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California

Study: Flood farms to recharge aquifers

By **TIM HEARDEN**
Capital Press

SACRAMENTO — Another study is suggesting that rainwater from this year's anticipated wet winter be captured and used to flood farmland to replenish aquifers.

Research commissioned by the California Water Foundation concludes that flushing water through the most porous soils could curb groundwater overdraft on the San Joaquin Valley's east side by between 12 percent and 20 percent each year.

State water experts blame the overdraft for causing land in the valley to sink at historic rates. A recent National Aeronautics and Space Administration study showed land in the valley is sinking by nearly 2 inches per month in some places.

"Our study area focused in on a three-county area — Merced, Madera and Fresno counties," said Andrew Fahlund, the water foundation's deputy director. "We really found we could make a significant contribution to groundwater recharge through this method of spreading water on irrigated farmland."



A bridge over the Delta-Mendota Canal in Firebaugh, Calif., in the western San Joaquin Valley nearly touches the water because of subsidence of land caused by groundwater pumping. A California Water Foundation study asserts flooding farmland to recharge aquifers could curb subsidence by as much as 20 percent.

The research, conducted by RMC Engineering, was separate from the work being done by scientists Anthony O'Geen and Helen Dahlke of the University of California's Division of Agriculture and Natural Resources.

This summer, the two researchers proposed using some of the state's

3.6 million acres of farms and ranches with suitable topography and soil conditions to recharge aquifers during winter months. Dahlke is still conducting field experiments to evaluate how much water can be recharged in a couple of weeks.

The water foundation study suggests diverting excess river flows

from winter storms to active farmland. While excess flows aren't available every year, an average of 80,000 to 130,000 acre-feet per year could be diverted to farmland suitable for recharge, the foundation asserts.

While additional research is being done to make sure such a project

wouldn't affect the productivity of land or crops, some farm groups are showing interest in the techniques.

"Almond growers are committed to finding innovation solutions that contribute to environmental sustainability," Almond Board of California president and chief executive officer Richard Waycott said in a statement.

The foundation — a nonprofit group aimed at achieving a sustainable water supply in California — is urging President Barack Obama's administration and Congress to ensure that money from federal programs can be used for such groundwater-recharge projects, a news release explained.

"I think there is an increased interest in seeing how to accelerate this in practice, but it requires ... the cooperation of landowners and a level of comfort and trust that hopefully studies like this can provide," Fahlund said. "I think we'll see increasing numbers of additional studies, tests and pilot projects that could really give producers a level of comfort that this isn't going to harm their operations and could really enhance them through greater water security."

New UC endowments to fund ongoing pistachio research

By **TIM HEARDEN**
Capital Press

University of California leaders have joined a pistachio group in setting up the first of what officials hope will be many endowments to provide ongoing funding for agricultural research.

The UC and the California Pistachio Research Board have established two endowed chairs of \$1 million each, the accrued interest from which will be used over the next five years for studies on tree nut genetics, soil science and plant-water relations.

Glenda Humiston, the UC's vice president for agriculture and natural resources, said she's having discussions with several other groups to

set up similar funding streams for other areas of agriculture. In each case, a private group would provide half the funding.

"This is a form of funding that is crucial as we move forward," Humiston told a gathering Oct. 29 at the UC's Kearney Agricultural Research and Extension Center in Parlier, Calif. The announcement was streamed online.

"We've seen the volatility of funding in past years" as state and federal budgets fluctuate, she said. "This brings a little stability to funding."

Endowed chairs are fixtures at Harvard University and other top institutions as a way to fund specific types of medical and other research. UC President Janet Napoli-

tano announced last year that she would seek endowment partners for all of the university's campuses and for Cooperative Extension.

The pistachio research board was established in 2007 and has used grower assessments to donate about \$4.5 million for research so far, said Tom Coleman, a Fresno County grower and the board's chairman.

"The pistachio industry being new has been very unique in my involvement in that other growers want to help every other grower out there," Coleman told the gathering. "I've had a couple of issues in my career when I couldn't figure out what the problem was, and I had people just show up at my ranch ... to help me



Courtesy of UCANR

Glenda Humiston, the University of California's vice president for agriculture and natural resources, announces a pair of research endowments Oct. 29 at the UC's Kearney Agricultural Research and Extension Center in Parlier, Calif.

out." Pistachios were introduced in California in the 1930s as part of a U.S. Department of Agriculture crop program, and the region's first commer-

cial growers started producing pistachios in the late 1960s and early 1970s, research board manager Bob Klein explained.

There are now more than 225,000 bearing acres and more than 300,000 total acres of pistachios in California, mostly growing in the San Joaquin Valley, Klein said.

The endowments come as this year's pistachio yields were lighter than expected as some growers encountered more empty shells than normal because of the drought and a lack of chilling hours last winter.

Growers expect the yields to total about half of last year's, when 520 million pounds of pistachios were produced.

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