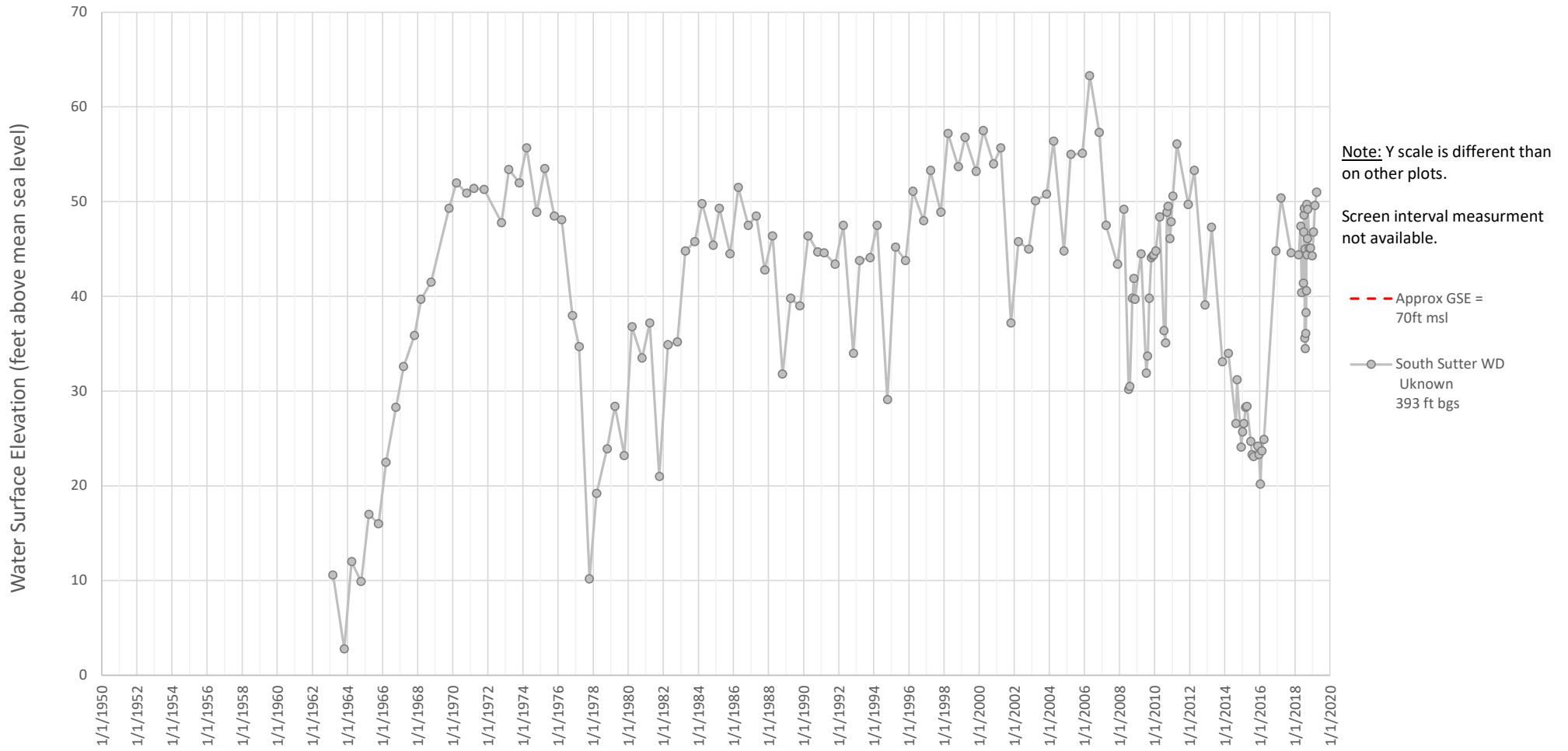
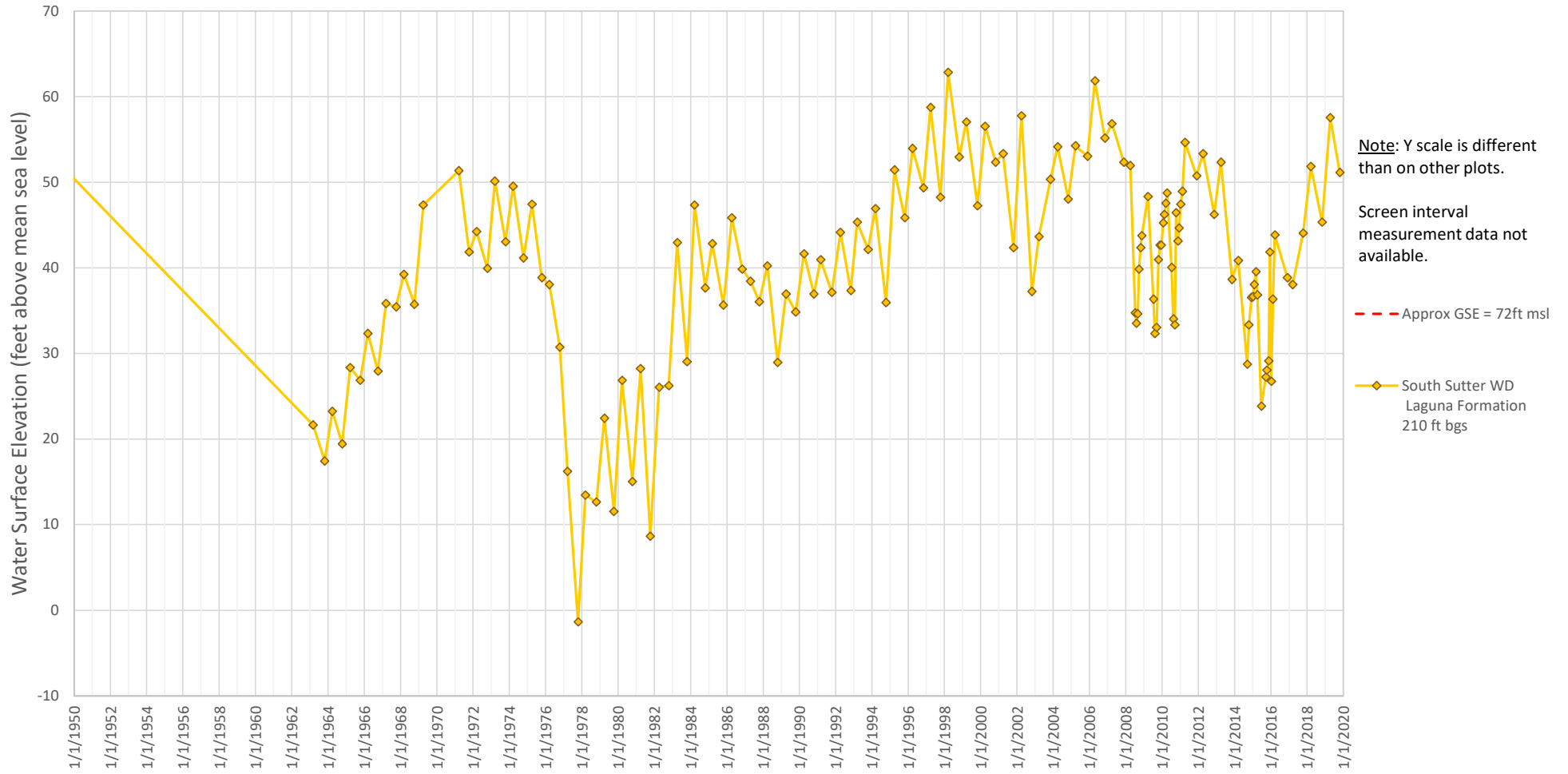


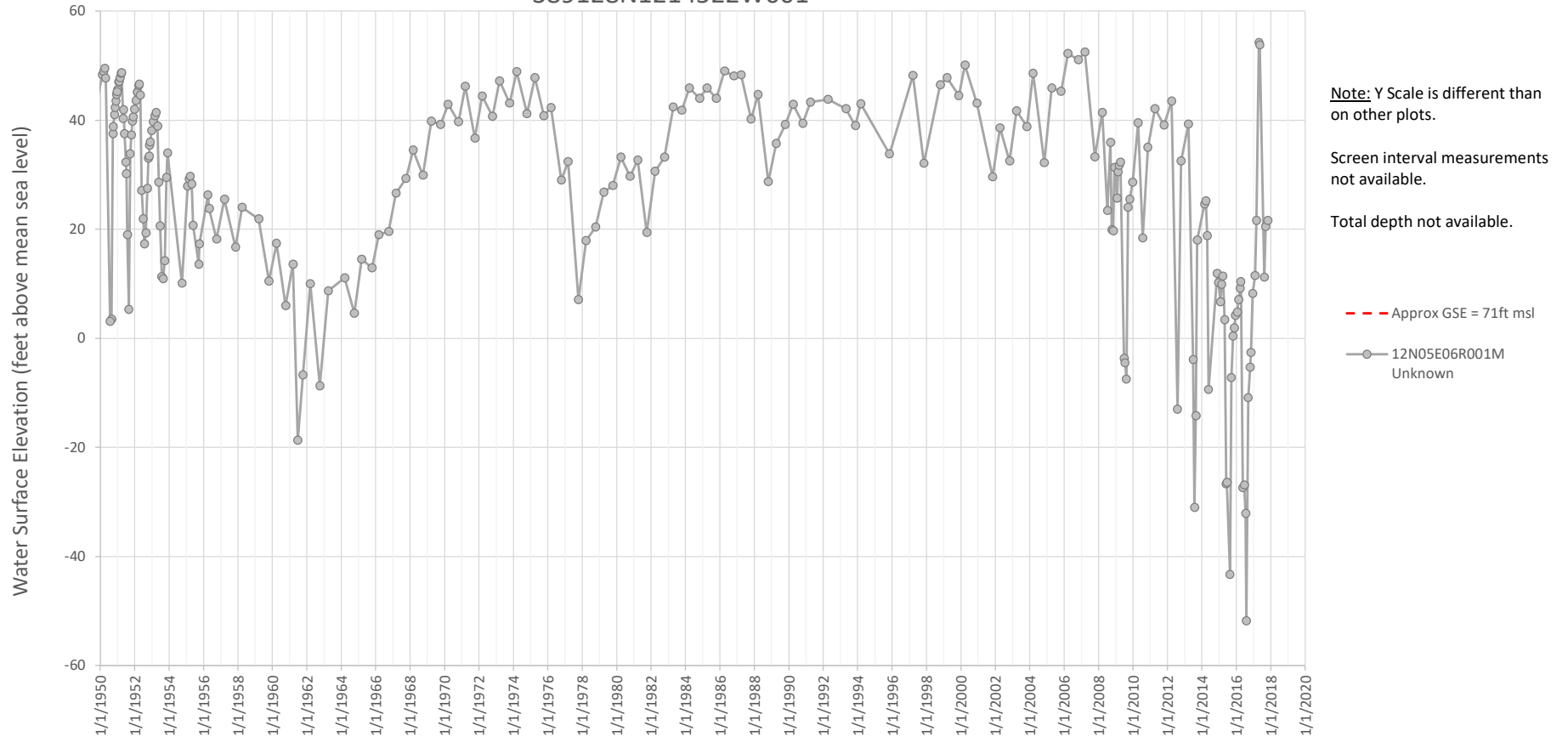
Local Well No. 77
South Sutter
389327N1214594W001



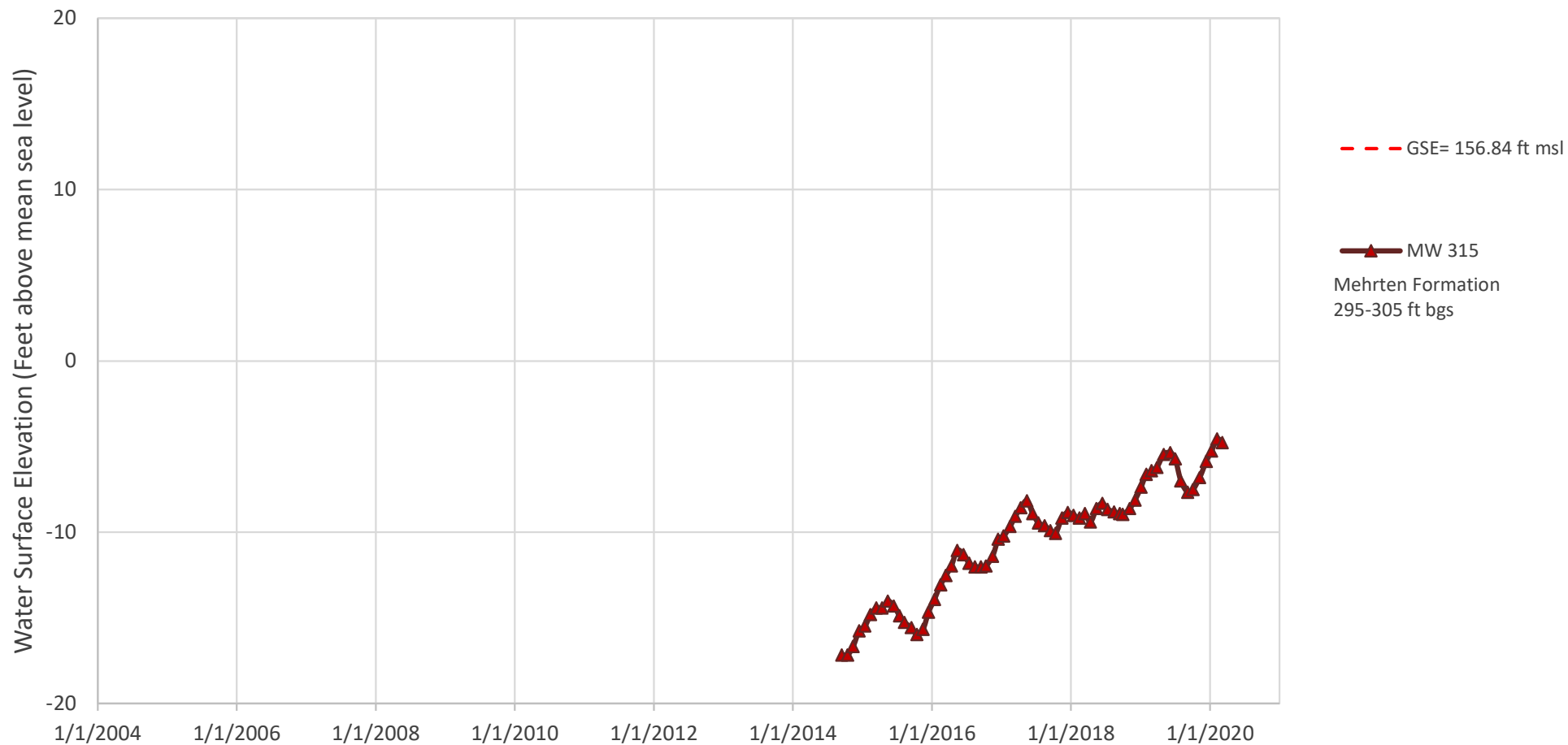
Local Well No. 83
South Sutter
389834N1214655W001



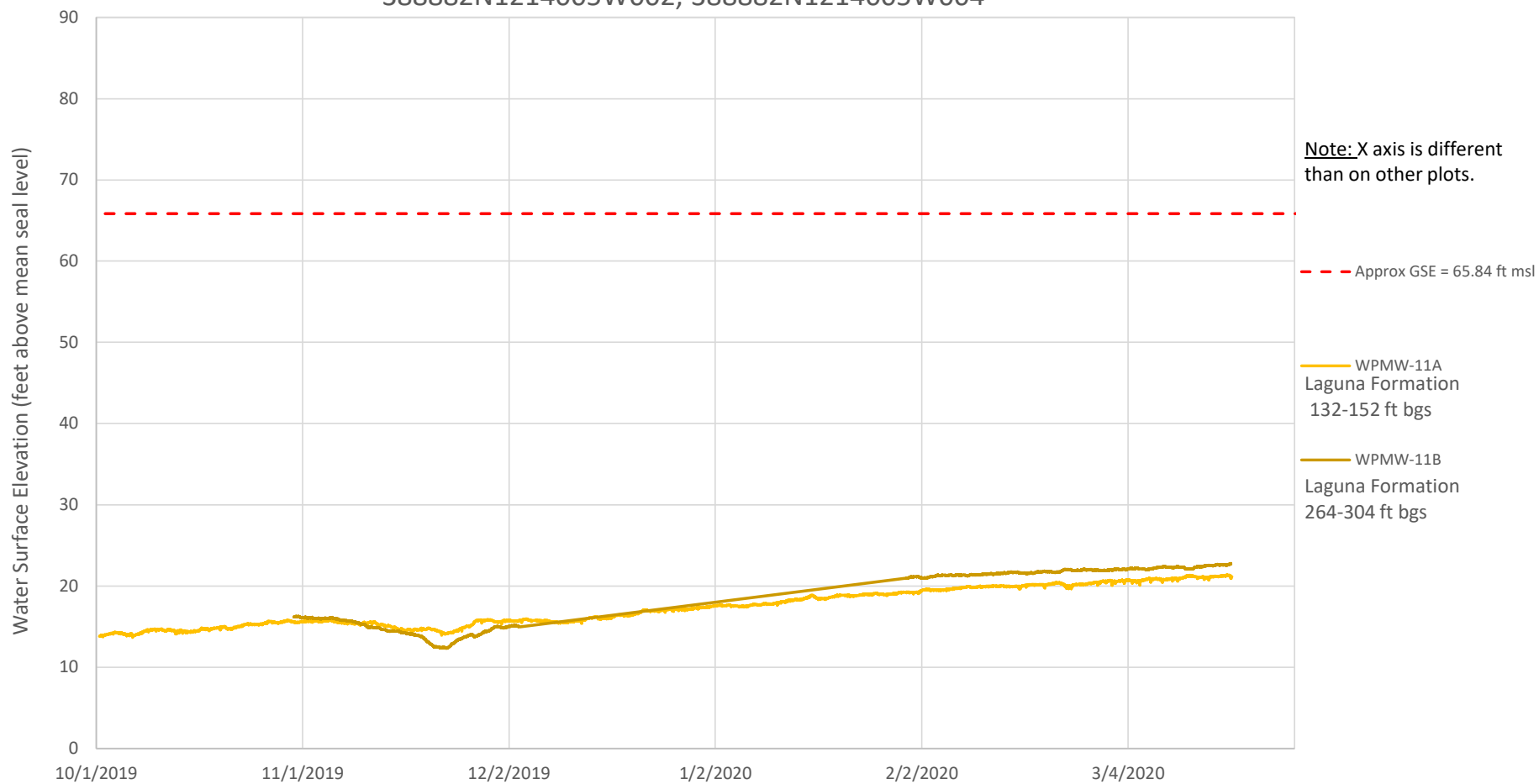
Local Well No. 86
12N05E06R001M
389128N1214522W001



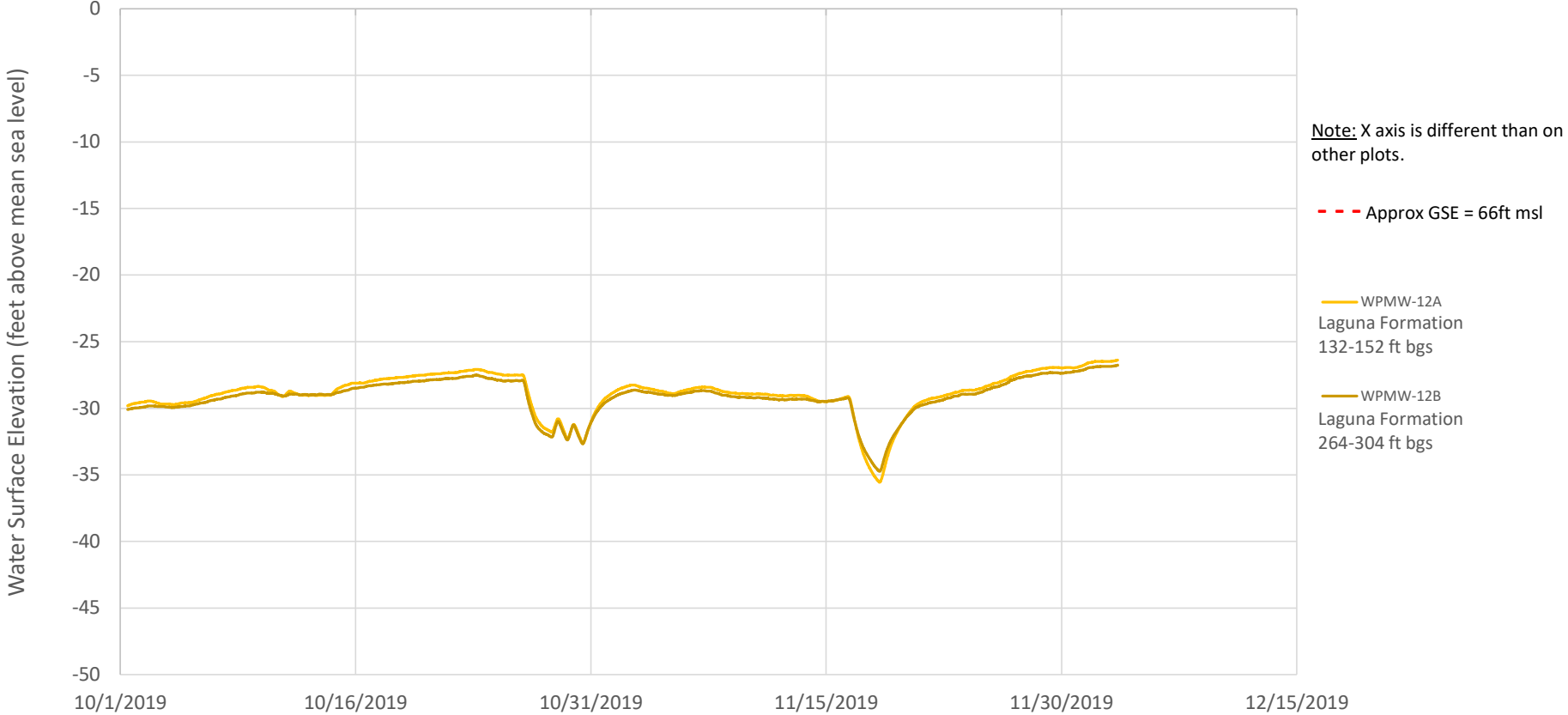
Local Well No. 89
Roseview 315



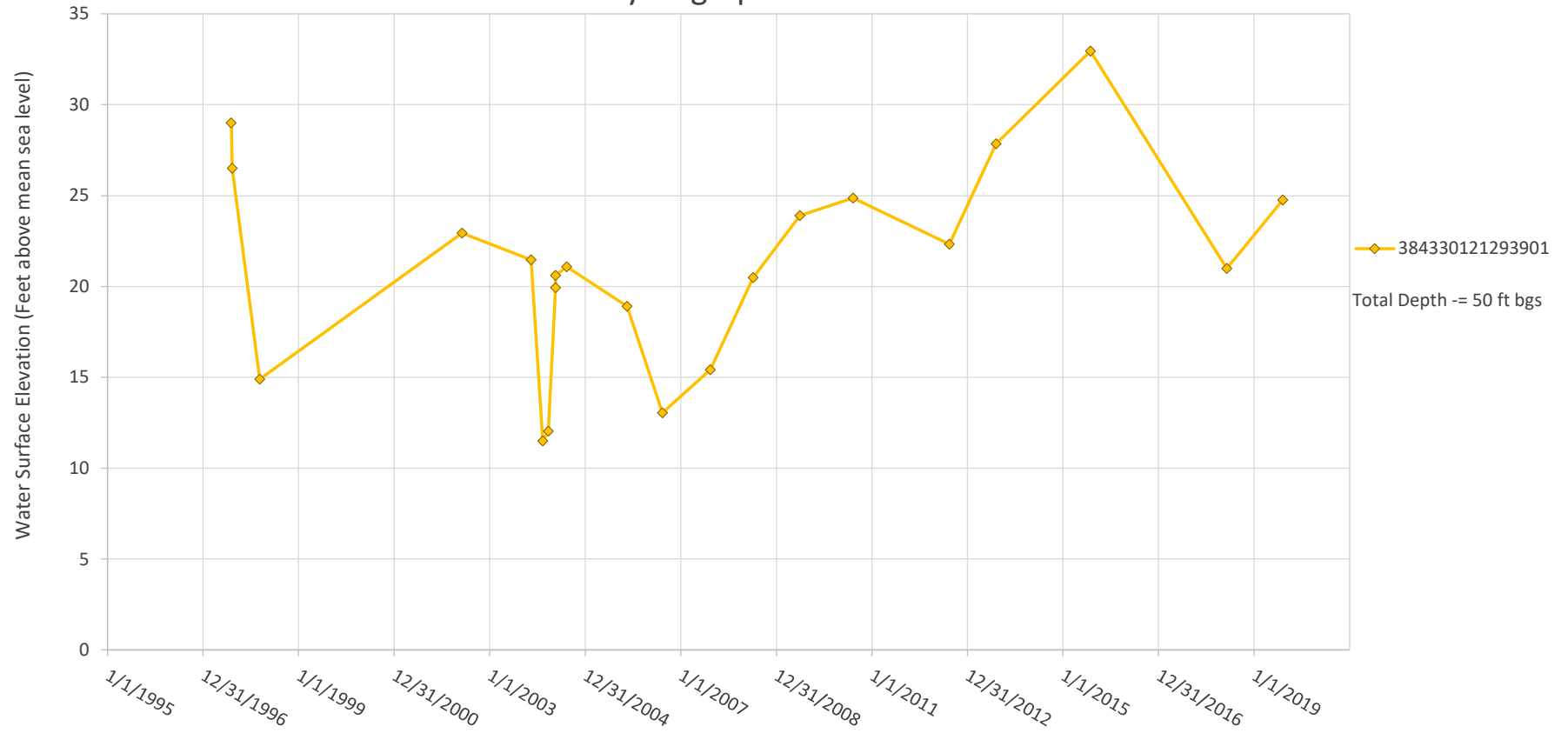
Well No. 90
WPMW-11A, WPMW-11B
388882N1214005W002, 388882N1214005W004



Local Well No.91
WPMW-12 Nested Well Hydrograph
388026N1214432W002, 388026N1214432W004



Local Well No. 126
384330121293901 (010N004E13F001M)
Hydrograph



Appendix I: Eastern Area Hydrographs

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN





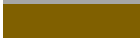
APPENDIX I Eastern Area Wells with Hydrographs

December 2021

APPENDIX I

EASTERN AREA WELLS WITH HYDROGRAPHS

LEGEND:

	Perched Aquifer Wells
	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

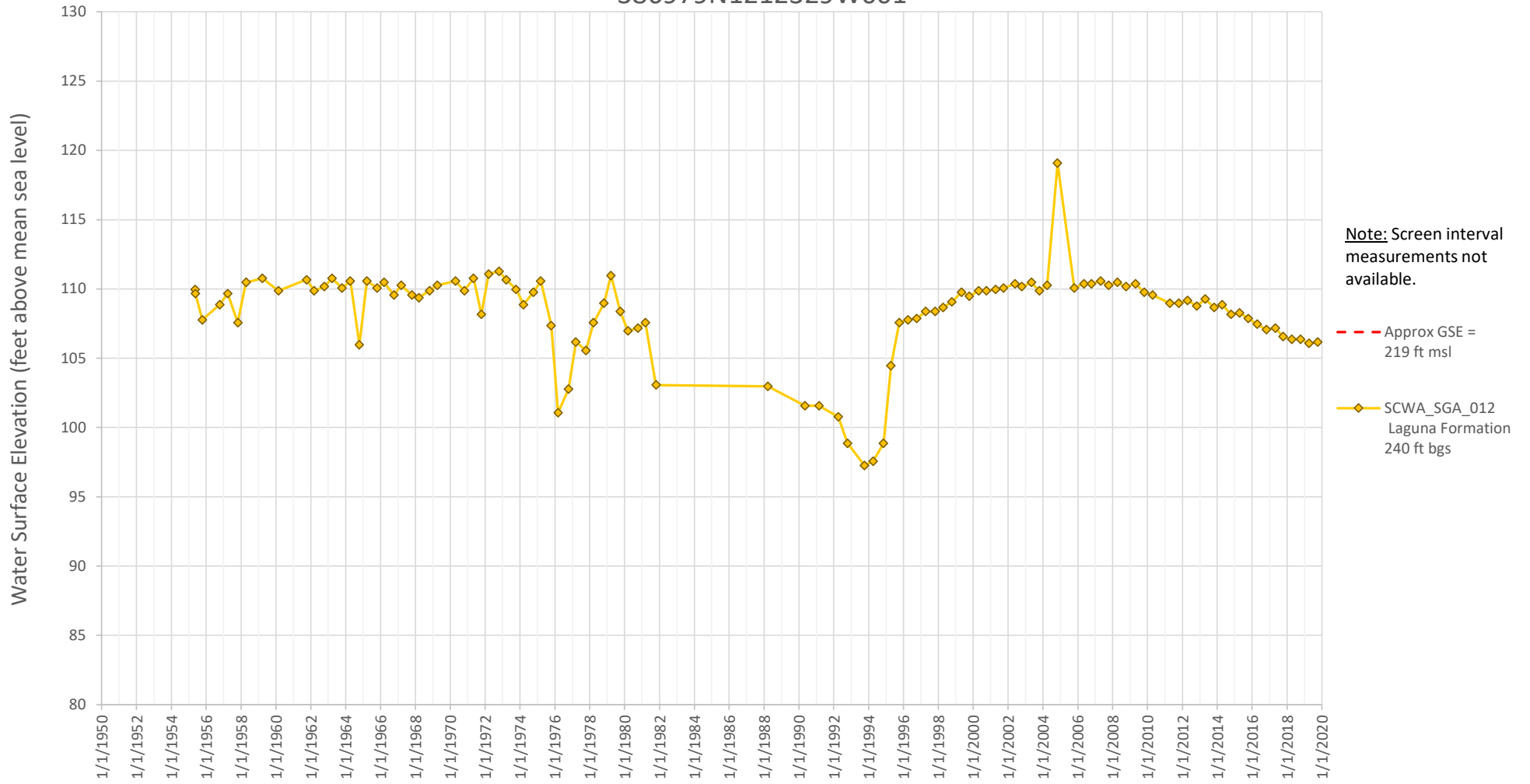
Years Displayed	2004 to 2019
	Unless otherwise noted
Vertical Axis	50 feet
	Unless otherwise noted

