFESSIONAL DEVELOPMENT CODE OF CONDUCT CRITICAL INCIDENT RESPONSE MANAGEMENT NEW EMPLOYEE CULTURE DAY	
<b>STOCKHOLDERS</b>	<b>16</b>
COST RECOVERY COST OF CAPITAL CORPORATE GOVERNANCE CYBER SECURITY	
<b>ENVIRONMENT</b>	<b>18</b>
ENVIRONMENTAL STANDARDS GROUNDWATER BASIN MANAGEMENT RECYCLED WATER WILDLIFE PROTECTION ENERGY EFFICIENCY LONG-TERM CONSERVATION STANDARDS CONSERVATION PROGRAMS WATER LOSS WASTEWATER AND WASTEWATER REUSE CLIMATE CHANGE GREEN FACILITIES AND FLEET	



## WELCOME

One of the imperatives to being a leader in the water utility industry is anticipating and preparing for change, whether that means new water quality standards, supply challenges, or environmental regulations. But in the face of change, one thing remains constant: our commitment to fulfilling our promise of enhancing the quality of life for our customers, communities, employees, and stockholders.

It's evident in the way we've done business not just in recent years, but since our founding in 1926. In every goal, strategic priority, and business objective, we focus on being a good corporate citizen and responsible steward of our resources. And, whether we are expanding our infrastructure improvement program to keep our water and wastewater systems reliable, or conducting hundreds of thousands of tests to ensure our customers are getting safe, high-quality water and that we meet environmental standards, or even contributing time and resources to local charities to help those in need, our focus hasn't wavered.

Our 2017-2018 Corporate Citizenship Report illustrates our efforts to truly live our purpose over the past two years in our California, Hawaii, New Mexico, and Washington subsidiaries. But we won't stop there. We will build on these efforts every year as we fulfill our promise to always provide quality, service, and value.

A handwritten signature in black ink that reads "Martin A. Kropelnicki". The signature is written in a cursive, flowing style.

**Martin A. Kropelnicki**

*President and CEO, California Water Service Group*

▶ Cal Water conducted **422,344** tests on **62,009** water samples for **292** constituents in 2017, and met every primary and secondary water quality standard in every system, every day.



## CUSTOMERS

### WATER QUALITY

Protecting our customers' health and safety is our highest priority, and we do this through a comprehensive water quality assurance program. In addition to the routine treatment, testing, and monitoring conducted throughout our water systems on a daily basis, in 2017 and 2018, we implemented several additional initiatives and programs in order to provide safe, high-quality water to our customers.

In the summer of 2017, the State of California enacted its first maximum contaminant level (MCL) for 1,2,3-trichloropropane (TCP). TCP is a manmade organic chemical that was mostly used in soil fumigants until the 1980s; it seeped into the groundwater supplies in six California Water Service (Cal Water) districts. Although the timeline to comply with the new regulation of five parts per trillion (ppt) was short, our research and planning ahead of the MCL enabled us to meet the standard by the compliance monitoring deadline of January 2018. In Stockton, treatment facilities were already in place where TCP had been detected. In our Bayshore District's South San Francisco system, treatment was installed at one location, while in Chico, affected well sites were taken offline. However, in our Central Valley districts of Bakersfield, Selma, and Visalia, 38 sites were affected. Crews installed granular-activated carbon (GAC) treatment at 21 of those well sites by the end of 2017 to meet the standard, and at the remaining 17 sites by summer 2018 to enable the districts to bring those additional sources of water back

online as demand increased. To prevent our customers from bearing the costs of installing these treatment units, we were a plaintiff in litigation against Dow and Shell, the manufacturers of the TCP-containing soil fumigants, and in 2018, we successfully reached a settlement with the two companies.

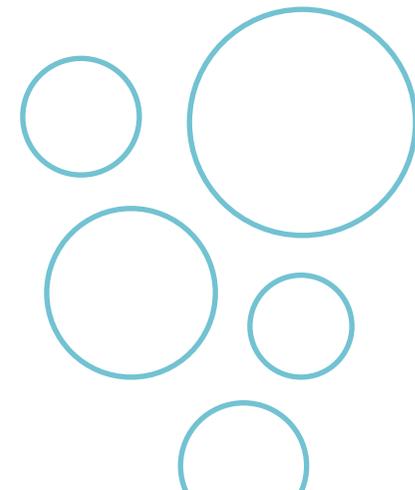
Also in 2017, California's State Water Resources Control Board (State Board) vacated the MCL of 10 parts per billion (ppb) for chromium-6, set in 2014, due to insufficient documentation on the economic feasibility of compliance. Experts continue to believe that chromium-6 is a threat to public health, and because we already have treatment facilities in place, we are continuing to treat the water for the constituent while the State Board works to establish a new MCL.

Assembly Bill 746 was signed into law in 2017 as well, requiring California public schools built before 2010 to test for lead in their drinking water by July 1, 2019. We support our schools' efforts to protect students and ensure the water coming through their plumbing fixtures meets lead limits. We have been proactively reaching out to school districts and working with them to complete testing in all public and private schools serving kindergarten to 12th grade in our service areas. For the few sites tested that exceeded the lead action level of 15 ppb, we helped the schools identify potential corrective actions. With more than 700 of these schools in our districts, we have completed testing in 35% of the schools.



Beyond lead, in the summer of 2018, the State adopted an interim notification level of 14 ppt for perfluorooctanesulfonic acid (PFOS) and 13 ppt for perfluorononanoic acid (PFOA), which means water systems must notify governing bodies of any water sources in use that exceed these levels. We already monitor for the presence of PFOS and PFOA, manmade compounds that previously had a lifetime health advisory limit and now a response level of 70 ppt combined through the Unregulated Contaminant Monitoring Rule. We are taking steps now in our Chico, East Los Angeles, and Visalia systems to meet an anticipated standard for PFOS and PFOA, and examining all other groundwater sources to determine any other areas that may be affected.

In 2016 and 2017, runoff from winter storms contributed to higher levels of total organic carbon (TOC) material in the Kern River, which created a treatment challenge in our Kern River Valley's Kernville surface water treatment plant. Higher-than-normal TOC levels, along with chlorine from our disinfection process, contributed to the formation of disinfection byproducts, measured as haloacetic acids (HAA5) and total trihalomethanes (TTHM). We adjusted the amount of disinfection used to effectively treat the water, modified storage tank levels to encourage turnover and decrease water aging, and installed a pilot GAC treatment unit that removes TOC from the source water, which successfully lowered elevated HAA5 levels. We are currently seeking grant funding for full-scale GAC treatment from the State Board's Division of Financial Assistance so that customers in this small district do not have to bear those costs.



Our in-house, state-of-the-art water quality laboratory conducts analyses on microbiology, inorganic chemistry, toxic chemical elements, organic chemistry, and radiochemistry, and has been certified through the Environmental Laboratory Accreditation Program (ELAP) for the past 19 years. This rigorous certification requires each of our eight scientists to pass blind-study proficiency tests each year for every water quality test performed. Our lab currently tests for 107 contaminants.

While our water meets federal and state water quality standards, we expanded monitoring for issues that affect the aesthetic qualities of water. Our water quality team implemented testing for cyanotoxins, geosmin, and 2-methylisoborneol (MIB) during algal outbreaks in all of our surface water systems to help identify when taste and odor could be more noticeable, so that we could proactively communicate with our customers.

The water we send into the distribution system meets all standards, and we have a robust cross-connection control program to help prevent that high-quality water from being compromised in the distribution system by activities on customers' properties. Our cross-connection control specialists make sure all existing backflow prevention assemblies are tested annually, prioritize assessment of all water connections, and enforce and manage the installation of new commercial and residential assemblies.

In 2017, our specialists oversaw installation of 2,826 new backflow prevention assemblies and testing of 36,433 assemblies in our California service areas.



**95%** of respondents in our 2018 Voice of the Customer research considered their experience as a customer satisfactory, very good, or excellent.

### CUSTOMER SERVICE

Providing excellent customer service is part of our promise to our customers, and we consistently seek opportunities to enhance the customer experience. Over 2017 and 2018, we updated our Voice of the Customer, refreshing our understanding of customers' needs, expectations, and experiences through research to determine what would most improve the customer experience. Through focus groups and online and phone surveys, customers provided feedback that showed the areas of highest importance to them paralleled our ongoing commitments: ensure that infrastructure, water quality, and future supplies stay reliable; keep water safe and aesthetically pleasing; support customers and quickly resolve issues; and be an advocate for the environment.

Since we began offering electronic billing at the end of 2012, 41% of our customers have enrolled in the program, which allows them to save time, eliminate postage, and pay online at their convenience instead of receiving traditional paper bills in the mail. In 2017 alone, 35,283 customers enrolled in eBilling.

To expand self-service options and improve convenience for customers, we launched a new online customer portal. This portal helps customers save time and postage and reduce clutter by offering easier account recovery, improved electronic bill presentation and payment options, access to important notifications, detailed conservation and meter analytics that include leak detection capabilities, and future Advanced Metering Infrastructure (AMI) integration. Along with the new portal came an enhanced automated phone

payment system and mobile application that provides real-time appointment arrival time updates and enables customers to report water main and service leaks. Since the customer portal went live for Hawaii customers at the end of 2016, about 600 customer accounts have been enrolled, with more than 7,500 one-time payments and 2,600 recurring payments made online. The portal rolled out for New Mexico customers in August 2017; since then, more than 1,300 customer accounts have been enrolled, with about 19,000 one-time payments and more than 5,920 recurring payments made through the system. The new portal was launched in California in August 2018.

