



KRCD News

Fall 2011

Volume 35, No. 2

Water Year Concluding As One Of Kings' Biggest Ever

For a water year originally predicted to not provide much of a supply, 2010-11 has turned out to be one to remember.

One big storm after another, including some surprisingly potent late spring events, are adding up to what is expected to be the seventh largest Kings River water year ever recorded. The 2010-11 water year, which ends September 30, is expected to generate natural Kings River runoff of about 3,321,000 acre-feet, 195 percent of average.

April-through-July peak season runoff added up to 2,295,546 acre-feet, 184 percent of average.

Kings River Watermaster Steve Haugen said many of the Kings River's 28 member agencies expect to deliver water through September. A few will operate into November.

Still, Pine Flat Reservoir storage will be much higher than usual when the irrigation season ends as Kings River units carry over supplies into 2012. That may well be too much of a good thing, Haugen noted.

Computer modeling of the coming fall and winter runoff in most scenarios forecast Pine Flat Reservoir will encroach into space reserved during the winter for rain-flood management, with a reasonable chance of flood releases by mid-January.

"A big fall storm would push encroachment and the need for a flood release up into November," Haugen said. "The timing and



Kings River water makes a spectacular show during a Pine Flat Dam spillway release. KRCD's power plant was generating at capacity. (Photo courtesy of John Moore, PG&E)

duration of any flood release will depend on storm activity."

The U.S. Army Corps of Engineers, which operates Pine Flat Dam, is in full charge of flood management and flood releases. The KRWA administers river releases at other times.

This year's big central Sierra precipitation totals, in creating the full water supplies making possible carryover reservoir storage for 2012, also prompted the first Kings River flood releases in three years.

There were three flood releases, with 500,930 acre-feet of water – more than half the capacity of Pine Flat Reservoir – lost to the Kings River service area and into the San

Joaquin River at Mendota Pool. The Kings had 167 days of flood releases, third longest ever. Total water released ranked twelfth among all Kings River flood releases.

Kings River Conservation District flood management staff members, based in Riverdale, are working to keep the channels and levees ready for any high flows this coming winter.

The system, maintained by KRCD from southwest of Kingsburg to Highway 145 on James Bypass and Highway 41 west of Stratford on the South Fork, performed very well with only a few minor problems that were quickly resolved. KRCD staff

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Groundwater Efforts Grow in Kings Basin

For decades, the Kings River Conservation District has been involved in groundwater issues.

KRCD has worked with local interests, usually with a minimum of fanfare, on ways to stem groundwater overdraft, a problem created when more water from the aquifer is used than replenished. Numerous plans and projects have been undertaken over the years.

Such efforts are of great importance because groundwater is relied upon by just about everyone in the central San Joaquin Valley for domestic, municipal and irrigation supplies.

Recently, these efforts have broadened. The Upper Kings Basin Integrated Regional Water Management Authority has been organized as the most broadly based public effort on water to date on the Kings. (see "Grants Awarded" story, Page 3) It includes representatives of agriculture, urban and environmental interests working together in search of ways to provide sustainable supplies of the region's surface and groundwater resources.

"If ever there were a textbook example of the effectiveness of local control and planning of a vital resource such as groundwater, this is it," David Orth, KRCD General Manager, said.

Kings River water agencies, cities, counties, environmental and other civic groups, business, industry and individuals have mounted the broad integrated regional water planning effort.

Now, using grant money awarded as a result of those plans, the Authority is quickly turning studies into reality with projects aimed



General Manager's Report
David Orth

Troubling Tale of Two Rivers

In many ways, the Kings and San Joaquin rivers are easy to compare, especially since they drain neighboring central Sierra watersheds.

Each is vital to regional water supplies. Both provide irrigation water to about one million acres from average annual water supplies of about 1.7 million acre-feet. Each is harnessed by a series of dams and hydroelectric generating facilities. The two rivers have heavy recreational use and high aesthetic values. Fisheries on both are important and have been subjects of past debate.

On the Kings, what started as conflict is now governed by cooperation between river interests, the California Department of Fish and Game, and local anglers. As a result, a model effort known as the Kings River Fisheries Management Program has been quietly but effectively (not to mention efficiently) at work for over 10 years enhancing the Kings River fishery.

