



Construction could begin in late-2019 to raise Shasta Dam. The move could add over 600,000 acre feet of storage to the large reservoir.

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Friant Water Authority: 'California's water math does not compute'

California has little time to create solutions to water sustainability

Todd Fitchette | Apr 17, 2018

A growing shortfall of irrigation water in California's San Joaquin Valley could lead to over 700,000 acres of land retirements, even with new conveyance and Temperance Flat reservoir, a water official says. With possible construction of dams like Temperance Flat a minimum of 20 years away, there seems to be little to stop what could be a mass fallowing of farmland within the next decade.

Jason Phillips, chief executive officer for Friant Water Authority, says there is a myriad of necessary steps state and federal officials must take to ensure that farmers have the water they need to grow the estimated 400 crops California can produce. These changes need to come quickly, as implementation of the State Groundwater Management Act (SGMA) will begin setting severe limits on groundwater pumping as soon as 2020.

For some farmers, that could mean pumps would be idled, as sustainable water deliveries from wells may be less than one foot of water per year.

During the Friant Water Authority annual meeting at Fresno, Phillips illustrated farm water losses that have occurred since implementation of the Central Valley Project Improvement Act in the early 1990s. He also spelled out the political reasons for those losses, and the difficulties in correcting them, since some of the reductions came about through federal court decisions.

ENGINEERING AND MATH

Phillips is an engineer. He explained to an audience of about 250 district members and guests that the water math doesn't compute: The Valley's annual demand for 13.3 million acre feet of water is not being met by existing supply.

Traditional surface water resources once used by farmers are now being used to boost river flows through the Delta region, under the guise of habitat and fishery restoration, and the State Water Board wants more water. Some argue those increased flows are not working to increase fish populations.

Current regulations require 3.9 million acre feet (MAF) of outflow from all San Joaquin Valley tributaries through the Delta. Phillips says the increased flows the State Water Board wants will reduce the 8.2 million acre feet of available water to farms and cities.

Reduced Delta water imports — now down to about 2.8 MAF from 3.3 MAF — makes water problems worse by increasing the demand for groundwater in an era when groundwater management plans will mandate reduce pumping.

Add the 8.2 MAF in local supplies to the 2.8 MAF from Delta imports, and the total 11 MAF falls 2.3 MAF short of Valley demand, Phillips says — a shortfall that will only grow larger if the State Water Board gets its way.

Prior to passage of the Central Valley Project Improvement Act (CVPIA) in 1992, water allocations to San Joaquin Valley farmers averaged 93 percent. That fell to 75 percent after the act was implemented, and by 2007 court-ordered environmental biological opinions and further regulatory restrictions reduced that average to just 32 percent, though drought played a key role in the latter.

WATER BALANCE POSSIBLE?

Achieving sustainability is a matter of math — and the numbers continue to not add up, Phillips says. The largest factor in achieving a sustainable water balance must come through new surface water storage.

He cautions people to not view irrigation efficiency or recycling as means to achieve water balance. “These just won’t help.” While agreeing that water efficiency is good, he emphasizes that farmers are already doing this, and that there’s little added benefit, or increased water, that will result from complete adoption of water-thrifty irrigation systems.

Moreover, reduced groundwater recharge and soil health have become unintended consequences of these systems. Furrow and flood irrigation that once recharged aquifers, while watering crops, no longer happens. Further, natural soil salts that

were once flushed past root zones by these irrigation practices now concentrate at the surface, choking out crops and making land difficult to farm.

CALIFORNIA WATER BOND

In November, a new \$8.87 billion water bond is set to go to voters in November that would, in part, allocate \$750 million to address subsidence on the Friant Kern Canal, a particularly critical issue for water users along the southern third of the canal system, since water deliveries there are reduced by 60 percent because of the lower capacity of the canal.

Dr. Jerry Meral, director of the California Water Program and Natural Heritage Institute, says the November water bond differs greatly from what is being billed as a water bond on the June ballot. While the June measure has some water elements in it, he says, it is largely a mechanism to fund parks. “There’s never been a water bond like this,” he says of the November measure.

About half of the bond will fund issues important to the Central Valley. Included are funds for SGMA compliance, and money for drinking water to disadvantaged communities. Water recycling and desalination of inland water sources will also be addressed.

“We can win this campaign,” Meral says. Numerous water agencies and agricultural groups have already come out in support of the bond.

REGULATORY REACTIONS

Phillips invited regulatory representatives to address water issues. Karla Nemeth, director of the California Department of Water Resources; David Murillo, regional director of the Bureau of Reclamation’s Mid-Pacific Region; and, Austin Ewell, deputy assistant secretary for water and science in the Department of Interior, explained issues and likely changes that could bode well for Californians.

One is the long-awaited raising of Shasta Dam. Murillo and Ewell say efforts are under way to begin construction to boost the capacity of Shasta Lake by raising the dam 18 feet. Studies indicate another 634,000 acre feet of capacity could be added to the reservoir, which currently holds 4.55 million acre feet.

Ewell is more optimistic than Murillo on the Shasta Dam project, saying flatly that the goal is to begin moving dirt by the end of 2019.

“Raising Shasta Dam is probably the highest priority right now, because it’s the easiest one to get shovels in the ground,” Murillo says. USBR is looking at various other storage projects, he notes, including Sites Reservoir in northern California and Temperance Flat. Both projects are seeking money from the last state water bond to begin construction, but so far the state has not awarded any money for them.

‘WON’T BACK OFF’

Nemeth is Gov. Brown’s latest appointee to head the Department of Water Resources. While there is less than a year left in the current state administration, she says the governor “is not going to back off from any of his priorities.”

Those include California WaterFix. About two weeks after the Friant meeting, where she spoke, Metropolitan Water District of Southern California directors agreed to fund most of the controversial twin tunnel project, voting by a 2:1 margin to provide nearly \$11 billion towards construction of the project that would build tunnels to bypass the Delta with water from the Sacramento River.

Some of that water could be sold to farmers to help MWD — which supplies drinking water to half of the state’s population — recover some of its costs.

“I applaud MWD’s leadership to step up and keep this important project moving forward,” Phillips said in a prepared statement. “Because the Delta is so complex, there are still many issues that need to be resolved, including those related to how federal contractors in the Valley might participate. This action should help facilitate

resolving many of those issues, while not hindering forward progress on implementation.

TITLE TRANSFER

Phillips says the message from the Trump Administration seems positive, as officials continue to ask how the federal government can get out of the way of project ideas sought by local officials.

“I will tell you, with this administration the message they give you on every issue you bring up is that they honestly want to know how we can solve these problems,” he says.

Perhaps one of the more innovative approaches in the mix is title transfer of federal water projects to local agencies. In the case of Friant Water Authority (FWA), this could mean transferring title to the 150 mile-plus canal owned by the Bureau of Reclamation to FWA. Friant currently manages the canal system for Reclamation, which includes funding maintenance and operations of the system.

According to Ewell, the Trump Administration is interested in the idea, and has directed Interior and Reclamation to discuss the practicalities of how this might take place. For some projects, title transfer will require an act of Congress. For other non-controversial projects, an effort is under way to give the Secretary of Interior authority to transfer these less-complicated projects to local control.

As is already the case, FWA operates and maintains the Friant Kern Canal at a lower cost than the federal government could, Phillips says. Still, because it is owned by Reclamation, certain projects require federal approval and permitting before they can take place. “This is burdensome, and that is why we want to look into title transfer,” he says.

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