DWR

SPRING–SUMMER 2016

a magazine from the California Department of Water Resources

CELEBRATING

60 YEARS OF MANAGING WATER

In a March 1963 poster to recruit engineers to help build the State Water Project, the State Personnel Board declared: "These engineering projects are no boom-time enterprises. They are sustained, long-range operations planned to keep pace with the continued growth of the state."

The last 50 years proved the truth of that statement. The State Water Project serves the high-tech campuses of Cupertino, the carrot fields of Kern County, the national laboratory in Livermore that employs a small army, and cities from Thousand Oaks to Pasadena to San Diego that long ago outgrew local streams and aquifers. Our project supports hundreds of billions of dollars of economic activity a year, or, put another way, the jobs, neighborhoods, and ambitions of millions of people.

California's big water projects were probably inevitable, given the productive climate and soils in the south state and the flood risk along big northern rivers. But inevitable doesn't mean easy. Those who came before us at DWR overcame daunting engineering and political challenges to build the State Water Project.

Our challenge is outfitting the project for the next generation. We are closer than ever to building north-to-south conveyance in the Delta, something the original architects envisioned but never built, for a variety of reasons. The need for tunnels (once proposed as a canal) increases each year. New intakes on the Sacramento River will better protect fish, giving us more opportunities to move water when river flows are high, which only becomes more important as climate change reduces the Sierra snowpack. New intakes will help us cope with the sea-level rise that will put the existing south Delta pumps at increasing risk and make them ever more difficult to operate.

The builders of the project did not foresee the extent to which their works would be asked to sustain fish and wildlife, besides cities and farms. Increasingly, our challenge is trying to maintain reliability while meeting complex environmental requirements. We need biologists, hydrologists, and ecologists as much as we need engineers. More than ever, we must be skilled at working with people from different agencies and organizations. Uncertainty is inevitable in our work; we must embrace it and adapt, always adapt.

There's no doubt that the State Water Project is a sustained effort, or that it sustains much of the state. Our focus changes, but not the hard work or the vital mission.

—Mark W. Cowin
Director, California Department of Water Resources

DWR magazine

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Secretary for Natural Resources

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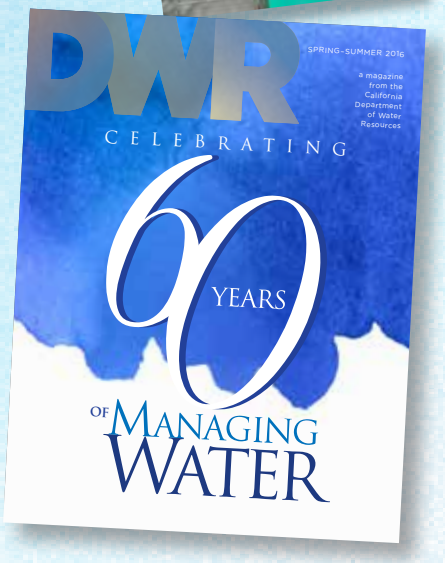
What's INSIDE



DWR Magazine in the last 60 years

Time

By Lauren Hersh

DWR employees from 19 locations moved to DWR's headquarters at the Natural Resources Building in downtown Sacramento. The dedication took place on January 8, 1965.

This July, DWR turns 60 years old. Take a brief journey with us as we look back to its inception and what our world was like 60 years ago.

The year is 1956. Schoolchildren pledge allegiance to a United States flag with 48 stars. Citizens re-elect Dwight D. Eisenhower as President, and former California Governor Earl Warren is Chief Justice of the United States Supreme Court. Goodwin J. Knight is California's Governor, and voters consider 19 statewide ballot propositions in the November election.

Among them is Prop 19, which provides a constitutional amendment that would empower the state legislature to "change, alter and redefine the boundaries of the State . . ." At issue is the boundary between California and Arizona, defined as mid-channel of the Colorado River. The problem is the meandering Colorado creates a meandering state boundary—not very helpful to the administration of water rights, enforcement of fish and game laws and County tax assessors. The ballot measure will pass.

DWR Jobs in Earlier Years

1956
DWR's first department logo


Oroville Project Inspections


Snow Surveying


Telemetering Station's Gauge Inspections

Travel

Nearly 14 million people live in California, where the minimum wage is $1. The post-war economy and focus on education propels college enrollment, one out of every three high school graduates goes to college. At the University of California system, tuition is free for state residents, but there is an $84 "incidental fee." Cost of enrollment at a California State University school is $12.50.

On July 5, the California Department of Water Resources (DWR) comes into being. Following a disastrous flood in December 1955 that killed 64 people and caused $200 million in property damage in Northern and Central California, Governor Knight calls a special session of the Legislature to establish DWR. This single department replaces the State Engineer's Office, the Water Project Authority, the State Water Resources Board and the Division of Water Resources of the Department of Public Works. Water rights are the purview of another new agency—the State Water Rights Board (later the State Water Resources Control Board).

The new Department is organized into three divisions and a district—the Division of Administration, Division of Design and Construction, Division of Resources Planning and a Southern California District. DWR also absorbs the duties of the State Water Board, which would later become the California Water Commission. Governor Knight appoints former State Engineer Harvey O. Banks to be DWR's first Director.

DWR and its distinguished new director have their work laid out—plan, design, construct and oversee the building of the nation's largest state-built water development and conveyance system. It will be several years before the bond to help fund the project is approved by the voters, but in the meantime the groundwork is being laid to support such a massive undertaking.

Today, 60 years later, DWR protects, conserves, develops and manages much of California's water supply including the State Water Project, which provides water for 25 million residents, farms and businesses and is one of the largest state-owned water and power utilities in the world.

Above: In a tunnel for the Western Branch Bridge in Butte County, a crew operates a drilling rig on August 18, 1958. During the Oroville damsite groundbreaking ceremony, the first blast for the construction of the No. 1 diversion tunnel took place on October 12, 1961.

Geological Inspections

Levee Sandbagging

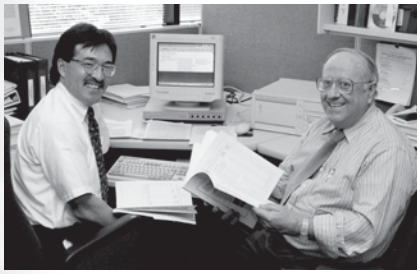
River Gauge Station Logging

Construction Surveying

Memories of Earlier Days

DWR Employees and Retirees Reminisce

By Doug Carlson



Above: Robert Potter, who retired from DWR as Chief Deputy Director, worked in the Jackson Building on 14th and K streets in Sacramento in 1963. **Below:** Senior Engineer Vern Knoop (right), DWR's current employee with longest career at 57 years of service, reviews Bulletin 160 with David Inouye of Southern Region Office.

Tens of thousands of Californians have worked within DWR over the past six decades, and if we could drop their memories —each about the size of a basketball—into the State Water Project, they'd surely fill every foot of its length and all the connecting lakes and reservoirs. Here are some of those memories:

Robert Potter, 42-year DWR employee who retired in 1998 as Chief Deputy Director:

"I started with DWR in June 1957 as an Engineering Aid II. My total stint with DWR was mostly in Sacramento but included 11 years in Red Bluff and one year in Los Angeles.

"In the 1950s, long-term travel per diem was $4.10. You could survive on it if you were careful. If you checked out a State car for travel, it had no heater. If you believed you needed a heater, you filled out a special form to justify getting a car with one. Nobody I knew had ever seen a car with an air conditioner.

"We had computers. One of my best early assignments was to babysit the DWR Bendix computer at 23rd and R during the night. The computer ran on punched paper tape. If there was a glitch, the computer stopped and awaited instructions from the typewriter attached to it. There was heavy demand for the machine; lots of people wanted to run programs on it, mostly reservoir operation studies, so it tended to run 24/7. When it stopped, my job was to get it going again or to call the DWR engineer whose program was supposed to be running. They were not always happy to get a call in the middle of the night.

"Early in my career I spent a lot of time on a plane table, surveying potential small reservoir sites for hydro power developments. Only a few DWR News readers will remember plane tables.

"When we did engineering calculations, we did them on special mechanics paper printed for DWR with a form at the top where you identified the person who did the calculation

River Quality Sampling

Oroville Tunnel Mining

Levee Patroling

1973
Coin commorating the completion of the State Water Project

Steam Gauge Inspections

and the person who checked the calculations. The paper had the form number printed at the bottom – DWR 133-B (REV. 5-70). We did those engineering calculations on slide rules—some straight and some circular, some made from bamboo and some from plastic.

"If you wanted to send information up the line, you put it in a 'blue memorandum.' The blue memo's original was typed on blue paper with five carbon copies behind it on white tissue paper. If a typo was made, the original and all five copies had to be fixed, plus deal with all that nasty carbon paper. We all remember carbon paper, right?

"In those days as today, Delta studies were a big part of the DWR program. Periodically we ran 36-hour tidal cycle measurements where people in boats collected water samples at dozens of locations throughout the Delta every hour for 36 hours.

"Communications for coordinating these efforts were more difficult than they would be today. We had hand-held radios with very limited range. To overcome the limited range, an auto with a powerful radio sat atop Mount Diablo all night and relayed messages back and forth between the hand-held radios.

"Delta tidal flow studies were sometimes interesting to watch. We would release hundreds and sometimes thousands of oranges at some predetermined locations, then try to track their movement over several tidal cycles to see where they went and at what speed."

Vern Knoop, 57-year DWR Employee, currently Chief, Water Supply Evaluation Section, Southern Region:

"When I first arrived in the Southern District in 1959, I held discussions with the Planning Branch Chief, and we eventually went to lunch with the Section Chief. When we returned from lunch, I was introduced to a succession of supervisors. I then met everyone in the District, and I especially remember meeting the Chief of Central Records. She ran what might be called a 'tight ship.'

"I soon settled into making hydrologic computations on a mechanical electrical calculator. It was noisy and tiring but got the job done. Later, the Design Branch—originally called the 'Glendale Bunch'—moved into the same building with the Planning Branch with a District Chief in charge. The State Water Project (then called the Feather River Project) had recently passed the Legislature and the voters.

"I finally received my Professional Engineer license in 1966. I then accepted a position to work in the Relocation Unit to relocate all facilities to clear the right-of-way to build the southern portion of the State Water Project. I later became Chief of that Unit. During that time a person who had been living on some nearby land ran off Southern California Edison workers with a shotgun. They were relocating 29 towers there to clear space for Silverwood Lake. She apparently didn't think they should intrude on her 'squatter's rights.'

"The Southern District grew to over 500 people at its peak employment. After the first phase of the State Water Project was completed, staffing rapidly decreased, with some engineers transferring to Caltrans while others found other work. It was amazing that very few, if any, left without having found a replacement job."

Mike Nolasco, who has worked 32 years for Operations and Maintenance, conducts annual inspection of Thermalito Pumping-Generating Plant in 1993.

Mike Nolasco, Water Services Supervisor, Reporting Section, Regulatory Compliance and Reporting Branch, Joint Operations Center—retiring this year with 42 years of State service:

"I became a State employee in 1974 and began work at DWR in 1980 in the Resources Building. It was at the Division of Design and Construction, which eventually became the Division of Engineering.

"I was a draftsman in a room full of drafting tables that took up the entire floor from wall to wall. There were no desk phones, no cubicles, no modular furniture, no computers, and the whir of typewriters could be heard throughout the day.

Geological Inspections

Thermal Welding

Groundwater Sampling

Oroville Project Construction

2014
DWR's Current Logo

Reminiscences of Our History

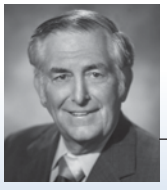
By Ronald B. Robie,
DWR Director (1975-1982) &
Associate Justice of Court of Appeal,
3rd Appellate District

My first connection to the Department of Water Resources came in September 1960 when I joined the Assembly Water Committee staff. The Chair of the Committee was Assembly Member Carley V. Porter, the co-author of the Burns-Porter Act which authorized construction of the State Water Project and included the $1.75 billion bond act that at the time was the State's largest ever. In November of that year the bond act passed, the water service contracts were signed and the State Water Project went full speed ahead. At the time the Department was a mere four years old. During the nine years I was with the Legislature various legislation involving the Department was part of my daily agenda. Then during my seven years as a member of the Water Resources Control Board the Department was often before me as a party, such as during the proceedings leading to the first Delta Water Rights decision, D 1379.

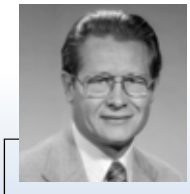
Left: Justice Ronald Robie, DWR's fifth Director, was honored by the renaming of Oroville's Thermalito Pumping-Generating Plant on May 2, 2012.

The Directors


Harvey O. Banks
1956–1961


William E. Warne
1961–1967


William R. Gianelli
1967–1973


John R. Teerink
1973–1975


Ronald B. Robie
1975–1982

Little did I know or expect when I started in Sacramento that a little more than 15 years later, in 1975, I would become the Department's fifth Director.

Governor Brown permitted me- the first lawyer to serve as director- to have a wonderful executive staff: Deputy Directors Bob James and Robin Reynolds (longtime Department employees). Gerald Meral (a biologist who would go on to serve in the current administration), Mary Anne Mark (an engineer and the first woman to serve as Deputy Director), and Chuck Shoemaker (a lawyer and an engineer).

It is hard to believe that during my tenure at the Department we celebrated its 25th anniversary!

