

DWR NEWS | *People*

FALL 2007

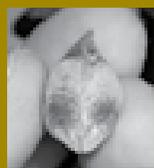


Keeping A Record of The State Water Project

(Left to Right) Bulletin 132's team with past issues of the bulletin include Lorna Wilson, Margaret Gentzel, Therese Tynan, and (sitting) Lauren Muscatine



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Every generation of DWR employees have their own set of challenges to resolve. This has certainly been the case for DWR and especially the State Water Project. The visionaries and leaders who dreamed of a water project that would transform California into one of the great economic powers of the world

needed to overcome technological challenges. They resolved this by building a water delivery system that conveys water across two thirds of the state and features the tallest dam in the nation, a pumping plant with the highest single lift in the world, and an aqueduct of unprecedented length and capacity. They also needed to overcome financial challenges. They met that challenge through a creative financial formula that included the Burns-Porter Act which allowed sales of bonds for construction. Then they entered into long-term contracts under which the agencies that receive and distribute State Water Project water pay for the energy needed to pump the water, as well as for the operation and maintenance of the Project. These were among the challenges of their day.

However, they could not have predicted all of the challenges that would face a generation 50 years later. Major changes have occurred in California during the last 50 years, and today there are an unprecedented number of challenges as a result of those changes. Environmental protection, increased water demand, decreasing supplies due to changes in use and climate change, droughts and floods, aging infrastructure and maintaining a trained workforce are a few of the challenges we face today.

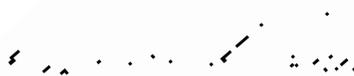
These challenges provide us with a unique opportunity to develop solutions that will sustain us for the foreseeable future. We need to develop solutions that will insure the continued economic growth of California. Tantamount to this solution is having a State Water Project that is reliable, sustainable, and environmentally responsible. We must work toward a new balance between beneficial uses and the future available water supply. We must use water supply wisely and build the type of facilities that

allow us to intelligently manage our limited water resources. We need to have an energy portfolio that is clean, reliable, and sustainable. And finally, and potentially most important, water must remain affordable to all Californians.

Maintaining a well-trained workforce is the most essential element for DWR to accomplish its mission and insure State Water Project reliability. This is our greatest challenge. Our present workforce has an unprecedented number of people who will be retiring in the next five to ten years. Our ability to recruit and retain people with the skill sets needed has been successful in some areas; however, challenges remain in several other areas. We need to quickly change the workforce course on which we are headed.

You are all diligently working on the solutions to these challenges. DWR employees involved with the SWP are developing a new energy portfolio. Additional facilities are being planned, designed and constructed. Future operational strategies are being analyzed along with upgrades of the control and communications systems. Major replacement and refurbishment of major facilities is currently taking place. Condition assessments of existing facilities are being conducted. Reviews of our financial elements are being looked at. DWR employees are also evaluating and repairing California's flood protection system. New storage facilities and Delta management strategies are being evaluated as part of the comprehensive water plan. Assessments of California's future water needs, including impacts due to climate change, are being conducted. DWR and SWP organizations are being changed to better meet these challenges.

This is indeed an exciting time at DWR and for the SWP. The people at DWR have always been able to meet the challenges that have come their way. This is the main reason I have enjoyed my 30 years with DWR. The future generations will no doubt have challenges of their own that are unforeseen to us now. But I have the utmost confidence that the challenges will be met.



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Keeping a Record of the **STATE WATER PROJECT**

By Margarita Macias

For several generations, employees of DWR, other government agencies, and State Water Project Contractors have relied on information gathered into Bulletin 132, *Management of the California State Water Project*. This annual publication discusses significant events and issues that affect State Water Project (SWP) management and operations. After the State Water Project's first deliveries of a total of 8,906 acre-feet of water in 1962, the collection and storage of this and other information became a vital, annual function within DWR.

When DWR Director **William E. Warne** created Bulletin 132 in 1963, the initial SWP facilities were still under construction. The first bulletin of the series consisted of 13 chapters with 280 pages. Bulletin 132-77 published in November 1977 had just two chapters. Today, Bulletin 132-05 consists of 15 chapters with more than 360 pages.

"Although this bulletin is not legislatively mandated, the Department has continued this traditional reporting for 44 years," said **Lauren Muscatine**, who has been Supervisor of Technical Publications since 2006.

Since Bulletin 132 was created in 1963, DWR has published 43 editions. It is highly regarded as a reference document, valued for its historical record of SWP facts. Subject areas of interest to readers include SWP financial analysis, water delivery, and facilities information

The bulletin's organization, content, and focus of discussion have changed since it was first released. In earlier years, much of the reporting was focused on actual construction, project costs, and financing of the SWP.

"After the project's initial facilities were completed in 1973, the content slowly began to include information on departmental programs supporting SWP operations," said Lauren. "Over the years, the number and content of the chapters and appendices has changed."

More than 300 copies of Bulletin 132 are distributed to the California Legislature, State Water Contractors, water project power users, state libraries, and others. Since 2003, 200 CDs also have been produced each year. Bulletin 132 can be accessed on the Web, where each edition since 1995 is available in PDF format at www.swpao.water.ca.gov/publications/index.cfm



“For me, the immediate reward of seeing the bulletin in its final form, printed and bound, with the color cover is quite satisfying.”

LAUREN MUSCATINE

Gathering the Information

The Bulletin 132 team includes Lauren and her staff of three Research Writers – **Therese Tynan**, **Margaret Gentzel**, and **Lorna Wilson**. Together they compile, edit, and coordinate the review of all information in the Bulletin. As a team, they work together with more than 100 employees throughout the Department to produce each yearly edition.

“It can be challenging to produce this bulletin because of the many voices contributing to it,” said Lauren. “It has quite an extensive review process, which includes contributors and reviewers at all management levels, including Executive.”

Contributors and reviewers come from 10 divisions in DWR. However, at least one-third of the information comes from the State Water Project Analysis Office (SWPAO).

“We couldn’t publish it without everyone’s efforts,” said Lauren.

The Bulletin 132 team may come from diverse backgrounds, but they share the same interest of creating an accurate and readable bulletin. As the chapters are divided, usually five chapters per employee, each writer’s background is one of the many factors considered.

Managing the Publication

As the Supervisor of Technical Publications, Lauren’s assignment includes drafting all formal correspondence, overseeing the review process, updating chapter templates, and reviewing the entire bulletin. This year, she also will publish Appendix B for 2007-08 with input from SWPAO’s Project Cost Branch. Appendix B is an annual publication that includes rationale, data, computations, and projections used to determine annual water charges for the State Water Contractors. Appendix B is included in Bulletin 132, but first published under separate cover for the State Water Contractors.

Lauren, who joined DWR’s Environmental Services Office in 1995 as an Environmental Scientist, has worked on long-standing fishery issues of the Sacramento-San Joaquin Delta.





In 2006, Therese Tynan received a Meritorious Service Award for her dedicated and professional service in SWPAO from SWPAO Chief Rob Cooke (right).

In that position, she co-authored a technical report titled *Delta Agricultural Diversion Evaluation Summary Report, 1993-1995*, which evaluated the effectiveness of screening agricultural intake pipes to protect fish. Lauren chose to bring her science background to editing and publishing in 1997, when she joined SWPAO as a Research Writer for Bulletin 132.

Lauren returned to the Division of Environmental Services in 1998 to hone her expertise in scientific editing and publishing. She was responsible for editing and publishing division technical reports, and was managing editor of the quarterly *Interagency Ecological Program Newsletter* until 2002. From DWR, she joined the California Bay-Delta Authority for four years as Associate Editor of Publications, where she co-created a peer-reviewed, Web-based journal titled *San Francisco Estuary and Watershed Science*. She returned to DWR and the State Water Project Analysis Office as Supervisor of Technical Publications in 2006.

"For me, the immediate reward of seeing the bulletin in its final form, printed and bound, with the color cover is quite satisfying," said Lauren. "My long-term reward is receiving requests for copies where the information sought is only found in this bulletin."

Bringing a Historical Perspective

In addition to being part of the Bulletin 132 team for the longest time, Research Writer Therese has more than 20 years of writing experience. After working as an Editorial Technician and Research Writer for the Division of Planning and Local Assistance's Reports Administration, she joined the State Water Project Analysis Office in October of 1998.

During her assignment with the Division of Planning, Therese edited division reports and newsletter articles, as well as Bulletin 160-98, *California Water Plan Update* and the *Flood Emergency Action Team Report*. In recognition of her efforts in editing Bulletin 160-98, Therese received a Meritorious Service Award in 1999.

Since joining the Bulletin 132 Section, Therese has worked on eight bulletins, edited several editions of Appendix E (a yearly report of water operations and water quality in the Sacramento-San Joaquin Delta), created and maintained the unit's Process Manual, and, for the past eight years, prepared Appendix B. Therese recently participated as a subject matter expert on the panel for DWR's Research Writer exam.

Therese is currently working on chapters covering Local Assistance, Water Supply Development and Reliability, Water Contracts and Deliveries, Facilities Maintenance, Recreation, and State Water Project Education and Information.

"Getting accurate information on time has always been very important to us," said Therese. "This bulletin is an annual snapshot of the State Water Project – to meet our deadlines, it is crucial for us to get the information when it is requested."

Before joining DWR in 1996, Therese worked for the Air Force at McClellan Air Force Base, where she worked on story boards, edited newsletter articles, and wrote and edited responses to Air Force program technical documents. She also worked for Sacramento State University in the Regional Continuing Education Offices' Travel Program, where she proofed articles and press releases, wrote course proposals, itineraries, and evaluations for extended education travel programs.

Considering the Wider Audience

In her first State job, Margaret feels rewarded to be part of the Bulletin 132 team. She began working for SWPAO in August of 2006, which has provided her with a broader understanding of the State Water Project.

“As a new hire to DWR and the State, it’s very interesting to learn about the great variety of subjects from legislation and the Delta to water supply and the environment,” said Margaret.

When Margaret is not working on the unit’s Style Guide or Web site, her focus is on the chapters on Delta Resources, Environmental Programs, Legislation and Litigation, Water Supply, and Engineering and Right of Way. She initiated project management of formatting *Bulletin 1* (“Water Resources of California” published in 1951 by the State Water Resources Board) for the Web for the Division of Planning and Local Assistance. In addition, Margaret’s legal and legislative background aids her in creating consolidated water supply contracts for SWPAO and the State Water Contractors.

“It has been rewarding to establish contacts with contributors throughout DWR and learn what various divisions are doing,” said Margaret.

Margaret’s career before DWR includes working as a Communications Manager for the Dairy Council of California, where she wrote abstracts and conducted media work on agriculture, health and land issues. She came to the Dairy Council from Sutter Health, where she served as Communications Coordinator, and wrote and edited press releases on health issues. Margaret worked for the *Capitol Weekly* as a writer and editor for more than four years, where she wrote articles about the budget, legislation, government officials, and State programs. Margaret came to *Capitol Weekly* from the political environment of Californians for Inclusive Schools (CIS), where she served for six years as the Legislative Liaison. Margaret’s duties at CIS included advocating

Bulletin 132 is distributed to a wide audience – water management companies, and financial, legal and policy firms throughout California and the U.S. receive copies, as well as libraries and individuals hailing from Canada, Germany, and China.



“As a new hire to DWR and the State, it’s very interesting to learn about the great variety of subjects from legislation and the Delta to water supply and the environment.”

MARGARET GENTZEL

for children’s rights at the State Capitol, organizing statewide grass-roots campaigns, and creating print and Web publications including brochures, legislative analyses, policy committee testimony, talking points, and newsletters.

Margaret has received various community awards for her professional endeavors, including the Cappie Silver Award, Diane J. Lipton Advocacy Award, and Californians for Inclusive Schools award for meritorious service.

“To annually publish timely, accurate, and useful information about management of the State Water Project to meet the needs of the Department, the State Water Project Contractors, and the State’s people.” – BULLETIN 132 MISSION STATEMENT

Maintaining Statewide Publishing Practices

Newest to DWR’s Bulletin 132 team, Lorna joined the unit in November of 2006. She is happy to be back in a position that allows her to write and edit.

“I’ve really enjoyed learning more about the State Water Project and about the complexities of water management in California, in general,” said Lorna.

As part of the team, Lorna’s chapters include The State Water Project, Water Quality Programs, Power Resources, and Financial Analysis. She is now lead editor for Appendix E, and is working with the Division of Operations and Maintenance and the Division of Planning and Local Assistance to produce the next edition.

Before joining DWR, Lorna worked for the Legislative Counsel Bureau as an Exam Analyst. Lorna started her State career in 1986 as a Legislative Clerk for the Legislative Counsel Bureau, where she proofread bills, amendments, and legal opinions. In 1997, she joined the Office of State Publishing (OSP) as a Proofreader. During her time with OSP, Lorna served as coordinator and lead proofreader and editor for the Sesquicentennial edition of the *California Blue Book*, for which she earned a written commendation from the Senate. She also proofread a variety of other documents, including ballot pamphlets, the State Budget, Web pages for Governor Gray Davis and First Lady Sharon Davis, and parts of the California State Web site.

In her free time Lorna volunteers extensively, writing and editing publications for her children’s schools and other local organizations.

Future Goals

“Our goal is to catch up the bulletin’s annual publication cycle by 2008,” said Lauren. “The bulletin last published was Bulletin 132-05, which contains information for calendar year 2004. In 2007, we will initiate two publication cycles to help meet this goal.”

The team of four has planned for their long-term goals, but they always look forward to their yearly goal – the



“I’ve really enjoyed learning more about the State Water Project and about the complexities of water management in California, in general.”

LORNA WILSON

published Bulletin 132. They traditionally celebrate this accomplishment with an office party, proudly handing out new editions with gourmet cookies.

“Our team of four really enjoys working together and has been effective in accomplishing long-standing and new goals,” said Lauren. “As a result, we have created and adopted our own mission statement – “To annually publish timely, accurate, and useful information about management of the State Water Project to meet the needs of the Department, the State Water Project Contractors, and the State’s people.” ■



California's Roadmap for

MANAGING WATER RESOURCES

By Valerie Holcomb

Every five years, the Department of Water Resources produces an updated California Water Plan, a framework for water managers, legislators and the public to make decisions on California's water resources. Work on the next Water Plan Update, due in 2009, began as soon as Update 2005 went to the printers.

"Update 2005 represents a fundamental transition in how we look at water resource management in California; and a fundamental transition in the way State government needs to be involved with local entities and interest groups to deal with water issues in the state," said **Director Lester Snow**. And for the first time, in a long time, DWR has embarked on organizational and business process changes consistent with the key initiatives of the California Water Plan to promote integrated regional water management, and to improve and integrate statewide water management systems.



The first California Water Plan was published in 1957, as *Bulletin 3*. It outlined a master plan of water resource development to meet the state's water needs, without consideration of time or economics. The *Bulletin 160* series, updates to the 1957 plan, adhered to the concept of a general master plan to be completed some time in the distant future when the land and other resources of California reached a state of complete development.

That is, until the team working on the 2003 water plan update took a step back and reconsidered the whole planning process. Working with a committee of 65 public advisors, they concluded that a more useful approach was to look at the update as a strategic plan, with goals, recommendations for actions, and measures of success. In this new approach, planners would examine multiple possible scenarios for the future, rather than a single "likely" future.

With the support of the Legislature and stakeholders, this dramatic shift in approach meant that the 2003 update

California, which has 36 million people, is a state with a great diversity of water needs.



During the Regional Public Workshop on August 23 in Red Bluff, Kamyar Guivetchi, DWR's Program Manager for the 2005 and 2009 Water Plan Updates, spoke about the California Water Plan Update 2009 and where we have been and where we are going.

took an additional two years to produce. Update 2005 is a "framework for action." It describes short- and long-term actions that can be implemented at the state and regional level, and identifies a portfolio of 25 resource management strategies to sustain California's communities, economy and environment.

"We now look at the Water Plan Update as an ongoing strategic planning process," said **Kamyar Guivetchi**, Program Manager for the 2005 and 2009 updates. "Each report is a 'snapshot in time.' We know we can't capture everything in each five-year plan. We need a long-term view for better data collection and to develop better tools." The long-term view is also efficient – Update 2009 continues and expands the work in the previous update. The Update 2005 process concluded with a list of 50 "parking lot" topics to be dealt with in Update 2009.

More than 150 DWR staff members worked on Update 2005, from Planning and Local Assistance including the four District Offices, Water Use Efficiency and Transfers, Flood Management, Public Affairs, Information Technology, Publications, and Administration. About 2000 people from

more than 200 agencies and organizations participated or provided support, and sponsored public workshops. More than 100 DWR team members, and staff from other State agencies, are working on Update 2009, along with Kamyar, who will continue as program manager.

What's New in 2009?

