



Water Ranching in the Lone Star State

Texas Water Policy Update December 2001

This newsletter, produced periodically by the Texas Center for Policy Studies (TCPS), provides updates on water issues affecting rural Texas. Topics addressed in this issue include water ranching, current groundwater laws, updates on the regional water planning process, and an overview of important upcoming events in water policy.

What is Water Ranching?

Ranching is definitely nothing new to Texas. It's been done with cattle, sheep and goats for generations. In fact, much of our history and cultural heritage is tied up in the tradition of ranching and agriculture. But as small-scale livestock production and ranching face increasing economic challenges, a different kind of ranching is gaining popularity.

The term "water ranching" has evolved to describe the practice of landowners selling the right to pump the groundwater that lies beneath their land to another entity, or the situation where an outside interest purchases land with the sole intent of "mining" the groundwater beneath it for use elsewhere. Water ranching usually occurs in rural areas of the state where groundwater supplies are still relatively untapped, and most often "ranches" have multiple wells that are complemented by large pumps. What makes water ranching different from more traditional uses of groundwater is that the volumes of water being withdrawn are much greater than historical withdrawals - much more than the landowner would have ever used to irrigate his/her crops, or to support his livestock or family. For this reason, issues like aquifer sustainability, fairness and equity in withdrawals and legal rights to capture water, are coming into question.

The Value of Water

When water is treated as a marketable commodity, questions arise as to how to set its value. It is possible to tally up the going rate for an acre-foot of water, treatment costs, associated piping, etc. But treating water as a simple commodity like oil or livestock is too simplistic. It's value runs deeper and includes preserving our cultural heritage, the rural economy and way of life, and more tangible aspects such as maintaining soil moisture levels, springflow, and base-flows for rivers and streams. It is extremely difficult to quantify these values on the same scale as the price municipalities are willing to pay for water supplies.

Protecting our Groundwater Resources

The practice of water ranching is facilitated by Texas' guiding principle for groundwater management –the **rule of capture**. This rule, adopted in 1904, gives the landowner the right to capture an unlimited amount of groundwater from beneath his/her land. This is why the rule of capture is often referred to as the **law of the biggest pump**. By relying on the rule of capture, our historical approach has been to limit all public control of groundwater. This practice seems to work best when neighboring landowners are withdrawing similar amounts of water or they are not affecting each other's ability to withdraw "their" groundwater.

However, as nontraditional uses of groundwater, such as water ranching, become more common, there needs to be some mode of protecting local interests from increased withdrawals. These local interests include rural communities, agriculture and ranching operations, and environmental water needs. Modifying the rule of capture to take into account the rights of the neighbor - **Correlative Rights**- or limiting water withdrawals to a reasonable amount for the land from which it is produced –**Doctrine of Reasonable Use**- are two guiding principles for groundwater used by many other states.

Groundwater conservation districts, which have been Texas' preferred management tool for groundwater resources since the 1950's, have the ability to modify the rule of capture slightly. Empowered with new authority this last legislative session, districts are now better equipped at handling the issue of **exploitation of groundwater** within their boundaries. Districts now have clear authority to regulate spacing and production of wells to ensure the availability of groundwater in the district's boundaries, and they can deny a permit to withdraw groundwater based on the effect it may have on aquifer conditions. However, they do not have specific authority to prohibit the **exportation of groundwater** outside the district. The districts can require a permit amendment and charge a fee for an export, but they cannot deny the permit based on the groundwater's destination and they cannot adopt rules to limit exports.

As of 2000, 63 groundwater conservation districts covered 37 percent of the state and this year the number of districts grew to more than 80. Districts are essential to the protection of groundwater resources because, in their absence, there is little recourse against the over-exploitation of aquifers.

Examples from Across the State

Here are three examples of current and proposed water ranching operations from around the state. These are definitely not the only examples available, but they illustrate the variety and complexity of issues surrounding the practice of water ranching in Texas.

