

DWR

WINTER 2012/13

a magazine from the
California Department of
Water Resources

The Bryte Chemical Laboratory

GUARDIANS OF THE WATERWAYS

Sustainability is one of the Department of Water Resources' guiding principles. More than most state agencies or departments, DWR's mission requires that DWR consider the welfare of future generations of Californians. Sustainability, in its broadest sense, is about inter-generational justice. It is about making sure that we don't compromise the long-term capacity of natural ecosystems and human structures—such as the State Water Project—to meet the needs of future generations. Since our creation in 1956, DWR has worked on behalf of the current generation of Californians as well as those to come.

Historically, overseeing California's variable and asymmetrical water resources has required large investments in water infrastructure as well as long-term planning. Now a variety of global forces make long-term planning and a commitment to future generations more critical than ever. One of these global forces is climate change. Climate change is impeding our ability to use the past as a guide to the future. Historical measurements of such things as storm intensity, sea level, rainfall, and reservoir inflow can no longer be counted on to predict future patterns.

At this juncture in our history, our State Water Project is more than 50 years old. Many project structures are approaching the time when they will need repair and renovation. With heavy investments needed to maintain our infrastructure and climate uncertainty on the horizon, we must consider sustainability in everything we do.

A key component of sustainability is environmental stewardship. Environmental stewardship means the wise use of water and other natural resources. Environmental stewardship also means pursuing environmental benefits in all of our projects, and working with - not against - natural

processes. But sustainability is more. Water resource issues in California are complex and dynamic, and the planning we do as a department must set a trajectory that ensures that in the long run, Californians will enjoy clean water, healthy fish and wildlife populations, and ample resources. As a public trust agency, we also must lead by example.

We take that obligation seriously. DWR is committed to being a leader in both California state government and the California water community in sustainability. DWR has adopted a Sustainability policy and a Climate Action Plan. Additionally, DWR employs a sustainability coordinator who oversees multiple efforts across DWR.

At the departmental to the individual level, we are "greening" our work. We are, among other things, adding sustainability indicators to the California Water Plan, upgrading the energy efficiency of the heating and lighting in our offices, buying cleaner sources of electricity to power the State Water Project, shrinking the number of servers we need to handle our data (and cutting the associated cooling costs), and offering employees classes on climate change.

All of these Sustainability efforts are not faddish or altruistic. They are what we must do as a public agency responsible for the long-term management of a limited natural resource.

Dale Hoffman-Floerke
Chief Deputy Director



To learn more, please visit DWR's sustainability website at <http://sustainability.water.ca.gov> or contact DWR's sustainability coordinator, Mary Simmerer at mary.simmerer@water.ca.gov.

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On the Cover:

Bryte Chemical Laboratory Chemist Josie Quiambao prepares water samples for the analysis of calcium, magnesium, potassium, and sodium by plasma emission spectroscopy. **Above:** Ampoules containing certified reference standards used to calibrate the lab instrumentation to ensure the accuracy and precision of the data reported by the Bryte Chemical Laboratory.

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Delta Flood Exercise Staged by DWR and CCC

On December 12, 2012, DWR Flood Operations Chief Bill Croyle gives advice as members of the California Conservation Corps hone their flood fighting skills in a large-scale, emergency response exercise on Twitchell Island in the Sacramento-San Joaquin Delta, scene of a major, real-life flood fight

on New Year's Day, 2006. During the flood fight simulation, more than 150 CCC members from Humboldt County to San Diego practiced sandbagging and other techniques to protect Delta levees that guard not only lives and property, but the source of drinking water for more than 25 million Californians.

Features

C.A.S.T.

A Special Day for Kids

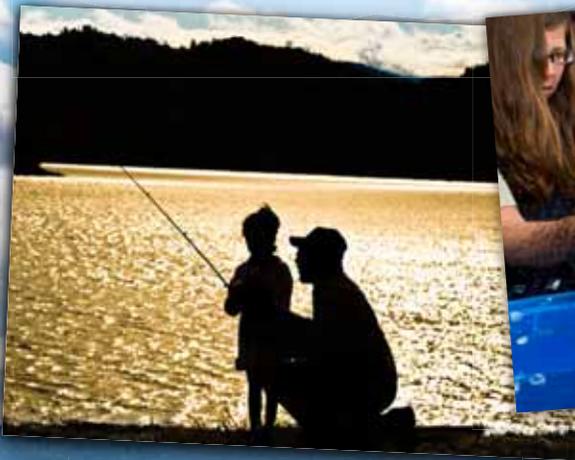
To offer children with special needs a day of outdoor recreation at State Water Project (SWP) facilities, DWR began co-sponsoring “Catch A Special Thrill” (C.A.S.T.) events at Del Valle and Oroville lakes in 1995. This year, C.A.S.T. events were held at seven SWP lakes—Del Valle, Oroville, Castaic, Silverwood, Perris, O’Neill, and San Luis.

“The California Department of Water Resources has been an integral part of the Catch A Special Thrill Foundation’s program in the state – both through its financial support and the caring and dedication of its employees,” said C.A.S.T. Executive Director Jim Owens. “They helped us enrich the lives of hundreds of children that we would never have been able to reach.”

A morning of fishing on a SWP reservoir highlights the day of outdoor adventure for

the boys and girls. Presented with their own rod, reel, and tackle box, the children and a parent or guardian partner board a boat with an experienced volunteer angler to learn about boating safety, fishing ethics, and California’s environment and natural resources. A barbecue lunch and awards ceremony follows. DWR’s Public Affairs Office and regional offices volunteer at the events.

DWR, other state agencies, and C.A.S.T. for Kids Foundation sponsored these annual events. Created in 1991, the C.A.S.T. for Kids Foundation is a national, non-profit organization that works with organizations to offer a once-in-a-lifetime experience for the children. ♦



Left to Right: C.A.S.T. events at Lake Oroville, Lake Perris, Castaic Lake, and O’Neill Forebay **(Above)** Southern Field Division Guide II Kathy Simmons (left) preparing children for a day of fishing and other outdoor recreation at Castaic Lake. **(Below)** Fishing at Lake Oroville.

GUARDIANS WATER



Color coded pH buffer standards are loaded on the autosampler for the calibration of the autotitration instrument at the Bryte Chemical Laboratory in West Sacramento.

OF THE WAYS

By Christina Jimenez

Nestled along the Sacramento River at the DWR Sacramento Maintenance Yard in West Sacramento, you will find twelve DWR scientists in the Bryte Chemical Laboratory. Dressed in white lab coats and protected by safety glasses, the scientists test and monitor the water quality in California's waterways, including the State Water Project (SWP). They are the guardians of California's water.

"To ensure the levels meet the water quality standards imposed by the United States Environmental Protection Agency (U.S. EPA), the lab runs 30,000 water analyses a year for chemical, physical, and biological constituents," said Chief of the Bryte Chemical Laboratory Sid Fong, a chemist for more than 30 years, including 17 with DWR.

Initially established in 1951 under the Department of Public Works' Dam Safety

Left to Right: Chemist Matt Hicks monitors the status of the organic carbon analyzer and Elaine Chan loads samples on the autotitrator for the analysis of pH, alkalinity, and electrical conductivity.

Office to test concrete and soil for dam construction, the Bryte Chemical Laboratory shifted its focus solely to monitoring water quality in the 1970s as SWP construction wound down and environmental pollution concerns increased.

In 1969, the Cuyahoga River in Ohio caught fire because of the large amount of pollution and harmful contaminants in the water. This led to the formation of the U.S. EPA in 1970. To ensure the monitoring of toxic materials in water systems, the Clean

Water Act was passed in 1972. The need for monitoring water quality began to take off in the 1970s, including at DWR.

In 1972, the lab began to sample and test all sources of water in California, including the SWP, for water quality parameters and harmful levels of toxic substances.

Today, the lab, which is housed in the Division of Environmental Services, is DWR's primary water quality laboratory testing for all of DWR's divisions throughout California.



A TEAM EFFORT

To accomplish their laboratory assignments, the team of six chemists and two laboratory technicians test water samples around the clock.

“From one minute to three days, sample analysis varies in time depending on the complexity of the

test method,” said Fong.

With the guidance of Supervising Chemist Allan Wong, the team of chemists - Richard Hernandez, Matt Hicks, Gary Munoz, Josie Quiambao, Maritza Pineda, and Pritam Thind - work together with lab technicians Elaine Chan and Marilyn Toomey.



Above: Laboratory Supervisor Allan Wong reviews lab results from 250 water quality samples from various projects throughout the State.

“Originally, we had thirteen chemists, but today we have about half the staff producing the same amount of work due to increases in efficiency by utilizing advanced instrumentation that includes automation and robotics that can run 24 hours a day, seven days a week,” said Fong.

While all chemists are knowledgeable and cross-trained in the different functions of the lab, each specializes in a specific area of testing. A chemist with the lab for nearly twenty years, Maritza Pineda, a native of Honduras, is the Ion Chromatography specialist. She analyzes water samples for levels of chloride, nitrate, fluoride, bromide and sulfate.

The team of chemists and lab technicians determine the levels of minerals, anions, cations, mercury, organic carbon, pesticides, herbicides, metals, endocrine disruptors and nutrients in drinking water, surface water, groundwater and wastewater for a wide array of DWR programs including water quality in the Truckee, Feather, American, Sacramento, and San Joaquin rivers. Water samples are received from more than 35 counties in California.

All of the data generated is stored in DWR’s Water Data Library (WDL) and is available to the public at no cost.

After samples are tested and results entered in the database, Staff Environmental Scientist Bruce Agee of DWR’s Municipal Water Quality Program Branch and Environmental Scientist Kelley Pepper manage the lab’s databases. To help keep the laboratory in operation, Business Services Assistant Clint Walker handles the procurement, contracts, and supplies.

THE PROJECTS

“We work on projects with the Divisions of Engineering, Flood Management, Environmental Services, and Operations and Maintenance, along with all district offices,” said Fong. “We also have helped other departments, such as Fish and Wildlife, Food and Agriculture and the Regional Water Quality Control Board with sample analyses when they were unable to perform the work themselves.”

One of the chemists’ many ongoing projects is the Red Rock Ranch Project – a 20-year-old project involving many State and federal agencies. To



understand how to remove the large amounts of salt and selenium from the drainage water in the San Joaquin Valley, the chemists routinely

analyze hundreds of samples a year to provide timely and valuable data to researchers from the University of California, Los Angeles; California State University, Fresno; and University of California, Davis.

“Roughly 70 percent of our projects are ongoing or routine for our chemists,” said Fong. “On occasion, we are called upon in an emergency situation where chemical data is needed as soon as possible for decision-making, and the lab can and has delivered results in a matter of hours. An example of this is a boat sinking at Lake Oroville and the need to know if there is a diesel fuel leak.”