The San Joaquin is on a different path, created by litigation settlement after 18 years of legal battles and leading toward goals of river and salmon fishery restoration. A few months ago, draft San Joaquin River Restoration Program environmental impact documents were released. Kings River interests have reviewed the draft Environmental Impact Report (EIR) and support the long-term objectives; however, we do have concerns about potential impacts to the Kings River.

The report states that when salmon are introduced into the San Joaquin, that a section of the river would almost certainly be closed to all fishing, an unmistakable major recreational angling impact, especially since the San Joaquin borders the Fresno-Clovis metropolitan area. However, the report assumes the effects of such closure will be offset by increased angling on the Kings River.

This would be an enormous impact on the Kings River fishery. Thousands of anglers would be redirected to the Kings where angling pressure is already at or above capacity. A huge investment in stocking, enforcement and projects would be required.

We have other concerns as well. The Kings needs fish screening developed to prevent salmon and steelhead from using infrequent flood flows out the James Bypass to reach the Kings River, where they were never native. Such an installation is not proposed.

And the Kings is concerned over what could happen to flood releases that occasionally (like this year) must be made by the Corps of Engineers from Pine Flat Dam. The environmental documents do not make clear if flood operations would have priority over San Joaquin restoration flows. During Kings flood releases, there are times when most of the San Joaquin's capacity for many miles downstream from Mendota Dam is required to safely convey Kings River flood waters, meaning restoration flows released from Friant Dam and diverted into Mendota Pool might at times have to be limited.

Kings River Conservation District and Kings River Water Association representatives recently traveled to Washington, D.C. to voice our concerns to our Congressional representatives. In addition, we will be meeting with federal agencies involved in the restoration efforts to develop cooperative ways to address the Kings River concerns and preserve the fisheries of the Kings River.

Valley Aquifer Issues Continue To Heat Up

It isn't making the front pages or the evening news but recent enthusiasm among some state regulators to extend the yoke of new rules and restrictions to groundwater is gaining traction.

Groundwater in most parts of California – including the Kings River region – has never been regulated as are diversions and uses of surface water. That appears to be changing.

“The State Legislature and several state agencies continue to focus on groundwater use and quality. We are fighting an ongoing battle on the legislative and regulatory front to maintain local control of groundwater critical to our region,” says David Orth, KRCD General Manager.

One such state effort is being made by the Central California Regional Water Quality Control Board and its staff.

As part of its latest irrigated lands regulatory program for water quality now being implemented, the Regional Board has determined that protecting groundwater quality will be part of the regulatory framework. The Regional

Board is asserting that all irrigation has potential to pollute groundwater. Landowners and water quality coalitions will be required to monitor and take certain actions to address any groundwater contamination that might be linked to irrigation activities. Under a special study being conducted by UC Davis, analysis is under way regarding nitrate sources with a draft report is expected in September. Legislation could follow.

The state is also implementing groundwater monitoring and use efficiency mandates imposed by the state's 2009 comprehensive water legislation. Consistent with long-standing practice and leadership on these issues, KRCD is working with state officials to provide groundwater elevation data and promote water use efficiency consistent with these mandates.

Meanwhile, the Association of California Water Agencies (ACWA) earlier this year released its Groundwater Framework, an extensive study and report on the state's groundwater in which Orth participated.

ACWA says, “Given the significant differences in groundwater basins, ACWA believes the one-size-fits-all approach of statewide regulation would be counterproductive. ... ACWA believes the state should encourage and support local management by embracing polices that reflect California's hydrologic diversity, by working collaboratively with local agencies.” The report makes a number of recommendations to be implemented by the Legislature, regulatory agencies, and local groundwater management programs, including a notable recommendation that the state must take action to clarify that recharge of groundwater basins is a legal beneficial use of surface water.

As the ACWA report notes, “Ultimately, for sustainable groundwater management to succeed, California must also invest in conveyance improvements in the Delta, additional surface storage and groundwater storage to optimize both water supply reliability and ecosystem health, and substantial investments in local water resources development.”

Grants Awarded to Kings Basin for Regional Water Efforts

The Upper Kings Basin Integrated Regional Water Management Authority, a coalition of water agencies, cities, and counties in the Kings River Basin, has been awarded a \$2 million Proposition 50 grant from the California Department of Water Resources and a \$236,890 Proposition 84 planning grant.