Outside of this portal, there are occasions in which we need to reach our customers with important water service information, such as temporary water service interruptions related to new water main installations or water quality emergencies. We are rebuilding our outreach platform, called our Customer Outreach Portal, to provide more comprehensive information to customers—such as maps of affected areas—via email, better target customers who may not be in a single geographic area, and call or text customers faster than before. This upgraded platform is expected to be in use by year-end 2018.

In 2018, we completed converting the customer database for the remainder of our subsidiaries to the Customer Care and Billing (CC&B) platform. The CC&B conversion not only reduced operating costs and enhanced security, it also streamlined a number of business and accounting processes, all of which enabled us to provide faster service to customers and more efficient workflows for our employees.



Since we began offering electronic billing in 2012, **41%** of our customers have enrolled in the program, which allows them to save time, eliminate postage, and pay online at their convenience, instead of receiving traditional paper bills in the mail. In 2017 alone, **35,283** customers enrolled in eBilling.

We measure our success in providing excellent customer service through key performance indicators (KPIs), both those reported annually to the California Public Utilities Commission (CPUC) as part of General Order 103 and those we set internally. In 2017, we:

- ▶ Received 551,238 total calls, 89% of which were answered in 30 seconds or less, exceeding our goal of 80%
- ▶ Delivered 99.7% of the 5,536,493 customer bills accurately, higher than the goal of 97%
- ▶ Made 99.4% of the 31,474 scheduled service appointments on time within our own two-hour window, more stringent than the CPUC-established four-hour window
- ▶ Completed 83,702 customer-requested work orders
- ▶ Received even fewer customer complaints to the CPUC's Consumer Affairs Branch than before, at 0.009% of our 484,900 California customer connections in 2017 versus 0.020% of our 480,955 connections in 2015



### AFFORDABILITY

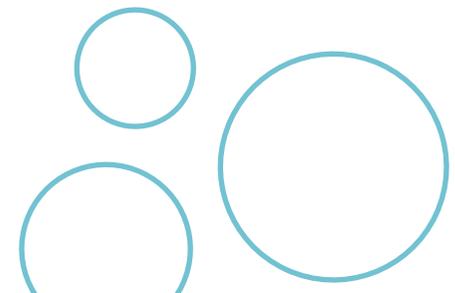
As costs to maintain and upgrade water systems—and to meet increasingly stringent water quality and environmental standards—continue to rise, we echo Section 106.3 of the California Water Code and have adopted a policy to provide access to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes by operating in accordance with applicable state and federal laws and regulations, at rates established by our governing regulatory agencies.

In 2017, we were granted approval from the CPUC to consolidate the rates of some of our smaller, higher-cost service areas with those of nearby, larger districts, similar to how electric utilities' rates are structured. The CPUC and State Legislature have encouraged water utilities to consolidate water systems regionally to increase efficiency and spread costs over a larger customer base. This helps reduce the rate impact of future water system improvements by increasing the number of customers who share the costs of those projects. We are now proposing to combine the rates of our Dixon District with our Stockton District in our Infrastructure Improvement Plan submitted to the CPUC in July 2018. If approved, it would become effective in 2020.

In June 2018, we submitted a filing with the CPUC to decrease revenue currently needed in our California service areas by almost \$18 million, due to a decrease in the federal corporate tax rate and lower capital financing costs. These savings began being reflected in customers' bills when the filing became effective July 1, 2018. Cal Water has been tracking the effect of all changes to the federal tax laws and capital financing costs since they became effective on Jan. 1, 2018. We will be submitting another filing to apply a credit to customer bills in order to true up the impact of all these changes for calendar year 2018.

All residential customers who meet maximum income guidelines are eligible for our Low-Income Ratepayer Assistance (LIRA) program, through which they can receive 50% off the monthly service charge on their bill. As of July 2018, we have 122,061 customers enrolled in LIRA. We also recognize that some customers may have trouble making ends meet from time to time due to various circumstances. For these situations, we offer payment arrangements, payment extensions, and hardship grants to qualified customers.

Cal Water also has a Rate Support Fund (RSF) program that provides rate assistance to customers in the Kern River Valley, a smaller service area where the costs to provide safe, reliable water service are considerably higher than average. The RSF subsidy program is supported by Cal Water customers statewide.





## COMMUNITIES

### COMMUNITY SUPPORT

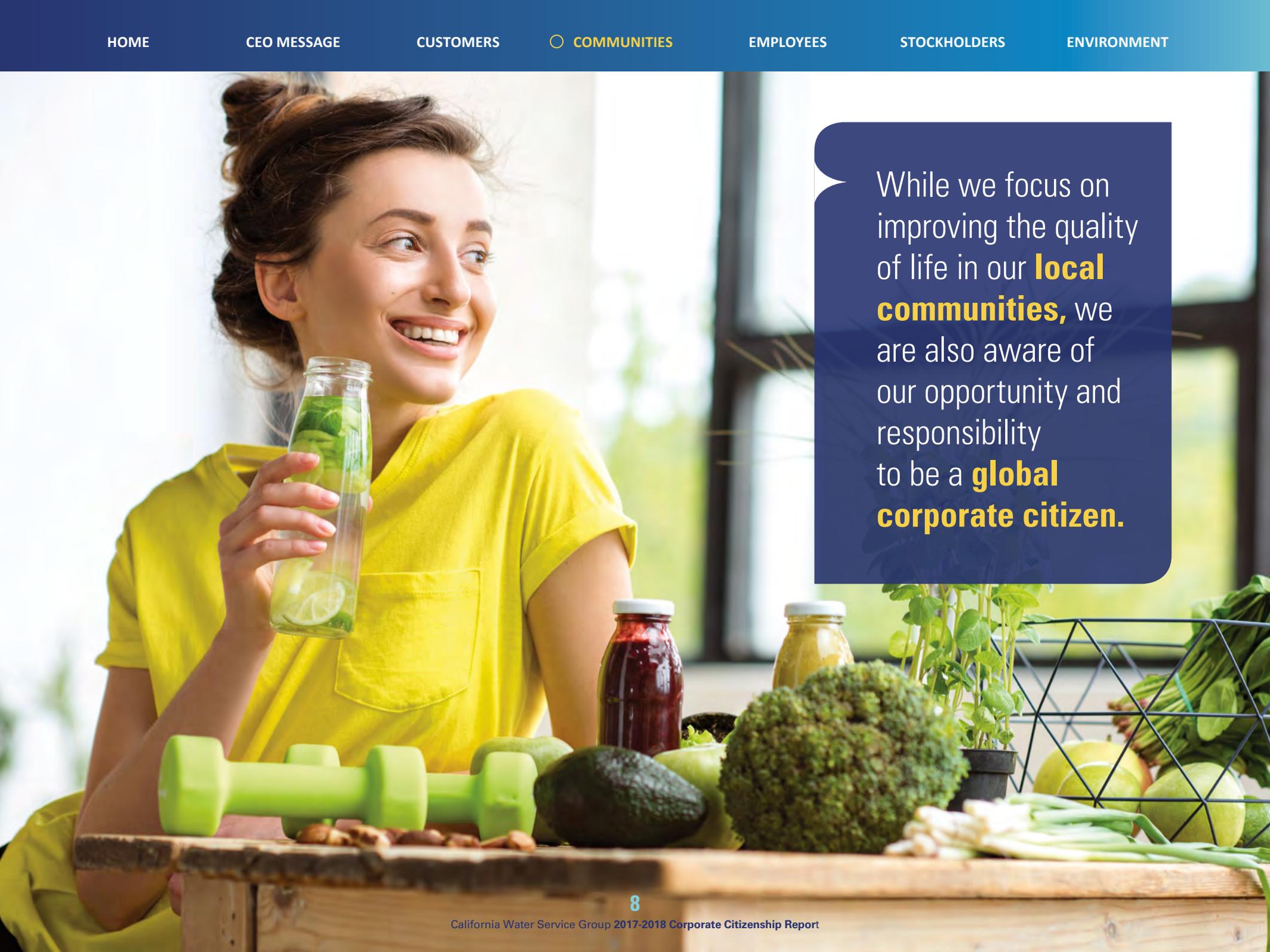
Cal Water, Hawaii Water, New Mexico Water, and Washington Water share a commitment to being more than a water and wastewater utility provider. We're committed to improving the quality of life in the communities we serve. And, in 2017, our subsidiaries partnered with numerous organizations that share the same commitment through our stockholder-funded philanthropic giving program. Just a few of these organizations included:

- ▶ Bakersfield Homeless Center
- ▶ Bethlehem Center in Visalia
- ▶ Oroville Rescue Mission
- ▶ University of New Mexico at Valencia
- ▶ Waikoloa Dry Forest Initiative, which works to preserve, protect, and restore a native Hawaiian dry forest ecosystem
- ▶ Homeless Backpacks, which is dedicated to ending teenage homelessness in Washington
- ▶ Salvation Army's Hurricane Harvey Relief Fund
- ▶ American Red Cross to assist those affected by the Tubbs Fire in northern California

Our employees give of their time as well, volunteering with numerous community organizations such as Rotary, Kiwanis, and Chambers of Commerce throughout our service areas, along with charities such as:

- ▶ Second Harvest Food Bank in San Jose
- ▶ Toys for Tots, to brighten the holidays for our youngest residents
- ▶ United Way
- ▶ Children's Home of Stockton
- ▶ Dixon Family Services
- ▶ Boys and Girls Clubs, to mentor and support at-risk youth
- ▶ American Cancer Society
- ▶ American Red Cross, to host blood drives in Livermore
- ▶ Second Chance Animal Shelter in Selma and SPCA in Salinas and Visalia, to protect our four-legged friends
- ▶ Wiliwili Festival, to educate the community about water conservation along with protecting the rare, indigenous trees found only in Hawaii
- ▶ Permission to Start Dreaming Foundation's Race for a Soldier in Gig Harbor, Washington

▶ In 2017, California Water Service Group and our subsidiaries donated **\$832,000** to more than **320** local community organizations and students.