During my years as Director there were a number of major events. Most significantly the drought of 1976-77, until last year the worst in the history of our state. Many emergency measures were undertaken including temporary Delta barriers and a pipeline across the Richmond-San Rafael Bridge to deliver water to parched Marin County. During that time we also delivered emergency supplies to the City and County of San Francisco.

The drought spurred Governor Brown to create the Governor's Commission to Review California Water Rights law, headed by former California Chief Justice Donald Wright. Although few of its recommendations were adopted by the Legislature at the time, its scholarly work has proved to be the basis for significant legislation adopted in recent years.

Above: In 1982, DWR Director Ronald Robie (right) with Governor Edmund G. Brown Jr. (center) presents the California Aqueduct's renaming plaque to former Governor Edmund G. "Pat" Brown.

During my time at the Department we also established the Office of Water Conservation and placed significant emphasis on both urban and agricultural water conservation.

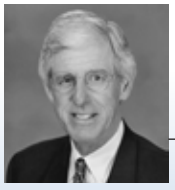
Of course our major legislative achievement was enactment by the Legislature by significant margins in both houses of a comprehensive water supply and environmental conservation plan- including the Peripheral Canal- the forerunner of the current twin tunnels plan. Regrettably a statewide referendum repealed the canal program.

At the same time the Department's initiative to add significant stretches of rivers from the California Wild Rivers system to the Federal Wild Rivers System was successful.

My time at the Department was exciting and rewarding. The successes we had were made possible by the greatest group of state employees anywhere in State Government.

When Governor Brown's first administration drew to a close, he appointed me to the Municipal Court. Later I was elected to the Superior Court and in 2002 appointed to the Court of Appeal where I am today. Although I have had a marvelous 30+ years as a judge, as I look back over more than a half-century in State Government, the time I most fondly recall were those exciting, dynamic days I was director of DWR. Thanks for the memories.


David N. Kennedy
1983–1998


Thomas Hannigan
1999–2003

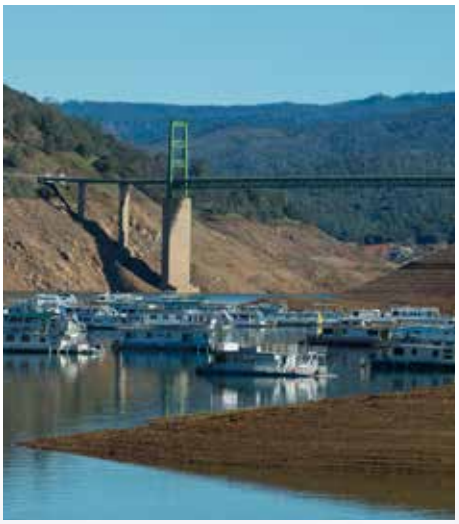

Linda S. Adams
2003–2004


Lester A. Snow
2004–2010


Mark W. Cowin
2010–Present

Drought vs. El Niño

By Doug Carlson



Left: On January 25, 2016, Lake Oroville's was 39 percent of capacity.
Right: Lake Oroville reaches 96 percent of capacity on May 11, 2016.

A small town in 19th century California, struggling to stay alive as bad fortune sets in.

The street down the middle of town between broken-down buildings holds not a single blade of grass. A dust devil kicks up, then dies like nearly everything else here.

Most townsfolk—including the only lawman—have pulled up stakes and left. Only a few remain, including one hard-as-nails dangerous man who arrived four years ago and started dictating his own law.

No more this, can't do that. No more happy times around the player piano in the saloon, where the gunslinger brews up a nasty disposition at the corner table each day while nursing a near-empty bottle of whiskey.

Then one day, a stranger rides into town, ties his lathered-up horse to the hitching post outside the sawbones's shed and walks, real slow-like, to one end of that dusty street a ways down from the saloon. He turns and stands there—waiting.

The hard man in the saloon hears soon enough about the stranger. He drains the last few drops from his bottle, strides through the

saloon's swinging doors to the middle of the dusty street, and turns.

There they stand facing each other, yards apart, hands at their sides, trigger fingers twitching slightly in anticipation of a climactic moment that will leave only one of them standing—a showdown that might seal the town's fate for years to come.

Back in the 2016 present, we've witnessed such a showdown between California's four-year drought and the warming surface temperatures in the Pacific known as El Niño, which arrived this winter with a drought-busting reputation.

Rainfall at the critical 8-station Northern Sierra Index in December and January was 60 percent greater than average in those two months, and the San Joaquin and Tulare basins collectively were 36 percent above average.

An atmospheric river, El Niño's faithful sidekick (see DWR Magazine, Spring/Summer 2015), arrived the first weekend of March and brought rain—lots of it.

So much rain fell in the north that Lake Oroville, the State Water Project's largest reservoir, added more than 100,000 acre-feet of storage on March 6, the third largest one-day gain in 12 years. Oroville, Shasta and Folsom lakes all were releasing water for flood control in March.

It was as if El Niño said with a sneer, "Drought, you thought you could stare me down, but not so fast. I still have work to do here."

Drought doesn't scare easily, though. At the six-month mark of Water Year 2016, rainfall in the three regions monitored closely by DWR was just slightly above the long-term average, and the statewide snowpack's water content was 40 percentage points below average for late April.

As editorial writers like to opine when an outcome is murky, it remains to be seen how this showdown will end, but at press time, old man drought seemed more determined than ever to have his way with California for a fifth year.

DWR's Drought Team Welcomes New Leaders

By Jennifer Iida

DWR's ongoing ability to deal with high-priority drought issues is as challenging as it is humbling for those on the front line of the emergency. Being proactive instead of reactive is what DWR's Drought Emergency Management team has been doing the past three years. Leading the team since February, Arthur Hinojosa, Greg Farley and Gary Lippner *(photo)* are managing DWR's drought response.

Hinojosa, Chief of the Division of Integrated Regional Water Management, is administering our drought emergency effort, Farley is serving as DWR's Drought Manager and Lippner as DWR's Drought Emergency Response Team Director.

"The drought is, in many ways, the epitome of all our water supply efforts," said Hinojosa, "but with a focus and urgency that puts what to many of us are routine efforts, in a much brighter spotlight in the highest political circles."

DWR is moving from an emergency response structure based on the California Standardized Emergency Management System (SEMS) to a new hybrid of SEMS.

"The drought affords us a unique opportunity to elevate the Department's value by allowing us to display our competent well-trained people, effective water management programs and leadership capabilities to a thirsty audience at the highest levels of local and state government," said Lippner.

DWR's Drought Management Operations Center—Operations, Planning, Intel, Logistics and Finance/Administration—coordinates with state, federal and local agencies responding to water shortage and other drought emergencies.

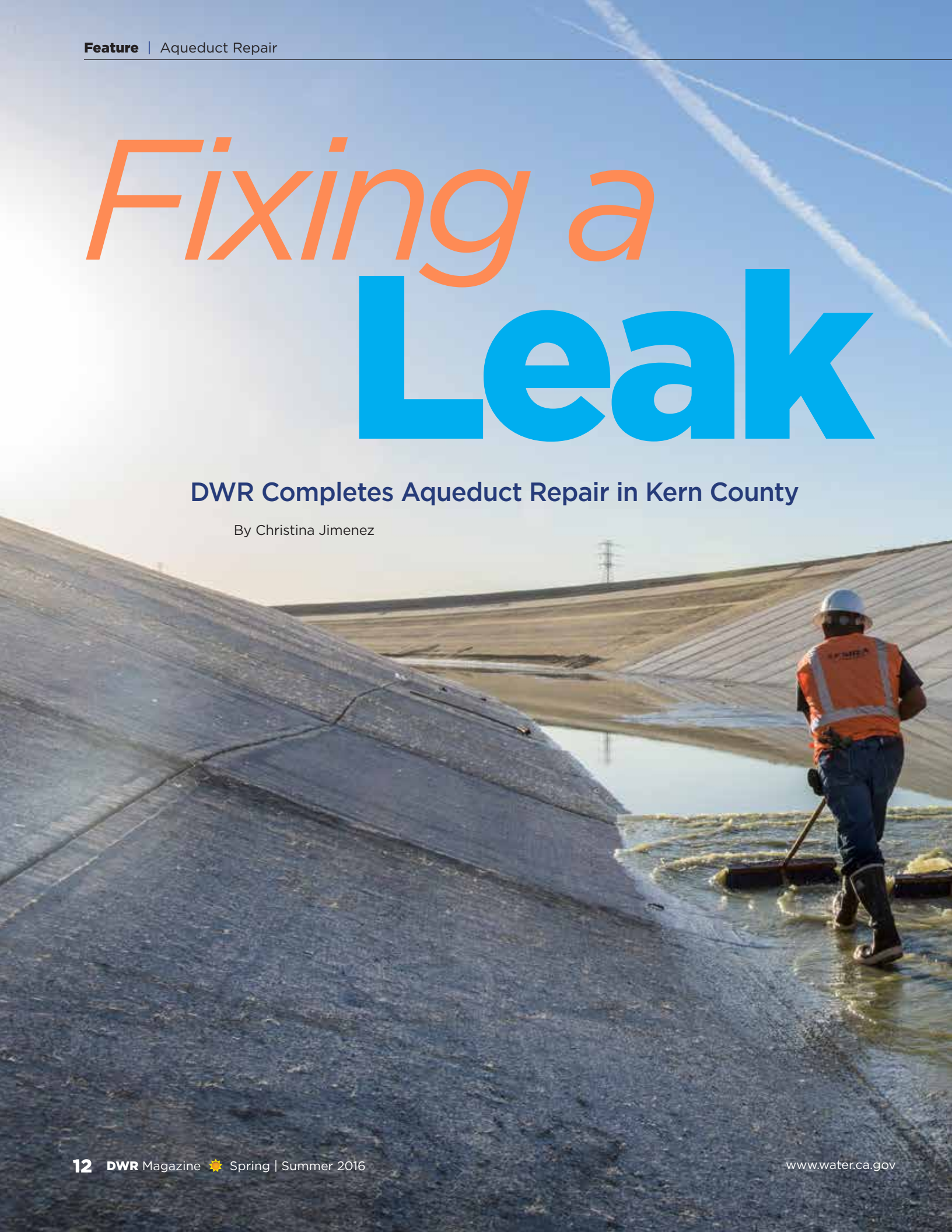
"With increasingly extreme weather and the fifth year of critical water shortages likely, I look forward to meeting with our partners around the state to increase California's drought resilience through effective communication, collaboration and coordination," said Farley.

"The leadership team is grateful for the previous drought team and the great progress they made," said Lippner. "Together, we are helping DWR consistently address high-priority drought issues to benefit the people of California."

Fixing a Leak

DWR Completes Aqueduct Repair in Kern County

By Christina Jimenez



What began with water bubbling out of the ground at a rate of 2,000 gallons per minute into an irrigation ditch adjacent to the California Aqueduct in Kern County ended as one of DWR's largest aqueduct repairs in recent years.

"The scale of this repair was much larger than other aqueduct repairs," said Division of Engineering (DOE) Senior Engineer Christina Kashiwada. "This project had three separate repair sites in this pool, (Mile Posts 244.5, 245 and 248.9) all with a large amount of embankment being excavated and replaced with new compacted embankment. This repair also had a significant amount of Teranap, a waterproof geomembrane, placed—2,600 linear feet. The most Teranap placed in a single repair project."

San Joaquin Field Division (SJFD) Water Operations staff discovered the seepage boil on January 2, 2016.

"We needed to quickly evaluate the situation and put a stop to the leak in order to ensure the integrity of the State Water Project," said Bryan Carter, SJFD Utility Craftsworker Superintendent. "The repairs are always a rush job. There's always an urgency to get the water flowing again."

DWR DOE Engineering Geologists and Engineers also arrived at the site to assess the situation and help identify a solution.

Water in the aqueduct at Pool 30, approximately 6.5 miles from Check 29 to Buena Vista Pumping Plant, was lowered to help

The Pool 30 Emergency Project nears completion as the contractor performs final close-out repairs.

California Department of Water Resources

Below: Aqueduct repair was completed on February 26, 2016 and Pool 30 was refilled.
Left: Damage on the liner at Milepost 245.09 bridge.
Right: Smaller repair site near Milepost 248.9 bridge.

identify the source of the boil. Crews found an approximately eight-by-ten foot section of collapsed concrete liner on the water side that allowed water to penetrate through the embankment, resulting in a boil.

"We examined the soil, looked at previous reports that had been done in the area and put our heads together to find the best solution," said Engineering Geologist, Brad von Dessonneck, with DOE's Geotechnical and Engineering Services Branch, Project Geology Section.

Crews injected concrete to temporarily plug the leak and boil.

"For a good portion of the repair, operations were run 24 hours a day, seven days a week, in order to complete the work by February 26," said Kashiwada. "This project also had a significant amount of environmental aspects, so a large-scale environmental program was put into place with environmental monitors on site 24/7 as well."

Uncovering the Damage

"When we lowered the water levels in the aqueduct, we truly saw the amount of repairs needed to the system – well beyond the eight-by-ten feet of broken concrete that caused the boil," said Carter.

Many broken concrete panels, separated panels and areas with exposed subgrade were found.

In order to repair the large amount of damage, the entire Pool 30 was drained, and nearby water deliveries were affected during the approximately two-month repair.

Within the six miles, a total of 3,315 linear feet of canal liner and embankment was repaired.

