

DWR

SPRING/SUMMER 2012

a magazine from the
California Department of
Water Resources



Creating *an* Urban *Paradise*

*Julie Saare-Edmonds
fields DWR's effort
to develop water
efficient urban
landscaping.
—Story on page 6*



In 2001, the State Water Project received Monument of the Millennium recognition by the American Society of Civil Engineers. This award went to those projects that had the greatest impact on society. The only other recipient from California was the Golden Gate Bridge. The Panama Canal was also a recipient. In 2006, DWR and yours truly celebrated their 50th year of existence. The SWP marked its 50th anniversary in 2010 and DWR celebrated the 50th anniversary of the first water delivery from the State Water Project on May 15, 2012. This occurred on the South Bay Aqueduct. These events and celebrations serve as reminders of the significant impact that the SWP has had on the lives of those who live in California.

Without the SWP, it is unlikely that California would have the cutting-edge computer industry of the Silicon Valley, the bountiful agricultural production of the Central Valley, or the large population of Southern California. And without the SWP, it is unlikely that California could boast of having one of the world's strongest economies.

Now that I am retired from DWR and moving on to the next phase of my life, I can look back and reflect on how extremely fortunate I am to have spent my career to this point with DWR and the SWP. I am lucky to have worked with folks who are committed to excellence, who share a common goal, and who are professionals in every sense of the word. I have had the good fortune to have worked on many infrastructure projects as a geotechnical engineer, including the seismic re-analysis of many SWP dams, including Oroville Dam, Thermalito Forebay and Afterbay dams, San Luis, Pyramid, Cedar Springs, and Perris dams. I was lucky to work at the Bryte Engineering labs during the 80's and to work on the Geysers, Thermalito Diversion Dam Powerplant, North Bay Aqueduct, and about 25 major aque-

duct repairs, including mile posts 55, 56, 349, and 351 using innovative repair techniques. I spent time in the Budget Office and worked closely with the State Water Contractors. Then, there were the floods of 1997 and 1998. I was fortunate to be in Operations and Maintenance, then Division Chief of Engineering, then on to manage the FERC relicensing of the Oroville Facilities, and finally Deputy Director for the State Water Project.

Now it is time to look to the future. DWR will continue its role in helping to assure the quality of life that Californians have come to expect. One need only look at the major programs presently ongoing in the SWP to understand the impacts on the future. There is the continuing partnership between DWR and the State Water Project Contractors, through which the SWP was conceived, financed, designed, constructed, and is operated and maintained. There is the Bay-Delta Conservation Plan/ Delta Habitat Conservation and Conveyance Program. The ecology of one of the most unique estuaries in the world and the reliability of water supply for agriculture and millions of Californians depend on this program. There are the plans for new water delivery systems and capital improvements to ensure the reliability of the SWP infrastructure. There is the continuing program to provide the SWP with a reliable source of energy that is affordable and clean. And there is the Department's commitment to environmental stewardship in everything that it does.

The values that society holds dear have changed significantly in the last 50 years, and just as DWR and the SWP have met the needs of the State in the past there is no doubt that the employees of DWR will meet the future needs of California.

Raphael A. Torres
Retired Deputy Director

What's INSIDE



On the Cover:
Julie Saare-Edmonds
of DWR in front
of Tree Mallow
(*Lavatera maritima*),
which are easy to
grow and cold, hardy
relatives of Hibiscus.
Above: Peruvian
Squill (*Scilla
peruviana*) is a bulb
plant that looks good
growing in groups.

Water Efficient Landscaping ... story on page 6

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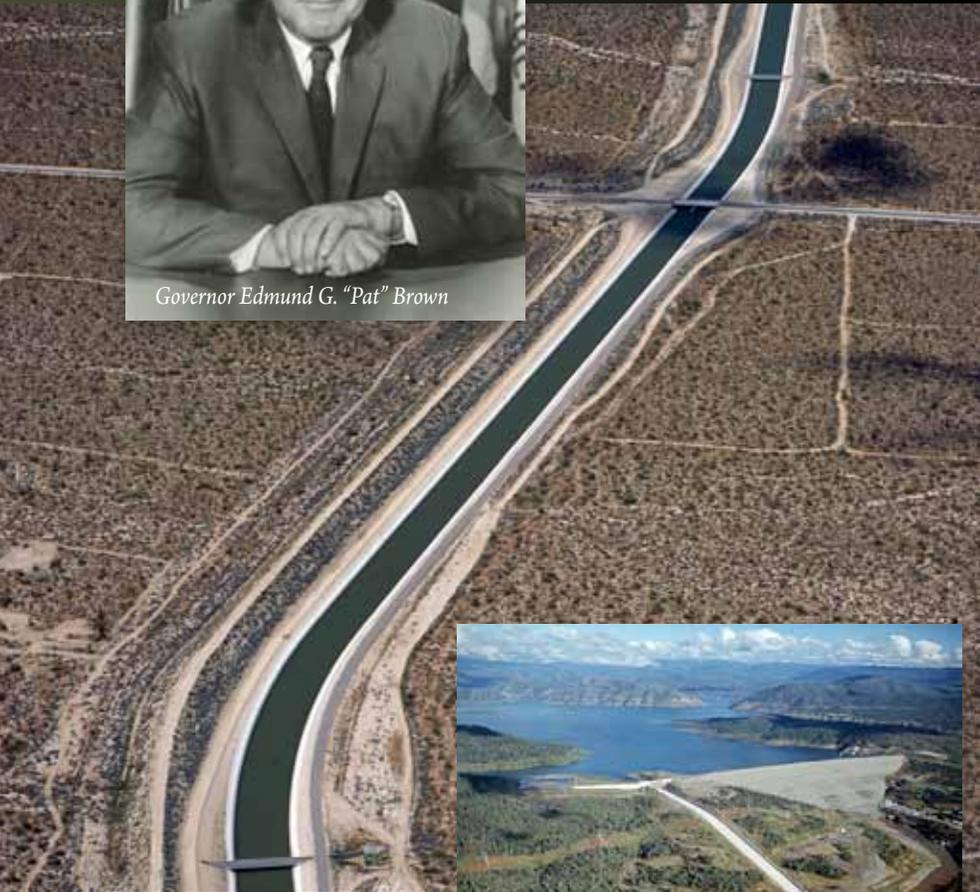
Back cover: DWR mission

50 years ago...



Governor Edmund G. "Pat" Brown

State Water Project opens bringing water south ...



70%

of Californians receive their water from the State Water Project—of the contracted water supply, 70 percent goes to urban users and 30 percent goes to agricultural users. The Project makes deliveries to two-thirds of California's population.

“... One major aid to agriculture is the California Water Project. Not only will it make new supplies available for farming, it will furnish water for new industries and millions of new residents who will provide expanded markets for food and fiber.

“... This Administration intends to give high priority to fish and wildlife development wherever water projects are built. Further, under the Porter-Dolwig Act, we will continue to improve groundwater levels in the Central Valley, the coastal area and Southern California.”

— from the Second Inaugural Address of Edmund G. "Pat" Brown, California's 32nd Governor, on January 7, 1963



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Features

Here's to Another 50 Years! DWR Celebrates 50 years of Moving Water through the State Water Project

On May 10, 1962, top water leaders joined then-Governor Pat Brown as he lifted a plank to start the flow of water into the State Water Project's South Bay Aqueduct. A half-century later, with Pat Brown's son Governor Jerry Brown serving in office, we celebrate 50 years of moving California's water through the State Water Project.

State and local water officials gathered at Bethany Reservoir on May 15 to commemorate the first SWP water delivery.

DWR Director Mark Cowin repeated the words said 50 years ago by then-DWR Director William Warne about the first delivery of project water through the South Bay Aqueduct into Alameda County: "Through the canals and reservoirs of the State Water Project will flow water, the liquid lifeline."

"He was right," said Cowin. "California's history, landscape and economy have been shaped by water, aided by thousands of dedicated men and women who have worked on the State Water Project, the Central Valley Project, and countless other local water systems that serve our communities, farms and families."

The first SWP water delivery was pumped from Bethany Reservoir through the South Bay Pumping Plant into South Bay Aqueduct for deliveries to the Bay Area water users.

Besides Cowin, speakers at event included SWP Deputy Director Carl Torgersen, Association of California Water Agencies Executive Director Tim Quinn; State Water Contractors Board Member Stephen Arakawa; General Manager of Alameda County Flood Control and Water Conservation District, Zone 7 Jill Duerig; and DWR retirees Art Winslow and Herb Greydanus.

"Today's event is a good reminder that with vision, dedication, and strong partnerships, we can meet the milestones of sustainable, integrated water management," said Cowin.

For five decades, the State Water Project has moved water for urban, agricultural and industrial uses, in addition to providing flood control, water quality improvements, fish and wildlife protection, enhancement of the natural environment, recreation, and power generation.



Below (left to right): DWR Retired Executive Assistant Art Winslow, DWR Retired Deputy Director Raphael Torres, DWR Retired Chief of Planning Herb Greydanus, Alameda County Flood Control and Water Conservation District, Zone 7 General Manager Jill Duerig, State Water Contractors Board Member Stephen Arakawa, DWR Deputy Director Carl Torgersen, Association of California Water Agencies Executive Director Tim Quinn, and DWR Director Mark Cowin.

Above: DWR Director Mark Cowin speaking during the May 15th celebration at Bethany Reservoir. The Monument of the Millennium plaque awarded to the State Water Project by the American Society of Civil Engineers was on display during the event.



Former DWR Director Robie Honored

Former DWR Director Ronald B. Robie was honored by the renaming of Thermalito Pumping-Generating Plant on May 2 in Oroville.

At the 11 a.m. dedication ceremony, former California Water Commission Vice Chair Paul Kelley, Retired Presiding Justice Arthur Scotland of the Third District Court of Appeal, Mayor of Oroville Linda Dahlmeier, Chair of the Board of Supervisors of Butte County Steve Lambert, and DWR's Division of Operations and Maintenance Chief Dave Starks spoke. They unveiled the new plaque naming the facility the "Ronald B. Robie Thermalito Pumping-Generating Plant." Water Commission member Luther Hintz, as well as family, friends and colleagues of Justice Robie attended.

On September 21, 2011, the Water Commission voted to rename the State Water Project's (SWP) Thermalito Pumping-Generating Plant to commemorate Justice Robie's distinguished water service to California. The Commission, which consists of nine members appointed by the Governor, has oversight and approval responsibilities for a wide range of water management activities. The proposal to rename the plant was originally suggested to the Commission by Justice Arthur Scotland, a colleague of Justice Robie on the Third District Court of Appeal in Sacramento. The concept was supported by State and Federal water contractors, the Water Education Foundation, and members of the public.

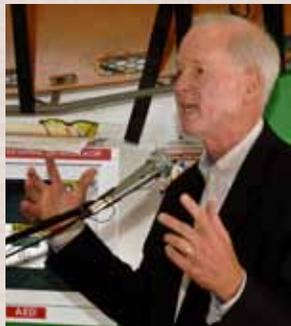
Robie was DWR's Director from 1975 to 1982 during Governor Edmund G. Brown Jr.'s first two terms as Governor. During his directorship, Robie achieved federal "wild river" status for several California rivers, confronted water supply and Delta water quality issues, led a legislative effort to validate a peripheral canal, and showed conservation leadership during California's major drought of 1976-1977.

"My years at DWR were some of the greatest of my career," recalled Robie, DWR's fifth Director. "The employees of the department were always first rate—the finest in state government."

In a distinguished public career, Robie served in all three branches of government. A 1958 journalism graduate of the University of California, Berkeley, Robie entered State service in the Legislature. He served as a consultant to the Assembly Water Policy Committee, analyzing complex legislation and dealing with thorny water policy issues.

"Justice Robie has had a profound and beneficial impact on the development and protection of our State's water resources and continues to be a leading voice for balancing environmental and water supply needs," said the Water Commission's Anthony Saracino. "The Commission is proud to acknowledge his lasting contributions in this way."

Robie worked closely with veteran Assemblyman Carley Porter in helping write the landmark Burns-Porter Act. Its passage by the Legislature in 1959 authorized issuance of \$1.75 billion in general obligation bonds to finance construction of California's State Wa-



(Left to Right) **Above:** Speakers at May 2 event included Chair of the Board of Supervisors of Butte County Steve Lambert, Mayor of Oroville Linda Dahlmeier, and retired Presiding Justice Arthur Scotland. **At Left:** California Water Commission Executive Officer Sue Sims, California Water Commission Member Luther Hintz, Justice Ronald Robie, and former California Water Commission Vice Chair Paul Kelley stand by the plaque renaming the facility.

ter Project (SWP). In November 1960, California voters approved the bond issue, making possible construction of the largest State-run water and power system in the United States.

While a legislative consultant, Robie earned a law degree at McGeorge School of Law. He became a top legislative expert on California water law and water policy.

This expertise served him well when Governor Ronald Reagan appointed him to the State Water Resources Control Board, a regulatory body with jurisdiction in areas of water rights and water quality. Robie was a member of the board from 1969 to 1975, when Governor Brown selected him to lead DWR.

After Robie left DWR, Governor Brown in 1983 appointed him to the Sacramento Municipal Court bench. In 1986, he was elected to the Sacramento County Superior Court. In 2002, Governor Gray Davis appointed him to the State Court of Appeal, Third Appellate District, where he currently serves.

Four earlier DWR directors have been honored by having key facilities in the SWP named for them. They are:

- Harvey O. Banks, DWR's first director, 1956-1961 (Delta Pumping Plant in Byron);
- William E. Warne, DWR's second director, 1961-1967 (powerplant near Pyramid Lake, Los Angeles County);
- William Gianelli, third director, 1967-1973 (pumping-generating plant near San Luis Reservoir);
- John Teerink, fourth director, 1973-1975 (pumping plant about 23 miles south of Bakersfield in Kern County).

Seventy miles north of Sacramento and four miles west of Oroville in Butte County, Thermalito Pumping-Generating Plant is a principal feature of the Oroville-Thermalito pumped-storage power complex. This pumping-generating facility, which was constructed from 1964 to 1969 with operations starting in 1968, is operated



Former DWR Director Robie stands outside of Thermalito plant after renaming ceremony on May 2.

in tandem with Hyatt Powerplant and Thermalito Diversion Dam Powerplant to produce power. With three pumping units, it has a pumping capacity of 9,120 cubic feet per second. Together, Hyatt and Thermalito powerplants produce an average of 2.2 billion kilowatt-hours of electricity each year. ♦

A high definition video clip of Robie, the Thermalito Pumping-Generating Plant at Oroville, and the Water Commission meeting is available at <http://www.water.ca.gov/newsroom/video/general.cfm>.

With increasingly limited water supplies, DWR is meeting the challenge by providing leadership for more water-efficient urban landscaping.

Creating an Urban

Paradise

The plants featured in this article are California natives or plants from other Mediterranean climate regions. Well adapted plants by their nature require little extra water above rainfall, thrive on less than perfect soils and provide food, shelter and nesting sites for birds and beneficial insects. If chosen well for the given climate, exposure, and site conditions, well adapted plants need less pruning and mowing, pest control, and fertilizers.

CA
Native



California Poppy

Eschscholzia californica

California native that needs nothing but rain.



Sage

Salvia

Sages attract pollinators and have fragrant foliage.



(Left) The Fair Oaks Horticulture Center received one of 15 Northern California grants awarded for water efficient landscapes.

Whether it's to reduce the water bill or enhance wildlife, DWR's Water Use Efficiency staff is guiding California urban water agencies in developing their water efficient landscapes.

"All landscapes, including for recreation, fire protection, erosion control or replacing ecosystems, are essential to the quality of life in California," said DWR's Landscape Specialist Julie Saare-Edmonds. "To meet the challenge of the growing population with a limited supply of water, landscapes must become more water efficient."

With more than 50 percent of California's residential water used for outdoor landscapes, the Department of Water Resources' (DWR) role is essential in providing the tools and assistance necessary for water efficient landscapes.

Along with awarding approximately 50 grants for water efficient landscapes, DWR's leadership role includes providing technical assistance, primarily to local water agencies and other State agencies on water efficient landscapes.

"Water efficient landscapes need less mowing and, therefore, less green waste is sent to landfills.



Sageleaf Rockrose

Cistus salviifolius

A shrub from the Maquis, the European equivalent of chaparral.



Spanish Lavender

Lavandula stoechas

Soil type: any
Watering: 1-2 times weekly in summer



The design, installation, and maintenance should be water efficient. To achieve this goal, the following is helpful:

- 1** Planning and site analysis—evaluate how the landscape needs to function—what it's going to do for the owner/users and what are the conditions: climate, exposure, and soil types
- 2** Soil preparation—add organic matter to encourage healthy soils that retain moisture and grade the site to retain rainwater

Through this, DWR's water efficiency goals are helping Cal Recycle in reaching waste diversion goals," said Saare-Edmonds. "Water efficient landscapes also improve air quality and reduce urban heat islands."

DWR staff has worked with the Department of General Services on the Green Action Plan for sustainable building practices at State-operated buildings and landscapes. Staff has been technical advisor to the Building Standards Commission and the Department of Housing and Community Development on the Cal Green Building Code for indoor water use and water efficient landscapes.

"Water use efficiency is one of the foundational actions of the California Water Plan, and our goal is to provide assistance and inspiration to the public for efficient use of water," said Chief of the Water Use and Efficiency Branch Manucher Alemi. "So, it is a responsibility for us to promote water use efficiency and to help make it happen through technical and financial assistance and by ensuring water agency compliance with state water conservation rules and goals."

Water Efficient Landscapes Legislation

On September 10, 2010, DWR adopted the current statewide Model Water Efficient Landscape Ordinance. Assembly Bill (AB) 1881, the Water Conservation in Landscaping Act authored by California Secretary for Natural Resources John Laird in 2006 when he was an Assemblyman, required DWR to update the Model Ordinance in accordance with specified requirements, reflecting many of the recommendations of the Landscape Task Force, as documented in the report "Water Smart Landscapes for California." The first statewide landscape ordinance was passed in 1993.

By January 1, 2010, local agencies were required to adopt the updated Model Ordinance or a local landscape ordinance at least as effective in conserving water.

Since the adoption of the Updated Model Water Efficient Landscape Ordinance, DWR has received 338 responses from cities and counties and other water purveyors about adopting a landscape ordinance. One hundred eighty cities and twelve counties opted to create their own ordinance.

"The model ordinance that came out of AB 1881 was used to establish the

Cal Green Building code, which effects business or building contractors," said Saare-Edmonds. "Landscape architects or contractors have to abide by the new rules and the city and county enforce it."

