



KRCD News

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Kings River Agencies Make the Most of Flood Release

Mention of a flood release can sound wasteful but the extra flows that were sent out of Pine Flat Reservoir during January to increase storage space after the holiday season storms were put to use by the river's water providers.

The U.S. Army Corps of Engineers, which operates Pine Flat Dam and has jurisdiction over Kings River flood operations, began a flood release December 30 after the reservoir's storage encroached into space reserved each winter for flood control.

It was hardly a torrent. The Corps established a target flood release flow of just 100 cubic feet per second (c.f.s.) over Crescent Weir near Riverdale.

However, Kings River Water Association water entitlements for KRWA's 28 member agencies change during a flood release and each "unit," as districts and canal company are known on the river, are encouraged to divert all the water they can.

Since flood releases most frequently occur when soils are wet and little or no



A small amount of Kings River flood release water trickles over the James Weir spillway into the James Bypass near the end of January's modest flood release. This water is destined for Mendota Pool and the San Joaquin River.

irrigation demand exists, Kings River units use flood release water wherever facilities and conditions exist in ponds that recharge the groundwater supply.

"This is a key part of the conjunctive use of surface water and groundwater that is so vital to creating a full water

supply for the Kings River service area," said Kings River Conservation District General Manager David Orth. (Please see the General Manager's Report, Page 2.)

As a result, even a small flood release with a downstream target of 100 c.f.s. will

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Channels, Levees Handle First Flood Release Water Safely

Kings River Conservation District flood management staff members had not had to deal with flood water in five years but the system they maintain came through January's releases in great shape.

Regular maintenance and improvements have routinely taken place since the last flood release in 2006 and the Kings River flood control project is in excellent condition.

The project received its first flood flows from Mill and Hughes creeks,

unregulated streams that enter the river below Pine Flat Dam. The creeks sent flows in excess of 4,000 c.f.s. into the river but, being less than flows that routinely occur during the irrigation season, passed through the system safely. Other such flows occurred later in December.

KRCD operates and maintains the Kings River flood control project for the Corps from southwest of Kingsburg to Empire Weir No. 2 at State Route 41 on the Clark's Fork-South

Fork system and to State Route 145 (McMullen Grade) on the North Fork-James Bypass system. KRCD is also responsible for portions of the main Kings River, Cole Slough, Dutch John Cut and the Crescent Bypass.

KRCD's Riverdale-based river operations staff handles maintenance along the channels year round and steps up patrols – to 24 hours a day when necessary – when high flows occur.

Good Water Year Comes Wrapped For the Holidays

It wasn't a record but the potent series of storms that struck during the holiday season was a gift that promises to keep on giving throughout much of 2011.

So generous were these storms that much of the upper Kings River watershed's snowpack water content by New Year's weekend had reached the average attained in a normal year on April 1 when snow conditions are assumed to peak.

The season's first three California Department of Water Resources natural runoff forecasts have all been well above average but decreased during the first weeks of February because of a near total lack of precipitation between January 2 and February 16.

Based on those conditions, DWR's forecast on February 17 was that the Kings River could expect to have a full natural flow during the peak April-July period of 1.54 million acre-feet, or 126 percent of average, assuming normal amounts of precipitation occur for the remainder of the season. The mid-February storm events appeared to be of average intensity.

It was a different story in late December. Accompanied by lengthy periods of moderate to heavy rain, amounting to 15-20 inches in some places, over the foothills and lower mountains, the wet weather led the U.S. Army Corps of Engineers to conduct a flood release from Pine Flat Dam during much of January. The valley floor was also drenched with more than five inches of rain in some areas.

Pine Flat's seasonal rainfall on January 18 stood at 19.69 inches, 247

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*General Manager's Report
David Orth*

Groundwater Controversy

Political, regulatory, and legal fights over surface water have been going on in the San Joaquin since our valley's settlement began more than 150 years ago. Now, what could turn out to be among the biggest struggles is emerging over use of vital underground supplies.

Regulation of groundwater has been proposed by some for decades but now what appears to be another push toward state aquifer control is in motion on a variety of fronts.

While the prospect of extending tentacles of regulating groundwater to valley farmers, rural residents and communities seems to have an irresistible lure to some, local management of groundwater is far more effective.

