

## Attorney Has A Friant Homecoming First Full-Time Counsel Starts Work With FWA

**W**hen Jennifer Buckman began her duties late this past summer as the Friant Water Authority's first full-time General Counsel, she found herself on familiar ground.

Buckman spent several years gaining detailed knowledge about the Friant Division, its Central Valley Project water contractors and the San Joaquin River as one of the attorneys representing Friant in the San Joaquin River litigation and its Settlement, reached in 2006.

### **SIMILARITIES**

In many ways, she says, things at Friant haven't changed.

"It's busy and I'm still working on all the issues we were working on when I left," Buckman said.

At the time, she was an attorney with Best Best & Krieger (BB&K), working closely on the river case brought in 1988 by the Natural Resources Defense Council and more than a dozen other environmental and commercial fishing plaintiffs.

For the past several years, Buckman was on the staff of Somach Simmons and Dunn, working on issues related to the Sacramento River Settlement Contracts, Sacramento County regional sanitation and wastewater treatment, and the City of Stockton's relationship with the Delta.

### **IN SACRAMENTO**

In her new FWA position, she is based in Sacramento, near where Buckman and her husband and two children live.



Friant Water Authority / J. Randall McFarland  
Jennifer Buckman — first full-time General Counsel for the Friant Water Authority.

She says she was lured back to the Friant Water Authority because it enabled her "to get into the issues. The Settlement and the Bay-Delta issues are interesting to me. I wanted to be more involved in those and couldn't as outside counsel because of cost considerations."

Buckman said much of her attention is being focused on three areas:

- San Joaquin River Settlement implementation and legal issues, "keeping everyone to the deal we agreed to." Buckman added, "The Settlement is basically a process. It's going to be ongoing. It's really a very involved experimental pro-

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## SAN JOAQUIN RIVER RESTORATION PROGRAM

# Friant Files Comments On Environmental Studies

Extensive comments from the Friant Water Authority are among the approximately 100 responses that have been submitted on a massive San Joaquin River Restoration Program draft environmental studies released last spring.

An extended comment period on the 8,000-page draft programmatic environmental impact statement and report closed September 21. The U.S. Bureau of Reclamation and other state and federal agencies now must review and respond to every comment before finalizing the programmatic EIS-EIR.

### **WATER SUPPLY EFFECTS**

Ronald D. Jacobsma, FWA General Manager, said Friant's comments focused on the overall effects of reduced water supply availability to agricultural and municipal users within the Central Valley Project's Friant Division.

Friant officials also commented on the deficient analysis of potential economic repercussions of losses of water to Friant water users, as well as socioeconomic impacts to local communities, under the San Joaquin River litigation Settlement. The comments also noted the possible over-

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# Judge Blasts U.S. Scientists

**F**ederal agencies are again headed back to the drawing board as a result of a U.S. District Court judge's ruling that blistered a pair of government scientists in a Delta salmon and steelhead biological opinion case.

For Judge Oliver Wanger of Fresno, it was quite a swan song. The 70-year-old jurist, whose Fresno courtroom hearings and decisions have made him a major player in California water issues, retired September 30 from the U.S. District Court for the Eastern District of California. He is returning to private practice as a partner in a new law firm, Wanger Jones Helsey.

### **PUMPING RESTRICTIONS**

Because of the decision, federal bio-

logical opinions establishing protections for migrating salmon must again be rewritten by the National Marine Fisheries Service (NMFS).

The biological opinions challenged by water user organizations had reduced pumping of water being exported from the Delta to supply portions of the San Joaquin Valley and much of urban Southern California with north state water. Thus, the decision was particularly welcomed by water agencies.

Although Friant water users had not yet  
Please see [Scientists](#), back page



Judge Oliver Wanger

# Big Water Year Lingers At Lake

## River Restoration Pulse Flows Are Set

Effects of the soon-to-conclude 2010-11 water year are continuing to be felt at the Friant Division's Millerton Lake northeast of Fresno.

Water storage in the Central Valley Project reservoir is far higher than normal for early fall, even though it has been declining slowly since filling and very briefly spilling in early July.

### **71% OF CAPACITY**

The U.S. Bureau of Reclamation, which administers Friant Dam and Millerton Lake to supply Friant water users, said Millerton storage as of September 30 was more than 358,457 acre-feet, or 69% of the reservoir's capacity, 520,500 acre-feet.

