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## **Water Wars Move Underground**

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Cities seek to refill aquifers emptied by extensive pumping. But another agency claims control over reserves.

By Jia-Rui Chong, Times Staff Writer

Since Southern California was settled, communities have lived and died on their access to water, fighting mercilessly for their rights to pump it. Now, the focus has shifted as cities see the depleted underground aquifers as a potentially valuable resource.

A group of cities in southeast Los Angeles County, including Downey and Lakewood, are asserting their rights over the vast aquifers and hope to eventually use the porous sediments to store portions of their water supply. They believe they can save money by pumping imported water into the ground rather than pay for expensive water storage facilities and pipelines.

Water storage can be expensive: The Metropolitan Water District, the region's main water wholesaler, spent \$2 billion completing Diamond Valley Lake, a reservoir that holds 800,000 acre-feet of water and required flooding a valley in Riverside County. An acre-foot is enough water to supply two average families for a year.

"I could spend a lot of money, find land, build a pipeline to that land because there's no land around here, but it would be very expensive," said Desi Alvarez, the director of public works in Downey. "Why would I give up a relatively inexpensive resource right under our jurisdictional boundaries?"

But exactly who controls the valuable aquifers is a matter of dispute. The Water Replenishment District of Southern California also claims authority over what happens in the aquifers. The district was formed in 1959 because local agencies had drawn out so much water that the aquifers were dangerously low. It was charged with refilling the aquifers so that agencies with rights to the water could continue pumping.

Water district officials fear that cities or other groups with water rights, such as private water companies, want to use the fragile water system to generate revenue. They worry about the aquifers being leased out to the highest bidder or agencies that will distribute the water elsewhere. That, they said, could result in misuse of the system.

"It's like deregulating energy," replenishment district General Manager Robb Whitaker said. "You saw what happened. If people put water in whenever they want to put it in and we have no ultimate authority over what occurs, we'd be left to clean up the mess."

Aquifers form when water saturates loose layers of earth - sand and gravel in the Los Angeles Basin - that are separated by dense silt and clay. Under certain conditions, water percolates from the surface into these underground reservoirs. Some aquifers lie just below the surface and others spread out at a depth of about 1,000 feet. Cities and water agencies drill wells to recover the water.

Not all areas have aquifers. Bedrock underlies San Diego, for example, so not enough water can accumulate to supply the county.

In the Los Angeles Basin, much of the natural water had been drained from the wells by the 1960s. In the decades after that, no one really sought to use empty space in the aquifers.

But that changed a few years ago.

Voters passed ballot initiatives in 2000 and 2002, making millions of dollars available for local groundwater storage projects. Underground storage is attractive not just because of the lower costs but because less water evaporates than in a surface reservoir.

In southern Los Angeles County, geologists believe the 10 aquifers that spread underground from Manhattan Beach to Whittier could safely store 450,000 acre-feet of water. That's enough to fill more than half a million Olympic-sized swimming pools.

The region's main importer of water, the Metropolitan Water District, has already joined water officials in Orange County to slowly fill aquifers with about 60,000 acre-feet of imported water. In exchange for the storage space, the MWD used the bond money and its own construction funds to pay for new pipes to bring the water into the Orange County Water District's system.

The eight cities participating in the project will also get free wells so it is easier to draw the stored water. The cities could draw the water as soon as 2007, officials said.

Cities in Los Angeles County are now talking about reserving a portion - perhaps half - of the aquifers beneath their own communities.

They would use the space to capture additional storm runoff and store imported water, a move they said would save them the cost of contributing to big water storage projects.

In drier years, the cities would still have to import water from sources in Northern California and the Colorado River, among others, to put into storage. But they could take advantage of natural aquifers, instead of paying a water wholesaler to build its storage systems. With plenty of water in hand, the cities could also avoid surcharges the wholesalers sometimes add in times of drought.

Several cities said they had no immediate plans to sell off that storage space to other counties and funnel the money back into police departments or other city services.

But, Alvarez, of Downey, added: "I see nothing wrong with that."