

Edward's Aquifer

By Bill Hobby

It's summer in central Texas. The temperature has been in the upper 90's for weeks. It hasn't rained in a month.

Just as in every other hot, dry summer, the level of the Edwards Aquifer is sinking. The headlines are ominous: "The Water Crisis--Judgement Time in San Antonio", "Federal Judge Poised to Take Over Aquifer", "Rain Only Hope of Dampening Need for Conservation".

San Antonio's municipal pride is injured. The U.S. Senate has taken a stand. The feds are taking a serious bashing, some of it deserved. The Endangered Species Act is endangered.

As often happens, the real issue is lost in the fog of the rhetoric.

The Edwards is one of Texas' great resources, a giant underground pool of water underlying a part of South Central Texas often short of rain. Where it surfaces it provides the clear green water of San Marcos and Comal Springs, feeding the San Marcos River. It irrigates the farms of Medina and Uvalde Counties. It is San Antonio's only source of water.

The Texas Hill Country being a desirable place to live, population has increased rapidly in the six counties over the Edwards Aquifer. So has the amount of water pumped out of the aquifer. In 1934, wells brought up about 100,000 acre-feet a year. It is now more than 540,000 acre-feet and projected to reach 850,000 acre-feet by 2020.

The aquifer is being depleted. It is recharged by rainwater, and more water is being pumped out than is seeping through from the surface. Experts disagree about how long the aquifer will last at the present depletion rate, but one thing is clear. The loss of this aquifer will be devastating for Texas. The issue isn't fountain darters, salamanders and Texas wild rice. The endangered species in Comal and San Marcos Springs were the cue that brought Federal Judge Lucius Bunton on stage. Judge Bunton's order forced the Texas Legislature to confront the real issue, an impending water shortage, and that is a good thing.

There are no villains in this story. Everyone from the farmers in Uvalde to the Mayor of San Antonio is acting in a rational economic way. If you own the land, groundwater is there for the taking. All you need is a pump. San Antonio has very large pumps.

What we have here is a classic case of bad economics making bad public policy. The water from the aquifer is not only undervalued, it's free. No one is responsible for the aquifer. An undervalued resource for which no one is responsible will soon be plundered or destroyed.

Garret Hardin, a professor emeritus at the University of California at Santa Barbara, would call this the "tragedy of the commons." In old England and the British colonies, a commons was pastureland open to all, open range. Every herdsman wanted to keep as many cattle as possible on the commons. The more animals, the more gain, since the resource is free to all. The problem is that as one owner increases his herd, his neighbors follow suit.

The land is overgrazed. Erosion begins, hardier weeds supplant the grass. The cattle lose weight and the resource is destroyed.

The same thing happens now on public grazing lands. They are undervalued and overgrazed. The fish in the oceans belong to everyone, and they are being fished to extinction. Our national forests are available at bargain prices, and they are being depleted.

People acting as rational economic creatures can create a lot of havoc. The City of San Antonio never developed an alternative source of water because it never had good reason. Dallas and Houston, hit hard in the 1950s drought, spent the next few decades, developing good surface water sources, putting their tax dollars on the line. San Antonio voters turned down similar proposals.

It is ironic that current efforts to better manage water resources depend on some odd spring critters and not on good sense.

We should be grateful to the fountain darters, salamanders and gambusia because they have made some good things happen:

- The Legislature last year passed Senate Bill 1477. Like most compromises, it isn't perfect, but it would reduce pumping to 450,000 acre-feet a year and then to 400,000 by the year 2008. (In a classic federal case of right hand not paying attention to left hand, the U.S. Justice Department determined that S.B. 1477 violated the Voting Rights Act and suspended its enforcement).
- On August 13, San Antonio voters will again get a chance to vote on Applewhite Reservoir, which they turned down in 1991 after work had been underway six months. The reservoir will reduce San Antonio's dependence on underground water. The 2050 Water Plan, as Applewhite has been renamed, also includes projects to boost recharge of the aquifer, reuse water from sewage treatment plants, as many cities already do, and buy water rights from those willing to sell.
- Farmers who pump water from the aquifer are actually beginning to think about ways to save water, either through more efficient irrigation systems or crops better suited to dryland farming.

None of these efforts is guaranteed to work, but they represent giant steps forward. Despite the blaming and bashing, we might yet avoid the tragedy of the commons.

(This column was prepared with the help of Shana Norton, a student at the Lyndon B. Johnson School of Public Affairs.)

Originally published August 7, 1994, in the Houston Chronicle.