Groundwater levels from multiple aquifers shown

SI No.	Local Well Number	State Well Number	CASGEM Well ID	CASGEM Station ID	Monitoring Entity	GW Basin Name	GW Basin Code	County	Well Use	CASGEM Well	Total Well Depth	Well Construction	Well Completion	Status	Latitude(Y)	Longitude(X)
1	SVMW East-2B	Not Available	48577	381626N1213651W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	525	Y	NOT AVAILABLE	Active	38.762629	-121.365097
1	SVMW East-2A	Not Available	48576	387626N1213651W001	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	140	Y	NOT AVAILABLE	Active	38.762629	-121.365099
1	SVMW East-2C	Not Available	48578	387626N1213651W002	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	670	Y	NOT AVAILABLE	Active	38.76263	-121.365098
2	SGA_MW06	Not Available	48014	385828N1213385W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	72	Y	e026069	Active	38.58281	-121.33846
3	SGA_MW04	Not Available	48012	385841N1214185W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	65	Y	e029066	Active	38.58414	-121.41852
4	MW12A	Not Available	48021	385947N1213985W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	285	Y	NOT AVAILABLE	Active	38.59472	-121.39847
4	MW12B	Not Available	48022	385947N1213985W002	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	385	Y	NOT AVAILABLE	Active	38.59472	-121.39847
4	MW12C	Not Available	48023	385947N1213985W003	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	615	Y	NOT AVAILABLE	Active	38.59472	-121.39847
4	MW12D	Not Available	48024	385947N1213985W004	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	845	Y	NOT AVAILABLE	Active	38.59472	-121.39847
4	MW12E	Not Available	48025	385947N1213985W005	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	1005	Y	NOT AVAILABLE	Active	38.59472	-121.39847
5	DWR_SGA_004	09N05E25J001M	9641	386016N1213761W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Residential	No	238	N	94507	Active	38.6016	-121.3761
6	MW11A	Not Available	48018	386038N1213882W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	187	Y	NOT AVAILABLE	Active	38.6038	-121.38815
6	MW11B	Not Available	48019	386038N1213882W002	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	278	Y	NOT AVAILABLE	Active	38.6038	-121.38815
6	MW11C	Not Available	48020	386038N1213882W003	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	375	Y	NOT AVAILABLE	Active	38.6038	-121.38815
7	DWR_SGA_005	09N05E28K001M	9643	386038N1214357W001	Department of Water Resources	North American	5-021.64	Sacramento	Irrigation	No	250	N	NOT AVAILABLE	Active	38.6038	-121.4357
8	SCWA_SGA_003	09N04E27F001M	8944	386061N1215313W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Irrigation	No	320	N	828	Active	38.6061	-121.5313
9	SCWA_SGA_004	09N06E27D001M	9648	386117N1213150W001	Sacramento Central Groundwater	North American	5-021.64	Sacramento	Observation	No	200	N	NOT AVAILABLE	Inactive	38.6117	-121.315
10	DWR_SGA_003	09N05E21M001M	31412	386151N1214467W001	Department of Water Resources	North American	5-021.64	Sacramento	Unknown	No	89	N	NOT AVAILABLE	Active	38.6151	-121.4467
11	Bannon Creek Park	09N04E23R002M	48041	386160N1215054W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	48	Y	NOT AVAILABLE	Active	38.61603	-121.5054
12	09N04E22E001M	09N04E22E001M	8943	386199N1215386W001	Department of Water Resources	North American	5-021.64	Sacramento	Residential	No	-	N	NOT AVAILABLE	Active	38.6199	-121.5386
13	Chuckwagon Park	09N04E13R001M	48040	386292N1214877W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	52	Y	NOT AVAILABLE	Active	38.62921	-121.4877
14	13N04E23A002M	13N04E23A002M		389669N1214897W001	Department of Water Resources	North American	5-021.64	Sutter	Residential		83				38.9669	-121.4897
15	11N04E09D002M	11N04E09D002M		388208N1215397W001	Department of Water Resources	North American	5-021.64	Sutter	Residential		100				38.8208	-121.5397
16	DWR_SGA_002	09N05E14B001M	40050	386410N1213995W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Irrigation	No	550	N	49236	Active	38.641	-121.3995
17	AB-2 deep	12N04E26J002M		388593N1214885W001	Department of Water Resources	North American	5-021.64	Sutter	Observation					Active	38.8593	-121.4885
17	AB-2 middle	12N04E26J003M		388593N1214885W002	Department of Water Resources	North American	5-021.64	Sutter	Observation					Active	38.8593	-121.4885
17	AB-2 shallow	12N04E26J004M		388593N1214885W003	Department of Water Resources	North American	5-021.64	Sutter	Observation					Active	38.8593	-121.4885
18	SCWA_SGA_002	09N04E08L001M	29914	386489N1215679W001	Department of Water Resources	North American	5-021.64	Sacramento	Irrigation	No	105	N	185	Active	38.6489	-121.5679
19	SCWA_SGA_001	09N04E01R001M	8921	386576N1214846W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Residential	No	82	N	NOT AVAILABLE	Active	38.6576	-121.4846
20	SGA_MW05	Not Available	48013	386635N1213486W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	220	Y	e029068	Active	38.66347	-121.34859
21	10N04E12A001M	10N04E12A001M		387404N1214870W001	Department of Water Resources	North American	5-021.64		Irrigation					Active	38.7404	-121.487
22	AB-4 deep	10N04E31M001M	39756	386782N1215943W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	180	Y	NOT AVAILABLE	Active	38.6782	-121.5943
22	AB-4 middle-deep	10N04E31M002M	24319	386782N1215943W002	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	815	Y	NOT AVAILABLE	Active	38.6782	-121.5943
22	AB-4 middle-shallow	10N04E31M003M	37857	386782N1215943W003	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	410	Y	NOT AVAILABLE	Active	38.6782	-121.5943
22	AB-4 shallow	10N04E31M004M	24318	386782N1215943W004	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	200	Y	NOT AVAILABLE	Active	38.6782	-121.5943
23	South Sutter	11N04E13D001M		388072N1214842W001	Department of Water Resources	North American	5-021.64	Sutter	Irrigation		535				38.8072	-121.4842
24	SGA_MW02	Not Available	48010	386836N1214536W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	110	Y	e029062	Active	38.68362	-121.45363
25	SGA_MW03	Not Available	48011	386836N1214536W002	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	305	Y	e034123	Active	38.68356	-121.45362
26	SCWA_SGA_005	10N03E35A001M	40055	386848N1216146W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Irrigation	No	96	N	221	Active	38.6848	-121.6146
27	AB-3 deep	10N04E27R002M	32581	386864N1215222W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	995	Y	NOT AVAILABLE	Active	38.6864	-121.5222
27	AB-3 middle	10N04E27R003M	15689	386864N1215222W002	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	500	Y	NOT AVAILABLE	Active	38.6864	-121.5222
27	AB-3 shallow	10N04E27R004M	15690	386864N1215222W003	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	220	Y	NOT AVAILABLE	Active	38.6864	-121.5222
28	Twin Creeks Park	10N06E27F001M	48042	386964N1213120W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	198	Y	NOT AVAILABLE	Active	38.6964	-121.31203
29	SCWA_SGA_012	10N07E29G001M	33380	386979N1212329W001	Sacramento County	North American	5-021.64	Sacramento	Irrigation	No	240	N	1037	Inactive	38.6979	-121.2329
30	SCWA_SGA_008	10N05E14Q002M	13652	386982N1213992W001	Department of Water Resources	North American	5-021.64	Sacramento	Residential	No	225	N	10678	Active	38.6982	-121.3992
31	SCWA_SGA_009	10N05E26B002M	13654	386982N1213992W002	Sacramento County	North American	5-021.64	Sacramento	Residential	No	150	N	NOT AVAILABLE	Active	38.6982	-121.3992
32	MLF Well #1	11N03E01D001M		388361N1215959W001	Department of Water Resources	North American	5-021.64	Sutter	Irrigation						38.83664	-121.59591
33	Monument (A)	Not Available	48030	387000N1213529W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	274	Y	NOT AVAILABLE	Active	38.70005	-121.35288
33	Monument (B)	Not Available	48031	387000N1213529W002	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	334	Y	NOT AVAILABLE	Active	38.70005	-121.35288
33	Monument (C)	Not Available	48032	387000N1213529W003	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	450	Y	NOT AVAILABLE	Active	38.70005	-121.35288
33	Monument (D)	Not Available	48033	387000N1213529W004	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	544	Y	NOT AVAILABLE	Active	38.70005	-121.35288
34	SCWA_SGA_010	10N06E21F002M	33087	387092N1213300W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Residential	No	144	N	NOT AVAILABLE	Active	38.7092	-121.33
35	Poker (A)	Not Available	48034	387117N1213327W001	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	134	Y	NOT AVAILABLE	Active	38.71174	-121.33271
35	Poker (B)	Not Available	48035	387117N1213327W002	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	176	Y	NOT AVAILABLE	Active	38.71174	-121.33271
35	Poker (C)	Not Available	48036	387117N1213327W003	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	320	Y	NOT AVAILABLE	Active	38.71174	-121.33271
35	Poker (D)	Not Available	48037	387117N1213327W004	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	470	Y	NOT AVAILABLE	Active	38.71174	-121.33271
36	SCWA_SGA_006	10N04E23A001M	32580	387138N1215047W001	Sacramento County	North American	5-021.64	Sacramento	Industrial	No	85	N	NOT AVAILABLE	Active	38.7138	-121.5047
37	SUT-P4	11N04E04N001M		388260N1215394W001	Department of Water Resources	North American	5-021.64	Sutter	Observation		305				38.826	-121.5394
37	SUT-P3	11N04E04N002M		388260N1215394W002	Department of Water Resources	North American	5-021.64	Sutter	Observation		195				38.826	-121.5394
37	SUT-P2	11N04E04N003M		388260N1215394W003	Department of Water Resources	North American	5-021.64	Sutter	Observation		120				38.826	-121.5394
37	SUT-P1	11N04E04N004M		388260N1215394W004	Department of Water Resources	North American	5-021.64	Sutter	Observation		980				38.826	-121.5394
38	Lone Oak Park	10N05E13F001M	48043	387216N1213842W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	166	Y	NOT AVAILABLE	Active	38.72163	-121.38417
39	AB-1 deep	12N04E03N001M		389116N1215238W001	Department of Water Resources	North American	5-021.64	Sutter	Observation		980				38.9116	-121.5238
39	AB-1 middle-deep	12N04E03N002M		389116N1215238W002	Department of Water Resources	North American	5-021.64	Sutter	Observation		710				38.9116	-121.5238
39	AB-1 shallow	12N04E03N004M		389116N1215238W003	Department of Water Resources	North American	5-021.64	Sutter	Observation		190				38.9116	-121.5238
39	AB-1 middle-shallow	12N04E03N003M		389117N1215238W001	Department of Water Resources	North American	5-021.64	Sutter	Observation		530				38.9116	-121.5238
40	Antelope North (A)	Not Available	48038	387228N1213298W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	283	Y	NOT AVAILABLE	Active	38.722803	-121.329755
40	Antelope North (B)	Not Available	48039	387228N1213298W002	Sacramento Groundwater Authority	North American	5-021.64	Sacramento	Observation	Yes	473	Y	NOT AVAILABLE	Active	38.722803	-121.329755
41	WPMW-5A	Not Available	51280	387331N1213610W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	100	Y	e0266541	Active	38.733106	-121.360994
41	WPMW-5B	Not Available	51281	387331N1213610W002	City of Roseville	North American	5-021.64	Placer	Observation	Yes	650	Y	e0266541	Active	38.733106	-121.360994
42	WPMW-7A	Not Available	51283	387512N1212390W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	45	Y	e0265730	Active	38.751194	-121.239
43	WPMW-8A	Not Available	51284	387510N1212390W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	50	Y	e0265733	Active	38.750989	-121.23895
43	WPMW-8B	Not Available	51285	387510N1212390W002	City of Roseville	North American	5-021.64	Placer	Observation	Yes	115	Y	e0265733	Active	38	

46	SVMW West - 1A	Not Available	48573	387623N1213915W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	145	Y		NOT AVAILABLE	Active	38.762324	-121.39153
46	SVMW West - 1B	Not Available	48574	387623N1213915W002	City of Roseville	North American	5-021.64	Placer	Observation	Yes	560	Y		NOT AVAILABLE	Active	38.762325	-121.39153
46	SVMW West - 1C	Not Available	48575	387623N1213915W003	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	750	Y		NOT AVAILABLE	Active	38.762325	-121.391529
48	WPMW-4A	Not Available	48567	387755N1212753W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	145	Y		NOT AVAILABLE	Active	38.775536	-121.285254
48	WPMW-4B	Not Available	48568	387755N1212753W002	City of Roseville	North American	5-021.64	Placer	Observation	Yes	300	Y		NOT AVAILABLE	Active	38.775535	-121.275255
49	WPMW-1A	Not Available	48560	387786N1213737W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	120	Y		NOT AVAILABLE	Active	38.778603	-121.373698
49	WPMW-1B	Not Available	48561	387786N1213737W002	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	480	Y		NOT AVAILABLE	Active	38.778603	-121.373697
49	WPMW-1C	Not Available	48562	387786N1213737W003	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	545	Y		NOT AVAILABLE	Active	38.778602	-121.373698
50	W-77MW-A	Not Available	51294	387816N1213870W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	516	Y		NOT AVAILABLE	Active	38.781581	-121.38702
50	W-77MW-B	Not Available	51295	387816N1213870W002	City of Roseville	North American	5-021.64	Placer	Observation	Yes	604	Y		NOT AVAILABLE	Active	38.781581	-121.38702
51	O'Brien well	11N05E23B001M	11223	387943N1213856W001	City of Roseville	North American	5-021.64	Placer	Residential	No	195	N		NOT AVAILABLE	Active	38.7943	-121.3856
52	CVMW-1A	Not Available	48569	387957N1213813W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	285	Y		NOT AVAILABLE	Active	38.795655	-121.38126
52	CVMW-1B	Not Available	48571	387957N1213813W002	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	495	Y		NOT AVAILABLE	Active	38.795654	-121.381258
52	CVMW-1C	Not Available	48572	387957N1213813W003	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	590	Y		NOT AVAILABLE	Active	38.795655	-121.381258
53	South Sutter WD	11N04E15Q001M	10508	387971N1215119W001	SUTTER, SOUTH, WATER DISTRICT	North American	5-021.64	Sutter	Unknown	Yes	-	N		NOT AVAILABLE	Active	38.7971	-121.5119
54	South Sutter WD	11N05E18R001M	11221	387977N1214521W001	South Sutter Water District	North American	5-021.64	Placer	Irrigation	Yes	-	N		NOT AVAILABLE	Active	38.7977	-121.4521
55	South Sutter WD	11N04E13R001M	10507	387982N1214704W001	South Sutter Water District	North American	5-021.64	Sutter	Irrigation	Yes	-	N		NOT AVAILABLE	Active	38.7982	-121.4704
56	DCMW-3	Not Available	51293	388027N1213384W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	520	Y		NOT AVAILABLE	Active	38.80271	-121.338432
57	DCMW-1	Not Available	51291	388058N1213355W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	455	Y		NOT AVAILABLE	Active	38.805757	-121.335503
58	DCMW-2	Not Available	51292	388063N1213354W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	437	Y		NOT AVAILABLE	Active	38.806291	-121.335415
59	Tinker MW	Not Available	51290	388116N1213054W001	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	177	Y		NOT AVAILABLE	Active	38.811594	-121.305387
60	WPMW-2A	Not Available	48563	388145N1213491W001	City of Roseville	North American	5-021.64	Placer	Observation	Yes	230	Y		NOT AVAILABLE	Active	38.814497	-121.349144
60	WPMW-2B	Not Available	48564	388145N1213491W002	City of Roseville	North American	5-021.64	Placer	Observation	Yes	425	Y		NOT AVAILABLE	Active	38.814497	-121.349143
61	Sutter County MW-5A	11N03E02Q002M	47776	388235N1216079W001	Sutter County	North American	5-021.64	Sutter	Observation	Yes	170	Y		E0123539	Active	38.823235	-121.60763
61	Sutter County MW-5B	11N03E02Q003M	47777	388235N1216079W002	Sutter County	North American	5-021.64	Sutter	Observation	Yes	675	Y		E0123539	Active	38.823235	-121.60763
61	Sutter County MW-5C	11N03E02Q004M	47778	388235N1216079W003	Sutter County	North American	5-021.64	Sutter	Observation	Yes	930	Y		E0123539	Active	38.823235	-121.60763
61	Sutter County MW-5D	11N03E02Q005M	47779	388235N1216079W004	Sutter County	North American	5-021.64	Sutter	Observation	Yes	1225	Y		E0123539	Active	38.8235	-121.6079
62	South Sutter WD	12N04E34H001M	17037	388458N1215100W001	SUTTER, SOUTH, WATER DISTRICT	North American	5-021.64	Sutter	Residential	Yes	-	N		NOT AVAILABLE	Active	38.8458	-121.51
63	WPMW-3A	Not Available	48565	388476N1212872W001	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	53	Y		NOT AVAILABLE	Active	38.847609	-121.287189
63	WPMW-3B	Not Available	48566	388476N1212872W002	City of Roseville	North American	5-021.64	Placer	Observation	Yes	140	Y		NOT AVAILABLE	Active	38.847609	-121.287187
64	South Sutter WD	12N04E29J001M	25784	388555N1215468W001	South Sutter Water District	North American	5-021.64	Sutter	Irrigation	Yes	-	N		NOT AVAILABLE	Active	38.8555	-121.5468
65	MW 1-2	Not Available	49928	388604N1213544W002	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	318	Y		NOT AVAILABLE	Active	38.860383	-121.354383
65	MW 1-4	Not Available	49930	388604N1213544W004	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	92	Y		NOT AVAILABLE	Active	38.860383	-121.354383
66	MW 5-1	Not Available	49937	388826N1213078W001	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	100	Y		NOT AVAILABLE	Active	38.882583	-121.30775
66	MW 5-2	Not Available	49938	388826N1213078W002	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	62	Y		NOT AVAILABLE	Active	38.882583	-121.30775
69	South Sutter WD	12N04E16A004M	17031	388944N1215257W001	Department of Water Resources	North American	5-021.64	Sutter	Irrigation	Yes	-	N		NOT AVAILABLE	Active	38.8944	-121.5257
70	MW 3-2	Not Available	49935	388971N1213301W002	City of Lincoln	North American	5-021.64	Placer	Observation	Yes	75	Y		NOT AVAILABLE	Active	38.897133	-121.330083
71	WCMSS	Not Available	52461	386280N1213493W001	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	170	Y		WCR2016-005904	Active	38.62799	-121.34925
71	WCMMSM	Not Available	52462	386280N1213493W002	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	290	Y		WCR2016-005902	Active	38.62799	-121.34925
71	WCMMSD	Not Available	52463	386280N1213493W003	Department of Water Resources	North American	5-021.64	Sacramento	Observation	Yes	530	Y		WCR2016-005899	Active	38.62799	-121.34925
72	South Sutter WD	12N04E10D002M	17027	389075N1215237W001	SUTTER, SOUTH, WATER DISTRICT	North American	5-021.64	Sutter	Unknown	Yes	-	N		NOT AVAILABLE	Active	38.9075	-121.5237
73	South Sutter WD	12N04E05R004M	17025	389130N1215441W001	South Sutter Water District	North American	5-021.64	Sutter	Residential	Yes	90	N		NOT AVAILABLE	Active	38.913	-121.5441
74	11N05E16H001M	11N05E16H001M		388029N1214145W001	Department of Water Resources	North American	5-021.64	Placer	Irrigation		460					38.8029	-121.4145
75	MW 2-1	Not Available	49931	389255N1213566W001	City of Lincoln	North American	5-021.64	Placer	Observation	Yes	310	Y		NOT AVAILABLE	Active	38.925467	-121.356633
75	MW 2-2	Not Available	49932	389255N1213566W002	City of Lincoln	North American	5-021.64	Placer	Observation	Yes	170	Y		NOT AVAILABLE	Active	38.925467	-121.356633
76	South Sutter WD	13N04E35Q002M	35624	389255N1214969W001	South Sutter Water District	North American	5-021.64	Sutter	Unknown	Yes	-	N		NOT AVAILABLE	Active	38.9255	-121.4969
77	South Sutter WD	13N05E31K001M	40137	389327N1214594W001	Department of Water Resources	North American	5-021.64	Sutter	Unknown	Yes	393	N		NOT AVAILABLE	Active	38.9327	-121.4594
78	South Sutter WD	13N04E32G001M	35623	389328N1215489W001	SUTTER, SOUTH, WATER DISTRICT	North American	5-021.64	Sutter	Irrigation	Yes	-	N		NOT AVAILABLE	Active	38.9328	-121.5489
79	South Sutter WD	13N04E28R001M	17195	389410N1215254W001	Department of Water Resources	North American	5-021.64	Sutter	Irrigation	Yes	-	N		NOT AVAILABLE	Active	38.941	-121.5254
80	Cemetery	Not Available	51328	389740N1213606W001	Placer County	North American	5-021.64	Placer	Irrigation	Yes	111	Y		NOT AVAILABLE	Active	38.974027	-121.360615
81	MW-2	Not Available	51331	389764N1213710W001	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	45	Y		NOT AVAILABLE	Active	38.976427	-121.371001
81	MW-3	Not Available	51332	389774N1213728W001	Placer County	North American	5-021.64	Placer	Observation	Yes	35	Y		NOT AVAILABLE	Active	38.977408	-121.372844
81	MW-1	Not Available	51330	389785N1213713W001	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	40	Y		NOT AVAILABLE	Active	38.97846	-121.37132
82	Whyte A	Not Available	52475	387222N1212920W001	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	226	Y		e0303799	Active	38.722168	-121.29196
82	Whyte B	Not Available	52476	387222N1212920W002	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	306	Y		e0303799	Active	38.722168	-121.29196
83	South Sutter WD	13N05E18C001M	17209	389834N1214655W001	South Sutter Water District	North American	5-021.64	Sutter	Irrigation	Yes	210	N		NOT AVAILABLE	Active	38.9834	-121.4655
84	Spencer	Not Available	52555	389867N1213654W002	Department of Water Resources	North American	5-021.64	Placer	Residential	Yes	107	Y		101157	Active	38.986724	-121.36542
85	13N05E09R001M	13N05E09R001M		389873N1214156W001	Department of Water Resources	North American	5-021.64	Sutter	Irrigation							38.9873	-121.4156
86	12N05E06R001M	12N05E06R001M		389128N1214522W001	Department of Water Resources	North American	5-021.64	Placer	Irrigation							38.9128	-121.4522
87	12N04E24M002M	12N04E24M002M		388710N1214870W001	Department of Water Resources	North American	5-021.64	Sutter	Irrigation							38.871	-121.487
88	11N03E03C002M	11N03E03C002M		388357N1216273W001	Department of Water Resources	North American	5-021.64	Sutter	Irrigation							38.8357	-121.6273
89	Roseview-MW315	Not Available			Sacramento Groundwater Authority	North American	5-021.64				315					38.718222	-121.327729
89	Roseview-MW465	Not Available			Sacramento Groundwater Authority	North American	5-021.64				465					38.718222	-121.327729
90	WPMW-11A	Not Available	54779	388882N1214005W002	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	162	Y		NOT AVAILABLE	Active	38.888164	-121.400463
90	WPMW-11B	Not Available	54780	388882N1214005W004	Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	309	Y		NOT AVAILABLE	Active	38.888164	-121.400463
91	WPMW12-A	Not Available			Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	300	Y		NOT AVAILABLE	Active	38.802639	-121.443216
91	WPMW12-B	Not Available			Department of Water Resources	North American	5-021.64	Placer	Observation	Yes	550	Y		NOT AVAILABLE	Active	38.802639	-121.443216

Local Well No. 29
SCWA_SGA_012
386979N1212329W001

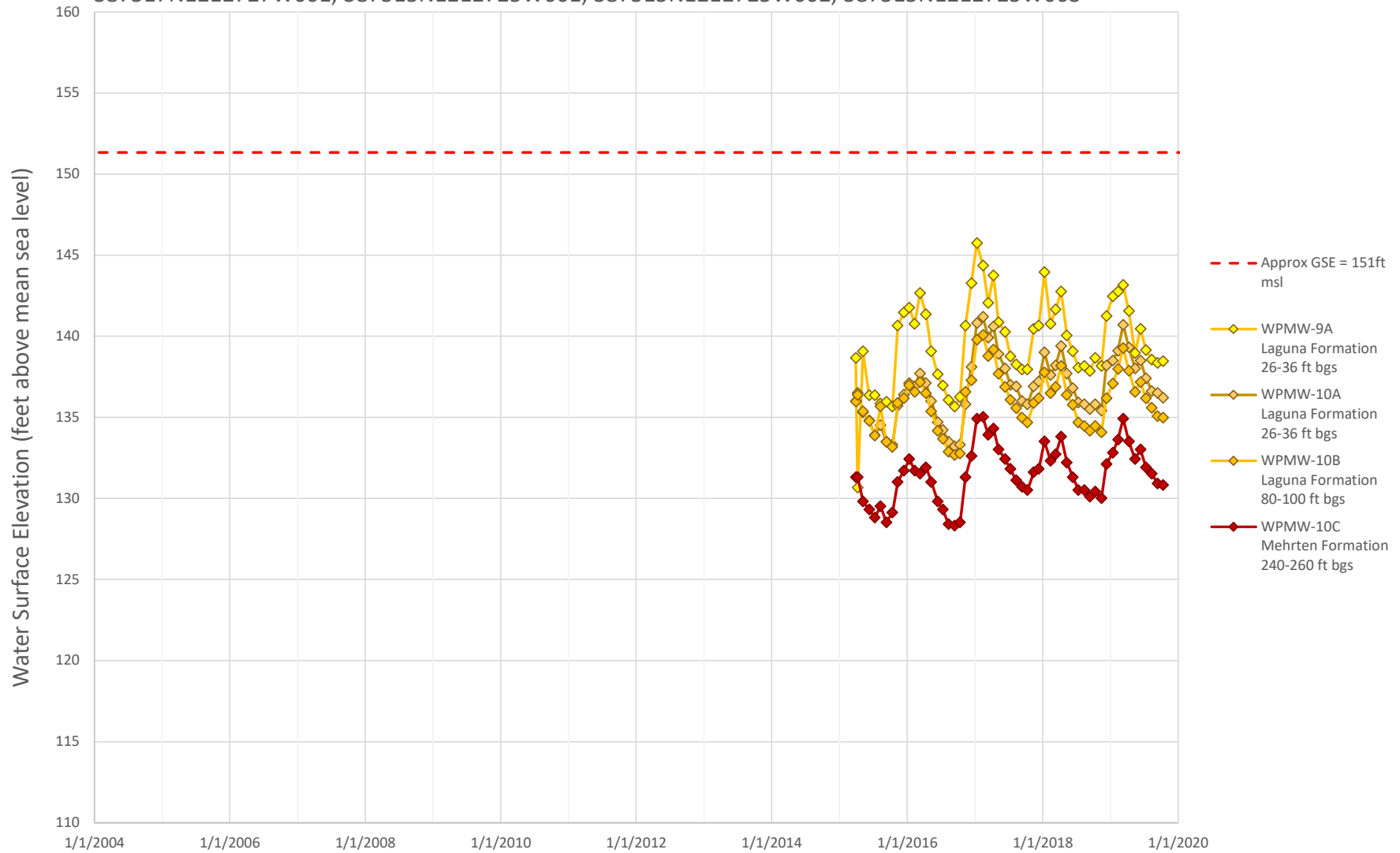


Local Well No.42 & No.43
387512N1212390W001, 387510N1212390W001, 387510N1212390W002

