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# *MIDDLE PECOS GROUNDWATER CONSERVATION DISTRICT*

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Proposed Amendments to Rules  
(Set for Public Hearing on August 15, 2017)

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This set of documents makes up the proposed rules that will be discussed at the public hearing on August 15, 2017. This rulemaking proposes substantive amendments to Section 10 of the District's rules (Production Limitations) applicable to Management Zone 1. The proposed repeal of language is reflected in text that is ~~struck through~~, and the proposed new language is reflected in text that is **bold and underlined**. Additionally, there are new figures and tables in this proposed set of rules, which are briefly described below.

The proposed rule amendments are intended to (1) change Management Zone 1 boundaries and operating conditions to recognize hydrogeological differences between South Coyanosa and Belding areas; and (2) establish (A) acceptable aquifer level fluctuations and (B) thresholds for pro rata cutbacks when aquifer level declines in certain monitoring wells.

Rule 10.5(a) contains two figures (Figures 1 and 2) that show current Management Zone 1 boundaries. The attached figure titled "*Proposed Management Zone 1 and Monitor Wells*" indicates (1) a proposed change in the current Management Zone 1 boundaries and (2) several proposed monitoring wells that are proposed to be used to establish thresholds for pro rata cutbacks when aquifer levels decline. This attachment is proposed to replace current Figure 2, and to be incorporated into Figure 1 to accurately depict new Management Zone 1 boundaries.

The attached table titled "*Monitor Well Thresholds and Cutbacks*" provides more information about the 11 wells that are proposed to be incorporated into the Management Zone 1 monitoring and production management program that would amend current provisions in Section 10 of the District's rules. This table would be incorporated into Rule 10.5(b).

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MIDDLE PECOS GROUNDWATER CONSERVATION DISTRICT  
PROPOSED RULE CHANGES TO SECTION 10 OF THE DISTRICT'S RULES  
TO BE CONSIDERED AT A PUBLIC HEARING ON AUGUST 15, 2017

The proposed repeal of language is reflected in text that is struck through, and the proposed new language is reflected in text that is **bold and underlined**. Additionally, there are new figures and tables in this proposed set of rules, which are referenced in the text below.

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RULE 10.5 MANAGEMENT ZONES

- (a) As set forth in the District Management Plan and illustrated in Figures 1 through 4 below, the following management zones are established within the principal areas of irrigation and pertinent surrounding areas of Pecos County:

**Management Zone 1 – Leon-Belding Irrigation Area and Vicinity of City of Fort Stockton to include outlets of Comanche Springs:**

This management zone area is generally bounded by the TWDB Edwards-Trinity (Plateau) / Pecos Valley Aquifer GAM-Grid cells that contain the following sets of latitude and longitude coordinates: **[new coordinates that reflect the attached proposed new management zone boundaries will replace the following:]** (~~30.90321N, 102.8566 W~~); (~~30.85306N, 102.8928 W~~); (~~30.69796 N, 10.15137 W~~). The specific GAM-grid cells composing Management Zone 1, **which** are provided in Appendix G of the District Management Plan, **will be updated to reflect the new coordinates described above consistent with the map below in Figure 2.**

**Management Zone 2 – Bakersfield Irrigation Area:**

This management zone area is generally bounded by the TWDB Edwards-Trinity (Plateau) / Pecos Valley Aquifer GAM-Grid cells that contain the following sets of latitude and longitude coordinates: (except where cells are truncated by intersection with the Pecos County-line): (31.05667 N, -102.3717 W); (30.8992 N, -102.28911 W); (30.95167 N, -102.1653 W); (30.96833 N, -102.2169 W). The specific GAM-Grid cells used to compose Management Zone 2 are provided in Appendix G of the District Management Plan.

**Management Zone 3 – Coyanosa Irrigation Area:**

This management zone area is generally bounded by the TWDB Edwards-Trinity (Plateau) / Pecos Valley Aquifer GAM-Grid cells that contain the following sets of latitude and longitude coordinates (except where cells are truncated by intersection with the Pecos County-line): (31.1805 N, 103.0202 W); (31.3169 N, 103.0511 W); 31.2097 N, 103.0026 W); (31.1105 N, 102.9924 W); (31.1025 N, 103.1022 W); (31.1834 N, 103.1347 W). The specific GAM-Grid cells used to compose Management Zone 3 are provided in Appendix G of the District Management Plan.