The Model Ordinance is helping achieve the goal of the "20x2020" plan. The "20x2020" plan requires a 20 percent reduction in per capita urban water use statewide by 2020.

The requirement to reduce water use stems from the Water Conservation Act of 2009, which was signed into law as part of a comprehensive water legislation package. The Act, SBX7-7, directed DWR to develop technical methodologies and criteria to ensure consistent implementation and to provide guidance to urban retail water suppliers in determining baseline and compliance water use. After DWR held two public listening sessions, five public stakeholder meetings, and two public workshops to receive comment on the technical methodologies, the methodologies were completed in October 2010.

"In 2010, SBX7-7 required that suppliers calculate and report baseline per capita water use and to set 2020 water use targets in their 2010 plans," said Chief of the Urban



Tree Mallow

Lavatera maritima

A Hibiscus relative, tree mallow is a hardy waterwise plant with a tropical look.



Beard Tongue

Penstemon

A garden variety of the California native Penstemon.



Spurge

Euphorbia sp.

Related to Poinsettia, spurges have modified bracts that form the "flower".

3 Choose plants that are suitable for the local climate (natives and adapted non-natives)

4 Use the most efficient irrigation system (if needed) and water according to plant needs

5 Maintain the irrigation system and plants

6 Manage the irrigation controller schedule

7 Monitor water use with a dedicated meter or submeter

Section of Water Use Efficiency Unit Peter Brostrom. “Since July of 2011, DWR has received 384 of the 2010 UWMPs.”

In the 2015 and 2020 urban water management plans, urban water suppliers are required to report the per capita water use for their service area and document progress towards meeting their water use targets. After each cycle of plans is submitted and reviewed, DWR will report to the Legislature on the status of urban water management plans received and on progress towards the State’s “20x2020” goal.

Funding for Water Efficient Landscapes

Since 2001, DWR has awarded a total of more than \$14 million in grants for water efficient landscapes. Of these grants, 15 were for Northern California, 10 for Central California, and 23 for Southern California.

The grants funded training and education for professional landscapers and home gardeners, with in-person and online workshops, including some in Spanish. The grants helped pay for demonstration water efficient gardens open to the public. They also include significant funding for irrigation system improvements, including equipment and weather-based irriga-

tion controllers for both direct installation and rebate programs at homes, schools, and businesses. There was also funding for “cash for grass” and other water efficient landscape conversion rebates.

Grants awarded in Northern California include the Water Efficient Landscape (WEL) garden at the Fair Oaks Horticulture Center, City of Sacramento parks improvements, and the City of Folsom’s property improvements. In Central California, grants include the Clovis Botanical Garden for WEL demonstration; Cachuma Resource Conservation District in Santa Barbara for irrigation system evaluations, upgrades, and workshops; and Scotts Valley Water District for irrigation controllers, turf replacement, and other landscape improvements. In Southern California, grants were awarded to Urban Releaf in Los Angeles for landscape conversions and rainwater retention, Olive Sports Complex in Upper San Gabriel Water District for irrigation improvements at a public recreational landscape, and Sustainable Landscapes in Santa Monica for landscape conversion and irrigation system improvements.

Tools for a Better Landscape

Knowing a location’s purpose and planting climate-adaptive plants, such as coastal plants in Eureka and desert plants in Palmdale, are essential to creating water efficient landscapes.

“Evaluating the site and how it’s going to function are key parts of the planning process,” said Saare-Edmonds. “Then, preparing soil and choosing correct plants are also important. You must also maintain the plants and irrigation system. It’s not just plant it and walk away.”

To conform to local and State water efficient landscape ordinances, landscape designs should include low water-use plants, efficient irrigation systems, smaller turf areas, soil improvements and mulch, irrigation systems that are regularly maintained, dedicated landscape water meters for monitoring of the water budget, adjustment of irrigation controllers regularly, and irrigation scheduled during early or late hours.

Maintaining the health, appearance, and function of the landscape involves using important tools, such as the California Irrigation Management Information System (CIMIS) and the water budget calculator.

DWR’s CIMIS program is a helpful tool



Butterfly Rose

Rosa chinensis mutabilis

Blooms nearly year round and requires little water once established.



California Lilac

Ceanothus

A California native that thrives on little extra water.



Lemon Bottlebrush

Callistemon citrinus

An Australian native that is attractive to hummingbirds.

50%

...of
California residential
water is used for
outdoor landscaping

Chief of CIMIS Program Bekele Temesgen (*center*) explains the Davis CIMIS station, one of the first few stations that DWR installed at the start of the program in July 1982. It stands on a well-maintained grass surface next to the University of California, Davis' Campbell Tract research facility.



in providing data for irrigators to use in setting irrigation controllers.

A water budgeting method is used to schedule irrigation using reference evapotranspiration (ET_o) data from the CIMIS and crop coefficients from Water Use Classification of Landscape Species (WUCOLS). The CIMIS ET_o data are also used for calculating the maximum amount of water one should apply to a landscape—also known as Maximum Applied Water Allowance (MAWA)—and estimating applied and total water use.

“CIMIS provides near real-time weather and reference evapotranspiration data to the public and it is free of charge,” said Senior Land and Water Use Scientist Bekele

Temesgen, in the Land and Water Use Section of the Water Use and Efficiency Branch. Bekele has worked on CIMIS for 10 years and managed it for a year.

CIMIS currently has over 40,000 primary registered data users and thousands more secondary and tertiary users. In 2011 alone, more than 2.1 million reports were generated from the CIMIS Web site. CIMIS measures all the factors that cause evapotranspiration to happen, including solar radiation, air temperature, relative humidity, and wind speed. It calculates ET_o using complex sets of equations.

MAWA calculation requires using DWR's CIMIS ET_o in inches per year. ET_o data, which are available for many locations in California, estimates the amount of water lost to the atmosphere by evaporation from soil and grass surfaces on which the stations stand and transpiration from the grass. Plant factors, known as landscape coefficients, are used to convert ET_o to the actual amount of water used by a specific landscape. CIMIS computer servers retrieve the weather data from the stations every four hours, run quality control checks on the data, calculate ET_o, and store the final product in the database for retrieval by users via the Internet.

“A number of suppliers have identified

landscape water conservation as a key water conservation program in meeting their statewide goal,” said Brostrom. “Significant savings can be achieved through correctly setting irrigation controllers and proper maintenance and repair of irrigation systems.”

Future Plans

DWR is working with the Association of California Water Agencies to extend the “Save our Water” Campaign and bolster its emphasis on landscape water conservation. Begun during the 2007-2009 drought, the campaign has reached millions of Californians through its Web site, advertisements, electronic messages, and public events. Future efforts could include video tutorials on setting irrigation controllers, the creation of a “water wise” seal of approval for well-managed properties, and partnerships with landscapers, realtors, and local water agencies.

“Walk or run through any California neighborhood early in the morning and the potential to save water is very evident,” said Brostrom. “Big gains can be made through simple steps such as resetting sprinkler controllers and adjusting spray head. Multiplied many times, these small actions will go a long way in helping the State meet its water use goals.” ♦



Urban Water Management Plan Team

(left to right) Peter Brostrom, Gwen Huff, Joanne Chu, and Betsy Vail (Not in photo: other members include Dave Arrate, Luis Avila, Martin Berbach, Jan Carey, Sergio Fierro, Dave Inouye, Romain Maendly, Guyla McCurry, Toni Pezzetti, Kim Rosmaier, Jessica Salinas-Brown, Jeff Smith, Shem Stygar, and Dave Todd.)

a Love

of Outdoor Landscapes



DWR's Landscape Specialist Julie Saare-Edmonds (right) educates people about water-efficient landscapes during the 2011 California State Fair.

Raised in a family of gardeners, Julie Saare-Edmonds' love for planting comes naturally. Her great grandfather, who was a friend of well-known Horticulturist Luther Burbank, is an inspiration to her.

"My grandfather was a gardener and my great-grandfather was a gardener, along with his good friend, Luther Burbank, so it's kind of in my blood," said Saare-Edmonds. "Luther Burbank grafted apple trees on my great-grandfather's ranch in Calistoga."

With her grandparents as role models, it was no wonder that Julie gained an interest

in gardening as a child when she bought her first plant, a two-inch asparagus fern, in Santa Rosa. Her love for gardening led her to her career as a landscape specialist.

A graduate of Sacramento State in Biological Conservation and Sierra College in Environmental Horticulture, Julie started her 13 years with the State as a Scientific Aid for the Department of Fish and Game and later the California Department of Forestry. In 2001, she joined DWR as a Land and Water Use Scientist.

As the sole landscape specialist for DWR, Julie makes more than 20 presentations a year on water efficient

landscapes to water agencies, universities, and irrigation districts. As a DWR representative of the International Code Council since 2011, Julie is assisting with setting minimum performance standards for irrigation equipment.

"Part of why I like my job, I feel I am making a difference in the field," said Saare-Edmonds. "Landscapes enhance the built environment by replacing some of the natural environment that was lost. They add a lot of beauty to our lives. Landscapes and gardens provide so many benefits, such as clean air, nesting sites, and food. For economic prosperity and the

environment, landscapes are important to California and I really believe that."

Even away from work, gardening has become a large part of Julie's life. She also operated a small nursery for five years. During the last six years, she has volunteered as a master gardener for the University of California Cooperative Extension.

"From the shade provided to the beauty at our homes, landscapes add so much to our lives," said Saare-Edmonds. "Even after we are gone, the landscape could still be there."

CA Native



Pacific Coast Iris

Iris douglasiana

A California native that needs shade when grown inland.

Tools available for water efficient landscapes:

- Visit the "Guide to Estimating Irrigation Needs" to determine what plants work best in your area: www.water.ca.gov/pubs/conservation/a_guide_to_estimating_irrigation_water_needs_of_landscape_plantings_in_california__wucols/wucols00.pdf
- Use a water budget calculator to learn how much water is allowed on certain landscapes: www.water.ca.gov/wateruseefficiency/landscapeordinance/
- See DWR's "Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use": www.water.ca.gov/wateruseefficiency/sb7/committees/urban/u3/
- Check out the California Irrigation Management Information System: www.cimis.water.ca.gov
- Save Our Water: www.saveourh2o.org

Promoting "Save Our Water"

Water Conservation at California Rest Stops

By Saunthy Nicolson-Singh

Water and shade have always been essential to California travelers, even before the first state-funded fruit trees were planted at rest stops in 1868. Today, more than 54 million travelers this year will visit California's 87 Caltrans highway rest stops and many will learn how to conserve water through DWR's "Save Our Water" posters.

"Water is a very precious resource and the State of California has had many droughts in its history," said Trent Manning, Department of Transportation (Caltrans) Statewide Roadside Rest Area Coordinator. "Caltrans is very happy to work with the

DWR to educate the travelling public about easy ways to conserve water."

From the thick redwood forests of Highway 101 on the northwest coast to the high desert of Southern California at Boron, rest stops are located along 19 freeways in California. For rest stop locations, visit <http://www.dot.ca.gov/hq/maint/ra/Statewide.htm>.

Through a partnership with Caltrans to display the posters, DWR's Public Affairs Office's Water Education and Administration Branch distributed the "Save Our Water" posters to promote easy ways to conserve water, such as installing low-flow shower heads, washing full loads of laundry, and installing aerators on kitchen faucets. Since 2009, DWR has partnered with "Save Our Water" program co-sponsor, the Association of California Water Agencies, to get the word out about water conservation.

The poster, which contains eight easy ways to save water along with the "Save Our Water" logo and Web site, was designed by Michael J. Miller, formerly a DWR Graphic Designer and now Photography Unit Chief.

"The signs began with the branding and design elements of the Save Our Water program and fit easily for a clean design," said Miller, a 19-year veteran of the DWR Graphics Unit.

The sign text also briefly explains California's water is-

ssues and lists ways, illustrated with photos, to show how everyone can conserve water every day. Mark McCourt, Graphic Designer I, coordinated the creation of the signs with an outside vendor.

Created of DiBond, a solid polyethylene core between two sheets of thin aluminum, the signs can take a beating from the sun, fog, and salty sea air. Ranging in size from 18 by 24 feet to 40 by 40 feet, the signs were custom-sized to fit in the variety of rest area display cases. Some were hand-delivered to the regions; others were shipped to a coordinated site. Caltrans maintenance field crews completed the sign installation in March of 2012.

"Caltrans has a long history of conserving resources, including water, within our roadside landscapes," reflected Lori Butler, Caltrans Roadside Facilities Coordinator. "As we upgrade the facilities, we're improving our conservation methods with drought-tolerant plants, state-of-the-art irrigation, non-irrigated landscape, low flow toilets and automatic shut off faucets at the rest area stops."

From the Web site, www.saveourH2O.org, to billboard and bus ads, radio spots, magazine ads and inserts, exhibits at the State Fair and smaller county fairs, through social media, and now at the Caltrans rest stops, California residents and travelers are reminded that we can all work to Save Our Water. ♦

Saunthy Nicolson-Singh of DWR's Water Education and Administration Branch has worked on the Save Our Water campaign as a program manager since 2009. During the early 1980s she worked for Caltrans as a Landscape Maintenance Worker, including at roadside rest areas.



A Unique Link

By Jennifer Iida

From a bird's eye view, the ground below resembles two huge water slides paralleling playfully through the rural landscape of the San Joaquin Valley. Instead, this site near Tracy is home to an important link between the State Water Project's California Aqueduct and the Federal Central Valley Project's Delta-Mendota Canal.

On May 2, political leaders and water officials celebrating a long-awaited connection between the State and the Federal government called the "Intertie."

This interconnected pipeline allows water to be conveyed between the Central Valley Project's (CVP) Delta-Mendota Canal (DMC) and the California State Water Project's (SWP) California Aqueduct.

"Completion of the Intertie is the result of considerable teamwork and cooperation among U.S. Bureau of Reclamation (USBR), DWR, and San Luis and Delta Mendota Water Authority (SLDMWA) staff to the benefit of both projects," said DWR Director Mark Cowin. "Operation of the Intertie will help the CVP better manage its available water supply by addressing system capacity issues and will also provide flexibility for both projects in emergency and maintenance situations."

The Project

Located in an unincorporated, agricultural area in Alameda County, the Intertie is west of the city of Tracy and south of Byron.

"It's a rural location and it's the one point in both systems where there is less distance

Constructed from 2010 to 2012, the Intertie of the California Aqueduct (left, above) and the Delta-Mendota Canal is connected via two 108-inch-diameter pipes.



(Left to Right) At the May 2 Intertie Project Completion Ceremony in Tracy, participants included U.S. Congressman Dennis Cardoza representative Deedee D'Adamo, U.S. Senator Dianne Feinstein representative Shelly Abajian, U.S. Senator Barbara Boxer representative Ameen Khan, Bureau of Reclamation Mid-Pacific Region Regional Director Donald Glaser, U.S. Congressman Jerry McNerney representative Gary Prost, DWR Director Mark Cowin, U.S. Congressman Jim Costa, Master of Ceremonies and SLDMWA's Executive Director Dan Nelson, and Bureau of Reclamation Commissioner Michael Connor.

in between so less work had to be done in order to connect the systems," said Hydroelectric Plant Operations Superintendent Doug Thompson of DWR's Delta Field Division.

These shared State-Federal pipelines, measuring 500 linear feet, connect the CVP and the SWP aqueducts via two 108-inch-diameter pipes. The pumping plant has a pumping capacity of 467 cubic feet per second (cfs) to pump from the DMC to the California Aqueduct with the capacity for 900 cfs of gravity flow from the California Aqueduct to DMC.

"The State Water Project has many connections from reservoirs and canals

but not with the DMC other than at San Luis Reservoir, so it's unique," said Water Services Supervisor Jim Odom of Delta Field Division.

The Intertie connection on the California Aqueduct is at Mile post 9 and downstream of Harvey Banks Pumping Plant. This portion of the California Aqueduct was originally constructed from 1962 to 1973. Spanning more than 600 miles from Northern to Southern California, the SWP includes approximately 700 miles of canals, tunnels, and pipelines. It also includes 34 storage facilities, 20 pumping plants, four pumping-generating plants, and five hydroelectric powerplants.

The DMC, which began operating in 1951, runs south along the western edge of the San Joaquin Valley, parallel to the California Aqueduct for most of its journey, but it diverges to the east after passing San Luis Reservoir, which receives some of its water. The Jones Pumping Plant and the DMC are the primary federal water delivery facilities that provide water to CVP contractors south of the Bay-Delta.

The two projects function quite differently. The CVP Pumping Plant operates at a constant rate up to the 4600 cfs system capacity, while the

SWP Pumping Plant operates on a fluctuating basis at up to a maximum permitted rate of 6680 cfs that is well below the 10,300 cfs system capacity. The CVP water deliveries are primarily for agricultural needs whereas the SWP delivers mostly to municipalities.

Getting to the Groundbreaking

Although there was a festive groundbreaking ceremony in the fall of 2010, getting to that point wasn't a smooth ride. The project took a considerable amount of time and money.

It was nearly 25 years in the making and required \$28 million including \$15.8 million in federal stimulus money known as the American Recovery and Reinvestment Act, plus \$8.8 million of CALFED funding. The remaining funding came from contributions from CVP Contractors and the USBR budget.

During this time DWR, USBR, and the San Luis and Delta Mendota Water Authority worked in synch to overcome obstacles trying to get all the appropriate agreements in place in order to move forward.

"We are all working well and cooperatively, it just took some time!" said SLDMWA's Engineering and Planning Department Manager Bob Martin.

Odom said, "Working with other agen-

(Left to Right) Speakers at event include DWR Director Cowin and Bureau of Reclamation Commissioner Connor.





Intertie Facts

- Purpose: Provide flexibility during CVP or SWP maintenance activities or emergencies

CENTRAL VALLEY PROJECT:

Jones Pumping Plant and Delta-Mendota Canal

- Permitted capacity 4600 cubic feet per second (cfs), design capacity 4600 cfs, current conveyance capacity 4200 cfs
- Direct Intake on Old River
- Improve CVP water deliveries to south of Delta contractors
- Provide capability to fill CVP San Luis earlier in the water year, more frequently

STATE WATER PROJECT

Banks Pumping Plant and California Aqueduct

- Permitted capacity 6680 cfs, design capacity 10,300 cfs, current conveyance capacity 10,300 cfs
- Radial Gate from Old River to Clifton Court Forebay

The Delta-Mendota Canal and California Aqueduct Intertie Pumping Plant located five miles west of Tracy contains four pumping units with a total pumping capacity of 467 cubic feet per second and total reversed flow capacity of 900 cfs.

cies has actually been going really well. This new partnership, I feel, has opened some doors with communication.”