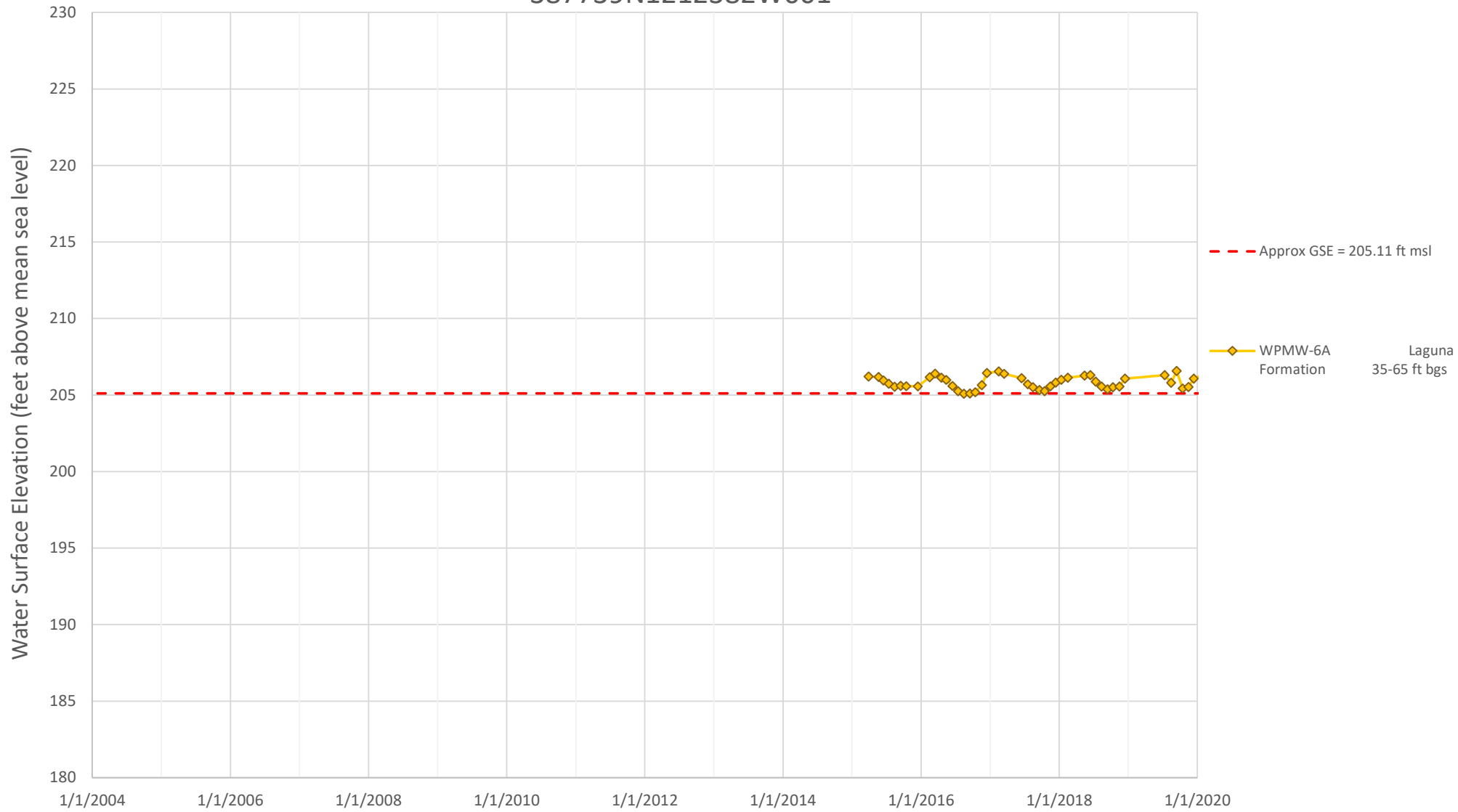


Local Well No. 44 & No. 45
WPMW-10 Nested Well & WPMW-9

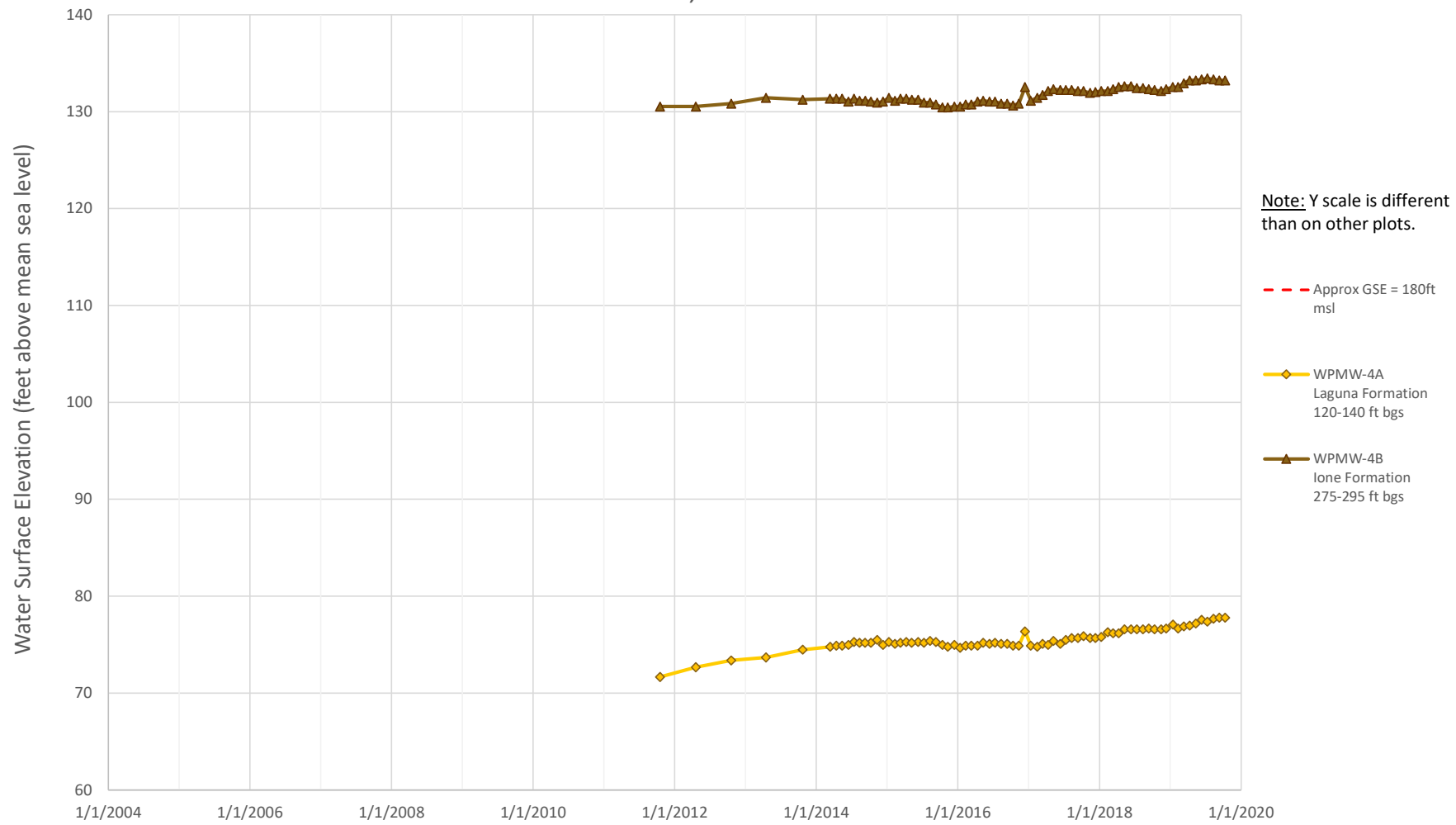
387517N1212727W001, 387515N1212725W001, 387515N1212725W002, 387515N1212725W003



Local Well No. 47
WPMW-6A
387739N1212382W001

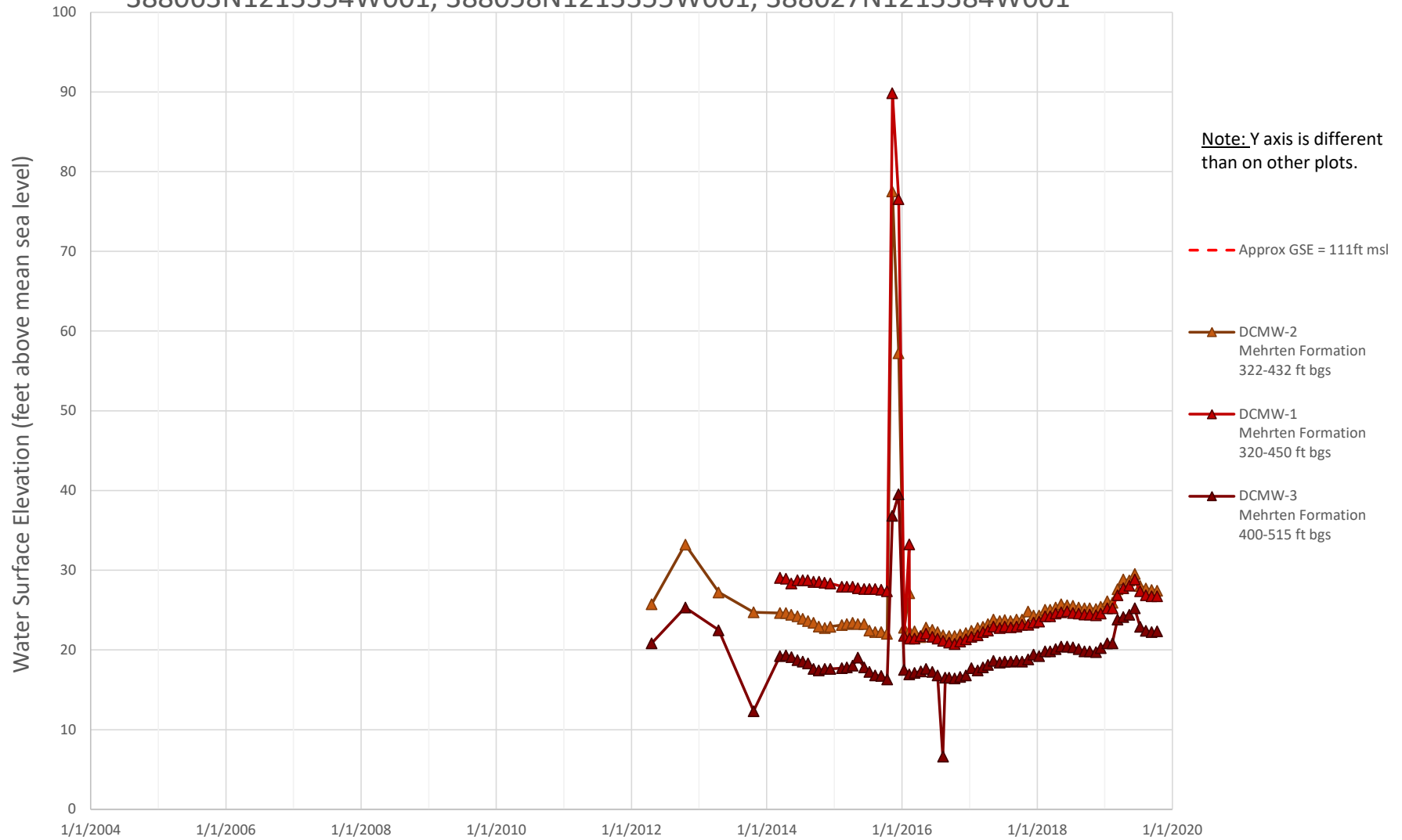


Local Well No. 48
WPMW-4 Nested Well
387755N1212753W001, 387755N1212753W002



Local Well No. 57, No. 58, & No. 56
DCMW-1, DCMW-2, & DCMW-3

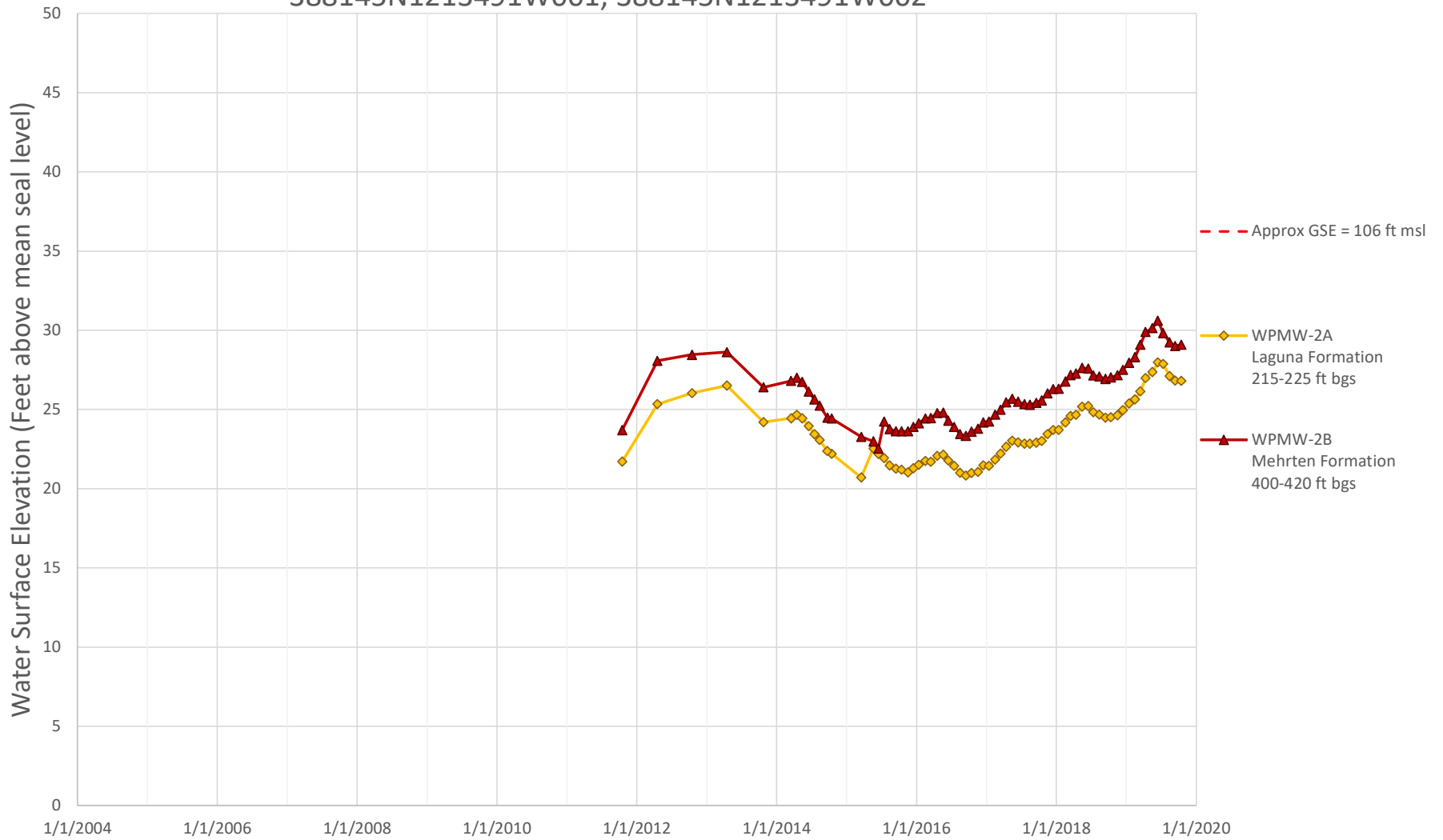
388063N1213354W001, 388058N1213355W001, 388027N1213384W001



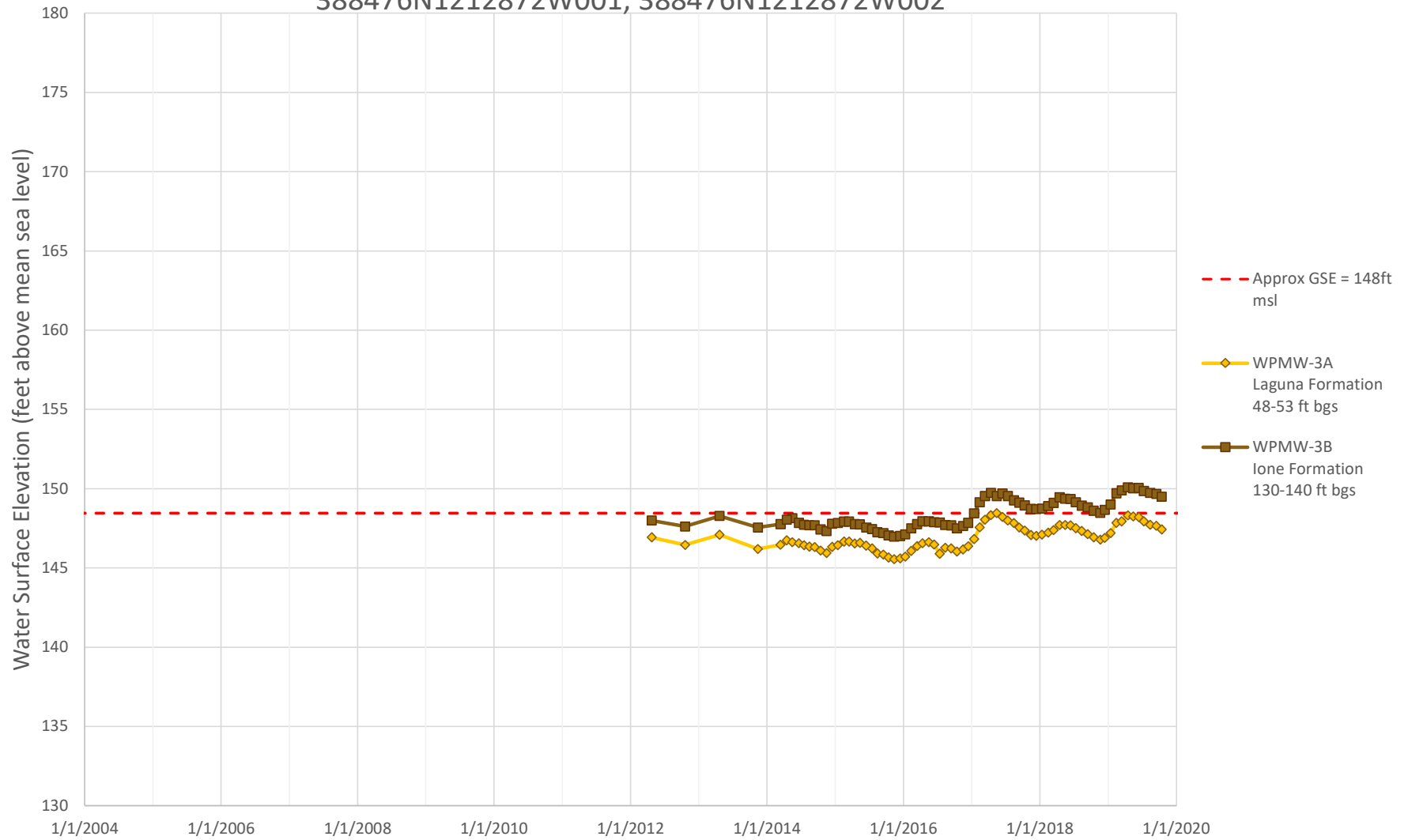
Local Well No. 59
Tinker MW
388116N1213054W001



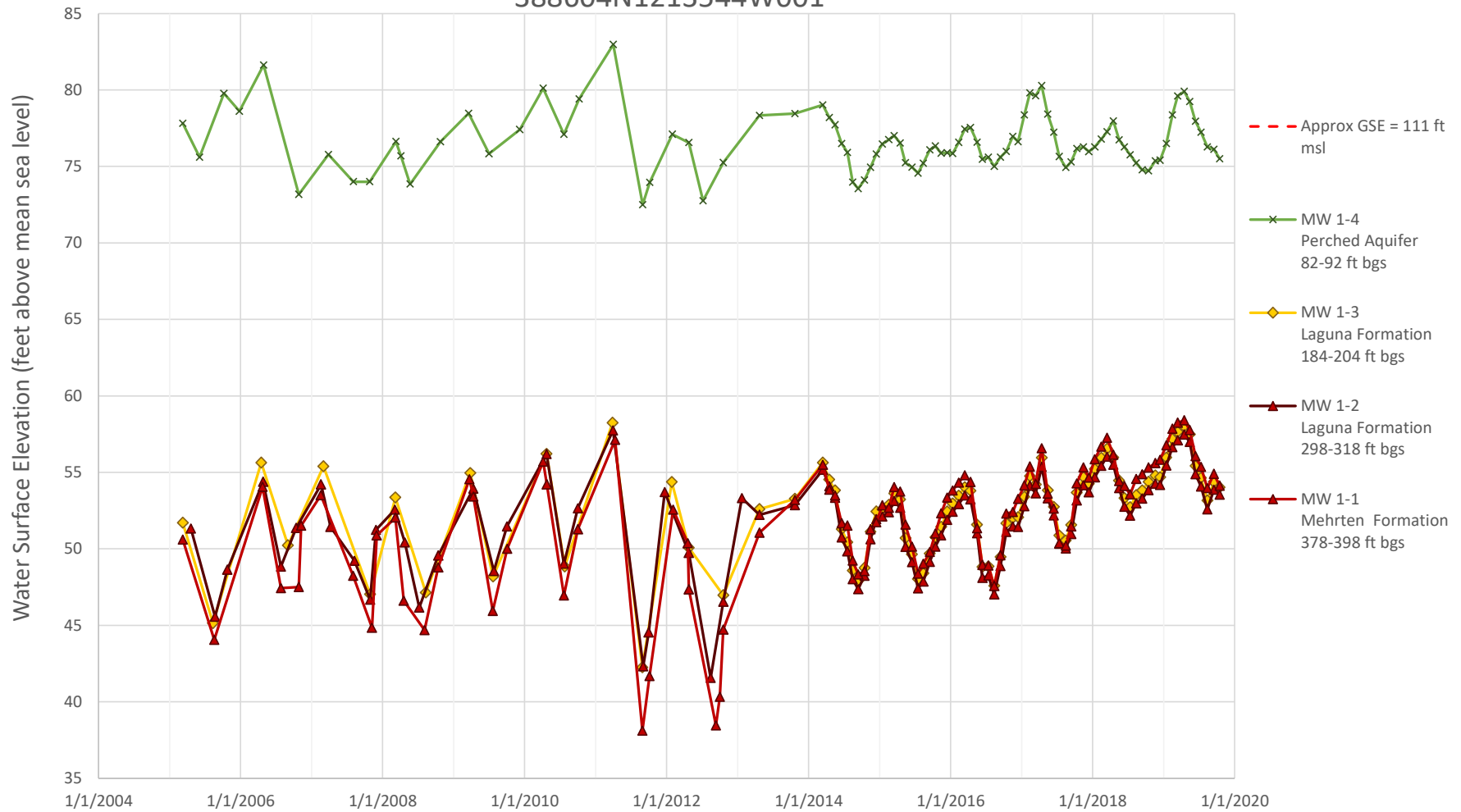
Local Well No. 60
WPMW-2 Nested Well
388145N1213491W001, 388145N1213491W002



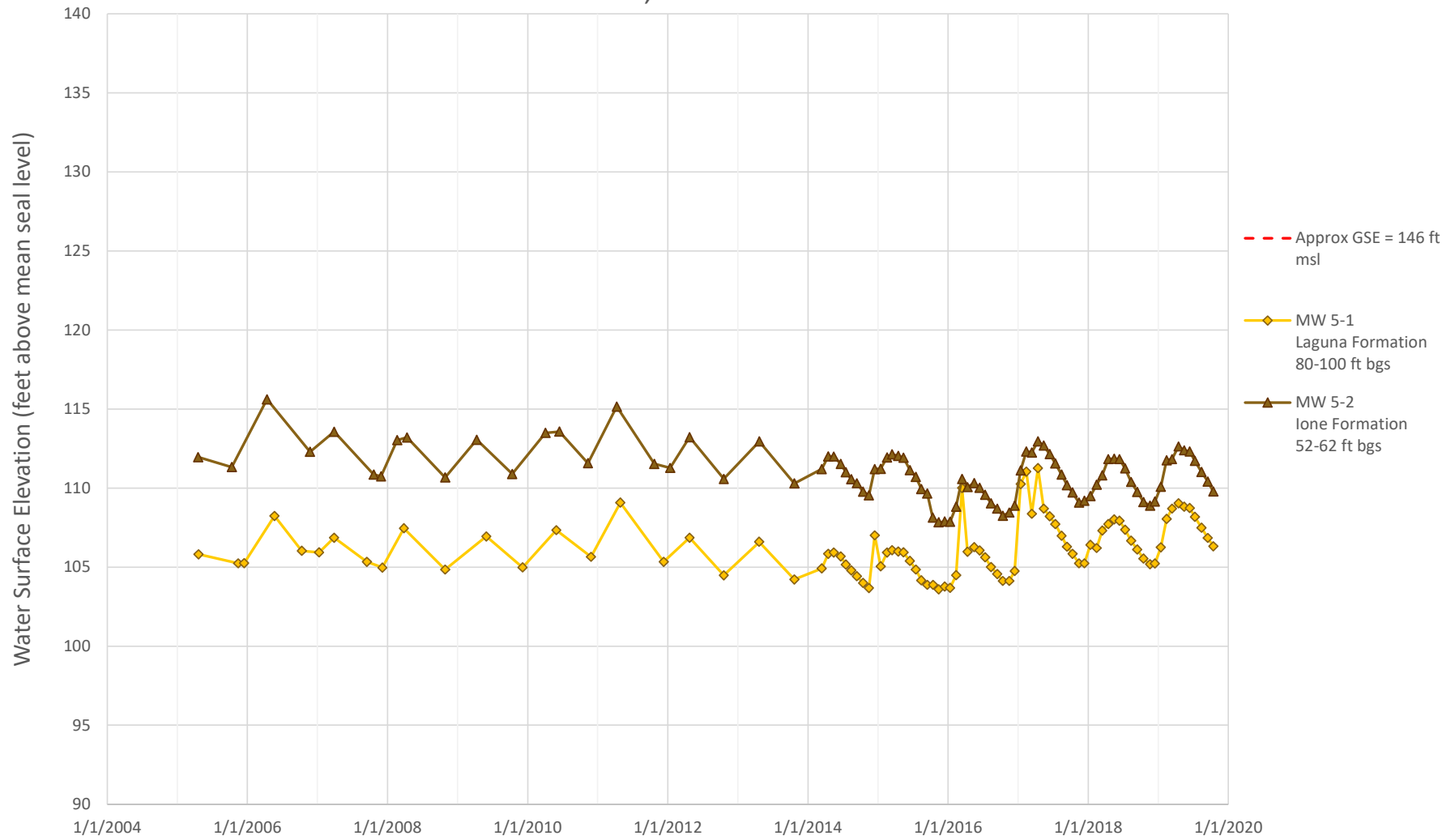
Local Well No. 63
WPMW-3 Nested Well
388476N1212872W001, 388476N1212872W002



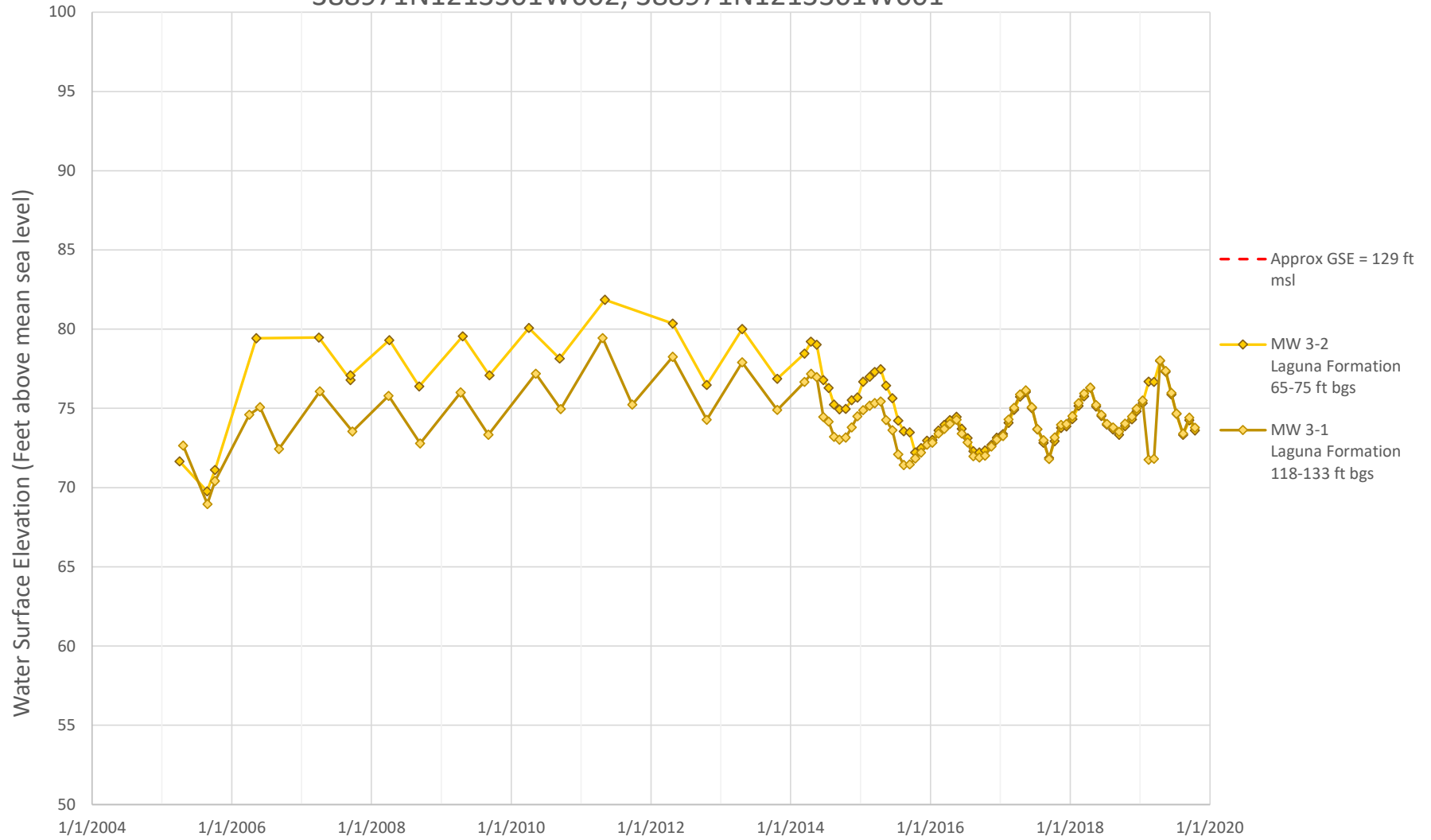
Local Well No. 65
MW-1 Nested Well
388604N1213544W004, 388604N1213544W003, 388604N1213544W002,
388604N1213544W001



