

Appendix B: Domestic Well Assessment

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

APPENDIX B Domestic Well Assessment

December 2021

APPENDIX B –DOMESTIC WELL ASSESSMENT

This appendix provides a description of the approach used to assess the potential impacts to domestic well users in the North American Subbasin (NASb or Subbasin) resulting from minimum threshold sustainable management criteria (SMC) developed for the NASb groundwater sustainability plan (GSP). The assessment consisted of five steps. The first step was to verify to the degree possible the presence of domestic wells as provided by the California Department of Water resources (DWR) (see <https://data.ca.gov/dataset/well-completion-reports/resource/90ef01cc-b057-413c-8110-3e02a9db28eb>). The second step was to identify domestic wells in the vicinity of where groundwater elevations are expected to decline by five feet or more. The third step was to estimate the projected groundwater levels at these nearby domestic wells. The fourth step was to compare projected groundwater levels in these domestic wells to their construction information. These steps and the assessment results are described below.

Step 1 –Verification of Potential Domestic Wells in NASb

Domestic well information for each Public Land Survey System (PLSS) section in the Subbasin was downloaded from the SGMA database. Figure B-1 shows the well densities as originally downloaded from the database. The database information includes well location (address, coordinates, and/or Assessor's Parcel Number (APN)), and well construction information. Where good location information was available, well locations were verified to ensure that wells were assigned to the correct PLSS section. Based on the SGMA database, there were an estimated total of 2,412 potentially active domestic wells in the Subbasin. During the review, wells that had duplicate records, were mis-located or had been destroyed but not recorded (including well destructions verified by records from the former McClellan Air Force Base), were removed from the total number of wells (155 wells removed) leaving a revised estimate of 2,257 domestic wells within the Subbasin. In some cases, the verified number of wells in a PLSS section increased based on the review. A summary of this information by PLSS section is included in Table B-1.

Step 2 – Identify Domestic Wells in the NASb where Five Feet or Greater Groundwater Level Declines are Projected

Figure B-2 shows the projected changes at each Representative Monitoring Site (RMS) in the NASb for groundwater elevations. The RMS locations are where SMC are established in the NASb. For RMS locations that had a projected five feet or greater decrease in depth to groundwater, domestic wells nearby were identified. The RMS used in the evaluation, their estimated change in groundwater level, the nearby PLSS sections assessed, and the number of domestic wells assessed are shown in Table B-2. There were 1,331 domestic wells in the vicinity of RMS where projected groundwater levels could decline by five feet or more.

Step 3 – Estimate Projected Groundwater Levels in Domestic Wells based on Minimum Thresholds at RMS Locations

Using the known groundwater elevation and ground surface elevation at each RMS, a depth to groundwater was calculated to represent a “baseline” condition (i.e., conditions before modeled future projections). For most RMS locations, the average of Fall 2014 and Fall 2015 was used. Where RMS locations did not have data for that period, more recent data (typically 2018 or 2019) were used. The baseline depth to water for nearby domestic wells was then interpolated based on the characteristics of the Fall 2019 depth to water contour map, which is shown in Figure B-3. The projected depth to groundwater for each domestic well was then calculated by subtracting the projected decline at the nearest RMS from the domestic well baseline depth to water.

Step 4 – Comparison of Projected Groundwater Levels to Domestic Well Construction

With a projected depth to water at each of the 1,331 domestic wells along with construction information, an assessment of anticipated impacts to domestic users can be made. For each domestic well, the total depth, depth to first open interval, and year of construction were reviewed. Total depth was used because it represents the most extreme impact on a well if projected water levels are deeper (i.e., the well would go completely dry). The depth of first open interval was used because it represents a more conservative level of impact in that it would indicate that the open interval of the completed well is fully saturated with groundwater; maintaining groundwater above this interval preserves access to groundwater for the domestic users. Note that no domestic wells were eliminated from the NASb well database based on age. However, wells greater than 50 years old (1970 was used for this evaluation) are considerably less likely to be in service today. Destruction records are sporadic, so confirmation of destruction is difficult.

To compare the projected levels associated with NASb SMC to domestic well construction, graphs were prepared for each of the eighteen RMS locations with projected declines of five feet or more. On the graph, all nearby domestic wells with their projected depth to water, first open interval, and total depth are also plotted. Finally, the data are shown with reference to the year the well was constructed on the horizontal axis. Plotting by date helps observe where wells have been constructed deeper through time in areas that experienced groundwater declines.

The graphs are shown in Figures B-4 through B-21. The green markers represent the projected depth to groundwater at each domestic well. The orange markers represent the depth of the first open interval of each well. The solid black vertical lines represent the total depth of each well. Also shown on the graph is the RMS well with its Measurable Objective shown as a blue horizontal line and its Minimum Threshold shown as a red horizontal line. These are only included for reference and should not be applied to a domestic well on the graph. The most important consideration in evaluating the graphs is the relationship of the green marker to the orange marker. Where the green marker is above the orange marker, the

well is considered protected. Where the green marker is below the orange marker, the well may not be protected with respect to having continued access to groundwater.

Assessment Results

To assess the potential impacts to domestic wells from the NASb SMC, the baseline and projected depth to groundwater at each location were compared to the total depth (the point at which a well is dry) and the depth to first open interval (the point at which the well would experience operational difficulties). The baseline comparison is important because it helps isolate wells that may have already been impacted at the time of SGMA passage from those that could be impacted from future usage and management of the basin (the responsibility of GSAs under SGMA). The net difference then between the baseline condition and the projected condition is an indicator of the potential effects of the NASb SMC.

Table B-3 shows the results of the assessment with respect to whether domestic wells would go dry. In terms of maintaining groundwater levels above their total depth, domestic users are protected. Based on the analysis, no domestic wells of up to 50 years old would go dry (e.g., drop below their total depth). Of wells that are greater than 50 years old, only 2 percent (28 of the 1,331 wells assessed) could potentially drop below their total depth; many of these may no longer in use.

Table B-4 shows the assessment results with respect to whether domestic wells could see groundwater levels drop below their first open interval. In terms of maintaining groundwater levels above their first open interval, domestic users are also protected. Of wells that are up to 50 years old, less than 1 percent (9 wells of 1,331 wells) could potentially drop below the first open interval. Of wells greater than 50 years old, 5 percent (66 wells of 1,331 wells) could potentially drop below their first open interval. Again, many of the wells are over 50 years old and may longer be in use.

This assessment concludes that the NASb SMC will not lead to significant and unreasonable undesirable results with respect to domestic users. It is also important to remember that almost none of the projected changes to groundwater elevations in the NASb would occur within the next five years. Confirmation of the status of these domestic wells is a management action in the NASb GSP (see **Section 9.2.6** of the GSP). The results of implementing the management action to better understand the status of these wells will be considered when conducting the required five-year assessment of the GSP.

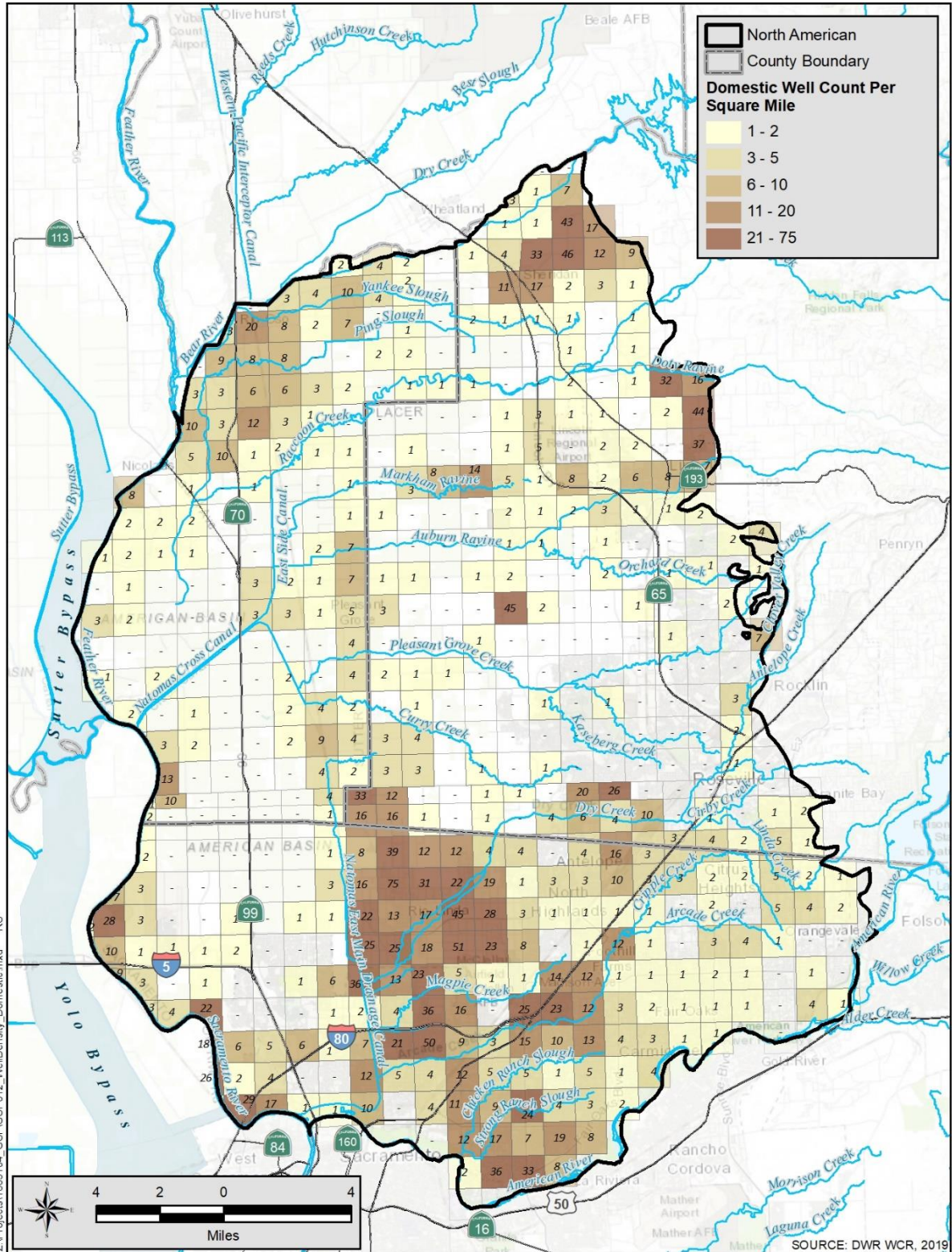


Figure B-1. Domestic Well Density from DWR SGMA database

Table B-1. Well Verification Data Summary

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
8	5	1	33	35
8	5	2	36	26
8	5	3	2	2
8	5	10	0	0
8	5	11	0	0
8	5	12	0	0
8	6	5	5	5
8	6	6	8	7
9	3	1	3	2
9	3	2	9	5
9	3	12	3	1
9	4	1	6	5
9	4	2	1	1
9	4	3	0	0
9	4	4	0	0
9	4	5	1	1
9	4	6	0	0
9	4	7	4	3
9	4	8	22	17
9	4	9	0	0
9	4	10	0	0
9	4	11	0	0
9	4	12	1	1
9	4	13	1	1
9	4	14	6	5
9	4	15	5	6
9	4	16	6	5
9	4	17	18	12
9	4	20	26	20
9	4	21	2	1
9	4	22	4	6
9	4	23	0	0
9	4	24	0	0
9	4	25	1	1
9	4	26	1	1
9	4	27	17	9
9	4	28	29	21
9	4	35	1	1
9	4	36	11	10
9	5	1	1	0
9	5	2	1	0
9	5	3	5	5
9	5	4	23	29
9	5	5	13	15
9	5	6	36	36
9	5	7	1	0
9	5	8	4	4
9	5	9	36	30
9	5	10	16	15
9	5	11	0	0

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
9	5	12	25	26
9	5	13	15	14
9	5	14	3	3
9	5	15	9	11
9	5	16	50	36
9	5	17	21	20
9	5	18	7	7
9	5	19	12	10
9	5	20	5	6
9	5	21	4	2
9	5	22	12	11
9	5	23	5	7
9	5	24	5	8
9	5	25	24	21
9	5	26	9	8
9	5	27	11	10
9	5	28	4	6
9	5	29	0	0
9	5	30	10	12
9	5	31	0	0
9	5	32	1	0
9	5	33	0	0
9	5	34	12	12
9	5	35	17	15
9	5	36	7	8
9	6	1	2	2
9	6	2	1	1
9	6	3	1	1
9	6	4	1	1
9	6	5	12	13
9	6	6	14	14
9	6	7	23	27
9	6	8	12	9
9	6	9	3	3
9	6	10	2	2
9	6	11	1	1
9	6	12	1	1
9	6	13	1	1
9	6	14	1	0
9	6	15	3	2
9	6	16	4	4
9	6	17	13	14
9	6	18	10	11
9	6	19	1	1
9	6	20	5	6
9	6	21	1	0
9	6	22	4	5
9	6	23	0	0
9	6	28	2	2
9	6	29	3	2
9	6	30	4	6
9	6	31	19	21

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
9	6	32	8	8
9	6	33	0	0
10	3	1	1	0
10	3	12	2	2
10	3	13	2	2
10	3	23	7	5
10	3	24	3	2
10	3	25	3	3
10	3	26	28	25
10	3	35	11	18
10	4	1	4	3
10	4	2	0	0
10	4	3	0	0
10	4	4	0	0
10	4	5	0	0
10	4	6	10	10
10	4	7	0	0
10	4	8	0	0
10	4	9	0	0
10	4	10	0	0
10	4	11	0	0
10	4	12	1	0
10	4	13	1	1
10	4	14	0	0
10	4	15	0	0
10	4	16	0	0
10	4	17	0	0
10	4	18	0	0
10	4	19	0	0
10	4	20	0	0
10	4	21	0	0
10	4	22	0	0
10	4	23	0	0
10	4	24	3	2
10	4	25	1	1
10	4	26	1	1
10	4	27	0	0
10	4	28	1	1
10	4	29	0	0
10	4	30	0	0
10	4	31	1	0
10	4	32	1	1
10	4	33	2	1
10	4	34	0	0
10	4	35	0	0
10	4	36	0	0
10	5	1	1	1
10	5	2	1	1
10	5	3	0	0
10	5	4	0	0
10	5	5	12	10
10	5	6	34	34

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
10	5	7	16	14
10	5	8	16	15
10	5	9	1	1
10	5	10	0	0
10	5	11	1	0
10	5	12	1	1
10	5	13	4	4
10	5	14	4	4
10	5	15	13	15
10	5	16	12	11
10	5	17	39	40
10	5	18	8	7
10	5	19	16	19
10	5	20	75	70
10	5	21	32	26
10	5	22	23	20
10	5	23	19	17
10	5	24	1	1
10	5	25	3	3
10	5	26	29	26
10	5	27	46	47
10	5	28	17	26
10	5	29	14	16
10	5	30	22	21
10	5	31	26	25
10	5	32	25	20
10	5	33	18	19
10	5	34	51	39
10	5	35	23	17
10	5	36	8	9
10	6	1	0	0
10	6	2	0	0
10	6	3	0	0
10	6	4	26	29
10	6	5	20	22
10	6	6	0	0
10	6	7	4	4
10	6	8	7	5
10	6	9	4	3
10	6	10	10	10
10	6	11	0	0
10	6	12	1	1
10	6	13	4	3
10	6	14	3	3
10	6	15	3	3
10	6	16	16	15
10	6	17	4	3
10	6	18	0	0
10	6	19	3	1
10	6	20	3	3
10	6	21	10	11
10	6	22	3	1

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
10	6	23	3	3
10	6	24	2	1
10	6	25	2	2
10	6	26	0	0
10	6	27	1	1
10	6	28	1	1
10	6	29	1	1
10	6	30	1	1
10	6	31	0	0
10	6	32	1	1
10	6	33	12	12
10	6	34	1	0
10	6	35	0	0
10	6	36	3	3
10	7	4	0	0
10	7	5	0	0
10	7	6	0	0
10	7	7	0	0
10	7	8	1	1
10	7	16	1	2
10	7	17	7	7
10	7	18	2	2
10	7	19	2	2
10	7	20	5	6
10	7	21	2	2
10	7	22	1	1
10	7	23	0	0
10	7	27	2	2
10	7	28	4	4
10	7	29	5	5
10	7	30	0	0
10	7	31	4	3
10	7	32	1	1
10	7	33	0	0
10	7	34	0	0
11	3	1	0	0
11	3	2	2	2
11	3	3	2	2
11	3	10	0	0
11	3	11	0	0
11	3	12	1	1
11	3	13	2	2
11	3	14	0	0
11	3	15	1	1
11	3	22	0	0
11	3	23	2	2
11	3	24	0	0
11	3	25	3	3
11	3	36	12	12
11	4	1	5	3
11	4	2	1	1
11	4	3	3	4

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
11	4	4	3	3
11	4	5	0	0
11	4	6	0	0
11	4	7	0	0
11	4	8	0	0
11	4	9	0	0
11	4	10	0	0
11	4	11	0	0
11	4	12	4	5
11	4	13	4	3
11	4	14	0	0
11	4	15	2	2
11	4	16	0	0
11	4	17	0	0
11	4	18	0	0
11	4	19	1	1
11	4	20	0	0
11	4	21	0	0
11	4	22	2	2
11	4	23	4	4
11	4	24	2	3
11	4	25	4	5
11	4	26	9	8
11	4	27	2	2
11	4	28	0	0
11	4	29	0	0
11	4	30	2	2
11	4	31	0	0
11	4	32	0	0
11	4	33	0	0
11	4	34	0	0
11	4	35	4	3
11	4	36	2	1
11	5	1	2	2
11	5	2	45	42
11	5	3	0	0
11	5	4	0	0
11	5	5	0	0
11	5	6	3	3
11	5	7	0	0
11	5	8	0	0
11	5	9	0	0
11	5	10	1	1
11	5	11	0	0
11	5	12	0	0
11	5	13	0	0
11	5	14	0	0
11	5	15	0	0
11	5	16	1	1
11	5	17	1	1
11	5	18	2	1
11	5	19	0	0

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
11	5	20	1	1
11	5	21	0	0
11	5	22	0	0
11	5	23	0	0
11	5	24	1	1
11	5	25	0	0
11	5	26	0	0
11	5	27	0	0
11	5	28	0	0
11	5	29	4	3
11	5	30	3	3
11	5	31	3	3
11	5	32	3	4
11	5	33	0	0
11	5	34	1	1
11	5	35	0	0
11	5	36	1	1
12	3	12	0	0
12	3	13	0	0
12	3	14	8	8
12	3	23	2	2
12	3	24	2	2
12	3	25	1	1
12	3	26	2	2
12	3	27	1	1
12	3	34	0	0
12	3	35	1	2
12	3	36	0	0
12	4	1	0	0
12	4	2	1	1
12	4	3	3	3
12	4	4	13	13
12	4	5	3	3
12	4	6	10	12
12	4	7	5	10
12	4	8	10	12
12	4	9	1	1
12	4	10	2	1
12	4	11	1	1
12	4	12	1	0
12	4	13	1	1
12	4	14	0	0
12	4	15	0	0
12	4	16	1	1
12	4	17	0	0
12	4	18	1	1
12	4	19	2	2
12	4	20	0	0
12	4	21	0	0
12	4	22	0	0
12	4	23	0	0
12	4	24	1	2

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
12	4	25	7	8
12	4	26	2	2
12	4	27	0	0
12	4	28	0	0
12	4	29	0	0
12	4	30	1	1
12	4	31	0	0
12	4	32	0	0
12	4	33	3	3
12	4	34	2	1
12	4	35	1	1
12	4	36	7	7
12	5	1	3	2
12	5	2	1	0
12	5	3	0	0
12	5	4	0	0
12	5	5	0	0
12	5	6	0	0
12	5	7	0	0
12	5	8	1	1
12	5	9	0	0
12	5	10	0	0
12	5	11	1	1
12	5	12	5	3
12	5	13	1	1
12	5	14	5	6
12	5	15	15	13
12	5	16	8	6
12	5	17	4	4
12	5	18	0	0
12	5	19	1	1
12	5	20	0	0
12	5	21	0	0
12	5	22	0	0
12	5	23	2	2
12	5	24	1	1
12	5	25	1	1
12	5	26	1	1
12	5	27	0	0
12	5	28	0	0
12	5	29	0	0
12	5	30	0	0
12	5	31	1	1
12	5	32	1	0
12	5	33	0	0
12	5	34	1	1
12	5	35	2	1
12	5	36	0	0
12	6	5	1	0
12	6	6	1	0
12	6	7	0	0
12	6	8	2	2

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
12	6	9	2	2
12	6	10	0	0
12	6	15	8	2
12	6	16	6	5
12	6	17	2	2
12	6	18	8	9
12	6	19	2	2
12	6	20	3	2
12	6	22	1	1
12	6	27	0	0
12	6	28	0	0
12	6	30	0	0
12	6	31	0	0
12	6	32	2	2
12	6	33	0	0
12	6	34	1	1
13	4	13	10	9
13	4	14	4	3
13	4	15	3	3
13	4	16	0	0
13	4	20	3	1
13	4	21	20	24
13	4	22	8	11
13	4	23	2	2
13	4	24	7	6
13	4	25	0	0
13	4	26	0	0
13	4	27	8	4
13	4	28	8	10
13	4	29	9	19
13	4	30	0	0
13	4	31	3	3
13	4	32	3	3
13	4	33	6	5
13	4	34	6	4
13	4	35	3	3
13	4	36	2	2
13	5	1	1	1
13	5	2	1	1
13	5	7	4	3
13	5	8	3	2
13	5	9	0	0
13	5	10	1	1
13	5	11	4	4
13	5	12	35	33
13	5	13	17	23
13	5	14	11	6
13	5	15	0	0
13	5	16	0	0
13	5	17	2	2
13	5	18	4	3
13	5	19	0	0

Township	Range	Section	Total Wells from DWR SGMA Database (Domestic)	Actual Total Domestic Wells after verification (removing mis-location, destruction or duplicates)
13	5	20	1	1
13	5	21	0	0
13	5	22	2	2
13	5	23	1	1
13	5	24	1	0
13	5	25	0	0
13	5	26	0	0
13	5	27	0	0
13	5	28	0	0
13	5	29	2	1
13	5	30	2	1
13	5	31	0	0
13	5	32	1	1
13	5	33	1	1
13	5	34	1	1
13	5	35	0	0
13	5	36	0	0
13	6	5	18	7
13	6	6	43	34
13	6	7	46	41
13	6	8	12	9
13	6	9	9	13
13	6	16	1	1
13	6	17	3	2
13	6	18	2	2
13	6	19	1	1
13	6	20	0	0
13	6	21	1	0
13	6	28	1	1
13	6	29	0	0
13	6	30	1	0
13	6	31	2	1
13	6	32	0	0
13	6	33	1	0
13	6	34	32	26
Totals:			2,412	2,257

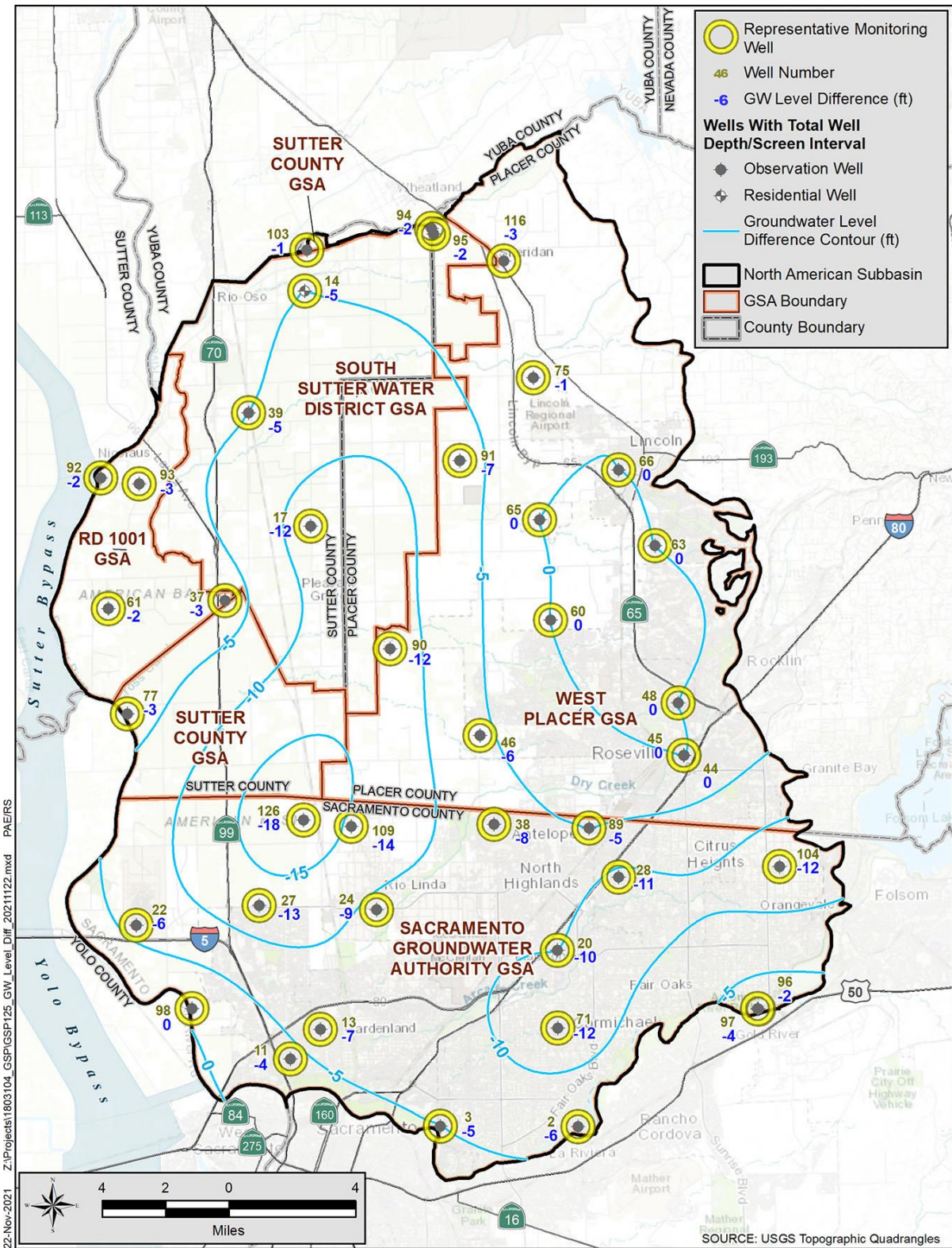


Figure B-2. Projected Groundwater Elevation Changes at RMS Location

Table B-2. NASb RMS Wells with Nearby Number of Domestic Wells

Local RMS Well No.	PLSS Section of RMS (Township/Range-Section)	Projected RMS Change (ft)	PLSS Sections in Vicinity of RMS	Number of Domestic Wells Evaluated
2	8/6-5	-6	8/5-1; 8/6-5, 6; 9/5-25, 31, 32, 36	105
3	9/5-34	-5	8/5-2; 9/5-25, 26, 27, 28, 34, 35, 36	111
13	9/4-13	-7	9/4-1, 13, 14, 15, 22; 9/5-7, 8, 18, 19	50
14	13/4-23	-5	13/4-13, 21, 22, 23, 24; 13/5-18	63
17	12/4-26	-12	11/4-1, 3, 4, 12; 11/5-6; 12/4-13, 16, 25, 26, 33, 34, 36	38
20	9/6-5	-5	9/6-5, 6, 7, 8, 17, 18; 10/6-33	99
22	10/4-31	-6	9/3-2; 9/4-8; 10/3-23, 26, 35; 10/4-31	69
24	10/5-32	-9	9/5-6; 10/5-28, 29, 31, 32	130
27	10/4-27	-13	9/4-1; 10/4-27; 10/5-30	29
28	10/6-27	-11	10/6-10, 16, 17, 20, 21, 27, 33, 36	58
38	10/5-13	-8	10/5-13, 14, 15, 22, 23, 26; 10/6-8	89
39	12/04-3	-5	12/4-3, 4, 6, 7, 8; 13/4-27, 28, 29, 33, 34	89
71	9/6-17	-8	9/5-13; 9/6-5, 7, 8, 16, 17, 18, 20	77
90	11/5-17	-12	11/4-12, 13, 23, 25, 11/5-6, 17, 29, 30	24
91	12/5-15	-7	12/5-14, 15, 16, 17, 23; 12/6-18	41
104	10/7-29	-12	10/7-17, 18, 20, 21, 28, 29, 31	29
109	10/5-18	-14	10/5-8, 16, 17, 18, 20	140
126	10/4-13	-18	10/4-1, 13; 10/5-6, 7, 19, 30	90
Totals				1,331