The Intertie Facility will be jointly operated and maintained by the DWR’s Delta Field Division and the SLDMWA, and therefore ongoing coordination and communications will be essential.

Achieving **Multiple Benefits** through **Partnerships**

The Bureau of Reclamation and the SLDMWA are in charge of maintaining the quality and quantity of the water that is delivered from the south end of the DMC. The DMC passes through parts of Alameda, San Joaquin, Stanislaus, Merced, and Fresno counties, but runs into conveyance issues just south of the intertie.

“We have subsidence that has occurred over the years, so we’re not able to convey the quantity of water we have been historically able to due to a bottleneck in the canal which restricts use of the conveyance capacity,” said Assistant Executive Director Frances Mizuno with the SLDMWA. “So having the intertie in place allows for more water to be pumped south of the Delta that

we might not otherwise be able to convey with the current facilities.”

The Intertie not only benefits the DMC, but is mutually beneficial for emergencies and maintenance, according to both sides of this pipeline.

“A leak in the California Aqueduct in 2001 shut down their system and DWR built an emergency temporary intertie from the DMC into the aqueduct to serve the State delivery demand,” said Martin.

DWR’s Odom agreed: “Both projects will enjoy more flexibility for emergencies and maintenance.”

Other **Needs**

The Intertie not only gives water managers the flexibility to operate one or the other facility in an emergency, but will also help in response to different water and environmental needs.

“Since the Intertie is located between the DMC and the California Aqueduct and downstream of Banks and Jones Pumping Plants (outside the Delta), the construction of the Intertie had only minor habitat impact and less than significant or no impact to other environmental resources,” said Reclamation Intertie Project

Manager Erika Kegel.

The final Environmental Impact Statement (EIS) released in November 2009 was followed by a Record of Decision in December 2009. In 2010, the construction contract was awarded to a contractor by the Bureau of Reclamation.

Kegel enjoys seeing the fruits of her labor and of so many others progress into an operational facility in an environmentally responsible manner after years of study and coordination.

DWR’s Chief of Temporary Barriers and Lower San Joaquin Jacob McQuirk in the Bay-Delta Office worked with the Bureau on Intertie environmental compliance issues from the State side. He says the intertie can actually help with fishery concerns.

“At South Delta export facilities, this project should also give us the operational flexibility to increase the water exports at times when it’s less damaging to the fish,” said McQuirk. 💧

For more information about the Intertie, visit the Bureau of Reclamation Web site at www.usbr.gov/mp/intertie/

A Century of Progress

Board Celebrates First 100 Years of Fighting Central Valley Floods

By Pete Weisser

The Central Valley Flood Protection Board marked its Centennial with a January 27th ceremony at the California State History Museum in Sacramento.

A century of flood management in California's Central Valley was celebrated, with historic memories of "doing God's work" and a resolve to intensify flood protection efforts in the future.

Created by the Legislature in 1911 and known for most of its existence as The Reclamation Board, the Board provides flood policy direction along California's two longest rivers, the Sacramento and the San Joaquin, and their tributaries.

"We celebrate our history while looking forward to our future," said former Board President Benjamin Carter, who served as master of ceremonies. "We also thank all those who have generously served the people of California as part of the Board and staff during the last century."

In partnership with the U.S. Army

Corps of Engineers (Corps), and in coordination with other Federal, State, and local agencies, the Board approves and funds the construction, modification, improvement, and maintenance of Central Valley flood control systems. This includes 1,600 miles of levees, 1.7 million acres of land, and 1,300 miles of designated floodways.

Today, the Board seeks to protect a region with one million residents, nearly \$70 billion in assets and infrastructure, countless farms, and more than 500 species of native plants and wildlife.

A key focus for the future is the Central Valley Flood Protection Plan, developed by DWR, which recommends between \$14 billion to \$17 billion worth of improvements to provide greater flood protection in the Central Valley. The plan uses a system-wide approach, seeking as a first step to provide 200-year flood protection for urban areas in the valley. DWR officials made a detailed presentation of the plan to the Board on the morning of January 27.

The Board will analyze the plan, receiving public input at a series of meetings, with adoption scheduled by July 1. (For news and updates on the plan visit the Board's Web site at www.cvfpb.ca.gov)

A new 20-page full-color brochure describing the Board's first 100 years of valley flood protection was given to attendees at the Centennial event. The brochure and history of valley flooding video shown at the Centennial event are available online by accessing the Board's Web site at www.cvfpb.ca.gov.

The Centennial event featured a series of brief speeches by dignitaries, recalling the Board's history, leadership and renewed commitment to flood protection in California's great Central Valley. The speeches were preceded by a 12-minute documentary film of the Board's place in Central Valley flood history, developed by the DWR Public Affairs Office's Film/Video Unit.

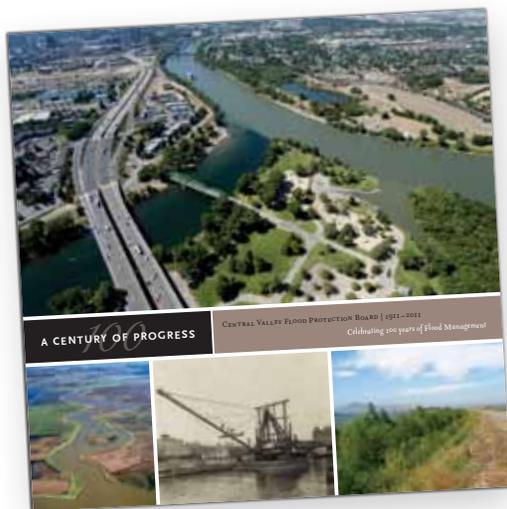
Dave Kennedy, former DWR Director, referred to Board levee work and DWR flood fights as "doing God's work", recalled DWR Deputy Director Gary Bardini, himself a former Chief of DWR's Division of Flood Management. Bardini, now Deputy Director for Integrated Water Management, was chief of flood operations during flood events in 2005-2006. He gave a brief emotion-tinged speech recounting the tension and drama of fighting big floods.

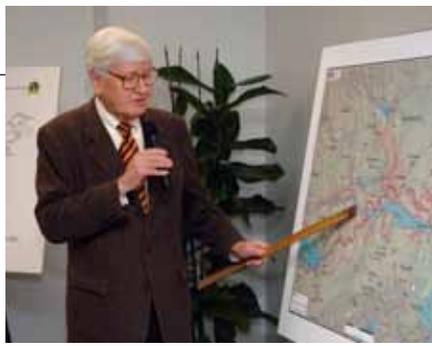
Major flood fights are tense, stressful, and exhausting, recalled Bardini. "You hope God will be merciful. You hope you'll get another chance to perfect the (flood protection) system... We're going to fight better. We're going to build better."

Bardini's speech can be viewed at <http://www.facebook.com/photo.php?v=355398557804152>.

Historic Overview of Valley Floods

George Bayse, retired attorney and flood historian, gave an overview of historic efforts to prevent the massive seasonal flooding that frequently transformed the Sacramento and San Joaquin valleys into "an inland sea".





Left to Right: During the CVFPB's Centennial Celebration, speakers and participants included Retired Attorney and Flood Historian George Bayse; Congressman Wally Herger and Former Board President Benjamin Carter; Board Staff David Williams, Flood Management's Maintenance Environmental Support Branch Chief Kelly Briggs, and Flood Management Chief Keith Swanson; Board's Executive Officer Jay Punia.

Starting in the 1850s, when California's valleys still were pastoral farmland with only a few small cities and landowners built their own levees, Bayse traced early efforts to contain seasonal river flooding.

He credited Colusa newspaper editor Will Green with advocating in the 1860s the weir and bypass Sacramento River floodway strategy that eventually came to dominate valley flood planning. The bypasses give relief to flood-swollen leveed rivers. Flood flows spill over weirs into bypasses, allowing floodwaters up to approximately 600,000 cubic-feet-per-second to drain away from the flood-stressed Sacramento River.

Validated hydrologically by major floods in 1907 and 1909, the bypass strategy has benefitted California's valleys for over a century.

Bayse described landmark legislative and planning efforts, including the State Reclamation Act of 1868 and the Jackson Report of 1910 that led to adoption of modern flood management systems, and the 1911 creation of the flood board to guide valley flood policy. Construction of upstream dams, including federal dams at Shasta and Folsom and the State dam at Oroville, helped moderate and hold back flood flows, as did stronger river levees.

Army Corps a Strong Partner

The U.S. Army Corps of Engineers has been a "strong and proud" partner in valley flood planning and levee construction, noted Colonel William Leady, Commander,

Sacramento District. He cited the current improvements being made at Folsom Dam as symbolic of modern era flood management progress by California and the Corps. The Corps has long been a leader in improving levee standards in California.

Personal memories of floods in 1950 and 1955 were offered by U.S. Rep. Wally Herger, whose Rio Oso dairy-farming family was affected by high water in those years. Farmers who lived through such floods are grateful for flood protection, he said.

Two other Congressional representatives, Doris Matsui and John Garamendi, sent congratulatory statements. State Assembly member Roger Dickinson delivered a Legislative Resolution commending the Board for its flood protection leadership and achievements.

Flood Board Modernization

In the modern era, the Board has adapted to new flood and habitat challenges, speakers noted, with planners taking ecosystem and species protection into account, as well as flood management.

To keep pace with flood challenges, the Board in recent years was modernized and its responsibilities and authority expanded. This was done via legislation signed into law in 2007. Pursuant to that legislation, the board's name changed in 2008 from The Reclamation Board to the Central

Valley Flood Protection Board. The legislation also expanded the Board's authority to regulate encroachments on levees and to require compliance with standards assuring public safety.

Two departing Board members, Francis (Butch) Hodgkins and John Brown, whose terms were ending, praised the Board and its staff for its dedication and professional growth in recent years.

In concluding remarks, Board Executive Officer Jay Punia turned the focus "back to the future." He cited several major projects that symbolize the Board's commitment to improving flood protection in the now populous Sacramento and San Joaquin valleys.

First, Punia cited the Central Valley Flood Protection Plan, a Legislatively-mandated valley-wide systemic flood protection plan that is part of California's FloodSAFE program. He paid tribute also to the new Folsom Dam spillway now under construction to give more protection on the American River for the metropolitan Sacramento region. And Punia also praised the swift and significant levee upgrade progress being made by several local flood control agencies with the funding made available with the passage of Propositions 1E and 84. ♦



The Future of Flood Management in California

Developing a Systemwide Approach

Every few years, California's Central Valley experiences flooding that ranges from moderate to devastating. In recent memory, the floods of 1997 destroyed over 9,000 homes, forced the evacuation of more than 120,000 people, devastated thousands of acres of farm land, and caused more than \$1 billion in direct flood damages (2011 prices). In spring 2006, flood fighting around Firebaugh went on for more than a month. On April 1, 2011, Sierra snowpack was 165 percent of average. Fortunately, an unusually cool spring and early summer, allowed snow to melt slowly. Even so, the Central Valley's flood management system was stressed. Given the flood risk in the Central Valley, California needs a comprehensive plan for managing floods in the Central Valley. On December 30, 2011, Department of Water Resources (DWR) staff delivered such a plan to the Central Valley Flood Protection Board (Board), the culmination of hundreds of hours of public engagement and four years of work by scores of DWR staff.

The December 30 submission of the Public Draft 2012 Central Valley Flood Protection Plan (CVFPP) and its companion documents – “the Flood Control

System Status Report” and “the State Plan of Flood Control Descriptive Document” – to the Board did more than meet the legislatively mandated deadline of January 1, 2012. The plan will fundamentally change the State's approach to managing the State-federal levees, channels, reservoirs, and bypasses collectively known as the State Plan of Flood Control (SPFC) – including 1,600 miles of levees in the Sacramento and San Joaquin valleys.

“The CVFPP will be a change in everyone's approach,” said Division of Flood Management (DFM) Chief Keith Swanson. According to Swanson, in the past everyone involved with flood management in California has come at the complex issues involved from their unique perspective and specific area of interest, such as State, Federal, and local governments, environmental groups, local levee maintaining agencies, and others.

Swanson noted that even though the quality of cooperation among those involved in managing California's flood risk was “spotty” and litigation or legislation that elevated one group at the expense of another group was common in the past, he is optimistic about what the CVFPP of-

fers. He said, “We believe the CVFPP will carry California forward on a path where flood protection integrates public safety, environmental stewardship, and economic stability. The plan reflects the values and commitment of those who helped create it, and it provides options for improving flood protection for everyone in the Sacramento-San Joaquin Valley – which will ultimately benefit all Californians.”

As one of the six inter-related flood protection bills signed in 2007 by then Governor Schwarzenegger to address the problems of flood protection and flood management responsibilities in California, Senate Bill 5 authorized the development of the CVFPP and requires the CVFPP be updated every five years.

Delivery of the CVFPP has triggered a six-month adoption process the Board designed to meet its legislative requirement to adopt the CVFPP by July 1, 2012. The Board proceedings have included formal presentations by DWR staff about the CVFPP and the CVFPP Draft Program Environmental Impact Report (DPEIR) on January 27 and March 23. Additionally, the Board held numerous public meetings and hearings



(Left to Right on page 18) To develop the CVFPP, the Central Valley Flood Management Planning Program held more than 300 meetings, including this first CVFMP Valleywide Forum in West Sacramento in June of 2010. DWR staff manually pulling boards to open the Sacramento Weir on December 31, 2005.

on the CVFPP and DPEIR in Sacramento, Marysville, Stockton, and Woodland.

State Systemwide Investment Approach

After DWR evaluated a range of potential approaches identified for improving flood management in the Central Valley, DWR recommended the State Systemwide Investment Approach (SSIA). The SSIA defines a strategy for responsibly meeting the State's objectives to improve public safety, ecosystem conditions, and economic stability in the Central Valley, while recognizing the financial challenges facing local, State and Federal governments.

The SSIA identifies \$14 billion to \$17 billion in investments in regional and systemwide projects and programs aimed at achieving 200-year flood protection for urban communities; 100-year flood protection for small communities; and emergency response, flood protection, and flood recovery enhancements for rural and agricultural communities that receive protection from the SPFC.

Concurrent with the Board adopting the CVFPP, DWR is beginning work with locals in preparing regional and State level financing plans to guide investments for the next 20 to 25 years. The financing plan will be completed in 2013 and updated as part of the 2017 CVFPP update.

Because it takes time to finance large-scale water resources development projects, the 2013 financing plan will be a key milestone for the 2017 update.

"By 2017, additional funds will be needed from local, State and federal levels to

"The development of these regional plans will touch nearly every level within DWR."

—Flood Policy Advisor Michael Mierzwa

continue progress," said DFM Assistant Division Chief Paul Marshall. "If we're allowed to continue through additional funds, the type of work within DFM will start to push away from maintaining local and regional projects and move toward major system improvement projects. Some very big projects would be coming out of this, such as expansion of the bypasses and improving flood structures such as weirs. These are two big game changers for the future."

Unprecedented Effort

"The breadth and geographic scale of the CVFPP and the DPEIR is an unprecedented planning effort for DWR," said Marshall. "The scope of the CVFPP is larger than anything we've dealt with – even the Bay-Delta Conservation Plan – and the CVFPP has a higher degree of resolution."

However, it is more than just the scale of the CVFPP that makes it unique; the CVFPP and its companion documents were developed through an extensive, long-term public engagement process that involved approximately 450 people representing public agencies, businesses, and interest-based groups. From 2008 to 2011, more than 300 meetings were held with a range of stakeholder organizations, including agricultural, academic, business, environmental, recreational, flood management and water users, California Native American tribes and organizations, and local, State, and Federal agencies.

"We could not have done it (completed the CVFPP) were it not for the strong leadership of Deputy Director Gary Bardini, the dedication of my staff, the contributions of every office and branch chief and their staff, and the involvement of hundreds of stakeholders and our partner agencies," said

Jeremy Arrich, Chief of the Central Valley Flood Planning Office, whose eight-member team led the development of the CVFPP.

The New Paradigm

The legislative guidance that directed development of the CVFPP also drove DWR and the Board to redefine their organization's roles and responsibilities for flood management and its planning in the Central Valley, as well as their interactions with Federal agencies and local operators and maintainers of SPFC facilities, and each other.

According to Board Member Emma Suarez, the 2007 legislation expanded the Board's responsibilities and authorities, and provided for a more efficient process for conducting the business of the Board. As well, according to Jay Punia, Executive Officer to the Board, the State's overall role in implementing flood management improvements has increased since 2007.

This change in the roles and responsibilities as well as the relationship between DWR and the Corps presents many challenges for the State and local agencies implementing flood management improvements that are consistent with the 2007 legislation.

"The existing paradigm is not working well for anyone, and the situation is exacerbated by the changing role of the federal government. Many would like to see some of the traditional roles continue. We'd like to see a strong Sacramento Bank (a cost-shared erosion repair program between the State and the Corps). We would like to see the Corps providing more Public Law (PL) 84-99 levee rehabilitation assistance. However, we're seeing the level of support we've historically received from the federal government changing – the Corps has reduced



(Left to Right) San Joaquin River levee repair, upstream of the Chowchilla Bypass in 2006. Jeremy Arrich explains flood plan details at the Central Valley Flood Protection Board hearing on April 5, 2012.



its commitment to the Sacramento Bank program and getting PL 84-99 assistance is much more difficult,” said Swanson. “Today, we cannot rely on the Federal government to fund projects as they once did, and this is part of the difficult discussions we need to have with municipalities, SPFC operators and maintainers, and the people of the State of California.”

Regional Plans

While the 2007 legislation started that discussion by addressing land use planning in flood-prone areas, the first major task resulting from the CVFPP is to initiate development of nine detailed Regional Flood Management Plans for the following areas identified in the SSIA: Feather River, Upper Sacramento/Butte Basin, Mid-Sacramento, Lower Sacramento, Delta-North, Delta-South, Lower San Joaquin, Mid-San Joaquin, and Upper San Joaquin.

Scheduled for completion in October 2013, each Regional Plan will involve DWR staff working with local entities and other stakeholders to define local flood system improvements and local investment strategies that are consistent with the SSIA. These regional plans will be prepared with participation by local maintaining agencies, regional flood management agencies, counties and cities within the region, and agricultural and environmental interests. The role of counties and local communities is critical for the regional planning process because legislation directs that after the CVFPP is adopted urban and urbanizing areas in the Sacramento-San Joaquin Valley amend their general plans, which help guide local

land use, and incorporate information consistent with the CVFPP – e.g., locations of flood hazard zones, policies and objectives that will reduce the risk of flood damage.