Local Well No. 66
MW-5 Nested Well
388826N1213078W001, 388826N1213078W002

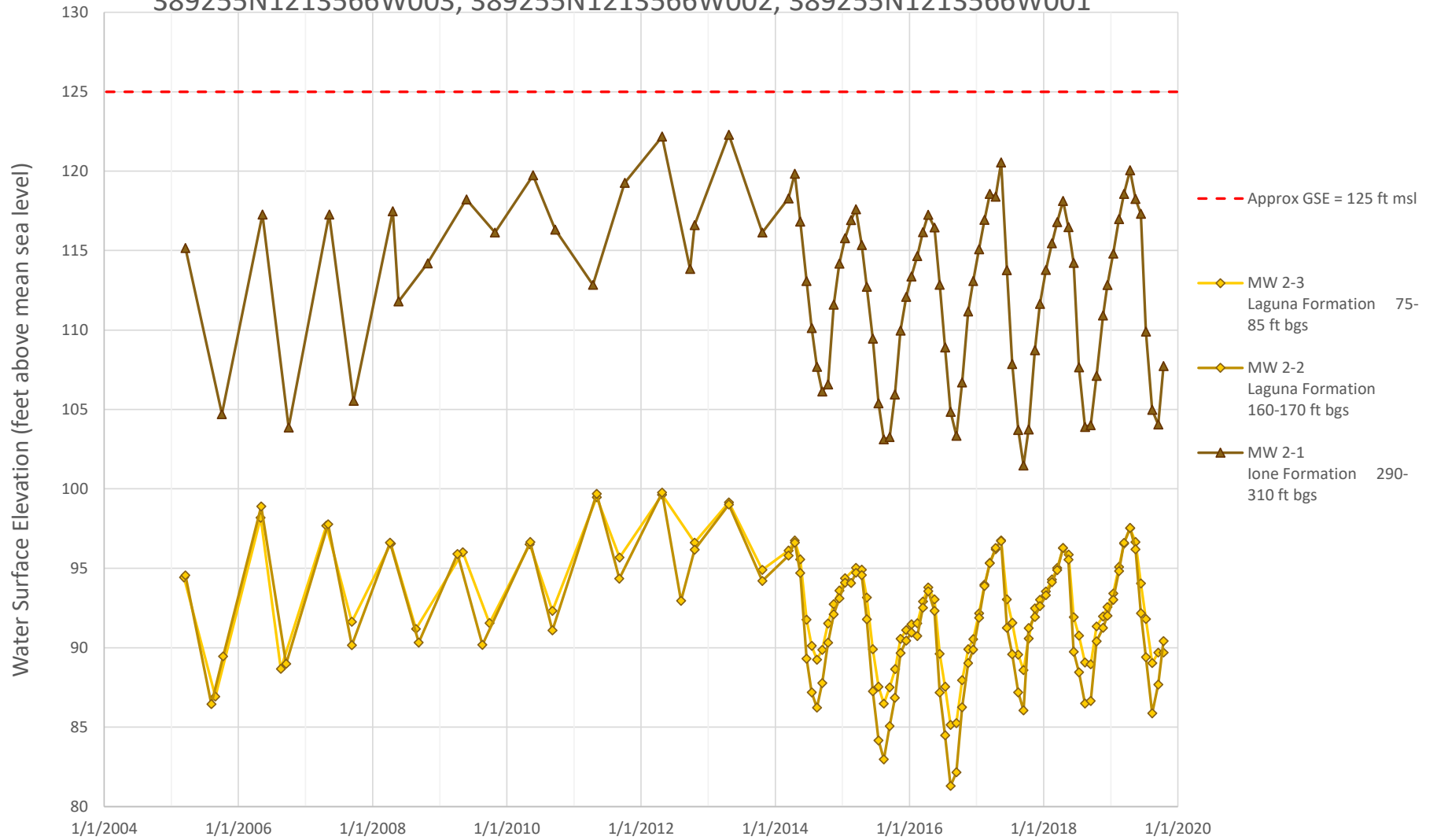


Local Well No. 70
MW-3 Nested Well
388971N1213301W002, 388971N1213301W001



Local Well No. 75
MW-2 Nested Well

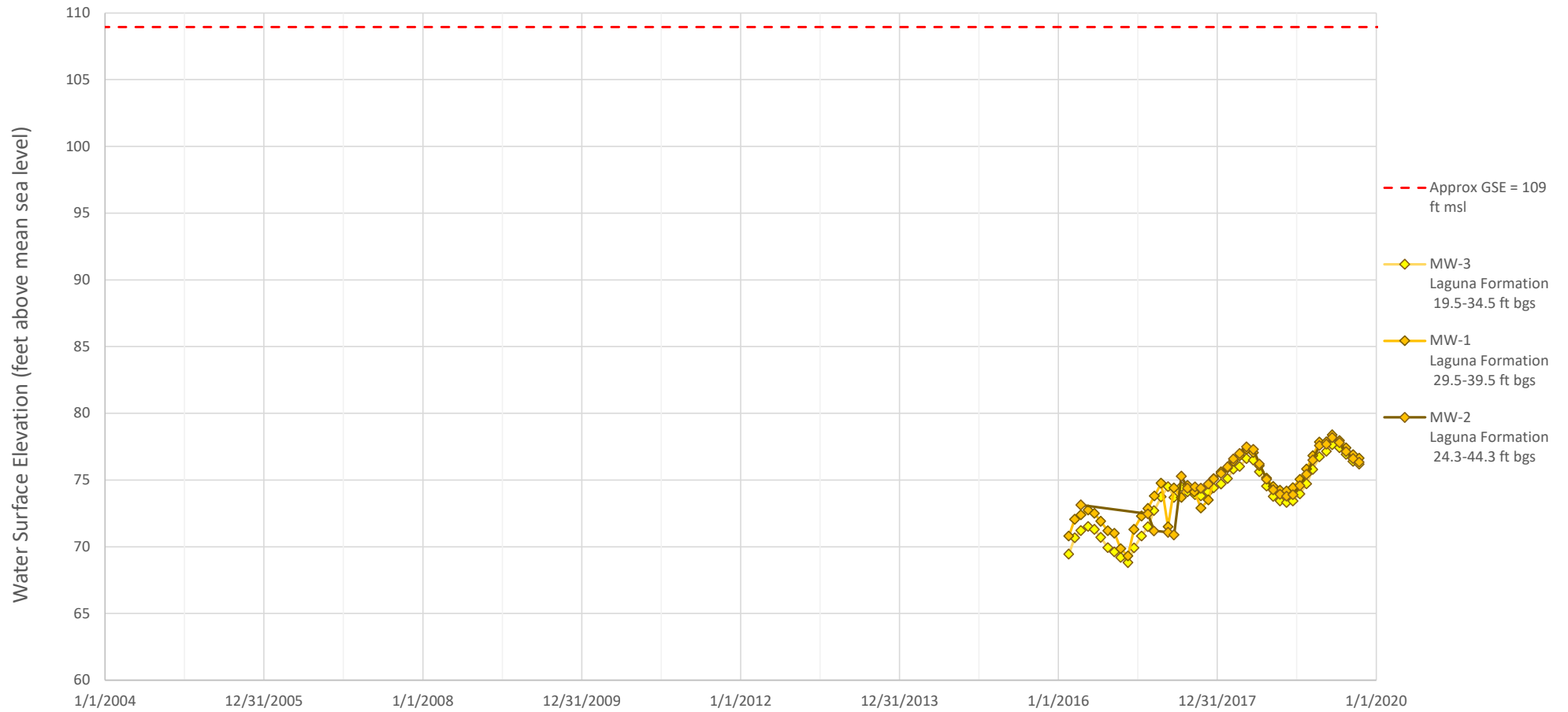
389255N1213566W003, 389255N1213566W002, 389255N1213566W001



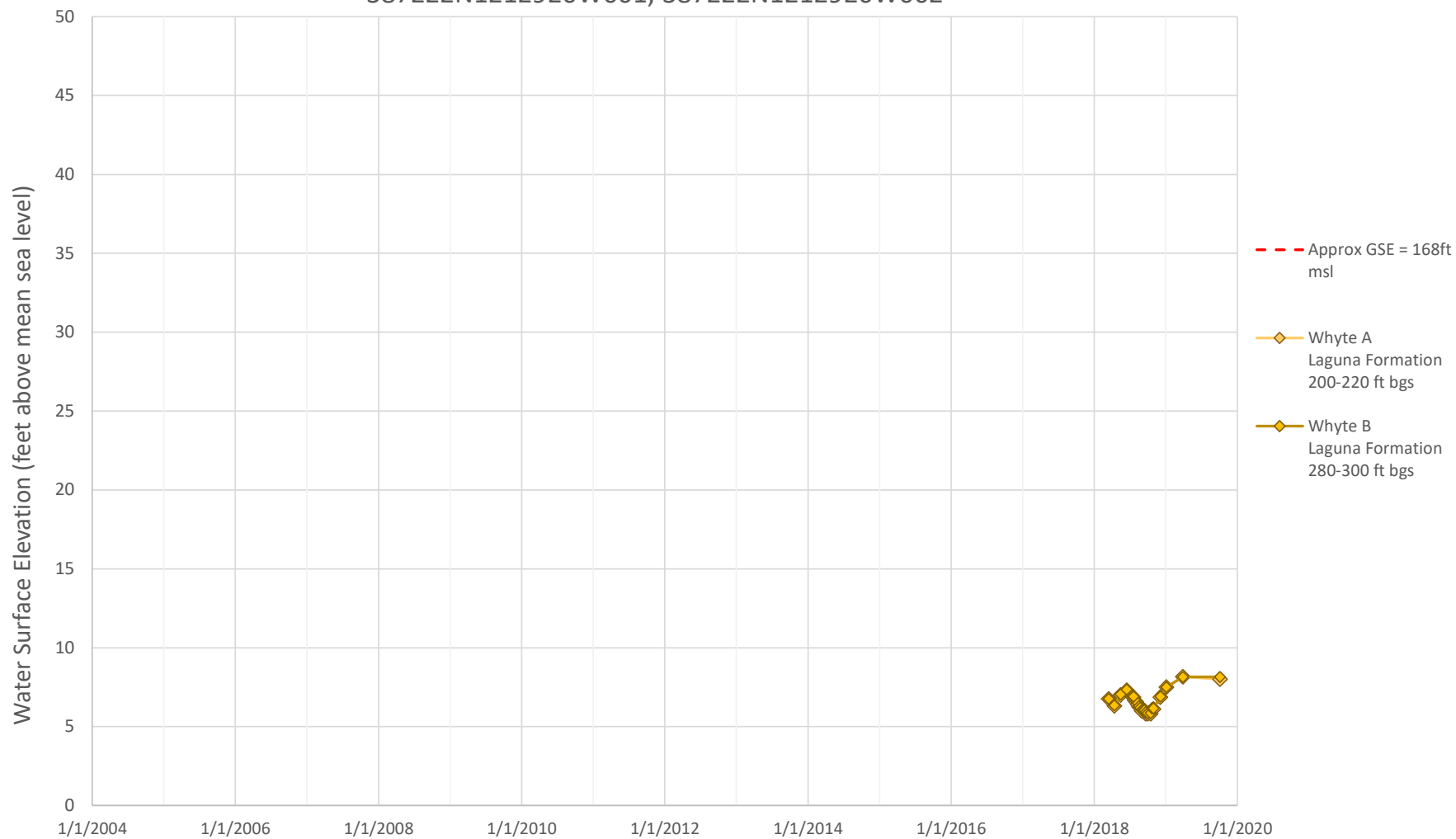
Local Well No. 80
Cemetery
389740N1213606W001



Local Well No. 81
MW-1, MW-2, & MW-3
389785N1213713W001, 389764N1213710W001, 389774N1213728W001



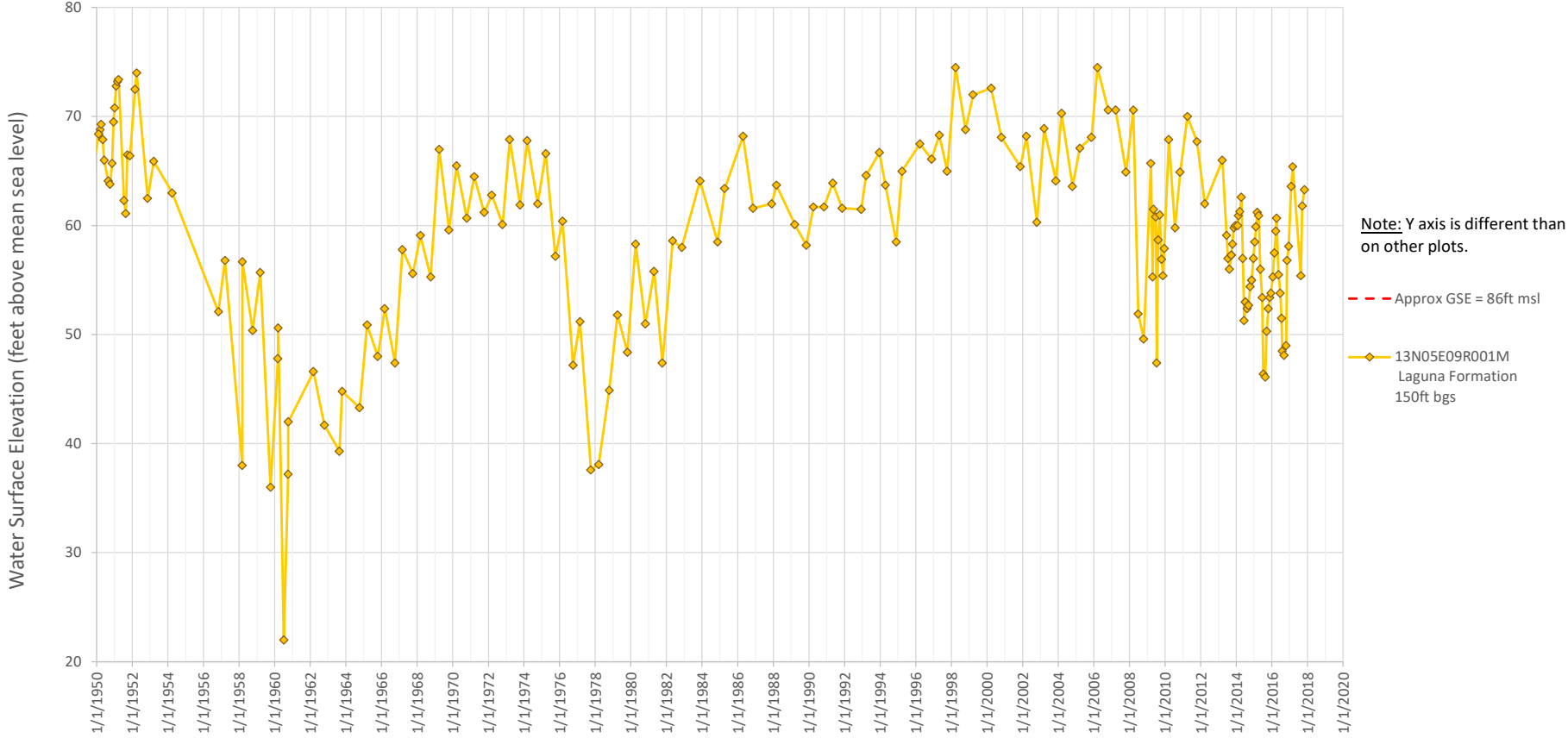
Local Well No. 82
Whyte Nested Well Hydrograph
387222N1212920W001, 387222N1212920W002



Local Well No. 84
Spencer
389867N1213654W002



Local Well No. 85
13N05E09R001M
389873N1214156W001



Appendix J: Vertical Gradients

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN




APPENDIX J Vertical Gradient Hydrographs

December 2021

APPENDIX J

VERTICAL GRADIENTS HYDROGRAPHS

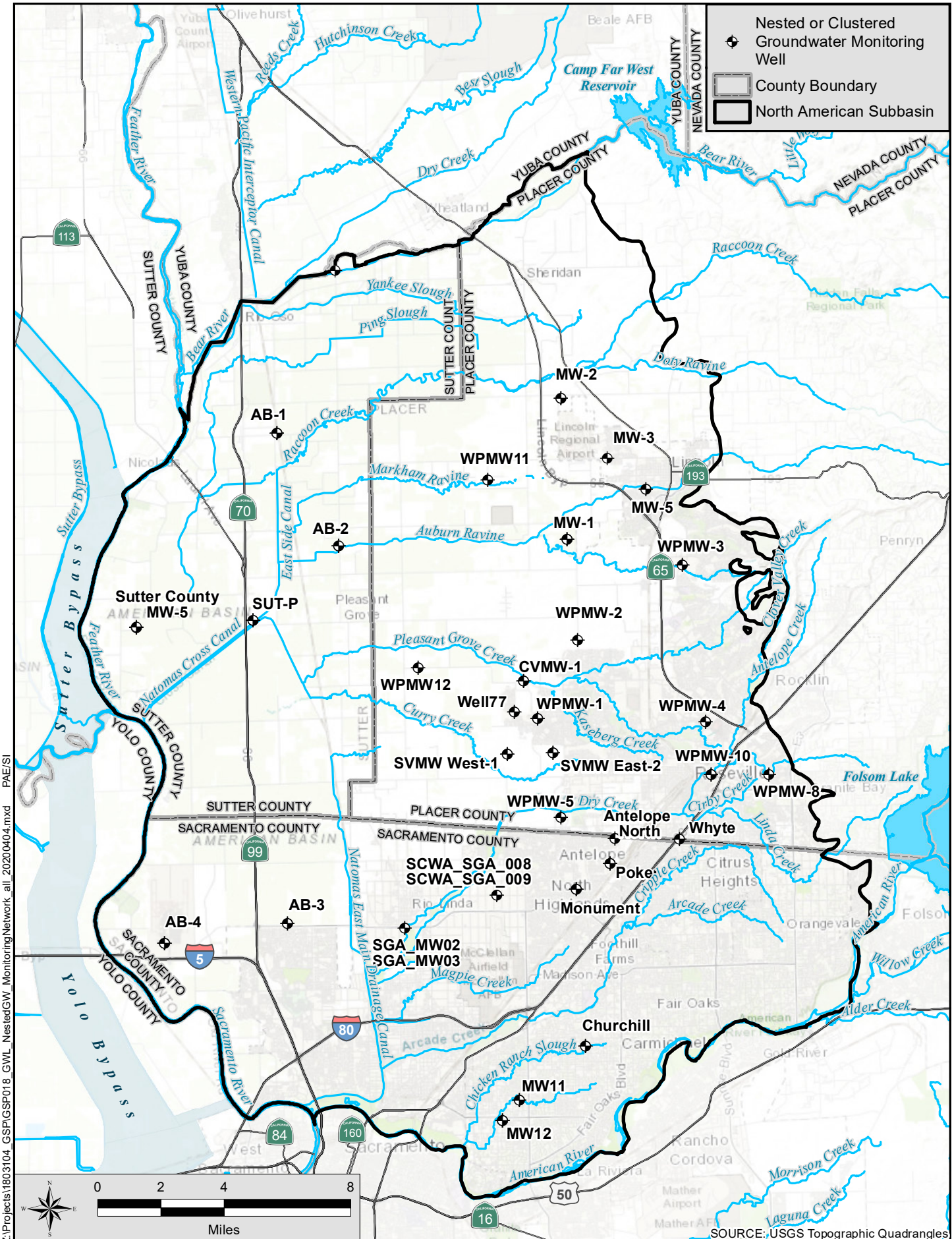
LEGEND:

	Laguna Formation Wells
	Mehrten Formation Wells
	Ione or Central Valley Fm. Wells

Short Term Hydrographs

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

Groundwater levels from multiple aquifers shown

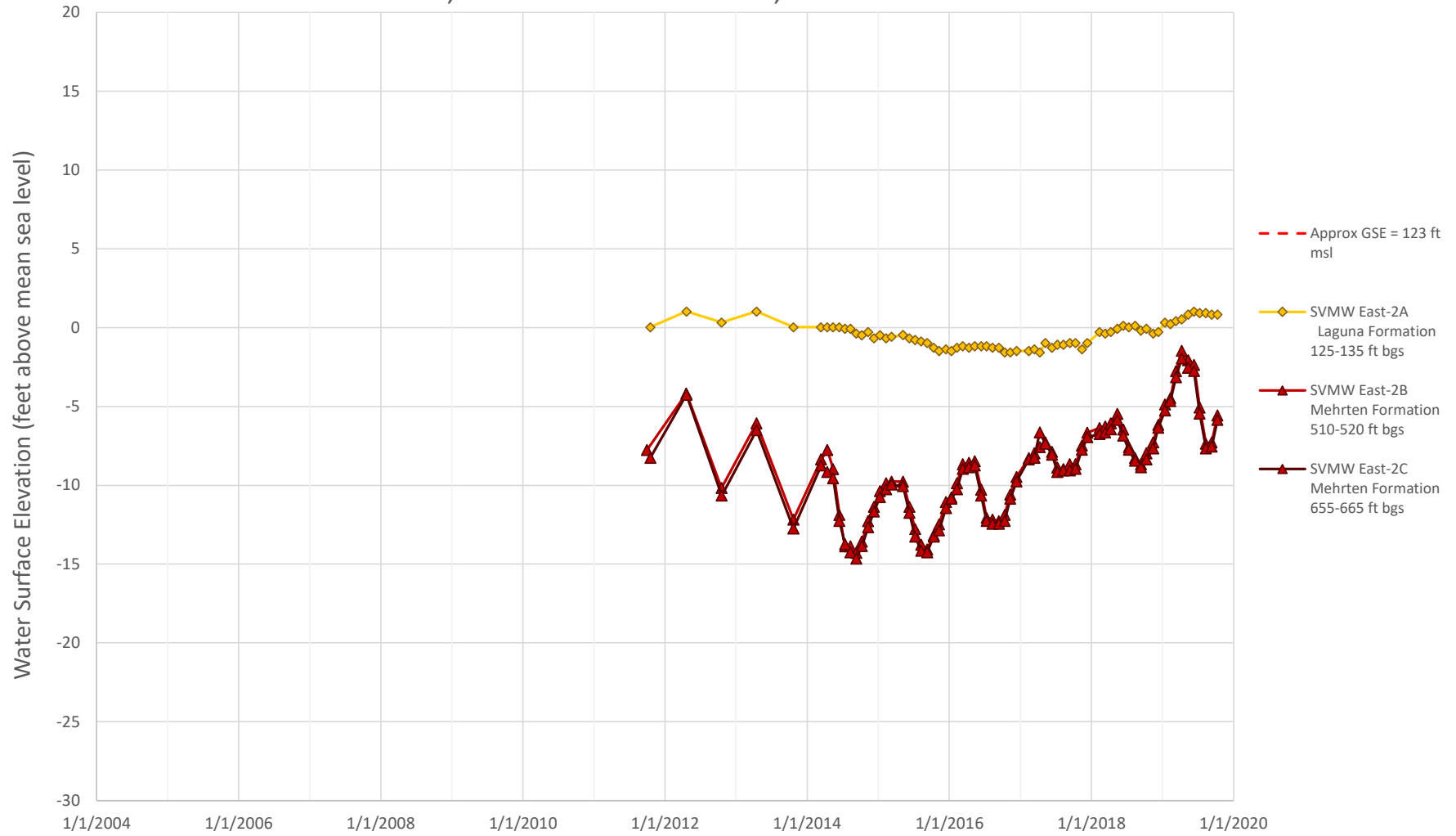


Z:\Projects\1803104_GSP\GSP018_GWL_NestedGW_MonitoringNetwork_all_20200404.mxd PAE/SI

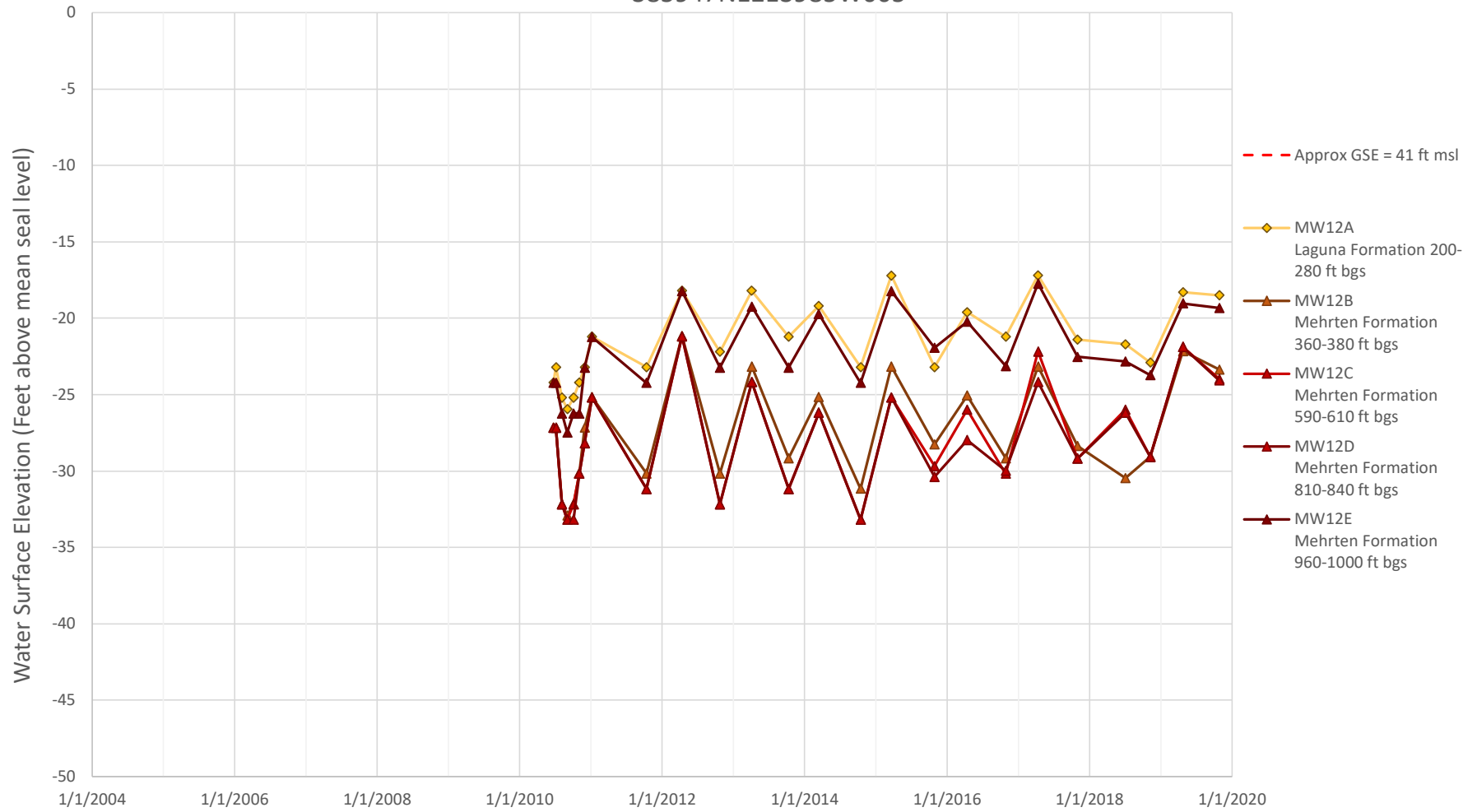
SOURCE: USGS Topographic Quadrangles

<p>North American Subbasin Sutter, Placer and Sacramento Counties</p>		<p>Nested and Clustered Groundwater Monitoring Wells</p>
<p>North American Subbasin</p>	<p>APRIL 2020</p>	<p>FIGURE 4</p>