A BETTER METHOD

The Bryte Lab’s Field and Laboratory Information Management System (FLIMS) was developed by Agee and Pepper, who manage the database that tracks projects from the beginning to the end, including sample collection by the field samplers, analysis by the chemists, and final reports to the program managers.

“It is a paperless system and critical to the daily operations of the lab,” said Wong. “The Lab’s FLIMS is unique in comparison to other labs because we’ve integrated the program management and field operation functions, allowing them to set up and track their projects from any location in the state.”

When the analysis are completed and approved by Fong, the data are uploaded into DWR’s WDL. Most of the analysis are then immediately available to the public.

DWR’s chemists use advanced high-tech lab instrumentation that is fully automated and computer controlled. The days of mixing chemicals in beakers and heating over Bunsen burners are long gone. The majority of the physical labor is now performed by robotic instrumentation.

“The new technology used in the chemical laboratory for the past 15 years has increased our efficiency, productivity and improved our quality assurance and quality control results,” said Fong. “Twenty years ago, it took our team of chemists three to six months to complete a project. Today, it takes five days.”

Sample volumes along with chemical and reagent use are a fraction of what used to be required for the analyses, resulting in substantial cost savings, minimal waste streams, and less hazardous waste disposal. The instrumentation can achieve detection limits that were unobtainable a few years



ago. For metals, the lab can detect concentrations in the parts per trillion levels, which is so sensitive that the analysis has to be performed in a Class 100 clean room to avoid contamination from dust in the ambient air.

“Productivity and efficiency are critical to our projects,” said Fong. “There is no status quo here. We are constantly investigating new technologies and methods to improve performance and achieve further cost savings.”

Top at left: Staff Environmental Scientist Bruce Agee manages the Field and Laboratory Information Management System (FLIMS) at the Bryte Chemical Laboratory and also helps with the water quality portion of DWR’s public portal for water resources, the Water Data Library (WDL). **Top at right:** Sid Fong, Laboratory Director since 2009, reviews and approves projects before the lab results are electronically sent to the Program Managers. **Below:** Chemist Maritza Pineda uses Ion Chromatographs to determine the concentrations of chloride, bromide, sulfate, and nitrate in water quality samples.



6 more

East Branch Extension Moves Closer to Completion



A large construction project expanding water deliveries to Southern California is rolling full speed ahead despite initial delays. When the East Branch Extension's Phase I Improvements and Phase II are complete, it will improve the State Water Project (SWP) system's flow capacity and reliability to meet the growing water demands of the San Bernardino, Mentone, Redlands, Yucaipa, Cherry Valley, Beaumont, and San Geronio communities. In addition to doubling the San Geronio Pass Water Agency's (SGPWA) SWP deliveries to 17,300 acre-feet a year, Phase II will facilitate importation of SWP water into the agency's service area to replenish groundwater basins that have been declining since the 1920s in the Beaumont Storage Unit.

To learn about EBX's progress, *DWR Magazine* staff met with EBX Program Manager Paul Strusinski, Crafton Hills Reservoir Enlargement Job Manager Tim Wehling, and Supervising Engineer Joan Weber of the EBX II Field Office.

EBX Highlights

Q.: What type of field work is going on along the EBX?

Strusinski: Mentone Pipeline field work recently started in January 2013. Citrus Reservoir and Pump Station excavation is ongoing. In the meantime, some interesting usage came out of the trees which were knocked down while clearing the area. The wood chips from the trees

were used by Caltrans for landscaping of the medians on local highways.

Is project completion in the near future?

Strusinski: The Citrus Reservoir and the Mentone Pipeline are scheduled for completion by April 2014. The Citrus Pump Station itself will not likely be in full operation until late 2014 and perhaps not until early 2015.

(Below) DWR Supervising Engineer Joan Weber (right) and consultant Field Engineer Bruce Blank discuss construction progress.



miles

By Jennifer Iida

Located in Mentone, Citrus Reservoir, which will have a storage capacity of 400 acre-feet, will provide pumping regulation and short term water supply. The reservoir pool will lie entirely within 1.2 million cubic yards of excavation.



Crafton Hills Reservoir Enlargement Project Highlights

What had to happen before you could move on this enlargement project?

Wehling: We had to get the Yucaipa connector pipeline in place. It's essentially a bypass while we're working on the Crafton Hills Reservoir Enlargement Dam, so we can still get water to customers. It was very important to have it in place in order to empty the Crafton Hills Reservoir.

There's been industry buzz about the grout technology you're using for the new dam.

Wehling: The older grout curtains didn't hold up very well. With the modern grout program, we use stable grout and we do this by adding bentonite, which is a natural clay mineral, superplasticizer, and viscosity modifying agents. We're grouting under the dam to make a grout curtain. The grout fills all the rock joints and cracks to make a solid impermeable curtain of grouted rock.

How is progress on the new Dam?

Wehling: We're going to have a sister dam near the original dam with about two and a half times the storage capacity. They've started excavating this material out to build the bowl of the reservoir. They are finishing up grouting under the dam, and then they'll finish excavating, as the dam is almost done being built. Finally, we'll drain the reservoir, dig out the connector channel, and backfill that excavated rock into the borrow pit where they excavated good soil to build the new dam.

The existing Crafton Hills Reservoir (water body above) in San Bernardino County will be enlarged by building a new 90-foot tall dam above the excavated core trench (shown just left of all the construction equipment on page 13) and by digging out a connector channel (below the water tank to the left) between the two dams.

What was one challenging part of this enlargement?

Wehling: One of the biggest challenges was negotiating to purchase the land for the new reservoir. There were California Environmental Quality Act issues and we had to build some new connector trails before construction started for the residents who hike and bike. The residents really enjoy the reservoir and the network of trails, so the temporary disturbance from construction is an unavoidable impact on the locals.

How is the budget for this EBX project and what does the future look like?

Strusinski: We have some good news. It's partly due to the economy. We're spending less money than previously anticipated. Because of the favorable economic environment, we are coming under budget due to competitive contractor bids, the redesign of portions of the project to be more efficient, and lack of inflation due to economic conditions. As for the future, with technology these days, we are able to keep an eye on our facilities with cameras located at each site, plus Google Earth has some amazing views.

Was there any part of the project that had more construction challenges? Why?

Weber: One of the biggest challenges on the Crafton Hills Reservoir project is the tight working area. The dam is being constructed in a deep, narrow valley with an elevation change from top to bottom of approximately 80 feet. The long, steep slopes on either side of the dam make it very challenging to access the work area and make it difficult to move heavy equipment in and around the site.

For the EBX Phase II projects, one of our biggest challenges has been working within the constraints of our environmental permits. We are working in an area where there are endangered species of plants and animals that must be protected.



(Above) EBX II Program Manager Paul Strusinski at a monthly progress meeting.



(Below, Left to Right) Grout holes are being drilled in the bedrock foundation for the Crafton Hills Reservoir Enlargement Dam by Consulting Geologist Adam Wade, DOE Geologist Ante Mlinarevic, Grouting Subcontractor Jaime Renalde, and North Central Region Office Geologist Erin Smith.

What are some of the highlights in the construction of EBX Phase I Improvements and Phase II in the last year?

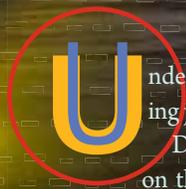
Weber: The Crafton Hills Reservoir Enlargement project is the last of the EBX Phase I projects to be constructed, and the main component of this project requires the construction of a dam. Due to the complexity of the dam structure, and governing safety regulations, there are several teams involved in the building of this project. Some of the different team members include engineers from the

Division of Safety of Dams, environmental staff from the Division of Integrated Regional Water Management, and real estate staff, design engineers, project geologists, and construction staff from the Division of Engineering. With so many individuals from varying disciplines working on this project, it takes a significant coordinated effort to keep it on

schedule. So far, the team members have worked together well and we expect to be able to effectively and timely address any issues or challenges that arise. Our first EBX Phase II project, Citrus Reservoir, is off to a good start. If the current progress is maintained, we anticipate it will be completed well ahead of the original contract completion date. 💧

BAFFling smolts

... Another Piece of the Big Puzzle to Keep Salmon in Safer Waters



Underwater light and sound shows are part of the puzzle pieces in keeping juvenile salmon on the right path in the Delta.

DWR has embarked on a multi-year journey to protect salmon on the San Joaquin and Sacramento Rivers. In response to a National Marine Fisheries Service Biological Opinion requirement that DWR and the U.S. Bureau of Reclamation (Reclamation) pursue engineering solutions to reduce the diversion of young, ocean-bound salmon in the interior and southern Delta, DWR has taken the lead in protecting juvenile salmon with evaluating underwater light and sound shows.

The underwater sound and light shows are actually high tech, non-physical fish deterrents utilizing bio-acoustic fish fence™ (BAFF) technology. BAFF technology—sometimes called a “bubble barrier”—uses underwater strobe lights and electronic sounds to guide fish away from a dangerous route. This technology has been successfully utilized at Georgiana Slough

Proposed Installation Sites

on the Sacramento River and the Head of Old River on the San Joaquin River.

According to the 2011 final report by DWR on the Georgiana Slough Non-Physical Barrier (GSNPB) study, the BAFF kept approximately two-thirds of ocean-bound Chinook salmon that approached the barrier from taking a risky detour into Georgiana Slough near Walnut Grove from the relatively safe main channel of the Sacramento River.

“Georgiana Slough is a piece of the big puzzle and has been considered a problematic and important junction,” said GSNPB Project Manager Ryan Reeves. “People think if this junction can be taken care of, then we may see some positive results for salmon.”

Another critical piece of the puzzle is the junction of the Head of Old River and the San Joaquin River in the south Delta. DWR and the Reclamation also successfully evaluated the BAFF technology here in 2009, 2010, and were poised for a third installation in 2011. However, high San Joaquin River flows prevented its installation in 2011.