Typically, the lake is much lower in late September and it is not unusual for October storage to be drawn down to not far above the reservoir's "dead storage"

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## La Niña Making A Return Appearance

Another *La Niña* cool-water, weather-spawning pattern appears to be shaping up in the tropical Pacific with the big question for Central California being whether it will result in wet or dry conditions during the upcoming precipitation season.

Answers, however, are difficult to predict in advance because *La Niña* events are so erratic.

### **SIMILAR TO 2010-11**

A year ago, a similar *La Niña* forecast prompted grim forecasts of a return to drought.

Instead, big storm events in fall, winter and spring led to a massive Sierra Nevada snowpack and San Joaquin River runoff this year that has been nearly twice average.

Please see [La Niña](#), back page

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# FRIANT Waterline

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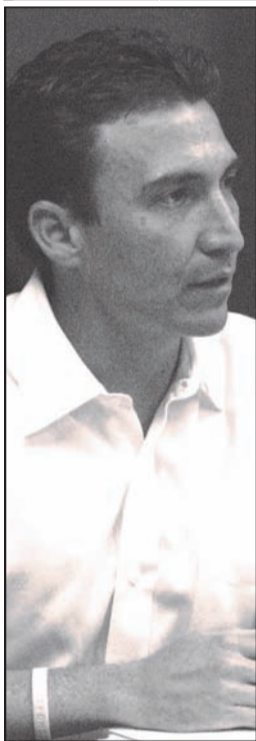


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Friant Water Authority

## State Senator's Water Workshop

State Senator Michael Rubio (*D-Bakersfield*), Agriculture Committee Vice Chairman, makes a point in addressing three dozen valley agricultural, business and civic leaders September 30 in a Fresno meeting in which the Friant Water Authority participated. Delta issues dominated the discussion. Rubio explained his legislation (SB 250) which would compel development of a Delta conveyance plan by 2013 and completion by 2025. The workshop helped formulate topics for an official Agriculture Committee workshop being planned for the Fresno area.

## AROUND FRIANT AND CALIFORNIA



Shrunken Lake Success east of Porterville, its storage constrained by Success Dam seismic concerns.

### SUCCESS DAM REMEDIATION PROJECT

## Senate Panel Appropriates Funds Toward Project

It has a long way to go before becoming reality but some progress is being made in the Success Dam seismic remediation project.

The Senate Appropriations Committee has approved a bill providing \$18 million in funding for the Army Corps of Engineers to move forward with the project to build a new Success Dam.

H.R. 2354, a \$30.6 billion appropriations bill, was approved September 7.

Tule River Watermaster Richard Schafer told the *Porterville Recorder*, "Although it hasn't been completed through Congress or signed by the President, it's a positive situation that \$18 million was designated for the acquisition of land below Success Dam that will be needed for the rehabilitation of the dam and for additional design of the structure."

Dan Vink, who manages the Lower Tule River and Pixley irrigation districts, added, "We are grateful to Congressman Nunes, and Senators Feinstein and Boxer for their efforts in helping to secure the funding. All three have been up-front advocates for this project and have worked closely together to see that it receives the resources needed to proceed."

Sparked by earthquake concerns related to the pre-

sent dam's design, foundation and construction, the \$480 million project would lead to construction of a second earthen dam 100 yards downstream from the present flood control and water conservation barrier that spans the Tule River eight miles east of Porterville.

The \$18 million appropriation would include \$15 million for purchase of 235 acres, and \$3 million would be used for design work.

Earlier this year, the Corps of Engineers opted not to conduct a springtime data-gathering test that would have increased permitted storage by 10 feet of elevation.

Lake Success storage has been restricted by the Corps since 2004 due to the seismic safety concerns.

Storage is currently limited to 40,000 acre-feet, less than half of the reservoir's as-built capacity of 82,300 acre-feet.

### DELANO-EARLIMART I.D. Bigger Banking Project Launched

The Delano-Earlimart Irrigation District (DEID) has completed expansion of its Turnipseed Basin Groundwater Banking Project and has begun operations with introduction of water into the new project site.

Addition of 80 acres has doubled the recharge basins' previous size.

The basins are located at Avenue 176 and Road 32 in the district's center. The project's first 80-acre development began in 1993.