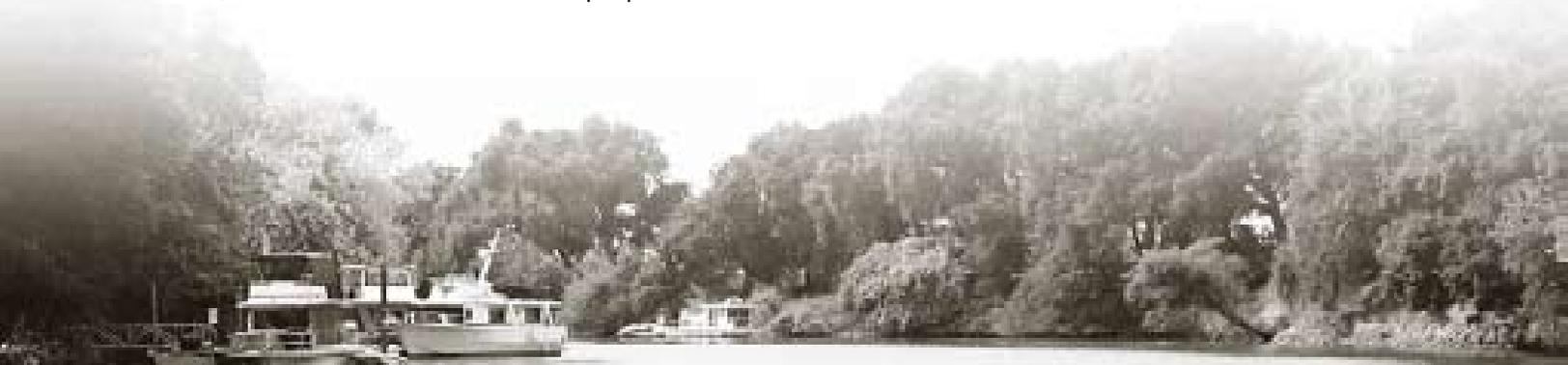
Outreach

Increased outreach, particularly at the regional level, could be the theme of Update 2009. Public outreach is both expanded and refined from previous years, with multiple opportunities for participation.

"The Water Plan is California's roadmap for managing the state's water resources. A viable plan depends on the collaboration of a wide array of stakeholders, particularly when we are facing a growing population and impacts from a changing climate," said DWR Director Lester Snow.

The first step in reaching a broader range of stakeholders was to set up a multi-State agency Water Plan steering committee. In the past, DWR was the only state agency directly involved in the development of the water plan updates. **Mark Cowin**, DWR Deputy Director for Regional Water Planning and Management, chairs the 18-agency Update 2009 Steering Committee. The Steering Committee will coordinate with federal agencies, consult with Tribal governments, and engage statewide and local agencies and organizations, technical experts and the public.

"Update 2009 will be a people-focused process," said Kamyar. "We held many public workshops to support Update 2005, but in 2009 this will be an even bigger piece."



The Delta, known as the hub of California's water management and aquatic ecosystems, faces multiple challenges, such as flood and levee risks, climate change, and water supply reliability.

The 38-member Advisory Committee, representing 38 statewide organizations from a broad spectrum of interests, will provide input on statewide policy issues and initiatives. Several Advisory Committee members are former DWR employees who worked from the inside on previous updates, including **Jonas Minton, Steve Macaulay and Susan Tatayon**. The committee will meet quarterly.

Regional workshops and forums will focus on regional water issues and management strategies with an emphasis on integrated regional water management and planning. Information from these workshops will be used to describe critical issues, needs and the effectiveness of regional planning efforts. In the past, DWR developed the regional reports, which are a legislative requirement for the Update. Kamyar would like to see the regions take a bigger role in developing the 12 regional reports for Update 2009. Ideally, the regional reports will reflect the Integrated Regional Water Management Plans (IRWMP). Funding for many of the IRWMPs comes from Proposition 50, Proposition 84 and Proposition 1E.

Several workshops and a multi-region forum will be held each year, covering every hydrologic region in the state, as

well as the mountain counties and the Delta. Nine workshops were held in Summer 2007. Regional conditions, needs and issues were shared with DWR staff. Local and regional organizations sponsored the workshops. Workshops in 2008 will get into the meat of developing the regional reports. In 2009, regional stakeholders will review and comment on the draft Water Plan, which will include the regional reports.

Through the Extended Review Forum, people can follow the Water Plan process without direct involvement in work activities. Members will receive regular information updates and public meeting notices.

The Statewide Water Analysis Network (SWAN), a voluntary network of scientists and engineers from the public, private and non-governmental sectors, will hold public workshops on technical topics. SWAN is a collaboration between DWR and interested stakeholders to improve analytical tools and share data that support water management decisions and investments.

Each year, everyone – the Steering Committee, Advisory Committee, delegates from all regions, SWAN members, representatives from tribal communities, and Advisory Committee alumni – will be invited to a Plenary meeting to promote communication and cooperation.



DWR employees assisted during the Red Bluff Regional Workshop in August. Nine workshops were held throughout California in 2007. For upcoming workshops, visit the Water Plan Web site at <http://www.waterplan.water.ca.gov/>



The California Water Plan 2009 is a roadmap for meeting the state's water demands through the year 2050.

Content

"The challenge to water managers today is understanding increasing risk and uncertainty and integrating tools to estimate and manage risk into our planning," Director Snow stated at the first Update 2009 Advisory Committee meeting in June 2007. "Environmental concerns and climate change are two major issues impacting water use today." Climate change, integrated flood management and water quality are major new and expanded components in Update 2009.

Update 2005 examined three baseline scenarios for a 2030 planning horizon: current trends, less resource intensive, and more resource intensive. Staff plans to expand the scenario approach, incorporate climate change, and develop regional scenarios for Update 2009. Even if assumptions are basically the same, scenarios will play out differently in each region. The Water Plan's Climate Change Technical Advisory Group will coordinate with the Governor's Climate Action Team on scenario development.

A major question to be examined is water operations: given the water supply, distribution, and flood management facilities we have and anticipated changes, such as earlier snowmelt and more flood fluctuations, can we change operations and management of the state's existing facilities to help meet the state's water, flood management and ecosystem needs?

What it Means to DWR

Update 2005 was not only a fundamental transition in how we look at water resource management. The focus on integrated regional water management as a key initiative for meeting California's water needs in the future laid the groundwork for an ongoing reorganization in DWR. In May, Director Snow announced a new organization structure and appointed Mark Cowin the Deputy Director for Regional Water Planning and Management. The major focus of this area is integrated regional water management planning, climate change, and the California Water Plan.

"Prior to Update 2005, California Water Plan updates had little or no effect on activities and resource allocation in DWR or other State agencies," said Kamyar. "But the concept of integrated water management and the three foundational actions to use water efficiently, protect water quality and support environmental stewardship are having a ripple effect on how DWR does and will do business. Grants and loans are fashioned around integrated regional water management planning, and integrated resource planning is behind DWR's recent efforts to reorganize and change business practices, like using more interdisciplinary matrix teams."

Kamyar thinks this approach will have a positive affect on the state agencies participating in Update 2009. The inter-agency collaboration will make Update 2009 a more comprehensive water plan for California. He hopes that inter-agency communication at the Steering Committee level will filter down to regional offices as well. "It is the state's plan for water, not DWR's," he said. ■

SUMMARY OF CALIFORNIA WATER PLAN UPDATES

The California Water Plan is to be updated every five years, usually in years ending in “3” and “8.” Update 2009 may seem to be early, coming only four years after the last update. But with the approval of the Legislature, Update 2005 was delayed in order to revamp the approach. By accelerating the schedule for Update 2009, DWR plans to be caught up with the next water plan update.

Published in 1957, Bulletin 3 was the first “official” California Water Plan. At least three major California water plans preceded Bulletin No. 3 in 1957, however. The 1874 “The Report of the Commissioners on the Irrigation of the San Joaquin, Tulare, and Sacramento Valleys, in the State of California,” was a how-to guide to develop the Central Valley for irrigation.

In 1919, **Robert Bradford Marshall**, a U.S. Geological Survey employee, developed a plan for diverting water from northern rivers to the south and the San Francisco area. Marshall’s report was the basis of “State Water Plan 1930,” published as Bulletin No. 25 of the Division of Water Resources of the California Department of Public Works. Bulletin 25 is the direct precursor of the Central Valley Project and the 1957 California Water Plan.

BULLETIN 160-66, Implementation of the California Water Plan – Proposed implementation of specific parts of the Water Plan. Water policy concerns included flood and flood control, power, water-related recreation, water quality, relationship of fish and wildlife to water development.

BULLETIN 160-70, Water for California: The California Water Plan, Outlook in 1970 – With population growth slowing from the 1950s, estimates for population and irrigated agriculture growth were reduced. Slower growth, with authorized or planned water development provides breathing space “to consider alternative sources of water supply and develop policies for maximum protection of environment.”

BULLETIN 160-74, The California Water Plan Outlook 1974 – The report concludes that water supplies will be adequate with the completion of Auburn, New Melones and Warm Springs Reservoirs and Peripheral Canal by 1980. The report is less conclusive about future water needs because of new wild and scenic river regulations. Key water policy issues: cooling water for energy production,

water deficiencies, water exchanges, public interest in agricultural drainage, water use efficiency, water transfers and water reclamation.

BULLETIN 160-83, The California Water Plan: Projected Use and Available Water Supplies to 2010 – More of a technical report than previous updates, this update applies agricultural models for the first time to assess the general effects of water and energy costs. The report quantified water conservation measures and the potential for water reclamation to reduce needs.

BULLETIN 160-87, California Water, Looking to the Future – A broad view of water issues and events, with a discussion of leading water management concerns, including water quality and the Delta. The report concludes that in three out of four years, California’s natural water resources, including rights to Colorado River, were sufficient to meet all water needs for foreseeable future.

BULLETIN 160-93, The California Water Plan Update – The first update to use an advisory committee discusses how population growth, land use and water allocations for the environment were affecting water resource management. Also new: estimated environmental water needs are estimated separately; water demand management methods are posed as an additional means of meeting needs; and water balance scenarios for average and drought conditions are presented.

BULLETIN 160-98, The California Water Plan Update – Water management options that could improve California’s water supply reliability are evaluated. Local agency plans form building blocks for each of State’s ten hydrologic regions. Potential local options are integrated with statewide actions to create statewide evaluation. The report estimated a 1.6 million acre-foot water shortage in average years and a 5.1 maf shortage in drought years at the 1995 level of development. This estimate forms policy debates in Legislature.

BULLETIN 160-05, California Water Plan Update 2005: A Framework for Action – Formulated as a strategic plan, takes an integrated regional water management approach to water planning. Update 2005 recommends two key initiatives and 25 resource management strategies. It posed alternative California water “futures” and challenges requiring further investigation, laying the groundwork for future updates. ■



SWP MARKS 40TH ANNIVERSARY

of Completion of Two Key Facilities – Sisk and Oroville Dams

By Pete Weisser

California's State Water Project during 2007 recorded the 40th anniversary of two key elements – completion in 1967 of B. F. Sisk Dam at San Luis Reservoir and the mighty Oroville Dam.

"Forty years after their completion, Oroville and Sisk dams are vital links in, respectively, California's State Water Project (SWP) and the federal Central Valley Project (CVP), helping fuel California's economy, ecosystems and quality of life," said **William Gianelli**, DWR Director when the two dams were completed. Gianelli served as DWR Director from 1967-1973 under Governor Ronald Reagan.

"Oroville Dam is the key Northern California water storage and power-generating facility for the SWP," noted Gianelli. "Sisk Dam makes possible great flexibility and high efficiency in both the State and federal water systems. Their special roles and distinctive engineering features have benefited countless Californians."

"The DWR professionals who planned and built these dams a generation ago are justifiably proud of them. So, too, should be today's DWR employees who operate them and keep them humming," said Gianelli. "The entire SWP is a

dynamic legacy for California and a symbol of excellent water management for us to emulate in the future."

B.F. Sisk Dam

Construction of Sisk Dam, creating San Luis Reservoir, began in 1963. Water first was pumped into San Luis Reservoir in April 1967. The reservoir initially was filled two years later. Named for Congressman **B.F. Sisk**, D-Fresno, a strong advocate of California water development programs, the dam is 18,600 feet long and 385 feet high.

San Luis Reservoir ranks as the largest off stream storage reservoir in the United States, with a storage capacity just over two million acre-feet. San Luis is a special joint-use complex serving both California's SWP and the federal CVP.

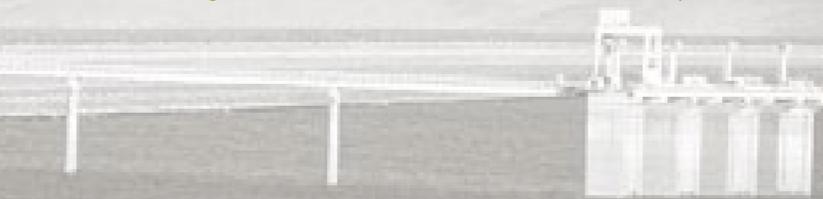
Left Photo: Governor Ronald Reagan presided over the official dedication of Oroville Dam in 1968. Reagan, who later became the 40th President, gave credit for the SWP's development and construction of Oroville Dam to his predecessor Governor "Pat" Brown.

Right Photo: During the San Luis dedication, Congressman B.F. Sisk (standing next to flag) was a key participant.



Left Photo: President John F. Kennedy (left) came to the San Luis site in August of 1962 to join California Governor Edmund G. "Pat" Brown in the official groundbreaking ceremony. Photo and closed loop film footage on view at the Romero Overlook Visitors Center, located at San Luis Reservoir, document this memorable moment.

Bottom Photo: During Oroville Dam's construction, the first concrete was placed in 1963



The State and federal projects operate separate pumping plants in the South Delta. For the most part, the two parallel systems move their water supplies separately, the SWP using the California Aqueduct while the CVP moves water through the Delta Mendota Canal. However, they jointly use the San Luis Joint Complex for storage and transportation. Costs are shared: 55 percent State and 45 percent federal.

Oroville Dam

Built on the Feather River in scenic Butte County, Oroville Dam created Lake Oroville, second largest reservoir in California. Lake Oroville is the SWP's major storage reservoir, with a capacity of 3.5 million acre-feet and a surface area of 15,000 acres.

The tallest dam in the United States at a height of 770 feet, Oroville Dam ranks as one of the 20 largest in the world. The dam crest is 6,920 feet long, more than one mile in length. The dam crest offers visitors a sweeping view of the upper Sacramento Valley, including the Sutter Buttes, known as the world's smallest mountain range.

Lake Oroville provides water for SWP deliveries from Butte County and the Bay Area to service areas as far south as San Diego, but also for flows for water quality needs in the Sacramento-San Joaquin Delta and to benefit fish in the Feather River and Delta. Lake Oroville is a year-round recreational attraction with a full menu of boating, camping, swimming, hiking and biking.

Dam construction began in 1961, after relocation work was completed on the Western Pacific Railroad and what is now State Highway 70. The dam embankment, containing 80 million cubic yards of material, was topped out in 1967.

One of the largest construction projects in Northern California history, dam construction included many innovations in moving fill material by belt and railcar. Construction was viewed from two hillside overlooks. The last construction overlook was replaced in 1974 by the Lake Oroville Visitors Center on Kelly Ridge, which continues to serve Lake Oroville visitors today.

A key function of Oroville Dam is flood control. The huge earthen dam protects the immediate Feather River region and the City of Oroville, and downstream communities including Yuba City, Marysville and Sacramento. Lake Oroville includes 750,000 acre-feet of flood control storage.

Three years prior to its completion, the dam was credited with saving Oroville and many other downstream areas from flooding during the Christmas floods of December, 1964.

Oroville Dam played a valuable role in preventing flood damage during subsequent flood years, as well, including 1969, 1983, 1986, 1995, 1997, 2005 and 2006.

In February 1986, when Northern California received the equivalent of half a year's precipitation in 10 days, Oroville Dam for the first time achieved a record release rate of 150,000 cubic feet per second (cfs), while taking inflows peaking at 266,000 cfs. During the New Year's Flood of 1997, flows into Oroville Dam peaked at 302,000 cfs on January 1, while releases hit a record 160,000 cfs.

Located in bedrock below the dam, the Edward Hyatt Powerplant is a hydroelectric pumping-generating facility that provides a substantial portion of the electrical energy needed to move SWP water to the agencies with long-term contracts to receive SWP water.

Oroville Dam has been cited for engineering excellence by the American Society of Civil Engineers. In 2006, Oroville Dam was honored as the tallest dam in the United States by issuance of a U.S. stamp in the "Wonders of America" collection. ■





Trials Begin on Stockton Deep Water Ship Channel Aeration

DEMONSTRATION PROJECT

By Don Strickland

If someone collapsed from lack of oxygen, you'd probably apply emergency techniques that include mouth-to-mouth resuscitation. But, how would you breathe new life into a seven-mile long oxygen-deficient section of a major California river – an "impaired zone" that can inhibit passage of migrating salmon?