While we focus on improving the quality of life in our **local communities**, we are also aware of our opportunity and responsibility to be a **global corporate citizen.**

Additionally, one of our New Mexico team members initiated a much-needed service to ensure pets are properly vaccinated in his hometown. With support from New Mexico Water, the City of Rio Communities, and local veterinarians, our employee and his wife have organized low-cost vaccination clinics for the local community and Valencia County for the past several years. About 80-90 pets are vaccinated during each three-hour clinic.

We partnered with King City in 2018 to install and dedicate a drought-tolerant and low-water-use conservation demonstration garden around the new signage at the entry to its downtown business district. The walkable feature is designed to help residents envision ways they can incorporate water-efficient landscaping that will thrive in local conditions into their own landscapes.

We were also the major corporate sponsor for Visalia's Sequoia Legacy Tree project, which was created to provide an outdoor learning space for both visitors and residents. Not only does the Sequoia Legacy Tree highlight the ties between the city of Visalia and the local national parks, it also demonstrates the importance of the Sierra Nevada Mountains to the Valley floor for water and the need for conservation, and shows Visalia's historical connection to Sequoia and Kings Canyon National Parks and the National Park Service.

Our employees in New Mexico had a unique opportunity to honor our country's veterans, receiving a former Veterans Park as part of 116 acres of land we purchased around our Rio Del Oro Wastewater Treatment Facility to safely discharge treated effluent. The abandoned park still housed two mounted, nine-foot military cannon barrels. Rather than leave the cannons, our team, with the assistance of a local contractor, refurbished the barrels, created new concrete mounts, and reset the cannons beside the statue of a soldier at the Korean War Memorial of nearby Tomé Dominguez Community Center and Museum.

In Hawaii, we were able to honor the lives of the men and women of the sea services who made the ultimate sacrifice for our country by supporting the Lone Sailor Statue at Pearl Harbor. The statue was dedicated in October 2017 on the Navy's 242nd birthday.

While we focus on improving the quality of life in our local communities, we are also aware of our opportunity and responsibility to be a global corporate citizen. Each year, a team of employees also travels with Living Water International to developing countries to help provide clean drinking water in areas that desperately need it. In 2017, eight employees were part of a group that installed a well at a primary and secondary school in Masagua, Guatemala. In 2018, four employees joined the team, led each year by a Cal Water retiree, to construct a well for residents in Lirios Del Coronado, one of 16 villages in Genova, Guatemala.

## OROVILLE SPILLWAY EMERGENCY

In early 2017, heavy winter storms severely damaged the spillway at the Oroville Dam, and impending rain—combined with the potential for the spillway to fail—prompted the evacuation of all Oroville and Marysville residents just before Valentine's Day. Ahead of the evacuation, we had made preparations to ensure our local water systems would withstand flooding and other impacts and activated our Emergency Operations Center, utilizing support from other nearby Cal Water districts and our centralized Customer Support Services. So, when many of our residents evacuated to the Chico Fairgrounds, we looked for ways we could temporarily ease their stress. We partnered with a local movie theater to offer free showings of new releases. And on Valentine's Day, our President and CEO Marty Kropelnicki passed out See's chocolates to evacuees at the fairgrounds while Cal Water team members gave out water.

During the emergency, the increased outflow from the dam also raised the turbidity of the water at the Feather River Fish Hatchery to a level unsafe for the fish. While the Department of Fish and Wildlife (DFW) was able to relocate many of the fish, DFW needed immediate assistance to save about 1 million steelhead eggs, listed as threatened under the Endangered Species Act, that could not be moved. Working with the State Board, DFW, and Cal Fire, we were able to flow water from a fire hydrant, through Cal Fire's hose, and through a granular-activated carbon filtration system into the hatchery to protect the eggs—some of which were already hatching—from the more turbid water. Our local team was later honored by state assemblymembers and DFW for the effort.

## WATER SUPPLY RELIABILITY

Investing in our infrastructure is critical to ensuring we can continue providing a reliable supply of safe, high-quality water for customers' everyday needs and sufficient resources for firefighters to protect our communities. We develop 20-year supply plans for each region and regularly assess those supplies.

As part of our investment in 2017, we increased the amount of aging pipelines to be replaced so that we could reduce water loss, along with associated impacts to the community and environment. We installed 128,700 feet of new or replacement water pipelines throughout our service areas, along with 16 emergency generators, three storage tanks, one groundwater well, and four booster pump stations. We utilize an Enterprise Asset Management system to ensure we get the maximum life from our infrastructure while replacing or upgrading components before they become unreliable and costlier to repair.



Our California, Hawaii, New Mexico, and Washington subsidiaries invested a record **\$259.2 million** in 2017 to upgrade water and wastewater system infrastructure.

With 90% of the Palos Verdes Peninsula currently served by a single drinking water pipeline, we broke ground in June 2018 on the Palos Verdes Peninsula Water Reliability Project, a long-planned, much-needed infrastructure upgrade that will enhance reliability to the system's 90,000 residents. As the largest capital project in our company's history, construction will include installation of seven miles of new pipelines and a new pump station on a separate electrical grid. This work requires installing the pipelines in a major traffic artery through the Peninsula and under bridge trails frequently used in this equestrian community. As part of our commitment to being a good neighbor, we are relocating residents during any night work, boarding any horses that may be impacted by any construction activities, and keeping our city leaders, community associations, and residents updated frequently. We are also working with mobile map applications to help reroute motorists around the construction zones when traffic is heavier. The entire project is expected to be completed at the end of 2019. A few other water system upgrades we have made since 2017 are:

- ▶ Installing a new well in New Mexico Water's Indian Hills system, a system we acquired in 2015, to provide up to an additional 50 gallons per minute to a community that did not previously have an adequate water supply
- ▶ Constructing a new well that can deliver 1.44 million gallons per day in Hawaii Water Service's Waikoloa

water system to reliably serve the needs of a growing community

#### DEVELOPING TOMORROW'S LEADERS

In 2017 and 2018, we awarded a total of \$120,000 in college scholarships to students residing in our service areas and enrolling in full-time undergraduate study at an accredited two- or four-year college or vocational-technical school. The college scholarship program, administered by Scholarship Management Services and funded by our stockholders, considers students' academic achievement, community service, and financial need. Two students each year received top scholarships of \$10,000 each, with 20 additional students receiving smaller awards. Of the recipients in the past two years, 16 have been first-generation college students.

Separately, qualified high school students in California's Bay Area who are interested in a career in the water field are eligible for a water utility training program scholarship, offered through our Human Resources Department in coordination with Santiago Canyon College. Up to 20 students who enroll in the college's online Water Utility Science (WUS) program and take related classes can receive up to \$500 to offset costs. This program was launched in August 2018; we hope to expand to more areas in the coming years.

We have also partnered with Cristo Rey Jesuit High School, which is specifically geared toward low-income and at-risk youth, in San Jose to offer work experience in multiple fields to four high school students each school year through its work-study program. In the past two school years that we have participated in the program, Cristo Rey high schoolers have gained valuable work experience in our Facilities, Information Technology, Corporate Communications, Human Resources, Engineering, and Accounting departments.

Cal Water's Engineering Department expanded its annual internship program, providing hands-on training to eight college students in our San Jose and Torrance locations. This internship program both enables future engineers to gain industry knowledge and experience, and strengthens our relationship with local universities.

#### SUPPLIER DIVERSITY

Finding, engaging, and doing business with diverse suppliers remains a priority for Cal Water. We believe that by expanding our pool of suppliers and partnering with local vendors who compete for our business, we promote economic inclusion and utilize vendors who provide the highest-quality goods and services at the lowest prices. We regularly help women-, minority-, disabled veteran-, and LGBT-owned businesses become certified through the CPUC's supplier

clearinghouse, and also achieved several milestones in 2017, including:

- ▶ More than doubling our spend with certified African-American suppliers from \$193,000 in 2016 to \$457,000
- ▶ Increasing business with qualified LGBT vendors five-fold, from \$23,000 in 2016 to \$119,000
- ▶ Tripling our spend with disabled veteran businesses from \$2 million in 2016 to \$6.6 million, which represented 2.75% of all discretionary spending and surpassed the CPUC's goal of 1.5%
- ▶ Utilizing diverse suppliers for 75% of all Environmental Affairs Department projects
- ▶ Through the California Water Association, partnering with the San Jose-, Fresno-, and Los Angeles-based chapters of the Minority Business Development Agency to host quarterly workshops on technical assistance and capacity-building, and providing more than 12 hours of training on supplier diversity, bonding, access to capital, and marketing to diverse suppliers and communities

For our commitment to supplier diversity, we were recognized by notable organizations, both regionally and nationally. We were named Supplier Diversity Champion of the Year by Asian, Inc., received the Distinguished Supplier Diversity Award from the U.S. Department of Commerce's Minority Business Development Agency, were honored by the U.S. Veterans Business Alliance, and received the national 2018 Diversity Award by the American Water Works Association.