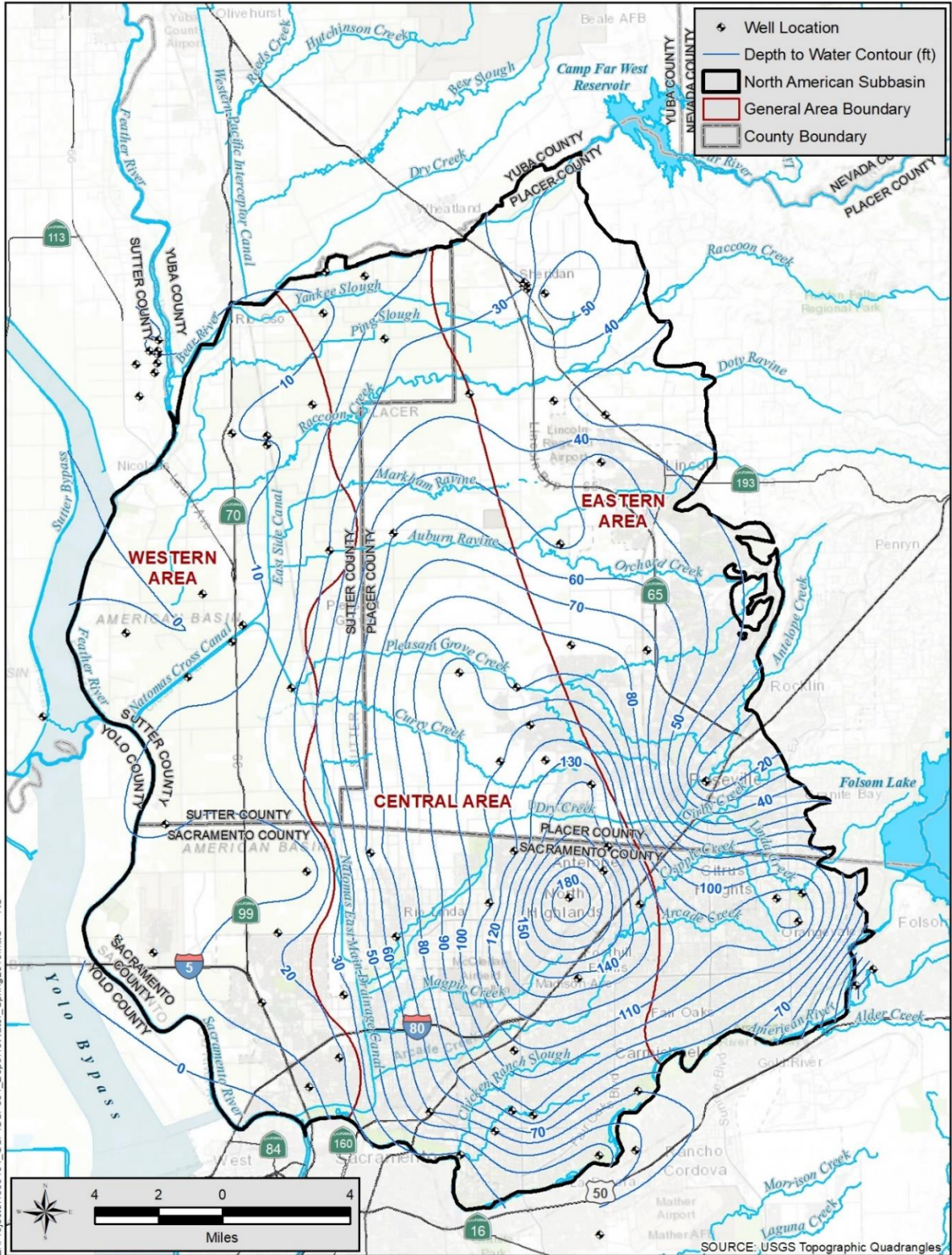


Figure B-3. Spring 2019 Depth to Water Contours

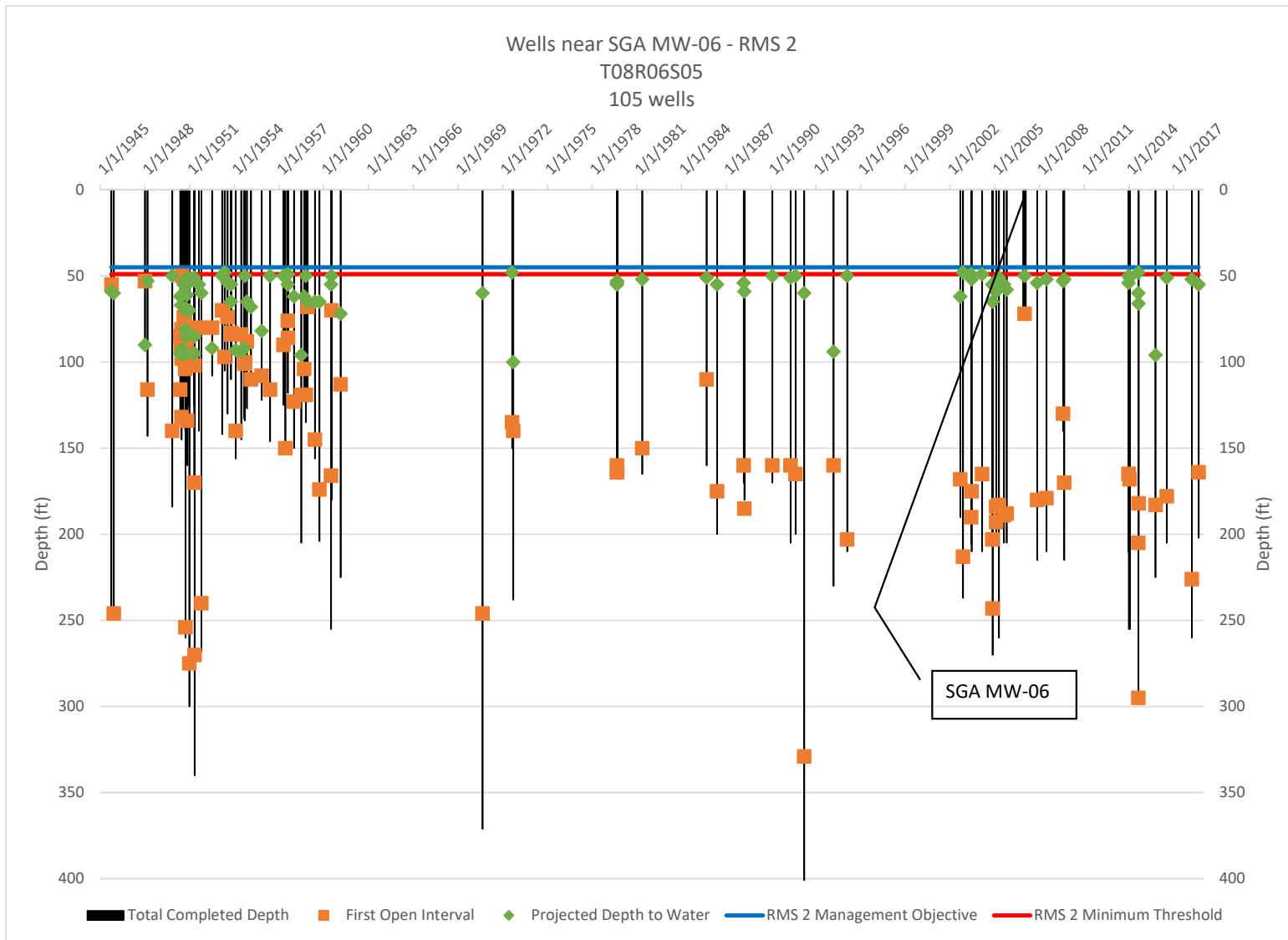


Figure B-4. Domestic Well Characteristics near RMS 2

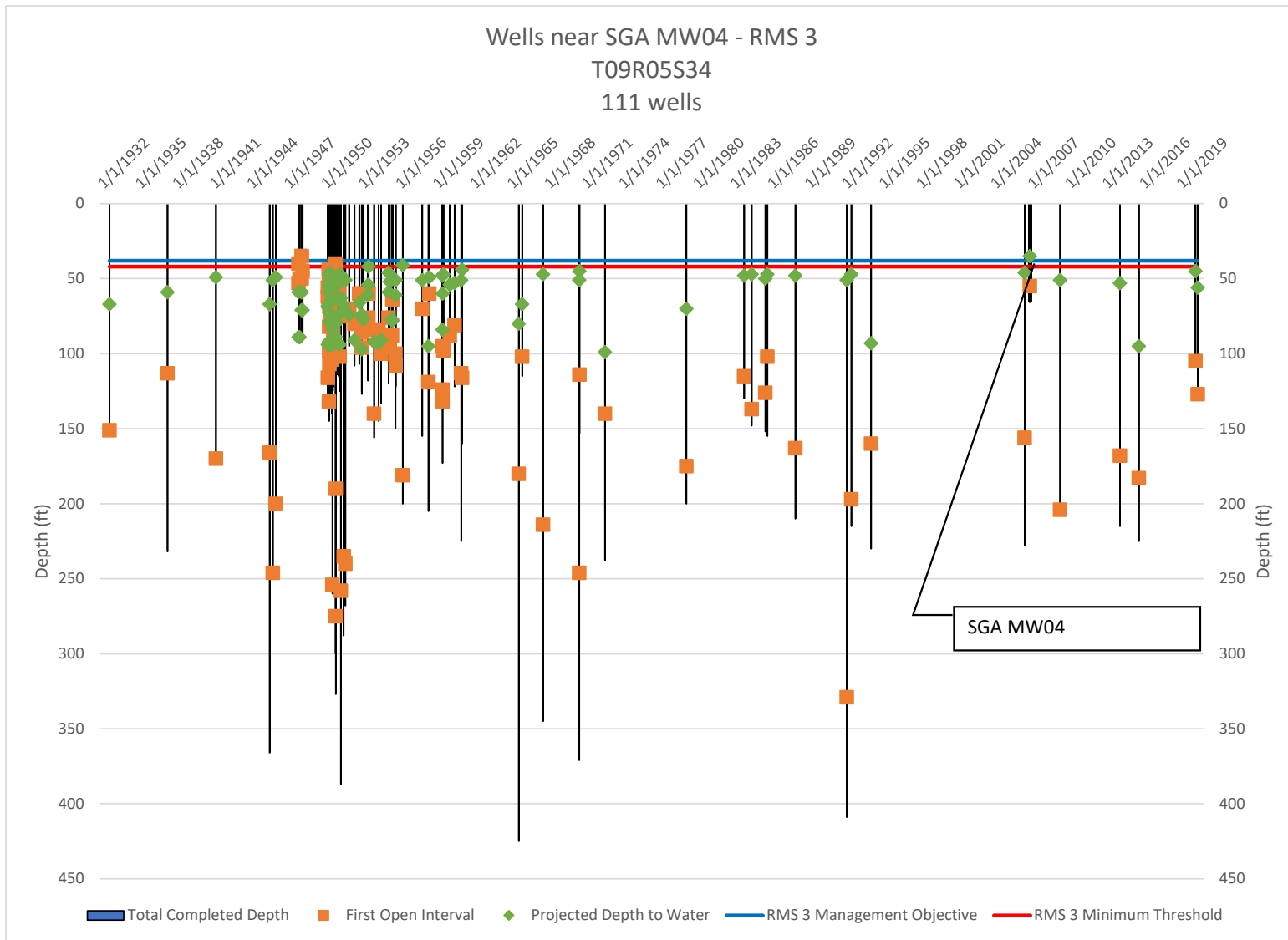


Figure B-5. Domestic Well Characteristics near RMS 3

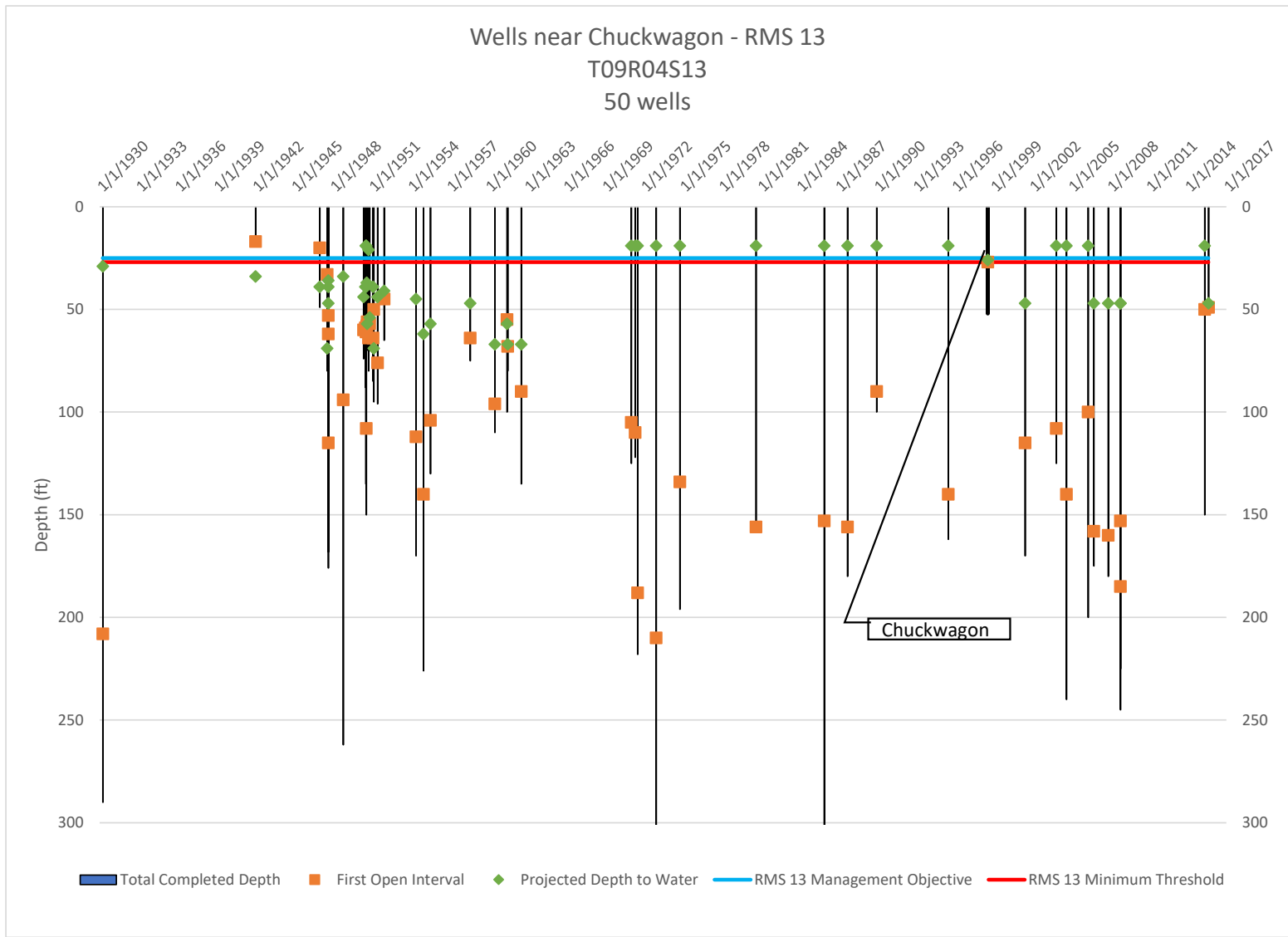


Figure B-6. Domestic Well Characteristics near RMS 13

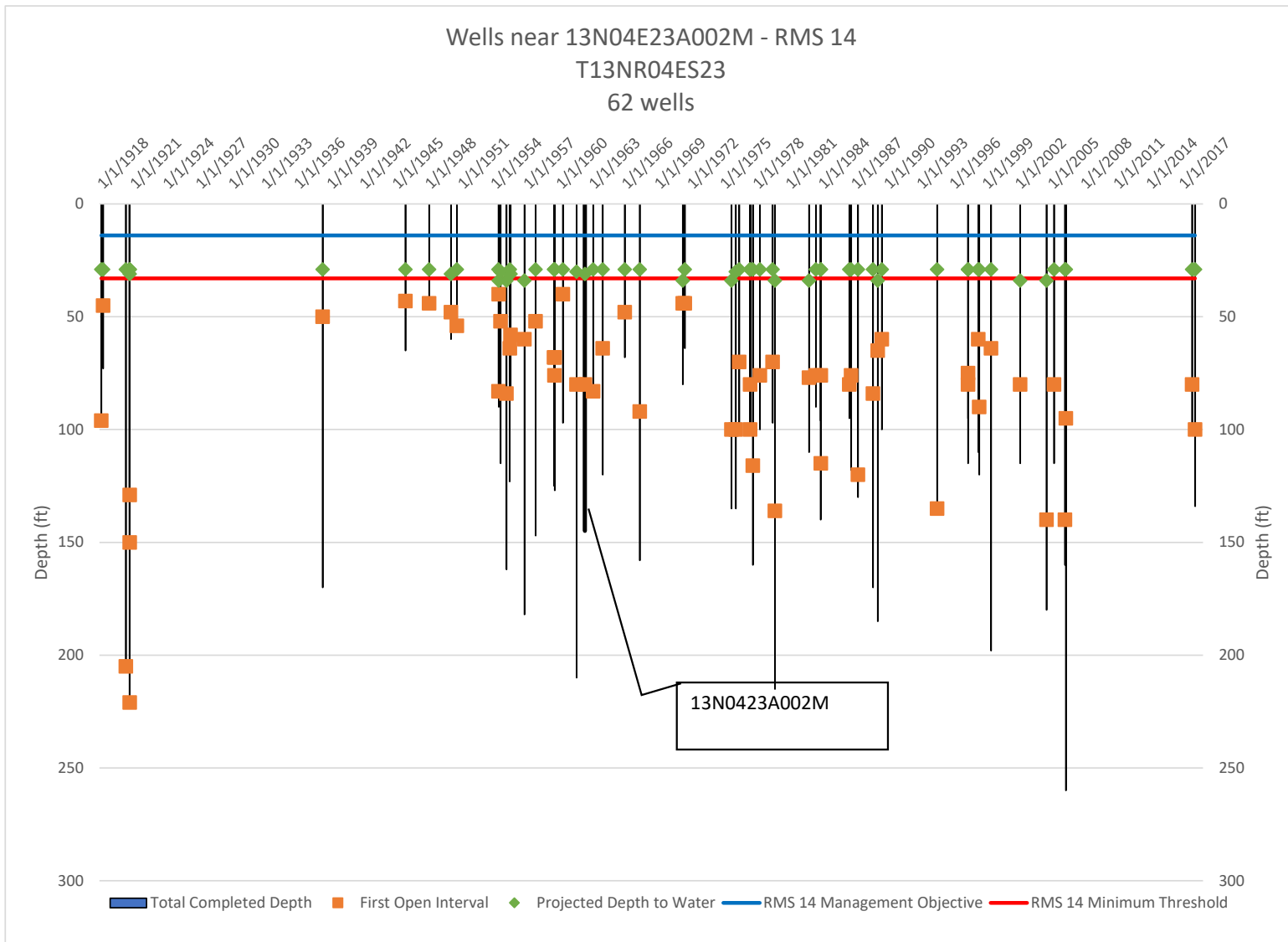


Figure B-7. Domestic Well Characteristics near RMS 14

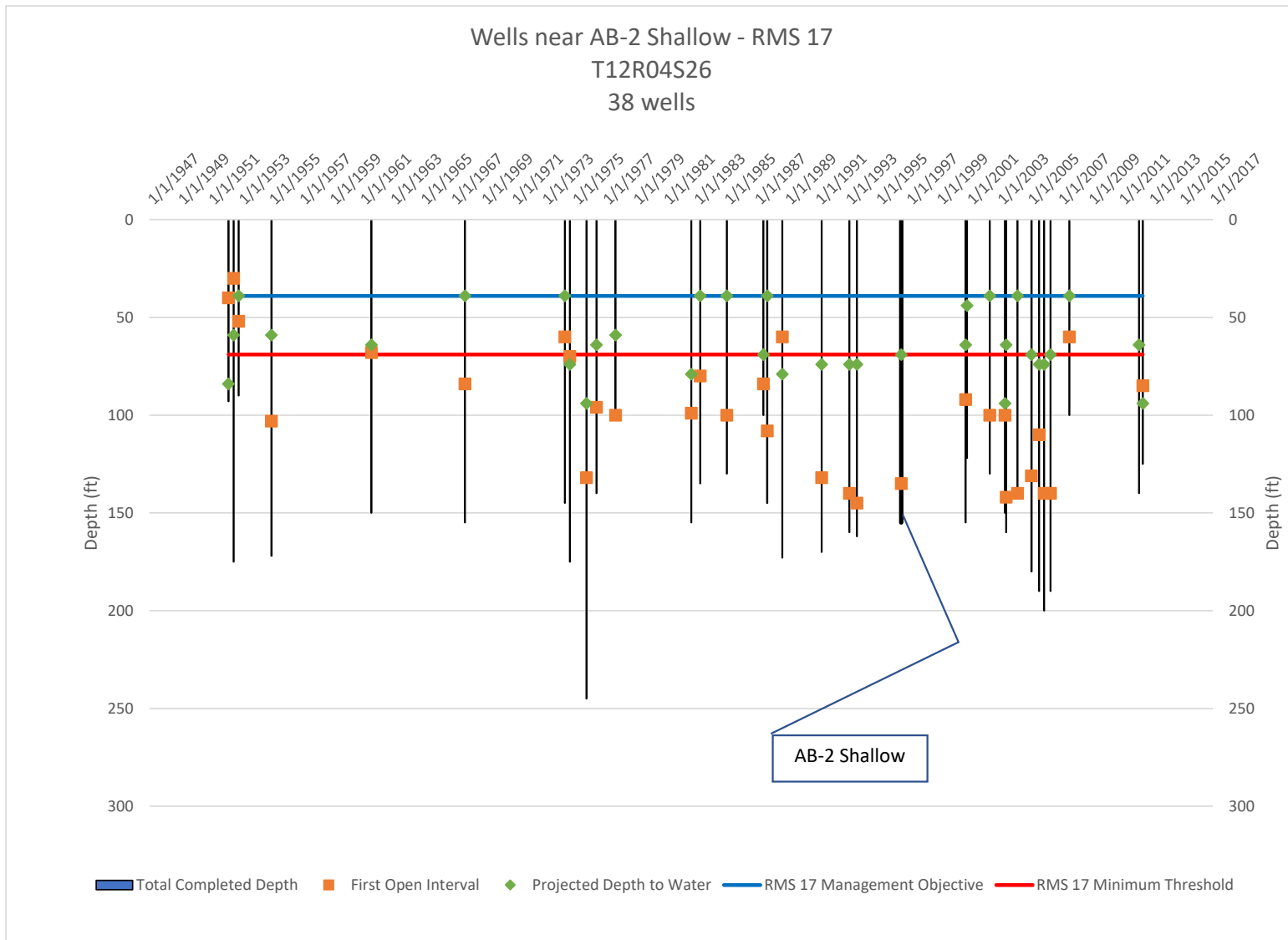


Figure B-8. Domestic Well Characteristics near RMS 17

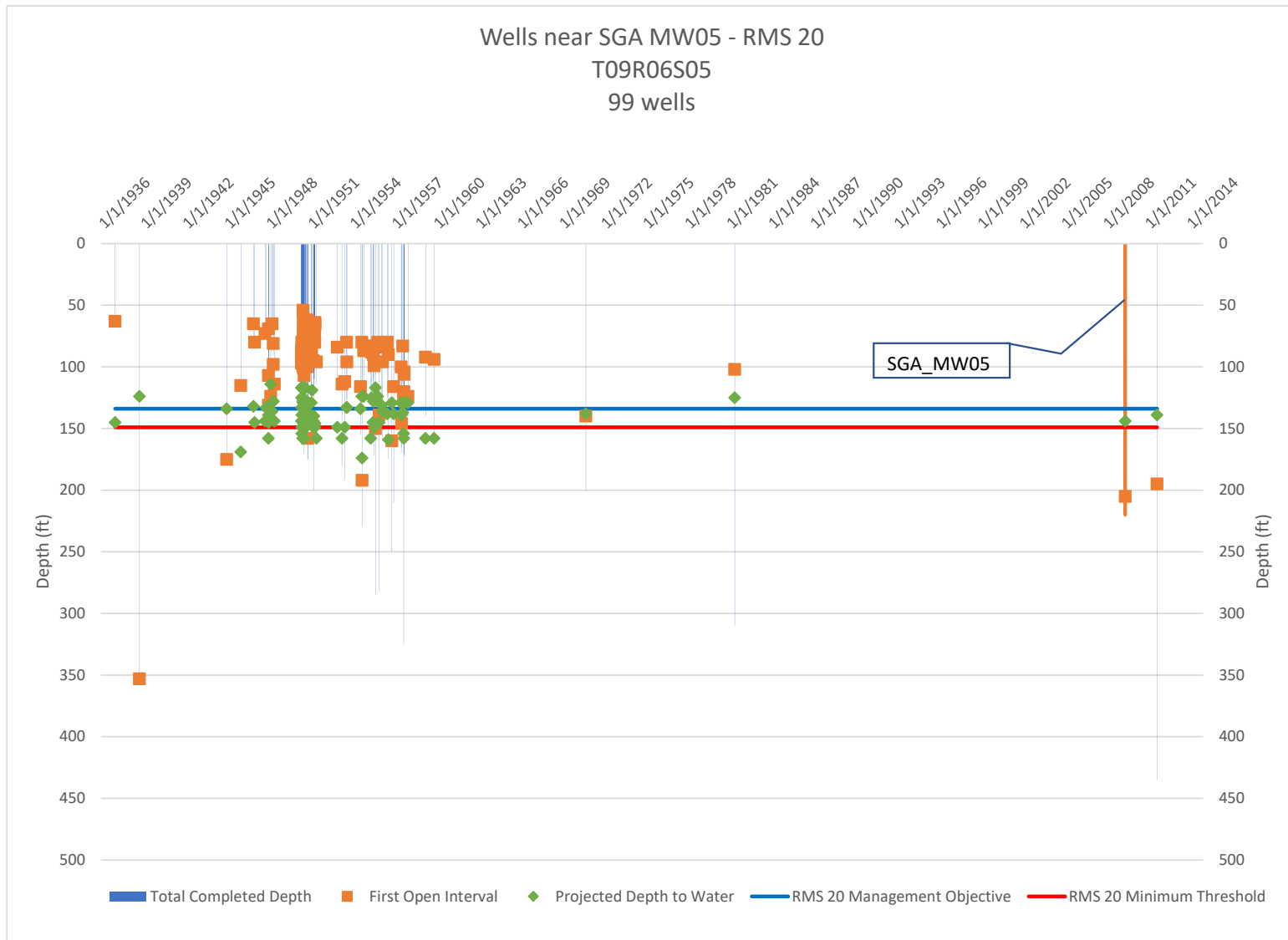


Figure B-9. Domestic Well Characteristics near RMS 20

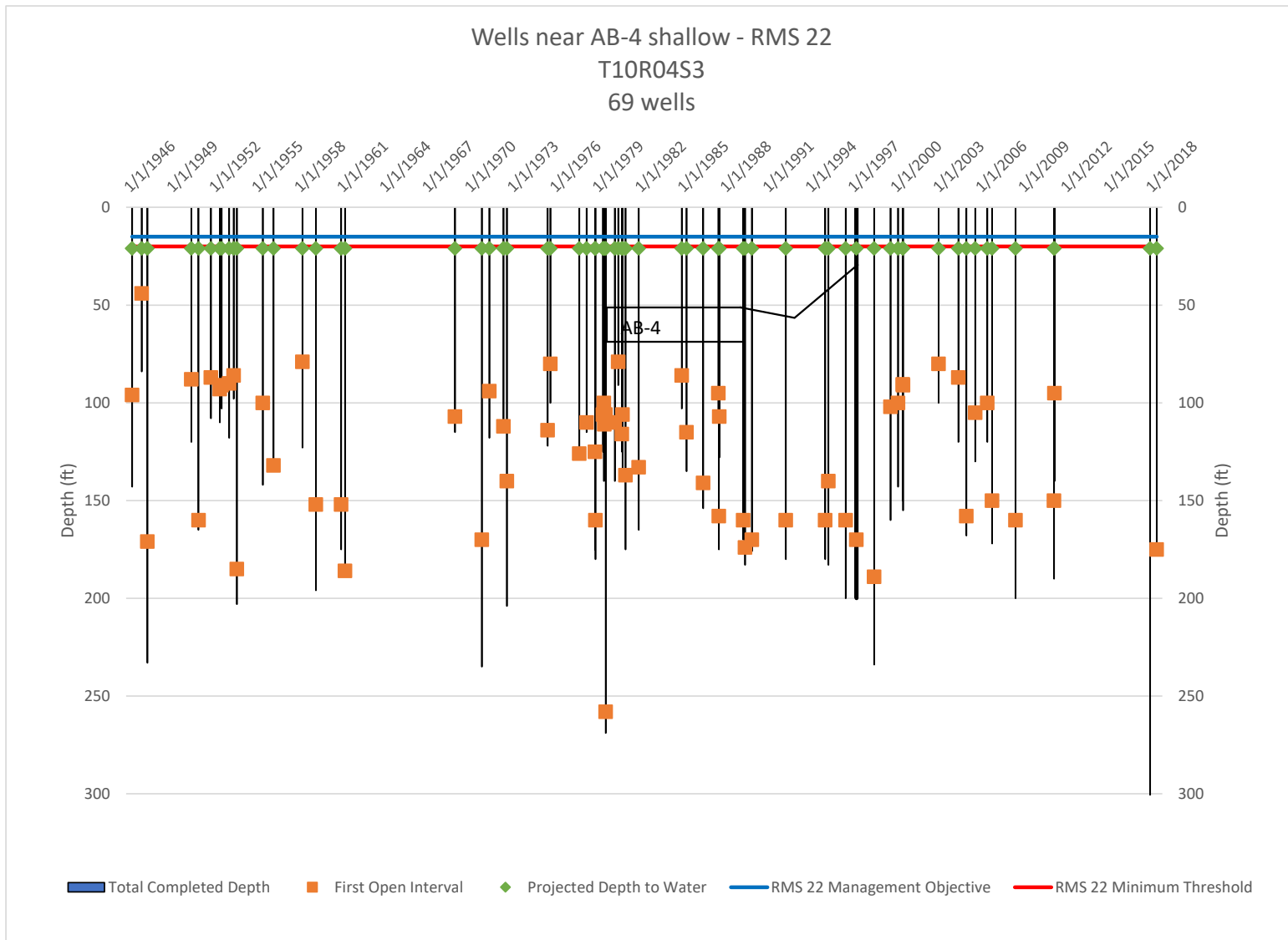


Figure B-10. Domestic Well Characteristics near RMS 22

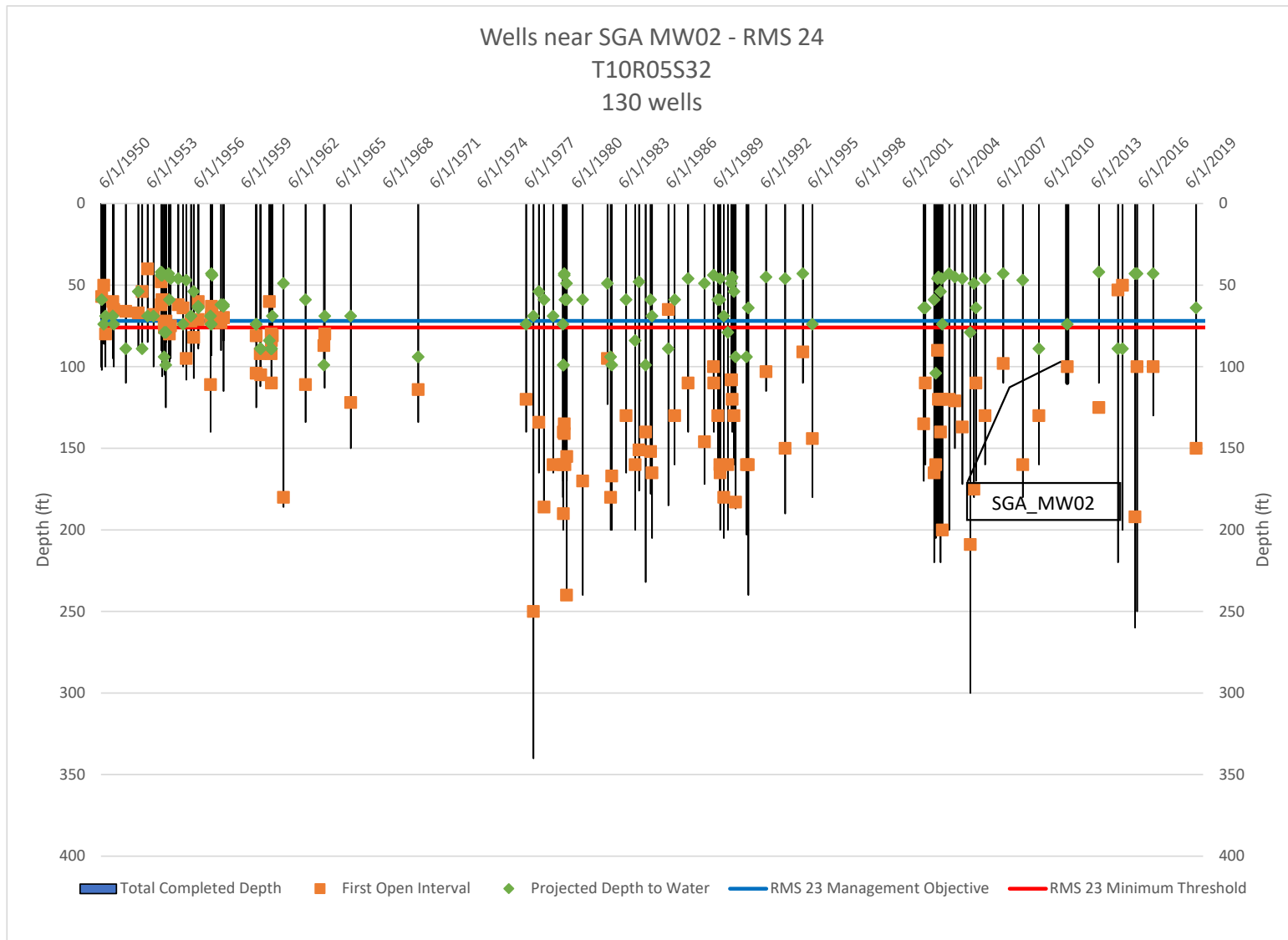


Figure B-11. Domestic Well Characteristics near RMS 24

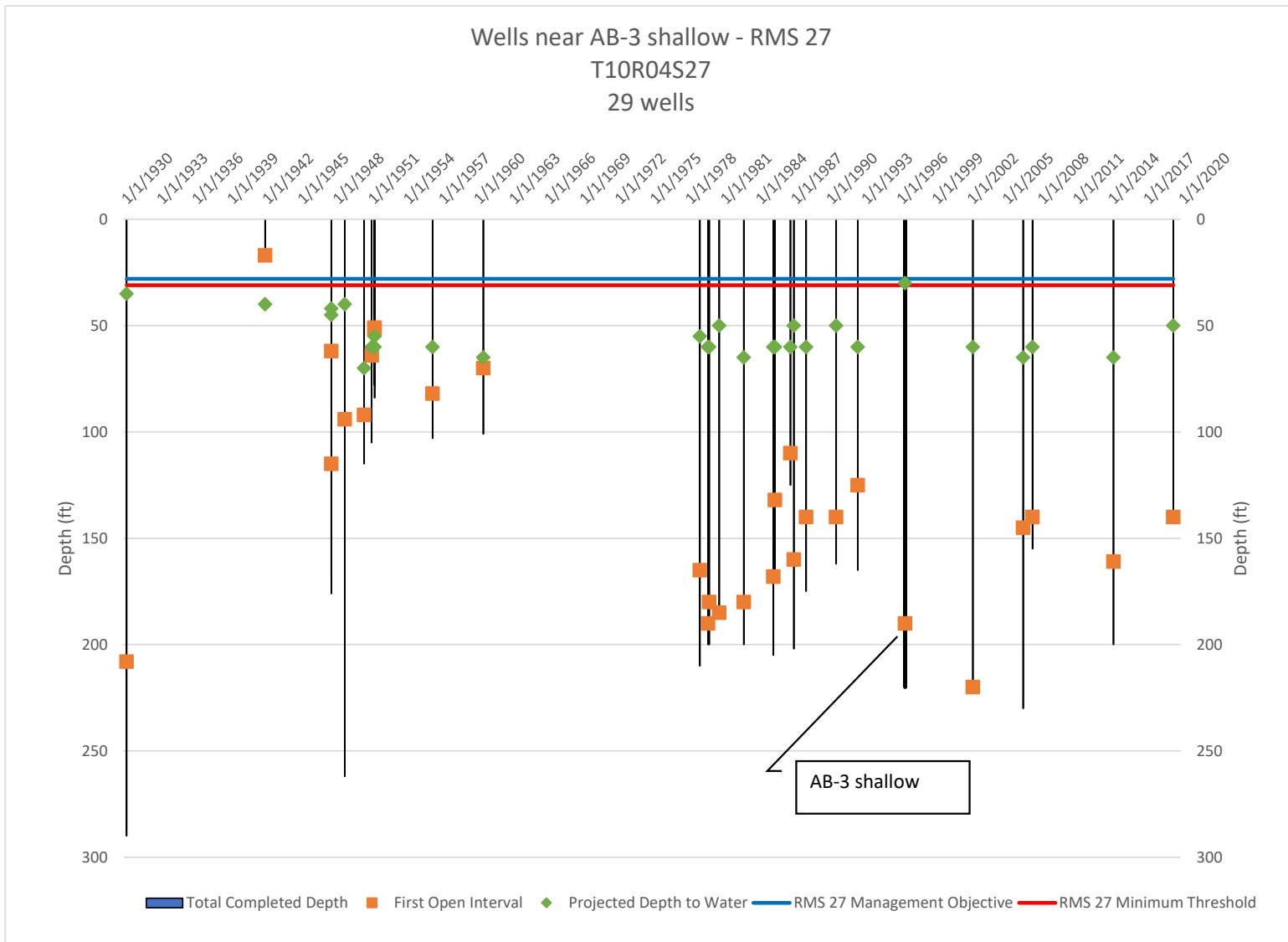


Figure B-12. Domestic Well Characteristics near RMS 27

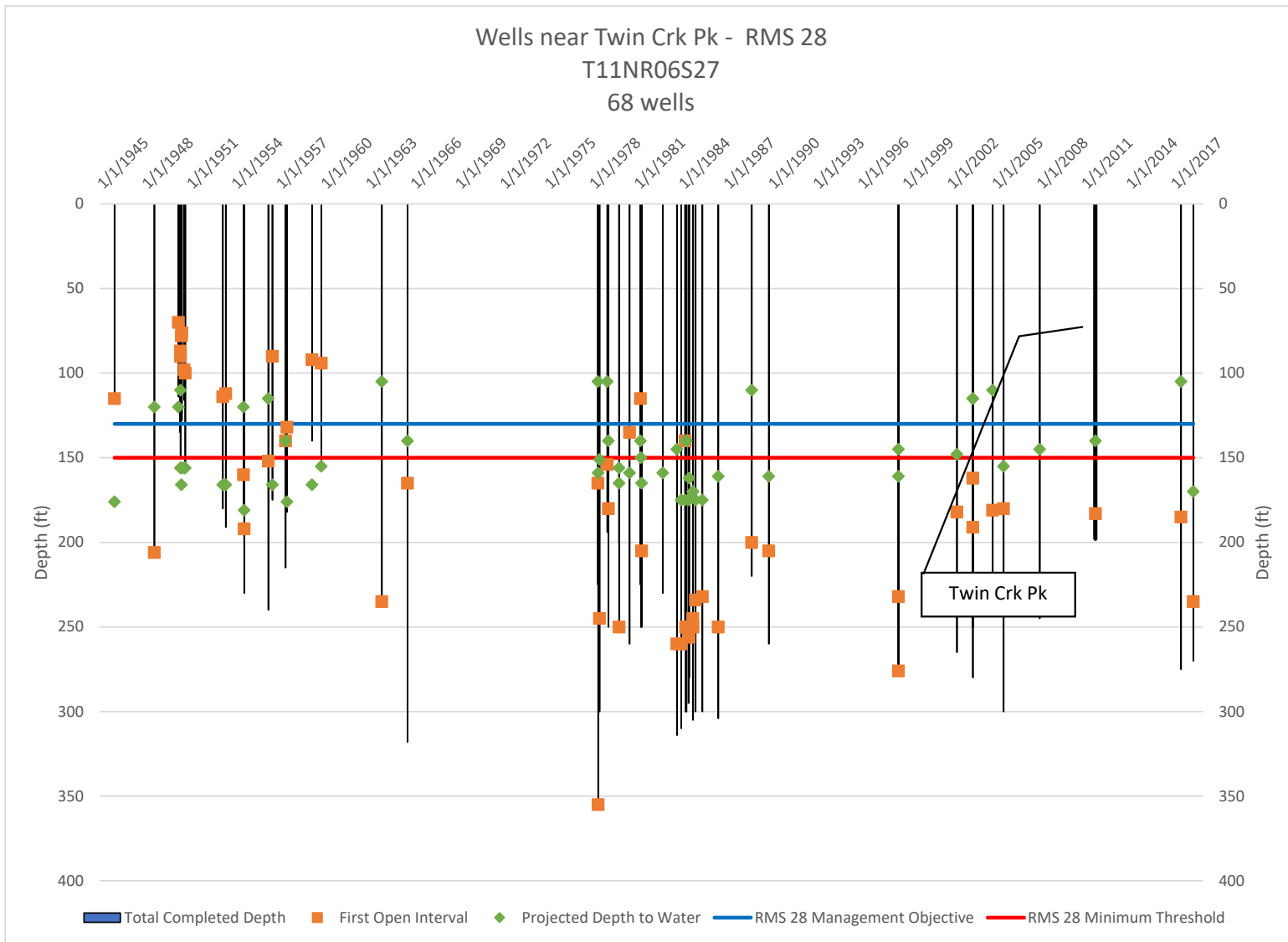


Figure B-13. Domestic Well Characteristics near RMS 28

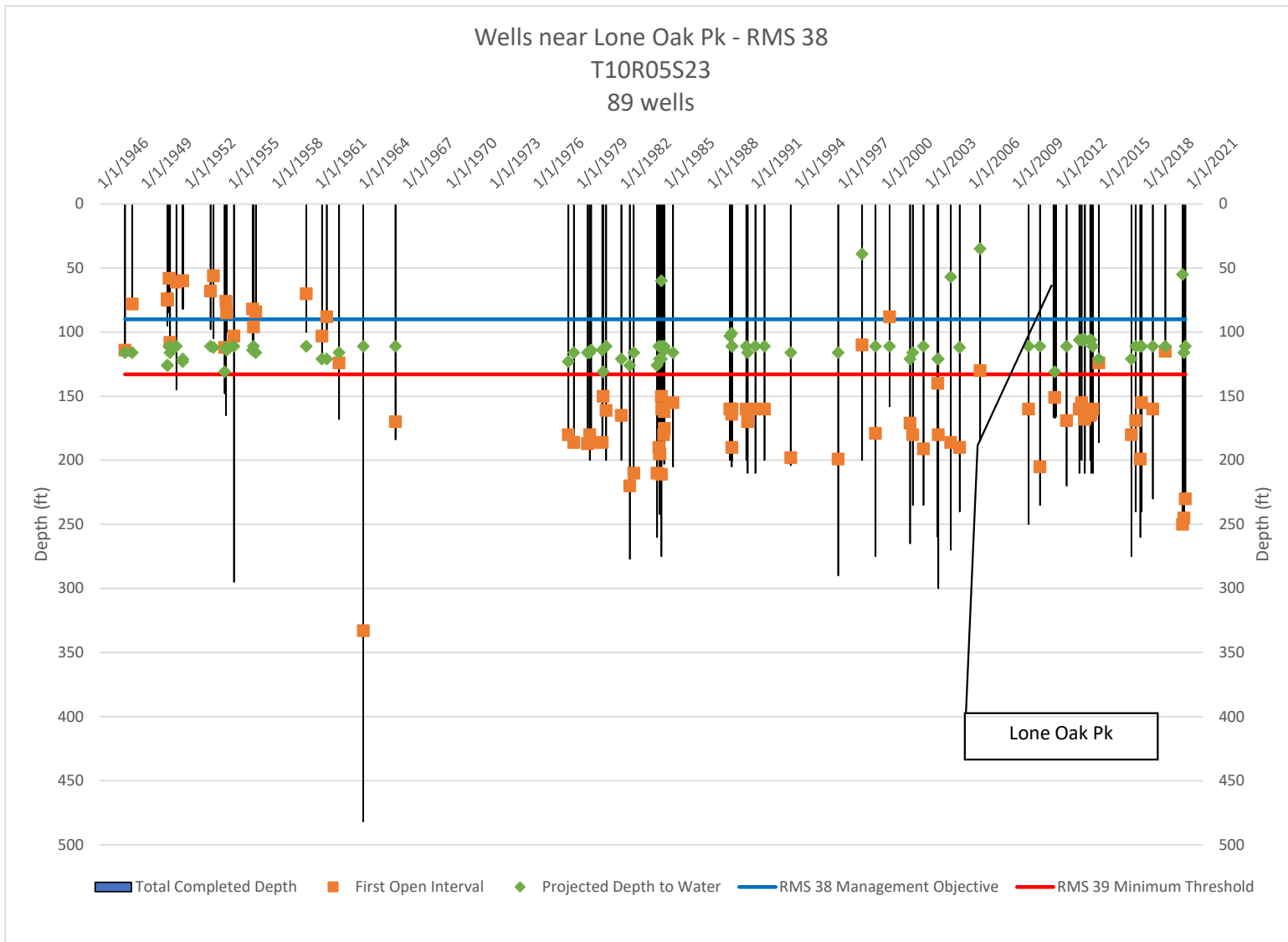


Figure B-14. Domestic Well Characteristics near RMS 38

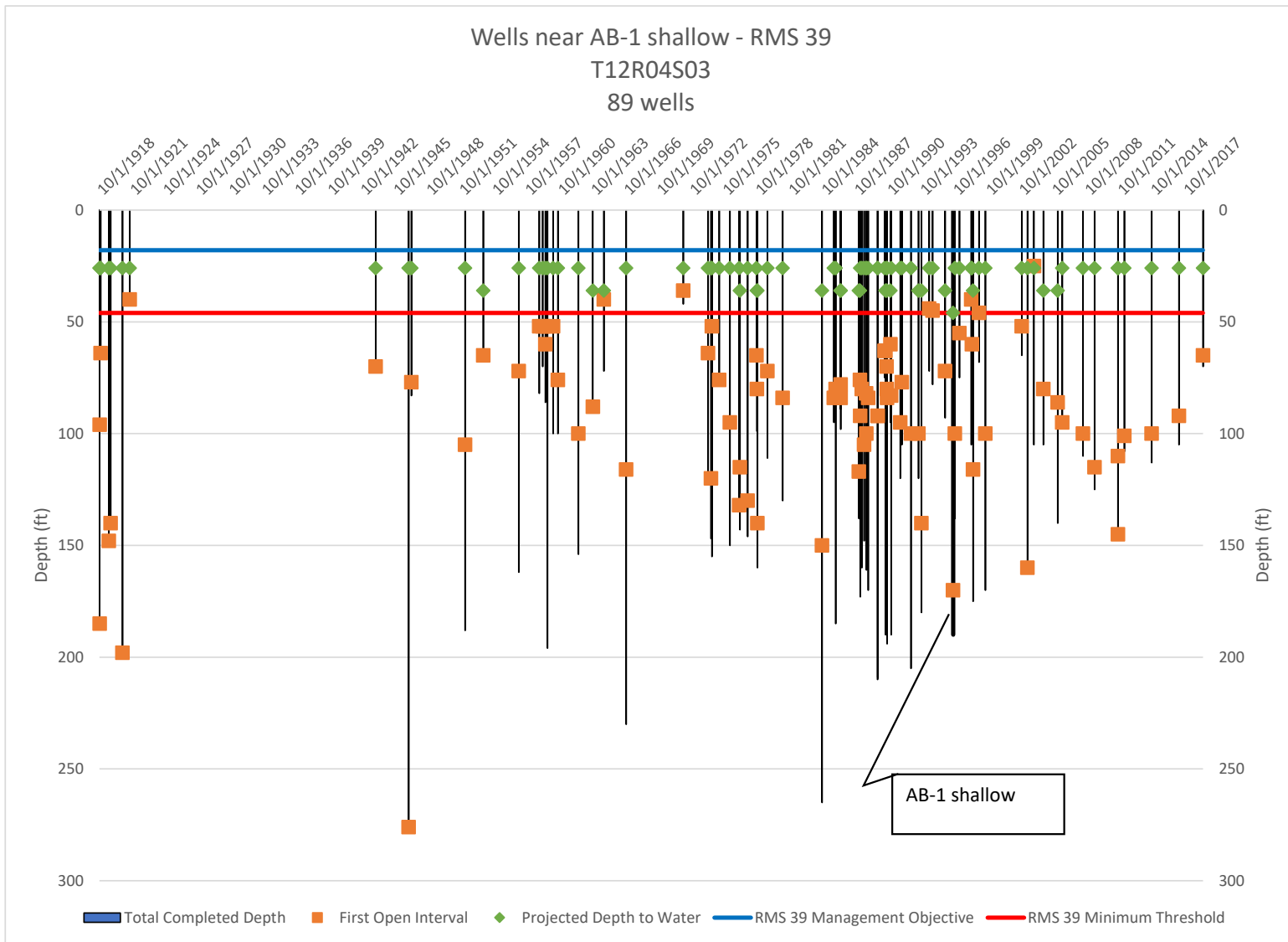


Figure B-15. Domestic Well Characteristics near RMS 39

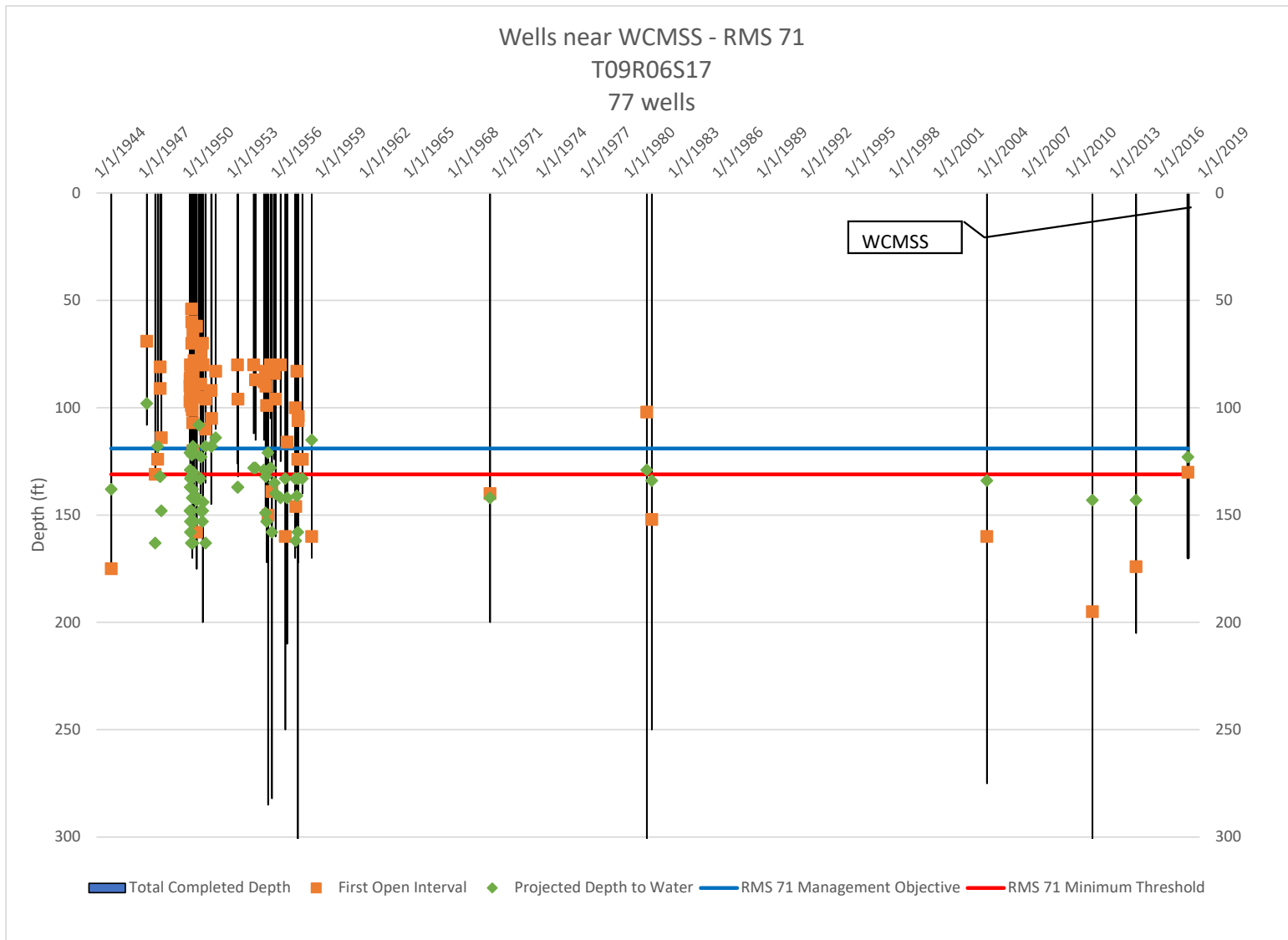


Figure B-16. Domestic Well Characteristics near RMS 71

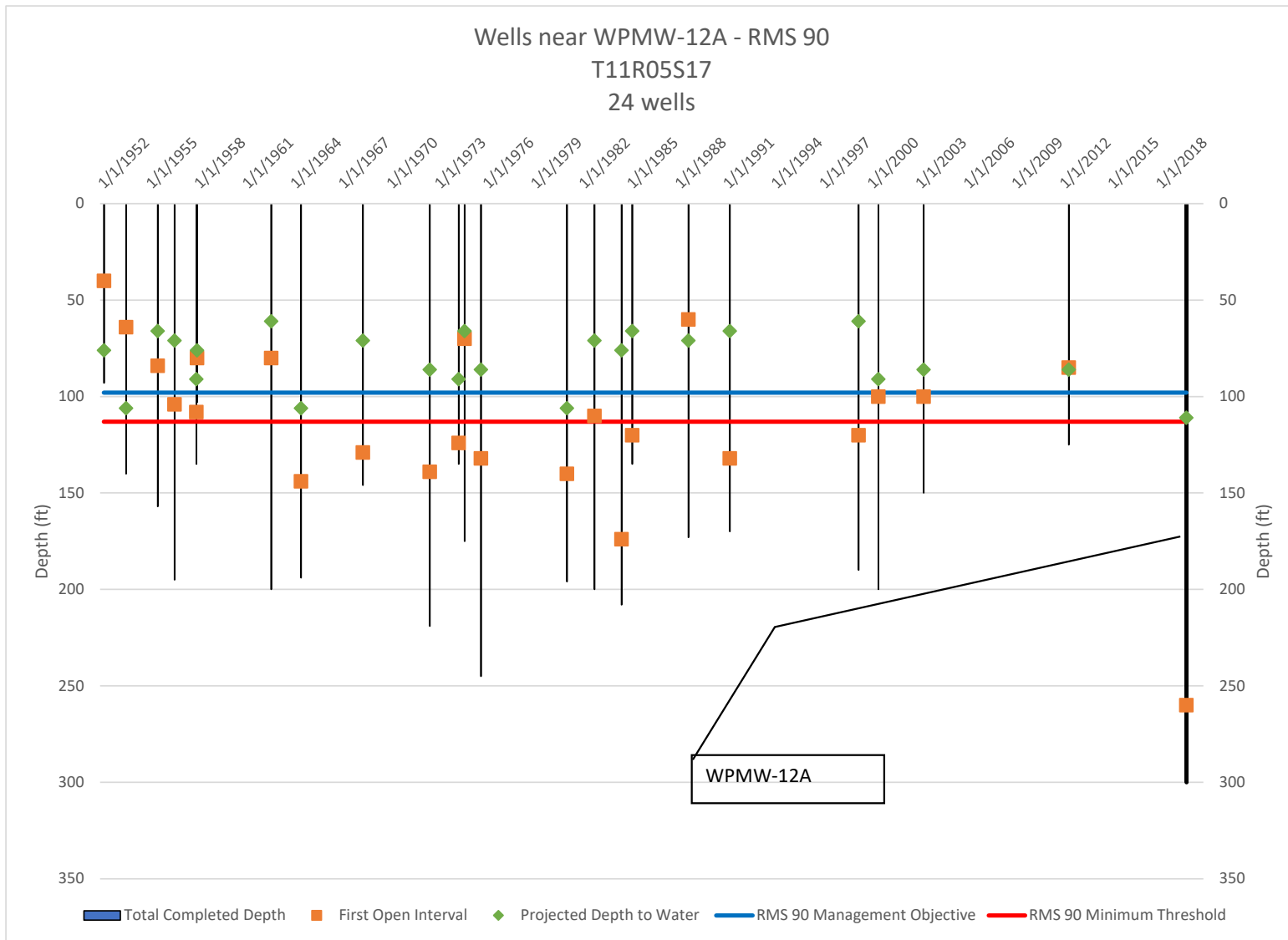


Figure B-17. Domestic Well Characteristics near RMS 90

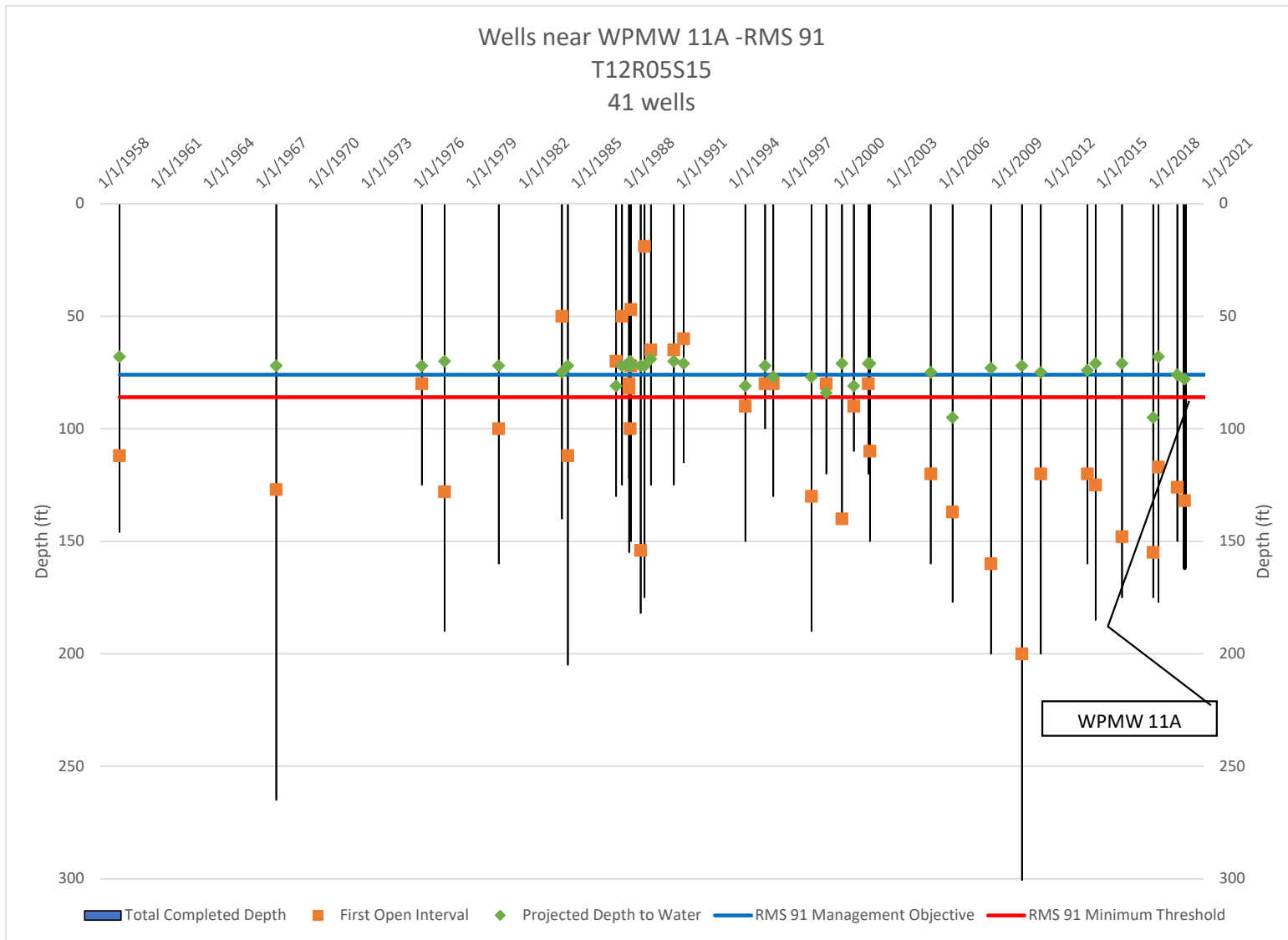


Figure B-18. Domestic Well Characteristics near RMS 91

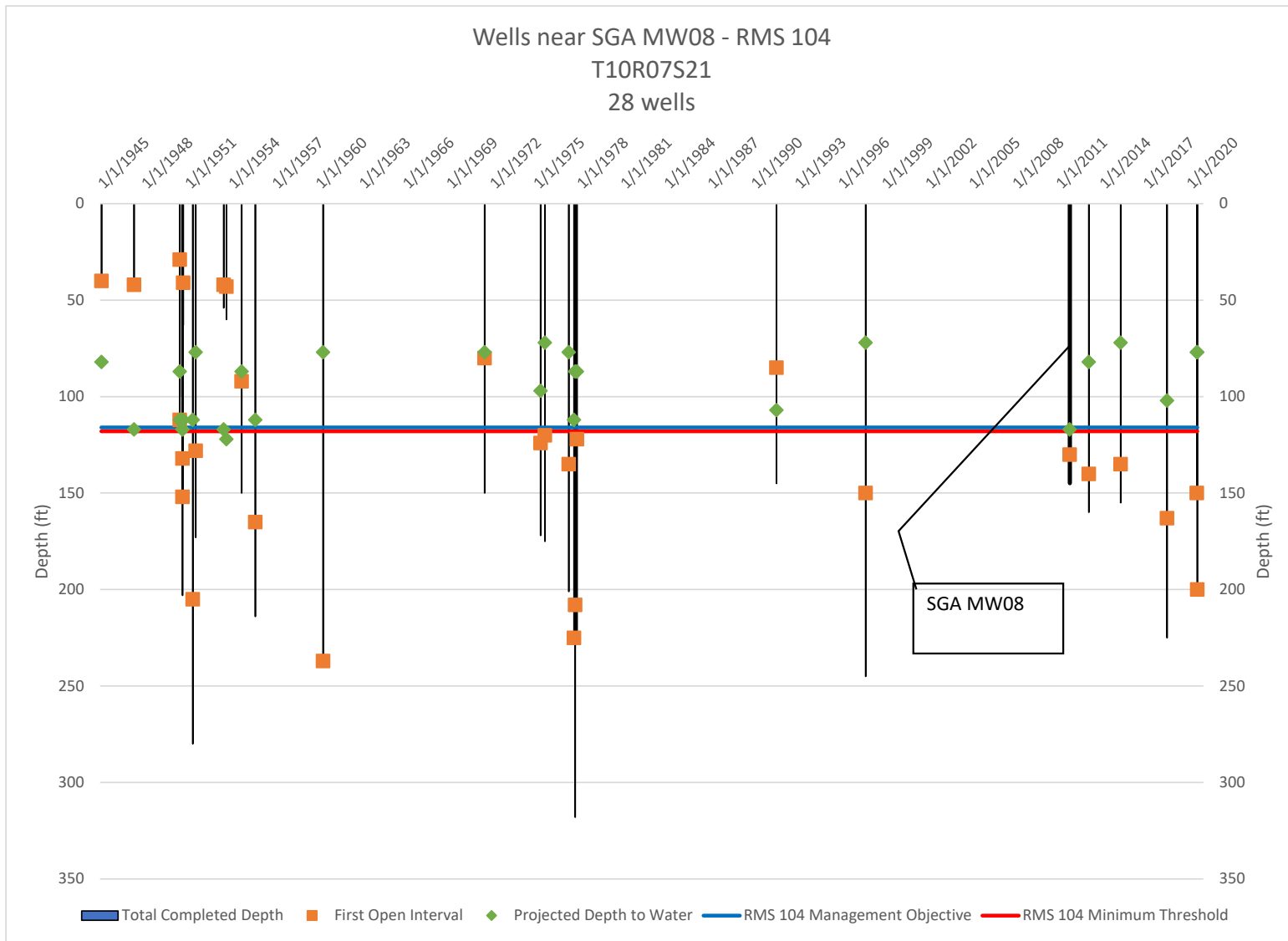


Figure B-19. Domestic Well Characteristics near RMS 104

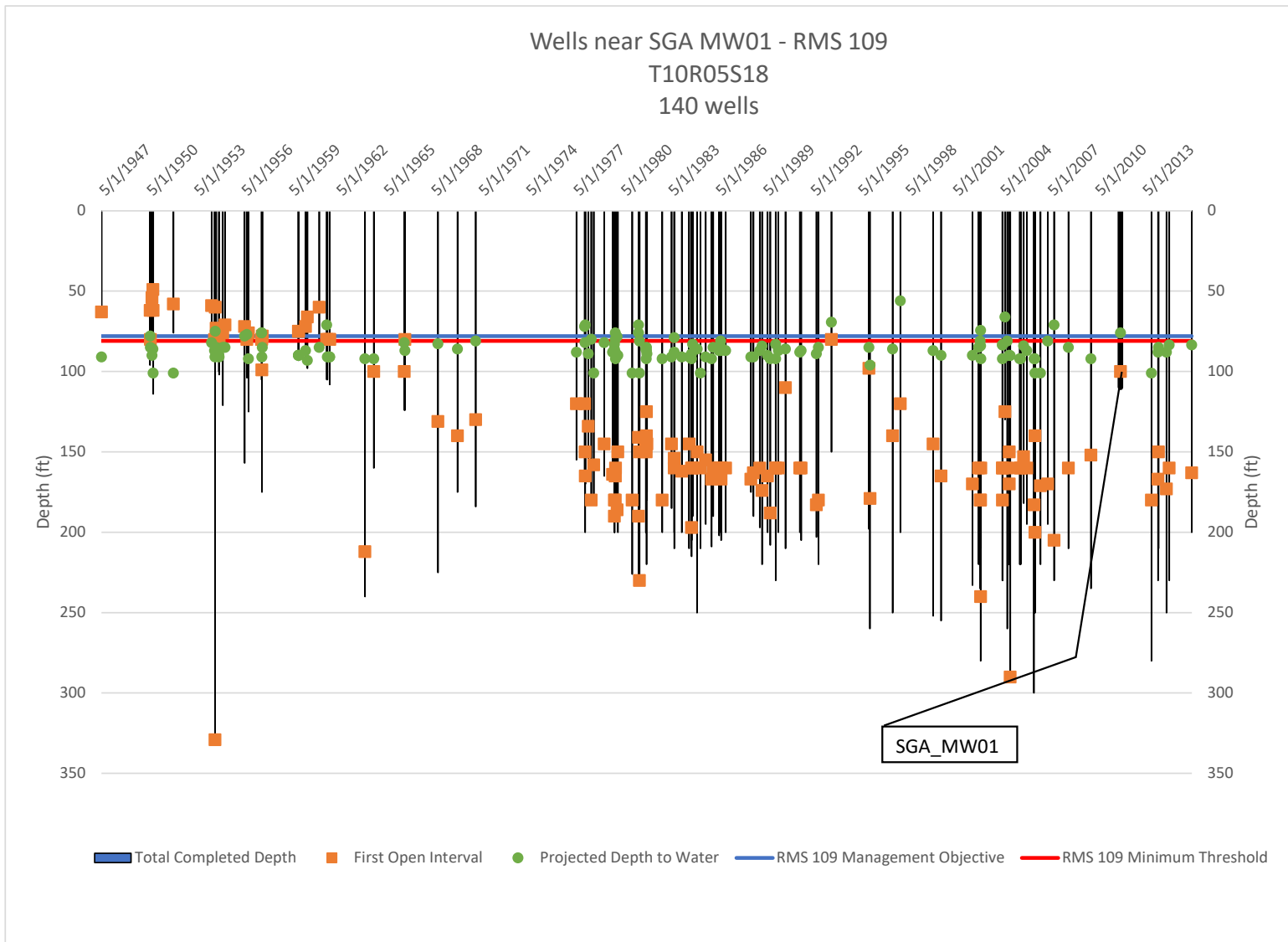


Figure B-20. Domestic Well Characteristics near RMS 109

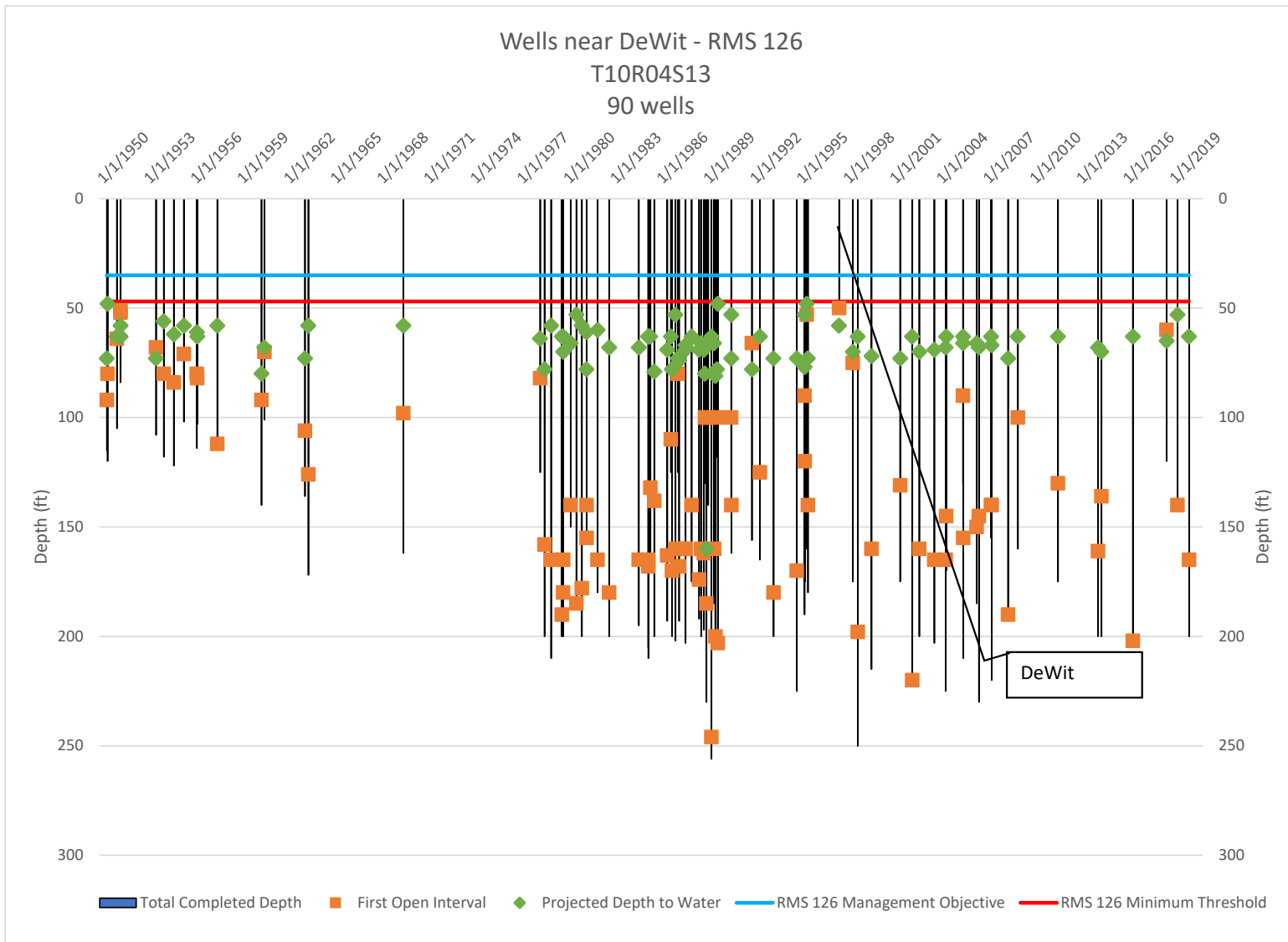


Figure B-21. Domestic Well Characteristics near RMS 126

Table B-3. Summary of Domestic Well Analysis with Respect to Total Depth

Well Information		Baseline Condition			Projected Condition			Net Difference (Baseline-Projected)	
Representative Monitoring Well	Number of Domestic Wells Assessed	Number pre-1970 Wells Above Depth to Water	Number post-1970 Wells Above Depth to Water	Total Wells Above Depth to Water	Number pre-1970 Wells Above Depth to Water	Number post-1970 Wells Above Depth to Water	Total Wells Above Depth to Water	Pre-1970 Domestic Wells	Post-1970 Domestic Wells
2	105	0	0	0	2	0	2	2	0
3	111	3	0	3	7	0	7	4	0
13	50	1	0	1	1	0	1	0	0
14	63	0	0	0	0	0	0	0	0
17	38	0	0	0	0	0	0	0	0
20	99	56	0	56	60	0	60	4	0
22	69	0	0	0	0	0	0	0	0
24	130	2	0	2	3	0	3	1	0
27	29	1	0	1	1	0	1	0	0
28	58	8	0	8	9	0	9	1	0
38	89	12	0	12	15	0	15	3	0
39	89	0	0	0	0	0	0	0	0
71	77	36	0	36	42	0	42	6	0
90	24	0	0	0	0	0	0	0	0
91	41	0	0	0	0	0	0	0	0
104	29	5	0	5	5	0	5	0	0
109	140	2	0	2	9	0	9	7	0
126	90	0	0	0	0	0	0	0	0
Total	1331	126	0	126	154	0	154	28	0

Table B-4. Summary of Domestic Well Analysis with Respect to First Open Interval

Well Information		Baseline Condition			Projected Condition			Net Difference (Baseline-Projected)	
Representative Monitoring Well	Number of Domestic Wells Assessed	Number pre-1970 Wells Above Depth to Water	Number post-1970 Wells Above Depth to Water	Total Wells Above Depth to Water	Number pre-1970 Wells Above Depth to Water	Number post-1970 Wells Above Depth to Water	Total Wells Above Depth to Water	Pre-1970 Domestic Wells	Post-1970 Domestic Wells
2	105	6	0	6	7	0	7	1	0
3	111	28	0	28	32	0	32	4	0
13	50	4	0	4	6	0	6	2	0
14	63	0	0	0	0	0	0	0	0
17	38	2	1	3	4	1	5	2	0
20	99	85	1	86	85	1	86	0	0
22	69	0	0	0	0	0	0	0	0
24	130	14	3	17	22	3	25	8	0
27	29	1	0	1	3	0	3	2	0
28	58	15	3	18	15	3	18	0	0
38	89	21	0	21	22	0	22	1	0
39	89	0	0	0	0	1	1	0	1
71	77	39	1	40	63	2	65	24	1
90	24	2	0	2	2	2	4	0	2
91	41	0	6	6	0	9	9	0	3
104	29	6	1	7	7	1	8	1	0
109	140	10	0	10	28	0	28	18	0
126	90	0	0	0	3	2	5	3	2
Total	1331	233	16	249	299	25	324	66	9

Appendix C: Monitoring Construction Details

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

APPENDIX C Groundwater Level Monitoring Well Construction Details

December 2021

Appendix C
Groundwater Level Monitoring Well Construction Details

Map No.	CASGEM ID	Local Name	State Well Number	Latitude	Longitude	Reference Point Elevation (ft)	Monitoring Entity	Screened Interval (ft bgs)	Total Depth (ft bgs)	Period of Record	Well Type
1	387626N1213651W001	SVMW East-2A		38.762629	-121.3651	126.02	City of Roseville	125-135	140	2011-2020	O
1	381626N1213651W001	SVMW East-2B		38.762629	-121.3651	125.83	City of Roseville	510-520	525	2011-2020	O
1	387626N1213651W002	SVMW East-2C		38.76263	-121.3651	125.75	City of Roseville	655-665	670	2011-2020	O
2	385828N1213385W001	SGA_MW06		38.58281	-121.33846	49.49	DWR	62-72	72	2007-2019	O
3	385841N1214185W001	SGA_MW04		38.58414	-121.41852	38.69	DWR	55-65	65	2007-2019	O
4	385947N1213985W001	MW12A		38.59472	-121.39847	41.8	DWR	200-280	285	2010-2020	O
4	385947N1213985W002	MW12B		38.59472	-121.39847	41.84	DWR	360-380	385	2010-2020	O
4	385947N1213985W003	MW12C		38.59472	-121.39847	41.82	DWR	590-610	615	2010-2020	O
4	385947N1213985W004	MW12D		38.59472	-121.39847	41.82	DWR	810-840	845	2010-2020	O
4	385947N1213985W005	MW12E		38.59472	-121.39847	41.77	DWR	960-1000	1005	2010-2020	O
5	386016N1213761W001	DWR_SGA_004	09N05E25J001M	38.6016	-121.3761	66.7	DWR	Unknown	238	1977-2020	R
6	386038N1213882W001	MW11A		38.6038	-121.38815	59.45	DWR	167-177	187	2010-2017	O
6	386038N1213882W002	MW11B		38.6038	-121.38815	59.41	DWR	258-268	278	2010-2020	O
6	386038N1213882W003	MW11C		38.6038	-121.38815	59.25	DWR	332-365	375	2010-2020	O
7	386038N1214357W001	DWR_SGA_005	09N05E28K001M	38.6038	-121.4357	36.84	DWR	Unknown	250	1968-2020	I
8	386061N1215313W001	SCWA_SGA_003	09N04E27F001M	38.6061	-121.5313	27.04	SCWA	Unknown	320	1953-2029	I
9	386117N1213150W001	SCWA_SGA_004	09N06E27D001M	38.6117	-121.315	73.5	SCWA	Unknown	200	1962-2019	O
10	386151N1214467W001	DWR_SGA_003	09N05E21M001M	38.6151	-121.4467	37.14	DWR	Unknown	89	1948-2010	U
11	386160N1215054W001	Bannon Creek Park	09N04E23R002M	38.61603	-121.5054	13.76	SGA	33-48	48	2011-2012	O
12	386874N1212206W001	SGA_MW09		38.68739	-121.22058	231.27	DWR	150-160	160	2007-2019	O
13	386292N1214877W001	Chuckwagon Park	09N04E13R001M	38.62921	-121.4877	11.71	DWR	27-37	52	1998-2019	O
14	389669N1214897W001	13N04E23A002M	13N04E23A002M	38.9669	-121.4897	59.28	SSWD	Unknown	83	1963-2020	R
15	388208N1215397W001	11N04E09D002M	11N04E09D002M	38.8208	-121.5397	30.87	DWR	Unknown	100	1958-2020	R
16	386410N1213995W001	DWR_SGA_002	09N05E14B001M	38.641	-121.3995	68.53	DWR	Unknown	550	1980-2019	I
17	388593N1214885W003	AB-2 shallow	12N04E26J004M	38.8593	-121.4885	52.76	DWR	135-145	155	1996-2020	O
17	388593N1214885W001	AB-2 deep	12N04E26J002M	38.8593	-121.4885	52.3	DWR	670-690	700	1996-2020	O
17	388593N1214885W002	AB-2 middle	12N04E26J003M	38.8593	-121.4885	52.63	DWR	380-490	500	1996-2020	O
18	386489N1215679W001	SCWA_SGA_002	09N04E08L001M	38.6489	-121.5679	27.51	SCWA	Unknown	Unknown	1953-2010	I
19	386576N1214846W001	SCWA_SGA_001	09N04E01R001M	38.6576	-121.4846	22.72	SCWA	Unknown	17	1953-2019	R
20	386635N1213486W001	SGA_MW05		38.66347	-121.34859	121.87	DWR	205-215	215	2007-2019	O
21	387404N1214870W001		10N04E12A001M	38.7404	-121.487	45.54	DWR	Unknown	290	1947-2005	I
22	386782N1215943W004	AB-4 shallow	10N04E31M004M	38.6782	-121.5943	18.53	DWR	170-190	200	1997-2020	O
22	386782N1215943W001	AB-4 deep	10N04E31M001M	38.6782	-121.5943	19.28	DWR	1060-1070	1080	1997-2020	O
22	386782N1215943W002	AB-4 middle-deep	10N04E31M002M	38.6782	-121.5943	17.51	DWR	795-805	815	1997-2020	O
22	386782N1215943W003	AB-4 middle-shallow	10N04E31M003M	38.6782	-121.5943	17.98	DWR	380-400	410	1997-2020	O
23	388072N1214842W001		11N04E13D001M	38.8072	-121.4842	49.96	DWR	Unknown	535	1948-2008	I
24	386836N1214536W001	SGA_MW02		38.68362	-121.45363	52.39	DWR	100-110	110	2007-2019	O
25	386836N1214536W002	SGA_MW03		38.68356	-121.45362	51.82	DWR	285-305	305	2007-2019	O
26	386848N1216146W001	SCWA_SGA_005	10N03E35A001M	38.6848	-121.6146	23.09	SCWA	Unknown	96	1953-2019	R
27	386864N1215222W003	AB-3 shallow	10N04E27R004M	38.6864	-121.5222	28.31	DWR	190-210	220	1996-2019	O
27	386864N1215222W001	AB-3 deep	10N04E27R002M	38.6864	-121.5222	27.84	DWR	745-995	995	1996-2020	O
27	386864N1215222W002	AB-3 middle	10N04E27R003M	38.6864	-121.5222	28.09	DWR	470-500	500	1996-2020	O
28	386964N1213120W001	Twin Creeks Park	10N06E27F001M	38.6964	-121.31203	121.8	DWR	183-193	193	2011-2019	O
29	386979N1212329W001	SCWA_SGA_012	10N07E29G001M	38.6979	-121.2329	219.57	SCWA	150-240	240	1955-2019	I
30	386982N1213992W001	SCWA_SGA_008	10N05E14Q002M	38.6982	-121.3992	88.51	SCWA	116-227	227	1955-2019	R
31	386982N1213992W002	SCWA_SGA_009	10N05E26B002M	38.6982	-121.3992	83.81	SCWA	Unknown	150	1990-2019	R
32	388361N1215959W001	MLF Well #1	11N03E01D001M	38.83664	-121.59591	24.45	Sutter County	Unknown	Unknown	1949-2017	I
33	387000N1213529W001	Monument (A)		38.70005	-121.35288	173.39	Sac Suburban WD	226-274	274	2011-2020	O
33	387000N1213529W002	Monument (B)		38.70005	-121.35288	173.26	Sac Suburban WD	324-334	334	2011-2020	O
33	387000N1213529W003	Monument (C)		38.70005	-121.35288	173.26	Sac Suburban WD	380-450	450	2011-2020	O
33	387000N1213529W004	Monument (D)		38.70005	-121.35288	173.24	Sac Suburban WD	498-544	544	2011-2020	O
34	387092N1213300W001	SCWA_SGA_010	10N06E21F002M	38.7092	-121.33	161.51	SCWA	Unknown	144	1952-2019	R
35	387117N1213327W001	Poker (A)		38.71174	-121.33271	151.74	SGA	104-124	134	1994-2020	O
35	387117N1213327W002	Poker (B)		38.71174	-121.33271	151.77	SGA	156-166	176	1994-2020	O
35	387117N1213327W003	Poker (C)		38.71174	-121.33271	151.76	SGA	274-310	320	1994-2020	O
35	387117N1213327W004	Poker (D)		38.71174	-121.33271	151.75	SGA	370-460	470	1994-2020	O
36	387138N1215047W001	SCWA_SGA_006	10N04E23A001M	38.7138	-121.5047	17.97	SCWA	Unknown	85	1953-2019	I
37	388260N1215394W004	SUT-P1	11N04E04N004M	38.826	-121.5394	32.31	DWR	110-120	120	1994-2020	O
37	388260N1215394W001	SUT-P4	11N04E04N001M	38.826	-121.5394	31.81	DWR	880-890	890	1994-2020	O
37	388260N1215394W002	SUT-P3	11N04E04N002M	38.826	-121.5394	31.95	DWR	295-305	305	1994-2020	O
37	388260N1215394W003	SUT-P2	11N04E04N003M	38.826	-121.5394	32.13	DWR	185-195	195	1994-2020	O
38	387216N1213842W001	Lone Oak Park	10N05E13F001M	38.72163	-121.38417	105.77	DWR	151-161	166	2011-2019	O
39	389116N1215238W003	AB-1 shallow	12N04E03N004M	38.9116	-121.5238	50.58	DWR	170-180	190	1996-2020	O
39	389116N1215238W001	AB-1 deep	12N04E03N001M	38.9116	-121.5238	49.83	DWR	950-970	980	1996-2020	O
39	389116N1215238W002	AB-1 middle-deep	12N04E03N002M	38.9116	-121.5238	50.23	DWR	680-700	710	1996-2020	O
39	389117N1215238W001	AB-1 middle-shallow	12N04E03N003M	38.9116	-121.5238	50.37	DWR	390-520	530	1996-2020	O
40	387228N1213298W001	Antelope North (A)		38.722803	-121.32976	133.68	Sac Suburban WD	253-273	283	2011-2020	O
40	387228N1213298W002	Antelope North (B)		38.722803	-121.32976	133.71	Sac Suburban WD	328-468	473	2011-2020	O
41	387331N1213610W001	WPMW-5A		38.733106	-121.36099	100.42	City of Roseville	80-100	100	2015-2020	O
41	387331N1213610W002	WPMW-5B		38.733106	-121.36099	100.35	City of Roseville	630-650	650	2015-2020	O
42	387510N1212390W001	WPMW-8A		38.750989	-121.23895	234.17	City of Roseville	30-50	50	2015-2019	O
42	387510N1212390W002	WPMW-8B		38.750989	-121.23895	234.09	City of Roseville	95-115	115	2015-2020	O
43	387512N1212390W001	WPMW-7A		38.751194	-121.239	225.97	City of Roseville	35-45	45	2015-2019	O
44	387515N1212725W001	WPMW-10A		38.751494	-121.27251	153.21	City of Roseville	26-36	36	2015-2019	O
44	387515N1212725W002	WPMW-10B		38.751494	-121.27251	153.18	City of Roseville	80-100	100	2015-2020	O
44	387515N1212725W003	WPMW-10C		38.751494	-121.27251	153.12	City of Roseville	240-260	260	2015-2020	O
45	387517N1212727W001	WPMW-9A		38.751667	-121.27266	154.66	City of Roseville	26-36	36	2015-2020	O
46	387623N1213915W001	SVMW West - 1A		38.762324	-121.39153	94.25	City of Roseville	120-140	145	2015-2020	O
46	387623N1213915W002	SVMW West - 1B		38.762325	-121.39153	94.17	City of Roseville	535-555	560	2011-2020	O
46	387623N1213915W003	SVMW West - 1C		38.762325	-121.39153	94.05	City of Roseville	725-745	750	2011-2020	O
47	387739N1212382W001	WPMW-6A		38.7739	-121.238183	207.61	City of Roseville	35-65	65	2015-2020	O
48	387755N1212753W001	WPMW-4A		38.775536	-121.27525	181.67	City of Roseville	120-140	145	2011-2020	O
48	387755N1212753W002	WPMW-4B		38.775535	-121.27525	181.52	City of Roseville	275-295	300	2011-2020	O
49	387786N1213737W001	WPMW-1A		38.778603	-121.3737	107.83	City of Roseville	110-120	120	2011-2020	O
49	387786N1213737W002	WPMW-1B		38.778603	-121.3737	107.31	City of Roseville	460-480	480	2011-2020	O

**Appendix C
Groundwater Level Monitoring Well Construction Details**

49	387786N1213737W003	WPMW-1C		38.778602	-121.3737	106.75	City of Roseville	535-545	545	2011-2020	O
50	387816N1213870W001	W-77MW-A		38.781581	-121.38702	97.2	City of Roseville	486-506	516	2012-2020	O
50	387816N1213870W002	W-77MW-B		38.781581	-121.38702	97.2	City of Roseville	584-594	604	2012-2020	O
51	387943N1213856W001	O'Brien well	11N05E23B001M	38.7943	-121.3856	90.86	City of Roseville	Unknown	195	1972-2020	R
52	387957N1213813W001	CVMW-1A		38.795655	-121.38126	87.11	City of Roseville	260-280	285	2011-2020	O
52	387957N1213813W002	CVMW-1B		38.795654	-121.38126	86.95	City of Roseville	460-490	495	2011-2020	O
52	387957N1213813W003	CVMW-1C		38.795655	-121.38126	86.84	City of Roseville	565-585	590	2011-2020	O
53	387971N1215119W001		11N04E15Q001M	38.7971	-121.5119	35.98	DWR	Unknown	Unknown	1963-2020	U
54	387977N1214521W001		11N05E18R001M	38.7977	-121.4521	64.37	DWR	Unknown	Unknown	1963-2020	I
55	387982N1214704W001		11N04E13R001M	38.7982	-121.4704	53.37	DWR	Unknown	Unknown	1963-2020	I
56	388027N1213384W001	DCMW-3		38.80271	-121.33843	99.82	City of Roseville	400-515	520	2012-2020	O
57	388058N1213355W001	DCMW-1		38.805757	-121.3355	119.94	City of Roseville	320-450	455	2014-2020	O
58	388063N1213354W001	DCMW-2		38.806291	-121.33542	120.22	City of Roseville	322-432	437	2012-2020	O
59	388116N1213054W001	Tinker MW		38.811594	-121.30539	132.2	City of Roseville	117-177	177	2013-2020	O
60	388145N1213491W001	WPMW-2A		38.814497	-121.34914	108.2	City of Roseville	215-225	230	2011-2020	O
60	388145N1213491W002	WPMW-2B		38.814497	-121.34914	108.09	City of Roseville	400-420	425	2011-2020	O
61	388235N1216079W001	Sutter County MW-5A	11N03E02Q002M	38.823235	-121.60763	26.45	Sutter County	130-160	170	2012-2020	O
61	388235N1216079W002	Sutter County MW-5B	11N03E02Q003M	38.823235	-121.60763	26.28	Sutter County	655-675	675	2012-2020	O
61	388235N1216079W003	Sutter County MW-5C	11N03E02Q004M	38.823235	-121.60763	26.22	Sutter County	910-920	930	2012-2020	O
61	388235N1216079W004	Sutter County MW-5D	11N03E02Q005M	38.8235	-121.6079	26.12	Sutter County	1205-1215	1225	2012-2020	O
62	388458N1215100W001		12N04E34H001M	38.8458	-121.51	42.83	DWR	Unknown	Unknown	2011-2020	R
63	388476N1212872W001	WPMW-3A		38.847609	-121.28719	150.95	City of Roseville	48-53	53	2012-2019	O
63	388476N1212872W002	WPMW-3B		38.847609	-121.287187	150.34	City of Roseville	130-140	140	2012-2019	O
64	388555N1215468W001		12N04E29J001M	38.8555	-121.5468	34.84	DWR	Unknown	285	2005-2020	I
65	388604N1213544W003	MW 1-3		38.860383	-121.35438	113.81	City of Lincoln	184-204	204	2012-2020	O
65	388604N1213544W001	MW 1-1		38.860383	-121.35438	113.6	City of Lincoln	378-398	398	2012-2019	O
65	388604N1213544W002	MW 1-2		38.860383	-121.35438	113.76	City of Lincoln	298-318	318	2012-2020	O
65	388604N1213544W004	MW 1-4		38.860383	-121.35438	113.61	City of Lincoln	82-92	92	2012-2020	O
66	388826N1213078W001	MW 5-1		38.882583	-121.30775	148.7	City of Lincoln	80-100	100	2012-2019	O
66	388826N1213078W002	MW 5-2		38.882583	-121.30775	148.65	City of Lincoln	52-62	62	2012-2020	O
69	388944N1215257W001		12N04E16A004M	38.8944	-121.5257	42.82	DWR	Unknown	Unknown	1963-2020	I
70	388971N1213301W001	MW 3-1		38.897133	-121.33008	130.5	City of Lincoln	118-133	133	2012-2020	O
70	388971N1213301W002	MW 3-2		38.897133	-121.33008	130.5	City of Lincoln	65-75	75	2012-2019	O
71	386280N1213493W001	WCMSS		38.62799	-121.34925	90.74	SGA	130-150	170	2017-2019	O
71	386280N1213493W002	WCMSSM		38.62799	-121.34925	90.53	SGA	230-270	290	2017-2019	O
71	386280N1213493W003	WCMSSD		38.62799	-121.34925	90.23	SGA	490-510	530	2017-2019	O
72	389075N1215237W001		12N04E10D002M	38.9075	-121.5237	51.32	DWR	Unknown	Unknown	2011-2020	U
73	389130N1215441W001		12N04E05R004M	38.913	-121.5441	44.32	DWR	Unknown	90	1963-2019	R
74	388029N1214145W001		11N05E16H001M	38.8029	-121.4145	90.36	DWR	135-460	460	2011-2020	I
75	389255N1213566W003	MW 2-3		38.925467	-121.35663	127.67	City of Lincoln	75-85	85	2012-2020	O
75	389255N1213566W002	MW 2-2		38.925467	-121.35663	127.67	City of Lincoln	160-170	170	2012-2019	O
75	389255N1213566W001	MW 2-1		38.925467	-121.356633		City of Lincoln	290-310	310	2012-2019	O
76	389255N1214969W001		13N04E35Q002M	38.9255	-121.4969	57.9	DWR	Unknown	Unknown	1988-2020	U
77		SREL-1-27-F1		38.774911	-121.597535		SGA	Unknown	46.32		O
78	389328N1215489W001		13N04E32G001M	38.9328	-121.5489	48.32	DWR	Unknown	Unknown	1963-2020	I
79	389410N1215254W001		13N04E28R001M	38.941	-121.5254	51.31	DWR	Unknown	Unknown	1949-2013	I
80	389740N1213606W001	Cemetery		38.974027	-121.36062	135.28	DWR	70-111	111	2015-2019	I
81	387432N1215588W001	MW 1		38.74317	-121.55875	109.71	Placer County	30-40	40	2015-2016, 20	I
81	389764N1213710W001	MW-2		38.976427	-121.371	113.69	Placer County	24.3-44.3	45	2016-2020	O
81	389774N1213728W001	MW-3		38.977408	-121.37284	103.41	Placer County	19.5-34.5	35	2016-2020	O
82	387222N1212920W001	Whyte A		38.722168	-121.29196	167.31	SGA	200-220	226	2016-2019	O
82	387222N1212920W002	Whyte B		38.722168	-121.29196	167.35	SGA	280-300	306	2016-2019	O
83	387874N1215764W001	Spangler		38.7874	-121.5764	27	DWR	150-170	252	2014-2016, 20	I
84	389867N1213654W002	Spencer (SVWQC00008)		38.986724	-121.36542		Placer County	96-107	107	2016-2020	R
85	389873N1214156W001	13N05E09R001M	13N05E09R001M	38.9873	-121.4156	86	DWR	Unknown	150	1949-2020	I
86	389128N1214522W001		12N05E06R001M	38.9128	-121.4522	71.3	DWR	Unknown	Unknown		I
87	388710N1214870W001		12N04E24M002M	38.871	-121.487	54.32	DWR	Unknown	340	1952-2017	I
88	388357N1216273W001		11N03E03C002M	38.8357	-121.6273	28.79	DWR	Unknown	97	1948-2007	I
89		Roseview Park - 315		38.719118	-121.328786	156.84	SGA	295-305	315	2014-2019	O
89		Roseview Park - 370		38.719118	-121.328786		SGA	350-360	370	2014-2019	O
89		Roseview Park - 465		38.719118	-121.328786	156.76	SGA	445-455	465	2014-2019	O
90	388026N1214432W002	WPMW-12A		38.802639	-121.443216	69.62	City of Roseville	260-280	300	2019-2020	O
90	388026N1214432W004	WPMW-12B		38.802639	-121.443216	69.57	City of Roseville	508-528	550	2019-2020	O
91	388882N1214005W002	WPMW-11A		38.888164	-121.400463	92.07	Placer County	132-152	162	2019-2020	O
91	388882N1214005W004	WPMW-11B		38.888164	-121.400463	91.7	Placer County	264-304	309	2019-2020	O
92		RDMW-101		38.882937	-121.611051		Sutter County	28-43	48		O
93		RDMW-102		38.879869	-121.58533		Sutter County	28-43	48		O
94	389950N1214148W002	RDMW-103		38.99461	-121.414794		Placer County	28-43	48	2019-2020	O
95	389919N1214141W002	RDMW-104		38.99195	-121.413502		Placer County	28-43	48	2019-2020	O
96		1516		38.634871	-121.231917	88.38	Aerojet	13-33	40	2018-2019	O
97		1518		38.635131	-121.232312	130.71	Aerojet	55-75	80	2018-2019	O
98		URS71000-700+00C		38.639704	-121.562435	41.7	SGA	Unknown	45.24		O
99		URS71000-700+00F		38.639539	-121.561543	24.2	SGA	Unknown	45.14		O
100		13N04E13R001M	13N04E13R001M	38.97	-121.4697	71.57	DWR	Unknown	Unknown		I
101		13N04E16N001M	13N04E16N001M	38.9692	-121.5408		DWR	Unknown	500	1948-2020	I
102	389704N1214340W001	13N05E17R001M	13N05E17R001M	38.9704	-121.434		DWR	Unknown	480	1948-2020	I
103	389857N1214880W001	BR-1B	13N04E11R002M	38.9857	-121.488		DWR	78-98	98	2003-2020	O
103	389857N1214880W004	BR-1A	13N04E11R005M	38.9857	-121.488		DWR	28-48	48	2003-2020	O
103	389857N1214880W002	BR-1C	13N04E11R003M	38.9857	-121.488		DWR	215-245	245	2003-2020	O
103	389857N1214880W003	BR-1D	13N04E11R004M	38.9857	-121.488		DWR	320-331	331	2003-2020	O
104	387000N1212180W001	SGA_MW08		38.69998	-121.21795	218.06	DWR	130-140	140	2007-2019	O
105	388893N1212847W001	MW 4		38.889283	-121.28468	183.87	City of Lincoln	15-25	25	2012-2019	O
106	386814N1213809W001	MW-15	09N06E06A001M	38.68144	-121.38093		Sac Suburban WD	205-481	486	2011-2019	O
107	386697N1213106W001	MW-N28	09N06E03C001M	38.669665	-121.310578		Sac Suburban WD	170-452	454	2011-2019	O
108	389185N1213268W001	Swainson		38.918461	-121.32684	140.65	Placer County	44.1-91.9	92	2015-2019	I
109	387218N1214677W001	SGA_MW01		38.72178	-121.46771	47.59	DWR	100-110	110	2007-2019	O
110		Dpool A		38.7403376	-121.2946181		SGA	190-210	245		O
111		Dpool B		38.7403376	-121.2946181		SGA	310-330	336		O
112	389327N1214594W001		13N05E31K001M	38.9327	-121.4594	70.29	DWR	Unknown	393	1963-2020	U
113	389539N1215186W001		13N04E27C003M	38.9539	-121.5186	54.47	DWR	Unknown	Unknown	2008-2020	I
114	388473N1214905W001	12N04E35H001M	12N04E35H001M	38.8473	-121.4905	50.73	DWR	Unknown	Unknown	2012-2020	U

Appendix C
Groundwater Level Monitoring Well Construction Details

115	389674N1214063W001		13N05E22C003M	38.9674	-121.4063		DWR	Unknown	400	1961-2020	I
116	389791N1213727W001	Old Well #2	13N05E13D003M	38.979133	-121.37269	107	Placer County	144-209	209	2016-2020	O
117	388755N1213144W001	SLC-1	Not Available	38.875475	-121.3144	145	City of Lincoln	142-249	249	2012-2020	O
118	388637N1213222W001	SLC-2	Not Available	38.863733	-121.32218	126.47	City of Lincoln	144-293	293	2012-2020	O
119	388677N1213397W001	SLC-3	Not Available	38.867683	-121.33973	117.98	City of Lincoln	132-311	311	2012-2020	O
120	387141N1212431W001	SCWA_SGA_011	10N07E20D001M	38.714688	-121.2431	207.57	SCWA	Unknown	185	2011-2019	R
121	387139N1215459W001	10N04E21B002M	10N04E21B002M	38.7139	-121.5459	18.97	DWR	Unknown	Unknown	1990-2019	I
122	387137N1214906W001	SCWA_SGA_007	10N04E24B001M	38.7137	-121.4906	30.17	DWR	Unknown	Unknown	1990-2019	I
123	386904N1214757W001	10N05E30L001M	10N05E30L001M	38.6904	-121.4757	38.99	DWR	Unknown	Unknown	1990-2012	R
124	388531N1214244W001		12N05E33C001M	38.8531	-121.4244	69.33	DWR	Unknown	610	1961-2020	I
125	389292N1214056W001	35633	13N05E34P001M	38.9292	-121.4056	89.3	DWR	Unknown	Unknown	1961-2020	I

Appendix D: Geologic Section Well Logs

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

APPENDIX D Geologic Section Well Logs

December 2021

Geologic Section A-A'

ORIGINAL

File with DWR

STATE OF CALIFORNIA THE RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES WATER WELL DRILLERS REPORT

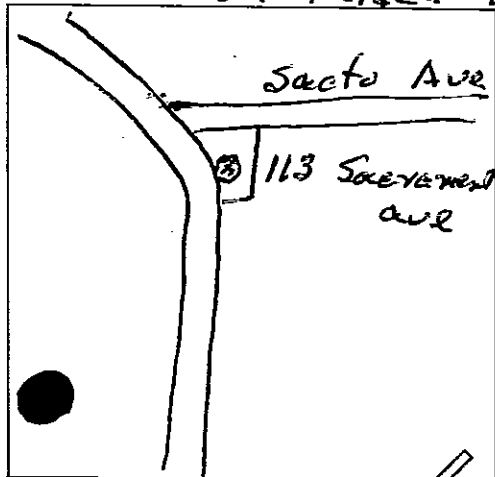
Do not fill in No. 244954

No. of Intent No. Local Permit No. or Date

State Well No. Other Well No. 12N03E02F

(2) LOCATION OF WELL (See instructions): County Sutter Owner's Well Number Well address if different from above Township Range Section Distance from cities, roads, railroads, fences, etc.

1.8 mi south of Yuba City on Garden Hwy



WELL LOCATION SKETCH

(3) TYPE OF WORK:

- New Well Deepening Reconstruction Reconditioning Horizontal Well Destruction Proposed Use: Domestic Irrigation Industrial Test Well Stock Municipal Other

(12) WELL LOG: Total depth ft. Depth of completed well ft. from ft. to ft. Formation (Describe by color, character, size or material)

0-4 - Soil 4-12 - Hard pan 12-42 - Soft Sandy Clay 42-60 - Bl Clay 60-72 - Sandy Bl Clay 72-80 - Bl Sand gravel in Bottom

(5) EQUIPMENT: Rotary Cable Other Reverse Air Bucket

(6) GRAVEL PACK: Yes No Size Diameter of bore Packed from to ft

(7) CASING INSTALLED: Steel Plastic Concrete

(8) PERFORATIONS: Type of perforation or size of screen

Table with 7 columns: From ft, To ft, Dia. in, Gage of Wall, From ft, To ft, Slot size. Row 1: 0, 44, 8, 10, , ,

(9) WELL SEAL: Was surface sanitary seal provided? Were strata sealed against pollution? Method of sealing Coresing hand ad in clay

(10) WATER LEVELS: Depth of first water, if known Standing level after well completion

(11) WELL TESTS: Was well test made? Type of test Depth to water at start of test At end of test Discharge gal/min after hours Water temperature Chemical analysis made? Was electric log made?