Testing got underway in early September on a DWR-managed program which hopes to correct this situation.

Here's the problem: between May and November, when low flows and warmer temperatures occur, a dredged section of the San Joaquin River known as the Stockton Deep Water Ship Channel often runs low in dissolved oxygen, particularly in the last seven miles as it approaches the Port of Stockton Turning Basin.

Several factors combine to create low dissolved oxygen (DO) levels in the water. First, you have the aforementioned seasonal low flow rates. Then, you have the presence of oxygen-demanding substances and the introduction of nutrients which promote algae growth. Finally, there's the configuration of the deep water channel itself: 500-foot wide

and 35-foot deep, it is considerably larger than the undredged upper part of the river. When the river gets to the channel, it slows down and decomposing algae settles and decays, further reducing oxygen concentrations.

In efforts to find a solution, DWR is adapting a "U-tube" technology long used in small aquaculture applications to introduce oxygen into fish-farming ponds.

Robert Pedlar of DWR's Bay-Delta Office is the project's supervising engineer. "Even though the Stockton project employs some complicated-looking equipment," he said. "It's a very simple process that relies on standard principles of gas dissolving in liquid under pressure."

Two wells 200 feet deep have been drilled on Rough and Ready Island, about 100-feet from the river's edge. Pump assemblies outfitted with fish screens, located nearby in the San Joaquin River, pump oxygen deficient water from the channel to the wells or "U-tubes."

DWR supervising engineer Robert Pedlar describes the aeration facility to Water Education Foundation tour participants.

Each U-tube assembly has a center conductor pipe 20-inches in diameter inside a 30-inch outer casing. Water pumped from the San Joaquin River travels down the center pipe as oxygen gas is injected. As it moves downward, increasing pressure causes the gas to dissolve into the water. The process of dissolving the oxygen into the water is nearly complete by the time the oxygen-enriched water gets to the bottom of each well. Then it makes a u-turn and heads back to the surface through the outer well casing before flowing into the river through a 200-foot long discharge diffuser submerged 15-feet below the channel surface.

During a planned two-year study period, the project will test the basic theory that providing 10,000 pounds of oxygen per day to the channel will have an appreciable effect on overall DO levels. "We know the demonstration project alone won't completely solve the waterway's low DO problem," said **Russ Grimes**, a senior project director with Jones & Stokes, the Sacramento-based environmental company that's been working with DWR to develop the aeration system. "This system, however, does present one of the most tangible approaches to mitigating the Deep Water Ship Channel's low DO concentration."

Other steps being considered or implemented to improve the situation include managing river flow, and reducing the discharge of oxygen demanding substances and nutrients from upstream wastewater treatment plants and agricultural drainage. However, "the nutrients that contribute to algae growth also contribute to the ecological productivity which supports Delta fisheries. So adding oxygen with the U-tube system rather than simply reducing nutrient load is expected to help Delta fish," said **Paul Marshall** a Principal Engineer in DWR's Bay Delta Office.

As far as the project team knows, the only other large U-tube facility in the country is on the Tombigbee River in Alabama. But the Stockton operation is unique because it's the only one located on a tidally-influenced estuary. That's a plus because the tides will help circulate the U-tube oxygen-enriched water. "We couldn't practically build and maintain a massive underwater distribution system in the channel anyway due to the fact that large cargo ships move through the channel on a regular basis," said Pedlar.

The San Joaquin River project is costing approximately \$3.5 million plus estimated operating costs of \$200 thousand per year. It's funded under Proposition 13 and originated from the recommendations of a CALFED assessment study. After the two-year demonstration period,

Pedlar and his team will consider several alternatives: pursue further study or seek permitting as a permanent system.

"Right now, DWR has ownership of the facility along with spending authority," said Pedlar. "But, when our testing is complete, the Department is looking to turn it over to local interests who will assume responsibility for its operation."

This project is the culmination of more than four years of study by numerous stakeholders and scientists who have collaborated to select the most appropriate technology. The design of the demonstration system has used as a basis a conceptual design furnished by HDR, Inc., of Omaha, Nebraska, and Jones & Stokes. The final design was prepared by the Department's Division of Engineering (**Joe Barron, III**, Senior Engineer, Engineering Project Manager) and the construction contracting, administration and management provided by the Sacramento Project Headquarters Office (**Jim Peddy**, previous Chief, Sacramento Project Headquarters, **Brian DePuy**, Chief, Sacramento Project Headquarters, **John Berringer**, Project Administrator, Construction Manager Supervisor, **William Sutcliffe**, Construction Supervisor I, Construction Inspector). Monitoring support has been provided by the Division of Planning and Local Assistance (**Bob Nozuka**, Supervising Engineer, **Gina Goff**, Environmental Scientist). Cooperation and project support has been provided by the Division of Environmental Services (**Rich Breuer**, Environmental Program Manager I, Chief of Environmental Water Quality Estuarine Studies Branch, **Darryl Kaff**, Senior Control Engineer, Supervisor). The Bay-Delta Office (**William McLaughlin**, Senior Engineer, Project Engineer) has been responsible for administering, coordinating and guiding implementation of the project. ■

(Top photo) Left to Right: DWR project team members Ajay Dev, Robert Pedlar, Russ Grimes (Jones & Stokes), William Sutcliffe, and William McLaughlin discuss the facility testing plan.



(Bottom photo) Overhead view of facility control room, u-tube head works, and oxygen supply system.





DWR Acts to Block Invasion by

TROUBLESOME QUAGGA MUSSELS

By Pete Weisser

*Photos by Jeffrey Herod of the
U.S. Fish and Wildlife Service*

DWR is taking action to protect the State Water Project (SWP) – and other California water resources – against invasion by tiny quagga mussels that can clog water systems, alter food webs in ecosystems and foul boat engines. Two major Southern California water systems have been invaded, but, at press time, quagga mussels have not been found in the SWP.

In recent months, DWR intensified mussel monitoring in the SWP system, and joined with other water agencies and key Resources Agency departments in a coordinated effort to combat their spread in California. Expert biological science, SWP management vigilance and public assistance from California boaters all play roles in DWR's battle for quagga control, under the leadership of SWP Deputy Director **Ralph Torres**.

The chief threat to SWP reservoirs and lakes is posed by inadvertent transfer of mussels in boats trailered from one lake to another.

"To thwart the spread of quagga mussels, we are urging boaters to wash their boats and drain all water after boating

at one reservoir and before trailering to launch in another waterway," said **Lester Snow**, DWR Director.

Boaters Play Key Role

This summer, officials from DWR, and the Departments of Fish and Game (DFG), Parks and Recreation, and Boating and Waterways alerted recreational boaters and anglers who trailer boats to California lakes and reservoirs to keep their boats clean and free of quagga mussels. Boat warning cards developed by DFG and funded by the Division of Operations and Maintenance (O&M) were given boaters at SWP lakes.

This Fall, DWR sponsored a quagga informational panel at the November conference of the Association of California Water Agencies (ACWA) in Indian Wells. ACWA represents more than 450 public water agencies, which account for 90 percent of water delivered in California. In September, DWR scientists updated fishery biologists from across the nation at the American Fisheries Society Conference in San Francisco on SWP monitoring implemented during 2007.

DWR is drawing on the scientific expertise of academic consultants from Portland State University, experienced in mussel science, and conferring with Midwest utilities and water agencies that have dealt with the quagga mussel for several years. An Interagency Quagga Mussel Incident Response Team is training crews, including DWR staff, in surveying techniques for invasive mussels, both quagga and zebra mussels, according to **Jeff Janik**, an environmental scientist with O&M's water quality control unit. Janik is a leading scientific advisor in DWR's quagga response effort.

SWP Monitors for Mussels

DWR began monitoring the SWP for quagga mussels early in 2007, shortly after the invasive freshwater mollusks were first detected in California.

The initial discovery of quagga mussels in the Western United States occurred in Lake Mead in January, 2007. The first California discovery was in Lake Havasu in the Colorado River. In subsequent months, they were found in two Southern California water systems using Colorado River water, the Metropolitan Water District of Southern California (MWD) and the San Diego County Water Authority.

MWD documented the mussels in March and again in July in its 242-mile Colorado River aqueduct, and also at Lake Mathews near Riverside and at Lake Skinner in Winchester, east of Temecula. In August, the mussels were discovered in three lakes in San Diego County: Dixon Lake in Escondido, San Vicente Reservoir near Lakeside and Lower Otay Reservoir in Chula Vista.

California's State Water Project draws its water from Northern California watersheds, and is thus less exposed to infestation from Colorado River water. For the SWP, trailered boats from infested waters are the big risk.

Environmental scientists are monitoring the system, one of the largest water and power systems in the United States. They have studied the experience of MWD and other infested systems. Scientist Janik reports that infected water systems, including MWD, use chlorine to control the mussels, which tend to congregate at intakes and in siphons.

Once mussels establish themselves in a water body, they are difficult to eradicate. Prevention is vital. Boaters are encouraged to wash and drain their boats to prevent inadvertent transfer of mussels from one lake to another.

Quagga boat warning cards were distributed at several major reservoirs during the Labor Day holiday weekend, including Diamond Valley Reservoir, Lake Skinner and San Vicente Reservoir in Southern California and at Lake Oroville in Butte County in Northern California. In October, Governor

"...we are urging boaters to wash their boats and drain all water after boating at one reservoir and before trailering to launch in another waterway,"

LESTER SNOW, DWR DIRECTOR

Schwarzenegger signed an urgency bill giving DFG added inspection and quarantine authority to help combat the spread of quagga mussels. The bill was AB 1683 by Assemblymember Lois Wolk (D-Davis).

California's 1.2 million boat owners in October also received quagga cards along with their boat registration documents, to alert them to the dangers posed by quagga mussels to their boats.

Invaders from the Ukraine

Native to the Ukraine, quagga mussels have become an expensive nuisance in the Great Lakes states of the Midwest. The mussels are thought to have reached the Great Lakes in ballast from transoceanic vessels. They are believed to have entered the Colorado River system in boats trailered there from infested waters in the Midwest.

Researchers for Congress estimate that during the 1990s another, similar invasive species, the zebra mussel, caused a \$5 billion impact on US industries.

Boaters should inspect all exposed surfaces. Quagga mussels feel like sandpaper to the touch. Boaters should thoroughly wash boat hulls, drain any water through the vessel's hull plug and clean and dry any live-wells on the vessel. It's advised to keep boats dry and out of water for five days between different reservoir outings.

DWR is a leading member of the multi-agency State task force responding to the mussel challenge. More information on Quagga mussels is available at a DFG Web site at <http://www.dfg.ca.gov/invasives/quaggamussel/>, and within DWR on the Division of Environmental Services Web site.

A public toll-free number –1-866-440-9530 – has been established for boaters and other water recreationists seeking information on these invasive mussels. That toll-free number is active weekdays, 8 a.m. to 5 p.m. ■





DWR's Portal Transition Team Aims to Improve the Usability, Accessibility and Create a More

USER-FRIENDLY WEB SITE

By Annie Parker

How many times has this happened to you?

You want to access information about the State on the Internet, but since you're not sure where to start, you enter a query: 'How do I get a California driver's license?' or 'How do I vote in California?' in the search box on the Google homepage and you click search.

After receiving the list of hits, do you know which sites are the legitimate State of California sites? Along with the links to the DMV and the Secretary of State, there are millions of other sites listed that are not official State sites covering a wide selection of groups ranging from non-profit to for-profit which contain the keywords 'license' or 'vote' and 'California'.

(Left to Right) Front Row: With new portal page in center, DWR's Portal Transition Team includes Cheryl Garrett and Anna Fong. **Back Row:** Dana Fernandez, Kell Brigan, Don Davis, Brian Niski, Frank Farmer, and Linda Ingalls. (Not in photo are Robert Haines, Anabel Gil, and Allison Melani.)

The California eServices Office's Usability Recommendations states, "Providing a Web presence that allows citizens and businesses to easily access and understand government information and services is becoming increasingly critical to State Government."

In 2007, the office, on behalf of the Governor's Office, issued a sweeping policy for new Web site development guidelines that all agencies, boards, departments, and commissions within the Executive Branch of the State of California must follow.

More than 63 agencies, departments and boards have already overhauled their site with the new Web format including the main California Web portal and the Governor's Office of Emergency Services.

This executive mandate to overhaul all Executive Branch Web sites also gave the DWR team an opportunity to change the basic design and function of the approximately 64 different sites that DWR maintains.

DWR's Portal Transition Team is formed

According to **Allison Melani**, Technology Coordinator for the Division of Technology Services (DTS) and project manager for the DWR Portal Transition Team, the primary driver from the Governor's Office for this project is to create a uniform state presence online.

The Portal Transition Team was created in 2006 with DWR employees from a variety of offices. The team members include **Kell Brigan**, **Anabel Gil**, **Linda Ingalls**, **Frank Farmer**, and **Robert Haines** from DTS, **Don Davis** from State Water Project Analysis Office, **Brian Niski** from the Division of Planning and Local Assistance, **Anna Fong** and **Dana Fernandez** from the Division of Flood Management, and **Cheryl Garrett** from the Division of Management Services. The Executive Sponsor for the portal overhaul is **Sue Sims**, Chief of the Public Affairs Office.

"The purpose of this transition is to create a strong State presence, so that when people visit our site, they know they are visiting a State site, and that will help develop a level of trust between the user and the Web site for the type of information they are accessing. Beyond that, we are also mandated to improve consistency, find ability, and usability of our site," said Allison. "Our Web site hasn't been refreshed since 2001, and in terms of Internet time, that's an eternity."

The New DWR Portal Design

As well as creating a uniform look and feel for California State Web sites, each agency must create a webpage that is accessible to all members of the public. All updated State portals must carry the State of California logo, a portrait of Governor Schwarzenegger, a search box, agency contact information for the public, and Flex Your Power and Amber Alert notices.

The main portal, which will be visible to the public in November 2007, will be reorganized and feature multiple tabs to assist the public in a quick search for important key terms such as 'Flood', 'Environment' and 'Data', and a new alphabetic 'Browse Topics' bar across the page that will also help the



At the helm of the Portal Transition Team, Allison Melani, who has worked just over a year for DWR, has worked closely with all DWR's divisions on the new Web sites.

"Providing a web presence that allows citizens and businesses to easily access and understand government information and services is becoming increasingly critical to State Government."

THE CALIFORNIA eSERVICES OFFICE'S USABILITY RECOMMENDATIONS

public search for items. DWR news releases and hot topics will remain prominent on the home page, and other DWR sites of interest to the public including how to get a job with DWR and how to do business with DWR will also be more effective, organized, and prominently displayed.

"We will be creating a portal that improves the participation aspect of DWR's site including public meetings, submission of web comments, frequently asked questions, and contact information," said Allison.

One of the main goals of the Portal Team is to create a DWR site that is more content driven, where the public can search for certain types of information without having to know which Web site posts the information or the specific program that owns the content.

A strategy to implement this new content driven method of search is taxonomy, which is the organizing of information based on the content of the information rather than where it belongs within the DWR organization. Anna Fong and Dana Fernandez with the Division of Flood Management have taken the lead on taxonomy and have been working with department webmasters to categorize their site information.

"For example, if someone wants information about a DWR public meeting, they will be able to visit a single page with a calendar of all upcoming public meetings without having to visit each specific program page first," said Allison.

Another example of this new content driven approach is the team's intention to create a new DWR Publications Page, which will centralize all DWR publications that are intended to be available to the public.





The new DWR Portal, which has been visible since November, must carry the State of California logo, a portrait of Governor Schwarzenegger, a search box, and agency contact information for the public. Flex Your Power and Amber Alert notices will also appear on the site.

“Currently, DWR has so many different publications listed in many different places throughout our site. We would like to bring those all together on one page that could be easily updated,” said Allison.

According to Staff Information Systems Analyst Brian Niski, another major goal of DWR’s portal overhaul is to centralize information and eliminate the duplication of information on DWR sites. The usability and findability standards encourage webmasters to design their sites to accommodate the different ways users interact with a site. Multiple paths to similar information will make it easier for the user.

“Right now, we are focusing on the goal that when the public visits the DWR main page, they see DWR as only one Web site, and not a collection of individual programs and sites, which is how DWR employees often view the site,” said Brian.

Behind the Scenes Design

Along with the members of the team who have been working to arrange the content of DWR’s multiple Web sites to be more user friendly to the public, other members of the DWR portal team have been kept busy with the behind-the-scenes type of work including the procurement of the new server hardware, Web server software and Web application software, and making sure that DWR’s internal sites are prepared to migrate off the existing equipment, which is out of date.