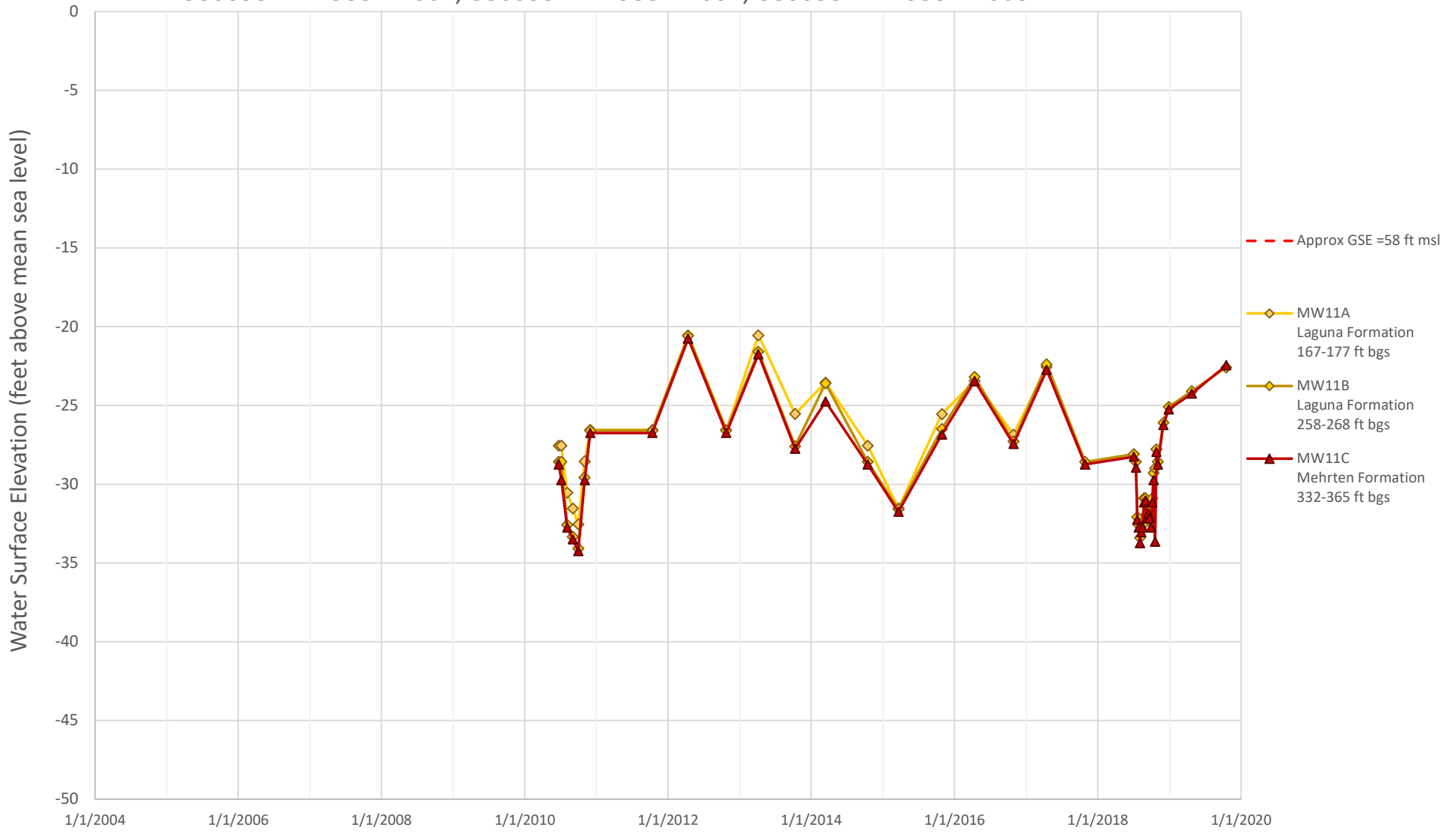
Local Well No. 01
SVMW-2 East Nested Well Hydrograph
387626N1213651W001, 381626N1213651W001, 387626N1213651W002



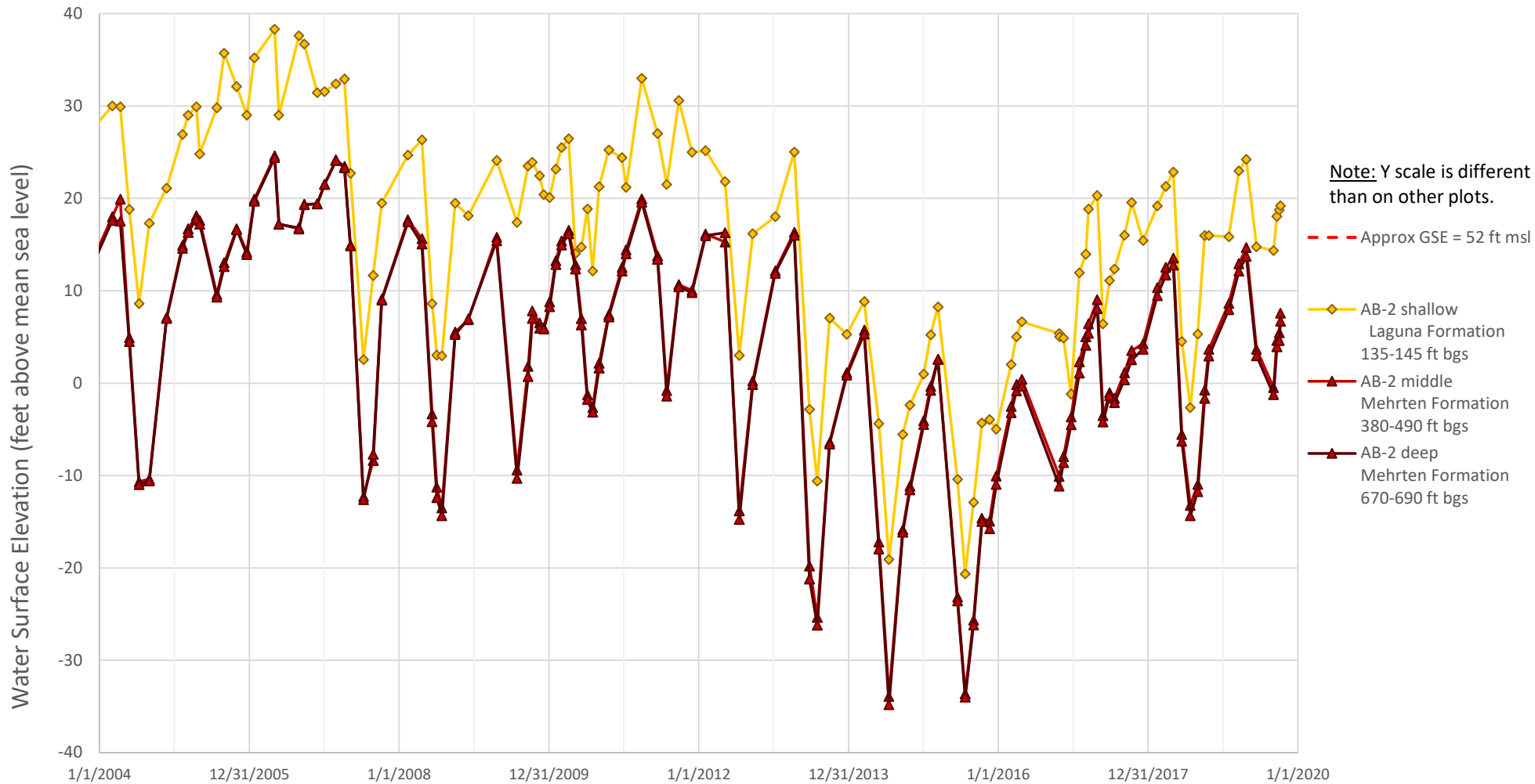
Local Well No. 04
MW12 Nested Well
385947N1213985W001, 385947N1213985W002, 385947N1213985W003, 385947N1213985W004,
385947N1213985W005



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



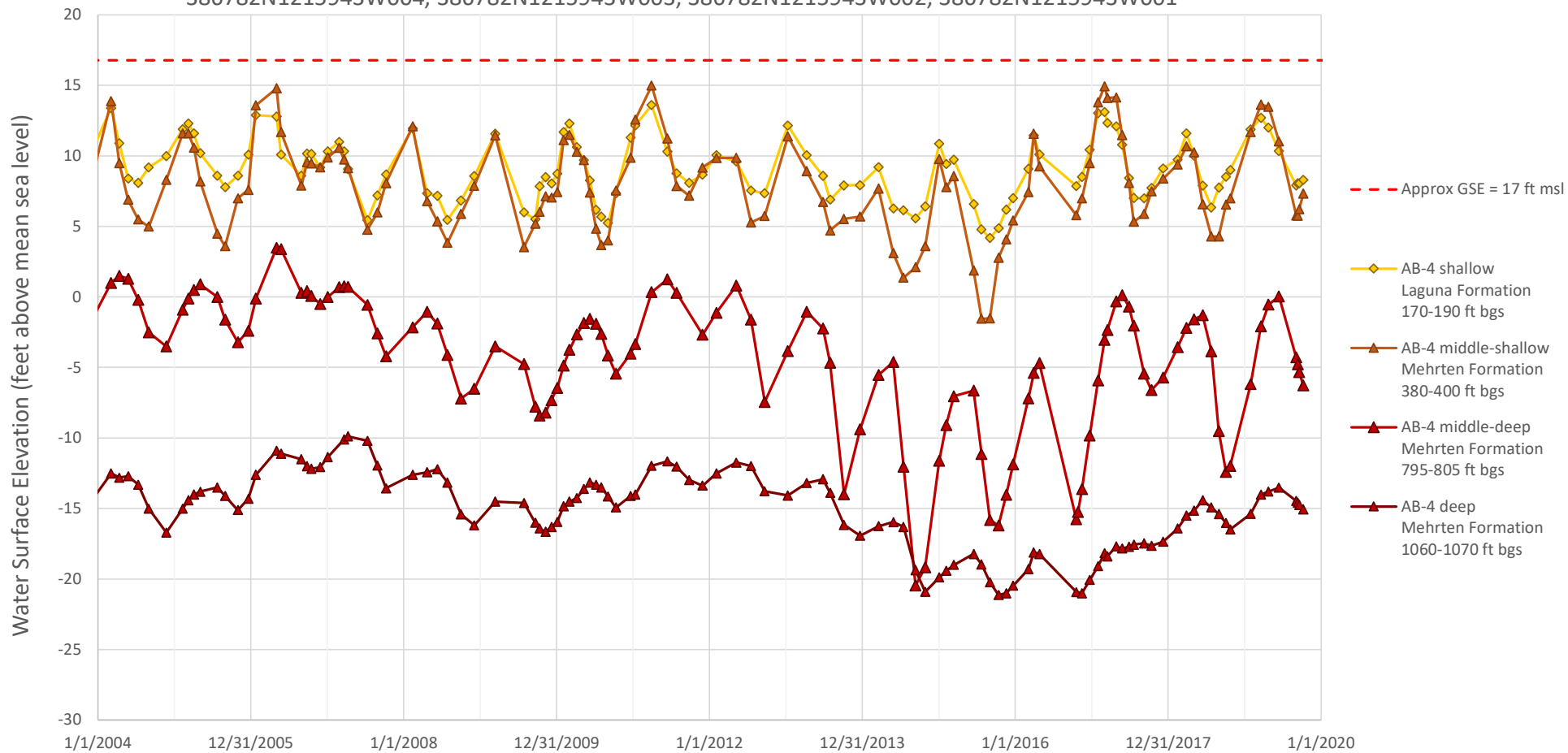
Local Well No. 17
AB-2 Nested Well
388593N1214885W003, 388593N1214885W002, 388593N1214885W001



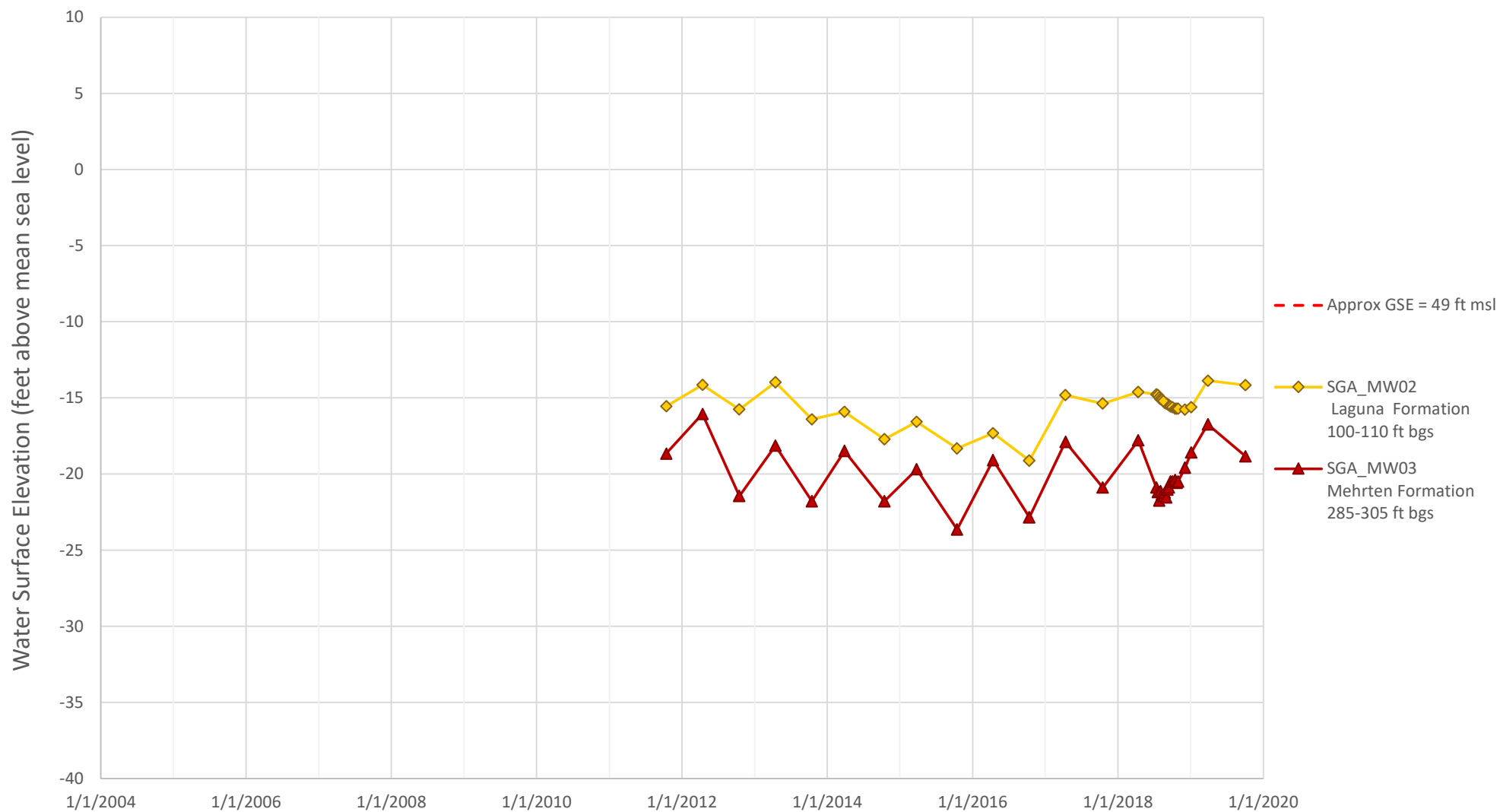
Local Well No. 22

AB-4 Nested Well

386782N1215943W004, 386782N1215943W003, 386782N1215943W002, 386782N1215943W001

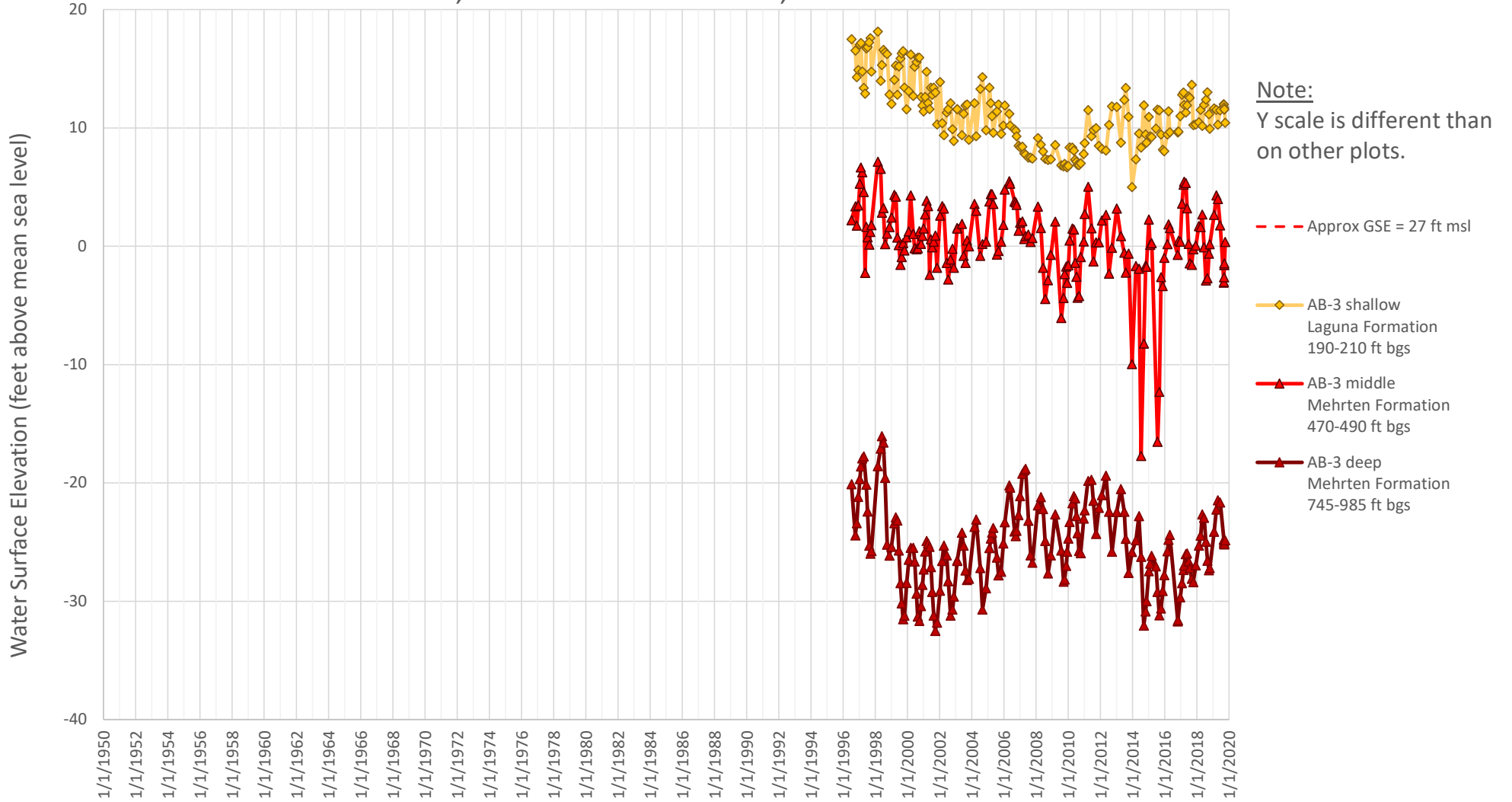


Local Well No. 24 & No. 25
SGA_MW02 & SGA_MW03 Clustered Wells
386836N1214536W001, 386836N1214536W002

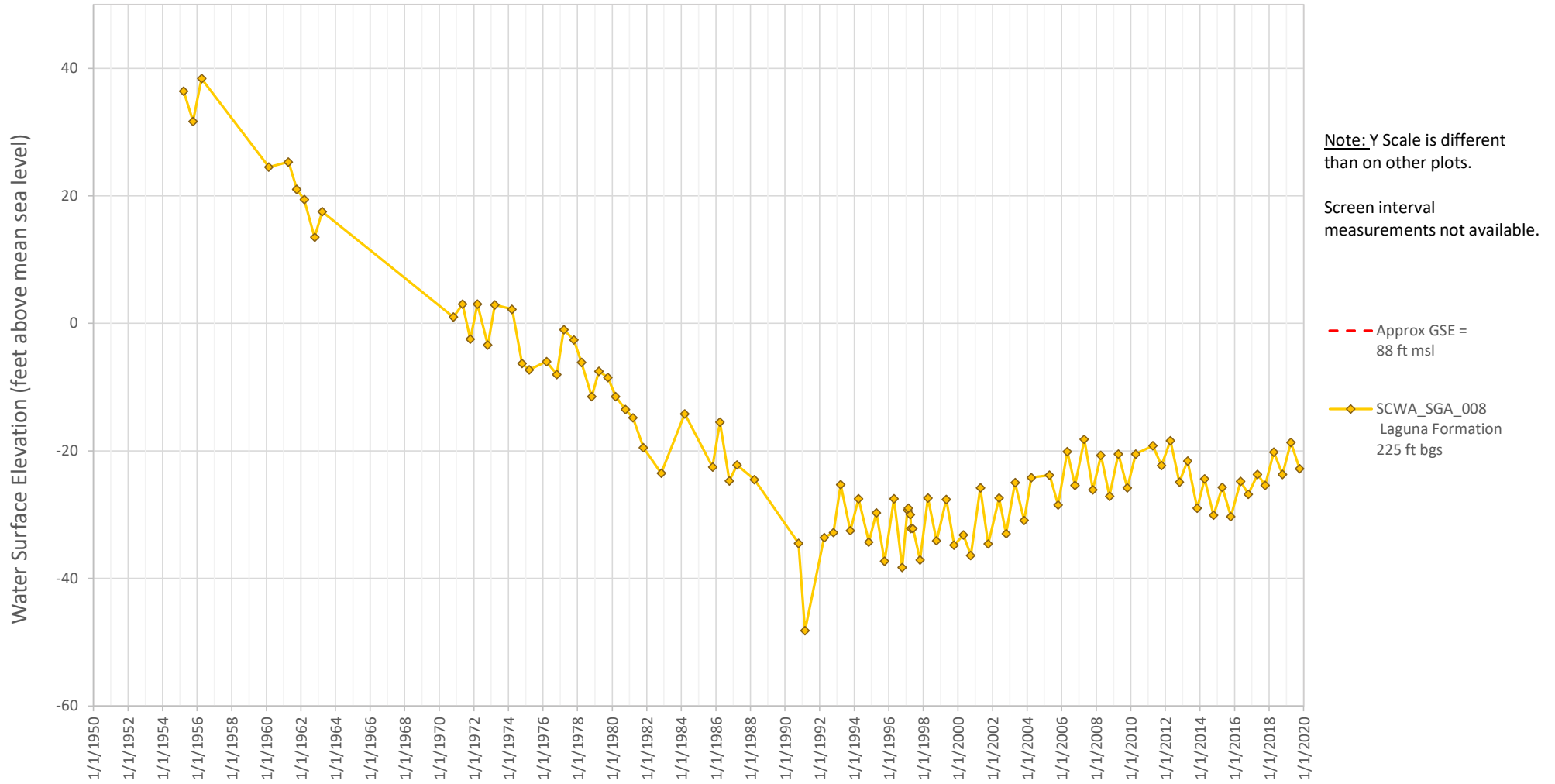


Local Well No.27
AB-3 Nested Well

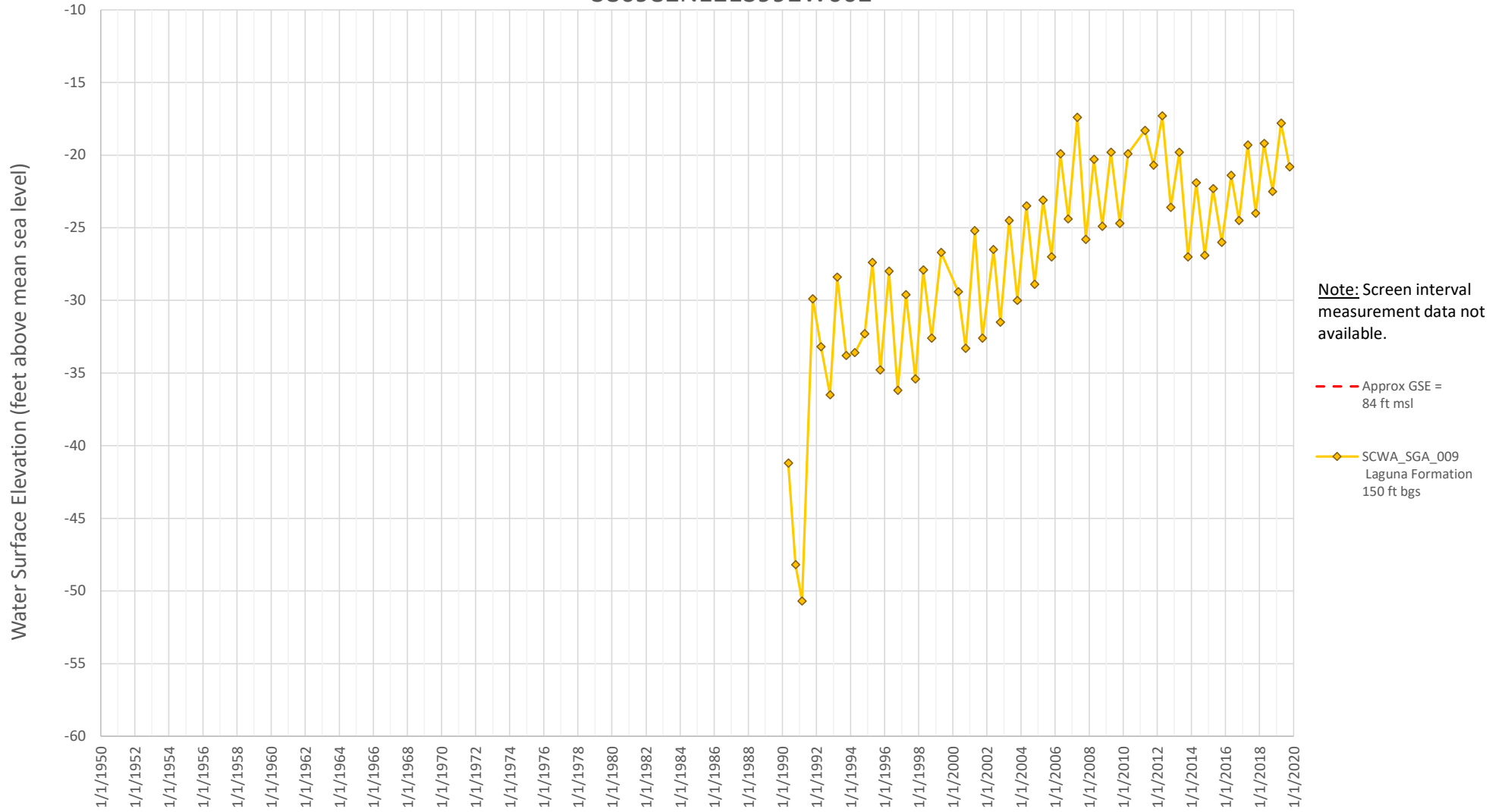
386864N1215222W003, 386864N1215222W002, 386864N1215222W001



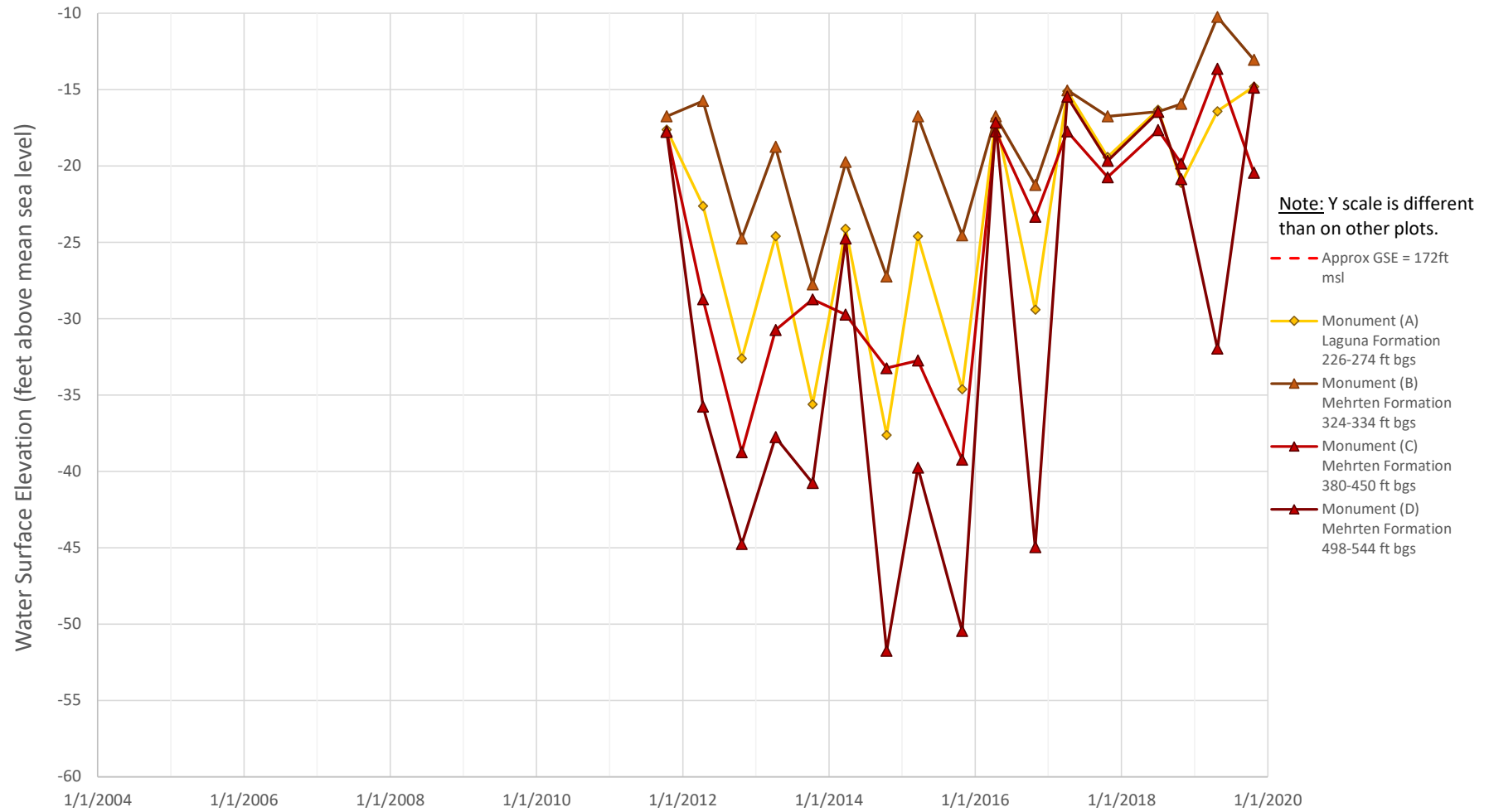
Local Well No. 30
SCWA_SGA_008
386982N1213992W001



