Moab's Aquifer May Be Maxed Out, Prompting City To Explore Water Conservation

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The Glen Canyon Group Aquifer is refilled by snowpack in the La Sal Mountains, located southeast of Moab. New research shows there's less water in the aquifer than previously thought.

The city of Moab is planning to implement water conservation measures in the coming months based on a recent study that found the Moab Valley may hold less water than previously thought.

Researchers from the University of Utah and the U.S. Geological Survey used carbon dating and other modern techniques to determine there are around 2,500 acre feet of unused water flowing through a shallow aquifer just south of Moab called the Valley Fill Aquifer each year. That's much less than the 11,000 acre feet of water scientists believed to be there, based on a 1971 study.

They also found Moab may have less drinking water than previously thought. They determined the Glen Canyon Group aquifer is split into two sections. The lower part is where Moab gets its drinking water, which discharges through natural springs and wells near the city's golf course, while the water in the upper part cannot be easily captured.

The researchers estimate Moab is using around 4,000 acre feet, or 1.3 billion gallons, of water each year from the deep section of the aquifer, which is approximately its recharge rate as well.

"This is a very good time to contemplate the negative impacts of future development," said Vic Heilweil, one of the researchers. "Because we think that any additional development of groundwater from the [deep Glen Canyon Group] aquifer may not be sustainable."

Heilweil said he and his colleagues recommended the city begin monitoring the outflow of the springs, which supply

Moab's drinking water, in order to determine exactly how much water is coming out of the aquifer. Using that data, they suggested the city create a numerical model that can be used to simulate the effects of additional pumping. That, Heilweil said, would allow the city to better understand the effects of future development.

Council Member Kalen Jones said he's concerned about the new findings, but it could be worse.

"We're in a better position than many places, in that other places have gone into an overdrawn situation and are playing catch up," he said.

Jones added that Moab still has the opportunity to manage its water well, and the city council recently directed staff to draft an ordinance that would limit irrigation to certain times of day to help save water.

But the fate of the aquifer will also depend on other water users in the valley. He said the city will likely participate in a watershed management planning process with the state's Division of Water Resources sometime soon.

"Since currently we have very little of anything incentivizing water conservation, we should be doing basic conservation as we enter conversations about the aquifer with other water users in the valley," he said.

But some residents think conservation measures don't go far enough. John Weisheit is the director of a Moab-based non-profit called Living Rivers and he said the city and county should put a moratorium on all new development until they know exactly how much water is available in the aquifer.

"Water conservation is good, but when water conservation goes from one use to another, it's not water conservation," he said. "That's called demand hardening."

Jones said that's not likely to happen, but the city already has a moratorium on new hotels and is ready to look at creative ways to conserve water without making residents give up things like gardening and landscaping.