



**GROUNDWATER
QUALITY
CONDITIONS
REPORT –
CUYAMA VALLEY
GROUNDWATER
BASIN**

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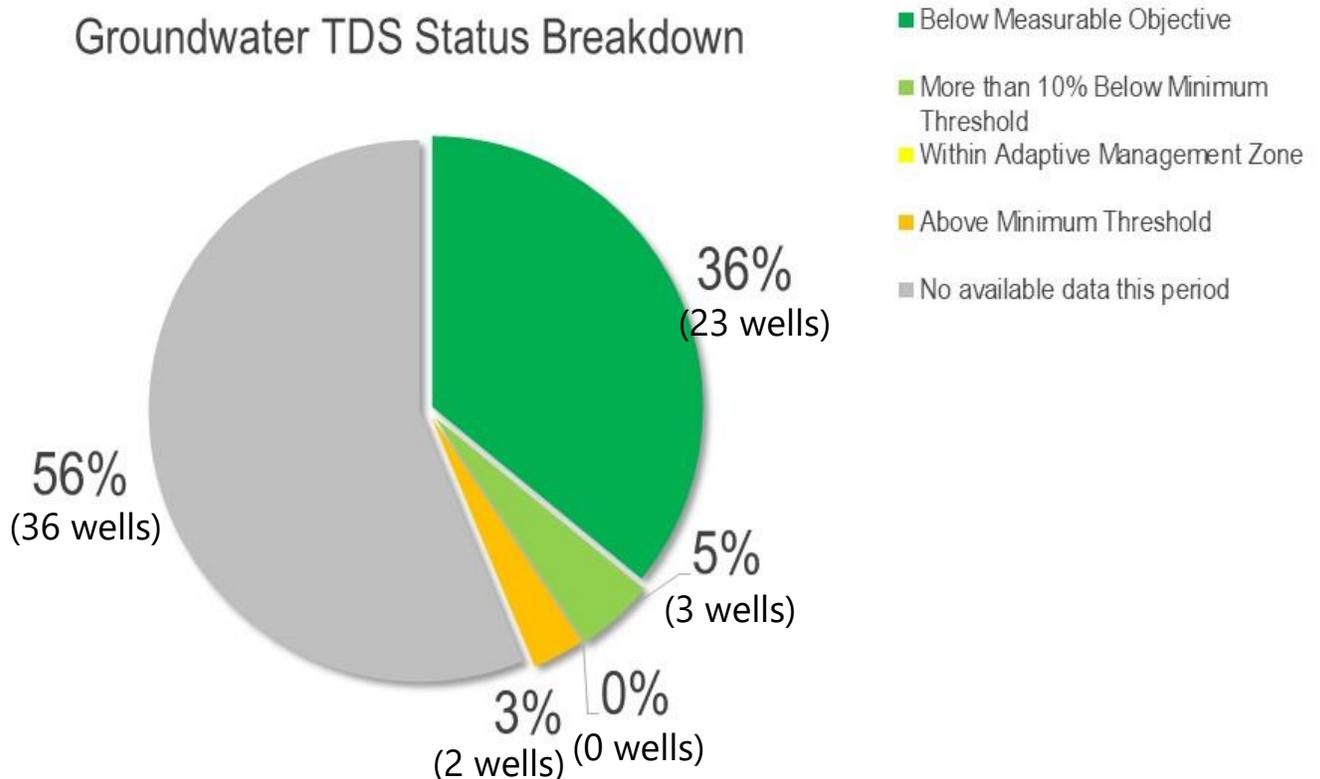
1. INTRODUCTION

This report is intended to provide an update on the current groundwater quality of total dissolved solids (TDS) conditions in the Cuyama Valley Groundwater Basin. Groundwater quality measurements were taken on August 21 and 22, 2024. This work is completed by the Cuyama Basin Groundwater Sustainability Agency (CBGSA), in compliance with the Sustainable Groundwater Management Act.

2. SUMMARY STATISTICS

As outlined in the GSP, undesirable results for degraded water quality occurs, “when 30 percent of representative monitoring points... exceed the minimum threshold for a constituent for two consecutive years.” (Cuyama GSP, pg. 3-4). Fourteen wells (900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 912, 914, 916) were installed after the GSP was submitted in January 2020 and therefore do not have minimum thresholds or measurable objectives. Additionally, wells 62, 103 and 571 had transducers installed after January 2020 and do not have minimum thresholds or measurable objectives. Measurements from well 204 are now being taken at nearby well 205. The results dating back to first quarter 2023 have been updated to reflect the well change.

FIGURE 1: THIRD QUARTER 2024 GROUNDWATER STATUS



3. CURRENT CONDITIONS

Table 1 includes the most recent TDS measurements taken in the Cuyama Basin from representative wells included in the Cuyama GSP Groundwater Quality Monitoring Network, which were taken during July and August 2023. The eleven wells discussed above are also included in **Table 1**. Per the plan described in the GSP, it is the intention of the GSA to take TDS measurements once per year. **Table 2:** includes all of the representative wells and their current status in relation to the thresholds applied to each well. This information is also shown in **Figure 1**.