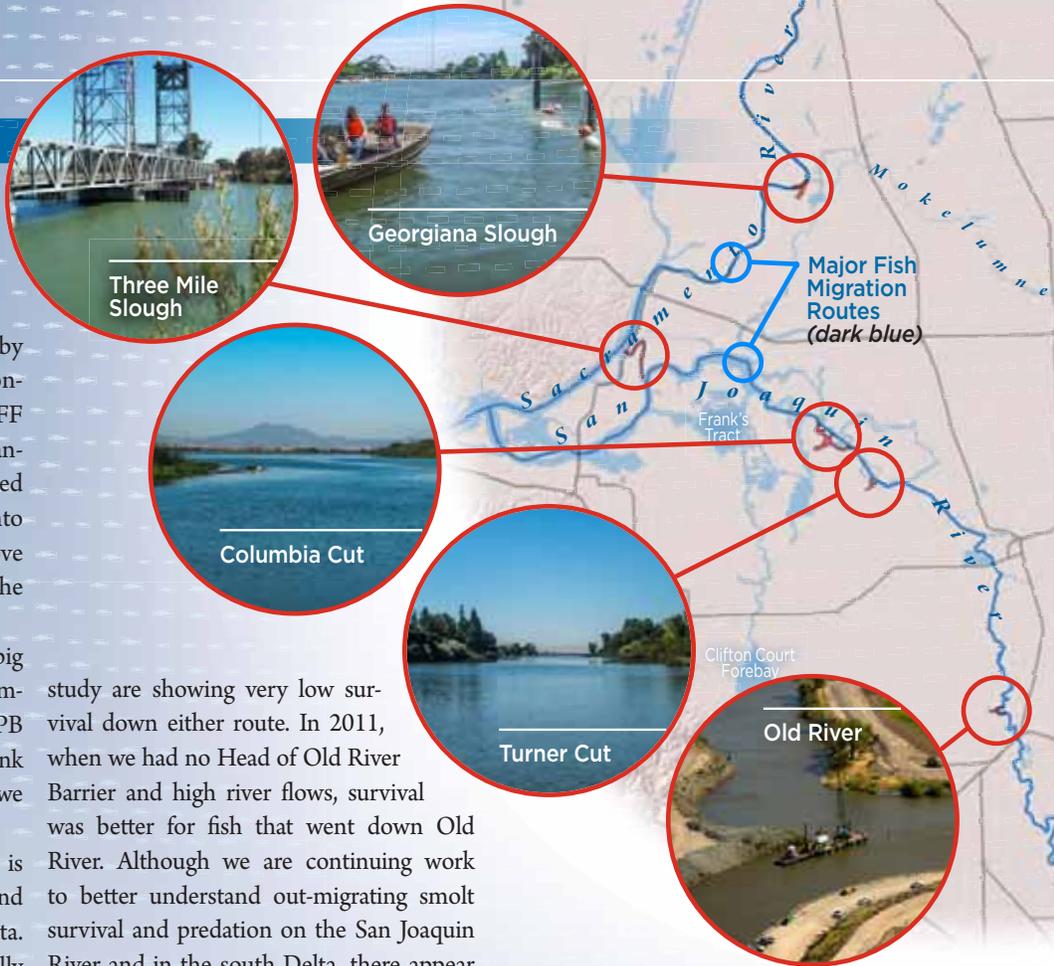
“We were able to successfully use a BAFF at the divergence of Old River from the San Joaquin. The BAFF allows unimpeded flow down Old River while keeping most smolts in the San Joaquin River,” said Jacob McQuirk, Chief of the Temporary Barriers and Lower San Joaquin Section. “DWR has been trying to keep salmon in the San Joaquin River for decades at this junction, but results from the 2011 six-year telemetry

study are showing very low survival down either route. In 2011, when we had no Head of Old River Barrier and high river flows, survival was better for fish that went down Old River. Although we are continuing work to better understand out-migrating smolt survival and predation on the San Joaquin River and in the south Delta, there appear to be no simple solutions that will lead to recovery of these salmon and steelhead runs. Any future infrastructure or management decisions need to be based on good science.”

DWR Senior Engineer Bill McLaughlin is working to assemble this complicated puzzle in a final report to the National Marine Fisheries Service by 2015. The junctions of Georgiana Slough, Head of Old River, and the BAFF technology are only a few of the pieces in this puzzle. All of the pieces include feasibility studies of engineering solutions utilizing fish guidance technology ranging from low technology physical structures, such as rock barriers

and floating guidance walls, to the high tech non-physical electronic fish behavioral modification technologies. These technologies will also be evaluated for use at Columbia Cut, Turner Cut, and Three Mile Slough, as well as at Georgiana Slough and Head of Old River.

“As we research options, the recommended solutions may be totally different for each of the four to five sites,” said McLaughlin. “We may not have one cookie-cutter technology because each site has its own set of challenges to guide fish while minimizing their effect on flows.”



Left to Right: BAFF operations staff include Ryan Reeves, Khalid Ameri, Jacob McQuirk, Colin Hanley, Genny Schrader, and Bill McLaughlin. Acoustic fish tag being implanted into juvenile salmon.



In the Spotlight:

South Central Region Office



Helping to restore 153 miles of the San Joaquin River may not be their typical task, but DWR's South Central Region Office (SCRO) employees are rising to the challenge.

Working with the U.S. Bureau of Reclamation and others to bring a historic salmon run back to a largely dewatered section of the San Joaquin River is just one of many front-burner challenges for the Region.

Working out of Fresno in the heart of the San Joaquin Valley, Region Chief Kevin Faulkenberry and a staff of 70 engineers, environmental scientists, water resources technicians, geologists, land and water use scientists, and others as partners with federal, State, and local agencies to solve regional problems and engineer improvements.

"The South Central Region, like most of California, has many competing water interests that can be better managed through Integrated Water Management," said Faulkenberry. "SCRO plays a key regional role by coordinating and participating in Integrated Regional Water Management (IRWM) groups to promote its advancement in California."





The regional role plays out across 11 counties, from the beaches of Santa Cruz to the agricultural fields of Kern County.

As part of the local implementation of the IRWM programs, SCRO provides technical assistance in water resources engineering, project management, hydrology, groundwater, water quality, surveying, mapping, and water conservation.

“Our office provides regional coordination and technical support for all DWR divisions,” said Faulkenberry. “Our staff also provides support to other agencies in the region, including Lower San Joaquin Levee

District, Kings River Conservation District, U.S. Fish and Wildlife Service, Department of Fish and Wildlife, California Department of Transportation and San Joaquin River Conservancy.”

With programs to help improve one of the world’s most productive agricultural regions and California’s second-longest river, SCRO has a vital role in the development of the San Joaquin River Restoration, the San Joaquin Valley Drainage Monitoring, Climate Change, and several other programs.

River Investigations and Flood Management

Helping with one of the most ambitious river revitalization projects in the nation, the River Investigations Branch (RIB) manages DWR’s efforts on the San Joaquin River Restoration Program (SJRRP).

The SJRRP is a comprehensive, long-term effort to restore flows to the San Joaquin River from Friant Dam, a federal dam near Fresno, downstream to the confluence of the Merced River. Focusing on this 153-mile segment of the San Joaquin River, the SJRRP aims to restore a self-sustaining Chinook salmon fishery while



Left to Right: At Wildwood on the San Joaquin River, Matt Meyers and Robert Lampa of South Central Region Office’s River Restoration Section prepare to monitor sand accumulation as part of salmon restoration effort. At Red Rock Ranch in Fresno, Engineer Ken Johnson reviews new ForEver Water Vapor Compression Distillation unit. Environmental Scientist Fong Vang logs data during trap checks for small mammals along the California Aqueduct. In the fall, Robert Lampa, Matt Meyers, Tom Snyder, and Sammy Naventhan perform monthly checks to monitor sand accumulation on the San Joaquin River.



(Left to Right) Engineer Josh Bannister, Student Andre Forestiere, and Engineer Steve Doe of the Hydrology, Hydraulics, and Flood Management Section perform maintenance of the flume stream gages on Cantua Creek watershed at the California Aqueduct. Jennifer Bohling, Erica Rhyne-Christiansen and Abimael Leon-Cardona of the Environmental Compliance Section discussing taking pebble counts to measure grain size distribution of streambed at Wildwood on the San Joaquin River. Fresno Metropolitan Flood Control District Engineer Jarrod Takemoto with Chris Montoya and John Kirk of the SCRO Groundwater and Regional Planning Section inspect new pump station constructed from Proposition 1E storm water grant to improve urban flooding issues in southeast Fresno.

San Joaquin Restoration Agencies Select Preferred Alternative

Federal and State officials in October 2012 announced their preferred alternative to implement the San Joaquin River Restoration Program. It is the “preferred alternative” listed in the Final Program Environmental Impact Statement (EIS)/ Environmental Impact Report (EIR).

Among seven competing alternatives considered, the one chosen includes the use of the river channel and bypass system to convey restoration flows and allows for recapture of these flows in the Delta and in the river upstream from it.

Led by the U.S. Bureau of Reclamation, the SJRRP is being implemented by Reclamation, DWR, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and State Department of Fish and Wildlife.

Program leaders from Reclamation and DWR said the preferred alternative “provides the greatest flexibility in implementing the Settlement and the greatest opportunity to fulfill the purpose and need of the SJRRP.”



reducing or avoiding adverse water supply impacts from restoration flows.

RIB, which provides support with engineering studies for evaluating river morphology and fisheries habitat, also performs hydraulic modeling and data collection to provide a better understanding of how the San Joaquin will respond to planned actions of the SJRRP.

“Since the early 1990s, SCRO has been involved in river restoration efforts in the San Joaquin Valley,” said Paul Romero, Supervising Engineer of the RIB.

Under the direction of Dave Encinas, RIB has gained valuable experience in the area of river restoration and continues to support the Delta Fish Agreement with work on the Merced River and the San Joaquin River Conservancy by designing and constructing projects to enhance habitat and recreation activities.

In addition to its river restoration efforts, SCRO is also helping the Division of Flood Management in implementation of the Central Valley Flood Protection Plan by leading the regional planning efforts along the San Joaquin River from below Friant Dam to the Stanislaus River. Senior Engineer

Greg Farley is helping manage those planning efforts and is also working on the Arroyo Pasajero and Cantua Creek streams to reduce flood impacts to the California Aqueduct.

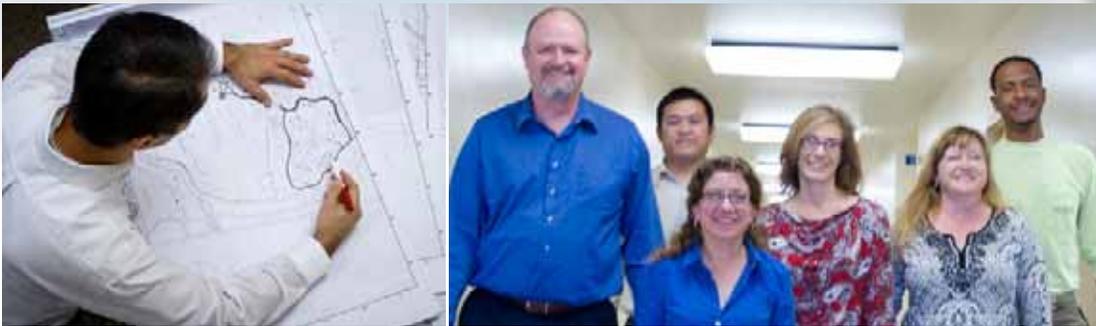
Special Investigations

DWR’s regional office in Fresno also works on a problem that has long plagued farmers in arid regions.