### STRATEGIC SOURCING

Like our supplier diversity program, our California strategic sourcing program helps ensure customers receive the best value for their dollars and that our critical infrastructure is



supported by top-notch suppliers in the state by implementing long-term contracts (master contracts) on key spending. Through the request for proposal (RFP) process for master contracts, currently used for pipeline maintenance, repairs, upgrades, and associated materials, we examine prospective contractors objectively by reviewing their pricing proposals, operations, past performance, safety and environmental practices and records, emergency response plans, quality assurance plans, value engineering, key personnel qualifications, and financial stability. We reopen the RFP process every three to four years to invite new contractors

to participate and most recently rebid about 40% of the contracts in 2018. For the master materials contracts, which expired in 2018, we extended the contracts with the incumbent suppliers because of their extremely high quality of services rendered, but renegotiated the terms to optimize the contract value. Of the parties invited to bid on the master contracts, 30% have been diverse suppliers.

In 2018, we started the strategic sourcing program on water quality treatment chemicals. After analyzing our needs and specific site conditions and constraints, we issued an RFP and expect to have master contracts for treatment chemicals in place by late 2018.

## EMERGENCY RESPONSE COORDINATION

Communication and coordination are key to successfully managing an emergency, and all of our service areas are prepared to respond to any crisis that affects our water systems. Our Emergency Operations Center (EOC) is compliant with the National Incident Management System and state-level Standardized Emergency Management System, and our internal first responders simulate and train on large-scale crises annually in each of our districts and subsidiaries.

Recognized as a leader in emergency response in our industry, we began hosting regional EOC exercises with other first responders community-wide in 2017. We have brought together city officials, police and fire departments, and Community Emergency Response Team members for classroom training and hands-on simulations in Chico, Marysville,



Oroville, Washington, New Mexico, and Hawaii, with more scheduled in our Stockton, Bayshore, and Bear Gulch Districts in the fall of 2018.

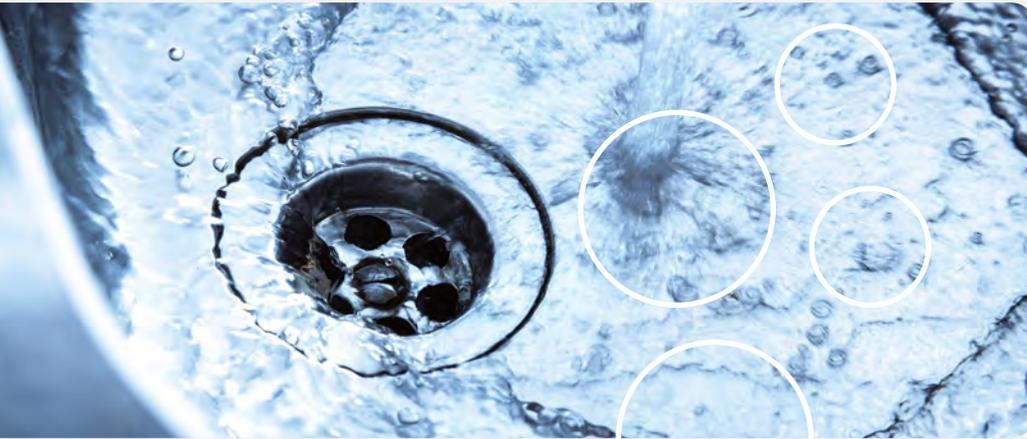
In Oroville, we also had a unique opportunity in the summer of 2017 to honor the town's first responders, who worked to keep residents safe both during the Oroville

spillway emergency and year-round. Held in conjunction with our Water Awareness Morning to educate customers about how our upgraded water treatment plant keeps them safe, our Salute to Local Heroes activities and presentation thanked the local fire and police departments, Cal Fire, and the Butte County Sheriff's office.

## LOCAL ECONOMIC IMPACT

While we are the largest publicly traded water utility west of the Mississippi River, we are also locally focused, not only investing in communities' infrastructure and supporting local charities, but also purchasing locally when possible and putting money back into the local economy. For example, in our Bakersfield District in 2017, we spent \$3.5 million with 425 local vendors. Based on a 1.57 economic multiplier index from Moody's Analytics, the local economic impact of those purchases was more than \$5.4 million. In our Visalia District, we spent a half-million dollars with 314 local vendors, for a local economic impact was \$726,000.





In the past five years, we reduced our Total Case Incident Rate (TCIR) **61%** company-wide. Our Days Away, Restrictions, and Transfers (DART) rate declined **25%**.

## EMPLOYEES

### EMPLOYER OF CHOICE

We believe that if we take care of our employees, they can be our best ambassadors. We were honored to be named a Top Workplace in the Bay Area for the seventh consecutive year in 2018. The distinction, awarded by the Bay Area News Group, was given based on input from Cal Water's 376 local employees from our Bayshore, Bear Gulch, Livermore, and Los Altos Districts along with our San Jose headquarters. Topics included company leadership, values and ethics, compensation and training, diversity and inclusion, career development, and family-friendly flexibility. The significance of receiving this award year after year in a geographic area that is home to some of the best-known technology and research companies in the world is not lost on us, and we continue to work hard to maintain an environment in which our employees learn, grow, and thrive.

Company-wide, we were named a Great Place to Work® for the second year in a row in the fall of 2017 by the Great Place to Work® Institute. This certification is based on a Culture Audit® of the company's programs and practices on hiring, internal communication, developmental opportunities, training, recognition, and diversity, plus a Trust Index® that considers employee responses about their experience with the company related to leadership, credibility, respect, fairness, pride, and camaraderie. Responses to this survey came from across our California, Hawaii, New Mexico, and Washington subsidiaries.

To attract and retain skilled professionals who are experts in their fields, we offer a competitive employee benefits package that includes a 401K savings plan with company match; a defined benefit plan; medical, vision, and dental insurance; flexible spending accounts; and generous paid time off.

Because we work hard to take care of our employees, monitor their satisfaction and engagement through these surveys, provide a fair and living wage for all employees, and commit to always doing the right thing, we have maintained excellent relationships with the two unions who represent some of our employees, the Utility Works Union of America, AFL-CIO and the International Federation of Professional and Technical Engineers. We collaborate on issues that affect the business, such as drought management and, most recently, our Cost of Capital proceeding. Going forward, we will continue our commitment to open and thoughtful dialogue to ensure these relationships continue to be respectful, cooperative, and productive.

### SAFETY

Our commitment to keeping our employees safe and healthy, both on and off the job, is reflected not only in our company-wide occupational health and safety policy, it's also evident in the way we conduct our daily business—such as starting every meeting with a safety

▶ Due to our new return to work and triage nurse programs, our TCIR declined **38%** in the last 12 months (through July 2018), and our lost time rate dropped **83%**.

moment, conducting daily vehicle checks, having clear rules for safe driving practices, and making training sessions as accessible as possible to employees in every location. In 2017 and 2018, we delivered training to all employees on driver safety, first aid, CPR, Occupational Safety and Health Administration best practices, and evacuation procedures, to name a few. We also conducted job safety assessments and hearing and respiratory fit testing for multiple office and field positions. And, we launched programs to provide prescription safety eyewear and bring mobile units to outfit employees with proper footwear.

To enhance the effectiveness of our occupational health and safety policy, we implemented a comprehensive Injury and Illness Prevention Program for employees at all facilities and operations. This program, which addresses compliance; hazard identification, mitigation, and communication; accident investigation; training; and recordkeeping, was developed to help reduce injuries and illnesses, increase productivity, and promote a safer and healthier environment. In addition to measuring TCIR—also called the Total Recordable Injury Rate, which was 4.7 in 2017; DART, which in 2017 was 3.6; and near-miss frequency, we track and report injuries, occupational diseases, and the fatality rate for employees, most of whom are employed full-time, annually to OSHA.

Our Executive Health and Safety Committee, led by our President and CEO and Chief Safety and Emergency

Preparedness Officer, meets monthly to review any injuries and accidents that occurred and focuses on the root cause to reduce the number of future incidents. This committee maintains oversight of the policies and operational controls established to keep our workforce—and community members—safe. Our local Safety Committees and Safety Champions work to drive a culture of safety in each of our locations by hosting monthly meetings, which are attended by all district employees.