Frank Farmer, a System Software Specialist II in DTS, has already been at work with members of the team to implement an improved search engine for DWR’s public pages that will use “search appliance” technology from Google, hosted by the California Department of Technology Services, which will provide a search engine service equal to or better than what is in place now, at a lower cost and with less complexity and support requirements.

“With this new technology, we can keep track of specific data that the public is usually searching for on our Web site

and this will allow the user to find what they are looking for much faster, and it will also help those within DWR respond to requests for information. Then, when a person types a search query into the search box, the results will be much more refined,” said Frank.

Another difference that won’t be apparent to most of the users of DWR’s public Web sites is the state mandate of the use of CSS, or Cascading Style Sheets, which is a simple, yet powerful mechanism that allows styles such as fonts, colors, spacing and other aspects of online document presentation.

“DWR has been ahead of many other agencies because we already have been using CSS in many of our online documents, and that has helped us with the technical aspects of this transition,” said Robert Haines, Supervisor of the Web Development Group in DTS and lead developer for the new portal.

As part of Phase I of the Portal’s Transition, the most visible DWR sites that will be updated first include the main DWR Portal, the Public Affairs Web site, and some of the often-visited Department of Management Services sites like the Personnel Office, Imaging, and the Small Business and Disabled Veteran Business Enterprise sites.

“We have something in the neighborhood of 44,000 pages to convert, so right now we are only focusing on converting the most visible pages as part of the Phase 1 launch in November. We want to take our time and get this project done right,” said Allison. “Once we have our templates into production and trained the Department’s webmasters, we will methodically convert the remainder of the pages.”

In the end, DWR’s Web site will not only convey trust to visitors that they are on an official State site, but will also be customer-oriented. The information provided will be easy to navigate and allow individuals to find what they are looking for when they want it. ■



Serving the State Water Contractors for 25 Years

By Margarita Macias

For the last 25 years, the State Water Contractors (SWC) office has been serving 27 of the 29 State Water Project water contractors in presenting information that is useful to the State Water contractors and others in the water community.

Created in November 4, 1982, the SWC office is a non-profit association of 27 public agencies from Northern, Central, and Southern California that purchase water from the California State Water Project (SWP).

The SWP, the largest state-built water and power system in the United States, includes reservoirs, lakes, storage tanks, canals, tunnels, pipelines and pumping and power plants that capture, store, and convey water to these 27 public agencies and two others. In addition to being the single largest power consumer in California, the SWP is California's fourth-largest energy producer. Through the SWP, the State Water Contractors deliver water to more than 25 million people and more than 750,000 acres of agricultural lands.

Because almost any issue that affects the State Water Project's operations directly affects members of the State Water Contractors, they established a permanent office in Sacramento with the goal of serving as a communications bridge with the Department of Water Resources (DWR), which operates and maintains the State Water Project.

Through the SWC office, more than 14 committees, ranging from Audit-Finance to Municipal Water Quality Investigations, were created to present information to the Contractors at monthly Board meetings in Sacramento.



(Left to Right) John Coburn, the first employee of the State Water Contractor's office, was hired by General Manager David Schuster.



Dave Schuster

“The numerous committees, each chaired by a SWC representative and comprised of water agency representatives and DWR staff, are able to resolve many issues before they become major problems,” said **George Baumli**, SWC General Manager from 1989-1994. “The committees provide an excellent forum for interaction between the SWC and DWR.”

The SWC office has had five General Managers – **David**

Schuster, George Baumli, Steve Macaulay, John Coburn, and currently **Terry Erlewine**.

Starting Up the SWC Office

With more than 18 years of water management experience working for the Bureau of Reclamation on the federal Central Valley Project, **David Schuster** was recruited by the public agencies to help establish the new SWC office in 1982.

“With water agencies located throughout California, they realized the need to unite themselves as one voice,” said Schuster. “This helped make them more influential in DWR.”

Schuster hired the first staff of three. Today, the office consists of eight employees.

As General Manager, Schuster was involved with developing the landmark 1986 Coordinated Operation Agreement (COA). The COA took more than 25 years of negotiations and provides for the State Water Project and Central Valley Project to coordinate operations to meet Bay-Delta water quality standards and assure that each Project receives an agreed upon share of the Central Valley’s available water.

To provide updates on the State Water Project, DWR employees meet regularly with the State Water Contractors.

Schuster also assisted in negotiating an agreement on the management of California’s Suisun Marsh with the California Department of Fish and Game, DWR, U.S. Bureau of Reclamation, and the Suisun Resource Conservation District.

Before joining the SWC office, Schuster worked as Assistant Regional Director for the Mid-Pacific Region of the U.S. Bureau of Reclamation, where he directed all planning, design and construction activities for the region. For more than six years, he was responsible for all decisions regarding water operations of the Central Valley Project.

When he left the SWC office in 1989, he became a water resources consultant for the State Water Contractors and the Kern County Water Agency. He was involved in the development of the Bay-Delta Accord, which brought federal, State, environmental, agricultural, municipal, and industrial interests together on water quality standards for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. In 1996, Schuster became a founder of Surface Water Resources, Inc., a Sacramento-based consulting firm.

Focusing on the Drought

During **George Baumli’s** tenure as General Manager from 1989 to 1994, his focus was on helping the SWC and DWR deal with a five-year drought.

“In 1991, the driest year of the drought, the SWP drastically reduced water deliveries. Agricultural contractors received no water and the urban customers received only 20 percent of their normal supplies,” said Baumli. “Battles between the urban and agricultural contractors became quite heated and I, like others, was caught between the dog and the fireplug.”

The SWC and DWR developed a plan to pay farmers for not growing crops, thereby freeing up irrigation water for more critical uses. In 1991, Governor Pete Wilson, in response to a request from the SWC, created the State Drought Water Bank, operated by DWR to purchase and sell water.





George Baumli

“The SWP purchased almost 800,000 acre-feet of water from some 335 farmers at a cost of about \$100 million,” said Baumli.

Baumli’s 36 years in water resources development and management began after earning a Civil Engineering degree from the University of Colorado at Boulder.

Baumli worked 21 years for DWR (1957-1978), advancing from Junior to Principal Engineer

with the Division of Planning, including its Northern District and Southern District offices. He later worked for the U.S. Section of the International Boundary and Water Commission for resolution of water issues between the United States and Mexico.

After retiring, Baumli became a consultant to the World Bank, assisting the Philippine Government develop water resources management programs. He now resides in McKinney, Texas.

Taking a Different Perspective

Steve Macaulay, who was SWC General Manager from 1994 to 1999, was involved with the Bay-Delta Accord, Monterey Agreement (negotiations, implementation and litigation), CALFED, major issues with regard to SWP cost-effective maintenance and equipment replacement, and improving long-term relationships with DWR at all levels.

During his five years with the SWC office, the Coastal Branch Aqueduct Phase II was completed in 1997 and DWR was tasked with major energy contract responsibilities during deregulation in 1998.

“The creation of the SWC office was a tremendous advantage to the Department, since they can go through the SWC organization for meaningful discussions on the full range of SWP issues,” said Macaulay, who was later Chief Deputy Director at DWR. “It has been particularly beneficial to the contractors as a means of discussing contractor concerns within their organization, finding points of agreement and allies, and – through their full-time staff in Sacramento – doing original analyses and work (many times working closely with DWR staff) to advance the purposes of the SWP across the full range of challenges from water operations to financing.”

Before joining the SWC office, Macaulay, who has a Bachelor of Science in Chemical Engineering from the University of California, Davis and a Master of Science in Civil Engineering from California State University, Sacramento, worked for the Central Valley Regional Water Quality Control Board for four years, the State Water Resources Control Board (SWRCB) for three years, and DWR’s Planning, SWP Analysis Office, Executive, and Division of Planning and Local Assistance from 1980 to 1994.

During his four years as DWR’s Chief Deputy Director



Steve Macaulay

from 1999 to 2003, Macaulay was involved with negotiating components of the CALFED Record of Decision, settlement of the Monterey Agreement litigation, the trials and tribulations of both SAP implementation and State budget challenges, and a range of DWR organizational issues.

Since 2003, Macaulay has been Executive Director of the California Urban Water Agencies (CUWA) and concurrently Vice

President of West Yost Associates – a water resources engineering consultant in Davis.

“In my role at CUWA, I’ve worked directly with CALFED implementing agencies, represented CUWA on the Bay-Delta Public Advisory Committee, participated as a very active member of the California Water Plan Advisory Committee, and directed a number of technical studies to advance the knowledge and understanding of specific drinking water concerns, fisheries issues, urban water conservation, climate change, and recycled water issues,” said Macaulay.

Dealing with Relicensing

Unlike the previous General Managers, **John Coburn**, who was the first hired employee of the SWC office, became General Manager after working several years as a staff Engineer for the SWC office.

When Coburn was General Manager from 1999 to 2004, energy relicensing began, East Branch Extension Phase I construction began expanding service to San Bernardino and San Geronio Pass areas in 1999, and the Joint Powers Agreement was negotiated.

"The State Water Contractors member agencies have a vital interest in the generation and consumption of State Water Project power, which is needed to maintain reliable water deliveries to their service areas in Northern, Central and Southern California," said Coburn. "State Water Contractors' members pay the California Department of Water Resources for all costs associated with power facilities and water deliveries. Energy is the largest component of the State Water Contractors' annual bills, comprising approximately 45 percent of the forecasted water delivery costs for 2007."

The SWC office works closely with the California Department of Water Resources on an ongoing basis to contain pumping costs and enhance power generation value.

Coburn, who graduated from the University of California, Davis, worked for the Bureau of Reclamation's Central Valley Operations Office along with Schuster from 1972 to 1983. In 1983, he became Staff Engineer at the SWC Office. After retiring as General Manager of the SWC Office, Coburn worked as Interim General Manager for the SWP Contractors Authority from January to July 2007. He currently works as a consultant to the Municipal Water Quality Investigations Specific Project Committee.

Keeping the Pumps Running

Terry Erlewine, SWC General Manager since 2004, has devoted his entire career to California water supply management and planning. In 2007, he worked closely with

DWR and the SWC in dealing with the impact of regulation to protect the delta smelt on State water pumping.

"Recently, the Delta has been the subject of increased statewide attention, as it continues to face numerous challenges. The Delta currently serves as the hub to the State Water Project's water delivery system, but its ability to serve in that capacity is increasingly coming under question. The State

John Coburn

Water Contractors have made addressing the Delta's needs a priority for 2007," said Erlewine.

On January 26, 2005, DWR passed another milestone when Oroville's Federal Energy Regulatory Commission (FERC) Relicensing application was submitted. The document was the result of five years of intensive work by DWR, with frequent input and intense participation by the SWC and its members.

As part of the General Manager's assignment, Erlewine is responsible for overseeing and carrying out the objectives of the SWC, including timely completion of SWP facilities; assisting to ensure proper and efficient SWP operations; protection of water rights needed by the SWP; review and coordination of litigation affecting the SWP; presentation of SWC views to legislative and administrative agencies, myriad stakeholders, interested parties, and the general public; and development and maintenance of a public information program about the SWP.

Erlewine also plays a key role in coordinating with DWR with regard to statewide SWP operations, water supply management and deliveries, and the numerous institutional efforts, programs, policies, environmental regulations, and multi-party agreements affecting SWP operations. He is also responsible for developing, managing and disseminating information pertaining to SWP delivery facilities, including current water supply and water quality conditions, flow and storage data, flood and drought status, and all regulatory matters affecting the SWP. In addition, Erlewine oversees the SWC's participation in the current and developing framework for managing water supply and ecological issues within the Sacramento-San Joaquin Bay-Delta.

Erlewine, who has a Master of Science in Civil Engineering and a Bachelor of Science in Civil Engineering from the University of California, Davis, began working for the State Water Contractors in 1994 as a Principal Engineer and later Assistant General Manager. From 1991-1994, he worked for Bookman-Edmonston Engineering. From Junior Civil Engineer to Senior Engineer, Erlewine worked for DWR from 1978 to 1991. ■



Terry Erlewine



THE STATE WATER CONTRACTORS MEMBER AGENCIES

Alameda County Flood Control and Water Conservation District, Zone 7
100 North Canyons Parkway
Livermore, CA 94551
925-454-5055

Alameda County Water District
43885 South Grimmer Blvd.
P.O. Box 5110
Fremont, Ca 94537-5110
510-668-4200

Antelope Valley-East Kern Water Agency
6500 West Avenue N
Palmdale, CA 93551-2855
661-943-3201

Castaic Lake Water Agency
27234 Bouquet Canyon Road
Santa Clarita, Ca 91350
661-297-1600

City of Yuba City
1201 Civic Center Boulevard
Yuba City, CA 95993
530-822-4601

Coachella Valley Water District
85-995 Avenue 52
P.O. Box 1058
Coachella, CA 92236-1058
760-398-2651

County of Kings
Government Center
1400 West Lacy Boulevard
Hanford, Ca 93230
559-582-3211

Crestline-Lake Arrowhead Water Agency
24116 Crest Forest Drive
P.O. Box 3880
Crestline, CA 92325-3880
909-338-1779

Desert Water Agency
1200 Gene Autry Trail South
P.O. Box 1710
Palm Springs, Ca 92263
760-323-4971

Dudley Ridge Water District
286 West Cromwell Avenue
Fresno, CA 93711-6162
559-449-2700

Empire West Side Irrigation District
P.O. Box 66
Stratford, CA 93266
559-947-3328

Kern County Water Agency
3200 Rio Mirada Drive
P.O. Box 58
Bakersfield, CA 93302-0058
661-634-1400

Littlerock Creek Irrigation District
35141 87th Street East
Littlerock, CA 93543
661-944-2015

Metropolitan Water District of Southern California
700 North Alameda Street
Box 54153, Terminal Annex
Los Angeles CA 90054-0153
213-217-6000

Mojave Water Agency
22450 Headquarters Drive
Apple Valley, CA 92307
760-946-7000

Napa County Flood Control and Water Conservation District
Department of Public Works
1195 Third Street, Suite 201
Napa, CA 94559
707-253-4351

Oak Flat Water District
P.O. Box 1596
Patterson, CA 95363
209-892-4470

Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550
661-947-4111

San Bernardino Valley Municipal Water District
1350 South E Street
P.O. Box 5906
San Bernardino, CA
92412-5906
909-387-9200

San Gabriel Valley Municipal Water District
549 East Sierra Madre Avenue
P.O. Box 1299
Azusa, CA 91702-1299
626-969-7911

San Geronio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223
951-845-2577

San Luis Obispo County Flood Control and Water Conservation District
County Government Center,
Room 207
San Luis Obispo, CA 93408
805-781-5252

Santa Barbara County Flood Control and Water Conservation District
123 East Anapamu Street
Santa Barbara, CA 93101
805-568-3540

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, Ca 95118-3686
408-265-2600

Solano County Water Agency
6040 Vaca Station Road,
Building 84
P.O. Box 349
Elmira, CA 95625
707-451-6090

Tulare Lake Basin Water Storage District
1001 Chase Avenue
Corcoran, Ca 93212
559-992-4127

Ventura County Watershed Protection District
Public Works Agency
800 South Victoria Avenue,
Location 1610
Ventura, CA 93009
805-654-2040

CALIFORNIA'S WATER DELIVERIES

The 27 State Water Contractors deliver water to an area covering almost one-quarter of California and more than two-thirds of its population. A number of the agencies were formed for the sole purpose of contracting for SWP water.

First SWP deliveries were made in 1962 to the Alameda County Flood Control and Water Conservation District Zone 7, and the Alameda County Water District. In 1965, deliveries were made to the Santa Clara Valley Water District. By 1968, service was extended into the central and southern San Joaquin Valley. In 1972, Southern California areas began receiving their first deliveries. The SWP has delivered 75 million acre feet of water since its initial deliveries.

SWP water is delivered to various locations throughout California, including the world-famous Disneyland, several Air Force bases, and vineyards.

The Kern County Water Agency is the second largest participant in the SWP, with Kern County being the state's fourth most productive agricultural county. Crops grown in Kern County are consumed throughout the United States and are exported to countries around the world including Canada, Mexico, Australia, Japan, China and countries in Central America, South America, Africa, Europe, the Middle East, and Southeast Asia.

As public agencies, the State Water Contractors' members have an obligation and mandate to provide reliable and safe drinking water, protect the environment and public health, and promote water conservation and greater efficiency. ■



STATE WATER CONTRACTORS
FOUNDED IN 1982

Member Agencies & Service Areas



State Water Contractors
1121 L Street
Suite 1050
Sacramento, CA 95814
(916) 447-7357

The boundaries in this map are only a rendering, not an exact delineation of the State Water Project contractors' service areas.