As part of the project, modifications were made to discharge facilities of an existing diversion structure in White River that allows water released from the Friant Kern Canal to move into the expanded project area.

Additional turnouts from the District's distribution system were also added that



DEID's expanded water bank.

allows water to be diverted into the new cells when there is pipeline capacity available.

Metering will be added later this year.

Project costs are expected to total approximately \$434,000, with grants from the U.S. Bureau of Reclamation contributing \$322,200 toward that cost.

With the abundant 2011 water supply DEID expects to keep the entire 160 acres under water through February. The district has targeted total groundwater recharge for the 2011 water year at the Turnipseed Project at 12,000 acre-feet.

—DEID Pipeline

### KERN COUNTY Water Agency Marks 50 Years

The Kern County Water Agency is celebrating its 50th anniversary with a program it calls Vision 2061.

Agency President Mike Radon said the event will be an educational forum for statewide water leaders to discuss topics designed to reflect on past 50 years of the State Water Project and current challenges.

It will take place at Bakersfield College on Friday, October 21.

### CALAVERAS DAM Alameda County Project Started

Construction has started on a four-year, \$416 million project to replace 86-year-old Calaveras Dam, a barrier that was declared structurally unsafe a decade ago because of seismic safety concerns.

Its reservoir's storage has since been restricted to half of capacity.

When built, Calaveras Dam was the world's tallest earth-filled dam. Now, it is slowly falling.

Seven million cubic yards of material is being removed. About half will be used in construction of New Calaveras Dam near the same site but just downstream.

## General Counsel: Attorney Has A Friant Division 'Homecoming'

Continued from front page

cess just like VAMP [the Vernalis Adaptive Management Plan, on the lower San Joaquin River] was. There will be a lot of work to do on the Settlement."

- The San Joaquin River Group Authority in what she termed "the post-VAMP world," now that the VAMP process and agreement related to flows and habitat issue is ending. A related issue is a State Water Resources Control Board plan proposed for the San Joaquin River "and how it will impact tributaries and us. We made a deal in the Settlement and it has to be taken into account in establishing baseline conditions, and be consistent with Settlement."
- The many environmental, water supply and infrastructure issues and problems related to the Bay-Delta Estuary, which affect Friant because of the Bureau of Reclamation's obligations to the San Joaquin River Exchange Contractors. Those four

agencies on the valley's West Side hold historic San Joaquin River water rights. Bureau delivery of a substitute supply of Delta water to the Exchange Contractors makes possible diversion of water at Friant Dam into the Friant-Kern and Madera canals. Buckman and the FWA are also closely monitoring all Bay Delta Conservation Plan and Delta Stewardship Council activities. Friant has a particular interest in how the Bay-Delta proceedings will affect the ability to recapture and recirculate water under the Settlement.

Buckman noted many new regulatory compliance issues have arisen in recent months as important issues and all must be dealt with by water agencies on behalf of their users.

### EARLIER YEARS

Buckman grew up in Sacramento and was always close to the law. For 35 years, her father, James Thompson, was an attorney with Kronick Moskovitz Tiedemann & Girard, where Buckman worked as a teenager, han-

dling file-clerk duties, before she earned her undergraduate degree at the University of California, Davis. While attending UC Berkeley's Boalt Hall School of Law, Buckman spent a summer working for the firm, which she joined after graduating, working largely on resource issues.

**'It's good to get back involved with the issues'**

—JENNIFER BUCKMAN, FWA General Counsel

After moving to Southern California with her husband, she started at BBK in 1997 and quickly became involved in Friant issues.

"It's good to get back involved with the issues," Buckman said. "I'm glad I have the background with the Settlement negotiations. That makes things a lot easier. And it's very interesting to see how it is all playing out in the implementation."

# Restoration: Friant Submits Comments On PEIS-PEIR

Continued from front page

statement of the return to the Friant Division of some of the water to be released for habitat and fishery purposes from Friant Dam under the Settlement's Water Management Goal.

"Reclamation's analysis understated the impacts of water supply reductions," Jacobsma said. "We found some flaws."

## 'WANT IT ADEQUATE'

He added, "We want the document to be an adequate representation of anticipated water supply impacts, anticipated water recovery possibilities and possible economic consequences."

Effects of the restoration program on a variety of other operational, groundwater recharge, municipal supply, land and fishery impacts were also addressed in Friant's comments.