For many years, all water agencies in the Kings River service area – with the Kings River Conservation District in a leadership role – have quietly but efficiently established a number of important programs to counter groundwater overdraft.

Dealing with groundwater depletion, quality and reliability is one of the key reasons the Upper Kings Basin Integrated Regional Water Management Authority was organized. The Authority is perhaps the most broadly based public effort – with representatives of agriculture, urban and environmental interests – ever organized on the Kings. The Authority's participants seek a sustainable supply of the Kings River Basin's finite surface and groundwater resources through regional planning that is balanced and beneficial for all interests.

During a February 1 Assembly Parks and Water Committee hearing during which I testified, it was clear that a groundwater regulation bill is high on the mind of key legislators pushing California closer to what most parts of this state have never had before – direct state legal governance of groundwater, a supply property owners and communities have always considered to be a right of owning property.

A Texas style of basin and local regulation gained some attention at the hearing.

The alarming fact is that if the Legislature doesn't impose some sort of groundwater registry, rights, licenses, controls and inevitable fees, other state agencies are lining up to accomplish much the same thing.

The Legislature has already imposed a mandate for extensive new groundwater measurement and monitoring, tasks which KRCD has agreed to undertake for the Kings and Tulare Lake groundwater basins.

The Central California Regional Water Quality Control Board is considering a long-term interim ag waiver water quality program that will include groundwater monitoring, taking the position that all irrigation leads to groundwater. The theory seems to be that any grower who irrigates – meaning all in the valley – has potential to pollute groundwater. This is just one part of a sweeping Regional Board effort to place all of agriculture under a blanket of strict state regulation.

Why is this so important? Groundwater is the foundation for agriculture, business and life in our region. Except for a fraction of the municipal water used in Fresno and Clovis, every drop consumed by people and a great deal of the water used on farms is pumped.

Making better use of this vital resource is already being pursued locally and regionally on a cost-efficient basis. The State should support, not take away from, these local efforts.

Fisheries Management Program Moves Into Its Second Decade

Nearly two years after its renewal during a riverside signing ceremony, the Kings River Fisheries Management Program (FMP) continues to progress with a variety of projects, activities, studies, monitoring and exemplary public involvement.

David Orth, KRCD General Manager and a member of the program's Executive Policy Committee, said the innovative program's second decade is continuing the sort of cooperative approach to planning and development that has made the FMP stand out as a progressive model.

"We are so fortunate on the Kings River to be able to work together and avoid the controversy over fisheries and habitat that surrounds so many California rivers and streams," Orth said. "I said at the signing ceremony that in the program's first 10 years we had come a long way. Now, we're much further along and river resources are better for it."

Along with KRCD, the other partners are the Kings River Water Association (KRWA) and California Department

of Fish and Game (CDFG). The program was several years in the making and was enacted formally on May 28, 1999.

Since its establishment, the FMP has established an extensive planning, data collection, monitoring and scientific analysis process that has led to numerous habitat improvements. Those include placement of boulders, spawning gravel and shoreline coves and jetties, and other channel improvements.

The most recent activity of the FMP is a riparian revegetation project approximately a mile downstream from Pine Flat Dam along about a 700 feet long section of the river's southern bank. In this location, there is very little native vegetation. The goal is to replant this area with native plant species. Ninety-nine native trees and nineteen shrubs will be planted including: Deer Grass, Wild Rose, Valley Oak, Cottonwood, Willow, Ash, and Western Sycamore.

The improved habitat will benefit birds and other wildlife along the river. Work began at the site in January of this



KRCD biologist, Heidi Smith, prepares the ground for planting at the revegetation site.

year and is expected to be completed by March. The project is part of the FMP's Habitat Enhancement Master Plan.

KRWA and KRCD annually contribute a total of \$100,000 to the FMP, totaling a \$1,000,000 for the first ten years of the program. Both agencies are continuing their financial support over the 10-year renewal period. The CDFG contributed a total of \$700,000 during the first 10 years and plans to continue its financial support for a total of \$2 million as state funding is available.

Kings County Water Veteran Now Heads KRCD's Board of Directors

Brent Graham of Hanford, now in his fifth decade of service to the Kings River, is the new Kings River Conservation District President.



