

CEO MESSAGE

CUSTOMERS

COMMUNITIES

EMPLOYEES

SHAREHOLDERS

ENVIRONMENT

# Committed

to doing the right thing



California Water Service Group  
2013-2014 Corporate Citizenship Report



QUALITY. SERVICE. VALUE.



# A Message

## from the President and CEO



Yogi Berra once said, “It ain’t the heat. It’s the humility.” Those words sure ring true when it comes to the water utility industry. For decades, we have worked tirelessly to provide the lifeblood of our communities. We have secured water from the best available sources, treated and tested it to make it safe, built and maintained the systems of wells, pumps, and pipes needed to get the water where customers needed it, and assisted customers with both routine services and emergencies. But we’ve done all this silently and behind the scenes. That’s why most people fail to recognize the true value of the service we provide. It isn’t because we have failed to perform, it’s because we have performed so well. In short, “It ain’t the heat. It’s the humility.”

That’s why I am so pleased that we are taking this opportunity to share our commitment to enhancing the quality of life for our customers, employees, stockholders, and communities. This may sound like a lofty aspiration, but it is our purpose, serving as a compass in both our everyday work lives and our long-range planning. For us, good corporate citizenship means fulfilling our purpose and living our core values—integrity, service, value, health and safety, corporate citizenship, and respect and collaboration.

You will see our purpose and core values reflected in all of the programs and initiatives described in this report. Do high-quality water and excellent service at affordable rates enhance our customers’ quality of life? Absolutely. Do charitable activities and environmental responsibility enhance the quality of life in our communities? Definitely. Do a safe and satisfying work environment and competitive benefits enhance employees’ quality of life? You bet. Does transparent corporate governance and prudent fiscal management enhance stockholders’ quality of life? Sure.

I couldn’t be more proud of this company and the positive impact it has on its key stakeholders. For decades, we’ve been working silently and behind the scenes doing the right things. Looking ahead, we’ll need to continue to improve the way we track and communicate what we’re doing in a way that clearly demonstrates our purpose and core values, which in turn demonstrate the true value of the service we provide.

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*





**Committed**  
to doing the right thing for our customers



### Water Quality

We don't take our responsibility for providing safe water to our customers lightly. In fact, we consider protecting public health and safety to be our highest priority. We are pleased to report that in 2013, we met every state and federal standard set to protect public health.

We also continued work related to the new California **standard for chromium-6**, which became effective July 1, 2014, with a compliance testing deadline of December 31, 2014. In 2012, in anticipation of the new standard, our team of water quality experts continued investigating potential treatment methods to identify the most cost-effective approach to meeting the new standard, which will require treatment at all of the wells in our Dixon and Willows districts, as well as the wells in our Salinas District's Las Lomas and Oak Hills systems. Despite these efforts, compliance with the new standard will have a significant impact on rates in affected districts.

Beyond chromium-6, our state-certified water quality laboratory began conducting water quality tests on a new **gas chromatograph/mass spectrometer/mass spectrophotometer system** capable of detecting constituents at levels as low as two parts per trillion in March 2014. This new equipment, which is certified by the Environmental Laboratory Accreditation Program (ELAP), is expected to reduce outside laboratory fees by \$100,000 annually by enabling additional tests to be conducted in-house. These are savings that will be reflected in customers' rates.

In California, we test **68,000** samples per year in house,  
or **262** per day, for a total of **417,663** tests each year.

California Water Service Company's (Cal Water) laboratory operations are certified by ELAP. To maintain this rigorous certification, all of our scientists must pass blind-study proficiency tests each year for every water quality test performed. Our state-of-the-art lab, which is certified to perform analyses in microbiology, inorganic chemistry, toxic chemical elements, organic chemistry, and radiochemistry, currently tests for 109 separate contaminants.

In early 2014, we installed 16 large air diffusers in our Bear Gulch Reservoir to pump air into the lake, which keeps algae from growing and hindering the treatment process. This effort to protect our source water also reduces the amount of treatment needed to improve taste and odor. This innovative project, which originated with a Continuous Improvement team, is an example of how the Continuous Improvement process works to make us leaders in the industry, as a member of our water quality team was subsequently tapped to coauthor a manual on aeration. The manual, M-64, will be published by the American Water Works Association in 2014.

To ensure that the high-quality water we deliver is not compromised in the distribution system, Cal Water has a robust cross-connection control program in place. Cross-connection control is critical to ensuring that activities on customers' properties to do not affect the public water supply. In 2013, our 11 cross-connection control specialists ensured that **backflow assemblies** were installed on more than 1,870 service connections where they had identified concerns. Currently, our cross-connection control team is in the process of performing a comprehensive assessment of all non-residential connections.

### Customer Service

Providing water that meets all federal and state water quality standards is only part of the equation for us, and we work diligently to ensure that we are providing equally high-quality service to our customers. We measure our success in providing excellent customer service through key performance indicators (KPIs) that are not just gauged internally, but also reported to the California Public Utilities Commission (CPUC) each year as part of General Order 103.

