

Farming through historic water scarcity in California

By ALEJANDRO DÁVILA FRAGOSO, Multimedia Editor | Posted: Sunday, May 3, 2015 1:00 am

The drought is so severe that when Mark McBroom goes to the California Farm Bureau Federation meetings, he sometimes can't help but feel like the luckiest man in the room.

“Because of the amount of water that we have to farm with ... we (Imperial County) are definitely better off than most in California,” said McBroom, a Calipatria farmer who represents Imperial and San Diego counties on the state Farm Bureau Federation Board. “But that doesn't mean we are more comfortable, nor does that mean that we are complacent.

“I can say about 95 percent of what I'm farming is micro irrigated,” added McBroom, a citrus and date farmer, “and what I mean by that is that water is applied just to the tree or the crop. There (are) good things and bad things about doing that.”

After four years of what's been called a historic drought, Gov. Jerry Brown announced the state's first-ever mandatory water restrictions to potable water users. With that he targeted households. He largely spared the farming industry, arguing that farmers had borne the brunt of the drought to date.

The governor's reluctance to put farming under mandatory water cuts sparked some criticism, even though state farmers have experienced dire times for several months. Research from the University of California, Davis calculated that drought-related crop revenue loss was about \$810 million in 2014. In total, the state lost \$2.2 billion in crop plus other agricultural revenue and more than 17,000 jobs, according to the same economic analysis. As far as this year, the industry that produces nearly half of U.S.-grown fruits, nuts and vegetables expects difficulties to continue.

About 30 percent of the irrigated farmland in California will get no surface water deliveries, according to a survey by the California Farm Water Coalition, an advocacy group. “There are a lot of concerns of what crops will be able to be planted this year,” said Mike Wade, executive director of the coalition.

It's widely known that the Central Valley, irrigated by water that trickles from California's diminishing snowcaps, has suffered the most. In fact, another curtailment notice cutting off water orders for the area was



Farming through historic water scarcity in California

Jose Laguna carries a bucket of organic cucumbers grown through drip irrigation in Westmorland. Imperial County farmers are increasingly turning away from furrow irrigation as droughts in the western United States have reached historic levels. While many farmers across the state are lacking in their water supplies, the county — known for its efficiency — has been resilient to water scarcity. Alejandro Dávila Fragoso Photo

released Friday. If dry years continue — as forecasted by experts — Central Valley crop farming could lose \$1 billion a year, according to UC Davis research.

LOCAL RESILIENCE

But while farmers elsewhere are forced to use even depleting salty aquifers to keep crops alive, farming in Imperial County has seen periodical gross production records. “We locally have (the) ability to do that because we do have stability here,” said Linda Evans, the county assistant agricultural commissioner. “We have a stable group of growers, we have water that is reasonably stable and our weather is relatively stable. That’s what makes the Imperial Valley so productive.”

Unlike many other areas, Imperial County receives its water solely from the Colorado River. It also owns 77 percent of the state’s Colorado River allocation, which is a distressed water system that has reservoirs reaching historic lows. Still, the most recent numbers available for the county’s agricultural crop report show record production for 2013. That is despite a decrease of harvested acres for that year, despite the ongoing massive water transfer, and despite a persistent Colorado River drought that’s been going for nearly 15 years.

While the Valley’s farming has been largely resilient to tensions, concerns among farmers and officials over water scarcity and what all that means for business and even the environment exist. “No one knows what the future holds and you always have to be thinking about the next problem,” said Evans.

As a result, multiple farmers interviewed agreed that the local industry is increasingly turning toward more efficient irrigation methods, like costly drip systems and sprinklers. And then there’s Northend farmer Alex Jack, who wants more “futuristic ideas.”

Jack is in discussions to have Cal Poly San Luis Obispo students design water reclamation projects for his farming; projects that he said are outside the Valley’s norm. “I want to be on that leading edge,” said Jack, whose father, Neal, started using drip irrigation in the county in 1978.

He is also looking to put money on ideas of his own. Jack wants to buy an old cotton gin and turn that property into a state-of-the-art reservoir, as well as organize a water collective in the Valley with neighboring farmers, so they could all benefit from stored fresh water.

“A couple of farmers that I’ve spoken with are very open to that type of project,” said Jack, noting he first came up with the idea seven years ago. It had a lukewarm reception then, but the environment has since changed and will continue to do so, said Jack. “Every drop of water as time goes on is going to be more and more important,” he said and explained that such a project could give him the ability to exactly use the amount of water he needs for crops, independently of the IID’s delivery schedule.

A HIGHLY EFFICIENT WATER USER

Multiple experts and local farmers agree the area is highly efficient in its water use. Innovation and water conservation, some officials, experts and farmers say, have been at the forefront here for years. Especially after the Quantification Settlement Agreement began in the early 2000s, and the largest agricultural-to-urban water transfer in the nation was put in motion.