All measurements have also been incorporated into the Cuyama DMS, which may be accessed at <https://opti.woodardcurran.com/cuyama/login.php>

TABLE 1: RECENT TOTAL DISSOLVED SOILDS MEASUREMENTS FOR MONITORING NETWORK

Well	Region	Q1, 2021	Q3, 2022	Q3, 2023	Q3, 2024
		TDS, mg/L	TDS, mg/L	TDS, mg/L	TDS, mg/L
61	Southeastern	-	-	-	-
72	Central	560	980	900	894
73	Central	-	-	-	-
74	Central	1260	1700	1310	1360
76	Central	1270	-	-	-
77	Central	1070	1120	1120	1165
79	Central	1790	-	-	1630
81	Central	-	-	-	-
83	Eastern	1120	1400	1120	1110
85	Eastern	-	-	-	-
86	Eastern	-	-	-	-
87	Badlands	-	-	-	-
88	Badlands	330	300	320	337
90	Central	-	1400	-	1120
91	Central	1030	-	1020	1059
94	Central	960	-	1190	1140
95	Central	1290	1700	1340	1310
96	Central	1210	1500	1100	1220
98	Central	-	-	-	-
99	Central	1010	1300	1140	1060
101	Eastern	-	1400	1210	1230
102	Central	900	2100	1610	1640
130	Southeastern	-	-	-	-
131	Eastern	-	-	-	-
157	Southeastern	1360	-	-	-
196	Eastern	-	-	-	-
204	Badlands	-	-	-	-
226	Eastern	-	-	-	-
227	Eastern	-	-	-	-

Well	Region	Q1, 2021	Q3, 2022	Q3, 2023	Q3, 2024
		TDS, mg/L	TDS, mg/L	TDS, mg/L	TDS, mg/L
242	Eastern	830	1100	780	883
269	Eastern	-	-	-	-
309	Central	-	-	-	-
316	Central	1050	1050	1060	1105
317	Central	690	990	-	1056
318	Central	-	-	-	-
322	Central	1120	1500	1140	1170
324	Central	490	850	740	700
325	Central	750	1400	1070	1040
400	Central	1350	-	-	-
420	Central	1080	1080	1080	1122
421	Central	800	1290	1280	1404
422	Central	-	-	-	-
424	Central	-	1600	1260	1270
467	Central	1140	1400	1070	1080
568	Central	870	920	860	841
702	Southeastern	-	-	-	-
703	Northwestern	-	-	-	-
710	Eastern	-	-	-	-
711	Central	-	-	-	-
712	Central	-	-	-	-
713	Central	-	-	-	-
721	Central	-	-	-	-
758	Badlands	-	-	-	-
840	Northwestern	-	-	-	-
841	Northwestern	-	-	-	-
842	Northwestern	-	-	-	-
843	Northwestern	-	-	-	-
844	Northwestern	-	-	-	-
845	Northwestern	-	-	-	-
846	Northwestern	-	-	-	-
847	Northwestern	-	-	-	-
848	Northwestern	-	-	-	-
849	Northwestern	-	-	-	-
850	Northwestern	-	-	-	-
Additional Non-Representative Wells					
62	Eastern	890	980	780	757
103	Central	520	820	860	-
205	Badlands	360	340	380	348
571	Western	310	300	290	294
900	Central	-	6200	-	6410
901	Central	-	6700	-	9620

Well	Region	Q1, 2021	Q3, 2022	Q3, 2023	Q3, 2024
		TDS, mg/L	TDS, mg/L	TDS, mg/L	TDS, mg/L
902	Central	-	9200	-	10500
903	Eastern	-	1500	1080	1110
904	Eastern	-	1500	1120	1140
905	Eastern	-	1400	1100	1170
906	Central	-	-	-	1230
907	Central	-	1600	1260	1300
908	Central	-	2400	1770	1760
909	Northwestern	-	-	-	2,270
910	Northwestern	-	-	-	946
911	Southeastern	-	-	-	1,360
912	Southeastern	-	-	-	1,320
914	Central	-	-	-	1,830
916	Central	-	-	-	1,200