The Panhandle Region – Roberts County

The Texas Panhandle is renowned for its irrigated agriculture. Its long history of irrigation was made possible by the Ogallala aquifer, which supports 90 percent of the water needs in the Panhandle region. On the whole, the Ogallala is suffering from overuse and the amount of water held in storage is continuing to decline. Roberts County is different than its neighboring counties in that the topography of the land is not conducive to irrigated agriculture. Because of this, its groundwater reserves remain largely untapped. Consequently over the last decade, Roberts County has become the site of three separate water ranching efforts.

One of the more infamous efforts is led by oilman T. Boone Pickens, who through Mesa Water Inc., has amassed the water rights for 150,000 acres of land. Potential customers for Mesa are the cities of Fort Worth, Dallas, and San Antonio. Another water ranching effort is led by the Canadian River Municipal Water Authority (CRMWA). It controls approximately 43,000 acres of land three miles south of the Mesa property. Just this past month, the CRMWA project started production from a field of 27 water wells. The CRMWA water is piped to Lake Meredith and then distributed to 11 different cities, including Amarillo and Lubbock. Lastly, the city of Amarillo has purchased the right to pump groundwater from 72,000 acres of land in Roberts County. This source was secured to meet future water demands for the city and they do not plan to tap it until after 2025. But with increased pressure on the local groundwater reserves from the other water ranches, there may be much less water to pump by then.

Roberts County is part of one of the first groundwater conservation districts created in Texas. With its ability to limit the production rate of water wells, the Panhandle Groundwater Conservation District (GCD) has established a rule of thumb that generally allows landowners to pump an acre-foot of water per acre of land every year. This worked well based on more traditional uses of the land; however, with these new types of users, the rule might need revisiting.

A potential problem with these large-scale pumpers is that if they withdraw their allotted amounts simultaneously, the area will witness a much higher rate of aquifer depletion. At stake is future local economic development and the aquifer contribution to essential base-flows in the nearby Canadian River.

Even though all three groups currently hold a permit from the Panhandle GCD to withdraw a designated volume of groundwater each year, they each feel that “their” groundwater is vulnerable to other pumpers. The rule of capture does not offer protection from other pumpers or guarantees of water availability. For this reason, each of the groups –Mesa, CRMWA, and the city of Amarillo- are now parties to lawsuits against each other. When Mesa applied for its permit in June 2001, CRMWA filed a contested case against the permit because it felt it would infringe on the water under its land. Not surprisingly, Mesa filed suit against CRMWA, saying its wells will drain the groundwater underneath Mesa’s property. The city of Amarillo joined this suit in October.

West Texas

In arid west Texas, the city of El Paso is facing future water demands with a drought susceptible supply of surface water from the Rio Grande and diminishing local groundwater reserves. For additional future water supplies, the El Paso Water Utilities in recent years purchased two water ranches in rural west Texas - the Antelope Valley Ranch (approximately 25,000 acres) near Valentine, Texas, and the Wild Horse Ranch (approximately 22,000 acres) near Van Horn, Texas. The Utility is also considering the importation of water from the Dell Valley area, although it currently does not own any property there. All three areas are located within groundwater conservation districts and the Utility would have to secure permits from the water conservation districts to withdraw the groundwater. The Utility anticipates pumping a minimum of 15,000 acre-feet from any import source it eventually selects. Higher pumping volumes may be possible based on findings from future aquifer modeling studies. The earliest that it might begin pumping from these ranches would be by 2010.

Because ranching and tourism industries depend on the region’s water to sustain them, local communities are worried about the effects of El Paso’s proposed groundwater withdrawals on the aquifer and the local economy.

South Central Texas – The City of San Antonio

To help meet the growing water demands of the city of San Antonio, San Antonio Water Systems (SAWS), the city’s public water supplier, has purchased the right to pump groundwater from two properties located in northern Bexar County. Both of these properties, Oliver Ranch and BSR Water Supply Company land, are located over the Trinity aquifer.