Jacobsma said the FWA anticipates third party interests – which are potentially affected by river restoration but were not part of the litigation over the river – will address impacts on lands adjacent to the river as well as consequences of fishery reintroduction, and various effects on the Delta and tributary fisheries.

## RIVER SETTLEMENT

Settlement of 18-year litigation was reached in 2006 by an environmental coalition headed by the Natural Resources Defense Council, the U.S. Departments of the Interior and Commerce, and the Friant Water Authority and its member districts. It was directed at restoring river flows, habitat and spring-run Chinook salmon.

The environmental study takes a first cut at analyzing the environmental impacts of actions called for by the Settlement, such as:

- Improved channels and structures to

convey flows, and provide fish passage and habitat. Each such project will have site-specific EIS-EIR documentation.

- Modified Friant Dam operations to release interim and restoration flows downstream.
- Reintroduction of spring-run and fall-run Chinook salmon below Friant Dam.
- Implementing the Settlement's co-equal Water Management Goal to recapture, recirculate, reuse, ex-

change and transfer restoration flows in order to eliminate or minimize water supply impacts on Friant users.

The EIS-EIR is a programmatic document, which means that most of the actions it analyzes are not evaluated in sufficient detail for construction-level work to proceed.

Rather, it is anticipated that additional environmental review that focuses on the site-specific features will be completed in the next stage of Settlement implementation. The programmatic EIS-EIR provides

a broad-brush analysis of the overall program, including six action alternatives, each of which could potentially be chosen as the means to implement the program.

The alternatives differ in two basic ways on how flows could be routed through a river reach north of Dos Palos in Merced County that has carried no flows since 1969 and three different locations for recapture.

Differing flow regimes are analyzed as is potential use of nearby flood control bypass channels and facilities.

## Friant Takes Part In Water Panel's Storage Session



Friant Water Authority / J. Randall McFarland  
Site of the proposed Temperance Flat Dam in the upper end of Millerton Lake.

California Water Commission members heard a wide range of views expressed on water storage during a September 14 workshop in Sacramento. Friant Water Authority personnel participated in the workshop.

Friant interests and many other California water agencies have long advocated the need to develop additional water storage facilities – particularly surface storage – to help meet California's increasingly varied future water supply needs.

One such potential project would be Temperance Flat Reservoir on the San Joaquin River. It would be formed behind a dam located in the upper end of existing Millerton Lake and could add 1.3 million acre-feet of storage. Millerton Lake's current storage is much smaller at 520,500 acre-feet.

### JOINT EVALUATION

Mario Santoyo, FWA Assistant General Manager, pointed out to Commission members:

- Groundwater storage and surface storage cannot be evaluated independently because neither can be optimized without the other.
- Evaluating ecosystem benefits, one of the factors to be considered in new storage proposals, may be somewhat subjective but there are cases in which a direct value can be demonstrated. He said the San Joaquin River Restoration Program presents one such example. With river restoration expected to cost hundreds of millions of dollars or more and require 15%-20% of the Friant Division's water supply, a new Temperance Flat Reservoir could provide environmental water as well as direct benefits from an above-ground water storage project that could be quantified.

Santoyo said the observation resulted in "pretty positive reaction. One of the economists noted that such a value provided by new storage would help avoid losing the value of the previous investment in infrastructure."

### DIFFERENT THINKING

Bill Swanson, with the engineering firm of MWH, is a key planner for the proposed Temperance Flat project and other potential surface storage projects. He said thinking about surface storage has changed.

Much of the infrastructure now in place was designed and implemented in vastly different era. Social values, the regulatory environment and environmental protection concerns are all different. The key question, Swanson said, is not where to develop more storage but how to adapt it. California water system focus today needs to be more on water movement than static reservoirs, he said.

Aside from Temperance Flat, surface storage projects being studied include raising of Shasta Dam; Sites Reservoir in Colusa County; in-Delta storage (using islands); and expansion of Los Vaqueros Reservoir in Contra Costa County.