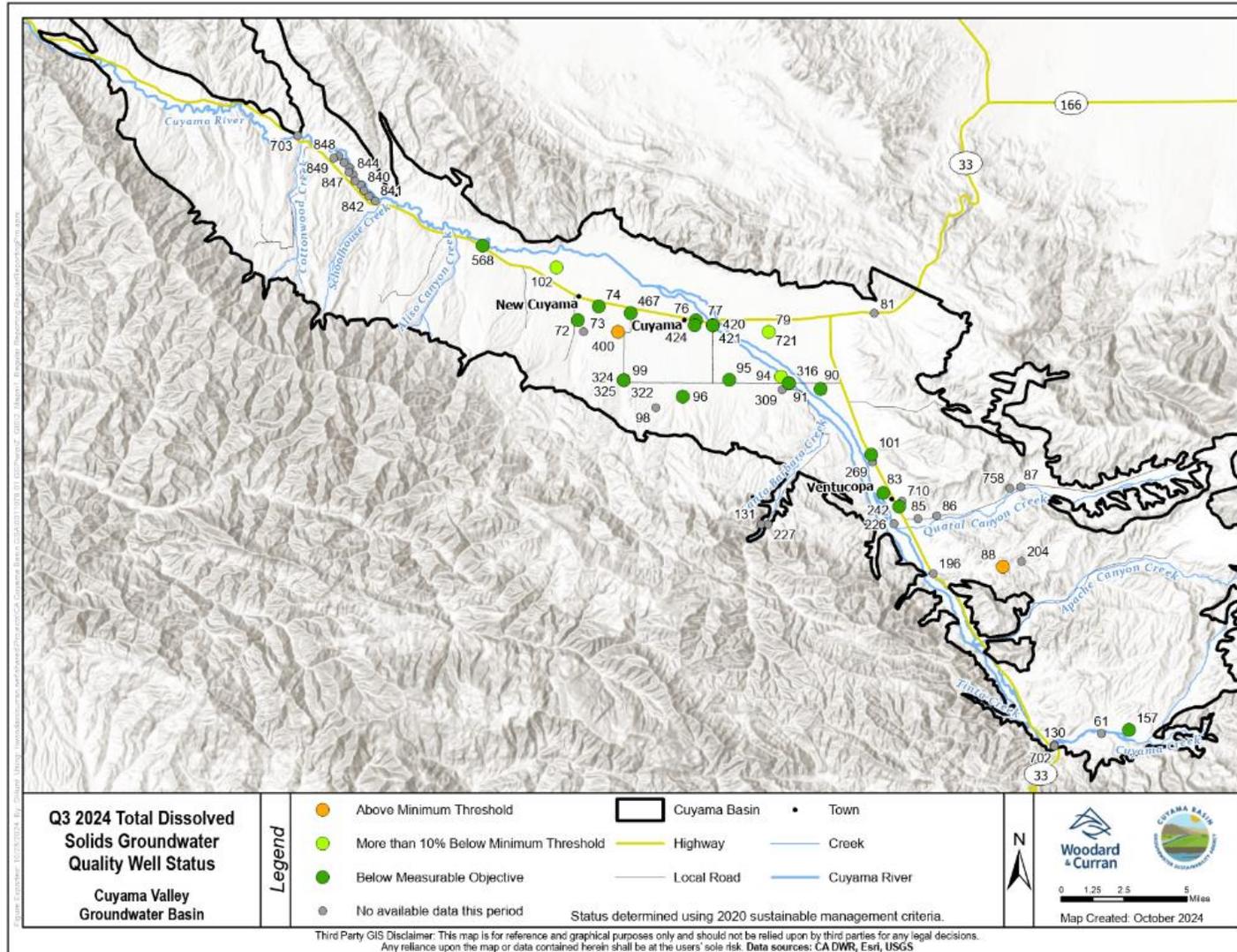
TABLE 2: WELL STATUS RELATED TO TDS THRESHOLDS

Well	Region	Current Measurement Period		Minimum Threshold	Within 10% of Minimum Threshold	Measurable Objective	Status	GSA Action Required?
		TDS mg/L	Date					
61	Southeastern	-	-	615	612	585	No available data this period	No
72	Central	894	8/21/2024	1023	1020	996	Below Measurable Objective	No
73	Central	-	-	856	851	805	No available data this period	No
74	Central	1360	8/22/2024	1833	1800	1500	Below Measurable Objective	No
76	Central	-	-	2307	2226	1500	No available data this period (below MO in 2021)	No
77	Central	1165	7/20/2024	1592	1583	1500	Below Measurable Objective	No
79	Central	1630	8/22/2024	2320	2238	1500	More than 10% Below Minimum Threshold	No
81	Central	-	-	2788	2659	1500	No available data this period	No
83	Eastern	1110	8/21/2024	1726	1703	1500	Below Measurable Objective	No
85	Eastern	-	-	1391	1314	618	No available data this period	No
86	Eastern	-	-	975	974	969	No available data this period	No
87	Badlands	-	-	1165	1157	1090	No available data this period	No
88	Badlands	337	8/22/2024	302	302	302	Exceeds Minimum Threshold	No
90	Central	1120	8/22/2024	1593	1584	1500	Below Measurable Objective	No
91	Central	1059	7/20/2024	1487	1479	1410	Below Measurable Objective	No
94	Central	1140	8/21/2024	1245	1226	1050	More than 10% Below Minimum Threshold	No
95	Central	1310	8/21/2024	1866	1829	1500	Below Measurable Objective	No
96	Central	1220	8/21/2024	1632	1619	1500	Below Measurable Objective	No
98	Central	-	-	2400	2310	1500	No available data this period	No
99	Central	1060	8/22/2024	1562	1555	1490	Below Measurable Objective	No