In California, although the CPUC allows us a four-hour service appointment window, we strive to provide a two-hour window to our customers. In 2013, of the 22,163 service appointments scheduled, we reached our two-hour window 97.8% of the time. Other 2013 highlights include:

- Of the 179,377 customer-requested work orders generated, 99.7% were completed within the required time period.
- Less than one-half of 1% of bills generated were inaccurate, even better than the 0.56% we achieved in 2012.
- As in 2012, 99.9% of payments were posted accurately, and 100% of customer bills were mailed within seven days of the meter being read.
- The total number of complaints reported from the CPUC's Consumer Affairs Branch was 0.011% of the 477,267 customer connections in the state.

Beyond General Order 103, we measure additional KPIs for customer inquiries and service calls to monitor our response times and ensure customer satisfaction.





83%

of all testing is done in house. There are



88

primary water quality standards,



17

secondary standards, and



30

action/notification levels.

## With Mobile Workforce

In 2013:

- Employees were on site for after-hours emergency callouts within one hour 99.5% of the time, better than 98% achieved in 2012.
- Customer inquiries were handled satisfactorily by the first Customer Service Representative 98% of the time, up from 97% the previous year.

Our customers' opinions are important to us, so we are currently developing an enhanced customer survey process. By the end of 2014, we will generate a phone or email survey for every customer contact.

Another key customer service enhancement is our newly redesigned web site, which offers a number of self-service options and enhanced online billing capabilities. With the new site, introduced in 2013, our customers can interact with Cal Water at their convenience, 24 hours per day, seven days per week. By the end of 2013, 23% of our customers had enrolled in e-billing, up from 21% in 2012 and 12% in 2008.

In 2013 and 2014, we expanded our Mobile Workforce program to six more of our service areas. The program, launched in 2010 and first piloted in two districts, sends work orders prioritized by route to computers in our field representatives' vehicles, which reduces time and gas spent driving to various locations and allows us to respond to customer service requests more quickly. The program also improves efficiency for our Customer Service Representatives, because notes made in the field are transferred automatically into our customer service



-----field representatives complete **20%** more service requests per day.

database. Besides eliminating redundant data entry, this enables Customer Service Representatives to receive updated information in real time to assist customers better. With our eight largest districts now using the program, 79% of our customer base is now supported by Mobile Workforce. In these districts collectively, customer field activity efficiency has increased 20%, meaning our field representatives are able to complete 20% more of their service requests every day. We expect to roll out the program to our remaining districts by the end of 2015.

### Affordability

With economic conditions still difficult for many of our customers and communities, Cal Water has continued to seek ways to help. In July 2014, we were proud to introduce our new **Cal Water Cares** hardship grant program. Through this program, customers facing hardships are eligible to receive grants of up to \$200 each to help pay their bill. Dollar Energy Fund, one of the largest hardship fund organizations in the United States, is administering our program, which is funded by Cal Water shareholders, not ratepayers. We are partnering with local community-based organizations, such as the Salvation Army, which will help customers apply for grants and verify that eligibility criteria are met.

Additionally, we have a **Low-Income Rate Assistance (LIRA)** program in place for all customers who meet low-income guidelines. Through LIRA, customers can

receive a discount of up to 50% off of their service charge each month on their water bill.

All customers, regardless of whether they are on LIRA, will soon be able to take advantage of a balanced payment plan option on their bills, so their bills will be more predictable and easier to manage. We expect to roll this option out to our customers by the end of 2014.

We are the first investor-owned water utility in California to implement a Rate Support Fund (RSF) to assist customers who live in areas where the costs of providing safe, reliable water service are substantially higher than average. The RSF provides a discount to each customer in our Kern River Valley, Redwood Valley, and portions of our Antelope Valley districts through a subsidy supported by all other customers in the state.





**Committed**  
to doing the right thing for our communities



### Community Support

Our commitment to our customers extends beyond the faucet. We are committed to improving the quality of life in the communities we serve. In 2013, we **contributed nearly \$700,000** from our shareholders to charitable organizations in our California, Hawaii, Washington, and New Mexico service areas. Just a few of these organizations and programs include:

- Elite Service-Disabled Veteran-Owned Business Network, which helps service-disabled veterans establish and grow their own businesses, in California
- Maui Food Bank and the Food Basket in Hawaii
- Permission to Start Dreaming Foundation, which supports organizations that help soldiers recover from war and adjust back to life at home, in Washington
- Boys & Girls Club and Food Pantry in New Mexico
- Operation Gobble, which feeds families in need through more than 100 charities

Our employees also gave time and effort to a wide variety of community organizations, including local Chambers of Commerce, Rotary Clubs, and Kiwanis Clubs. But it doesn't stop there; for example:

- Our Westlake District employees have personally made well-balanced lunches and delivered them to Lutheran Social Services, a local nonprofit, for distribution to the homeless every month for the past 20 years.
- In our Chico District, employees are part of the Butte County Water Technical Advisory Committee, Noon Exchange Club, Piscatorial and Convivial Society,





invested **\$116 Million** in infrastructure.

Breakfast Exchange Club, Lyons, Soroptimist, Relay for Life, and Bridging the Gap Water Walk.