DWR helps in the Children's Miracle Network Celebration

DWR's Delta Field Division employees along with the UC Davis Children's Hospital, the Sacramento Monarchs Basketball team, and Wal-Mart of Stockton teamed up for the Children's Miracle Network Reunion and Celebration on July 26 in Sacramento's Arco Arena.

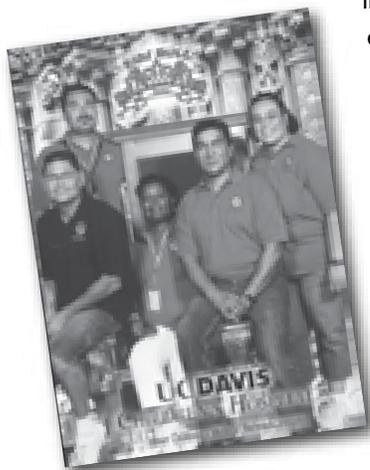
This one-day event, which included 200 children from the Sacramento and Elk Grove area, was created in 2006 to celebrate with children, who have survived cancer and other illnesses. At the event, children enjoyed DWR's fishing simulator, free raffles sponsored by Wal-Mart, and free portraits taken with mascots of pro basketball teams.

"I could see the pain in some of these kids' eyes. You would never know it by the smile on their faces when they saw us with the fish simulator. Some of the

children had never held a fishing pole before in their hands," said **Shirley Tobias** of Delta Field Division.

DWR's employees that participated included **Eleanor Matuu, Richard Rodriguez, Efen Flores, Raul Salcedo** and Shirley, all of Delta Field Division.

"Shirley's team added so much to our event - there were smiles and miracles made that day! Thanks again for DWR's support!," said **Jacquelyn Kay-Mills**, Development Officer with the Children's Miracle Network of UC Davis Children's Hospital. ■



(Left to Right) Delta Field Division's team, which included Efen Flores and Eleanor Matuu (sitting) Richard Rodriguez, Shirley Tobias and Raul Salcedo, talked with children at the event about the dangers of the Aqueduct and demonstrated a drown proofing technique. (Photo at right) The team also assisted children with DWR's fishing simulator.

Emergency Communication Trailers

DWR has purchased three communications system trailers to improve communication and data transferring capability between the Flood Operations Center and Incident Command Post(s) during times of emergency. Two of the trailers were purchased with Division of Flood Management funding and the third trailer was purchased with Department of Homeland Security Grant funding.

"It's been a long road in procuring these trailers," said **Sonny Fong**, DWR's Emergency Preparedness and Security Manager. "However, communication is crucial when dealing with lives and infrastructures."

These 9-by-26 foot trailers are outfitted with generators, HVAC systems, satellite communication system, land lines, two-way radios, and faxes.

They will be located at The Joint Operations Center, Oroville Field Division, and Delta Field Division. Stationed at these strategic locations, the trailers are then readily available for transportation by truck or helicopter for rapid response during floods and other emergencies. ■

DWR's new mobile communication command trailers are stationed in Northern California.





Eradication of Northern Pike in Lake Davis

The Department of Fish and Game (DFG) in conjunction with the Department of Water Resources (DWR) conducted another project to eradicate the invasive northern pike from Lake Davis, a State Water Project reservoir in Plumas County.

“This time we took a very planned and systematic approach,” said **Ed Pert**, DFG’s Lake Davis Project Manager.

Beginning the week after Labor Day, Lake Davis and its tributaries were treated with a liquid form of pesticide containing an approved amount of the fish-killing agent rotenone.

First discovered in Lake Davis in the mid-1990s, the voracious northern pike have devastated the local fishery, consequently damaging the area’s economy. There is also the possibility that the pike will disrupt the delicately balanced ecosystems of the Feather and Sacramento rivers and the Sacramento-San Joaquin Delta if they move downstream from Lake Davis.

Planning for managing and eradicating pike has taken several years. As DFG implemented various population control measures, DWR implemented operational and engineering approaches to ensure pike do not escape the reservoir. “Graters” installed in 1996, a low-tech but innovative approach to killing fish entrained in Lake Davis discharge, served well for a decade (Article featured in *DWR NEWS/People’s Winter 2000 issue*).

Oroville Field Division implemented aggressive spill prevention operational criteria. Within the last year, DWR’s engineering and installation of high-tech, multimillion-dollar

“strainers” (essentially an innovative application of industrial water-screening technology) ensured that not even 1.5mm pike eggs or larva can escape the Lake Davis outlet.

After this series of control and containment efforts, officials and many stakeholders concluded that the only way to protect downstream ecosystems and economies is to completely eradicate the pike from the lake.

In 1997, DFG attempted to eliminate the pike using similar methods, but they reappeared 18 months later in Lake Davis.

Doug Rischbieter of DWR’s Division of Environmental Services says the promise of success of the current project lies in the major differences between the 1997 and 2007 eradication projects. Communication and cooperation between project management and the community has been strengthened with the establishment and participation of the Lake Davis Steering Committee. Collaboration with other agencies, including the U.S. Forest Service, has given DFG greater access to the lake and its neighboring tributaries, allowing officials to thoroughly scour for pike. Staffing and resources have increased as well.

“Our part in the pike eradication effort was to monitor and forecast the surface elevation and storage of Lake Davis leading up to Labor Day,” said **Kevin Wright**, Water Services Supervisor of Oroville Field Division’s Beckwourth Substation. “The Beckwourth staff is also responsible for operation of Grizzly Dam and any changes to water releases from Lake Davis as required for the success of our sister agency’s plan.”

Additional information about this project can be found on DFG’s Web site at <http://www.dfg.ca.gov/lakedavis/> ■



Above: California Secretary for Resources Mike Chrisman with dead northern pike, Ed Pert (at left in bottom photo) of DFG, and Doug Rischbieter (at right in bottom photo) at Lake Davis during eradication treatment of northern pike. Kevin Wright (top photo) of DWR turns off Lake Davis outflow for treatment process to begin.

Bottom: DFG used about 25 boats, which included three airboats, to cover the lake.

DWR's Traveling Groundwater Exhibit Visits Six Counties

Corn dogs and demolition derby were some of the perks for DWR employees who staffed a groundwater booth at six county fairs last summer.

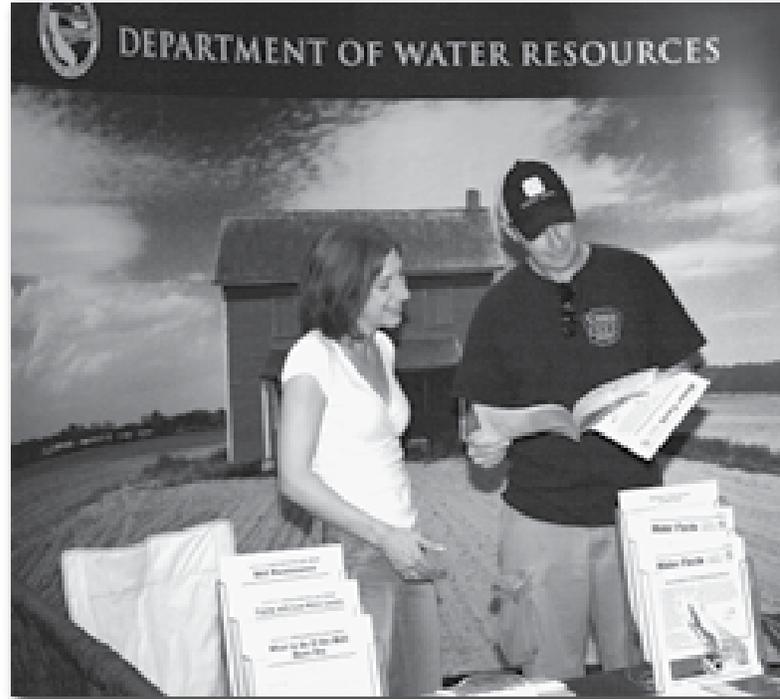
The results of DWR's final 2007 snow survey showed snow pack at 29 percent of normal, the lowest level in nearly 20 years. Homeowners with private wells drilled in fractured rock are among the earliest affected by dry conditions.

"The groundwater exhibit provided information to encourage people to think about preparing for the possibility of water shortage," said **Amy Norris**, Exhibit Coordinator.

During California's last major drought (1987-92), there was an increase in new residential wells drilled, partly because many existing wells ran dry. By encouraging preventive maintenance and conservation before major problems arise, rural well owners may better safeguard their water supply.

Venues included the El Dorado County Fair, Redwood Acres Fair in Eureka, Mother Lode Fair in Sonora, Redwood Empire Fair in Ukiah, Butte County Fair in Gridley, and Desert Empire Fair in Ridgecrest.

Thanks to the following staff that braved the heat, dust and fried fare in the name of water supply reliability: **Michael Miller, Ann Marie Alexander, Melvia Davis, Bethany Knudsen, Annie Parker, Angel Rodriguez, Phyllis Green, Chuck Borelli, Carolyn Tucker, Alan Ladwig, Dale Kolke and Matt Smith.** ■



(Left to Right) Amy Norris of the Public Affairs Office reviews a well maintenance fact sheet with Marc Fawns, a Geologist with Haling & Associates.

DWR's Alumni Club Annual Picnic



On September 13 at Howe Park, more than 120 DWR retirees reunited for their Annual Picnic. If you're interested in joining DWR's Alumni Club, please contact Bob Bailey at (916) 961-1897 or bbbailey@sprynet.com

Aquatic Adventure Camp Reaches a Milestone!

This year, the Department of Water Resources (DWR) celebrates a milestone for its Aquatic Adventure Camp Program. Since the creation of the program, more than 500 youth have completed the Aquatic Adventure Camp Program, where they had fun while learning water safety skills, at five State Water Project lakes throughout California.

DWR's SWP Recreation Coordinating Committee formed the Aquatic Adventure Camp Program in 2002 to help stem fatalities along the SWP. The program targets youth who live near SWP facilities and along the 444 miles of California Aqueduct.

"Drowning is the second largest cause of death of among all children and young teens. Tragically, minority youth between 5 and 19 years drown at two and a half times the rate of non-minorities," said **Dorothy Benjamin**, DWR's Aquatic Adventure Camp Coordinator. "The Aquatic Adventure Camps are an essential part of ensuring improved safety for all children with targeted outreach to groups at the greatest risk."

DWR partners with local recreation agencies to provide this award winning two-week water safety program. In 2007, camps were held at Lake Perris (July 9 - July 20 and July 23 - August 3), Lake Del Valle (July 2 - July 13 and July 30 - August 10), Lake Oroville and Chico (July 12 - July 27), and Castaic Lake (July 23 to August 4). ■



Top Photo: Lake Oroville's Aquatic Camp brought many smiles to the children.

Bottom Photos: During the Aquatic Camps, children learned life saving water skills while enjoying the State Water Project lakes, which included (left to right) Lake Oroville, Lake Del Valle, and Lake Perris.



New Assignment

Sandino Appointed DWR Chief Counsel



David Sandino, a California water law expert and teacher, was appointed DWR Chief Counsel by Governor Schwarzenegger in August of 2007.

In addition to teaching water and energy law in California and Russia, Sandino's legal career includes working on environmental, water,

natural resource, land use, and energy issues. Sandino's new assignment includes managing 27 attorneys and 8 support staff in handling issues related to all of the Department's legal activities.

"I want this to be the best in-house legal office in State service," said Sandino, who has practiced law for 23 years. "I want to have good client relations, where Department employees turn to the legal office for help to prevent problems."

Sandino, a native of Merced, developed an interest in water issues while working on farms and food processing plants. He worked in the tomato fields, driving tractors, and hauling tomatoes.

"Without irrigation, the rich agriculture bounty we enjoy in the Central Valley would not be possible," said Sandino.

Sandino received a degree in chemistry from the University of California, Davis in 1980. In 1984, he received his Juris Doctorate from Santa Clara University, and took a Master of Laws degree from the University of London, King's College in 1987.

After working as a Yuba County Deputy County Counsel on land use, environmental, mental health and personnel issues, Sandino joined DWR in 1989 as staff counsel. For DWR, his assignments have included serving as lead attorney for the Bay-Delta Water Rights hearings and the State Water Project Power Management process and counsel for The Reclamation Board and DWR's Division of Flood Management.

"One of my most interesting DWR assignments was being lead attorney for the Coastal Branch Project," said Sandino. "As a new DWR hire, I enjoyed the excitement of working on

"One of my most interesting DWR assignments was being lead attorney for the Coastal Branch Project. As a new DWR hire, I enjoyed the excitement of working on this high profile project. This project was completed without environmental litigation and in full compliance with all environmental laws."

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In addition to his DWR service, Sandino served a term on the City of Davis Planning Commission and has provided pro bono legal service to the disadvantaged for more than a decade.

His love of traveling has taken Sandino around the world to about 15 countries along with 43 U.S. states, including Italy where all of his relatives are from.

For the past decade, Sandino has taught water law, environmental law, real property, and local government law in the evening. He is an adjunct professor at Santa Clara University, Golden Gate Law School, and the University of San Francisco. During a four-month leave of absence from DWR in 1999, Sandino taught international environmental law on a Fulbright Fellowship at the Moscow State Agricultural Academy in Russia.

In addition to continuing to study Spanish and Italian and play golf, Sandino hopes to become a winemaker when his public service career is over. ■

New Assignment

State Water Project Analysis Office Chief Appointed



Robert B. Cooke, who has worked 27 years on California flood management, Delta, water quality, and State Water Project (SWP) issues, was appointed Chief of the State Water Project Analysis Office (SWPAO) on August 22, 2007.

"SWPAO is a great place to work. Since it's a smaller division, we are proud of

our comfortable and productive atmosphere, and low turnover rate. I plan to continue that tradition by making sure employees are learning new things, achieving their personal goals, being able to use their natural strengths and talents regularly, and enjoying their job," said Rob. "It's all about creating job satisfaction."

Rob's goals for SWPAO include developing good working relationships with the State Water Contractors and maintaining SWPAO's high quality of work standards. SWPAO administers policies and procedures to ensure that the State Water Project, delivers water to the millions of Californians who depend on it for at least a portion of their water needs.

As Chief of SWPAO, Rob manages about 100 employees in three main areas of State Water Project management, which include project cost, project power, and project water. He also oversees the yearly completion of Bulletin 132 - Management of the California State Water Project, now in its 44th edition.

Rob, who earned his Bachelor of Science in Civil Engineering from the University of California, Berkeley in 1979, started his engineering career with the Contra Costa Flood Control and Water Conservation District doing design work, and became a registered Civil Engineer in 1982.

Rob's desire to return to his hometown of Sacramento took him to the start of his DWR career with the Central District as an Assistant Engineer in 1980. He developed reservoir operation studies and flood routing models, and then joined the Division of Engineering (DOE). One of his DOE projects included the Montezuma Slough Control

Structure and Access Road, where he developed a 'burrito' raft foundation engineering solution to enable the construction of a heavy-duty access road to the control structure on the Delta's soft peat soils.

From 1985 to 1990, Rob worked for the State Water Resources Control Board, where he reviewed plans and specifications for wastewater treatment plants and pumping plants. He returned to DWR as a Project Manager with the Division of Flood Management where he worked on several flood control projects.

"Flood Management is great because it allows journey-level engineers to work with a fairly high level of responsibility. I really learned a lot about project management and working with the media," said Rob.

"SWPAO is a great place to work. Since it's a smaller division, we are proud of our comfortable and productive atmosphere, and low turnover rate."

Rob joined SWPAO in 1993 as a Senior Engineer, where he had his first experience with SWP water operations. He negotiated water contracts and coordinated water schedules and deliveries. In 1997, he was promoted to Supervising Engineer in the CALFED Bay-Delta Program, where he served as Program Manager of the Delta Levees Program, Suisun Marsh Program, and the North Delta Program.

He returned to SWPAO with a promotion to Principal Engineer in 2002 as Chief of the Project Water Management Group, where he was responsible for administering the 29 Long-Term Water Supply Contracts. Since July 2006, he has served as interim Division Chief.

Rob's outdoor hobbies include dirt biking, snow skiing, and water skiing. ■

DWR Snow Surveyors Spotlighted Throughout Nation

By Amy Norris

You probably haven't met **Dave Hart**, but there's a good chance you may recognize his snow suit. For over 20 years, Hart has worked with **Frank Gehrke** to conduct snow surveys and explain snow pack and water content to freezing reporters. Gehrke joined snow surveys in the late 1980's. They've appeared on national television and in magazines often enough to make them the Department's unofficial celebrities.

Dave Hart started his career with DWR in 1981 as a Land and Water Use Analyst. Two years later, in the midst of downsizing, he answered an ad in the Job Opportunity Bulletin and landed the snow surveyor job he has held ever since.

The field work involved in snow surveying appealed to Hart as a change from his very academic background. Hart used his Bachelor of Science in Agronomy and Master of Science in Soil and Drainage in his first position to model Feather River flows to Oroville. Hart's new job provided an instant opportunity to get out of the office and into the wilderness.