Well	Region	Current Measurement Period		Minimum Threshold	Within 10% of Minimum Threshold	Measurable Objective	Status	GSA Action Required?
		TDS mg/L	Date					
101	Eastern	1230	8/21/2024	1693	1674	1500	Below Measurable Objective	No
102	Central	1640	8/21/2024	2351	2266	1500	More than 10% Below Minimum Threshold	No
130	Southeastern	-	-	1855	1820	1500	No available data this period	No
131	Eastern	-	-	1982	1934	1500	No available data this period	No
157	Southeastern	-	-	2360	2274	1500	No available data this period (below MO in 2021)	No
196	Eastern	-	-	904	898	851	No available data this period	No
204	Badlands	-	-	269	267	253	No available data this period	No
226	Eastern	-	-	1844	1810	1500	No available data this period	No
227	Eastern	-	-	2230	2157	1500	No available data this period	No
242	Eastern	883	8/22/2024	1518	1513	1470	Below Measurable Objective	No
269	Eastern	-	-	1702	1682	1500	No available data this period	No
309	Central	-	-	1509	1499	1410	No available data this period	No
316	Central	1105	7/20/2024	1468	1459	1380	Below Measurable Objective	No
317	Central	1068	7/20/2024	1337	1329	1260	Below Measurable Objective	No
318	Central	-	-	1152	1145	1080	No available data this period	No
322	Central	1170	8/22/2024	1386	1382	1350	Below Measurable Objective	No
324	Central	700	8/22/2024	777	774	746	Below Measurable Objective	No
325	Central	1040	8/22/2024	1569	1559	1470	Below Measurable Objective	No
400	Central	-	-	976	970	918	No available data this period (exceeds MT in 2021)	No
420	Central	1121	7/20/2024	1490	1484	1430	Below Measurable Objective	No
421	Central	1390	7/20/2024	1616	1604	1500	Below Measurable Objective	No

Well	Region	Current Measurement Period		Minimum Threshold	Within 10% of Minimum Threshold	Measurable Objective	Status	GSA Action Required?
		TDS mg/L	Date					
422	Central	-	-	1942	1898	1500	No available data this period	No
424	Central	1270	8/22/2024	1588	1579	1500	Below Measurable Objective	No
467	Central	1080	8/22/2024	1764	1738	1500	Below Measurable Objective	No
568	Central	841	8/21/2024	1191	1159	871	Below Measurable Objective	No
702	Southeastern	-	-	2074	1878	110	No available data this period	No
703	Northwestern	-	-	4097	3727	400	No available data this period	No
710	Eastern	-	-	1040	1040	1040	No available data this period	No
711	Central	-	-	928	928	928	No available data this period	No
712	Central	-	-	978	977	977	No available data this period	No
713	Central	-	-	1200	1200	1200	No available data this period	No
721	Central	-	-	2170	2103	1500	No available data this period	No
758	Badlands	-	-	954	949	900	No available data this period	No
840	Northwestern	-	-	559	559	559	No available data this period	No
841	Northwestern	-	-	561	561	561	No available data this period	No
842	Northwestern	-	-	547	547	547	No available data this period	No
843	Northwestern	-	-	569	569	569	No available data this period	No
844	Northwestern	-	-	481	481	481	No available data this period	No
845	Northwestern	-	-	1250	1250	1250	No available data this period	No
846	Northwestern	-	-	918	918	918	No available data this period	No
847	Northwestern	-	-	480	480	480	No available data this period	No
848	Northwestern	-	-	674	674	674	No available data this period	No
849	Northwestern	-	-	1780	1752	1500	No available data this period	No
850	Northwestern	-	-	472	472	472	No available data this period	No

FIGURE 2: GROUNDWATER QUALITY REPRESENTATIVE WELLS AND STATUS



4. TOTAL DISSOLVED SOLIDS TIME SERIES FIGURES

The following figures provide an overview of TDS conditions in each of the six area threshold regions identified in the GSP.

