

## **Studies: Pumping, drought double threat to springs**

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Central Texas springs and the popular watering hole they feed are threatened by increased water demand that could slow the flow to a trickle during a severe drought, according to a new study by the agency managing the watershed.

The Barton Springs segment of the Edwards Aquifer, besides supplying the limestone-rimmed pool and providing drinking water to thousands of Austin area residents, also supports an endangered salamander.

Studies by the Barton Springs-Edwards Aquifer Conservation District have found the threat even worse than predicted by a 2001 computer model, suggesting that the agency may need to set limits on the total amount of water that can be pumped even in times of plentiful rain.

Development is still booming in southern Travis and northern Hays counties, with water demand threatening to outstrip the ability of well owners to conserve enough water during droughts to protect the springs or neighborhood wells.

"When there's not a drought, there is plenty of water," Brian Hunt, a district hydrogeologist, told the Austin American-Statesman in Tuesday's online edition. "The question is: How much water can users cut back, from their permitted levels, during severe drought conditions?"

District board members plan to tackle such questions, perhaps revising permitting rules, after the Texas Water Development Board accepts the new studies. They were aided by an advisory board including representatives of the U.S. Geological Survey, the City of Austin and the University of Texas, and have been reviewed by scientists from other agencies including the Lower Colorado River Authority.

Total pumping in the aquifer's Barton Springs segment has increased about 15-fold since the 1950s, from less than 1 cubic foot of water per second to about 10 cubic feet per second. During the record drought of 1950-56, the water flow at Barton Springs dropped to a low of about 11 cfs, the new studies determined. That's about 2 cfs less than the 2001 model estimated.

With pumping up about 10 cfs since that drought, the studies confirmed that, without any drought-period pumping limits, the spring flow could now drop to 1 cfs or less, compared with the average spring flow of 53 cfs or about 400 gallons per second.

"The springs could approach zero flow or go dry," said Jim Camp, aquifer board president. "We don't know the impact on the (endangered) Barton Springs salamander or on recreation. But Barton Springs Pool would be more of a Stagnant pool."