Work started 3/8 19 85 Completed 3/12 19 85

WELL DRILLER'S STATEMENT: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. SIGNED Henry J. Herr (Well Driller) NAME Henry J. Herr (Person, firm, or corporation) (Typed or printed) Address 2410 Turcan Rd City Yuba City Zip 95991 License No. 431172 Date of this report 3/13/85

ORIGINAL

STATE OF CALIFORNIA

Do not fill in

File with DWR

THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

No. 244968

of Intent No.
Permit No. or Date

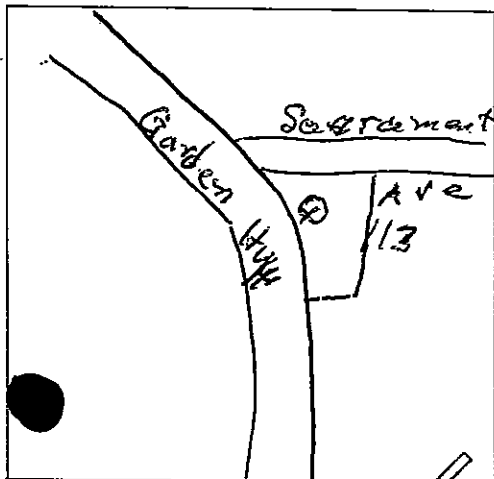
State Well No.
Other Well No. 12N03E02

(1) OW

Address
City

(2) LOCATION OF WELL (See instructions):
County Sutter Owner's Well Number

Well address if different from above
Township Range Section
Distance from cities, roads, railroads, fences, etc.
18 mi. south of Yuba City
on Garden Hiway



WELL LOCATION SKETCH

(3) TYPE OF WORK:

- New Well [X] Deepening []
Reconstruction []
Reconditioning []
Horizontal Well []
Destruction [] (Describe destruction materials and procedures in Item 12)
(4) PROPOSED USE:
Domestic [X]
Irrigation []
Industrial []
Test Well []
Stock []
Municipal []
Other []

(12) WELL LOG: Total depth ft. Depth of completed well ft.
from ft. to ft. Formation (Describe by color, character, size or material)

Table with 2 columns: from ft. to ft. and Formation. Rows: 0-4 Soil, 4-12 Hardpan, 12-42 Soft, sandy clay, 42-60 Blue clay, 60-72 Sandy, blue clay, 72-80 Blue cemented sand, gravel in bottom

(5) EQUIPMENT:
Rotary [] Reverse []
Cable [X] Air []
Other [] Bucket []

(6) GRAVEL PACK:
Yes [] No [X] Size
Diameter of bore
Packed from to ft.

(7) CASING INSTALLED:
Steel [] Plastic [] Concrete []

(8) PERFORATIONS:
Type of perforation or size of screen

Table with 7 columns: From ft., To ft., Dia. in., Gage or Wall, From ft., To ft., Slot size. Row 1: 0, 54, 8, 10

(9) WELL SEAL:
Was surface sanitary seal provided? Yes [X] No [] If yes, to depth 50 ft.
Were strata sealed against pollution? Yes [X] No [] Interval 0'-54 ft.
Method of sealing Casing landed in clay

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes [] No [] If yes, by whom?
Type of test Pump [] Bailer [] Air lift []
Depth to water at start of test ft. At end of test ft.
Flow rate gal/min after hours Water temperature
Chemical analysis made? Yes [] No [] If yes, by whom?
Was electric log made? Yes [] No [] If yes, attach copy to this report

Work started 5/8 19 85 Completed 5/12 19 85

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
SIGNED Henry T. Herr (Well Driller)
NAME Henry T. Herr, Well-Drilling, Inc
Address 2410 Tuscan Rd.
City Yuba City Zip 95991
License No. 431172 Date of this report 5/15/85

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in

No. 340815

Notice of Intent No. _____

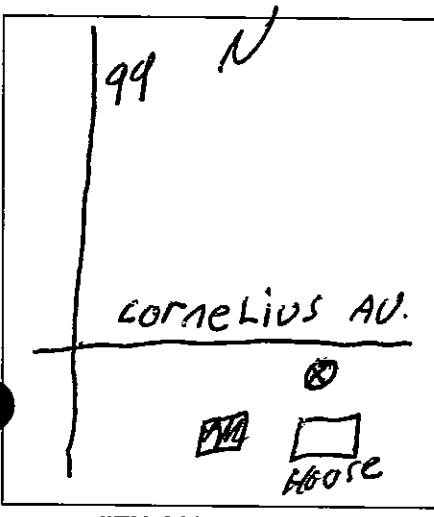
State Well No. _____
Other Well No. 12N04E04B

Local Permit No. or Date _____

(1) WELL LOG: Total depth 194 ft. Completed depth 194 ft.
from ft. to ft. Formation (Describe by color, character, size or material)

(2) LOCATION OF WELL (See instructions):
County SUTTER Owner's Well Number _____
Well address if different from above _____
Township 13 Range 4E Section 4
Distance from cities, roads, railroads, fences, etc. _____

0	-	1	TOP
1	-	17	Brown clay
17	-	19	Shell
19	-	34	Brown clay
34	-	36	Shell
36	-	41	Brown clay
41	-	45	SOFT BROWN CLAY
45	-	48	Sand
48	-	54	Brown clay
54	-	58	Sandy Brown clay
58	-	71	Brown clay
71	-	79	Sand
79	-	84	Brown clay
84	-	88	Shell
88	-	89	Brown clay
89	-	93	Shell
93	-	106	Hard Brown clay
106	-	109	Sandy Brown clay
109	-	115	Shell
115	-	128	Brown clay
128	-	130	Shell
130	-	136	SOFT BROWN CLAY
136	-	148	Brown clay
148	-	156	SOFT SANDY BROWN CLAY
156	-	158	Shell
158	-	162	Brown clay
162	-	164	Shell
164	-	168	Brown clay
168	-	172	Shell
172	-	176	Hard Brown clay
176	-	181	Sandy Brown clay
181	-	187	Shell
187	-	190	Sandy Brown clay
190	-	194	Shell



(3) TYPE OF WORK:
New Well Deepening
Reconstruction
Reconditioning
Horizontal Well
Destruction (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic
Irrigation
Industrial
Test Well
Municipal
Other (Describe)

(5) EQUIPMENT:
Rotary Reverse
Cable Air
Other Bucket

(6) GRAVEL PACK:
Yes No Size _____
Diameter of bore _____
Packed from _____ to _____

(7) CASING INSTALLED:
Steel Plastic Concrete

From ft.	To ft.	Dia. in.	Gage or Wall
0	84	6	10

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
172	176	Hard Brown clay
176	181	Sandy Brown clay
181	187	Shell
187	190	Sandy Brown clay
190	194	Shell

(9) WELL SEAL:
Was surface sanitary seal provided? Yes No If yes, to depth 20 ft.
Were strata sealed against pollution? Yes No Interval 20 ft.
Method of sealing _____

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion 30 ft.

(11) WELL TESTS:
Was well test made? Yes No If yes, by whom? _____
Type of test Pump Bailer Air lift
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes No If yes, by whom? _____
Was electric log made Yes No If yes, attach copy to this report

Work started 6/26 90 Completed 7/6 90
WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed [Signature]
NAME SUPERIOR DRILLING Co.
Address 1146 GRAND AVE
City MARSHVILLE CA ZIP 95901
License No. 466272 Date of this report 7-6-90

REGION _____
 COUNTY Sutter
 NEAR _____

2108A
 DIVISION OF WATER RESOURCES
 DEPARTMENT OF PUBLIC WORKS
 STATE OF CALIFORNIA

MD-13N/3E-36F1
 BASIN 16
 DWR No. 133 36 F 1
 OTHER NOS. _____
 51-458 180

WELL LOG

LOCATION _____

OWNER _____ ADDRESS _____

DRILLED BY Crandall and Herr ADDRESS _____

DRILLING METHOD _____ GRAVEL PACKED _____ DATE COMPLETED Feb. 1935

SIZE OF CASING DEPTH _____ STRUCK WATER AT _____

PERFORATIONS _____ SIZE _____ No. _____

WATER LEVEL BEFORE PERFORATING _____ AFTER _____

TEST DATA: DISCHARGE G. P. M. _____ DRAWDOWN FT. _____ HOURS RUN _____

OTHER DATA AVAILABLE: WATER LEVEL RECORD _____ ANALYSIS _____

SURFACE ELEV. _____ DATUM _____ SOURCE OF INFORMATION Driller

FOR FIELD COPIES USE ALTERNATE LINES

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %
2		Silt		
4		Sand		
22		Silt soil		
35		Brown clay		
39		Brown san (Perforated)		
44		Clay		
60		Sandy clay		
67		Sand		
		Water table 17'		

LOG OBTAINED BY _____ DATE _____ SHEET 1 OF _____

FORM 263. 47625 7-51 5M © SPO

MD 13N/AE-31J1

REGION _____
COUNTY Sutter
NEAR _____

DIVISION OF WATER RESOURCES
DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

BASIN _____
DWR NO. 134 31J1
Nos. 16-33
B & M _____
768

51-789

WELL LOG

LOCATION _____

OWNER _____

DRILLED BY Crandall and Herr ADDRESS _____

DRILLING METHOD _____ GRAVEL PACKED _____ DATE COMPLETED 3/39

SIZE OF CASING DEPTH _____ STRUCK WATER AT _____

PERFORATIONS _____ SIZE 1 1/4" No. _____

WATER LEVEL BEFORE PERFORATING _____ AFTER _____

TEST DATA: DISCHARGE G. P. M. _____ DRAWDOWN FT. _____ HOURS RUN _____

OTHER DATA AVAILABLE: WATER LEVEL RECORD _____ ANALYSIS _____

SURFACE ELEV. _____ DATUM _____ SOURCE OF INFORMATION Log book

FOR FIELD COPIES USE ALTERNATE LINES

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %
3		Soil		
13		Clay, brown		
15		Sand, brown		
36		Clay, brown		
40		Gravel		
50		Gravel, cemented		
68		Clay, brown		
74		Clay, brown, soft		
98		Clay, brown		
108		Sand, brown, cemented		
114		Clay, brown		
116		Sand, cemented		
120		Gravel and sand, caving at 105		

Noted and Coded
As Well 134/AE-31J1

LOG OBTAINED BY _____ DATE _____ SHEET 1 OF _____

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 5
(Insert appropriate number)

13N/4E-31K1
WATER WELL DRILLERS REPORT
(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

LOCATION ~~NOT~~ CHECKED
Do Not Fill In
No. **54781**
State Well No. 13N/4-31K1
Other Well No. 13N/4E-3

751

(1) OWNER:

Name _____
Addr 6

(2) LOCATION OF WELL:

County Sutter Owner's number, if any—
R. F. D. or Street No. One Mile North of the East
Nicolaus highway. 1/4 Mile East of the
Feather River

(3) TYPE OF WORK (check):

New well Deepening Reconditioning Abandon
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:

Rotary
Cable
Dug Well

(6) CASING INSTALLED:

SINGLE DOUBLE
From 1 ft. to 45 ft. Diam. 14" Gage or Wall 10 RD

If gravel packed

Diameter of Bore	from ft.	to ft.

Type and size of shoe or well ring 3/4x6
Describe joint 3/4x6 Butt Weld

Size of gravel:

(7) PERFORATIONS:

Type of perforator used None

From	ft. to	ft.	in., length, by	in.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth _____ ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata
From _____ ft. to _____ ft.
Method of Sealing _____

(9) WATER LEVELS:

Depth at which water was first found 16 ft.
Standing level before perforating _____ ft.
Standing level after perforating _____ ft.

(10) WELL TESTS:

Was a pump test made? Yes No If yes, by whom? Star Well
Yield: 2300 gal./min. with 55 ft. draw down after 8 hrs.
Temperature of water _____ Was a chemical analysis made? Yes No
Was electric log made of well? Yes No

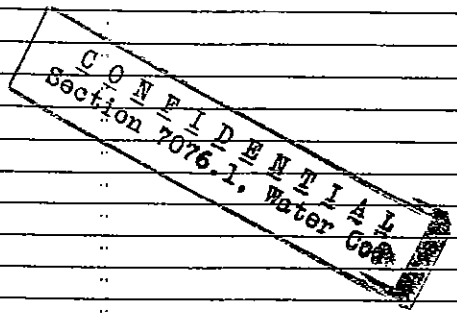
(11) WELL LOG:

Total depth 82 ft. Depth of completed well 82 ft.

Formation: Describe by color, character, size of material, and structure.

ft. to	ft.	
0	16	Top Soil
16	43	Sand
43	53	Clay
53	70	Brown Silt Packed
70	82	Gravel & Sand

*1 MI. NO. OF ENICOLAUS CW EL
CENTRO RD, W ON CORNELIUS AVE
1 MI TO WHITE GATE AT 90° TURN
IN RD. SWIM ALONG DIRT RD
TO SWIM POOL ADJACENT TO
LEDE, WELL IS WEST OF RD &
NEXT TO POOL*



FOR OFFICIAL USE ONLY

Work started 1-25-60 19 _____ Completed 1-28 1960

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Star Well Drilling & Pump Co.
(Person, firm, or corporation) (Typed or printed)

Address Live Oak Highway
Yuba City, California

[SIGNED] James B. McCoy Well Driller
License No. 121868 Dated 2-2 1960

N.B. location of this well may not agree with Hyde Forbes or Kirk Bryan. This location was obtained from Natomas Co. records and is believed to be correct. 51-791 1

REGION _____
 COUNTY Sutter
 NEAR _____

DIVISION OF WATER RESOURCES

DEPARTMENT OF PUBLIC WORKS
 STATE OF CALIFORNIA

BASIN MD 13N/4E-32H1
 DWR No. 134 32H1 B & M
 SER NOS 16-35

51-791

WELL LOG

165

LOCATION Lot 29, Subdivision 1, Bear River Garden, Subarea, Nicolas Quad
Rio Oso, California

OWNER _____

DRILLED BY Linscott Drilling Co. ADDRESS _____
Log 43

DRILLING METHOD _____ GRAVEL PACKED _____ DATE COMPLETED Aug. 6-Sept. 30, 1913

SIZE OF CASING DEPTH _____ STRUCK WATER AT _____

PERFORATIONS _____ SIZE _____ No. _____

WATER LEVEL BEFORE PERFORATING _____ AFTER _____

TEST DATA: DISCHARGE G. P. M. _____ DRAWDOWN FT. _____ HOURS RUN _____

OTHER DATA AVAILABLE: WATER LEVEL RECORD _____ ANALYSIS _____

SURFACE ELEV. _____ DATUM _____ SOURCE OF INFORMATION DWR - Hyde Forbes

FOR FIELD COPIES USE ALTERNATE LINES

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %
10		Top soil	10	
18		Hard pan	8	
30		Soft clay	12	
35		Fine gravel	5	
69		Clay	34	
73		Loose sand	4	
95		Clay	23	
120		Clay and fine gravel	25	
140		Yellow clay	20	
155		White clay	15	
170		Yellow clay	15	
207		All clay with small gravel	37	
210		Sand, gravel, and clay	3	
218		White clay	8	
272		Blue shale	54	
300		Shale and lava	28	
307		Shale	7	
315		Lava	8	
320		Shale	5	
330		Lava	10	
348		Lava sand	18	
395		Blue shale	47	
397		Gravel	2	
405		Shale	8	
430		Lava	25	
435		Shale	5	
450		Lava	15	
463		Blue shale	13	

*Plotted and Coded
 As Well*

MD 13N/4E-32H1

LOG OBTAINED BY _____ DATE _____ SHEET 1 OF 2

WELL LOG

LOCAL DESIGNATION 16-35

DEPTH	ELEVATION OF BOTTOM OF STRATUM	MATERIAL	THICKNESS FEET	% VOIDS	ABSOLUTE VOIDS FEET	TOTAL VOIDS FEET
475		Lava	12			
485		Blue shale, sloughing	10			
505		Lava	20			
510		Blue shale	5			
570		Lava	60			
580		Shale	10			
685		Lava	105			
690		Blue shale	5			
710		Lava	20			
735		Blue shale	25			
740		Lava ash	5			
768		Lava	28			
785		Loose lava	17			
795		Hard lava	10			
806		Loose lava	11			
		Casing - 11-5/8" casing 378 ft. deep				
		9-5/8" casing 806 ft. deep				
		Perforations:				
		Double slots from 500' up to 380'				
		600' up to 500'				
		800' up to 600'				
		Some casing pulled out.				
		Test with air line about 200 gals. per minute.				
		Water level 6 ft.				

FOR FIELD COPIES USE ALTERNATE LINES

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

SWTR
Do Not Fill In
State Well No. 13N4E-32N1E
Other Well No. _____
Region _____

120

(1) Driller:
Name Frank P. Conley
Address 432 Feather Rider Blvd
Marysville, Calif
License No. 105346 Classification C 57

(2) Proposed use or uses (check):
Domestic Municipal
Irrigation Industrial
Domestic and Irrigation Test well
Other _____
(3) Equipment used (check):
Rotary
Cable
Dug well
Other _____

Owner:

Name _____
Address _____

(4) Type of work (check):
New well Reconditioning of well
Deepening existing well

(5) Well log:

Total depth of well 84 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface

ft.	to	ft.
4	5	
5	18	
18	22	
22	46	
46	50	
50	75	
75	84	
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"

top soil
hard pan
brown clay
soft brown clay
brown clay
gray sand
tough brown clay
fine brown sand

Plotted and Coded
As Well 13 N 4 E 32 N 1 E

FOR OFFICIAL USE ONLY

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
<u>53</u>	<u>8"</u>	<u>welded</u>	<u>129</u>	<u>5-2 1/2</u>

Type and size of shoe or well ring 3 x 3/8 Welded joints Yes No

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

Do Not Fill In

State Well No. 16N/9E-26N1
 Other Well No. _____
 Region _____

(7) Perforations:

Type of perforator used _____

Perforated	ft. to	ft.	Hole size	No. of holes
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"

(8) Water levels:

Depth at which water first encountered 18 ft.
 Depth to water before perforating _____ ft.
 Depth to water after perforating _____ ft.
 Note any change in water level while drilling _____

(9) Well pumping test:

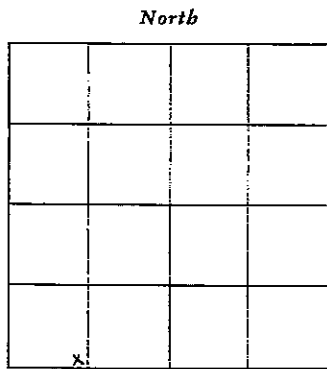
Date of test _____ By whom _____
 Depth to water when test started _____ ft.
 G.P.M. at beginning of test _____
 Drawdown from standing level _____ ft.
 G.P.M. at completion of test _____
 Drawdown at completion of test _____ ft.
 Length of time tested _____
 Temperature of water _____
 Was gas present in water? Yes No

(10) General:

Was well gravel packed? Yes Size of rock _____ Thickness of pack _____
 Was a surface sanitary seal provided? No
 Were any strata sealed against pollution? Yes No If yes, attach detailed description.
 Strata sealed 5 1/2 ft. sealed casing driven into solid clay
 Was analysis made of water? Yes No If yes, attach copy.
 Was electric log made of well? Yes No If yes, attach copy.
 If well abandoned, was it plugged and sealed? _____
 Method of plugging and sealing _____

FOR OFFICIAL USE ONLY

(11) Location:



Section No. 32 (11)
 Township 13-North
 Range 4-East
 Base & Meridian N. 19
 Show location of well in Section, thus (X)
 Distances to section lines from well, N or S 75 ft. and E or W 4200 ft.
 Show location of nearest known well, thus (O)
 Distance to nearest known well _____ ft.

(12) Time of work:

Work started date Aug 8 Completed date Aug 9
 Date of this report Oct 6, 1951

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] Frank P. Conley
Well Driller
 By Bernice Freeborn
 License No. 105346 Classification C 57
 Dated Oct 6, 1951

13N/4E-33J1

DO NOT CHECK

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 5
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

1105

Do Not Fill In
No. 73352
State Well No. 13N/4E-33J1
Other Well No.

(1) OWNER:

(2) LOCATION OF WELL:

County SUTTER Owner's number, if any— NONE
R. F. D. or Street No. 1 MILE NORTH OF NICOLAUS CROSSING
AVE. ON PACIFIC AVE. HOUSE LOCATED
50 FT. WEST OF PACIFIC AVE. - WELL
LOCATED 30 FT. NORTH WEST OF GARAGE.
(CROSSBRIDGE AREA)

(3) TYPE OF WORK (check):

New well Deepening Reconditioning Abandon
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:

Rotary
Cable
Dug Well

(6) CASING INSTALLED:

SINGLE DOUBLE
From 0 ft. to 100 ft. 8 Diam. 12 Gage or Wall
Diameter of Bore from ft. to ft.
NONE

Type and size of shoe or well ring 8X12X4 Size of gravel:
Describe joint BUTT WELDED

(7) PERFORATIONS:

Type of perforator used NONE
Size of perforations in., length, by in.
From ft. to ft. Perf. per row Rows per ft.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth 2 FT. ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata
From 0 ft. to 100 ft.
Method of Sealing CASING DRIVEN IN CLAY

(9) WATER LEVELS:

Depth at which water was first found 65 FT. ft.
Standing level before perforating NO PERFORATING ft.
Standing level after perforating ft.

(10) WELL TESTS:

Was a pump test made? Yes No If yes, by whom?
Yield: gal./min. with ft. draw down after hrs.
Temperature of water Was a chemical analysis made? Yes No
Was electric log made of well? Yes No

(11) WELL LOG:

Total depth 155 ft. Depth of completed well 154 ft.
Formation: Describe by color, character, size of material, and structure.
0 ft. to 3 ft. TOP SOIL
3 " " 30 " RED CLAY
30 " " 32 " FINE BROWN SAND
32 " " 80 " SOFT BROWN CLAY
80 " " 96 " FINE BROWN SAND
96 " " 145 " HEAVY BROWN CLAY
145 " " 155 " BLUE CLAY & FINE SAND (BLUE)

FOR OFFICIAL USE ONLY

Work started MAY 12 1963 Completed MAY 14 1962

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME SUTTER PUMP WORKS
Address 909 S WALTON
FURB CITY CALIF.

[SIGNED] Carl J. Lamm Well Driller
License No. 154299 Dated JUNE 18, 1962

ORIGINAL

File with DWR

STATE OF CALIFORNIA

THE RESOURCES AGENCY

DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

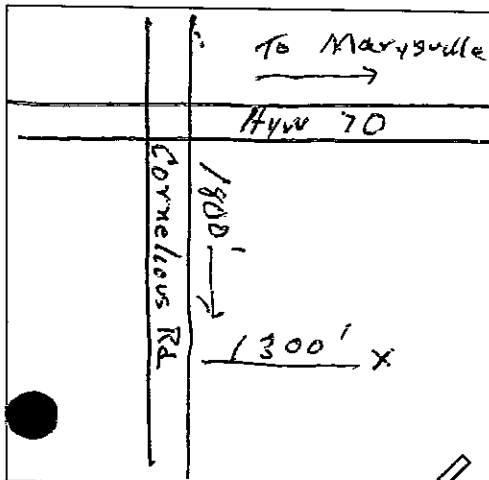
No. 111753

Permit No. or Date

State Well No. Other Well No. 13N/4E-33P

(2) LOCATION OF WELL (See instructions):

County Sutter Owner's Well Number Well address East Michaels Township Range Section Distance from cities, roads, railroads, fences, etc. 1300' N of Cornelius Rd 1800' East of Hwy 70



WELL LOCATION SKETCH

(3) TYPE OF WORK:

- New Well [checked] Deepening [] Reconstruction [] Reconditioning [] Horizontal Well [] Destruction [] (Describe destruction materials and procedures in Item 12) (4) PROPOSED USE: Domestic [] Irrigation [checked] Industrial [] Test Well [] Stock [] Municipal [] Other []

(12) WELL LOG: Total depth 336 ft. Depth of completed well 336 ft. from ft. to ft. Formation (Describe by color, character, size or material)

0 - 3 - Soil 3 - 87 - Br Clay 87 - 98 - Fine Gravel 98 - 140 - Br Clay 140 - 150 - Cem Sand & gravel 2" 150 - 205 - Br Clay 205 - 210 - Cem gravel. Fine 210 - 260 - Blue Clay 260 - 268 - Cem 13.1 Sand 268 - 310 - Blue Clay 310 - 336 - Blue Cem Sand covering

- (5) EQUIPMENT: Rotary [] Cable [checked] Other [] Reverse [] Air [] Bucket []

- (6) GRAVEL PACK: Yes [] No [checked] Size Diameter of bore Packed from to

(7) CASING INSTALLED: Steel [checked] Plastic [] Concrete []

From ft.	To ft.	Dia. in.	Gage or Wall
0	152	14	10

(8) PERFORATIONS: Type of perforation or size of screen

From ft.	To ft.	Slot size

- (9) WELL SEAL: Was surface sanitary seal provided? Yes [] No [checked] If yes, to depth ft. Were strata sealed against pollution? Yes [checked] No [] Interval 0 - 152 ft. Method of sealing Casing Landed in Clay

- (10) WATER LEVELS: Depth of first water, if known 60 ft. Standing level after well completion ft.

- (11) WELL TESTS: Was well test made? Yes [] No [checked] If yes, by whom? Type of test Pump [] Bailer [] Air lift [] Depth to water at start of test ft. At end of test ft. Discharge gal/min after hours Water temperature

Work started 9/5/1978 Completed 9/12/1978

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED Henry J. Terry (Well Driller) NAME H.T. Terry (Person, firm, or corporation) (Typed or printed) Address 2410 Tuscan Rd City Yuba City Zip 95991 License No. 209184 Date of this report 7/20/78

172 • See 2-10-1

ORIGINAL
File Original, Duplicate and Triplicate with the
DIVISION OF WATER RESOURCES
P. O. BOX 1079
SACRAMENTO 5, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

COUNTY 1
51-793

Do Not Fill In
State Well No. 13N-4E-33Q1
Other Well No. 27-27A
Region 5

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

17

(1) Driller:
Name William Flynn
Address Box 157 Sutter, Calif.
So. Butte Rd at York
License No. 97194 Classification SC 57

(2) Proposed use or uses (check): (3) Equipment used (check):
Domestic Municipal
Irrigation Industrial Rotary
Domestic and Irrigation Test well Cable
Other _____ Dug well
Other _____ Other _____

Owner:
Name _____
Address _____

(4) Type of work (check):
New well Deepening existing well
Reconditioning of well

(5) Well log:
Total depth of well 300 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface	
ft.	ft.
0	4
4	27
27	31
31	50
50	65
65	120
120	134
134	161
161	174
174	240
240	280
280	290
290	300
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"

Top Soil
 Yellow Clay
 Sand and Decomposed Granite
 Yellow Clay and Decomposed Granite
 Sandy Yellow Clay
 Yellow Clay
 Sandy Yellow Clay
 Yellow Clay
 Hard Sand
 Yellow Clay
 Blue Clay
 Brown Lava Sand
 Blue Clay

Plotted and Coded
 As Well 13N-4E-33Q1

FOR OFFICIAL USE ONLY

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING Steel	SEATING BELOW GROUND SURFACE, FT.
<u>70</u>	<u>14</u>	<u>3/16 welded</u>		<u>70</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Type and size of shoe or well ring _____ Welded joints— Yes No
14" X 5/8" X 4"

27-27A 51-793

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

Do Not Fill In
State Well No. 13A-4E-33Q1
Other Well No. 27-27A
Region 5

(7) Perforations:

Type of perforator used None

Perforated	ft.	to	ft.	Hole size	No. of holes
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

(8) Water levels:

Depth at which water first encountered 40 ft.
Depth to water before perforating _____ ft.
Depth to water after perforating _____ ft.
Note any change in water level while drilling _____

(9) Well pumping test:

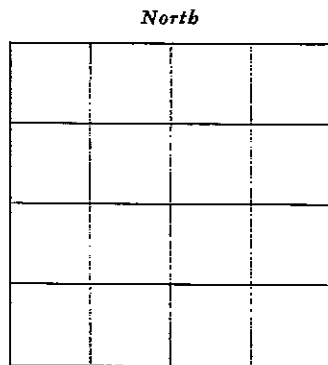
Date of test _____ By whom _____
Depth to water when test started _____ ft.
G.P.M. at beginning of test _____
Drawdown from standing level 10 ft.
G.P.M. at completion of test _____
Drawdown at completion of test _____ ft.
Length of time tested _____
Temperature of water _____
Was gas present in water? Yes No

(10) General:

Was well gravel packed? NO Size of rock _____ Thickness of pack _____
Was a surface sanitary seal provided? _____
Were any strata sealed against pollution? Yes No If yes, attach detailed description.
Strata sealed _____
Was analysis made of water? Yes No If yes, attach copy.
Was electric log made of well? NO Yes No If yes, attach copy.
If well abandoned, was it plugged and sealed? _____
Method of plugging and sealing _____

FOR OFFICIAL USE ONLY

(11) Location:



Section No. 33
Township Nicolas
Range Sutter County
Base & Meridian _____
Show location of well in Section, thus (X) _____
Distances to section lines from well, N or S 500 N ft. and E or W _____ ft.
Show location of nearest known well, thus (O) _____
Distance to nearest known well 500 ft.

(12) Time of work:

Work started date June 5 Completed date June 8 51
Date of this report June 25 51

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] [Signature]
Well Driller

By _____
License No. 97194 Classification 3057
Dated June 25, 1951

1-Mile North & 1-Mile East of East Nicolas, 500 ft North of Road

(11) WELL LOG:

Total depth 130 ft. Depth of completed well 130 ft.

Formation: Describe by color, character, size of material, and structure

0 ft. to 2 Top soil ft.
2 35 Soft Clay
25 35 Dry Sand
35 60 soft yellow clay
60 78 sand & gravel
78 - 125 yellow clay
125 - 130 sand.

(2) LOCATION OF WELL:

County Butte Owner's number, if any _____
Township, Range, and Section _____
Distance from cities, roads, railroads, etc. _____

(3) TYPE OF WORK (check):

New Well Deepening Reconditioning Destroying

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:

Rotary
Cable
Other

This Well is approx 2 miles
south of Rio Chico on
Highway Ave. approx 1/2 mi.
East out in Pasture.

(6) CASING INSTALLED:

STEEL: OTHER:
SINGLE DOUBLE

If gravel packed

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	80	8"	12ga.			

Size of shoe or well gage 4x4x8" Size of gravel: _____

Describe joints B/W

Plotted and Coded

As Well 13N/4E-34M SC

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth _____ ft.

Were any strata sealed against pollution? Yes No If yes, note depth of strata

From 0 ft. to _____ ft.

From _____ ft. to _____ ft.

Method of sealing _____

Work started 4/5 1971 . Completed 4/6 1971

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

(9) WATER LEVELS:

Depth at which water was first found, if known 35 ft.

Standing level before perforating, if known _____ ft.

Standing level after perforating and developing 15.5 ft.

NAME Desman Don Pump Co.
(Person, firm, or corporation) (Typed or printed)

Address 470 N. 1st St. Wash. Blvd
Yuba City Calif.

(10) WELL TESTS:

Was pump test made? Yes No If yes, by whom?

Field: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Temperature of water _____ Was a chemical analysis made? Yes No

Was electric log made of well? Yes No If yes, attach copy

(SIGNED) J. N. Desman
(Well Driller)

License No. 196093 Dated 4/13 1971

SKETCH LOCATION OF WELL ON REVERSE SIDE

CONFIDENTIAL LOG
Water Code Sec. 13752

DIVISION OF WATER RESOURCES

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, State Code)

Do Not Fill In

State Well No. _____
Other Well No. 13N-4E-35H
Region 5

206

(1) Driller: Chas D. Cronin
Name _____
Address #14405 1/2 St. Colton
License No. 123196 Classification C-57
Proposed use or uses (check):
Domestic Municipal
Irrigation Industrial
Domestic and Irrigation Test well
Other _____
(3) Equipment used (check):
Rotary
Cable
Dug well
Other _____

Owr _____
Nam _____
Addr _____

(4) Type of work (check):
New well Reconditioning of well
Deepening existing well

(5) Well log:
Total depth of well 544 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface

ft.	to	ft.	
0		372	UNKNOWN
372		382	Gray Sand (med)
382		510	Peam & clean out - Clay Mud
510		544	Block Sand Cemented (Coarse)
			Plotted and Coded
			As Well <u>13N 19E 35H80</u>

FOR OFFICIAL USE ONLY

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
<u>60</u>	<u>12</u>	<u>Single Welded</u>	<u>169.2</u>	<u>360 to 390</u>

Type and size of shoe or well ring _____ Welded joints Yes No

2-12x4x3/8 Steel Shoes

51-469 SHEET 2 106
Sutter
Do Not Fill In
State Well No. _____
Other Well No. 13N-4E-35
Region 5

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

CONFIDENTIAL
Section 7076, Water Code

(7) Perforations:

Type of perforator used	Perforated	ft. to	ft. Hole size	No. of holes
	Top 30'	Slotted 6"	8" slots to the round	
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"

(8) Water levels:

Depth at which water first encountered 28 ft.
 Depth to water before perforating _____ ft.
 Depth to water after perforating _____ ft.
 Note any change in water level while drilling
None

(9) Well pumping test:

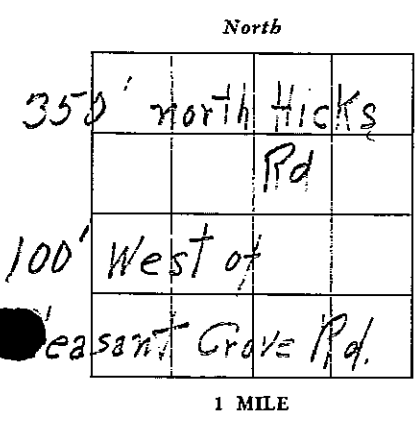
Date of test _____ By whom _____
 Depth to water when test started _____ ft.
 G.P.M. at beginning of test _____
 Drawdown from standing level _____ ft.
 G.P.M. at completion of test _____
 Drawdown at completion of test _____ ft.
 Length of time tested _____
 Temperature of water _____
 Was gas present in water? Yes No

(10) General:

Was well gravel packed? no Size of rock _____ Thickness of pack _____
 Was a surface sanitary seal provided? _____
 Were any strata sealed against pollution? Yes No If yes, attach detailed description.
 Strata sealed _____
 Was analysis made of water? Yes No If yes, attach copy.
 Was electric log made of well? Yes No If yes, attach copy.
 If well abandoned, was it plugged and sealed? _____
 Method of plugging and sealing _____

FOR OFFICIAL USE ONLY

(11) Location:



Section No. _____
 Township _____
 Range _____
 Base & Meridian _____
 Show location of well in Section, thus (X) _____
 Distances to section lines from well, N or S _____ ft.
 and E or W _____ ft.
 Show location of nearest known well, thus (O) _____
 Distance to nearest known well _____ ft.

(12) Time of work:

Work started date 4/20/53 Completed date 4/24/53
 Date of this report 5/18/53

WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
 [SIGNED] Chas D. Sandell
 Well Driller
 By _____
 License No. 12310 Classification 357
 Dated May 18, 19 53

ORIGINAL
 File Original, Duplicate and Triplicate with the
 REGIONAL WATER POLLUTION
 CONTROL BOARD No. _____
 (Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

256

Do Not Fill In
No. 8627
 State Well No. _____
 Other Well No. 13/4-36F

(1) Nam _____
Addr _____

(2) LOCATION OF WELL:
 County Sutter Owner's number, if any—
 R. F. D. or Street No. Rio Oso Sub Station
1/2 mile East of Pleasant Grove Road
on Nicks Road, 1/2 mile North of Nicks Road

(3) TYPE OF WORK (check):
 New well Deepening Reconditioning Abandon
 If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
 Domestic Industrial Municipal
 Irrigation Test Well Other

(5) EQUIPMENT:
 Rotary
 Cable
 Dug Well

(6) CASING INSTALLED:
 SINGLE DOUBLE
 From 0 ft. to 91 ft. 8" Diam. 8 Gage or Wall
 Diameter of Bore from ft. to ft.
 Type and size of shoe or well ring 8" x 4" x 5/8" Size of gravel:
 Describe joint _____

(7) PERFORATIONS: None
 Type of perforator used _____
 Size of perforations in., length, by in.
 From ft. to ft. Perf. per row Rows per ft.

(8) CONSTRUCTION:
 Was a surface sanitary seal provided? Yes No To what depth 6 ft.
 Were any strata sealed against pollution? Yes No If yes, note depth of strata
 From ft. to ft.
 Method of Sealing _____

(9) WATER LEVELS:
 Depth at which water was first found 45 ft.
 Standing level before perforating _____ ft.
 Standing level after perforating _____ ft.

(10) WELL TESTS:
 Was a pump test made? Yes No If yes, by whom? SWD & P Co.
 Yield: 120 gal./min. with 12 ft. draw down after 8 hrs.
 Temperature of water _____ Was a chemical analysis made? Yes No
 Was electric log made of well? Yes No

(11) WELL LOG:

Total depth	ft.	Depth of completed well	ft.
0	to	2	Sand
2	to	12	Red Clay
12	to	21	brown sandy clay
21	to	56	sand & gravel
56	to	59	brown sandy clay
59	to	67	sand & gravel
67	to	78	brown sandy clay
78	to	82	cemented sand
82	to	95	brown sandy clay
95	to	108	cemented sand
108	to	110	sand & pea gravel
110	to	150	brown sandy clay

Formation: Describe by color, character, size of material, and structure.

Plotted and Coded
 As Well 13/4-14F-36F50

FOR OFFICIAL USE ONLY

Work started 6/29/54 19 _____ Completed 7/7/54 19 _____

WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
 NAME Star Well Drilling & Pump Co.
 (Person, firm, or corporation) (Typed or printed)
 Address P.O. Box 689
Yuba City, Calif.
 [SIGNED] Stem & Mares
 Well Driller
 License No. 121868 Dated 7/10/54, 19 _____

51-471

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

LOCATION NOT CHECKED
Do Not Fill In

STATE OF CALIFORNIA—DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES 2322

State Well No. _____
Other Well No. 13N-4E-36N
Region _____

C.O.M.E.L.D.E. ID. No. 7076-I-A-111
SECTION 7076 WATER CODE

(1) DRILLER: (person, firm, or corporation)
Name Frank P. Conley
Address 432 - Feather River Blvd
Marysville, Calif

(8) LOCATION OF WELL:
County Sutter
R. F. D. or Street No. Pleasant Grove Rd,
End of Cornelius Ave.

OWNER
Name _____
Address _____

(2) Proposed Use (Check) Equipment

Domestic <input type="checkbox"/>	Industrial <input type="checkbox"/>	Rotary <input type="checkbox"/>
Irrigation <input checked="" type="checkbox"/>	Test Well <input type="checkbox"/>	Cable <input checked="" type="checkbox"/>
Municipal <input type="checkbox"/>	Other <input type="checkbox"/>	Dug Well <input type="checkbox"/>
		Other <input type="checkbox"/>

(3) CASING:
84 ft. of 14 in 10 lb./ga. casing left in well

"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Type and size of shoe or well ring 14" 4 x 1/2

(4) PERFORATIONS:
Type of perforator used _____

Perforated	ft. to	ft.	holes per	in.
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"

Diameter of perforations _____ in., length _____ in.

(5) WATER LEVELS:
Was electric log made of well? Yes No If yes, attach copy.
Depth at which water was first found 50 ft.
Standing level before perforating _____ ft.
Standing level after perforating _____ ft.
Note your observation of any change in water level while drilling 40
Was a surface sanitary seal provided? No

(6) WELL PUMPING TEST:
Capacity _____ gal./min. ft. draw down _____
Was well gravel packed? No
Were any strata sealed against pollution? Casing driven into clay at 85'
Temperature _____ Was a chemical analysis made? _____ Attach copy _____
If abandoned was well capped? _____

(7) TYPE OF WORK (check):
New well Reconditioning of well
Deepening existing well

(9) WELL LOG:
Total depth of well 320 ft.
Formation: Mention size of water gravel—

<u>0</u>	ft. to	<u>28</u>	ft.	<u>top soil</u>
<u>28</u>	"	<u>48</u>	"	<u>orange sand</u>
<u>48</u>	"	<u>50</u>	"	<u>sea gravel</u>
<u>50</u>	"	<u>190</u>	"	<u>brownish clay</u>
<u>190</u>	"	<u>193</u>	"	<u>brown sand</u>
<u>193</u>	"	<u>198</u>	"	<u>crumbly brown clay</u>
<u>198</u>	"	<u>200</u>	"	<u>sea gravel</u>
<u>200</u>	"	<u>260</u>	"	<u>brown clay & gravel</u>
<u>260</u>	"	<u>265</u>	"	<u>blue clay</u>
<u>265</u>	"	<u>295</u>	"	<u>brown clay</u>
<u>295</u>	"	<u>319</u>	"	<u>blue shale</u>
<u>319</u>	"	<u>320</u>	"	<u>clay</u>

Plotted and Coded
As Well 13N-4E-36N80

FOR OFFICIAL USE ONLY

Work started July 3 19 53, Completed July 10 19 53
Date of Report Aug 7, 19 53

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
[SIGNED] Frank P. Conley
Well Driller
By Bernard Schabert
License No. 11524 Classification 357
Dated Aug 7, 19 53

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

45
SHEET 1
LOCAT 31-113 ECKED

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

Do Not Fill In
State Well No. _____
Other Well No. 13N-5-270
Region _____

(1) Driller:
Name William Flynn
Address Box 157 Sutter, Calif.
License No. 97194 Classification 8057

(2) Proposed use or uses (check): (3) Equipment used (check):
Domestic Municipal
Irrigation Industrial Rotary
Domestic and Irrigation Test well Cable
Irrigation Dug well
Other _____ Other _____

(4) Type of work (check):
New well Reconditioning of well
Deepening existing well

(5) Well log:
Total depth of well 400 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface

1	ft. to	3	ft.
3	" "	10	" "
10	" "	35	" "
35	" "	40	" "
40	" "	55	" "
55	" "	58	" "
58	" "	85	" "
85	" "	100	" "
100	" "	110	" "
110	" "	120	" "
120	" "	170	" "
170	" "	180	" "
180	" "	190	" "
190	" "	200	" "
200	" "	250	" "
250	" "	290	" "
290	" "	300	" "
300	" "	360	" "
360	" "	370	" "
370	" "	400	" "
400	" "	405	" "
405	" "		" "
	" "		" "
	" "		" "
	" "		" "

top soil
hard pan
brown clay
brown clay
yellow clay
packed gravel
soft clay
brown clay
yellow hard clay
soft yellow clay
hard gray clay
soft clay
yellow clay
hard sand
tough clay
gray clay
hard sand
yellow clay
blue clay
hard gray clay
blue sand
blue shale

Plotted and Coded
As Well 13N 105E-270

FOR OFFICIAL USE ONLY

CONFIDENTIAL
Section 7076.1, Water Code

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
132	14	single	107	132

Type and size of shoe or well ring _____ Welded joints— Yes No
14" x 5/8" x 4"

91-113 45
 SHEET 2
 LOCATION NOT CHECKED
 LOCATION NOT CHECKED
 Do Not Fill In

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

State Well No. _____
 Other Well No. _____
 Region _____

(7) Perforations:

Type of perforator used	Mills	ft.	to	ft.	Hole size	No. of holes
Perforated	90		124		1/2 X 2	180
"	"	"	"	"	"	"
"	"	"	"	"	"	"
"	"	"	"	"	"	"
"	"	"	"	"	"	"
"	"	"	"	"	"	"
"	"	"	"	"	"	"
"	"	"	"	"	"	"
"	"	"	"	"	"	"
"	"	"	"	"	"	"

(8) Water levels:

Depth at which water first encountered 40 ft.
 Depth to water before perforating 40 ft.
 Depth to water after perforating 40 ft.
 Note any change in water level while drilling _____

(9) Well pumping test:

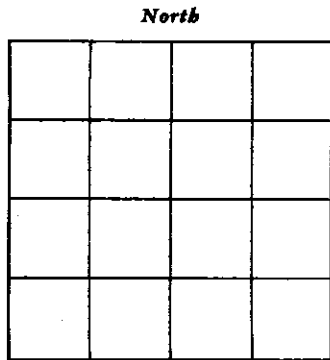
Date of test None By whom _____
 Depth to water when test started _____ ft.
 G.P.M. at beginning of test _____
 Drawdown from standing level _____ ft.
 G.P.M. at completion of test _____
 Drawdown at completion of test _____ ft.
 Length of time tested _____
 Temperature of water _____
 Was gas present in water? Yes No

(10) General:

Was well gravel packed? NO Size of rock _____ Thickness of pack _____ **FOR OFFICIAL USE ONLY**
 Was a surface sanitary seal provided? _____
 Were any strata sealed against pollution? Yes No If yes, attach detailed description.
 Strata sealed _____
 Was analysis made of water? Yes No If yes, attach copy.
 Was electric log made of well? Yes No If yes, attach copy.
 If well abandoned, was it plugged and sealed? _____
 Method of plugging and sealing _____

C O N F I D E N T I A L
 Section 7076.1, Water Code

(11) Location:



1 MILE

Section No. 27
 Township 10 / 2
 Range Placer County
 Base & Meridian _____
 Show location of well in Section, thus (X) _____
 Distances to section lines from well, N or S _____ ft.
 and E or W _____ ft.
 Show location of nearest known well, thus (O) _____
 Distance to nearest known well 1800 ft.

(12) Time of work:

Work started date 11/30/51 Completed date 12/5/51
 Date of this report 3/3/52

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] [Signature]
 W/Driller

By _____
 License No. 97194 Classification 8057

Dated March 3, 1952

3rd road south of Sheridan on old Resville road 1 1/2 miles west of old Resville road, 1/4 mile past 1st set of buildings, 800 ft. north of road.

ORIGINAL

File with DWR

Notice of Intent No. 135681

Local Permit No. or Date _____

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in

No. 44513

State Well No. _____
Other Well No. 13N/5E-28L

(2) LOCATION OF WELL (See instructions):
County Sutter Owner's Well Number _____
Well address if different from above Waltz Rd
Township 13N Range 5E Section 28
Distance from cities, roads, railroads, fences, etc. N/E quarter of
s/w quarter of section 28 1 1/2 miles
East of Brewer Rd and 1/2 mile
north of Waltz Rd.

(3) TYPE OF WORK:
New Well Deepening
Reconstruction
Reconditioning
Horizontal Well
Destruction (Describe destruction materials and procedures in Item 12)
(4) PROPOSED USE:
Domestic
Irrigation
Industrial
Test Well
Stock
Municipal
Other

(5) EQUIPMENT:
Rotary Reverse
Cable Air
Other Bucket

(6) GRAVEL PACK:
Yes No Size _____
Diameter of bore _____
Packed from _____ ft. to _____ ft.

(7) CASING INSTALLED:
Steel Plastic Concrete

(8) PERFORATIONS:
Type of perforation or size of screen Mils knife

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	204	1 1/2	3/16	130	190	

(9) WELL SEAL:
Was surface sanitary seal provided? Yes No If yes, to depth _____ ft.
Were strata sealed against pollution? Yes No Interval _____ ft.
Method of sealing Casing driven 51' into light brown clay

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion 72 ft.

(11) WELL TESTS:
Was well test made? Yes No If yes, by whom? Valley Pump
Type of test Pump Bailer Air lift
Depth to water at start of test 67 ft. At end of test 136 ft.
Discharged 2950 gal/min after 2 1/2 hours Water temperature _____
Chemical analysis made? Yes No If yes, by whom? _____
Well log made? Yes No If yes, attach copy to this report

(12) WELL LOG: Total depth 515 ft. Depth of completed well _____ ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	4	top soil
4	6	red clay
6	37	Brown clay
37	91	Dark Brown clay
91	93	quick sand
93	159	Cemented sand
159	220	light brown clay
220	225	black sand
225	250	Cemented gravel
250	296	Brown clay
296	331	unders & gravel
331	465	blue clay
465	490	blue shale
490	515	blue clay

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Paul A. Baillie
(Well Driller)
NAME Valley Pump & Motor Works, Inc
(Person, firm, or corporation) (Typed or printed)
Address 470 No. Geo. Washington Blvd
City Yuba City Zip 95991
License No. 256384 Date of this report 11-20-77

ORIGINAL

File with DWR

STATE OF CALIFORNIA

THE RESOURCES AGENCY

DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 123431

of Intent No. _____

Permit No. or Date _____

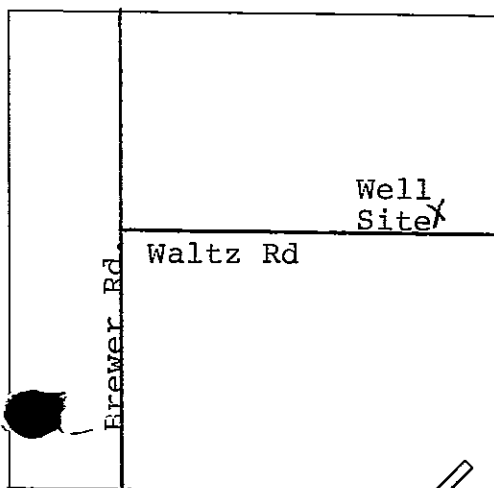
State Well No. _____
Other Well No. 13U/SE-29 R

(1) Adc _____
City _____

(2) LOCATION OF WELL (See instructions):
County Sutter Owner's Well Number A-14

Well address if different from above _____
Township 13 N Range 5E Section SW 1/4 28

Distance from cities, roads, railroads, fences, etc. Approx 1 mi east
of Brewer Rd on north side of Waltz
Rd.



(3) TYPE OF WORK:

- New Well Deepening
- Reconstruction
- Reconditioning
- Horizontal Well
- Destruction (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

- Domestic
- Irrigation
- Industrial
- Test Well
- Stock
- Municipal
- Other

(12) WELL LOG: Total depth 505 ft. Depth of completed well 386 ft.
from ft. to ft. Formation (Describe by color, character, size or material)

- 0- 2 Red gravel, top soil
- 2- 7 Hard pan
- 7- 9 Gravel and clay mixed
- 9- 14 Hard yellow clay
- 14- 31 Rocks and gravel
- 31- 40 Hard yellow clay
- 40- 52 Hard pan
- 52- 54 Coarse sand and gravel
- 54- 65 Hard yellow clay
- 65- 86 Brittle brown clay
- 86- 89 Coarse sand and gravel
- 89- 96 Yellow clay
- 96- 99 Hard gray clay
- 99- 137 Brown sandy clay
- 137- 143 Coarse sand and gravel
- 143- 152 Sandy brown clay
- 152- 173 Green clay
- 173- 180 Blue clay
- 180- 190 Blue clay
- 190- 239 Hard brown clay & cemented sand
- 239- 267 Hard green clay
- 267- 280 Brown cemented sand
- 280- 285 Hard sand and brown hard pan
- 285- 320 Hard shale and sandstone
- 320- 340 Coarse sand and gravel shale
- 340- 345 Hard sandy blue clay
- 345- 350 Hard blue sand stone
- 350- 370 Hard blue clay
- 370- 377 Coarse sand and fine shale
- 377- 400 Sandy blue clay & blue shale
- 400- 441 Blue clay
- 441- 444 Clay and gravel mixed
- 444- 498 Coarse sand
- 498- 500 Sandy blue clay
- 500- 504 Clay and coarse sand
- 504- 505 Hard blue clay

WELL LOCATION SKETCH

- (5) EQUIPMENT:
- Rotary
 - Cable
 - Other
 - Reverse
 - Air
 - Bucket

- (6) GRAVEL PACK:
- Yes No
 - Size 26
 - Diameter of bore 26
 - Packed from 0 to 386 ft.

- (7) CASING INSTALLED:
- Steel Plastic Concrete

- (8) PERFORATIONS: Johnson Irrigator
- Type of perforation or size of screen

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	233	16	1/4	233	253	100
253	278	16		278	338	100
338	368	16		368	386	100

From ft.	To ft.	Slot size
233	253	100
278	338	100
368	386	100

- (9) WELL SEAL:
- Was surface sanitary seal provided? Yes No If yes, to depth _____ ft.
- Were strata sealed against pollution? Yes No Interval _____ ft.
- Method of sealing _____

Work started 2-22 19 77 Completed 2-26 19 77

- (10) WATER LEVELS:
- Depth of first water, if known _____ ft.
- Standing level after well completion 46 ft.

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

- (11) WELL TESTS:
- Was well test made? Yes No If yes, by whom? EELCO
- Type of test Pump Bailer Air lift
- Depth to water at start of test 52 ft. At end of test 189 ft.
- Discharge 3000 gal/min after 2 hours Water temperature _____
- Analysis made? Yes No If yes, by whom? _____
- Was electric log made? Yes No If yes, attach copy to this report

SIGNED _____ (Well Driller)

NAME E.E. Luhdorff Co/Division of Layne
(Person, firm, or corporation) (Typed or printed)

Address P.O. Box 1326 Western

City Woodland Zip 95695

License No. 334205 Date of this report 12-22-77

SUTTER
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

SHEET 1
13N 5E 32C1

51-123

Do Not Fill In
Well No. 13N 5E-32C1

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

37

Other Well No.
Region

(1) Driller:

Name: JB Breazeale
Address: Route 1 Box 312 Lucerne Calif
License No. _____ Classification _____

(2) Proposed use or uses (check): (3) Equipment used

Domestic Municipal
Irrigation Industrial
Domestic and Irrigation Test well
Irrigation Dug well
Other _____ Other _____

(check):

Own
Name
Addr

Type of work (check):
New well Reconditioning of well
Deepening existing well

(5) Well log:

Total depth of well 120 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface

1	ft. to	30	ft.
30	" "	32	" "
32	" "	60	" "
60	" "	61	" "
61	" "	109	" "
109	" "	120	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "
"	" "	"	" "

Clay - red
gravel size of an egg (no water)
Clay - red
coarse grey sand (loose)
Clay red
sand, grey, coarse, (loose)

Slotted and Cased
As Well 13N 5E 32C1

FOR OFFICIAL USE ONLY

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
<u>76 ft</u>	<u>10</u>		<u>10</u>	<u>75 ft</u>

Type and size of shoe or well ring 1/2 x 4 in Welded joints Yes No

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

51-123

Do Not Fill In

State Well No. 21155-2201
 Other Well No. 51-123
 Region 5

(7) Perforations:

Type of perforator used	ft.	to	ft.	Hole size	No. of holes
<u>None</u>					
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

(8) Water levels:

Depth at which water first encountered 40 ft.
 Depth to water before perforating _____ ft.
 Depth to water after perforating _____ ft.
 Note any change in water level while drilling
went from 40 to 30

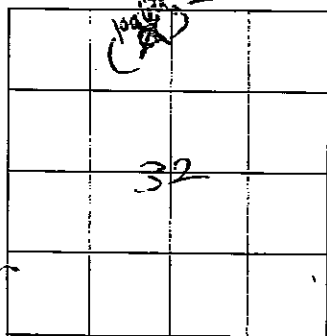
(9) Well pumping test:

Date of test _____ By whom _____
 Depth to water when test started _____ ft.
 G.P.M. at beginning of test _____
 Drawdown from standing level _____ ft.
 G.P.M. at completion of test _____
 Drawdown at completion of test _____ ft.
 Length of time tested _____
 Temperature of water _____
 Was gas present in water? Yes No

(10) General:

Was well gravel packed? no Size of rock _____ Thickness of pack _____
 Was a surface sanitary seal provided? _____
 Were any strata sealed against pollution? Yes No If yes, attach detailed description.
 Strata sealed all sealed to 75' ft **FOR OFFICIAL USE ONLY**
 Was analysis made of water? Yes No If yes, attach copy.
 Was electric log made of well? Yes No If yes, attach copy.
 If well abandoned, was it plugged and sealed? _____
 Method of plugging and sealing _____

(11) Location:



1 MILE

Section No. 32
 Township 13 North
 Range 5 West
 Base & Meridian Diablo
 Show location of well in Section, thus (X)
 Distances to section lines from well, N or S 100 ft. and E or W _____ ft.
 Show location of nearest known well, thus (O)
 Distance to nearest known well 1/2 mi. east

(12) Time of work:

may 28
 Work started date May 9 Completed date June 7
 Date of this report June 7, 1950

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] J.B. Brumbyale
 Well Driller

By _____

License No. _____ Classification _____

Dated _____, 19 _____

ORIGINAL
File with DWR

CONFIDENTIAL
Water Code Sec. 13752

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do Not Fill In

No 113384

State Well No. _____
Other Well No. 13403E35A

(2) LOCATION OF WELL:

County Placer Owner's number, if any _____

Township, Range, and Section _____

Distance from cities, roads, railroads, etc. _____

(3) TYPE OF WORK (check):

New Well Deepening Reconditioning Destroying

If destruction, describe material and procedure in Item 11. _____

(4) PROPOSED USE (check):

Domestic Industrial Municipal Irrigation Test Well Other

(5) EQUIPMENT:

Rotary Cable Other

(6) CASING INSTALLED:

STEEL:				OTHER:		
From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
144'		14" x 3/16"	B/W Plate Casing			

Size of shoe or well ring: 14"x6"x3/4" Size of gravel: _____

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen _____

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth _____ ft.

Were any strata sealed against pollution? Yes No If yes, note depth of strata _____

From _____ ft. to _____ ft.

From _____ ft. to _____ ft.

Method of sealing _____

(9) WATER LEVELS:

Depth at which water was first found, if known 32 ft.

Standing level before perforating, if known 32 ft.

Standing level after perforating and developing _____ ft.

(10) WELL TESTS:

Was pump test made? Yes No If yes, by whom? _____

'd: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Temperature of water _____ Was a chemical analysis made? Yes No

Was electric log made of well? Yes No If yes, attach copy _____

(11) WELL LOG:

Total depth 0 ft. Depth of completed well 250 ft.

Formation: Describe by color, character, size of material, and structure

FROM:	TO:	ft. to	ft.
0'	05'	Top Soil	
05'	10'	Red Clay	
10'	18'	Sand & Gravel 2"	
18'	80'	Red Clay & Streaks of Clay & Gravel	
80'	85'	Gray Clay & Gravel	
85'	95'	Brown Clay & Gravel	
95'	97'	Sand & Gravel	
97'	115'	Brown Clay With Traces of Gravel and Clay	
115'	120'	Loose Sand & Clay	
120'	134'	Gray Clay	
134'	155'	Packed Sand	
155'	167'	Brown Brittle Shale	
167'	200'	Blue Clay & Streaks of Blue Shale	
200'	207'	Blue Brown Clay	
207'	240'	Brown Shale	
240'	250'	Blue Shale	
250'	250'+	Blackish Packed Sand	

CONFIDENTIAL LOG
Water Code Sec. 13752

Work started 2/2/ 19 77, Completed 2/14/ 19 77

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Frank L. Cornwell & Son
(Person, firm, or corporation) (Typed or printed)

Address 521 1/2 3rd St. Marysville, California 95901

[SIGNED] [Signature]
(Well Driller)

License No. _____ Dated _____, 19 _____

SKETCH LOCATION OF WELL ON REVERSE SIDE

Geologic Section B-B'

DWR Log No. 51-014

9

USGS-CAL-T1
May 1948

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

No. 11/3E-281
Other Nos. 20-9
DWR J

WELL LOG

State California County Sutter Subarea Vernon

Owner _____

Location _____

Drilled by Coupe Address _____

Date Jan. 1932 Casing diam. 16 and 12" Land-surf. alt. 20

Source of data Metopes

(Enter type of well, perforations, yield, and drawdown at end of log)

Correlation	Material	Thick-ness (feet)	Depth (feet)
	Top soil		3
	Ford pan		6
	Brown clay		10
	Sand		12
	Brown clay		45
	Blue clay		98
	Blue sand		125
	Blue sand and gravel		138

Record by _____ Date _____

Sheet _____ of _____

MD 11N/3E-201 2C1

REGION _____
COUNTY Sutter
NEAR _____

DIVISION OF WATER RESOURCES
DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

BASIN _____
DWR No 113 ~~201~~ 2C1 B & M
OTHER Nos 20-9A

WELL LOG

26
DWR Log No: 51-015

LOCATION Feather River, NE. 1/4 Sec. 2, T. 11 N., R. 3 E., South Portion

OWNER _____ ADDRESS _____

DRILLED BY Francis Coupe ADDRESS _____

DRILLING METHOD _____ GRAVEL PACKED _____ DATE COMPLETED March 13, 1932

SIZE OF CASING DEPTH _____ STRUCK WATER AT _____

PERFORATIONS _____ SIZE 16, 12, and 10 No. _____

WATER LEVEL BEFORE PERFORATING _____ AFTER _____

TEST DATA: DISCHARGE G. P. M. _____ DRAWDOWN FT. _____ HOURS RUN _____

OTHER DATA AVAILABLE: WATER LEVEL RECORD _____ ANALYSIS _____

SURFACE ELEV. _____ DATUM _____ SOURCE OF INFORMATION Natomas Co.

FOR FIELD COPIES USE ALTERNATE LINES

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %
17		Brown clay		
19		Brown sand		
45		Brown clay		
80		Blue clay		
90		Fine Blue sand		
100		Blue sandy clay		
122		Blue sand		
125		Brown sandy clay		
128		Blue sand		

LOG OBTAINED BY ok DATE 11-1-48 SHEET 1 OF 546

REGION _____

DIVISION OF WATER RESOURCES

BASIN _____

COUNTY Sutter

DEPARTMENT OF PUBLIC WORKS

DWR NO. 113 3C2 B & M

STATE OF CALIFORNIA

OTHER NOS. 20-8

NEAR _____

WELL LOG

21

LOCATION Natomas, Feather River, NE 1/4 Sec. 3, T. 11 N., R. 3 E., F-1 Property
for F. R. Pump Unit No. 3

OWNER _____ ADDRESS _____

DRILLED BY Vernon McGrew ADDRESS _____

DRILLING METHOD _____ GRAVEL PACKED _____ DATE COMPLETED May 1937

SIZE OF CASING DEPTH _____ STRUCK WATER AT _____

PERFORATIONS _____ SIZE 1 1/4" No. _____

WATER LEVEL BEFORE PERFORATING _____ AFTER _____

TEST DATA: DISCHARGE G. P. M. _____ DRAWDOWN FT. _____ HOURS RUN _____

OTHER DATA AVAILABLE: WATER LEVEL RECORD _____ ANALYSIS _____

SURFACE ELEV. _____ DATUM _____ SOURCE OF INFORMATION Natomas

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %
18		Soil and silt		
35		Sand and small gravel		
87		Clay		
95		Hard sand		
110		Tight gravel		
		Loose gravel		

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY ok DATE 11-1-48 SHEET 1 OF 514

WATER WELL DRILLERS REPORT
(Sections 7076, 7077, 7078, Water Code)
STATE OF CALIFORNIA—DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES 210

DWR-100 No. 51-043
LOCATION Do Not Fill In
State Well No. **11N/4E-3C1**
Other Well No. **HV-1E-3D**
Region **5**

(1) DRILLER: (person, firm, or corporation)
Name **Frank P. Conley**
Address **432 - Feather River
Marysville, Calif.**

OWNER
Name _____
Address _____

(2) Proposed Use (Check)		Equipment
Domestic <input type="checkbox"/>	Industrial <input type="checkbox"/>	Rotary <input type="checkbox"/>
Irrigation <input checked="" type="checkbox"/>	Test Well <input type="checkbox"/>	Cable <input checked="" type="checkbox"/>
Municipal <input type="checkbox"/>	Other <input type="checkbox"/>	Dug Well <input type="checkbox"/>
		Other <input type="checkbox"/>

(3) CASING:
80 ft. of 14" in 3/16 lb./sq. casing 79 1/2 left in well

Type and size of shoe or well ring **14" 4 x 1/2**

(4) PERFORATIONS:

Type of perforator used	Perforated	ft. to	ft.	holes per	in.
Diameter of perforations		in., length			in.

(5) WATER LEVELS:
Was electric log made of well? Yes No If yes, attach copy.
Depth at which water was first found **18** ft.
Standing level before perforating _____ ft.
Standing level after perforating _____ ft.
Note your observation of any change in water level while drilling _____
Was a surface sanitary seal provided? **No**

(6) WELL PUMPING TEST:
Capacity _____ gal./min. ft. draw down _____
Was well gravel packed? **No**
Were any strata sealed against pollution?
Temperature _____ Was a chemical analysis made? _____ Attach copy _____
If abandoned was well capped?

(7) TYPE OF WORK (check):
New well Reconditioning of well
Deepening existing well

(8) LOCATION OF WELL:
County **Sutter**
R. F. D. or Street No. **Pacific Ave. - 1 mile west of
Hawesley Sta. - east of
Arthur Chesnut home**

(9) WELL LOG:
Total depth of well **250** ft.

Formation: Mention size of water gravel—	0 ft. to	15 ft.	ft.		
	0	15		top soil	5
	15	25		sand	20
	25	50		clay	3
	50	60		fine gravel	13
	60	115		gray clay	3
	115	140		sand, soft	20
	140	200		brown clay	3
	200	215		sandy	20
	215	240		clay	3
	240	250		brown sand	20

FOR OFFICIAL USE ONLY

Work started **Nov 8** 19 **52**. Completed **Nov. 15** 19 **52**
Date of Report **May 21**, 19 **53**
WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
[SIGNED] **Frank P. Conley**
Well Driller
By **Bernice Freeborn**
License No. **105346** Classification **C 57**
Dated **May 21**, 19 **53**
46370 7-51 30M QUIN © SPO

ORIGINAL

File Original, Duplicate and Triplicate with the
DIVISION OF WATER RESOURCES

P. O. BOX 1079
SACRAMENTO 5, CALIFORNIA

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA—DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES 253

DWR Log No: 51-050;
LOCATION NOT CHECKED
Do Not Fill In

State Well No. _____
Other Well No. 11N-4E-4A
Region _____

(1) DRILLER: (person, firm, or corporation)

Name Frank P. Conley
Address 432-Feather River Blvd.
Marysville, Calif.

