SAVING FOR AFTER RAINY DAY IN LODE

OFFICIALS SEEK METHOD TO STORE SURPLUS WATER UNDERGROUND

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SAN ANDREAS - Most folks would probably say they were happy if they found that there was no sign of nuclear bomb fallout in their well water.

For officials studying how to recharge depleted groundwater tables in western Calaveras County, however, it's a problem.

A U.S. Geological Survey study report filed in the fall found only one well at sites west of Valley Springs between Highways 12 and 26 had any detectable tritium. Tritium is a radioactive isotope of hydrogen that has been pervasive in the atmosphere since the early 1950s due to nuclear bomb testing.

See the study

To see a recently completed U.S. Geological Survey study of the groundwater basin in western Calaveras County, go to pubs.usgs.gov/of/2012/1049/

All of the other wells, including all of the test wells at the former Trinitas golf course site south of Wallace, had no detectable tritium. That means falling rain since 1952 is not recharging those wells, scientists say.

In fact, other types of testing found that water in the wells has been underground for 2,200 to 13,400 years.

"The recharge takes a long time to penetrate to the groundwater table," Patrick Dunn of Dunn Environmental said during a Dec. 12 report to Calaveras County Water District directors.

Like other water districts in the foothills, CCWD has rights to more surface water than it can use. Officials would like to put some of that rainfall and snowmelt underground, both to recharge the aquifer and to store wet-year surpluses for use during droughts.

The trick is how to get extra water - say from New Hogan Reservoir near Valley Springs - into the ground economically.

Just to the west, in San Joaquin County, Stockton East Water District has had a pilot project since 2003 that leases fields in the Farmington area as places to percolate surface water into the ground.

That project seeks to use about 1,200 acres of land to sink about 35,000 acre feet of water a year into the ground.

An acre foot is enough water to cover an acre one foot deep and is roughly enough water to serve two urban households for a year.

The challenge in Calaveras County is finding where to get the water into the ground. Rocks and soils high in clay prevent water from sinking in many locations.

A good site, in contrast, would have deep layers of gravel and sand that would allow water to penetrate far underground.

"We do believe several (such good sites) are out there," said Jeffrey Meyer, finance director for CCWD.

Such sites are key, Meyer said, because "injection wells are very expensive."

Although the USGS study has ended, CCWD has expanded the number of wells monitoring groundwater in the western end of the county to 16, Meyer said. Also, the Natural Resources Conservation Service is currently doing a survey of soils in the area.

The hope, Meyer said, is that the soils survey will find areas where water can sink easily into the ground.

"We have to do the science," Meyer said.

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