"We closed the gates at Check 29 on January 4 at 1:30 p.m. at which time we had 1,142 acre-feet of water left in Pool 30," said Water Services Supervisor Jennifer Metcalf of the San Joaquin Field Division. "We dewatered 753 acre-feet using Buena Vista Pumping Plant units and the remainder—approximately 380 acre-feet—was pumped out using portable pumps."

"The 15 feet of water that was manually pumped out of the aqueduct with portable water pumps proved to be challenging for the crew," Carter added.

Water contractors were forced to move water around with one another, and Metropolitan Water District utilized its reserve supply for a short period of time.

Getting Ready for Repair

Prior to construction, a crew of nearly 30 from the SJFD worked around the clock for approximately 11 days to clean the bottom of the drained aqueduct in preparation for the repairs.

DOE Engineers had one week to complete the design, prepare drawings and specifications and find sufficient material.

"DOE's Engineers provided on-site real-time assessment of the aqueduct liner

and embankment and provided engineering direction for the repair options," said Kashiwada. "We also provided construction inspection 24 hours a day, seven days a week, to ensure the repairs were completed efficiently and according to design."

"In addition to providing design drawings and specifications for the contractors, DOE Engineers also coordinated safety requirements and the delivery of the aqueduct geomembrane liner from the supplier in France," said Senior Water Resource Engineer Rob Black of DOE's Geotechnical and Engineering Services Branch.

Every few years, planned, similar repairs are made to the State Water Project. Crews have repaired panels, cleaned out the bottom of the canal and power-washed the concrete—basic prep work for repairing the canals.

New Conditions, New Design

During the design of the repairs, DOE Engineering Geologists conducted onsite field exploration.

"We found that the ground was saturated under the aqueduct panels, different than when it was first built," said von Dessonneck. "It was our job to identify what we could do with the material we were building on and give our recommendations to the engineers designing the repairs."

Engineering geologists found areas of soft mud and areas with no mud under the panels. Dry compacted soil was used to replace those areas, ensuring a secure foundation for the new concrete panels and liner.

"We did not want to build on unsuitable mud," von Dessonneck said. "All unsuitable material was removed, and a majority of the soft mud was excavated."

DWR engineering geologists closely monitored the soil being removed and provided recommendations as needed.

Unknown ground conditions below the concrete aqueduct liner, groundwater and soft soil changes were noted as a few of the many project challenges. However, DOE identified the delivery of the overseas waterproof geomembrane in the short time-frame as one of the more challenging aspects of the project.

"The aqueduct liner material is manufactured in France, and we needed a large quantity," said Black. "As it was being manufactured, it was being air-freighted over and delivered to the site in batches."

Day-to-day construction of the project was managed by Pearblossom Pumping Plant's DOE Construction Branch.

"We handled all contract administration, payments, specification requirements and unforeseen conditions," said Water Resource Engineer Angela Hall of DOE's Pearblossom Project Headquarters. "This was a huge undertaking. Emergency contracts do not happen often."

Bryan Carter, San Joaquin Field Division Utility Craftworker Superintendent, inspects Aqueduct repair work.

Along with the Pearblossom Project Headquarters crew, engineers and environmental scientists from DOE's Pipelines Section and the South Central Region Office in Fresno were also onsite during construction to ensure the contractors followed the specifications and met all environmental requirements.

"Pool 30 project reached a safety milestone without an OSHA recordable or lost time injury," said Michael Morris, Associate Safety Engineer of SJFD. "SJFD employees worked 16,640 person-hours in three months, the equivalent of working eight years without an OSHA recordable or lost-time injury for one person."

Following construction, crews continued minor cleanup at the site, including repairs to the roads damaged from heavy equipment traffic and demobilization of the staging area where the project trailers, materials and equipment were stored.

"This project was truly a large collaboration and required all parties involved to be on top of everything in order to get the water flowing again down south," said Hall.

DWR geologists are continuing to examine the root cause of the leak.

"We believe a combination of things triggered this incident," said von Dessonneck. "Those include aging infrastructure and saturated, poor foundation soils."

"As the SWP ages, we can expect an increased number of required repairs to the aqueduct, with a potentially larger number of emergency repairs such as this one," Kashiwada said.

Engineering Geologist Brad von Dessonneck of Engineering's Geotechnical and Engineering Services Branch examines soil of aqueduct.

Left to Right: Division of Engineering's Engineer Robert Curry and Senior Engineer Christina Kashiwada inspect the aqueduct excavation repair work near the Milepost 245 bridge.

Happy Trails

New San Joaquin River Parkway Trail Underway

By Jennifer Iida

A dynamic public access trail, fit for year-round recreation, is in the works at the state-owned San Joaquin Hatchery property in Friant. DWR, the California Department of Fish and Wildlife (DFW), the San Joaquin River Conservancy (SJRC) and the California Wildlife Conservation Board (WCB) have partnered to create the newest segment of the San Joaquin River Parkway Trail.

The new trail is 0.7 miles and will provide a unique education and recreation destination along the scenic San Joaquin River. Visitors will be able to follow the trail to connect to the San Joaquin Hatchery, Small Fry Children's Trail and the Salmon Conservation and Research Facility.

"We've been involved in developing this project since 2011," said Dave Encinas, DWR Project Coordinator of the South Central Region Office. "There have been many challenges, which are to be expected when working on projects along the river, so we're excited to see it finally taking shape."

The trail is located in Fresno county within the San Joaquin River Parkway, which covers approximately 5,900 acres on both sides of a 22 mile long stretch of the San Joaquin River between Friant Dam in the east and State Route 99 to the west.

"The benefits to the public are numerous, including new or improved access features in compliance with the Americans with Disabilities Act to the river and fish hatchery," said Encinas.

Right: DWR Engineer Sammy Naventhan of the South Central Region Office uses GPS rover to conduct field surveys at San Joaquin Parkway Trail project.

California Department of Water Resources

Left to Right: DWR Engineers Dave Encinas, Robert Lampa and Sammy Naventhan assess the progress surrounding the San Joaquin River Parkway Trail under construction along the San Joaquin Hatchery in Friant on April 25, 2016.

DWR and DFW are implementing agencies of the San Joaquin River Restoration Program (SJRRP) and are collaborating on several other projects along the river to support restoration of the river and mitigate SJRRP impacts on recreational fishing. DFW's San Joaquin Hatchery is also undergoing renovation that's necessary to bring back salmon to the San Joaquin River, one of the requirements under the SJRRP and an important topic in the Governor's Water Action Plan.

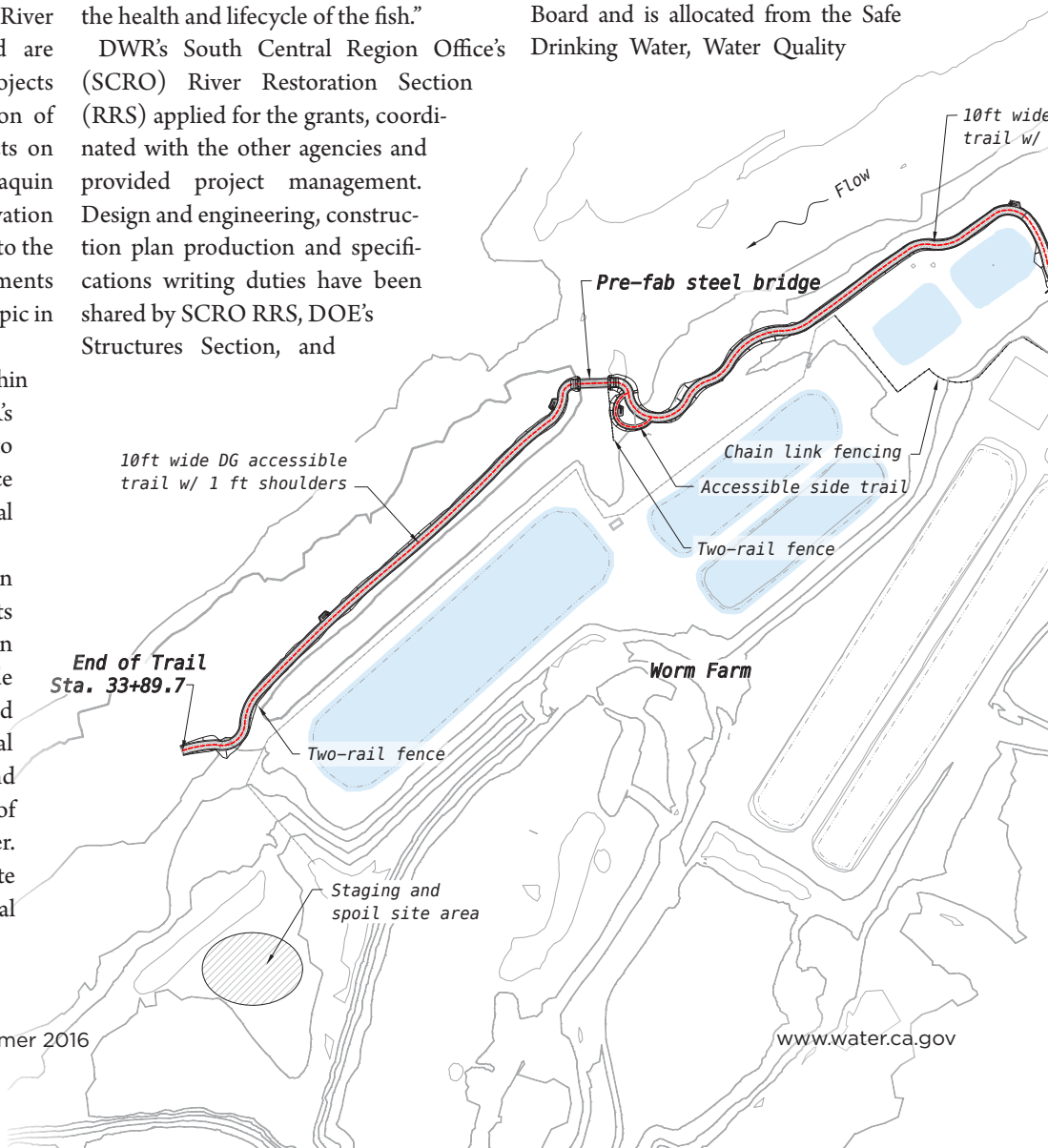
This trail project is also partially within the state-designated floodway, so DWR's expertise and experience was crucial to design and lead this project to reduce flood impacts and meet state and federal flood requirements.

"It's very rewarding to work on public access and education projects such as this one. The San Joaquin Hatchery Trail Project will provide the community an accessible and comfortable place to enjoy the natural environment, fish, hike, bike and relax," said Jamal Zumot, Division of Engineering (DOE) Project Manager. "The project will also help to educate the public about the local natural resources, the workings of the hatchery and the health and lifecycle of the fish."

DWR's South Central Region Office's (SCRO) River Restoration Section (RRS) applied for the grants, coordinated with the other agencies and provided project management. Design and engineering, construction plan production and specifications writing duties have been shared by SCRO RRS, DOE's Structures Section, and Division of Operations and Maintenance's Electrical Engineering Services. Robert Lampa of SCRO RRS and Jonathan Kwan of DOE Structures are credited as the lead designers, and Kandasamy "Sammy" Naventhan of RRS also contributed significant portions of design work. Sacramento Project Headquarters staff is administering the contract and will share construction inspection duties with Lampa.

The State continues to have a significant interest in restoring the 150-mile reach of the San Joaquin River below Friant Dam to provide extensive benefits to the environment, federal, state and local governments and to millions of Californians.

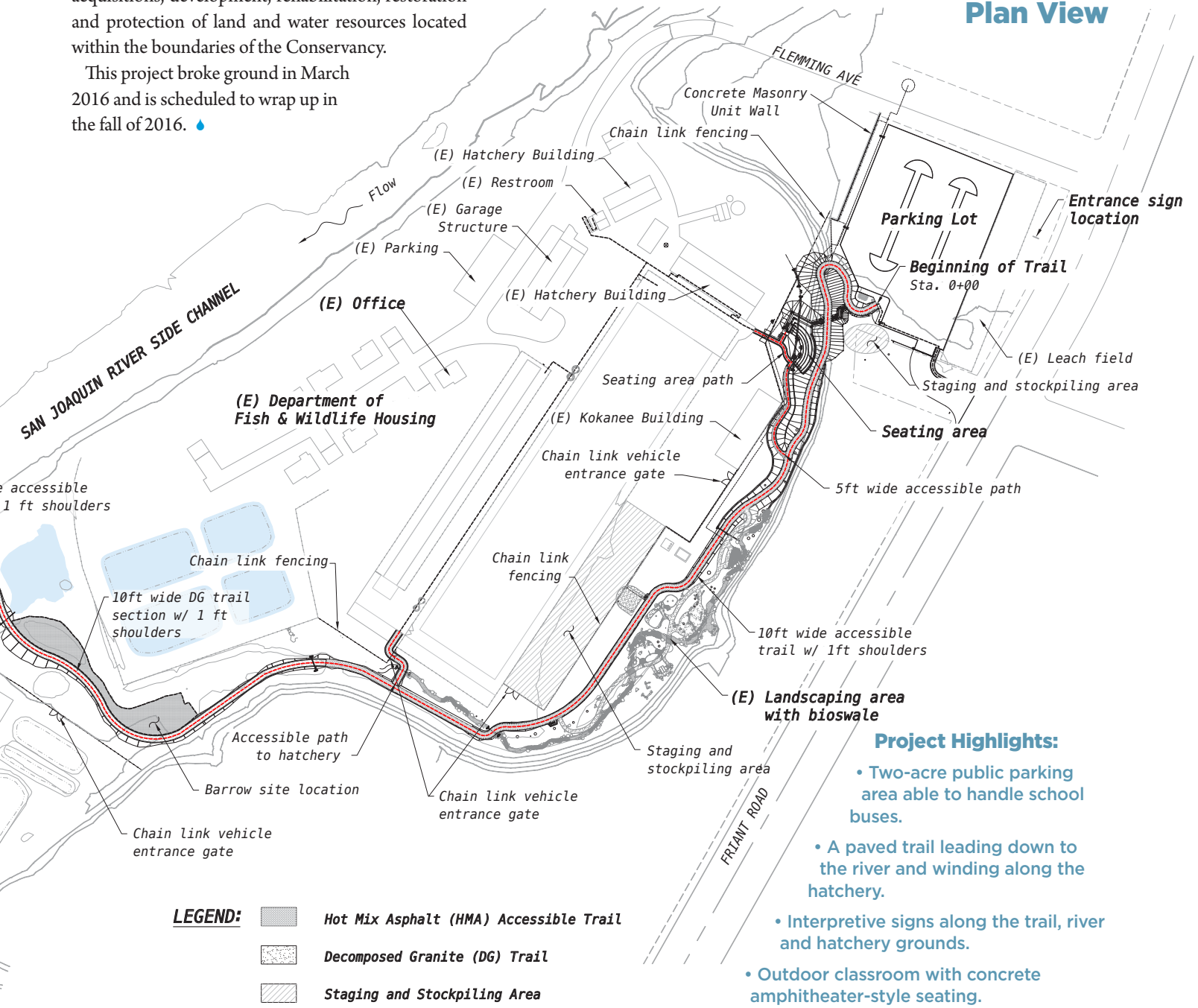
Funding for this project came from a grant agreement with the Wildlife Conservation Board and is allocated from the Safe Drinking Water, Water Quality