“The development of these regional plans will touch nearly every level within DWR,” said Flood Policy Advisor Michael Mierzwa. “If DWR staff thought the level of outreach for development of the CVFPP was a lot, brace yourself: there is much more on the horizon. We’ll be working even more closely and intensely with local stakeholders to develop lists of regional projects they would like to see; the timing and priority they want to see; which projects have high-level benefits, at what cost they expect; and whether they have funding available to pay for these improvements. As we go through this regional process, we’ll consider how the projects affect each other and the entire flood management system.”

Because of the heightened level of stakeholder engagement by many DWR staff, DFM initiated robust training aimed at further honing staffs’ communication and engagement skills. “Society is more interested in government being more customer service oriented,” said Mierzwa. “For DWR, this means staff will need to be aware and responsive to the public’s needs. Fail that and people will be reluctant to engage in the comprehensive flood management planning California needs, and future funding may be directed to another agency.”

Long-Term Actions

The regional plans will include both local and regional projects. Local projects are small and can be implemented and com-

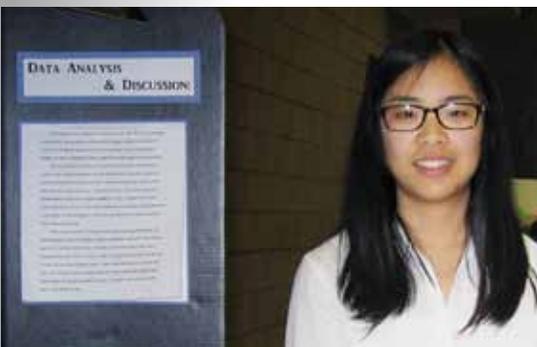
pleted by a single community – e.g., raising a small section of levee a few feet. Regional projects are larger, requiring region-wide engagement by all of the local entities and providing region-wide benefits – e.g., Paradise Cut, which will lower the flood stage along the San Joaquin River.

As regional plans are developed, each regional project will be carefully analyzed for basin-wide and systemwide benefits. Those regional projects that provide basin-wide benefits will become part of either the Sacramento Basin-Wide Feasibility Study or the San Joaquin Basin-Wide Feasibility Study. The primary purpose of these feasibility studies is developing a Locally Preferred Plan (LPP) that considers project benefits – environmental, economic, public safety, among others – basin-wide (and ultimately systemwide). The goal is to increase federal interest in cost-sharing the LPP because when the benefits are considered across an entire basin, instead of on a local basis, benefits increase substantially.

From a divisional staffing perspective, Swanson anticipates staff will have many opportunities to gain new skills and work on challenging activities as regional plans are completed and basin-wide feasibility studies mature.

“While I don’t see the number of staff expanding, I definitely see people moving around to support project implementation. We will need to be creative and work hand-in-hand with our counterparts at the local and federal level and draw from their institutional perspective,” said Swanson. 💧

Rocking with Research: The Sacramento Regional Science and Engineering Fair Awards



DWR's Sacramento Regional Science and Engineering Fair winners included Alys Shin (top) and Natalie Giorgi

(Left to Right) The DWR special award judging panel consisted of Environmental Scientist Erin Brehmer of Flood Management, Water Education Specialist Michelle Robinson of Public Affairs Office, Electrical Engineer Harpreet Kaur of the SWP Power and Risk Office, Suisun Marsh Planning Chief Michal Koller of Environmental Services, Associate Governmental Program Analyst Ashley Glisan of Engineering, Chief of Power Planning and Contract Management Michael Werner of the State Water Project Power and Risk Office, Staff Environmental Scientist Ted Swift, Ph.D., of Environmental Services, Associate Hydroelectric Power Utility Engineer John Chairez of Operations and Maintenance, and Flood Policy Advisor Michael Mierzwa of Flood Management/DWR Executive, and Associate Governmental Program Analyst Michael A. Miller of the Public Affairs Office.

Middle and high school students from the greater Sacramento region competed in the DWR-sponsored Sacramento Regional Science and Engineering Fair on March 24 at Rosemont High School's auditorium.

In addition to the event's presentation of special awards, category awards, and the grand prize award, DWR presented two awards for Best Science or Engineering Project Supporting Water Management to a 6th-8th (Junior Category) and 9th-12th (Senior Category.) The criteria for judging were relevance to water management, originality in design, and adherence to scientific method.

"With a huge increase in the number of student projects, DWR's eight volunteers from several divisions were very helpful in reviewing and selecting the winning projects," said Michelle Robinson, DWR's water education specialist who led DWR volunteers. "I can't wait for next year."

A junior at Champion Christian School in Chico, Alys Shin, scored top honors in DWR's senior special award category with her "Analysis of Energy Output by Water Turbines Due to Excessive Rainfall in Third World Countries." Armed with data from the National Oceanic and Atmospheric Administration, Shin set out to find a way to produce enough energy to light a light bulb by spinning water turbines with average annual rainfall in a city in a third world country.

"I enjoyed the project, however was disappointed in the data," said Alys. "I found despite the massive amount of rainfall in third world countries that my turbine models didn't work to provide enough energy.

With future research, I've decided to attach a water tank to the gutter system to collect the water during the rainy days and then use the water at night to turn the turbines for the light bulb."

The outstanding DWR Junior category special award went to sixth grader Natalie Giorgi from Our Lady of Assumption in Carmichael. She raised the bar for other focused youngsters with her project on "The Effectiveness of Storm Drains on Carmichaels' Waterways."

"I became interested in this because some marine life is getting sick due to the polluted waterways," said Natalie. "During my trials, I tested the water passage rate and the litter rate with different grates on storm drains and determined the Carmichael drains still allow trash to enter our ocean, but it also keeps bigger pieces out so it allows water to get through as to not flood our areas. I think a slightly tighter drain would work better."

"The students are gaining confidence not only in their scientific process, but the way to communicate the results," said Michael Mierzwa, a DWR volunteer judge. "So much of what they are doing is the visual display, the interaction with the judges. They have to look us in the eye, they have to think through their thoughts, and then carefully articulate why it's important, and what they learned from it. It's a great combination of communication and engineering science."

The DWR special awards consist of a certificate, statewide recognition in *DWR Magazine* plus national weather service rain gauges. ♦





A Remote Partnership

NASA Collaborates with DWR on Remote Sensing for Water Resources Applications in California

By Jeanine Jones

To help broaden data about water resources, the National Aeronautics and Space Administration (NASA) in collaboration with DWR has been researching various uses for remote sensing.

The DWR-NASA research partnership stems from the Space Administration's initiative to use satellite-gathered data in an increasing number of practical programs on earth.

The remote sensing information most commonly used for natural resources management purposes has historically come from the Landsat missions, a series of earth-observing missions that began operation in 1972. Landsat data offer the longest continuous global coverage of the earth's surface, and have applications such as land use or land cover change detection.

NASA has launched multiple missions with earth-observing capabilities subsequent to development of the Landsat series, but use of information from these missions has been limited almost exclusively to the scientific community. NASA

now has established an applied sciences program for promoting research to identify innovative uses of NASA earth science data and to demonstrate practical applications.

The American Recovery and Reinvestment Act of 2009 (ARRA) funded NASA's applied sciences program to investigate potential water resources applications, and three NASA centers approached DWR regarding collaboration on that research. The three centers are the Jet Propulsion Laboratory in Pasadena (JPL), the Ames Research Center in Mountain View (Ames), and the Marshall Space Flight Center in Maryland (Marshall). As part of the ARRA project, DWR and the NASA centers targeted five water resources applications:

- Enhancements to DWR's California Irrigation Management Information System (CIMIS) program for estimating crop irrigation requirements and disseminating irrigation scheduling information to growers;
- Snow water equivalent mapping;
- Regional climate model diagnostic toolkit and improving model interface;
- Basic research on measuring surface water extent and flooded area;
- Basic research on groundwater detection.

Enhancements to DWR's CIMIS

The two mapping activities closest to operational use involved estimation of crop water needs and snowpack parameters. In the agricultural application, NASA Ames and California State University Monterey Bay personnel used NASA software to ingest satellite data for estimating crop coefficients and to combine the crop coefficients with reference evapotranspiration values measured at DWR's CIMIS weather stations. This process provided spatially based estimates of crop irrigation needs that growers could access on their cell phones. NASA's MODIS sensor (see sidebar) collects the raw data that allows space-based measurement of crop conditions.

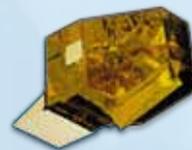
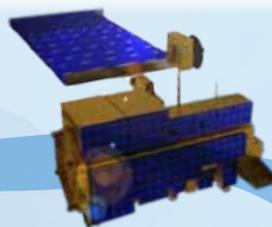
Beyond Landsat

Other NASA Earth Observing Capabilities



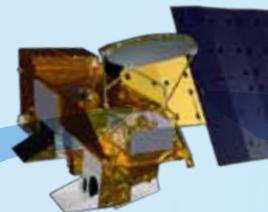
Sensor: AMSR-E (Advanced Microwave Scanning Radiometer for EOS)
Water Resources-Related Capabilities: Passive microwave remote sensing of snow water equivalent, snow cover

Aqua



Sensor: MODIS (Moderate Resolution Imaging Spectroradiometer)
Water Resources-Related Capabilities: Optical remote sensing of vegetation conditions, snow cover, land use

Terra



The NASA-DWR ARRA project received an Outstanding Partnership Award from the Far-West Region of the Federal Laboratory Consortium for Technology Transfer. DWR's ARRA project participants are (Left to Right) Bekele Temesgen, Jeanine Jones, Kent Frame, Francis Chung, and Mike Anderson. (Not in photo: Frank Gehrke, Morteza Orang and Cayle Little)



Snow Water Equivalent Mapping

The snowpack application involved estimating the spatial distribution of snow water equivalent, which entails determining snow-covered area and then estimating the snow's water content. Working with DWR's snow surveys program, JPL personnel used MODIS observations of snow-covered area in conjunction with a snowmelt model to generate estimates of Sierra Nevada snow water equivalent. These estimates can be used to help understand why agencies' forecasts of snowmelt runoff may not match observed runoff values well. Much of the Sierra Nevada snowpack is located above the elevations where ground-based snowpack measurements (snow pillows, manual snow courses) are made. Remote sensing of mountain snowpack offers an important opportunity for improving runoff forecasts, by permitting these now unmeasured areas to be quantified and incorporated into forecasting models.

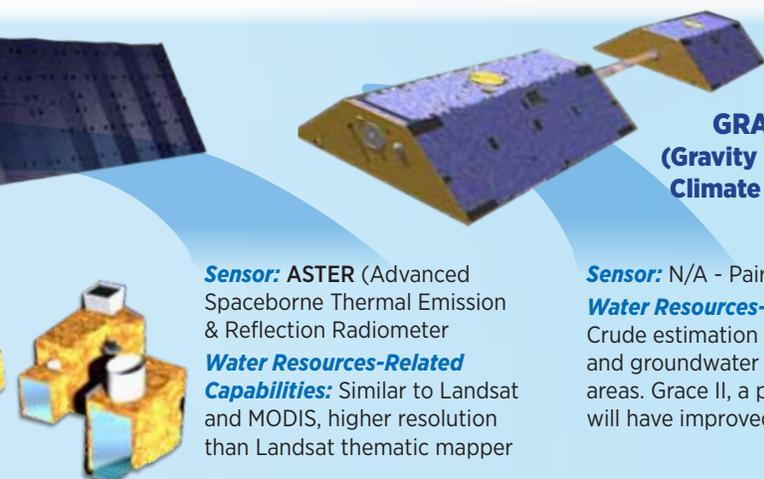
Additional Activities

Remote sensing applications are not limited to satellite platforms. In other research outside of the ARRA project, NASA has been working with DWR to investigate the use of aircraft-mounted synthetic aperture radar (SAR) for monitoring land surface change and levee movement in the Sacramento-San Joaquin River Delta. Similarly, aircraft-mounted light detection and ranging (LIDAR) is widely being used for research and commercial high-resolution topographic mapping applications, including for DWR levee repair work and for California Ocean Protection Council – National Oceanic and Atmospheric Administration coastline mapping.

Remote sensing's advantage lies in its ability to rapidly provide data over large geographic areas at low cost (NASA data products are available free of charge). Historically, its relatively low resolution has been a limiting constraint, but instrument resolution has been rapidly improving. Re-

ote sensing is especially valuable in areas where no ground-based measurements exist, or it is not practically feasible to maintain ground-based observations.

Recognizing the benefits demonstrated by NASA's ARRA project, DWR follow-up activities have included co-sponsoring a workshop with NASA and the Water Education Foundation on U.S. – Mexico border (Lower Colorado River Basin) applications of the technology. Potential applications in this region include low-cost monitoring of Ciénega de Santa Clara wetlands in Mexico, where a U.S. funded ground-based monitoring program had been implemented as part of test runs of the U.S. Bureau of Reclamation's Yuma Desalting Plant. DWR is additionally working with NASA, the U.S. Geological Survey, and the National Agricultural Statistics Service on a drought impacts pilot project to use remote sensing to quantify Central Valley fallowed acreage during the growing season. 💧



Sensor: ASTER (Advanced Spaceborne Thermal Emission & Reflection Radiometer)

Water Resources-Related Capabilities: Similar to Landsat and MODIS, higher resolution than Landsat thematic mapper

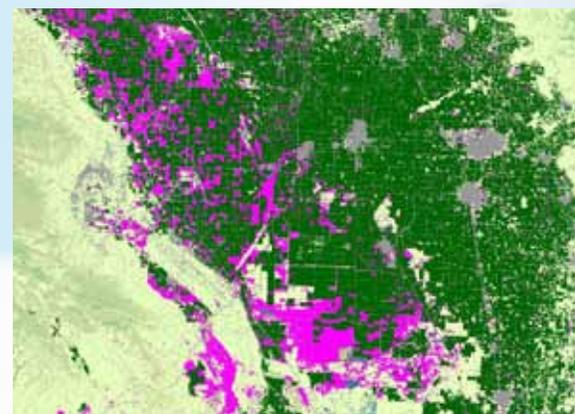
GRACE (Gravity Recovery and Climate Experiment)

Sensor: N/A - Pair of gravimetric satellites

Water Resources-Related Capabilities:

Crude estimation of changes in soil moisture and groundwater storage over very large areas. Grace II, a planned follow-on mission, will have improved resolution.

Processed image from National Agricultural Statistics Service data showing agricultural land fallowing (purple areas) in part of the San Joaquin Valley in 2009, a drought year. The image spans roughly from Fresno on the northeast to Kettleman City on the southwest. Data source for NASS imagery is Landsat and other satellite missions. *Image courtesy of CSU Monterey Bay.*



DWR RAMPS UP

for California's future

By Jennifer Iida

Imagine a world in which the environment and taxpayers would mutually benefit from infrastructure projects that are designed and developed with multi-departmental and agency collaboration.

A proposal to do just that has been in the works for the last few years and was recently described within the Regional Advance Mitigation Planning (RAMP) draft Statewide Framework. The logic behind it: RAMP will help meet Californian's needs for roads, bridges, levees and other facilities, services and environmental protection more efficiently and economically by a more comprehensive approach to mitigating the impacts of these projects.

Charting the course

It all started when a work group formed in 2008 to look at the potential for such an innovative and unique program.

"We needed the vision, we needed the processes in place and some knowledge and tools on how we can bring conservation science into our planning," said DWR's RAMP Project Manager Natasha Nelson.

Dale Hoffman-Floerke, DWR Deputy Director for Delta and Statewide Water Management, was an instrumental advocate of RAMP in 2007 when it was first contemplated.

"This project is supposed to do something very different from what we're doing now. The premise is when you have funds available up front for spending on mitigation lands you can do this in a way that avoids your project-by-project mitigation," said Hoffman-Floerke.

According to Hoffman-Floerke, back in 2007 after infrastructure bonds passed for the California Transportation Department (Caltrans) and DWR, it was recognized that the money available for both departments could be pooled for identifying potential infrastructure impacts and fixes using a synergistic approach for bigger and better long term mitigation projects.

The RAMP work group is comprised of representatives from 14 organizations. They include DWR, Caltrans, California Department of Fish and Game, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration – Fisheries, California Wildlife Conservation Board, California Department of Parks and Recreation, University of California, Davis, The Nature Conservancy, Resources Legacy Fund, Federal Highway Administration, and State Water Resources Control Board.

Key role under FESSRO

Housed under the FloodSAFE Environmental Stewardship and Statewide Resources Office, RAMP is an integral part of the conservation strategy connected to the Central Valley Flood Protection Plan (CVFPP).

The 2012 CVFPP focuses on identifying and prioritizing integrated flood management and flood risk reduction actions for areas protected by the facilities of the State Plan of Flood Control. RAMP can support regional and systemwide solutions proposed within CVFPP.

This large scale systematic process

Giant garter snake mitigation recently built in the Natomas Basin located north of Sacramento by the Sacramento Area Flood Control Agency (SAFCA) is one of the Early Implementation Projects funded by DWR in 2007.

would protect habitat for plants and wildlife as well as help with clean drinking water, carbon storage, flood risk reduction, and recreation opportunities.

Outreach Odyssey

In order to jump start a project of this size, multiple levels and layers of outreach for the RAMP draft Statewide Framework are required. It's an enormous undertaking which involves meeting with many stakeholders, including State agency directors, State legislators, local land use agencies, statewide and regional stakeholders, agency staff, non-profits, and the public.

"We largely depend on the cooperation and the volunteerism of others moving forward to crystallize how this project will get done and the amount of resources involved so we'll be in good standing to get legislation and funding in place," said project manager Nelson.

The statewide framework is a living document that will be periodically revised based upon the feedback received from agencies, stakeholders, and the public.

The Pilot Project

Planning for RAMP's pilot project is already underway in the central Sacramento Valley.

The planning area for the Central Sacramento Valley Regional Assessment covers one million acres (1,500 square miles)

Briefing

Program Continues to Flow

San Joaquin River Restoration Made Gains in 2011

By Pete Weisser

Efforts to revitalize the San Joaquin River progressed during 2011, in environmental planning, engineering evaluations, and water management actions. Most dramatically, 2011 marked a third consecutive year of interim flows to nurture science-based efforts to restore a naturally-reproducing salmon population in California's second-longest river.

Goals for 2012 include more analysis for interim flows, seepage, and flood risks, while planning will intensify on projects to improve three key infrastructure features.

