

## **Southeast Texas growth could strain water supply**

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Water in Southeast Texas is cheap, clean and abundant enough to provide for all of the proposed industrial expansion on the horizon.

If fuel prices are climbing, and the grocery bill is higher, people still can rely on what they need the most to survive and thrive.

However, in 10 or 15 years, Southeast Texas might have to find more water to meet all of its needs as industry expands and demands more, while the rest of the state looks toward Southeast Texas as a potential source to meet its needs as well.

While supply in Lake Sam Rayburn is plentiful now, said Robert Stroder, general manager of the Lower Neches Valley Authority, the region must protect its rights to ensure its future.

There is a weakness in existing rights to the water in Rayburn that the Texas Commission on Environmental Quality will have to fix, he said.

Firming up those rights will ensure the future supply, but even that won't be enough in perhaps 20 years, Stroder said.

The state commission will have to ensure that existing users have first rights to the water supply. That isn't assured now, he said.

The river authority is working toward ensuring its rights will hold, he said.

It's important because the water makes industrial expansion possible. The river authority estimates that the water it provides helps to employ 100,000 people in the private sector in Jefferson County.

Industry is the thirstiest of the main water consumers the Lower Neches Valley Authority serves.

Agriculture is second in volume and people are last.

Lake Sam Rayburn is the main reservoir through which the Lower Neches Valley Authority provides water to 26 industrial plants, about 30 agricultural users and about 300,000 people from west Jefferson County to Mid-County, Port Arthur, and on to the Bolivar Peninsula.

Beaumont gets its own water from the Neches River and from wells in southern Hardin County.

The lake, north of Jasper, contains about 3 million acre-feet of water. An acre-foot is about 326,000 gallons and it's considered enough to cover an acre of land to a depth of 1 foot.

As of last week, Rayburn's water level stood at 163.94 feet. When it's considered full, it tops out at 164.4 feet, said Robert Stroder, general manager of the Lower Neches Valley Authority.

That means the lake is well-fixed going into summer, normally a drier time of year.

The lake level started at 159 feet in January.

"We anticipate a normal to mild drought this year," Stroder said. "We're in good shape."

Lake water also is used to produce hydroelectricity and to provide enough flow in the Neches River to keep its environment happy.

For agricultural and municipal users, the price for water from the LNVA remains at 15 cents per 1,000 gallons and 16 cents per 1,000 gallons, respectively.

Industrial users began paying 20 cents per 1,000 gallons as of January, up from 18 cents.

That works out to about \$65 per acre-foot for Jefferson County industry. That compares very favorably with rates for the state's most expensive water from the Lower Colorado River Authority, which charges \$126 per acre-foot for all categories of users.

Only the Brazos River Authority's is cheaper than the LNVA's at \$54.50 per acre-foot for industry. Brazos charges about the same as the LNVA for municipal users and almost \$40 for agricultural users compared with LNVA's \$10.50 to \$15 per acre-foot.

"We are very fortunate to have Lower Neches support for agriculture," said rice producer Mike Doguet. "Our water is half of what it would cost elsewhere in the state."

The LNVA will be able to supply most of the expansions, but Stroder cautioned that the river authority likely will have to hunt for more water in perhaps 10 to 15 years.

As an example of how much industry consumes, Motiva Enterprises, a refinery in Port Arthur that processes more than 300,000 barrels of oil per day, uses 15 to 20 million gallons of water per day.

Motiva plans to expand to 600,000 barrels of oil per day capacity, so its daily water use could go to 30 million to 40 million gallons per day, Stroder said.

"We were guessing they'd go to 50 (million gallons per day), but through conservation practices, they can hold down demand quite a bit," he said.

And LNVA water has helped make possible more development on the Bolivar Peninsula, which once suffered from a sulfurous, teeth-staining, laundry-coloring brew from briny wells near Winnie.

In October 2005, to satisfy a state mandate to wean itself away from well water, the LNVA in cooperation with the Bolivar Peninsula Special Utility District built a treatment plant in Winnie and extended water lines to the peninsula.

Water quality improved immediately on delivery, and Bolivar's water connections in the last five years have increased to 6,200 from 5,600, said special utility district general manager Jennifer McKnight.

Of course, water rates increased as well - to \$46 a month for the minimum bill from \$20 per month for the well water.

However, the higher rate offsets the need for residents to haul in potable water or buy bottled water to drink, she said.

Jim Hayes, a manager with development company Crown Team Texas, which is building Laguna Harbor on the Intracoastal Waterway near Port Bolivar and other Gulf front beach homes on the peninsula, said the project to bring in fresh water lines made the developments possible.

"Finally, we had truly potable water," he said. "I can drink from the tap. I can wash my clothes in it. I can make ice with it."

Rates might have more than doubled, but Keith Zahar, proprietor of the Gulf Coast Market in Crystal Beach, said everyone he knows is glad for the LNVA water, particularly his employees who no longer have to lug around large containers.

"We called them hernia packs," he said.

He said the well water was full of dissolved solids and though it wasn't unhealthy, it was unsavory.

"I think this is the best thing that ever happened to the peninsula."

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