

CCID OBSERVER

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Restoration Flows Impact Groundwater in CCID Service Area

■ DISTRICT TAKES STEPS TO ENSURE ADEQUATE MONITORING AND GROUNDWATER PROTECTION WHEN SJ RIVER FLOWS RESUME.

District-owned groundwater monitoring wells have shown that increased San Joaquin River flows to restore endangered salmon species are having an impact on groundwater tables and crops in pockets of CCID farmland adjacent to the River.

CCID since 1983 has operated a series of 56 shallow groundwater-monitoring wells in its service area, which provide a good baseline of groundwater levels over the past two decades throughout the District. Recent District monitoring shows that groundwater at nearly a third of those wells was impacted by interim restoration flows.

“We are well situated within CCID in that we have numerous monitoring wells with a long history of measurement,” said CCID General Manager Chris White. “We were able to collect data which indicated a linkage between shallow groundwater levels and flows in the river, so we were able to make the technical argument to gain the ear of the Bureau. These were substantiated claims based on measurement in the field.”

Since restoration flows commenced last year under the San Joaquin



AS A RESULT OF INPUT FROM CCID, THE BUREAU OF RECLAMATION IN SEPTEMBER AGREED TO CURTAIL RESTORATION FLOWS IN REACH 4A AT SACK DAM TO PERMIT THE REMOVAL OF BLOCKAGE THAT WAS FURTHER IMPACTING GROUNDWATER LEVELS IN THE AREA.

River Restoration Program, CCID has stepped up its groundwater monitoring throughout the affected service area, including an extensive study on the influence of those increased flows to groundwater tables at Reach 4A, in its south division north of Valeria Ave.

“That study linked shallow groundwater levels and elevated soil salt levels to San Joaquin River flows in Reach 4A,” White said. “Before the restoration project started, that area of the river was dry for periods throughout the year. Since flows began, we have seen about 30 cfs being pushed into the ground full time. In our view that seepage overwhelmed the natural drainage system that is in place and caused high groundwater levels.”

White said that landowners on about 15,000 acres of farmland in the far north end of the south division saw impacts to crops including tomatoes, melons and beans, though the full extent of crop damage will not be known until after harvest. Additional salts in the root zone are another long-term impact growers in the area will have to contend with.

CCID alerted the Bureau of Reclamation to problems as they began to surface earlier this year. As a result of that communication, the Bureau ultimately did reduce flows, but White said the problem should have been prevented in the first place.

“The Program didn’t work the way it was intended because the Bureau got

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DRAINAGE EXTENSION GRANTED



3
CONSERVATION SPOTLIGHT
PEREIRA BROS.

Grassland Drainage Extension Granted

■ CCID CONTINUES TO PURSUE LOCAL SOLUTIONS TO MEET STRINGENT DRAINAGE REQUIREMENTS.

The State Water Board on Oct. 3 was expected to approve the 10-year extension on the Agreement for Use on the San Luis Drain to help local groups and federal agencies develop drainage solutions on 100,000 acres of farmland in the Grassland Basin.

The extension will allow farmers in the area—which includes more than 5,000 acres in the Camp 13 CCID Service Area—to continue to drain into the lower San Joaquin River while improvements are made to address drainage requirements.

“Local drainage and irrigation districts worked very hard with the Bureau and regulators to achieve an extension of the reuse,” said CCID General Manager Chris White. “It was vital. There is no way farming in that area could continue without a drainage outlet and the extension gives us a little bit more time to deal with the drainage issue.”

White said the extension would realistically give farmers only another six years or so because phased-in selenium load levels within that time will become too restrictive and it will be impossible to farm while meeting those load level requirements.

While the extension offers more time to deal with the issue, proposed federal improvements, including a treatment plant that is the cornerstone of the Bureau of Reclamation’s drainage solution strategy, will take much longer to implement than even the current extension would allow.

“With the phasing in of those stringent selenium requirements, drainage will have to be shut off before physical solutions to address the problem can be built,” he said. “So CCID is trying to be creative to help its landowners through the situation.”

CCID is currently developing an Environmental Impact Report on a Camp 13 Drainage Elimination Plan to help landowners in the area cope with looming drainage deadlines. The draft Camp 13 Plan includes solutions ranging from building projects to reduce the need for drainage, to purchasing and retiring land. The EIR will likely take until next year to complete.