**[The following Figures 1 and 2 are proposed to be replaced by attached new Figure 2 and revised Figure 1 that reflects the changes to new Figure 2:]**

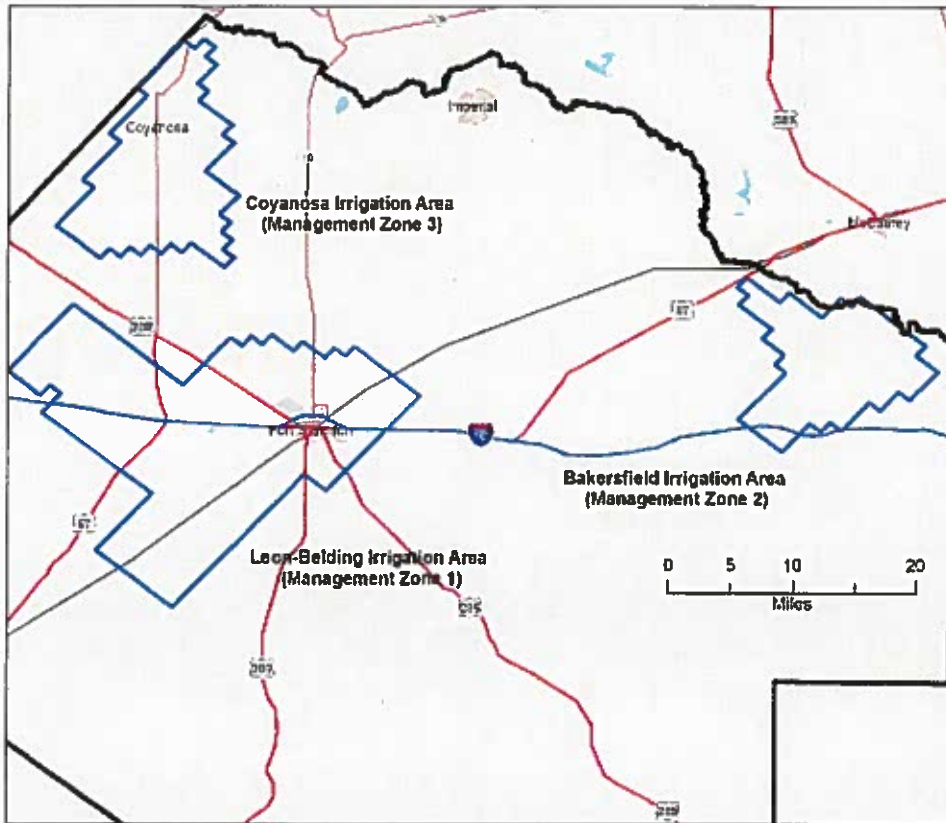


Figure 1, District Designated Management Zones

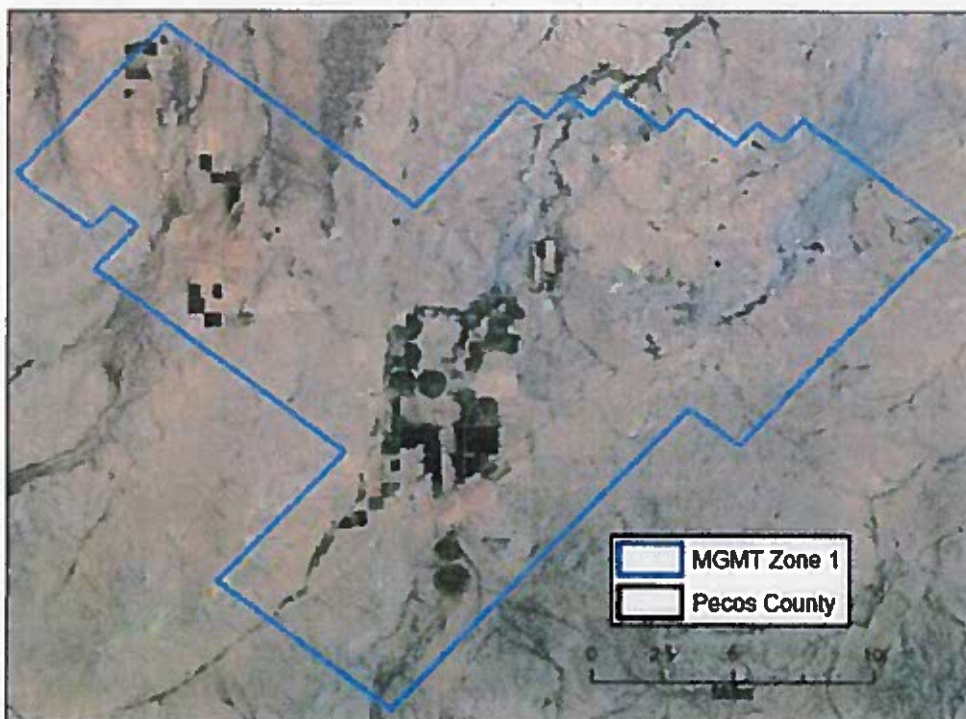


Figure 2, District Management Zone 1

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- (b) The District shall establish benchmarks of sustainable groundwater use over time to avoid impairment of the Desired Future Condition of each of the aquifers within each management zone, and will re-establish benchmarks from time to time as necessary to be consistent with such Desired Future Conditions. The benchmarks of sustainable groundwater use are threshold amounts of acceptable drawdown over time. The threshold amounts of acceptable drawdown are the average predicted drawdown values over time for each management zone predicted in Scenarios 10 and 11 of TWDB GAM-Run 09-35, Version 2, used to establish the DFCs for the Edwards-Trinity (Plateau) and Pecos Valley aquifers in the District. The predicted drawdown values over time for Management Zones 1 and 2, located in the GMA-7 portion of the District, are from Scenario 10. The predicted drawdown values over time for Management Zone 3, located in the GMA-3 portion of the District, are from Scenario 11. The threshold amounts of acceptable drawdown over