

Rural areas face challenge to find next water source

by **Shaun McKinnon** - Aug. 3, 2009 12:00 AM

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FLAGSTAFF - As Phoenix, Mesa, Tucson and the rest of Arizona's big cities wonder if there will be enough water for the next 100 years, the question up in the cool pines of the high country is sometimes a little more basic: Will there be enough for the next year?

Rural Arizona has long been the weak link in the state's water-supply chain. Its cities and towns can pump groundwater freely with almost none of the limits that protect urban aquifers. Renewable surface-water supplies are rare, and without the kind of federal subsidies that helped build the Central Arizona Project canal that delivers Colorado River water, those supplies can't reach far.

The result for rural parts of the state is an erratic patchwork of wells, springs and seasonal streams and lakes - a water supply that fails occasionally because of overuse and carries few promises about its long-term sustainability.

"This part of Arizona, just like Central Arizona, needs to be plugged into a stable water source, like the Colorado River," said Brad Hill, Flagstaff's water-resources chief. "In the meantime, we have to look out for ourselves."

Flagstaff has scrambled to keep water flowing from the day the first railroad workers tapped Old Town Spring near Mars Hill in the early 1880s. The city now serves its 64,000 residents with an ever-changing mix of water from scattered wells, springs and a small reservoir.

With reliable supplies so often stretched thin, Flagstaff started looking for a new water source and found it on a ranch about 40 miles east, not far outside Winslow. The city sketched out a plan to drill wells and build a pipeline to import the water.

But before committing the millions of dollars such a plan would cost, the city decided the time had come to figure out how much water it has and how much is needed to meet future demands.

"The city's never asked itself that question," said Hill, who left a similar job in Peoria about 18 months ago. "We've never looked at how much we will need at build-out. There's never been a link between population and the regional water supply."

That connection barely exists anywhere outside Arizona's urban areas, where new subdivisions must come with a 100-year water supply. In rural towns, the law allows a developer to build even if the state determines the water supply is inadequate.

The Legislature has repeatedly refused to strengthen water laws in rural areas, siding with home builders and property-rights advocates who oppose new controls.

Lawmakers have rejected proposals to measure well-water use, protect home buyers in dry areas and encourage regional planning.

The only new measure to emerge - granting counties and cities clearer authority to consider water supplies in growth decisions - requires a unanimous vote from local leaders to enact and remains little-used.

Even with added protection for groundwater resources, most rural areas likely can't continue to grow without importing water from somewhere else. The unanswered question is where somewhere else is.

"It's probably the Colorado River to start," said Herb Guenther, director of the Arizona Department of Water Resources. "There's water out there. But the market's going to get more competitive, and it's going to get expensive."

Cities could negotiate with farmers, paying them to grow fewer crops in exchange for the water saved, or with Indian tribes, which control vast reserves of water from the Colorado and its tributaries.

Flagstaff, Williams, Winslow and other cities already are eyeing a still-unfinished agreement with the federal government that would settle water claims with the Navajo and Hopi tribes.

A study of water supplies in northwestern Arizona concluded that such a deal, if it used Colorado River water, could help fill the needs of towns and cities. The federal government could build a pipeline from the river or Lake Powell to deliver the water. The cities, after acquiring their own water rights, could then piggyback onto the pipe, contributing a fraction of the money it would cost to build it themselves.

Money is just one obstacle for such import plans. Prescott and Prescott Valley decided to spend \$200 million to pump water from an aquifer 30 miles away, but that plan is mired in challenges that the wells would drain water from the upper Verde River, a significant source of water for Phoenix and neighboring cities.

Even drilling wells isn't always the easy solution. Higher-elevation towns sit atop fractured rock aquifers, which yield water at a slower rate and a higher cost.

The other option is to reduce the demand for new water, either through conservation or by using more treated wastewater. Flagstaff is doing both. The city imposes strict limits on outdoor water use and now meets 20 percent of its needs with recycled water.

But those measures won't fill the gaps in the long-term supply, which is why the city is also studying the Red Gap Ranch import project and watching the Navajo and Hopi settlement talks.

A few other towns have tried to get ahead of shrinking water supplies. Payson adopted some of the state's tightest conservation rules years ago. Cochise County was the first to adopt the new laws that link water and growth.

Water experts say the old ways limit the range of possibilities. To succeed, cities need to open themselves to new ideas.

"The question is will we go to the point of plumbing the other parts of the state?" said Jim Holway, a former state water regulator who now works on conservation programs for the Sonoran Institute. "Or do we start to tighten the belt and stop growing? If people were willing to be creative and take off the restraints, we could make things happen."