- Our Marysville District boasts two long-time volunteer firefighters.
- Our Los Altos District helps sponsor its annual Los Altos Hills 5K/10K, Los Altos Business Expo, Los Altos History Museum water exhibit, and Earth Day celebration.
- In addition to being a headlining sponsor of the annual Wiliwili Festival in Waikoloa, our Hawaii Water Service Company (Hawaii Water) employees host a booth to educate participants about water conservation and provide conservation items and devices.
- In Valencia County, N.M., where about 80% of New Mexico Water Service Company's (New Mexico Water) customers reside, our employees play a leadership role in the Greater Belen Chamber of Commerce's annual Rio Abajo Becker Street Festival, which is open and free to the public and the largest fundraiser for the chamber and its scholarship fund.
- Our Washington Water Service Company (Washington Water) employees host a watering station and pass out water to runners in the annual Race for a Soldier marathon, organized by the Permission to Start Dreaming Foundation.

While we value our tried and true efforts, we continuously seek new ways to benefit our communities. In July 2014, we introduced a **scholarship program** for students who live in Cal Water's service areas and are enrolling in undergraduate

study at an accredited two- or four-year college or vocational-technical school. Administered by Scholarship Management Services, a 501(c)(3) non-profit organization, Cal Water's scholarship program is funded by Group's shareholders, who are providing up to \$120,000 in awards for the 2014-2015 school year.

#### Water System Reliability

Of course, these important philanthropic efforts are secondary to our responsibility for providing the reliable water supply needed for public health and fire protection. Over recent years, we have invested in larger-diameter ductile iron pipes, which have a longer lifespan and are made mainly of recycled materials, or PVC pipes, which do not rust or corrode, for many of our main replacements. We have a systematic main replacement program to replace aging water mains before they become unreliable or fail. On average, we have been replacing 0.3% of pipelines in our service areas each year. Going forward, we plan to increase that amount to 0.5-0.75%.

In 2013, we also installed two emergency interconnections, one in our San Carlos system with the Mid-Peninsula Water District, and another in our Westlake District, with Oak Park Water System. This brings our total number of emergency interconnections with other agencies or cities to 93. We have an additional emergency interconnection planned in Westlake later this year with the City of Thousand Oaks. And in our San Mateo system, we are installing additional valves



## We have a supplier diversity program in place to ensure that we have an open and competitive bidding process for the goods and services we purchase.

in 2014 to be able to move water from one area to another if water supplies from our wholesale supplier are interrupted.

### Fire protection

Reliability of our infrastructure is also critical when it comes to fire protection. We have more than 45,600 fire hydrants in our service areas that we own, maintain, or both own and maintain. In most areas, we both own and operate the fire hydrants, inspecting and maintaining them in accordance with Uniform Fire Code regulations from the National Fire Protection Association to ensure reliability when firefighters need them most.

Our Bear Gulch Reservoir, which can hold up to 149 million gallons of water, also served as a water-drop location for local fire units for the first time during a major grass fire in Woodside, Calif., in July 2014. That fire, which began when a tree fell and brought down a 60,000-volt power line, interrupted electricity to the area, including seven of our pump stations and our field office, for several hours. While our pump stations continued to operate properly on back-up generators, we invited Cal Fire's helicopter unit to pull water from our reservoir to contain the fire. Four water drops later, firefighters brought the fire under control.

### Supplier Diversity

We have a [supplier diversity program](#) in place to ensure that we have an open and competitive bidding process for the goods and services we purchase. The goal of



the program is to ensure that local woman-, minority-, and disabled veteran-owned business enterprises (WMDVBEs) have the opportunity to bid on our projects, which enables us to get the best services at the best prices in order to provide the best service to our customers, all while achieving spending targets set by the CPUC. In 2013, our spending with qualified WMDVBE suppliers was

18.7%, or \$21.4 million, of our total spending, which is an increase of nearly 100% over our spending with diverse suppliers in 2012. By focusing our efforts on outreach and business expos, we increased the number of qualified diverse suppliers in our database by 64.3%, widening the pool of potential vendors for our employees who make purchasing decisions. Together, those employees made purchases from 113 certified diverse suppliers, an increase of 63.7% from 2012.

But we didn't stop there. Cal Water employees participate in an average of two outreach events per month, during which vendors have the opportunity to discuss their products or services with our decision-makers to determine what local or company-wide opportunities may be available for them. Additionally, as a member of California Water Association, we support its Mentor-Protégé Program, where diverse businesses are coached and network to increase their capabilities and opportunities. We coached 10 minority-owned businesses in 2014 to become certified by the CPUC; this effort includes offering an overview of the program and its benefits, assisting with the certification process, and providing post-certification marketing to the 32 participating utilities.

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Committed  
to doing the right thing for our employees

### Employer Of Choice

In 2014, Cal Water was named a **Top Workplace** in the Bay Area for the third year in a row by the Bay Area News Group, which is especially gratifying because the Bay Area is home to some of the best-known technology and research companies in the world. The award was given based on survey responses from Cal Water's employees in our San Jose headquarters and our Bayshore, Bear Gulch, Los Altos, and Livermore districts. The rankings are based on employee responses about the direction of the company; connection with the company; execution of goals and objectives; pay and benefits; individual job roles; and management. For the first time, we extended the survey to employees outside the Bay Area to measure engagement throughout the organization, and were pleased to find that results were just as positive outside the Bay Area. We are proud of the excellent relationships we have with the two unions that represent some of our employees, the Utility Workers Union of America, AFL-CIO and International Federation of Professional and Technical Engineers, and believe they reflect our efforts to be an employer of choice in our industry.

