



Water on way to being liquid gold in the state

Web Posted: 08/13/2006 12:05 AM CDT

Joseph S. Stroud
Express-News Staff Writer

Twice the number of people. Eighteen percent less water.

That's the kind of future Texas faces if steps aren't taken soon to find new sources of water, according to an early version of the new State Water Plan.

Finding enough to keep taps flowing and sprinklers spraying will be especially challenging along the Interstate 35 corridor as well as in the Dallas and Houston suburbs, the Rio Grande Valley and the Panhandle.

The cost of adding enough water to prevent significant shortages by 2060: \$30.7 billion.

The 2007 State Water Plan, released without fanfare by the Texas Water Development Board in an Internet posting last week, finds that major shortages could be widespread as early as 2010 — much sooner than predicted in previous plans.

If the state four years from now experiences a drought like that of the 1950s, the worst on record in Texas, 80 percent of the state's people would be living in water-short areas unless they find new sources, the plan finds.

Anything worse than that kind of drought — and some say global warming makes that a distinct possibility — and the shortages would be greater.

"The demands have definitely gone up," said Bill Mullican, who heads the planning effort at the Texas Water Development Board. "The shortages have gone up. A lot of entities didn't have nearly as much water as they thought they had."

The plan draws a sobering picture of the future of water in Texas. But Texans have a long history of seeing opportunity in scarce commodities. And so even as the state endures a second hot, dry summer, an assortment of lawyers, out-of-state businesses, private interests, water utilities and river authorities are clamoring to answer the question of how a burgeoning population will find water in years to come.

Speaking with power-point confidence at a water law seminar at Texas

An increasingly precious resource

The new State Water Plan, issued in draft form on the Internet last week, draws an ominous picture of the future of water in Texas. Among its findings:

- The state's total water supply, if no new sources of water are found, will drop from 17.9 million to 14.6 million acre-feet per year by 2060 because of sedimentation in reservoirs and depletion of the state's underground aquifers.
- By 2060, demand for water in Texas is projected to increase 27

Tech University back in the spring, Lynn Ray Sherman, a 43-year-old Austin lawyer, framed the conversation around a bundle of sticks.

There's the timber stick, the gravel stick, the coal stick and the oil stick. All are part of the bundle of sticks that go with real estate, he explained.

And who owns them? The landowner, of course.

"Alright, 'Who owns the groundwater stick?' is the question I'm posing here," Sherman said.

"Is it God? Now we don't recognize God's ownership of property in American jurisprudence, much less Texas jurisprudence, alright? So God doesn't own it, with all due respect."

The answer, Sherman finally volunteered, is the landowner. The landowner owns groundwater and can do what he wants with it — up to and including selling or leasing it to people like Lynn Sherman.

Sherman's style of speaking is both fast-talking and folksy. Tall and broad-shouldered, he wears a nice suit, frameless glasses and worn black cowboy boots.

He carries a big brown leather satchel, and his work on water issues has taken him from Mission to Lubbock to El Paso. He is among the state's most knowledgeable water lawyers.

As Sherman spoke, Harvey Everheart sat quietly at a table near the front, his black cowboy hat at his side. Later, when asked what he thought of Sherman's talk, Everheart was blunt: "He's just as full of (expletive) as a Christmas turkey, I promise you."

Everheart is the groundwater district manager of the Mesa Underground Water Conservation District in the Panhandle town of Lamesa. That means he has been designated by the state to regulate the pumping and export of groundwater in his area.

It also means he thinks heavy-handed efforts by the state to bind the hands of local districts will be bad for everyone.

Everheart's district lies over the Ogallala Aquifer, which declines faster than it replenishes. And yet he can lead you to wells where significant rises in the water table have been recorded. To Everheart, whose district isn't much of a target for marketers, that means water issues need to be handled differently from place to place, and he thinks locals can do that best.

"When you start painting with a brush in Mesa Underground Water Conservation District, you better have you one of them little bitty fine brushes, because the big ones, they won't apply correctly," Everheart

percent, from almost 17 million acre-feet of water in 2000 to a projected demand of 21.6 million acre-feet.

- Of 238 cities that five years ago reported significant water needs by 2020, only 21 have put projects in place that were recommended in the 2002 State Water Plan to meet that demand. Another 12 have projects under construction, while 89 have taken no steps toward building the projects.
- Farming as a way of life is headed toward a dramatic transformation. That stress will be felt most severely in the Rio Grande Valley, where farmers stand last in line for water from the river between the U.S. and Mexico during a drought. The plan projects that the Valley's population will more than double by 2060, while water use in the region will rise only 13 percent.
- The Ogallala Aquifer, the sprawling underground reservoir that provides 40 percent of all the water used in Texas, continues to disappear, mostly because of irrigated agriculture. In Texas alone, more than 6 million acre-feet, or roughly four times the amount of water in Lake Travis and Canyon Lake combined, is withdrawn

said.