Said Hart, "We have a snow tube set. The back country runs we ski all the way from Highway 50 to Forni Ridge. It's about an 11 mile loop and a 3000 foot elevation change... We strap on the skis, put a pack on, put the tube set components in the pack, our lunch, whatever additional jackets we think we might need and take off."

On a particularly snowy day, Hart and Gehrke may spend five or six hours on skis to do a snow sampling that lasts for an hour and a half. As the years have passed, Hart said the grueling runs are becoming harder to do, but their experience helps keep them fairly comfortable. "We travel pretty light compared to what most people might think. We go with polypro underwear and lightweight silk later in the season. We're old school wool, both of us. You can get rained on, snowed on and shake it off and stay dry."

Usually the photos and on-camera interviews are conducted at convenient locations so reporters can avoid difficult skiing. But on occasion the pair has taken along someone who wants more than a photo op in an easy to reach meadow—which has led to some dramatic stories.

Said Hart, "We took up a National Geographic photographer. He was freelance. He's been all over the world, a rough tough guy. We were going up the road, and it was just a killer. We were breaking heavy trail. At the end of the day it was like a movie. He sits down on the trail and said, 'I can't go on.' I go over and slap him. Since he was only 200 yards from the cabin, he got up and made it inside for dinner."



Left to Right: Frank Gehrke and Dave Hart are well-known for their snow surveys.

But Hart's snow treks aren't without real hazard. "On my first time up, I made the mistake of going out myself and fell into a tree well. I fell in head first. I was thinking I was going to die. I went crazy and got out. But that's when I learned it takes 10 times more energy to fall down and get up than it does to go slowly and be careful."

Though outdoor adventures help keep his job interesting, the hydrology is the true draw of his work. In his more than 20 years of experience as a snow surveyor, Hart said there's still not enough data to spot trends. Hart has noticed that rain on snow seems a more frequent occurrence, but it's also

a characteristic of California snow pack he's read about in notes that were taken in the 1930's. Hart explains it this way. "Data's important. When you go out there on a cold day, it always seems like it's the coldest day."

So what does a snow surveyor do in the summer? According to Hart, it's actually the busiest time. Snow sensors require maintenance in preparation for the next winter, and since no one knows exactly when the first snow will fall, mid-October is the deadline when everything must be in working order.

Though the thrill of appearing on local T.V. and even CNN has waned, the importance of his work has not.

Said Hart, "This is a really unique program because of how it works with the cooperating agencies. It's one of the only programs I know of that we're getting 250,000 to 300,000 dollars of voluntary contributions to get the work done. We pride ourselves on having a very good relationship with our customers and we're accountable to them. The product is very high quality forecast, some of the best database for this type of data anywhere. A lot of these climate studies have been using our data. We're constantly working to keep it clean and improve it." ■



A Tale of Two Musicians

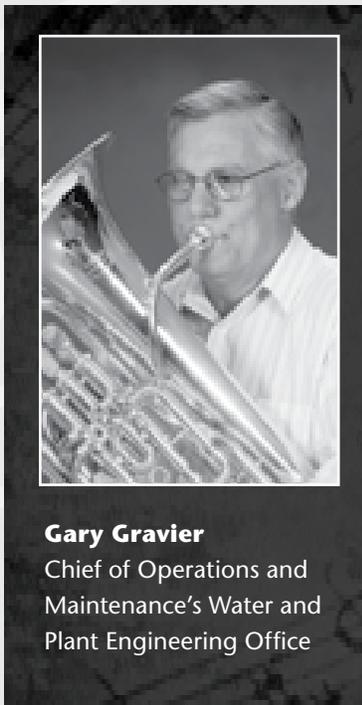
By Margarita Macias

Although they may not consider themselves to be a Mozart or Beethoven, **Gary Gravier** and **Neil Gould** do share the same love of music. From their piano lessons as children to drum and euphonium performances as adults, these two DWR employees have learned how sound can make a difference in their lives.

Since their early childhood, Gary and Neil enjoyed their weekly music lessons. Music gave them a chance to see the world in another perspective.

During a Carmichael Park Band Festival in June 2006, Gary and Neil learned about each other's common interest in music. Gary and Neil performed again at this past June's Festival.

Their inspiration for music has taken them to several performances in Sacramento and surrounding areas. After several years of playing music, they have not only saved recorded LP's and CD's, but also the memories that came with them.



Gary Gravier
Chief of Operations and
Maintenance's Water and
Plant Engineering Office

A Balancing Act

Gary's interest in music began when he started playing the euphonium in sixth grade.

"Music gives my life a balance," said Gary, who is Chief of Operations and Maintenance's Water and Plant Engineering Office. "My work is the science side and playing music is the art side of me."

At age eight, Gary, who was raised in Oroville, began playing the piano, which his mother also played. His desire to play other instruments inspired him to try and play his uncle's clarinet in his middle school band. However, before playing his first note, the band leader introduced Gary to the euphonium.

Top Photo (Left to Right) Gary Gravier and Neil Gould have enjoyed being musicians since their childhood.

"I had never heard of the instrument. He brought out an old, beat-up silver euphonium and explained the different valve positions to make different notes," said Gary. "After a few weeks of practicing at home, I was rehearsing with the band."

Since there were plenty of euphonium players in his high school band, Gary volunteered to play the tuba all four years. While attending California Polytechnic State University in San Luis Obispo, Gary played the euphonium for the first three years until 1972, and then took a leave from playing in bands to work part-time while attending college and also starting his career and family.

Gary's 34 years of State service have all been with DWR. His assignments have included the design and construction of Warne and Alamo Powerplants, the expansion of Devil Canyon Powerplant, and the initial design of Los Baños Grandes. He is currently supervising the replacement of protective relays at all of the State Water Project pumping and power plants.

"After my wife got tired of hearing me talk about how much fun I had playing in bands, she bought me a euphonium in December 2002 as my 25th wedding anniversary gift and hooked me up with a band conductor," said Gary.

Gary returned to playing music with the Sacramento Concert Band and Cosumnes River College Band in January 2003. In addition to two concerts yearly, both bands also participate in the Carmichael Park Band Festival each June and the CRC Band and Brass Choir perform at the Downtown Plaza's rotunda on Wednesday nights in early December.

"I enjoy the sound of concert band music," said Gary. "As long as my brain, eyes, fingers, and mouth are coordinated enough to play my euphonium decently, I plan to continue this interest of mine."

A Different Tune

From school marching bands to a Dixieland Jazz band, Neil has played more than a dozen kinds of percussion instruments during his 25 years as a musician.

"When I'm playing music, it's a spiritual experience," said Neil. "My sense of self in the world is completely different. It's a wonderful sense of joy."

Like Gary, Neil played the piano during his first music lessons. After hearing the drums during an elementary school assembly, he was inspired to try playing them.

"Although the drums and the piano have a different sound, they are both percussion instruments," said Neil. "Like most drummers, I began playing on just a rubber practice pad with a pair of sticks. When I got my first drum set at home, the noise level required a lot of patience from my parents."

Neil also took a leave from music after college to start his career. As Senior Staff Counsel with the Office of the Chief Counsel, Neil, who received his law degree from the University of California, Berkeley, has worked 20 years for DWR. He currently reviews service agreements for the divisions of Operations and Maintenance, Environmental Services, Technology Services, and Engineering.

During a classic car "cruise night" held at the Vacaville Foster's Freeze, Neil met Robert Briggs, who was Director of the University of California, Berkeley marching band for 25 years, and is now the conductor

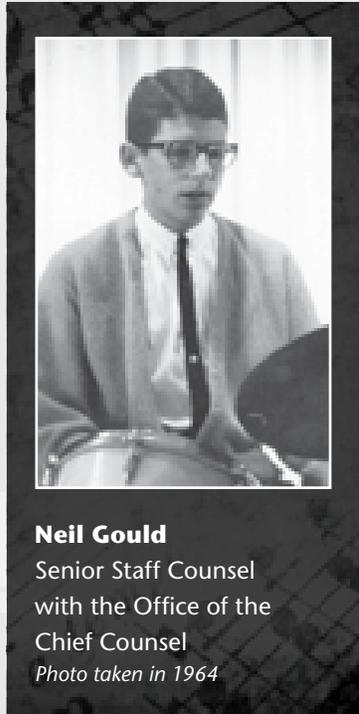
of Solano Winds Community Band, based in Fairfield. Bob invited Neil to join Solano Winds as their snare drummer. He also plays other instruments occasionally, including the bass drum, crash cymbals, gong, triangle, tambourine, wood block, maracas, congas, bongos and claves.

With the Solano Winds, Neil has performed for 10 years at about 10 events per year.

"Drummers are teased as only knowing how to crash and bash. But, we secretly know that we are the engine that drives the train," said Neil. "The key to playing any instrument in a group setting is to listen to the rest of the band and to make your sound fit with the group."

Neil has performed on 20 Solano Winds CD's and while in junior high and high school, was part of two LP recordings. Solano Winds plays marches, Broadway show tunes, and classical music. Neil's favorite composers include Ralph Vaughn Williams and Gustav Holst.

"I'm not in the band to get a promotion to something else. I want to keep playing, period," said Neil. "When I retire, I hope to play more. It's just a wonderful experience." ■



Neil Gould

Senior Staff Counsel
with the Office of the
Chief Counsel

Photo taken in 1964

A Broader Perspective about Law

By Annie Parker

At DWR, the arrival of summer is often heralded by an influx of college students, eager to begin working in any number of internships in such professional fields as engineering, biology, communications, and business administration. DWR's Student Employment Program is designed to provide students with on-the-job training in their chosen field, which is very important when searching for that first job out of college.

Although many college students working at DWR are in the process of earning their undergraduate degree, the Department also has special student positions open for those who are working on an advanced degree. In the Office of the Chief Counsel on the 11th floor, for decades, law students, such as **Deanna Gay, Kelly Mieske, and Heidi Avelino**, have interned in the Office of the Chief Counsel, where they have gained valuable insight into the working environment of a law office and what it is like to work in the public sector.

According to Staff Counsel **Scott Morgan**, one of the major differences between interning at a State agency and interning at a private firm is the pace of work.

"We don't bill by the hour at DWR, and when certain legal issues come in, we are able to investigate them and look at them in greater detail. The students have the ability to come and talk to us and research various avenues and questions related to an issue," said Scott. "We like to work collaboratively with our students and get their input on issues."

Furthermore, Scott explained that DWR is an ideal place to intern because of the wide range of law that students are exposed to, including property law, contract law, federal and State energy law, environmental law, and personnel law.

"Many State agencies have a narrower focus than DWR. Here, students are exposed to a broader range of legal issues," said Scott.

DWR's law student program accepts students who have completed their second year of law school.

"The students usually start right after finals, work through the summer, and continue up until about a week or two before school starts. If they are from McGeorge or Davis, they frequently stay on during the school year," said Law Librarian **Mary Ann Parker**, who acts as a supervisor for the students, fielding requests for assistance from the legal staff and helping the students with research and other support.

Due to the proximity of both the McGeorge School of Law in Sacramento and the University of California, Davis School of Law, most of the law students have attended one or the other. However, students from other schools including the Universities of San Diego, Santa Clara, Pepperdine, Loyola Marymount, and San Francisco along with the University of California in Los Angeles and Berkeley have also participated in the program.

"Usually, it's an issue of housing. If they come from the Bay Area or Southern California, they usually have family in the area," said Mary Ann. "The student who came the furthest was from the University of Arizona."

"I was interested in working for DWR because I had some familiarity with water issues from writing my undergraduate thesis on water rights on agricultural land in the Central Valley,"

DEANNA GAY



*“When I was growing up,
dinner conversations were often
about the State Water Project.”*

KELLY MIESKE

Former Law Student Makes Good at DWR

Jeannie Lee, Staff Counsel with DWR, started with DWR as a student assistant in the Division of Environmental Services while earning her undergraduate degree in Environmental Resource Science at the University of California, Davis. While working full-time as a Fish and Wildlife Scientific Aid at DWR, she attended McGeorge Law School in the evenings, and during her third year in law school, she transitioned to the Office of the Chief Counsel where she worked as a law clerk until her graduation.

As a full-time Staff Counsel, Jeannie works with DWR managers and supervisors on employment issues, and also represents the Department at State Personnel Board hearings.

“Since I was an Environmental Science major, working for DWR was a natural fit,” said Jeannie. “I feel very fortunate to practice law in the same department that provided me with my first job into State service as a scientist.”

According to Jeannie, the wide range of assignments she encountered as a student in the Office of the Chief Counsel helped prepare her for her legal career.

“I liked all of my projects because I gained a lot of knowledge and experience from all of my research and writing assignments,” said Jeannie.

Different Paths to Becoming a Lawyer

While many of the law students learn of The Office of the Chief Counsel internship program via word of mouth, **Kelly Mieske** came to DWR to follow her family tradition.



Kelly, a third year law student at Loyola Marymount Law School in Los Angeles, became familiar with DWR through her grandfather **Rudy Laumbach** and her father **Blaine Laumbach**, who both have worked and continue to work for DWR.

“When I was growing up, dinner conversations were often about the State Water Project,” said Kelly. “I am definitely excited that I now get to be part of the ‘shop talk’ conversations with them.”

So far, projects that Kelly has worked on include both water and business State Water Projects issues, the San Joaquin River Restoration Program, and various personnel issues alongside DWR staff counsel.

“I am interested in all areas of public interest and I really enjoy using my skills for a greater good. I’m very proud to work for this organization,” said Kelly.

Deanna Gay, a second year law student at the U.C. Davis School of Law, heard about the student program at DWR through school, and was interested because of the environmental law programs she studied as an undergraduate at the University of California, Santa Barbara.

“I was interested in working for DWR because I had some familiarity with water issues from writing my undergraduate thesis on water rights on agricultural land in the Central Valley,” said Deanna. “I find it interesting to see the differing perspectives on these issues.”



Deanna is interested in Environmental Law, and is also working on receiving her Environmental Law certificate as well as the Public Service Certificate. She is attending The University of California at Davis's Graduate School of Management as well.

"I am interested in impacting environmental policy formation and more importantly, practical and creative implementation through a business degree," said Deanna.

Deanna said that one of her more interesting projects so far was when she had to analyze the various liabilities DWR might face for a certain action.

"The question was broad and difficult, but it allowed me to be creative and explore various arguments," said Deanna.

Heidi Avelino, a third year law student at the University of California, Davis, learned about the intern program through her brother-in-law, who attended law school with Jeannie, and introduced them at a national conference.

"I entered law school knowing I was interested in focusing on environmental law. I completed a course on Water Law last school year, and found it to be one of the most interesting and complex topics that I have studied," said Heidi.

"I entered law school knowing I was interested in focusing on environmental law. I completed a course on Water Law last school year, and found it to be one of the most interesting and complex topics that I have studied."

HEIDI AVELINO

Heidi earned her Bachelor of Science in Biological Sciences from The University of California, Santa Barbara, and is working on an Environmental Law certificate as well. She said she hopes to work for a State agency once she graduates.

"I am happy to be gaining experience at DWR on issues dealing with water rights and the California Environmental Quality Act and so far my internship with DWR has given me broad exposure to many different areas of law, including governmental tort liability and personnel issues," said Heidi.

The Program Continues

According to Mary Ann and Scott, while having students around helps serve some of the more practical functions of the office, such as an extra set of hands for research, the legal internships are more of an opportunity for the students than for the legal staff.

"Students get a lot of work related experience, and the Department benefits directly from their efforts, but I think the greatest benefit may be less tangible. No matter what a lawyer ends up doing professionally, the odds are good that they will deal with a state or other governmental agency. In that sense, one of the greatest benefits of this assignment may be to see how a state agency works from the inside," said Scott.

Mary Ann agrees, "When I've asked the students over the years what they like about working here, they usually say they like the variety of work they get to do. Plus, they are always fun to have around because they are excited about the law and they really want to learn what you have to tell them about the law." ■

A Visit to Africa

By Annie Parker

In June, I spent two weeks in Ghana in the northwest corner of Africa to visit my friend Mike, a Peace Corps volunteer stationed in the village of Hain in the Upper West Region.

Once known as the Gold Coast because of the vast amounts of gold that were found in the local rivers Ankobra and the Volta, Ghana was established as a British colony in 1874. Ghana won its independence in 1957 and 2007 marked the 50th anniversary of the country. When I was there, I saw many Ghanaian flags flying and colorful billboards lining the road exhorting this significant milestone.

Traveling in Ghana is difficult because almost no one owns their own car and public transportation is spotty. It took us three long days to travel about 300 miles. It was a long trip, but it was worth it. Everyone in Hain was incredibly friendly. It took us about an hour to walk a mile through town because everyone wanted to greet us.

