

# ALBUQUERQUE JOURNAL



## Aquifer rising despite drought

By John Fleck / Journal Staff Writer | September 6, 2013

Copyright © 2013 Albuquerque Journal

Nearly five years after Albuquerque began its shift from groundwater to river water for its municipal supply, the aquifer beneath the city continues to rise, according to a new report by scientists at the U.S. Geological Survey.

That's a sharp turnaround for the aquifer, which experts realized in the 1990s was shrinking unsustainably due to extensive groundwater pumping.

The gains vary across town. Areas hit hardest by past groundwater pumping, including the Rio Grande Valley through Albuquerque and the city's northeast heights, show the biggest improvement.

Near La Cueva High School, levels have risen 9 feet since the Albuquerque Bernalillo County Water Utility Authority turned on its San Juan-Chama Drinking Water Project. Beneath the neighborhoods northwest of the University of New Mexico, the aquifer has risen 8 feet.

"It is being recharged," said John Hawley, an independent groundwater expert who worked on some of the early studies that led to the water supply shift. "That was what we hoped would happen."

"I think it's good news," said John Stomp, chief operating officer for the water utility. "Everything we thought was going to happen is happening."

Stomp spearheaded the San Juan-Chama Drinking Water Project, the \$500 million combination of a dam, water treatment plant and new distribution pipes needed to reduce the metro area's reliance on dwindling groundwater supplies.

The aquifer is made up of beds of clays, sands and gravels deposited over millennia by ancient valley river channels. Water, some of it ancient and some resulting from recent recharge, fills the spaces between the rocks and grains of sand, and Albuquerque uses massive pumps to suck up the water for municipal use.

About 15 years ago, government scientists and water managers realized there was less underground water beneath the city than they thought, and they launched a campaign to reduce Albuquerque's reliance on the unsustainable resource.

Despite the recovery, the aquifer has a long way to go. Across large areas of Albuquerque's northeast heights, the aquifer had dropped 80 to more than 120 feet since groundwater pumping began early in the 20th century. A study done by USGS projected groundwater would rise 25 to 50 feet over 40 years once Albuquerque cut back on its pumping.

For Rio Grande Valley water users, both human and natural, the recharge is not free. While some of the water refilling the aquifer comes from snow and rain on the mountains, experts agree that most of the water comes from the Rio Grande, reducing flows in the river through Albuquerque as water seeps from the river's bed to fill deep depressions left by past groundwater pumping.

"I'm really glad that the aquifer is continuing to rise, but I also equally regret that the main source of that rise is still the river," said Michael Jensen of Amigos Bravos, an environmental group. With a recent increase in political attention to Albuquerque's riverside bosque, the impact of municipal water management reducing flows in a river already depleted through Albuquerque should not be ignored, Jensen said.

"I think that the lower flows in the river hurt the bosque. The bosque needs water," said Jen Pelz, Wild Rivers Program director for the environmental group WildEarth Guardians.

Albuquerque's impacts on the river continue to cause impacts downstream for farmers and the environment as water leaks from the river's bed to fill the hole left by past pumping, Jensen said. "If all of the water that is leaving the river now stayed in the river, then it wouldn't have dried up the last two years," he said.

The new municipal system uses water imported via tunnels from the headwaters of the San Juan River. The water is dumped into a Rio Grande tributary, and Albuquerque then makes use of its share by diverting water at a dam near Alameda Boulevard.

Due to the recent drought, the city has cut back the amount it is diverting. But the aquifer is improving despite those shortfalls. In 2012, the water utility got just 43 percent of its water from the San Juan-Chama project, relying on groundwater pumping for the rest. That is well short of the 70 to 90 percent officials said was their goal when they were building the project.

This is the third consecutive year in which drought has forced the water utility to curtail its river use, though Stomp said his staff was able to resume Rio Grande water diversions in late September after storms swelled the river's flow.

While the groundwater recovery is apparent in Albuquerque, where pumping has been curtailed, the aquifer is still dropping in other communities where groundwater pumping continues unabated. In Rio Rancho, for example, the aquifer beneath Lincoln Middle School has dropped 15 feet since 1998, with no sign of letting up.