



# USGS report shows progress in valley's fight to save its water basin

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**WATSONVILLE >>** When an excessive amount of groundwater is pumped from wells, it can cause the land above the wells to sink, causing buildings to crumble and pipes to burst.

A new report prepared for Pajaro Valley water managers, however, shows that from 2015 to 2018 the land above the valley's aquifer subsided only 2 inches — hopeful news as coastal communities battle a severe drought.

Just over the coastal mountain range in the Central Valley, the "land subsidence" in over-pumped water basins is a lot more dire. Some areas of the fertile valley have reached a subsidence rate of nearly a foot a year, causing substantial damage to roads, canals, pipelines and other infrastructure both above and below the ground.

In 2017, the state Department of Water

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Resources recommended the land subsidence analysis to Pajaro Valley water managers because its basin is critically overdrawn — meaning a lot more water is being pumped than rain can naturally replenish.

The U.S. Geological Survey used satellite imaging to determine how much subsidence had occurred in recent years. Then USGS compared the results to water levels in the Pajaro Valley's aquifer.

"We saw that groundwater levels were generally increasing throughout the valley," said USGS geophysicist Justin Brandt. "As long as they don't have water levels start declining again, they're in a pretty good spot."

Managing aquifer levels is particularly vital to coastal California as extended periods of severe drought and other effects of climate change increase over the next several decades. When aquifers are overdrafted, saltwater invades water basins and eventually ruins them.

Since its creation in 1984, the Pajaro Valley Water Management Agency has focused its efforts on restoring and maintaining its aquifer. And the results of the USGS report show that the endeavor is paying off.

"We've been working hard to achieve sustainable groundwater resources for quite some time," said Brian Lockwood, the local water agency's general manager. "It's a long-term challenge."

One game changer has been to provide recycled urban water to coastal farmers to irrigate with so they don't have to pump as much groundwater. Since the mid'90s, the water agency has also metered private wells and educated farmers and Pajaro Valley residents about sustainable water use.

Though the subsidence threat appears to be diminishing, Pajaro Valley's aquifer still isn't out of the woods.

Conservation alone won't pull the basins out of their overdrafted state. So that makes projects that directly raise the water table, such as the Harkins Slough recovery project, indispensable.

The two-decade-old project has diverted surface water runoff, which would otherwise flow into the Monterey Bay, and filters the water before allowing it to trickle into a shallow aquifer for short-term storage.

"Conservation is a key component of sustainability," said Sierra Ryan, Santa Cruz County's water resource manager. "But we can't conserve our way out of climate change."