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Pumping endangers state rivers and wildlife - Verde River

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CAMPBELL RANCH - From a clearing in the ash trees and willows here, the Verde River whispers as it flows by.

Along these banks, only a dozen miles or so below the Verde's headwaters and far above most of the tributaries that add to the river, you can hear birds, the buzz of insects, a twig breaking underfoot. But for all its serenity, this stretch of the Verde is producing an increasingly vocal debate about how rural Arizona can continue to grow freely and still protect its natural resources.

"It would be a shame if one of our last living rivers were reduced to an artificially created flow," said Michelle Harrington, who works on Verde issues for the Center for Biological Diversity, a Tucson-based conservation group. "I really hope we can be more forward-thinking than that."

The debate delves into some of Arizona's most arcane water law, a sweeping 31-year-old court case on water rights and a definition of water sources that, if changed, would affect communities across the state. The conflict has also allied environmentalists with a traditional foe: Salt River Project.

At issue is a basic question: Do wells pumping groundwater affect the levels of nearby rivers and streams? In some states, such as New Mexico, there is no question. Groundwater and surface water are treated the same. But in Arizona, the law recognizes them separately.

For most scientists and conservationists, there is no doubt that too much groundwater pumping can reduce the flow of a nearby river. Federal courts have even agreed in southern Arizona, where evidence shows that growth around the Fort Huachuca Army base in Sierra Vista has devastated portions of the San Pedro River.

But it remains to be seen if these decisions will establish a legal precedent. The Army has successfully sought congressional protection from the court decisions, and growth around Sierra Vista has not slowed.

Stretches of the San Pedro now dry up part of the year, and the Center for Biological Diversity says wildlife habitat is vanishing, taking threatened and endangered species with it.

SRP is intervening on the Verde, one of the two major river systems that supply the utility and its Phoenix-area customers with water. It asked a court last year to stop more than a dozen Verde Valley landowners from diverting water from the river or its tributaries. Those cases are pending.

The Verde is also part of a larger water rights battle that has been winding through the courts for 31 years. In that case, which will eventually settle all claims to the Gila River and its tributaries, including the Verde, lawyers and judges are trying to define when water pumped from a well belongs to a river.

SRP argues that wells too near the Verde are sucking away water that should continue flowing to Horseshoe and Bartlett reservoirs. It wants landowners and communities to find other water sources. "There just isn't enough water in all these areas," said Dave Roberts, SRP's water rights manager.

"They're going to have to import water or limit their growth."

The environmental groups and SRP want major well-drillers to complete habitat conservation plans that assess the effects of drilling wells so near the Verde or its headwaters. At least six threatened or endangered species live along the upper Verde, including the bald eagle, the Southwestern willow flycatcher and the razorback sucker.

A 2004 study by two retired U.S. Geological Survey scientists, who were working with groups that oppose pumping, suggested that time is not on the Verde's side. They found that Prescott's and Prescott Valley's plans to pump 8,700 acre-feet from the aquifer above the river headwaters could cause stretches of the upper Verde to dry up within 100 years. That damage would be accelerated if other growing communities also tap the aquifer as expected, they said.

Although area ranchers have pumped water for decades, they generally used it on site, allowing some to percolate back into the ground, said Ed Wolfe, one of the former USGS scientists. Exporting the water leaves nothing to recharge the area.

SRP's Roberts said reducing the river's flow will lead to other problems. Phoenix, Tempe and other Valley cities hold rights with SRP to the Verde that would be reduced if the river's long-term flow dropped. Over time, the wells could drain so much water from along the river that runoff would percolate deep into the ground instead of flowing toward SRP's reservoirs.

Prescott and other communities have promised to repair any damage their pumping causes, arguing that they are drilling wells so far from the river's source that any effects will be minor.

Jim Holt, who will oversee Prescott's new wells, says lower tributaries will keep losses to a minimum. "To say that it will dry up is simply not the case," he said, citing studies that found the Upper Verde Springs contribute less than 5 percent of the river's flow. But SRP and environmental groups fear that until a court or the Legislature decide that groundwater is part of a stream or river, the Verde remains vulnerable.