### OTHER VIEWPOINTS

Other comments made to Water Commissioners:

- **TIM QUINN** Association of California Water Agencies Executive Director, said storage is going to be needed but infrastructure solu-

tions will need to be governed by co-equal goals that benefit multiple interests. He pointed out the comprehensive water program adopted by the Legislature in 2009 includes provisions in a proposed water bond (to be voted upon in November 2012) that would appropriate \$3 billion for water storage projects which have a nexus to the Delta. Those funds would be available for surface storage projects, groundwater projects, reoperation of conjunctive use (groundwater and surface water) and reservoir projects, and local projects creating public benefits such as ecosystem improvements, better water quality, improved flood control, emergency response and recreation. Water supply, Quinn said, is not a listed public benefit that would be paid for by bond funds. He added that the bond measure has a strong emphasis on analysis and quantification. By December 2012, the Water Commission must adopt by regulation methods to measure public benefits.

- **PAUL ROBERSHOTTE** of the U.S. Army Corps of Engineers, the federal agency that oversees the nation's flood management, said the future will generate more demands but provide fewer resources. There will need to be a smarter, integrated, coordinated system approach to optimize multiple factors such as ecosystem, flood risk management, water supply, conservation, navigation, recreation and system (reservoir) operations.
- **DON GLASER**, U.S. Bureau of Reclamation Mid-Pacific Regional Director, said California's water storage system is unique because it does not constitute protection from multiyear drought events. Glaser pointed out problems faced by Central Valley Project water users on the West Side south of the Delta who have received 100% of contract amounts of water only three times since 1990 after receiving full supplies in every previous year, except in the critical drought of 1977.
- **MARK COWIN**, Department of Water Resources Director, said as surface water supplies have declined, groundwater use has increased. It is estimated the state's groundwater storage capacity is between 143-450 million acre-feet. DWR has become deeply involved in groundwater monitoring and promoting integrated regional water management planning. He said recognition of impacts of surface storage on the environment and rising development costs have thwarted new state-backed storage in recent decades. Storage is an extremely important part of the water supply toolbox, he said, but is very divisive. Cowin said increased reliance on local and regional planning and facilities to supply local water reliability has been one of most profound shifts in statewide thinking and policy in recent years and has enjoyed success.
- **JEFFREY KIGHTLINGER**, Metropolitan Water District of Southern California General Manager, said MWD has invested \$4 billion in storage programs, including the new Diamond Valley Reservoir near Hemet in Riverside County. High water costs resulted in nearly five years being required to fill the lake but the reservoir's ability to supply Southern Californians in dry years has proven to be a great investment. MWD has invested heavily in new types of local supplies, such as cleaning and re-using groundwater, water recycling and storage.
- **CARL HAUGE**, chief hydrogeologist for the California Department of Water Resources, noted the importance of replenishing groundwater as part of conjunctive use, the planned management of surface and groundwater resources to optimize water supply. He pointed out that the process requires available surface water, conveyance and recharge facilities, empty storage capacity in the aquifer, extraction facilities in discharge areas, hydraulic continuity between recharge and discharge areas, and political, legal, institutional, technical and economic consensus. Conjunctive management will not succeed without surface water.

## Restoration Program Given Recognition

The San Joaquin River Restoration Program has been named one of 17 recipients of the Interior Department's 2011 "Partners in Conservation Awards."

The Settling Parties to the Settlement, including the Friant Water Authority, were recognized.

Interior Secretary Ken Salazar presented the awards September 21 in Washington. FWA officials, in the capital for a long-planned series of other meetings, were unable to attend the awards presentation because of a late change in the scheduling of the event by the Interior Department.

The Partners in Conservation Award honors outstanding conservation, collaboration, cooperation, and communication achievements by federal agencies and non-federal interests. The Bureau of Reclamation nominated the San Joaquin River Restoration Program for the 2011 award.

The San Joaquin River Restoration Program involves various federal and state agencies, the FWA and other water agencies, and environmental and commercial fishing organizations.

It is a result of the Settlement of 18 years of litigation brought in 1988 by an environmental coalition headed by the Natural Resources Defense Council. Friant interests were the non-federal defendants.

## Honored For Friant Service



Friant Water Authority / J. Randall McFarland

Visalia attorney D. Zachary Smith (left) is presented with a resolution of thanks and commendation from Friant Water Authority Chairman Harvey Bailey. The resolution was adopted unanimously at a September FWA board meeting. It recognizes Smith's work since he began representing the FWA when it was formed in 2004, including the FWA's eventual consolidation with the old Friant Water Users Authority. Smith's successor is the FWA's first full-time General Counsel, Jennifer Buckman. (Please see story, page 1.)

