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# water

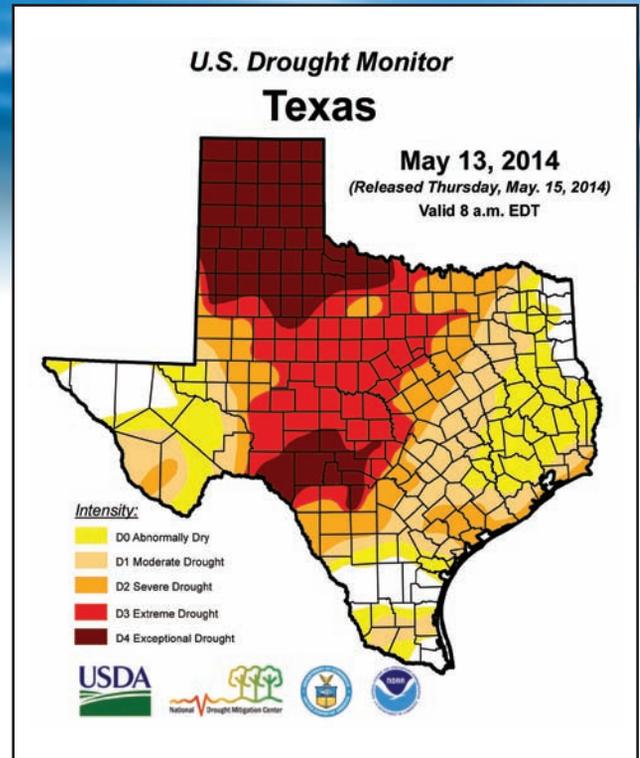
## Our Texas Drought: What's Happening?

DO WE REALLY have any real idea of our projected water needs for the future? Isn't that something of great importance to everyone in Texas—not just we citizens who need water for our lives, but especially those who operate our state, local and regional water agencies? Throw in our county and city politicians, urban planners, architects, landscape architects, developers and builders. Oh, and the banks and other organizations which fund all this Texas growth – don't they kind of need to know we will have enough water? Yep, they do.

What about the biggest and maybe the most important industry in Texas—agriculture? It cannot operate or function well without water either. Water is crucial for irrigating crops for human food, fiber crops and animal feed. Also important is ample water for many other uses such as industrial products and production of power. Do you like being able to buy quality, reasonable food that is Texas grown? I do. If we are short-sighted and take too much water from agriculture you won't be able to do so. A large amount of urban water use goes for landscapes (home/office lawns, parks, ball fields, etc.) How good do you think a bermuda grass or st. augustine grass sandwich will be? Or will we make other logical choices first? I hope so, but an informed and active public must act and vote accordingly to make that happen.

Belatedly, the state woke up in the late '90s and passed some good water legislation. One law set up stakeholder and expert committees for each of our river basins that flow into our Gulf of Mexico. These Environmental Flow Committees have spent the last five or so years studying the water flow, water use and needs of each of those river basins. The Colorado and Rio Grande basins are the largest and probably the most important to both people and to the Gulf bays and estuaries. Look at the **Texas Commission on Environmental Quality (TCEQ)** to view basin reports and learn of river pumping permits.

I am on the Guadalupe Basin Committee and we



also heard from experts and studied river ecological data to try and arrive at a minimum drought flow needed to have a healthy river and bay, while providing for human needs in the basin. Not an easy task, but very important to having sustainable rivers, creeks and bays. Those same bays and estuaries, if too little river water flows, then become too salty to produce the millions of young fish, oysters and shrimp making up a major source of jobs and income to Texas, not to mention a source of delicious seafood.

Another law set up state water planning regions, as you have probably heard. Again, these committees are made up of locals and agencies within the region. Go to the website for the **Texas Water Development Board (TWDB)** which develops the State Water Plan and find yours. TWDB also provides groundwater and conservation expertise across Texas.

The 2012 State Water Plan *estimates Texas will experience a shortage of 2.7 trillion gallons of water a year by 2050, and*



This pool of Twin Buttes Lake at San Angelo is fed by the Middle Concho River and is considered 0% full at present, a remarkably low level for the lake. Twin Buttes feeds constant level Lake Nasworthy, which is well below full at present. Photo by Gary Cutrer.

that filling the gap would take an estimated \$53 billion in new infrastructure. This is a composite view of the data and forecasts of all of the state's water planning regions. Not everyone agrees with the water shortage total or of the estimated cost, but the point is, Texas is going to have a whole lot more people in 50 years and there is not likely to be enough water to satisfy all needs and wants. Those who lived through the **Drought of the 1950s**, recognize what such a severe, long-term eight- to 10-year drought would do to Texas with four or five times more people and a large irrigation industry that did not then exist!

Then throw into the picture a generally accepted climate forecast that Texas and the Southwest are possibly undergoing a long period of hotter and drier weather. This may be the "new Texas weather." What to do?

Well, first and foremost for the state and every city and town is **maximum conservation!** *That is always the cheapest New Water available*, plus we are all going to have to be in a conserving state of mind regarding water. Take a close look at conservation programs for El Paso and San Antonio or Phoenix and Tucson if you want good ideas and inspiration.

There are many good, effective choices including **desalination of groundwater or ocean water**. Several years ago El Paso built the largest inland de-sal plant in conjunction with Fort Bliss. San Antonio is building one now, and many small towns have de-sal plants across Texas. Another option is storing excess water from wet years underground, a strategy called **Aquifer Storage and Recovery (ASR)**. Towns as small as Kerrville and as large as San Antonio use ASR.

**Reuse or recycling of treated sewage water** is another good example of getting the most out of our water. San Antonio uses theirs to irrigate golf courses and parks and to sell to industry which can use it. Of course, recycled water can be further treated to drinking water quality as is done in space and in several US cities. In Texas, Big Spring and Brownwood are in that process. Wichita Falls can no longer count on drying lakes and has made that decision as well.

In some brief, but severe droughts in the '90s, several Texas towns ran dry, including Bronte and Blanco. Recently, Robert Lee has had severe shortages and a number of medium size West Texas cities would be on thin ice—if there were enough water. **San Antonio TV recently reported that there are 33 communities within 90 days of running out of water!** *Good development planning for cities and counties is necessary to reduce undue stresses on water and other resources.*

Many still look to building new dams on our already over-drafted rivers as the saving solution for their town. I hear that regularly here in Kerrville—but where do you suggest we build one? Where is the water coming from to fill it and keep it full? *In much of Texas west of I-35 the annual evaporation rate is from five (5) to six (6) feet!* Not to mention tremendous costs and the fact that from start of planning to project completion a new dam can take up to 20 years! I was on water resource teams in the '90s looking at potential new large dam sites—good ones with proper geology, watershed and a substantial river. We could not find any such sites left in the state. Who wants to give up their farms and ranches or homes to a new lake? The people in East Texas do not for sure. They have been fighting the poor water-conserving DFW area and state politics for years to avoid the building of

two new dams to serve the DFW Metroplex.

As you can see, the water issue is very serious across Texas and it is mainly a combination of increasing population demands and a very dry climate. If we want to have a Texas similar to the one our parents enjoyed, with good clean water, reasonably priced food, healthy rivers and quality bays, we are going to have to do the right thing starting at home and then carry those ideals to our counties, towns, and to Austin in particular. **WATER IS LIFE!** ◇

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