OWNER:

Name _____
Address _____

(2) Proposed Use (Check)

Domestic Industrial
Irrigation Test Well
Municipal Other

Equipment

Rotary
Cable
Dug Well
Other

(3) CASING:

Liners	ft. of	in	lb./ga. casing	ft. left in well
48	12	10	48	
40	10	12	40	
60	8	12	60	

Type and size of shoe or well ring 12" 3x3/8

(4) PERFORATIONS:

Type of perforator used	ft. to	ft.	holes per	in.
<u>Burnt with acetylene</u>	180	216	7	12
	275	291	5	12
	330	390	5	12

Diameter of perforations 1/4 in., length 3 in.

(5) WATER LEVELS:

Was electric log made of well? Yes No If yes, attach copy.
Depth at which water was first found 20 ft.
Standing level before perforating 20 ft.
Standing level after perforating 20 ft.
Note your observation of any change in water level while drilling _____
Was a surface sanitary seal provided? No

(6) WELL PUMPING TEST:

Capacity 1700 gal./min. 85 ft. draw down

Was well gravel packed? No

Were any strata sealed against pollution? No

Temperature _____ Was a chemical analysis made? _____ Attach copy _____

If abandoned was well capped? _____

(7) TYPE OF WORK (check):

New well Reconditioning of well
Deepening existing well

(8) LOCATION OF WELL:

County Sutter
R. F. D. or Street No. _____
On levee road - 3/4 mile north of Howsley Rd.
Pleasant Grove, Calif.

(9) WELL LOG:

Total depth of well 400 ft.
Formation: Mention size of water gravel—
0 ft. to 207 ft. old hole
207 " 280 " sand run-in
280 " 300 " gravel
300 " 310 " sand
310 " 355 " brown clay
355 " 365 " sand - water
365 " 385 " gray clay
385 " 390 " bluish blue clay
390 " 400 " blue sand

FOR OFFICIAL USE ONLY

Work started Nov 20 19 53. Completed Dec 10 19 53
Date of Report December 10 19 53

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] Frank P. Conley
Well Driller

By Bernice Freeborn
License No. 105346 Classification C 57

Dated December 10, 19 53

ORIGINAL
File Original, Duplicate and Triplicate with the
DIVISION OF WATER RESOURCES
P. O. BOX 1079
SACRAMENTO 5, CALIFORNIA

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA—DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES 186

LOCATION NOT CHECKED!
DWR Log No: 51-051
State Well No. _____
Other Well No. 11M-4E-5C
Region _____

(1) DRILLER: (person, firm, or corporation)
Name Frank P. Conley
Address 432 - Feather River Blvd., Marysville, Calif.

OWNER:
Name _____
Address _____

(8) LOCATION OF WELL:
County Sutter
R. F. D. or Street No. South side of Catlett Rd. - approx 3/4 mile west of El Centro Rd.

(2) Proposed Use (Check)			Equipment		
Domestic	<input type="checkbox"/>	Industrial	<input type="checkbox"/>	Rotary	<input type="checkbox"/>
Irrigation	<input checked="" type="checkbox"/>	Test Well	<input type="checkbox"/>	Cable	<input checked="" type="checkbox"/>
Municipal	<input type="checkbox"/>	Other	<input type="checkbox"/>	Dug Well	<input type="checkbox"/>
				Other	<input type="checkbox"/>

(9) WELL LOG:
Total depth of well 145 ft.
Formation: Mention size of water gravel—

0	ft. to	16	ft.	<u>tough clay</u>
16	"	40	"	<u>sand</u>
40	"	75	"	<u>brown clay</u>
75	"	105	"	<u>blue sand</u>
105	"	120	"	<u>dark clay</u>
120	"	130	"	<u>gravel</u>
130	"	145	"	<u>hard</u>

(3) CASING:
105 ft. of 14 in 3/16 lb./ga. casing 104 1/2 left in well

Type and size of shoe or well ring 14" 4 x 1/2

(4) PERFORATIONS:

Type of perforator used	Perforated	ft. to	ft.	holes per	in.
	Diameter of perforations		in., length		in.

(5) WATER LEVELS:

Was electric log made of well? Yes No If yes, attach copy.

Depth at which water was first found 14 ft.

Standing level before perforating _____ ft.

Standing level after perforating _____ ft.

Note your observation of any change in water level while drilling _____

Was a surface sanitary seal provided? No

(6) WELL PUMPING TEST:

Capacity 2000 gal./min. 50 ft. draw down

Was well gravel packed? No

Were any strata sealed against pollution? _____

Temperature _____ Was a chemical analysis made? _____ Attach copy _____

If abandoned was well capped? _____

(7) TYPE OF WORK (check):

New well Reconditioning of well
Deepening existing well

FOR OFFICIAL USE ONLY

Work started Feb 4 19 53 Completed Feb 9 19 53
Date of Report Mar. 25 19 53

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] Frank P. Conley
By Bernice Freeborn
License No. 105346 Classification C57
Date Mar. 25, 19 53

46370 7-51 30M QUIN © SPO

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA—DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES 228

DWR Log No: 51-1720-5
LOCATION ~~NOT~~ CHECKED
State Well No. 12N 3E-36Q2
Other Well No. ~~12N 4E-51E~~
Region.....

(1) DRILLER: (person, firm, or corporation)
Name Frank P. Conley
Address 432-Feather River Blvd.
Marysville, Calif.

OWNER
Name
Address

Proposed Use (Check)		Equipment	
Domestic	<input type="checkbox"/>	Rotary	<input type="checkbox"/>
Irrigation	<input checked="" type="checkbox"/>	Cable	<input checked="" type="checkbox"/>
Municipal	<input type="checkbox"/>	Dug Well	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>
Test Well	<input type="checkbox"/>		
Other	<input type="checkbox"/>		

(3) CASING:
176 ft. of 14 in 10 lb./sq. casing 175 1/2 left in well
Type and size of shoe or well ring 14" 4 x 1/2

(4) PERFORATIONS:
Type of perforator used mills perforator
Perforated 125 ft. to 135 ft. 18 holes per 12 in.
" 153 " 165 " 8 " " 12 "
Diameter of perforations 3/4 in., length 3 in.

(5) WATER LEVELS:
Was electric log made of well? Yes No If yes, attach copy.
Depth at which water was first found 14 ft.
Standing level before perforating 17 ft.
Standing level after perforating 14 ft.
Note your observation of any change in water level while drilling
Was a surface sanitary seal provided? No

(6) WELL PUMPING TEST:
Capacity 1150 gal./min. 39 ft. draw down
Was well gravel packed? No
Were any strata sealed against pollution? No
Temperature _____ Was a chemical analysis made? _____ Attach copy _____
If abandoned was well capped? _____

(7) TYPE OF WORK (check):
New well Reconditioning of well
Deepening existing well

(8) LOCATION OF WELL:
County Sutter
R. F. D. or Street No. On Ukropina ranch
Cattlett Rd. - 2 miles
west of El Centro Blvd. -
back of equipment shed
Pleasant Grove, Calif.

(9) WELL LOG:
Total depth of well 240 ft.
Formation: Mention size of water gravel—
0 ft. to 2 ft. top soil
2 " 6 " hardpan
6 " 18 " sandy clay
18 " 40 " gray clay
40 " 50 " sand
50 " 80 " blue clay
80 " 85 " sand
85 " 130 " blue sandy clay
130 " 140 " blue sand
140 " 160 " blue clay
160 " 172 " gravel
172 " 200 " blue clay
200 " 210 " blue sand
210 " 240 " blue clay

FOR OFFICIAL USE ONLY

Work started Sept. 19 19 53. Completed Sept. 30 19 53
Date of Report October 6 19 53

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
[SIGNED] Frank P. Conley
Well Driller
By Bernice Freeborn
License No. 105346 Classification C 57
Dated October 6, 19 53

DIVISION OF WATER RESOURCES



Do Not Fill In

State Well No. 12466-33P1
Other Well No. _____
Region _____

119

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

(1) Driller: Frank P. Conley
Name Frank P. Conley
Address 432 - Feather River Blvd
Mariposa, Calif.
License No. 105346 Classification DC 57

(2) Proposed use or uses (check): (3) Equipment used (check):
Domestic Municipal Rotary
Irrigation Industrial Cable
Domestic and Test well Dug well
Irrigation Other _____
Other _____

Owner Name _____
Address _____

(4) Type of work (check):
New well Reconditioning of well
Deepening existing well

(5) Well log:
Total depth of well 185 ft.

Depth From Ground Surface

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

ft.	to	ft.
6	20	
20	35	
35	45	
45	70	
70	80	
80	88	
88	106	
106	115	
115	185	
185	200	

top soil
coarse granulated sand X
blue clay
sand & gravel
light grey clay
red sandy
red soft clay
cemented granite X
sandy
gray clay

FOR OFFICIAL USE ONLY

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
<u>91</u>	<u>14"</u>	<u>welded</u>	<u>10g</u>	<u>90 1/2</u>
<u>24</u>	<u>12"</u>	<u>"</u>	<u>10g</u>	
	<u>14" 3x1/2</u>			

Type and size of shoe or well ring _____ Welded joints Yes No

ORIGINAL
File with DWR

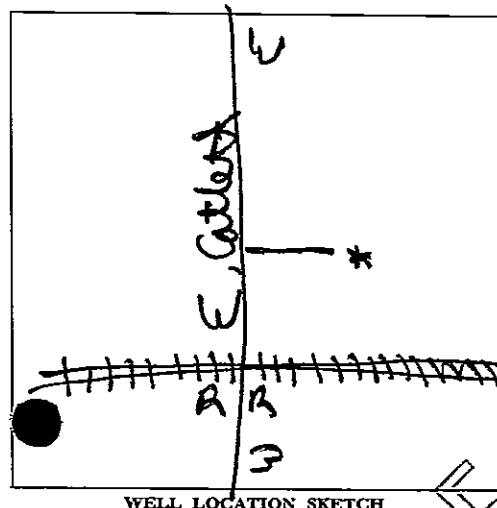
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 209372

Name of Intent No. _____
Permit No. or Date 4/21/83

State Well No. _____
Other Well No. 12N04E34J

(1)
Addr _____
City _____
(2) LOCATION OF WELL (See instructions):
County Sutter Owner's Well Number _____
Well address if different from above same
Township _____ Range _____ Section _____
Distance from cities, roads, railroads, fences, etc. 45' west of house, between corner of garage and tree.



(3) TYPE OF WORK:
New Well Deepening
Reconstruction
Reconditioning
Horizontal Well
Destruction (Describe destruction materials and procedures in Item 12)
(4) PROPOSED USE:
Domestic
Irrigation
Industrial
Test Well
Stock
Municipal
Other

(12) WELL LOG: Total depth 165 ft. Depth of completed well 135 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	-	1 top soil
1	-	8 coarse granite sand WB
8	-	17 yellow tough clay
17	-	27 brown sandy clay
27	-	37 coarse granite sand & sm. grav. WB
37	-	52 brown tough clay
52	-	61 red sandy clay
61	-	64 yellow soft clay
64	-	71 yellow tough clay
71	-	77 brown sandy brittle clay
77	-	81 yellow tough clay
81	-	85 brown sandy brittle clay
85	-	103 yellow silty clay
103	-	106 yellow shale clay
106	-	114 brown sandy clay
114	-	119 gray fine packed sand WB
119	-	130 yellow sandy clay
130	-	137 yellow tough clay
137	-	144 brown sandy brittle clay
144	-	155 yellow tough clay / br. coarse loose

(5) EQUIPMENT:
Rotary Reverse
Cable Air
Other Bucket

(6) GRAVEL PACK:
Yes No Size _____
Diameter of bore _____
Packed from _____ to _____ ft.

(7) CASING INSTALLED:

From ft.	To ft.	Dia. in.	Gage or Wall
0	80	10	10 ga

(8) PERFORATIONS:
Type of perforation or size of screen

(9) WELL SEAL:
Was surface sanitary seal provided? Yes No If yes, to depth _____ ft.
Were strata sealed against pollution? Yes No Interval _____ ft.
Method of sealing _____

(10) WATER LEVELS:
Depth of first water, if known 1 ft.
Standing level after well completion 9 ft.

(11) WELL TESTS:
Was well test made? Yes No If yes, by whom? _____
Type of test Pump Bailer Air lift
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes No If yes, by whom? _____
Was electric log made? Yes No If yes, attach copy to this report

Work started 4/8 19 83 Completed 4/19 19 83

WELL DRILLER'S STATEMENT: sand & sm. grav. WB
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED John A. Beebe (Well Driller)
NAME John A. Beebe (Person, firm, or corporation) (Typed or printed)
Address 2574 16th St.
City Sacramento Zip 95818
License No. 392469 Date of this report 4/21/83

CONFIDENTIAL LOG
 Water Code Sec. 13752 STATE OF CALIFORNIA
 THE RESOURCES AGENCY
 DEPARTMENT OF WATER RESOURCES
 WATER WELL DRILLERS REPORT

Do Not Fill In

No 115437

ORIGINAL
File with DWR

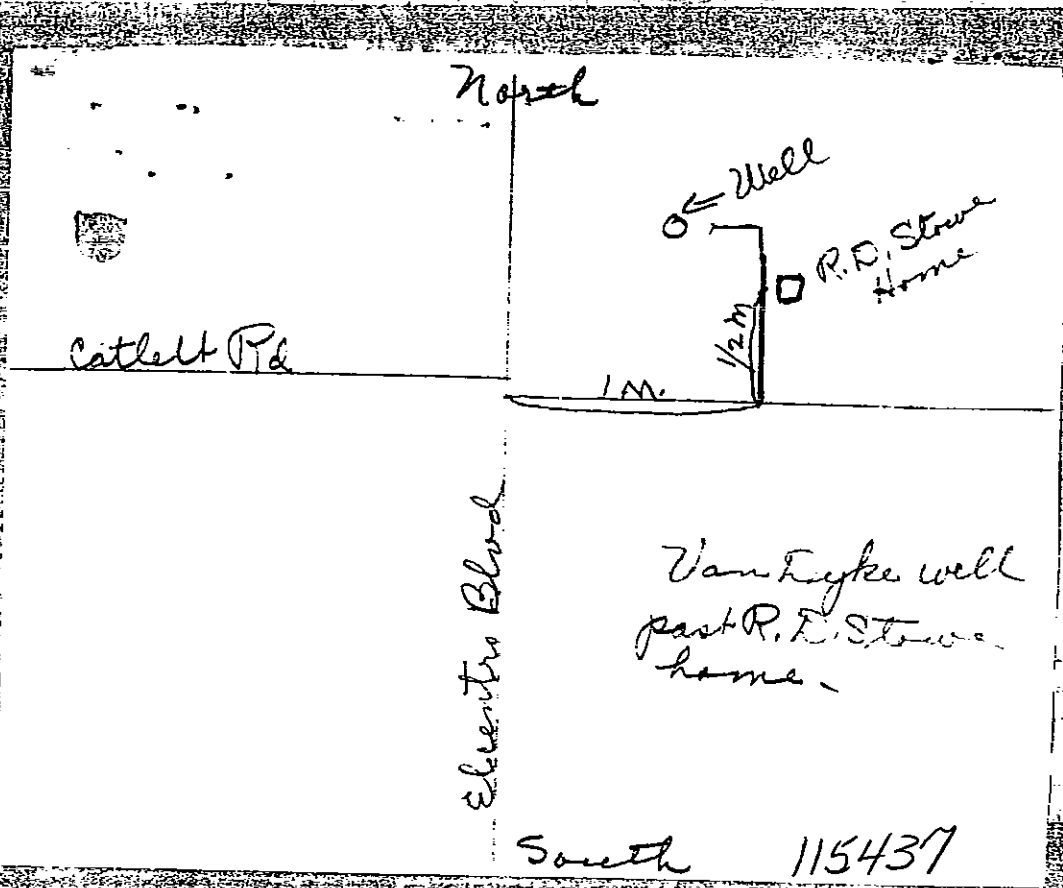
State Well No. _____
 Other Well No. 12N/4E-35P

(1) OWNER: Name _____ Address _____ (2) LOCATION OF WELL: County <u>SUTTER</u> Owner's number, if any <u>75-1</u> Township, Range, and Section <u>12N, R4E, Sec. 35</u> Distance from cities, roads, railroads, etc. <u>2 1/2 mi. E. on Cattlet Rd., off Hwy. 99, 100' north.</u> (3) TYPE OF WORK (check): New Well <input checked="" type="checkbox"/> Deepening <input type="checkbox"/> Reconditioning <input type="checkbox"/> Destroying <input type="checkbox"/> If destruction, describe material and procedure in Item 11.					(11) WELL LOG: Total depth <u>410</u> ft. Depth of completed well <u>400</u> ft. Formation: Describe by color, character, size of material, and structure <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">0</td> <td style="width:10%; text-align: center;">16</td> <td style="width:10%; text-align: center;">ft. to</td> <td style="width:60%;"><u>Hard pan & red clay</u></td> <td style="width:10%;"></td> </tr> <tr> <td style="text-align: center;">16</td> <td style="text-align: center;">19</td> <td></td> <td><u>Loose course sand</u></td> <td></td> </tr> <tr> <td style="text-align: center;">19</td> <td style="text-align: center;">29</td> <td></td> <td><u>Red clay & sand</u></td> <td></td> </tr> <tr> <td style="text-align: center;">29</td> <td style="text-align: center;">53</td> <td></td> <td><u>Clay</u></td> <td></td> </tr> <tr> <td style="text-align: center;">53</td> <td style="text-align: center;">57</td> <td></td> <td><u>Sand & clay stringers</u></td> <td></td> </tr> <tr> <td style="text-align: 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(6) CASING INSTALLED: STEEL <input checked="" type="checkbox"/> OTHER: _____ SINGLE <input type="checkbox"/> DOUBLE <input type="checkbox"/> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>From ft.</th> <th>To ft.</th> <th>Diam.</th> <th>Gage or Wall</th> <th>Diameter of Bore</th> <th>From ft.</th> <th>To ft.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>137</td> <td>16" OD</td> <td>1/4"</td> <td>26"</td> <td>0</td> <td></td> </tr> <tr> <td>157</td> <td>191</td> <td>"</td> <td>"</td> <td>"</td> <td></td> <td></td> </tr> <tr> <td>278</td> <td>326</td> <td>"</td> <td>"</td> <td>"</td> <td></td> <td></td> </tr> <tr> <td>390</td> <td>400</td> <td>"</td> <td>"</td> <td>"</td> <td></td> <td></td> </tr> </tbody> </table> Describe joint: <u>Collared Welded</u> If gravel packed: _____ Size of gravel: <u>MIX #31</u>					From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.	0	137	16" OD	1/4"	26"	0		157	191	"	"	"			278	326	"	"	"			390	400	"	"	"																																																																																																																										
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(8) CONSTRUCTION: Was a surface sanitary seal provided? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> To what depth _____ ft. Were any strata sealed against pollution? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, note depth of strata _____ From _____ ft. to _____ ft. From _____ ft. to _____ ft. Method of sealing _____ Work started <u>12/2 19 75</u> Completed <u>12/9 19 75</u>																																																																																																																																																															
(9) WATER LEVELS: Depth at which water was first found, if known _____ ft. Standing level before perforating, if known _____ ft. Standing level after perforating and developing <u>18'</u> ft.																																																																																																																																																															
(10) WELL TESTS: Was pump test made? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, by whom? <u>EELCOINC</u> Yield: <u>1200</u> gal./min. with <u>101</u> ft. drawdown after <u>2</u> hrs. Temperature of water _____ Was a chemical analysis made? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Was electric log made of well? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, attach copy																																																																																																																																																															

WELL DRILLER'S STATEMENT:
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
 NAME E. E. LUHDORFF CO., INC.
 (Person, firm, or corporation) (Typed or printed)
 Address P. O. BOX 1326
WOODLAND, CALIFORNIA 94695
 [SIGNED] _____
 (Well Driller)
 License No. 276625 Dated 1-9-76, 1976

SKETCH LOCATION OF WELL ON REVERSE SIDE

CONFIDENTIAL LOG
 Water Code Sec. 13752
 67132-750 8-72 30M TRIP ©T OSP



RECEIVED
DIV. OF WATER RESOURCES
SACRAMENTO

OCT 9 1951

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USGS-CAL-T1
May 1948

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

No. 12/LE - 3681
Other Nos. _____

WELL LOG

State California County Sutter Subarea Pleasant Grove

Owner _____

Location _____

Drilled by Kirchgeater Address _____

Date 1947 Casing diam. 8" Land-surf. alt. 50

Source of data _____

(Enter type of well, perforations, yield, and drawdown at end of log)

Correlation	Material	Thick- ness (feet)	Depth (feet)
	Soil		1
	Adobe		2
	Hardpan		4
	Clay, yellow		17
	Clay, white		28
	Sandstone, soft		78
	Clay, yellow		114
	Sand and clay		119
	Clay		182
	Clay, hard and small gravel		200
	Clay, hard		275
	Coarse sand, small gravel and white clay		280
	Sand, fine		308
	Clay		310
	Sand and gravel, cemented		325
	Clay, blue		350
	Shale		372
	Shale, sand and blue clay		390
	Well began to sluff in from 360-390' water level 25'		

DUPLICATE
File Original, Duplicate and Triplicate with the
DIVISION OF WATER RESOURCES
P. O. BOX 1079
SACRAMENTO 5, CALIFORNIA

WATER WELL DRILLERS REPORT 51-832
(Sections 7076, 7077, 7078, Water Code)

Do Not Fill In 130

STATE OF CALIFORNIA—DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

State Well No. _____
Other Well No. 12/4-27
Region 5 (36H)

(1) DRILLER: (person, firm, or corporation)
Name Frank P. Conley
Address 432 - Feather River Blvd.,
Marysville, Calif.

OWNE
Name _____
Address _____

(2) Proposed Use (Check) Equipment

Domestic	<input type="checkbox"/>	Industrial	<input type="checkbox"/>	Rotary	<input type="checkbox"/>
Irrigation	<input checked="" type="checkbox"/>	Test Well	<input type="checkbox"/>	Cable	<input checked="" type="checkbox"/>
Municipal	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	Dug Well	<input checked="" type="checkbox"/>
				Other	<input type="checkbox"/>

(3) CASING:
60 ft. of 12 in 10 lb./ga. casing 60 left in well
" " 34 " " " " " " "
" " " " " " " " "
Type and size of shoe or well ring 12" 3 X 3/8 1-025 03

(4) PERFORATIONS:
Type of perforator used burnt with acetylene
Perforated 155 ft. to 175 ft. 6 holes per 12 in.
" " " " " " " " "
" " " " " " " " "
" " " " " " " " "
" " " " " " " " "
" " " " " " " " "
" " " " " " " " "
" " " " " " " " "
" " " " " " " " "
Diameter of perforations 1/8 in., length 3 in.

(5) WATER LEVELS:
Was electric log made of well? Yes No If yes, attach copy.
Depth at which water was first found 30 ft.
Standing level before perforating 30 ft.
Standing level after perforating 30 ft.
Note your observation of any change in water level while drilling
Was a surface sanitary seal provided? No

(6) WELL PUMPING TEST:
Capacity _____ gal./min. ft. draw down _____
Was well gravel packed? No
Were any strata sealed against pollution? Cemented in int. clay
Temperature _____ Was a chemical analysis made? (Attach copy)
If abandoned was well capped? _____

(7) TYPE OF WORK (check):
New well Reconditioning of well
Deepening existing well

(8) LOCATION OF WELL:
County Sutter
R. F. D. or Street No. Catlett Rd. - 1 mile east
of Pleasant Grove Rd.

(9) WELL LOG:
Total depth of well 380 Old well 215 ft
Caved in to 160 ft.
Formation: Mention size of water gravel—
160 ft. to 215 ft. sand
215 " 225 " gray clay
225 " 270 " decomposed granite
270 " 290 " clay
290 " 300 " lime shale
300 " 370 " clay
370 " 380 " sand

CONFIDENTIAL

FOR OFFICIAL USE ONLY

Work started Nov. 24 19 52, Completed Dec. 15 19 52
Date of Report Jan. 2 19 53

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
[SIGNED] Frank P. Conley Well Driller
By Bernice Freeborn
License No. 105346 Classification 357
Dated Jan 2, 19 53

WATER WELL DRILLERS REPORT

(Sections 7079, 7080, 7081, 7082, Water Code)

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

12N/5E-34K1

JUL 20 1967

Do Not Fill In

No. 9468

State Well No. 12N/5E-34K1

Other Well No. 12N/5E-34K1

(1) OWNER:

Name _____
Address _____

(11) WELL LOG:

Total depth **145** ft. Depth of completed well **145** ft.

Formation: Describe by color, character, size of material, and structure

0 to 1 top soil ft. to _____ ft.

(2) LOCATION OF WELL:

County **Placer** Owner's number, if any _____

Township, Range, and Section **12N/5E-34K1**

Distance from cities, roads, railroads, etc. **2 1/2 Mi. east of Brewer Rd. on Pleasant Grove Rd.**

1 " 3 hard pan

3 " 22 red hard clay

(3) TYPE OF WORK (check):

New Well Deepening Reconditioning Destroying

If destruction, describe material and procedure in Item 11.

22 " 36 red silty clay

36 " 62 yellow hard silty clay

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:

Rotary
Cable
Other

62 " 74 red tough clay

74 " 78 yellow clay

(6) CASING INSTALLED:

STEEL: SINGLE DOUBLE OTHER:

If gravel packed

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	100	10	10			

78 " 81 gravel & clay mix W.R.

81 " 96 red silty clay

96 " 104 red & yellow tough clay

104 " 107 brown coarse cemented sand W.R.

Size of shoe or well ring: **1/2" X 6" X 10" spiral steel**

Describe joint **ark but welded**

107 " 123 gray coarse tight sand W.R.

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen **None**

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.

123 " 138 Gray sand & small gravel W.B.

138 " 145 tight med. & small gravel W.B.

Plotted and Coded

As Well **12N/5E-34K80**

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth _____ ft.

Were any strata sealed against pollution? Yes No If yes, note depth of strata _____

From _____ ft. to _____ ft.

From _____ ft. to _____ ft.

Method of sealing _____

(9) WATER LEVELS:

Depth at which water was first found, if known **89** ft.

Standing level before perforating, if known **75** ft.

Standing level after perforating and developing _____ ft.

(10) WELL TESTS:

Pump test made? Yes No If yes, by whom? _____

_____ gal./min. with _____ ft. drawdown after _____ hrs.

Temperature of water _____ Was a chemical analysis made? Yes No

Was electric log made of well? Yes No If yes, attach copy _____

FOR OFFICIAL USE ONLY

Work started **May 29 19 67**, Completed **June 7, 19 67**

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

LYLE W. CORNELIUS

NAME **Well Drilling Contractor**
(Person, firm, or corporation) (Type or print)

1820 First Ave. GI 8-6410
Sacramento 18, Calif.

Address _____

[SIGNED] **Lyle W. Cornelius**
(Well Driller)

License No. **142613**

Dated **June 10, 19 67**

SKETCH LOCATION OF WELL ON REVERSE SIDE

Geologic Section C-C'

ORIGINAL
File with DWR

CONFIDENTIAL LOG
Water Code Sec. 7080

WATER WELL DRILLERS REPORT

(Sections 7079, 7080, 7081, 7082, Water Code)

Do Not Fill In

THE RESOURCES AGENCY OF CALIFORNIA DEPARTMENT OF WATER RESOURCES

No. **9491**
State Well No. **11N/3E-36P1**
Other Well No. **11N/3E-36P1**

(1) OWNER:

Name _____
Address _____

(11) WELL LOG:

Total depth **171** ft. Depth of completed well **170** ft.
Formation: Describe by color, character, size of material, and structure
0' to 3' sandy top soil ft.

(2) LOCATION OF WELL:

County **Sutter** Owner's number, if any **483-7122**
Township, Range, and Section **T- R- S-**
Distance from cities, roads, railroads, etc. **62' west of center Garden Highway & 100' north Rego Rd.**

3" 6' fine sand

(3) TYPE OF WORK (check):

New Well Deepening Reconditioning Destroying
If destruction, describe material and procedure in Item 11.

19" 38' blue silty clay

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:

Rotary
Cable
Other

38" 40' fine packed sand W.B.

40" 64' blue doby clay

64" 70' blue cemented sand

(6) CASING INSTALLED:

STEEL: OTHER:
SINGLE DOUBLE

If gravel packed

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
minus* 6'	157	8"	10			

70" 83' sand & small gravel W.B.

83" 126' blue crumbly clay

126" 154' blue sticky clay

134" 138' blue packed sand W.B.

Size of shoe or well ring: **1/2" X 4" X 8" plus steel**

Describe joint **Ark but welded**

138" 143' blue sticky clay

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen **none**

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.

143" 148' blue fine quick sand W.B.

148" 157' blue tough sandy clay

157" 171' dark sand & small gravel W.B.

171" large gravel W.B.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth **8** ft.

Were any strata sealed against pollution? Yes No If yes, note depth of strata

From _____ ft. to _____ ft.

From _____ ft. to _____ ft.

Method of sealing

CONFIDENTIAL LOG
Water Code Sec 7080

Work started **6 / 20 1969** Completed **6 / 26 1969**

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME **WILLIAM W. CORNELIUS**
Well Drilling Contractor
1820 First Ave. GI 8-6410
Sacramento 18, Calif.

Address _____

(9) WATER LEVELS:

Depth at which water was first found, if known **38** ft.

Standing level before perforating, if known **19** ft.

Standing level after perforating and developing _____ ft.

[SIGNED] *William W. Cornelius*
(Well Driller)

(10) WELL TESTS:

Was pump test made? Yes No If yes, by whom? **Cornelius**

Rate: **300** gal./min. with **11** ft. drawdown after **4** hrs.

Temperature of water _____ Was a chemical analysis made? Yes No

Was electric log made of well? Yes No If yes, attach copy

License No. **142613** Dated **June 27 1969**

SKETCH LOCATION OF WELL ON REVERSE SIDE

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 280943

Notice of Intent No. 246643
Local Permit No. or Date 35-030-015

State Well No. _____
Other Well No. 11N03E36R

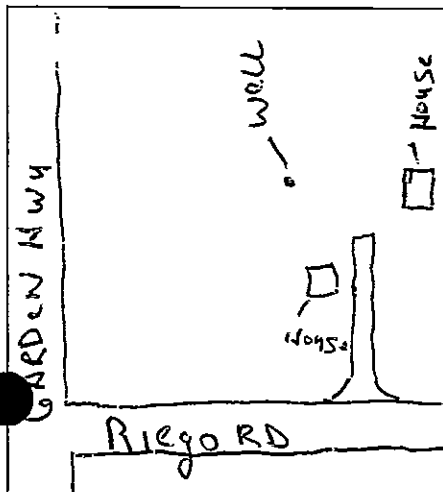
(1)
A
C

(2) LOCATION OF WELL (See instructions):

County SUTTER Owner's Well Number _____
Well address if different from above 5341 W. Riego RD
Township 11N Range 4E Section 36
Distance from cities, roads, railroads, fences, etc. _____

(12) WELL LOG: Total depth 165 ft. Completed depth _____ ft.
from ft to ft Formation (Describe by color, character, size or material)

0	-	3	TOP SOIL
3	-	15	BROWN STICKY CLAY
15	-	17	Blue Clay
17	-	28	Brown Clay
28	-	29	SAND w.B.
29	-	64	BROWN CLAY
64	-	65	SAND
65	-	99	BROWN CLAY
99	-	141	BROWN CLAY
141	-	143	SAND
143	-	158	Blue Clay
158	-	165	SAND & GRAVEL



(3) TYPE OF WORK:

New Well Deepening
Reconstruction
Reconditioning
Horizontal Well

Destruction (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic
Irrigation
Industrial
Test Well
Municipal
Other (Describe)

(5) EQUIPMENT:

Rotary Reverse
Cable Air
Other Bucket

(6) GRAVEL PACK:

Yes No
Diameter of bore _____
Packed from _____ to _____ ft.

(7) CASING INSTALLED:

Steel Plastic Concrete

(8) PERFORATIONS:

Type of perforation or size of screen _____

From ft	To ft	Dia. in	Gage or Wall	From ft	To ft	Slot size
0	145	8"	156			

(9) WELL SEAL:

Was surface sanitary seal provided? Yes No If yes, to depth 21 ft.
Were strata sealed against pollution? Yes No Interval _____ ft.
Method of sealing Bentonite Seal

Work started 1-10 1990 Completed 1-23 1990

(10) WATER LEVELS:

Depth of first water, if known _____ ft.
Standing level after well completion 15' ft.

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

(11) WELL TESTS:

Was well test made? Yes No If yes, by whom? _____
Type of test Pump Bailor Air lift
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes No If yes, by whom? _____
Was electric log made? Yes No If yes, attach copy to this report

Signed G. Gakin (Well Driller)
NAME G. GAKIN Well Drilling
Address 10550 Lowell St.
City ELVERTA ZIP 95626
License No. 374391 Date of this report 1-24-90

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. _____
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

~~LOCATION NOT CHECKED~~

Do Not Fill In

No 32889

State Well No. _____

Other Well No. 11/4-32889

481

(1) OWNER:

Name _____
Address _____

(2) LOCATION OF WELL:

County Sutter Owner's number, if any— _____
R. F. D. or Street No. _____
550' W of Marysville Rd.
1500' N of Base Line Road

(3) TYPE OF WORK (check):

New well Deepening Reconditioning Abandon
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic Industrial Municipal Rotary
Irrigation Test Well Other Cable
Dug Well

(6) CASING INSTALLED:

SINGLE <input checked="" type="checkbox"/> DOUBLE <input type="checkbox"/>				Gage of Wall	If gravel packed		
From	ft. to	ft.	Diam.		Diameter of Bore	from ft.	to ft.
0	76	12	12				

Type and size of shoe or well ring 1/2x4x12 Size of gravel: _____
Describe joint Welded

(7) PERFORATIONS:

Type of perforator used _____

Size	of perforations		in., length, by		in.
From	ft. to	ft.	Perf. per row	Rows per ft.	

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth 76 ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata _____
From 0 ft. to 76 ft.
Method of Sealing Welded

(9) WATER LEVELS:

Depth at which water was first found 46 ft.
Standing level before perforating _____ ft.
Standing level after perforating _____ ft.

(10) WELL TESTS:

Was a pump test made? Yes No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. draw down after _____ hrs.
Temperature of water _____ Was a chemical analysis made? Yes No
Was electric log made of well? Yes No

(11) WELL LOG:

Total depth	ft.	Depth of completed well	ft.
187		185	
Formation: Describe by color, character, size of material, and structure.			
0'	ft. to	3'	ft. Top Soil
3	"	10	" Hardpan & sand
10	"	23	" Clay, gray
23	"	32	" Clay, brown
32	"	64	" Clay, gray
64	"	70	" Sediment, gray
70	"	74	" Sand
74	"	150	" Clay, gray
150	"	165	" Sandy
165	"	175	" Sediment, blue
175	"	187	" Sand, coarse

CONFIDENTIAL
 Section 7076.1, Water Code

FOR OFFICIAL USE ONLY

Work started April 19 56 Completed _____ 19 _____

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME E. C. Keables, Well Drilling
(Person, firm, or corporation) (Typed or printed)
Address 1700 Glenrose Ave.
N. Sacramento 15, Calif.

[SIGNED] E. C. Keables
Well Driller
License No. 157234 Dated April, 1956

REGION _____

DIVISION OF WATER RESOURCES

BASIN _____

COUNTY Sutter

DEPARTMENT OF PUBLIC WORKS

DWR No. _____ B & M

STATE OF CALIFORNIA

OTHER NOS. 32-16

NEAR _____

WELL LOG

114 33J1

State - California

11/4E-33 51

LOCATION _____

SUBAREA Vernon

OWNER _____ ADDRESS _____

DRILLED BY Thomas J. Fulton ADDRESS Casing diam. 16, 14, and 12"

DRILLING METHOD _____ GRAVEL PACKED _____ DATE COMPLETED Sept. 1947

SIZE OF CASING DEPTH _____ STRUCK WATER AT _____

PERFORATIONS _____ SIZE _____ No. _____

WATER LEVEL BEFORE PERFORATING _____ AFTER _____

TEST DATA: DISCHARGE G. P. M. _____ DRAWDOWN FT. _____ HOURS RUN _____

OTHER DATA AVAILABLE: WATER LEVEL RECORD _____ ANALYSIS _____

SURFACE ELEV. _____ DATUM _____ SOURCE OF INFORMATION Owner

(Enter type of well, perforations, yield, and drawdown at end of log)

FOR FIELD COPIES USE ALTERNATE LINES

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %
13		Soft top soil		
16		Brown sand		
32		Gray with pieces brown clay		
39		Soft brown clay		
40		Pea gravel		
71		Hard dark brown clay		
91		Soft brown clay		
93		Black burnt sand		
96		Soft gray sand		
101		Hard gray sand		
139		Soft brown clay		
143		Hard black sand		
145		Black sand		
156		Hard gray clay		
163		Blue clay		
164		Gray sand		
175		Hard blue clay		
181		Soft gray sand		
183		Hard gray sand		
196		Cemented sand and gravel		
199		Hard yellow clay		
201		Gray sand		
219		Soft blue clay		
221		Black sand		
243		Soft blue clay		
247		Hard blue clay		
251		Soft blue clay		
252		Blue sand		
271		Hard blue clay		

LOG OBTAINED BY _____ DATE _____ SHEET 1 OF _____

DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

BASIN _____

DWR NO. _____ B & M _____

OTHER NOS. 32-16

114 33J1

11/4E-33 5/

WELL LOG

REGION _____

COUNTY _____

NEAR _____

LOCATION _____

OWNER _____ ADDRESS _____

DRILLED BY _____ ADDRESS _____

DRILLING METHOD _____ GRAVEL PACKED _____ DATE COMPLETED _____

SIZE OF CASING DEPTH _____ STRUCK WATER AT _____

PERFORATIONS _____ SIZE _____ No. _____

WATER LEVEL BEFORE PERFORATING _____ AFTER _____

TEST DATA: DISCHARGE G. P. M. _____ DRAWDOWN FT. _____ HOURS RUN _____

OTHER DATA AVAILABLE: WATER LEVEL RECORD _____ ANALYSIS _____

SURFACE ELEV. _____ DATUM _____ SOURCE OF INFORMATION _____

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %
283		Hard blue shale		
285		Hard blue sand and caving small pieces of clay		
		Perforated 82-102, 148-168'		

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY _____ DATE _____ SHEET 1 OF _____

ORIGINAL
File Original, Duplicate and Triplicate with the
DIVISION OF WATER RESOURCES
P. O. BOX 1079
SACRAMENTO 5, CALIFORNIA

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA—DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES 305

DWR Log No: 51-099
 LOCATION NOT CHECKED
 State Well No. 11N/4E-34J1
 Other Well No. 11N/4E-34J1
 Region 34J1

(1) **DRILLER:** (person, firm, or corporation)
 Name E. C. Keables
 Address 1700 Glenrose Ave.
Sacramento 15, Calif.

OWNER:
 Name _____
 Address _____

(2) Proposed Use (Check)				Equipment	
Domestic	<input type="checkbox"/>	Industrial	<input type="checkbox"/>	Rotary	<input type="checkbox"/>
Irrigation	<input checked="" type="checkbox"/>	Test Well	<input type="checkbox"/>	Cable	<input checked="" type="checkbox"/>
Municipal	<input type="checkbox"/>	Other	<input type="checkbox"/>	Dug Well	<input type="checkbox"/>
				Other	<input type="checkbox"/>

(3) CASING:
 100 ft. of 14 in 12 lb./sq. casing 100 left in well
 " " " " " " " " " " " " " " " " " " "
 50' 12" 12G Liner- perf. 30' " " "
 40' 10" 12G Liner- perf. 16' " " "
 " " " " " " " " " " " " " " " " " "
 Type and size of shot or well ring 14"

(4) PERFORATIONS:
 Type of perforator used _____

Perforated	ft. to	ft.	holes per	in.

Diameter of perforations _____ in., length _____ in.

(5) WATER LEVELS:
 Was electric log made of well? Yes No If yes, attach copy.
 Depth at which water was first found 24 ft.
 Standing level before perforating _____ ft.
 Standing level after perforating _____ ft.
 Note your observation of any change in water level while drilling _____
 Was a surface sanitary seal provided? Yes

(6) WELL PUMPING TEST:
 Capacity _____ gal./min. ft. draw down _____
 Was well gravel packed? _____
 Were any strata sealed against pollution? _____
 Temperature _____ Was a chemical analysis made? _____ Attach copy _____
 If abandoned was well capped? _____

(7) TYPE OF WORK (check):
 New well Reconditioning of well
 Deepening existing well

(8) LOCATION OF WELL: LOCATION QUESTIONED
 County Sutter
 R. F. D. or Street No. _____
2376 Ft. W. Riego Rd.
3840' W of Western Pacific RR

(9) WELL LOG:
 Total depth of well 275 Ft. ft.
 Formation: Mention size of water gravel—

<u>1</u>	ft. to	<u>2</u>	ft.	<u>Top Soil</u>
<u>2</u>	"	<u>3</u>	"	<u>Hardpan</u>
<u>3</u>	"	<u>40</u>	"	<u>Clay & Granite Sand</u>
<u>40</u>	"	<u>90</u>	"	<u>Clay</u>
<u>90</u>	"	<u>98</u>	"	<u>Sand, hard</u>
<u>98</u>	"	<u>150</u>	"	<u>Clay</u>
<u>150</u>	"	<u>156</u>	"	<u>Sand, hard</u>
<u>156</u>	"	<u>165</u>	"	<u>Clay</u>
<u>165</u>	"	<u>171</u>	"	<u>Sand, soft</u>
<u>171</u>	"	<u>176</u>	"	<u>Clay</u>
<u>176</u>	"	<u>192</u>	"	<u>Sand</u>
<u>192</u>	"	<u>229</u>	"	<u>Clay</u>
<u>229</u>	"	<u>250</u>	"	<u>Sand</u>
<u>250</u>	"	<u>255</u>	"	<u>Clay</u>
<u>255</u>	"	<u>265</u>	"	<u>Sand, hard</u>
<u>265</u>	"	<u>275</u>	"	<u>Sand, soft</u>
<u>275</u>	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	
	"		"	

FOR OFFICIAL USE ONLY

Work started Mar. 30, 1953 Completed 4/13/53 19 ____
 Date of Report April 30, 1953 19 ____

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
 [SIGNED] E. C. Keables
 Well Driller

By Owner
 License No. 119760 Classification C-57
 Dated June 9, 1954 , 19 ____
 45270 7-51 30M 20IN ① SPO

LOCATION NOT CHECKED

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. _____
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

Do Not Fill In
N^o 45210 **35J1**
State Well No. 11N/4E-35J1
Other Well No. 11N/4E-35J1

683

(1) OWNER:
Name _____
Address _____

(2) LOCATION OF WELL:
County Sutter Owner's number, if any—
R. F. D. or Street No. (Pleasea. Grove Rd.)
342' W Old Marysville Rd.
474' N. Riego Road

(3) TYPE OF WORK (check):
New well Deepening Reconditioning Abandon
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:
Rotary
Cable
Dug Well

(6) CASING INSTALLED:
SINGLE DOUBLE
From 1 ft. to 20 ft. Diam. 12" Gage or Wall 12"
Type and size of shoe or well ring none
Describe joint _____

If gravel packed
Diameter of Bore from _____ to _____ ft.
Size of gravel: _____

(7) PERFORATIONS:
Type of perforator used _____
Size of perforations _____ in., length, by _____ in.
From _____ ft. to _____ ft. Perf. per row _____ Rows per ft. _____

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes No To what depth 20 ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata _____
From _____ ft. to _____ ft.
Method of Sealing _____

(9) WATER LEVELS:
Depth at which water was first found 54 ft.
Standing level before perforating _____ ft.
Standing level after perforating _____ ft.

(10) WELL TESTS:
Was a pump test made? Yes No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. draw down after _____ hrs.
Temperature of water _____ Was a chemical analysis made? Yes No
Was electric log made of well? Yes No

(11) WELL LOG:
Total depth 133 ft. Depth of completed well 133 ft.

Formation: Describe by color, character, size of material, and structure.

0	ft. to	3	ft.	Top Soil
3		50		Clay
50		52		Sand
52		128		Clay
128		133		Sand

official no. 11N/4E-35J1
plots in 35 J1

plot .1 mi W of
P.C. Rd., 26 mi N of
Riego Rd

CONFIDENTIAL
Section 7076.1, Water Code

FOR OFFICIAL USE ONLY

Work started 6/2/58 19 _____ Completed _____ 19 _____

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME E. C. Keables, Well Drilling
(Person, firm, or corporation) (Typed or printed)
Address 1700 Glenrose Ave., N. Sacto., 15
California

[SIGNED] E. C. Keables
Well Driller
License No. 157234 Dated Jan., 19 59

DUPLICATE
File Original, Duplicate and Triplicate with the
DIVISION OF WATER RESOURCES
P. O. BOX 1079
SACRAMENTO 5, CALIFORNIA

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA—DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES

DWR Log No: 51-199
11/1
Do Not Fill In

State Well No. _____
Other Well No. 11-32
Region _____

9168

(1) **DRILLER:** (person, firm, or corporation)

Name E. C. Keables
Address 1700 Glenrose Ave.,
Sacramento, Calif.

OWNER

Name _____

Address _____

(2) **Proposed Use** (*Check*)

Domestic Industrial
Irrigation Test Well
Municipal Other 2

Equipment

Rotary
Cable
Dug Well 2
Other

(3) **CASING:**

88 ft. of 14 in. 12 x/ga. casing 88 left in well

34 Ft. Liner from 138' to 172'

Type and size of shoe or well ring 14"

(4) **PERFORATIONS:**

Type of perforator used _____

Perforated	ft. to	ft.	holes per	in.

Diameter of perforations _____ in., length _____ in.

(5) **WATER LEVELS:**

Was electric log made of well? Yes No If yes, attach copy.

Depth at which water was first found 34 ft.

Standing level before perforating _____ ft.

Standing level after perforating _____ ft.

Note your observation of any change in water level while drilling _____

Was a surface sanitary seal provided? Yes

(6) **WELL PUMPING TEST:**

Capacity _____ gal./min. ft. draw down _____

Was well gravel packed? 2

Were any strata sealed against pollution? 2

Temperature _____ Was a chemical analysis made? _____ Attach copy

If abandoned was well capped? _____

(7) **TYPE OF WORK** (*check*):

New well Reconditioning of well

Deepening existing well

(8) **LOCATION OF WELL:**

County Sutter

R. F. D. or Street No. _____

2376' N Reigo Rd.

1200' W of W.P. Railroad

(9) **WELL LOG:**

Total depth of well 290 ft.

Formation: Mention size of water gravel—

	1	ft. to	3	ft.	
	<u>1</u>		<u>3</u>		Top Soil
	<u>3</u>		<u>21</u>		Hardpan
	<u>21</u>		<u>60</u>		Clay
	<u>60</u>		<u>85</u>		Sand
	<u>85</u>		<u>99</u>		Clay
	<u>99</u>		<u>106</u>		Sand
	<u>106</u>		<u>120</u>		Clay
	<u>120</u>		<u>125</u>		Sand
	<u>125</u>		<u>150</u>		Clay
	<u>150</u>		<u>172</u>		Sand
	<u>172</u>		<u>275</u>		Clay
	<u>275</u>		<u>290</u>		Sand, Coarse

FOR OFFICIAL USE ONLY

Work started 4/5/51 19 _____ Completed 4-2-19 19 _____

Date of Report July 1952

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] E. C. Keables Well Driller

By E. C. Keables

License No. 96347 Classification C-57

Dated _____, 19 _____

31-010

DIVISION OF WATER RESOURCES

11N SE 26L2

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

Placer
31

Do Not Fill In
State Well No. 11N/SE-26L2
Other Well No. _____
Region _____

(1) **Driller:**
Name V. J. McGrew
Address 304 W. El Camino
North Sacramento, California
License No. 17425 Classification A

(2) **Proposed use or uses (check):**
Domestic Irrigation Domestic and Irrigation Other Stock Well

(3) **Equipment used (check):**
Municipal Industrial Test well Rotary Cable Dug well Other _____

(4) **Type of work (check):**
New well Deepening existing well Reconditioning of well

(5) **Well log:**
Total depth of well 100' ft. Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface

0	ft. to	5	ft.	Top Soil	Red
5	" "	9	" "	Hard Pan	Yellow
9	" "	12	" "	Sand	Grey
12	" "	50	" "	Clay Sandy	Yellow
50	" "	95	" "	Clay	White
95	" "	100	" "	Sand	Brown
	" "		" "		
	" "		" "		
	" "		" "		
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	" "		" "		
	" "		" "		

*Placed and Colored
As Well 11N SE 26L2*

FOR OFFICIAL USE ONLY

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) **Casing left in well:**

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
<u>4</u>	<u>6</u>	<u>Single</u>	<u>12 ga</u>	<u>3</u>

Type and size of shoe or well ring None Welded joints— Yes No

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

LOCATION ~~NOT~~ CHECKED

No. 1994

State Well No. 11N/SE-3461

Other Well No. 11N/SE-3461

106

(2) LOCATION OF WELL:

County Placer Owner's number, if any—
R. F. D. or Street No.

1500' N. of Base Line Rd.
Sec. 33, T 11 N, R = 5 E
4 1/2 miles E of Reno

(3) TYPE OF WORK (check):

New well Deepening Reconditioning Abandon
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:

Rotary
Cable
Dug Well

(6) CASING INSTALLED:

SINGLE <input checked="" type="checkbox"/> DOUBLE <input type="checkbox"/>			Gage or Wall	If gravel packed		
From	ft. to	Diam.		Diameter of Bore	from	to
<u>139 1/2</u>	<u>14</u>	<u>12</u>				

Type and size of shoe or well ring 14" 4x5/8 Size of gravel:
Describe joint butt weld

(7) PERFORATIONS:

Type of perforator used			Size of perforations			in., length, by		
From	ft. to	ft.	Perf. per row	Rows per ft.				

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes No To what depth _____ ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata _____
From _____ ft. to _____ ft.

Method of Sealing

(9) WATER LEVELS:

Depth at which water was first found 60 ft.
Static level before perforating 65 ft.
Static level after perforating _____ ft.

(10) WELL TESTS:

Was a pump test made? Yes No If yes, by whom?
Yield: _____ gal./min. with _____ ft. draw down after _____ hrs.
Temperature of water _____ Was a chemical analysis made? Yes No
Was electric log made of well? Yes No

(11) WELL LOG:

Total depth	ft.	Depth of completed well	ft.
0	ft. to	1	ft.
1		5	
5		20	
20		30	
30		35	
35		60	
60		65	
65		70	
70		80	
80		110	
110		120	
120		185	
185		195	
195		215	
215		225	
225		250	
250		265	
265		275	
275		297	
297		310	
310		320	

Formation: Describe by color, character, size of material, and structure.
top soil
hard pan
granulated formation
clay
coarse sand
clay
sandy - 1st water
clay
soft & sandy
clay
sandy clay
hard clay
soft
clay
light sand
hard clay
sand
clay
coarse sand
red clay
black sand

Plotted and Coded
As Well 11N SE 3461

FOR OFFICIAL USE ONLY

Work started July 7 1954. Completed July 13 1954

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Frank P. Conley
(Person, firm, or corporation) (Typed or printed)

Address 432 Feather River Blvd
Marysville, Calif

[SIGNED] Frank P. Conley
Well Driller

License No. 105346 Dated _____, 19____

Appendix E: Levee Geologic Sections

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

APPENDIX E Levee Geologic Sections

December 2021

Evaluation of Potential Groundwater Impacts Due to Proposed Construction for Natomas Levee Improvement Program

prepared for:

Sacramento Area Flood Control Agency
(SAFCA)

prepared by:

Luhdorff & Scalmanini,
Consulting Engineers

May 4, 2009

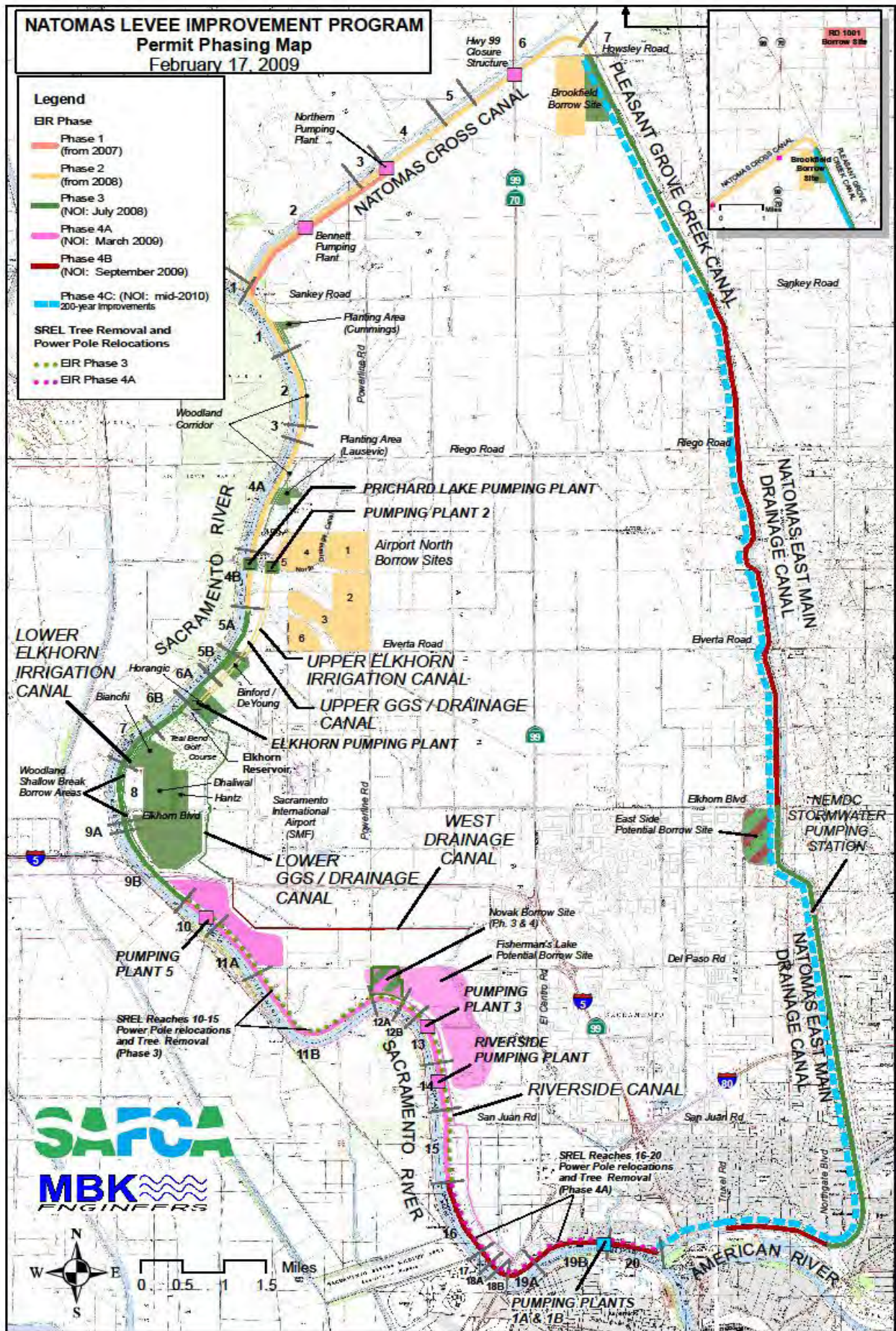
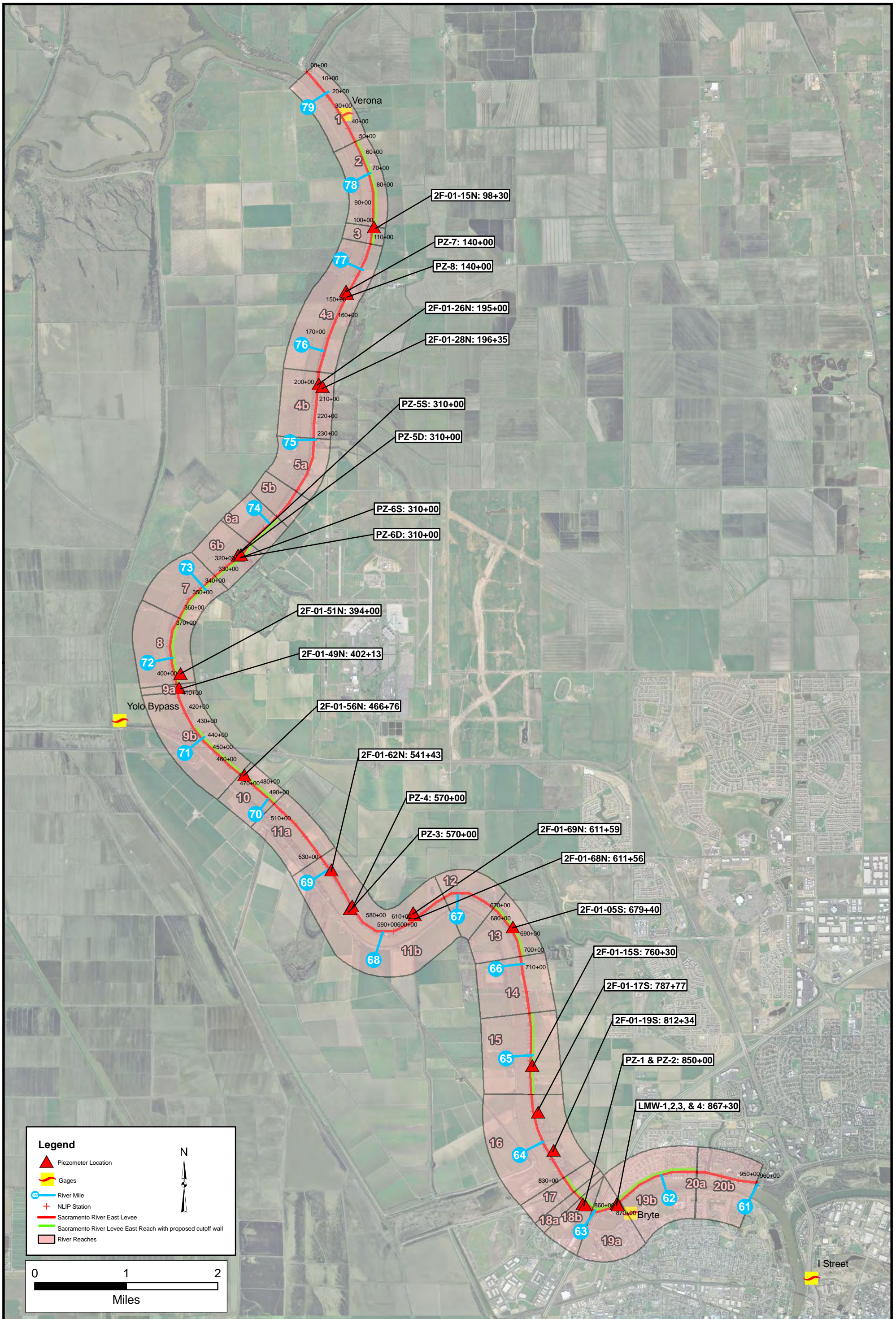
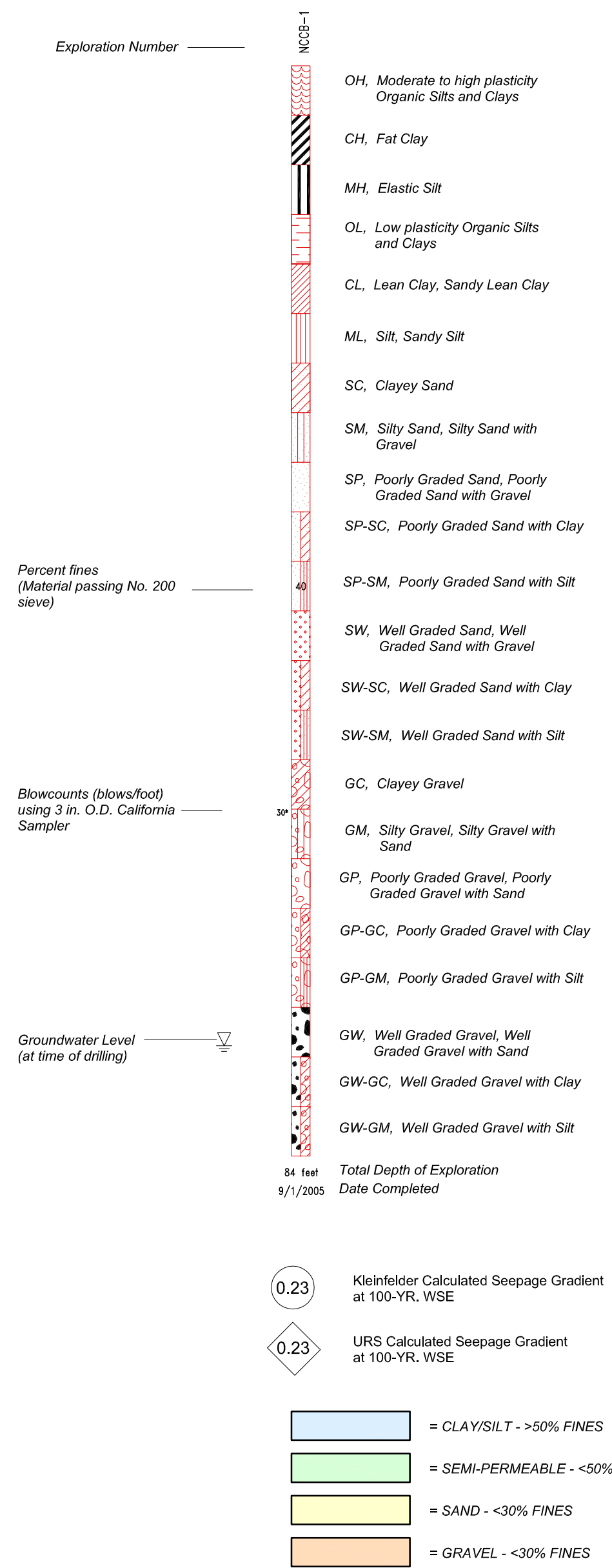


Figure 1-1
Proposed SAFCA Construction Locations
for Natomas Levee Improvement Program



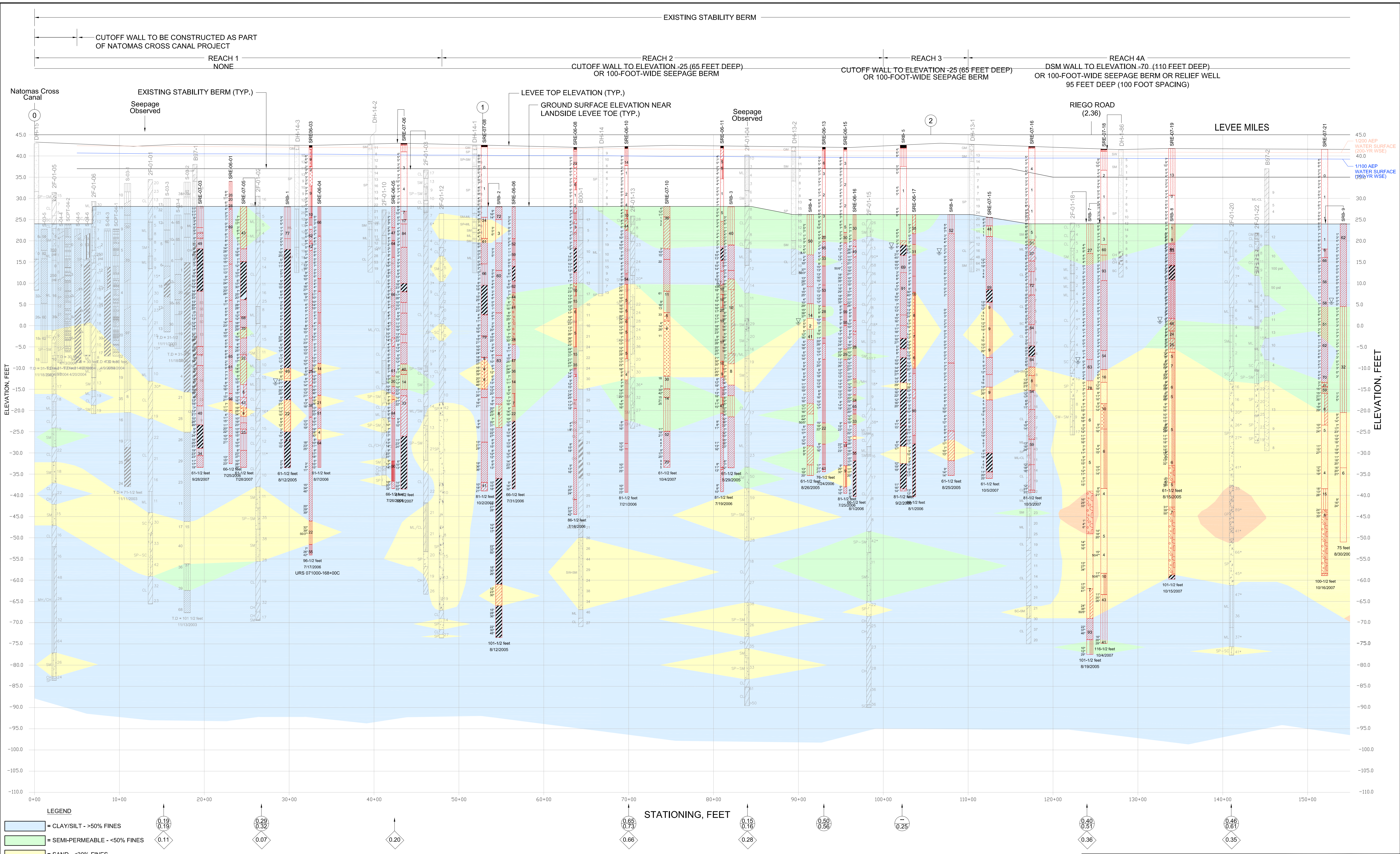
**SUBSURFACE PROFILE
SACRAMENTO RIVER EAST LEVEE**

LOG LEGEND



Notes:

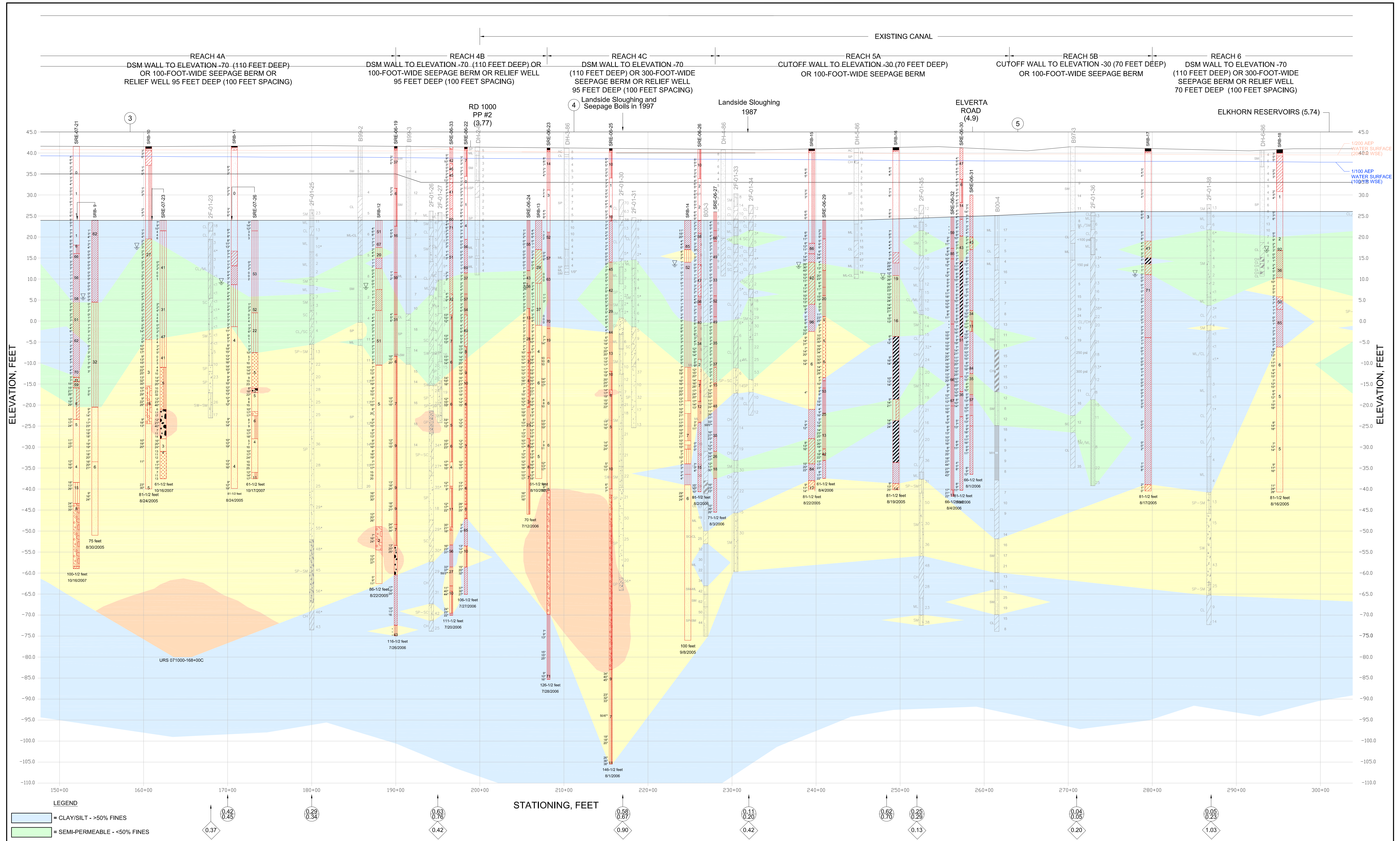
1. Base drawings for these levee profiles, obtained in August 2005 from the Sacramento District U.S. Army Corps of Engineers (USACE) and used with their permission, include stick logs of previous explorations, a levee crown profile, a landside levee toe profile, notes regarding levee performance and completed levee improvements, and elevation scale based on the 1929 National Geodetic Vertical Datum (NGVD, 1929).
2. Logs of the following explorations were added to the USACE base drawings: Kleinfelder 2006 borings (SRE-06-XX); Kleinfelder 2005 borings (SRB-XX); Kleinfelder 2003/2004 Borings S-03-1, S-03-2, S-03-3, S-03-4.
3. Locations of explorations shown are approximate. See Plate 2A through 2E for approximate plan locations of explorations.
4. The log legend shown applies to Kleinfelder 2005 borings (SRB-XX) and Kleinfelder 2006 borings (SRE-06-XX). Caution is advised in using the legend for interpretation of other explorations.
5. Logs represent general soil conditions observed at the point of exploration on the date indicated. Refer to Kleinfelder's 2005 report and Kleinfelder's 2006 report for more detail on the Kleinfelder 2005 borings (SRB-XX) and 2006 borings (SRE-06-XX).
6. Lines separating strata on logs represent approximate boundaries only. Actual transitions may be gradual.
7. No warranty is provided as to the continuity of soil conditions between individual sample locations.
8. Approximate top of boring elevations for Kleinfelder 2006 borings (SRE-06-XX) were obtained using GPS equipment survey; Kleinfelder 2005 borings (SRB-XX) were estimated using topographic data obtained by USACE 1997.
9. The 1/100 AEP and 1/200 AEP water surface profiles shown were provided by MBK Engineerson August 18, 2006. See report for an explanation of these profiles and conditions.
10. Details regarding completed levee improvements have been added to those already on the USACE levee profile base drawings and were obtained from the USACE. Extents of completed levee improvements shown are approximate and are the same as indicated on the USACE profiles. Refer to USACE as-built drawings for actual extents.



