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The hunt to fill Tulare County water reservoirs

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While the underground reservoirs that supply most Tulare County communities with water aren't so depleted as to trigger widespread rationing, many community officials have begun pressing for ways to hold onto more water.

"We're not in any danger of running out of water," said Phil Mirwald, Visalia district manager for California Water Service Co., but the situation is serious.

"By serious, what I mean is we live in a desert, and people have to understand we don't live in an oasis" with unlimited water, Mirwald said.

His company supplies drinking water to most of Visalia and Goshen as well as parts of Tulare and Porterville.

Water in Tulare County is laced with a lot of uncertainty, questions about whether the drought will linger or — even if it does break this winter — if drier winters will become the norm here and across the state because of changing weather patterns that some call global warming.

Then there are the heated politics of new reservoirs and other water-storage methods combined with the environmental debate over directing some water away from farms and homes to maintain waterways important for fish.

More than 20 significant pieces of water legislation were introduced this year in California's Legislature. All either failed or are in limbo until the lawmakers reconvene in January.

If California does have better-than-average rainfall and snowfall this winter, how ready are communities and water districts to capture and store that extra water?

"There hasn't been a significant change on water infrastructure" in several years, said Wendy Martin, the California Department of Water Resources statewide drought coordinator.

"We're no different today than we were last year," she said, noting all the water bills that didn't pass in the Legislature and the large amounts of money that will be needed to build reservoirs to increase the state's above-ground water storage.

In fact, 53 possible new dam sites or expansions that the Department of Water Resources had been studying have been whittled to a list of just five, including a new reservoir at Temperance Flat, upriver of Millerton Lake, which supplies water to the Friant-Kern Canal, said Stephen Roberts, who is managing the dam feasibility studies for the state agency.

Those projects could be years away.

Tulare County Supervisor Allen Ishida said he doesn't think the county is as prepared to capture and store as much water as it should be.

"Every drought is ended by a flood, and that's how nature is. And we are not ready to capture that water from the next flood," he said. "I think overall, we're probably 20 years behind in flood control and in ground recharge."

"I think everybody would agree we don't have enough capability. We don't have enough water supply to meet all our demands as a region," said Dick Moss, a civil engineer specializing in water resources and a vice president for Provost & Pritchard Consulting Group in Visalia.

Still, Ishida said, "we're catching up. We're realizing that capturing floodwater also has recharge benefits."

Among the projects completed or in the works to capture more water in Tulare County:

- The Kaweah Delta Water Conservation District is looking to buy about 2,000 acres east of Visalia to convert into water retention basins that could be filled with runoff water to recharge underground reservoirs.

This would add to the 40 retention basins covering about 5,000 acres that the district already maintains.

- In 2006, the city of Tulare and the Tulare Irrigation District bought a 154-acre plum orchard for $3 million -†reimbursed by city developer impact fees — east of Mooney Boulevard and Avenue 256 for a groundwater recharge basin.

It's part of a plan to increase recharge acreage east of Tulare from 500 acres to 1,500 acres to percolate more water into the aquifers from which the city draws its water, said Lew Nelson, Tulare's public works director.

"I'm guessing we will probably have another 150 acres of basin in place every three or four years" over the next nine to 12 years, he said.

Nelson said water from the duck pond already seeps underground and into the aquifer that flows southwest toward Tulare, but the county pumps underground water to refill the pond.

When there is water in nearby Cameron Creek, the irrigation district would direct creek water to fill the ponds, and no underground water would be used to fill them at those times, Nelson said.

- The city of Visalia is looking into using treated water from its wastewater treatment plant to irrigate Plaza Park and the Valley Oaks Golf Course rather than drawing underground water.
- Tulare County is considering buying land off Deer, Frazier and Strathmore creeks as well as White River in south county to build ponding basins not only to aid in flood control but also to serve as recharge basins.

"We are going to try to detain the water as much as we can in those water courses" by creating the basins, said James May, a civil engineer for the county Resource Management Agency currently working on a feasibility study he hopes to complete in the next couple of months.

"We've been delayed by the state's budget woes."

While money and the cost-effectiveness issues count as reasons the county's water retention isn't better, another major reason is the lack of a clear picture on how much water is here and how much more is needed.

Several water experts contacted said that, unlike water in a reservoir, it's not clear how much water is underground because the space is irregular and the water is constantly flowing.

In fact, about the only way to tell is by looking at well levels. Though there are plenty of reports that well levels are dropping and that wells are going dry, nobody has put all this information together to get an overview of the aquifer situation, Ishida said.

By some estimates, there are about 12,000 wells in Tulare County.

The county already has mapped about a thousand of them and has received a $250,000 state grant to map more.

That mapping includes checking water levels, pumping depths and water quality as well as making capacity estimates, Ishida said.

"It's extremely expensive to get this information, and this is just a small down payment," he said. The county is seeking an additional $2 million in grants to conduct a large-scale well mapping, Ishida said.

With that information, he said, a clearer picture would form of how great the water need is and how much needs to be captured.

At the same time, information held by water districts in the county should be pooled to give a clearer picture of water-capturing capabilities here, Ishida added.

For example, Ishida said he had no clue how many recharge basins exist in the county.

"Everybody knows their own area. Nobody has put everything together," he said. "We want to consolidate it all so we can come up with a countywide plan."

Additional Facts

Drought information

To learn more about California's drought as well as how to save water and apply for financial assistance for drought-related losses, visit California Department of Water Resources' Web site at www.water.ca.gov/drought/assist.
Here are some other online sources for water conservation tips:

- www.wateruseitwisely.com
- www.americanwater.com
- www.epa.gov/WaterSense
- www.bewaterwise.com
- www.wateraware.org