## Salmon: 'Agency Bad Faith' Found

Continued from front page

been harmed directly by the controversial water supply cuts, Friant's diversions of San Joaquin River water depend upon the ability of the Bureau of Reclamation to deliver full amounts of a substitute water supply pumped from the Delta that is used by the San Joaquin River Exchange Contractors, the river's historic water right holders.

### 'SEARING OPINION'

While Judge Wanger's decision – latest in a series of rulings critical of the way government scientists and other officials have handled Delta environmental issues – pleased water agencies on its merits, it was the tone and tenor of the judge's findings that drew vast media attention from across the country.

The Washington *Examiner* termed it "a searing opinion." In it, the Judge said two Interior Department scientists had given "false" and "incredible" testimony. Those scientists are Frederick V. Feyrer of the U.S. Bureau of Reclamation, and Jennifer M. Norris of the U.S. Fish and Wildlife Service.

Wanger's lengthy written opinion referred to Norris as a "zealot" and asserted the two acted in bad faith. The Judge said a fish and water issue originally presented as a lost opportunity came back in a new hearing as an extinction issue.

### 'ATTEMPT TO MISLEAD'

"The only inference that the court can draw is that it is an attempt to mislead and to deceive the court into accepting what is not only not the best available science, it's not science. There is speculation," Wanger said.

Wanger called the Interior Department agencies on the carpet for relying upon what he called "equivocal or bad science to impose RPA [reasonable and prudent actions] without clearly explain-

ing or otherwise demonstrating why the specific measures imposed are essential to avoid jeopardy and/or adverse modifications."

Wanger upheld the government in a number of specific areas and said a sentence that says the plan's conclusion that the species are in jeopardy "is lawful."

However, he said, "The court finds agency bad faith here. There simply is no explanation. There is no justification."

U.S. Fish and Wildlife Service Regional Director Ren Lohofener said in an internal e-mail to employees that was reported by the Bay Area News Group, "As a professional biologist with over 30 years of experience in endangered species research and implementation of the Endangered Species Act, I want you all to know that I fully, 100%, stand behind the scientific integrity and credibility of Dr. Norris and Mr. Feyrer. They are outstanding public servants and scientists."

Lohofener said he approved the scientists' findings before submission.

The environmental community was generally fairly restrained in its reaction.

### 'COURT GOT IT RIGHT AGAIN'

Water user organizations were pleased. Typical were remarks by Westlands Water District General Manager Tom Birmingham.

"The Court got it right again," said Birmingham. "The Court has repeatedly found that the federal agencies charged with implementing the Endangered Species Act have failed to comply with the law because they have failed to base their decisions on science, and they have failed to explain the basis for their conclusions. Those agencies now have an opportunity to make fundamental changes in the way they implement this law, and it is our hope that they take advantage of that opportunity."

## Water Supply: High Storage

Continued from front page

pool of 135,000 acre-feet, below which water cannot be released into the Madera and Friant-Kern canals.

Water demands among Friant users have remained relatively high, making it possible to slowly reduce storage despite higher-than-normal late season natural runoff coupled with water being released by Southern California Edison Company, which is draining Shaver Lake to facilitate completion of dam maintenance and repairs.

### COMPARES WITH 1982-83

Michael Jackson, Bureau of Reclamation Area Manager in Fresno, said Millerton Lake's end-of-September storage in 2011 has been exceeded only once previously at this time of year, in the record 1982-83 water year.

"The tendency is going to be down," Jackson told Friant Water Authority directors. "We just won't be down far enough as we prepare for storms in the upcoming winter. We're going to have to move water out of the reservoir for the winter coming up."

Millerton Lake's small size, in comparison with the San Joaquin River's average annual runoff, creates an annual water management challenge for the Bureau to meet Corps of Engineers' flood control requirements while maximizing CVP water storage benefits for the following spring and summer.

### PULSE FLOWS

Meanwhile, the San Joaquin River Res-

toration Program is gearing up for its scheduled early fall pulse flows.

Those flows are being modified this fall from what is included in the San Joaquin River litigation Settlement's hydrographs because river releases into Mendota Pool (in western Fresno and Madera counties) must end by November 15 to permit major maintenance work to take place on Mendota Dam.