### Safety

Part of being a responsible employer is ensuring the safety of our employees, whether in the field or out in their everyday lives. In 2014, Cal Water's Safety Department revamped the Injury/Illness Prevention Program, which addresses issues such as management commitment, safety communication, compliance





Our goal is to decrease injuries and illnesses by 20%, from a TCIR rate of 8.90 in 2013 to 7.12 by year-end 2014.

with safe work practices, and record-keeping, among others. The team is also updating all 50 of the safety training programs that will be conducted throughout the year at safety meetings and through instructor-based training and our online learning management system.

We measure the success of our safety program by tracking our Total Case Incident Rate (TCIR), which is a calculation reported to the Occupational Health and Safety Administration that takes into account the total number of recordable injuries or illnesses and the total number of hours worked by employees for a specified period of time. Our goal is to decrease injuries and illnesses by 20%, from a TCIR rate of 8.90 in 2013 to 7.12 by year-end 2014. So far, our efforts are paying off; as of July 2014, our TCIR rate was at 7.1.

Also on the safety front, we have enhanced security and added ergonomic workstations in our Customer Centers and began the process of reinstating District Safety Committees to identify any potential hazards and take corrective actions. On a company-wide level, our safety team has been coordinating job hazard analyses to evaluate potential risks of tasks performed by employees. The efforts of our Safety Department are part of the company's commitment to the safety, health, and well-being of all of our employees, those involved with our operations, and the communities in which we work.

#### Excellent Benefits

At California Water Service Group, we are committed to attracting and retaining skilled professionals. Our **employee benefits** package helps us stay competitive in the marketplace. In addition to our 401K savings plan matching program and medical, dental, and vision insurance, in 2014, we were able to offer enhancements to employees' flexible spending accounts and prescription coverage.

#### Professional Development

Our employees continue to develop after they come on board. In addition to providing continuing education opportunities locally and offering tuition reimbursement, in 2011, we implemented a successful Management Trainee Program (MTP) to guide employees who want to grow in their careers with the company. MTP provides experience and mentoring to selected employees, and enables them to develop leadership and management skills to prepare them for future management positions within field operations and customer service. Of the nine MTP participants since the program's inception, 67% have been promoted into permanent management positions within the company. We are currently selecting applicants for our 2014-2015 MTP class.

Our MTP participants are not the only employees making a difference; at Group, we are "one team." And all 1,100-plus employees on this team are involved in



# 1,125 employees

at year-end 2013;  
all have opportunities for ongoing development.

our continuous improvement approach to the business, where small teams work together to identify opportunities to improve efficiency or service. In addition to learning valuable analytical, public speaking, and team-building skills, the program gives employees the opportunity to improve the way we do business.

A few examples of teams that received approval on their projects in 2013 and 2014 include:

- A Bakersfield District team improved response time for field employees responding to field activities and work orders by having GPS units installed in each truck. This also eliminates lost time for both field employees and Customer Service Representatives due to any lack of street or address location information. We estimate that, when installed in all vehicles, we will save about 2,000 hours per year in employee labor and provide those resources to handle other field activities and work orders.
- In East Los Angeles, a team had transducers installed in wells and connected the readouts to our SCADA system, which then received water levels continually and electronically, eliminating the manual, time-consuming monitoring process conducted by Certified Pump Operators. We expect to save about 116 hours per year in labor, enabling employees to address other maintenance issues.
- In our Livermore District, a team developed and implemented a hydrant maintenance schedule and process to address leaking hydrants and eliminate

the potential for missing or unavailable parts when needed. This also reduces or eliminates water lost from leaking hydrants.

- At Hawaii Water, a team installed five solar-powered automatic gate openers for multiple series of exterior gates on access roads to wells and water storage facilities. In an emergency, manually opening and securing each gate prior to reaching the next gate and repeating the process would be very time-consuming. The new solar-powered openers are expected to save \$4,000 per year in labor.
- A Washington Water team installed bollards, a handicap parking stall, lined parking stalls, and created one-way traffic routing through the Customer Center parking lot to improve and add parking spaces, plus make the parking lot safer for customers and employees.

Outside of Continuous Improvement, we worked with our geographic information system (GIS) developers to customize an innovative Underground Service Alert (USA)/DigAlert locating app for the iPad to improve efficiency for our operators. This new mobile GIS tool, rolled out in all of our California districts in the second half of 2014, feeds USA/DigAlert tickets to Locators in the field, displays the location on a map that includes our water facilities, provides access to more than 40,000 as-built drawings, and manages photos of utility paint marks. We expect this tool to increase our efficiency and reduce driving time. Documentation features will also help reduce our risk should claims due to locating arise.





**Committed**  
to doing the right thing for our shareholders

»» Employees, customers, and stockholders are like the proverbial three-legged stool.

Our employees' efforts to increase efficiency and improve service benefit customers and stockholders alike. Employees, customers, and stockholders are like the proverbial three-legged stool—they are all equally important to the chair's stability. And stability is what our stockholders expect from us.

Meeting stockholder expectations means managing finances prudently, investing in water system infrastructure, proactively addressing rate and regulatory issues, growing strategically, and mitigating risks.