“The guys there in (the) Imperial Irrigation District, Coachella Valley, they use very efficient irrigation systems,” said Samuel Sandoval, assistant professor of the land, air and water resources department at UC Davis. Sandoval, who’s visited the region, said area farmers reach more than 80 percent water efficiency. Some local farmers believe efficiency is higher than that.

In any case and by all accounts, the QSA forced the Imperial Irrigation District and farmers to conserve water and fallow land years before the recent California drought began, and farming in other state areas started seeing water cuts. “We’ve been doing a lot for a very long time,” said Mike Abatti, who farms around 7,000 acres of land.

Imperial County farmers used 97 percent of the county’s water supply. Through 2014, IID conserved 3.3 million acre-feet of raw water for water transfers, according to an IID report. That is more than twice what Brown’s mandated 25 percent statewide water cuts could bring between April and February of 2016, according to figures in published reports.

These water savings materialized as the IID implemented a conservation program that put farmers on unprecedented water budgets. “For 100 years we were not on a water budget,” said Steve Benson, president of the IID Board of Directors. A farmer himself, Benson said farmers “are making cropping decisions based on not only on what you can grow, but how much water you have.”

Farmers like John Hawk, for instance, are treating water-thirsty crops like Sudan grass differently. “Instead of planting 400 (acres), we are maybe planting 250 (acres),” said Hawk, owner of Horizon Farms in Holtville.

He’s changed farming practices over concerns of the Colorado River reservoirs that feed the Valley. “We watch Lake Powell and Lake Mead, we realize they are under 50 percent capacity, so we are conserving like everybody else,” he said while referring to the reservoirs that according to published reports, keep falling below capacity.

As of Tuesday, according to the Los Angeles Times, Lake Mead was 38 percent full.

WATER CONCERNS

Many farmers agreed that not everyone is proactive in conservation measures, and also agreed that scarcity and drought is what’s driving their change. “I think we are all guilty of some water waste, but I think farmers here are doing what they can to conserve water,” said Fred Mamer, general manager of Jack Brothers, the company Alex Jack owns.

Mamer, like his boss, seems to enjoy figuring out ways to conserve water. However, he said he’s displeased with how the state is managing the water supply. “It’s ridiculous how much water is being released into the ocean,” Mamer said.

California’s total water supply is used in agriculture, urban areas and the environment. On average, water use is roughly 50 percent environmental, 40 percent agricultural and 10 percent urban, according to the Public Policy Institute of California. There are some who believe environmental water use is

disproportionately spared of water cuts and ill managed. For farmers, that translates to fear that scarcity elsewhere could mean less water allocation in the long run.

“The citizens are in an uproar with their elected representatives in Sacramento (in) that they favor the environmental aspect of water rationing over their tax payers who are paying their salaries,” said McBroom, the local farmer and official with the state farm bureau.

Caitrin Chappelle, associate director of the Public Policy Institute of California, said that much of the environmental water is found in the northern part of the state. This is water allocated to wild and scenic areas like forests and wetlands. Many of this water is also not connected to the human water supply.

Yet various experts say intervening with environmental waters is dangerous. “Water that is let towards the ocean is not wasted,” said Fabian Bombardelli, associate professor at UC Davis civil environmental engineering department. “That water serves environmental functions. ... The hope is that we could understand the complexity of the situation.”

A CONSERVATION PARADOX

If Imperial County is somewhat detached from the state’s water shortage, then in a way environmental water-use concerns brought up by local farmers regarding the state’s management decision in the north is somewhat ideological. Yet the Valley, too, has its share of problems involving environmental water use, as it relates to the ailing Salton Sea, and farmers who’ve worked their way through water scarcity with efficient conservation know this and raise the issue.

That’s because farming, the Salton Sea and the livelihood of the Valley are interconnected. For example, some of McBroom’s crops benefited from the microclimate the shores of the sea create. In turn, the largest inland lake in the state is partly replenished by the water McBroom and thousands of other farmers use.

However, this 100-year-old balance has been ruptured as drought, water scarcity and the water transfer became a reality to local farmers. For years local agencies like the IID and the county have been pushing the state to pay for the Salton Sea’s costly mitigation, as the state promised it would do. No funding has been secured yet.

Meanwhile, farmers have aggressively turned to efficiency in a trend likely to continue; and now, with the same force the Salton Sea is dwindling away, exposing playa that experts fear will be a major source of air pollution in the coming years. This for many is a unique conservation paradox.

“That’s the missing link that nobody seems to see,” McBroom said. “The more water they take from us, the more efficient they think that we need to be, the (unhealthier), and the more detrimental it's going to be for the citizens of Imperial County.”

Multimedia Editor Alejandro Dávila can be reached at 760-337-3442 or adavila@ivpressonline.com

BY THE NUMBERS

\$2.2 billion - The estimated agricultural revenue loss in the state in 2014 over the drought

17,000 - The estimated number of jobs lost over the California drought in 2014

3.3 million - The acre-feet of raw water that IID conserved through last year