

Status Report on QC/Sparta/C-W Modeling Results and Modeling Results for the Yegua-Jackson and Brazos River Alluvium Aquifers

Presented to

Board of Directors

Brazos Valley Groundwater Conservation District

by

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Yegua - Jackson Aquifer

ReRun of the TWDB 2016 MAG Run

GCD	Existing DFC, ft.			New DFC with ReRun, ft		
	Yegua	Jackson	Yegua-Jackson	Area	Saturated Thickness	Entire Volume
Brazos Valley	70	114	--	73	102	95
Fayette County	--	--	77	77	94	89
Lost Pines	--	--	--	42	49	44
Mid-East Texas	--	--	7	7	8	7

Summary

MAG of 6,854 acre feet per year for Re Run simulation the same as developed for the 2016 planning cycle

Brazos River Alluvium

Development of DFCs

- ❑ Use the Brazos River Alluvium Aquifer GAM completed in 2016 for 2021 planning cycle, same GAM used to develop MAGS in the GMA 12 2016 planning cycle
- ❑ Develop distribution of pumping consistent with areas of irrigated agriculture in Milam, Burleson, Robertson and Brazos counties. Moved some pumping away from the river compared to 2016 planning cycle distribution

Average drawdowns or DFCs proposed to be the same for 2021 planning cycle as used in the 2016 planning cycle

Summary

- ❑ Current Simulation Closely Reproduces DFCs from 2016 planning cycle
- ❑ Resulting MAGs
 - Robertson - 52,903 AFY
 - Brazos -76,038 AFY

Model Layers- Aquifer in Updated QC/SP GAM

- ❑ Layer 1- Colorado and Brazos River Alluvium
- ❑ Layer 2- Shallow flow systems
- ❑ Layer 3- Sparta Aquifer
- ❑ Layer 4- Weches Formation
- ❑ Layer 5- Queen City Aquifer
- ❑ Layer 6- Reklaw Formation
- ❑ Layer 7- Carrizo Aquifer
- ❑ Layer 8- Calvert Bluff Aquifer
- ❑ Layer 9- Simsboro Aquifer
- ❑ Layer 10- Hooper Aquifer

Average Drawdown From Run S-7

Aquifer	Ave. Dd for 1999-2069 for S-7 Using Updated Model					
	GMA 12	LPGCD	BVGCD	POGCD	METGCD	FCGCD
Sparta 3	30	25	50	21	31	52
Queen City 5	29	30	43	21	25	75
Carrizo 7	99	147	84	184	53	136
Calvert Bluff 8	111	170	112	196	64	
Simsboro 9	207	346	257	384	89	
Hooper 10	131	193	176	239	79	

Note: Drawdown values in feet

GMA 12 is proposing that a variance of 25 percent regarding DFCs be allowed when the TWDB calculates average drawdowns due to variability in assumptions in future pumping locations

Pumping from Simsboro Aquifer in BVGCD for S-7 is 147,235 acre feet per year by 2070

??Questions??

Thank you!

S7
BVGCD Per Aquifer