Friant Water Authority Resources Manager William Luce said the river's Restoration Administrator has recommended that interim and riparian flows below Friant Dam be maintained at 350 cubic feet per second between October 1-10, and then be increased to a combined flow of 700 c.f.s. between October 11-20 (unless certain groundwater well thresholds upstream from Mendota Pool are exceeded), consistent with the Settlement hydrographs.

The combined flow would be cut back to 350 c.f.s. between October 21 and November 5. Interim flows of 350 c.f.s. are scheduled to resume January 15, assuming work on Mendota Dam is completed.

Luce said release of any interim flows after September 30 would depend upon whether or not the State Water Resources Control Board issues an order providing for the temporary transfer of water and change in the method of operation of Friant Dam, as well as making a number of temporary changes to the Friant water right permits.

## La Niña: Extreme 2011 Weather

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At the end of August, California's reservoirs contained storage listed at 131% of average, highly unusual for summer's final weeks.

La Niña also contributed to extreme weather around the globe during the first half of 2011.

### UPGRADED CHANCES

Now, La Niña has re-emerged and is forecast to gradually strengthen and continue into winter. Forecasters with NOAA's Climate Prediction Center on September 8 upgraded a La Niña watch to a La Niña advisory.

NOAA will issue its official winter outlook in mid-October, but La Niña winters often see drier than normal conditions across the southern tier of the United States – including California – and wetter than normal conditions in the Pacific Northwest and Ohio Valley.

Mike Halpert, NOAA's Deputy Climate Prediction Center Director, observed, "This means drought is likely to continue in the drought-stricken states of Texas, Oklahoma and New Mexico. La Niña also often brings

colder winters to the Pacific Northwest and the northern Plains, and warmer temperatures to the southern states."

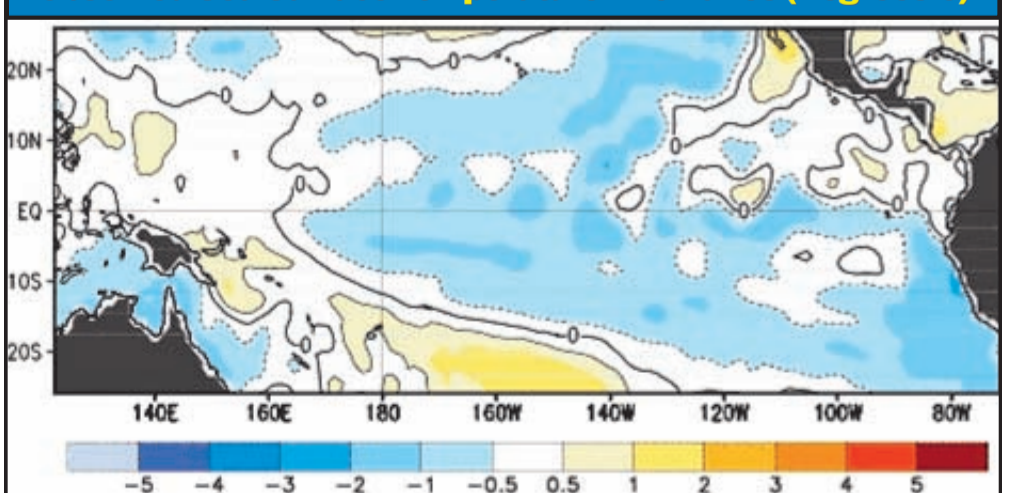
### STRONG EVENT

This past year's La Niña proved to be a strong event and contributed to record winter snowfall, spring flooding and drought across the United States, as well as other extreme weather events throughout the world, such as heavy rain in Australia and an extremely dry equatorial eastern Africa.

La Niña is a naturally occurring climate phenomenon located over the tropical Pacific Ocean and results from interactions between the ocean surface and the atmosphere.

During La Niña events, cooler-than-average Pacific Ocean temperatures influence global weather patterns. La Niña typically occurs every three-to-five years, and back-to-back episodes occur about half the time. The opposite condition – El Niño – results when tropical Pacific sea surface temperatures are higher than normal. El Niño is often, but not always, associated with wet winter patterns over California.

### Observed Sea Surface Temperature Anomalies (Degrees C)



Seven-day average in the tropical Pacific Ocean centered on September 21 reflects a La Niña pattern becoming established.