

SOME BRAZOS G WATER PLANNING GROUP SUGGESTIONS FOR AQUIFER RECHARGE FOR 2026 PLAN

From; John Asbury, Temple, Texas , November,2023

The 2026 plan for the Brazos G Planning Group would do well to have a very comprehensive section on aquifer recharge as Texas aquifers continue decrease in overall total amount of stored water(drawdown over x years in MAG reports) and increase demand for water in Texas. A large amount of monies (recent election results)are now available also for the better ideas(see G long term project list).

1. Aquifer recharge and ACS ; The ACS program as of 2023 are proposing mainly using waste water as the source of the recharge water primarily. Several other water sources of water may be considered in this program for the future water resources for Texas.
 - A. Can unused permitted water rights for recharge water when the water is available from the BRA on a yearly basis.
 - B. During periods of excess water in the lakes and rivers of the BRA catchment area and the water is not needed/required for other purposes, be used for aquifer recharge(see attachment).
 - C. As Texas has more abundant water on the east side of the state, should this water be used to restore the aquifers to their full level first and any left over water be shipped westward to be used for aquifer recharge starting with the Carrizo- Wilcox and Gulf Coast aquifers first and then the Trinity Aquifer next. Storing the east Texas water in the aquifer not needed for other purposes is better than letting it run into the Gulf of Mexico.
 - D. Desalination of salty water,brackish or gulf.
 - E. Limiting the manor of irrigation of BRA surface water and ground water.
 - F. Not allowing the district G water to be used for certain water intensive crops such as rice(corn, sorghum and cotton in the same area does well without irrigation).
 - G. Limiting the future new permits use of District G water to certain types of landscaping plants.
 - H. Designing waste water treatment plant capable of treating water of

the quality for recharge if criteria of treatment is higher than for regular waste water.

2. I. Explore the use of the Brazos alluvium as a source of recharge water using horizontal drilled extraction wells due to the shallow depth of the aquifer and solar panel electrical power and even siphon flow program to targeted aquifer for recharge(Coastal, Trinity (and Carrizos-Wilcox)

3. OTHER SUGGESTIONS.

- A.Evaluation of horizontal vs vertical water wells for extraction/injection on the local draw down effect and rapidity of injection of water for recharging aquifers
4. Use of solar panels for electrical power especially when the pumps etc are not needed on a specific time schedule. The old pasture windmill pumps water when the wind blew but made enough water to supply the live stock , even better if had a storage tank(battery)(aquifer to aquifer transfer)
5. District G would be the best place to have the BRA and the underground water districts to come together locate the best places for aquifer recharge based on select criteria(see Clearwater recharge ACR as an example) in District G (water availability,aquifer composition, treatment treatment plants, extent of drawdown, etc) When you put water in an aquifer, it is not going to go anywhere very fast and sooner or later someone will use it!! It take 3000 years of a water molecule from a Texas River to evaporate back into the atmosphere that flows into the ocean. Use it or wait a long time. Water that evaporates on land falls back in 9 days on average.
6. Pipe line route from the East; Toledo Bend to Sam Rayburn to Lake Livingston to near Hearne / Rockdale tapping the rivers it cross and used for the aquifer recharge program especially the Carrizos -Wilcox Aquifer that a lot of folks use as their favorite resource aquifer (I have a dream).
7. Use of salt water cooling towers for industries located along the gulf coast/bays
8. Begin the recharging the eastern section of the Texas aquifers from the lakes and rivers and work west and northward as the first aquifers start to fill up. May get more water dependent user to locate in the east and northeast parts of Texas if more water was available. (Southeast-hurricane 🙄)Most Texas large lakes need a recharging facility if over an aquifer. Could be part of a water intake facility.