

Is there enough water to go around?

Complicated water math could pose problems for proposed nuclear power plant



[Photo 1 of 1](#)
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To see a graphic/document:

- [How much water is available? \[PDF\]](#) (Lacey note: this is attached)

BY GABE SEMENZA - VICTORIA ADVOCATE

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Trying to grasp answers to slippery water questions is like trying to spot fish in the murky Guadalupe River.

In the case of water availability questions, however, answers are clouded by fuzzy math.

Since Exelon Nuclear announced two weeks ago that Victoria is the primary location for the potential construction of a nuclear power plant, excitement and concern have rained galore.

On one side of the river, Bill Jones worries that there is not enough in the Guadalupe to feed such a thirsty plant and provide for future growth.

This Region L board member points to last year and to a time state water law forced the city of Victoria to stop using river water.

A dry period dipped river levels and forced Victoria to groundwater - long before a nuclear power plant draws its massive supply from downstream, he notes.

Region L is one of 16 regional groups in Texas created to assess and plan for area water needs.

On the other side of the river, Bill West says there is more than enough water to feed a nuclear power plant. As general manager of the Guadalupe-Blanco River Authority, West said studies support him.

GBRA, a state-designated steward of river water in the upper and lower basins, agreed to a two-year water reservation deal with Exelon.

GBRA has longstanding rights - a set amount it can use yearly - to a large portion of the river and can lease water to those it deems fit.

By leasing water to a Victoria-based customer, it could keep a great amount of water in this county and out of homes in San Antonio, he suggests.

Whether the water authority has the volume of rights required to feed the plant - an amount three times as great as Victoria's yearly rights - and meet its many other water obligations is a tricky question.

Everyone agrees water is a complicated subject. The amount of available water, for instance, changes on a daily - and sometimes hourly - basis.

Bob Keith is Victoria County's representative on the South Central Texas Water Advisory Committee, one of many water groups with an opinion on how the resource should be used.

"It's not easy to determine who is right," Keith said. "You need a pretty thorough scientific study and engineering design of what Exelon's going to do."

Exelon representatives say studies paid for by GBRA show the water supply is ample, and that a future environmental impact study will further support that. But even GBRA's data can be conflicting and confusing.

In March, GBRA predicted its lower basin water demand in 2020 would be greater than similar data it offered the Advocate this week.

Jones, the Region L member, said there's a lot about water availability - today and tomorrow - that people don't know.

"It's just the complexity of the water planning process, trying to determine 50 years out how many people are going to be around, how much industry, and what their needs are," Jones said. "It's a daunting task. The question is, 'Is there enough to go around?'"

Jones calculated GBRA could exceed the river rights it owns by 50,000 acre-feet per year if it leases water to Exelon.

West calculated the river authority would have more than 50,000 acre-feet still available even after leasing water to Exelon.

Con Mims, Region L's chairman, said his group has not yet studied the effects of such a plant on water. "At this point, we have no position whatsoever," Mims said.

Jones also represents a faction of the O'Connor family that opposes this proposed nuclear plant, but he said his opinions are from a water-planning perspective.

"I'm not speaking for O'Connor family ranches," he said. "I'm speaking after having looked at data in Region L's plan, and GBRA's numbers don't add up."

If river levels dip again as they did last year, it could force a nuclear power plant to use groundwater - decreasing water tables and affecting residential and other well users, Jones said.

"Either someone does not get the water they need, or water is going to have to come from some other source," he said. "Where's the water going to come from?"

West said he's confident GBRA can supply Exelon's needs, as well as maintain the bays and estuaries and the demands of projected growth. He said a massive cooling lake would supply the plant with water in dry times.

"The state has issued us water rights to manage it for the people. We manage that water for everyone who needs it - humans and animals," West said.

Keith, with the South Texas water committee, said he thinks there is enough water in the river for a nuclear plant.

"But we live on the edge of a desert, and we have droughts. The water supply would have to be managed to account for those droughts," Keith said. "The key, in my mind, is provisions Exelon makes to meet the needs of their plants when the water is low."

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Photo caption: Watered down

The lower Guadalupe River basin extends from Gonzales, which is 60 miles north of Victoria, through Dewitt, Victoria and Calhoun counties and ends at the San Antonio Bay.

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How much water is available?

According to the GBRA, the Texas Water Development Board mainly calculates total-yearly waterflow into the San Antonio Bay by adding the waterflow from the Guadalupe River and the San Antonio River.

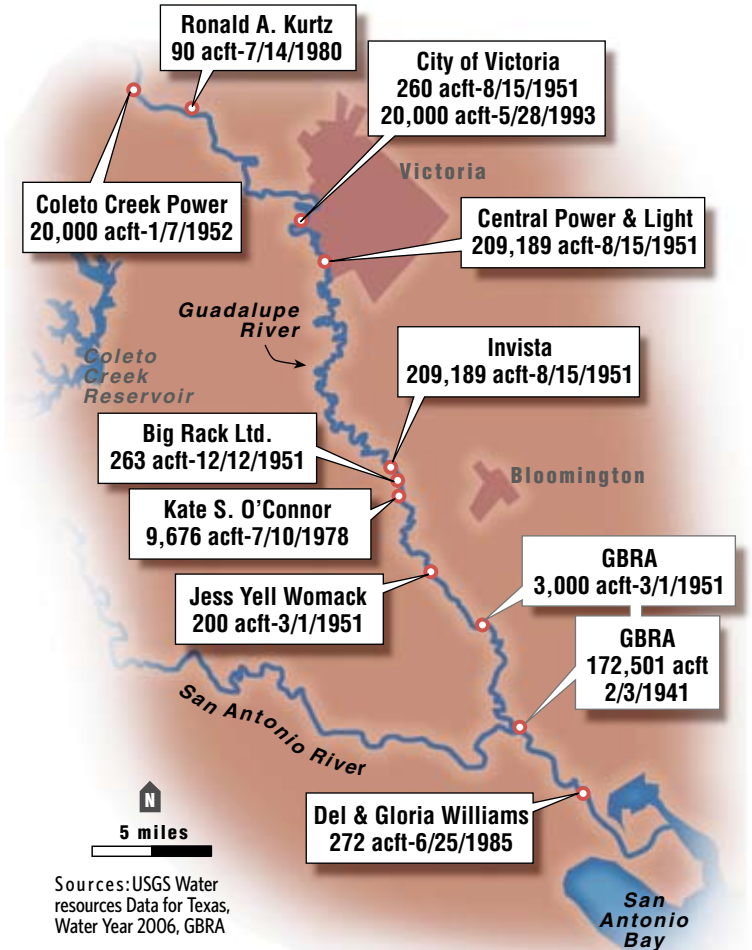
TOTAL WATERFLOW FOR 2006

San Antonio River
299,826 acre feet

Guadalupe River
786,109 acre feet

WHO USES IT?

Map below shows largest local users, amount of water rights (measured in acre feet) and start date of water rights. In the event of water shortage, older water rights are honored first.



Sources: USGS Water resources Data for Texas, Water Year 2006, GBRA