

Transmissivity Category	DSGMZ	Total Pumping Rate (AFY)		Average Freshwater Drawdown at Well Fields		Area of Over 5-foot Drawdown in Freshwater Zone (square mile)				Effective Radius of Impact Area with Over 5-	
		Addendum #1	Addendum #2	Addendum #1	Addendum #2	Addendum #1	% of County	Addendum #2	% of County	Addendum #1	Addendum #2
High	Slightly Saline	20,000	10,000	57	22	918	99%	377	41%	17.1	10.9
	Moderately Saline	15,000	7,000	19	9	752	81%	528	57%	15.5	13.0
	Extremely Saline	-	5,000	-	3	-	-	0	0%	-	0.0
Medium	Slightly Saline	20,000	10,000	27	13	928	100%	327	35%	17.2	10.2
	Moderately Saline	15,000	7,000	13	4	928	100%	329	35%	17.2	10.2
	Extremely Saline	-	5,000	-	2	-	-	0	0%	-	0.0
Low	Slightly Saline	-	10,000	-	12	-	-	497	54%	-	12.6
	Moderately Saline	-	7,000	-	9	-	-	606	65%	-	13.9
	Extremely Saline	-	5,000	-	1	-	-	0	0%	-	0.0

Note 1: total square miles in Calhoun County used to calculate **% of County** is 928.

Transmissivity Category	DSGMZ	Total Pumping Rate (AFY)		Average Freshwater Drawdown at Well Fields		Area of Over 5-foot Drawdown in Freshwater Zone (square mile)				Effective Radius of Impact Area with Over 5-	
		Addendum #1	Addendum #2	Addendum #1	Addendum #2	Addendum #1	% of County	Addendum #2	% of County	Addendum #1	Addendum #2
High	Slightly Saline	20,000	10,000	71	19	631	74%	338	39%	14.2	10.4
	Moderately Saline	15,000	7,000	13	7	480	56%	252	29%	12.4	9.0
	Extremely Saline	-	5,000	-	1	-	-	0	0%	-	0.0
Medium	Slightly Saline	20,000	10,000	11	21	857	100%	368	43%	16.5	10.8
	Moderately Saline	15,000	7,000	16	8	857	100%	242	28%	16.5	8.8
	Extremely Saline	-	5,000	-	2	-	-	0	0%	-	0.0
Low	Slightly Saline	-	10,000	-	17	-	-	293	34%	-	9.7
	Moderately Saline	-	7,000	-	5	-	-	731	85%	-	15.3
	Extremely Saline	-	5,000	-	1	-	-	0	0%	-	0.0

Note 1: total square miles in Jackson County used to calculate **% of County** is 857.

Transmissivity Category	DSGMZ	Total Pumping Rate (AFY)		Average Freshwater Drawdown at Well Fields		Area of Over 5-foot Drawdown in Freshwater Zone (square mile)				Effective Radius of Impact Area with Over 5-	
		Addendum #1	Addendum #2	Addendum #1	Addendum #2	Addendum #1	% of County	Addendum #2	% of County	Addendum #1	Addendum #2
High	Slightly Saline	20,000	0	72	-	393	49%	43	5%	11.2	3.7
	Moderately Saline	15,000	7,000	16	13	272	34%	189	23%	9.3	7.8
	Extremely Saline	-	5,000	-	2	-	-	0	0%	-	0.0
Medium	Slightly Saline	20,000	10,000	45	4	678	84%	87	11%	14.7	5.3
	Moderately Saline	15,000	7,000	17	5	806	100%	168	21%	16.0	7.3
	Extremely Saline	-	5,000	-	2	-	-	0	0%	-	0.0
Low	Slightly Saline	-	10,000	-	41	-	-	495	61%	-	12.6
	Moderately Saline	-	7,000	-	17	-	-	594	74%	-	13.7
	Extremely Saline	-	5,000	-	2	-	-	0	0%	-	0.0

Note 1: total square miles in Refugio County used to calculate **% of County** is 806.

Transmissivity Category	DSGMZ	Total Pumping Rate (AFY)		Average Freshwater Drawdown at Well Fields		Area of Over 5-foot Drawdown in Freshwater Zone (square mile)				Effective Radius of Impact Area with Over 5-	
		Addendum #1	Addendum #2	Addendum #1	Addendum #2	Addendum #1	% of County	Addendum #2	% of County	Addendum #1	Addendum #2
High	Slightly Saline	20,000	10,000	73	33	694	78%	443	50%	14.9	11.9
	Moderately Saline	15,000	7,000	30	8	472	53%	334	38%	12.3	10.3
	Extremely Saline	-	5,000	-	1	-	-	0	0%	-	0.0
Medium	Slightly Saline	20,000	10,000	55	3	888	100%	172	19%	16.8	7.4
	Moderately Saline	15,000	7,000	2	2	889	100%	128	14%	16.8	6.4
	Extremely Saline	-	5,000	-	3	-	-	0	0%	-	0.0
Low	Slightly Saline	-	10,000	-	5	-	-	33	4%	-	3.2
	Moderately Saline	-	7,000	-	3	-	-	869	98%	-	16.6
	Extremely Saline	-	5,000	-	3	-	-	0	0%	-	0.0

Note 1: total square miles in Victoria County used to calculate **% of County** is 889.

The four tables provide the simulated drawdown impacts on freshwater due to brackish groundwater development in DSGMZs. The impacts are compared using the simulation results from Addendum #1 and Addendum #2.

The simulations in both addendums are performed with simultaneously pumping at sites in the same DSGMZ and the same transmissivity category. For each simulation, one site was selected in each county. At each pumping site (well field), there are nine designed production wells with 0.5-mile spacing and evenly distribution pumping rates. See the figure as example.

Transmissivity Category	Transmissivity Value
High	> 5,000 ft ² /d
Medium	1,000 - 5,000 ft ² /d
Low	< 1,000 ft ² /d

The differences between simulations in Addendum #1 and Addendum #2 are listed as follows:

1. Production rates for DSGMZ are lower in Addendum #2.
2. The DSGMZs are delineated using the TDS raster in the report (Figure 2-39 to 2-41) in Addendum #1, while the DSGMZs are delineated using Mr. Tim Andruss's approach in Addendum #2.
3. The pumping site in Refugio is excluded for the simulation in slightly saline DSGMZ and high transmissivity category in Addendum #2.