The \$2 million grant is for two projects. Fresno Irrigation District will install a well to enhance its recovery capability at a percolation pond southwest of Fresno. The well would increase the net recovery capacity from 3,000 acre-feet/year (AFY) to 4,500 AFY. Benefits from the irrigation district's project would include an increased water supply; improved supply reliability especially in dry years, and mitigation of the Kings basin's groundwater overdraft.

The second project involves the City of Fresno's installation of 5,000 residential water meters. Benefits from the

City of Fresno's project include a 10 percent reduction in water usage in the city. The project would also support local and regional water supply; improve water reliability through conservation; and improve the water management system through measurement automation.

The \$236,890 planning grant will support the update of the Authority's Integrated Regional Water Management Plan to satisfy new State guidelines.

Over the last several years, the Water Authority has brought over \$14 million of funding to the region for planning and expanding local water management projects. These projects have been proposed as partnerships between member irrigation districts, cities, counties and environmental organizations.

Water Year, *continued*

members conducted regular flood patrols to maintain safety.

At Pine Flat Dam, the greatest release into the river took place on July 8 and measured 12,984 cubic feet per second (c.f.s.) but all river flows remained confined to the designated flood plain.

Pine Flat Reservoir storage reached its maximum level – 996,652 acre-feet (99.6 percent of capacity) July 7.

“Just as the reservoir storage was peaking in early July, heavy mountain thunderstorm activity took place and boosted runoff,” Haugen said. “That led the Corps to briefly make a late big increase in the flood release.” Just as quickly, conditions stabilized and flood releases ended July 11.

As of September 11, Pine Flat Lake was 66 percent full (666,540 acre-feet) and dropping. Haugen said “low” point this fall – about November 15 – is likely to be about 525,000 acre-feet (52 percent of capacity).

The river’s calculated natural flow, as it would have occurred at the foothill community of Piedra if there were no dams, had a spring snowmelt peak of 20,925 c.f.s. on June 15 and other high flows were experienced in late June and early July as a result of hot weather.

During the water year, the river’s highest mean daily natural flow was 28,592 c.f.s., during a major December 19 rain event in which 15-20 inches of rain were recorded at some Sierra locations.

The snowpack that drove up water year runoff was impressive. On April 1, the date traditionally regarded as the peak for snowpack accumulation, water content averaged 172 percent of average around the watershed. The snowpack was already above average on February 1. As late as June 19, automated snow sensors were reporting water contents averaging 56 percent of the April 1 normal.



The KRC D News is published by the Kings River Conservation District, a political subdivision of the State of California serving 1.2 million acres in Fresno, Kings and Tulare counties.

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Water Year Boosts Power Production

A water year that has provided nearly twice the average amount of Kings River runoff and plenty of storage has added up to terrific generation production at KRC D’s Jeff L. Taylor-Pine Flat Power Plant.

That’s good power supply news for the State Water Project (SWP) and its users as well as electricity customers in the central San Joaquin Valley.

Electricity generated by the 165-megawatt plant’s three units, located at the base of Pine Flat Dam and powered by water being released for irriga-

tion demands and flood control needs, is typically consumed on the valley’s eastern side with equivalent amounts of power delivered to the SWP.

For the coming year, the plant’s production is anticipated to be 158 percent of average.

Projections for a possible winter flood release mean that “our maintenance window in the fall will be very short.”

KRC D opened the Pine Flat plant in 1984 and has successfully operated it since.

Groundwater, *continued*

at more water for groundwater recharge and banking.

“Working on a local and regional basis to increase groundwater storage and improve our region’s ability to conjunctively use surface water and groundwater on a more reliable basis is not only working, it is proving to be highly efficient,” Orth said. “We believe what we are doing in managing groundwater on the Kings River is far better than still more state regulation.”

Note to Readers

KRC D News, which has been published annually the past few years as an economy measure, has been changed to a twice-a-year schedule. KRC D plans to bring you this summary of important Kings River news and issues during the spring and summer.

Our website, www.krcd.org, continues to be updated regularly. It includes summaries of KRC D and other Kings River projects and activities.