For employees who do take time away from work due to either work-related or non-work-related injuries, we created a new return to work program company-wide to help them assimilate back to work, whether in their regular, modified, or alternate duties. Our new triage nurse program in California helps employees properly assess any injuries and take appropriate action, and enables the company to help manage the issue from beginning to end

### SECURITY

Utilizing results from vulnerability and security assessments we conducted in 2017 at all of our office and infrastructure locations, we have taken multiple steps to increase security for our employees and customers. Some of these include

- ▶ Installing bullet-resistant glass at our cashier stations
- ▶ Implementing keyless entry systems at all points of entry that record badge access information

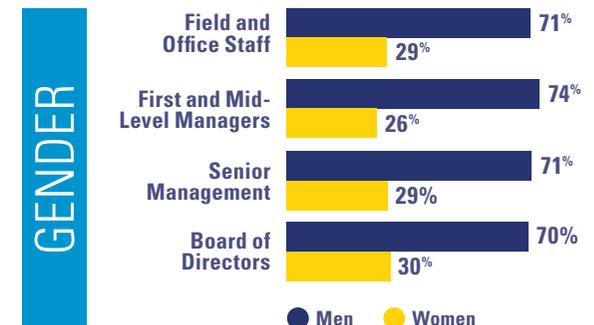
- ▶ Installing video cameras and monitoring to react to security incidents in real time
- ▶ Improving lighting at and securing the perimeters of facilities
- ▶ Participating in community security organizations to be aware of emerging threats
- ▶ Training staff on security procedures

### DIVERSITY AND INCLUSION

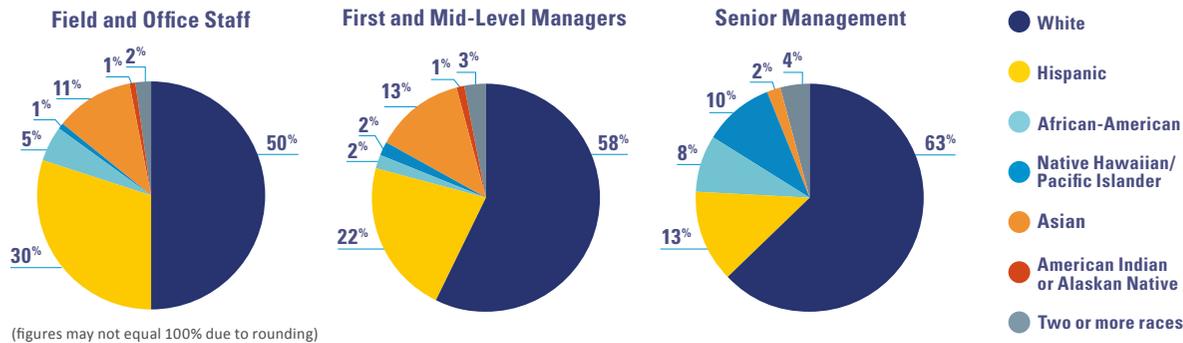
We are committed to not only hiring and retaining the best employees, but also to ensuring our workforce is diverse and inclusive, both in gender and race. This commitment extends beyond our field and office staff to also include our managers, department heads, executives, and Board of Directors.

### PROFESSIONAL DEVELOPMENT

When employees come to work at California Water Service Group subsidiaries, they continue their education and professional growth to stay at the forefront of their industries. We provide training opportunities locally and offer tuition reimbursement. And, with more than 1,500 industry-specific certifications held by our team members, we employ some of the brightest professionals in the water industry. In 2018, we also launched an incentive program to reward employees who earned multiple certifications.



## RACE



Our one-team approach to the business means team members collaborate to improve our efficiency, productivity, and service, all of which benefit our customers. Recognizing that our employees are among the best sources of ideas and innovations, we launched our revamped Continuous Improvement process, called CI 2.0, in 2017. Through CI 2.0, all employees are encouraged to contribute and implement new ideas using their problem-solving skills and creative thinking. The streamlined process requires less time and fewer resources, allows for more flexibility, and enables faster implementation. Since then, about 130 “daily improvements” have been initiated, and employees have already implemented 90 improvements.

To further improve efficiency for servicepersons, we began implementing KloudGin Field Service Management to help prioritize customer requests. The introduction of this tool to 11 of our 21 districts, which gives field representatives the ability to receive, prioritize, and complete work orders in real time instead of manually in the office, enabled employees in those districts to complete an average of 33% additional work orders. And, to enhance interaction and collaboration among employees in about 30 locations in four states, we are upgrading our employee intranet in 2018 to include discussion forums, article comment capabilities, and peer-to-peer kudos. The new intranet will go live this fall.

### CODE OF CONDUCT

We conduct our business in accordance with the highest ethical standards for corporate leadership and citizenship, and our employees are expected to act in accordance with the highest standards of personal and professional integrity. To that end, we have a business Code of Conduct published on our web site that addresses conflicts of interest and influence-seeking activities, and prohibits personnel from receiving and giving gifts, bribes, or facilitation payments. All employees take anti-corruption training annually on the Code of Conduct, which has executive oversight by officers, the general counsel, and the chair of the Board’s Audit Committee. As part of the code, we commit to providing equal opportunity and fair working conditions for employees that are free from discrimination, harassment, or retaliation of any kind, which are further defined in the Code.

### CRITICAL INCIDENT RESPONSE MANAGEMENT

When one of our team members experiences a crisis or traumatic event, no person in our company can support him or her better than a peer. It was for this reason that we created a Critical Incident Response Management (CIRM) team, similar to peer-based support systems utilized by fire departments and other first responders across the country. To ensure CIRM team members are prepared to provide emotional support to coworkers in the aftermath of a crisis,

In the second quarter of 2018, the company had 14 employee injuries reported year to date, **67%** less than the 42 injuries in the second quarter of 2017.

the team receives training about different human forms of stress, the effects of stress in the workplace and family life, a humane response to crisis intervention, and the dos and don’ts of how to offer support in time of need. We currently have 49 CIRM team members from different job positions all over California and in Washington. And, in the past two years, we have formally deployed these team members to support their fellow employees 12 times, in addition to countless informal one-on-one discussions.

### NEW EMPLOYEE CULTURE DAY

Our employees are our most important asset. In the last two years, more than 50 long-time employees retired, taking decades of experience, institutional knowledge, and our culture with them. To ensure that our history and culture are retained for future generations of employees, a cross-functional employee team developed a New Employee Culture Day. This day incorporates discussions, team activities, and networking opportunities that focus on what is most important to us as a company: ethics, safety, relationships, employee and business success, family, and history.

# STOCKHOLDERS

## COST RECOVERY

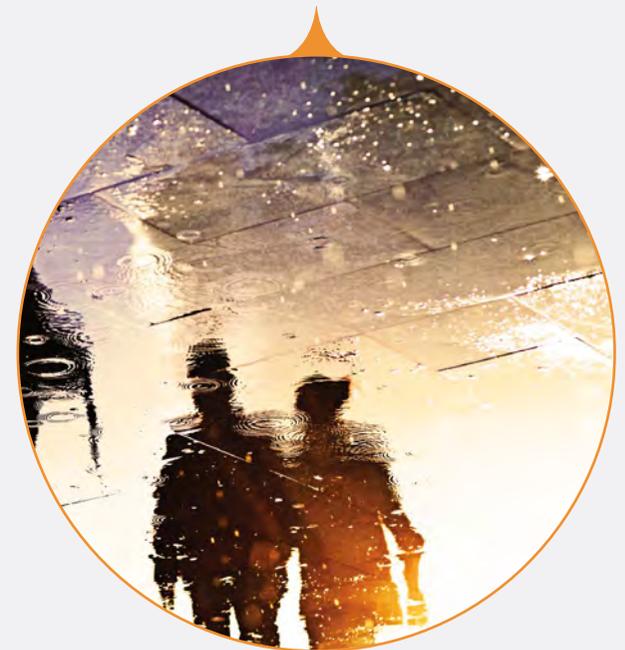
When we prudently invest in infrastructure to keep our water systems reliable for customers, we also earn a reasonable return for our stockholders, who provide the capital for these upgrades. Through rate case processes in Hawaii, New Mexico, and Washington, which are historical test year states, we seek to recover costs incurred over recent years to maintain and upgrade the water and wastewater systems. In California, which has a future test year, we propose improvements that are necessary during the next few years to keep systems safe and reliable. Public utilities commissions in each state thoroughly analyze our applications, books, and service, and seek input from consumer advocates and other parties before setting new rates that reflect the actual cost to provide service. We recently filed rate case applications in each subsidiary:

- ▶ In July 2018, Cal Water filed its Infrastructure Improvement Plan for all of its service areas in 2019 through 2021, which included proposed adjustments to district budgets beginning in 2020. Cal Water proposes to invest \$828.5 million in the water systems, more than 50% of which is dedicated to our main replacement program. If approved as filed, customers in 75% of the California service areas will still have monthly bill increases under \$5; customers in 90% of service areas will have monthly increases under \$6.
- ▶ Also in July 2018, Washington Water filed its proposal to recover costs incurred to make infrastructure

improvements since 2014 and account for increases in operating costs. Some of these investments included new pumping equipment and water pipelines, water treatment facilities, wells, and storage tanks. If approved as filed, Washington Water's annual revenue would increase by \$1.64 million.

- ▶ Hawaii Water received approval in fall 2017 to increase annual revenue in its Pukalani wastewater system on Maui by about \$771,000, so it could recover the costs of upgrades such as treatment plant upgrades; enhancements to the water quality monitoring, management, and reporting system; and emergency generators. In late 2017, Hawaii Water filed an application for its Waikoloa service areas for improvements made to the water, wastewater, and irrigation systems. If approved as filed, total annual revenue would increase by \$3.8 million.
- ▶ New Mexico Water filed nominal rate increases in August 2017 for four of its six rate districts to recover costs for increased operating expenses, plus capital investments such as land for treated effluent discharge and service line, meter, pipeline, and pump replacements. Rates were approved as filed and became effective in January 2018, providing \$126,000, or 3%, in additional annual revenue for those rate districts.