and Supply, Flood Control, River and Coastal Fund of 2006 (Proposition 84), which provides for the acquisitions, development, rehabilitation, restoration and protection of land and water resources located within the boundaries of the Conservancy.

This project broke ground in March 2016 and is scheduled to wrap up in the fall of 2016.

Friant Fish Hatchery Segment of the San Joaquin River Parkway Trail: Plan View



Project Highlights:

- Two-acre public parking area able to handle school buses.
- A paved trail leading down to the river and winding along the hatchery.
- Interpretive signs along the trail, river and hatchery grounds.
- Outdoor classroom with concrete amphitheater-style seating.
- Landscaping with native plants around the parking lot, the trailhead entrance and the outdoor classroom.
- A pedestrian bridge across a small stream leading along the river to Lost Lake Park.
- Rest areas, drinking water fountains and bike racks.

A Tale of TWO Projects

DWR Reduces Greenhouse Gas Emissions with Solar Power sites at Pearblossom and Lancaster

By Doug Carlson

Ask a group of three-year-olds what that big white ball up in the sky is, and they'll shout, "The sun!"

Ask grade school kids why we need the sun, and they may tell you it's essential to life as we know it.

Ask a high school student how much solar energy falls on Earth, and you might just get a precise answer, based on the following calculation:

The total amount of solar energy falling on the contiguous 48 states each year is 1.37 kilowatts per square meter (the solar constant), times 10^{16} kilowatt hours per year. That totals 46,700 Quads, with each quad equaling one quadrillion (1.0×10^{15}) British Thermal Units.

That's the energy equivalent of about 167 million barrels of oil—*each day of the year.* In fact, more solar energy falls to Earth every day than the total amount of energy 5.9 billion people could consume in 27 years, according to the National Renewable Energy Laboratory.

Without doing the math, California's daily share of the total surely would satisfy all of the state's energy needs forever if it could be harnessed, and that's the trick.

It's only been about five decades since meaningful direct capture of the sun's energy was achieved using photovoltaic (PV) cells rather than indirectly by releasing solar energy stored in coal, oil, wood, air currents and other fuels.

But what a 50 years it's been! The Mideast oil embargo and rising cost of oil, PV technology improvements, rebates and tax credits for solar installations all benefited this renewable energy industry. California's sunny weather has been a natural growth environment for rooftop solar; more than 2,200 solar companies employ nearly 55,000 employees in the state.

DWR is in step with solar's growth in California and is adding PV power to its

Above: George Baldini, Senior Engineer with DWR's State Water Project Power and Risk Office, reviews plans for the Pearblossom Solar Project.
Below: Pearblossom Solar Project construction began in April 2016 at the site adjacent to DWR's Pearblossom Pumping Plant.
Left: Solar panels installed at sPower's 85 megawatt facility near Lancaster.

renewable energy inventory. Two projects were announced in December—SunPower's 9.5-megawatt (MW) plant near the Pearblossom Pumping Plant in Los Angeles County, and sPower's 85-MW facility near Lancaster.

Veronica Hicks, Chief of DWR's State Water Project Power and Risk Office, said several years of work went into bringing these substantial solar projects into DWR's renewable energy portfolio. When the projects come online this December, DWR's solar resources will total 140 MW.

The Pearblossom project is going up on land owned by DWR; it responds to an initiative by the Governor's Office and DWR to develop renewable projects on state land. Hicks said the project had several challenges.

"We're putting a generation facility adjacent to the Pearblosson Pumping Plant's large electrical load, and we wanted it to be as isolated from the plant as possible to minimize any effect on our operations."

Hicks said the larger sPower project near Lancaster is "a decent-sized project in the solar industry. We're developing a good chunk of energy there," she said, "and to do it within this time frame—contract signed, interconnection made and the plant built in one year —is a pretty aggressive schedule."

DWR has been making a strong push to achieve its greenhouse gas emission reduction goals.

"We've already made substantial progress toward achieving our 2020 near-term goal to reduce emissions by 50 percent below 1990 levels." Hicks said. "Since mid-2013, we've eliminated coal as a source of electricity for the SWP and increased the use of renewables like solar and hydropower. We anticipate achieving our 2020 near-term goal and continuing on to achieve our 2050 long-term goal of 80 percent reduction below 1990 levels."

A River Invaded

New Zealand Mudsnails Found in the Lower Feather River

By Christina Jimenez

Mudsnail photo by Joseph Slusark of the California Department of Fish and Wildlife Aquatic Bioassessment Lab

A new, small nuisance species that settles on river bottoms was found in the low-flow section of the Lower Feather River and reported to DWR's Northern Region Office (NRO) in Red Bluff on January 29, 2016.

According to the California Department of Fish and Wildlife (CDFW), the New Zealand Mudsnails (NZMS), a tiny species ranging between four and six millimeters on average, are new to the Feather River, but have been found in many western streams, including California's Owens, Klamath, Russian, American, Stanislaus, Merced, San Joaquin, Yuba and Sacramento rivers.

"The NZMS were found through the Feather River Gravel Supplementation and Improvement Project post benthic macroinvertebrate (mostly aquatic insects) samples collected by the NRO on June 2, 2015," said Senior Environmental Scientist Scott McReynolds of NRO's Water Quality Section. "The samples were to primarily measure the food base improvement in the juvenile Chinook salmon and steelhead after the gravel project completed."

DWR does not perform routine benthic macroinvertebrate sampling. However, NRO gathers these samples before and after in-stream restoration projects.

While CDFW biologists have not found any Mudsnails in Lake Oroville, its forebay, afterbay, Feather River Hatchery or any DWR Oroville facilities, DWR field employees are following precautionary decontamination procedures.

To prevent the spread of the invasive snail found in the Feather River

Left to Right: Jason Kindopp, Chief of the Feather River Program Section and contractor Christine McDade take water samples during the Feather River Gravel Supplemental and Improvement Project in Oroville.

in Butte County, anglers and boaters visiting the Feather River are being asked to "clean, drain and dry" equipment.

"The populations in the United States are 95 percent clonal females, which means they can reproduce asexually," said McReynolds. "The United States Fish and Wildlife Service NZMS fact sheet states that a single female can produce up to 40 million offspring each year."

As with many invasive species, the NZMS do not have a predator in California.

They can cover large areas of the stream-bottom, and overtake native aquatic insect habitat, affecting the food base for salmon, steelhead, and other native species that rely on this resource, according to McReynolds.

While fish do eat the NZMS, they are not easily digested and can cause health issues, including starvation if consumed in large amounts.

DWR environmental scientists also see a risk that juvenile salmon could become easy targets for predators and disease if they are malnourished and smaller in size.

"We do not need another obstacle to promoting the growth, survival, and overall abundance of salmon and steelhead in the Central Valley," said Jason Kindopp, Senior Environmental Scientist with the Division of Environmental Services' (DES) Feather River Program.

The Feather River Program performs a variety of fisheries monitoring and research activities, including survival studies, evaluation of restoration projects, identification of spawning areas and evaluation of hatchery release strategies.

"Our primary responsibility in DES is to perform research and monitoring on salmon and steelhead in the lower Feather River to comply with the National Oceanic and Atmospheric Administration fisheries 2004 Operational Criteria and Plan's Biological Opinion for operation of the State Water Project," said Kindopp.

To help with efforts to prevent the spread of Mudsnails at DWR facilities, CDFW and Oroville Field Division require employees of DWR's Feather River Fish Hatchery to follow new Mudsnail prevention procedures, including the restriction of boats and some vehicles on the premises.

"No equipment that has entered the river is allowed inside the main hatchery area, and planting trucks must decontaminate after planting fish," said Senior Environmental Scientist Julie Brown of Oroville Field Division's License Coordination Branch.

Employees with waders will not be allowed at DWR facilities unless they have decontaminated the waders according to CDFW procedures.

DWR's DES is researching additional prevention measures and decontamination strategies.

For Mudsnail information or to report a sighting, visit **www.wildlife.ca.gov/Conservation/Invasives/Species/NZmudsnail**

Giving Back

Gutierrez leads DWR's Sustainable Groundwater Management Program

David Gutierrez views completed Calaveras Dam spillway in Alameda County.

When you ask Division of Safety of Dams (DSOD) Chief David Gutierrez which of his many accomplishments is he the most proud, you might expect him to point to the work in seismic analysis, the many major dam construction projects and the strides made in dam safety over the years. Or his leadership in National Dam Safety, including past President of the Association of State Dam Safety Officials. Or his leadership of the Sustainable Groundwater Management (SGM) Program, which will affect the management of California's groundwater resources for decades to come. Or the trajectory of his career, in which he rose from student assistant in 1980 to DSOD Chief in 2005.

Good guesses all, but not even close. In a 2015 Brown and Caldwell Water News interview, Gutierrez said "... when I think about what I am most proud of, it's not the projects." Success for Gutierrez has always been about people.

"I started at DSOD when I was 18 years old as a student assistant," he said. "I was very fortunate because there were a lot of folks who were helpful to me, and they taught me a lot of things. Any success I've had, I owe to them." Gutierrez was guided into the Mathematics, Engineering and Science Achievement (MESA) program while a student at Hiram Johnson High School in Sacramento and joined DSOD while earning his bachelor's degree from Sacramento State University, where he also earned a master's degree in civil engineering.

Right: David Gutierrez, Chief of Safety of Dams since 2005, visits construction site of Calaveras Dam. **Below:** David Gutierrez joined Safety of Dams as an engineer in 1980.

"As I was helped, I've tried to do that for others over the years. I've been able to build programs, but more importantly, build people. I rely on them heavily; I try my hardest to teach them everything I know and more. Oftentimes, I see them passing me up in terms of their knowledge, and that makes me feel really, really good. I learned early in my career that the successes of a program are always about the people. If you get the right people in the right place, you're going to win."

Now in his 36th year at DWR, the seemingly tireless Gutierrez has worked in every discipline of dam design, construction and safety and has been called upon more than once to head up important new programs in need of leadership.

Former DWR Director Lester Snow appointed Gutierrez Deputy Director of Business Operations, where he led the SAP migration team. Director Snow then appointed him as Acting Deputy Director of Public Safety (now Integrated Water Management Deputy Director) which included implementation of the Department's new FloodSAFE California program, one of DWR's largest programs ever.

Several years ago, Gutierrez led health and safety investigations into two tragedies that led to his recommendation to the Director to develop a world class health and safety organization within DWR. He also served as the lead technical expert in the Linda Levee failure that eventually instigated the FloodSafe program.

In 2014, Gutierrez was again tapped by Director Cowin to lead DWR's SGM Program, arguably one of the most important programs to the future of how California will manage water. With a legislative mandate to implement the landmark Sustainable Groundwater Management Act of 2014 (SGMA), Gutierrez has guided the work of engineers, geologists and support staff to ensure the legislative intent of SGMA is realized.

One of the SGM Program's successes so far has been its outreach to the public and a wide variety of other stakeholders. During the recent adoption of the basin boundary regulations, the California Water Commission lauded the program and last summer's outreach effort. The SGM Program also received overwhelmingly positive public comments during recent Assembly and Senate Hearings on the program and its transparency. Transparency is another testament to Gutierrez' philosophy of putting people first.

"Although we are not building the regulations by consensus, when it comes to new laws and regulations, no one wants to be surprised," he said. "We found it important to telegraph our intentions to all of our stakeholders to ensure a common understanding of the issues so the regulations are not a surprise to anyone. Building trust is critical, and our transparency is an important part of that. Ultimately, the plan is to help communities succeed in sustainably managing groundwater. Their success will be our success."

