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FEBRUARY 2017



**San Angelo Stock Show  
& Rodeo Set for Feb. 3-19**

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**Heart of Texas  
Music Festival  
to Host Country  
Greats**

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**By Mike Mecke**  
Retired Natural Resources & Water Specialist  
(830) 896-0805 mmecke@stx.rr.com

# water

## Are There Any Lingering Drought Effects in Texas?



Twin Buttes Reservoir south of San Angelo is still nowhere near capacity. It is currently estimated to be 12.2 percent full.

**MOST OF TEXAS** has been blessed with average or above average rainfall for the past year or more! It is not uncommon to hear your TV weather folks say “The drought in Texas is over,” and often that is echoed in the local coffee shops or by groups of weathered ranchers talking happily about the latest rain.

But, looking back at the number of drought years and exceptionally hot years we have had in the past seven or eight years, I have been suspicious of what effects still linger on in Texas. Growing up in the 1950s drought left me cautious and suspicious of a good year or two completely curing a long-term problem. Advising and planning with ranchers and farmers for the next 40 years in Texas, New Mexico, Arizona and Wyoming and going through several other shorter periods of severe drought made me want to check more than

my rain gage and records.

I am pretty sure that there have been watersheds and river basins that have not caught the big rains needed to fill some of these crucial Texas reservoirs. Also, our soil profile in much of the state, if you remember back a few years, was very dry way down deep and the grasses and other vegetation and litter usually found on the rangelands was gone—nothing to slow down those rains and get the crucial water down to plant roots or to aquifers which so often provide the base flows of our creeks and rivers into those lakes and down to the Gulf. So, I decided this month to take a quick look at some large and key lakes in the drier and hotter western half of Texas. With a changing climate, I suspect these factors have only increased the loss of surface moisture from water bodies, the soil and from vegetation.

Let’s take a look at the Texas Water Development Board’s fine website, which gives us the latest lake, river and aquifer data along with other valuable information. (<http://www.twdb.texas.gov/surfacewater/conditions/report/index.asp>)

**Reservoir Storage Index Map** – Right off the bat, a state map comes up with average lake storage percentages by region as of Dec.31, 2016. Starting up at the top of Texas for the High Plains Climatic region, we see it is in bright yellow and only has 21% of reservoir storage in that region. That shows to be on the top edge of “Severely Low.” Not good at all.

The Trans-Pecos Region is just below and covers all of far West Texas. It also is in that bright yellow and sits at just 22% of capacity. The foreword to this section states that this region’s data is changed and more complete, as it includes Elephant Butte Reservoir on the Rio Grande River just north of Las Cruces and El Paso in New Mexico. Since Texas shares that water with New Mexico, it is correct to add it into the Trans-Pecos Region. But, since New Mexico has felt many of these droughts too and has had some poor snow-pack years, the Rio Grande and its lakes have suffered just as other shared New Mexico–Texas rivers have (the Canadian and Pecos). New Mexico and Texas river flows and lake levels in this arid region of the Chihuahuan Desert affect not only those two states, but residents of Mexico from Juarez to Matamoros and Texas residents all the way to the Gulf.

Remember some years ago when the poor old overused Rio Grande failed to flow into the Gulf and a new sand bar formed, blocking it off? A sad sight for such a once mighty river—called Rio Bravo in Mexico. Not only was the agriculture of the basin badly hurt, but the river itself suffered and the Gulf fisheries were left saltier than normal.

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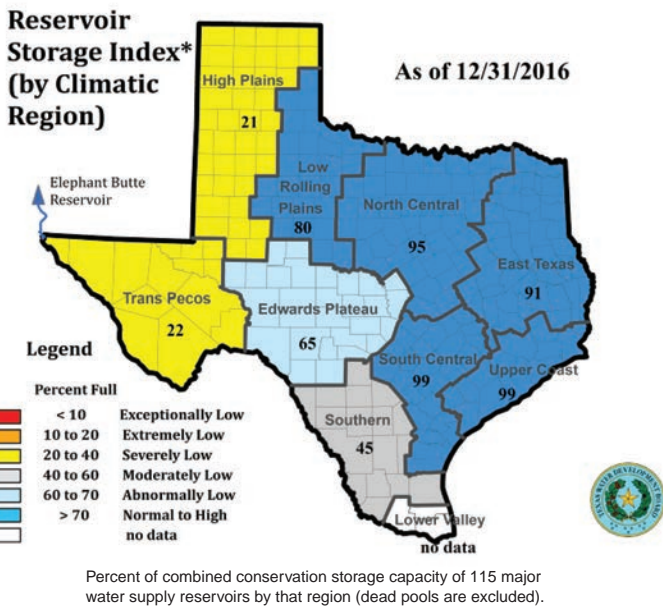
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The Edwards Plateau Region is just east of the Pecos River and includes much of Central Texas and the Hill Country sub-region. The Plateau has fared better and is in a shade of light blue which is labeled “Abnormally Low” and stands at 65% capacity. Still doesn’t bring those happy goose bumps does it? This is mostly a semi-arid region and it has not yet caught up to other areas on the map. Some of the lakes in this region are fed by spring fed creeks and rivers and years of low rainfall, high temperatures and higher aquifer pumping often reduce or even stop spring flows. That keeps area rivers and lakes low.

The Southern Region lies south of the Edwards and Hill Country and east along the Rio Grande River. Commonly called the South Texas Brush Country, it also is a semi-arid region of irrigated farms in areas with plentiful aquifers or bordering the river and of large cattle ranches. It runs almost to I-37 to Corpus Christi and has a few rivers flowing through it to the Gulf. They are the Nueces, Frio and Atascosa rivers. Surface water is at a premium here. It is colored gray on the map and carries a 45% of full label.

The rest of the state with the Rolling Plains, North Central, South Central and upper Coastal regions containing most of any remaining major ranching areas is in a pretty dark blue—like water! And these areas are rated Normal to High. Those four regions carry from 80% to 99% of capacity labels.

East Texas is all that is left, and the old Piney Woods is in a dark blue as well and a nice 91% status. The bottom tip of Texas—the Lower Rio Grande Valley—is in white with NO DATA as a label.

I believe this illustrates my opening remarks that a rainy year or two does not necessarily remove the deep and hurting after effects of years of drought. There are many key factors affecting ranching, farming and urban water resources not on TV weather or shown by a rain gage.

Next time, I will go through the key lakes in these drier regions and look at how they have recovered—or not. Hopefully, it will be all good news if we will be blessed

with more good rainfall in key watersheds and at a lake-filling rate.

I always remember some of my Range Management profs’ great advice “Ranch and stock at your drought rate and add some stockers as possible in wet years.” Sort of like other types of planning—plan for the worst and pray for the best!

*Water is Life!* ◇



I have mentioned previously how **Pioneer Water Tanks** can be built in very remote locations. Recently the **ARainDance** team installed this 30,000 gallon **Pioneer** tank in the hills near Uvalde. The ‘trail’ leading up to the high ridge where the build took place, was not for the faint of heart to traverse! I

am a firm believer in 4-wheel drive vehicles and this particular trip reaffirmed my belief. The fabulous benefit that **Pioneer** designed their tanks to be transported at 1% of their completed size is just one of the many considerations when looking to purchase a new water storage tank.

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