The San Joaquin River Restoration Program (SJRRP) is an ambitious collaborative effort to restore a 153-mile segment of the San Joaquin River from Friant Dam, a Federal dam near Fresno, to its confluence with the Merced River.

Led by the U.S. Bureau of Reclamation (Reclamation), which operates Friant Dam, the program seeks to implement a 2006 court-approved settlement that resolved 18 years of litigation over how the San Joaquin's water is used. The program has two goals: to restore and maintain fish populations, including salmon, in the San Joaquin River from Friant Dam to the Merced River, and to reduce or avoid adverse water supply impacts to Friant Division water users.

The California Department of Water Resources (DWR) is a restoration program partner with Reclamation, along with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the California Department of Fish and Game.

Paul Romero of the South Central Region Office in Fresno is the program manager for DWR.

In its 2011 Annual Report, Reclamation listed several top accomplishments, including:

- Release of a Draft PEIS/R for the program in April 2011.
- Completion of Water Year 2011 Interim Flow releases, including monitoring and water recapture activities. The flows give scientists valuable information on water, temperatures, fish needs, seepage losses water recirculation, and reuse.
- Water management: Allocated more than 460,000 acre-feet of Recovered Water Account water and recaptured about 18,000 acre-feet for Water Year 2011.

On salmon planning, the program completed a Reintroduction Strategy Document on methods and donor stocks to support Central Valley spring-run Chinook salmon reintroduction into the San Joaquin.

The program produced an updated Seepage Management Plan in March 2011, incorporating landowner comments. Seepage is of concern to growers near the river since it can affect crop root zones.

For 2012, Reclamation projects release of a Final Program EIS/R and Record of Decision as top goals, along with continued Interim Flows.

Seepage and flood issues are among high priorities in DWR's planning purview, reported Romero, who noted more studies during 2012 are addressing these topics.

Levee investigations on existing levees will be done to assess potential flood risk impacts of restoration flows and identify potential strategies to maintain acceptable flood risk management for the SJRRP.

Planning continues in 2012 on projects to improve fish passage at three key infrastructure features on the San Joaquin. DWR leads an effort to upgrade the Mendota Pool Bypass and Reach 2B Improvement Project. After environmental documents are completed in 2014, constructing the project will be a high priority for the program. It is intended to enlarge the river channel from its current 1,300 cubic-feet-per-second (cfs) size to a capacity of at least 4,500 cfs.

The other two infrastructure projects slated for improvement are the Reach 4B Eastside Bypass and Mariposa Bypass Channel and Structural Improvement Project, due for construction in 2015, and the Arroyo Canal Fish Screen and Sack Dam Fish Passage Project, with construction targeted during 2013 to 2014. Four temporary control gates were installed at Sack Dam during 2011. 💧

CLEAN DRAIN DRY

is the boaters' mantra for battling invasive mussels in California. This three-word battlecry for boaters summarizes how to thwart the movement of quagga mussels in trailered boats from infested waterways in Southern California to lakes and reservoirs elsewhere in the Golden State. Cleaning, draining, and drying watercraft assures that no invasive mussels survive to infest another water body.

Dense populations of invasive mussels can clog small diameter pipes, damage lake and reservoir ecosystems and harm boat engines. Water and wildlife agencies in California, as elsewhere, seek to control their spread.

Public outreach and boat inspections are keys to combatting spread of invasive mussels, especially during the summer boating season now underway. Along with other State agencies, the Department of Water Resources (DWR) is involved in this effort, with inspection programs at State Water Project (SWP) lakes and reservoirs.

"Boaters today seem to understand the need for inspections," said Gary Watts, a State Parks official active in coordinating California boat inspections, including the newest to be implemented by State Parks, in October 2011 at San Luis Reservoir.

Quagga mussels first were documented in Lake Mead in January 2007. Via Colorado River water diversions, they entered more than 20 water bodies in Southern California. The SWP draws water from Sierra watersheds and, thus far, remains free of quagga populations, according to Tanya Veldhuizen, Environmental Scientist in DWR's Aquatic Nuisance Species (ANS) Program. Zebra mussels, the

Outreach, Boat Inspections Educate Public to Thwart Spread of Invasive Mussels

By Pete Weisser

other invasive freshwater mussel found in California, were discovered January 2008 in one remote reservoir in California, San Justo Reservoir near Hollister. Both quagga and zebra mussels entered the U.S. about two decades ago from Europe, probably arriving in ship ballast.

"Most boaters I meet these days recognize the quagga challenge and react positively to the need to safeguard lakes and reservoirs," reported Alan Ladwig of DWR's Public Affairs Office's Water Education and Administration Branch.

Ladwig provided handouts and information on quagga mussels at a series of special events and sports shows in early 2012.

The Los Angeles County Department of Parks and Recreation, under contract to DWR, performs boat inspections and a boater education program at Pyramid and Castaic lakes, SWP reservoirs in Southern California. State Parks has been conducting boat inspections at Lake Perris and Silverwood Lake, two other SWP lakes in Southern California, since 2009, and at San Luis Reservoir, O'Neill Forebay, and Los Banos Reservoir since October 2011. Boat inspection activities are

also conducted at Lake Del Valle in Alameda County by East Bay Regional Park District and for commercially trailered houseboats at Lake Oroville in Butte County by State Parks.

DWR staffers trained to recognize quagga mussels monitor the SWP in a year-round early detection effort. These efforts are increased in frequency during warm weather months, from April through October, when mussel spawning is most likely to occur. More than 20 locations along the SWP are monitored regularly.

DWR conducts scientific research on invasive mussels on its own and with scientists from RNT Consulting, the mussel consulting firm which DWR hired in 2010.

The Department of Fish and Game (DFG) leads and coordinates the State response to the invasive mussels challenge. Susan Ellis, a Supervising DFG Biologist, leads the State's Quagga and Zebra Mussel Interagency Team, which includes representatives from environmental and water-oriented State and federal agencies. DFG maintains an active online web page devoted to invasive species control activities. It is accessible at: www.dfg.ca.gov/invasives/quaggamussel/. 

State Parks staff conducts boat inspection for mussels at San Luis Reservoir.



Rolling Advocates By Pete Weisser

LOBO Speaks Out for Oroville Bicyclists, Advocating for Safety, Recreational Trails

For over 15 years, the Lake Oroville Bicyclists Organization (LOBO) has championed the sport of bicycling in the Oroville region. The scenic hilly topography of the Butte County region is well suited to biking, a popular recreation activity and sport in Northern California.

LOBO promotes recreational biking by sponsoring events, educating the public about biking's benefits and advocating for bike safety and access to California recreational trails.

"We represent bicyclists and give them a voice in the community," explains Lyle Wright, a long time LOBO Leader. "This includes talking to local agencies on bike safety, street and traffic issues, as well as providing the bicyclist's perspective on State recreational trails, especially those near Lake Oroville."

LOBO members are very attuned to riding Oroville trails, especially the 41-mile Brad Freeman bicycle trail, which offers a great deal of variety, river scenery and elevation change to those who ride it.

Though about 30 miles of the Freeman trail are relatively flat, it also includes some hilly terrain. Steep slopes frame both sides of the crest of Oroville Dam while other segments parallel the Feather River and circle the Thermalito Forebay, Thermalito Afterbay and the Oroville Wildlife Area.

While Wright has served a decade as LOBO president, he takes most pride in the title and duties of "trails advocate."

In his advisory activities on State trails policy in the Lake Oroville State Recreation Area, Wright said he strives to give the bicyclist's perspective that

he felt was sometimes overshadowed historically by that of equestrians. At the same time, he advocates strongly for a "good neighbor" approach by bikers and horse riders on portions of trails that are shared.

LOBO was formed in 1996, from what had been the Oroville Bicycle Advisory Board. LOBO is a private, volunteer, non-profit organization. Its funding is derived from memberships. A family membership is \$10 annually. There are currently 50 members.

"LOBO members are anybody with an interest in bicycling," said Wright. "Doctors to ditch-diggers, county workers and business owners. Members' interests seem evenly split between road and traffic issues and dirt trails for recreation."

"We are an organization dedi-

cated to promoting the benefits of bicycling in the Oroville area," says current LOBO President Lex Parker. "We are involved in bicycle advocacy at all levels in the community. We are an organized group that gets together to ride."

A new staple outing for LOBO bikers is the weekly Wednesday Night Mountain Bike Race on the 41-mile Brad Freeman trail.

LOBO's most spectacular event in terms of bicycling appeal is the "24 hours of Gold Mountain Bike Race," a marathon-type annual competition, which each Fall attracts bikers from throughout Northern California for a high-energy event.

The 2012 "24 Hours of Gold" event is scheduled for October 27-28.

"LOBO was active during our FERC Relicensing process and signed the Settlement Agreement," said Rick Ramirez, a DWR official active in the Oroville Relicensing effort.

Several officials at Oroville speak highly of LOBO's role in representing biking on Oroville trails.

"LOBO has been an effective organization in terms of advocating responsible bicycling issues on the trails in the Lake Oroville State Recreation Area," commented Eldon McBride, a State Parks Ranger who has worked with LOBO for three years. "I think they do a good job of representing their members, working with other user groups and providing input to State Parks on trails policy issues."

Chief of the License Coordination Branch Bill Cochran of DWR's Oroville Field Division commented Wright should be recognized "for his contributions to LOBO as past president, and his cooperation with DWR and other (State) property managers." ♦



People

Retirements

Harley H. Davis, Jr.

Harley Davis' more than 35-year water resources career has taken him throughout California with one stop in eastern Montana.

With his double Bachelor of Science degrees in Soil and Water Science and Renewable Natural Resources from the University of California, Davis in 1972, Harley worked as a graduate student for the State Water Resources Control Board's Clean Water Grants Program checking invoices for sewage treatment plants and reviewing clean water grant payment requests. By 1975, Harley graduated from the University of California, Berkeley with a Master of Science degree in Wildland Resource Science from the School of Forestry, specializing in soils, hydrology, and watershed management.

He became an Associate Hydrologist and Soils Specialist for Hydrocomp, Inc. in Palo Alto from 1975 to 1979. He was hired to program and test the soluble and sediment related nutrient portions of the Agricultural Runoff Management (later included in the BASINS) Model developed for U.S. Environmental Protection Agency.

Harley spent the next two years with the Bureau of Land Management in eastern Montana as a Hydrologist. He returned to California from 1981 to 1986 to work as a hydrologist for the U.S. Forest Service Supervisor's office in Porterville.

As a Hydrologist and Watershed Manager from 1986 to 1988 for the Forest Service in the small northern California community of Platina, he provided analysis and leadership on hydrology, anadromous fisheries, toxic substances, water rights, erosion control, soil nutrition, slope stability, culvert design, mining permits, and stream protection for a ranger district covering Shasta, Trinity, and Tehama counties.

"My work with the BLM and Forest Service was enjoyable," said Harley. "It was fascinating to help manage federal land and work with professionals in various disci-

plines ranging from engineers to foresters and fishery and wildlife biologists. It gave me a chance to see first-hand the hydrologic processes that I studied and modeled."

In 1988, he began at Central District his more than 12 years with DWR as an Associate Land and Water Use Analyst. He determined agricultural water demand for Bulletin 160 (State Water Plan) and directed the urban landscape water conservation program for the District.

Harley joined the California Regional Water Quality Control Board's Central Valley Sacramento office in 1989 as an Associate Land and Water Use Analyst and later worked five years as an Associate Engineering Geologist. Harley returned to DWR in 2001 as Staff Environmental Scientist for the Conjunctive Water Management currently the Integrated Regional Water Management Branch. He was a lead person providing technical expertise involving environmental and other aspects of water management projects for grants and loans funded under voter approved Propositions 13 and 50 water bonds. He managed the Local Groundwater Assistance Grant Program for over six years.

As part of the Statewide Integrated Water Management's Project Services Office since 2009, he directed the Grants Administration and Bond Accountability Unit in providing bond management coordination and systems support for Propositions 84 and 1E.

After his retirement as a Program Manager II in April, Harley's plans include spending more time with his family and church related activities in Elk Grove.



Retirements

David Anderson

Executive
Staff Counsel IV

Cynthia Beach

Engineering
Construction Management Supervisor

Debra Carlisle

Office of Water Use Efficiency
Senior Engineer

John Clements

Northern Region Office
Senior Engineer

Holly Cronin

Executive
Senior HEP** Utility Engineer

Lorry Divine

Northern Region Office
Staff Services Analyst

Farhad Farnam

Statewide Integrated Water Mgmt.
Research Program Specialist III (Econ/Ops)

Phyllis Green

Management Services
Associate Information Systems Analyst

Rosette Hall

Southern Region Office
Management Services Technician

Raymond Hoagland

Statewide Integrated Water Mgmt.
Research Manager III

William Hoffmann

Statewide Integrated Water Mgmt.
Prog. Manager I, CA Bay-Delta Auth.

Jeffrey Howard

Safety of Dams
Senior Engineering Geologist

Martha Kie

FESSRO***
Prog. Manager I, CA Bay-Delta Auth.

Wanda Knouff

Fiscal Services
Senior Accounting Officer (Supervisor)

Denise Lasater

Engineering
Assoc. Governmental Program Analyst

** Hydroelectric Power

*** FloodSAFE Environmental
Stewardship and Statewide
Resources Office

Retirements

Donald Mirgon
Oroville Field Division
Utility Craftsworker

Michael Talley
Delta Field Division
Utility Craftsworker

Raphael Torres
Executive
Deputy Director

Cecilia Vasquez
Executive
Associate HEP** Utility Engineer

Kenneth Winden
South Central Region Office
Research Analyst II (Geo-Info-Systems)

New Hires

Alvin Abaya
Technology Services
Systems Software Specialist I

James Albertoni
Operations & Maintenance
Associate Corrosion Engineer

Jacqueline Amabile
San Luis Field Division
Office Assistant (Typing)

Kim Andregg
Technology Services
Systems Software Specialist II

Rodrigo Avalos
SWP Power & Risk Office
Associate HEP** Utility Engineer

Silvia Barillas
Southern Region Office
Office Technician (Typing)

William Black III
North Central Region Office
Land & Water Use Scientist

Marshall Booth III
San Luis Field Division
HEP* Mechanic Apprentice

Joseph Bridgford
San Luis Field Division
HEP* Electrician Apprentice

Michelle Bull
Management Services
Office Technician (Typing)

* Hydroelectric
Plant

** Hydroelectric
Power

Earl Gayles

From the railroads to the pumping plants, Earl Gayles found great reward working in the electrical field for the last 35 years.

At the age of 18, Earl, who was born and raised in Chicago, worked for the Chicago Northwestern Railroad as a brakeman. While riding in the caboose of a train from Chicago to Iowa, Earl operated track switches and train brakes giving him his first taste of working in the field of electricity.

After two years of military service during the Vietnam War, Earl returned to the railroad and began a four-year apprentice program as an electrician. With Earl's retirement from the railroad after 18 years, the next chapter in his life led him to California in search of warmer weather in 1984.

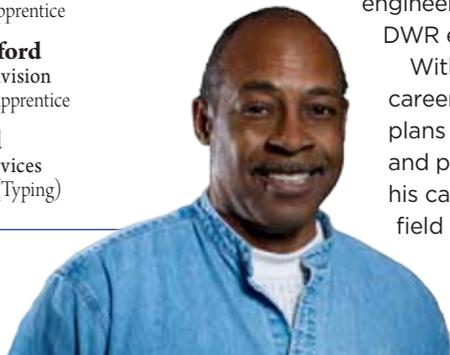
He joined Chevron as an Electrician and later became an Electrical Construction Supervisor. In 1992, Earl began working as an electrical contractor throughout California.

Two years later, Earl joined DWR as a Hydroelectric Plant Electrician for San Luis Field Division, where he worked at Gianelli Pumping Plant on the installation of the remote terminal units and evacuation alarm systems.

He moved to Bakersfield to work for San Joaquin Field Division at Edmonston Pumping Plant in 1997. Earl installed, repaired, and replaced high voltage electrical equipment, such as large generators, transformers, motors, voltage regulators, and circuit breakers.

"As one of three electricians working on the installation of four new pumps at Edmonston Pumping Plant, I enjoyed working side by side with Japanese engineers, interpreters, and DWR engineers," said Earl.

With the end of his State career in March, Earl now plans to travel overseas and possibly to extend his career in the electrical field as an electrical contractor.



Stan Ward

The year was 1986 when Stan Ward launched his DWR career at the Bottle Rock Geothermal Powerplant in Lake County. It was there, while working as a Heavy Equipment Mechanic in the world's largest producing geothermal region that fueled Stan into full mechanic mode spanning 25 years.

Stan's next stop was a four-year stint at the Sutter Maintenance Yard. He worked to ensure that flood control projects were maintained in accordance with federal regulation and the State Water Code from Knights Landing on the Sacramento River northward to Red Bluff.

For the next 20 years, he worked for Oroville Field Division from 1991 to 2011.

"It was the most interesting and rewarding job of all, having such a variety of work and something new every day," said Stan.

While working at Oroville, he chose to take on a Maintenance Mechanic position spending time up at the Beckwourth Subcenter near Portola from 2001 to 2005.

His most memorable, though very challenging, job with DWR was working on a complete rebuild of both V12 Detroit motors on the San Carlos research vessel while it was in the water at Antioch. This assignment used Stan's knowledge and skill to its utmost advantage. The vessel is used for water quality research in an interagency ecological program for the San Francisco estuary.

"Retirement plans include staying busy with my residential and commercial building repair-remodel business. I'm also looking forward to road trips to visit friends and relatives and finding that perfect lot or acreage in Idaho or Washington," said Stan.



Steve Killingsworth

Through his field explorations as a DWR Engineering Geologist for more than 20 years, Steve Killingsworth has gained a larger understanding of the geologic and tectonic history of California that is expressed on the colorful and varied landscape of our state.

"While geologically mapping the excavated Crafton Hills Dam foundation near the San Bernardino Mountains and the San Andreas fault zone, sheet by sheet a large geologic picture gradually emerged, showing a definite pattern of ages-old tectonic stressing and the intrusion of once-molten dike complexes throughout the entire rock foundation," said Steve, retired engineering geologist of the Division of Engineering's (DOE) Project Geology Section. "It was exciting and fascinating work."

Steve's geology career began after his graduation from California State University (CSU), Chico with a Bachelor of Arts degree in Geology in 1982. After serving as a Research Assistant in Paleontology at the San Diego Natural History Museum for two years, Steve returned to CSU, Chico for graduate studies, concurrently teaching Earth Science classes at Butte College in 1986. As a graduate intern, he worked on hydrology for the City of San Diego and hydrogeology for the County of San Diego in 1987. He also worked as a Geologist for an environmental engineering firm in Chico before joining DWR in 1991. He received his Master of Science degree in Hydrogeology from CSU, Chico in 1993 while employed at DWR.