“Known as one of the world’s most productive agricultural regions, the San Joaquin Valley has experienced problems with the disposal of agricultural drainage water,” said Program Manager Jose Faria, Chief of SCRO’s Special Investigations and Regional Planning Branch. “The drainage problem is a consequence of the Valley’s distinctive geological makeup, which makes natural drainage ineffective in certain areas.”

The San Joaquin Valley Drainage Investigation Program created in 1957 tracks 45 drainage sump systems for flow and water quality concerns. To help identify drainage problem areas, about 1,250 wells are monitored for shallow groundwater levels and electrical conductivity.

With more than 30 projects funded



(Left to Right) Senior Engineer Dave Encinas reviews river restoration design. Left to Right: Senior staff of the Environmental Compliance and Statewide Planning Branch include Steve Ewert, Mike Eng, Charyce Hatle, Chief Karen Dulik, Michelle Selmon, and Abimael Leon.

by Proposition 204, the section administers the funding of research projects aiming at resolving drainage and salinity problems in the west side of the San Joaquin Valley.

“One of the most successful projects has been with the University of California, Los Angeles, which demonstrated that drainage water from farms can be desalinated,” said Faria.

Environmental and Statewide Planning

As the newest branch at SCRO, the Environmental Compliance and Statewide Planning Branch recently reorganized in 2011 allowing it to support the State Water Project (SWP) and California Water Plan.

“We have a lot of expertise with San Joaquin Valley agricultural issues, water conservation, environmental permitting, climate change and San Joaquin Valley endangered species,” said Karen Dulik, Chief of the SCRO’s Environmental Compliance and Statewide Planning Branch and an Environmental Program Manager with DWR and SCRO since 2001. “Very few biologists have the ability to trap and handle the small mammal species of the Valley and we are fortunate to do this work.”

Environmental permitting and surveys on projects is done for other divisions, such as Engineering and Operations and Maintenance. The new branch won a unit citation in 2011 for their work cleaning up debris downstream of the Los Banos Creek Detention Dam.

“We are working on a number of CEQA

and environmental permitting projects for the Region, including permitting 15 stream gages along the floodways of the San Joaquin River and its tributaries,” said Senior Environmental Scientist Mike Eng.

SCRO’s CEQA expert Charyce Hatler has spent the last 17 years providing CEQA guidance on several projects, such as the dam raising and seismic retrofit Environmental Impact Report (EIR) and EIR/Environmental Impact Statement (EIS) for Lake Kaweah, Lake Success, Crane Valley Dam, and San Clemente Dam projects in coordination with DWR’s Safety of Dams, the U.S. Army Corps of Engineers, and private and public dam owners.

As part of DWR’s Climate Change Team, Michelle Selmon and Jennifer Morales of SCRO are helping water managers prepare for climate change. Selmon focuses on climate change adaptation, which includes helping regional water managers to assess their vulnerabilities to impacts, such as sea level rise and changing runoff patterns, by incorporating those considerations into their planning efforts. Morales, agricultural water mitigation specialist, works with farmers to reduce greenhouse gas emissions, such as carbon dioxide and nitrous oxide, from agricultural activities.

“Data collection and analysis play a major role in all of the planning work that DWR does, and identifying a dependable source of support funds for those activities will be key to keeping our planning efforts relevant into the future,” said Faulkenberry. ♣

South Central Region Office Chief

With more than 20 years of experience in San Joaquin water issues, Kevin Faulkenberry knows the importance of river restoration.

When Faulkenberry joined DWR in August of 1989 after graduating from California State University, Fresno with Bachelor of Science degrees in Civil and Survey Engineering, he worked on the Drainage Program. He later transitioned to river restoration projects on the San Joaquin River System. The projects were primarily for the Four-Pumps Mitigation Program, which included salmon and riverine habitat enhancement projects. Projects were located on the San Joaquin, Merced, Tuolumne, Stanislaus, and Calaveras Rivers and focused on all aspects of restoration, including fisheries habitat, passage, and ecosystems improvement.

Faulkenberry, who was program manager of the San Joaquin River Restoration Program from 2006 to 2010, led staff in development of the joint Final Program Environmental Impact Statement/ Report with the U.S. Bureau of Reclamation. The document is key to the implementation of the San Joaquin River Restoration Program.

“As Chief of SCRO during the last three years, I continue to follow my passion for riverine and fisheries habitat improvement through my continued involvement in the same programs as I always did only from the management perspective,” said Faulkenberry.



Keeping up with the times

By Elizabeth Scott



lean and adaptable are qualities that characterize the Ventura County Watershed Protection District.

In 2003, the District changed its name to keep up with community values, regulatory requirements and funding opportunities. The Ventura County Flood Control District, dating to 1944, became today's Ventura County Watershed Protection District.

If the name sounds more holistic, it's by design. The District was moving toward a greater emphasis on integrated watershed management, as well as taking more environmentally sound approaches to its 1944 mission of flood control.

"We're still doing the same function, in essence providing flood control, but we're looking at it a lot differently than how we used to,"

said District Director Tully Clifford. "Flood control for Ventura County in the past was about concrete structures and channels, but now the District is looking at flood control through a broader lens. We're looking at water quality issues, environmental issues, and regulatory responsibilities."

Although Clifford – who hails from Calgary, Canada – is in his first year with the District, he knows its history and people. And he is proud of its ability to meet changing demands.

Largely rural in 1944, the area located northwest of Los Angeles and now served by Clifford and his 140 employees has steadily lost farmland to new, still growing communities. As towns have grown, so have regulatory and environmental requirements, and community values and priorities have changed.

Communities look to the district to

Ventura County Watershed Protection District Director Tully Clifford viewing Ventura River, which outlets into the Pacific Ocean (left) and has five major tributaries.

protect their homes and businesses from floods, but also to protect water quality and preserve and enhance natural habitat.

"We have to work and collaborate very closely with the cities to make sure we're meeting their needs, meeting our needs, and meeting the needs of all of our various stakeholders," said Clifford. "We have a very interested and engaged stakeholder group here in Ventura County, which is really good. It makes it sometimes very challenging, but I'd rather they be interested and engaged than not."

With six watersheds including Cuyama River, Ventura River, Santa Clara River, Calleguas, Coastal Creeks, and Malibu





(Above) Santa Paula Creek, a major tributary to the lower Santa Clara River located in Ventura County, is a historic southern steelhead spawning habitat. (Below) Construction Inspector III Julie Rego inspecting the Camarillo Hills Drain Restoration project, which will help prevent flooding and provide 100-year flood protection for the adjacent properties.



Creek, the District covers more than 200 channel miles, 69 levee miles, 44 debris and detention basin-dams, and four pump stations in its 1,843 square mile area.

The District became a State Water Project contractor in 1963, with an annual allocation of 20,000 acre-feet of water, which is conveyed to the Casitas Municipal Water District, City of Ventura, and United Water Conservation District.

Just weeks into the job, Clifford led the District's collaboration with the Federal Emergency Management Agency (FEMA) and the U.S. Geological Survey (USGS) to conduct an ArkStorm exercise. They modeled a storm coming in from the Pacific. Concentrating on the Santa Clara River, the exercise starkly showed the potential impact on communities and critical facilities.

The exercise also tested the district's emergency response capabilities.

"The idea to conduct an ArkStorm exercise came to FEMA from us," said Clifford. "We're very well set up from a long-range planning and modeling point of view and are quite advanced in our storm operations center. We have very strong capabilities from a technology standpoint and are one of a very few organizations that they could come to who could take the Arkstorm information and integrate it into our system to use it like this."

Clifford said the District went beyond FEMA's expectations in detailed information, such as being able to project levels of

flood water at given times and locations. "That's something even FEMA can't provide," he said.

A New Leader

Local reviews are that Clifford is more than up to his new job. In addition to his Bachelor of Science degree in Civil Engineering from Royal Military College in Kingston, Ontario (Canada), Clifford has Master's degrees in Civil Engineering and Business Administration from the University of Calgary. Before making his way to Ventura County in the fall of 2012, Clifford's professional stops included engineering positions for the City of Calgary, Public Works Director for the City of Solvang, and Chief Administrative Officer for Crowsnest Pass, Alberta, Canada.

Clifford's goal is for the district to work more collaboratively with the community and do projects differently, providing flood control that meets all stakeholders' needs and provides multiple benefits.

"It takes a bit of a mind-shift of how we think, because it's real easy to go in and just put in something like a channel," said Clifford. "It's more challenging, and more expensive to do the type of work that meets all the needs of a community." ♦



Briefing

Bike Trail Bridges

Three New Bridges Improve Riding on Freeman Bike Trail

Bicyclists on the Freeman Bike Trail now enjoy smoother rides, thanks to three new bridges on the popular bike path near Lake Oroville.

“Three new weathered steel bridges were built during the summer months of 2012, replacing worn wooden bridges,” said Alyssa Stutz, an Engineer with Oroville Field Division. All three spans are located on

a trail segment just north of the Thermalito Power Canal. One is located between Garden Drive and Table Mountain Boulevard. The other two bridges are located farther east, between Table Mountain Boulevard and Cherokee Road.

“Our condition assessment program identified the need to replace the old bridges,” said Stutz.

New 23-foot-long weathered steel bridge located between Garden Drive and Table Mountain Boulevard.

The project was completed from June to August of 2012. New abutments to support the replacement spans were built by civil maintenance crews under the supervision of Chuck Saiz and lead crewmember Curtis Trujillo.

The new bridges are safer and will enhance the recreational experience for the many bicyclists and other users who enjoy the Freeman Trail. 💧

Disability Awareness and Resources Forum



As part of October Disability Awareness Month, DWR’s Disability Advisory Committee (DAC) along with three other Natural Resources agencies held its 2nd Annual Disability Awareness and Resources Forum in the Natural Resources Building auditorium on October 11.

“Whether you’re a person with a disability or you know someone with a disability, the information provided today will positively impact your life or lives of your friends and family,” said Raymond Sanchez, DAC Coordinator of the Office of Workforce Equality.

Programs and services available to persons with disabilities were presented by United Cerebral Palsy of Sacramento and Northern California, Touch of Understanding, California Foundation for Independent Living Centers, Families for Early Autism Treatment, the University of California, Davis Mind Institute, and Northern California Services for Deaf and Hard of Hearing.

The forum, which was held in two sessions, was also sponsored by the Departments of Fish and Wildlife, Forestry and Fire Protection, and Parks and Recreation. 💧

Left: At the October forum, 10 speakers provided information on programs and services for persons with disabilities.



To view the recording of this forum, visit <http://cawater.rmxpres.com/webcast/data/dwr10112012/main.htm>

Extra Effort at Thanksgiving

Robie Thermalito Pumping-Generating Plant Fire

Fire discovered early Thanksgiving morning damaged a State Water Project pumping-generating plant located four miles west of Oroville, putting the plant out of operation for an undetermined time.

