

CCID OBSERVER

NEWS AND INFORMATION FROM THE CENTRAL CALIFORNIA IRRIGATION DISTRICT • WWW.CCIDWATER.ORG • ISSUE THREE • 2014

Water Supply Update

■ NOVEMBER WATER AVAILABLE ON LIMITED BASIS.

The Exchange Contractors have secured November water from the Bureau of Reclamation and CCID has up to 25,000 acre-feet available for use on in-District ground for \$17 per acre-foot on a first come, first served basis.

Consumers can move unused January through August Tier 1 and Tier 2 water into September or October, however no water can be moved forward into November, said CCID General Manager Chris White.

He added that there was still no water available from the District

for Class II lands, although CCID will continue to transport private well water for those who have access to wells that can be pumped into District canals.

CCID continues to provide tools to connect landowners who don't need October water with others in the District in short supply.

White said it will be very helpful for growers to utilize available water in November and December to recharge aquifers, which were drawn down very heavily this year due to increased pumping.

Landowners Committed to Solving Subsidence Problem

Significant progress is being made getting a handle on subsidence in Madera and Merced counties that threaten conveyance on the CCID Poso Canal, among many other potential threats. CCID General Manager Chris White, in a presentation on subsidence to the Groundwater Resources Association of California annual meeting in September, said stakeholders know a lot more about subsidence than they did even a year ago and are making strides to turn the tide on the problem.

"We have a lot more information about subsidence and how much has occurred and we are seeing landowners in that area east of CCID and the River are committed to helping themselves," White said. "Landowners are putting money forward to finance projects to deal with the problem, through recharge basins and management techniques, to help reduce subsidence and it is making a big dent."

Several meetings have been held in the past year to educate those landowners about the problems associated with pumping deep

well water below the Corcoran clay and long term negative implications for farming in the region, as well as potential solutions.

"What we have learned is that if you arm landowners with knowledge, they respond. Now if they have a choice to pump deep or shallow wells we are seeing more landowners pumping shallow wells," he said.

CCID has been spearheading a project to develop shallow groundwater banking in the subsidence region to help take some of the pressure off deep wells in the area.

CCID first became aware of the severity of subsidence in the Red Top region of Madera/Merced counties through measurements taken as part of the San Joaquin River Restoration Program in 2012.

Initial investigations found the Eastside Bypass subsided 5 feet in four years between 2008 and 2012. The San Luis Canal

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CONSERVATION SPOTLIGHT



3
COOPERATION HALLMARK
OF WATER SHORT YEAR

Dos Palos Farmer Sees Many Benefits to Drip on Tomatoes

■ FULLY AUTOMATED SYSTEM ALLOWS FOR REMOTE ACCESS TO ADJUST IRRIGATION SETS AND FERTIGATION RATES.

Lewis Maiorino admits he doesn't jump lightly into something new. At 80 years old, the third-generation Dos Palos farmer is still involved in the day-to-day farming operations on his 4,000-acre tomato, cotton and corn farm that he has developed from the initial 100 acres he planted in 1956.



LEWIS MAIORINO SAYS THE TOMATO DRIP SYSTEMS INSTALLED WITH FINANCIAL ASSISTANCE FROM CCID'S WATER CONSERVATION PROGRAM SO FAR ARE AVERAGING SIGNIFICANTLY HIGHER YIELDS WHILE USING ONLY HALF THE WATER.

But over the last two years, as part of a joint venture with Del Mar Farms, Maiorino has been converting all 1,300 acres of his processing tomatoes into drip. The partnership provides expertise and legwork for farming the tomatoes under drip, while Maiorino furnishes the land and water and some of the tractor work and is still in on many of the decisions.

With the first tomato crop under drip coming into harvest, Maiorino said he already sees the benefits to his tomato crop in improved yield and ease of management. More uniform water distribution down the row improves yield consistency while maintaining quality as well.

"We made 40 to 50 tons in the past on our furrow tomatoes and so far this year the yields under drip have been averaging about 76 tons per acre," Maiorino said. "And I would say we are using about half the water as before."



