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Montgomery County considers new sources for water

Report finds underground supply quickly draining away

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Montgomery County is overusing its underground water supply and soon will need to rely more on area lakes for water.

"There is a serious problem," said Kathy Turner Jones, general manager of the Lone Star Groundwater Conservation District. "We didn't realize it was so immediate. We thought we had more time."

Montgomery County relies solely on groundwater as its water source, and already permitted use exceeds what the three aquifers in the county can replenish annually. The Lone Star Groundwater Conservation District unveiled a new plan to address the problems now and identify new water sources for the future.

Need for water

"By 2040, the demand for water to service the population and industrial needs in Montgomery County will be about 154,000 acre feet," Jones said. An acre foot is equal to 325,851 gallons.

"By subtracting 154,000 acre feet from the available groundwater in Montgomery County, we quickly realize that within the next 40-year period, we'll have a groundwater shortage of approximately 90,000 acre feet per year."

Under the Texas Water Development Board, which oversees the water supply in the state, Montgomery County's allowed use is only 64,000 acre feet a year.

The proposal calls for one to four management districts in the county to limit water that can be pumped from the ground. In addition, the report recommends using water from Lake Conroe and Lake Houston for a future water supply.

But that conversion to an aboveground source will take time and money. First, Montgomery County has no rights or ownership to water in the two lakes and it would require agreements with the San Jacinto River Authority or city of Houston. Second, new treatment plants and pipelines will be needed to get water to homes and business, at an initial cost of about \$195 million. The earliest portion of the system could be up and running in 2013, according to the report.

Growth continues

Montgomery County is the fifth fastest-growing county in Texas and its population is expected to grow by 42 percent by 2010. With 378,033 residents, Montgomery County is the 27th fastest-growing county in the nation, according to a U.S. Census Bureau report with figures up to July 2005.

The county has issued more than 500 permits to pump water from the ground, with an estimated annual use of 69,243 acre feet a year. This doesn't include individual household or exempt wells, which use another 3,000 acre feet a year.

Under the state water plan for this region, only 64,000 acre feet should be taken annually from the aquifers. That represents the amount of water that can recharge the system through rain and runoff. Using more reduces the water table, eventually leading to subsidence, poor water quality and higher drilling cost. Subsidence is when the land level drops, which can lead to more flood-prone areas.

The highest uses of groundwater in the county come from The Woodlands area and the Interstate 45 corridor, the Conroe area, Lake Conroe and the Texas 105 corridor, the Porter area in southeast Montgomery County, and the southwest area of the county.

Management zones

The groundwater district has proposed setting up one to four management zones in the county to oversee use of the three aquifers in the county. The plan calls for water companies to reduce the use of water, including conservation, water reuse and identifying aboveground sources. The Lone Star Groundwater Conservation District is studying regulations in this area as well as incentive programs for water providers.

"We do realize that conservation and reuse are needed for the reduction of water taken, but it is not the sole fix," Jones said.

The plan includes options to make some or all of the county ratepayers pick up the increased tab. Conversion to a surface water source is expected to raise the average water rate from about \$1.82 per 1,000 gallons to \$2.31 per 1,000 gallons. On average, a household uses 8,000 to 10,000 gallons a year, which is expected to increase water bills by about \$4 a month, said James Adams, a member of the groundwater district and general manager of the San Jacinto River Authority.

Future options

Most of the water wells used in Montgomery County are relatively close to the communities they supply. With a reservoir system, water would have to be purified and brought by pipeline throughout the county. Both groundwater and surface water would be used to meet future needs.

The surface water options identified include purchasing water from Lake Conroe and Lake Houston. The city of Houston owns both lakes, but the San Jacinto River Authority has water rights at both reservoirs. The river authority can pump 30,000 acre feet per year from Lake Conroe and 50,000 from Lake Houston. It also is negotiating for 40,000 additional acre feet from Lake Houston, Adams said. He said the San Jacinto River Authority would be a wholesale seller of water to Montgomery County.

Adams said the district did look at creating a new reservoir, but the closest possibility was up in Bedias, Texas.

"It's still a viable option, but it's expensive as heck," Adams said.

One resident expressed concern over the use of water from Lake Conroe and its impact on the economy of the county. Lake Conroe has experienced low lake levels to repair a break in the dam after Hurricane Rita.

"It was built as a water supply and that is the purpose of the lake," said Adams, acknowledging the economic impact of the resource. "We need to provide the water supply as required so we don't ruin this county for good."

The initial surface water system would supply southwest Montgomery County by 2013 and cost an estimated \$192 million. Future systems would target southeast Montgomery County, where the groundwater is being overpumped.

The Lone Star Groundwater Conservation District recently held a public hearing on the new plan.

That plan, with new comments, will be sent back to the Texas Water Development Board for review and final approval. The district is in the process of developing new regulations from the plan and other studies.