FIGURE 3: SOUTHEAST REGION – WELL 157

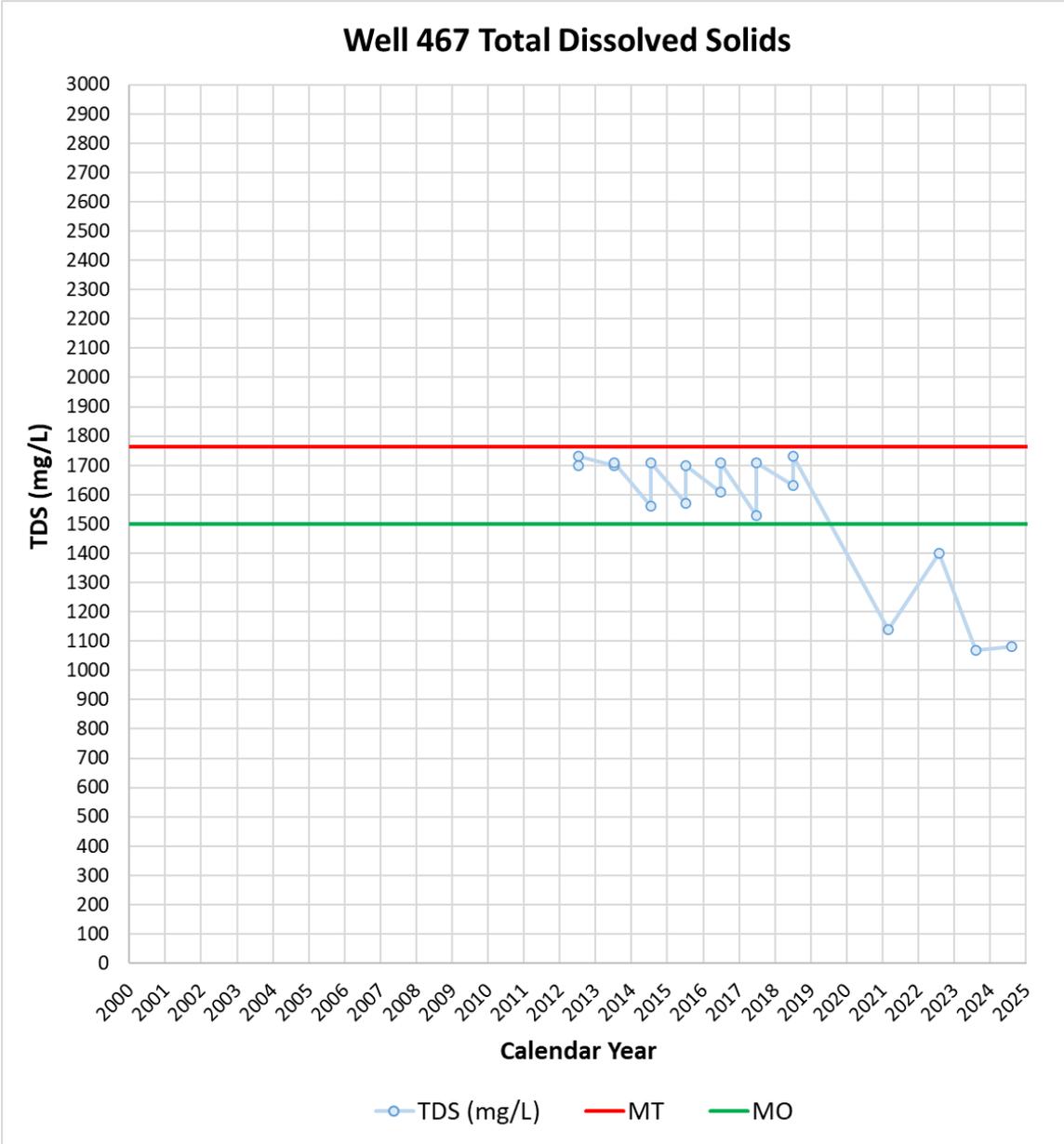


FIGURE 4: EASTERN REGION – WELL 83