MAIORINO SAYS DRIP NOT ONLY IMPROVES YIELD AND SAVES WATER BUT ALSO KEEPS RUNOFF FROM LEAVING THE FIELD.

And just as important, he added, the drip prevents offsite runoff of water and fertilizers, which he believes will one day become a requirement for farming the region.

Matching funds from CCID's Water Conservation Program helped finance two drip installations in the CCID service area last year totaling 290 acres and a third 195-acre project this year. Maiorino leveled and combined several smaller fields into larger

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—Lewis Maiorino, Lewis Maiorino Ranches

blocks, which has increased his farmable acres and allowed the drip systems to be designed and installed more efficiently.

CCID's Water Conservation Program provides 25-percent cost-share grants up to \$400 per acre for on-farm water efficiency improvements, such as low-volume irrigation and tailwater return systems. A leveraged funding partnership with the NRCS Bay Delta Initiative for CCID growers in the area covered additional costs to install mainlines and filtration systems.



THE DRIP INSTALLATIONS AT LEWIS MAIORINO RANCHES ARE CONTROLLED BY FULLY AUTOMATED COMPUTER SYSTEMS THAT ALLOW IRRIGATION MANAGERS TO REMOTELY ADJUST PUMPS, FERTILIZER RATES AND IRRIGATION SETS, WHILE KEEPING RECORD OF HOW MUCH WATER AND FERTILIZER IS APPLIED AND WHEN.

"Tracey at CCID worked very well with us as did the others (at NRCS)," Maiorino said.

The partnership invested more than \$2,000 per acre in each system as a long-term commitment to drip, installing more expensive sand media filtration and computerized automated systems at each filtration station, along with variable speed pumps to improve energy efficiency.

Will Pruitt, managing partner for Irrigation Design and Construction (IDC) Inc., who oversees the drip installations and manages irrigation events for the partnership, said automation allows the irrigation system to be operated remotely so that the duration and frequency of irrigation sets can be changed from a smart phone or computer. It also allows Maiorino to make fertigation rate and other adjustments automatically based on weekly petiole sample results to ensure the plants and developing fruit are getting optimum nutrition, only what they want and only when they need it.

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Cooperation Hallmark of Water Short Year

CCID growers this year worked cooperatively to help overcome extreme uncertainty and cope with a drastically reduced water supply.

CCID was able to connect landowners who perhaps had wells they could pump or Tier 1 water they didn't use by the end of August with other landowners who were either short or ran out by the end of the seven-month irrigation season. CCID will continue to facilitate allocation exchanges among consumers through October.

Many landowners were able to provide for their neighbors water from fallowed fields as a result of a coordinated effort supported by CCID staff. Others were able to utilize private wells to divert water into the CCID system for use by growers in short supply.

The District established a link on its website to facilitate exchanges among consumers.

"This is new territory for us, and it's new for our consumers; they navigated it very well and we did what we could to offer our support," said CCID General Manager Chris White. "While we have had tiered pricing for many years this is the first time in more than 20 years that we had allocated water to our landowners."

While there was no water available for Class II lands, CCID was able to transport water from well water that was pumped into the canal system for that purpose. In addition, CCID landowners and Exchange Contractor landowners reached out and provided 13,500 acre-feet of desperately needed water to growers on the east side of the Valley this summer.

"Growers and water users have come together and assisted one another," White said. "The community joined together to manage water shortages under very difficult circumstances."

Subsidence Problem

Continued from page 1

Company's headworks is sinking at 6 inches per year, which is not sustainable for long-term gravity diversions.

Current studies show that if left unchecked, subsidence will not only lead to flooding in the area, but reduce the water supply of neighboring districts as much as 20 percent in reduced conveyance capacity.

The problem in the western part of Madera and Merced Counties near the San Joaquin and Fresno Rivers was determined to be related to over-pumping of deep wells that leads to shrinking of clay layers below 250 to 300 feet deep and a resulting drop in ground levels above.