Our 20-year total return on investment in 2017 was **509%**, ahead of the S&P 500. And, in 2018, we increased the annual dividend for the **51<sup>st</sup>** consecutive year.



## COST OF CAPITAL

After issuing a proposed return on equity of 8.2% for Cal Water's Cost of Capital application, which we filed in conjunction with three other water utilities, the CPUC revised its proposed decision in the spring of 2018 and adopted a return on equity of 9.2% for 2018 through 2020. We believe this reversal was due to the strong relationships we've built with our communities and unions. City leaders and our union representatives stepped up to support our need to be able to attract investors in order to keep financing costs down. In addition to our approved 9.2% return on equity, the CPUC established our cost of debt at 5.51%, with a capital structure of 46.6% long-term debt and 53.4% common equity, and an authorized return on rate base of 7.48%.

## CORPORATE GOVERNANCE

In every aspect of our business, we believe in doing the right thing. We work hard to ensure we employ best practices, including:

- ▶ A Code of Ethics and insider trading policy published online for the board, management, and employees
- ▶ A business Code of Conduct for all employees published on our web site
- ▶ A separate Code of Vendor Conduct published on our web site for all potential suppliers, which includes, among other subjects, ensuring proper conduct related to child and forced labor and doing business in a way that reduces environmental impacts
- ▶ Clawback and anti-hedging policies for executives
- ▶ A separate Board of Directors committee for risk management
- ▶ An expanded role for our Board's independent lead director



- ▶ An annual "say on pay" stockholder vote on executive compensation
- ▶ Discussions of non-financial targets in our proxy statement, which also includes our executive compensation plan
- ▶ Majority voting for electing new Board directors
- ▶ Board and Committee charters to ensure proper oversight
- ▶ Internal controls to ensure we have no material weaknesses identified or reported by independent auditors, and no significant financial reporting deficiencies
- ▶ A formal bonding policy developed in 2017
- ▶ Multiple channels for employees to report concerns, either through management or Human Resources, or through quarterly questionnaires conducted in accordance with the Sarbanes-Oxley Act's Section 302
- ▶ A confidential risk/ethics hotline, newly established in 2018, as another protected avenue for employees to report related concerns

## CYBER SECURITY

While we continue to improve physical security measures at our Customer Centers and Customer Support Services office, we also continue to enhance cyber security by upgrading our internal controls, conducting awareness training for all employees, developing an incident response program, and implementing a cyber dashboard. Additionally, we have undertaken significant initiatives over the past two years to improve cyber security, including:

- ▶ Implementing the Security Incident Event Management (SIEM) tool to orchestrate all security logs, provide our security team with better detective controls, and alert the team to anomalous activities on the network
- ▶ Improving our existing intrusion prevention system to enforce security policies and block unwanted incoming or outgoing network traffic
- ▶ Upgrading to the Next Generation antivirus solution to better defend against today's threats
- ▶ Augmenting the SIEM tool to better detect various phases of kill chains
- ▶ Implementing a new vulnerability scanner to reduce opportunities for our systems to be exploited or compromised
- ▶ Implementing a data loss prevention security tool to protect and prevent exfiltration-sensitive data
- ▶ Upgrading our SCADA system to address aging infrastructure risks



Our California, Hawaii, New Mexico, and Washington facilities treated more than **616.3** million gallons of wastewater in 2017.

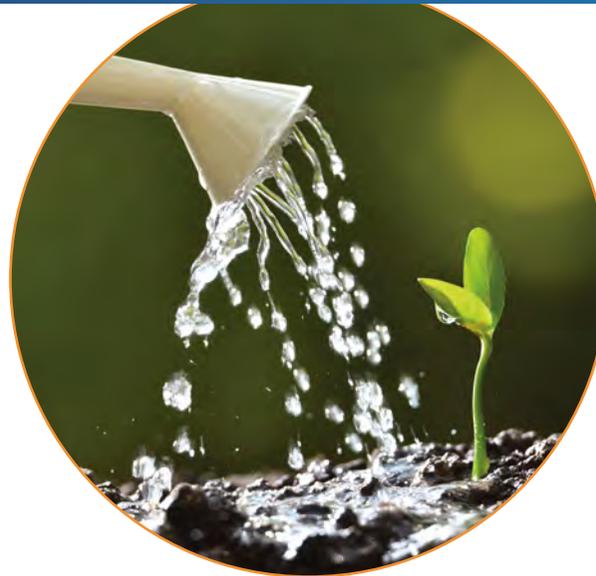
# ENVIRONMENT



## ENVIRONMENTAL STANDARDS

Our environmental policy clearly defines steps we take to ensure our subsidiaries meet or surpass all environmental standards for both water and wastewater operations, as well as how we work to reduce our footprint on the environment. Through this policy and our Environmental Management System that mirrors ISO 14001, we minimize how our operations impact the environment and ensure we comply with all laws and regulations. An important component of our efforts in environmental stewardship, our Environmental Management System is overseen by our Director of Environmental Affairs, who reports directly to executive management. This commitment extends beyond our own company, and we screen new suppliers for their environmental practices during the request for proposal process, when applicable.

The Hazardous Waste Generator Improvement Rule, which is expected to become effective in all four of our states by December 2018, includes more than 60 administrative changes to hazardous waste management. We began preparations in 2017 that include changes in standard operating procedures and training to be in compliance with the new rule once it is effective for each subsidiary. Our subsidiaries were early adopters of a second new regulation, referred to as e-manifest, to review and transmit hazardous waste shipping documents electronically. And, to ensure compliance with administrative standards related to hazardous materials and hazardous waste management, Cal Water developed an internal audit and training program in 2016 that standardized documentation across the state and—to further reduce our footprint on the environment—presented all environmental training program modules online to improve accessibility.



As we developed the treatment process to remove chromium-6 from the groundwater supplies in Dixon, Willows, and Salinas, we modified the chemical treatment to enable a portion of the chromium waste to be recycled back into the treatment process. Because chromium is the most significant contributor to any hazardous waste our operations generate, this modification enabled us to reduce the amount of hazardous waste generated company-wide in 2017 to 1,360,214 pounds, which was 52% of the amount generated in 2016 and better than our goal of 40%. The remainder of the waste is moved to a mixed-metals recycling facility in accordance with all laws and regulations, recycled, and reused in future chrome manufacturing.

We also take steps to manage non-hazardous waste, which include soil, construction debris, liquids, paint chips, and sandblast materials from tank cleanings that are below regulatory thresholds. Most of this waste is reused and recycled; sandblast materials even find new life as road material.

In 2017, Cal Water received two environmental violations that were quickly rectified. The first was a record-keeping oversight, in which data was not adequately recorded. The second was related to water discharge contributing to higher biological oxygen demand. This was due to more calcium thiosulfate being used in the dechlorination process at our Hawthorne Treatment Plant. Upon discovering the root cause of overly dechlorinated water samples, we made adjustments to our treatment process to eliminate the issue and false-positive test results.

## GROUNDWATER BASIN MANAGEMENT

California's Sustainable Groundwater Management Act, signed into law by Governor Brown in 2014, required formation of a local groundwater sustainability agency (GSA) in every area designated by the Department of Water Resources to be medium or high priority. We are actively participating in select GSAs in our service areas, partnering with other participating agencies to address concerns including lowered groundwater levels, reduced groundwater storage, seawater intrusion, degraded water quality, land subsidence, and depletion of interconnected surface water. Each GSA is working to have a local groundwater sustainability plan in place by 2020.

Thirteen wells are being constructed as part of phase one of our regional groundwater storage and recovery project with the San Francisco Public Utilities Commission, City of San Bruno, and Daly City. Two of the wells will be in and operated by our Bayshore District; one well will soon be online, and the other is scheduled to be online by 2020. Test wells that will help determine where and how many wells

▶ **96%** of our California districts are already below the water-use target set for 2020, as part of the 20x2020 water reduction requirements of Senate Bill X7-7, just one step toward long-term water-use efficiency.



should be added in phase two have also been constructed. During years of normal or heavy rainfall, more surface water will be delivered to the partner agencies to reduce groundwater pumped from the South Westside Groundwater Basin in San Mateo County. Then, in dry years, groundwater could be utilized at a rate of 6.2 million gallons per day to sustain supplies for up to 7.5 years. Since the project began in 2016, the aquifer has already recovered 25 feet.

In the same vein, with the heavier rains of 2017, our Bakersfield District was able to increase utilization of surface water to meet customers' needs, thereby reducing the amount of groundwater being pumped from a critically overdrafted basin. By doing so, we reduced groundwater pumping in 2017 by 560 million gallons over 2015, a year in which we were already pumping less due to the drought. Further south in the state, we work with court-appointed watermasters or groundwater management authorities that oversee the West and Central Basins in Los Angeles. These entities ensure long-term water supply reliability by measuring and limiting pumping, and actively recharging the groundwater through settling ponds or injection wells. Company-wide, we operate our wells responsibly to avoid negatively impacting groundwater supplies.

