

PUBLIC COMMENTS

HB 1544

HOUSE COMMITTEE ON NATURAL RESOURCES

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Carrizo Recharge Area: Land and Aquifer Reclamation by Joseph D. Neal

The Carrizo geologic formation is the most vital water resource aquifer for South Texas. The Carrizo provides water to San Antonio from many large commercial size wells. There are numerous residential, municipal, agricultural, and industrial frac water wells throughout. The Atascosa, Nueces, Frio, Medina, San Antonio, and Rio Grande river flow over the Carrizo outcrop formation. These rivers flow and fill Choke Canyon, Corpus Christi, and Falcon lakes which are reservoirs for Corpus Christi, Rio Grande Valley surrounding communities. This formation extends from Mexico to Louisiana and has the same function throughout, but the critical area is south to southwest of San Antonio into Mexico.

In the recharge area just south of San Antonio, the sand is being mined and processed for oil and gas well fracking propan and construction. This is a very important resource for our country's economy. The surface sand is removed down to the argillic horizon, about 6 feet on average, and an excellent new soil can be formed. This new soil can be reclaimed to be much more productive for agriculture, wildlife, and aquifer recharge. The recharge can be increased 75%. But when the sand is removed and left without reclamation the recharge ability is completely eliminated.

Important Facts

- The argillic horizon just below the sand is the accumulation of clay, which makes a great new soil. The argillic, or hard clay pan, is nearly impermeable which consist approximately of 50% clay and 50% sand and is 2 feet deep. The Carrizo Aquifer goes to a depth of about 400 feet, which consist of about 75% sand and 25% clay.  
Removal of the sand without immediate reclamation completely eliminates the recharge.
- Immediate reclamation with preferred taller bunch grasses are necessary to reduce dust and noise and to allow water to be absorbed
- Removing the sand also makes land better for residential development. This new soil is excellent to build due to its density index.
- The residents in the recharge area are affected immediately when the water table drops below their house water wells.
- As fracking increases, so will the use on the Carrizo aquifer. Clean Carrizo water can easily be accessible because of the oil/gas well location.
- Because of the increase in oil/gas exploration and growing industry in South Texas there will be a large migration of people that will need this Carrizo Aquifer water.
- The average rainfall is 25 inches and with 1% natural recharge a total of 6,804 gallons per acre enters the Carrizo. After the reclamation is complete the 75% recharge is increased to 506,777 gallons per acre. When multiplied by 30,000 acres, approximate area of sand, the 1% is 204,120,000 gallons and reclaimed is 15,203,000,000 or 15.2 billion gallons.
- Eliminate the 3 year rollback penalty for changing land use if land is immediately or annually reclaimed under USDA program.