CCID and San Luis Canal Company recognized the potential threat of subsidence to their conveyance system, and solicited the help of the Madera County Water Advisory Commission and the Merced County Public Works Department, along with other interested parties, to research and offer up solutions to the subsidence problem.

"We now know what caused it and have a lot of background both of how bad it can be and what we can do to correct the problem," White said.

The CCID and SLCC boards reached out to landowners who agreed to self-assess and put together a feasibility study for a shallow groundwater bank east of the service area. CCID, SLCC and Madera and Merced counties also contributed. Water from intermittent flood flows would be diverted into the groundwater recharge area above the Corcoran clay to support farming in other years and avoid deep well pumping.

"With those dollars committed we were able to do enough of a detailed study to see that the project is feasible and we are working on it," White said.

An additional project will build conveyance pipelines to move water from the San Joaquin River easterly to the heart of the subsidence area.

"We hope to have all the infrastructure done fairly quickly and built by this next spring," White said. "These landowners are incredibly motivated to get something done. They realize they need to be prepared for the next time flood flows come down the river."

Conservation Spotlight

Continued from previous page

Two lines of 13-mil drip tape are buried 14 inches on 80-inch beds. That configuration, along with the system's automation, provides for shorter, more frequent irrigation sets to eliminate stress that might result from variable, sand-streaked soil conditions.

"With the automation we also have a record of where our water went, where our fertilizer went and how much we applied," Pruitt said. "It allows us to catch mistakes and correct them before we see a problem in the field."

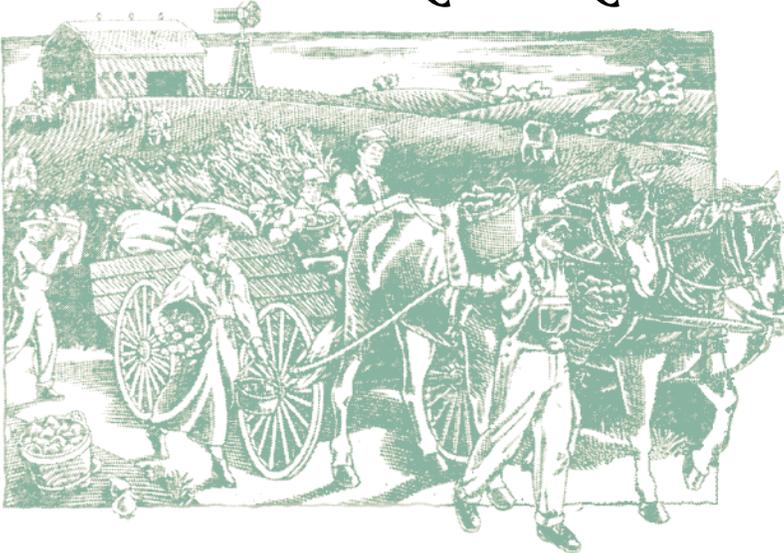
And there are labor savings as well. The system is so efficient, a single irrigator now operates about 300 or more acres.



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A look back...



50 Years Ago – Fall 1964

At Grassland Water District's annual dinner meeting in October, a plaque was presented to the widow of Laurence C. Wolfsen honoring him for his 11 years of service as the first President of the Central California Irrigation District. Grassland announced that it would re-name the new bypass from the Delta-Mendota Canal to the Outside Canal the Wolfsen Bypass in appreciation for Mr. Wolfsen's support of the grasslands, and that the plaque would be permanently mounted at that site.

25 Years Ago – Fall 1989

Groundwater Consultant Ken Schmidt appeared before the Board to express his concerns over potential adverse impacts of the proposed Los Banos Grandes Reservoir, and presented a proposal for a District groundwater monitoring program.

10 Years Ago – Fall 2004

U.S. District Court Judge Karlton issued a ruling in the NRDC v. Friant lawsuit, finding that the construction of Friant Dam was in violation of portions of the State Fish and Game Code, even though it was widely recognized that an attempt to establish a salmon run in the San Joaquin River would create major problems for long-established agricultural uses in the Central Valley.