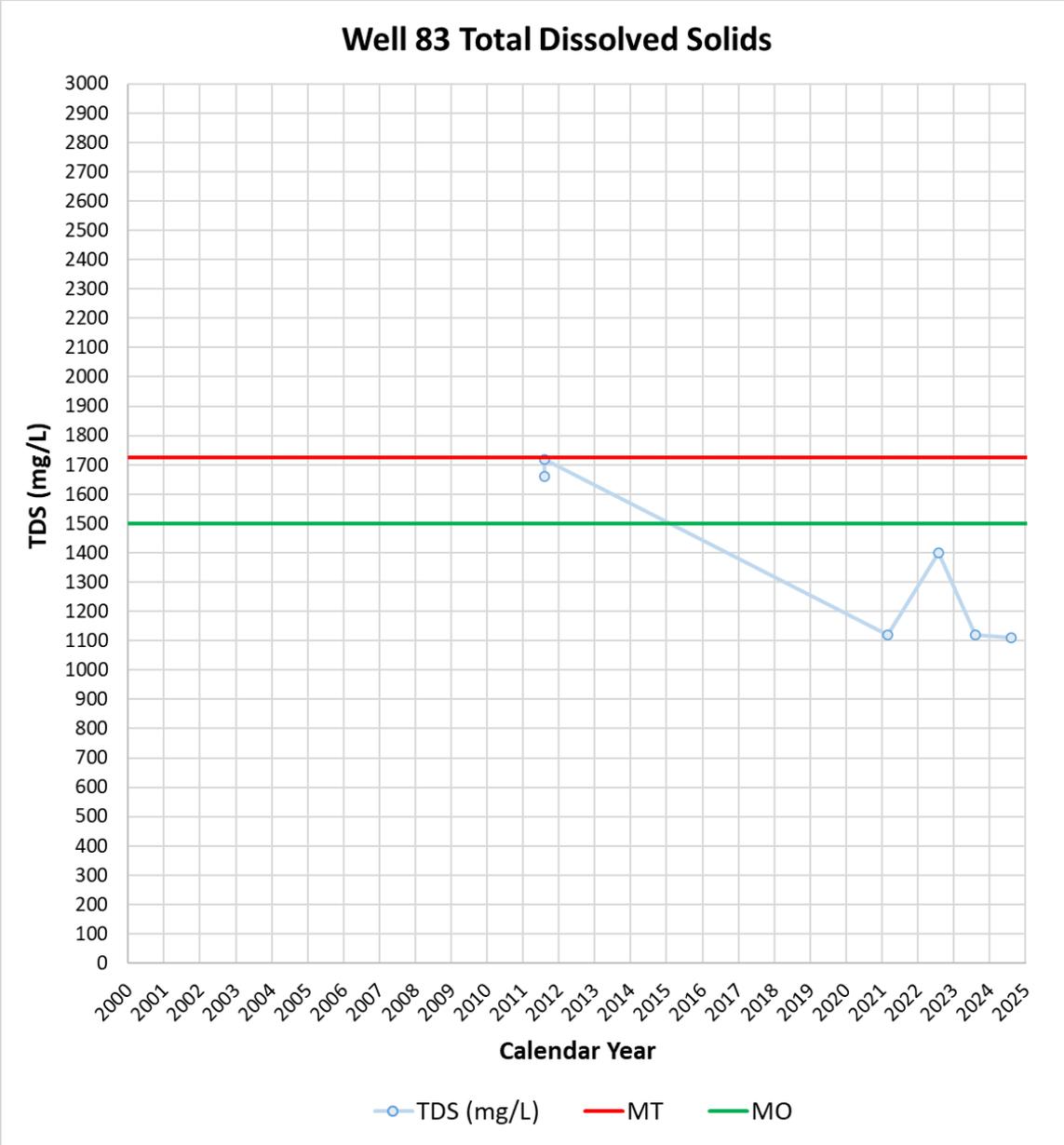


FIGURE 5: CENTRAL REGION – WELL 467

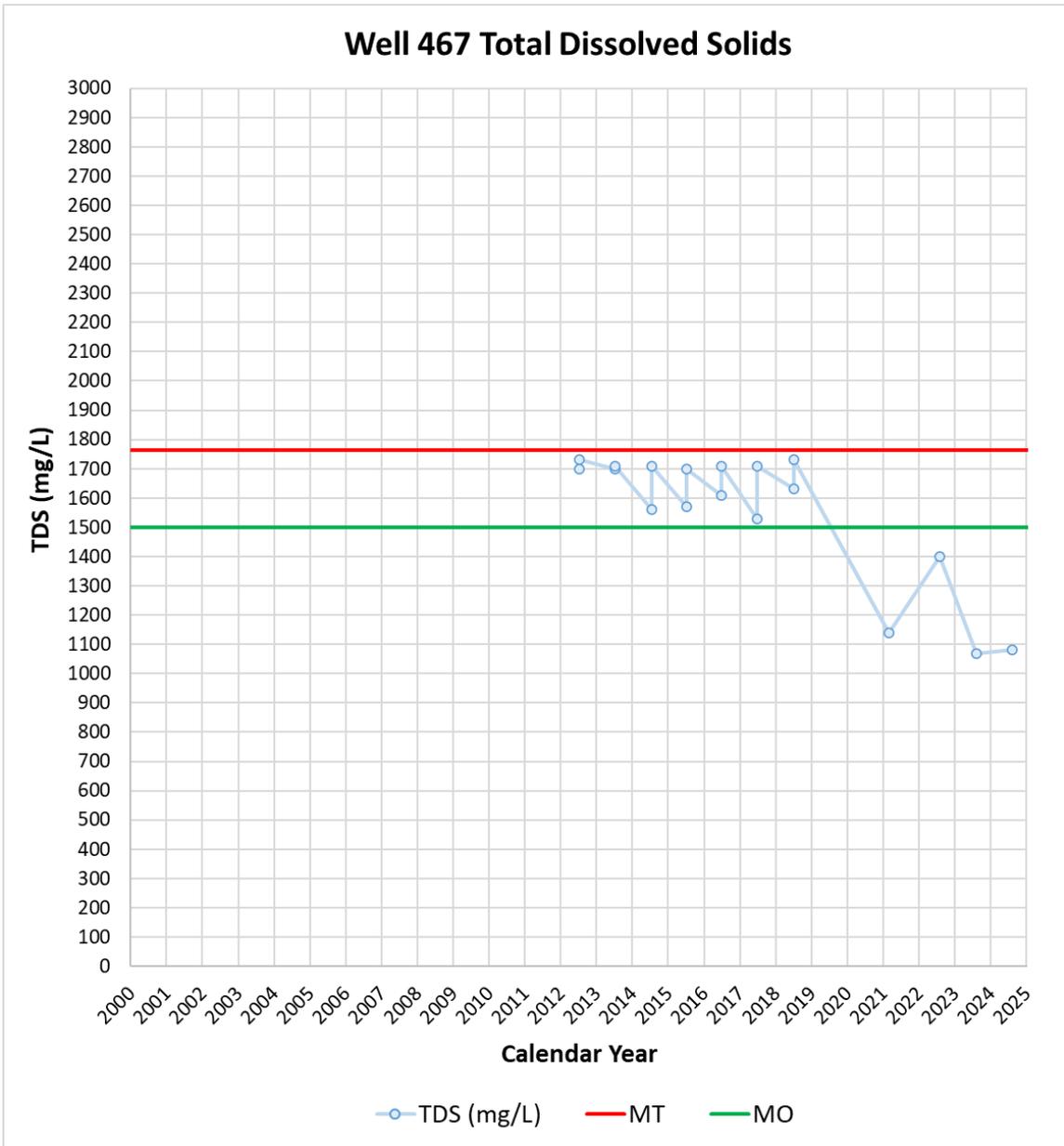