time for each Management Zone 2 and 3 are as presented in TWDB GAM Task Report 10-033, which presents more detailed information on Pecos County than otherwise available in but consistent with Scenarios 10 and 11 of TWDB GAM-Run 09-35. The threshold amounts of acceptable drawdown over time for Management Zone 1 were modified in August 2017 after public input and hearing. The threshold amounts of acceptable drawdown over time for each management zone are as follows:

**Following Table 1 proposed to be replaced by attached new Table 1:**

Year	Management Zone-1 Average Draw-Down (in feet, rounded to nearest foot)	Management Zone-2 Average Draw-Down (in feet, rounded to nearest foot)	Management Zone-3 Average Draw-Down (in feet, rounded to nearest foot)
2015	3	1	2
2020	7	2	4
2025	10	2	5
2030	13	2	7
2035	17	2	8
2040	20	3	9
2045	23	3	11
2050	26	3	12
2055	29	3	13
2060	32	3	15

Table 1, Example Predictive Average Drawdown Values over Time in Edwards-Trinity (Plateau) and Pecos Valley Aquifers for MPGCD Management Zones from TWDB GAM Task Report 10-033.

**[Following Figure 5 proposed to be replaced by revised Figure 5 that reflects the changes to new Table 1:]**

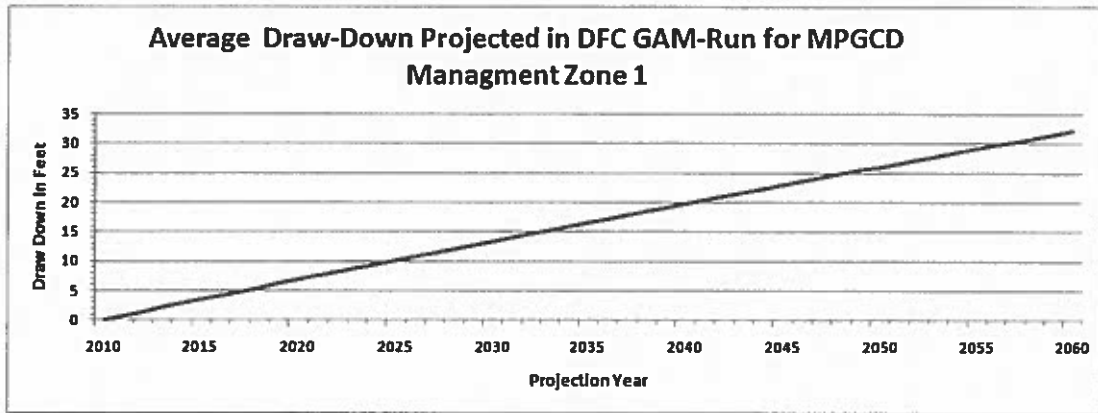


Figure 5, Chart of Predictive Average Drawdown Values over Time in Edwards-Trinity (Plateau) and Pecos Valley Aquifers for MPGCD Management Zone 1 from TWDB GAM Task Report 10-033.

