

Completed Brackish Aquifer Studies: Estimated Storage Volumes (all values are in acre-feet)

The TWDB uses brackish aquifer studies as the basis for brackish groundwater production zone (BGPZ) designations. For the purposes of BGPZ designations, brackish groundwater is slightly to moderately saline (groundwater containing 1,000 to 9,999 milligrams per liter [mg/L] of total dissolved solids). However, the TWDB also calculates volumes of very saline groundwater (containing 10,000 to 34,999 mg/L of total dissolved solids). Very saline groundwater volumes are also included in the table below, but only slightly to moderately saline groundwater is included in the total estimated brackish storage volume.

Aquifer	Study	Region	1,000-2,999 mg/L (Ss)	3,000-9,999 mg/L (Ms)	10,000-34,999 mg/L (Vs)	Total estimated brackish storage volume (1,000 to 9,999 mg/L)
Blaine	Finch et al., 2016	East Panhandle	---	17,896,879	170,000	17,896,879
Blossom	Andrews and Croskrey, 2019	Northeast Texas	445,000	1,925,000	7,395,000	2,370,000
Carrizo-Wilcox (south)	Incomplete; under review	South Texas	161,900,000	464,200,000	741,500,000	626,100,000
Gulf Coast (LRGV)	Meyer, et al 2014	Lower Rio Grande Valley	40,440,500	112,202,400	123,296,600	152,642,900
Gulf Coast (excludes LRGV)	Young et al, 2016	South and East Texas	454,800,000	368,800,000	612,100,000	823,600,000
Lipan	Robinson, et al, 2018	Big Country	4,441,405	1,605,743	not calculated	6,047,148
Nacatoch	Croskrey et al, 2019	East of DFW up to Northeast Texas	2,055,000	3,814,500	8,284,500	5,869,500
Pecos Valley Alluvium	Meyer, et al, 2012	West Texas	not calculated yet (report predates statute)			-
Rustler	Lupton, et al, 2016	West Texas	10,172,000	7,905,000	373,000	18,077,000
Trinity (north)	Robinson, et al, 2019	DFW West and North	486,666,000	703,485,000	399,221,000	1,190,151,000
Trinity (south)	Robinson, et al, 2022	Hill Country	25,730,307	34,351,848	41,610,134	60,082,155
UCP Central - Carrizo	Meyer et al, 2020	Central Texas	31,595,005	25,885,276	33,368,451	57,480,281
UCP Central - Queen City			13,498,486	3,503,100	23,302,987	17,001,586
UCP Central - Sparta			3,551,553	2,856,323	4,860,173	6,407,876
UCP Central - Wilcox			49,826,326	62,159,039	52,735,625	111,985,365
UCP Central - Yegua	Laughlin, et al, 2023	East Texas	---	42,955,486	16,902,316	42,955,486
UCP East - Sparta			22,184,600	27,842,700	17,723,200	50,027,300
Total estimated storage volume (acre-feet)			1,307,306,182	1,881,388,294	2,082,842,986	3,188,694,476
Total estimated brackish storage volume (acre-feet; 1,000 to 9,999 mg/L)				3,188,694,476		

Disclaimers:

These volumes are estimates of in-place brackish storage volume, and are not the same as TWDB-calculated total estimated recoverable storage (TERS) volumes. Site-specific studies are needed to confirm local production volumes. Not all brackish groundwater can be produced or economically developed.

Notes:

Blaine Ms volume is an aggregate of slightly and moderately saline. It was not reported separately. Carrizo-Wilcox (south) report is currently under review. Reported volumes are provisional. LRGV - Lower Rio Grande valley UCP - Upper coastal plains UCP Central brackish volumes only include single or dual classifications with Ss, Ms, Vs portions. Dual classifications (Ss-Ms) were divided equally.

Salinity Classifications		
Groundwater salinity classifications	Salinity Code	Range in TDS (mg/L)
Fresh	FR	0-999
Slightly saline	Ss	1,000-2,999
Moderately saline	Ms	3,000-9,999
Very saline	Vs	10,000-34,999
Brine	BR	> 35,000

Note: Brackish groundwater is slightly to moderately saline groundwater, for TWDB brackish groundwater production zone designation purposes.