#### RECYCLED WATER

Where possible, we supplement our supplies with alternative resources, such as recycled water. In 2017, we completed construction of the meter that will allow recycled water to flow to the new Apple 2 campus in Cupertino, Calif. Once all necessary testing has been completed, through our partnership with the City of Sunnyvale, Santa Clara Valley Water District, and Apple Inc., we will be able to deliver more than 157,000 gallons of recycled water per day to the

In total, we delivered **2,165,727,784** gallons of recycled water in 2017.

175-acre campus. The recycled water will be used for irrigation and data center cooling.

In our Westlake District, we expanded recycled water use at golf courses and parks. Our most recent project, converting Triunfo Park's irrigation system to recycled water in 2017, saves 30 acre-feet, or 9,775,543 gallons, of potable water each year. Our Rancho Dominguez District also provides recycled water to refineries for cooling and other plant processes. We continue to seek opportunities to utilize recycled water where possible.

#### WILDLIFE PROTECTION

In the fall of 2017, we completed the installation of a fish ladder as part of our long-term plan to protect runs of steelhead trout in Bear Gulch Creek. This creek is a water supply source for customers in our Bear Gulch District. Through this project, completed in collaboration with the California Department of Fish and Wildlife (CDFW) and the National Marine Fisheries Service, we modified the existing dam and intake, created a new concrete apron, installed Obermeyer gates to control the water levels, added two fish screens, constructed a serpentine fishway, installed a new utility control building, and made improvements to the access area. The new ladder maintains a minimum bypass flow in the creek to ensure that the fish have sufficient habitat prior to drawing water for Bear Gulch District customers. The steelhead trout, considered to be threatened under the Federal Endangered Species Act, can easily migrate the



ladder through a series of ascending pools until they have successfully ascended or descended a stretch of the creek that was previously unnavigable to fish. Our new structure opens more habitat to spawning and clears a path for the trout's journey to both the bay and the Pacific Ocean. We celebrated the completion of this important initiative with a tour for local community leaders, first responders, and neighbors in early 2018.

We work cooperatively with government agencies to preserve our 1,200-acre Bear Gulch watershed in a way that protects and restores the natural environment for native plants and animals. Our protected watershed, from which we obtain surface water for some customers, is home to a portion of the mountain lion population. Recently, Cal Water supported CDFW's research on mountain lions in the Santa Cruz Mountains. We opened our watershed property to CDFW and University of California, Santa Cruz researchers to locate, identify, and test genetic material left by mountain lions to obtain the genetic fingerprint of individual cats.

#### ENERGY EFFICIENCY

Our responsibility as an environmental steward naturally includes our goal to use energy as efficiently as possible and use alternative energy where appropriate to operate facilities such as pump stations, generators, and water storage tank mixing systems. In our Bakersfield, Bear Gulch, and East Los Angeles Districts, we participated in an energy management program through EnerNOC, a demand response and efficiency intermediary that works with water and energy utilities to determine which sites to take offline when electricity providers ask for a reduction in energy use. This program not only reduces peak energy stress on the electrical grid, it also lowers greenhouse gas emissions. Additionally, we purchase electrical power from several Community Choice Aggregators that focus on renewable power sources, such as Monterey Bay Community Power and Mid-Peninsula Community Power, among others.

We also participated in a company-wide baseline study with the Water Infrastructure System Efficiency (WISE)

Our California operation purchased **240 million** kilowatt-hours of energy from the electrical grid in California in 2017, which produced an estimated **126 million** pounds of carbon dioxide emissions<sup>1</sup>.



1. Carbon intensity of the California electrical grid provided by the State of California Energy Commission.

program, which was sponsored by Lincus Inc., Pacific Gas & Electric Company, and Southern California Edison. This program provides incentives and technical support to water utilities investing in long-term energy-efficiency measures, such as source and pump efficiency and optimization upgrades. Specific goals of the study pertained to equipment inventory, energy benchmarking, identification of potential savings and cost-effectiveness, and strategic and programmatic prioritization of future energy-efficiency investments. The baseline study identified nearly 13 million kilowatt-hours of potential annual energy savings throughout our California service areas—about 5% of Cal Water’s total energy use, which we are working to further research and implement.

Additionally, in 2017, we invested \$2.5 million to replace 36 pump units at our facilities with new, premium efficiency-rated models, which is the highest efficiency rating from the National Electrical Manufacturers Association. By replacing a single pump, we can reduce the energy used by up to 160,000 kilowatt-hours per year, which is the equivalent to the electricity that 24 average homes in California use within one year.

Beyond reducing traditional, electric power use, we continue to reap the benefits of wind and solar power installations to further maximize energy efficiency. In our Kern River Valley District, we utilize solar panels at five tank sites that do not have access to electricity to operate equipment that enables us to monitor and control water levels in the tanks. Additionally, in 2017:

- ▶ The 405 solar panels at our Chico District Customer Center generated 156,000 kilowatt-hours of energy.
- ▶ The wind turbine at one of our Waikoloa wastewater treatment plants produced 204,500 kilowatt-hours.
- ▶ Our inline power recovery turbine in our Palos Verdes system produced 240,000 kilowatt-hours of energy.

FUEL TYPE	CALIFORNIA POWER MIX	ESTIMATED CAL WATER USE (MILLIONS OF KWH)
Coal	4.13%	9.9
Large Hydro	14.72%	35.3
Natural Gas	33.67%	80.8
Nuclear	9.08%	21.8
Renewables	29.00%	69.6
Biomass	2.35%	5.6
Geothermal	4.35%	10.4
Small Hydro	2.70%	6.5
Solar	10.20%	24.5
Wind	9.40%	22.6
Unspecified Sources of Power	9.25%	22.2
<b>Total</b>	<b>100.00%</b>	<b>240.0</b>

### LONG-TERM CONSERVATION STANDARDS

Just like our “customer-first” approach and individualized water budgets during the drought, we are taking a customer-first approach to meeting California’s new long-term standards for water-use efficiency. In June 2018, Governor Brown signed Assembly Bill 1668 and Senate Bill 606 into law, which requires urban retail water suppliers to calculate and report an urban water use target by November 2023, and each November thereafter, that compares actual water use to the target. Additionally, the bills establish a timeline for state agencies to set standards for indoor use, outdoor use, and water loss, and includes changes to long-term planning requirements such as Urban Water Management Plans, five-year drought risk assessments,

▶ **29%** of the electricity we obtained from the state electric grid in 2017 was derived from renewable sources, including biomass, geothermal, small hydropower, solar, and wind.





Conservation programs utilized by customers company-wide in 2017 will save **128.7** million gallons of water per year, or **1.7** billion gallons over the devices' lifetime.

Water Shortage Contingency Plans, and annual supply and demand assessments. We are actively engaged in various rulemakings with state agencies regarding implementation of the regulations and are well-positioned to meet any standard that is adopted. In the meantime, we continue to offer a robust water conservation program to help our customers use water wisely, which will in turn help meet new water-use efficiency standards.

As part of our commitment to sustainability and water-use efficiency, we also collaborated with the State Board and Department of Water Resources on research for commercial water use and drought response. And, we supported the Public Policy Institute of California's (PPIC) study in 2017 on "Building Drought Resilience in California's Cities and Suburbs," which recommended improvements in drought resilience that could help urban areas better prepare for future droughts. With each of our service areas having unique water-use reduction requirements set by the State Board during the recent historic drought, we were able to provide detailed data and insight into our approach to successfully managing the drought and saving 38.8 billion gallons of water over 2013 baseline water use while state mandates were in effect.

### CONSERVATION PROGRAMS

While the historic drought was declared over in most of California in early 2017, we continue to offer an industry-leading water conservation program to help customers improve water-use efficiency. Some components of this program include:

- ▶ Residential rebates on high-efficiency clothes washers, toilets, and sprinkler nozzles; and smart irrigation controllers
- ▶ Commercial rebates on high-efficiency clothes washers, toilets, and urinals; high-efficiency sprinkler nozzles; large rotary nozzles; smart irrigation controllers; and spray bodies with integrated pressure regulation and check valves
- ▶ Residential conservation plumbing retrofit device kits that include high-efficiency showerheads, kitchen and bathroom faucet aerators, leak detection tables, and shut-off hose nozzles
- ▶ Direct installation of high-efficiency toilets for participants in our LIRA program
- ▶ A school education program
- ▶ Informational fact sheets and online resources
- ▶ Local water conservation reports

## 2017 CONSERVATION PROGRAM HIGHLIGHTS

- ▶ 2,860 toilets, showerheads, and faucet aerators installed as part of our Bathroom Fixture Replacement Program – **annual savings 24,062,018 gallons**
- ▶ 1,898 high-efficiency toilet rebates issued – **annual savings 7,308,615 gallons**
- ▶ 1,432 high-efficiency clothes washer rebates issued – **annual savings 5,243,882 gallons**
- ▶ 27,716 high-efficiency pop-up sprinkler nozzles distributed – **annual savings 12,139,608 gallons**
- ▶ 834 smart irrigation controller rebates issued – **annual savings 12,543,466 gallons**
- ▶ 17,543 commercial high-efficiency sprinkler spray body rebates issued – **annual savings 7,297,888 gallons**

In collaboration with the North American Association for Environmental Education (NAAEE), the annual Cal Water H2O Challenge crowned new grand-prize winners in 2017 and 2018. The Challenge is open to students and teachers in fourth through sixth grades in schools served by Cal Water; it asks participants to complete a project that addresses a local or global water-related issue. Fifth-graders from Sierra View Elementary in Chico, Calif., won the 2017 Challenge for its project on testing the safety of their school’s drinking water. Students researched the what, why, and how of water contamination, collected water samples, worked with local laboratories, and shared their findings with fellow students, the school district, and local media. A fifth-grade class at Murdock Elementary in Willows, Calif., won the top prize in 2018 for its project titled “Protect Our Drinking Water.” The class measured the safety of local drinking water, established and implemented a plan to protect the water supply, and educated the community on why and how they should help.