Steve worked for DOE's Project Geology Section for about 19 years and for the North Central Region Office (formerly Central District) for one and-a-half years. After passing the Registered Geologist exam in 1996, Steve became an Associate Engineering Geologist. He passed the California Certified Engineering Geologist exam in 1998.

Steve's varied projects included performing extensive surface and subsurface geologic exploration for the Los Banos Grandes project, the Coastal Branch Aqueduct (geologically inspecting and logging dozens of miles of pipeline trench, including major fault crossings, and performing

geologic tunnel mapping), the East Branch Extension pipelines, and Crafton Hills Dam and Reservoir, as well as its current enlargement. He resolved a long-standing issue of a potential fault through the foundation of DWR's Frenchman Dam through field mapping, trenching, and office research.

"The Crafton Hills project was a job that nearly all geologists would consider themselves extremely fortunate to perform," said Steve. "Working in spectacular country with the San Bernardino Mountains rising abruptly along the San Andreas fault zone, which dominated the landscape, we worked day by day for months on the bare rock foundation, mapping out the rock formations and all their features, all of which played a key role in the design and construction of the dam."

Steve also authored and co-authored faulting, seismicity, and seismic-hazard evaluations for several DWR dams and the Delta levees. He also designed, proposed, and implemented a multi-year program to locate and properly destroy abandoned monitoring wells associated with original studies for the proposed Peripheral Canal.

Steve, who served on the U.S. Navy Underwater Demolition Teams in the 1970s and then in the Naval Reserve, was also part of the DWR Dive Team from 1991 to 1999. He performed working dives conducting underwater inspections, maintenance, and repairs that were critical to the State Water Project and other agencies' facilities, including the failed Spillway Gate No. 3 at Folsom Dam for the U.S. Bureau of Reclamation. Steve continues to serve as a Naval Reserve officer.

Steve, who retired in February, plans to spend more time traveling, hiking, kayaking, surfing, cycling, competitive shooting, playing tennis, and hunting. He has wasted no time, traveling to the Midwest in February, and with a hiking trip in Arches and Canyonlands National Parks in Utah planned for spring.



New Hires

Brian Bustos
Management Services
Staff Services Analyst

Rocco Campagna
Management Services
Office Assistant

Holly Canada
Bay-Delta Office
Engineer

Michael Cane
Bay-Delta Office
Environmental Scientist

Mark Casimiro
Southern Field Division
Office Technician (Typing)

Kalley Chan
Fiscal Services
Accounting Officer

Jessica Chin
Technology Services
Data Processing Manager II

Claire Chung
Operations & Maintenance
Office Technician (Typing)

Justin Cisneros
Engineering
Transportation Surveyor (Caltrans)

Robert Clarke
Flood Management
Engineer

Thomas Cobarrubia
Engineering
Construction Supervisor II

Vonda Coltrin
Fiscal Services
Accounting Officer

Angelo Commandatore
FloodSAFE Environmental
Stewardship & Statewide
Resources Office
Senior Environmental Scientist

Matthew Correa
Flood Management
Engineer

Meghan Cottrell
Engineering
Office Technician (Typing)

Harry M. Curlett Jr.
Technology Services
Systems Software Specialist II

Mark Cusick
Technology Services
Systems Software
Specialist III

New Hires

Asit Dani

Technology Services
Senior Programmer Analyst

Ruth Darling

Flood Management
Environmental Scientist

Theodore Daum

Integrated Regional Water Mgmt.
Environmental Scientist

Jared Davis

Flood Management
Maint. & Service Occupational Trainee

Karen Dove

Statewide Integrated Water Mgmt.
Environmental Scientist

Michael Eng

South Central Region Office
Senior Environmental Scientist

John Everroad

Southern Field Division
HEP* Operator Apprentice

Jennilynn Felias

Safety of Dams
Engineer

Andrew Fernandez

San Joaquin Field Division
HEP* Operator Apprentice

Paul Giordano

Oroville Field Division
Utility Craftsworker Apprentice

Frederick Gius

Flood Management
Senior Engineering Geologist

Mathew Goodman

Flood Management
Utility Craftsworker Apprentice

Kyle Goto

Flood Management
Office Technician (Typing)

Cathy Gross

Management Services
Digital Composition Specialist I

Deborah Guerrero

Management Services
Personnel Specialist

Heidi Hall

FESSRO***
Prog. Manager I, CA Bay-Delta Auth.

Gurdip S. Rehal

As the rain splashed the windows of the Cessna 172 while he waited for takeoff before the start of his retirement, the pilot, Principal Hydroelectric Power Utility Engineer Gurdip Rehal, recollected the many good memories of his 28 years as an engineer in the water resources and electric utility field.

“My many years at DWR have been very fulfilling and rewarding,” said Gurdip. “DWR is the best place to work.”

His most memorable DWR project was his involvement in the energy crisis of 2000-2001 when Governor Gray Davis declared an energy emergency on January 17, 2001. During this emergency, Gurdip worked relentlessly day and night to keep California lights on, but instead of complaining Gurdip said, “I feel very fortunate to be part of this historic event.”

After starting out with DWR in 1984 in the State Water Project (SWP) Analysis Office, Gurdip was promoted in 1999 as senior hydroelectric power utility engineer and chief of the Power Contracts Section in the SWP Analysis Office.

As chief of Power Contracts Branch in the Division of Operations and Maintenance in 2001, he was responsible for the planning, developing, negotiating, and administering of SWP’s long term power and transmission contracts.

In 2005, Gurdip became Chief of the Invoice Validation Section for the California Energy Resources Scheduling Division (CERS). As Acting Chief of CERS’ Financial Management Office in 2011, he gave state-wide direction on oversight and coordination of CERS validation of the IOU’s settlements of transactions from DWR’s long-term power contracts, financial management revenue, bond financing, billings, collections, and credit management.

Gurdip came to the United States in 1980 to finish his Masters degree in Electrical Engineering at California State University, Sacramento leaving be-

hind loved ones and careers in India and then Canada. He started out in State service as an Electrical Engineer in 1982 at the California Department of Transportation in San Francisco. He also worked at the Public Utilities Commission in San Francisco before joining DWR. According to Gurdip, accepting the position with DWR turned out to be the best decision of all.

His enthusiasm for engineering apparently rubbed off on three of his four children because two daughters are engineers and his son is a University of California, Davis (UCD) engineering student. His other daughter is completing her Dermatology Residency at UCD.

Gurdip’s retirement plans include spending more time flying as the pilot and tending to his precious vegetable plants in his UCD garden plot. He plans on developing a farm and building a house on the land that he recently purchased near Davis. He also plans to use his mountain cabin often as well and take a relaxing cruise down the Panama Canal with his wife of 33 years.



* Hydroelectric Plant

*** FloodSAFE Environmental Stewardship and Statewide Resources Office

Twenty-Five Years of Service



Gary Bardini
Executive
Deputy Director
April 2012



Michael Barrera
Southern Field Division
Assistant Chief Planner/
Scheduler
June 2012



Mike E. Bingaman
Management Services
Associate Business Management
Analyst – March 2012



Sharon L. Brown
Integrated Regional Water
Management Southern
Region Office
Water Resources Technician II
April 2012



Xavier "Tito" Cervantes
Integrated Regional Water
Management
Senior Land and Water Use
Scientist
March 2012



Teresa Kerner
Flood Management
Staff Services Analyst
June 2012



Ken Kopper
Operations and Maintenance
Electrical Mechanical Testing
Technician III
May 2012



Diane M. Lewis
FloodSAFE Environmental
Stewardship and Statewide
Resources Office
Staff Services Analyst
April 2012



Jerry L. Marcott
Management Services
Office Assistant
June 2012



Michael J. Miller
Public Affairs Office
Graphic Services Supervisor
May 2012

Forty Years of Service



**Charles
(Steve)
Dawson**
Central Valley Flood
Protection Board
Water Resources
Engineering Associate
June 2012

No Photo Available

Jose Alvarado
Engineering
Senior Engineer
June 2012

Katie Chaney
Flood Management
Associate Governmental Program Analyst
March 2012

Robert Madrid
Southern Field Division
Hydroelectric Plant Mechanic II
April 2012



Dale Moisio
Southern Field Division
Hydroelectric Plant
Mechanic II
April 2012



Robert Niblack
Integrated Regional
Water Management
Senior Engineering Geologist
March 2012

New Hires

Catherine Hallinan
Legal
Staff Counsel III

Brian Hamman
Operations & Maintenance
Office Technician (Typing)

Robin Harrington
Legal
Staff Counsel III

Justin Heeb
Environmental Services
Office Technician (Typing)

Kendall Hindman
Oroville Field Division
Office Technician (Typing)

Janet Holder
State Water Project Analysis Office
Research Analyst II

Kristin Honeycutt
North Central Region Office
Engineer

Congratulations to the following Graduates:

Professional Engineer Exam



Cale J. Nasca
Flood Management
Engineer
January 2012

Professional Geologist Exam



Steven Springhorn
Division of Integrated Regional Water
Management – North Central Region Office
Engineering Geologist
October 2011

New Hires

Mitchell A. Howard
Southern Field Division
Water Resources Technician I

Rosalina Jao
Southern Region Office
Management Services Technician

John Johannis
Flood Management
Senior Engineer

Nikki Johnson
Management Services
Staff Services Analyst

Kimberly Johnston-Dodds
Executive
C.E.A.

Bruce Jones
O&M Oroville
HEP* Operator

Frank Julio
Operations & Maintenance
Heavy Equipment Mechanic

Eric Kauffman
Technology Services
Senior Programmer Analyst

Maureen King
Legal
Staff Counsel III

Charissa Kirk
Management Services
Staff Services Analyst

Paul Larson
Flood Management
Engineer

Arne Laumbach
San Joaquin Field Division
HEP* Electrician Apprentice

Lee Lee
Management Services
Senior Personnel Specialist

Scott Ligare
Operations and Maintenance
Engineer

Carl Lischeske
Executive
Principal Engineer

Mei Lui
Bay-Delta Office
Engineer

Joseph Lupercio
Delta Field Division
HEP* Mechanic I

* Hydroelectric Plant

New Assignments

Deputy Director of SWP

Carl Torgersen, appointed Deputy Director for the State Water Project on April 6, brings more than three decades of engineering experience to the job.

"From the energy crisis to California Aqueduct repairs, such as Mile 55, all of my assignments have been full of exciting challenges," Torgersen said of his DWR career to date.

After graduating with a Mechanical Engineering degree from California State University, Sacramento, Torgersen joined DWR in 1981 as a mechanical engineer in the Division of Design and Construction (now Division of Engineering).

Torgersen was Chief of the Powerplants Section from 1992 to 1996. During his 15 years with Engineering, Carl worked on the East Branch Enlargement, Banks Pumping Plant Phase II, Coastal Branch Aqueduct phase II, Hyatt Refurbishment project, Pearblossom Pumping Plant expansion, North Bay Aqueduct, and the Suisun Marsh Salinity Control Gates.

With his move to San Luis Field Division (SLFD) as Chief of the Engineering Branch (1996-1999), Carl was responsible for the maintenance of facilities and equipment, development and administration of construction and repair contracts, and development of the field division annual budget. From 1999-2000, Torgersen was Chief of SLFD, where he was responsible for the activities of 150 employees in five branches.

Carl became Chief of the State Water Project (SWP) Operations Control Office in 2000, responsible for the planning of water and power operations, including during the energy crisis and after the September 11 tragedy.

From 2006 to 2011, Torgersen was Chief of the Division of Operations and Maintenance, where he supervised more than 1100 employees statewide in the operation of the SWP. He was also the Chair of DWR's Succession Planning Team.

As Deputy Director, Torgersen will direct the SWP Delta Compliance Program, the

SWP Power and Risk Office, Hydropower License Planning and Compliance Office, Division of Engineering, State Water Project Analysis Office, and the Division of Operations and Maintenance, including the five field divisions.

"In addition to providing support for the larger programs that we have that will be ongoing beyond my tenure," said Torgersen, "there are some specifics that I would like to see grow and they include the safety program, recruitment and retention, and the SWP's financial management. For the safety program, we are working hard to make things consistent for all DWR employees and contractors. I have been working with the Director to engage with other agencies to find solutions to the recruitment and retention of employees. As for the SWP's financial management, the SWP Analysis Office is taking the lead to reduce the workload for managing the finances of the SWP."

During his college years, Torgersen worked for the Departments of General Services and Education as a Warehouse Worker, and later as an Engineering Student for the Sacramento Municipal Utility District at Rancho Seco.

Born and raised in New York, Torgersen's desire for warmer climate brought him to California in 1976 after serving three years for the U.S. Army in Germany. Raised in a family of engineers, Torgersen's father was an engineer, his cousin was President of Virginia Tech University, and his uncle was Dean of Engineering at the University of Connecticut. Torgersen, 58, has four children and enjoys playing golf. He is a resident of Manteca.



Flood Management's New Chief

New leadership for DWR's Division of Flood Management arrived in 2012 with Keith Swanson's appointment to Chief in January. In his 28 years in the field of engineering,



Swanson has worked for State, Federal, and private agencies.

"Over the course of my career, I've gained first-hand familiarity with facilities, personnel, and agencies associated with State and local flood man-

agement systems," says Swanson. "I've also developed a good understanding of the importance of integrating water supply, environmental stewardship, and public safety needs into all actions associated with flood control project system improvement."

Before joining DWR's Division of Engineering (DOE) as a Senior Engineer in 1999, Swanson worked for the U.S. Army Corps of Engineers, Kiewit Pacific, and the California Department of Transportation. Most of the work in the initial portion of his career was associated with geotechnical engineering design and construction. A graduate of California State University, Sacramento with Bachelors and Masters of Science in Civil Engineering, Swanson is also registered as both a Professional and a Geotechnical Engineer.

While working for DOE, he performed studies for State Water Project facilities and provided support for the Sacramento-San Joaquin Basin Comprehensive Study. In 2000, Swanson joined the Division of Flood Management's Flood Maintenance Branch as a Supervising Engineer. When the Flood Maintenance Office (FMO) was created, Swanson was promoted to a Principal Engineer.

As Chief of FMO, Swanson managed DWR's flood control project maintenance activities, including 11 weirs, five gate structures, four pumping plants, 293 miles of levees, and all the channels of the

Sacramento River Flood Control Project. He enhanced the program's performance by doubling staff to 106 people and base-line General Fund budget from \$7 million to \$14 million. He was also responsible for the management, tracking, and reporting of general obligation bond funds, including administering \$200 million in Proposition 1E appropriations.

"When we finally got the bond money, we were able to do a number of sediment removal projects," says Swanson. We worked with the Division of Engineering to implement a lot of structural rehabilitation projects, including replacing two water control structures and rehabilitating three pumping plants."

During Swanson's tenure as Chief of FMO, he compiled an impressive list of achievements in support of critical FloodSAFE initiatives.

Swanson's passion for travel is also well-known within the Department. Sitting in his office, surrounded by mementos and collections from his travels abroad, Swanson reflects on what sends him to the far reaches of the world. "It's not just the sites I see that accounts for my love of travel. It's the people you can meet that send me back."

It's that connection with people that Swanson knows will help in his new assignment.

As Chief of DFM, formerly led by now Deputy Director Gary Bardini, Swanson will lead the division in preventing loss of life and property damage caused by floods, facilitating response and recovery efforts following any natural disaster, providing runoff forecasts, assuring maintenance and repair and or rehabilitation of existing flood control projects, supporting authorization and implementation of necessary projects, encouraging wise use of floodplains, providing effective warning and flood fighting systems, and delivering all FloodSAFE programs and projects.

Swanson predicts that one of the challenges that DWR has in the future is integrating the Department's different professions and divisions to deliver some important initiatives over the next several years.

New Hires

Duard MacFarland

Fiscal Services
Staff Services Manager III

Christopher Martin

Legal
Staff Counsel

Wendy Masarweh

FESSRO***
Office Technician (Typing)

Michael G. McGee Jr.

Southern Field Division
Utility Craftsworker Apprentice

Noralee McKnight

Management Services
Personnel Specialist

Kevin Miller

Oroville Field Division
Control Systems Technician I

James Mizell III

Legal
Staff Counsel

Michael Nelson

Technology Services
Associate Information Systems Analyst

Benjamin Newcomb

Flood Management
Utility Craftsworker Apprentice

Joy Nishida

Flood Management
Environmental Scientist

Ismail Oudra

South Central Region Office
Land & Water Use Scientist

Kaitlin Paige

Operations & Maintenance
Staff Services Analyst

Wyatt Pearsall

North Central Region Office
Environmental Scientist

Kenneth Pergeson

San Joaquin Field Division
Building Maintenance Worker

Chad Pfeiffer

San Joaquin Field Division
HEP* Mechanic Apprentice

Jamie Polster

Operations & Maintenance
Office Technician (Typing)

*** FloodSAFE Environmental Stewardship and Statewide Resources Office

New Hires

Steven Popish
Delta Field Division
HEP* Mechanic Apprentice

Rodney Prasad
Operations & Maintenance
Electrical Engineer

Michael Preiss
Operations & Maintenance
Mechanical Engineer

Parminderjit Randhawa
Operations & Maintenance
Electrical Engineer

Kimberly Rhodes
Flood Management
Staff Services Manager I

Alex Rios
South Central Region Office
Office Technician (Typing)

Isaias Rodriguez Jr.
Southern Field Division
HEP* Electrician Apprentice

Robert Ross
Operations & Maintenance
Assoc. Governmental Program Analyst

Jack Saare
Flood Management
Utility Craftsworker

Cory Saltsman
Integrated Regional Water Mgmt.
Environmental Scientist

Brian Scoles
San Joaquin Field Division
Utility Craftsworker Apprentice

Sheenam Sen
Management Services
Staff Services Analyst

Masoud Shafa
SWP Power & Risk Office
Senior HEP** Utility Engineer

Igor Shevchyk
Flood Management
Engineer

Lida Shoeyb Pirjaberi
South Central Region Office
Land & Water Use Scientist

Sonya Sims
Fiscal Services
Office Technician (Typing)

Preet Karan Singh
San Luis Field Division
Control Systems Technician I

* Hydroelectric Plant
** Hydroelectric Power

Public Affairs Director Appointed

Nancy Vogel, formerly with the Senate Office of Oversight and Outcomes and a *Los Angeles Times* and *Sacramento Bee* reporter, was appointed as DWR Public Affairs Director by Governor Edmund G. Brown, Jr. on April 2.