Starting with the bottom line, at year-end 2013, our 20-year total stockholder return was 436%, putting us ahead of the S&P 500. We increased the **annual dividend** for the 47th consecutive year. And we received a decision on **California's 2012 General Rate Case**, which allows us to recover prudently incurred expenses and authorizes us to invest an additional \$447 million in water system upgrades. Because our stockholders earn a return only on investments in capital projects, they benefit along with customers when we diligently upgrade the pipes, pumps, treatment facilities, storage tanks, and wells that enable us to continue providing a safe and reliable water supply.

Our 20-year total stockholder return was **436%**.

We increased the annual dividend for the **47<sup>th</sup>** consecutive year.

Risk management and strategic growth are also key to providing **stockholder value**. We continue to identify and mitigate risks through our Enterprise Risk Management Program, and apply rigorous criteria to growth opportunities in order to make decisions for the long term.

No corporate citizenship report would be complete without addressing **corporate governance**, and we are pleased to note that we have a strong corporate governance rating from one of the largest shareholder voting advisory firms.

To ensure best practices, we have:

- A code of ethics and insider trading policy for the board, management, and employees.
- Clawback and anti-hedging policies for executives.
- A separate Board committee for risk management.
- An enhanced Board role for our independent lead director.
- An annual “say on pay” stockholder vote on executive compensation.

- Majority voting for electing directors.
- Board and Committee charters that ensure proper oversight.
- An effective system of internal controls. The company has never had a material weakness identified and reported by its independent auditors, and it currently has no significant deficiencies in financial reporting controls. Our Internal Audit Department is staffed by highly competent, experienced professionals.
- Multiple channels for employees to report concerns. Employees may report concerns to management or through the quarterly questionnaires conducted in accordance with Section 302 of the Sarbanes-Oxley Act.



**Committed**  
to doing the right thing for our environment



Being stewards of a precious natural resource, we operate our business in a way that reflects our respect for the environment. In 2013 and 2014, we undertook a number of projects and measures to increase sustainability of our resources and environment.

#### Groundwater Basin Management

Most of the groundwater we pump to meet customer demand comes from legally or collaboratively managed sources. Basins, such as the west and central basins of Los Angeles County, that are managed by a court-appointed watermaster or groundwater management authority ensure long-term reliability by measuring and limiting pumping to safe yield and actively recharging groundwater through settling ponds or injection wells.

We take a keen interest in new opportunities to manage groundwater for long-term benefits. For instance, Cal Water has partnered with the San Francisco Public Utilities Commission, Daly City, and the City of San Bruno on a regional groundwater storage and recovery project, which will augment the local supply of water in times of drought. During years of normal or heavy rainfall, additional surface water will be delivered to the partner agencies to reduce the amount of



2,580 conservation kits distributed for an annual savings of

11,352,000 gallons.

groundwater being pumped from the South Westside Groundwater Basin in San Mateo County. Over time, the reduction in pumping is expected to result in an increase in water levels and up to 60,500 acre feet of stored water. Then, during dry years, 16 wells, stations, pumps, and pipes will extract the stored groundwater at a rate of up to 7.2 million gallons per day. This project will sustain supplies during a dry period of up to 7.5 years, and the water could also be tapped during emergencies such as a major earthquake. Currently in the design phase, we expect construction to begin by the end of 2014 and be completed by 2017.

Similarly, our long-range planning efforts have enabled us to work proactively to manage the Livermore Valley groundwater basin. For the past 40 years in the Tri-Valley area, our Livermore District and other local water agencies have collectively kept groundwater production to a sustainable level. This effort paid clear dividends in 2014, when drought curtailed other sources of supply in the area. We also work with the groundwater management authority in Los Angeles County to mitigate seawater intrusion, which might otherwise degrade the groundwater resource.

#### Recycled Water

We currently provide recycled water to selected customers in our Rancho Dominguez and Westlake districts. In 2013, we served 2.5 billion gallons of recycled water. In the Rancho Dominguez District, refineries use it for cooling and other plant processes. In our Westlake District, the recycled water is primarily used for irrigation. We continue to seek opportunities to bring recycled water to more of our customers where feasible.

#### Wildlife Protection

Bear Gulch Creek, from which we draw water for our Bear Gulch District customers, also supports runs of steelhead trout, considered to be threatened under the Federal Endangered Species Act. Because the trout had been unable to migrate and spawn due to industry-standard pumping systems, we collaborated with the California Department of Fish and Wildlife and the National Marine Fisheries Service to develop a **fish passage initiative** and operations plan that included minimum bypass flow requirements to protect the fish. In 2013, we installed a concrete weir flow monitor at our diversion to ensure that we were providing an adequate flow for the trout to thrive and move up and down the stream. This supplemented the cone fish screen we installed at the water intake several years



distributed **57,402** sprinkler nozzles

prior. We are now able to draw water from Bear Gulch Creek when the water level is high enough for the fish to continue to migrate.

The second phase of this initiative includes the development of a fish ladder upstream in the same creek. This ladder, expected to be completed in 2016, will maintain minimum bypass flow and contain a series of ascending pools to allow the steelhead trout to move from pool to pool until they are out of the ladder and have a clear path to the bay and ocean. With the ability to migrate upstream and downstream of the intake diversion, the threatened steelhead trout can then repopulate.