“We are well into the process of assessing all the alternatives through detailed analysis in that 5,500-acre area within CCID,” White said. “Because the area is relatively small, we can intensively look at all the charac-

teristics of this land, consider drainage alternatives, drainage reduction alternatives and buyout alternatives to find the best combination in the context of this specific area.”

Meanwhile, local entities in the Westside Regional Drainage Plan continue to pursue federal funding to fully implement capital projects to solve drainage issues in the entire Grassland Area.

Those entities have received a number of grants and are about a third of the way toward implementing its components, which already have cut drainage outflows in the area by half.

White said CCID, the Exchange Contractors and other local stakeholders continue to remain focused on finding real, implementable solutions while also pursuing damages claims against the Bureau to hold the agency responsible for drainage in the Camp 13 area.

“The Bureau has offered a solution that does not provide drainage in time. We have deadlines to deal with and we intend to continue to help local stakeholders find solutions to the problem in advance of those deadlines.”

Restoration Flows *Continued from page 1*

such a late start installing its own groundwater monitoring system,” he said.

The Bureau installed some new monitoring wells last spring, two months after flows started, and is expected to install additional groundwater monitoring wells this fall.

White said CCID also recently discovered a sand blockage in the system at the end of Reach 4 that created high surface water levels in the river. Those surface water levels also impacted local groundwater in the adjacent area.

The Bureau in early September agreed to curtail flows in Reach 4A at Sack Dam to allow the removal of blockage and to let groundwater levels recover.

“We are now seeing the groundwater at the end of Reach 4A receding from a level of about 3.2 feet below the surface during peak flows down to more than 7 feet, so we should be able to get back to baseline levels,” White said.

White said the District will continue to seek management of the flow regime that avoids further seepage impacts on surrounding farmland.

In addition, the District is submitting comments to the Bureau to improve seepage management plans for next year. Among those recommendations is the installation of a drain that would intercept seepage along the base of the river and divert it into a canal or service drain and away from adjacent fields.

Drip Irrigation Helps Pereira Bros. Evolve

■ NEW INSTALLATION ON CANNING TOMATOES IMPROVES PRODUCTION OUTLOOK FOR LOS BANOS FAMILY FARM.

Like most farming families in the Central Valley, the Pereira family has had to adapt to survive. The three generation family farm was



THE PEREIRA FAMILY, FROM LEFT, ANTHONY, MADELINE, ANTONE, MANUEL, KAREN AND MICHAEL, STAND NEAR THE CCID OUTSIDE CANAL AT THE FAMILY'S 750-ACRE LOS BANOS MAIN RANCH. THE PEREIRAS FARM ANOTHER 250 ACRES IN THE CAMP 13 AREA OF CCID.

started in 1917 as a dairy and evolved into Pereira Bros. Farms, raising dairy cows and dry land wheat, bean, corn and barley through the 1950s.

Second-generation brothers Antone and Manuel in the 1960s reclaimed a nearby pasture near the Los Banos home ranch, laser leveling, installing tile drains, and planting cotton and sudan to build organic matter. They then planted the first of 400 acres of canning tomatoes, which they have been growing ever since.

This year the farm, which is overseen by Antone and Manuel and operated by Manuel's children Michael, Anthony and Karen, will farm nearly 1,000 acres of processing tomatoes, alfalfa and grain crops. The farm's latest adaptation is a new 100-acre drip tape irrigation installation on tomatoes. The drip tape project was installed this year with funding assistance from CCID's Water Conservation Program.

The Conservation Program provides cost share assistance including grants to cover 25-percent of approved project costs up to \$400 per acre benefited, and additional low-interest loans, up to \$1,000 per acre benefited, to help offset the farmer's portion of the remaining cost.

Pereira's pilot drip project has worked out so well, the family is in the process of putting another 215 acres

under drip for 2011.

"It was a huge help for us to get the financial assistance through CCID. We would not be able to do it if it weren't for the grant," says Karen, who handles the

books for Pereira Bros.

Brother Michael, who oversees the growing operation, says increased production is motivating Pereira Bros. to continue converting to drip.

"Our average tonnage on traditionally irrigated fields is about 35 to 40 tons per acre, and with drip fields we are hoping for 70-plus," he says.