As the liaison between the Department and the public, Vogel will lead more than 40 employees in the Public Affairs Office, including writers, designers, photographers, audio-visual technicians, television specialists, and exhibit coordinators in educating the public about California water issues.

Vogel said her goal in her new role is to help all Californians see the Department not only as the caretaker of a 50-year-old engineering marvel upon which so much of the state's economy depends — but also as a can-do, far-sighted organization that is ready for drought and flood emergencies while working to be sure water will flow where needed another 50 years from now, at the least harm to the state's natural heritage.

"It's our job in the public affairs office to show all the ways DWR is working to safeguard supplies and protect people from floods despite changing climate and public values," said Vogel. "No other water supplier must keep the statewide perspective that we do."

A native of Pennsylvania, Vogel attended Carnegie Mellon University's professional writing program in Pittsburgh before completing her Bachelor of Science degree in Conservation and Resource Studies at the University of California, Berkeley in 1989. Before graduating from U.C. Berkeley with a Master's degree in Journalism in 1991, Vogel was hired as a reporter for *The Sacramento Bee*, where she worked until 2000.

"At the *Bee* at various times, I covered the police, SMUD, education, and general assignment beats, but my favorite was water," said Vogel. "I covered water for several years and I loved it."

As a reporter for the *Los Angeles Times* at the Sacramento Bureau from 2000 to 2008, Vogel covered water issues, the 2001 power crisis when DWR stepped in and purchased electricity for the statewide grid, and the Assembly.

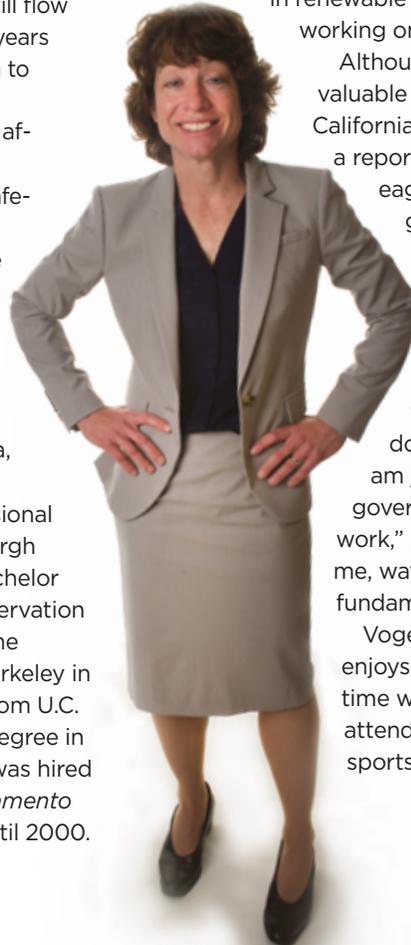
Before joining DWR Vogel was a principal consultant for the Senate Office of Oversight and Outcomes created by Senate President pro Tem Darrell Steinberg. Her assignments included gathering information about government program performance for Senate policy committees.

"For the last seven months, I worked on a report on renewable energy incentive programs," said Vogel. "We looked at whether California could create more manufacturing jobs from its investment in renewable energy. I really enjoyed working on that."

Although Vogel has gained valuable knowledge about California government working as a reporter and consultant, she is eager to learn more about government.

"A big part of why I wanted to join DWR was because I was tired of being a critic and I wanted to actually try to help get something done in government. I am just fascinated by how government works and doesn't work," said Vogel. "And to me, water issues are the most fundamental and interesting."

Vogel, 44, of Sacramento, enjoys reading and spending time with her family, especially attending her two children's sports activities.





Congratulations

... to DWR's Newest Parents:

New Hires

Michelle Stout
Executive
Office Technician (Typing)

Lynn Takata
Environmental Services
Environmental Scientist

Dominic Mario Tonel
Engineering
Engineer

Elisia Torres
Management Services
Office Technician (Typing)

Jenna Van Parys
North Central Region Office
Environmental Scientist

Vasundhara Vedantam
Flood Management
Staff Programmer Analyst

Patricia Vertrees
Fiscal Services
Accountant Trainee

Ronald Vinson
Operations & Maintenance
Engineer

Bradley Von Dessonneck
Engineering
Engineering Geologist

Jan Vossler
San Joaquin Field Division
Water Resources Technician I

William Walker III
Engineering
Office Service Supervisor I (Typing)

Jimmie Wang
Technology Services
Systems Software Specialist II

Michael Wenzinger
Southern Field Division
HEP* Operator

Michael White
Management Services
Staff Services Analyst

Monique Wilber
FESSRO***
Staff Environmental Scientist

Mark Wilder
South Central Region Office
Associate Information Systems Analyst

Leonard William
Operations and Maintenance
Heavy Equipment Mechanic

Karen Wood
Engineering
Office Technician (Typing)

Judy Zhang
Operations & Maintenance
Systems Software Specialist I

Kevin Zimmerman
Technology Services
Associate Information Systems Analyst

Promotions

Derrick Adachi
Environmental Services
Prog. Manager III, CA Bay-Delta Auth.

Marcelino Alcantar
Management Services
Associate Personnel Analyst

Shirley Alvarez
Executive
Staff Services Analyst

Stephen Ballard
Operations & Maintenance
Senior Control Engineer (Supv.)

Mike Bell
North Central Region Office
Water Resources Technician I

Peggy Bernardy
Legal
Assistant Chief Counsel

Aseem Bhatia
SWP Power & Risk Office
Senior HEP** Utility Engineer

Carol Bird
Fiscal Services
Accounting Administrator II

Jan Bowers
Statewide Integrated Water Mgmt.
Staff Services Manager I

Autumn Brown
Engineering
Executive Secretary I

De Anne Campagna
Management Services
Office Technician (Typing)

Debra Carlson
State Water Project Analysis Office
Executive Secretary I

Pamela Ceccarelli
Technology Services
Data Processing Manager II

Khalid Ameri, an Engineer with the Bay-Delta Office, has a daughter named Heela, who was born on December 22, 2011, weighing 9 pounds and measuring 21.9 inches long.

Andrew Cutlip, Engineer in Flood Management's Response and Security Section, has a son named Jackson Carter, who was born on May 30, 2012 weighing 8 pounds, 1 ounces and measuring 20.25 inches long.

Christina Jimenez, Information Officer with the Public Affairs Office, and **Timothy Jimenez**, Engineer with Safety of Dams, have a daughter named Charlotte Isabelle, who was born

February 10, 2012, weighing 7 pounds and measuring 19 inches long.

Md Haque, an Engineer in Flood Management's Reservoir Coordinated Operations Section, has a son named Sarem Rakin, who was born on April 27, 2012, weighing 4 pounds, 1 ounce and measuring 15.5 inches long.

John Paasch, a Senior Engineer in Flood Management's Regional Flood Preparedness Section, has a daughter named Ainsley Renee, who was born on May 10, 2012, weighing 8 pounds, 3 ounces and measuring 21 inches long.

Erin Chappell
North Central Region Office
Staff Environmental Scientist

Victoria Chesnut
Southern Field Division
Business Services Assistant

Mark Chin
FESSRO***
Environmental Scientist

Patricia Cornelius
Statewide Integrated Water Mgmt.
Supervisor of Technical Publications

Steve Croft
Technology Services
Data Processing Manager III

Michael Cunnagin
State Water Project Analysis Office
Staff Services Manager III

Brian Davis
San Joaquin Field Division
Senior HEP* Operator

Scott Deal
Flood Management
Senior Environmental Scientist

David Duval
Operations and Maintenance
Chief of Utility Operations

Jonathan Edney
Operations & Maintenance
Senior HEP** Utility Engineer

Rodney Essex
Technology Services
Data Processing Manager II

James Eto
Flood Management
Senior Engineer

Steven Ewert
South Central Region Office
Senior Land & Water Use Scientist

Kevin Fung
Statewide Integrated Water Mgmt.
Engineer

Brent Galyon
South Central Region Office
Land & Water Use Scientist

Alexander Garcia
Executive
Engineer

Cheryl Garrett
Management Services
Associate Governmental Program Analyst

Alejandro Guerrero
Flood Management
Utility Craftworker Apprentice

* Hydroelectric Plant

** Hydroelectric Power

*** FloodSAFE Environmental Stewardship and Statewide Resources Office

Promotions

William Hanley
Flood Management
Associate Governmental Program Analyst

Richard Harmonson
Technology Services
Systems Software Specialist III (Supv.)

Peter Hegyes
Engineering
Associate Governmental Program Analyst

Naoaki Ikemiyagi
Environmental Services
Environmental Scientist

Danielle Ingrassia
Flood Management
Environmental Scientist

Raman Isaiah
Operations & Maintenance
Electrical Engineer

Marcus Jenkins, Jr.
San Joaquin Field Division
HEP* Mechanic I

Spencer Kenner
Legal
Assistant Chief Counsel

Salma Kibrya
Statewide Integrated Water Mgmt.
Research Program Specialist II (Demo)

Gail Kuenster
Environmental Services
Environmental Prog. Mgr. I (Supv.)

Philip Lecocq
Executive
Supervising Engineer

Petra Lee
Environmental Services
Staff Environmental Scientist

Vivien Maisonneuve
FESSRO***
Staff Environmental Scientist

Candi Malone
Engineering
Staff Services Manager I

Kristen Martin
Safety of Dams
Engineer

Gerold Mateo
SWP Power & Risk Office
Senior HEP** Utility Engineer

Robert Mattos
San Luis Field Division
Water Resources Engineering Associate (Supv.)

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

Dennis McEwan
Environmental Services
Environmental Prog. Mgr. I (Supv.)

Leah McNearney
FESSRO***
Staff Environmental Scientist

Jeremiah McNeil
State Water Project Analysis Office
Supervising Engineer

Vanesa N. Morones
Operations & Maintenance
Engineer

Reza Namin
Technology Services
Systems Software Specialist III

Brian Niski
Technology Services
Data Processing Manager II

Emiliano Nunez
Technology Services
Associate Information Systems Analyst

Theresa Oakley
Management Services
Office Services Supervisor II

Joseph Ortega
Technology Services
Associate Information Systems Analyst

Jose Palomo
Operations and Maintenance
Senior HEP** Utility Engineer (Supv.)

Juan Pellicier
Technology Services
Associate Information Systems Analyst

Cameron Poya
Engineering
Senior Mechanical Engineer, HS

John Price
Operations & Maintenance
Mobile Equipment Superintendent I

Luis Ramos
Operations & Maintenance
Senior HEP** Utility Engineer (Supv.)

Joseph Reilly
Operations and Maintenance
Senior HEP** Utility Engineer

Erica Rhyne-Christensen
South Central Region Office
Environmental Scientist

Daniel Riordan
Environmental Services
Senior Environmental Scientist

Edward Roberts
Operations & Maintenance
Electrical-Mechanical Testing Technician III

Awards for the Division of Safety of Dams

Congratulations to Safety of Dams staff for awards presented March 12.

Seismic and Hydrologic Remediation of Big Tujunga Dam Team Unit Citation:

A unit citation was presented to the Division of Safety of Dams employees for their outstanding design and construction accomplishments associated with the successful completion of the seismic and hydrologic remediation of Big Tujunga Dam. As members of the team, they contributed in taking this \$100 million dam remediation project from design through construction. There were many design challenges associated with this project, which required working closely with the owner's consultants. DSOD engineers developed a 3-D finite element model to evaluate the dam and complete complex computations due to the unique spillway design. Construction issues such as equipment breakdowns, and schedule changes, required working long hours to oversee both day and night shift work. The project was awarded the 2011 National Rehabilitation Project of the Year by the Association of State Dam Safety Officials.

Meritorious Service Award:

Richard G. Draeger was awarded a Meritorious Service Award for his outstanding work as a Senior Engineer with the Division of Safety of Dams. He has performed thousands of dam maintenance and construction inspections. He was the lead engineer on two large construction projects, which include the seismic and hydrologic remediation of Big Tujunga Dam and the construction of Upper Chiquita Dam.



(Left to Right) Front: Senior Engineer Rick Draeger, Supervising Engineer Mutaz Mihyar, Safety of Dams Chief David Gutierrez, Principal Engineer Sharon Tapia, Supervising Engineer Mark Schultz, Supervising Engineering Geologist William Fraser. **Back:** Engineer Vojislav Cvijanovic, Senior Engineer Michael Sutliff, Principal Engineer Michael Waggoner, Engineer Bill Vogler, Supervising Engineer Shawn Jones, Senior Engineer Gary Gauthier, and Senior Engineering Geologist Jeff Howard.



**DWR Mechanic
Wins Award for Fall
Protection Device**



Harnessing Safety

Last December, Hydroelectric Plant Mechanic II Glenn Ward of Southern Field Division won an award for his suggestion for improving the safety of personnel when working on or around discharge valves at Pearblossom Pumping Plant.

The suggestion was to install an I-beam above all personnel spanning the hatch opening with an adjustable trolley for tying off to, in order to allow freedom of movement and to be safely tied off above each worker. The use of the I-beam was implemented in April 2009.

Many times during the removal of components associated with the discharge valves, employees working on or around the discharge valve become entangled or get into a situation that does not allow lanyards to be effective for fall protection, or conducive to removing the discharge valve in a timely efficient manner.

“The previous fall protection only worked if the employee has the proper distance above to allow the lanyard to take effect, and in most cases employees didn’t have the clearance needed,” said

Ward, who has worked for the Plant Maintenance Branch’s Mechanical Section at Pearblossom Sub-Center since 1990.

Previous Method

When the mechanics and electricians work on or around discharge valves they must use harnesses and lanyards to tie off to the valve itself to prevent falling and be in compliance with CalOSHA fall prevention regulations. The tie-off points are lifting eyes and are on the valve itself. The circular configuration of the lifting eyes leaves very few of them to be used to prevent falling. Although no serious incidents have occurred, the consequences could be quite severe for an employee.

Glenn’s New Method

The proposal to install an I-beam above all the personnel spanning the hatch opening where the valve would travel once it is being removed, with an adjustable trolley for tying off, allows freedom of movement and personnel to be safely tied off above each worker with effective use of the retractable lanyards. This allows numerous workers to be working on the discharge valve at different angles while meeting all the requirements of fall protection.

If someone fell, the extent of potential injury could be serious resulting in potential back injuries, broken bones, or death. Installation of the I-beam greatly reduces this hazard.

Information about the State’s Employee Suggestion Program can be found at <http://www.dpa.ca.gov/benefits/awards/esp/main.htm> or by contacting DWR’s Merit Award Coordinator Hoang Nguyen at nguyenh@water.ca.gov



(Left to Right)
Acting Field Division Chief John Bunce and Glenn Ward with award for his suggestion to improve safety.

Promotions

Kim Rosmaier
North Central Region Office
Senior Land & Water Use Scientist

Valerie Royo
Management Services
Assoc. Governmental Program Analyst

William Samuels
North Central Region Office
Staff Environmental Scientist

Patrick Scott
North Central Region Office
Environmental Scientist

Geoffrey Shaw
State Water Project Analysis Office
Supervising Engineer

Christopher So
Operations & Maintenance
Electrical Engineer

Johnathan Starks
Southern Field Division
HEP* Electrician I

Keith Swanson
Flood Management
C.E.A.

Karen Tolentino
FESSRO***
Engineer

Maria Vacaru
California Energy Resources Scheduling
Accounting Administrator I

Sajan Varkey
Operations & Maintenance
Senior Water & Power Dispatcher

Laura White
Environmental Services
Executive Secretary I

Daniel Wisheropp
Operations & Maintenance
Environmental Scientist

Allan Wong
Environmental Services
Supervising Chemist

Shuklan Wong
Fiscal Services
Senior Accounting Officer (Supv.)

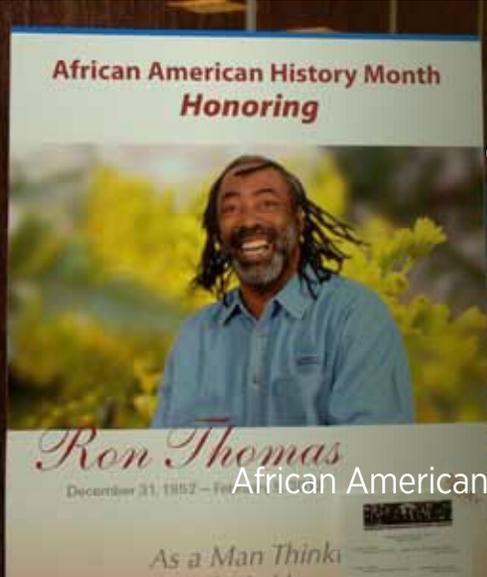
Aaron Wu
Flood Management
Engineer

Attilio Zasso
Operations and Maintenance
Principal HEP** Utility Engineer

Liheng Zhong
Bay-Delta Office
Environmental Scientist

* Hydroelectric Plant
** Hydroelectric Power

*** FloodSAFE Environmental
Stewardship and Statewide
Resources Office



“...When I Was Here”

African American History Month Event in Honor of Ronald Thomas

By Saunthy Nicolson-Singh



On February 27, 2012, DWR staff united at the Natural Resources Building Auditorium and lobby to celebrate African American History Month as a tribute to DWR employee Ronald Thomas.

Thomas, who had a strong interest in African American History Month, passed away on February 9, 2012.

Created in 12 working days, the African American History Month event came to life with speakers in the auditorium, exhibits in the lobby, and a potluck in room 133. It was a poignant and touching affair that included DWR employees' remembrances of Ron.

The program opened with everyone standing for our National Anthem, The Star Spangled Banner, recorded by Whitney Huston.

Derek Yagi showed a video montage set to the music of Dion's 1968 "Abraham, Martin and John" and Jackie DeShannon's "What the World Needs Now is Love." The video was underscored by sound bites from speeches by John F. Kennedy and Robert F. Kennedy, as well as a conversation in which an adult asks a youngster to define bigotry, segregation, and hatred. While admitting he doesn't know, the child says that prejudice is "when someone's sick." Phil Lusan provided the logistics, sound, and the coordination of the playing of the PowerPoint presentations.

Michael A. Miller of Public Affairs shared his last con-

versation with Ron, focusing on retirement. Herman Phillips gathered his gospel group, The Sons of Salvation, to sing acapella, "Show Me The Way." Lori Brown offered "Love Me Most, When I Was Here," a strong reminder to appreciate others now. Elizabeth Ware, Ron's supervisor, spoke of her appreciation for his ethics and integrity.