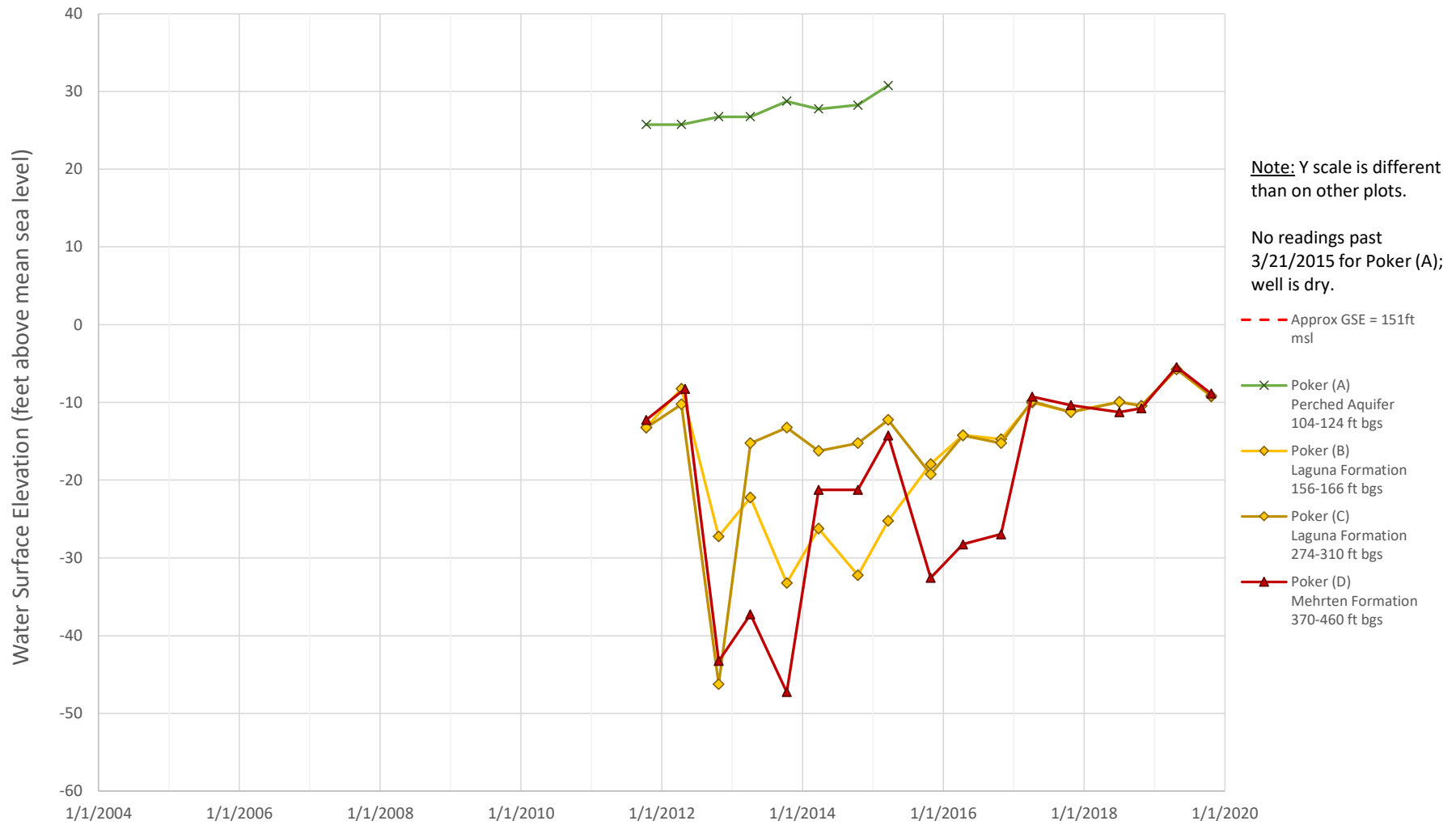
Local Well No. 31
SCWA_SGA_009
386982N1213992W002



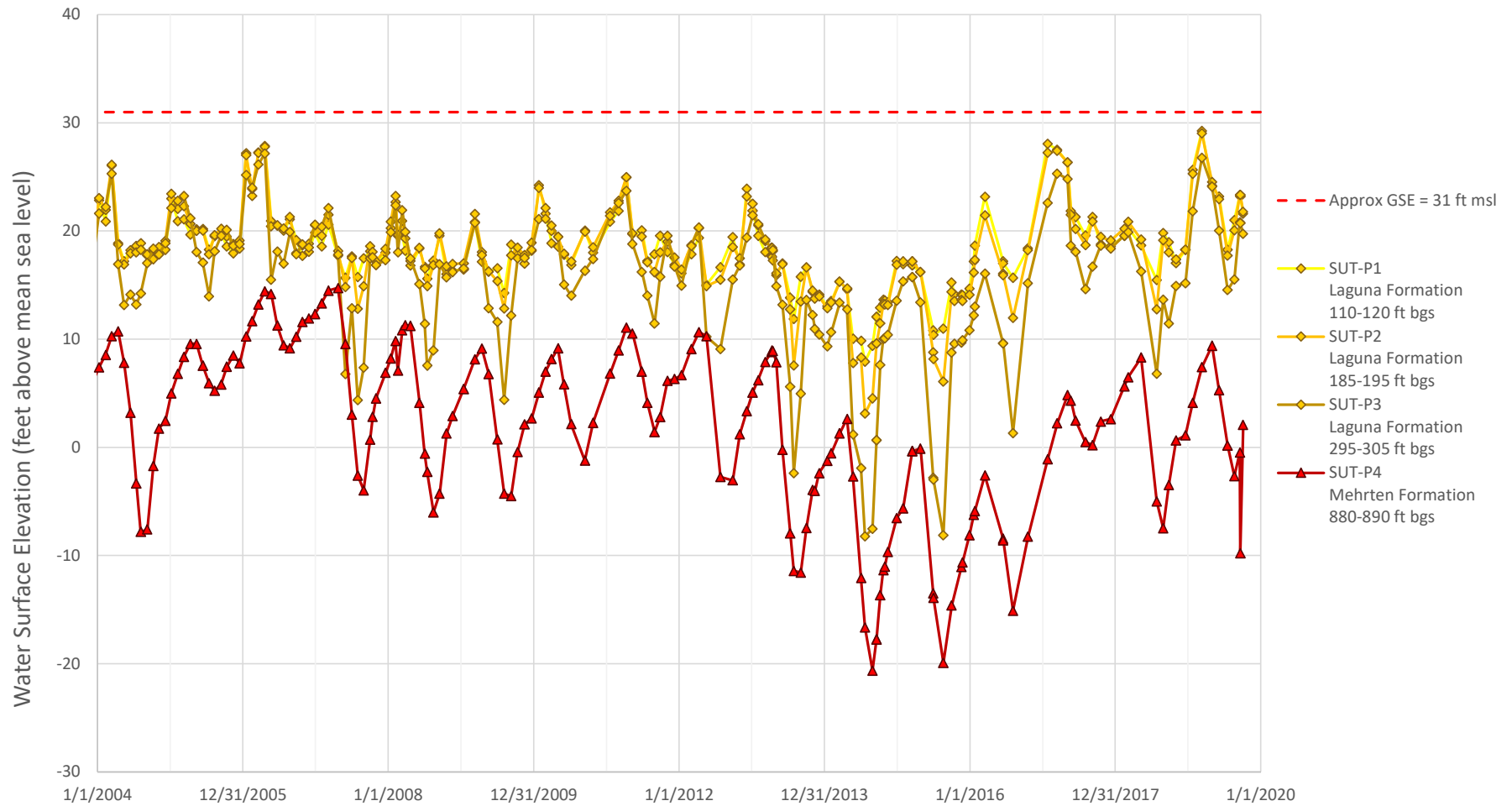
Local Well No. 33
 Monument Nested Well
 387000N1213529W001, 387000N1213529W002, 387000N1213529W003, 387000N1213529W004



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



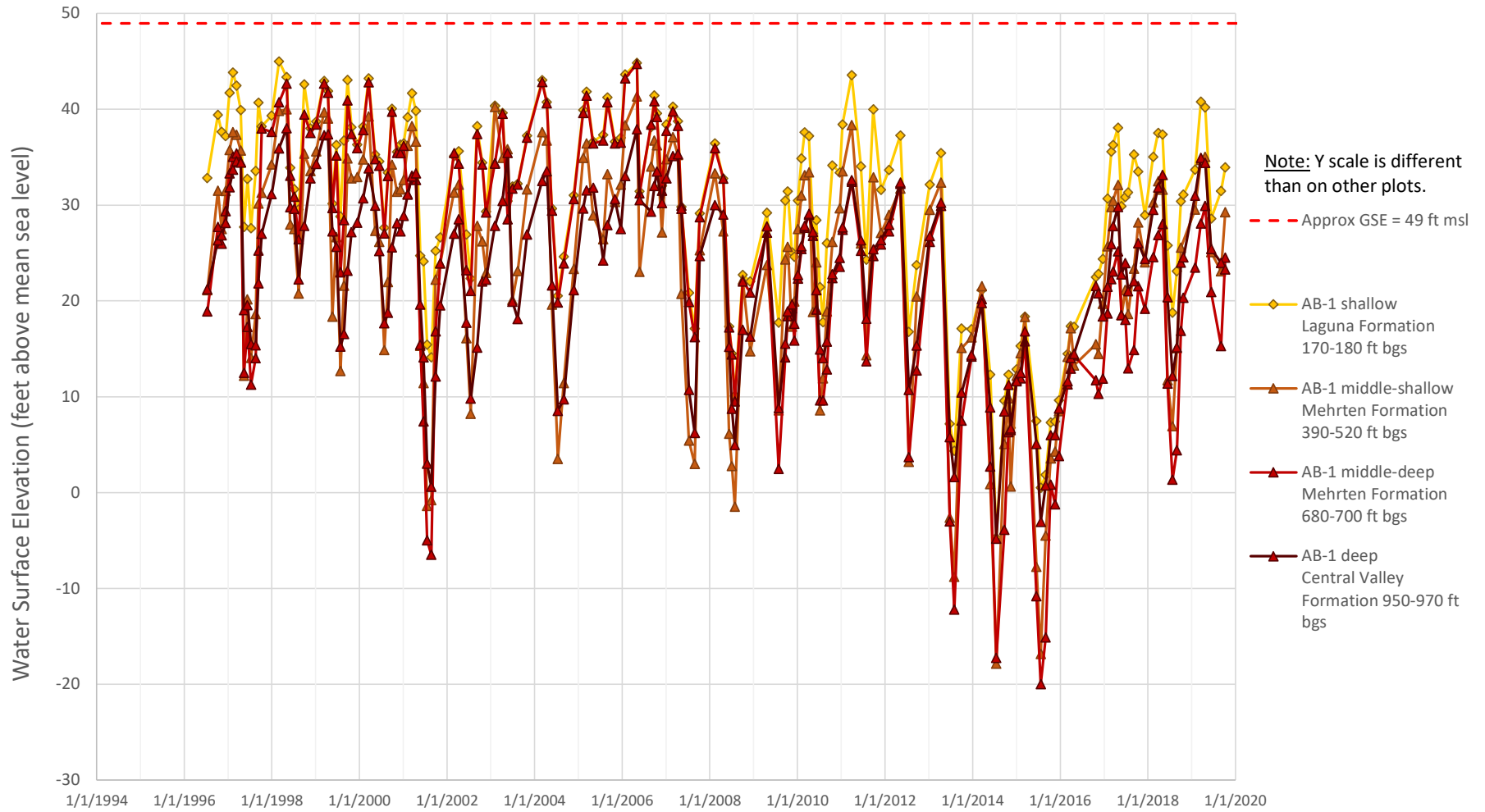
Local Well No. 37
SUT-P1, SUT-P2, SUT-P3, SUT-P4
388260N1215394W004, 388260N1215394W003, 388260N1215394W001, 388260N1215394W001



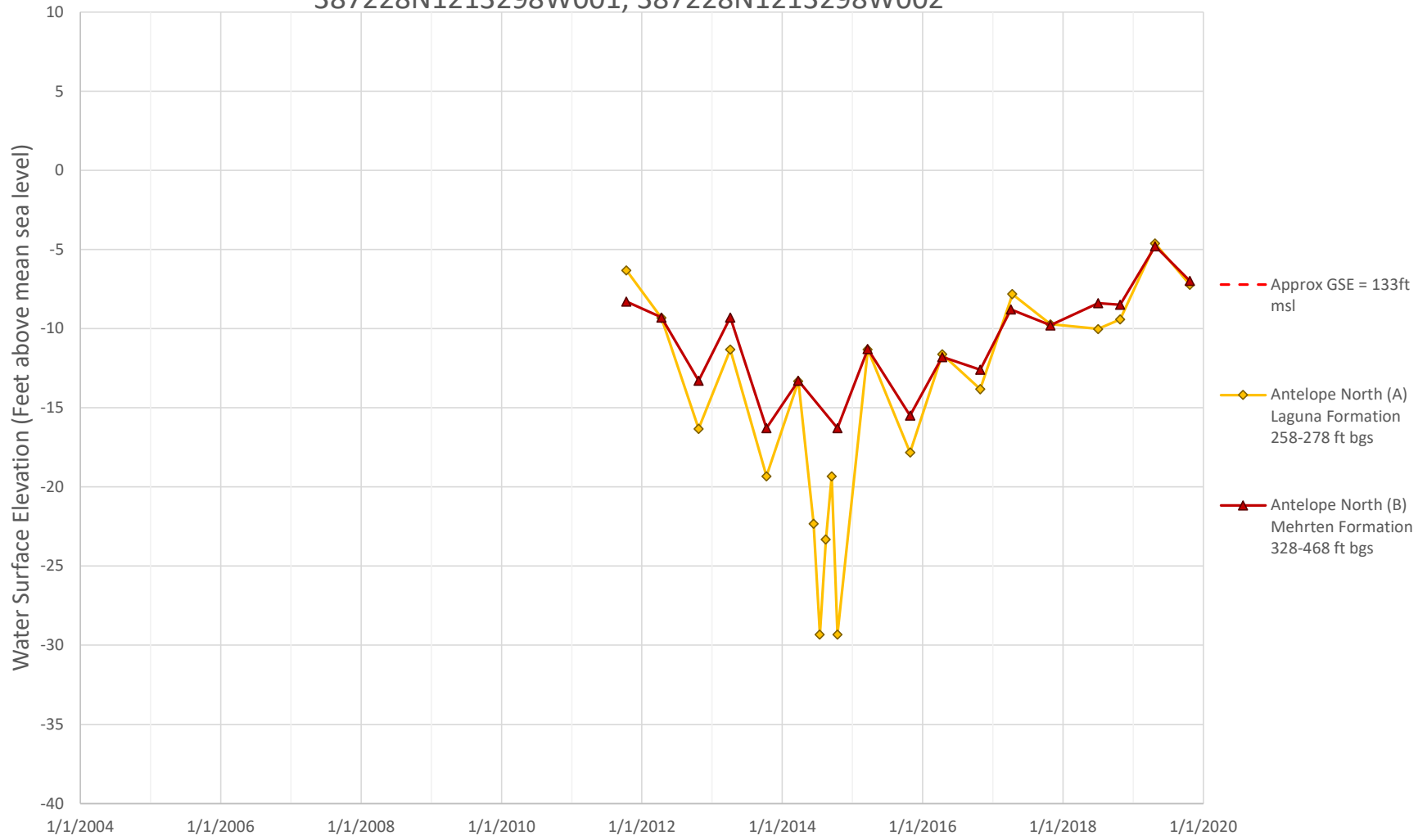
Local Well No. 39

AB-1 Nested Well

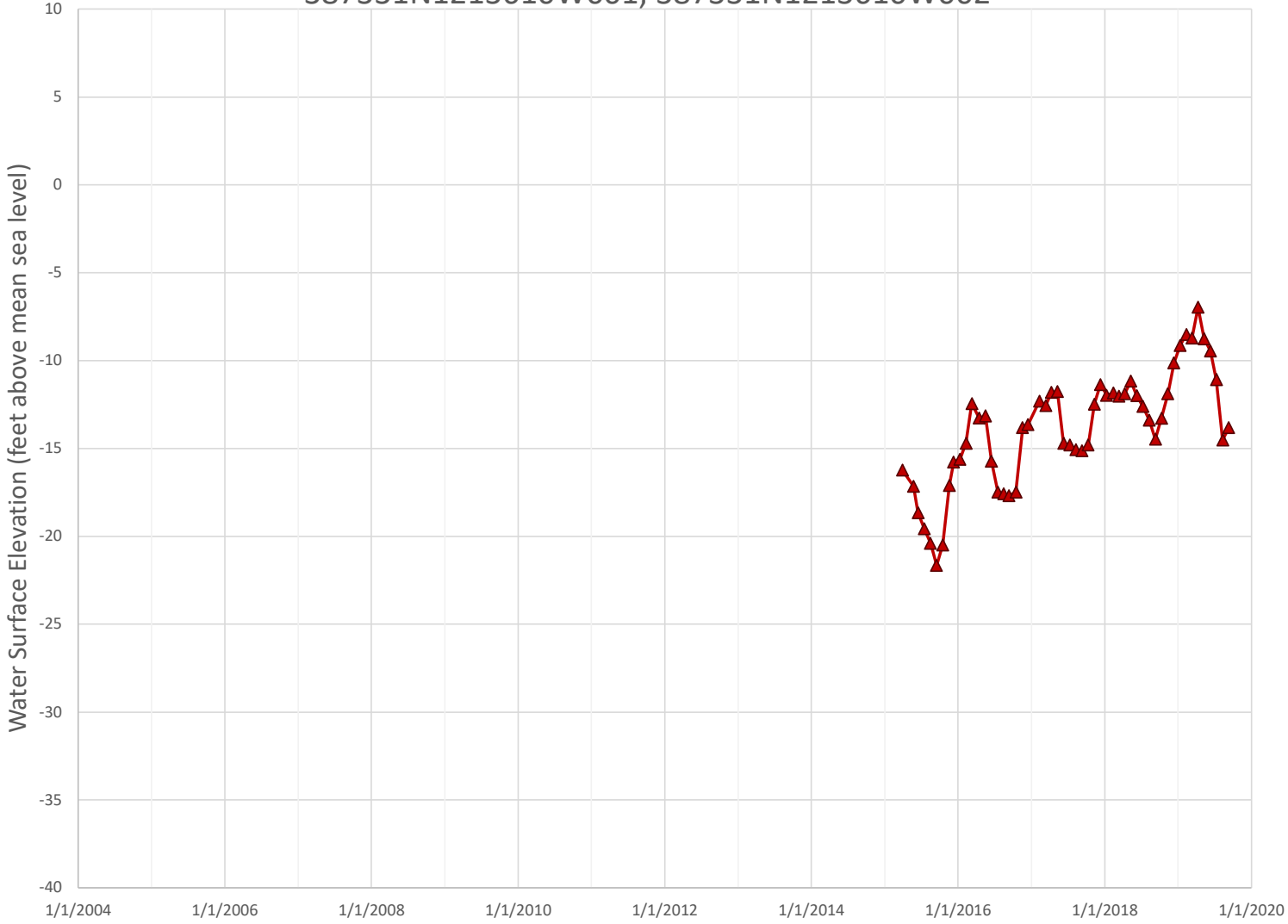
389116N1215238W003, 389117N1215238W001, 389116N1215238W002, 389116N1215238W001



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



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



Note: WPMW-5A is dry.

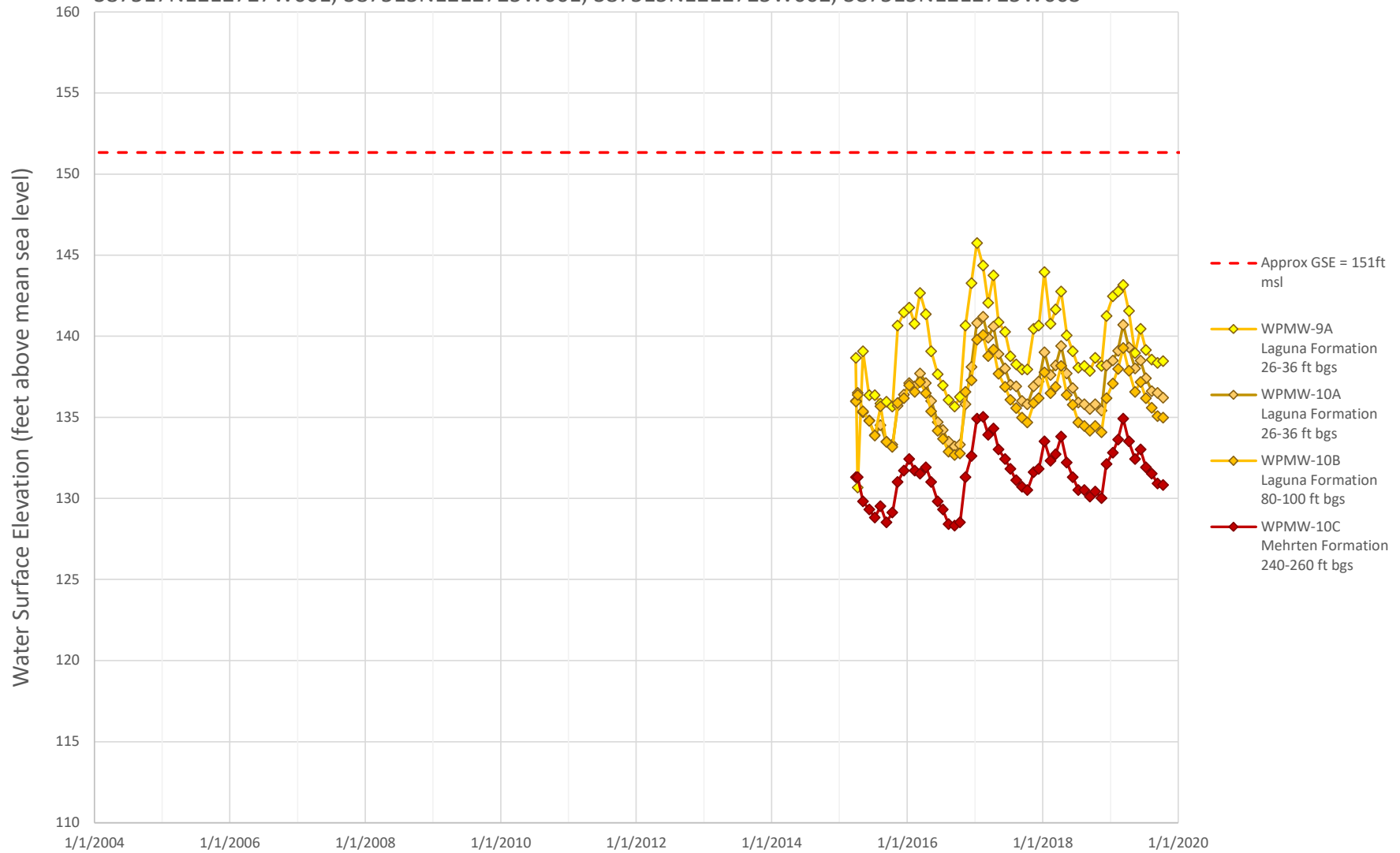
- - - Approx GSE = 98ft msl
- ◇ WPMW-5A
Laguna Formation
80-100 ft bgs
- ▲ WPMW-5B
Mehrten Formation
630-650 ft bgs

Local Well No.42 & No.43
387512N1212390W001, 387510N1212390W001, 387510N1212390W002

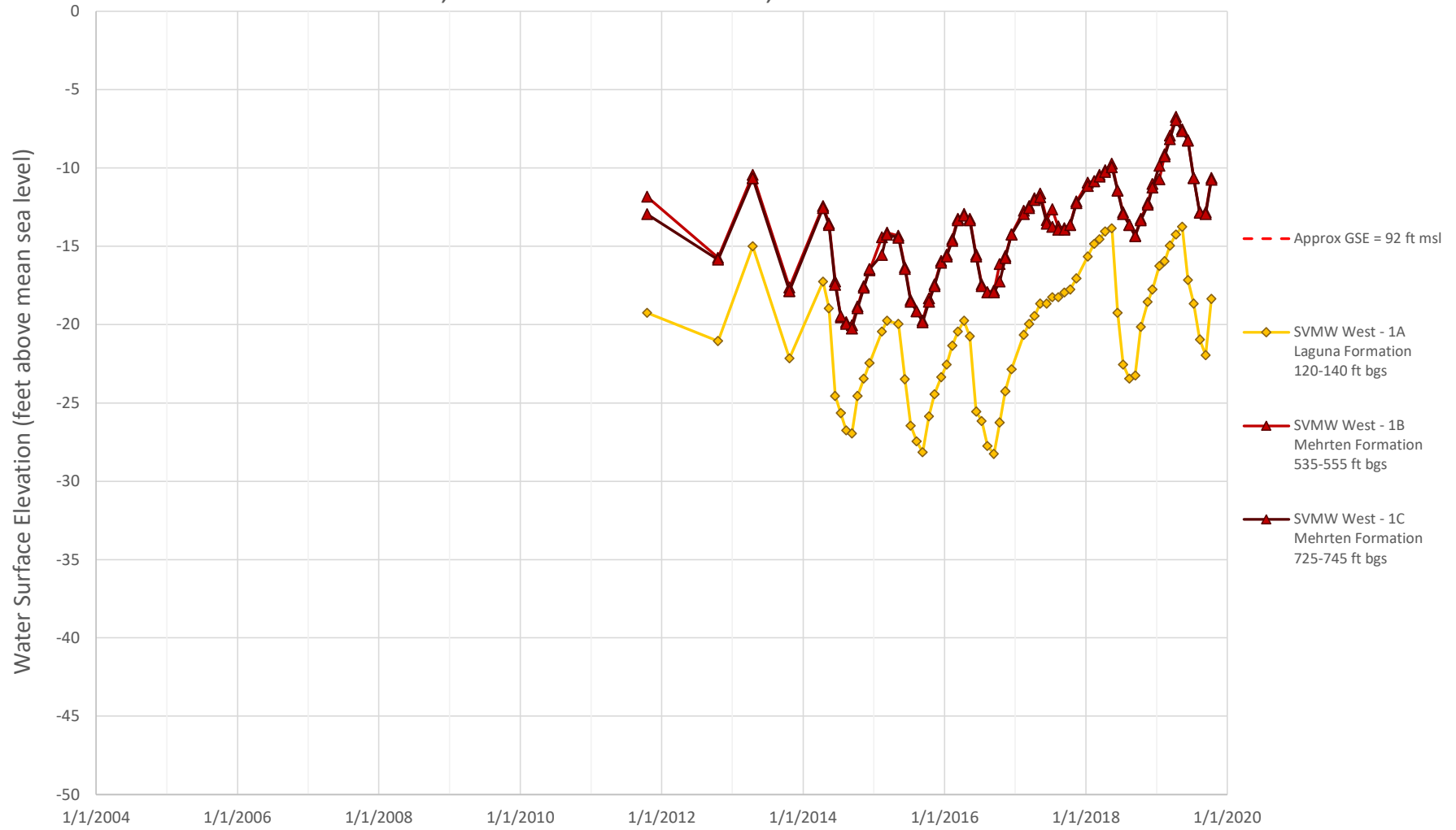


Local Well No. 44 & No. 45
WPMW-10 Nested Well & WPMW-9

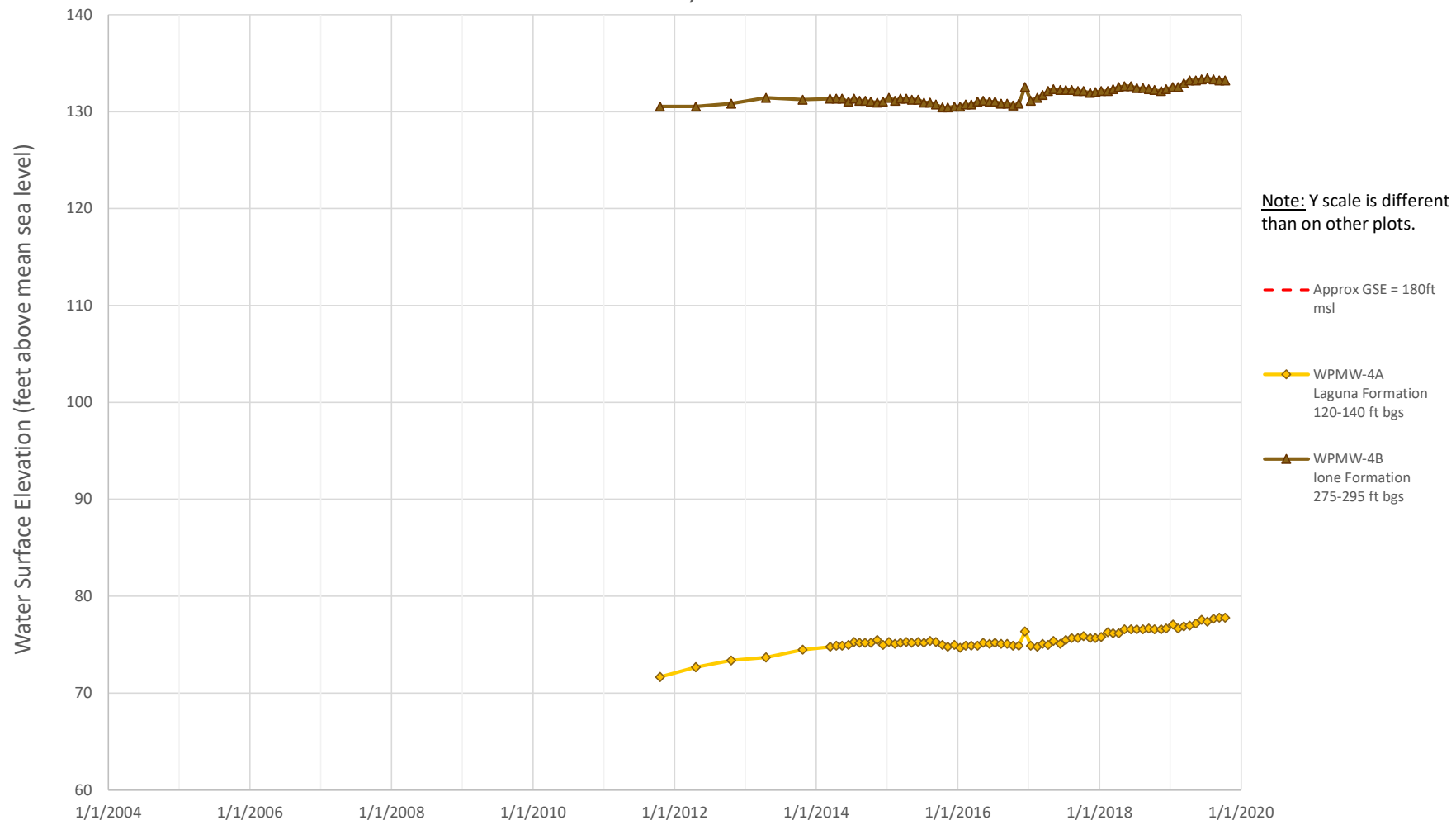
387517N1212727W001, 387515N1212725W001, 387515N1212725W002, 387515N1212725W003



