

HOW WATER NEEDS OF DFW-NORTH TEXAS CAN BE MET FROM EXISTING RESERVOIRS

There is an enormous amount of water that is sitting idle in existing reservoirs that could be used to meet the state's future water demands. (There are other smaller sources, but the sources below are the "biggies" that should be tapped before any new reservoir is built.) For context, to meet the highest levels of water use projected for DFW-North Texas area in the year 2060 would require adding about 1½ million acre-feet per year (AFY) to the region's current supply.

Lake Texoma, up to 800,000 AFY: The water in this reservoir is *slightly* salty, but only slightly above state drinking water standards. (For comparison, Texoma is about 1,000 parts per million of salts and the ocean is 40,000 ppm.) To use water from the reservoir would require only a small amount of desalination. HDR Engineering of Austin has done a study that found that water from Texoma could be desalinated and piped to DFW for a price comparable to or less than bringing water from new reservoirs. This is because Texoma is close to DFW and pipelines are expensive. Much of the water in Lake Texoma is currently allocated to hydroelectric power, but its value for hydropower is a few dollars per acre-foot compared to a few *hundred* dollars per acre-foot for water supply. Small amounts of water from Texoma are recommended in the state water plan, but many times as much water could be obtained from Texoma economically. Congress would have to reallocate the water from hydropower to water supply, but no structural changes would be necessary.

Wright Patman, 300,000 to 500,000 AFY: Lake Wright Patman is located downstream of the site of the proposed Marvin Nichols Reservoir and *could be used to store a significant portion of the same water that Marvin Nichols would store*. Patman has a large portion of its capacity allocated to flood control storage, but it has never filled up in its decades-long history. That flood storage could be allocated to water supply with no additional land acquisition. The people of northeast Texas *support* this water supply option, so it would not have the huge controversy of a new reservoir. The U.S. Army Corps of Engineers has done a study that shows that simply changing the operating rule for what the lake levels would increase the lake's yield for water supply substantially. If other existing reservoirs such as Lake Fork or Tawakoni were used to store some of Wright Patman flood flows, the reservoir could produce substantially more.

The Brazos River Basin, 300,000 AFY in upper reaches, substantially more downstream: Like Lake Texoma, water from the Brazos River would require some desalination, but its proximity to the Fort Worth urban area makes it a very cost-effective alternative for Fort Worth and its suburbs. Pipelines are very expensive and these would be short, thus countering the added cost of desalination.

Toledo Bend, up to 1 million AFY (Texas portion): The state water plan shows water from Toledo Bend to be less costly per unit of water than the proposed Fastrill Reservoir. It would be roughly comparable to the cost of water from Marvin Nichols (longer pipeline, but not have to build a dam or buy land). The Sabine River Authority is eager to sell water from Toledo Bend. The state water plan recommends *some* water from Toledo Bend, but much more could be used.

Sam Rayburn, hundreds of thousands of acre-feet per year: Reallocating flood storage to water supply would increase the yield from Sam Rayburn Reservoir. Sam Rayburn is farther from DFW as some sources of water, but could economically be used for other areas.



Janice Bezanson, Texas Conservation Alliance
512-327-4119, bezanson@texas.net