FIGURE 6: CENTRAL REGION – WELL 74

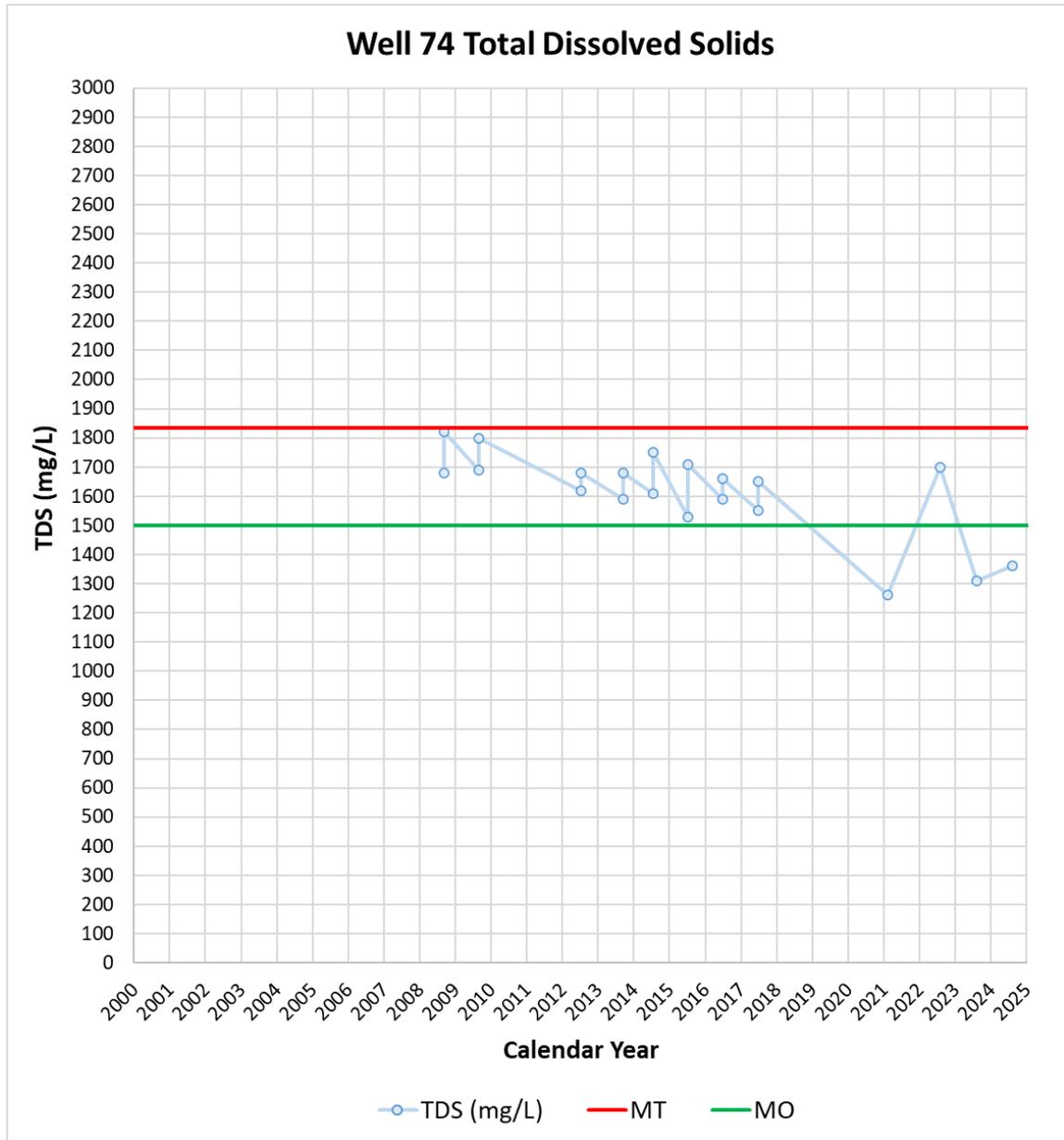


FIGURE 7: WESTERN REGION – WELL 571 (NOT A REPRESENTATIVE WELL)