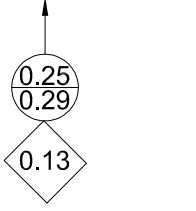
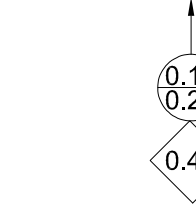
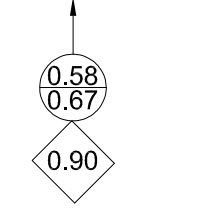
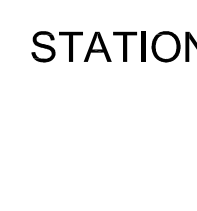
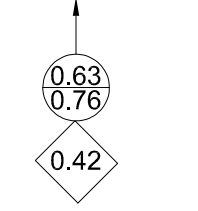
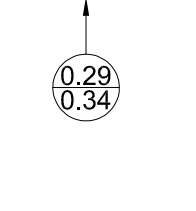
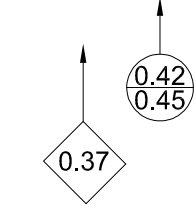
URS 071000-168+00C

NOTE: SOME STICK LOGS HAVE BEEN MOVED IN ORDER FOR ALL DATA TO BE READABLE. REFER TO THE BORING LOCATION MAPS FOR ACCURATE STATIONING OF THESE EXPLORATIONS.

KLEINFELDER		SACRAMENTO RIVER EAST LEVEE PROFILE		PLATE
Basis of Design Report		Sacramento River East Levee Reaches 1 through 4B		3B
Drawn By: D. ROSS	Date: 09/24/2007	Sacramento Basin Evaluation		
Project No.: 72834AASRN	Filename: 72834_p1.dwg	Sacramento and Sutter Counties, California		



- LEGEND**
- = CLAY/SILT - >50% FINES
 - = SEMI-PERMEABLE - <50% FINES
 - = SAND - <30% FINES
 - = GRAVEL - <30% FINES



NOTE: SOME STICK LOGS HAVE BEEN MOVED IN ORDER FOR ALL DATA TO BE READABLE. REFER TO THE BORING LOCATION MAPS FOR ACCURATE STATIONING OF THESE EXPLORATIONS.

KLEINFELDER		SACRAMENTO RIVER EAST LEVEE PROFILE	PLATE
Basis of Design Report		3C	
Sacramento River East Levee Reaches 1 through 4B		Natamas Basin Evaluation	
Sacramento and Sutter Counties, California		Drawn By: D. ROSS Project No.: 72834AASRN	
Date: 09/24/2007 Filename: 72834_p1.dwg		Date: 09/24/2007 Filename: 72834_p1.dwg	

**Appendix F: Assessment of Assessment of
Principal Aquifers**

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

APPENDIX F Assessment of Principal Aquifers

December 2021

APPENDIX F – ASSESSMENT OF PRINCIPAL AQUIFERS

This section provides a detailed hydrogeologic assessment of potential principal aquifers. It provides both historic definition of aquifers and current information to assess the number of principal aquifers.

The definition of principal aquifers must be supported by the geologic conditions, differences in groundwater levels, and water quality. The following sections provide a detailed discussion of aquifer conditions to demonstrate that the aquifers within the North American Subbasin can be considered to be one principal aquifer. Definitions of principal aquifers in adjacent subbasins are also included.

Historic Definition of Aquifers

The geologic units described above were grouped and separated into two aquifers, an Upper and Lower aquifer, by DWR for the North American Conjunctive Use Program (1997). “The division between the two aquifers is inexact, due to the difficulty in accurately determining the formation contacts”. Figures 4-9 through 4-11 in Section 4.9 of the GSP show the extent of the principal aquifers on the geologic sections.

The Upper aquifer was defined as the upper 200 to 300 feet of the aquifer system. It includes the Quaternary Alluvium, Modesto, Riverbank, and Laguna Formations and consists of generally thin and laterally discontinuous sands and gravels separated by thick sequences of clay. Groundwater in the Upper aquifer occurs under generally unconfined conditions. It should be noted on the geologic sections that portions of the Mehrten Formation in the eastern portion of the Subbasin would also be included in the Upper aquifer.

The Lower aquifer was defined as extending from about 200 to 300 feet below ground surface to the base of freshwater. It consists of Mehrten Formation sediments. It should be noted that in the eastern portion of the Subbasin the Upper aquifer includes the Mehrten Formation as it raises to ground surface.

Geologic Conditions

There are no regionally extensive fine-grained layers in the subsurface that were identified by previous studies or during the development of the geologic profiles or by historic references that could be used to separate and define principal aquifers.

There may be a confining bed in the deeper portions of the Mehrten Formation that is not being used for water supply in the NASb. Groundwater under the confining bed typically has dissolved gases and manganese concentrations above the MCL. It was partially identified near Roseville, but only a few other wells in the area have been drilled deep enough, so the full extent is unknown.

Groundwater Levels

Nested monitoring wells provide some of the highest quality data and groundwater levels in the various penetrated aquifers. Figure F-1 shows the location of nested and clustered wells in the NASb along with selected wells to illustrate groundwater levels in the different aquifers. Appendix J contains hydrographs for all of the nested and clustered wells in the Subbasin and sorted by DWR's definition of the aquifers.

Figure F-1 shows that for the most part, groundwater levels in the DWR-defined aquifers are similar, with the maximum difference in levels being 23 feet and those wells only present in the western portion of the subbasin. In the western portion, groundwater levels in the upper portions of the Mehrten Formation track similar to those in the Laguna Formation. Greater groundwater level differences are present in the deeper portions of the Mehrten Formation. The amount of separation of water levels between some zones indicates increasing confinement and isolation with depth (DWR, 1977). Other than for the western portion of the Subbasin, there is not a significant difference in groundwater levels between the two aquifers and does not suggest two separate aquifers.

Although there are head differences between the aquifers, wells in the areas are responding in a similar manner, to pumping and effects of recharge. Figure F-2 shows the head differences across the subbasin at nested or clustered wells and illustrates the similar trends in the aquifers suggesting they are interconnected.

The hydrographs show that groundwater levels in the Upper and Lower aquifers have similar trends, indicating that the aquifers are connected and are not separate. There is a slight lag time of the responses in the Lower aquifer.

Groundwater Gradients

The groundwater gradients are similar between the Upper and Lower aquifers except for on the east side. The gradients in the Upper aquifer are steeper from the east than in the Lower aquifer potentially due to groundwater recharge effects being greater in the Upper aquifer than in the Lower aquifer. Table F-1 provides the gradients by aquifers.

Table F-1. Groundwater Gradients

Aquifers	Groundwater gradients (ft/ft)			
	West	East	North	South
Upper	0.001	0.06	0.001	0.002
Lower	0.002	0.002	0.001	ND

Aquifer Hydraulic Characteristics

Aquifer hydraulic characteristics can best be determined by pumping a well and measuring the drawdown in observation well(s), but this only provides information at a single location in a 342,000-acre basin. The basis of the aquifers are from DWR's SVSim model which uses textural classifications to estimate hydraulic characteristics to simulate groundwater

hydraulic characteristics on a basin wide scale. The principal aquifers defined by DWR were not based on hydraulic characteristics of sediments. Aquifer tests with this elevated level of testing could not be located.

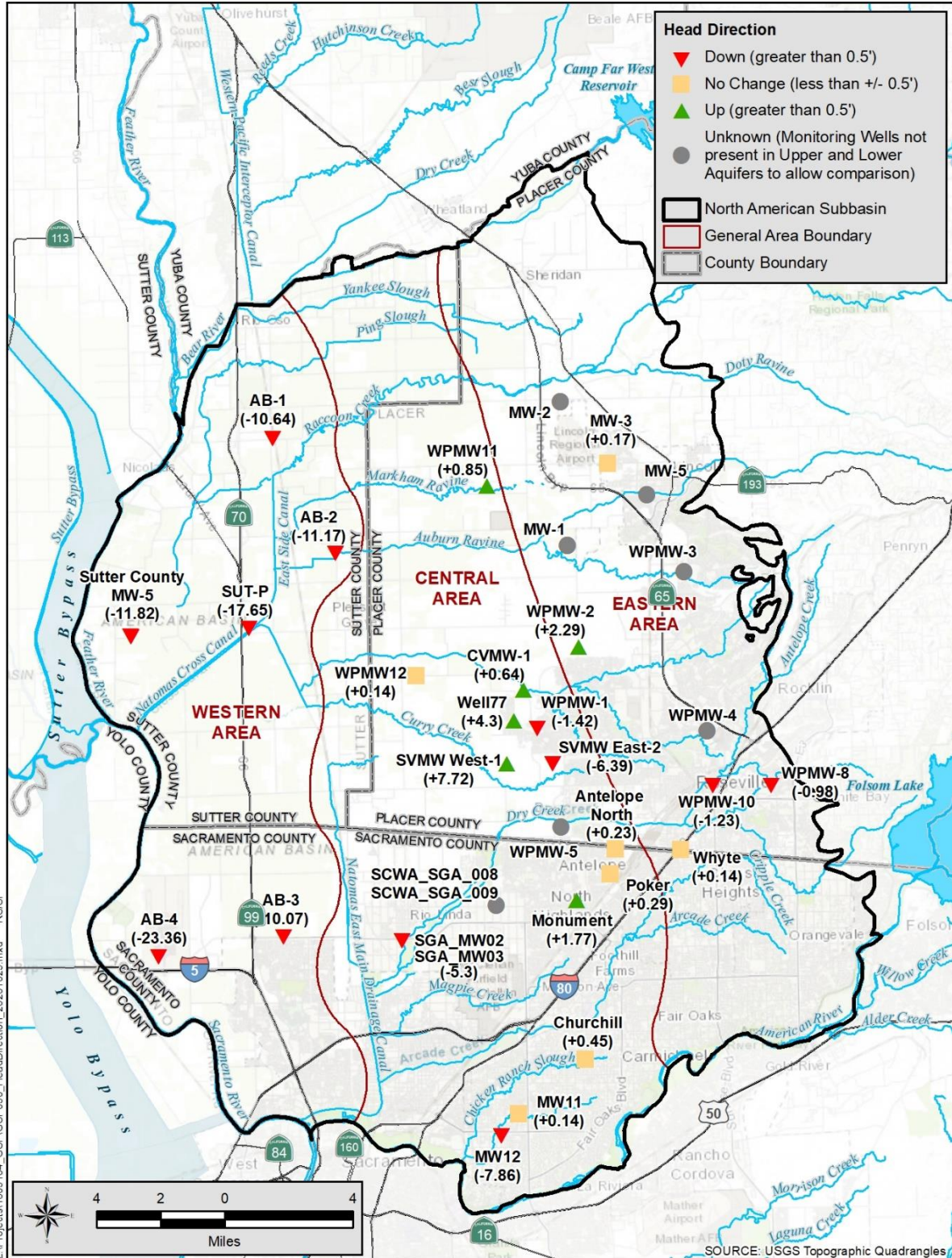


Figure F-1 Vertical Gradients Upper to Lower Aquifer – Fall 2019

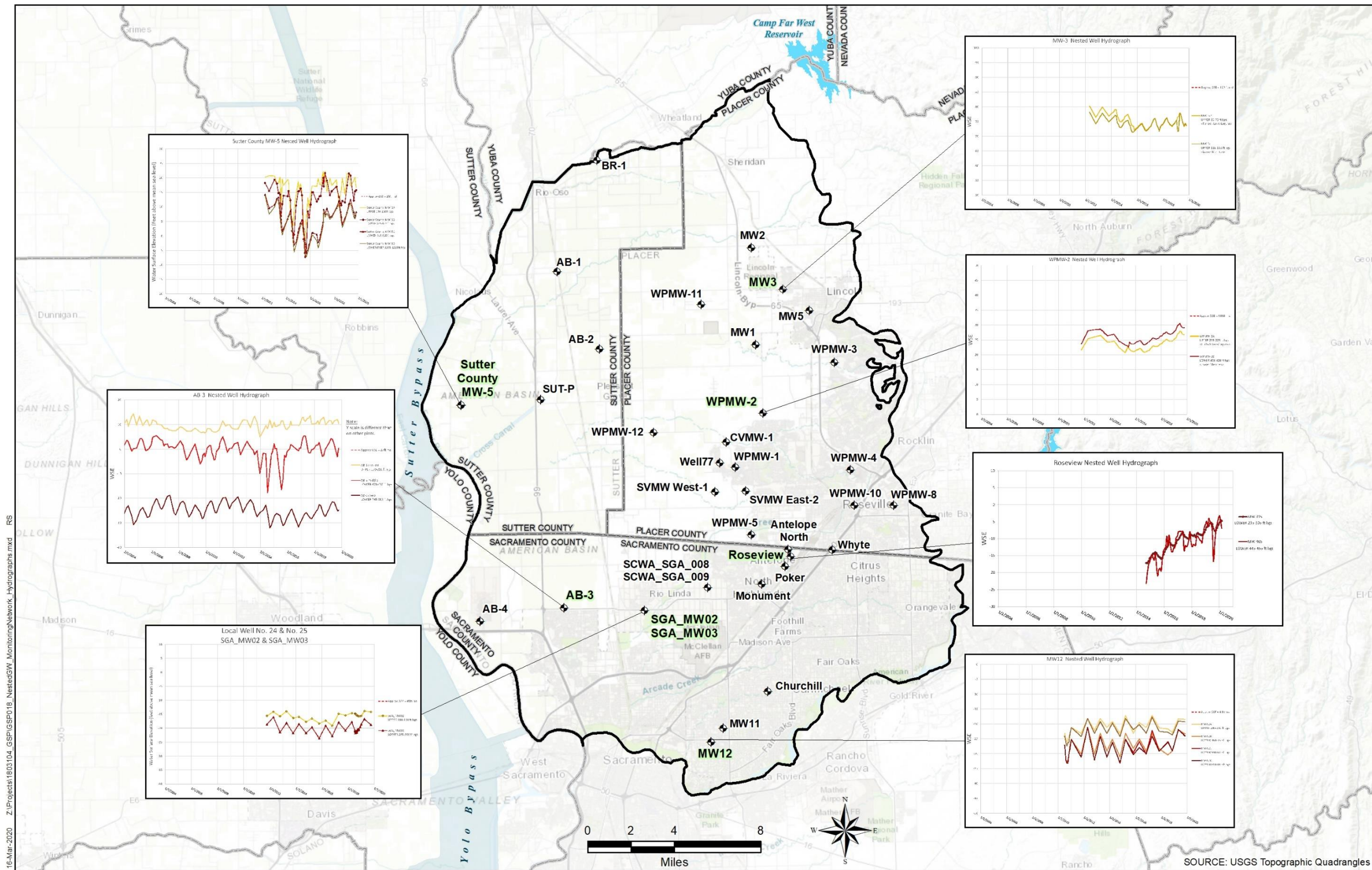


Figure F-2 Groundwater Level Trends

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General Water Quality

Figures F-3 and F-4 illustrate the distribution of total dissolved solids (TDS), a measure of the salt content, by the two DWR-identified aquifers in the central and western portion of the Subbasin and adjacent subbasins based on water quality sampling of depth-discrete monitoring wells that allowed vertical profiling of the groundwater quality in the various aquifers (GEI, 2020). The figures show that good quality water (green color and each ring representing one to three monitoring wells within the same aquifer) is present in the central portions of the Subbasin but poorer quality water (browns and reds) are present in the western portions of the Subbasin. Figure F-5 shows the distribution of the water quality in the subsurface by principal aquifers. The figure shows that water quality does not distinguish the DWR-defined principal aquifers.

Figures F-3 and F-4 show that high TDS groundwater is present along the western edge of the NASb. Figure F-5 shows the water quality in the western area is highly variable and not consistent by aquifer. Near surface groundwater, near the Feather River, contains high concentrations of TDS, along with elevated levels of chloride and nitrate, and its shallow depth suggests that it has been affected by agriculture. Underlying the near surface poor quality water is better quality water, but it also changes and varies with depth. There is also poor-quality water underlying the freshwater bearing aquifers, below the base of freshwater.

Number of Principal Aquifers

Based on the discussion above, there is not sufficient evidence to define two separate and distinct principal aquifers. Therefore, for the purposes of this GSP, the NASb only contains one principal aquifer.

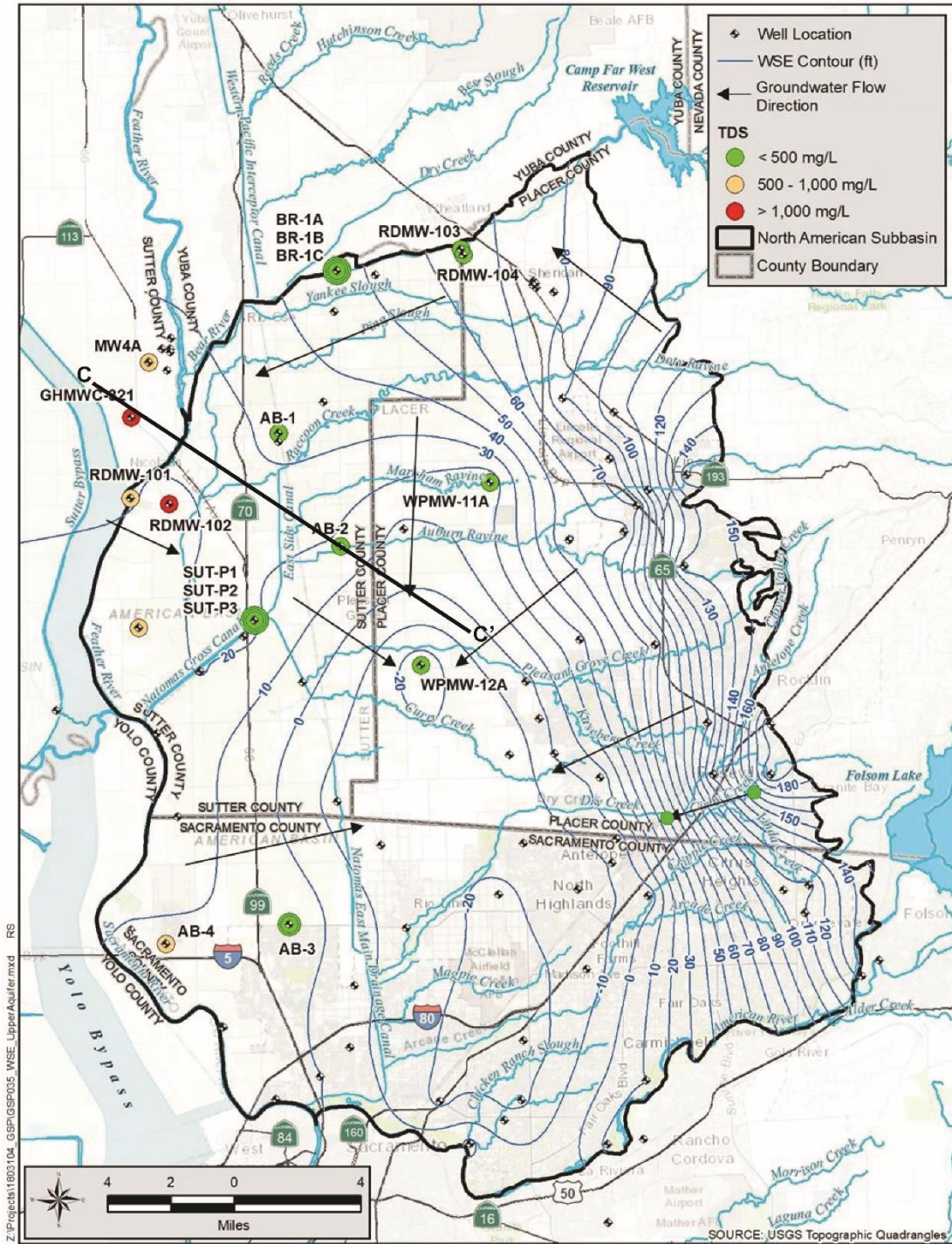


Figure F-3 Groundwater Quality Distribution Upper Aquifer

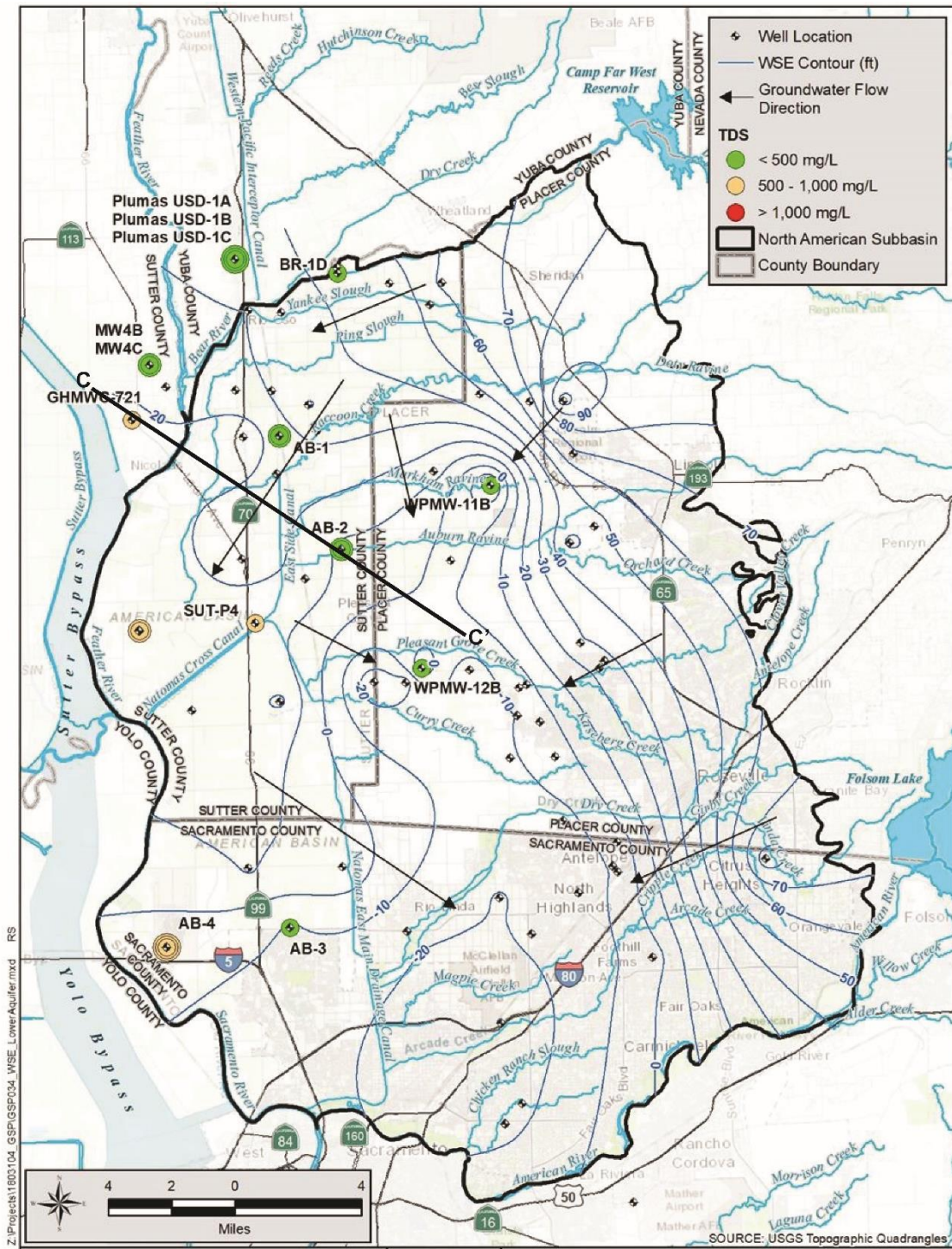


Figure F-4 Groundwater Quality Distribution Lower Aquifer

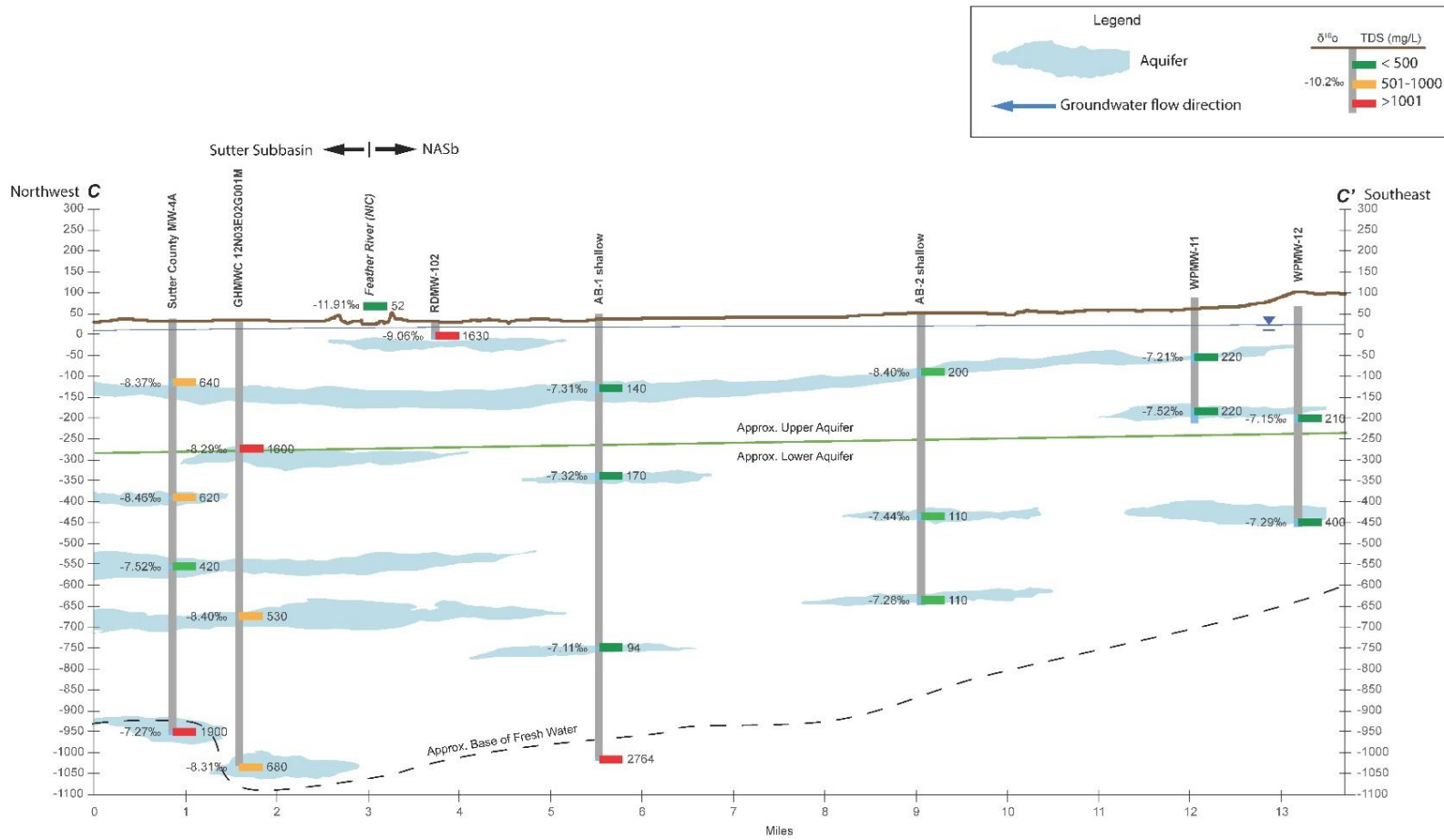


Figure F-5: Groundwater Quality Profile C-C'

Appendix G: Western Area Hydrographs

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN





APPENDIX G Western Area Wells with Hydrographs

December 2021

APPENDIX G

WESTERN AREA WELLS WITH HYDROGRAPHS

LEGEND:

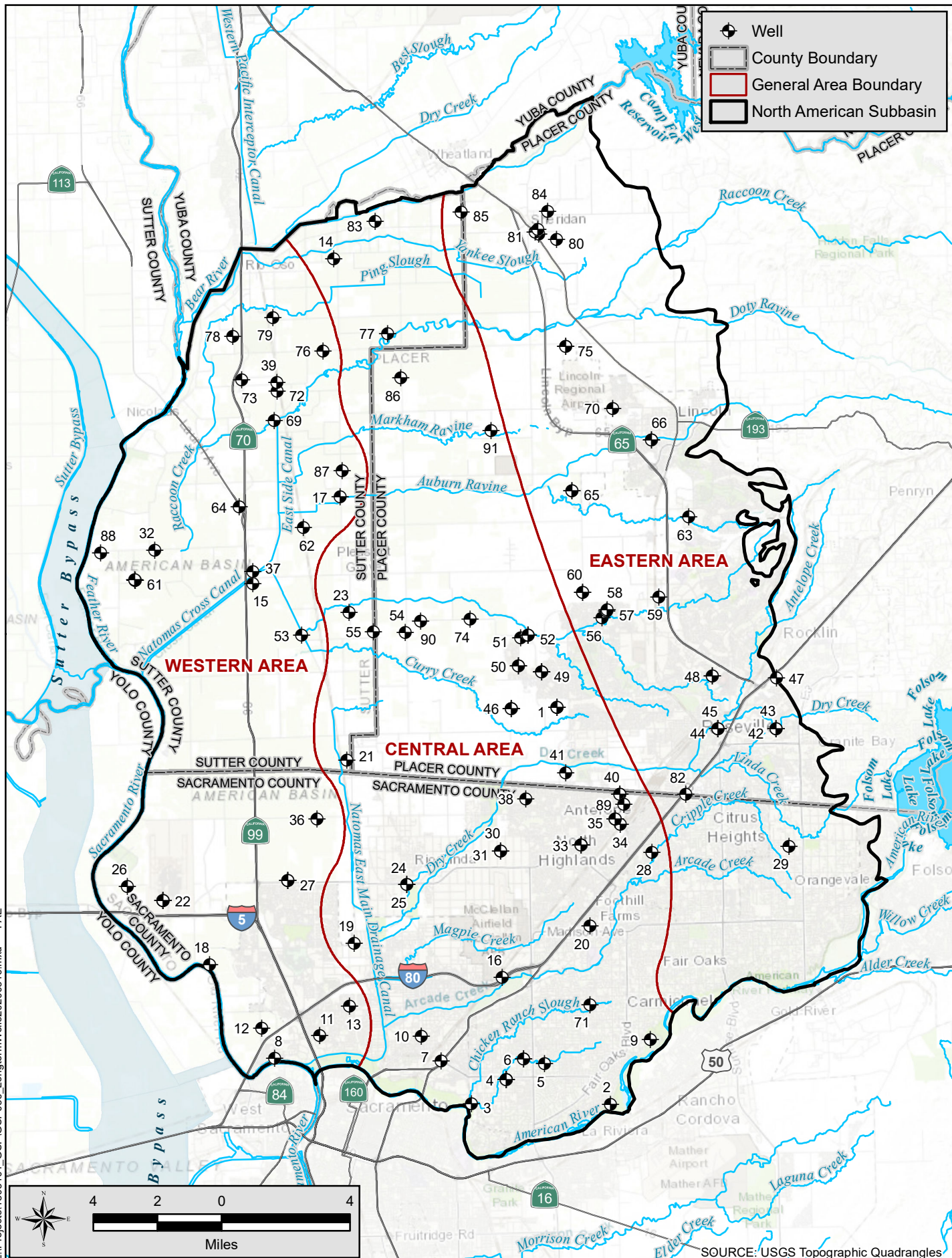
	Laguna Formation Wells
	Mehrten Formation Wells
	Wells with Unknown Construction Details
	Ione or Central Valley Fm. Wells

Long-Term Hydrographs

Years Displayed	1950 to 2019
Vertical Axis	50 feet
	Unless otherwise noted

Short Term Hydrographs

Years Displayed	2004 to 2019
	Unless otherwise noted
Vertical Axis	50 feet
	Unless otherwise noted
Groundwater levels from multiple aquifers shown	



Well
 County Boundary
 General Area Boundary
 North American Subbasin



SOURCE: USGS Topographic Quadrangles

North American Subbasin
Sutter, Placer and Sacramento Counties

North American Subbasin

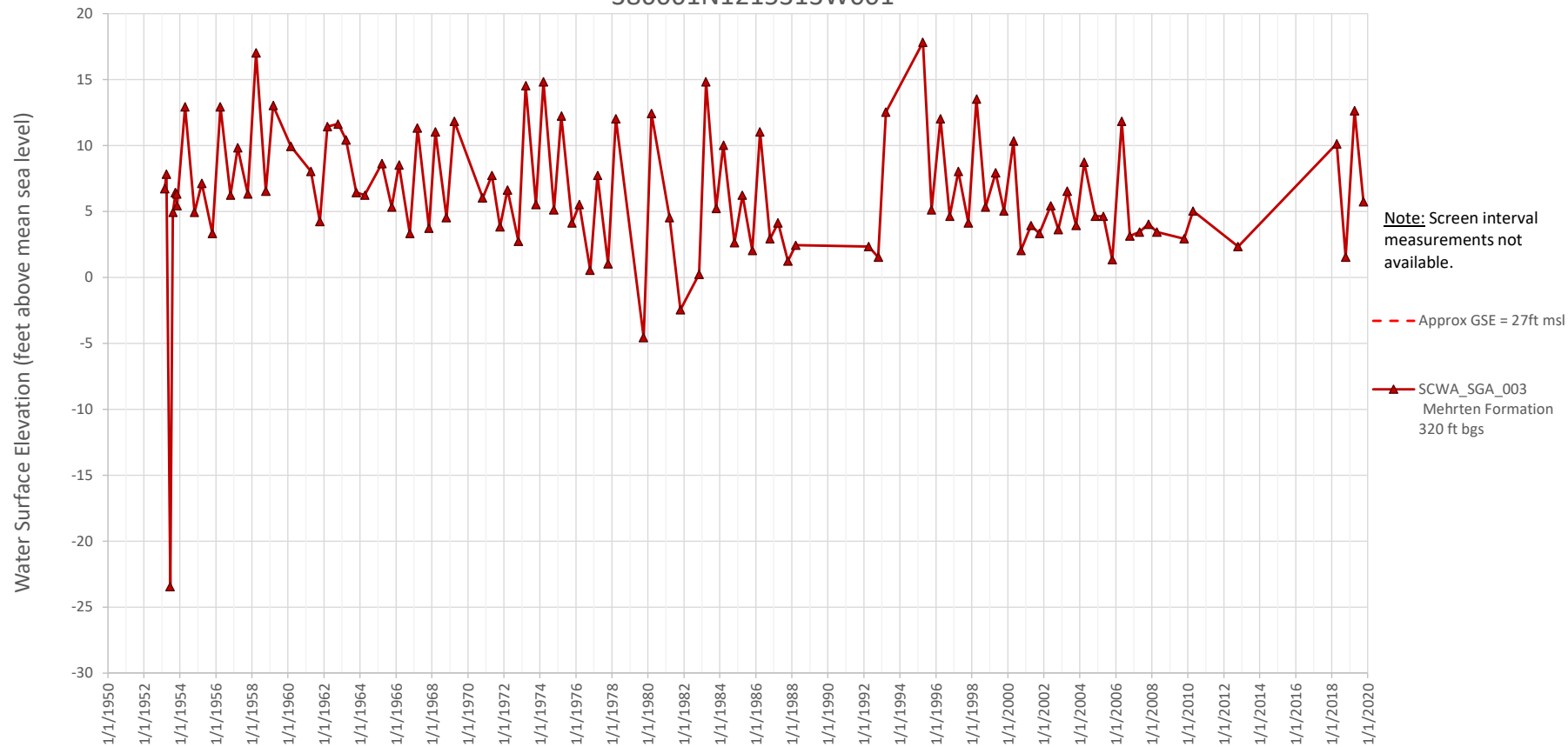


MARCH 2020

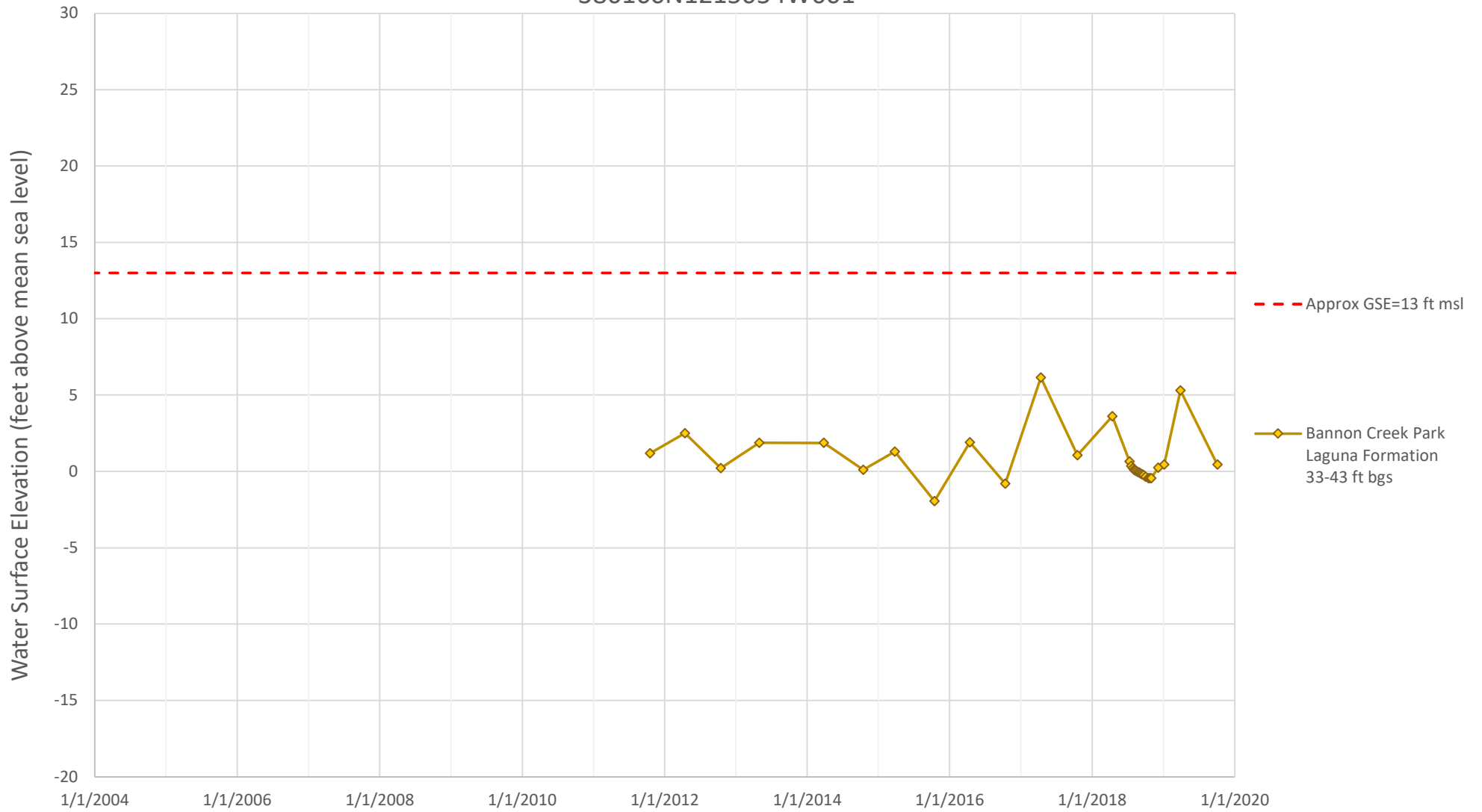
Long Term Wells

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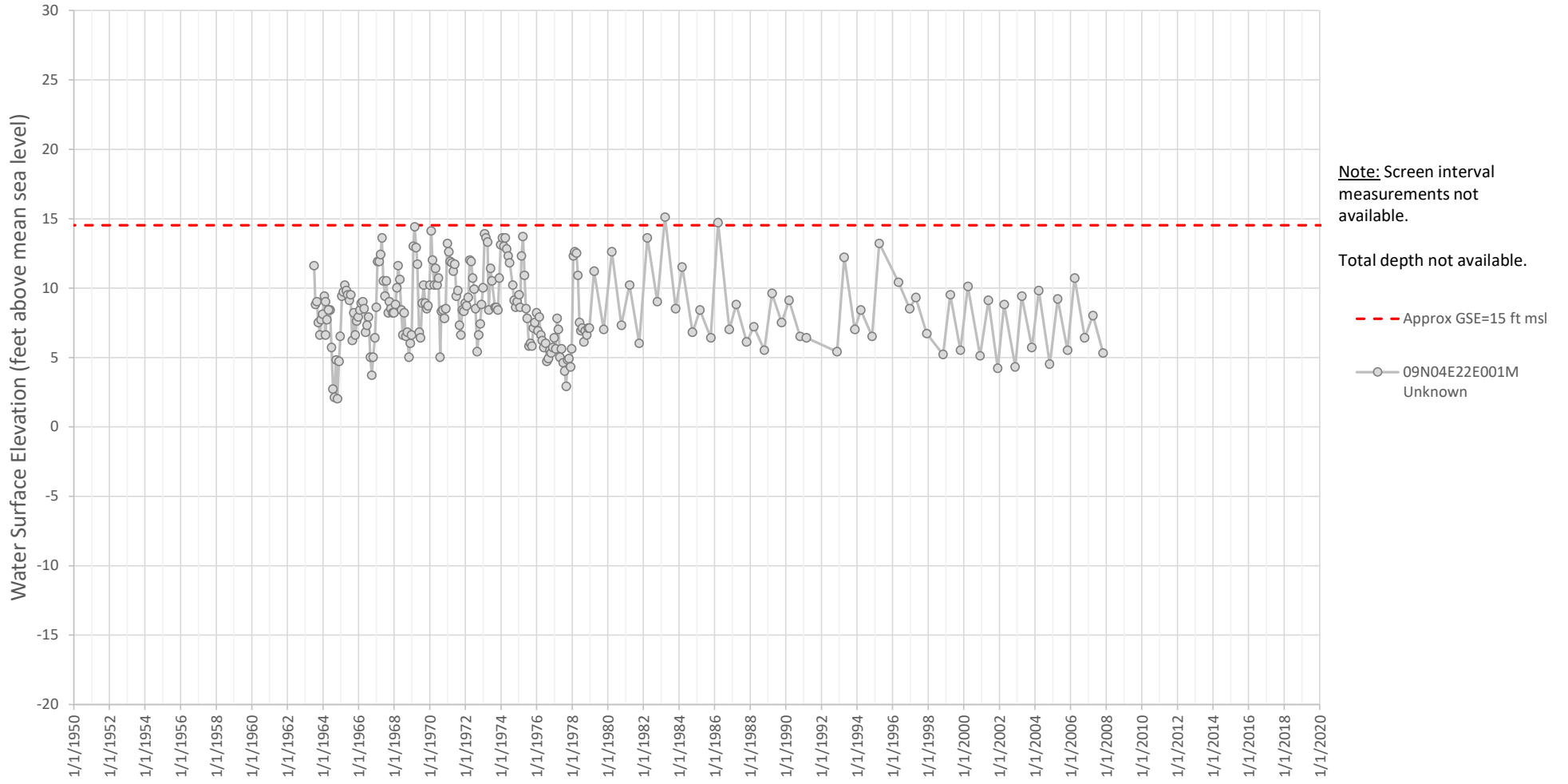
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SCWA_SGA_003
386061N1215313W001



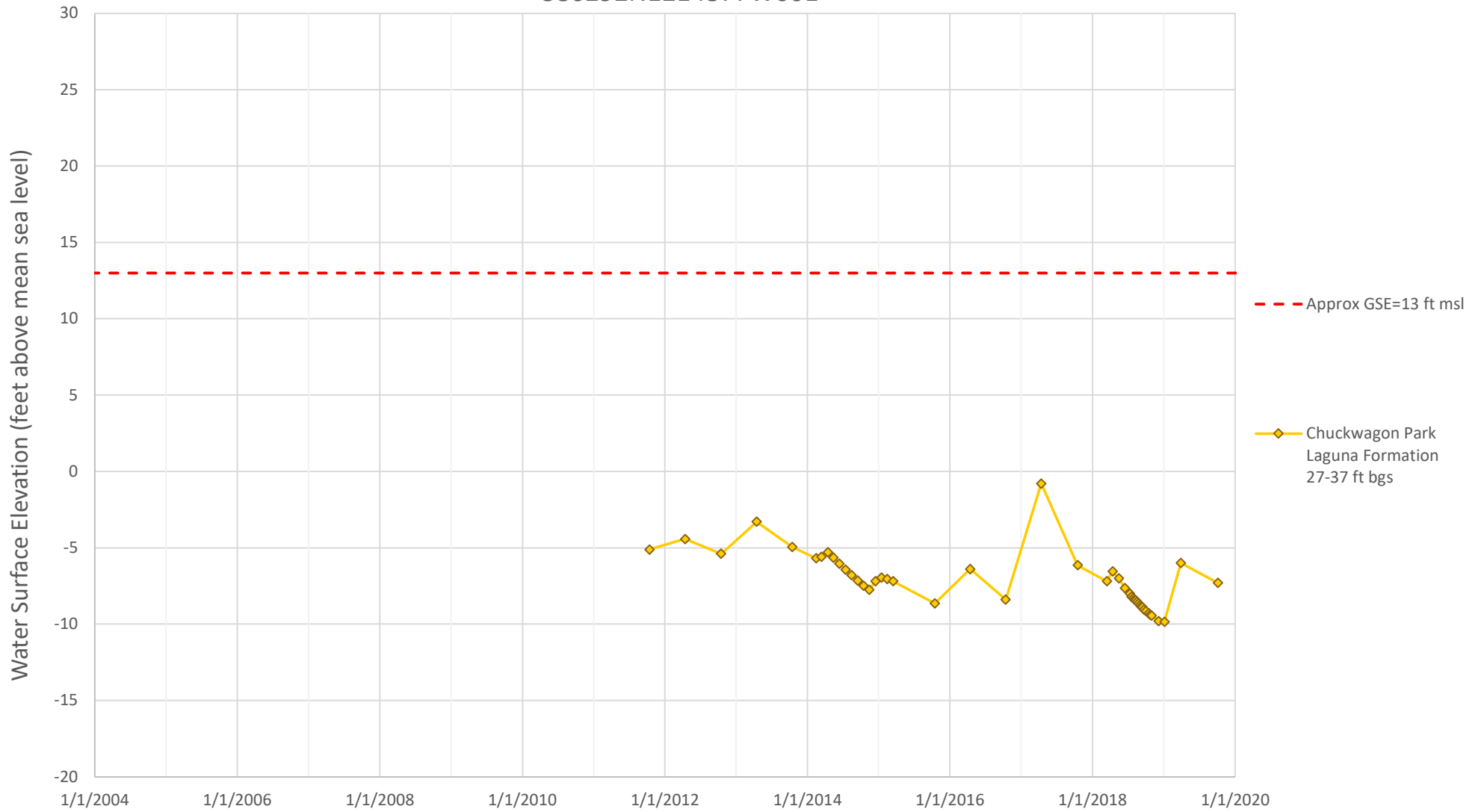
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Bannon Creek Park
386160N1215054W001



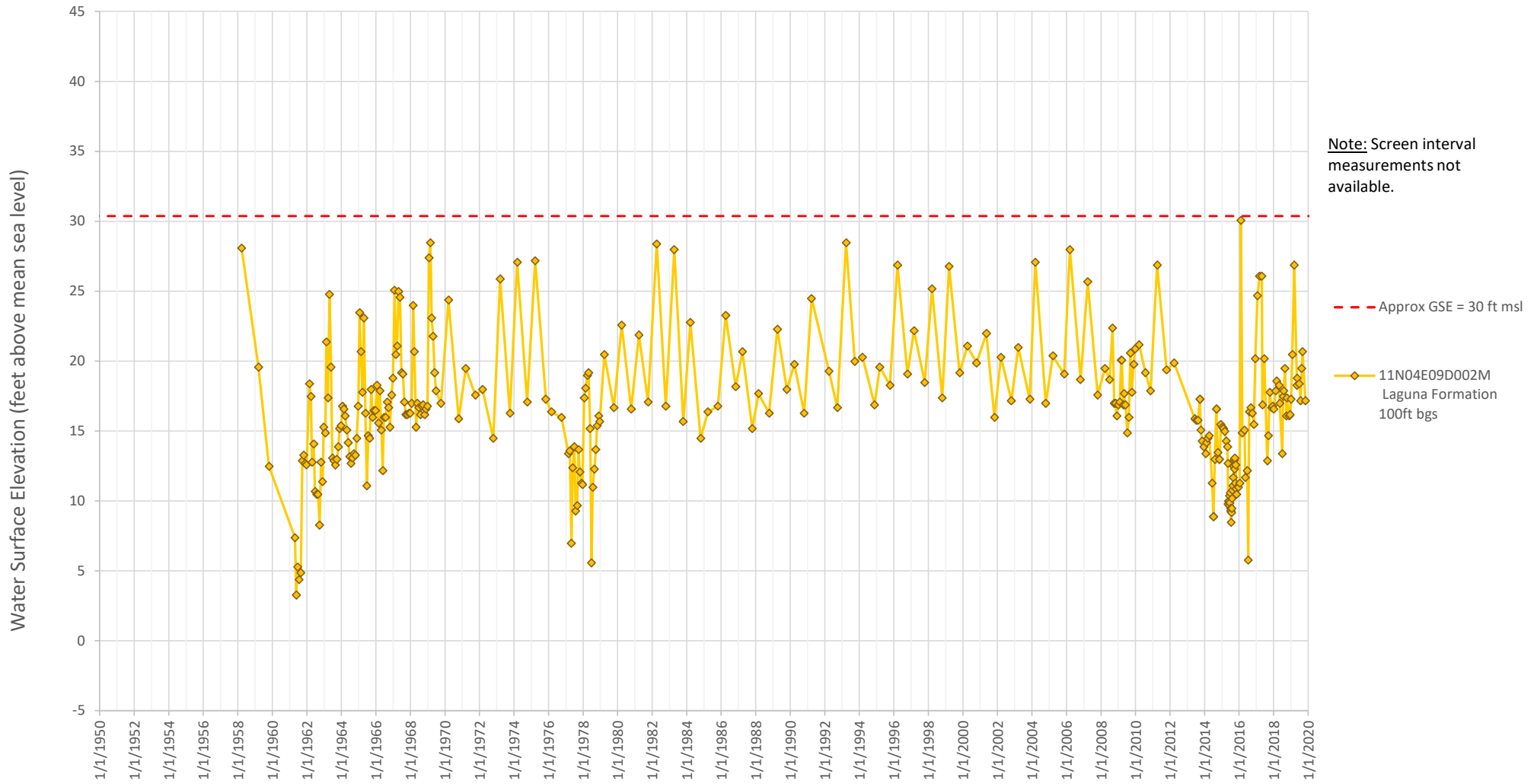
Local Well No. 12
09N04E22E001M
386199N1215386W001



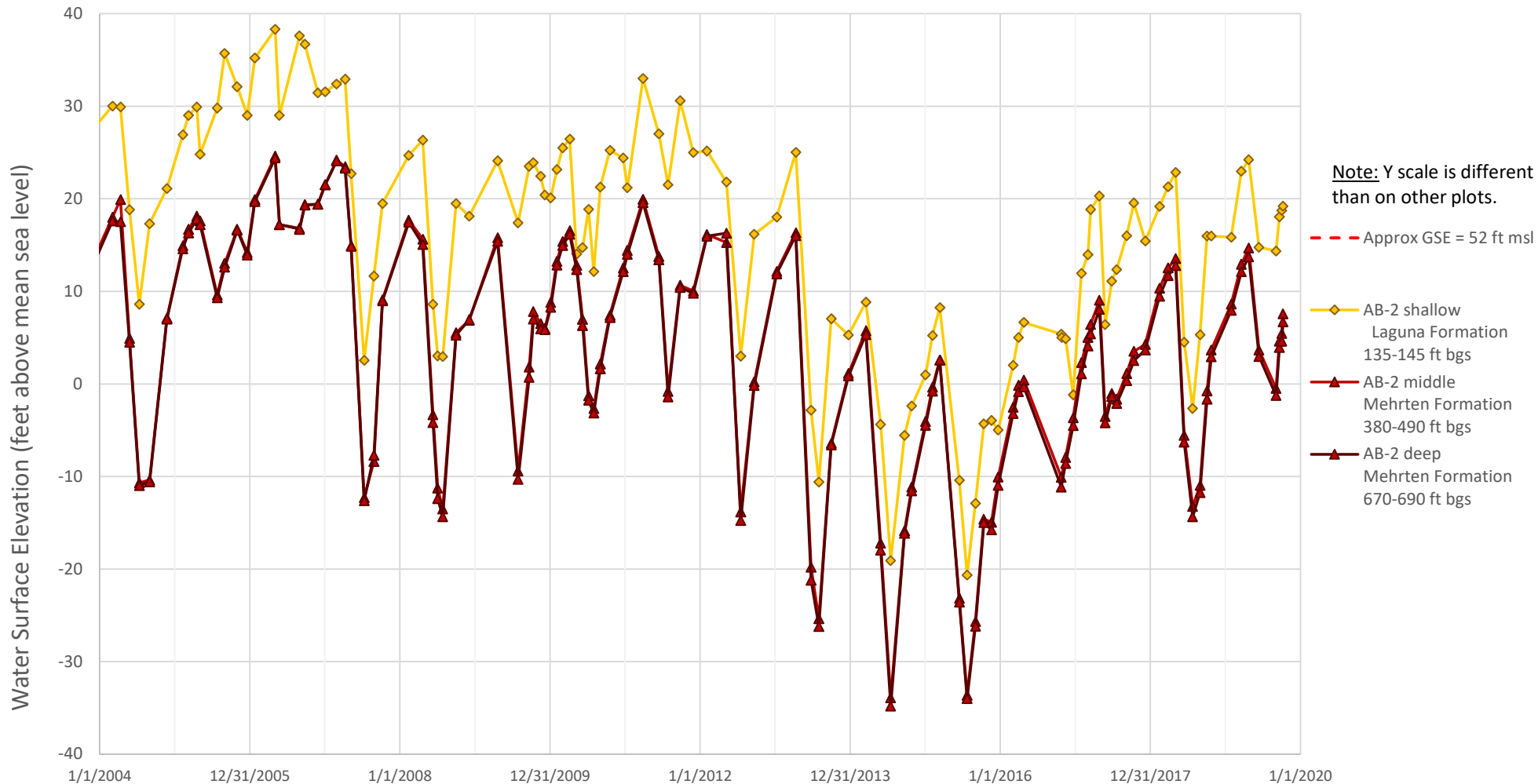
Local Well No. 13
Chuckwagon Park
386292N1214877W001



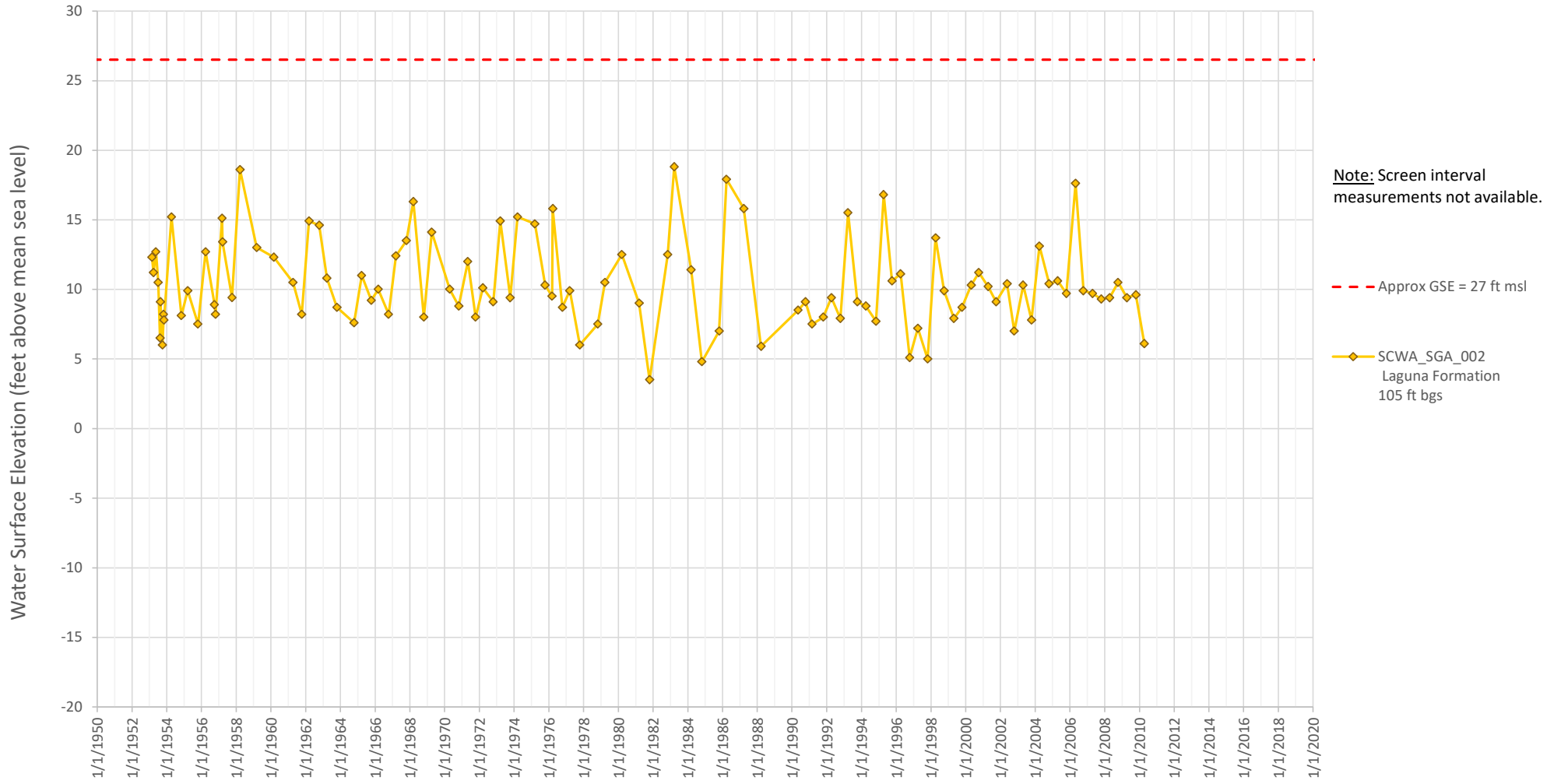
Local Well No. 15
11N04E09D002M
388208N1215397W001



Local Well No. 17
 AB-2 Nested Well
 388593N1214885W003, 388593N1214885W002, 388593N1214885W001