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

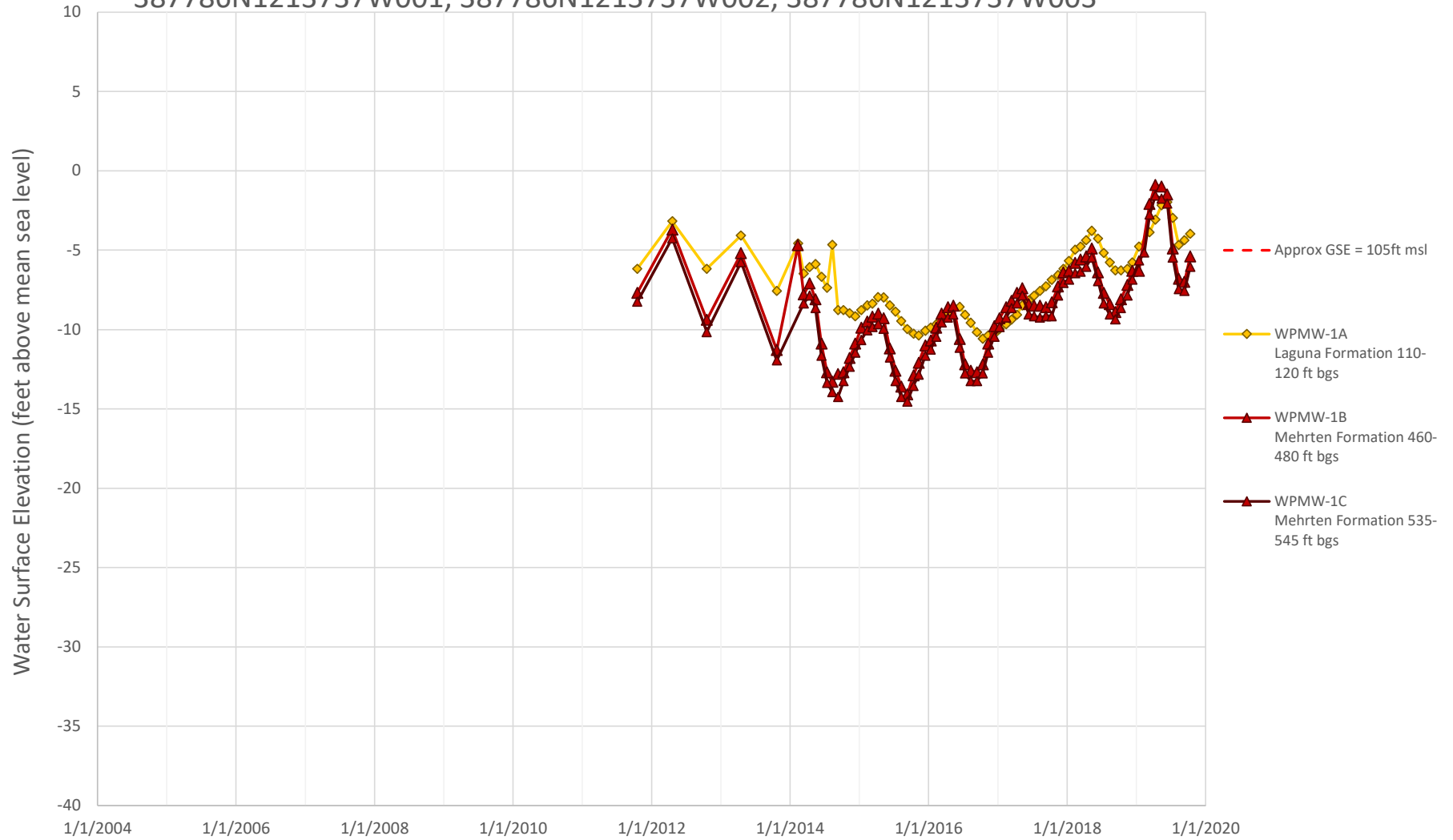


Local Well No. 48
WPMW-4 Nested Well
387755N1212753W001, 387755N1212753W002

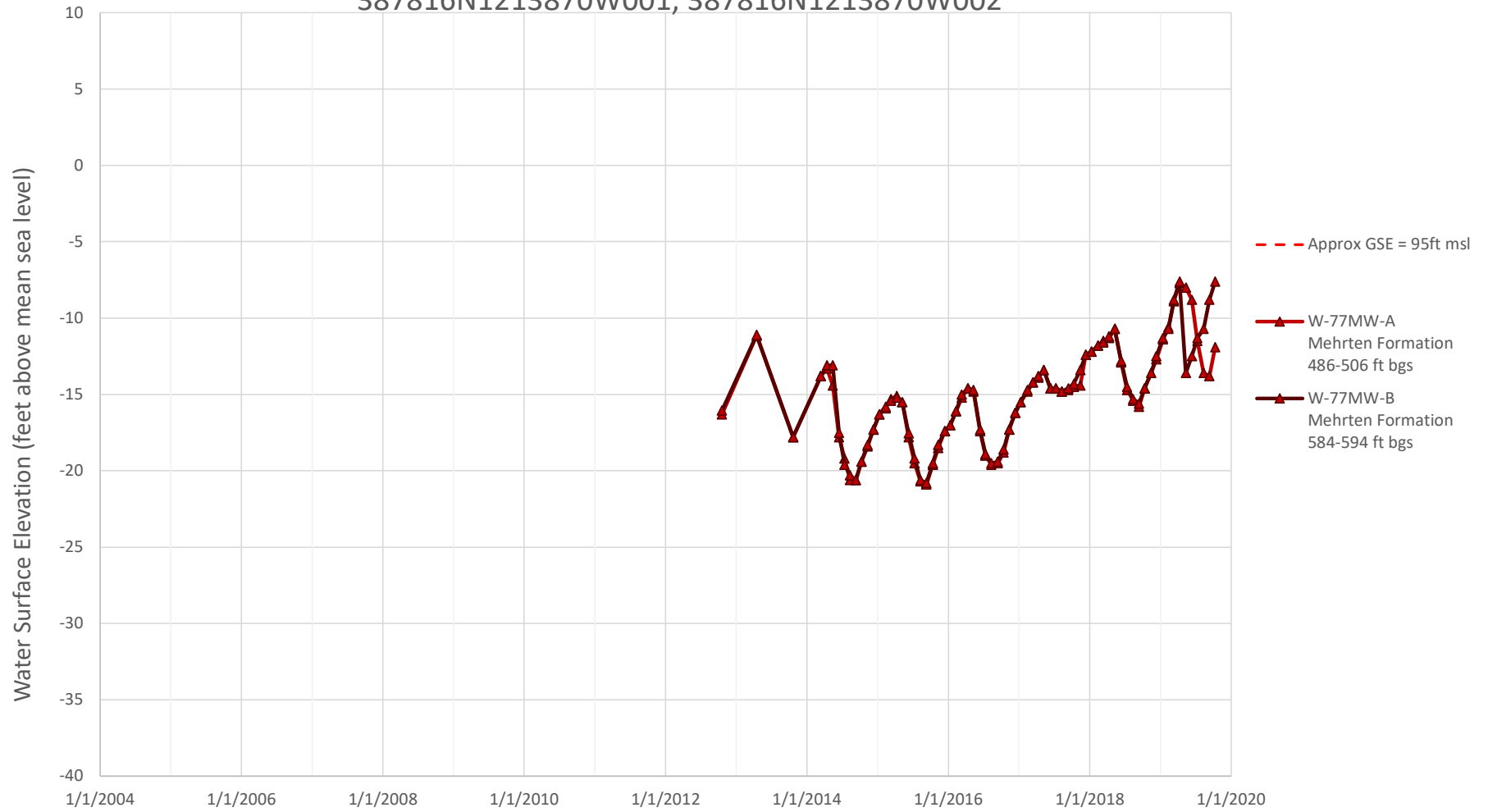


Local Well No. 49
WPMW-1 Nested Well

387786N1213737W001, 387786N1213737W002, 387786N1213737W003

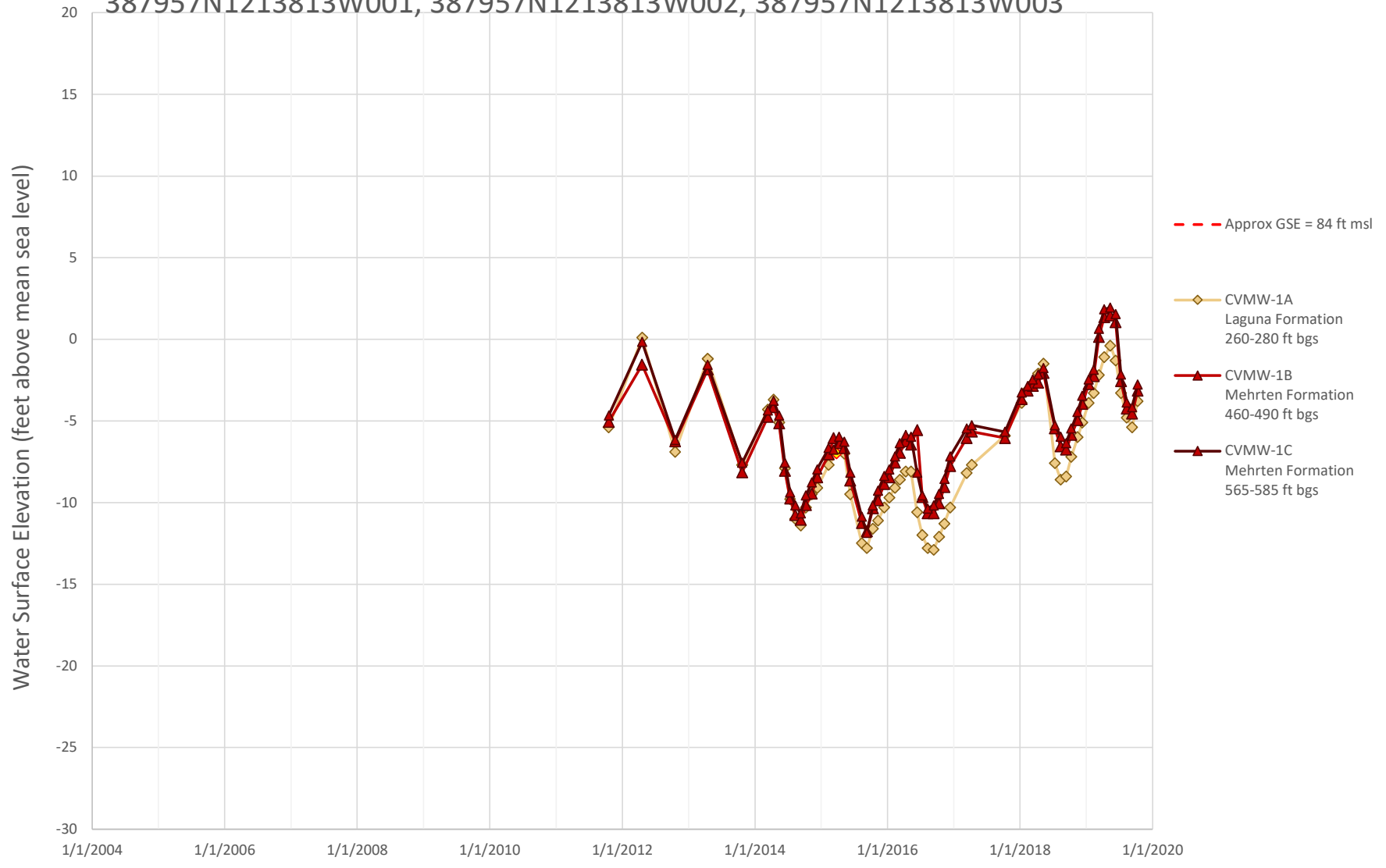


Local Well No. 50
W-77MW (Well 77) Nested Well
387816N1213870W001, 387816N1213870W002

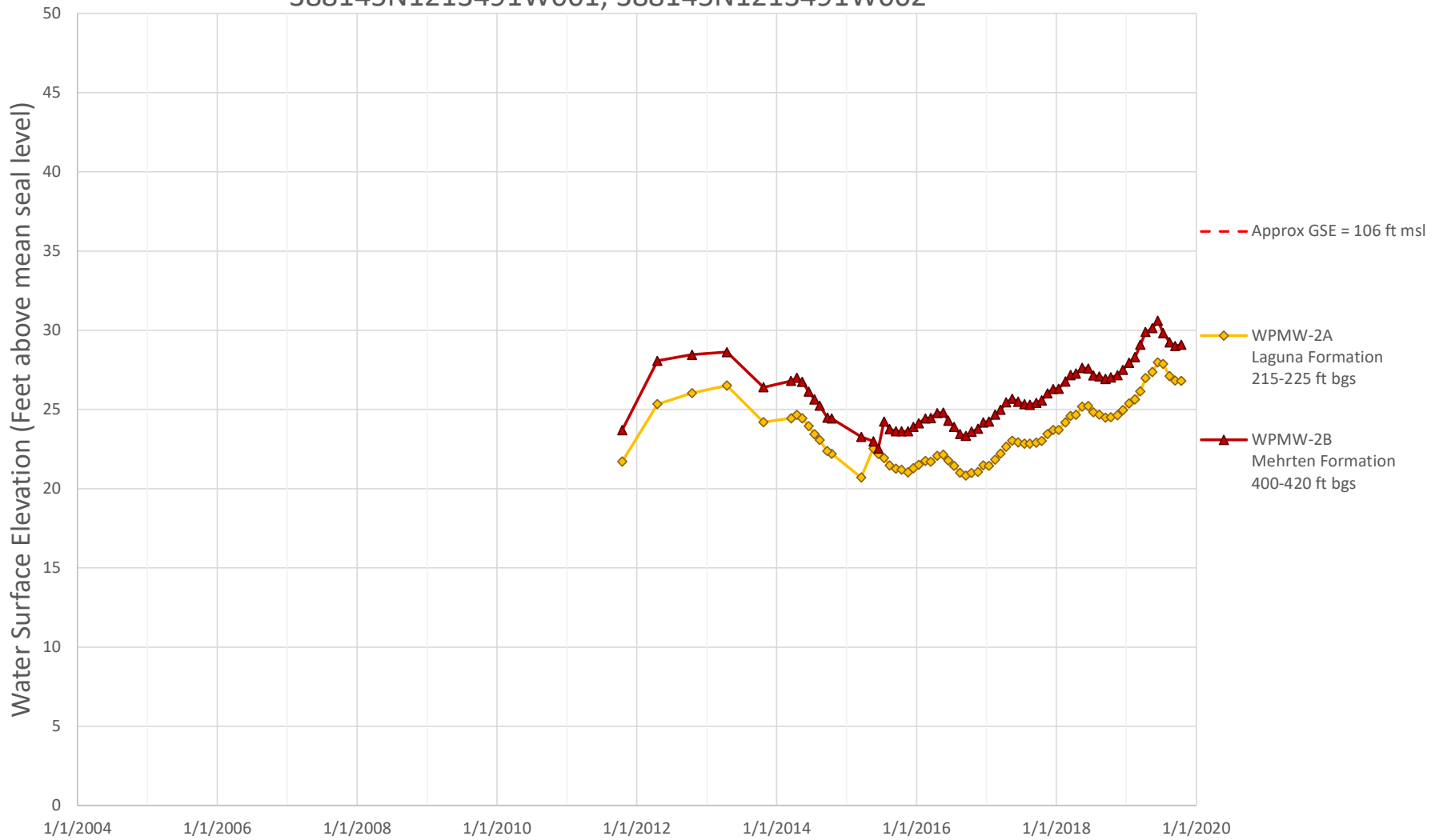


Local Well No. 52
CVMW-1 Nested Well

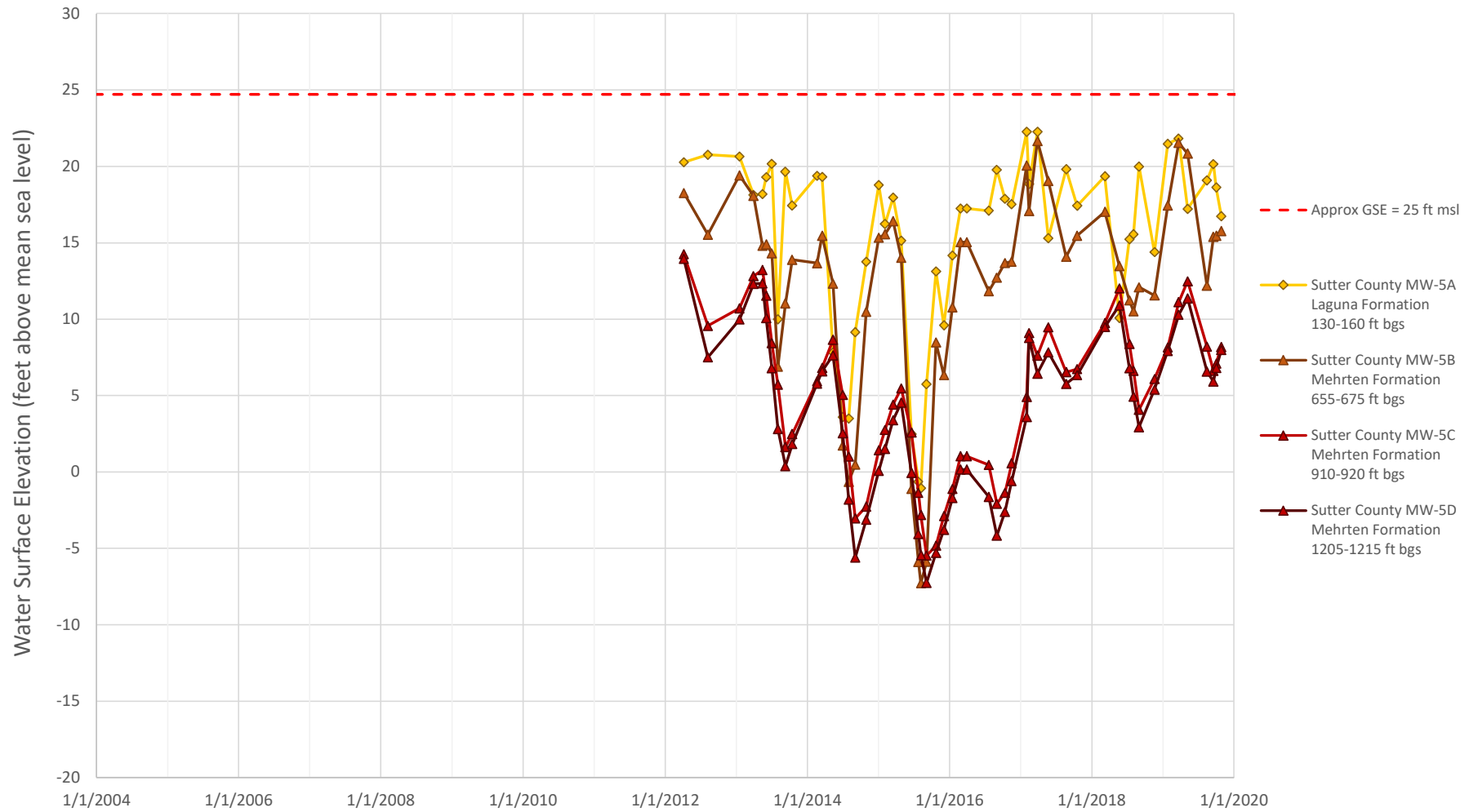
387957N1213813W001, 387957N1213813W002, 387957N1213813W003



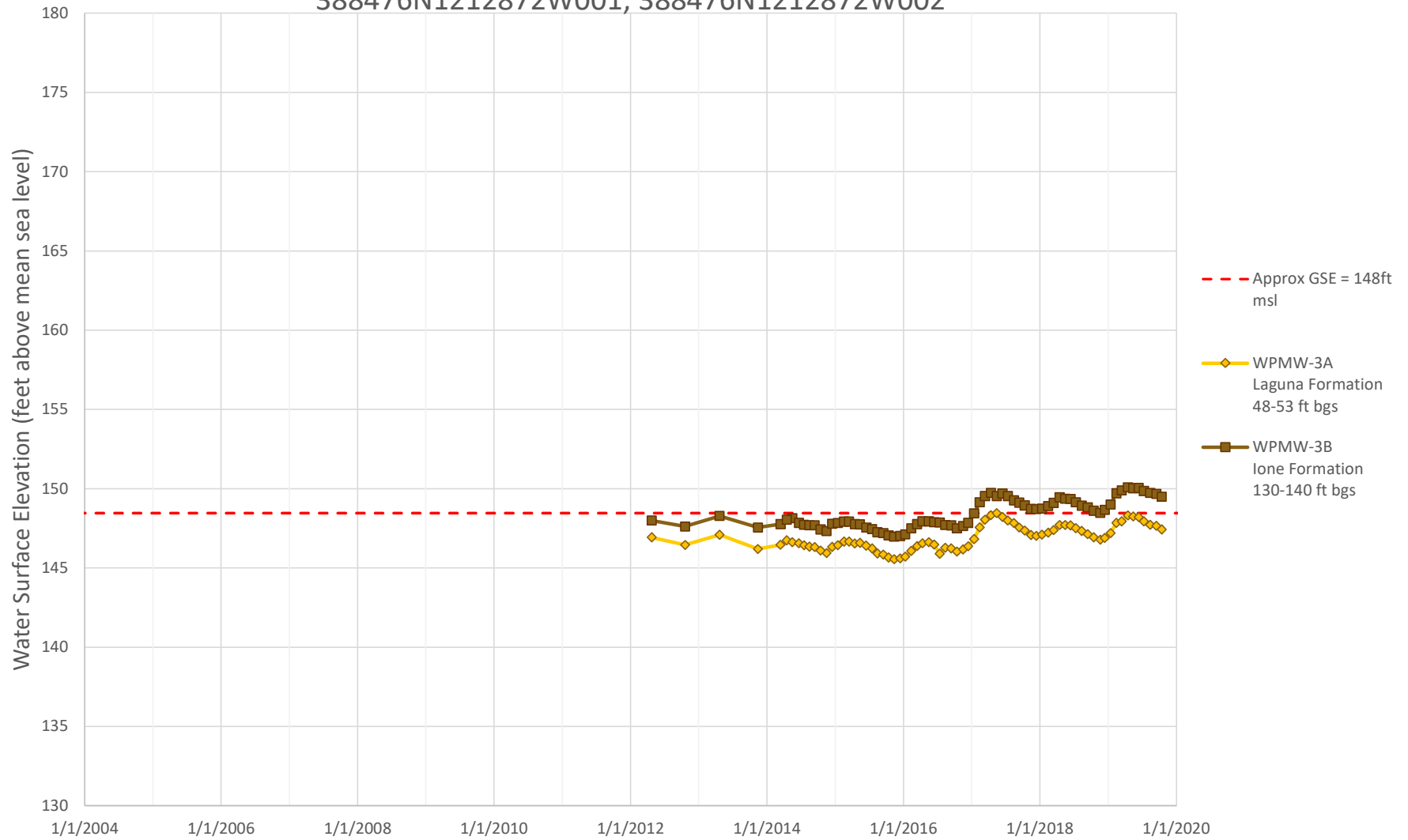
Local Well No. 60
WPMW-2 Nested Well
388145N1213491W001, 388145N1213491W002



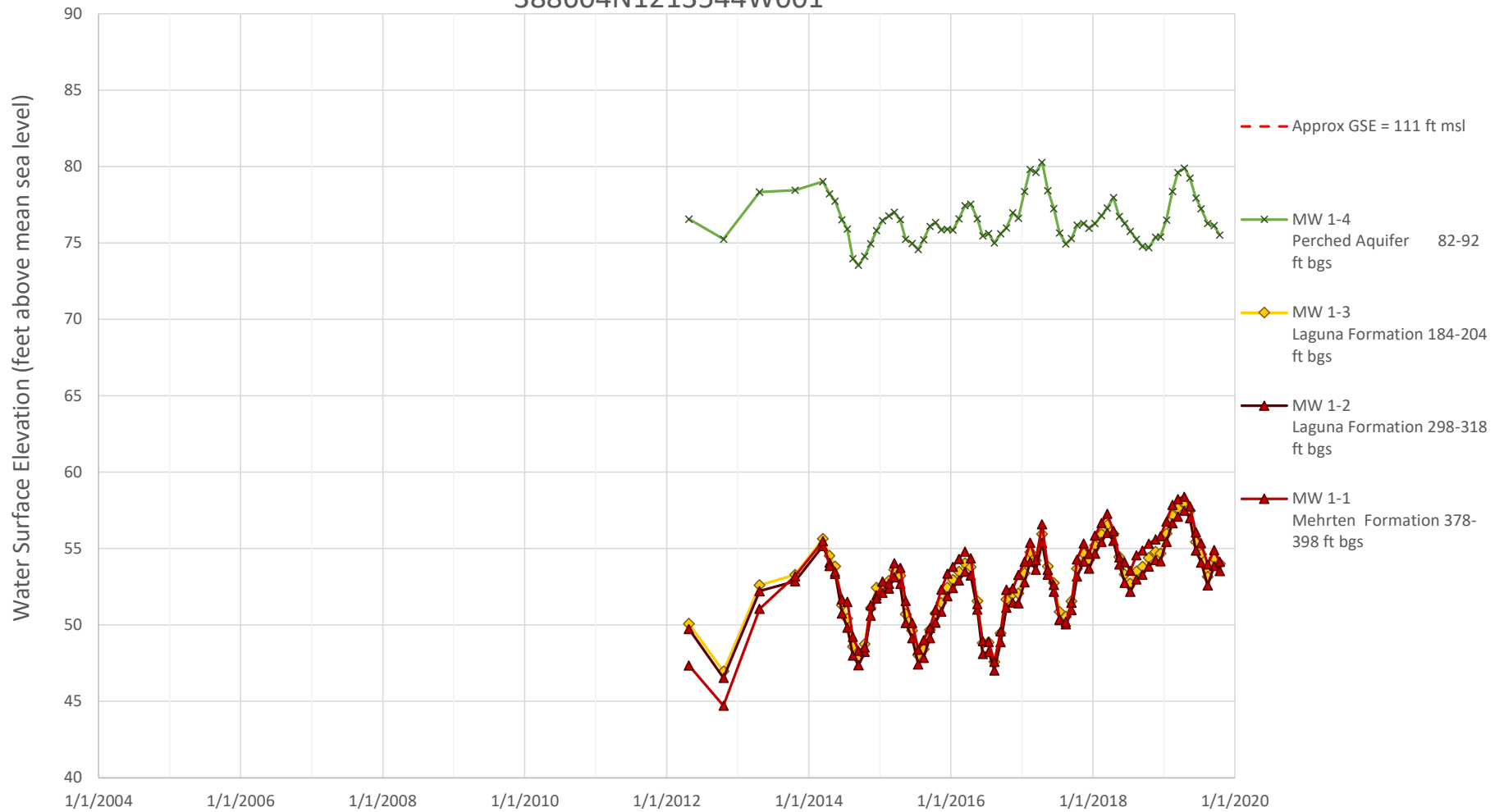
Local Well No. 61
Sutter County MW-5 Nested Well
388235N1216079W001, 388235N1216079W002, 388235N1216079W003, 388235N1216079W004