Gutierrez' interest in people has resulted in admiration and loyalty from staff and colleagues alike. Rebecca Mills, his Executive Secretary for six years, says there's no one who can say anything bad about Gutierrez, least of all her. "He is the first supervisor I had since starting my job with the state," says Mills. "I know how lucky I am to have him as my boss, and because of him I can't even imagine leaving."

Sharon Tapia says she "has been so very fortunate to have worked with him for years and years"—25 years to be exact. During that time, she worked with Gutierrez in various capacities at DSOD and as his advisor when he was acting Deputy Director.

"David is always willing to take on any assignment given to him, no matter how difficult the project is or how much work is involved," Tapia said. His motto is to always ask yourself what is the right thing to do, and just do it. He doesn't just try, he achieves."

According to Tapia, Gutierrez has been asked to assist on projects outside the Division often enough that he appeared numerous times on a "Missing Persons" poster at DSOD over the many years.

"Luckily for the people at DSOD," says Tapia, "David always returns back to home base after his assignments and shares his experiences with all."

Gutierrez lives with his wife Ofelia in Clarksburg. They have a grown daughter, Andrea, who he "walked down the aisle" last year.

Broad Experience Highlights New Chief Counsel

Spencer Kenner's career path to becoming DWR's Chief Counsel in February has been anything but linear. It's included a hodge-podge of interests, with numerous stops and varied experiences along the way.

"I've worked for a large law firm and as a Deputy District Attorney, represented victims of domestic violence, helped the California State Lottery sell tickets for education and I've been a Court Counsel for Yolo County," Kenner said. Before he began practicing law in 1990, he spent a summer in Washington, D.C. clerking for a judge in a building not far from the White House.

Born in Southern California and raised in Davis, Kenner has covered many miles not only as an attorney but also in several other jobs, including driving semi-trailer trucks loaded with tomatoes up and down the Central Valley, mapping walnut, almond and kiwi orchards in Gridley and hauling bales of hay to state and county fairs all over Northern California.

Before joining DWR's Office of the Chief Counsel (OCC), Kenner worked as Commission Counsel to the California Water Commission from 2009 to 2011, Staff Counsel at the Employment Training Panel from 2006 to 2008 and Deputy General Counsel at the California State Lottery from 1999 to 2006. He was Court Counsel at Yolo County Superior Court from 1999 to 2000, Staff Attorney at Empower Yolo from 1997 to 1999, Deputy District Attorney in the Yolo County District Attorney's Office in 1996 and Senior Associate at Downey Brand LLP from 1990 to 1996.

Kenner's DWR career began in 2008 as a Senior Staff Counsel. He became Assistant Chief Counsel in 2013 and acted briefly as Chief Deputy in 2015.

Although Kenner has enjoyed a wide array of DWR assignments, the Salton Sea Quantification Settlement Agreement is among the most interesting due to the oddity of the Salton Sea itself.

"The Salton Sea is the accidental result of a broken levee in the early 20th century that caused the Colorado River to divert for months and fill a broad basin," Kenner said. "It gave birth to an entirely new environment that attracted flora and fauna, some of which are now listed as endangered species.

"It's also a highly politicized source of conflict due to demands from many that it be restored. It's an issue that likely will be with DWR for years to come."

As DWR's Chief Counsel with a staff of 42 attorneys and 16 administrative employees, Kenner plans to carry on the work of his predecessors, including former Chief Counsel Cathy Crothers, who created a highly effective, singularly responsive, full-service legal office.

"My goal is to create a work environment that challenges our attorneys and staff and also is a really fun and gratifying place to be and expand a career," said Kenner. "I'm focused on OCC being the best legal office in the state. The level of expertise, camaraderie, skill and talent here is humbling to me. I just want to keep up!"

Kenner earned a Juris Doctor degree from Brigham Young University. He has a Bachelor of Arts degree in Spanish and Bachelor of Science degree in Agriculture Economics from the University of California, Davis.

Travel has been a big part of Kenner's career and his hobby. He says he's a huge fan of bicycle riding and racing and has pedaled many miles throughout California.

Gallagher Appointed Executive Officer of the Board

Even if you're a long-time DWR employee, you may still have questions about the Central Valley Flood Protection Board, such as:

"The Board is part of DWR, isn't it—or was once? It's been around longer than DWR, right? But then, wasn't it created less than 10 years ago? And wasn't it called The Reclamation Board, so when did its name change?"

The questions persist, and Leslie Gallagher has heard them all.

Gallagher was appointed Executive Officer of the Board in September after filling in as the Board's interim top officer since 2014. She had joined the Board as General Counsel in 2013 after serving in Oceanside as Counsel for the city's Planning Commission and later as Assistant General Counsel for the San Diego County Water Authority.

Gallagher said her whole time at the Authority was a fight for more water, "and now it's a fight to get the attention of the Legislature and stakeholders on the importance of maintaining the levees and ensuring flood protection."

Moving to Northern California was something of a homecoming for Gallagher. She's a Bay Area native and a graduate of California State University, Sacramento and the University of California, Davis King Hall School of Law.

Keeping the Central Valley safe from flooding has been the focus of the Board and its predecessor agency, The Reclamation Board, for more than a century.

Two large floods of the Sacramento Valley in 1907 and 1909 pushed the Legislature to create The Reclamation Board in 1911 to protect important agricultural land from flooding.

Although The Reclamation Board already was middle-aged by 1956 when DWR was created, it was absorbed in the late 1960s into DWR as a separate division.

In 2008, the Central Valley Flood Control Act created the Board as a stand-alone agency with authority to enforce compliance with requirements to strengthen flood protection throughout the Central Valley. The Board had just three employees then but now has 40 positions, including seven board members who are appointed by the Governor and confirmed by the California Senate. The Board continues to rely heavily on DWR to accomplish its mission.

Gallagher said protecting levees from encroachment, both man-made and environmental, is an important aspect of flood safety.

"We have more than 100 years of encroachment history," she said.

With a backlog of 1,400 encroachments and only two investigators on the Board's staff, Gallagher set out to tackle the backlog by enlisting the help of local maintainers and prioritizing encroachments using "the worst first" method. The problems range from rodent holes to residents carving a wine cellar into a levee.

Gallagher said she's always been drawn to public service, perhaps under the influence of her grandfather, who was a San Francisco fireman. Away from the office, you might find her riding tall in the saddle.

"I've been riding horses all my life, and my daughter, who's 10, has since she was 3," Gallagher says. "We do dressage—dancing on horses. We ride every weekend."

The Gallaghers raise service dogs, and they foster rescued neglected dogs for Homeward Bound Golden Retriever Rescue and Central California Labrador Retriever Rescue.

"I recently found a home for an 11-year-old black Lab that had been with us for almost a year," she said. "I adopted him out to a retired teacher in Stockton whose backyard is up against the levee. When I dropped him off, I thought, 'It's a very small world.'"

New Hires

Ryan Abernathy
Engineering
Engineer

Dharshana Balachandra
North Central Region Office
Associate Governmental Program Analyst

Mark-Jason Benitez
Technology Services
Systems Software Specialist II

Courtnie Braziel
Human Resources Office
Office Technician (Typing)

Jie Cheng
Operations and Maintenance
Engineer

Michelle Coldiron
Environmental Services
Environmental Scientist

Jana Coyle
Business Services Office
Office Technician (Typing)

Frank Cvitanich
Safety of Dams
Staff Services Analyst

Victor Davison
Delta Field Division
Warehouse Worker

Blake Dolve
Safety of Dams
Engineer

Kanwarjit Dua
Central Valley Flood Protection Board
Attorney III

Lisa Faulkner
Business Services Office
Staff Services Analyst

Jana Flowers
Delta Field Division
Utility Craftsworker Apprentice

Anthony Hodges
San Luis Field Division
Utility Craftsworker

Priscilla Jiang
Environmental Services
Data Processing Manager II

Renae Jones
Southern Field Division
Management Services Technician

Rickey Lizasuain
Delta Field Division
Utility Craftsworker Supervisor

Thomas Luong
Safety of Dams
Staff Services Analyst

Juan Madrigal
Southern Field Division
Warehouse Worker

Ian Maki
Safety of Dams
Engineer

Patrick Morrison
Engineering
Right of Way Agent

Daya Muralidharan
Statewide Integrated Water Management
Research Program Specialist II

Team Effort

Emergency Drought Barrier Team Recognized for Outstanding Efforts

DWR Director Mark Cowin recognized the 2015 Emergency Drought Barrier Team's outstanding efforts. The team's hard work, dedication and teamwork on this project helped ensure timely completion of the planning, installation and removal of the temporary rock barrier (above) at the West False River site in the Sacramento-San Joaquin Delta. This project, completed in November 2015, successfully deterred the tidal push of saltwater from San Francisco Bay into the central Delta. By limiting salinity intrusion, the barrier benefitted migratory fish and helped limit saltwater contamination of water supplies used by 25 million Californians. All of the complex tasks and deadline-oriented work were successfully completed on time and not a single lost time accident or injury occurred.

Congratulations to the Team

(Page 28) Left to Right: Division of Engineering team includes (Front row) Sarah Paiva-Lowry, Cosme Diaz, James Lopes (Middle row) Tru Van Nguyen, Thomas Cobarrubia, Christina Becker, Teresa Butler (Back row) Jason Bacher, Gregory Aleksich, Salendar Singh. (Not in Photo: Jeanne Kuttel, Mark Herold, Wayne Wolfe, Roxanne Boone, Joe Barron, Vincent Homdus, James Veres, Hilario de Guzman, Stanley Ho, Diane Corbeil, Doumon Kashkooli, Dilip Patel, Mitchell Bautista, Mohammed Shahid, Ben La Sarte, Brian DePuy, John Berringer, John Personeni, Matt Miller, Garrett Hart, Dan Ramsour, Cornelio Quedado, Danny Garcia, Bonnie Crozier, June Pascual, Julie Lee, John Orgera, Paul Strusinski, Vadim Stetsenko, Oscar Loya, Nikki Renalde, Ryan Dong, Katie Conant, Joe Royer, Nathan Smith, Dennis Gratchalian, Anna Gutierrez, Dominic Tonel, Hoang Le, Adam Jones, Bryan Dussel, Christine Alexander, Paul Farris, Linus Paulus, Olivia Garcia, Geoffrey Shumway, Anna Tequida, Matt DeGroot, Preston Good, Tricia Carlson, Delia Grijalva, Allie Lopez, Ann Cobb, Wesley Dote, Marie Buric, Dan Mardock, Carlon Yuan, Gregory Sanfilippo, Justin Cisneros, Fred Vonderscheer, Scott Rebelo, Timothy Case, Albert De Leon, Abraham Magdeleno, Robert Chesner, Clayton Guiraud, Charles Neuman, Gwynne Kimura-Fong, Jose Moldogo, Kris Klima, Holly Nichols, Russel Brunkhorst, Robert Jones)

Left to Right: Divisions of Environmental Services, Bay-Delta Office, Executive, Flood Management, Office of the Chief Counsel, FloodSAFE Environmental Stewardship and Statewide Resources Office, Integrated Regional Water Management, Operations and Maintenance include (Front row) Laurence Kerchhoff, Tara Smith, Elena Cowan, David Mraz, Gail Chong, Bob Nozuka, Bill McLaughlin, Khalid Ameri, Genny Schrader, Michael Burns (Second row) Jacob McQuirk, Marianne Kirkland, Katherine Marquez, Chris Weber, Kenny Karcher, Emma Siegfried, Jay Aldrich, Dave Huston, Paul Marshall, Ryan Reeves, Kijin Nam, Laura Peters (Third Row) Amy Zuber, Matthew Mulligan, Tyler Salman, Rolf Frankenbach, Eli Atelijevich, Ben Geske, Mike Dempsey, Karin Shine, Russell Stein, Mark Holderman, Mark Bradley (Not In Photo: Darla Cofer, Brett Larsen, Charlotte Biggs, Jeremy Hill, Tracy Hinojosa, Brian Smith, Robert Pedlar, Michael Abiouli, Michelle Wong, Simon Kwan, Bob Suits, John Leahigh, Jimmy Yang, Carl Torgersen, James Mizell, Rhiannon Klingonsmith, Kristin Richmond, Gilead Ghiliamichael, John Paasch, Brian Heiland, Joaquin Garza, Shawn Mayr, William Croyle, Jon Ericson, Elizabeth Bryson, William Wong, Wendy Francis, Rick Burnett, Albert DeLeon, Don Guy, Sarah Zorn, Dean Messer, Laura Gonzales, Karen Gehrts, Harry Spanglet, Gina Radieve, Jeffrey Tkach, Rachel August, Eva Olin, Gail Kuenster, Shaun Philippart, Eric Hong, Jason La Deaux, Scott Flory, Brody Sunderland, Patrick Scott, Jenna Rinde, Michelle Nelson, Michael Baldwin, Susan Bradley-Hudson, Lisa Sawyer and David Schaap.)

New Hires

Lucas Odom
Delta Field Division
Utility Craftsworker

Chris Orrock
Public Affairs Office
Information Officer II

Julie Perez
South Central Region Office
Staff Services Analyst

Kristen Perry
Public Affairs Office
State Park Interpreter III

Jennifer Quinton
San Luis Field Division
Associate Governmental Program Analyst

Desiree Ramirez
Integrated Regional Water Management
Environmental Scientist

Blake Rushworth
Technology Services
Systems Software Specialist III (Supv.)