The question of who owns water hasn't fully been settled in Texas law, but it's the subject of intense debate. Mary Kelly, an Austin attorney with Environmental Defense, put her disagreement with Sherman's position in more genteel terms.

"At its core, water is still a public resource," she said. "Why should people be making total windfall profits?"

Outlook for cities

The current drought, now in its 16th month, has given many Texas communities an unfriendly preview of the challenges that lie ahead.

Mandatory water-use restrictions are in place for 126 communities statewide, according to the Texas Commission on Environmental Quality. Another 71 have voluntary restrictions.

When the Edwards Aquifer dropped below 650 feet above sea level last month, mandatory region-wide water restrictions — including a once-a-week sprinkling schedule — were imposed across the San Antonio segment of the Edwards Aquifer for the first time since 2000.

All of that is occurring with just under 22 million people living in Texas. The new state plan projects that Texas will grow to 45.5 million people by 2060.

"It really begs the question: OK, if we try to do this for 45 million people, what are we going to do with 45 million people when we repeat a drought? That's the real frightening part," said Ron Kaiser, professor of water law and policy at Texas A&M University.

Although many of the state's larger cities will have difficulty finding adequate water supplies, they aren't likely to run out of water. That's because they have plenty of ratepayers, a significant tax base and the ability to borrow money to get more water if they need it — even if the cost is high.

The same cannot be said for much of rural Texas, especially the arid West. The chronic lack of rainfall west of I-35 makes that part of the state particularly vulnerable.

"When you get into small communities, particularly in West Texas, that rely on groundwater, and those groundwater resources are vastly disappearing, I think that's where the stressors are really going to come," Kaiser said.

Some officials familiar with the long-term outlook say the state's future water supply will come from the desalination of brackish groundwater — water from aquifers high in salt content — or even from seawater drawn from the Gulf of Mexico and stripped of salt.

That idea has its skeptics, however.

"It's so energy intensive and it's so costly that you have to really have a supply crisis before you go that way," said Kelly, the Austin environmental lawyer.

from the Ogallala each year.

- If no new water supply sources are found, available surface water will decrease 7 percent by 2060, while available groundwater will decline 32 percent. Most of that decline will occur in the Ogallala.
- [Water on way to being liquid gold in the state](#)
- [San Antonio is stepping up its efforts to find alternate sources](#)

Financial commitment

Although some of the shortages have been building for years, the state's commitment to finding new water sources has been lukewarm at best.

In a presentation to the Senate Natural Resources Committee, assembled in Houston last week, Water Development Board Executive Administrator Kevin Ward said it would take \$875 million in state appropriations to pay for water needed by 2020 alone. But he noted that neither of the two major programs created to provide state money for water projects has been funded by the Legislature.

The board, in its plan, asked the Legislature to provide \$90.1 million immediately for debt service on \$929.6 million in bonds "to ensure Texas has enough water for the future."

In 2005, a Senate measure that would have brought in \$85.4 million for water projects and other water-related programs failed late in the session.

In his presentation, Ward offered several options for taxes and fees, including a water use fee and a tax on bottled water, that the Legislature could consider to raise the needed money. He said he wasn't endorsing any of the proposals but noted "tax" and "fee" are both three-letter words. The remark drew mild chuckles in a room filled with interested parties.

Although the 2002 water plan put the cost of meeting the state's future water supply needs at \$18 billion, the tab has risen considerably. The agency now says \$30.7 billion is needed to complete recommended water supply projects.

The increase is attributed to "more growth than projects," and to the fact that new projects have fallen "further behind on implementation." New costs associated with tough new federal drinking water standards have added to the burden.

The new plan recommends construction of 14 major new reservoirs in the state, and says reservoir projects "absolutely must remain a strong and viable tool in our water-development toolbox if the state is to meet its future water supply needs."

That idea has drawn vehement opposition from the environmental community, which views reservoirs as a threat to the state's rivers and streams.

A coveted prize

With most of the state's surface water allocated, and with new laws making it harder to move surface water around, groundwater has become the most coveted prize of recent years.

The state now relies on water from underground for about 60 percent of its water supply, causing significant depletions in several of the state's major aquifers.

Besides the Ogallala, water tables have dropped in the Gulf Coast Aquifer north of Houston, in the Trinity Aquifer along I-35 between Waco and north of Dallas, and at several spots in the Carrizo-Wilcox Aquifer — the Winter Garden irrigation area north of Laredo, and near Lufkin, Nacogdoches and Tyler, according to the Water Development Board.

Sherman, the Austin lawyer and water marketer, said water levels vary widely in the Carrizo-Wilcox

Aquifer. Some areas are in decline, he said, but water is abundant in other parts.

Efforts to find groundwater are especially intense in counties over the Carrizo east of Interstate 35. Those areas have drawn the attention of water marketers in part because some of the fastest-growing areas along the highway are outgrowing their water supply. Plans for a new Trans-Texas Corridor have only accelerated the interest.

In some rural counties where water remains plentiful, including Milam and Burleson east of Austin, it's hard to find a landowner who hasn't been approached by someone hoping to buy or lease their water rights.