The damage, still being assessed, will cost millions of dollars to repair. But the fire has not disrupted water deliveries, and State Water Project (SWP) power managers will buy electricity to compensate for the damaged plant, which typically accounts for roughly five percent of the power generated by the SWP.

The cause of the fire was not immediately determined, with access to the facility restricted pending safety and environmental inspections. Operators were able to divert water released from Oroville Dam around the plant to continue uninterrupted deliveries of SWP water.

In May, the 44-year-old plant was renamed the Ronald B. Robie Thermalito Pumping-Generating Plant to honor former Director Robie, who led DWR from 1975 to 1982.

The Oroville Field Division plant contains four generating units, which are capable of both generating

electricity and pumping excess water back into storage to be used again to create hydropower.

When the fire started, no personnel were in the plant, which is monitored remotely from Hyatt Powerplant beneath Oroville Dam. After alarms erupted at about 7 a.m. on November 22 indicating trouble at the Thermalito plant, a DWR employee was dispatched to investigate and found smoke filling the facility.

Thick, black smoke hampered the CAL FIRE crews that responded. The crews made at least eight attempts on November 22 to control the fire, but were driven back by the hazardous conditions. Hazards inside the five-story building with the bottom four stories located underground included the danger of falling equipment, stored oil, and zero visibility.



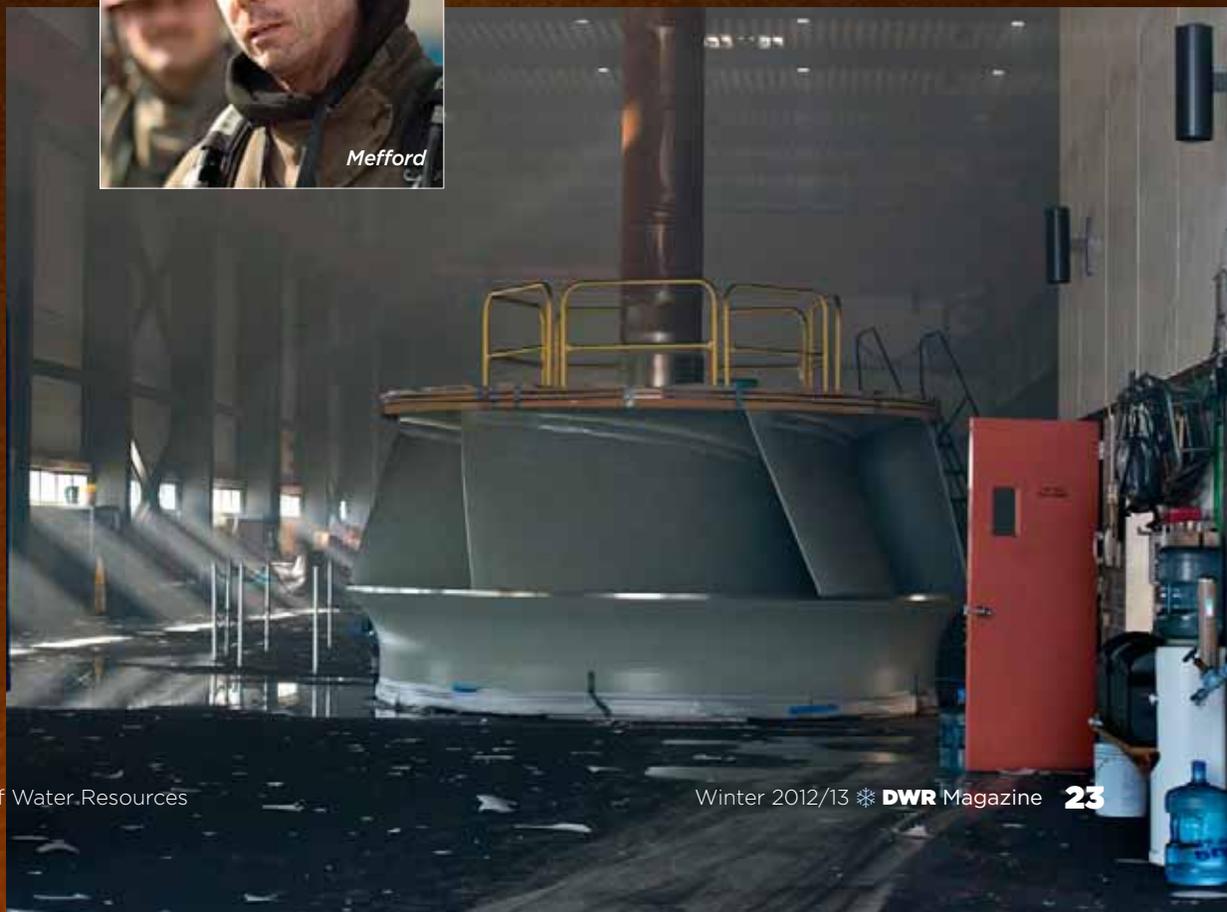
DWR Electrician Kevin Mefford of the Oroville Field Division

responded to the fire as a volunteer firefighter with Butte County Fire Department/CAL FIRE. According to both CAL FIRE and DWR supervisors at the scene, Mefford's familiarity with the plant and his training as a firefighter helped to prevent injury to others in his CAL FIRE crew. Mefford guided firefighters through the zero-visibility smoke in order to battle the fire.

Mefford also may have prevented much greater destruction to the plant. On the second day of the fire, when it was nearly contained and careful entry could be made, Mefford repeatedly surveyed each floor of the building and engaged the servo locks on generating unit 2 to prevent wicket gates from opening. Had they opened, the unit could have begun spinning uncontrollably and destroyed itself.

Dave Starks, Division of Operations and Maintenance Chief, was visibly relieved when Mefford came out of the plant after securing the generating unit.

"You can't overstate his effort," said Starks. 💧



People

New Hires

Bryan Armstrong
Operations & Maintenance
Electrical Engineer

Jason Bacher
Business Services Office
Staff Services Analyst

Michael Beckley
Operations & Maintenance
Heavy Equipment Mechanic

Christopher Boone
Oroville Field Division
Water Resources Technician I

Lori Brock
Executive
Attorney III

Cheresse Carrillo
Executive
Seasonal Clerk

Mei Lei Chen
Technology Services
Systems Software Specialist II

Greg Clawson
State Water Project Analysis Office
Electrical Engineer

Steve Doe
IRWM*** - South Central Region
Engineer

Paula Edwards
Flood Management
Office Technician (Typing)

Yan Fang
Oroville Field Division
Electrical-Mechanical Testing Tech. I

David Fong
Fiscal Services
Associate Budget Analyst

Preston Good
Engineering
Right of Way Agent

Erik Goodman
State Water Project Analysis Office
Engineer

Sirisha Gottipati
Technology Services
Senior Programmer Analyst

Paul Gowan
Engineering
Engineer

Mark Hamilton
Operations & Maintenance
Office Technician (Typing)

Laura Hollender
Executive
Attorney

*** Integrated Regional Water Management

New Assignment

Deputy Director Helliker

With 26 years of environmental and resources management expertise from federal, State, and local government, Paul Helliker was appointed DWR Deputy Director for Delta and Statewide Water Management by Governor Brown in October of 2012.

Some of Helliker's plans at DWR include leading staff in setting the foundation for the Bay Delta Conservation Plan and helping DWR adapt to climate change. He oversees DWR's Bay Delta Office, FloodSAFE Environmental Stewardship and Statewide Resources Office, Division of Environmental Services, and Interstate Water Resources Manager.

"I also plan to work on training and succession planning to keep up the high quality of work that DWR is known for," said Helliker.

As Executive Advisor in 2012 and General Manager of the Marin Municipal Water District (MMWD) from 2004 to 2012, Helliker led the District in a new water conservation master plan to reduce water demand by 20 percent, an award winning desalination pilot program, and climate change planning and greenhouse gas emission reduction initiatives.

With an annual budget of \$80 million and 260 employees, MMWD is the water supply agency for 190,000 customers in Central and Southern Marin County.

While at MMWD, Helliker was also the Chair of several organizations, such as the Bay Area Water Agencies Coalition, the regional water management group responsible for the completion of the Bay Area Integrated Regional Water Management Plan, and Association of California Water Agencies' Region One.

From 1999-2004, Helliker was appointed by Governor Davis as the Director of the California Department of Pesticide Regulation (DPR) during its launching of a work safety program and school integrated pest management program along with the establishment of DPR's full funding from industry fees.

Helliker has served as President of the Clean Air Force in Austin, Texas; Vice President of CALSTART in Burbank, California; Assistant Secretary of the California Environmental Protection Agency, and in various positions with the U.S. Environmental Protection Agency in the San Francisco Regional Office.

Helliker graduated from Stanford University with a Bachelor of Arts degree in Philosophy, a Bachelor of Science degree in Civil Engineering, and a Master of Science degree in Environmental Engineering. He is a registered civil engineer in California.

A native of Oklahoma, Helliker attended high school in London. His hobbies include scuba diving, kayaking, sailing, and skiing. ♦

Left to Right: New Deputy Director Paul Helliker and Director Mark Cowin



Sonny Fong Receives Statewide Award

By Christina Jimenez



Sonny Fong, DWR's Emergency Preparedness and Security Manager was honored with a California Emergency Services Association (CESA)

2012 Gold Award for his exceptional sustained efforts in support of emergency management.

The award, presented during the CESA Annual Conference on October 1 at the Sacramento Woodlake Hotel, recognizes Sonny's tremendous efforts implementing and maintaining California's Standardized Emergency Management System, and in particular, his continued contributions to the protection of the public and infrastructure.

For the last 15 years, Sonny has led DWR's emergency management program and held a critical leadership role in DWR's security program while responding to statewide emergencies and homeland security-related threats. In addition to assisting with several State Water Project Aqueduct emergencies from 1976 to 1997 and the Jones Tract levee failure in 2004, Sonny responded to the 2001 power emergency as the Department Operations Center Director. With DWR since

Sonny Fong (right) meets with staff during Golden Guardian exercise at the California Emergency Management State Operations Center.

1976, Sonny worked on the 1980 Coalinga Earthquake and the 1989 Loma Prieta Earthquake; floods in 1997, 1998 and 2006; and the wildfire disasters of 2003, 2007, and 2008.

CESA is a statewide association of emergency managers from special districts, cities, counties, State and federal government, and private companies. They normally present three Gold awards to organizations annually for outstanding efforts in the emergency management field. Occasionally, they recognize individuals. Sonny's award is the first time a DWR employee has been recognized with a CESA Gold Award. DWR itself has received two Gold Awards, including one for the statewide Golden Guardian simulated emergency in 2011. ♦

CONGRATULATIONS

... to DWR's Newest Parent:

Kevin Clark, a Staff Environmental Scientist with the Bay Delta Office, has a daughter named Anna Solimar Clark, who was born on September 24, 2012 weighing 7 pounds, 4.5 ounces.