Rajat Saha
FESSRO***
Engineer

Thomas Scott
North Central Region Office
Engineer

Michael Shallcross
Technology Services
Systems Software Specialist III

Anthony Squellati
Engineering
Transportation Surveyor

Luke Stankiewicz
San Joaquin Field Division
Electrical Engineer

Brett Sublett
Technology Services
Systems Software Specialist II

Kevin Tang
Operations and Maintenance
Electrical Engineer

Scott Turnquist
Oroville Field Division
Engineer

Victoria Valentine
Southern Field Division
Associate Governmental Program Analyst

Jane Van Susteren
Environmental Services
Environmental Scientist

Stefanie Vierhus
San Joaquin Field Division
Junior Engineering Technician

Jason Waggoner
Technology Services
Senior Information Systems Analyst

Jennifer Watts
Integrated Regional Water Management
Environmental Scientist

Promotions

Ishwor Adhikari
Delta Field Division
Electrical Engineer

*Hydroelectric Plant
*** Floodsafe Environmental Stewardship and Statewide Resources Office

Climate Savvy

DWR Triumphs with National Climate Award

Visions of a healthier planet resonate deeply within DWR and have brought forth a national leader in the Climate Leadership arena. In March, DWR was honored by the U.S. Environmental Protection Agency (EPA) with the nation's top Climate Leadership Award, along with three global business giants—Microsoft, Mars Incorporated and Ingersoll Rand.

DWR received the 2016 Organizational Leadership Award at the Climate Leadership awards ceremony in Seattle, Washington, which recognizes organizations that not only have their own broad greenhouse gas inventories and aggressive emissions reduction goals, but also exemplify extraordinary leadership in their internal response to climate change, and engagement of their peers, partners and supply chain.

Above: DWR's John Andrew (right) accepts award from Dennis J. McLerran, Region X Administrator of the U.S. EPA.

"Over the past 10 years, DWR has developed and implemented a comprehensive approach to addressing climate change," said John Andrew, Assistant Deputy Director, "covering climate science and analysis, mitigation, adaptation and public outreach. We greatly appreciate that our organizational leadership on this important issue has received this national honor."

In 2012, the Department adopted the greenhouse gas (GHG) emissions reduction phase of its Climate Action Plan (CAP), in which DWR commits to reducing its GHG emissions to 50 percent below 1990 levels by 2020 and 80 percent below 1990 levels by 2050. To achieve these goals, the CAP relies primarily upon using renewable and cleaner energy sources and improving energy efficiency for the State Water Project. As of 2014, DWR's carbon emissions were already approximately 30 percent below 1990 levels.

As part of US EPA's commitment to reducing GHG emissions, the agency's Center for Corporate Climate Leadership co-sponsors the Climate Leadership Awards with two non-governmental organization partners—the Center for Climate and Energy Solutions (C2ES), and The Climate Registry (TCR). These organizations look to highlight leaders in management and reduction of GHG emissions—both in internal operations and throughout the supply chain—through the awards.

This year, 17 awards were given to 13 organizations, three partnerships and one individual in the public and private sectors for their leadership in addressing climate change.

"It's particularly noteworthy that DWR was the only public agency to receive a national top honor this year," said Andrew. "Last year, we received an award in the 'Excellence in GHG Management' category. Building upon these successes, we look forward to even more progress on climate resilience and sustainability at DWR."

More information about the 2016 Climate Leadership Award winners is available at **www.epa.gov/climateleadership/2016-climate-leadership-award-winners**

Ateljevich Honored with Hugo B. Fischer Award

Eli Ateljevich, Senior Engineer in DWR's Bay-Delta Modeling Unit, was awarded the 2016 Hugo B. Fischer Award at the 22nd annual California Water and Environmental Modeling Forum (CWEMF) held on April 11 in Folsom.

Ateljevich was presented with the award for leading the development and application of the Bay-Delta Semi-implicit Cross-scale Hydroscience Integrated System Model (SCHISM), development and application of the Water Cost Tool and contributions to the development and application of the Delta Simulation Model 2 (DSM2) in the Bay-Delta Office. The models were applied in an Island Flood study and in several applications during the recent drought, including water level and velocity impacts as a result of the emergency drought barrier.

DWR Senior Engineer Eli Ateljevich (right) receives award from Ben Bray of the California Water and Environmental Modeling Forum.

Ateljevich joins previous DWR Hugo Award recipients, including Francis Chung, Kamyar Guivetchi, Dwight Russell, Armin Munevar and Emin C. Dogrul. The annual Hugo B. Fischer Award was created in 1995 in honor of Professor Hugo B. Fischer, who is remembered for his work on many projects focused on modeling, curbing water pollution and minimizing obstacles that could hinder efficient waterway operations.

A DWR employee for 17 years, Ateljevich graduated from the University of California, Berkeley with a Bachelor of Arts degree in Economics in 1993, a Master's degree in Statistics in 2000 and PhD in Civil and Engineering/Environmental Water Resources in 2001.

CWEMF presents the award yearly to state, federal, local and private scientists and engineers, who CWEMF recognizes for their outstanding contributions to construct, improve or make use of models used to accomplish the mission and goal of the CWEMF that is to increase the usefulness of models for analyzing California's water-related problems.

Promotions

Deborah Basye
Southern Field Division
Utility Craftsworker

Shannon Becker
Delta Field Division
HEP* Operator

Michael Beckley
Northern Region Office
Water Resources Technician II

Jillian Benci-Woodward
State Water Project Analysis Office
Engineer

Ronald Bennett
Operations and Maintenance
Senior HEP** Utility Engineer (Supv.)

Kyle Bickler
Flood Management
Senior Engineer

Darick Blake
Engineering
Structural Design Technician III

Arnold Boardingham
Operations and Maintenance
Senior Control Engineer (Supv.)

Mark Bradley
Bay-Delta Office
Supervising Engineer

Danette Brizzee
San Luis Field Division
Associate Governmental Program Analyst

David Brown
State Water Project Power & Risk Office
Senior HEP** Utility Engineer (Supv.)

Dale Brown
Engineering
Supervising Engineer

Robert Burns
Safety of Dams
Senior Engineering Geologist

Daniel Cimini
Engineering
Engineer

Michael Clark
Technology Services
Systems Software Specialist III

Matthew Correa
Statewide Integrated Water Management
Senior Engineer

Stacey Cunningham
Business Services Office
Staff Information Systems Analyst

Shervin Danque
Fiscal Services
Accounting Officer

Allan Davis
Engineering
Supervising Right of Way Agent

Mark De Cell
Business Services Office
Staff Services Manager I

Amritpal Dhillon
Fiscal Services
Accounting Officer

Seth Gargano
San Luis Field Division
Chief HEP* Operator

*Hydroelectric Plant
**Hydroelectric Power

Promotions

Valentina German
Office of the Chief Counsel
Legal Analyst

Diana Gillis
Delta Field Division
Chief

Adam Goldsmith
Fiscal Services
Staff Services Analyst

Jesus Gonzalez-Perez
Fiscal Services
Senior Accounting Officer

Heather Green
Environmental Services
Senior Environmental Scientist

Kimberly Hakala
Northern Region Office
Associate Governmental Program Analyst

Nikki Hatcher
Business Services Office
Staff Services Manager II (Managerial)

Brittany Hawkins
Human Resources Office
Training Officer I

Doris Hegner
Bay-Delta Office
Administrative Officer II

Zachary Heller
Human Resources Office
Associate Personnel Analyst

Barbara Holbrook
Oroville Field Division
Associate Safety Engineer

Summer Iqbal
Business Services Office
Associate Governmental Program Analyst

Bryan Johnson
Operations and Maintenance
Water and Power Dispatcher

Jodi Johnston
San Joaquin Field Division
Business Service Officer I

Matthias Kimball
Operations and Maintenance
Senior HEP** Utility Engineer (Supv.)

Kayal Rajuvel Kumar
Southern Field Division
Water Resources Technician II

Ted Lambert
Fiscal Services
Accounting Administrator I (Supv.)

Donna Lane-Mills
Human Resources Office
Staff Services Manager II (Supv.)

Lisa Larsen
Operations and Maintenance
Staff Services Manager II (Supv.)

Joel Ledesma
Operations and Maintenance (Supv.)
Chief of Utility Operations

Erik Loboschefsky
Executive
Program Manager I

Philip Lusan
Operations and Maintenance
Senior Information Systems Analyst

*Hydroelectric Plant
**Hydroelectric Power

Pedaling around Downtown

Bike Share Program Helps Boost Employee Health While Promoting Climate Resilience

By Akiela Moses

Launched during National Bike Month in May, DWR's Bike Share Program opens the door to a healthier and more environmentally friendly mode of transportation for DWR employees.

"This program serves as a great way to not only save money, but it also promotes a healthier

environment," said Nate Frank, Program Analyst for Executive Division and one of the key contributors to the planning and implementation of the program.

Thanks in part to a letter of executive support from the late Chief Deputy Director Laura King Moon; DWR was one of nine agencies to win a grant from Kaiser Permanente. This grant funded six bicycles, bike racks, helmets, safety lights, bicycle locks, side bags and adjustable seat post clamps. The Department of General Services (DGS) provided bike storage space in the parking structure at the Bonderson Building in downtown Sacramento.

From biking to nearby work meetings, to a lunch or just taking a break, this new program created in April allows employees to use the bikes and equipment as an alternative to public transportation and short-distance commuting.

"This is a convenient resource that allows you to take midday trips that are faster than walking," said DWR Senior Engineer Andrew Schwarz. "I very rarely drive a car to work, so it is great to have an alternative to reserving a car."

The bikes come in small, medium, large and extra-large sizes and are available throughout the work week for three-hour check-out from 8 a.m. to 5 p.m. at the Bonderson location.

Employees interested in using this program can register on DWR's Current website, where they can complete online training before signing an electronic waiver. After completion of the required training, the employee can check for bike availability and reserve it online at **current.water.ca.gov/services/transportation/Pages/BikeShare.aspx**

"The program corresponds well with many of DWR's core values such as sustainability, environmental stewardship and curbing climate change," said Mary Simmerer, Executive Division Sustainability Program Manager who originally submitted the Bike Share grant application. "Implementing the Bike Share Program may be a small step, but it is most definitely an important one."

Depending on interest and demand, the Bike Share Program holds the possibility of expanding beyond Bonderson to other DWR locations.

(Page 32): Front to Back: DWR employees Ted Frink, Andrew Schwarz, Nate Frank and Wesley McCandles enjoy bicycling around Old Sacramento during lunch break.
Above: Mark Mateo wears safety helmet provided by Bike Share Program.
Left to Right: John Engstrom, Mark Mateo, and Nate Frank of DWR test Bike Share bicycles.

Promotions

Andrew Lutz
Safety of Dams
Senior Engineering Geologist

Albert Madrid
Public Affairs Office
Director, TV Communications Ctr. (Supv.)

Michael Malott
San Luis Field Division
HEP* Maintenance Supt.

Ryan Martin
Oroville Field Division
Senior Environmental Scientist (Supv.)

Morgan Martinez
Environmental Services
Environmental Scientist

Robert Martinez
Operations and Maintenance
Water Resources Engineering Associate

Wesley McCandless
Business Services Office
Associate Governmental Program Analyst

Mark McCourt
Public Affairs Office
Graphic Designer II

Delia McGrath
Executive
Supervising Engineer

Jack Montgomery
Operations and Maintenance
Senior Water and Power Dispatcher

Chad Nichols
Southern Field Division
HEP* Mechanic II

Anthony Padilla
Fiscal Services
Accounting Officer

Edgar Padilla
San Joaquin Field Division
HEP* Operator

Ryan Parrilla
Engineering
Office Technician (Typing)

Jess Perez
San Joaquin Field Division
HEP* Mechanic II

Garnet Perlas
State Water Project Power & Risk Office
Associate HEP** Utility Engineer

Kenneth Petersen
Delta Field Division
HEP* Operator

Chad Pfeiffer
San Joaquin Field Division
HEP* Mechanic I

Alisa Pierce
Business Services Office
Staff Services Analyst

Steven Popish
Delta Field Division
HEP* Mechanic I

Kayalvizhi Raju
Southern Field Division
Water Resources Technician II

Anthony Ramirez
San Luis Field Division
Chief HEP* Operator

*Hydroelectric Plant
**Hydroelectric Power

Promotions

James Rathke
Engineering
Associate Safety Engineer

David Rennie
Operations and Maintenance
Principal Engineer

Christopher Ridley
Operations and Maintenance
Associate Control Engineer

Michelle Rivera
Statewide Integrated Water Management
Associate Governmental Program Analyst

Alfredo Rodriguez
Southern Field Division
HEP* Electrician II

Isaias Rodriguez
Southern Field Division
HEP* Electrician I

Maurice Rubio
Southern Field Division
Water Services Supervisor

Pardeep Singh
Delta Field Division
Senior HEP** Utility Engineer (Supv.)

Katherine Spiess
Technology Services
Associate Information Systems Analyst

Carla Strother
San Joaquin Field Division
Chief HEP* Operator

Esther Swink
Engineering
Associate Governmental Program Analyst

Omid Torabian
Fiscal Services
Accounting Administrator I

Garrett Townsend
Flood Management
Utility Craftsworker

Jimmie Wang
Technology Services
Data Processing Manager III

Amber Woertink
Central Valley Flood Protection Board
Associate Governmental Program Analyst

John Yarbrough
State Water Project Power & Risk Office
Principal HEP** Utility Engineer

Olivia Zalameda
Technology Services
Senior Information Systems Analyst

Retirements

Valerie Andrews
Executive
Associate Management Auditor

Reed Barnes
Southern Field Division
Utility Craftsworker Supv.

