

Water Supply Drying Up: It's not just about the drought

by Vicki Wolf

Water supplies are dangerously low in the Hill Country, but Raymond Slade, hydrologist, says it's not just because of the drought. Slade has been analyzing droughts, floods, and water quality issues for almost 40 years. He says the drought is severe, but in the last 100 years there have been three or four periods with equal or less precipitation. Slade says stream flows and spring flows are extremely low, but not near record lows.



Hill Country residents who are seeing their wells run dry know it's not just about the drought. At a recent Hays-Trinity Groundwater Conservation District hearing, one by one residents stood at the lectern and testified that their wells were running dry. They urged the district's directors to deny Aqua Texas's request to pump an additional 24.5 million gallons of groundwater for its Woodcreek Phases I & II service areas groundwater allowance. The board unanimously agreed to deny the request. They also told Aqua Texas to come up with a plan to prevent wasting water.

Slade would say they are on the right track. Many more people have moved to the Hill Country since the last drought and have substantially increased demand on the water supply. "In some places, we have already exceeded a safe yield - water that is available during a drought." Slade says.

El Nino - the weather cycle that causes the Pacific Jet stream to ride over Texas and the southern United States - may increase the chance of rain and bring an end to this drought. Slade says El Nino doesn't guarantee there will be more rain. Even if the drought ends, he says the threat of water supply depletion will still be an issue. Rapid growth is expected in the coming years for the Hill Country, and future droughts are likely.

"We need to break the hydro-illogical cycle," Slade says. "When you have a drought, there's awareness, then concern and then panic. Then it rains and there's apathy," he explains. Slade says we must do a better job of planning and budgeting water supply, even when there is plenty of rain, to be able to sustain a growing population and be prepared for future droughts.

He advises that groundwater conservation districts need more authority to limit future groundwater use. Municipalities should require grey water systems that recycle water from the bath and washing machines to water the lawn. Slade says we can save water by requiring drip irrigation instead of aerial sprinkler systems. He also suggests more incentives for rainwater harvesting.

Weather extremes - some months of drought then months of flooding - call for collecting the rain when it falls and saving it for the days when there is no rain. Some farmers in the Hill Country say they rely solely on their rainwater harvesting system and have never taken a drop of water from the aquifer.

“Rainwater harvesting is sustainable and not all that costly,” says John Kight, who teaches rainwater harvesting. He built the system for his 6,000 square foot house based on the drought of record. He and his wife use the water for landscape watering and all household needs. Kight’s 33,000 gallon system hasn’t come close to depletion during the past two years of drought. The system collects 4,000 gallons of water with every inch of rainfall.

Kight also practices water conservation. The house has low flush toilets and all appliances in his home are low-water use models. He puts a bucket in the shower to collect the cold water while waiting for the hot water to flow in.

Kight’s home has a water recycling system with a pump that aerates used household water. The aerobic system digests sewage and leaves the used water bacteria and odor free to spray on the yard. He says the combination of rainwater harvesting and water conservation is a low cost way to have water now and in the future.

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