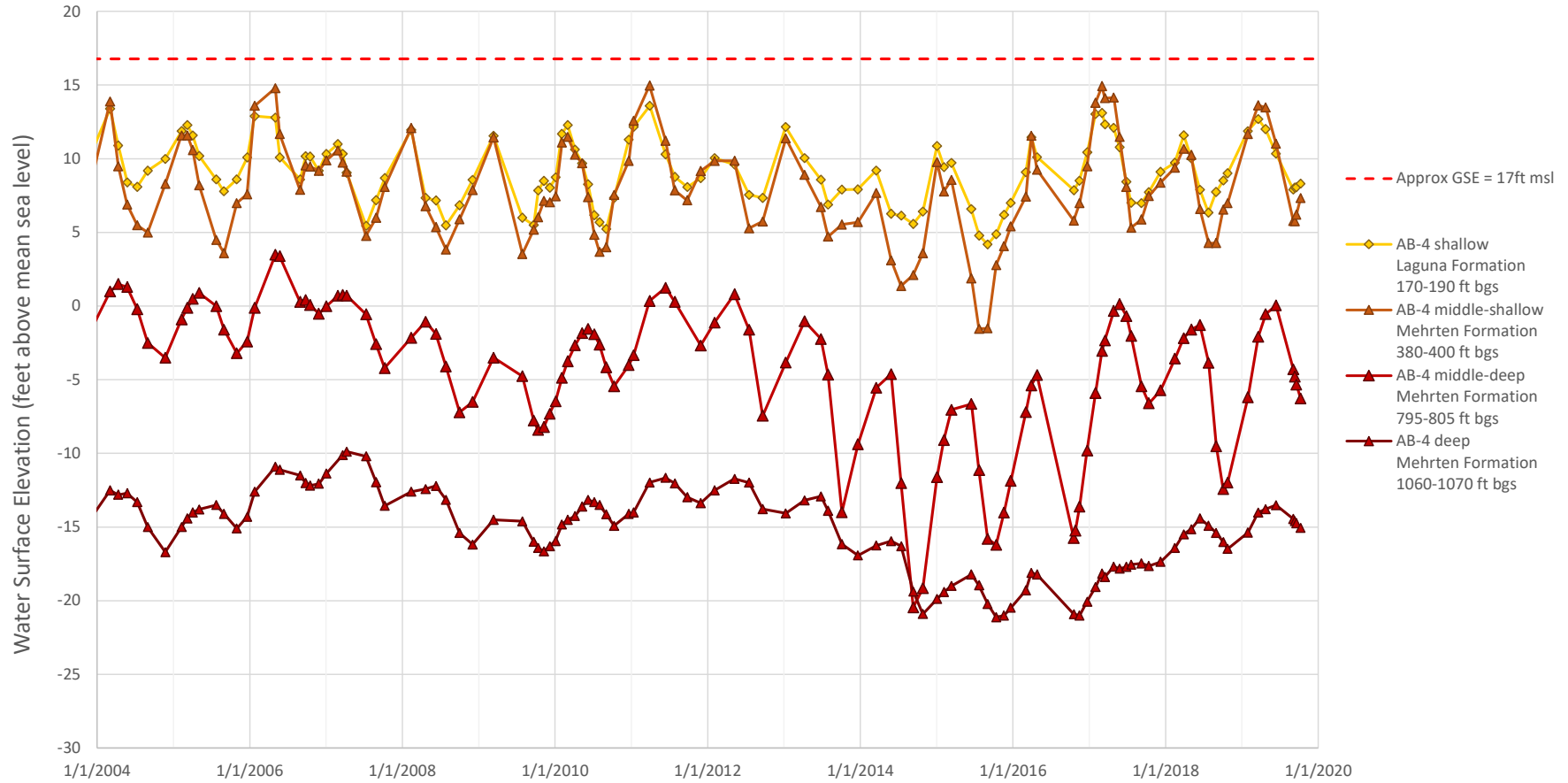


Local Well No. 18
SCWA_SGA_002
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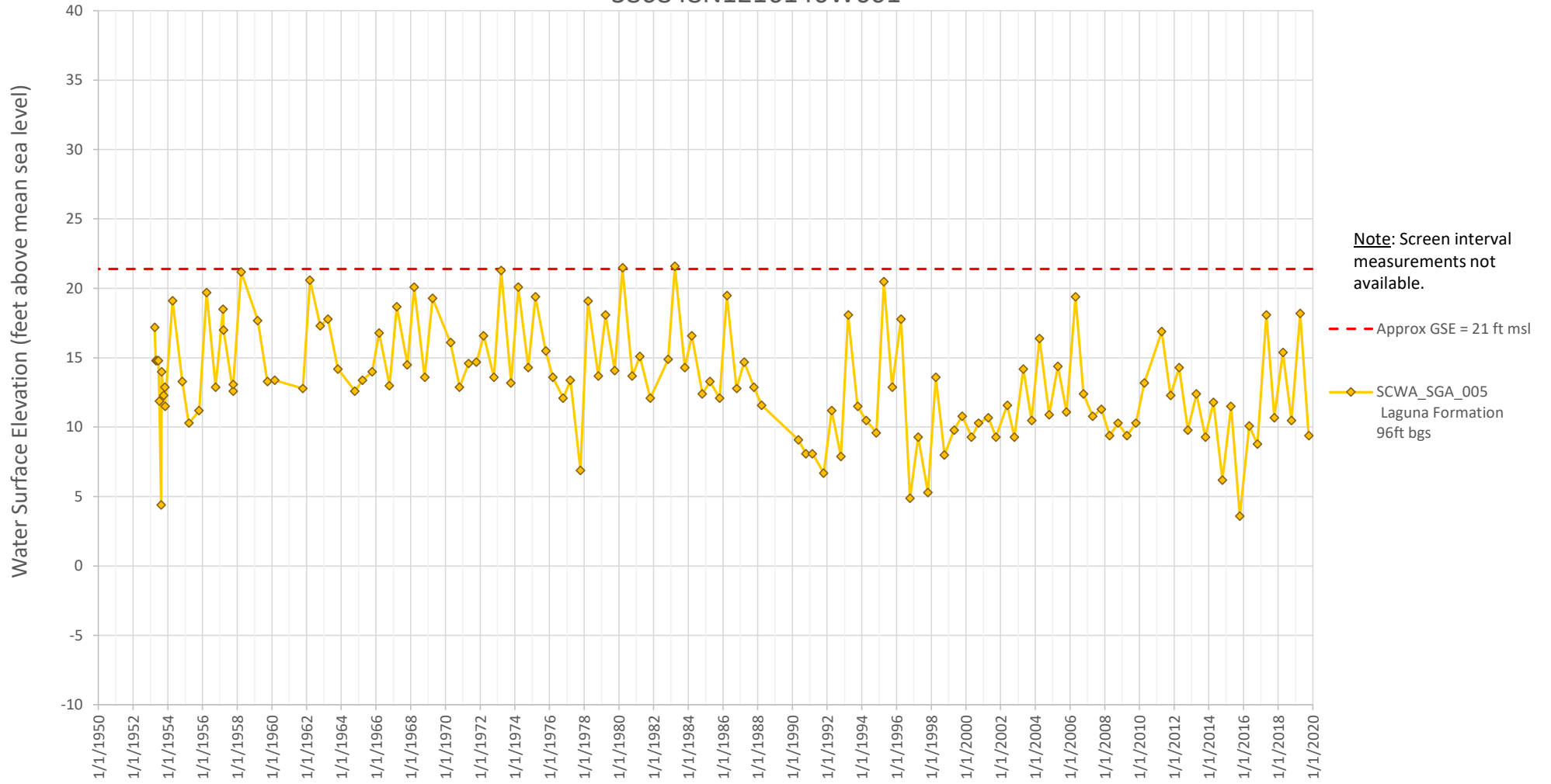


Local Well No. 22
AB-4 Nested Well

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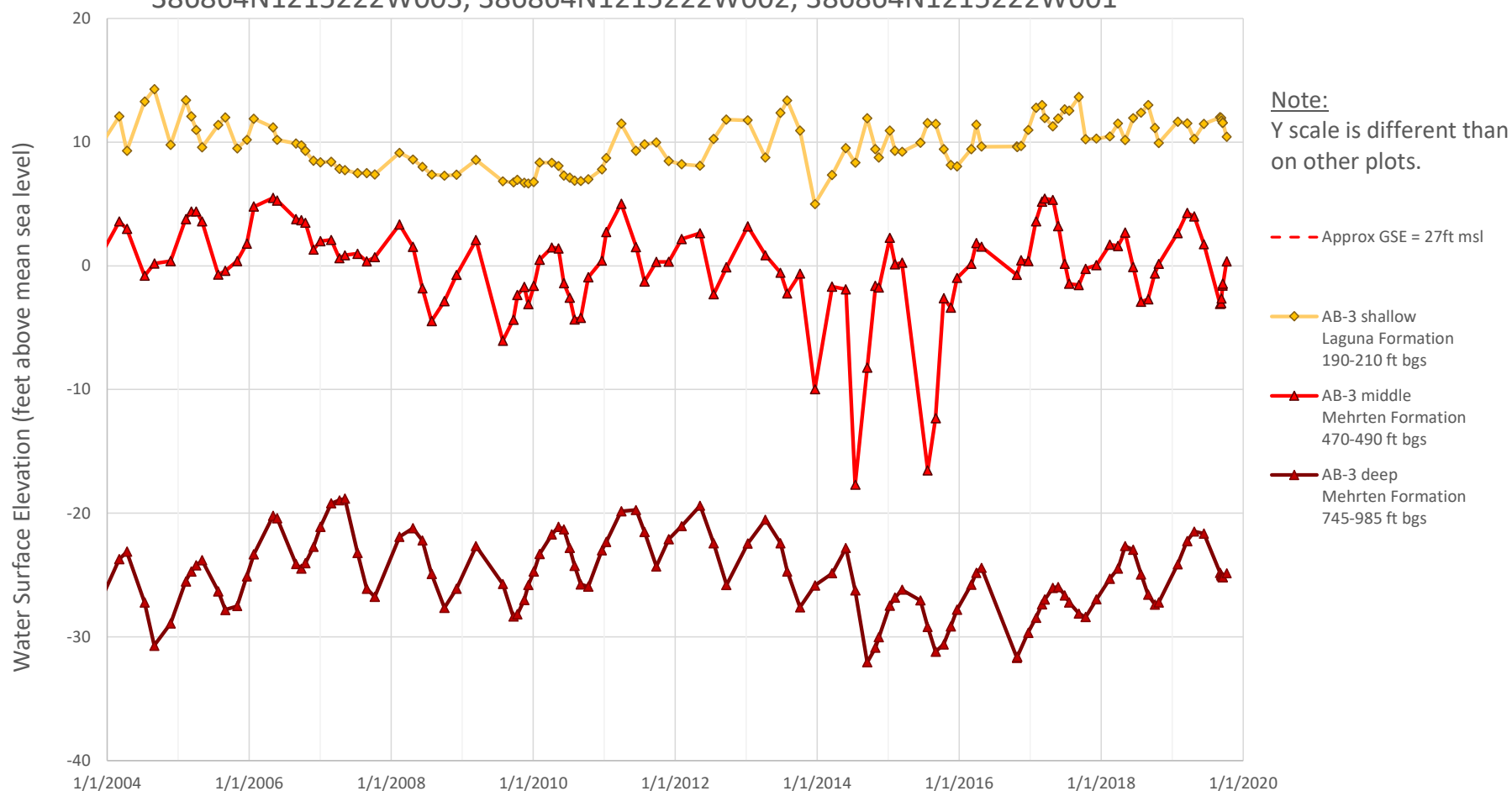


Local Well No. 26
SCWA_SGA_005
386848N1216146W001

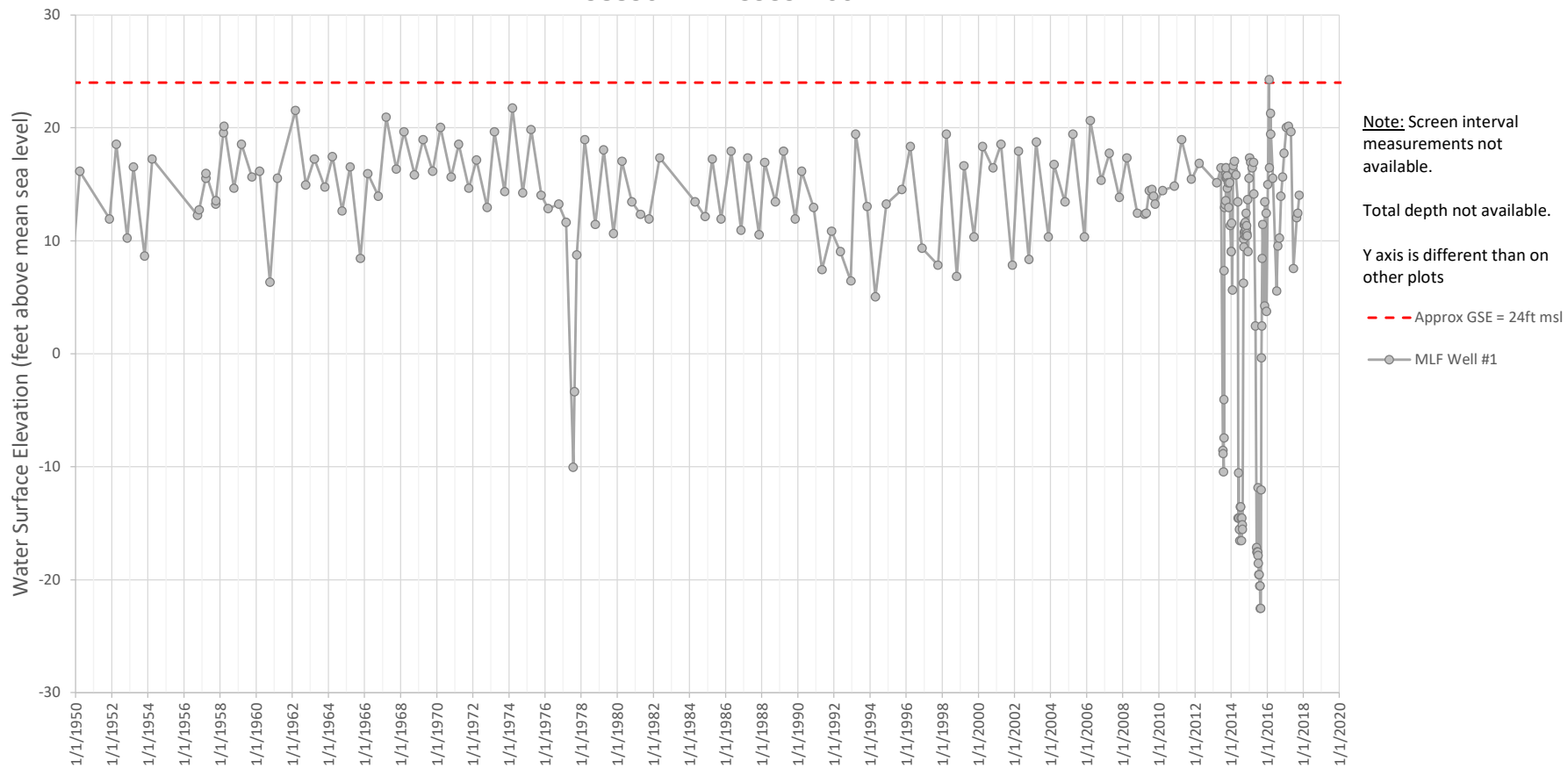


Local Well No.27
AB-3 Nested Well

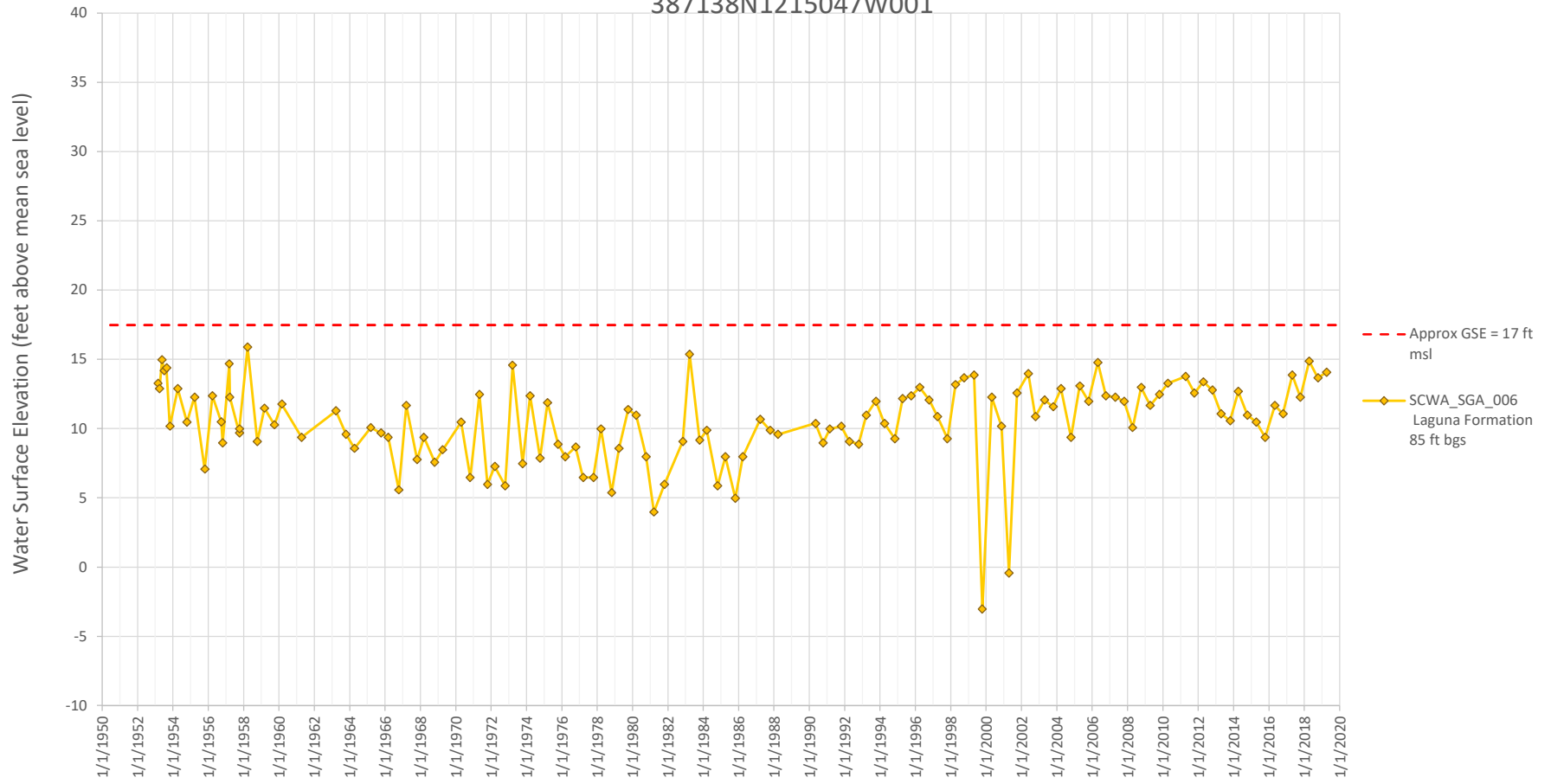
386864N1215222W003, 386864N1215222W002, 386864N1215222W001



Local Well No. 32
MLF Well #1
388361N1215959W001



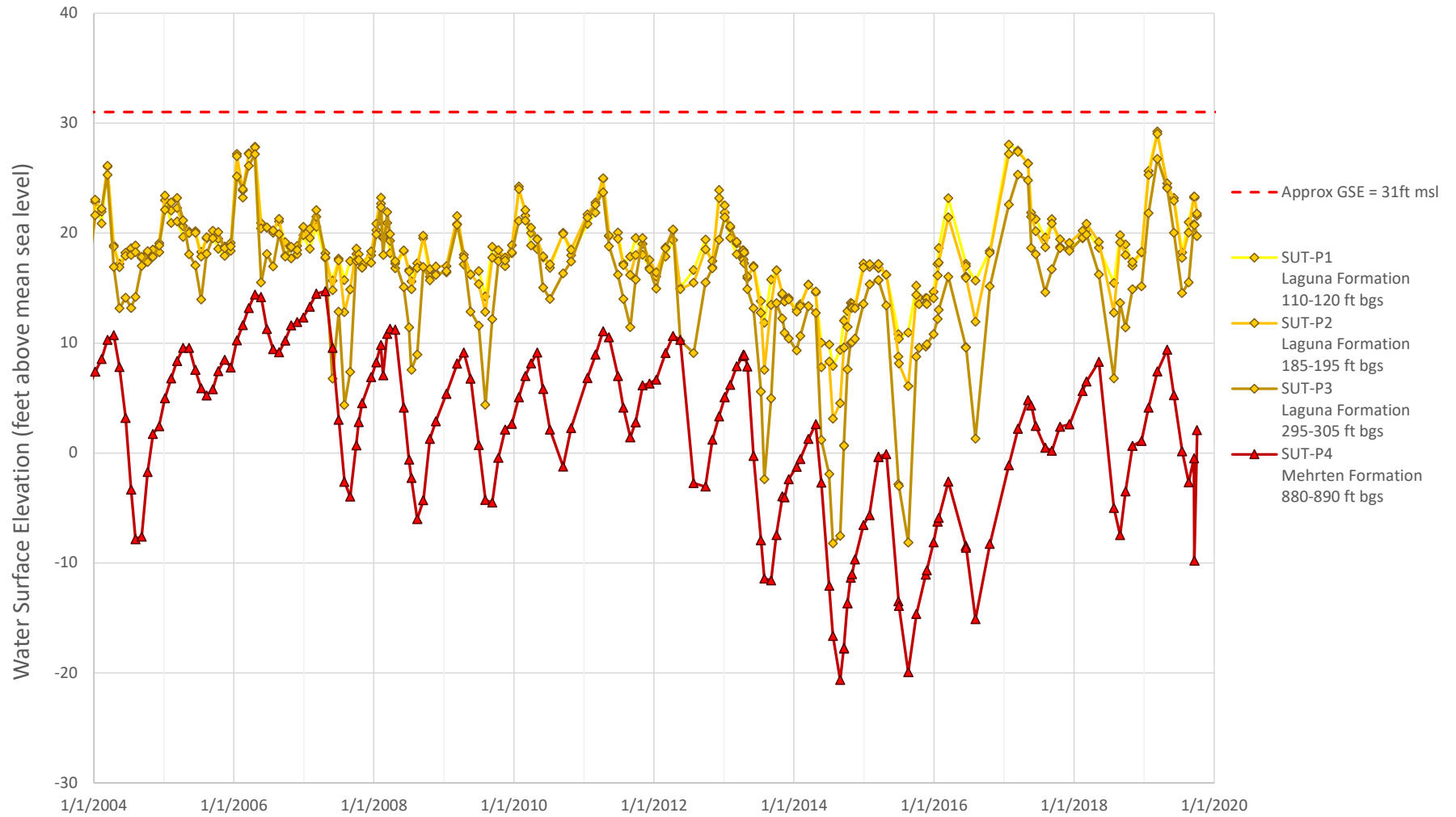
Local Well No. 36
SCWA_SGA_006
387138N1215047W001



Local Well No. 37

SUT-P1, SUT-P2, SUT-P3, SUT-P4

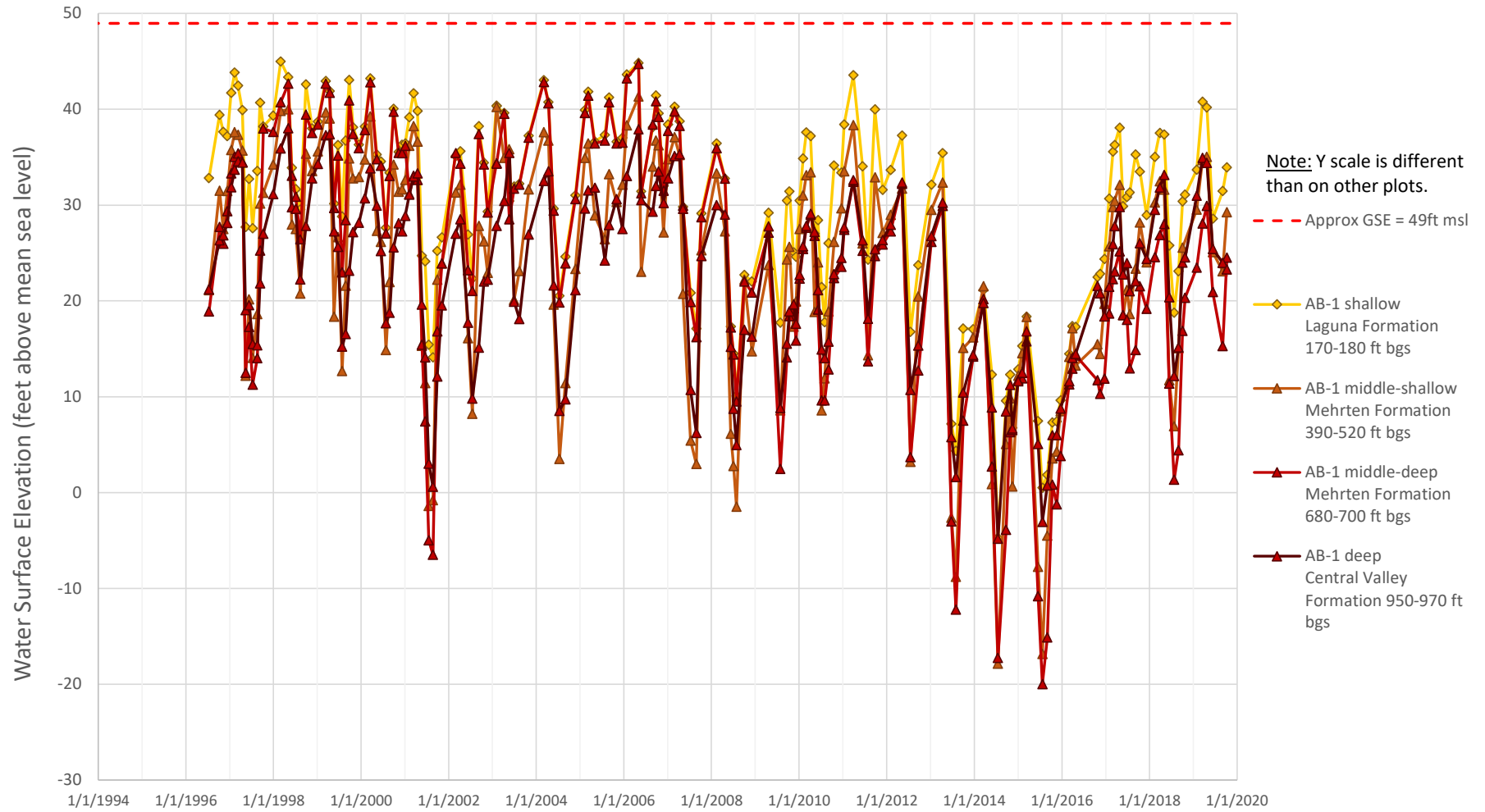
388260N1215394W004, 388260N1215394W003, 388260N1215394W001, 388260N1215394W001



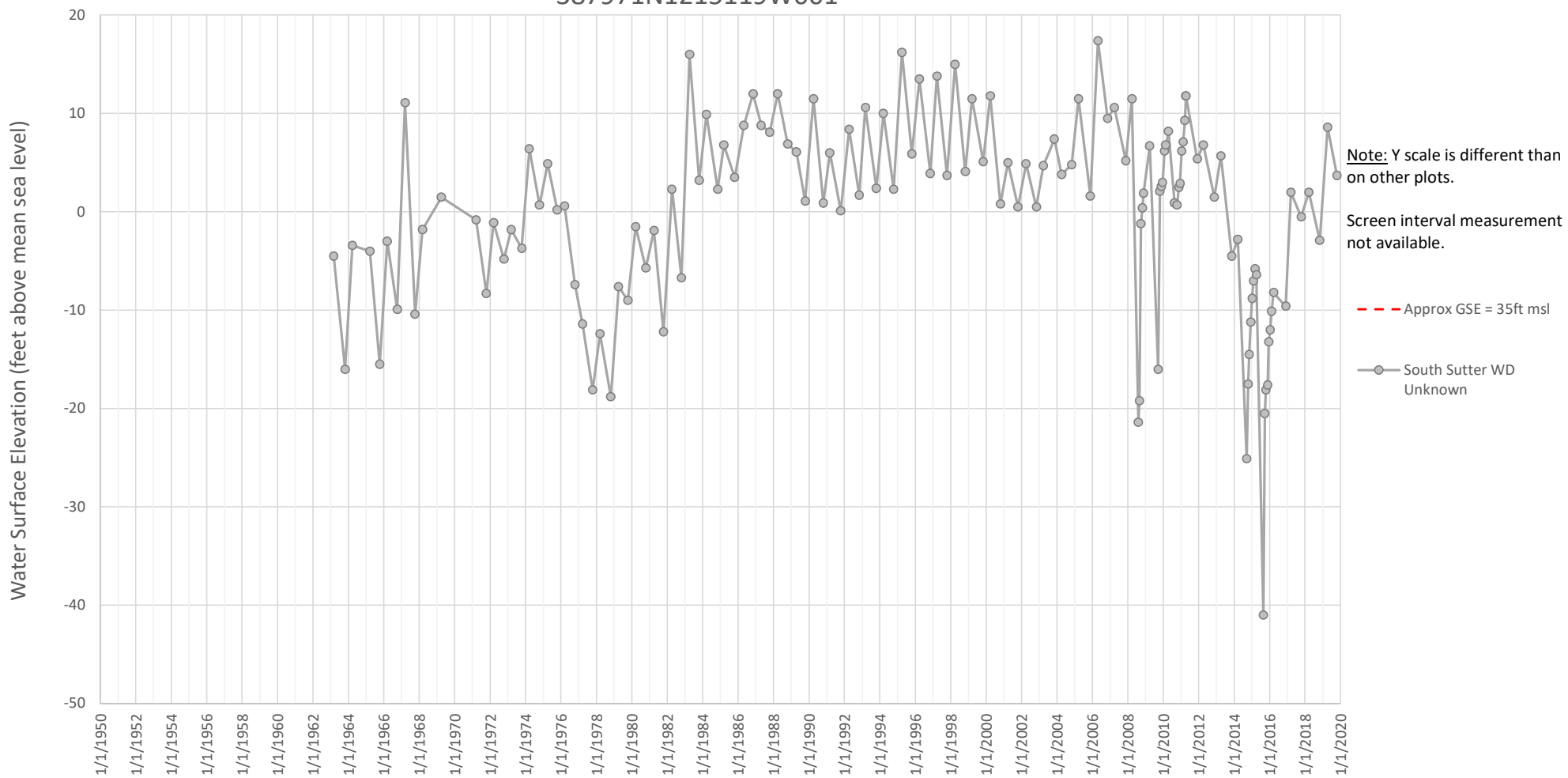
Local Well No. 39

AB-1 Nested Well

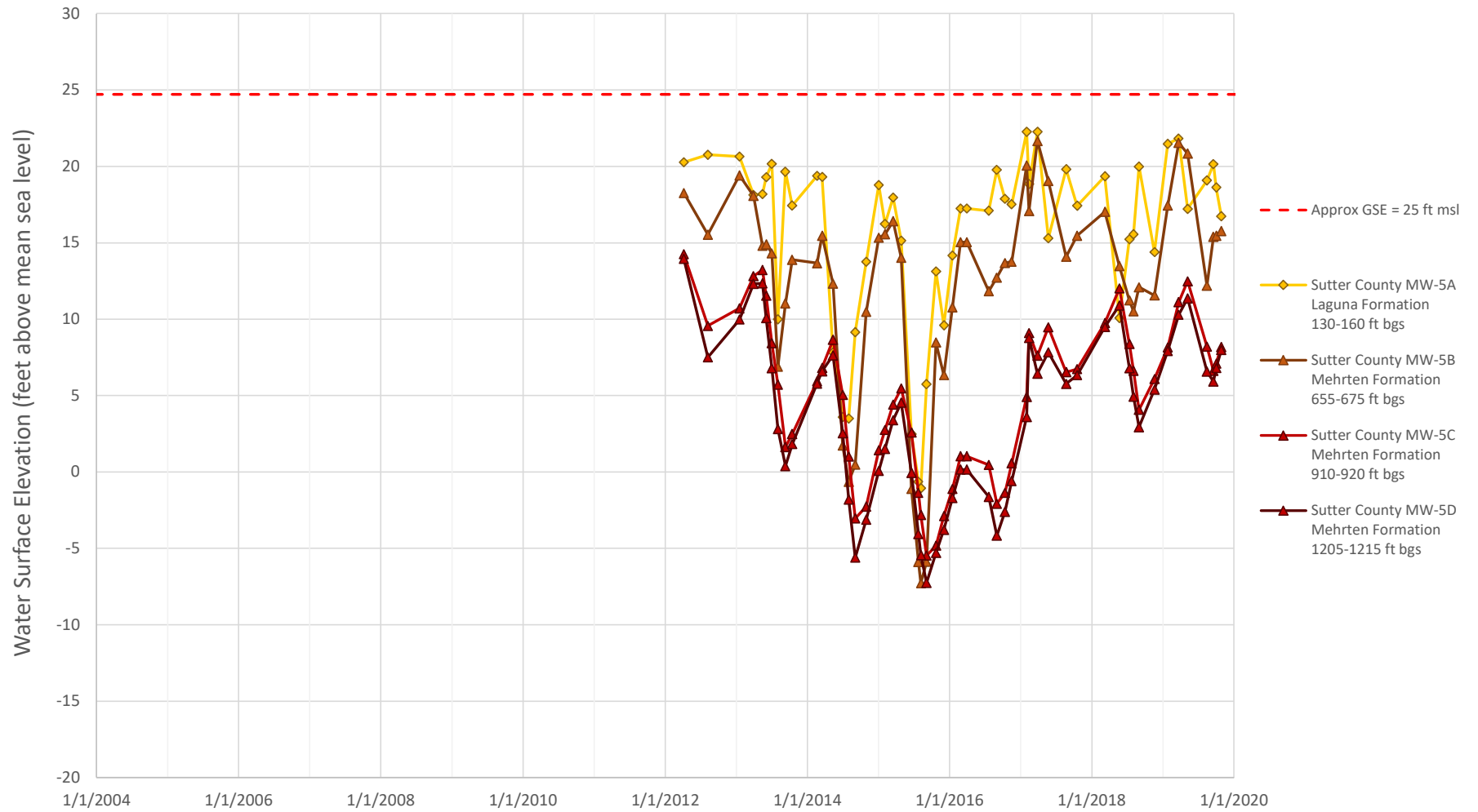
389116N1215238W003, 389117N1215238W001, 389116N1215238W002, 389116N1215238W001



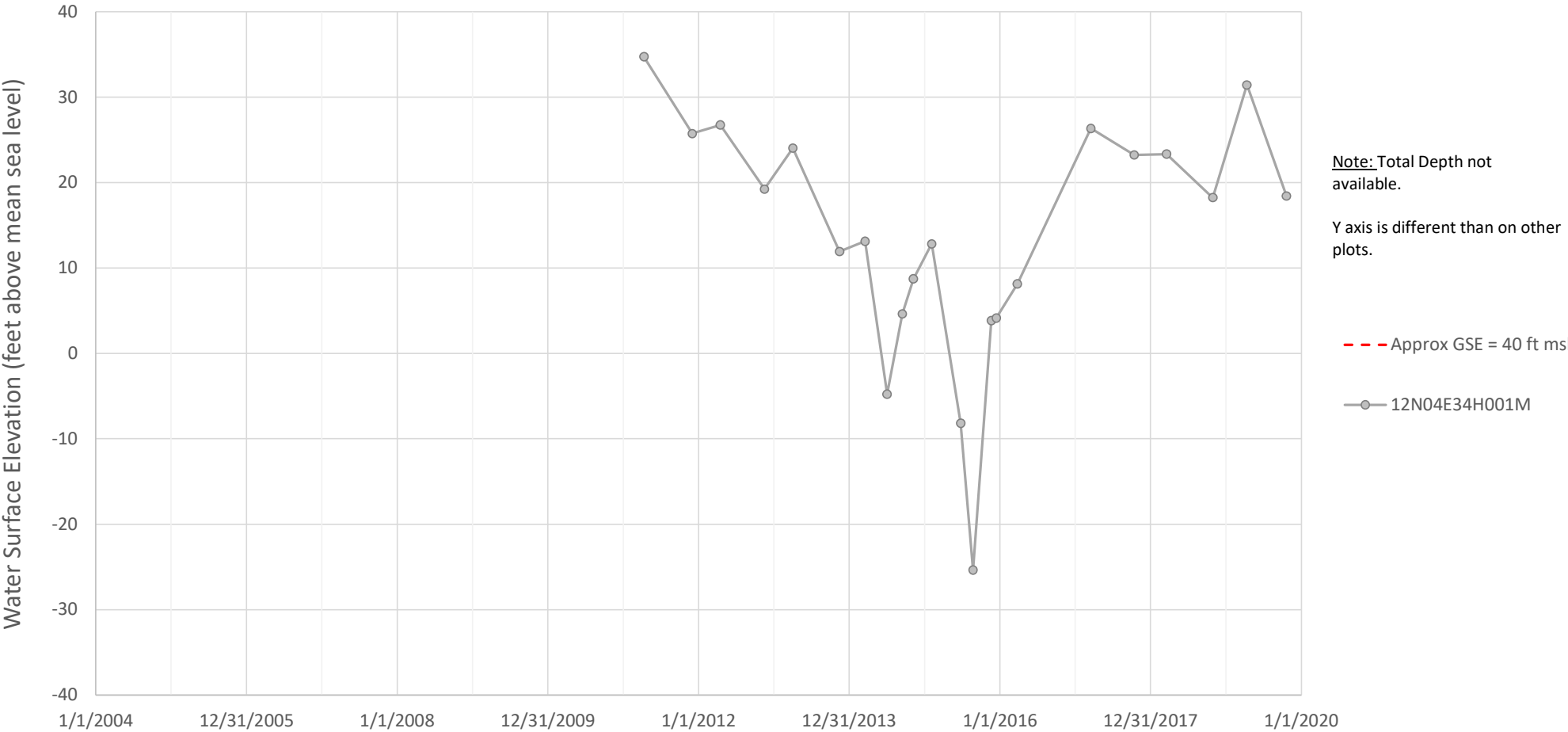
Local Well No. 53
South Sutter
387971N1215119W001



Local Well No. 61
Sutter County MW-5 Nested Well
388235N1216079W001, 388235N1216079W002, 388235N1216079W003, 388235N1216079W004



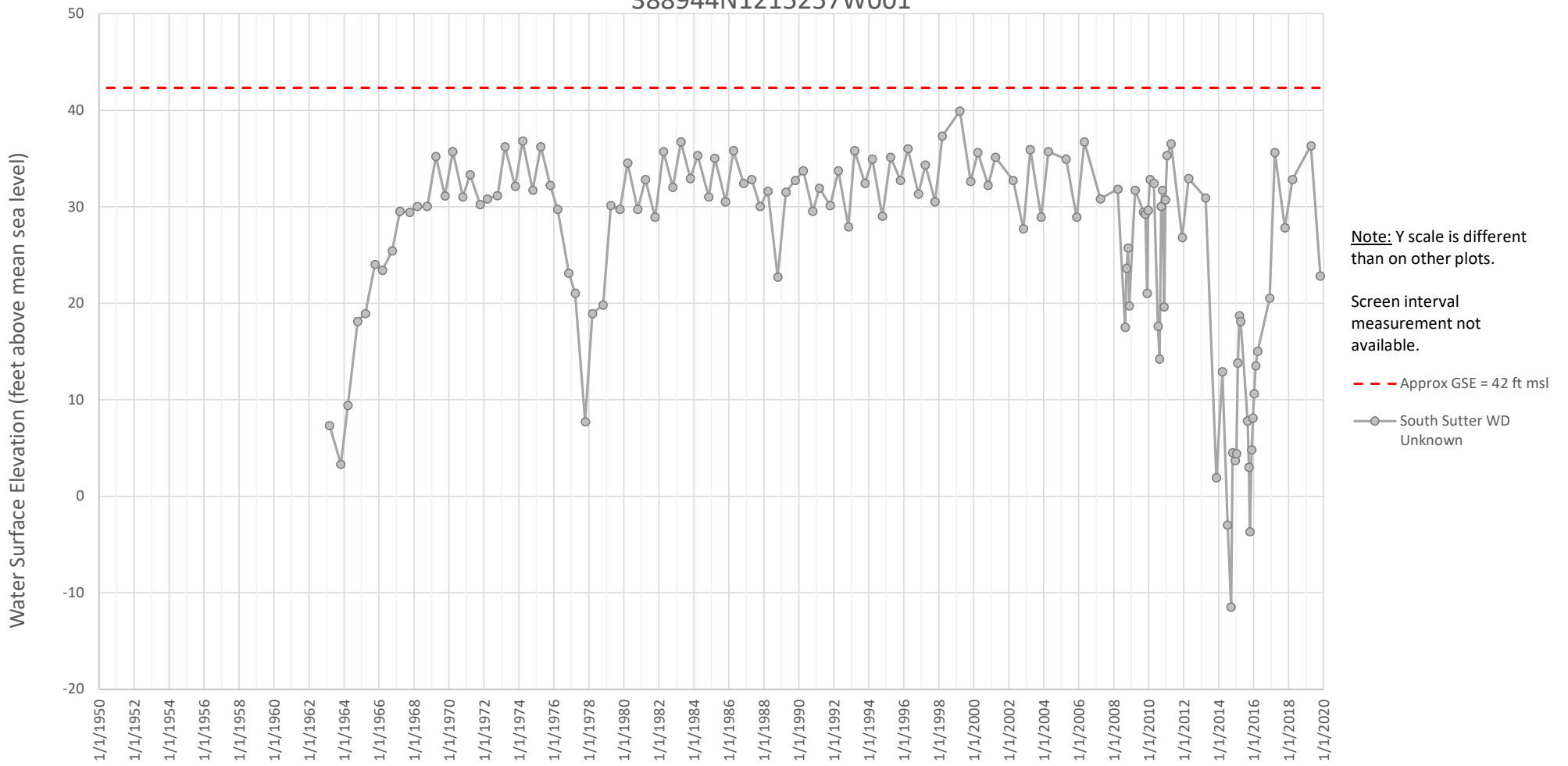
Local Well No. 62
12N04E34H001M
388458N1215100W001



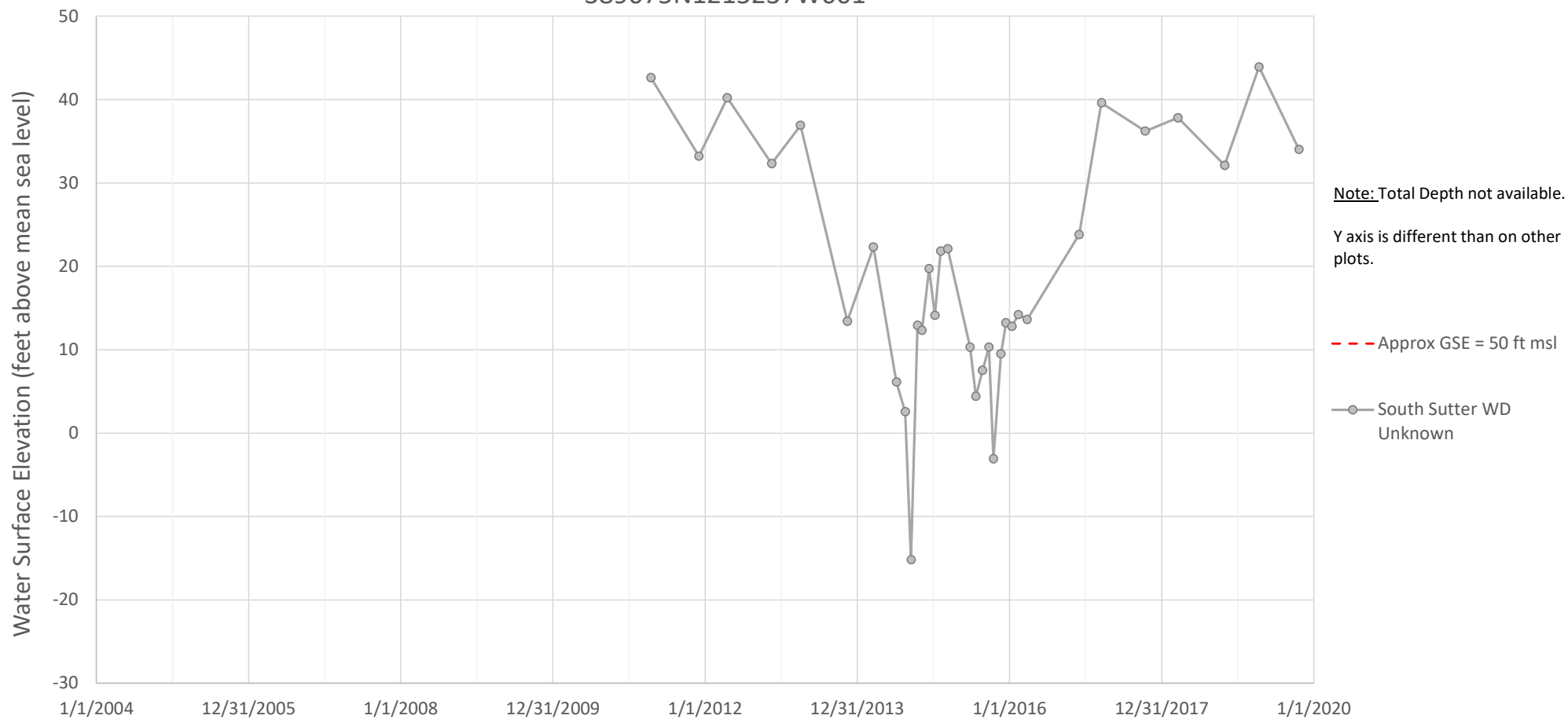
Local Well No. 64
12N04E29J001M
388555N1215468W001



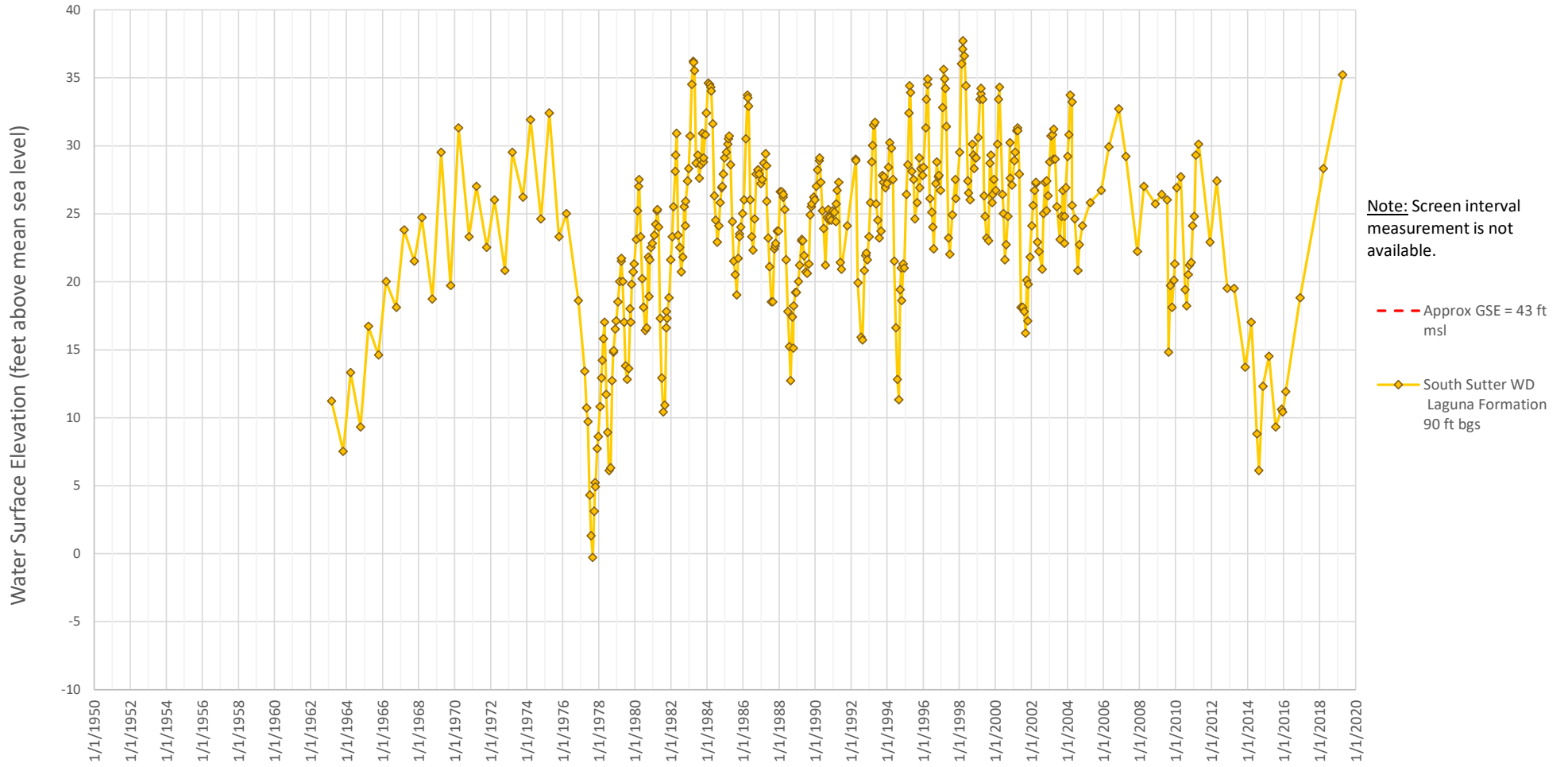
Local Well No.69
South Sutter
388944N1215257W001



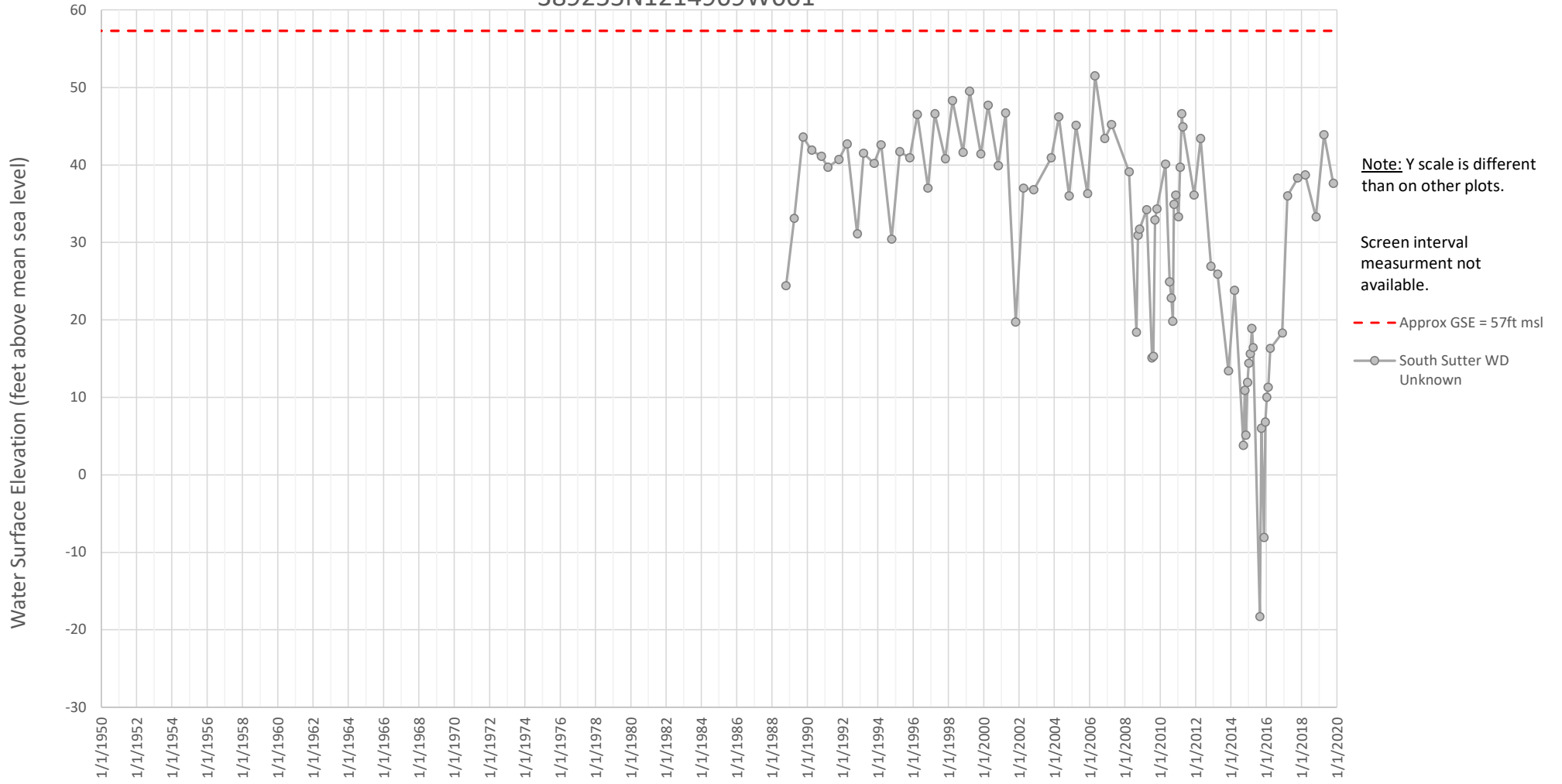
Local Well No. 72
South Sutter
389075N1215237W001



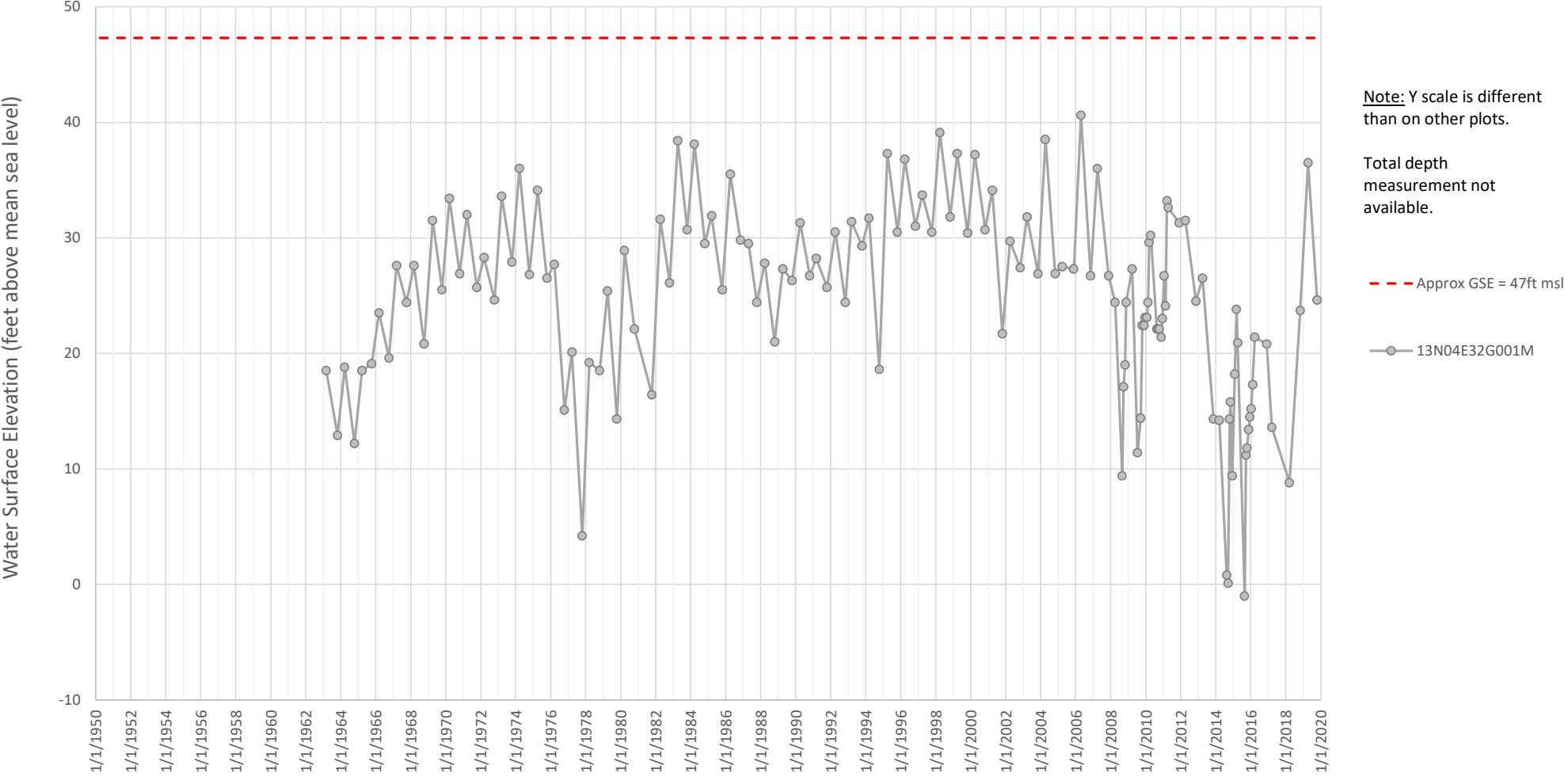
Local Well No. 73
South Sutter
389130N1215441W001



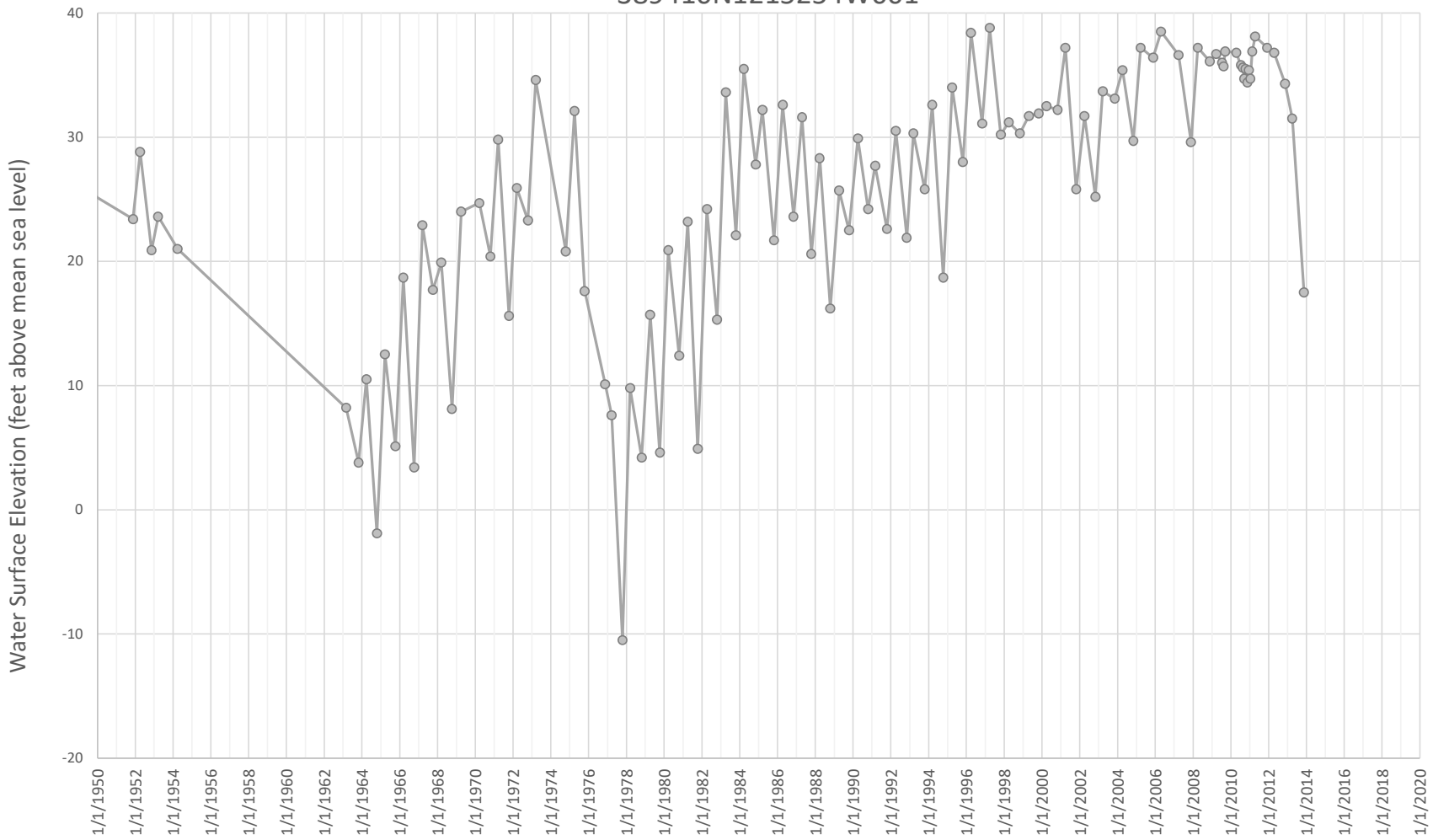
Local Well No. 76
South Sutter
389255N1214969W001



Local Well No. 78
13N04E32G001M
389328N1215489W001



Local Well No. 79
South Sutter
389410N1215254W001

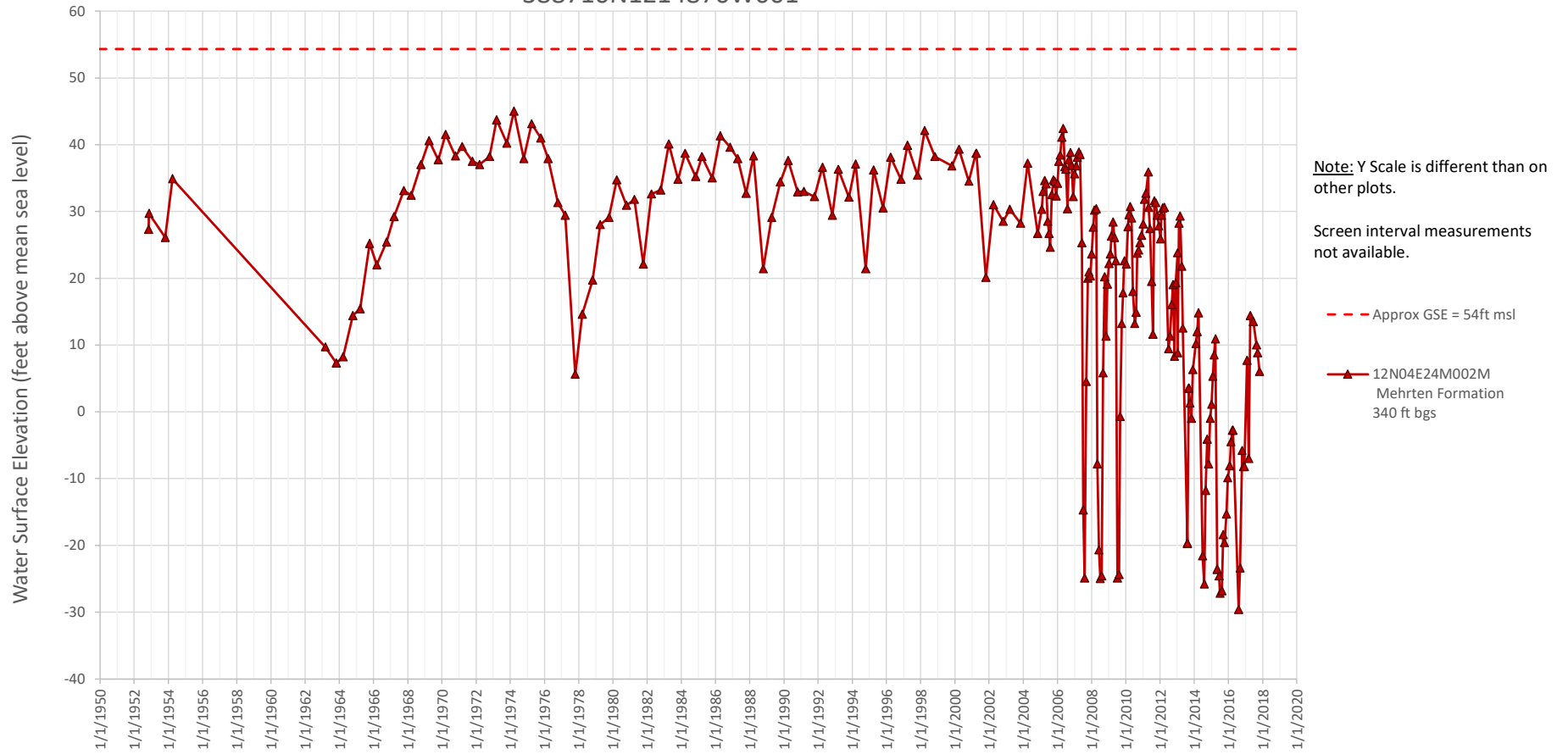


Note: Y scale is different than on other plots.

Screen interval measurement not available.

- - - Approx GSE = 50ft msl
- South Sutter WD Unknown

Local Well No. 87
12N04E24M002M
388710N1214870W001

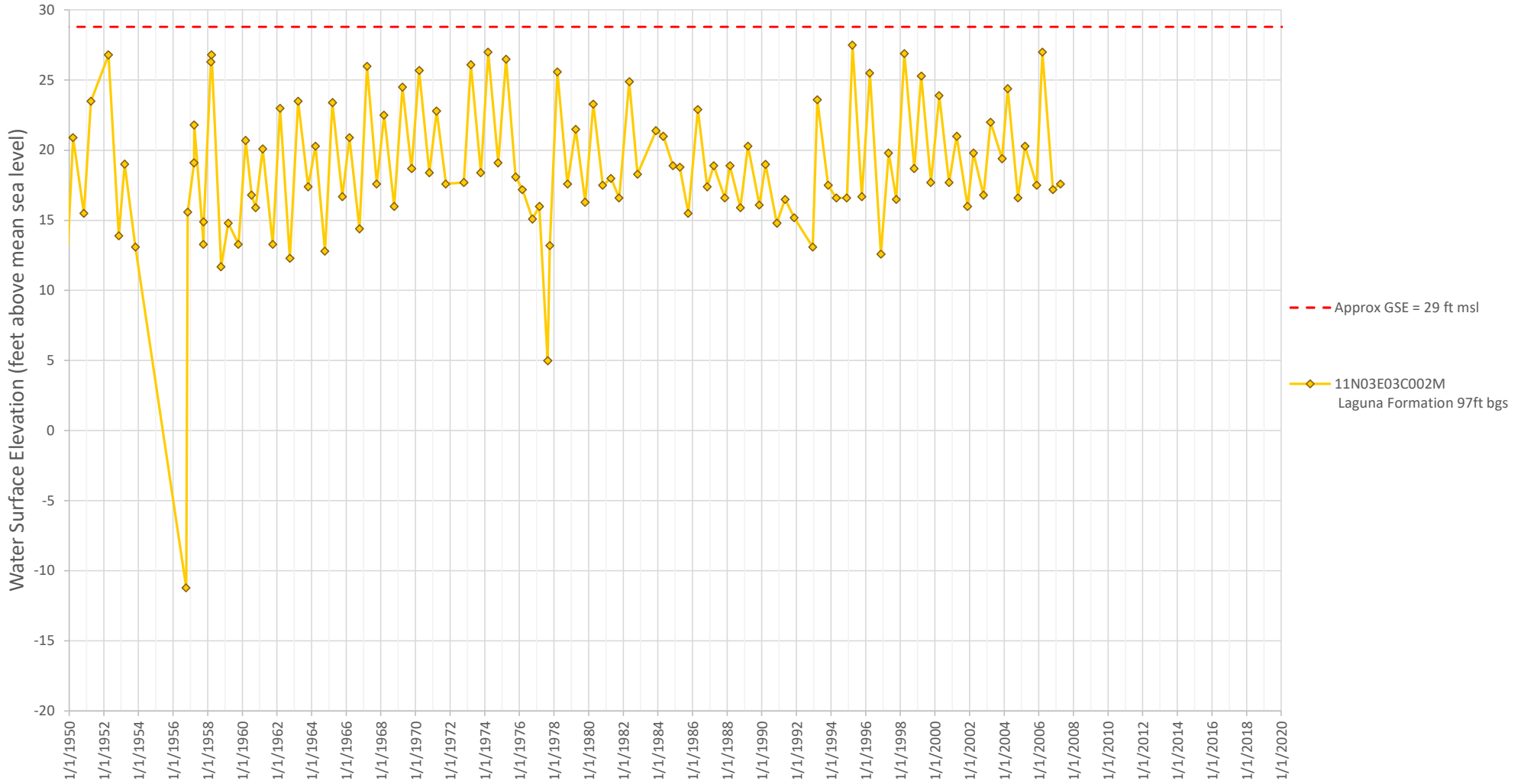


Note: Y Scale is different than on other plots.