Ghana is located a few degrees north of the equator and the temperature ranges from hot and humid in the south to hot and dry in the north. I was there during the rainy season, and in the south it rained almost every day. The north area of Ghana was experiencing dry conditions, and many of the farmers were having difficulty irrigating their fields and feeding their livestock. Fortunately, there are wells known as “boar-holes” that have been dug in the north that supply the locals with fresh groundwater for drinking and cooking.

Water and Power Reliability

Reliable electricity in Ghana is particularly hard to come by because most of the country is supplied by hydroelectric power from the Lake Volta complex. Lake Volta, which covers 3,283 square miles and can hold about 124 million acre-feet, is one of the largest man-made lakes in the world.



On safari, Annie viewed bathing elephants at Mole National Park in Northwest Ghana.

In 1981, an increased demand for power resulted in the construction of a small dam at Kapomg, downstream of the dam at Akosombo. While the Volta River Authority has been generally successful in maintaining Lake Volta levels, severe droughts in the area combined with increased power demand have had a significant impact on power generation. According to a March 2006 article in the “International Water Power and Dam Construction” magazine, west Africa experienced a series of droughts from 1997-2000. In 1998, the water level dropped by 74m at one point, slashing generating capacity at the Lake Volta facilities by over 600MW to just 300MW.

Ghana has recently been experiencing low rainfall again, and it has been estimated that there must be at least two years of normal rainfall to refill Volta to capacity. When I was there, low lake levels had forced the government to implement a series of rolling blackouts. Entire neighborhoods are blacked out either in the day or in the evening, and some of the smaller villages are often completely without electricity for a day or two. Some essential locations, such as hospitals and military offices, have generators. Currently, the Ghanaian government is exploring outside alternatives for power generation. ■

25 Years of Service



Alan Arroyo
Public Affairs Office
Audio-Visual Technician
November 2007



Howard Ayers
Oroville Field Division
Hydroelectric Plant Mechanic
November 2007

40 Years of Service



Mike Kemper
Management Services
Office Assistant
November 2007



Mike Driller
Engineering
Senior Engineer
August 2007



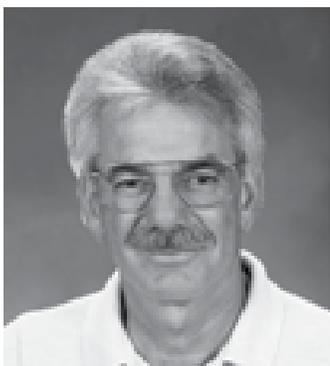
David Gonzalez
Environmental Services
Senior Environmental
Scientist
October 2007



Katherine Gould
Oroville Field Division
Administrative Officer I
November 2007



Khalil Jafarnejad
Engineering
Senior Electrical Engineer
November 2007



Tim Johnston
Engineering
Transportation Surveyor
October 2007



Allen Thompson
San Joaquin Field Division
Health and Safety Officer
August 2007



John Wilson
Delta Field Division
Senior Hydroelectric Plant
Operator
December 2007



Matthew Winston
Flood Management
Senior Meteorologist
September 2007

Professional Engineer Graduate



Qiang Shu
Bay-Delta Office
Engineer
April 2007



Xiaochun Wang
Bay-Delta Office
Engineer
August 2007

Birth Announcements

Congratulations to DWR parents:

Emin C. Dogrul, an Engineer in Bay-Delta Office, has a son named Evren, who was born on July 16 weighing 8 pounds, 9 ounces and measuring 21.5 inches long.

Sherry Constancio, Engineer with Flood Management, has a son named Colton Robert, who was born on October 8 weighing 7 pounds and was 19 inches long.

Adam Schneider, an Engineer with Flood Management, has a daughter named Maya Alexa, who was born on September 25 weighing 7 pounds, 13 ounces and was 19 inches long.

Retirement

Gary Kirk

Gary Kirk's assignments during his 30-year accounting career included internal audits, financial reports, and SAP manual reservations.

"I'm going to miss being around all of the people I have met at DWR. I have made some very good friends here," said Gary, who worked 22 years at DWR before retiring as an Associate Governmental Program Analyst (AGPA).

Gary started his State career in 1977 working as an Internal Auditor in the Department of General Services while earning his Bachelor of Science degree in Business, with a double concentration in Accounting and Management Information Science. He worked for the Office of State Printing, where he supervised the Accounts Payable Section. In 1980, Gary was promoted to an Accounting Office Supervisor at the Department of Developmental Service as the Federal Billing Section Supervisor.

Gary's DWR career began in 1985 as an Accounting Officer Specialist in the Utility Cost Accounting Section, where he worked on the distribution of State Water Project costs.



"Almost all of the main construction that will be done on the SWP has already been completed, so our main function was to recover SWP costs. Our job was to set up special tables to allow DWR to recover the costs of the water used by the SWP Contractors," said Gary.

In 1988, Gary transferred to the Accounts Receivable section, where he set up and administered General Fund and federally funded reimbursable contracts. In 1996, he became a Senior Accounting Office Specialist in the Program Cost Accounting Section, where he was responsible for creating and distributing Program Managers and other key financial reports used by the Division of Fiscal Services and other Program Managers throughout DWR.

When the SAP system was introduced to DWR in 1999, Gary was transferred to the Funds Oversight Office, reclassified as an AGPA and worked on settling cost within the SAP system and setting up Internal Order Numbers, Work Breakdown Structures and Plant Maintenance Orders. Gary's favorite project at DWR was the SAP manual reservations.

For retirement, Gary and his wife plan to sell their house in California, relocate to the Orlando area and travel in their newly-purchased fifth-wheel trailer.

"Florida would be an ideal place for us to retire because we love to cruise, I love to golf, my wife loves to do crafts, and we are both going to enjoy that warm winter weather," said Gary.

Retirement

Susan Weber

Attending college and law school during the Vietnam War era sparked DWR Staff Counsel III **Susan Weber's** interest in government and public policy. Her interest in law came with its promise of being a path to peaceful dispute resolution.



"Working at DWR has been an adventure and a great way for an out-of-state transplant to gain insight into the history and economy of California," said Susan, who was born in South Dakota and grew up in New York City and New Jersey. "I have been privileged to get to know some incredibly dedicated and creative public servants, learned a lot, made some good friends, and have enjoyed myself at least 80 percent of the time!"

During Susan's 28 years of DWR service, her assignments included working on projects to add portions of five California rivers to the National Wild and Scenic Rivers System and serving as Counsel to the California Water Commission 1986-87. She also worked with the Division of Design and Construction (now Division of Engineering), Safe Drinking Water bond programs, drought water banks, preliminary stages of Federal Energy Regulatory Commission (FERC) relicensing of the Oroville Facilities, Contract Services, and assisted with drafting the Bay-Delta Framework Agreement. From 1987 to 2001, Susan was DWR's Chief Counsel. Her most recent assignment before retirement was working on the Hyatt-Thermalito litigation.

"My favorite project was working in the early 1980's with a team of engineers, planners and lawyers to add portions of several California rivers, including parts of the Klamath, the Scott, the Smith, the Middle Fork Feather, and the Lower American rivers, to the National Wild and Scenic Rivers system, even though we worked every day through a very hot summer without air conditioning on the weekends because the State was trying to conserve energy," said Susan. "Seeing a bald eagle along the Middle Fork of the Feather River or deer in the Scott River Valley have been tangible reminders of the protection conferred on the rivers by the national act."

Before joining the State, Susan graduated in 1967 from Harvard-Radcliffe College in Massachusetts and in 1972 from the University of California, Hastings College of the Law School. She later worked four years as a legal editor at Matthew Bender

and Company in San Francisco and two years as law clerk to the Chief Justice of the Idaho Supreme Court in Boise.

Susan's retirement plans include spending time with her twins Christopher and Emily during the two years before they head off to college. Reading, writing, volunteering, following politics, cooking, playing music, and having a garden that consists of more than two cherry tomato plants are some of her many plans.

"I'm extremely grateful to have had the chance to work with all of the talented and able lawyers who have served on the Department's legal staff over the years," said Susan.

Mike Brun

After nearly 25 years with DWR, **Mike Brun**, a Hydroelectric Plant Mechanic II at Oroville Field Division, retired in June of 2007.

Mike came to DWR as a Mechanic I after working for 10 years for Granite Construction, where his last assignment was the construction of DWR's Alamo Powerplant.

"On that particular job, I made contact with several DWR employees, and they encouraged me to apply at DWR," said Mike.

After 10 years as a Mechanic I, Mike was promoted to a Mechanic II position. He became foreman of the Hyatt Powerplant, where his assignment included overseeing the refurbishment of the old turbines at the Hyatt Power Plant to six new 68-ton stainless steel turbines. The project will be completed shortly after his retirement.

"I have enjoyed working at DWR. The work has always been good, and I have enjoyed establishing the relationships that I have with the people I work with," said Mike.

For retirement plans, Mike has many interests to keep his days full. He plans to continue playing in his band. He also plans to continue restoring his three classic cars.

Mike is a certified diver, and was officially a member of the DWR dive team as a tender. He plans on taking trips to Belize and other diving destinations around the world.

"My wife and I have lots of places we plan to visit," said Mike. "We're going to try and take at least one to two major trips a year, and there are lots of places we want to see."



Retirement

Don Kurosaka

Don Kurosaka, Delta Conveyance Branch Chief with the Bay-Delta Office, retired from DWR after more than 33 years of State service. Don, who was one of the few DWR engineers who had licenses as a Civil and a Structural Engineer, was responsible for managing the CALFED Conveyance Program and major conveyance and water quality projects.



"I'll miss all the many friends I've made while working at DWR. I've really been able to be involved in a lot of very interesting, scientific work in the Delta to better understand its hydrodynamics and how to make improvements. I'm really glad that our study efforts to improve water quality and protect fish may soon come to fruition. Although I won't be in DWR to see them built, I know the people that I've left on these projects will do a great job," said Don.

After graduation from the University of California, Davis in 1973 with a Bachelor of Science in Civil Engineering, Don started working for DWR in 1978 as an Associate Engineer in the Division of Engineering (formerly Design and Construction) and became Plants Design Chief. He later obtained his Master of Science in Civil Engineering from California State University, Sacramento in 1983. After working in the Design Office for several years, Don worked in the divisions of Planning, Flood Management, Operations and Maintenance, Planning and Local Assistance and the Executive and the Bay-Delta Office.

From 1994 to 1996, Don served as the Coastal Branch Project Manager, during which he oversaw the planning, right of way acquisition, design and construction, environmental compliance, and operations and maintenance of the Coastal Branch Phase II Project. In 2000, he managed the Implementation of the SAP Phase 2A business system. From 2000 to 2001, he managed DWR's reorganization for the CALFED program.

Don's most recent special assignment was serving as the project manager for the Emergency Levee Project, a special project created in 2006 in response to Governor Schwarzenegger's emergency proclamation on repairing critical erosion sites in the Central Valley. As project manager, Don oversaw all facets of the levee program which included

the acquisition of environmental and right of way permitting, design and construction of the identified critical levee sites, and the identification of other potential critical sites by November 2006. This work also involved close coordination with the U.S. Army Corps of Engineers and the local levee maintenance agencies.

"During my career at DWR, I have had the privilege of working on many different, and very important projects," said Don. "It's not often that one gets to manage a project from initial conception to operations. I was fortunate to have been given the opportunity to manage these projects and that the Department had the confidence in me to get these important projects completed. I learned a lot of technical things in the process, but I learned how working with people and the general public is probably even more important. I couldn't have asked for a more complete engineering career in the Department."

Although he has retired from State service, Don isn't planning on retiring from work. He has accepted a job from Shaw Environmental and Infrastructure, a private engineering and construction firm, where he will be heading up a new business line developing water resource and coastal restoration projects.

"I found it very rewarding to plan and construct a project, so I thought now would be a good time for me to continue this type of work in the private sector," said Don.

Larry Lee

During **Larry Lee's** 30 years of State Service, he has worked on several significant flood control projects in the Central Valley.

"I have worked on the American River Common Features, the Folsom Dam Modifications, the West Sacramento Project, the Hamilton City Project, and many others," said Larry, who retired as a Senior Engineer in Flood Management after working 27 years for DWR.

Larry began his State career with the Department of Transportation, where he worked for approximately three years before transferring to DWR's Division of Operations and Maintenance in 1981. Once at DWR, Larry worked in various scheduling positions before he moved to the Division



Retirement

of Flood Management as a flood forecaster in 1987. Larry was appointed Chief of the Flood Maintenance Yards in 1990. After five years, he began working for the Flood Project Development Branch.

"I enjoyed working with many people during my time at DWR," said Larry.

Along with his work at DWR, Larry has taken his love of fishing from a hobby to a business that he would like to expand upon retirement. Larry builds custom fishing rods for all fishing conditions including fly fishing, spinning, bait casting, and salt water fishing. He builds more than 300 rods a year. His plans include conducting lessons on how to build rods and writing rod building articles for local fly fishing club newsletters and Web sites.

"I look forward to having more time to test my products," said Larry.

Jackie Schlessinger

Jackie Schlessinger, Staff Services Analyst with the Division of Technology Services, retired in October after almost 20 years with DWR.

Jackie started her state career as an Office Assistant with the Energy Division in 1988, where she was quickly promoted to Office



Technician. Jackie joined Operations and Maintenance in 1991. After 10 years, Jackie was promoted to Business Services Officer and transferred to the Division of Management Services' Mobile Equipment Office, where she did a number of different assignments including paying invoices, tracking General Services cards, verifying and paying taxi invoices, and working closely with the Division of General Services.

"I enjoyed my time working in the Mobile Equipment Office. There was always a great variety of work for me to do instead of the same repetitive daily endeavor," said Jackie.

In 2003, Jackie made a lateral transfer to a Staff Services Analyst position in the Division of Technology Services, where her work included service contracts, paying invoices and requisitioning.

"The work I have done at DWR has often been very interesting and I will miss the close relationships I have made over the years," said Jackie.

After retirement, Jackie plans to embark on her new career as a "Senior Research Associate in the Field of Child Development", also known as doting grandmother to her grandson while his mother goes back to work. After her grandson is ready to attend pre-school, Jackie and her husband plan to take an extended road trip around the U.S. in their trailer.

"Many of our friends have moved away, and this will give us an opportunity to visit them," said Jackie.

Manuel Guerrero

From San Luis to the Delta, **Manuel Guerrero**, who retired as a Utility Craftworker Supervisor, assisted in the operations and maintenance of the State Water Project during his 37 year of State service.



In 1970, Manuel started working at the Operations and Maintenance Sub-center at San Luis Field Division (SLFD) as a temporary worker, while he waited for an exam that would take him to a full-time position. After a few years at SLFD, he transferred to the Coalinga Sub-center in 1981. After 12 years, he was promoted to Supervisor. He then transferred to the Delta Field Division (DFD).

During his 25 years at DFD, Manuel supervised the maintenance of many Delta facilities, including the North Bay Aqueduct, South Bay Aqueduct, and portions of the California Aqueduct. He was involved in the corrosion coating of many of the radial gates at the Delta SWP facilities.

One of Manuel's favorite projects was when his group repaired several leaks in the South Bay Aqueduct. He enjoyed the high level of coordination and collaboration by DFD staff to make the repairs.

"Fixing those leaks meant putting a lot of people and supplies into action at the same time," said Manuel. "We had to get in and out of there pretty quickly to get it done, and it took a little skill and pride from everyone involved to get it done."

After retirement, Manuel and his wife plan to relocate to Idaho to a new home, where they will sightsee and relax.

"I am definitely going to be taking a boat out and doing a lot of fishing," said Manuel.

Retirement

Linda Henderson

During Linda Henderson's more than 30 years of State service, she got a taste of both Southern and Northern California.

"I am looking forward to enjoying the tranquility of the outdoors," said Linda, who retired in 2007 as an Associate Governmental Program Analyst for Oroville Field Division. "I like to fish and camp, and of course, there will be no alarm clocks around."

Linda's State career began in 1974 in Los Angeles with Cooperative Personnel Services, a Division of the State Personnel Board. After working five years for The Worker's Compensation Appeals Board in Van Nuys, Linda joined DWR's Southern Field Division as an Office Assistant II in 1980.



In 1983, Linda and her family relocated to Oroville, where Linda worked at the Oroville Field Division as an Office Services Supervisor. In 1990, Linda was promoted to Administrative Officer I, where she supervised the Administrative Services Section.

"One of my more interesting projects at Oroville was the work I did monitoring and maintaining the expenditures of the Lake Oroville Recreation Plan from 1993 to 2007," said Linda.

She was promoted to Associate Governmental Program Analyst (AGPA) in 2006, where she worked with the newly formed License Coordination Branch.

"As AGPA, I processed contracts and expenditure reports in conjunction with the FERC Relicensing Project in Oroville," said Linda.

