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Are wells straining aquifers? Plano: More tap into unregulated water to irrigate, cut costs

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PLANO - When Children's Medical Center Dallas decided to build a hospital in Plano, leaders envisioned a campus of trees, plants and shrubs that would soothe patients.

The city was under water restrictions because of drought, so the hospital turned to a centuries-old tool to meet its irrigation needs: a well.

Only a handful of wells have been built in Plano since the city established well permits in the 1960s. But years of dry weather and sprinkler restrictions have ushered in a new era of drilling.

The hospital's well is one of seven being built this year, including four for large-scale users that together will pump millions of gallons daily.

A few farms, golf courses and homeowners have long relied on wells to supplement their water supplies. Now, the strategy appears to be a burgeoning practice among corporations, schools and hospitals seeking to irrigate large campuses and fill retention ponds. The objectives range from saving on water bills in the long term to gaining autonomy from city watering rules.

Environmentalists fear the movement foreshadows what could be a rush to tap North Texas' aquifers, which are unregulated and showing the first signs of strain.

Buttressing the trend is a widely held view that the region's underground aquifers represent a surplus supply of water.

"People are not looking at the long-range longevity of the aquifer," said Laura Marbury, a senior water analyst for Environmental Defense, a national environmental group. "The attitude is that this is an unlimited resource. There's a change of mind-set that needs to happen."

Flood of well requests

There are more than 100 water wells in Collin County, including some dug before World War II that have since been abandoned, according to the Texas Water Development Board.

Technology firm EDS built a well in Plano for irrigation in the late 1980s, but few large water users have since, records show. Building wells can cost hundreds of thousands of dollars, and groundwater often needs treatment.

The drilling lull ended this year when city well permits were received by Children's Medical Center, Plano East Senior High School, financial firm Capital One and Legacy Town Center, the apartment, office and retail complex in West Plano.

"It is all drought-driven," said Matt Andrus, a McKinney-based well driller.

Most of the permits are for large-scale wells.

The medical center will draw 200 gallons of groundwater per minute into a man-made lake. On most days, sprinklers fed by the lake will irrigate the 82-acre campus in pieces over a 12-hour period, said project manager Robert Doane.

Plano East is installing a well that will pump about 130 gallons per minute and will fill a 2-acre retention pond, said Tom Kimbrough, the school district's executive director for facility services.

Wells at the Capital One and Legacy Town Center campuses also will pump significant quantities of groundwater, according to permits filed with the city. Officials with those entities declined to comment about their projects.

But environmentalists question whether the new well projects are worth the long-term cost to the region's groundwater supply.

A June report by the Texas Commission on Environmental Quality concluded that increasing use of groundwater by homes and businesses has put pressure on the Dallas area's two primary aquifers, the Woodbine and Trinity.

Both aquifers measure as much as thousands of feet down in the deepest spots and stretch from the Oklahoma border into Central Texas.

"The past and continued overdevelopment of aquifers ... threatens water supplies for rural domestic, municipal and small water providers who depend on groundwater," the report found.

'Rule of capture'

That outlook is colliding with the finders-keepers doctrine that has governed Texas groundwater management for more than a century.

Known as the "rule of capture," the philosophy maintains that property owners have a right to pump as much groundwater as they wish and are not liable, even if their pumping results in water shortages for their neighbors.

Ms. Marbury of Environmental Defense said the policy needs an overhaul, especially as water needs have grown.

"It's been our history and legacy in Texas that if you have the ability to pump this groundwater, it's yours," she said. "We're starting to see serious impacts because of that."

In Collin County, the process to obtain a well permit varies by city. Drillers must secure a state permit if the local municipality does not have a well ordinance.

In Plano, the City Council awarded well permits until Monday, when the council surrendered that power by changing the city's well ordinance. From now on, well permits will require a sign-off from the city's public works staff, not the council.

Council member Lee Dunlap said the council had little authority to reject a well proposal outright.

"We issue permits for the digging of the well, not the well itself," Mr. Dunlap said. "We can't control whether the water is drawn or not. The city doesn't control that water."

That viewpoint is far different from the attitude toward the region's lake reservoirs, which are fed by rivers, creeks and rains.

The lakes, including Lake Ray Hubbard, Lavon Lake and Lewisville Lake, are tightly regulated and monitored and supply North Texas with the vast majority of its water, known commonly as surface water.

Reasons for drilling

Backers of the well projects cite numerous reasons for drilling.

Louis Saksen, the hospital's vice president of facilities management, said the well would help save the city's lake-water supply.

Cultivating the hospital's landscape without worrying about water restrictions is another goal, said Mr. Doane, the project manager.

"With Children's being a top-10 hospital, how would it look if everything looked dead?" Mr. Doane asked.

The well will cost more than \$1 million; construction starts in December. The \$110 million hospital is slated to open next year.

Willow Bend Lakes, an affluent Plano subdivision, is repairing an older well to feed a series of decorative retention ponds. The lakes had begun to dry out and become choked with algae during the drought, said Timothy McConville, the neighborhood association manager.

Plano East has another objective: slashing irrigation costs. The school is spending \$200,000 to install a well that could trim the school's water bill by \$100,000 a year, Mr. Kimbrough said. The well will irrigate the school's 70-acre campus.

The school district plans to drill more wells if the Plano East project is successful, Mr. Kimbrough said.

"The main thing we are trying to do is save some money," he said. "We'll see it all pay back in 2 1/2 years. And then it's free water after that."

How long that might last is unclear. The Texas Commission on Environmental Quality will have a hearing Oct. 23 in Fort Worth to discuss possible regulations and fees on groundwater use in North Texas.

The state's long-term goal is to shield the region's aquifers from overuse.

Plano council member Shep Stahel said the city should do more to flex its oversight muscle and stress conservation.

He pointed out that many lawns and landscapes looked lush last year despite the watering restrictions, which expired earlier this year.

"It showed that people could reduce their watering by more careful timing and management," Mr. Stahel said.

"I just feel that if lots of people are drilling large wells, it can't help but drain the aquifer."

Staff writer Brandon Formby contributed to this report.

PLANO'S MAJOR WELLS

Large-scale well projects approved this year in Plano:

#### Capital One

-Location: Capital One's Legacy Campus in West Plano

-Approved on: May 29

-Description: The 1,700-foot- deep well will pump 200 gallons of groundwater per minute and feed two reflecting pools. The pools will irrigate the company's 54-acre campus.

#### Plano school district

-Location: Plano East Senior High School

-Approved on: June 11

-Description: The 1,300-foot- deep well will pump about 130 gallons of groundwater per minute for irrigation.

#### Children's Medical Center

-Location: Children's Medical Center Legacy site in West Plano

-Approved on: June 25

-Description: A 200-gallon- per-minute pump will help irrigate the hospital's 82-acre campus.

#### Legacy Town Center

-Legacy Town Center North in West Plano

-Approved on: Aug. 27

-Description: A 1,700-foot- deep well will "discharge into a water feature."

#### Private residence

-Location: The West Plano home of Ronald Rittenmeyer, president and chief executive of EDS

-Approved on: Jan. 22

-Description: A 25-gallon- per-minute pump for irrigation.

SOURCES: City of Plano, Dallas Morning News research

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