He notes the project is also estimated to save an estimated 55 acre-feet of water annually.

Drip also allows Pereira Bros. to farm saline ground that otherwise would not accommodate tomatoes.

Michael says seed companies and canneries are developing new varieties that are helping growers better manage drip right up to harvest to maintain solids and fruit quality. He expects a steep learning curve as he transitions from turning off the water three to four weeks before harvest date to managing the water up through harvest.

"It's a whole difference experience growing tomatoes under drip. We are working with our agronomists and it's been quite a learning process," he says. "It's a whole different experience between drip and furrow, but we've never had a tomato crop look so pretty than on this drip field."

Pereira uses soil probes to check moisture and also has installed owl boxes and other vertebrate control

measures to manage rodents and other pests that might damage the drip lines.

"I'm out there three times a day, and if we are running six hour sets, we're out there at night too," says Michael, who acknowledges that the drip at first takes a bit more hands-on effort. "We've got to babysit it more, especially this first year."

Pereira Brothers this fall plans to install an automated system to take



MICHAEL (RIGHT) AND ANTHONY PEREIRA SAY THAT WITH TODAY'S FARMING REALITIES, IT WILL BECOME NEARLY IMPOSSIBLE TO PROFITABLY GROW TOMATOES WITHOUT DRIP IRRIGATION.

some of the labor out of managing the irrigation sets, but Michael says, "You still have to be out there every day watching for leaks and blowouts."

But in the end run, Pereira expects it to be much less work.

Cultivations in the minimum til operation are simpler. Drip has eliminated three or more passes with the cultivator after planting. And there is no pipe to move.

"You don't have the drainage issues either or the leaching or sediment coming off your ground," says Anthony.

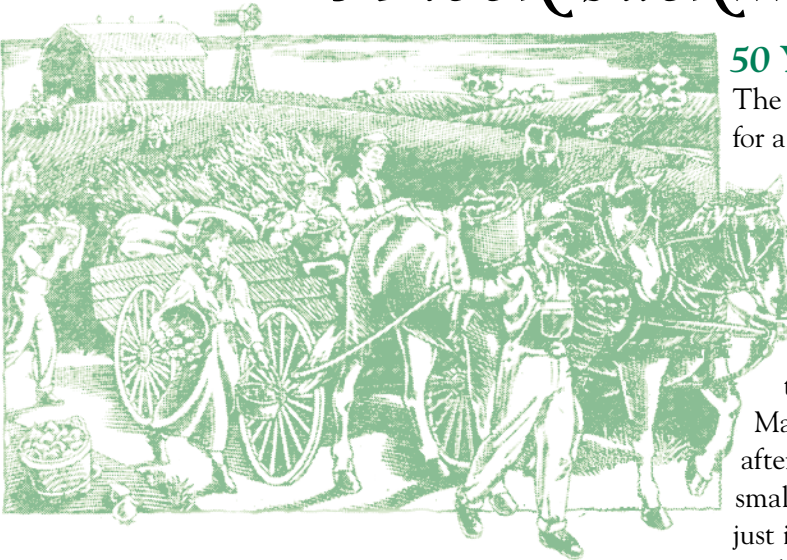
He acknowledges that at nearly \$1,200 an acre, the installation is a big financial investment. Using 15-mil tape buried 14 inches below the bed surface, he expects the tape to last 6 to 8 years, which would help easily recoup the investment with increased production within two to three years.



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A look back...



50 Years Ago – Summer/Fall 1960

The Board approved the budget for Calendar Year 1961 for a total of \$1.36 million, and set the annual assessment at \$2.15 per \$100 of assessed valuation. This was a reduction from the \$2.30 rate that had been in place since the District's inception in 1954.

25 Years Ago – Summer/Fall 1985

Charles W. Bates, who was highly instrumental in the formation of CCID and who served as its first Manager, from 1954 until 1979, passed away on Aug. 24, after a long illness. Construction was completed on two small hydro plants on District canals west of Los Banos, just in time to operate them briefly in late October before water deliveries were terminated for the winter.

10 Years Ago – Summer/Fall 2000

As it became apparent that the San Joaquin River Restoration Program would move forward, the Exchange Contractors played a leading role in the formation of the San Joaquin River Resource Management Coalition, helping to give downstream landowners a voice in the process.