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Under the Rainbow: Legal Issues Cloud Rain-Capture Plans

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Into each life a little rain must fall. But, if you live in Colorado, don't try capturing it in rain barrels so that you can use it in your garden later. That's illegal in this Western state. The same goes for Utah. However, legislators are trying to change rainwater-harvesting prohibitions.

Hands Off! It's Mine!

Water rights in the United States generally fall within two camps. Riparian rights are common in the Eastern U.S., and they specify that if landowners own property adjacent to a water source, those people have the right to make use of the water. If there is not enough water for all users to get their fill, allotments follow a percentage that reflects the amount of land fronting the water.

Under this system, water rights stay with the land and the watershed. That's not so in the water-rights system known as "prior appropriation," or sometimes called "Colorado Doctrine." With this arrangement, water rights are not tied to the land. They can be bought and sold separately. And, ownership follows a first-come, first-served basis, so those with the oldest water rights get priority use of the water, while those with "junior" rights must wait their turn and, maybe, miss out altogether.

In a prior-appropriation system, water that falls from the sky belongs to the water-rights holder. That's because it would eventually reach the watershed of the land on which it fell. Preventing water from reaching a river — and, therefore, its rights holder — "is akin to stealing," noted a *Denver Post* article from this past February.

That story publicized a recent development in Colorado. Legislators are challenging the existing rain-barrel ban with two bills. A state Senate bill would give rural households that have no city-water supply the right to obtain a rain-capture permit. The House bill would pave the way for a handful of pilot projects to see if rain harvesting could work when harvesters promise to release the diverted water back into the watershed it would have hit without the rain-barrel detour.

Saving With a Rainy Day

Although some areas restrict rain harvesting, others promote it. In fact, the City of Ann Arbor, Michigan adds revenue through rain barrels.

There, utility managers have separate stormwater charges that are based on the amount of impervious surface on a given piece of property. "A large home with a tennis court has more impervious area than a small home, so it would pay more for stormwater," explains Molly Wade, the utility's water-quality manager. If residents install rain barrels under their household downspouts, Ann Arbor offers a \$1.79 credit on the stormwater bill each quarter.

Wade was stunned to hear such programs are illegal in Colorado and Utah. She sees rain gardens as a way to "naturally infiltrate rainwater into the groundwater system." What's more, she doesn't think the water-rights holder is losing the water, but "gaining it through a different part of the water cycle."

Meanwhile, rain capture is a boon to the utility, Wade maintains. Less stormwater flowing into storm drains means less water for the utility to treat, leading to lower costs. As she points out, 1,000 50-gallon rain barrels could capture 50,000 gallons or 6,684 cubic feet of water. "This water would decrease the volume of stormwater to be treated and managed by the utility," she says. "It also is a form of water conservation, as residents can use the captured rain water to water their gardens and plants rather than using tap water."

What kind of impact might this have on utility revenues? It depends on how many users begin rainwater harvesting. An article in Colorado's *High Country News* calculated the result widespread rainwater capture might have in Santa Fe. "An inch of rain falling on a 1,000-square-foot roof can add up to more than 500 gallons of stored water," author Christina Opdahl wrote in a piece entitled, "Thirsty Santa Fe catches on to catching rainwater."

"In Santa Fe, New Mexico, where it rains about 15 inches a year, that amounts to 7,000 gallons per home," Opdahl continued. "If most of the town's buildings had such systems, almost 2,000 acre feet each year — about 20 percent of the city's total water use — could be collected."

That would certainly put a dent in utility revenues.

Swelling Popularity

Still, several utility systems now are encouraging rainwater harvesting. Programs exist throughout Texas and New Mexico. Utah's prohibitive laws took a hit on February 9, when a proposal to let residents catch and save rainfall won committee approval in the legislature.

In October 2008, The City of Tucson, Arizona, passed an ordinance mandating rainwater-capture plans for all new non-residential development beginning June 1, 2010. According to the new building codes, commercial developments must submit landscape-watering plans, and these must outline a water budget that projects irrigation needs, as well as rainwater-harvesting plans designed to meet at least 50 percent of those needs. Then, to make sure commercial developers comply, the city also requires a separate water meter or sub-meter to measure irrigation consumption on commercial sites.

Santa Fe has a similar system. There, all new buildings that are larger than 2,500-square feet — residential or commercial — must have some form of rainwater-capture system installed.

Absent such measures, how much of the rain that falls on arid states actually makes its way back into a river or watershed? Not much in arid regions, according to a study sponsored last year by Douglas County, Colorado, and some of that county's local water agencies. A write-up of the project produced by water-resources engineer Beorn Courtney reports that, "On average, 97 percent of the precipitation was consumed by the native vegetation and never returned to the stream system."

Courtney further notes: "With a 1,500-square-foot roof and 5,000 gallon cistern ... rainwater could provide almost half of the supply for a water-wise landscape."

Considering the dire drought conditions in California, Nevada and other Western states, perhaps this idea is now coming of age.

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