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**The monitor well aquifer-level thresholds and cutbacks shown in Table 2 below apply to all production permits authorizing production from wells located within Management Zone 1, which were associated with permit applications that were administratively complete on or after August 17, 2017.**

**[Table 2 to be added here.]**

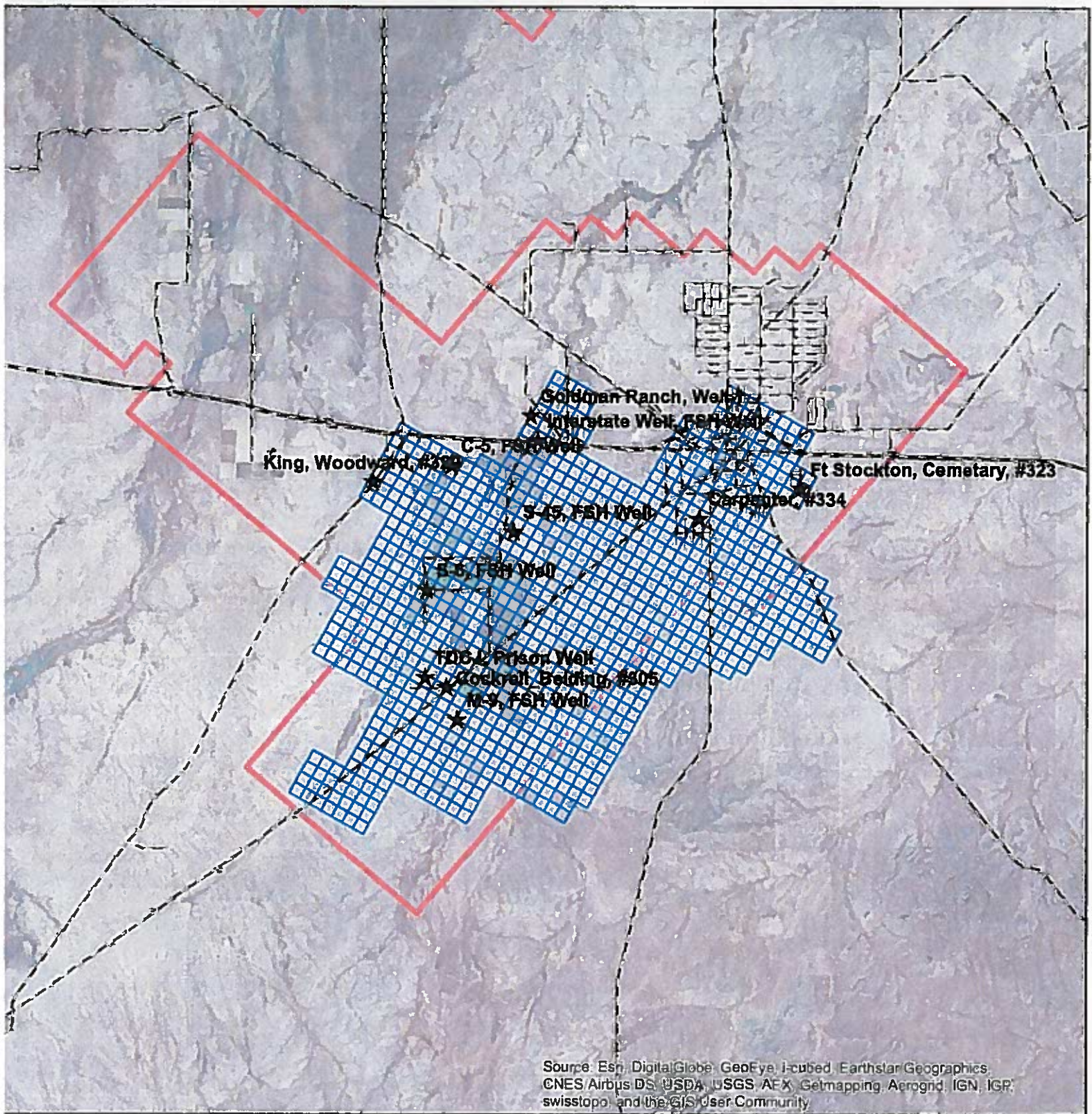
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**Monitor Well Thresholds and Cutbacks**