As well as enjoying the outdoors, other retirement plans included traveling with her husband around the United States.

"We are looking forward to going places that we have never been before, and we are also looking forward to revisiting those places we have always enjoyed," said Linda.

Retirement

Donald Arnett

San Luis Field Division
Assistant Utility Craftsworker
Supt.

Michael Brun

Oroville Field Division
HEP* Mechanic II

Julia Carrasco-Minton

Management Services
Staff Services Manager I

Paula Desarno

Operations and Maintenance
Staff Information Systems
Analyst

Linnet Fong

Fiscal Services
Accounting Administrator II

Steven Gold

State Water Project Analysis
Office
Senior Engineer

Paul Jones

San Joaquin Field Division
Mobile Equipment Superin-
tendent I

Lonny Mann

Southern Field Division
Building Maintenance
Worker

Farhad Nasirian

Engineering
Engineering Geologist

Ronald O'Quinn

Engineering
Construction Supervisor I

Patricia Palacios

Public Affairs Office
Graphic Designer III

Edward Parker

San Joaquin Field Division
Senior HEP* Operator

Catherine Reiner

Environmental Services
Environmental Scientist

Judith Sabella

Environmental Services
Associate Governmental
Program Analyst

Larry Shuman

Northern District
Staff Information Systems
Analyst

Joe West

San Joaquin Field Division
Senior HEP* Operator

* Hydroelectric Plant

Obituaries

William Tuthill

After decades of precise engineering design work for State agencies, **William Tuthill** shed bureaucratic obscurity, attaining popularity and recognition as a realistic artist painting Sacramento's urban scene.

Tuthill's State career featured 10 years working in the bridge section for the Department of Transportation, creating models, architectural renderings and structural drafting, and over 20 years with DWR, as a technical and structural draftsman.

In his mature years, Tuthill's architecturally exact paintings of the Sacramento cityscape brought him renown and popularity. Tuthill paintings realistically portray such Sacramento vistas as Old Sacramento, Tower Bridge and the Sacramento riverfront, the State Capitol, and Tower Theater.

By the time he died on July 13, 2007, at 80, he'd achieved acclaim as an artist with a distinct and recognizable style, rendering lifelike city scenes, vibrant with bright colors. The cause of death was multiple myeloma.

Tuthill reversed the typical career pattern of State workers whose retirement usually removes them from the professional spotlight. His engineering perspective was a profound influence in his art, as his painting career expanded, starting about 20 years ago.

"We live in a world of horizontals and verticals, the horizontal of nature and the vertical of man", Tuthill once observed. "This is what I'm comfortable painting. I like the control and precision of the architecture of a city or a bridge, a train or a car. So I paint in a tight, controlled style that reveals their structure."

Tuthill drew praise as "a great artist" and "a Renaissance man" by Barry Smith, owner of the Smith Gallery. Smith's gallery featured Tuthill as one of its major artists over the past decade. "Public demand for Tut's art was exceptional," said Smith, a friend of Tuthill's for 20 years. "The Sacramento arts community has lost an extraordinary artist. He knew so much and did so much in his life."

According to family members, Tuthill was a prolific artist who exhibited at small galleries and major shows, donated paintings to charity auctions and won many awards.

Born in 1926 in Long Island, New York, Tuthill came to Sacramento with his family in 1944. As a youth, he loved flying and obtained a pilot's license by age 16. After graduating from



McClatchy High School, he enrolled at Sacramento City College. Though interested in art, Tuthill planned to become an aeronautical engineer until his studies were interrupted by a serious skiing accident. While convalescing, he drew to pass the time. When he showed his drawings to art instructors, they encouraged him to study art. He changed his major to art.

He studied drawing and painting at Sacramento City College for two years, and then took two years of advanced art studies at Chouinard Art School in Los Angeles.

At DWR, Tuthill worked as a Structural Design Technician III in the Department's Division of Engineering, starting in the mid-1970s. Coworkers recall him as a highly skilled professional, self-disciplined and personally direct and candid.

He is survived by his wife, Mary of Carmichael, California, son, Rod of Clearwater, Florida, and daughter, Sandy Bennett of Gold River, California.

Donn Stafford

Donn Stafford, a former DWR engineer who served as the Chief of Dams and Canals section of the Civil Design Branch, passed away at the age of 84 on June 24, 2007.

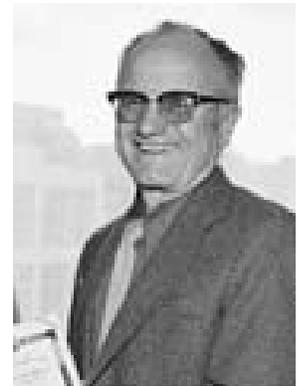
After a career in the U.S. Army, which included active service in WWII, Donn earned his Civil Engineering degree from the University of Southern California in 1950.

Before joining DWR in 1959 as an Associate Civil Engineer, he served as a Los Angeles County Engineer for four years and at a consulting firm in Sacramento for two years. In 1961, he was promoted to Associate Engineer. He later was promoted to Senior Engineer and Supervising Engineer. In 1983, he was Chief of the Dams and Canals Section in the Civil Design Branch, where he worked until his retirement in 1986.

Donn's assignments included the design of the North San Joaquin Division, Clifton Court Forebay, and preliminary design of the proposed Peripheral Canal. He also supervised the design for the California Aqueduct, the Delta facilities, the Suisun Marsh, and future water supply facilities.

After retirement, Donn kept active by managing his sons' and nephew's Little League teams and maintained a great interest in bowling, fishing, and golfing. He was also an active member of several local community organizations.

Donn is survived by his wife of 57 years, Lillian, his son Jeff and three grandchildren.



Cheryl Henderson

Cheryl Henderson, a Legal Secretary with the Office of the Chief Counsel, passed away on October 8 after a long battle with cancer.

"She was a very caring person and she was always aware of other people and their needs," said Katy Spanos, Staff Counsel with the Office of the Chief Counsel.



Cheryl started her DWR career as a stenographer in 1974. She was promoted to a Legal Stenographer in 1976, a Senior Legal Stenographer in 1977, and eventually to a Senior Legal Typist in 1993. She performed a wide range of secretarial tasks in her daily duties, and she has worked for nearly every attorney that has come through DWR in the last 30 years.

Cheryl was well known for her enthusiasm for a good party and she was always ready to celebrate a special occasion with her friends in and outside of the Legal Office.

"She was the one in our office that kept track of birthdays, promotions, and other special occasions, and she loved taking care of the arrangements for parties such as the cards and making sure there was good food," said Katy.

She was also active in many DWR charity-related activities and participated in many events including the DWR HeartWalk, DWR's WalkAmerica, the March of Dimes walk, the Annual Food Drive, and she often helped provide staff for DWR's Take You Kids to Work days.

Cheryl was an avid amateur poet, and over the years she produced hundreds of poems. The subject matter varied from her own personal life, her beloved dogs Sweetie and Chrissy, poems honoring her close friends, to the annual Christmas poem for the Office of the Chief Counsel.

She joined Capital Communications Toastmasters club three years ago to improve her writing and speaking skills. According to Virginia Sajak, Administrative Support, California Water Plan, Statewide Water Planning Branch, who joined Toastmasters at the same time as Cheryl, she got such useful feedback from the group that it really allowed her to blossom and gain confidence in her writing and speaking endeavors. She was certified as a Competent Toastmaster, a title awarded after a member writes and recites 10 speeches, meeting her personal goal of delivering one speech a month. She also wrote for DWR News/People as a guest writer.

"She was really at the top of her game when she left us. We will definitely miss her," said Virginia.

Cheryl is survived by her mother Mary Neidigh and her father Sid Henderson.

Ted Hisaaki Yoshikawa

Ted Hisaaki Yoshikawa, DWR's Data Center Manager in the Division of Technology Services (DTS), passed away at the age of 61 on October 7, 2007, after battling cancer.



Before joining DWR as an Information Technology Specialist II in February of 1982, he worked for the Department of Social Services as an Associate Data Processing Analyst. He was promoted to Data Processing Manager I in December of 1982, then he became Staff Information Systems Analyst (Supervisor) in 1999.

In 1983, Ted was a key member of the team assigned to the conversion of computer programs from the Department's Control Data 3300 to the Cyber 720. This was a twenty month project. Ted also supervised the Engineering Support Group, a team of programmers assigned to develop in-house engineering applications. Because of Ted's computer application knowledge, he became the project leader for converting the Department's accounting systems for the changes needed for the Year 2000. A task that was successfully completed in time for the turn of the millennia.

Ted's recent assignment, as the manager of the Department's Data Center, earned him the respect of his staff because of his dedication. He was always pleasant and helpful, no matter what was requested. He also quickly responded to alerts and emergencies in the Data Center, even on evenings and weekends.

"Ted will be missed by all who knew and worked with him in the Department of Water Resources," said Chris Navarrete, Ted's Supervisor.

Ted is survived by his wife Helen, children Vickie, Shannon, Derek, and Tara, and grandson Nicholas.

New Hires

Most Syada Ara

Flood Management
Engineer

Katrina M. Beck

Management Services
Office Technician (Typing)

Robyn Bilski

Environmental Services
Environmental Scientist

Patrick Brown

Management Services
Office Technician (Typing)

Michael Camara

San Luis Field Division
Utility Craftworker

Gary Champ

Operations and Maintenance
Heavy Equipment Mechanic

Joe Christen

Environmental Services
Environmental Scientist

Ah Chu

Engineering
Office Technician (Typing)

Jaikie Dyer

San Luis Field Division
Utility Craftworker

Levoys Finley Jr.

Southern Field Division
Building Maintenance Worker

Kimberly Gazzaniga

Environmental Services
Environmental Scientist

Maurice Hall

Planning and Local Assistance
Engineer

Christopher Haut

Oroville Field Division
Heavy Equipment Mechanic

Peter Hegyes

Engineering
Office Technician (Typing)

Karyn Heim

Planning and Local Assistance
Engineer

Yuchen Hsueh

Engineering
Engineer

Amy Jenkins

Environmental Services
Fish and Wildlife Technician

Thomas Kastner

Environmental Services
Fish and Wildlife Technician

Michal Koller

Flood Management
Engineer

Irene Kwasny

Executive
Staff Counsel

Kathryn Leigh

Engineering
Mechanical Engineer

Lan Liang

Bay-Delta Office
Engineer

Joshua Martinez

Engineering
Mechanical Engineer

Kevin Mc Allister

Environmental Services
Fish and Wildlife Technician

Cynthia Meadows

Planning and Local Assistance
Office Technician (Typing)

Mohammed Mohammed

San Joaquin Field Division
Engineer

Efren Munoz Jr.

Southern Field Division
Utility Craftworker

Allan Oto

Flood Management
Engineer

Melissa Pi

Safety of Dams
Engineer

Charles Reece

Environmental Services
Environmental Scientist

Sheri Rush

Management Services
Staff Services Analyst

Salendar Singh

Engineering
Engineer

Edward Sison

Engineering
Mechanical Engineer

Robert Spencer

Southern Field Division
HEP* Electrician I

Robert Spencer

Operations and Maintenance
HEP* Electrician I

Michael Toussand

Environmental Services
Stock Clerk

Jeanet Uy

Fiscal Services
Accountant Trainee

Deborah Van Vacter

Southern Field Division
Building Maintenance Worker

Jamal Zumot

Engineering
Engineer

***Hydroelectric Plant**

Promotions

Nathaniel Amey

San Joaquin Field Division
HEP* Electrician I

Rachel Barnett

Environmental Services
Environmental Scientist

Milan Bhatia

California Energy Resources
Scheduling
Associate HEP** Utility
Engineer

Amarjot Bindra

Flood Management
Senior Engineer

Lacretia Bratcher

Executive
Executive Assistant

Ronald Brault

Oroville Field Division
HEP* Mechanic II

Charles Brush

Bay-Delta Office
Engineer

Alex Bumgarner

Flood Management
Service Assistant (Maintenance & Operations)

Maria Buric

Engineering
Senior Land Agent (Supv.)

Jesse Cason, Jr.

Operations and Maintenance
Associate HEP** Utility
Engineer

Stuart Chan

California Energy Resources
Scheduling
Supervising HEP** Utility
Engineer

Ko-Ching Chang

Flood Management
Senior Engineer

Helen Chau

Management Services
Associate Information Systems Analyst

Merllyn Ching

Fiscal Services
Office Technician (Typing)

Tom Christensen

Flood Management
Senior Engineer

Deborah Condon

Flood Management
Environmental Program
Manager I (Supv.)

Doak Cotter

Oroville Field Division
Water Resources Technician II

Cathy Crothers

Executive
Assistant Chief Counsel

George Cullen

Southern Field Division
HEP* Mechanic I

Nicole Darby

State Water Project Analysis
Office
Staff Environmental Scientist

**** Hydroelectric Power**

Promotions

Eleanor Deanda

Fiscal Services
Associate Accounting Analyst

William Dickens

Oroville Field Division
Water Resources Engineering
Associate

Carla Elder

Fiscal Services
Accounting Officer

Christine Erickson

Flood Management
Staff Environmental Scientist

Frederick Feyrer

Environmental Services.
Staff Environmental Scientist

Maricella Flores

Fiscal Services
Accounting Administrator II

Anna Fong

Flood Management
Senior Programmer Analyst
(Supv.)

Serena Fong

Fiscal Services
Accountant Trainee

Sid Generoso

Delta Field Division
Electrical-Mechanical Testing
Technician I

Joe Guerra

San Joaquin Field Division
Utility Craftworker Supt.

Abraham Gutierrez

San Joaquin Field Division
Mobile Equipment Superin-
tendent I

Mark Herold

Flood Management
Senior Engineer

Matthew Hicks

Environmental Services
Chemist

Cory Hutton

Flood Management
Service Assistant (Mainte-
nance and Operations)

Richard Jerue

Operations and Maintenance
Senior Water and Power
Dispatcher

Gardner Jones

Environmental Services
Environmental Scientist

Robert Jones

Engineering
Transportation Surveyor
(Caltrans)

Lincoln King

State Water Project Analysis
Office
Senior Engineer

Katherine Kishaba

Fiscal Services
Staff Services Manager III

Eric Lauchli

Operations & Maintenance
Electrical-Mechanical Testing
Technician I

Andrew Lopez

Environmental Services
Business Services Assistant

Gregory Louie

Operations and Maintenance
Associate HEP** Utility
Engineer

Eric Mcgrath

Flood Management
Senior Engineer

Constantin Mercea

Flood Management
Senior Engineer

William Morgan

Delta Field Division
HEP* Mechanic II

Jamie Mulkey-Flink

San Joaquin Field Division
Administrative Officer II,
Resources Agency

Frank Nadal II

San Joaquin Field Division
HEP* Mechanic I

Earl Nelson

Flood Management
Environmental Program
Manager I (Supv.)

Robert Neves

Delta Field Division
Mobile Equipment Supt. I

Victor Pacheco

Bay-Delta Office
Principal Engineer

Adam Pan

State Water Project Analysis
Office
Engineer

Linus Paulus

Engineering
Senior Land Agent (Supv.)

Tawnly Pranger

Flood Management
Senior Engineer

Linda Quok

State Water Project Analysis
Office
Supervising HEP** Utility
Engineer

Maxine Roberts

Management Services
Personnel Supervisor I

Florine Rose

San Joaquin Field Division
Assistant Utility Craftworker
Supt.

Christopher Sanchez

Public Affairs Office
Graphic Designer III

Yolanda Saucedo

San Joaquin Field Division
Senior HEP* Operator

Bijaya Shrestha

Bay-Delta Office
Senior Engineer

Ronald Souza

San Luis Field Division
Assistant Utility Craftworker
Supt.

Vu Thai

Engineering
Senior Engineer

Terry Thompson

Flood Management
Engineer

Lisa Toms

Fiscal Services
Accounting Administrator II

Dat Tu

Technology Services
Systems Software Specialist II

Jeffrey Vangilder

Flood Management
Senior Engineering Geologist

Reymunda Vences

Management Services
Staff Services Manager I

Michael Waggoner

Safety of Dams
Principal Engineer

Clint Walker

Environmental Services
Business Services Assistant

Perry Wallace

San Joaquin Field Division
Heavy Equipment Mechanic

Timothy Wehling

Engineering
Senior Engineer

Elisabeth West

Fiscal Services
Accounting Officer

David Wheeldon

Flood Management
Senior Engineer

Ryan Wilbur

Operations and Maintenance
Senior Engineer

David Williams

Flood Management
Utility Craftworker
Supervisor

Allan Wong

Management Services
Inspector of Automotive
Equipment

Jimmie Wright

Delta Field Division
HEP* Mechanic II

*** Hydroelectric Plant****** Hydroelectric Power**

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.

STATE OF CALIFORNIA • DEPARTMENT OF WATER RESOURCES

DWR NEWS/People
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