We are careful to not impact migratory or nesting birds and other species as well, and have taken steps to adjust the timing of construction projects or reduce our construction footprint. In our Salinas District's Oak Hills system, Cal Water staff learned of the potential presence of tiger salamanders while planning for a new well. With these small creatures considered an endangered species, our contractors were specially trained to safely complete construction of the well, which was put into service in November 2013. And in Stockton, we have scheduled a new well construction project to begin at the end of 2014, specifically after nesting season to ensure that burrowing owls will not be disturbed.

#### Environmental Standards

Like the water we deliver to customers, the water that is discharged from our facilities must meet strict environmental standards. At the Hawthorne Treatment Plant in our Rancho Dominguez District, the manganese level in water to be discharged was higher than the permitted 50 micrograms per liter. To hire an engineering consulting firm to design and build a solution would have cost upward of \$200,000, so our treatment plant team thought outside the box and custom-engineered a solution with materials they already had on site. Employees built a drum filled with greensand to filter out the excess manganese and connected it to the tank, so that the water could be filtered before being discharged into the storm drain. Not only did this solution bring the district into compliance with the standard, it saved the company hundreds of thousands of dollars in the process.

In January 2014, Phase 1 Enhanced Vapor Recovery Retrofit regulations for above-ground gasoline storage tanks in California became more stringent. By July 1, 2014, tanks with greater than 18,000 gallons of gasoline output per year were required to have a special paint applied to control emissions. Of Cal Water's 20 gasoline tanks in the state, six were impacted by the tighter rules, and all six were painted and in compliance by June. As standard spill prevention procedure, we also use double-walled containment for generator fuel storage and treatment tanks, and require any contractors to also contain fuel on site.

for an annual savings of **59,812,884** gallons.

On our steel water storage tanks, we began using more environmentally friendly coating systems for our company-wide interior tank coating maintenance program. These new coating materials average 85 grams of solvents per liter, below the 250 grams per liter limit set by the California Air Resources Board and 100 grams per liter threshold from the South Coast Air Management District for southern California. We expect to recoat 10 welded steel tanks, from the smallest at 250,000 gallons in our Stockton District to the largest at 5 million gallons in our Bakersfield District, using the new system throughout our service areas by the end of 2014; however, we plan to apply this to all welded steel tanks company-wide as they need to be recoated. Using the new coating material and process, we have reduced the volatile organic compounds released into the air by 75% over the existing amount on a typical interior tank coating project.

We adhere to best management practices for all of our infrastructure construction projects, and carefully study potential environmental impacts when designing any infrastructure project. At a minimum, we conduct an initial study to comply with California Environmental Quality Act requirements and assess whether any significant impacts may exist, prompting either a negative declaration or mitigated negative declaration, or warranting an environmental impact report.

At our New Mexico subsidiary, with the increased use of low-flow toilets and other indoor conservation methods has come an increase in nitrogen levels in

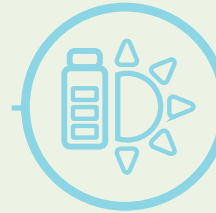
wastewater going into our Rio Del Oro treatment plant. Nitrogen levels in the treated effluent that is discharged must be below 10 mg/L. To ensure compliance with this standard, we are upgrading the air diffuser system, which is key to removing nitrogen. When completed by the end of 2014, the improvements are also expected to lower power costs.

Also in 2014, New Mexico Water will install a large irrigation system on the site where the treated effluent is currently discharged through manmade springs. This project will enable the subsidiary to distribute the treated effluent over a larger surface area and reduce or eliminate the possibility of it reaching the shallow, underground aquifer below. It will also enable us to accommodate future growth, as the current method for discharging treated effluent is limited by the amount that can be absorbed back into the ground.

#### Greener Fleet

Being environmentally conscious extends to every part of our business, and that includes our fleet, which logs a collective 7 million miles each year in the field. We have increased our use of hybrids and flex-fuel vehicles, and began piloting use of a compressed natural gas (CNG) utility truck in our Bakersfield District in 2013. In addition to our CNG truck, our fleet currently includes 36 diesel trucks, which represent the majority of the larger trucks we use, and 33 gas-electric hybrids, to lessen our dependence on petroleum.





### Energy Efficiency

Since 2011, Cal Water has 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 energy providers such as Pacific Gas & Electric Company (PG&E) and Southern California Edison (SCE) ask for a reduction in energy use. This program reduces both peak energy stress on the electrical grid as well as greenhouse gas emissions. These management activities ultimately translate into cost reductions that are passed on to our customers. We are currently participating in the EnerNOC program at selected stations in our Bakersfield and East Los Angeles districts.

We also have a team establishing a process to determine the unit cost of power for well production, so that we can operate the lowest-cost source first when feasible. We are monitoring the energy efficiency of our production facilities and, by the end of 2014, will pilot continual efficiency monitoring using SCADA production and PG&E SmartMeter™ data. The system will continually monitor energy consumption compared to water production (kilowatt-hours per million gallons) to help identify the lowest-cost sources to utilize first; it will also continually monitor wire-to-water efficiency to determine when inefficient pumps should be replaced. As part of this pilot project, we will also install well transducers to

provide accurate, automatic water levels to the SCADA system and save labor costs currently incurred to manually measure the water levels. When rolled out full-scale, we expect this project to save \$400,000 in power costs alone each year. Again, these savings are passed through to our customers.