Some landowners welcome the attention, seeing it as a bonanza. The water may be worth more than the crops they can raise on the land. Others are skeptical, and see the attention as an effort to fleece them.

Building pipelines is expensive, so the prospect of moving water long distances so far has slowed the gold rush.

Andy Sansom, executive director of the River Systems Institute at Texas State University, said the scarcity of water between San Marcos and Austin is the only thing preventing a Wal-Mart at every exit. Sansom and others find it fascinating no one has brokered a major water deal there yet.

That may be because customers — from the general public to the communities and utilities that serve them — aren't willing to pay a premium price for the water just yet. It's the customers, after all, who ultimately determine what the water is worth.

"The average person turns on the tap and there's the water, and doesn't know where it comes from — and for all intents and purposes doesn't care as long as the tap works," said Gabriel Eckstein, associate law professor at Texas Tech University.

That slows the transition toward more judicious use, he said.

"If the value was here today, I think the transformation would be much quicker. If people as a society valued groundwater more realistically, I think they would be more prone to think toward the future, especially in this part of the country where it's a non-recharging aquifer."

He was referring to the Ogallala, the aquifer that lies beneath much of the Texas Panhandle. According to the Water Development Board, declines of as much as 40 feet in 10 years have been recorded. That's mainly due to farm irrigation, by far the biggest user of groundwater.

The questions most Texans have yet to consider range from lifestyle choices to more philosophical matters, Eckstein said.

"What industries should we have here, could we have here, as opposed to what we actually use?" he asked. "How much water are we leaving for our children and grandchildren? Should we put all our money into technology, or put all our hopes into technology, that it will find new sources of water?"

'Boxing a shadow'

Another point of contention is transparency. Unlike surface water, the state requires no record of people who buy and sell groundwater rights. This allows landowners to sell or lease water rights without their

neighbors knowing, but it also allows marketers to buy up thousands of acres before anyone knows what hit them.

"These guys aren't filing their leases, so you don't know what they have, what the terms are or anything else," said John Burke of Aqua Water Supply Corp., a nonprofit water supplier established in Bastrop in the 1970s to provide water at low cost to rural areas east of Austin. "It's kind of like you're dancing with the wind or boxing a shadow. You know it's out there but you can't quite get your hand on what they're doing."

A proposal to ask the Water Development Board to track the marketing of groundwater failed in the 2005 legislative session.

Exports of groundwater don't become public until the marketer goes to a groundwater district for an export permit — and that's if there is a groundwater district.

The state has 89 groundwater districts, but 110 of the state's 254 counties have no district — either because local voters rejected them or none was ever proposed. Some areas don't have enough water to warrant having a district.

Most groundwater districts are able to slow but not stop water exports. Whether that is good or bad is another subject of some debate.

"The groundwater district can regulate pumping, which can keep anybody from over-pumping or pumping too much," said Burke. "But they can't keep a water marketer from coming in and, if they go by the rules, from pumping water and exporting it."

Sherman, the Austin lawyer, and other marketers think some groundwater districts throw up arbitrary obstacles that squelch the free market.

But every groundwater district is different. Some are intent on keeping water in the area; others want to see it sold for profit. Some have plenty of money; others don't.

When a dispute arises over exporting groundwater, the battleground moves to the courts. Burke said that often means districts are overmatched financially.

Some communities aren't interested in adding a new layer of government, so they reject the idea of a district altogether. In 1990, the Texas Commission on Environmental Quality designated Comal County as part of a Priority Groundwater Management Area because of runaway growth.

The agency said the county, one of the fastest growing in the state, needed a groundwater district because water was going to be a critical resource within 25 years.

But voters in two-thirds of Comal have twice rejected that idea. The other third of the county lies over the Edwards Aquifer and is protected.

Some local officials say that leaves the area over the sensitive Trinity Aquifer more vulnerable to overdevelopment.

"We're just sitting here fat, dumb and happy and have no idea what's going on underneath two-thirds of our county," said Comal County Commissioner Jay Millikin.

Kaiser, the A&M water law and policy expert, said the state eventually will have to loosen its rules for moving water around. That may hurt some rural Texans, but their loss will be trumped by the political pressure to bring water to everyone who needs it, he said.

The larger question, though, is whether the state has fully considered the implications of choices being made in the open water market. If Texas stays on the path it's on, Kaiser envisions a city stretching from San Antonio to Dallas, five miles wide on either side of the interstate.

"You really go back to how big should Texas be," he said. "We've just assumed, 'OK, we'll have 40 million people.' OK, let's go out and try and find the water for 40 million people."

"Everyone wants the water for the growth machine. And I think you've got to step back and say, 'Whoops, wait a minute: Maybe we shouldn't be that big.'"

jstroud@express-news.net

Database Editor Kelly Guckian contributed to this report.

Online at:

http://www.mysanantonio.com/news/environment/stories/MYSA081306.01A.water_shortages.222b032.html