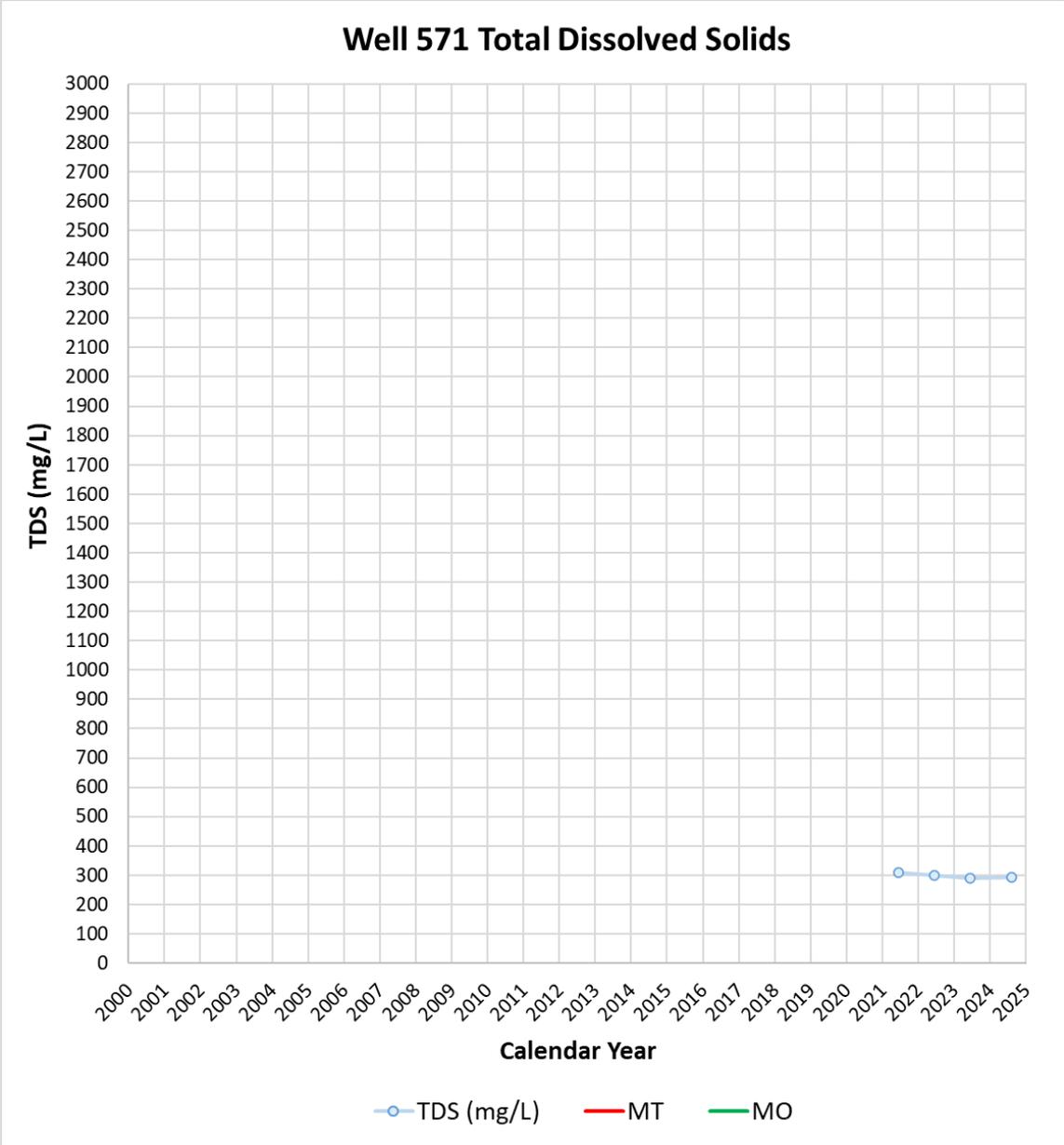
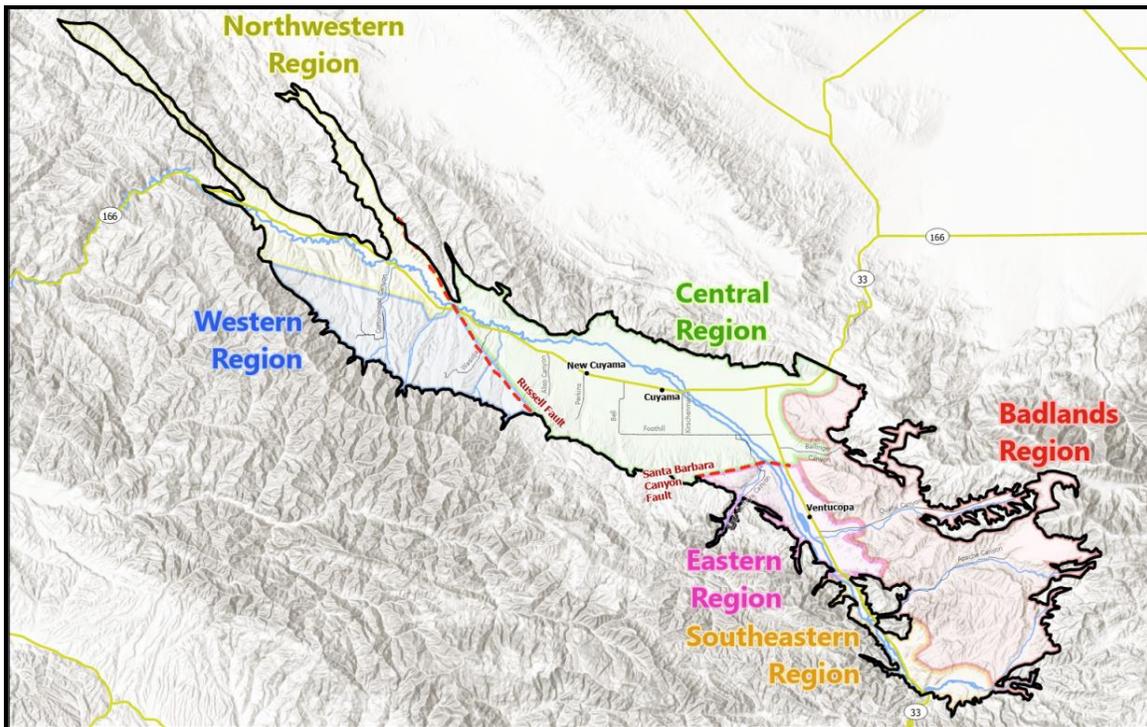


FIGURE 8: THRESHOLD REGIONS IN THE CUYAMA GROUNDWATER BASIN



5. MONITORING NETWORK UPDATES

As shown in the Summary Statistics Section, there are 40 wells without current measurements. These “no measurement codes” can have different causes as described below.

- Access agreements have not yet been established with the landowner, access has not been granted yet, or no access at the time of measurement:
 - Wells 61, 73, 81, 85, 86, 87, 98, 130, 131, 157, 196, 204, 226, 227, 269, 309, 702, 703, 710, 711, 712, 713, 721, 758, 840, 842, 843, 844, 846, 847, 848, 849, 850
- The well was out of service:
 - Wells 76, 400
- Transducer data was not currently available:
 - Wells 103, 841, 845
- The well has gone dry:
 - Wells 318, 422



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