At the same time, we have worked to reduce power costs by analyzing energy tariffs with PG&E and SCE for each of our facilities, so that we can optimize the way we run our facilities. For example, we pursued a lower rate structure for stations that are operated less frequently or during off-peak hours. We expect energy tariffs with PG&E, now optimized, to save \$1.6 million, or 7% of total power costs, over the next year. We continue to study our facilities company-wide to seek even greater savings and rate structures that benefit our customers the most.

Reducing traditional, electrical power use isn't the only method we are pursuing to achieve maximum energy efficiency. In our Rancho Dominguez District's Palos Verdes system, a service area that sits atop a hill on a peninsula, we have begun installation of a hydraulic turbine that will recover energy as water flows downhill to the coastal side of the service area. With the piping completed and electrical work expected to be finished by the end of 2014, we plan to begin operating the turbine in 2015. Essentially a pump running in reverse, the turbine will be able to instantaneously recover up to 325 kilowatts, with an estimated annual power



*continued from page 18 >>*

generation of 2 million kilowatt-hours. At 14 cents per kilowatt-hour, this equals about \$150,000 per year of deferred energy use.

Additionally, our Awaiakeakua Wastewater Treatment Plant (A-Plant) began using power from a 100-kilowatt wind turbine owned by HWSO1 Wind, LLC on Hawaii's Big Island in January 2013 to supplement electric power we purchase. This has enabled our Hawaii operation to reduce both high power costs and its carbon footprint.

While we pursue new ways to increase energy efficiency, previously implemented projects continue to work for us. Solar panels installed at our Chico Customer Center in 2010 are now generating 87% of the Customer Center's electric use, better than the company's expectation that it would generate 74% of the power. In 2013 alone, the 405 panels generated 154,426 kilowatt-hours of energy, saving more than \$24,700 in electricity costs for the Customer Center. The energy generated in 2013 was the equivalent of 237,816 pounds of carbon dioxide averted from the atmosphere, or 1,544,257 hours of 100-watt incandescent lightbulb use.

### Climate Change

Climate change could mean more extreme weather events for our service areas, such as more frequent or severe droughts, heat waves, and storms. Increasing average temperatures would also mean more California precipitation falling as rain and less as snow, as well as less overall runoff due to moisture evaporating from soil. The Sierra Nevada snowpack, which provides 65% of California's water supply, is predicted to be significantly lower by 2050. More rain and less snow will mean more runoff in the winter months but less in spring and summer, which could further stress water demand in the hotter, drier months.

In 2013, we conducted a risk assessment report that included studies on regional impacts of climate change on water supply for each of our service areas. Using a range of temperature and rainfall outputs from Global Climate Circulation Models, we are assessing possible effects on long-term supply and on both single-year and multi-year, minimum and maximum, water demand. Existing Cal Water district demand forecasts serve as a starting point for the new forecast models.



Company-wide, in 2013, our conservation programs saved **365,767,747** gallons per year, or **3,688,633,320** gallons over the devices' lifetime.

### Conservation

We are committed to helping our customers **use water efficiently**, so that our limited freshwater resources can be put to their best use. To that end, we were the first regulated water utility in California to implement a Water Revenue Adjustment Mechanism, which decouples sales from revenue to allow us to achieve aggressive conservation targets without affecting our financial stability.

We also have an industry-leading water conservation program that, over the last two years, included:

- Residential rebates on high-efficiency clothes washers, high-efficiency toilets, and Smart Irrigation Controllers
- Commercial rebates on high-efficiency clothes washers, toilets, and urinals; rotating sprinkler nozzles; Smart Irrigation Controllers; and spray bodies with integrated pressure regulation and check valves
- High-efficiency sprinkler nozzles at no charge
- Residential conservation kits with high-efficiency showerheads, kitchen and bathroom faucet aerators, leak detection tablets, and shut-off hose nozzles
- Direct-installation programs that included toilets and high-efficiency bathroom devices
- Residential indoor and outdoor water use surveys

- A school education program and materials
- Informational fact sheets and how-to videos
- Local water conservation reports

In 2013, these programs company-wide saved 365,767,747 gallons per year, and we expect our customers to save 3,688,633,320 gallons over the devices' lifetime.

These savings helped our California districts move closer to their 2015 and 2020 targets set to meet the 20x2020 water reduction requirements as set forth by Senate Bill X7-7 in 2009. By the end of 2013, eight of our districts (Bakersfield, King City, Livermore, Oroville, Salinas, South San Francisco, Visalia, and Westlake) were already below their 2015 goal, and another 12 districts (Antelope Valley, Chico, Dixon, East Los Angeles, Hermosa-Redondo, Kern River Valley, Mid-Peninsula, Marysville, Redwood Valley, Selma, Stockton, and Willows) were below both their 2015 and 2020 targets.