We also continue to make progress toward compliance with Assembly Bill 2572, which calls for water providers to meter all flat-rate customers by 2025 and encourages conservation. By the beginning of 2017, we had already completed all 32,000 conversions in our Visalia, Chico, Willows, Oroville, and Marysville Districts. We expect to complete all conversions in Bakersfield and Selma, our remaining two districts with flat-rate accounts, by 2022.

## WATER LOSS

Even before Senate Bill 555—which called for urban retail water suppliers to submit an annual, validated water loss audit to the California Department of Water Resources beginning in October 2017 and directed the State Board to develop performance standards for water loss for urban retail water suppliers—was enacted, Cal Water had been monitoring and investing diligently in our infrastructure to reduce the amount of water lost to leaks and pipeline failures. To augment efforts to control water loss, we have:

- ▶ Aggressive asset management programs for production meter calibration program of wells, treatment plants, and interconnections
- ▶ A customer meter testing and replacement program
- ▶ Leak monitoring and detection programs that include, for example, correlators utilized in multiple service areas to rapidly locate and pinpoint both the source of leaks that are not clearly visible and potential areas where leaks may arise
- ▶ A water loss control steering committee made up of officers and department heads to oversee tactical actions and ensure alignment across departments

In 2018, Cal Water began a Water Loss Auditing and Control Project to establish and document water loss auditing and control standards that would support compliance with current and future statewide water loss regulations while enhancing field practices, data management, affordability, and efficiency of water distribution.

Collaboration with the State Board and other water loss experts will help ensure water suppliers develop and

implement best practices in water loss control. We were part of the California Water Loss Technical Assistance Program in 2016 and 2017 to achieve compliance, and received a level 1 validation of a 2016 water audit for each applicable district. We are also participating in the stakeholder workgroup established by the State Board on performance standards for water loss control and will engage in the rulemaking to establish those standards.

## WASTEWATER AND WASTEWATER REUSE

Customers don’t always think about the services we provide, whether we are delivering clean water to the tap, or reliably and responsively removing wastewater from the property. Our 50-plus certified wastewater treatment professionals treat the wastewater to meet environmental standards





before discharging to the environment or reusing it for irrigation. In New Mexico, our state-of-the-art membrane bio-reactor (MBR) filtration plant cleans about 160,000 gallons per day, or 58 million gallons per year, to Class A status, which is reused on greenbelts in parks, while our extended air wastewater plant treats and discharges about 170,000 gallons per day, or 62 million per year, to the Rio Grande River. In Hawaii, we use a combination of MBR filtration, moving bed biofilm reactor (MBBR) technology, and rotating biological contactor (RBC) units to treat wastewater at our five plants. Our Waikoloa Resort MBR plant on Big Island and Pukalani MBR plant on Maui produce R-1 recycled water, the highest-quality reclaimed water defined by the Hawaii State Department of Health, which can be used without restriction for irrigation. In 2017, the two plants produced 307 million gallons of R-1 effluent for golf course irrigation, or 69% of the total wastewater treated in our Hawaii subsidiary. In total, the 365 million gallons of Class A and R-1 water reused enabled us to reduce the amount of water discharged to 251.3 million gallons in 2017.

Over the past two years, we have made a few major upgrades to ensure our wastewater systems remain safe and reliable, such as:

- ▶ Replacing four of the 12 RBC units with new geo-reactors at Hawaii Water's Kukio Resort wastewater treatment plant, and changing out the biofilm media in the remaining eight units
- ▶ Installing a new influent Mag Meter and replacing electrical components, pumps, controls, safety grates, hatches, and railings at three lift stations to pump wastewater to the Washington Water wastewater treatment plant on Orcas Island, and installing an automated auxiliary generator to keep the plant operating during power outages

On a regional level, our Livermore District in California is participating in a feasibility analysis with wholesale water supplier Zone 7 Water Agency and its other retailers to investigate a potential indirect potable reuse program that would store highly treated wastewater supplies in the Livermore Valley groundwater basin. As part of the analysis, we are investigating alternatives for 5 to 10 million gallons per day of treated supplies to be mixed with both naturally occurring local groundwater supplies and purchased surface water supplies from the State Water Project.

### CLIMATE CHANGE

For a number of years, we have been assessing the impacts of climate change on water demand and supply through a model that combines the framework of existing district demand forecasts with modern statistical methods to explain variations in demand attributable to changes in water rates, personal income, weather, demographics, passive and active conservation programs, and economic conditions.

As a first step toward determining how long-term water supply planning should reflect the impacts of climate change, Cal Water completed a study in recent years to investigate climate change impacts on all of our supply sources. The study conducted analyses on 14 districts that represent about 85% of our annual production. These districts were also chosen to reflect a representative range of local demographics, geography, and hydrology, as well as a variety of operational water supply portfolios—different combinations of groundwater, surface water, and purchased water—utilized within the company. Using historical data, along with projected temperature and precipitation data, local climate change supply impacts were estimated in the near term (year 2020), at mid-century (year 2050), and at end of century (year 2100), as is typical of many climate change assessments currently being conducted in the water sector.

This approach, our scenarios, and calculations that support our current analysis are detailed in our climate change update on our web site. We are currently developing the second phase of this analysis, which will consider and derive:

- ▶ Refinements to preliminary estimates of climate change impacts on local and imported supplies
- ▶ Enhanced simulation of future operations of select districts' systems to attempt to meet demand under climate change conditions
- ▶ An inventory of potential investments that may be necessary due to climate change, so that we can include them in future capital project plans

## GREEN FACILITIES AND FLEET

Our Voice of the Customer research showed that “green” is the new normal; 82% of responding customers consider themselves “green” or “very green.” Being an advocate for the environment is equally important to us, and our San Jose-based Green Team and Facilities Department have taken the lead to make Cal Water’s headquarters a sustainable facility. We conducted a building energy sustainability study in 2017 to identify district offices that would be good candidates for solar energy generation and opportunities to convert lighting to LEDs or otherwise further reduce energy use. We have also expanded our waste management and recycling programs. To advance our efforts to become certified through the California Green Business Program, we:

- ▶ Replaced all toilets that use 3.5 gallons per flush or more with high-efficiency models that use 1.6 gallons per flush on our San Jose campus
- ▶ Clearly labeled all storm drains to alert the public that water flows to the bay and there should be “No Dumping!”
- ▶ Eliminated the use of Styrofoam cups
- ▶ Helped employees increase the amount of waste being recycled and composted by adding separate containers and signage for correct use
- ▶ Developed the “Purple Pipeline” to allow employees to exchange and/or donate gently used goods in order to promote reuse
- ▶ Used technology to automate business processes and reduce waste streams
- ▶ Engaged employees about green practices through awareness-building events including, for example, battery disposal drives, a sustainability film series, and a bike-to-work day



Additionally, our new Bayshore Customer and Operations Center, which opened in 2017, is LEED®-certified through Green Business Certification, Inc., as set forth by requirements of the U.S. Green Building Council. The focus on sustainability extends outdoors, with a low-water-use demonstration garden and display to help residents develop their own landscapes. Similarly, we install native, water-efficient landscaping at our facilities and in our communities company-wide.

Reducing our footprint on the environment extends to our fleet as well. Where feasible, we continue to replace aging vehicles with environmentally friendly models, and 20% of our non-field service vehicles are now hybrids. Additionally, we installed our first electric vehicle chargers

in our Bayshore District and San Jose campus in 2018, and they are now available for employees and the public to use. We will continue to evaluate opportunities in other service areas. Finally, we used 367,700 gallons of fuel for our trucks and other fleet vehicles in 2017, generating an estimated 7.5 million pounds of carbon emissions.

FUEL USE IN 2017	GALLONS CONSUMED	ESTIMATED CARBON EMISSIONS (LBS.)
Unleaded Gasoline	282,900	5,556,156
Diesel	84,800	1,897,824
<b>Total</b>	<b>367,700</b>	<b>7,453,980</b>

## CONCLUSION

Since our founding more than 90 years ago, we have worked hard to do the right thing for our customers, communities, employees, stockholders, and environment. It doesn't end here; in the coming years, we will continue living our purpose and being a responsible corporate citizen. If you have any questions about our 2017-2018 corporate citizenship report, please contact us at:

**(408) 367-8200**

**(800) 750-8200 toll-free**

**[infoGO@calwater.com](mailto:infoGO@calwater.com)**



# LIVING OUR PURPOSE



**California Water Service Group**

1720 North First Street  
San Jose, California 95112  
(408) 367-8200

[www.calwatergroup.com](http://www.calwatergroup.com)