New Hires

Ronald Howell

San Joaquin Field Division
Utility Craftsworker

Wajih Iqbal

Operations & Maintenance
Electrical Engineer

Casey Jones

San Luis Field Division
Utility Craftsworker

Doumon Kashkooli

Engineering
Junior Engineering Technician

David Kolakowski

Oroville Field Division
HEP* Electrician I

Cheryl Luu

SWP Power & Risk Office
Electrical Engineer

Mark McDaniel

San Luis Field Division
Utility Craftsworker

Laura McLean

IRWM***
Senior Engineering Geologist

Prashil Nand

Business Services Office
Staff Services Analyst

Richard Pech

San Joaquin Field Division
HEP* Electrician I

Wendy Pierce

Environmental Services
Associate Environmental Planner
(Archeology)

Nicholas Ramos

Engineering
Right of Way Agent

Timothy Smith

San Luis Field Division
Utility Craftsworker

Melissa Sparks

IRWM***
Environmental Scientist

Maya Stafford

Executive
Attorney III

Warren Taylor

Delta Field Division
Electrical-Mechanical Testing Tech. II

Randall Thrash

Human Resources Office
Associate Personnel Analyst

David Tu

IRWM*** - Southern Region
Environmental Scientist

* Hydroelectric Plant

*** Integrated Regional Water Management

New Hires

Raymond Valim
Operations & Maintenance
Heavy Equipment Mechanic

Jennifer Vandyke
Operations & Maintenance
Office Technician (Typing)

Vania Vartoomian
Fiscal Services
Accountant Trainee

Diane Wampole
Operations & Maintenance
Office Technician (Typing)

Gregory Wells
San Luis Field Division
Utility Craftsworker

Alia Zakaria
IRWM*** - North Central Region
Assistant Information Systems Analyst

Promotions

Katayoun Aflatouni
Operations & Maintenance
Senior HEP** Utility Engineer (Supv.)

Donna Aguilar
Human Resources Office
Associate Personnel Analyst

Jose Alvarado
Engineering
Supervising Engineer

Nathaniel Amey
San Joaquin Field Division
HEP* Electrician II

Ranbeer Aujla
Operations & Maintenance
Associate Control Engineer

Lydia Barnum
Oroville Field Division
Business Service Officer I

Richard Brewer
Engineering
Construction Supv. II

Trong Bui
SWP Power & Risk
Office
Associate HEP**
Utility Engineer

Melanie Calastro
Operations & Maintenance
Office Technician
(Typing)

Debra Carlson
Public Affairs Office
Administrative Officer II

Richard Carter
San Luis Field Division
Senior Land Surveyor

* Hydroelectric Plant
** Hydroelectric Power

*** Integrated Regional Water Management

DWR Management Development

Since DWR's Management Development Program began in 1995, more than 500 DWR mid-level managers have completed the program. In 2012, the program expanded to two "Waves" with a total of 54 graduates.

DWR mid-level managers are nominated by their direct supervisors to participate in the year-long training program. The program teaches participants more about DWR and helps them develop the tools to become more effective leaders. During the program, participants

are teamed together to develop and complete a project, which could be implemented by DWR. After each team gives a presentation on their project at the final session, the DWR's Governance Board members share their thoughts and support of the participants, their projects, and the program.

Special thanks to Board members, who attended the October presentations. In addition to the Chief Deputy Director Dale Hoffman-Floerke, Assistant Director Nancy Vogel, California Water

Wave 1 from left to right (Front Row) Karina Bailey, Genny Schrader, Sandi Maxwell, Myra Galvez, Karen Enstrom, Yen Huynh **(Middle Row)** Lawanda Jaramillo, Curt Taras, Carol DiGiorgio, Jeff Schuette, Bill Harrell, Tony Lemus, Dave Wheeldon, Danielle Gist, Fethi Benjemaa, Bill Croyle, Trish Afarian-Salvador, Russell Kiri, Sonny Fong, Steve Hawks **(Back Row)** Sean Walsh, Linus Paulus, Shaun Philippart, Simon Eching, B G Heiland, Jim Lopes, Robert Neves, Dave Williams, Chuck Reilly. **(Not in photo:)** Michael Perrone and Jamal Zumot)



Program Graduates in 2012 By Sean Walsh

Commission Executive Officer Sue Sims, and three Deputy Directors Carl Torgersen, John Pacheco, Kathie Kishaba, Board members included Kathy Aldana, Rob Cooke, Cathy Crothers, Tim Garza, Kamyar Guivetchi, Veronica Hicks, Jeffrey Ingles, Kimberly Johnston-Dodds, Dave Kearney, Kathy Kelly, Paula Landis, Dean Messer, Perla Netto-Brown, Gail Newton, Kim Oliphint, Richard Sanchez, Keith Swanson and Stephanie Varrelman. DWR guests also attended the meetings to

watch the presentations and support the Management Development Program and participants. They included Melanie Baillie, Tom Beiler, Carmen Borelli, Bill Croyle, Jennifer Dong-Kawate, David Duval, Cassandra Enos-Nobriga, Sonny Fong, Diana Gillis, Elaine Hall, Bill Harrell, Sandi Maxwell, Victor Pacheco, Russ Stein, and Jim Thomas.

Program Mentor since 2011 was Kim Oliphint. ♦

Wave 2 from left to right (Front Row) Alicia Ramirez, Angelica Aguilar, Melanie Baillie, Cindy Garcia, Elizabeth Ware, Kathie Kishaba, Dale Hoffman-Floerke. **(Middle Row)** John Pacheco, Kim Oliphint, Sheree Edwards, Mike Salvador, Tom Filler, Paul Casillas, Casey Osborne, Trevor Joseph, Mary Jo Schall, Matthias Kimball, Steve Mahnke, Johnnie Gomez, Dane Mathis, Mike Brummer, Rich Sanchez, Keith Swanson. **(Back Row)** Brett Wyckoff, Wendy Wood, Kent Zenobia, Dave Huston, Sean Bagheban, Amy Bindra, Boone Lek, Ran Singh. **(Not in photo:** Tony Meyers and Ganesh Pandey)



Promotions

Ko-Ching Chang

SIWM****
Supervising Engineer

Lori Clamurro-Chew

FloodSAFE Environmental Stewardship and Statewide Resources Office
Prog. Manager I, CA Bay-Delta Auth.

Concepcion Cobos

San Joaquin Field Division
Water Resources Technician II

Vonda Coltrin

Fiscal Services
Senior Accounting Officer

Samantha Cook

Human Resources Office
Personnel Specialist

Oralia Cooper

Engineering
Office Technician (Typing)

Ted Craddock

Executive
Chief of Utility Operations

Shervin Danque

Fiscal Services
Accountant Trainee

Ariel Delmundo

Technology Services
Senior Information Systems Analyst

Carol Di Giorgio

Environmental Services
Prog. Manager I, CA Bay-Delta Auth.

Kenneth Dunn

Oroville Field Division
HEP* Electrician II

Yolanda Evangelista

Technology Services
Systems Software Specialist II

Pauline Felix

Technology Services
Assistant Information Systems Analyst

Patricia Finfrock

FloodSAFE Environmental Stewardship and Statewide Resources Office
Prog. Manager I, CA Bay-Delta Auth.

Kelly Fish

Fiscal Services
Accounting Administrator I

Felicia Furlong

Human Resources Office
Staff Services Analyst

Thomas Garcia

Technology Services
Senior Information Systems Analyst

Rebecca Gilbert

Environmental Services
Associate Environmental Planner (Archeology)

* Hydroelectric Plant

**** Statewide Integrated Water Management

Promotions

Julie Haas
IRWM***
Senior Engineer

Soufiana Haidara
Delta Field Division
Water Resources Technician II

Harpreet Hansra
Safety of Dams
Engineer

Steve Hawks
San Joaquin Field Division
HEP* Mechanic I

Octavio Herrera
San Joaquin Field Division
Chief HEP* Operator

Diane Huey
Technology Services
Senior Information Systems Analyst

Xaviera Isler
Engineering
Staff Services Analyst

Jeffrey Janik
Operations & Maintenance
Prog. Manager I, CA Bay-Delta Auth.

Mario Juarez
San Joaquin Field Division
Water Resources Technician II

Rachelle Kidwell
Operations & Maintenance
Associate Governmental Program Analyst

Nancy Kleider
San Joaquin Field Division
Electrical-Mechanical Testing Technician II

Nielson Kwong
Operations & Maintenance
Systems Software Specialist II

Eric Lauchli
Operations & Maintenance
Electrical-Mechanical Testing Technician II

Kent Leach
Engineering
Staff Services Manager I

Rene Luna
San Luis Field Division
Electrical-Mechanical Testing Technician II

Stephanie Mai
Engineering
Assistant Information Systems Analyst

Vangie Maniquis
Flood Management
Associate Governmental Program Analyst

Sharon McCammon
Human Resources Office
Office Technician (Typing)

* Hydroelectric Plant
*** Integrated Regional Water Management

DWR Apprentice Graduates

Since 1972, DWR's Operations and Maintenance Apprentice Program has provided training for utility craftworkers, operators, mechanics, and electricians. To graduate from the program, apprentices

complete three to four years of on-the-job training at DWR's five field divisions and two flood yards. It also includes classroom training and home study manuals along with corresponding exams.

Congratulations to DWR's Winter 2012 to 2013 Apprentice Graduates



John Amabile, IV
Hydroelectric Plant Electrician
San Luis Field Division
December 2012



Manuel Areia, Jr
Hydroelectric Plant Operator
San Luis Field Division
January 2013



Matthew Darling
Hydroelectric Plant Mechanic
San Luis Field Division
June 2012



Travis Faria
Hydroelectric Plant Operator
Delta Field Division
January 2013



Matthew Johnston
Hydroelectric Plant Mechanic
Southern Field Division
December 2012



Josue Medina
Hydroelectric Plant Operator
San Joaquin Field Division
July 2012



Lisa Melton
Utility Craftworker
Oroville Field Division
January 2013



Jeannette Popovich
Hydroelectric Plant Operator
Southern Field Division
July 2012

Twenty-Five Years of Service



Darryl Caetano
San Luis Field Division
Utility Craftworker
September 2012



Bonnie Duecker
Southern Field Division
Water Services Supervisor
February 2013



Sergio Quintero
Southern Field Division
Hydroelectric Plant Mechanic
November 2012

No Photo Available

Julie Weirton
California Energy Resources
Scheduling
Associate Governmental Program
Analyst
January 2013

Kathleen Considine
Flood Management
Engineering Geologist
February 2013

Retirements

DWR Senior Engineer **Greg Vaughn** started working for the State 37 years ago. He ended his career in December as Chief of the Response and Security Section in DWR's Division of Flood Management.