Screen interval measurements not available.

- - - Approx GSE = 54ft msl
- ▲ 12N04E24M002M Mehrten Formation 340 ft bgs

Local Well No. 88
11N03E03C002M
388357N1216273W001



Appendix H: Central Well Hydrographs

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN


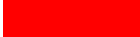

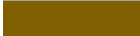
APPENDIX H Central Area Wells with Hydrographs

December 2021

APPENDIX H

CENTRAL AREA WELLS WITH HYDROGRAPHS

LEGEND:

	Laguna Formation Wells
	Mehrten Formation Wells
	Wells with Unknown Construction Details
	Ione or Central Valley Fm. Wells

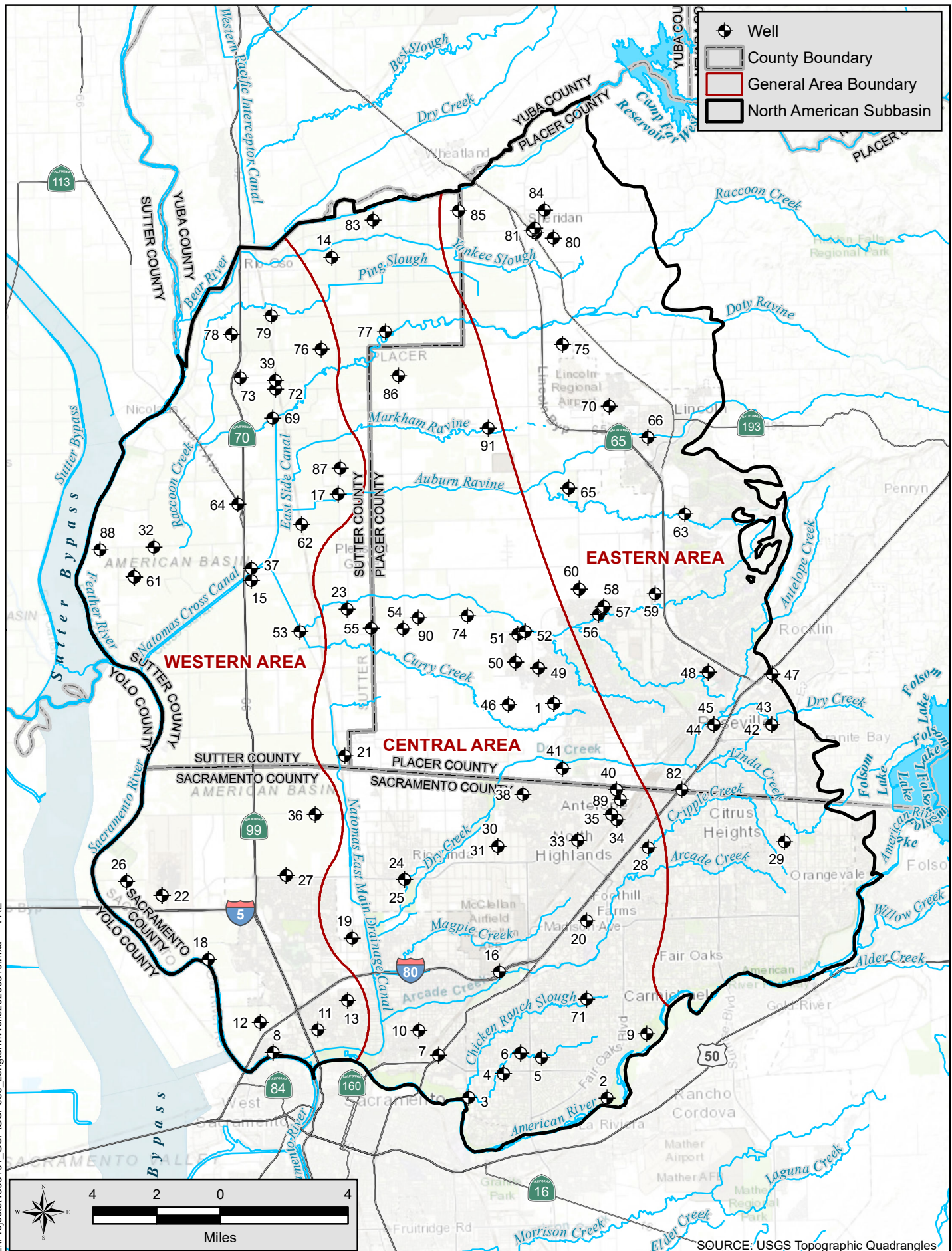
Long-Term Hydrographs

Years Displayed	1950 to 2019
Vertical Axis	50 feet Unless otherwise noted

Short Term Hydrographs

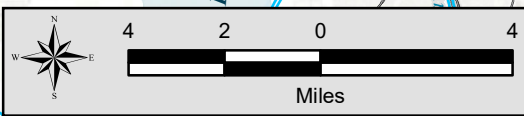
Years Displayed	2004 to 2019 Unless otherwise noted
Vertical Axis	50 feet Unless otherwise noted

Groundwater levels from multiple aquifers shown



◆ Well
 [Grey Line] County Boundary
 [Red Line] General Area Boundary
 [Black Line] North American Subbasin

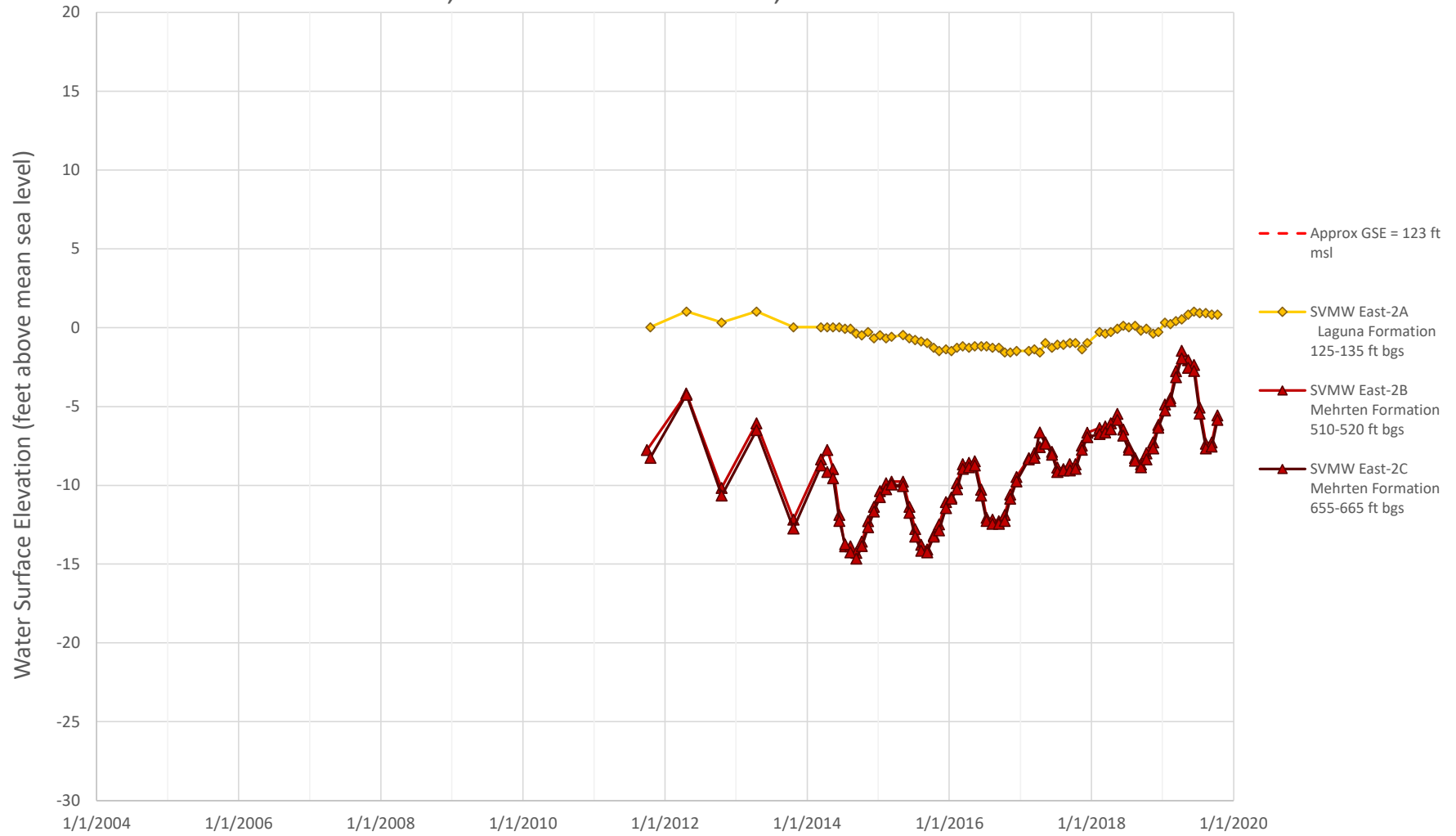
Z:\Projects\1803104_GSP\GIS\SP036_LongtermWells20200316.mxd PAE 18-Mar-2020



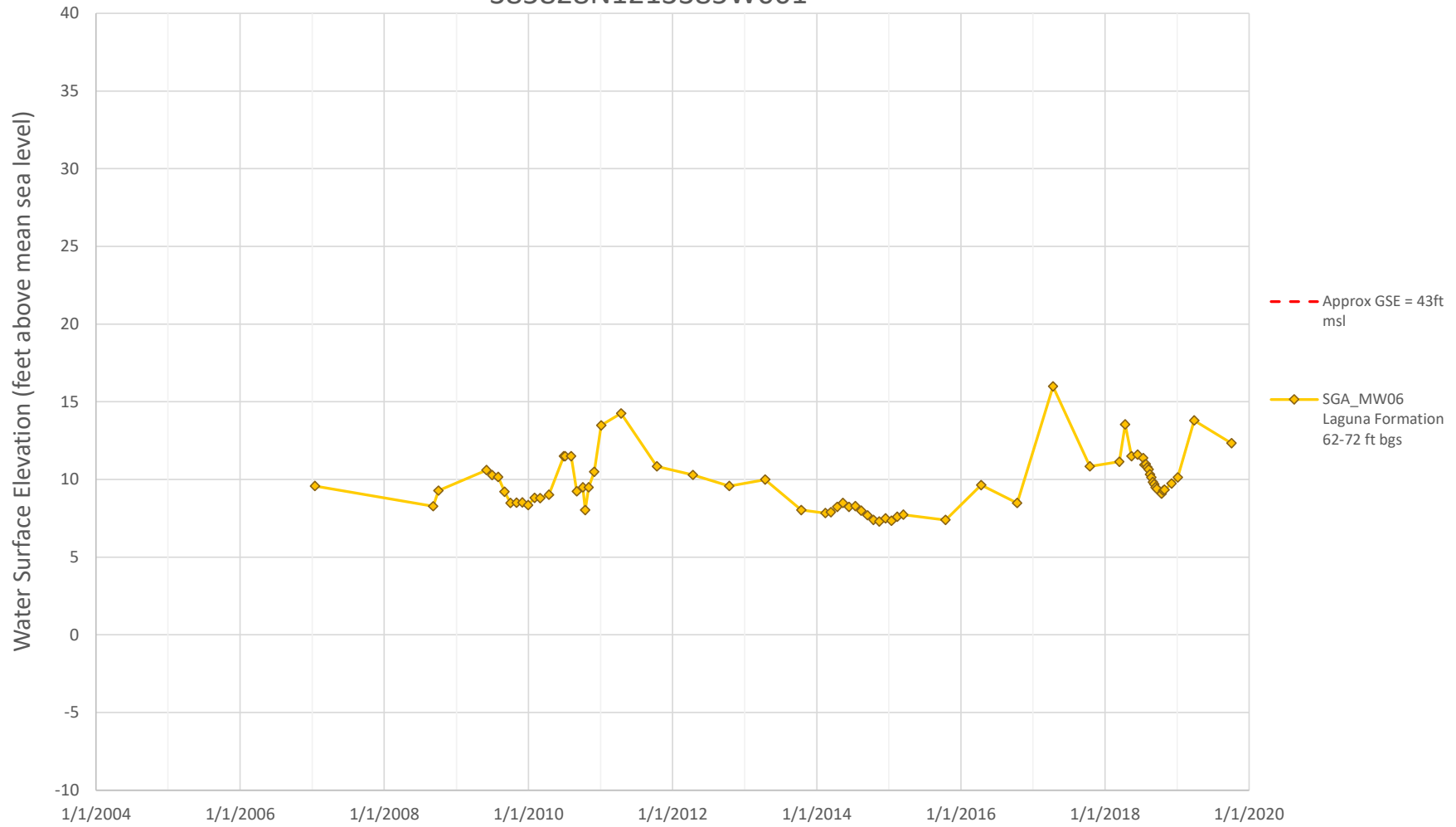
SOURCE: USGS Topographic Quadrangles

North American Subbasin Sutter, Placer and Sacramento Counties	 GEI Consultants	Long Term Wells MARCH 2020
North American Subbasin		

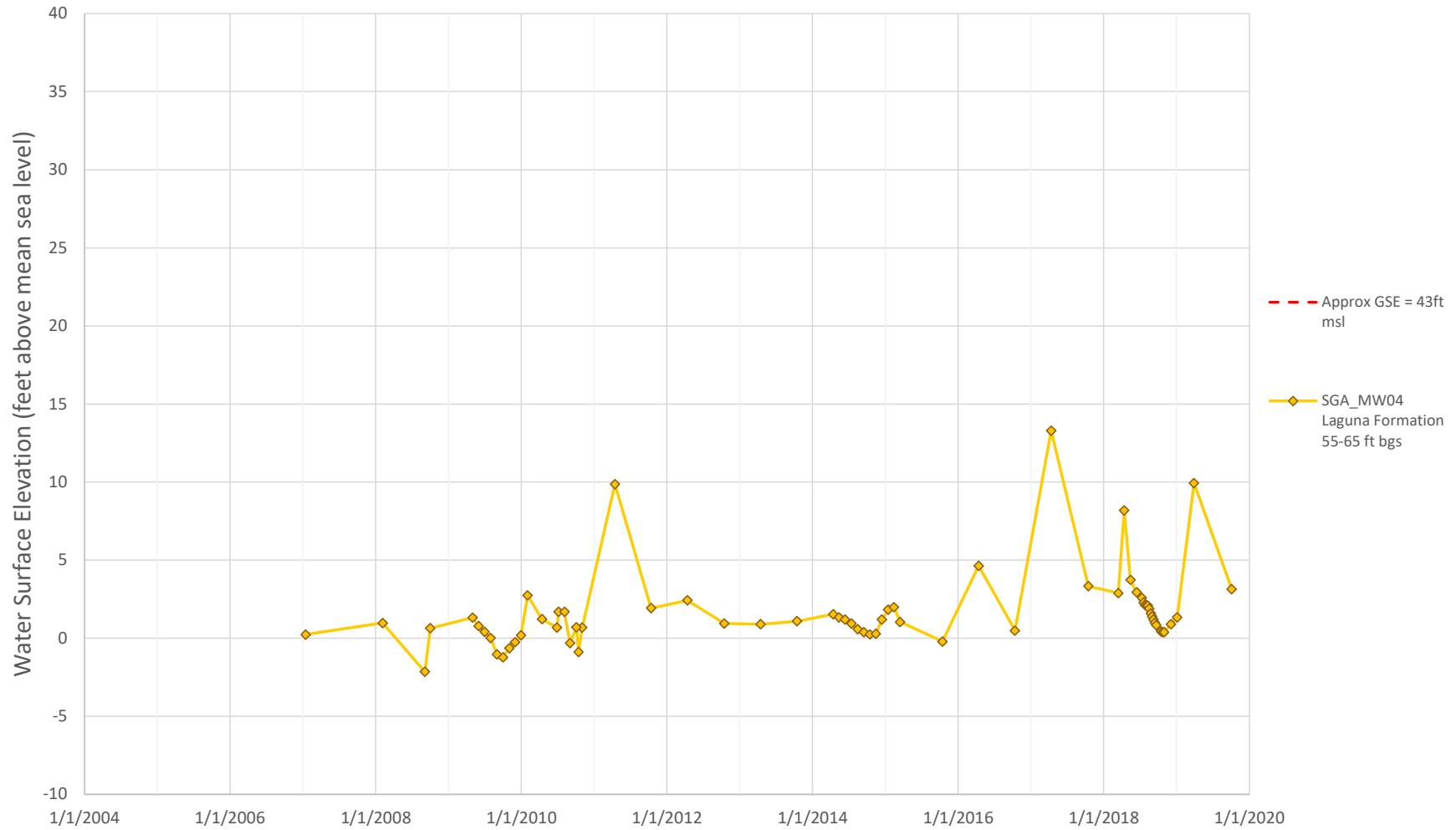
Local Well No. 01
SVMW-2 East Nested Well Hydrograph
387626N1213651W001, 381626N1213651W001, 387626N1213651W002



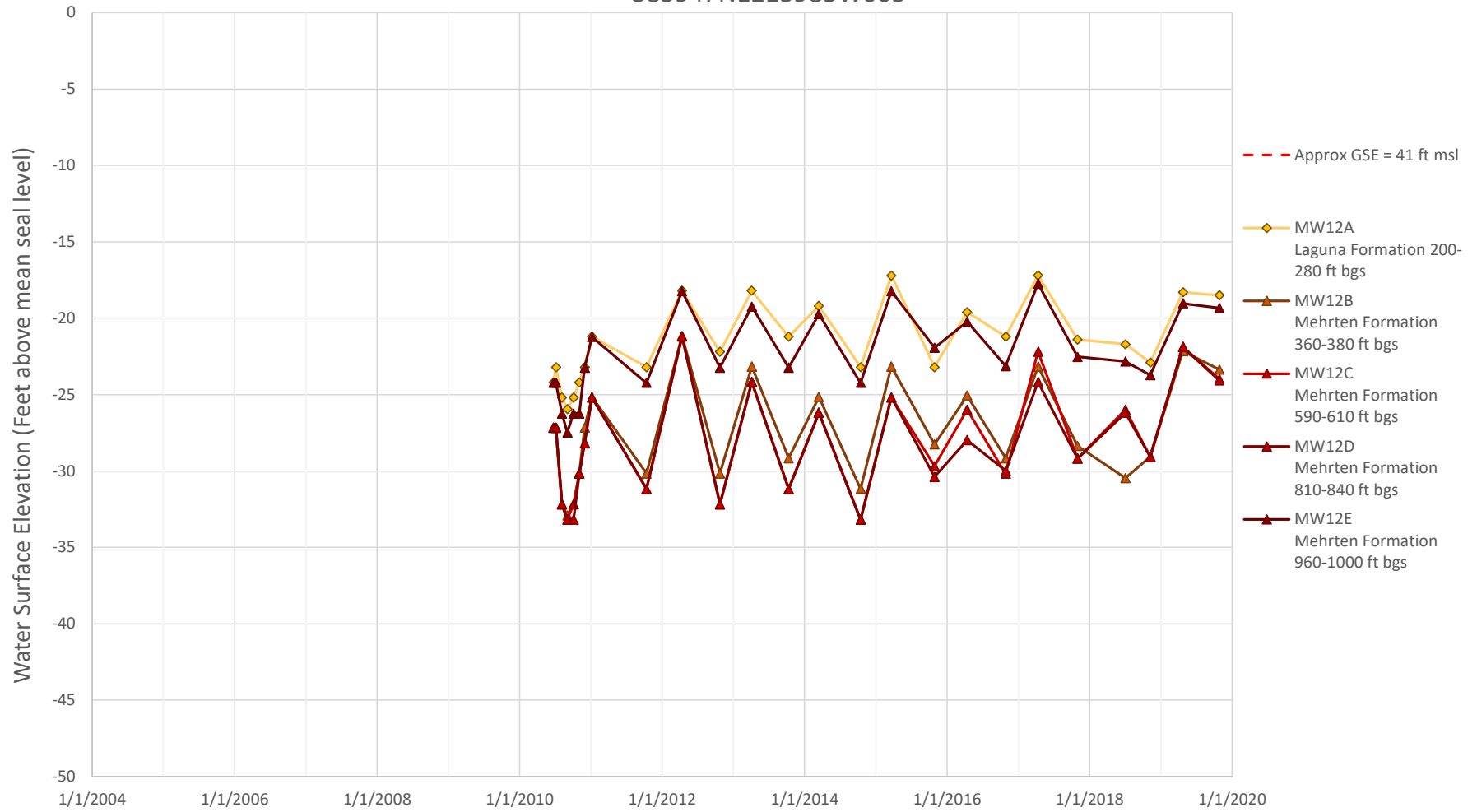
Local Well No. 02
SGA_MW06
385828N1213385W001



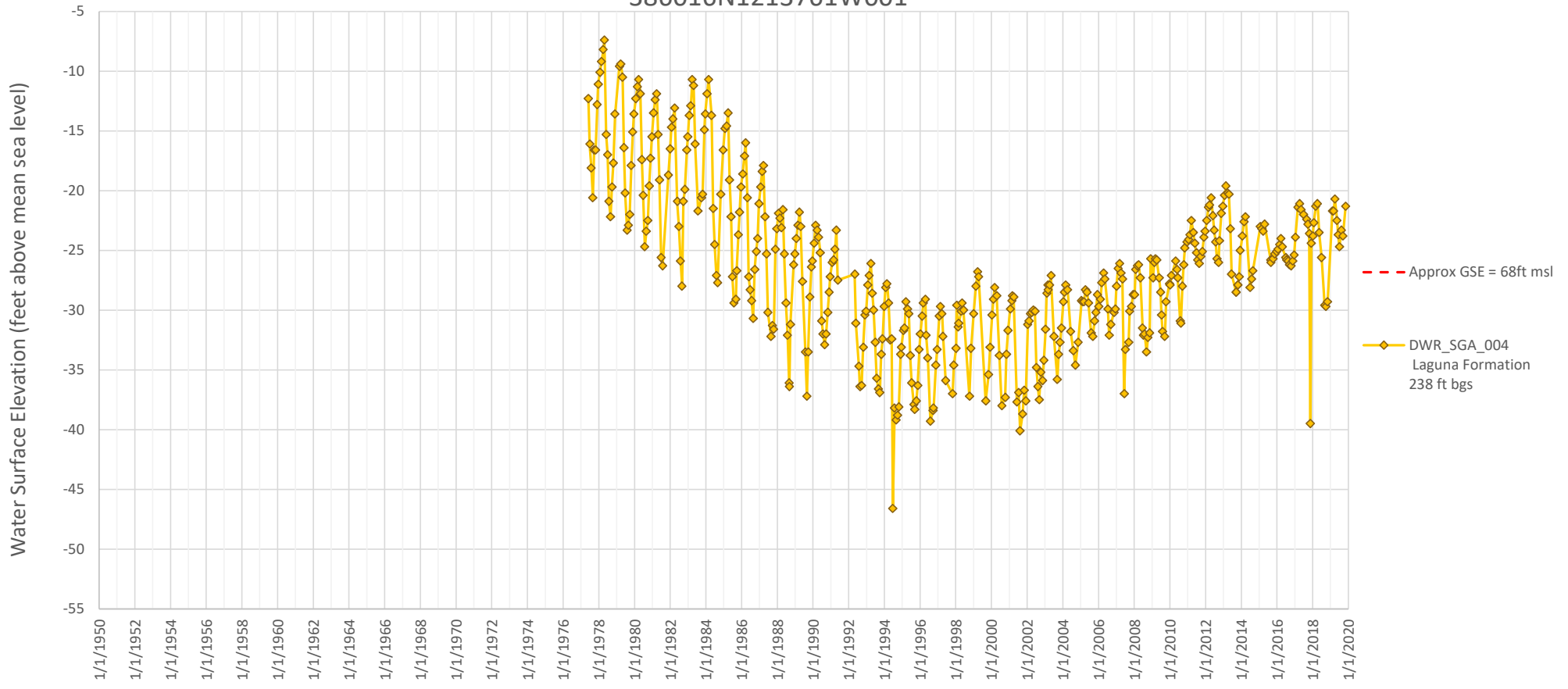
Local Well No. 03
SGA_MW04
385841N1214185W001



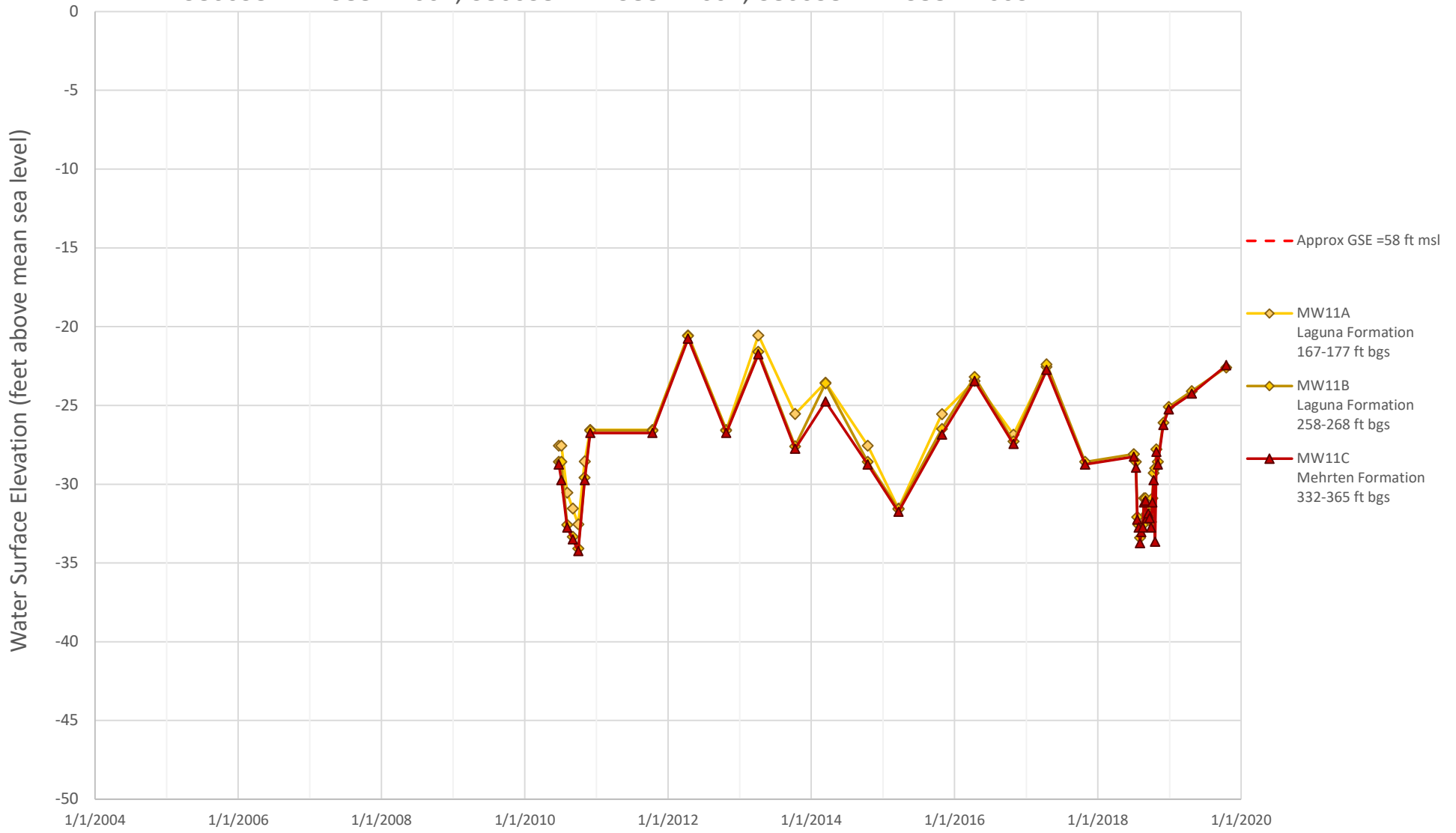
Local Well No. 04
MW12 Nested Well
385947N1213985W001, 385947N1213985W002, 385947N1213985W003, 385947N1213985W004,
385947N1213985W005



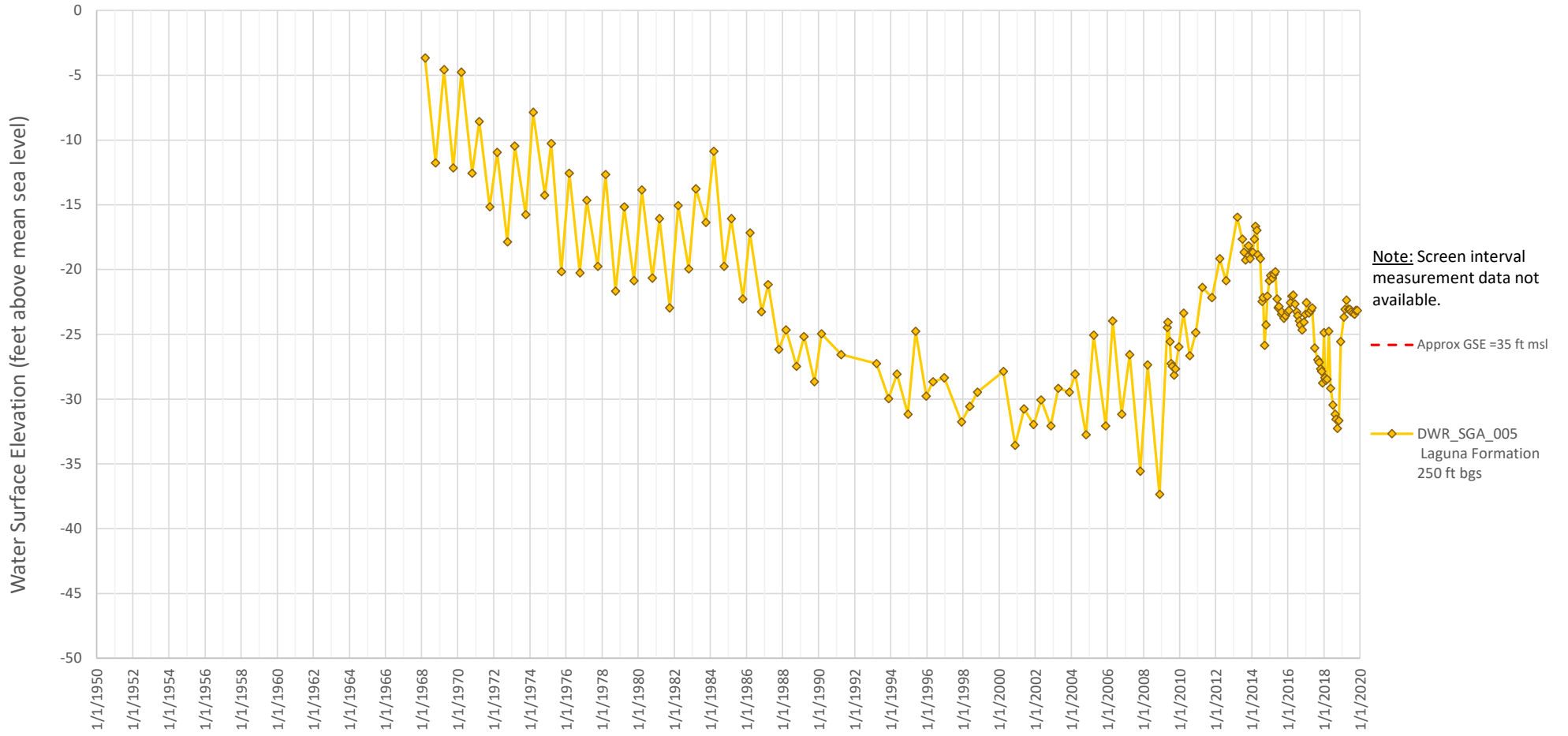
Local Well No. 05
DWR_SGA_004
386016N1213761W001



Local Well No. 06
MW11 Nested Well
386038N1213882W001, 386038N1213882W002, 386038N1213882W003



Local Well No. 07
DWR_SGA_005
386038N1214357W001

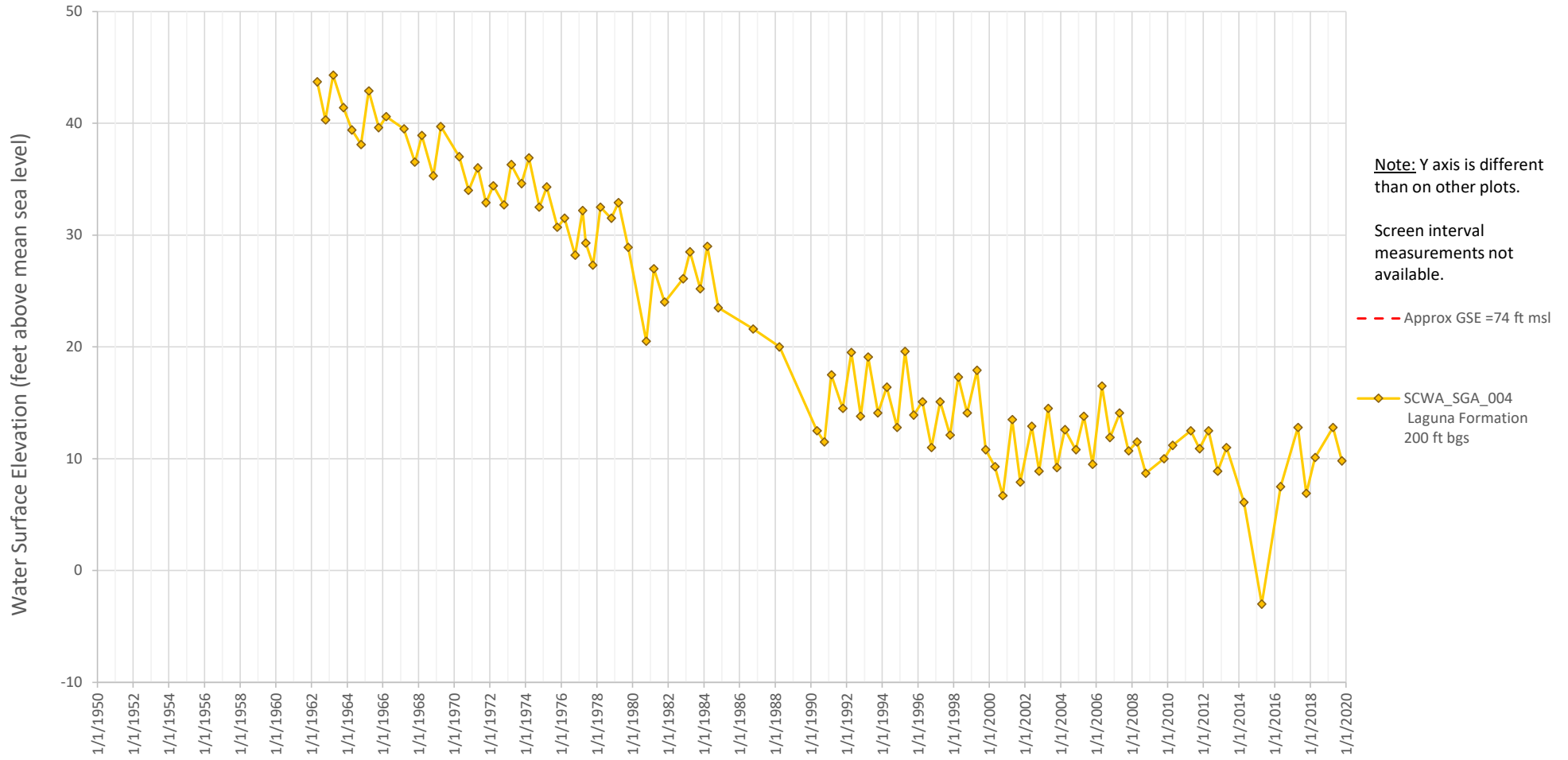


Note: Screen interval measurement data not available.

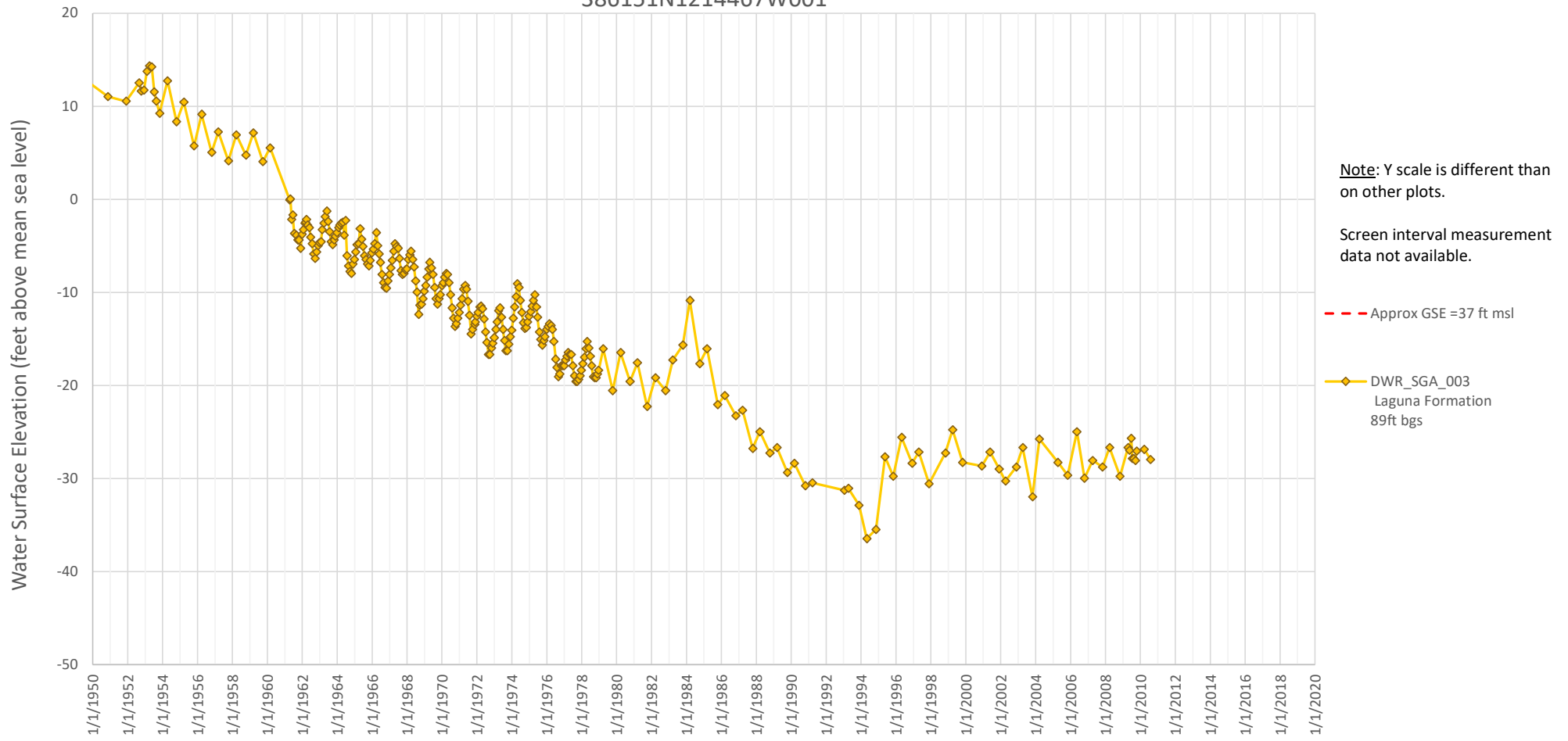
- - - - - Approx GSE =35 ft msl

DWR_SGA_005
Laguna Formation
250 ft bgs

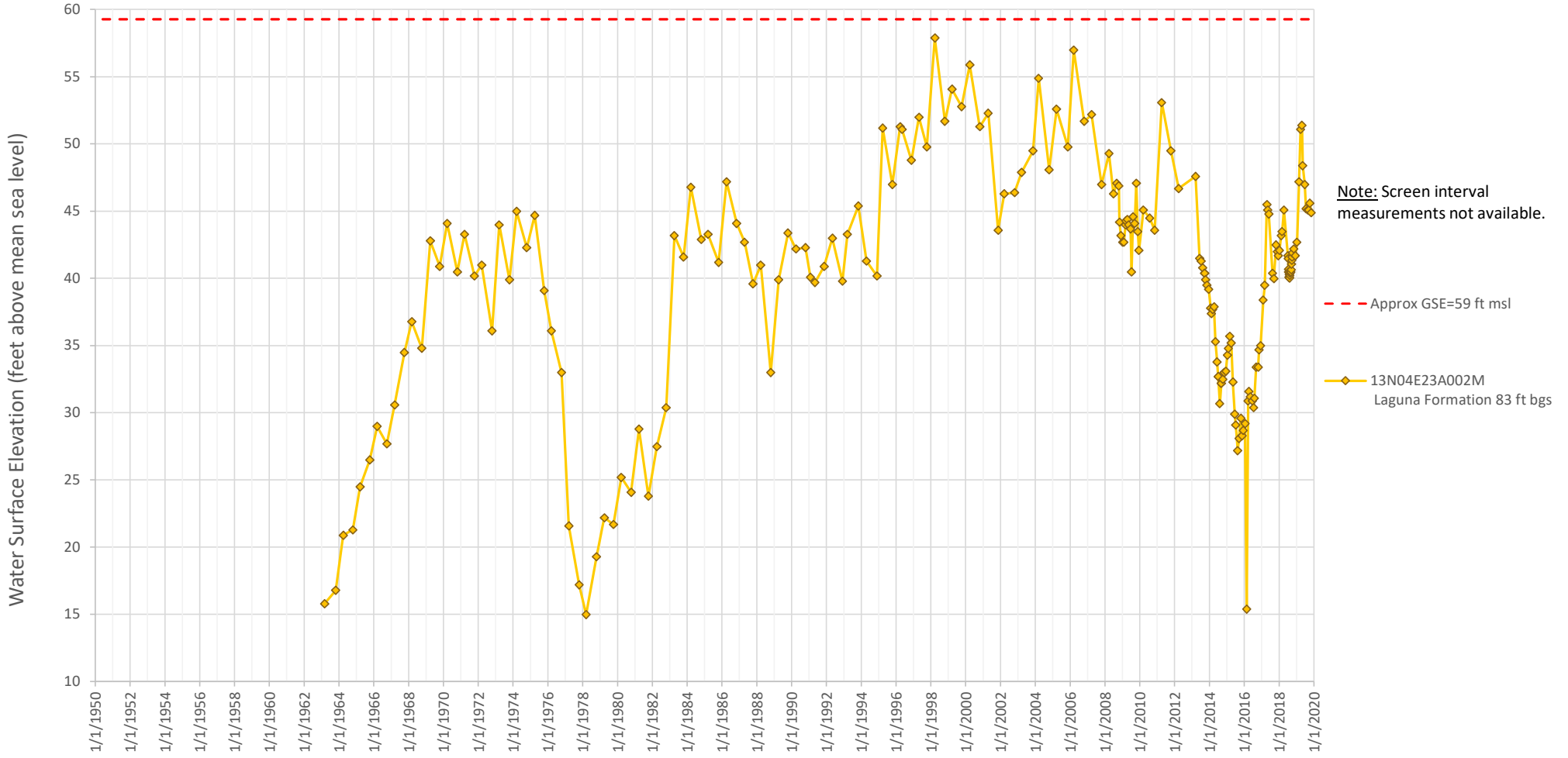
Local Well No. 09
SCWA_SGA_004
386117N1213150W001



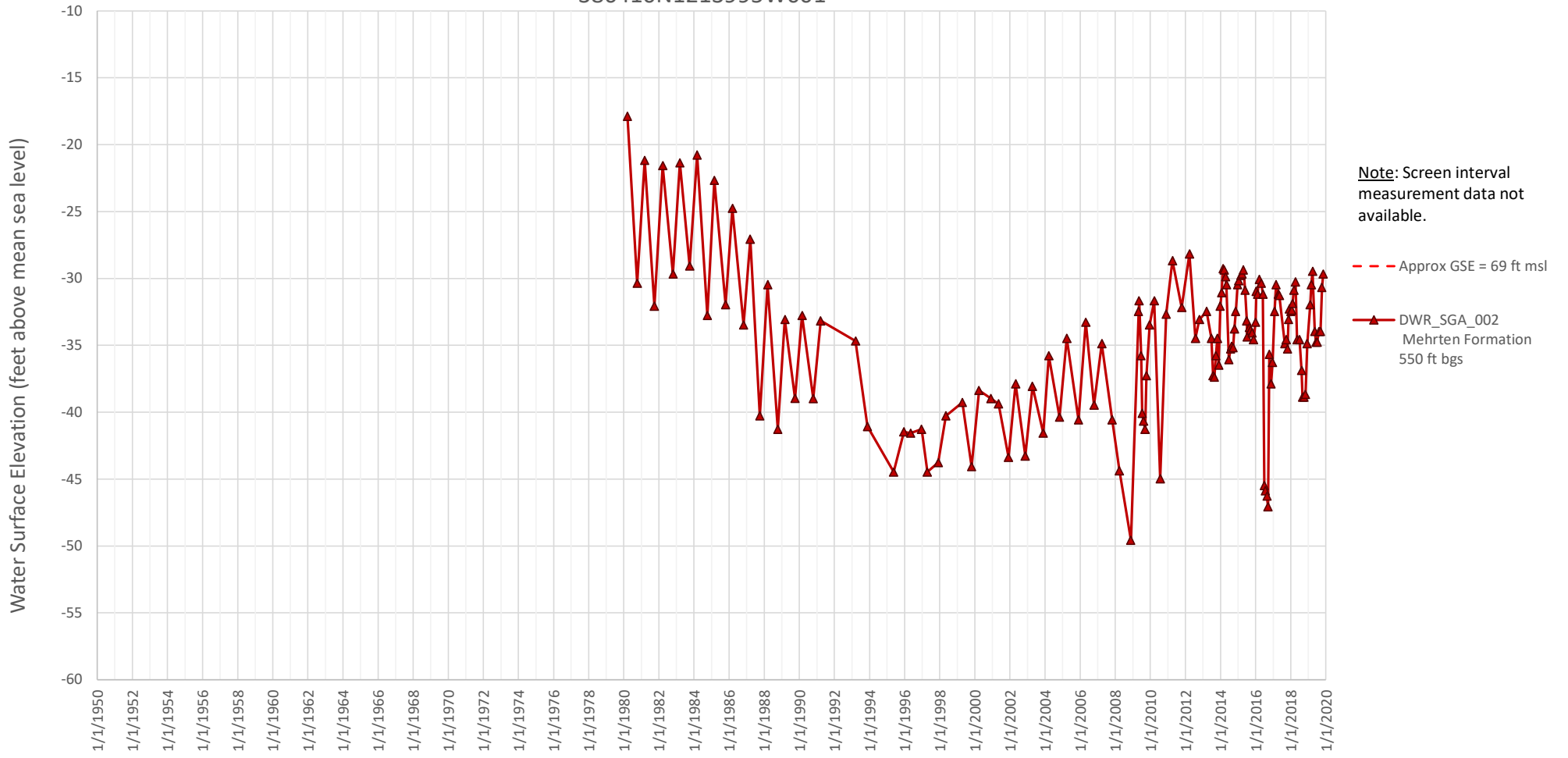
Local Well No. 10
DWR_SGA_003
386151N1214467W001



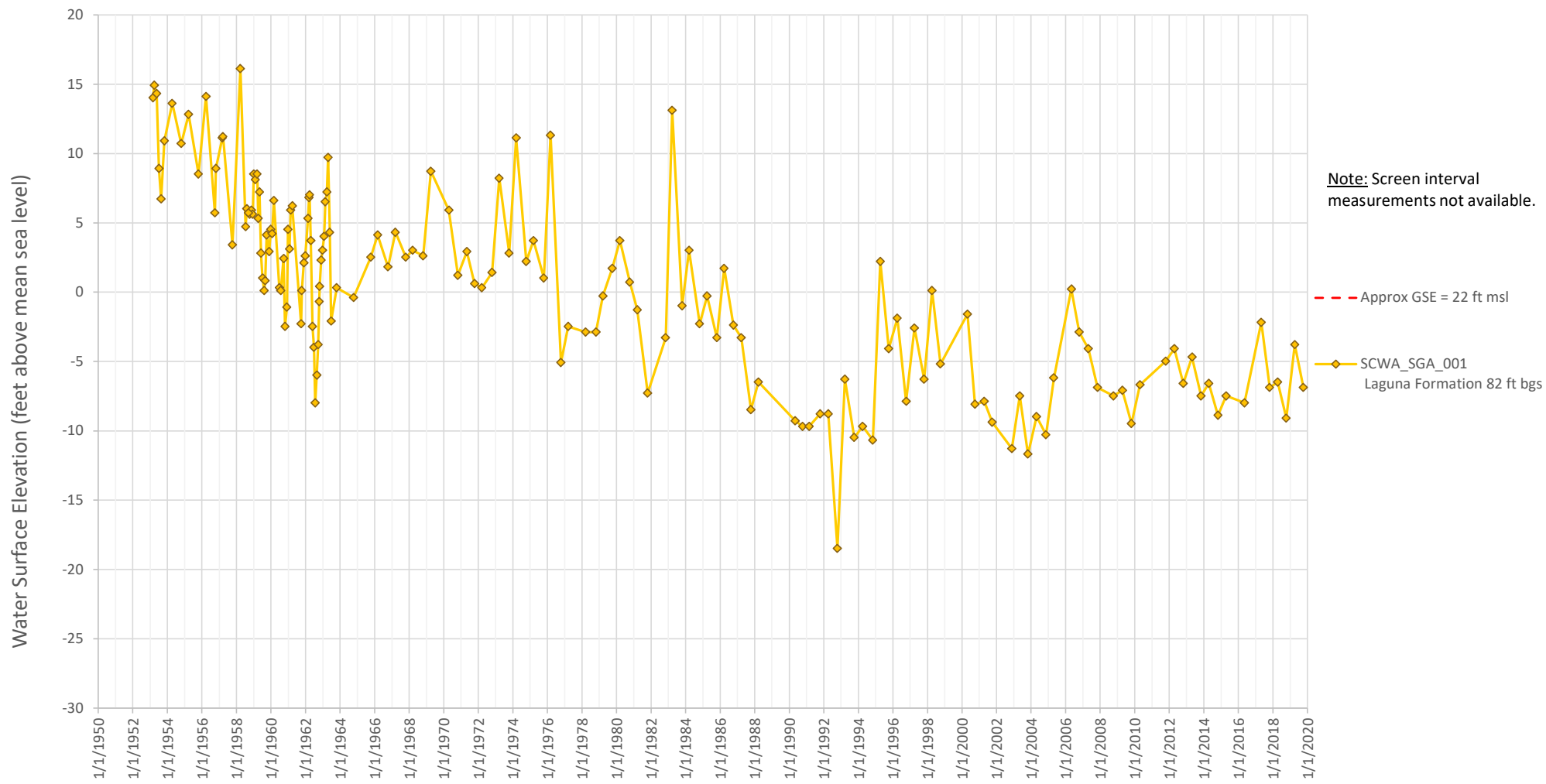
Local Well No. 14
13N04E23A002M
389669N1214897W001



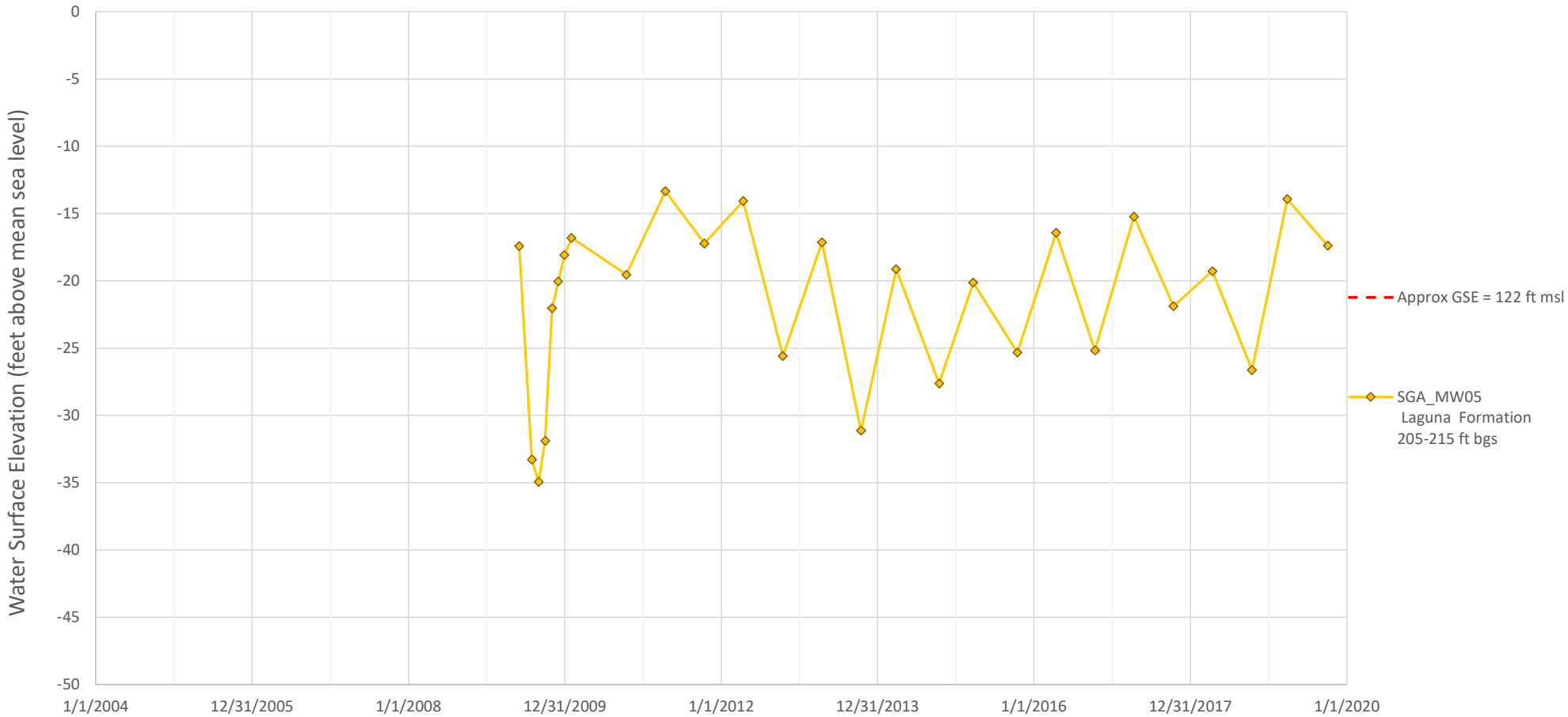
Local Well No. 16
DWR_SGA_002
386410N1213995W001



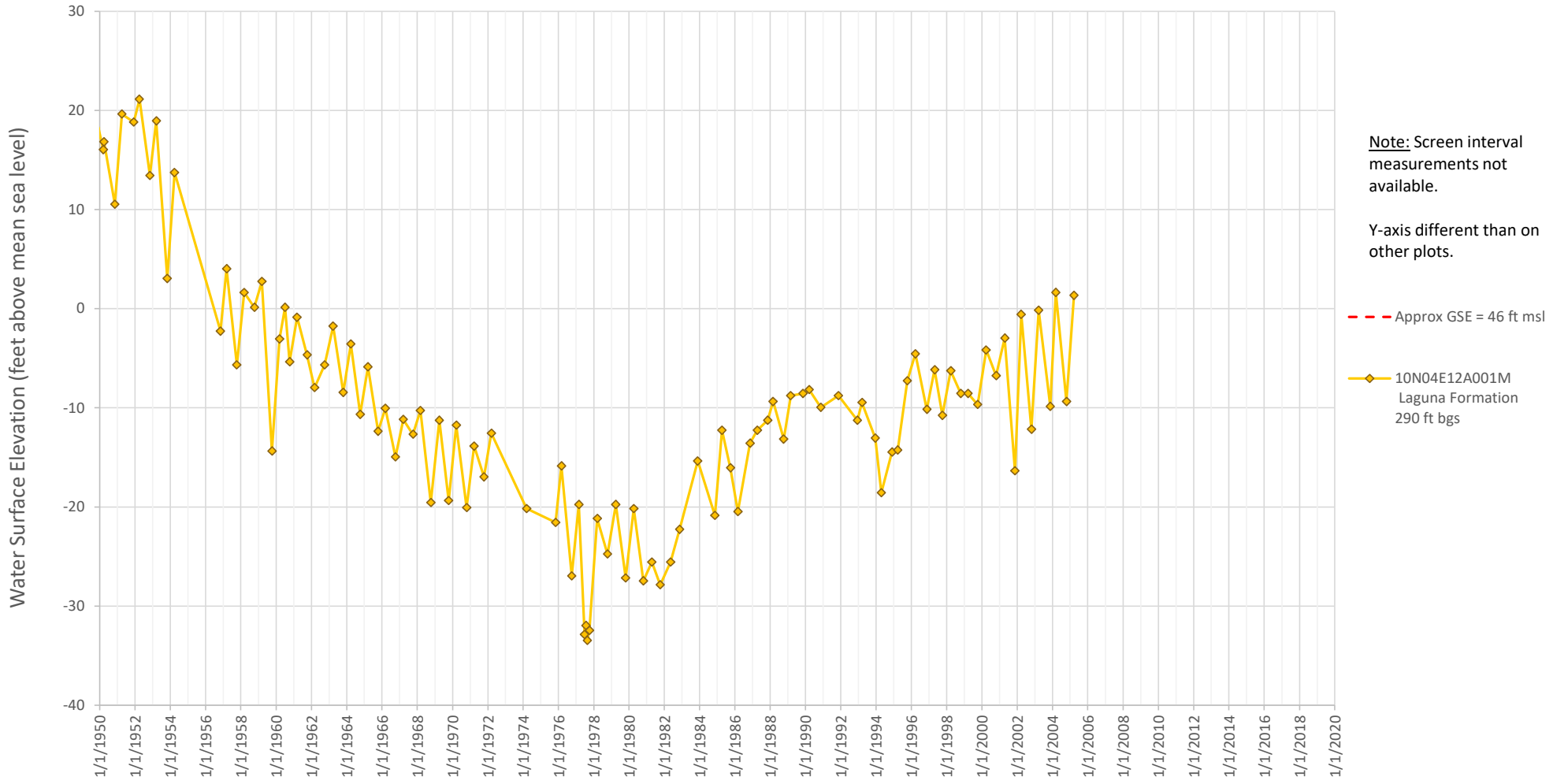
Local Well No. 19
SCWA_SGA_001
386576N1214846W001



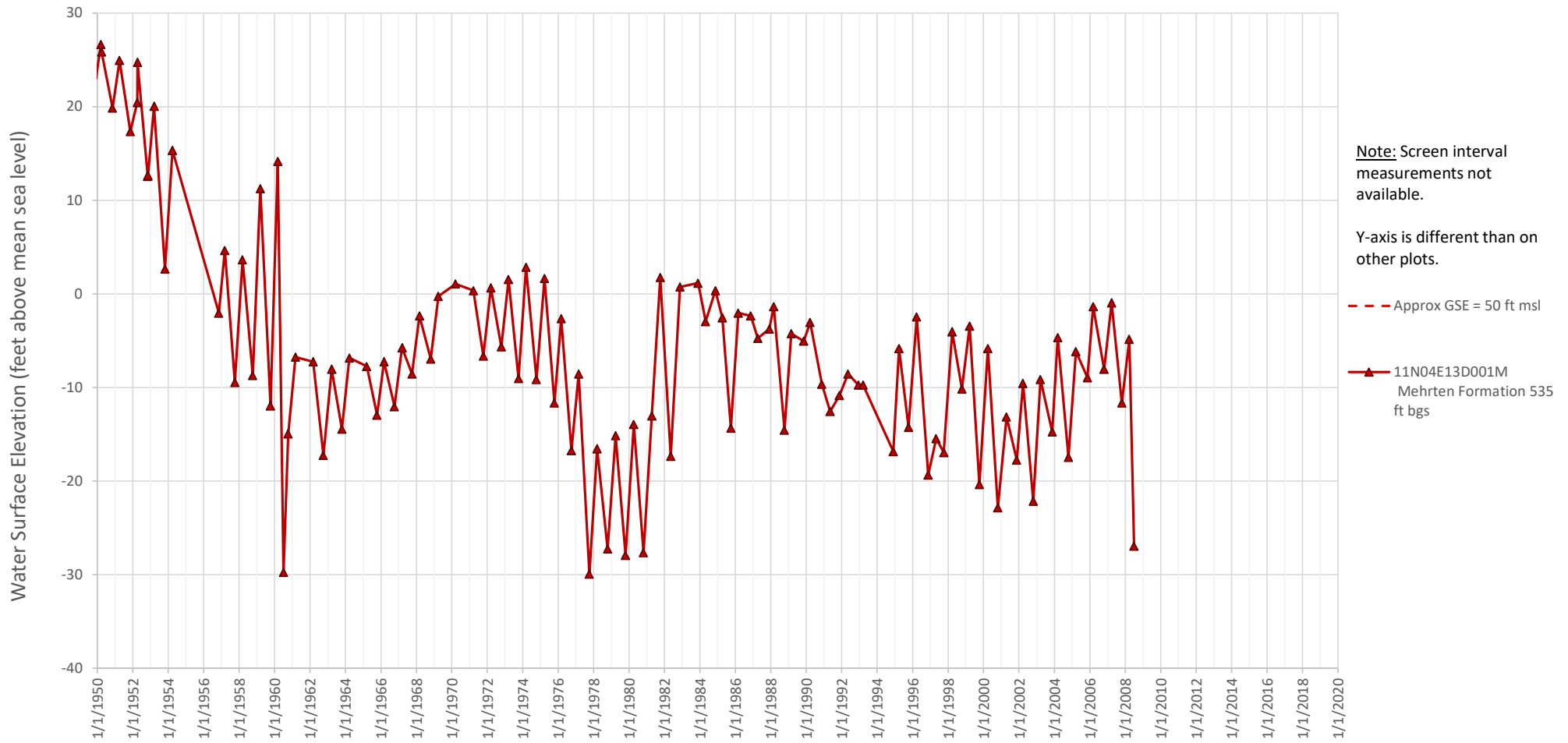
Local Well No. 20
SGA_MW05
386635N1213486W001



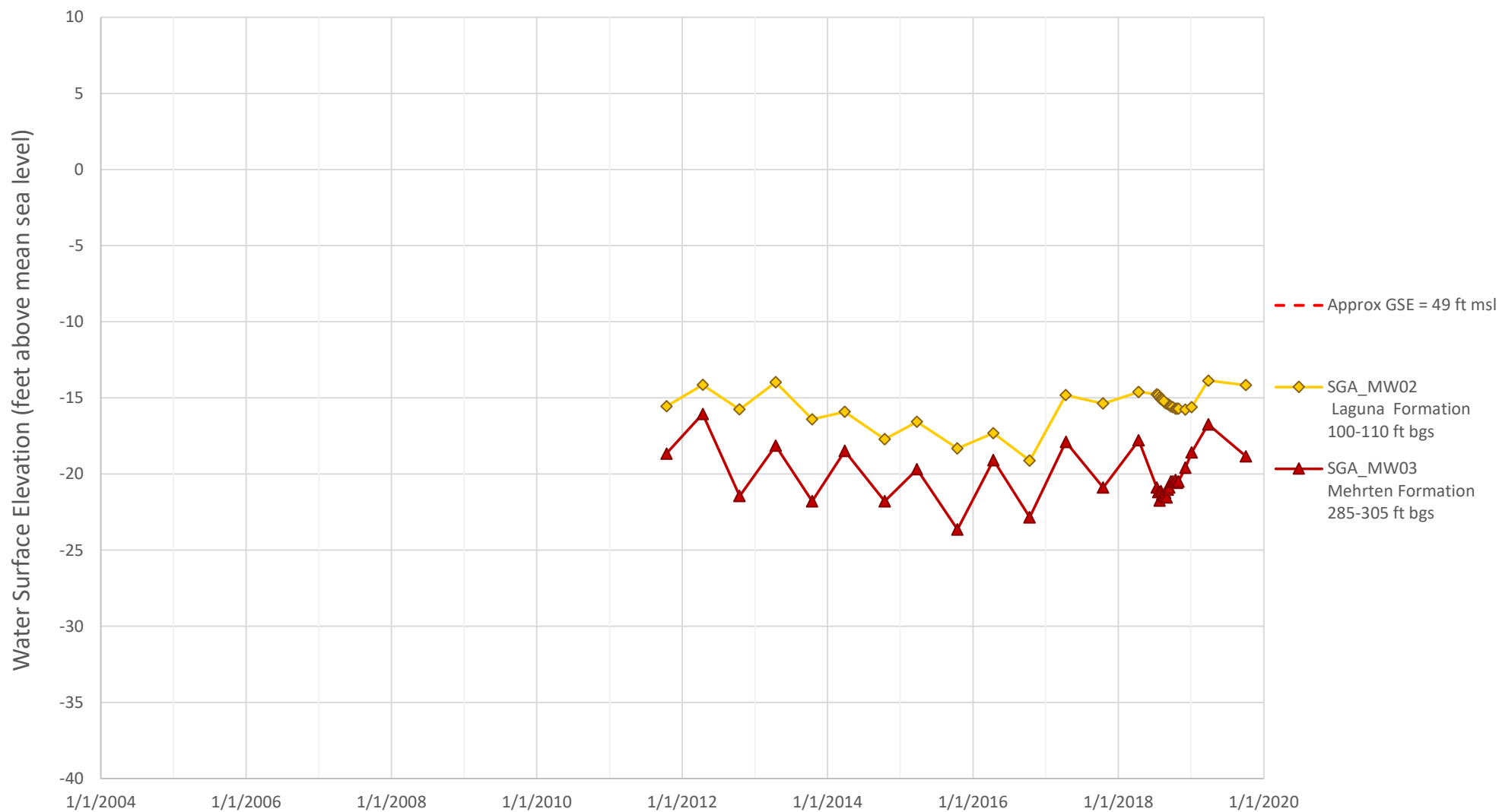
Local Well No. 21
10N04E12A001M
387404N1214870W001