Darryl Caetano
San Luis Field Division
Utility Craftsworker

Ignacio Carrillo
San Joaquin Field Division
Utility Craftsworker

*Hydroelectric Plant
** Hydroelectric Power

Leaders in Safety

Employees Honored for Building Safety Awareness at DWR

You may wonder how DWR employees are contributing to DWR's world-class safety system in the workplace. Although Teresa Engstrom of the Division of Engineering and Donald Guy of the Division of Environmental Services work for different DWR divisions, they share the same goal of making DWR a safer place. For their outstanding efforts, they became DWR's first annual safety award recipients in 2016.

Left to Right: Don Guy and Teresa Engstrom receive safety awards at DWR Annual Awards ceremony on February 23, 2016.

"The seven nominations for safety awards confirmed that DWR employees are actively participating in the safety process," said Michael Donlon, DWR's Chief Safety Officer. "Although we could not present awards to everyone, each nomination demonstrated outstanding safety and health contributions to DWR."

As the leader of the Division of Environmental Services' (DES) Safety Committee, Senior Environmental Scientist Guy ensures safety measures are followed by the 160 DES employees working throughout the State at several locations, including the Bryte Laboratory and by boat in and around the Delta.

"DES staff understand the complexities of the work they are assigned and the potential dangers that exist to accomplish these tasks with regular safety awareness training," said Guy, who has worked 16 years for DWR. "DES staff are asked to work in remote locations in adverse conditions year round. Each day, staff are required to assess and discuss the work at hand with all team members and supervisors to identify the daily changes that may exist and how to best manage those changes to accomplish their work safely."

Guy coordinated DES' mandatory Heat Illness Prevention Plan and First Annual Safety Awareness Day trainings last year. Like Guy, Engstrom, Assistant Chief of the Division of Engineering (DOE) and manager of DOE's Project Safety Office, provides guidance of safety-related concerns for a division that has staff located at numerous locations, including major construction sites. Engstrom helped in developing the Code of Safe Work Practices, implementing the construction contractor safety prequalification process and creating the State Water Project safety awareness website.

As the leader in hiring four Safety Engineers to perform milestone safety inspections at construction sites instead of previous monthly inspections, Engstrom is also directing the development and implementation of safety inspection checklists that will be used by DOE's Safety Engineers, construction inspectors and engineers.

DWR in January 2015 became the only state department to implement a safety prequalification process for construction contractors obtained through State Contract Act provisions. The intent of the safety prequalification is to understand contractors' past safety practices in an effort to reduce the risk of injuries, project delays and cost increases during construction.

To maintain the flow of communication and education on health and safety issues in DOE, Engstrom led the creation of DOE's Safety Sub-Committee (DOESS) on October 8, 2015.

"Safety awareness is learned—it's not always instinctive," said Engstrom, who has worked for DWR since 1984. "Over the past five years, DOE has put a tremendous effort into 'teaching' our 285 employees safe work practices."

For more information about DWR's safety program, visit **current.water.ca.gov/prog/dwrsafe/Pages/Home.aspx**

LIVE SAFE | WORK SAFE

DWR Safety System

DWR embarked on its department-wide safety program over three years ago to make sure every single employee practices good safety day in, day out—on the job and off. We have made great strides in implementing a world-class safety system.

DWR's first annual Safety Award for Individuals, Units, or Teams was added to the Director's Annual Awards this year. A request for Safety Award nominations was sent to all employees. All were encouraged to nominate any colleague who had contributed to the safety system in 2015. More specifically, individuals, units, or teams who made a significant contribution outside of their regular job duties to improve the health and safety of DWR offices or worksites; other State or federal employees; DWR contractors or consultants; or the safety of the public. Nominations were required to meet five criterions for submission.

A total of seven nominations of employees who have made great contributions to the DWR Safety System were received. Of those, the following two individuals were presented with the first Annual Safety Award at the Director's Annual Awards Ceremony last February:

- **Teresa Engstrom,** Assistant Chief, Division of Engineering, significantly contributed to DWR's Safety System by helping develop the Code of Safe Work Practices, implementing the Construction Contractor Safety Prequalification Process and developing the State Water Project Safety Awareness website.
- **Donald Guy,** Senior Environmental Scientist, Division of Environmental Services, has gone above and beyond his regular job duties to improve safety and health within the Division. He organized the first Annual Safety Awareness Day, a joint training for employees at the West Sacramento office, as well as mandatory heat illness training.

Even though these individuals did not win one of the inaugural Safety Awards, I would still like to recognize them for their outstanding safety and health contributions to DWR. The other nominees for the Director's Safety Award are as follows:

- **Amanda Bedal,** Associate Governmental Program Analyst, Division of Flood Management
- **Scott Deal,** Environmental Program Manager I, Division of Flood Management
- **Cindy Garcia,** Environmental Program Manager I, Division of Environmental Services
- **James Mason,** Chief Hydroelectric Plant Operator, Southern Field Division
- **Donald Santos,** Fish and Wildlife Technician, Bay-Delta Office

As the DWR Safety System continues to evolve, I look forward to increased participation by all employees and seeing more nominations in the coming years for this Safety Award.

Best regards,

LIVE SAFE | WORK SAFE,
Mark W. Cowin
Director

A Commitment to Sharing

DWR Employees Provide Training for 200+ Classes

By Sean Walsh

The DWR Training Office would like to acknowledge the more than 115 volunteer trainers and presenters who supported DWR's training program throughout 2015. In addition to their regular assignments, these DWR employees served as class instructors or presenters for a variety of classes, such as Flood Fighting Methods, Introduction to Sustainability, Contract Management and Administration and Civil Service Exam Preparation. DWR is fortunate to have such dedicated individuals who are willing to put in the extra time and effort to share their knowledge and expertise to support DWR's training program. These volunteers trained more than 4,000 participants in well over 200 classes. We thank them for their commitment to employee training and development.

Duard MacFarland, Chief of the Budget Office in the Division of Fiscal Services, explains the DWR Budget Process during the Supervisory Training Program.

Anthony Agustin
Rob Barry
Mary Ann Benny-Sung
Ken Bogdan
De Ann Campagna
Tariq Chechi
Mark Cowin
Sharmane Daniels
Senarath Ekanayake
Laura Franco
Myra Galvez
Ruppert Grauberger
Lorie Hall
Scott Hunt
Dave Kearney
Justin Leavitt
Paul Marshall
Dean Messer
Dave Mraz
Nate Nelson
Victor Pacheco
Rudy Portis
Robin Rodriguez
Ed Roza
Jane Schafer-Kramer
Mary Simmerer
Jason Swain
Craig Trombly
Matthew Warnick

Kathy Aldana
Ron Bass
Mike Bingaman
Elizabeth Bryson
Doug Carlson
Andy Chu
Gina Craig
Mark DeCell
Mitra Emami
Ted Frink
Tim Garza
Gretchen Goettl
Jeremy Hill
Jennifer Iida
Roy Kroll
Jeanne Lee
Paul Massera
Mutaz Mihyar
Jinny Munro
Tim Nelson
Karen Parr
Andrea Riley
Elena Romero
Dave Samson
Kasey Schimke
Wendy Slepian
Keith Swanson
Stephanie Varrelman
Nikki Hatcher

Emmanuel Asinas
Darren Becker
Kora Bitcon
Katrina Burkett
Susan Carroll
Mary Ann Ciaraglia
Cathy Crothers
Wendi Dodgin
Teresa Engstrom
Guy Gagot
Kim Gazzaniga
Kamyar Guivetchi
Gerri Higgs
Jeffrey Ingles
Jeanne Kuttel
Duard MacFarland
Dan McConnell
Aaron Miller
Tiffany Navarrette
Perla Netto-Brown
Irma Peralez
Doug Rischbeiter
Paul Romero
Raymond Sanchez
M. Elizabeth Scott
Brian Smith
Lisa Toms
Bill Voss
Twylla Winslow

Gary Bardini
Tom Beiler
Samantha Blackwood
Rick Burnett
Teresa Chaney
Nova Clemenza
John Curless
Michael Donlon
Paul Farris
Jeff Galef
Bryant Giorgi
Elaine Hall
Eric Hong
Gareth Johnson
Teresa Lear
Andy Mangney
Ray McDowell
Michelle Morrow
Jackie Nelson
Morteza Orang
Michael Perrone
Michelle Robinson
Joe Royer
Dustin Sanoski
Geoff Shaw
Martin Stevenson
Carl Torgersen
Elizabeth Ware
Mark Zetterbaum

CELEBRATING

25 Years of Service

Mark E. Andersen
Executive
Acting SWP Deputy Director
March 2016

Curtis Anderson
Northern Region Office
Chief
May 2016

Peggy Bernardy
Office of the Chief Counsel
Assistant Chief Counsel
March 2016

Joanna Gonzales
Environmental Services
Staff Services Manager I
April 2016

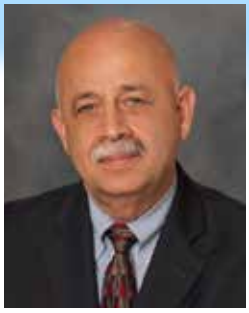
Teresa Gonzalez
Technology Services
Senior Information Systems Analyst
April 2016

Doris Hegner
Bay-Delta Office
Administrative Officer II
January 2016

Deborah Myrum
Statewide Integrated Water Management
Staff Services Manager I
March 2016

Jose R. Palomo
Operations and Maintenance
Senior Hydroelectric Power Utility Engineer (Supervisor)
March 2016

Mary Randall
Northern Region Office
Senior Engineer
June 2016



Amir Rangchi
State Water Project Analysis Office
Senior Engineer
June 2016

Joe Royer
Engineering
Principal Engineer
April 2016

Vera Sandronsky
Office of Chief Counsel
Attorney IV
April 2016

Jorge Salcedo
Delta Field Division
Hydroelectric Plant Electrician II
April 2016

Ted Sommer
Environmental Services
Program Manager III
April 2016

Lisa Toms
Fiscal Services
Accounting Administrator III
May 2016

Jon Yego
SWP Power and Risk Office
Senior Hydroelectric Power Utility Engineer (Supervisor)
May 2016

Memoriams

Ruben Navarrete
Fiscal Services
February 18, 2016

Warren Cole
Planning
March 24, 2016

Mary Ann Long
Fiscal Services
March 24, 2016

Carl Worley
Flood Management
March 28, 2016

Robert Haines
Technology Services
March 30, 2016

Merle Bashor
Operations & Maintenance
April 25, 2016

Congratulations

DWR Parents!

Binta Coleman, Engineer of Flood Management's River Forecasting Section, has a daughter named Presleigh, who was born on April 8, 2016 weighing six pounds and five ounces.

PROFESSIONAL ENGINEER GRADUATE

Benjamin Geske
Bay-Delta Office
Engineer
December 2015

Raising Awareness

DWR's Disability Advisory Committee and MORE!

DWR's Disability Advisory Committee (DAC), comprised of members from throughout various divisions, takes responsibility for increasing awareness about the many benefits of hiring and retaining employees with disabilities.

"DAC advises management on issues, policies and program activities that impact DWR's employees with disabilities," said DAC Chair Raymond Sanchez. "The DAC achieves this purpose in a number of ways, such as through educational materials, newsletters, fundraising events and outreach to the wider community serving persons with disabilities."

For the second year in a row, DAC has selected a charitable organization that serves the disabled community to receive a cash donation using some of the proceeds of the "Books are Fun" fundraisers held in the Natural Resources Building in Sacramento.

This year, committee members chose to donate to Mother Lode Rehabilitation Enterprises, Inc. (MORE) based in Placerville. MORE is an organization dedicated to empowering individuals with disabilities to enhance their quality of life. To fulfill this mission, the group fosters a better understanding of the needs of persons with disabilities and offers several programs to promote the independence of the people they serve. These programs include vocational instructional training, community access programs that teach job and life skills, creative options and opportunities for people with autism or with similar needs, and independent living services. To learn more about this organization's services or to get involved, visit **morerehab.org**

For more information about DAC membership and activities, contact **Raymond.Sanchez@water.ca.gov** or visit the Office of Workforce Equality's page at **current.water.ca.gov/programs/eeo/SitePages/Home.aspx** and select the "Disability Advisory Committee" link.

Above: DAC Chair Raymond Sanchez.
Center: DAC committee member Steve Heinbach helps at Book Fair in April.

Retirements

Chris Navarrete

After taking a computer class at California State University, Sacramento in the 1970s, Chris Navarrete became hooked on the magic of technology. His dedication to his career inspired Navarrete to spend the next 40 years working for the same division and on the same floor.

"As a student in an introduction to computers course, it was fun to learn how to write programs that would do something," said Navarrete, who retired as a Data Processing Manager III from the Division of Technology Services in April.

Navarrete has seen several renovations to the seventh floor and he has seen the transformation of DWR's world of technology, from Control Data 3300 computer in the 1970s to today's Virtual computers and cloud infrastructure. Starting with DWR as a student and later becoming Computer Operator, Navarrete managed the tape library and ran computers in the 1970s.

As a programmer, Navarrete began modifying the operating systems by using four of the computer programming languages such as Machine Language and Assembly Language. Later assignments included programming in Common Business Oriented Language (COBOL) and Formula Translation (FORTRAN).