Greg joined the State Water Resources Control Board's Central Valley Region during the implementation of the Clean Water Act.

"I saw many positive improvements in water quality through a time when our population has exploded and our demand for clean water has vastly increased," said Greg.

While working for the water board's Central Valley region for 35 years, he facilitated the closure of more than 100 hazardous waste sites, initiated many groundwater investigation and cleanup actions, and implemented remediation of a mine site to eliminate the annual discharge of 64,000 pounds of copper to the Camanche Reservoir and Mokelumne River.

A 1977 Civil Engineering graduate of California State University, Sacramento, Greg began his engineering career as a student with the SWRCB.

In communication with DWR staff regarding permits needed for dredging, levee repair, or fish habitat restoration projects,

Greg developed an interest in a career with DWR while working for the SWRCB. With his expertise in water quality and storm water management, he joined the Hydrology and Flood Operations Office of the Division of Flood Management in March of 2010. As the Chief of the Response and Security Section in DWR's Division of Flood Management, he has helped DWR better prepare its emergency response to floods.

Greg said he plans to work on home improvement projects, travel around the world, and play basketball.

"I have raised five children, have four grandchildren, and enjoy time vacationing with them all and watching the little munchkins grow," said Greg.



Promotions

Stephanie Mendiola
Flood Management
Staff Services Manager I

Rebecca Mills
Safety of Dams
Executive Secretary I

Debby Minear
Fiscal Services
Accounting Officer

Asm Golam Mostafa
SWP Power & Risk Office
Senior HEP** Utility Engineer

Dustin Nevis
IRWM*** - Northern Region
Office Technician (Typing)

Mattias Nolberg
SIWM****
Principal Engineer

Robert Parmley
San Joaquin Field Division
HEP* Mechanic II

Aman Percival
Human Resources Office
Office Technician (Typing)

Alma Perez
Engineering
Associate Land Agent

Jeannette Popovich
Southern Field Division
HEP* Operator

David Poukish
Technology Services
Systems Software Specialist II

Shaun Rohrer
Environmental Services
Environmental Scientist

Maurice Rubio Jr.
Southern Field Division
Water Resources Engineering
Associate (Supv.)

Nady Said
Engineering
Engineer

* Hydroelectric Plant

** Hydroelectric Power

*** Integrated Regional Water Management

**** Statewide Integrated Water Management

Promotions

Anthony Schnepel
Operations & Maintenance
Water & Power Dispatcher

Gerald Snow
Operations & Maintenance
Prog. Manager I, CA Bay-Delta Auth.

Garrett Tabar
San Joaquin Field Division
Utility Craftsworker

Wendy Underhill
Oroville Field Division
HEP* Mechanical Supervisor

Tanya Veldhuizen
Operations & Maintenance
Prog. Manager I, CA Bay-Delta Auth.

Jacqueline Wait
Environmental Services
Senior Environmental Planner

Glenn Ward
Southern Field Division
HEP* Mechanical Supervisor

Robert Whaley
Operations & Maintenance
Water & Power Dispatcher

Craig Williams
SIWM****
Staff Environmental Scientist

Sharon Woodland
Operations & Maintenance
Supervising HEP** Utility Engineer

Jamal Zumot
Engineering
Supervising Engineer

Retirements

Orlando Aguilar
Delta Field Division
HEP* Mechanic I

Rosa Aguilar
Delta Field Division
HEP* Operator

Victoria Lani Arena
Executive
Attorney III

Michele Belew
San Joaquin Field Division
HEP* Electrician I

Jill Breault
Technology Services
Staff Information Systems Analyst

Dwight Brewer
San Luis Field Division
Water Resources Technician II

* Hydroelectric Plant

** Hydroelectric Power

**** Statewide Integrated Water Management

Randy McBride is hanging up his hard hat after a career filled with major accomplishments and awards.

“My career with the department has been supremely rewarding as a member of the staff serving in different capacities on the State Water Project for more than 22 years,” said Randy, who retired as Hydroelectric Plant Mechanical Supervisor for San Joaquin Field Division in November. “I’ll miss my friends enormously.”

With the start of his career at Southern Field Division in Pearblossom, Randy worked on Devil Canyon Powerplant enlargement. After receiving a Meritorious Service Award in 1992, he became Construction Supervisor on the Remote Terminal Unit installation for a year. From 1993 to 1997, he transferred to San Joaquin Field Division as Electrical and Mechanical Construction Supervisor for Coastal Branch Aqueduct’s Heating Ventilation and Air Conditioning replacement project for Las Perillas and Badger Hill Pumping Plants. Randy received a Sustained Superior Accomplishment Award for his accomplishments during Coastal Branch Aqueduct Phase II, which was one of his most memorable projects.

“I began the project as an Electrical Construction Supervisor I as the first person on the ground, so to speak,” said Randy.

“I helped with the initial surveys of the three plant locations.”

In 1999, Randy worked on SAP Phase II for the Plant Maintenance Module development at headquarters and upon completion go-live for SAP.

“I helped develop the measurement matrix for “Operational Availability” (OA),” said Randy. “During my tenure, I was proud to say I helped our maintenance personnel achieve the highest average of OA at 93.7 percent.”

In addition to assisting with Hyatt Powerplant’s refurbishment of Unit 2, Randy later supervised San Joaquin Field Division’s maintenance work at Chrisman and Teerink Pumping Plants. As a liaison between Operation and Maintenance’s Delta Field Division and Division of Engineering’s Sacramento Project Headquarters (SPH), he worked at Delta Field Division on the development of the initial start up plan for the Design Engineers Criteria (DEC) until returning to San Joaquin Field Division’s Planning and Scheduling Section in 2009.

Randy’s retirement plans include helping people to learn to read English through the United Way, spending more time with his two daughters and five grandkids, as well as checking out the birth places of many of his ancestors in Ireland, Scotland, and Wales.





Michael A. Miller

For many reasons, tours of the State Water Project are popular with foreign visitors, and DWR's Tour Coordinator Michael A. Miller has taught travelers from more than 50 countries about California's water management.

"I've had a lot of jobs with the State, but none as enjoyable and fulfilling as working in DWR and especially as tour coordinator for the last 11 years," said Michael, who retired with 36 years of State service in December. "This job was a great fit for me. Besides always being inspired to teach about California's water system, I'm very comfortable in front of an audience because of my theatrical background from community colleges and theatres in the Sacramento area."

As Tour Coordinator in the Public Affairs Office after 9-11 increased security and limited tour locations, Michael quickly learned how to turn his tours into exceptional educational experiences for his guests. With more than 30,000 miles traveled throughout California, Michael has guided for-

eign dignitaries and other officials to Lake Oroville, water treatment plants in Southern California, the Eureka Flood Center, and the Sacramento-San Joaquin Delta, among many other places and facilities.

Michael knew the importance of all tour elements, from developing itineraries and doing security screening to scheduling presenters and preparing displays for visitors from Argentina to Zimbabwe. To assist with DWR's tours and events, he developed DWR's 50th Anniversary and State Water Project-at-a-Glance brochures.

Before joining DWR in 1998, Michael held accounting assignments with the Franchise Tax Board for 10 years, Health Services for five years, and Forestry and Fire Protection for eight years. He also worked as a DWR training officer for two years, teaching performance planning, ethics orientation, and appraisal and development courses.

Besides trips to Asia and Europe, Michael looks forward to practicing his ballroom dancing and spending time with his son, daughter, and two grandchildren.

Retirements

Patricia Bronson

San Luis Field Division
Senior HEP* Operator

Douglas Brown

Engineering
Transportation Surveyor Party Chief
(Caltrans)

Vincent Brown

Engineering
Electrical Construction Supervisor II

Janet Carey

IRWM*** - North Central Region
Associate Land And Water Use Scientist

David Carlson

FloodSAFE Environmental Stewardship
and Statewide Resources Office
Program Manager III, CA Bay-Delta
Authority

Larry Carmo

San Luis Field Division
HEP* Maintenance Supt.

Danny Erreca

San Luis Field Division
HEP* Operations Superintendent

Katherine Gould

Oroville Field Division
Administrative Officer II

Jerry Green

SWP Power & Risk Office
Senior HEP** Utility Engineer

Joe Guerra

San Joaquin Field Division
Utility Craftsworker Supt.

Robert Haines

Technology Services
Senior Programmer Analyst (Supv.)

David Hart

Flood Management
Water Resources Engineering Associate

Don Hatch

Technology Services
Staff Programmer Analyst

Wanda Headrick

Flood Management
Staff Services Analyst

Thomas Higgins

Engineering
Associate Electrical Engineer

Dzung Hoang

Engineering
Construction Management Supv.

Roberta Howe

IRWM*** - South Central Region
Engineer

* Hydroelectric Plant

** Hydroelectric Power

*** Integrated Regional Water Management

Retirements

Michael Kahn

Technology Services
Staff Programmer Analyst

Charles Keene

IRWM*** - Southern Region
Environmental Program Manager I (Supv.)

Nick Kontos

Executive
Supervising Engineer

Robert Lewis

Oroville Field Division
Control System Technician II

Leroy Lindo

San Luis Field Division
Utility Craftsworker

Terry Macaulay

Executive
Supervising Sanitary Engineer

Manuel Madrid

Delta Field Division
Utility Craftsworker

William Mendenhall

IRWM*** - Northern Region
Supervising Engineer

Kevin Muir

Oroville Field Division
Control System Technician II

Nancy Pashugin

IRWM***
Associate Governmental Program Analyst

Lorraine Pendlebury

Central Valley Flood Protection Board
Associate Governmental Program Analyst

Linda Quok

SWP Power & Risk Office
Supervising HEP** Utility Engineer

Angela Reynolds

State Water Project Analysis Office
Secretary

Duane Rickard

Technology Services
Senior Information Systems Analyst

David Rolph

Flood Management
Staff Environmental Scientist

Robert Ruff

San Joaquin Field Division
Senior HEP* Operator

Nancy Serrato

Fiscal Services
Associate Administrative Analyst

Gary Severns

Delta Field Division
Senior HEP* Operator

* Hydroelectric Plant

** Hydroelectric Power

*** Integrated Regional Water Management



Ward Tabor

Along with the adoption of the Central Valley Flood Protection Plan, 2012 marks another significant event for Assistant Chief Counsel Ward Tabor. He retired after 23 years of providing legal advice to DWR's flood and levee efforts.

Ward led five attorneys in providing legal support for flood programs of the Central Valley Flood Protection Board (CVFPB) and DWR, and was extensively involved in the preparation of the Central Valley Flood Protection Plan (CVFPP), particularly the Programmatic Environmental Impact Report. Although the CVFPP became a highlight of his career, Ward had several rewarding DWR assignments.