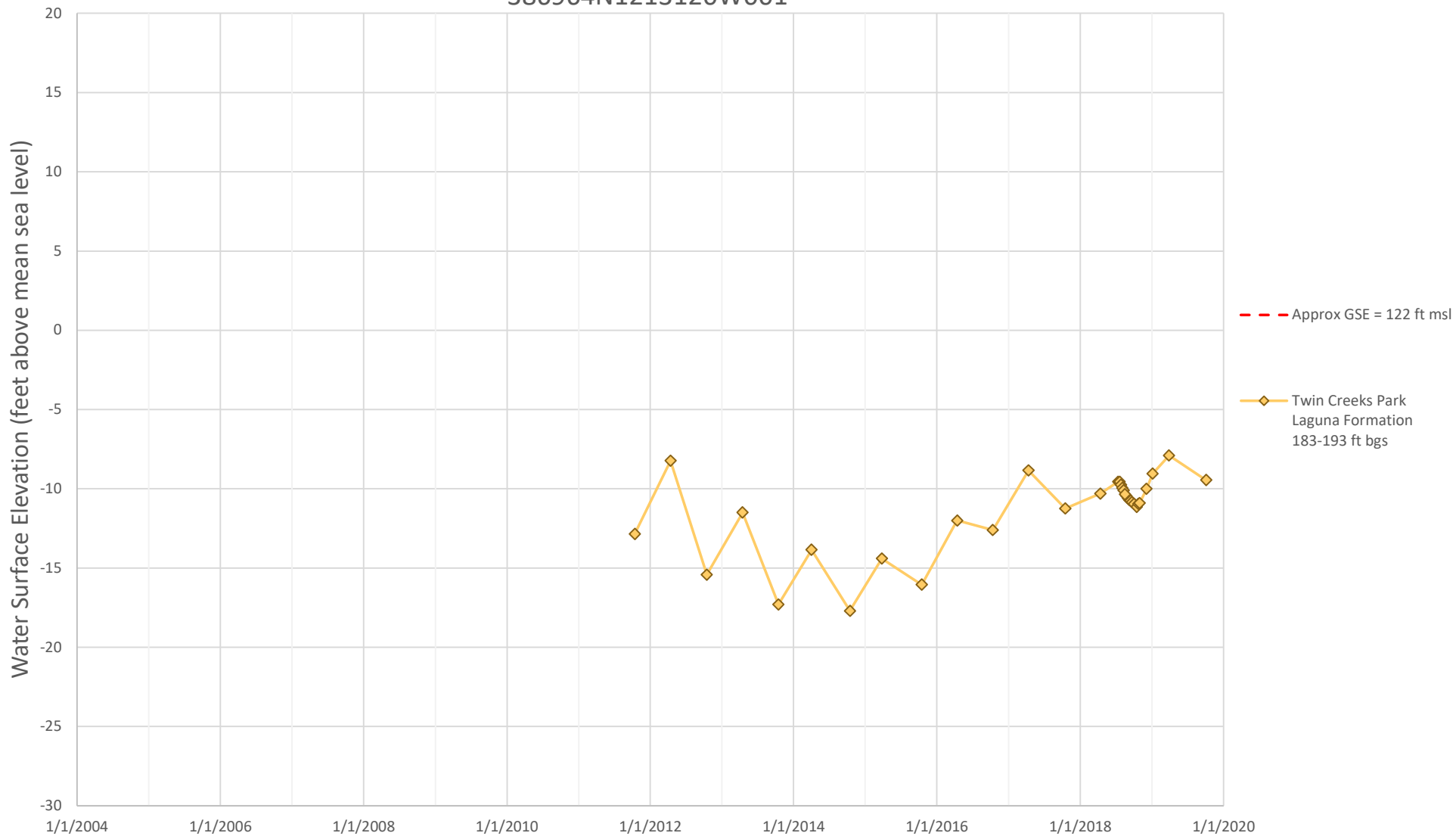
Local Well No. 23
11N04E13D001M
388072N1214842W001



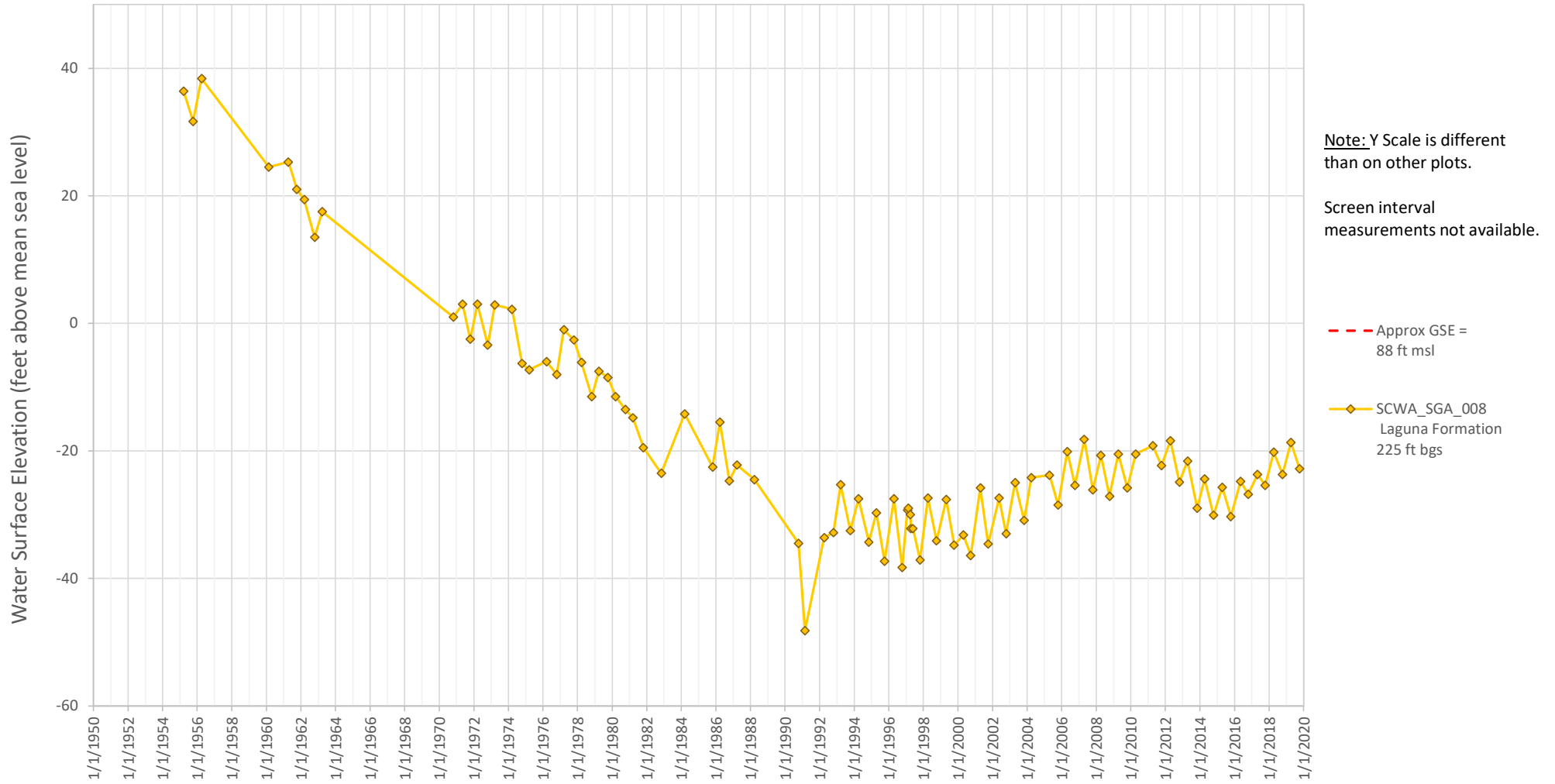
Local Well No. 24 & No. 25
SGA_MW02 & SGA_MW03 Clustered Wells
386836N1214536W001, 386836N1214536W002



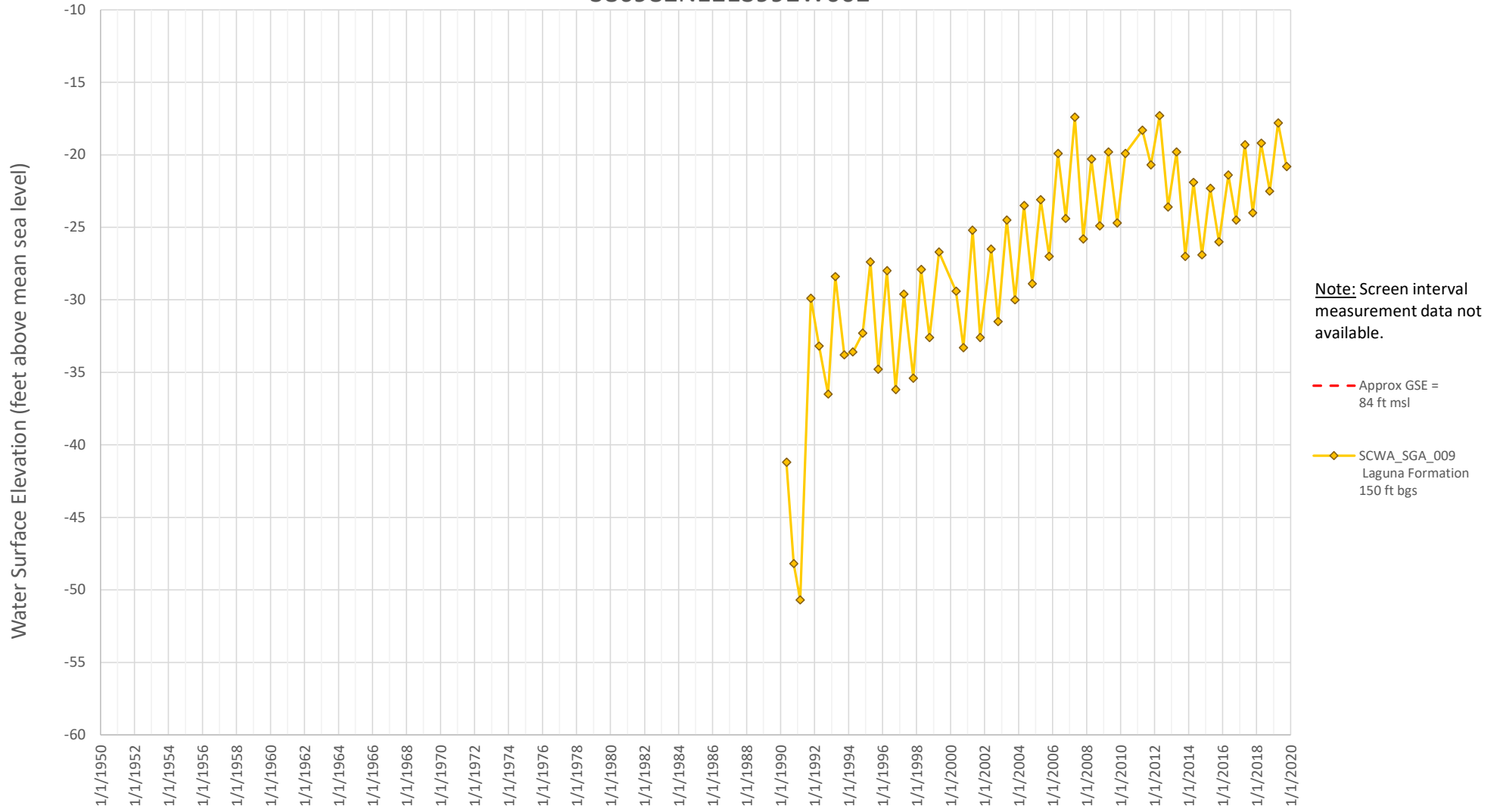
Local Well No. 28
Twin Creeks Park
386964N1213120W001



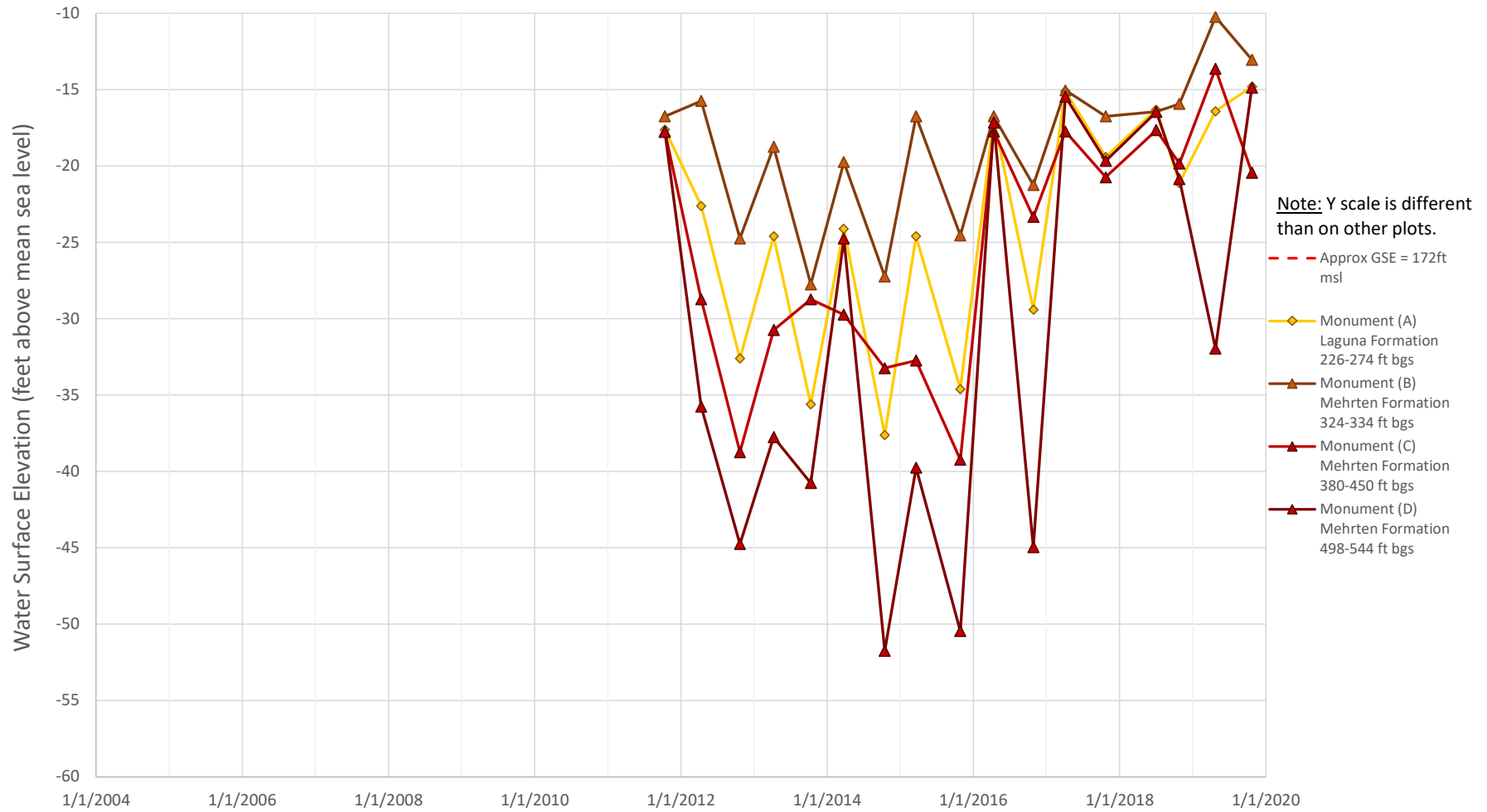
Local Well No. 30
SCWA_SGA_008
386982N1213992W001



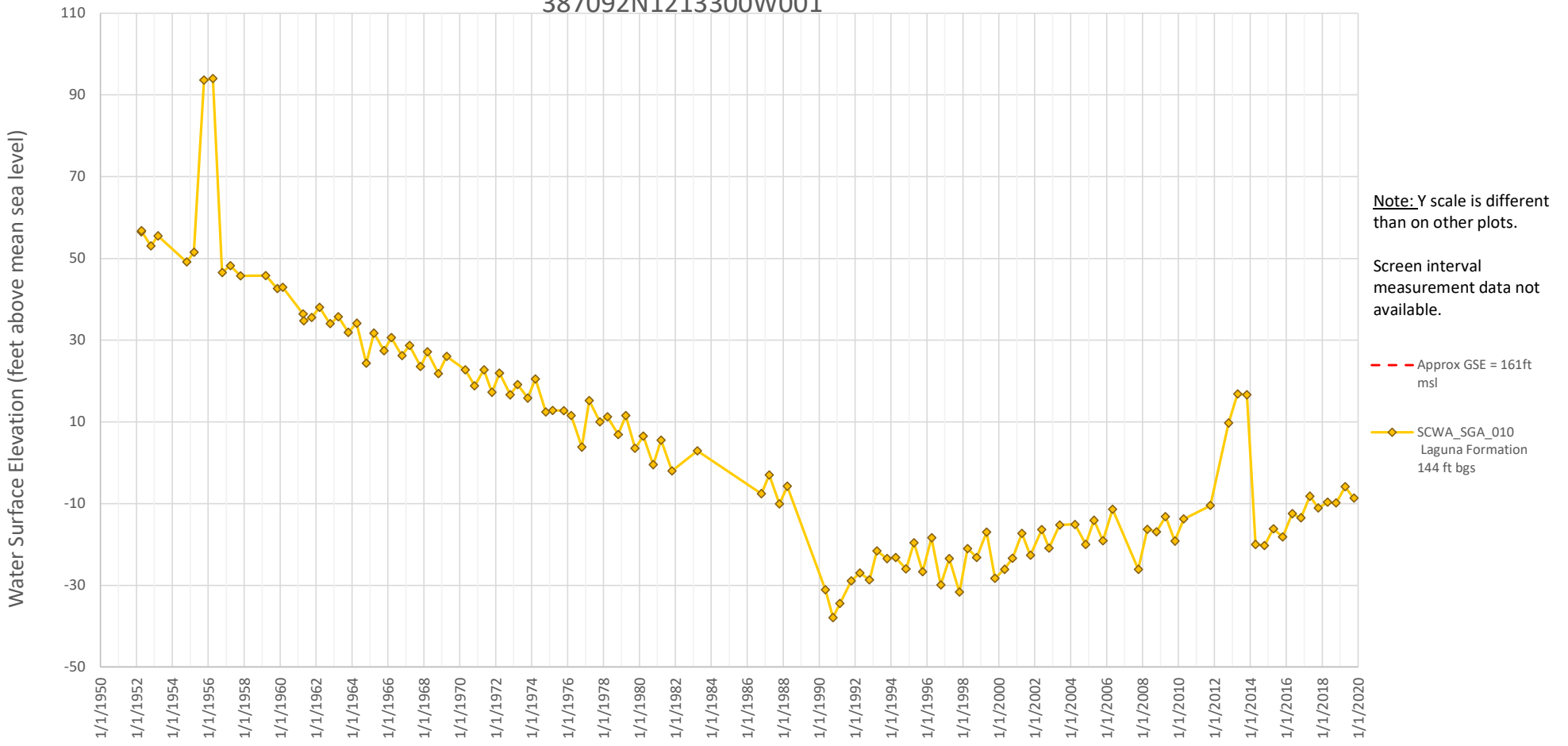
Local Well No. 31
SCWA_SGA_009
386982N1213992W002



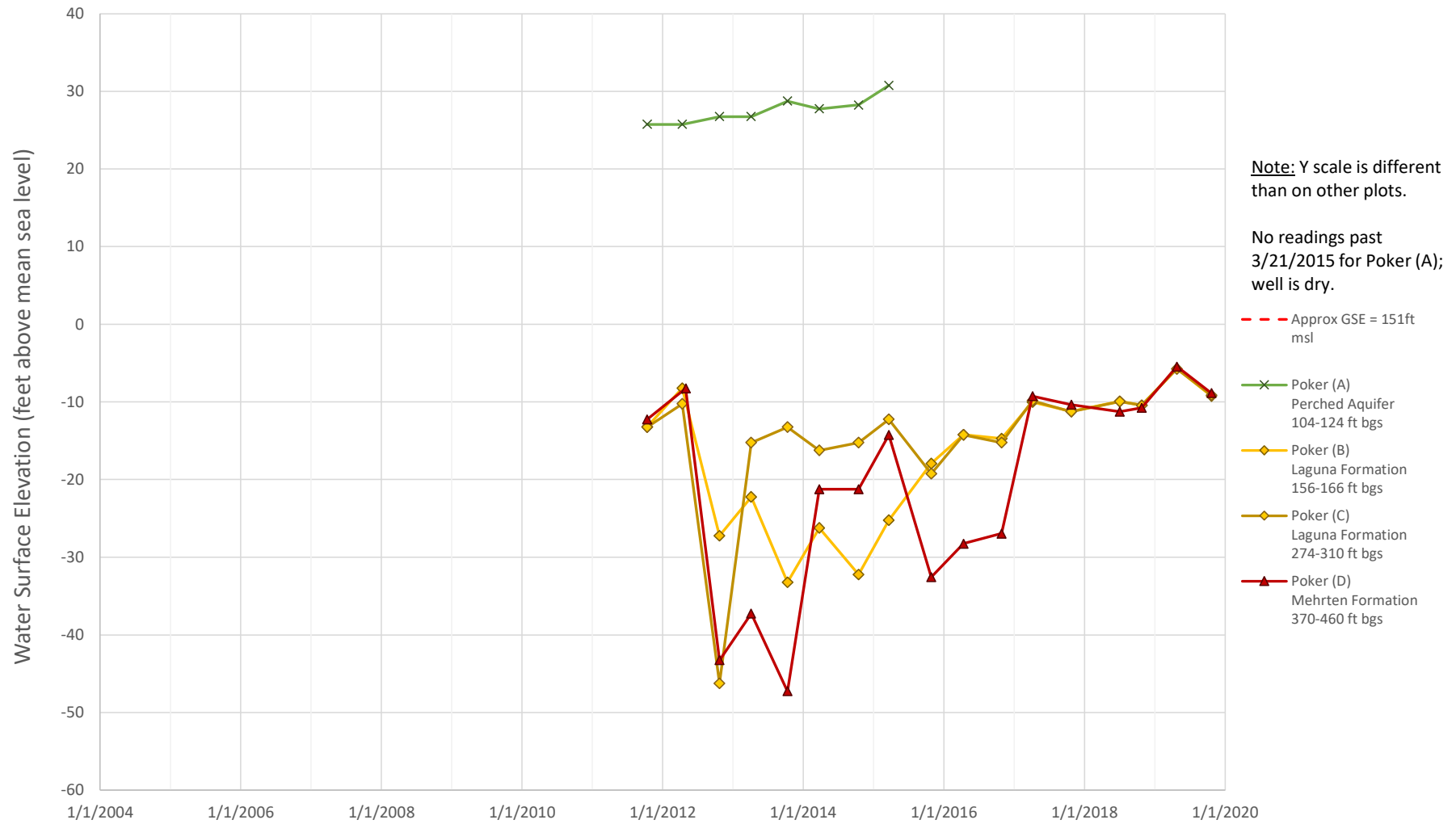
Local Well No. 33
 Monument Nested Well
 387000N1213529W001, 387000N1213529W002, 387000N1213529W003, 387000N1213529W004



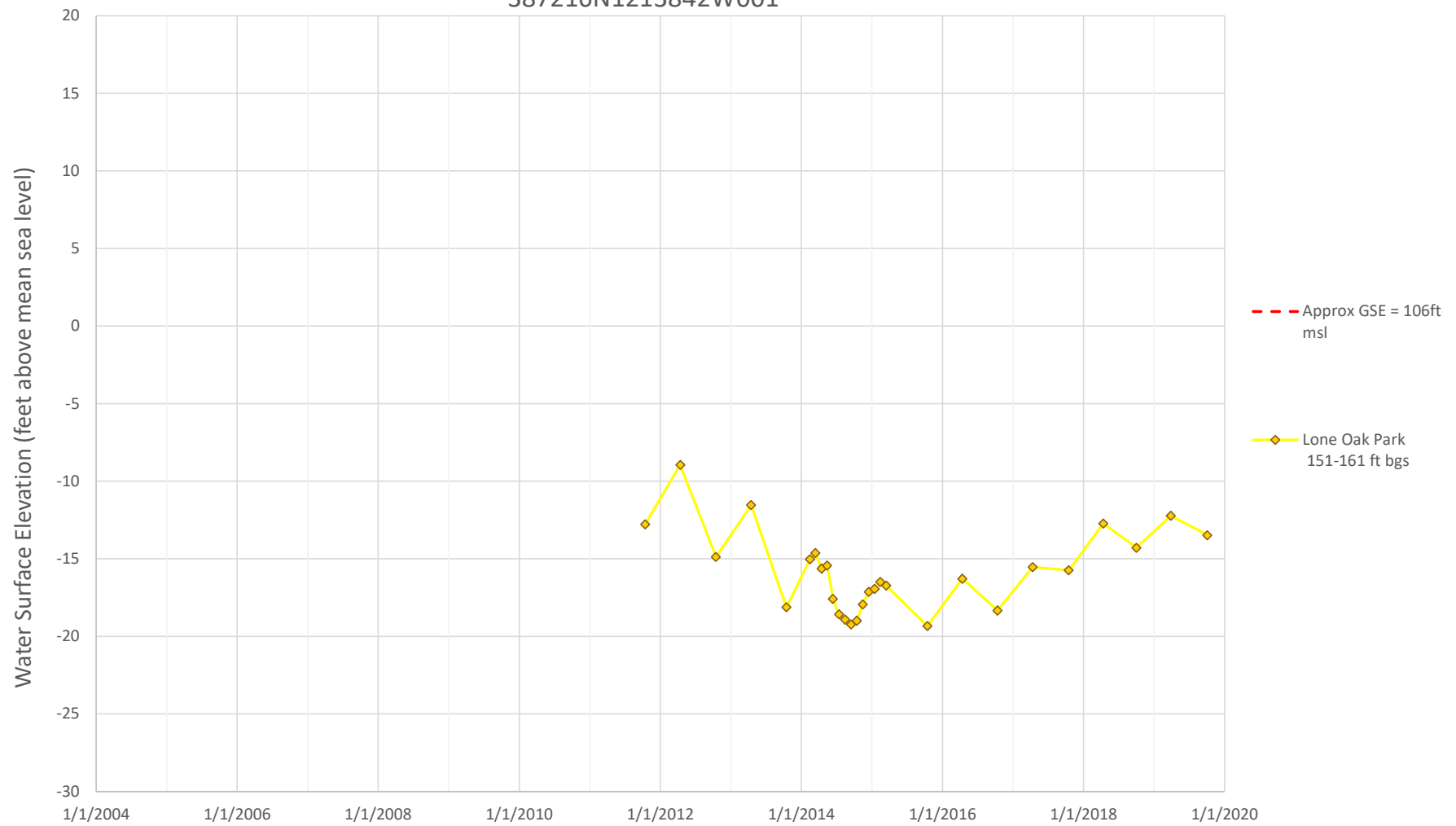
Local Well No. 34
SCWA_SGA_010
387092N1213300W001



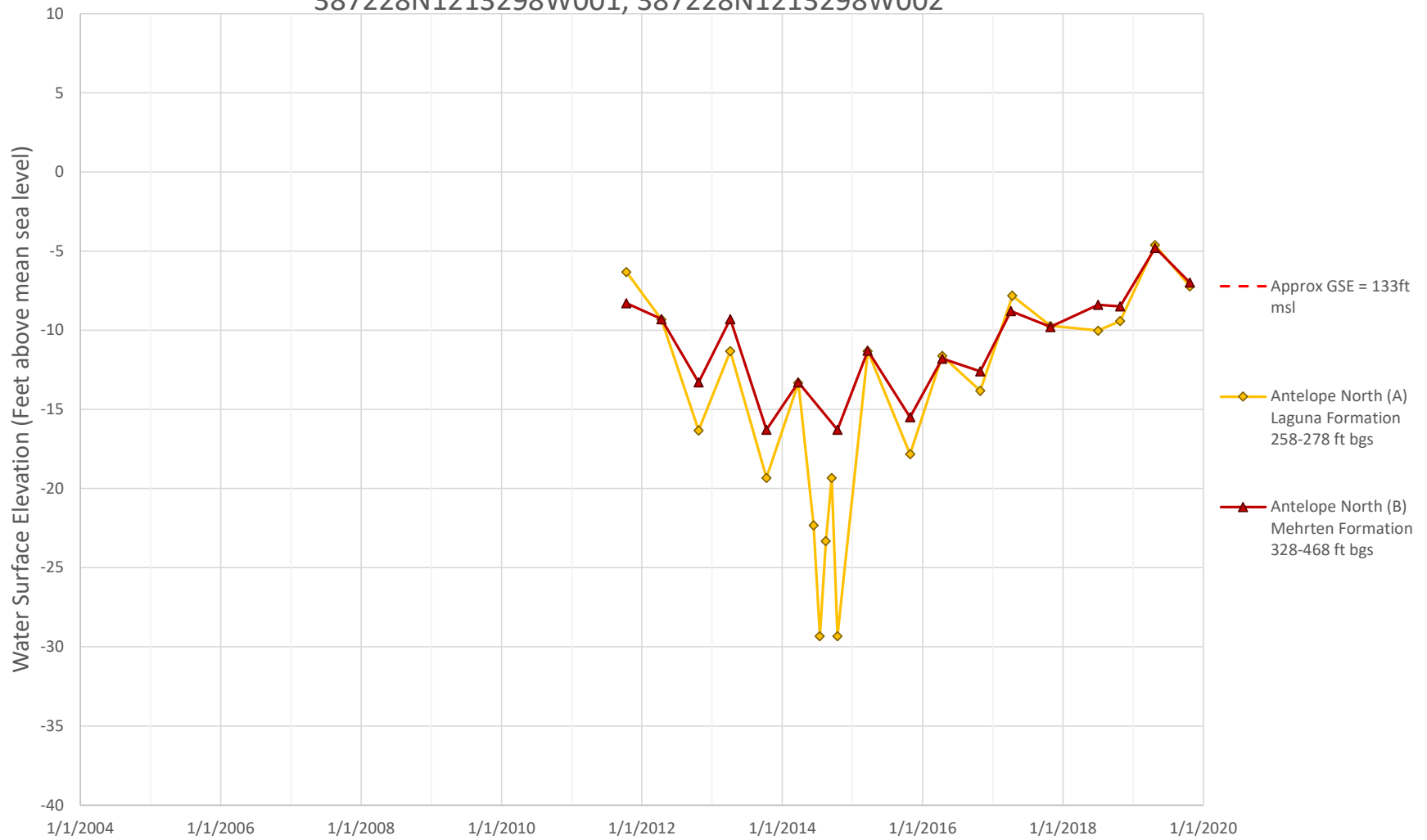
Local Well No. 35
Poker Nested Well
387117N1213327W001, 387117N1213327W002, 387117N1213327W003, 387117N1213327W004



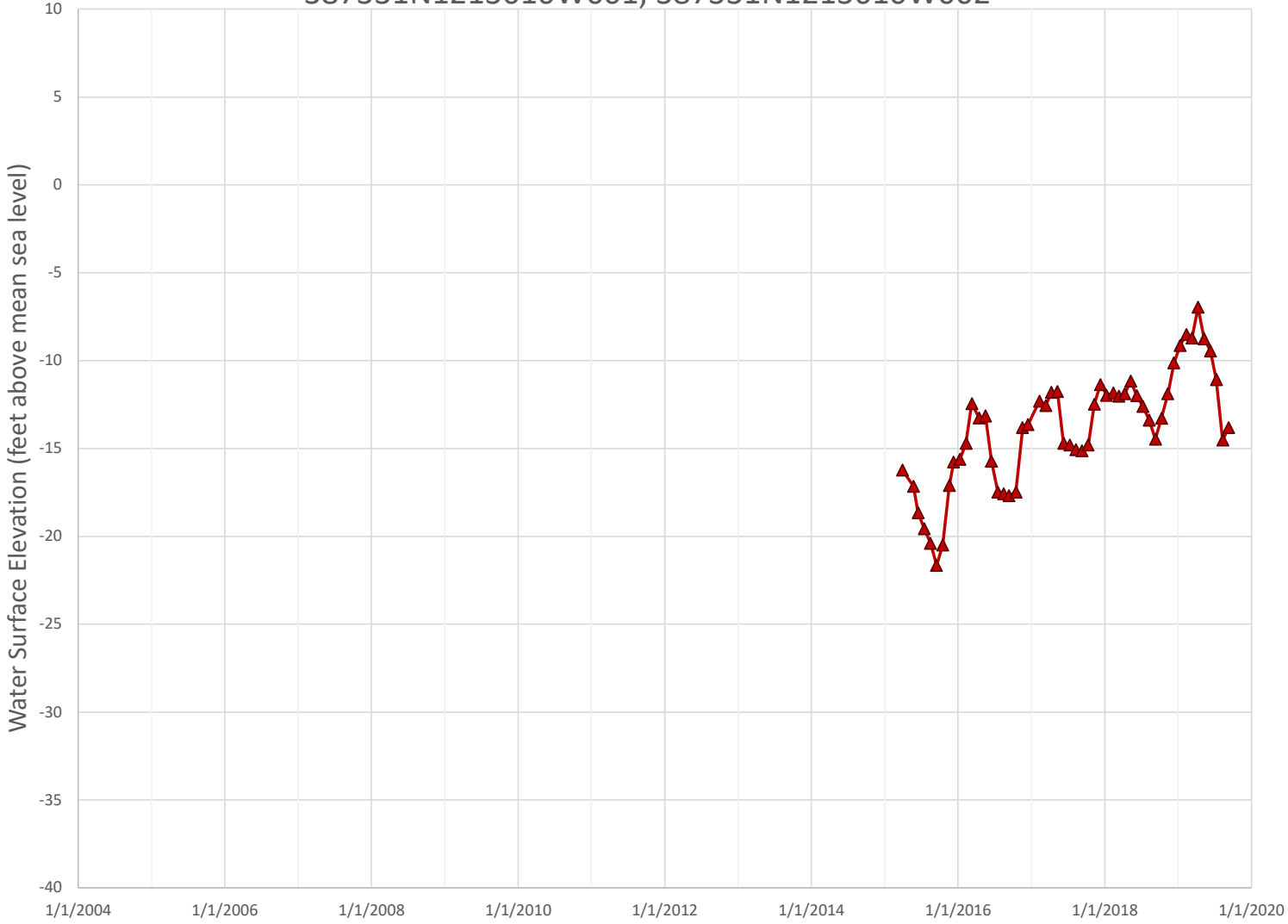
Local Well No. 38
Lone Oak Park
387216N1213842W001



Local Well No. 40
Antelope North Nested Wells
387228N1213298W001, 387228N1213298W002



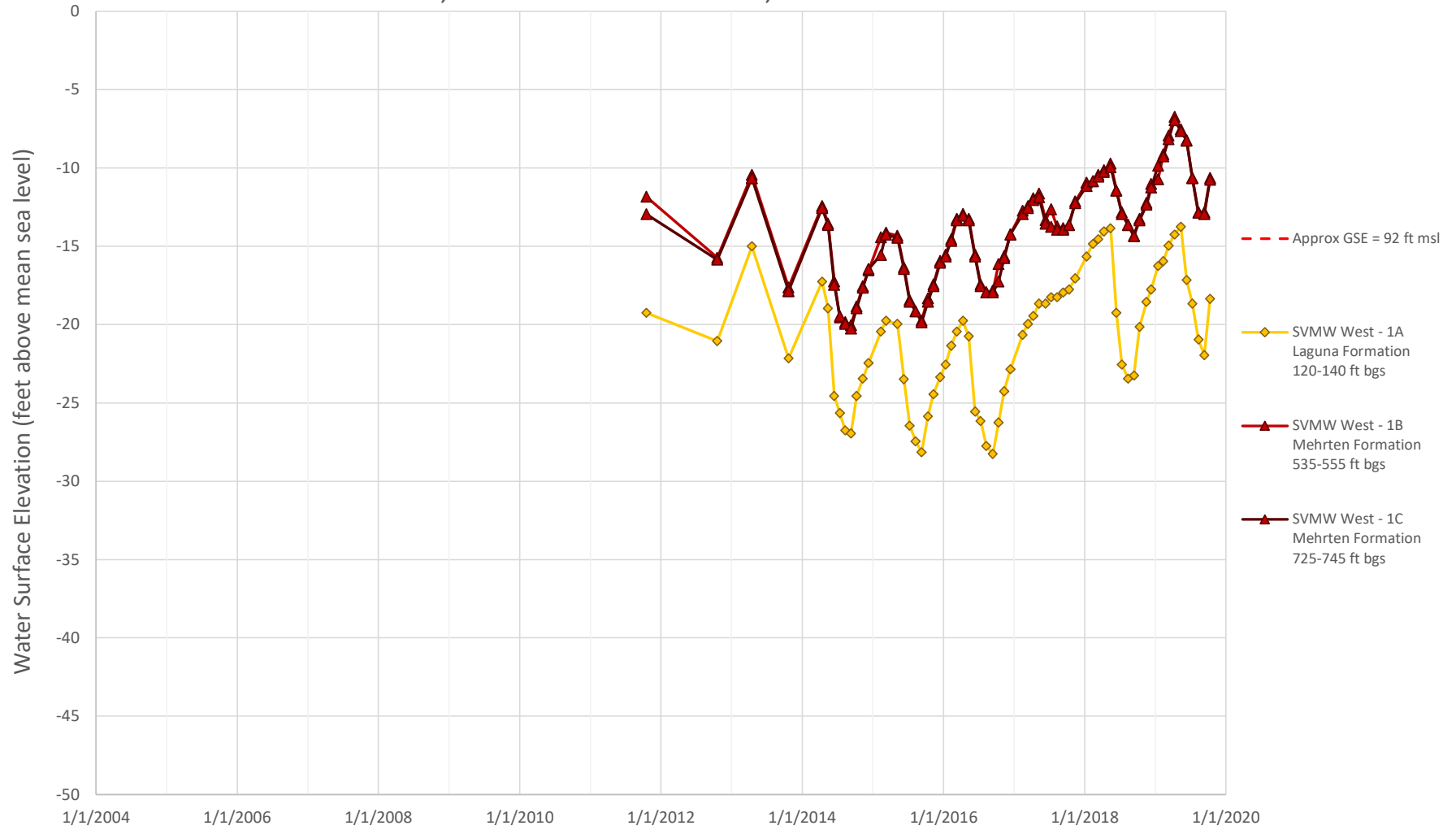
Local Well No. 41
WPMW-5 Nested Well
387331N1213610W001, 387331N1213610W002



Note: WPMW-5A is dry.

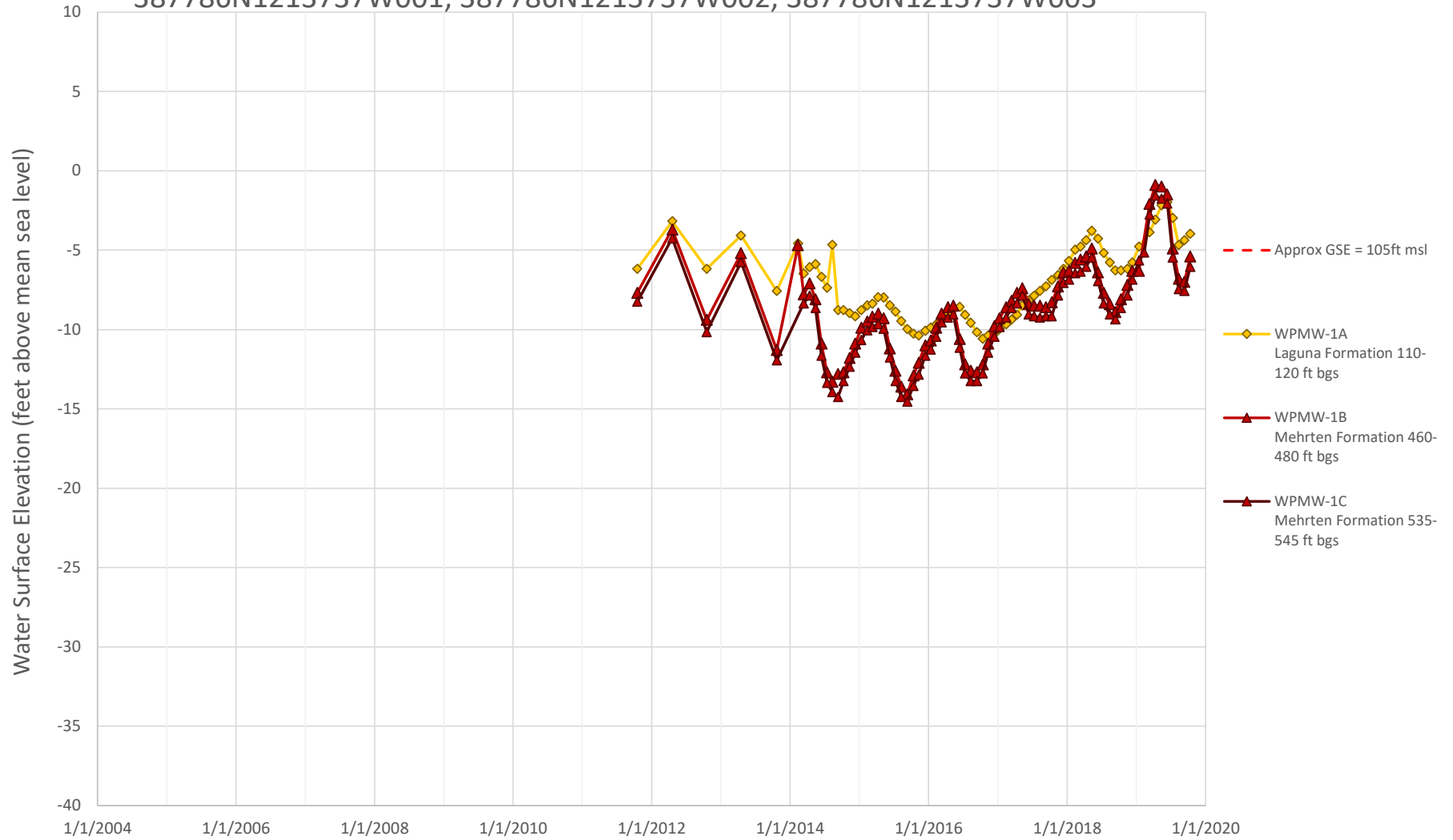
- - - Approx GSE = 98ft msl
- ◇ WPMW-5A
Laguna Formation
80-100 ft bgs
- ▲ WPMW-5B
Mehrten Formation
630-650 ft bgs

Local Well No. 46
SVMW West 1 Nested Well
387623N1213915W001, 387623N1213915W002, 387623N1213915W003

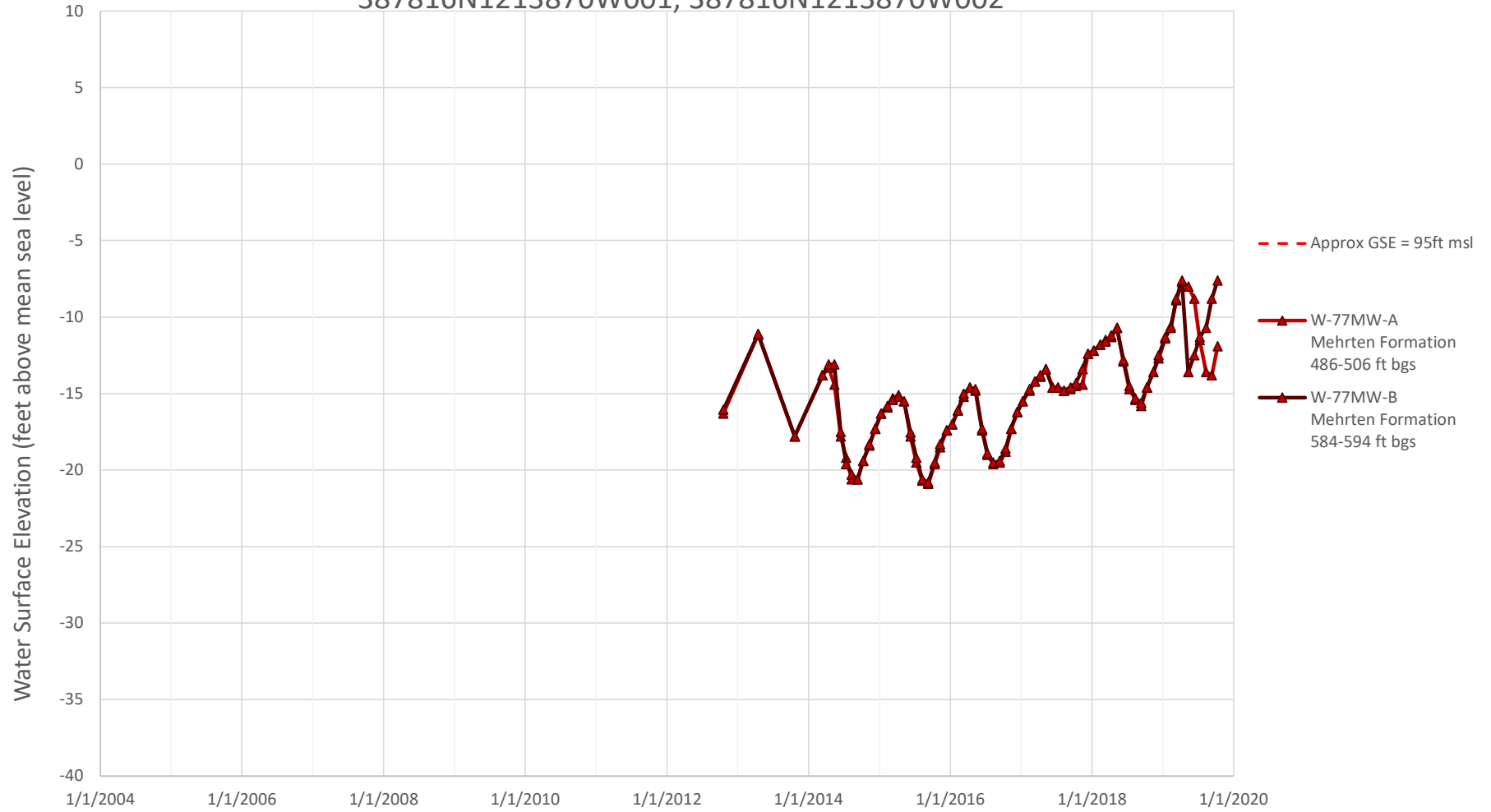


Local Well No. 49
WPMW-1 Nested Well

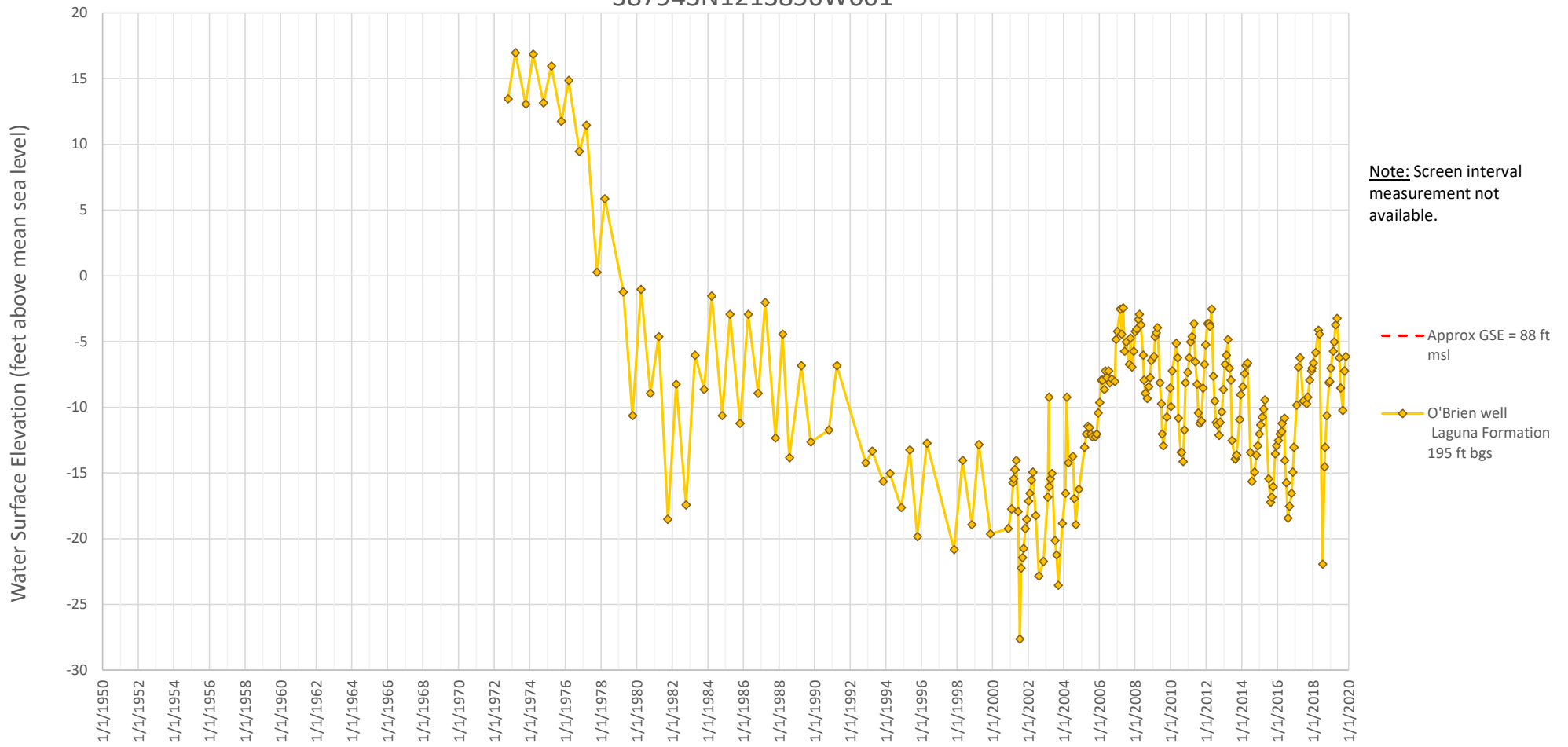
387786N1213737W001, 387786N1213737W002, 387786N1213737W003



Local Well No. 50
W-77MW (Well 77) Nested Well
387816N1213870W001, 387816N1213870W002

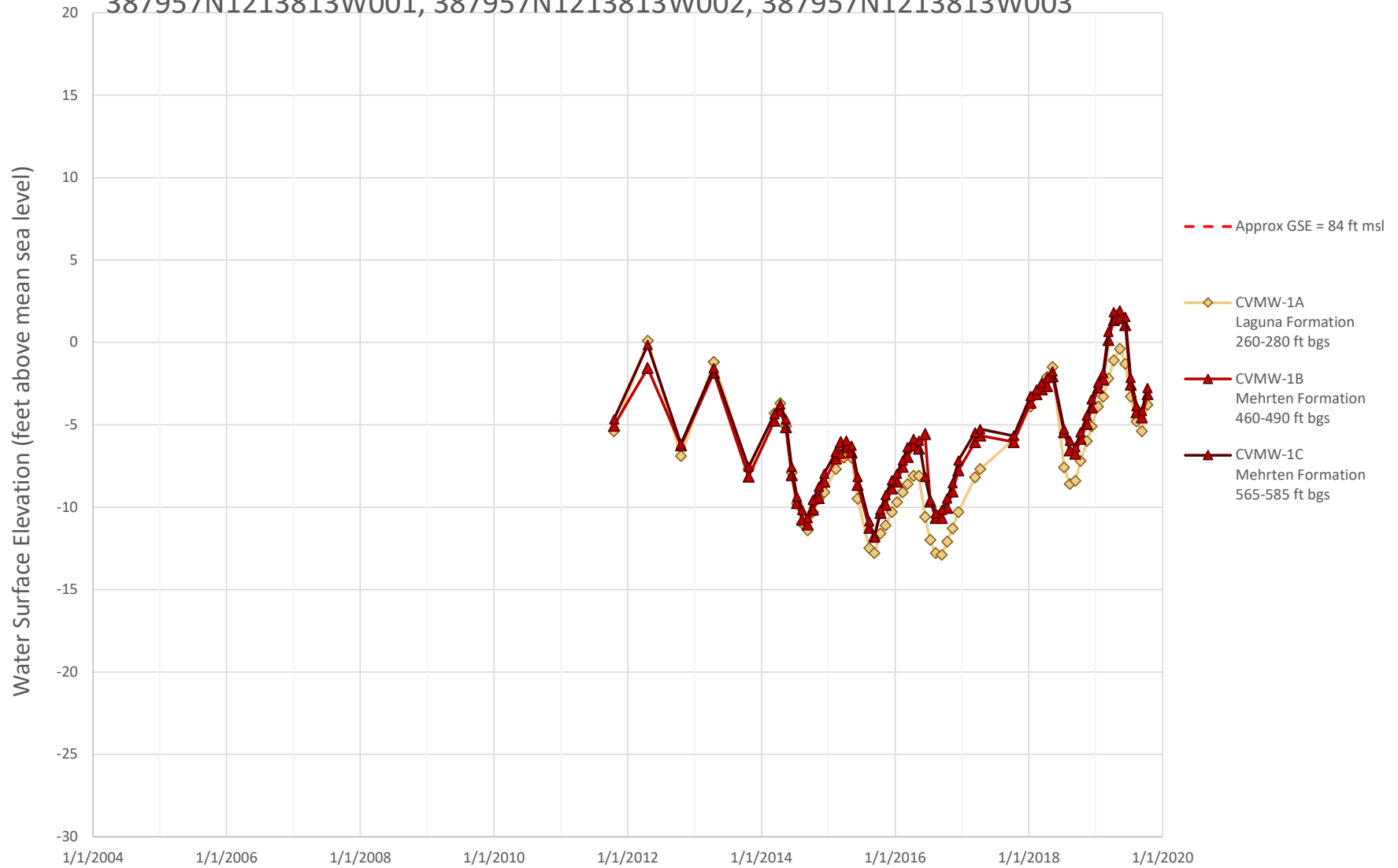


Local Well No. 51
O'Brien Well
387943N1213856W001

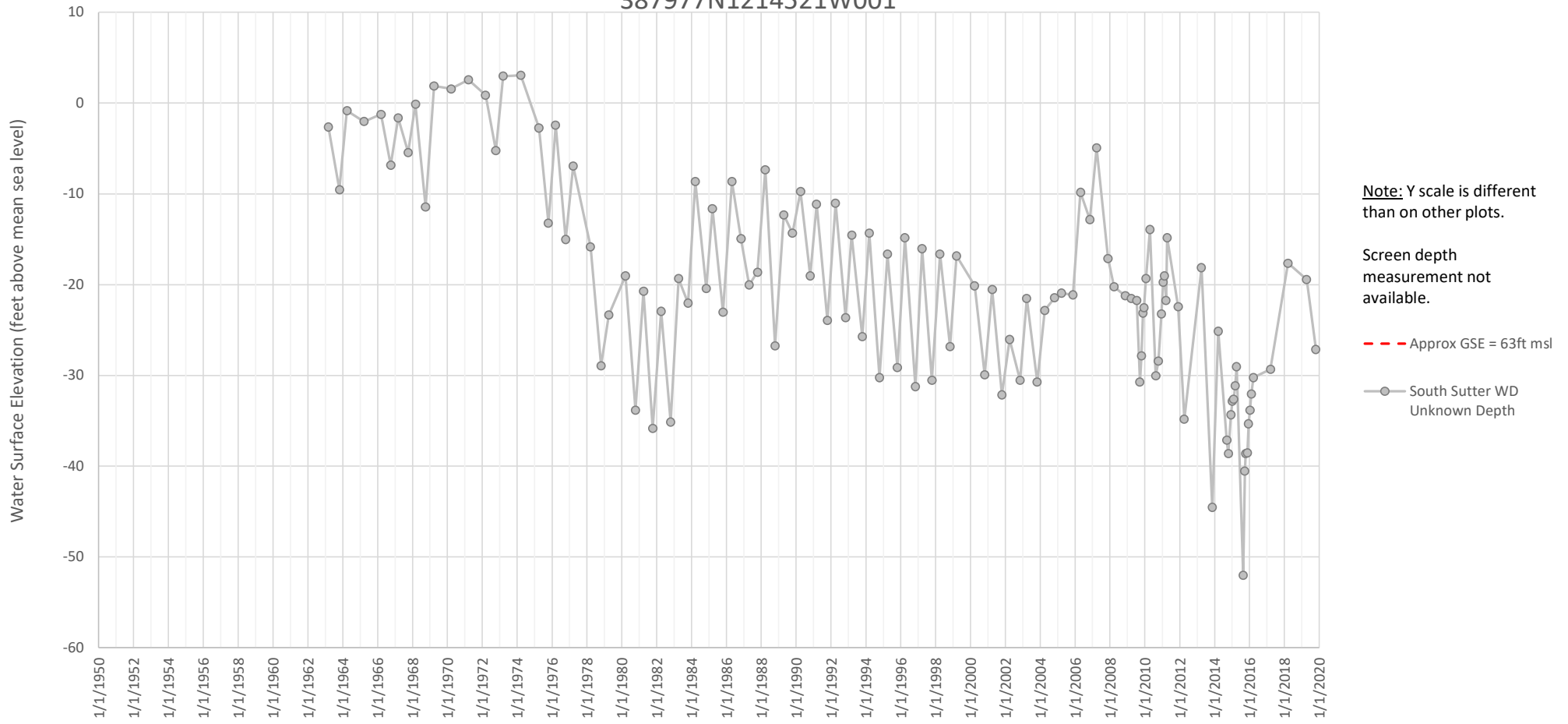


Local Well No. 52
CVMW-1 Nested Well

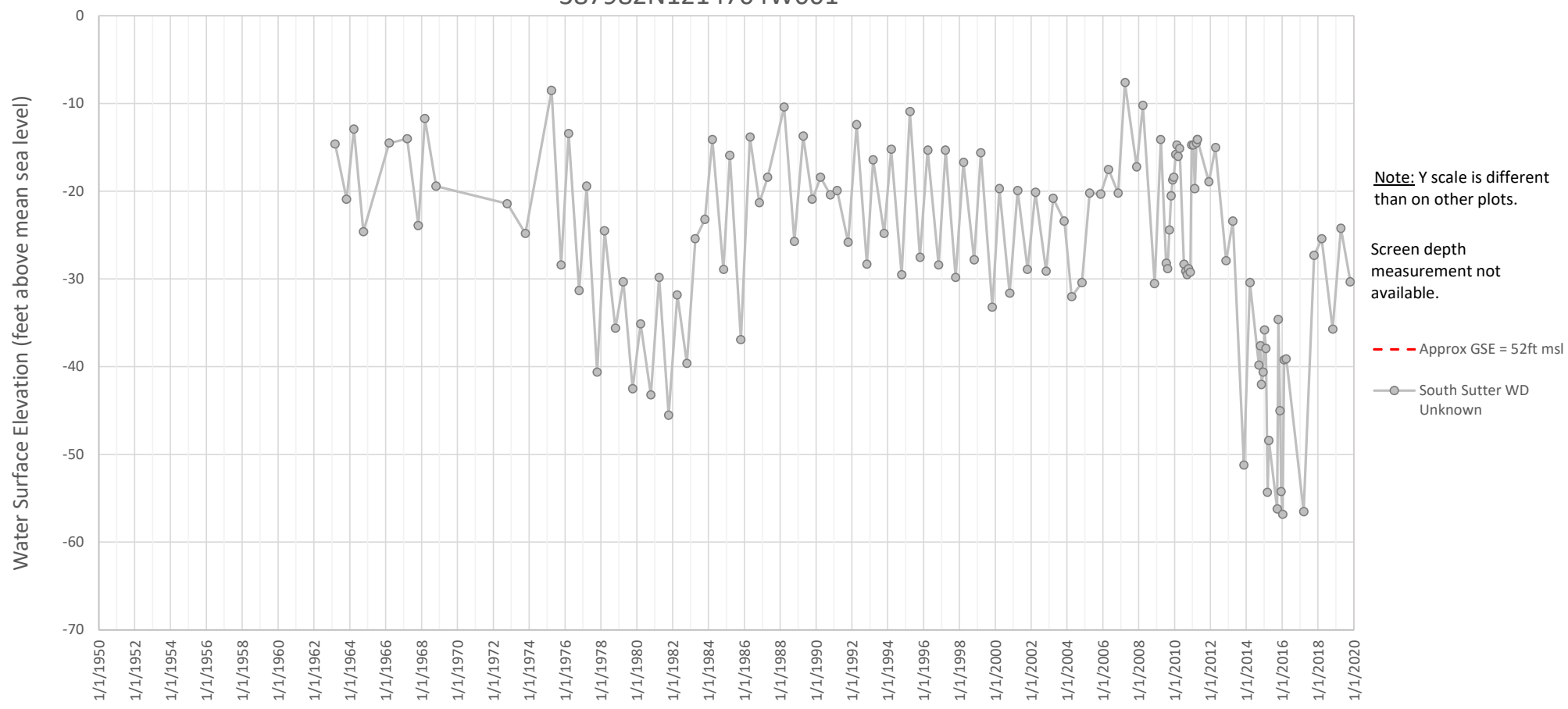
387957N1213813W001, 387957N1213813W002, 387957N1213813W003



Local Well No. 54
South Sutter
387977N1214521W001

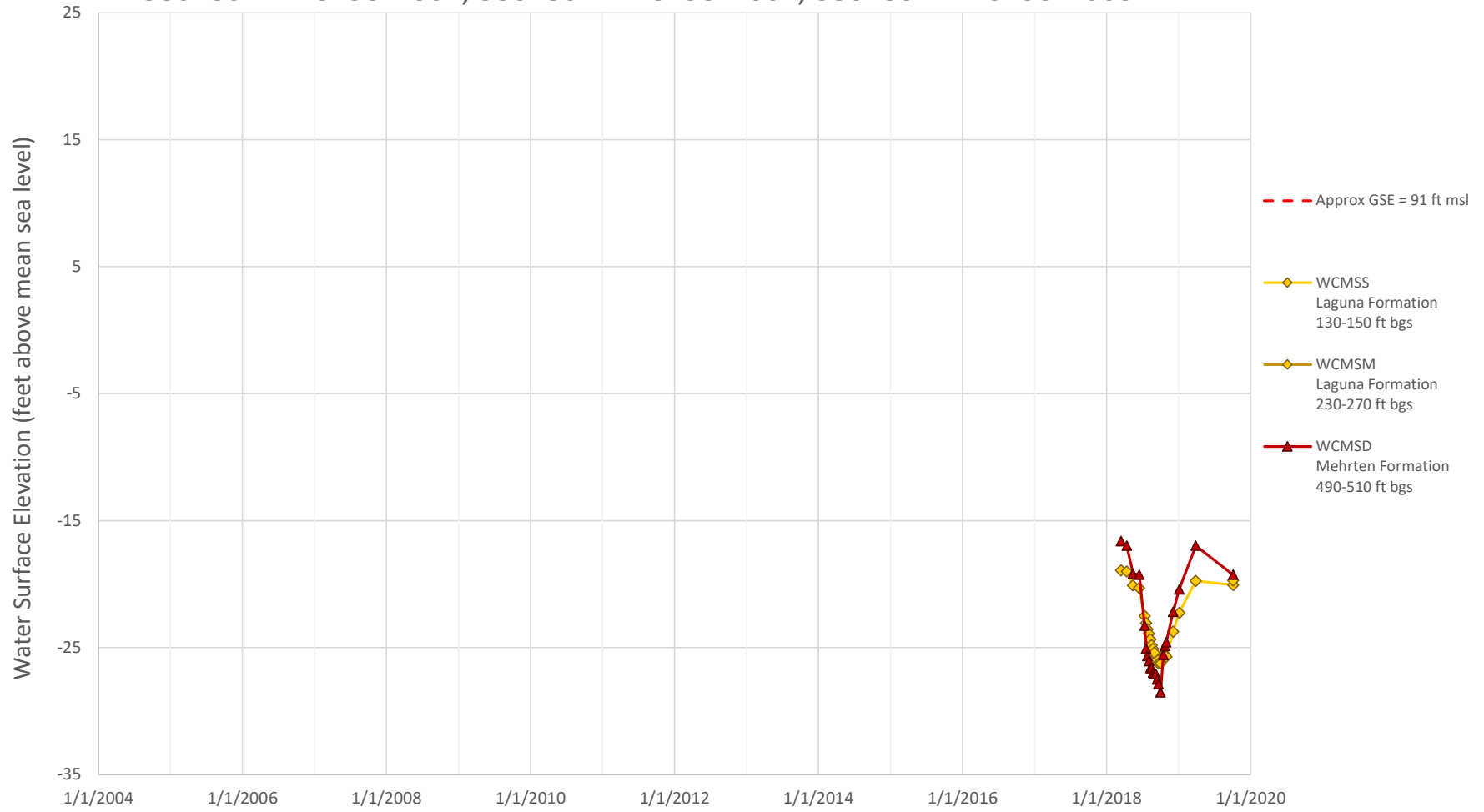


Local Well No. 55
South Sutter
387982N1214704W001



Local Well No. 71
WCMS (Churchill) Nested Wells

386280N1213493W001, 386280N1213493W002, 386280N1213493W003



Local Well No. 74
11N05E16H001M
388029N1214145W001