It is common in this area for a private water supply company to service a local community. However, SAWS will be the first to tap the Trinity aquifer to serve a larger public system. The total amount of groundwater SAWS expects to withdraw from both properties combined is approximately 6,200 acre-feet each year. While the water will be mixed into the SAWS distribution network, SAWS expects that it will go primarily to local users.

This past year, SAWS performed aquifer tests to determine how much groundwater could be pumped from the Oliver Ranch property. These tests showed that after one year of pumping, the level of water in the pumping wells would decrease by 100 feet. Even with this decline, SAWS believes that based on the properties of the Trinity aquifer in this area, continued pumping at this rate would not affect nearby landowners or pumpers. While aquifer tests have not been performed at the BSR property yet, SAWS

anticipates that it will withdraw approximately 1,500 acre-feet of water from that tract. SAWS expects to begin pumping from Oliver Ranch in January and the BSR property next March.

Despite the presumed availability of groundwater in this area, everyone involved agrees that groundwater withdrawals from the properties need to be monitored for sustainability. There is also much local concern that large-scale pumping of the Trinity aquifer will decrease groundwater levels in nearby wells. Another consequence of increased pumping could be decreased recharge to the Edwards aquifer. It is estimated that groundwater flows from the Trinity aquifer account for 10 percent of the recharge of the Edwards aquifer.

Both properties are within the boundaries of the Trinity Glen Rose GCD. This district was created this last legislative session and must be confirmed by popular vote within the next three years. As the temporary directors work to establish district rules, there are concerns as to whether wells that were permitted prior to the creation of the district, such as those on the Oliver Ranch and BSR properties, will be exempt from district rules and regulations. This matter is still subject for debate between the groundwater district representatives and the permit holders.

Regional Water Planning Process Update

The Texas Water Development Board (TWDB) accepted public comments on the draft of the state water plan --'Water for Texas – 2001' from September to mid-November. In all, the TWDB received approximately 2,000 comments. The majority of them were related to water conservation, water needs for fish and wildlife, or specific recommended water management strategies.

Regional water planning groups are already making headway into the next round of regional planning. They are currently developing their 'scopes of work' (SOW) that detail tasks the groups propose to accomplish over the next planning cycle. These SOWs guide the groups and their consultants by outlining timelines, budgets, responsibilities, and additional products or research efforts to be completed during this cycle.

While final SOWs will not be submitted to the TWDB until March 2002, a preliminary look at the some of the proposed tasks and activities planned for the next cycle show some positive trends in their development with regard to increased focus on water conservation efforts and attention to environmental water needs. Below are just a few examples:

- Region C proposes to look at water conservation, including comparing its water use rates to other regions.
- Several other regions (M, N, H, F, G at least) will give more attention to municipal conservation as a water management strategy. Region K is proposing to assess using "advanced municipal conservation" levels for their demand projections.
- More studies are slated to look into unique stream segments.
- Regions K, L, M, N, and P are reviewing potential strategies to assess meeting environmental water needs.

Information regarding the regional planning process is available on the TWDB website at www.twdb.state.tx.us. Additional information on the process and the individual regions is also available at www.texaswatermatters.org.

What's Coming Up

- The **Joint Committee on Water Resources** scheduled its first meeting for December 13th. The Committee is co-chaired by Senator J.E. "Buster" Brown and Representative David Counts and members include Senators David Bernsen and Teel Bivins, and Representatives Robert "Robby" Cook and Robert Puente. Additional information about the Committee and the meeting is available at www.capitol.state.tx.us.
- The TWDB is scheduled to consider the **approval of the state water plan** at a special meeting to be held immediately after the next TWDB Board meeting, December 12th. If the Board does not approve the plan at that time, they may reconvene the following week on December 19th to consider its approval. Additional information can be found on www.twdb.state.tx.us.

For additional information on these issues, to provide suggestions, or be removed or added to our mailing list, please contact Laura Brock at 512.474.0811, or via e-mail at lb@texascenter.org.



Research for Community Action