Maria Gomez of Contract Services had earlier revealed, "I had the honor and privilege to work very closely with Ron for the past 13 years. Every morning, Ron would play this song on his computer for all of us music lovers." So it was fitting that Dean Martin's lighthearted 1960 recording, "Ain't That a Kick in the Head" was a part of the program.

Dr. Barbara Nash offered insights on health issues.

A spunky, 92-year young Edith Roberts lightened the mood, regaling the audience with tales of marrying her husband, Colonel George "Spanky" Roberts, 10 minutes after he graduated as one of the first five Tuskegee Airmen and the obstacles they surpassed in the face of discrimination.

The Tuskegee Airmen were an elite group of World War II African-American Army Air Corps pilots and ground personnel. Management Services Technician Mikee Green with the Central Valley Flood Protection Board is the daughter of Edith Roberts and the late "Spanky" Roberts.

"My mother is part of a living history "team" that travels all over the state with old newspaper clippings

In Memoriam

(Left to Right)
Event participants included (above) Edith Roberts, Warren Spirling. (Below) Rhonda Smith, Dr. Barbara Nash, Troy Fits, Lori Brown, Dorothy Benjamin, Ron Barrow, Vicki Stringer, and Mark Meeks.



(mostly from east coast African-American newspapers) and exhibits giving presentations to schools, clubs, churches or any other group that asks them to come,” Mikey explained. “Ron was retired Air Force—it fit.”

In the lobby, Alan Ladwig and Jimmy Wynne provided oversight of the exhibits where Vicki Stringer of the Department of General Services displayed visual arts works reflecting an African influence, including masks, drawings, and sculptures. California State Parks lent its Colonel Allensworth exhibit, about the highest ranking Black officer in 1906.

Xiaojun Li of Graphic Services worked his design magic, turning out an eye-catching photo announcement of the event and Ron’s life, and a touching photomontage.

Special thanks to the African American History Month event committee, which included Debbie Jackson, Alan Ladwig, Ron Barrow, Lori Brown, Mark Meeks, Derek Yagi, Kathy Aldana, Andrea Riley, Amanda Jack, Rhonda Smith, Dena Hunter, Austine Eke, Warren Spirling, Marla Burnett, Darlene Griffin, Olivia Willis, Adrienne Nolan, Valerie Andrews, Jimmy Wynne, Terry Howell, Dennis Parker, Paul Hames, Theresa Bradford, Sheila Green, Rose Chinakwe, Herman Phillips, Mikee Green and Linda Wooldridge. DGS staff Vicki Stringer, Troy Fits, Brenda Cummings, and Phillip Dawson rallied as well, offering their support.

Ronald L. Thomas, DWR Business Service Officer I in the Division of Management Services’ Purchasing Services Office, passed away at the age of 59 on February 9.

Ron, a graduate of San Geronio High School in San Bernardino, was awarded several medals and awards before his retirement in 1994 from the Air Force. He was awarded the Air Force Commendation Medal, the Air Force Achievement Medal, the Air Force Longevity Service Award, Small Arms Expert-Rifle, National Defense Service Medal, the Air Force Good Conduct Medal, and the Air Force Outstanding Unit Award.

He started his 16 years at DWR in 1995 as an Office Assistant in the Records Management Unit, moving to the Personnel Office, and finally landing in Purchasing in Business and Office Services in 1999. Anyone who worked with the tall, dreadlocked Ron would agree he was undeniably the most affable coworker.

If there was a problem ordering items, Ron would laugh and soothingly promise, “Don’t worry, I’ll take care of it,” and true to his word, the multiple DWR Unit Citation recipient did, every time—and expeditiously.

“Ron and I hit it off the first day I started with DWR in 1999,” said Derek Yagi. “He wasn’t just a co-worker; he was like an older brother. He mentored me not only here at work but in life. We attended A’s baseball games and concerts together. He was good at telling jokes and tested to see if I could tell the joke and remember the punch line. I always failed and he laughed so hard he had tears in his eyes.”

Ron’s cubicle walls on the third floor of the Resources Building were papered with sayings like, “As a Man Thinketh, So Is He.” Jeff McCallister of Facilities remembered Ron as “a good teacher, glad to take the time to show you how to do something.”

No stranger to sports, Ron was a player on the H2O Force baseball team. He played in international military sports competitions on the Air Force basketball team before his retirement as a Staff Sergeant after logging 20 years in the military.

“But nothing captured Ron’s essence better than ‘Keep Cool,’ the 1927 poem penned by civil rights activist Marcus Garvey and recited by Troy Fits of DGS during the event on February 27,” said Dorothy Benjamin of the Public Affairs Office.

Ron is survived by his wife Jinnel, and two sons, Ronald Jr. and Brian. He also leaves behind many friends at DWR and beyond.



DWR's **Monika Burtzlander**, Public Affairs Office Assistant, passed away on March 18 in Vacaville. She was 50.

She underwent knee replacement surgery on March 13. At the time of her death, Monika was recuperating at home and by all accounts her recovery was going well. A cause of death has not been determined.

Monika was a kind and gentle person who endured much in her life. Her colleagues and coworkers will remember her as a warm, caring individual who was easily provoked to laughter. And while seemingly the quiet type, she very much enjoyed being in the company of others.

The area where she worked answering phones was regularly trafficked by public affairs' staff, but when the coast was clear, she did not miss an opportunity to seek out colleagues for conversation and advice. She was known for her ability to move rapidly down hallways, despite



being assisted by a cane, to visit the offices of her coworkers. These visits were sometimes announced, sometimes not, but always welcomed.

Her lighthearted nature and ability to easily laugh, despite having to cope with daily pain amid rare complaint, is that for which Monika will be most fondly remembered.

Monika joined the Public Affairs Office in 2003. She began her State service in 1988 with the Department of Food and Agriculture. Prior to joining DWR, Monika worked for the State Personnel Board, the California State Library and Napa State Hospital.

She is survived by her mother, Lilo of Vacaville.

Tyler Lynch, a Junior Engineering Technician with the Division of Operations and Maintenance's Southern Field Division, passed away at the age of 20 as the result of a car accident on February 27, 2012.

As part of the Water Quality Unit of

the Engineering Branch in Castaic, he monitored water quality by boat at Castaic and Pyramid lakes. Water quality samples were analyzed at Sacramento's Bryte Lab and Metropolitan Water District of Southern California. He also assisted in maintaining and operating the Immigrant Landing and Vista del Lago water treatment plants. He maintained water stations at Check 41 and Castaic Dam building.



"He was young, fun loving, and just a real good guy," said Water Resources Technician II Carlos Soria, who worked with Tyler since he joined DWR in October of 2011. "As someone who enjoyed the outdoors, he fit right in with his work."

A native of the Antelope Valley, he graduated from Paraclete High School in 2009. In addition to playing baseball, he enjoyed fishing, hunting, snowboarding, wakeboarding, and dirt bike riding.

He is survived by his eight-month-old son Brody, parents Andrew and Annette Lynch, brother Beau, sister Morgan, grandparents, Thomas and Kathleen Lynch, and significant other Casie Van Blarcom.

To donate to Tyler's son, send donations to the Brody Lynch Fund, c/o First City Credit Union, 39450 10th St. W. Palmdale, CA 93551.

Shelly Nathan Bailey, a retired Civil Engineer, passed away at the age of 84 on February 16, 2012 in a Sacramento.

Born in Los Angeles, he graduated in 1946 from Los Angeles's Thomas Jefferson High School, where he excelled at high school sports, earning awards in track and field and basketball. After working as a pear picker in Pearblossom, California, he worked 10 years for the California

Department of Justice in Sacramento as Fingerprint Technician.

Shelly later worked as a Junior Drafting Aid for the California Division of Highways (now Caltrans) in Los Angeles. To escape the Los Angeles smog, Shelly returned to Sacramento to work for Caltrans as an Engineering Aid and complete his Civil Engineering degree from Sacramento State College (now University) in 1965. He obtained his professional engineer license in 1969.

As Engineering Aid and later Engineering Associate, he worked for DWR's Concrete and Materials Testing Lab for nine years. He also worked for the divisions of Design and Construction and Operations and Maintenance. After returning to Caltrans, he managed the quality assurance program of materials and products used for highway signs, traffic safety, and on- and off-ramps.

In 1978, Shelly retired from the State to start his own engineering and construction firm with clients, such as Aerojet, Pacific Gas and Electric, the Mather Air Force Base, Sacramento Regional Transit, state and local municipalities, and residential and retail clients.

In addition to being co-founder and president of the Northern California Council of Black Professional Engineers, he was active in the Sacramento NAACP, the Northern California Chapter of the American Concrete Institute, and the Sacramento Section of the American Society of Civil Engineers. He also taught engineering labs at Sacramento State University on weekends. He was a member of the DWR Alumni Club since 1998.

He is survived by a daughter, two sons, three grandchildren and two great-grandchildren.

Ove Hansen, a retired HEP Mechanic II, passed away at the age of 81 on March 5, 2012. Ove worked for the Division of Operations and Maintenance's San Joaquin Field Division for 16 years until his retire-

ment in 1999. In 1983, Ove began as a Hydroelectric Plant Mechanic I at Edmonston Pumping Plant, where he dedicated his entire DWR career. Ove expertly operated large mechanical boring bars used to restore the large Edmonston pumps. He became a Hydroelectric Plant Mechanic II in 1989. After his retirement, he worked as a retired annuitant from 2001 to 2008.

"Ove's accumulated years of skills, knowledge, and leadership was utilized during the restoration of the large Edmonston discharge valves," said Curtis Wada of San Joaquin Field Division, who also joined DWR's Edmonston Pumping Plant in 1983. "Discharge valve restoration is very hazardous work, but was made safer with Ove's assistance."

Known for helping make the workplace safer, Ove also earned a DWR Merit Award in 1997 for making the safety chains surrounding the open pits during pump and generator repairs safer. With his concern about school children being in danger during tours of the plant, Ove created a sample handrail that was later adopted and fabricated at San Joaquin and Southern field division's plants.

A native of Denmark, Ove began his career as a machinist at the age of 14.

"Ove will be fondly remembered by



his coworkers as a highly skilled machinist, a generous, hardworking individual, and a great chef who cooked and served great meals for his coworkers, both at work

and at his home," said Curtis.

He is survived by his wife Janet "Susie," two daughters, two sons, and six grandchildren.

David Kessler, retired Senior Seismologist with the Earthquake Engineering Section of the Division of Operations and Maintenance (O&M), passed away at the age of 70 on April 6, 2012 at his home in Wilton.

A year after receiving a master's degree from the University of California, Berkeley in 1974, Dave began work as an Associate Seismologist with O&M's Earthquake Engineering Section, where he spent his entire 30 years of State service.

Dave prepared monthly reports on seismic activities and maintained a history file of epicenters and magnitudes recorded since 1968.

As Chief of the Earthquake Engineering Section in 1990, he managed the constant monitoring and reporting of seismic activities along the entire route of the State Water Project, as well as stations belonging to U.C. Berkeley, the California Institute of Technology, the U.S. Geological Survey and the University of Nevada. When earthquakes occurred, Dave and his staff reported it to the Project Operations Center and determined possible effects to the State Water Project. His work was vital to the divisions of Safety of Dams, Operations and Maintenance, and Design and Construction.

"Dave helped me a lot when I came to DWR from Conservation in 2005, and handled a lot of the more 'bureaucratic' paperwork for our section, as well as heading up an effort to digitize a large amount of film seismic records stored in our warehouse," said Senior Seismologist James Agnew, who worked with Dave when he was a Retired Annuitant. "Whenever I had a question about the history of the section, Dave usually had an answer."

Dave retired in 2004, returning as a Retired Annuitant from 2005 to 2012. He was a member of the Seismological Society of America for many years.

A huge fan of the San Francisco Giants, Dave would talk to anyone willing to talk baseball. He was a runner and competed in local marathons.



He was also part of the DWR team in 1984 that entered a race to raise funds for the Special Olympics.

"He was very friendly, and had many friends in DWR, especially among the graphics

design staff, with which Earthquake Engineering shares space on the 2nd floor," said James.

Dave is survived by a son and daughter.

Charles McCullough, who served as the first Chief of the Division of Flood Management upon its establishment in 1977, passed away at the age of 93 on May 3.

As a dedicated DWR engineer, Charlie saw the need for more State involvement in California flood management. During his 34 years of State service, he led DWR's San Francisco Bay District for the seven years of its existence. He also worked as an engineer for the California Water Commission from 1969 to 1971. As part of the Division of Planning, he was involved with the implementation of the California Water Plan.

"Charlie was an engineer with broad capabilities, working competently in many professional disciplines," said Ernie James, retired Chief of DWR's Civil Design Office. "I've known Charlie for almost 60 years, and was always impressed by the high standards of ethical judgment that Charlie brought to his work. He was a real gentleman."

He became Chief of the Division of Planning's Flood Control Office in 1976, and had an eye to the future during California's driest year on record in 1977 by justifying elevation of Flood Management to Division status, effective October of 1977. Charlie led Flood Management from 1977 to 1980 and retired as Chief of the Division of Planning's Environmental



Measurement Branch in 1982.

“Charlie was a class act,” said retired DWR Chief Deputy Director Robert Potter. “The people of California owe him a lot for his accomplishments at Water Resources. He was heavily involved in the formation of the State’s Water Project and served admirably as the first Division Chief for the Department’s Division of Flood Management. He was my boss for several years and taught me a lot.”

During the December 7, 1941 attack on Pearl Harbor, Charlie was a civilian working for a naval contractor at a fuel-depot mine on Red Hill located three miles from the harbor. With his return to the United States the next year, Charlie was commissioned as an officer, returning to an Army anti-aircraft squadron in the South Pacific. After serving in World War II, Charles completed his Civil Engineering degree at the University of California, Berkeley while working in mines. As part of family of pioneers from Nevada County, his family worked in the gold mines and ranched both in Sierra and Nevada County.

Preceded in death by his wife Betty, Charlie had three children and two grandchildren.

Robert Middleton, retired Senior Engineer, passed away at the age of 86 on January 14, 2012.

Born in Oakland, he graduated from Oakland Technical High School in June 1943. After attending a semester at the University of California, Berkeley in 1944, Bob served in the U.S. Army in the 355th Infantry Regiment in France, Luxembourg, and Germany during World War II.

A civil engineering graduate of the University of California, Berkeley in 1950, Bob began with the California Department of Public Works’ Division of Highways in San Francisco as a junior engineer. In 1952, he started his DWR career with the water quality section in Bryte as Junior Civil



Engineer. He joined the hydrology section in 1958 and the north coastal planning staff in 1961.

“I always enjoyed traveling on DWR assignments with Bob,”

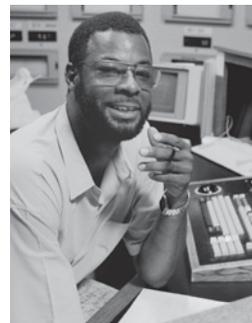
said retired Northern District Chief Wayne Gentry. “He was the kind of guy you’d like to have as a lifetime friend.”

He worked for Northern District in Red Bluff from 1966 to 1976. After becoming a Senior Engineer, he served for three years as project engineer for the Trinity-Klamath studies. He directed the Northern District Hydrologic Data Programs, then he led Sutter Yard and the associated flood control maintenance program in the Sacramento Valley. After more than 30 years of State service, he retired from the Division of Operations and Maintenance’s Water Operations Branch in 1988.

Bob is survived by his wife, Margaret, two sons, and four grandchildren.

Darryl Pegues, retired Operations and Maintenance Program Water and Power Dispatcher, passed away at the age of 59 on March 26.

During his more than 27 years with the State, he started at San Luis Field Division as a Hydroelectric Plant Operator. Then, he worked at the Project Operations Center (POC) in Sacramento until his retirement in 2008. As a power broker for DWR, he helped sell surplus electricity produced by the State Water Project’s power



plants during peak hours for premium prices to other utilities, then he also helped buy the power back off-peak at cheaper prices.

He is survived by his mother, two sisters, and two brothers.

Judi Sabella, Retired Annuitant with the Division of Flood Management, passed away on Wednesday, April 4, 2012 after a brief and courageous bout with pancreatic cancer.

Judi’s DWR career began with the Division of Engineering as an Office Assistant in 1995. Two years later, Judi promoted to Secretary in the Division of Planning and Local Assistance’s Central District, then to Executive Secretary for Randy Brown in the Environmental



Services Office (ESO) in 1998.

In 1999, Judi promoted to Staff Services Analyst in the ESO where she was the budget lead for the newly

released business enterprise program SAP. Judi was of enormous help to all ESO staff with the challenges encountered during the initial SAP roll out.

In August, 2001 she was promoted to Associate Governmental Program Analyst in ESO, where she served as the lead Budget Analyst for the Division of Environmental Services (formerly ESO) until her retirement in July of 2007. In March of 2008, Judi returned as a Retired Annuitant in Division of Flood Management.

Judi was known for her attention to detail, professionalism, and being generally, a class act. Judi was always willing to work with program staff as they developed their annual budgets and never hesitated to work extra hours to complete assignments to meet deadlines.

“She was very classy, a hard worker, and always offering to help out,” said Crisanta Gonzalez, Chief of the FloodSafe Support Unit where Judi worked as a retired annuitant. “We miss her tremendously.”

Judi is survived by her daughter, son-in-law, and two granddaughters.

In the Garden



While not everyone brings their work ideas into their homes, retired Assistant Deputy Director for Water Use Efficiency Rick Soehren has enjoyed transforming his South Land Park home into a great example of a “water efficient landscape.” The need for improving his old overgrown landscape that was hard to mow and had

runoff issues led Rick to hire a landscape specialist to help him transform his ordinary front yard into a place for him to enjoy throughout his retirement years. The water efficient plants chosen for the new landscape were a mix of California natives and other Mediterranean climate plants. With his low maintenance landscape and watering only needed every ten days after

plants became established, Rick spends more time enjoying his beautiful landscape. A devoted bird watcher, Rick, who retired in 2010 to continue his writing career, finds it relaxing to sit and enjoy watching the birds and butterflies while working on his next book or greeting his neighbors. ♦

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.



Frank Gehrke, Chief California Cooperative Snow Surveys, sampling the Phillips snow course on February 1. At the time, that measurement of 3.8 inches of snow water equivalent represented the second-lowest measurement in a record going back 64 years. There was considerable recovery later in the spring, but the year still ended well below average. The snow survey data is used to forecast stream flow, and these forecasts are used to efficiently manage California's water supplies.