"One of my favorite assignments was during efforts to rehabilitate the Central Valley's flood system after the 1997 devastating flood," said Tabor about his assignment as Interim General Manager of the CVFPB. "We worked collaboratively among federal, State, and local agencies to get the flood system up and running again. We all had this common goal despite coming from different levels of government and different professional disciplines. We were able to see the result of our efforts relatively quickly, compared with most water resource projects, which usually take years and decades to bring to completion."

During the development of DWR's FloodSAFE California program, Ward worked on the Early Implementation Program Guidelines and Program.

"In helping organize the FloodSAFE Federal Advocacy Program, I traveled to Washington, D.C. to advocate for federal funding for U.S. Army Corps of Engineers activities, crediting for DWR flood efforts, and flexibility in managing California's flood risks, including vegetation management," said Tabor.

His career also included working closely with DWR's Flood Maintenance Office on environmental permitting and compliance for the Cherokee Canal, Yolo Bypass, and Colusa Bypass. He counseled on land acquisition and California Environmental Quality Act review for the Cache Creek Setting Basin Reconstruction Project and many other projects.

Before joining DWR in 1989, Ward worked for the United States Department of Justice in Washington, D.C. on the first two cases involving the federal government's approval of the release of recombinant DNA organisms into the environment. Ward has a Bachelor of Arts degree in Biology from University of California, San Diego, a Master's of Science degree in Microbiology from San Diego State University, and a Juris Doctor degree from University of the Pacific McGeorge School of Law.

With more time for his wife and grandchildren, Ward's retirement plans include traveling the country and world, devoting more time to church, playing music, exercising, and gardening. The long-time folk music enthusiast has played the ukulele and guitar for more than fifty years.

Sushil Arora

Embarking on his DWR career nearly 33 years ago as a Graduate Student Assistant, Sushil Arora, Chief of the Central Valley Water Resources System Modeling Section in the Bay-Delta Office, bids farewell to the DWR family as he enters retirement.

“Working with talented and motivated people with various professional backgrounds has been my favorite part about DWR,” said Supervising Engineer Sushil. “My work has entailed developing and applying computer models for California’s water resources system planning, operations and management challenges, specifically applied to State Water Project and Central Valley Project system. These models attempt to mimic a very complex real world system with ever-changing Operations Criteria, which involves a large number of stakeholders, and is critical to the state’s water management activities.”

Sushil has worked with various DWR divisions, including Operation and Maintenance, State Water Project Analysis Office, Flood Management, Statewide Integrated Water Management, and Integrated Regional Water Management. He also worked with State Water

Resources Control Board, U.S. Bureau of Reclamation (Mid-Pacific Region), State Water Contractors and State and Federal fishery agencies.

“I have provided modeling support for several Department programs, including the Kern Water Bank Environmental Impact Report (EIR), Los Banos Grande EIR, South Delta Improvement Program EIR, CalFED Programmatic Record of Decision and the Draft Bay Delta Conservation Plan EIR/ Environmental Impact Statement being completed now,” said Sushil.

As one of his most rewarding projects, Sushil collaboratively developed and demonstrated a modeling tool to estimate the State Water Project’s annual water delivery allocation guidelines.

Sushil earned a Bachelor’s degree in 1970 and a Masters degree in 1975 from the College of Agricultural Engineering at Punjab Agricultural University in Ludhiana, India. He later earned a Doctor of Philosophy degree in Civil Engineering from the University of California, Davis in 1981 specializing in Water Resources System Planning and Management.

As he looks forward to retirement, Sushil is enthusiastic about spending more time with his wife and seven grandchildren. He also plans to continue learning by reading, keeping up with technology, and exploring organic gardening in his backyard. “Another hobby I am passionate about is Yoga and gaining knowledge of Hindu scriptures and applying them to our daily lives. I am also a novice in, and want to explore, my handyman skills which I am sure my wife will appreciate,” said Sushil. 💧

Retirements

Linda Solomon
Oroville Field Division
HEP* Operations Superintendent

David Starks
Operations & Maintenance
C.E.A.

Evelyn Tipton
SIWM****
Senior Engineer

Charles Toney
California Energy Resources Scheduling
Supervising HEP** Utility Engineer

Carol White
State Water Project Analysis Office
Research Analyst II

John Wright
San Luis Field Division
Utility Craftsworker

Bih Yuan
Operations & Maintenance
Associate Control Engineer

Cindy Zens
Public Affairs Office
Associate Governmental Program Analyst

* Hydroelectric Plant

** Hydroelectric Power

**** Statewide Integrated Water Management

Gary Chee, San Joaquin Field Division's Supervising Hydroelectric Power Utility Engineer and Chief of the Engineering Branch, passed away at the age of 52 on November 16 in Bakersfield.

"Gary became the San Joaquin Field Division "Go To" person and just a great, all around person," said Curtis Wada of San Joaquin Field Division. "Regardless of how busy he was, Gary always stopped to lend a helping hand



to anyone in need regardless of his own workload. Gary's passing has been a great loss to his coworkers, the community, and to me personally."

As a leader in extensive major equipment refurbishments at all of San Joaquin Field Division's facilities, he provided engineering leadship in the replacement of the four Allis-Chalmers pumps at Edmonston Pumping

Plant and project management for the replacement of the 230kV power circuit breakers for Chrisman, Teerink, and Buena Vista Pumping Plants. He also was very involved in the ongoing statewide control system replacement and protective relaying upgrade work representing San Joaquin Field Division. His engineering leadership oversaw extensive major equipment refurbishments at all of the San Joaquin facilities.

His more than 29 years of State service dedicated to DWR began with the Division of Engineering as an Electrical Engineer in 1983. A year later, he transferred to San Joaquin Field Division. He was later Associate Power Operations and Maintenance Engineer, Electrical-Mechanical Technician III, Senior Hydroelectric Power Utility Engineer, and recently Chief of the Engineering Branch.

"Gary was known for his tireless work ethic, caring and compassionate nature, wonderful sense of humor, and dedication to family and his community," said Chief of San Joaquin Field Division Jeff Said.

A native of Oakland, Gary was raised in Sacramento and graduated from the University of California, Berkeley in 1983.

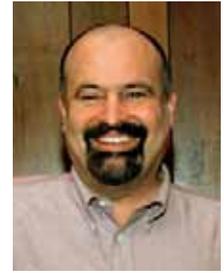
"He was a very sharp electrical engineer and would take the time to explain circuit issues or theory with San Joaquin employees," said Curtis Johnston, who worked with Gary at DWR.

Preceded in death by his mother, Gary is survived by his wife of nearly 27 years, Justina, four children, his father, and three siblings.

In lieu of flowers, donations to St. Francis Parish School and/or Garces Memorial High School, to be put toward scholarships, can be made in memory of Gary.

Richard Grix, Energy Advisor to CA Energy Resources Scheduling Office (CERS), passed away October 6.

Remembered for his invaluable assistance to three Deputy Directors, Grix advised on legal, operational, and financial issues. With more than 34 years of State service, Grix began working for the Governor's Office of Planning and Research as Junior Staff Analyst in 1977. From Energy Specialist I to Electrical Generation System Program Specialist III, he spent 21 years working for the Energy Resources Conservation and Development Commission. During the power emergency in 2001, he joined DWR's CERS as Supervising Hydroelectric Power Utility Engineer for CERS.



"Richard was the nicest 'curmudgeon' I have ever met on the face of this earth," said Pete Garris, who worked with Grix for 15 years at DWR. "Richard had the sharp wit and skillful mastery of the English language that could devour the confidence and credibility of people that would pretend to be subject matter experts regarding electric utility operations or regulatory affairs. He could also provide a level of support with respect to electric utility operations or regulatory affairs that would softly guide a novice or firmly support a senior executive. It is for those and many other wonderful reasons that DWR; his colleagues throughout the industry and myself personally are saddened by Richard's passing."

Grix is survived by his mother Catherine and three brothers.

Tod Santos, former Chief of DWR's Construction Office, passed away at the age of 80 on September 30.

During his more than 38 years of State service, he worked for DWR's Design and Construction Office until 1992. He worked on the construction of Coastal Branch Aqueduct and Alamo Powerplant.

"Tod's vast knowledge and calm demeanor had a positive impact on my early years with DWR," said Bonnie Duecker of Southern Field Division who worked with him at DWR's Lancaster Project Headquarters. "I feel privileged to have known him."



A graduate of the University of California, Berkeley with a Bachelor of Science degree in Civil Engineering in 1954, he worked for the Division of Highways before joining DWR in 1956.

Tod is survived by his wife of 59 years, Beverly, his five children, nine grandchildren, and seven great-grandchildren.

A Helpful Hand



A By Saunthy Nicolson-Singh
rose is just a rose, unless you ask DWR Legislative Coordinator Pam Myczek. Then, you'll learn a whole lot more from Myczek, a member of the Sacramento Rose Society and a consulting rosarian, certified since 2001 by the American Rose Society, the national organization dedicated to spreading the word about our national flower.

Myczek noted a growing interest among rosarians in "Earth-Kind" roses that, once established, demonstrate outstanding landscape performance and excellent heat, pest and drought tolerance. Heritage and

modern roses designated as "Earth-Kind" include Belinda's Dream, Carefree Beauty, Knock Out, Mutabilis, Reve d'Or, Sea Foam and New Dawn.

This fall, Myczek served as a U.S. rosarian delegate, travelling to Johannesburg, South Africa to vote on an International Award of Excellence for the San Jose Municipal Rose Garden.

"We visited gardens on large properties—native perennials and stands of bamboo interplanted with roses," she said. "Streams of heritage roses grew up into trees and cascaded down. In South Africa, a yellow bird of paradise (named after Nelson Mandela) and agapanthus reflected plants

also popular in California gardens."

Back home, Myczek volunteers at the Old City Cemetery's Sacramento Historic Rose Garden, helping to prune and maintain heritage roses gathered from other cemeteries and pioneer homesteads—plants that endured the journey west via wagon trains during the Gold Rush.

In January, Myczek will return to the recently renovated McKinley Rose Garden that boasts 1,300 rose bushes, where she annually participates in the pruning of the garden. Myczek also keeps busy as a Master Gardener, leaving little time to prune her own yard of up to 150 rose varieties. 💧

Photo courtesy of Anita Clevenger, Manager of the Sacramento Historic Rose Garden

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.



DWR Southern Field Division Hydroelectric Plant Mechanic Apprentice Ken Webbs grinding on one of the low intake gate stems from Castaic Intake tower, which is used to deliver water out of Castaic Lake. Every 10 years, the stems are removed from service for welding repairs, recoating, and installation of new sacrificial anodes.