"DWR's computers change every four to five years, so you're always learning new technologies," said Navarrete, who was part of the technology team when DWR employees received the first desktop computers in the early 1990s. "I've managed the conversion of operating programs from one machine to another."

For his outstanding work improving operating system software, Navarrete was awarded a Unit Citation.

In 2011, Navarrete became DWR's Chief Information Security Officer. To reduce security risks, Navarrete has helped expand information security in several ways, such as providing user education, additional firewalls and anti-virus programs.

While Navarrete might be spending less time on computers during his retirement, he will be increasing time spent peeling, chopping, slicing and grating perfect meals for family and friends. Since the age of 10, Navarrete has enjoyed being a chef. When he's not in the kitchen, Navarrete has participated in cooking demonstrations at events, such as the 2015 California State Fair where he took second place for his pomegranate jelly. He is a teacher's assistant in Advanced Baking in American River College's culinary program.

Navarrete also plans more time in his woodworking shop making gifts, including cutting boards in animal shapes and pens and pencils from exotic woods. He'll travel this summer to the University of New Mexico for his son's graduation. And back here at home, you might even spot him driving his 1968 Cadillac or cruising on his 2003 Indian Chief Motorcycle.

Mark Stuart

Mark Stuart's 39-year DWR career ended with his retirement in May as Chief of the Southern Region Office in Glendale. Asked to reflect on nearly four decades of water work, Stuart didn't hesitate:

"God's been good to me," he said. "I look at my career and think, what a blessing it's been. It was fun working with people, and it was challenging. What more could you ask for? I couldn't have designed it this way."

Stuart is a fourth generation Southern Californian, but the lure of skiing in the Rocky Mountains took him to the University of Colorado to study civil engineering. After receiving his degree, he spent 14 years in the Red Bluff Office, progressing from Project Engineer to Investigations Section Supervisor.

One of his co-workers there was Engineering Technician Jane Geiger, and they eventually married. Later assignments took Stuart to Sacramento's Central District Office and the Regional Planning Section and finally to the Southern Region.

"I enjoyed the rural atmosphere and the nature of the surface water issues in Red Bluff," he said. "I was fond of saying, 'The Red Bluff office was a big fish in a small pond, but the Glendale office was a small fish in a big pond.' I could speak for the Department in Red Bluff, but the Southern California powerhouse agencies skipped Glendale and went straight to the Director. Being so far from the center of government, the southern outpost gave me the most freedom, responsibility and challenges."

One of those challenges was filling the roll of Watermaster for two Southern California basins for 15 years, ensuring water rights for the holders according to the law. "I was the traffic cop—the man in the middle who made sure nobody cheated," he said. "Dealing with the judge's orders sometimes felt like interpreting the Dead Sea Scrolls."

Stuart said DWR personnel had been Watermasters in Southern California for decades, but eventually, the local water agencies decided to police themselves. "We served at their pleasure and didn't object when the agencies decided to do the job, but it was bittersweet to give it up after having the final word. I'm glad I got to do it."

Other challenging times in Glendale included the El Niño storms of 1997-98 ("we had nearly a year's worth of rain in one month"), the threat of a break at Prado Dam on the Santa Ana River ("it didn't break") and the whole Salton Sea restoration complexity ("no, I didn't come up with the fix").

Both Stuart and his wife are from Southern California, but they'll make their retirement home in Red Bluff. "I feel like I don't have any retirement-ready hobbies," he said. "I work all the time, but I did spend many years remodeling our house in Long Beach, so we'll probably be building or remodeling a home."

Stuart said decades of daily water work naturally made an impression, right down to his email address. "Waterbuff" has been half of that address for years.

"I was at a meeting where a woman was being honored for a service anniversary," he said. "An old guy stood up and presented her with a bronze sculpture of a water buffalo and said, 'I welcome you to the fraternity of old water buffalos.'

"And now that's me—an old water buffalo"—who's handy with a hammer.

Michael Werner, Chief of the Power Planning and Contract Management Branch in the State Water Project (SWP) Power and Risk Office, got a taste of how California moves water at a very early age.

"One of my earliest memories of the SWP was visiting Oroville Dam with my father in 1966 while the dam was under construction," said Werner. "My father's company was one of the contractors working on building the dam."

Nearly 50 years later, Werner retired from a 40-year career with DWR in 2015. He joined the Department in 1975 as an engineering student. After graduation from college in 1977, he became a mechanical engineer in the Division of Design and Construction.

From power plant design to power planning to FERC licensing to electric utility restructuring and transmission rate issues, Werner's time at DWR revolved around the ins and outs of providing power to operate the SWP.

"My most recent accomplishments included managing staff on the completion of System Impact Studies for California WaterFix facilities, SWP's Integrated Resource Plan for 2013 and transmission interconnection agreements for SWP facilities in PG&E's service area," said Werner.

Werner was Chief of the SWP Power and Risk Office's Power Planning and Contract Management from 2008 through 2015, Chief of Division of Operation and Maintenance's Transmission and Markets Branch from 2000 through 2007 and Chief of the SWP Analysis Office's Power and Transmission Contracts Section from 1994 through 2000.

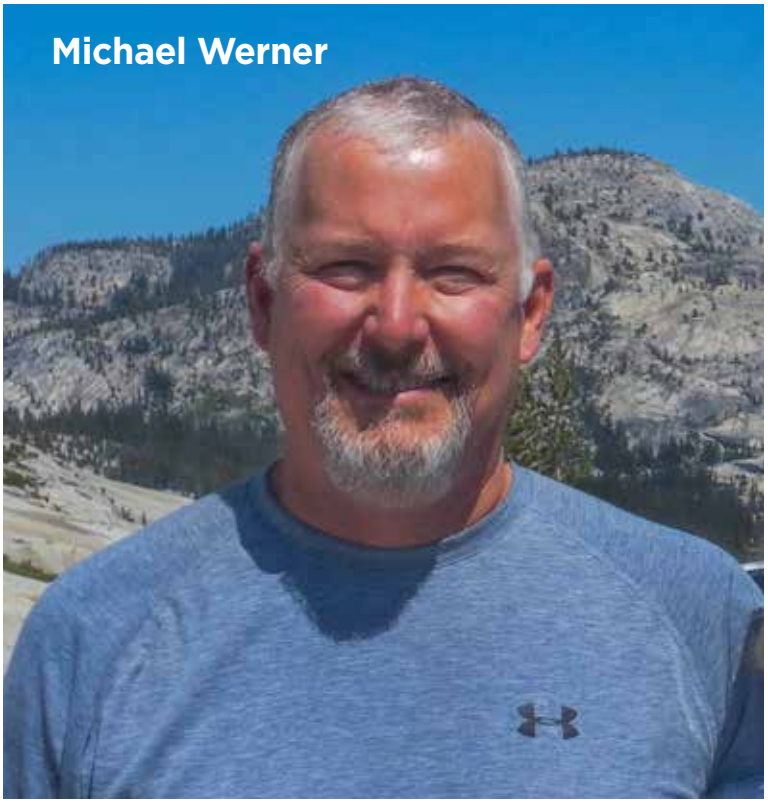
He recalls a number of interesting DWR assignments across the years, including design of SWP hydropower plants, Federal Energy Regulatory Commission (FERC) hydropower licensing of hydropower plants and representing the SWP during electric utility restructuring.

"A few of my most memorable and rewarding assignments were setting and testing Alamo and Mojave Siphon powerplants' turbine and shutoff valve operating criteria and timing, representing DWR in a FERC Open Access Tariff to prevent SWP's transmission costs from tripling, representing and protecting DWR's interests during the electric utility restructuring stake holder processes and negotiating the contract under which DWR became a 33.5 percent share participant in Northern California Power Agency's Lodi Energy Center," said Werner.

Born in Marysville, Werner was raised in Yuba City. He earned a Bachelor of Science degree in Mechanical Engineering in May of 1977 from California State University, Sacramento.

Growing up, Werner enjoyed backpacking and fishing in the Sierra and plans to revisit those pastimes during retirement. He also hopes to travel the world and spend time on his various hobbies.

"The variety of different work areas and assignments is what I enjoyed most about working at DWR," said Werner. "As well as the people I worked with and the sense of common purpose and dedication in working to resolve issues and complete assignments."



Retirements

Michael Christenson
Operations and Maintenance
Senior Mechanical Engineer

Robert Cooke
State Water Project Analysis Office
Chief

Andrew Cowell
Operations and Maintenance
Precision Electronics Specialist

Melody Creel
San Joaquin Field Division
Business Service Officer I

James Crettol
Operations and Maintenance
Senior Telecommunications Engineer

Ernest Davis
Delta Field Division
HEP* Mechanic I

Arthur Demayo
Delta Field Division
Senior HEP* Operator

William Dickens
Oroville Field Division
Water Resources Engineering Associate

Wendi Dodgin
Business Services Office
Staff Services Manager II (Managerial)

Margaret Durkin
Flood Management
Staff Services Manager I

Y-Nhi Enzler
Safety of Dams
Supervising Engineer

Paul Golovkin
Southern Field Division
Utility Craftsworker

Michalyn Green
Central Valley Flood Protection Board
Staff Services Analyst

Andy Guzman
San Luis Field Division
Chief HEP* Operator

William Haywood
San Luis Field Division
Assistant Utility Craftsworker Supt.

Steven Horrall
Southern Field Division
HEP* Technician III

Diane Huey
Technology Services
Senior Information Systems Analyst

Scott Jercich
State Water Project Analysis Office
Principal Engineer

John Kemp
Southern Field Division
Water Resources Engineering Associate

Nicholas Keserich
Southern Field Division
HEP* Electrical Supv.

Bernerd Lasarte
Engineering
Senior Cost Estimator

Rotana Lim
San Joaquin Field Division
Business Service Officer I

*Hydroelectric Plant

Retirements

Gilberto Lujan
San Luis Field Division
Senior HEP** Utility Engineer (Supv.)

Christopher Mattos
Operations and Maintenance
Supervising HEP** Utility Engineer

Timothy Milliron
Engineering
Construction Management Supervisor

Barry Montoya
Operations and Maintenance
Senior Environmental Scientist

Jesus Murillo
Southern Field Division
HEP* Technician II

Priscilla Neal
Flood Management
Staff Services Manager II (Supv.)

Douglas Osugi
FESSRO***
Supervising Engineer

Eugene Palilla
Southern Field Division
Senior HEP* Operator

Richard Pierson
Oroville Field Division
HEP* Mechanic I

Pete Ramos
Bay-Delta Office
Associate Governmental Program Analyst

Baldev Randhawa
Delta Field Division
Senior HEP** Utility Engineer (Supv.)

Stephen Raymond
Flood Management
Utility Craftsworker

David Roose
Operations and Maintenance
Chief of Utility Operations

Jeff Said
Delta Field Division
Chief

Steve Salcido
Southern Field Division
HEP* Electrician I

Jon Seehafer
SWP Power & Risk Office
Associate HEP** Utility Engineer

Bruce Shaffer
North Central Region Office
Engineer

Glenn Solberg
Operations and Maintenance
Chief Water and Power Dispatcher

Terrence Stanton
Southern Field Division
Senior HEP* Operator

Joseph Strain
Oroville Field Division
HEP* Maintenance Supt.

Ernest Taylor
South Central Region Office
Senior Engineer

Curtis Wada
San Joaquin Field Division
HEP* Maintenance Superintendent

Jack Warner
Operations and Maintenance
Senior Water and Power Dispatcher

Abraham Gutierrez

Looking back on his 38 years of state service Abraham Gutierrez, retired Mobile Equipment Superintendent, reminisced over the support and great experiences he gained while working with the Department.

"DWR has been like a second family to me," said Gutierrez.

Even before joining DWR in 1987, Gutierrez held an affinity for mechanics. After graduating from high school and serving in the U.S. Air Force as a mechanic, Gutierrez began his state career at Caltrans in 1978, where he took part in an apprenticeship program. He later joined DWR as a Heavy Equipment Mechanic at the San Joaquin Field Division.

"I would repair anything that had a number on it and a motor in it," said Gutierrez.

Working his way up to Mobile Equipment Superintendent, Gutierrez noted that with greater opportunities come greater responsibilities.

Gutierrez took on the task of managing and leading the overall sustainment, repair and service of heavy equipment directly involved with guiding water flow.

"Despite the hefty load, I would recommend working for DWR to anyone willing to work hard," said Gutierrez. "DWR provided ample and fair opportunity for upward mobility and for that I will forever be indebted."

In retirement, Abraham plans to spend more time traveling, spending time with his grandchild and becoming more dedicated to his congregation.

"It has been an immeasurable privilege and delightful experience to have worked as a state employee for over 38 years," said Gutierrez.

Retirements

Kwan Wong
Fiscal Services
Associate Accounting Analyst

Iris Yamagata
South Central Region Office
Senior Engineer

Marjaneh Zokaie
Engineering
Associate Cost Estimator

*Hydroelectric Plant
**Hydroelectric Power
***Floodsafe Environmental Stewardship and Statewide Resources Office

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DWR Mission Statement

To manage the water resources of California in cooperation with other agencies, to benefit the State's people and to protect, restore and enhance the natural and human environments.

Wesley Watson Jr., Program Water and Power Dispatcher at DWR's Project Operations Control (POC) Center in Sacramento, is among the 25 POC Dispatchers who monitor the State Water Project's 34 storage facilities, 29 pumping and generating plants along 700 miles of open canal and pipelines through several methods, including data and situational alarms on the 12 foot high map board.