In April 2014, Cal Water filed Rule 14.1, our "**Water Conservation and Rationing Plan**," with the CPUC in response to continuing **drought conditions** across California. Rule 14.1, which became effective the following month, included unauthorized water uses and possible enforcement mechanisms that could be applied to reach needed water use reductions. The prohibited water uses adopted





by the State Water Resources Control Board in July 2014 were already included as unauthorized water uses in our Rule 14.1, so we diligently continued working to achieve compliance by educating our customers via bill inserts; television, radio, newspaper, billboard, and movie theater advertising and public service announcements; targeted direct mail; and additional methods of outreach.

Another state requirement, Assembly Bill 2572, calls for water providers to meter all flat-rate customers by 2025, so that water bills reflect actual water use and to encourage conservation. Since we first began installing meters as part of our flat-to-meter conversion program in 2008, we have converted more than 42,000 customers to meters. We have already completed conversions for all flat-rate customers in our Visalia, Chico, Willows, and Oroville districts.

### Wastewater Reuse

Over recent years, we have taken significant steps toward improving the reliability and operation of our wastewater treatment systems at Hawaii Water. In June 2013, we completed construction of our Kamakoa Wastewater Treatment Plant (K-Plant), which treats up to 0.2 million gallons per day (MGD) using moving-bed biofilm reactor (MBBR) technology for Waikoloa School and an affordable housing project in Waikoloa Village. It can be expanded up to 0.4 MGD. The K-Plant joins

our A-Plant, which was completed in 2010 to treat up to 0.53 MGD using MBBR technology to serve the southern portion of Waikoloa Village. The A-plant can be expanded up to 0.8 MGD.

These two plants join our upgraded Pukalani Water Reclamation Facility on Maui, which was the first wastewater treatment plant in the state to use state-of-the-art flat-plate membrane bio-reactor filtration (MBR) technology and produces R-1 recycled water, the highest-quality reclaimed water defined by the Hawaii State Department of Health and which can be used without restriction for irrigation. It also joins our Waikoloa Beach Resort wastewater treatment plant on Big Island, which was built using flat-plate MBR technology to supply up to 1 MGD of R-1 recycled water to two golf courses. We completed construction of an effluent pipeline, the final section of the Waikoloa Beach Resort plant, in March 2014 to move any water that is less than R-1 quality across Queen Kaahumanu Highway for discharge deep underground.

### Non-Revenue Water

Baby Boomers might like to think that 50 is the new 30, but the same doesn't hold true for water system infrastructure. According to the Value of Water Coalition, the average age of water main infrastructure in the United States is 47 years, and



Maintaining water loss of less than 10% is the accepted standard in the industry, but Cal Water is currently experiencing only 6% water loss company-wide.

virtually all of these aging pipes are unseen underground, which means pinpointing water lost due to leaks can be quite challenging. That is one reason we proactively maintain and upgrade our infrastructure and follow a systematic main replacement schedule – to ensure that our water systems remain reliable. While this gives us confidence that unknown leaks are kept to a minimum, we have begun auditing our systems by using dataloggers to listen for any unknown leaks that may exist, so that we can proactively repair those leaks and reduce water loss. We are piloting the use of the dataloggers in our Bayshore District and Rancho Dominguez District’s Palos Verdes system.

We have also improved our leak detection capabilities by deploying correlator tools in 2014 to pinpoint leak locations. The tools reduce the excavation area and subsequent street restoration, and allow crews to repair leaks faster than they previously could. Not only does this save precious water, it also saves labor costs.

Non-revenue water, water produced but unaccounted for in customer usage, is a challenge facing water utilities across the country, and maintaining water loss of less than 10% is the accepted standard in the industry. Cal Water is currently experiencing only 6% water loss company-wide. Yet, we strive to reduce that percentage even further. To improve the accuracy of non-revenue water calculations, a team of engineers and electrical-mechanical technicians (EMTs) began testing, calibrating, and repairing or replacing, if necessary, 350 production



meters at the more than 500 active wells we operate. By ensuring the accuracy of meters from production to usage, areas of water loss can be better targeted and addressed. Meters tested and calibrated in the first three months of this project have already improved the accuracy of unaccounted-for water by 1.75 billion gallons per year.

#### Environmental Responsibility Through Continuous Improvement

Continuous Improvement teams throughout the company select green projects. As previously mentioned, a Hawaii Water team recently had solar-powered remotes installed on access gates in the field, saving time and power. Other teams, for example, have worked to optimize electric use, reduce waste by recycling or composting, make all of the district facilities greener, and turn their Customer Center landscaping into water-efficient demonstration gardens.

# \$383,875

provided in high-efficiency clothes washer rebates,



which will save

# 13,700,700

gallons per year



# 12,869

high-efficiency toilets provided through direct-installation and rebate programs,



which will save

# 156,648,295

gallons per year.



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## Conclusion

While we have worked diligently to be a responsible corporate citizen, our efforts don't end here. In coming years, we will continue our journey to do what's right for our customers, communities, employees, shareholders, and environment. If you have any questions about this report, please contact us at (408) 367-8200 or toll-free (800) 750-8200 or via email at [infoGO@calwater.com](mailto:infoGO@calwater.com).

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500 mL  
± 5%



OUR PURPOSE IS  
TO ENHANCE THE QUALITY OF LIFE  
FOR OUR CUSTOMERS,  
COMMUNITIES,  
EMPLOYEES,  
AND STOCKHOLDERS.





California Water Service Group  
**2013-2014 Corporate Citizenship Report**

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