Brent Graham

Graham was elected at the board's January meeting to succeed Mark McKean of Riverdale as President. McKean presided over the board for four years. Elected Vice President was the newest KRCD director, Dr. David Cehrs of Sanger.



David Cehrs

Graham joined the KRCD board in May 2006. He represents Division 5, which includes much of northern Kings County. Graham also serves on KRCD's Flood Maintenance, Public Power and Budget and Audit committees.

His Kings River career began as a Hydrographer for the Kings River Water Association before Graham was named Tulare Lake Basin Water Storage District General Manager in 1969, a post Graham held until his 2008 retirement.

He is a former Chairman of the Lower (Kings River) Board of Directors and the Kings County Water Commission, and is long-time Secretary of the San Joaquin Valley Agricultural Water Committee. Graham is Vice Chair of the California Farm Water Coalition and the State Water Project Contractors Authority.

Graham retired in June 2008 as the General Manager of the Tulare Lake Basin Water Storage District. Prior to becoming General Manager of the District in 1969, he was a hydrographer for the Kings River Water Association.

Dr. Cehrs joined the Board in 2008 as at-large representative. Cehrs serves on KRCD's Flood Maintenance and Accounts Payable committees.

He has volunteered in several organizations that deal with regional water resource management including the El Rio Reyes Conservation Trust, the Tehipite Chapter of the Sierra Club, and the San Joaquin Valley Blueprint Planning Process.

He is a geology professor at Reedley College and also works as a consultant on water supplies, water quality and recharge.

Dr. Cehrs' first hydrologic employment was in 1973 with the Water Management Lab of the U.S. Department of Agriculture - Agricultural Research Service working on the Leaky Acres project, a groundwater recharge facility in Fresno. He has also worked as a researcher on agricultural and municipal water problems including groundwater recharge, groundwater flow, water quality/chemistry, and crop water demand. He is a registered geologist and certified hydrogeologist.

Water Year, *continued*

percent of average. Although only four-tenths of an inch fell over the next six weeks, Pine Flat's February 16 total was still 174% percent of average.

The October-December runoff period generated a full natural flow on the Kings River of 340,000 acre-feet – a third of Pine Flat Reservoir's capacity – 341 percent of average and the sixth largest such period on record.

During the peak of the storm on December 19, the Kings River's calculated full natural flow at Piedra reached 28,592 cubic feet per second. Such a flow would have caused extensive flood damage downstream had not Pine Flat Reservoir been in existence to capture the entire event.

When the season's first Kings River watershed snow surveys were taken around February 1, snowpack water content averaged 168 percent of normal for February 1 and 102 percent of the peak average on April 1. Surveyors had a great deal of difficulty in several areas getting measuring equipment through layers of ice formed by heavy rain early in the December event. The snowpack's water content was extremely dense at all elevations and more like what would be found in springtime.

Depending on rain and snowfall during the late winter and spring, the current water year is likely to end up being the second in a row with above-average conditions.

Annual Groundwater Reports Completed

Groundwater contour maps for 2007-08 and 2008-09 are available on KRCD's website at the following link: http://www.krccd.org/water/groundwater_management/annual_report.html. Due to dry conditions, the 08/09 report reflects an overall increase in depth to groundwater (an overdraft of 637,000 acre feet was recorded). In 07/08, a replenishment of 283,000 acre feet was recorded due to lingering effects of the previous 2005-06 water year, which was 173 percent of average annual runoff.



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KRWA Hydrographer Ed Dittenbir and KRCD staff member Scott Cubillas measure snow depth at Scenic Meadow, which is at elevation 9,650 feet. The snow depth at this elevation was 65 inches.

Flood Releases, *continued*

typically result in much higher actual releases that are put to use beneficially within the service area rather than flowing to the San Joaquin River and beyond use in the Kings region.

The Kings flood release target flow at Crescent Weir was increased up to 1,000 c.f.s. for a few days before being reduced to 500 c.f.s. and finally 100 c.f.s. The flood release ended February 1 but could resume later in the winter or spring.

Note to Readers

If it seems as if it has been a long time since you've read an issue of KRCD News, you're right!

As an economy measure, the Kings River Conservation District has decreased the frequency of its newsletter's publication to once each year.

Our website, www.krccd.org, is updated regularly and includes summaries of KRCD and other Kings River projects and activities.