Well	Short Name	Long Name	Reference Point Elevation (ft MSL)	Winter Threshold 1		Winter Threshold 2 (Historic Minimum)		Winter Threshold 3		Winter Threshold 4		Summer Threshold		Recent Depth to Water	
				Depth to Water (ft)	Basis	Depth to Water (ft)	Basis	Depth to Water (ft)	Basis	Depth to Water (ft)	Basis	Depth to Water (ft)	Basis	Minimum Recent Drawdown (Winter to Summer)	Depth to Water (ft)
Mfgcd320	King, Woodward, #320		3068	205	Win2+5	200	Data 1/1999	195	Win2-5	190	Win2-10	245	Win2+Max DD	113	148
Mfgcd323	Ft Stockton, Cemetery, #323		3031	198	Win2+5	193	Data 1/2000	188	Win2-5	183	Win2-10	208	Win2+Max DD	146	148
C-5	C-5, FSH Well		3009	110	Win2+5	105	WPC 1973	100	Win2-5	95	Win2-10	177	Win2+Max DD	60	107
M-9	M-9, FSH Well		3261	313	Win2+5	308	WPC 1973	303	Win2-5	298	Win2-10	356	Win2+Max DD	246	283
S-45	S-45, FSH Well		3067	165	Win2+5	160	WPC 1973	155	Win2-5	150	Win2-10	216	Win2+Max DD	92	115
S-6	S-6, FSH Well		3123	205	Win2+5	200	WPC 1973	195	Win2-5	190	Win2-10	262	Win2+Max DD	118	159
Mfgcd305	Cockrell, Bldg., #305		3233	292	Win2+5	287	WPC 1973	282	Win2-5	277	Win2-10	362	Win2+Max DD	206	250
Mfgcd318	Goldman Ranch, Well 1		2957	72	Win2+5	67	WPC 1975	62	Win2-5	57	Win2-10	100	Win2+Max DD	30	49
Mfgcd334	Carpenter, #334		3051	140	Win2+5	135	WPC 1975	130	Win2-5	125	Win2-10	171	Win2+Max DD	104	126
Interstate	Interstate Well, FSH Well		2988	96	Win2+5	91	WPC 1975	86	Win2-5	81	Win2-10	131	Win2+Max DD	49	71
Prison	TDCJ, Prison Well		3199	258	Win2+5	253	WPC 1973	248	Win2-5	243	Win2-10	303	Win2+Max DD	184	224

**Threshold Action**  
 Winter Threshold 1 If 6 of 11 are below threshold, 100% reduction in FSH non-historical use pumping  
 Winter Threshold 2 If 6 of 11 are below threshold, 50% reduction in FSH non-historical use pumping  
 Winter Threshold 3 If 6 of 11 are below threshold, 30% reduction in FSH non-historical use pumping  
 Winter Threshold 4 If 6 of 11 are below threshold, 10% reduction in FSH non-historical use pumping  
 Summer Threshold If 6 of 11 are below threshold, meeting in 60 days between FSH and NPCCD to discuss data

**Notes**  
 Maximum Recent Drawdown (Winter to Summer) based on evaluation of recent data (~2010 to 2016)  
 Summer Thresholds derived by adding maximum recent drawdown (from historic data) to Winter 1 Threshold  
 Recent Depth to Water are from actual data - maximum (summer) and minimum (winter) from spring 2016 to winter 2017

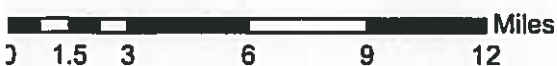


## Proposed Management Zone 1 and Monitor Wells



### Legend

- ★ Management\_Zone\_1\_Trigger\_Level\_Monitor\_Wells
- Proposed\_Management\_Zone\_Model\_Grid\_Finalized2
- MPGCD\_District\_Outline
- Management\_Zones





**Proposed Rules:  
Rule 10.5(b) Table 1**

**Summary of Drawdowns for Management Zone 1 (Current and Proposed)**

Year	Drawdown (ft) from 2010 Conditions	
	Current Management Zone 1	Proposed Management Zone 1
2015	3	4
2020	7	8
2025	10	12
2030	13	16
2035	17	20
2040	20	24
2045	23	27
2050	26	31
2055	29	35
2060	32	38
2065	N/A	42
2070	N/A	45