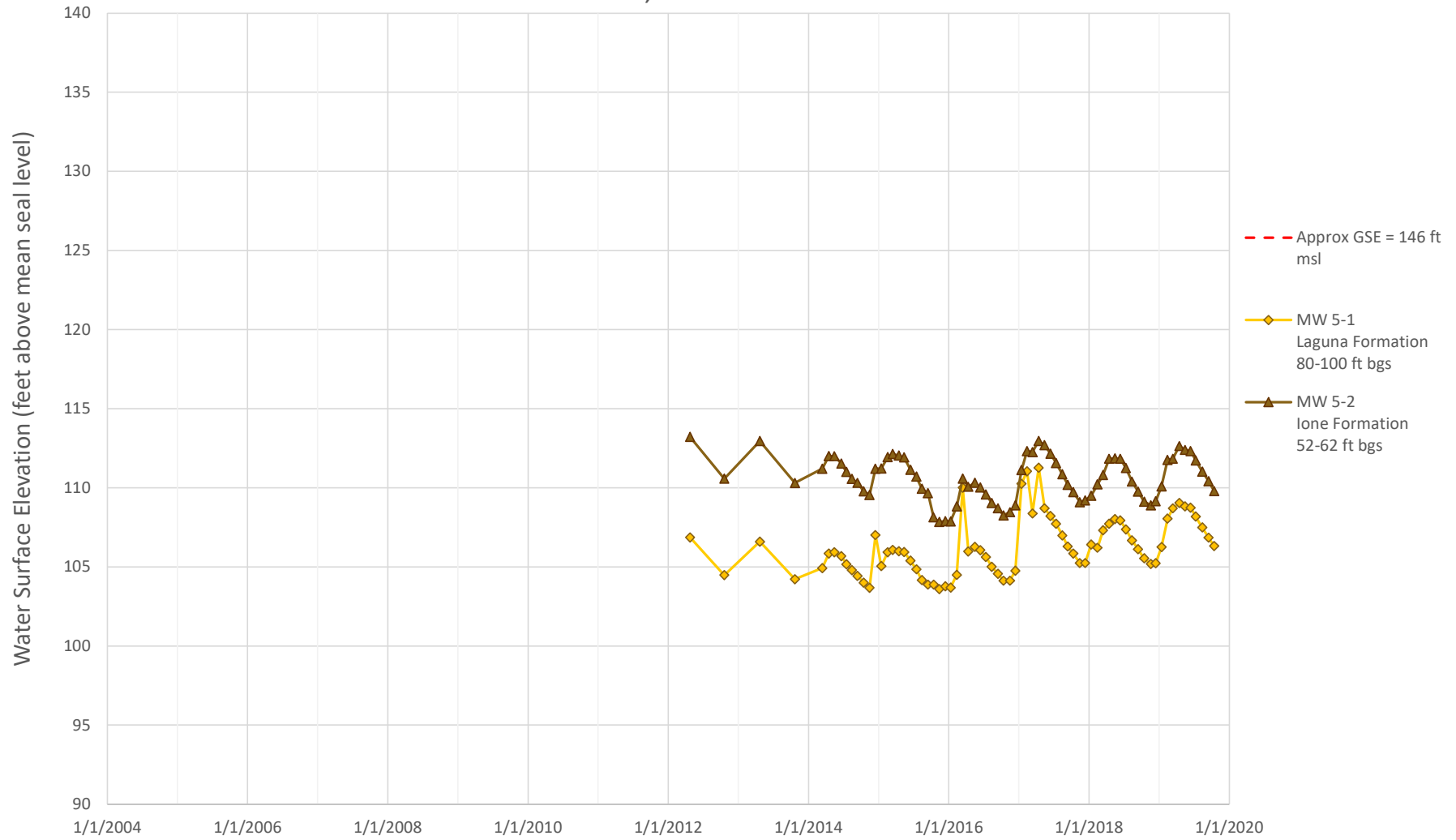
Local Well No. 63
WPMW-3 Nested Well
388476N1212872W001, 388476N1212872W002



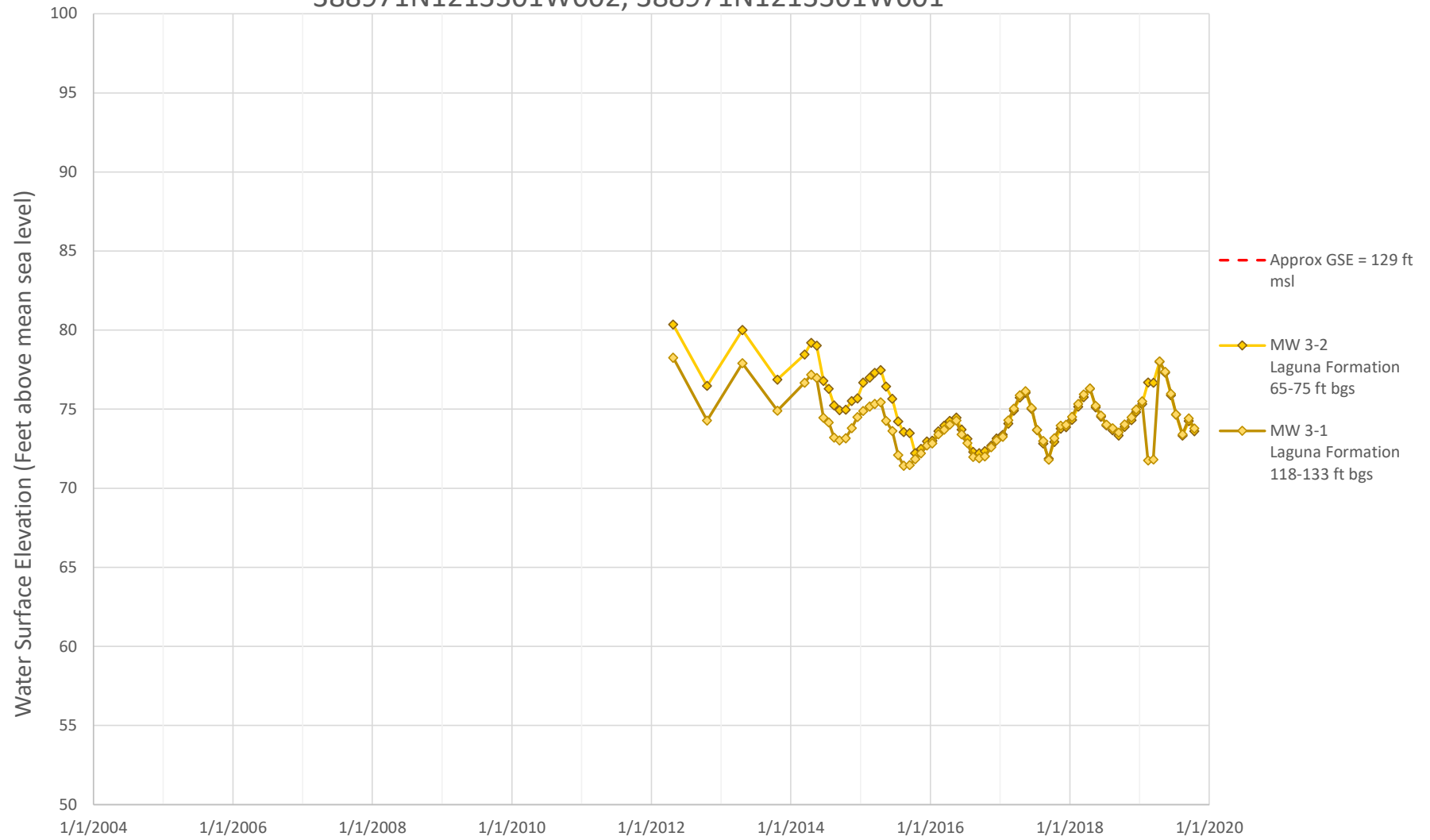
Local Well No. 65
MW-1 Nested Well
388604N1213544W004, 388604N1213544W003, 388604N1213544W002,
388604N1213544W001



Local Well No. 66
MW-5 Nested Well
388826N1213078W001, 388826N1213078W002

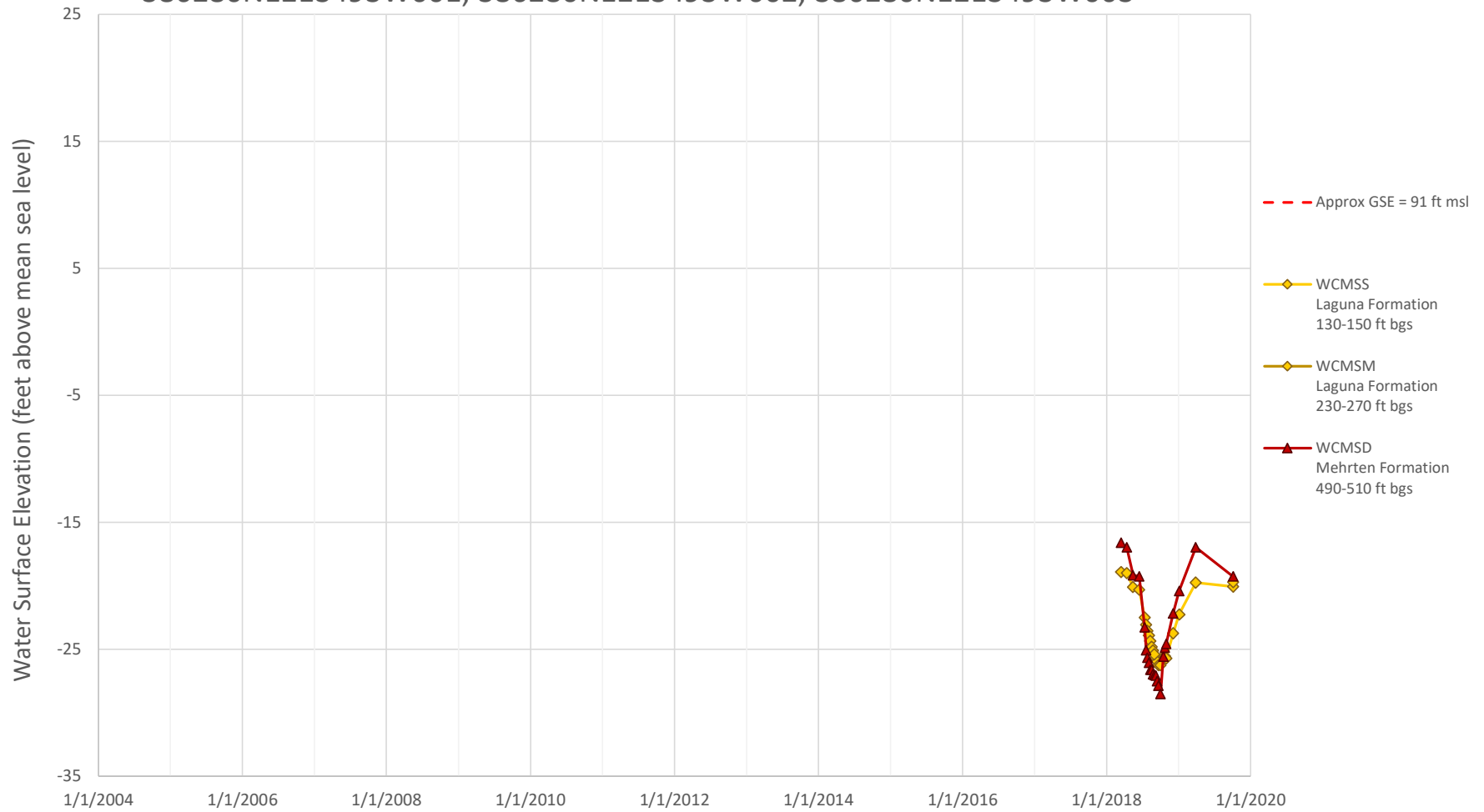


Local Well No. 70
MW-3 Nested Well
388971N1213301W002, 388971N1213301W001



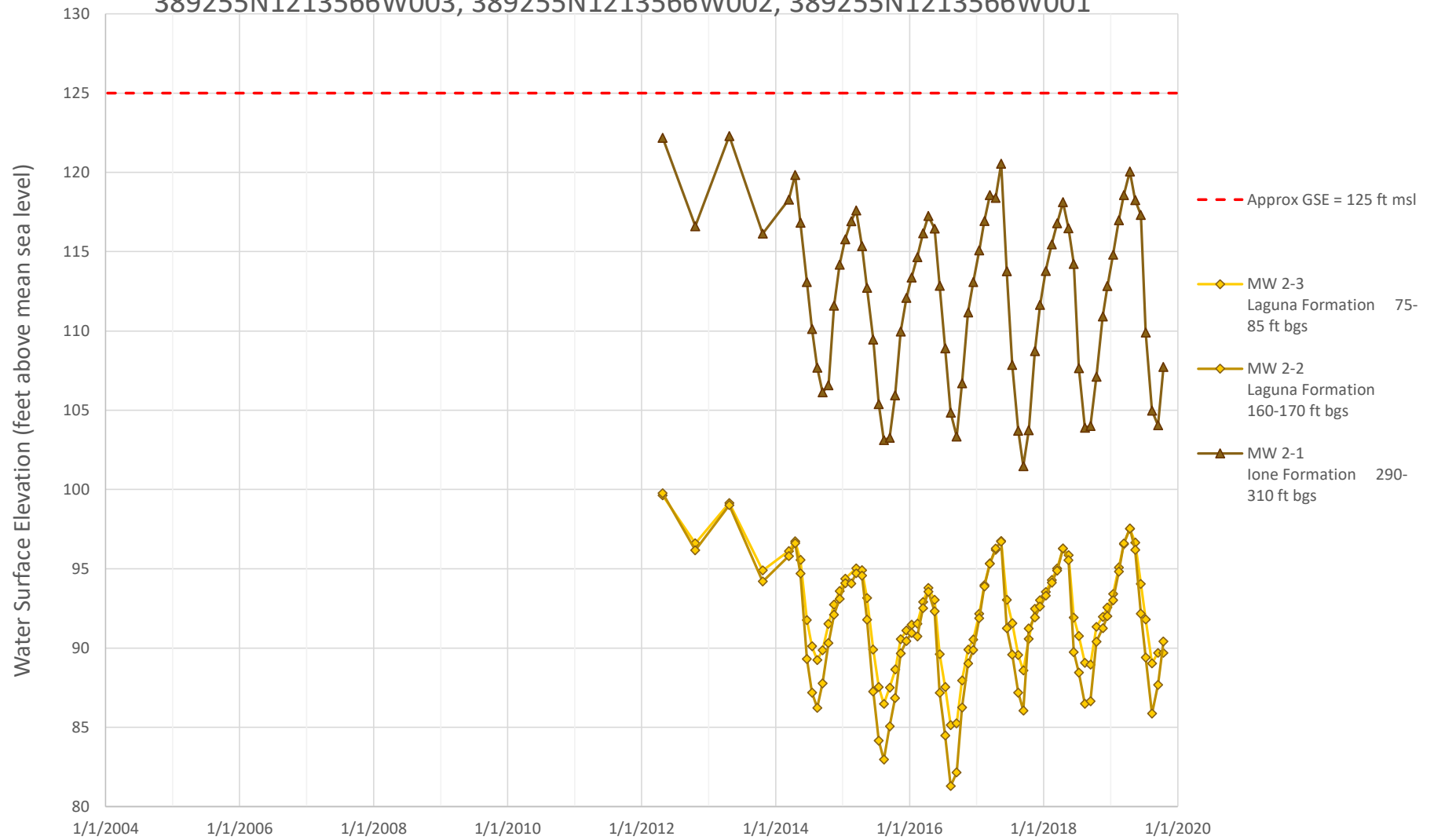
Local Well No. 71
WCMS (Churchill) Nested Wells

386280N1213493W001, 386280N1213493W002, 386280N1213493W003

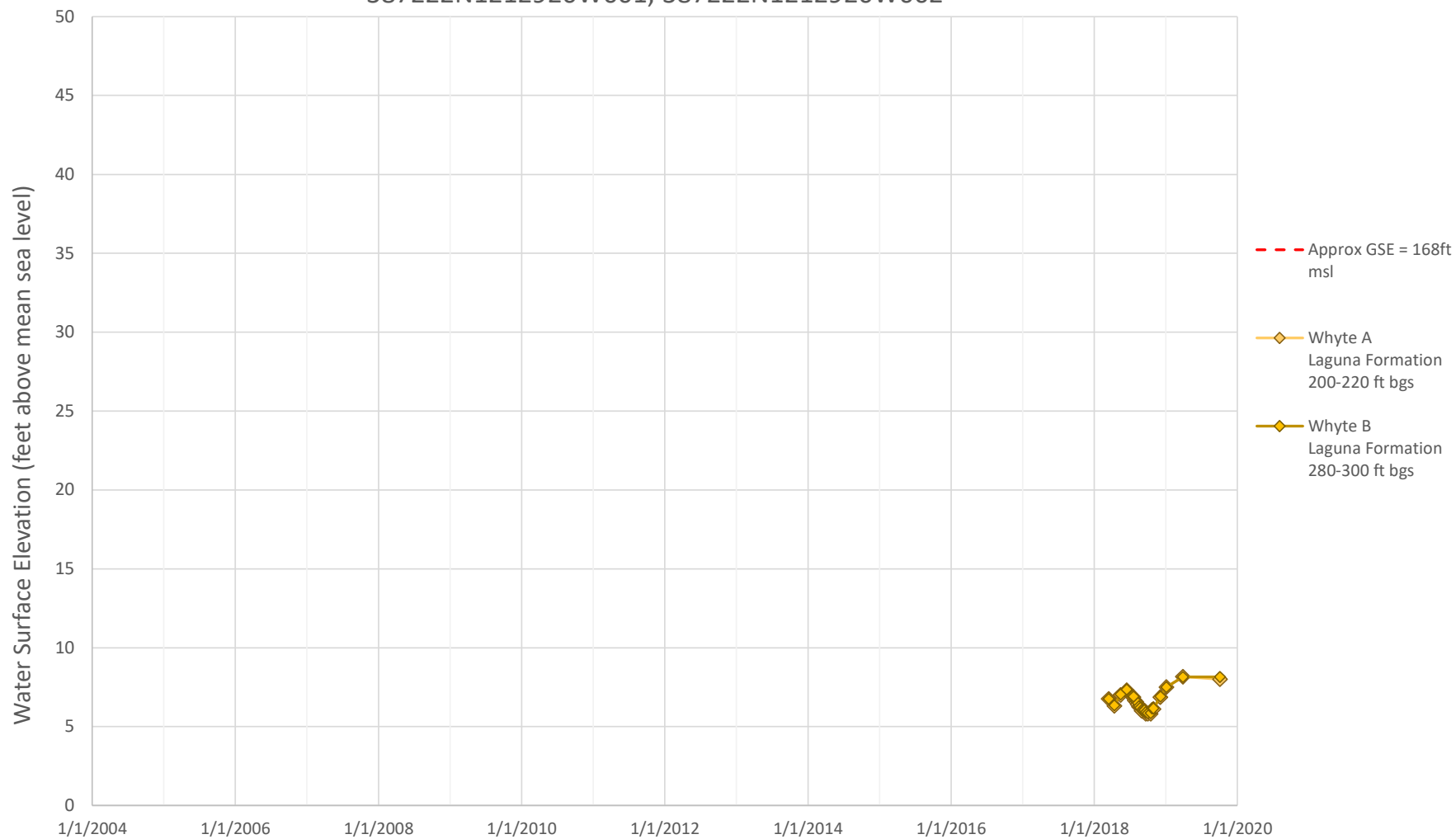


Local Well No. 75
MW-2 Nested Well

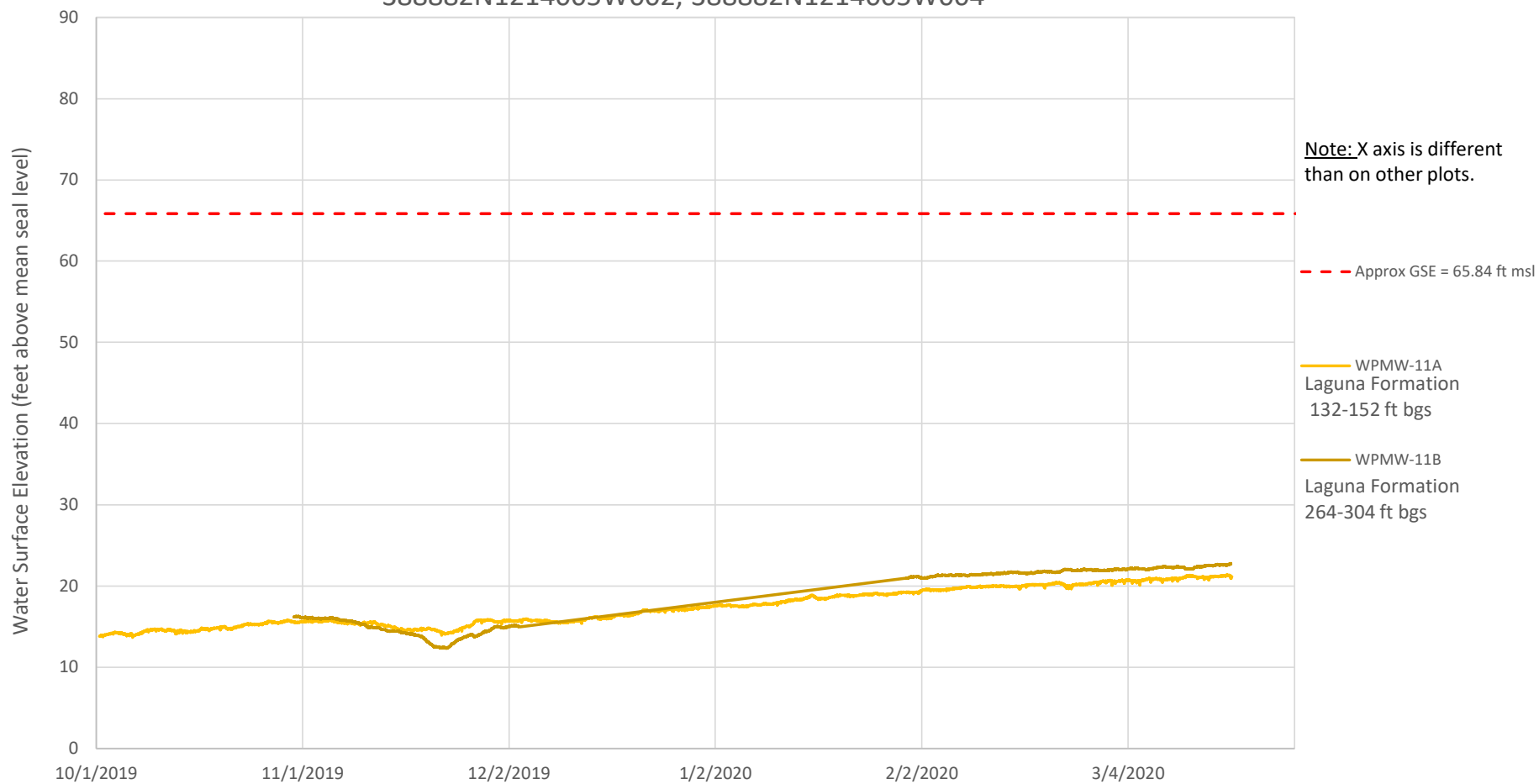
389255N1213566W003, 389255N1213566W002, 389255N1213566W001



Local Well No. 82
Whyte Nested Well Hydrograph
387222N1212920W001, 387222N1212920W002



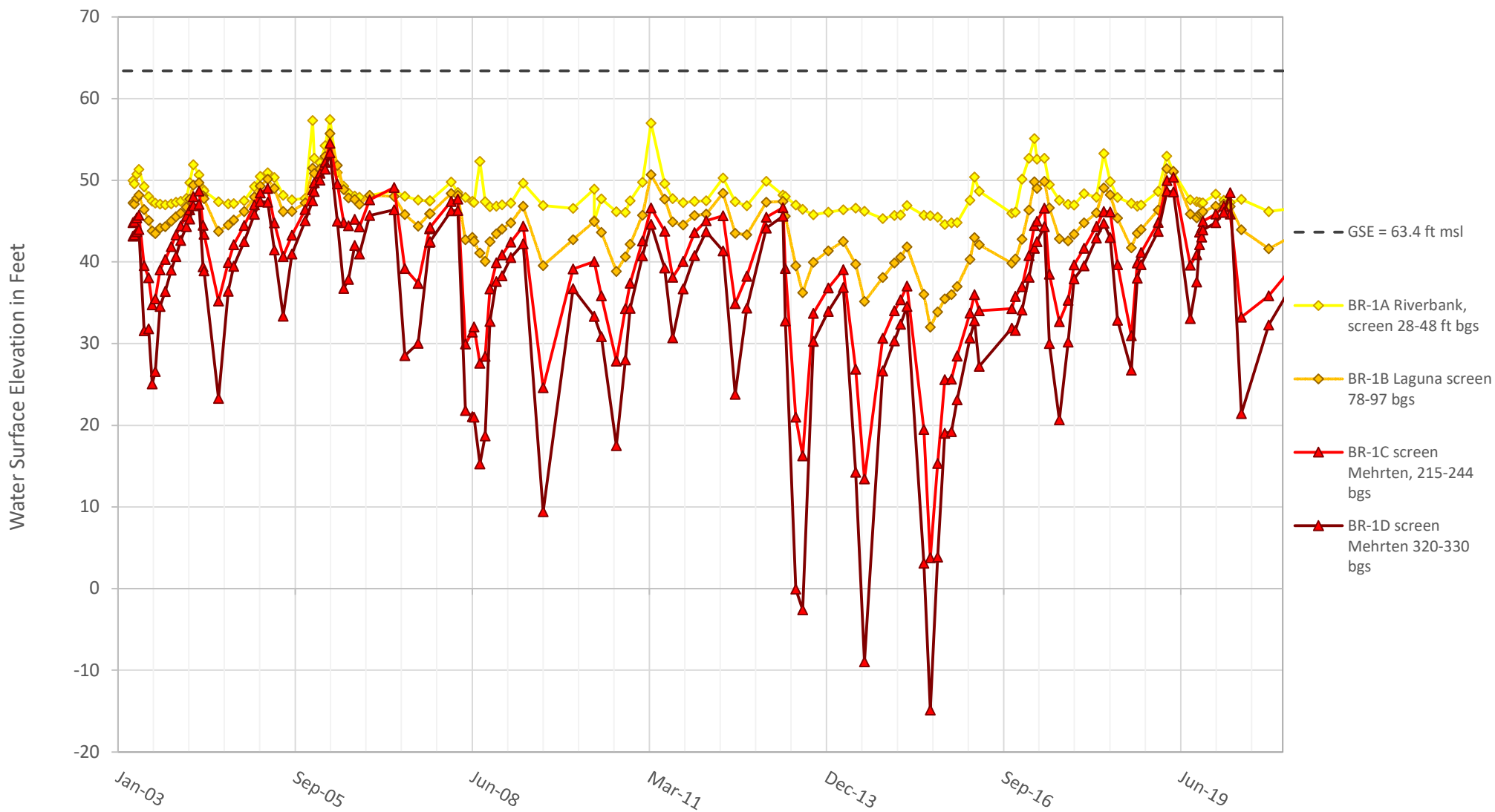
Well No. 90
WPMW-11A, WPMW-11B
388882N1214005W002, 388882N1214005W004



Local Well No.91
WPMW-12 Nested Well Hydrograph
388026N1214432W002, 388026N1214432W004



Local Well No.103 - BR-1



Appendix K: Ione Well Hydrographs

**NORTH AMERICAN SUBBASIN
GROUNDWATER SUSTAINABILITY PLAN**




**APPENDIX K
Ione or Central Valley Formation Well
Hydrographs**

December 2021

APPENDIX K

IONE OR CENTRAL VALLEY FORMATION WELLS WITH HYDROGRAPHS

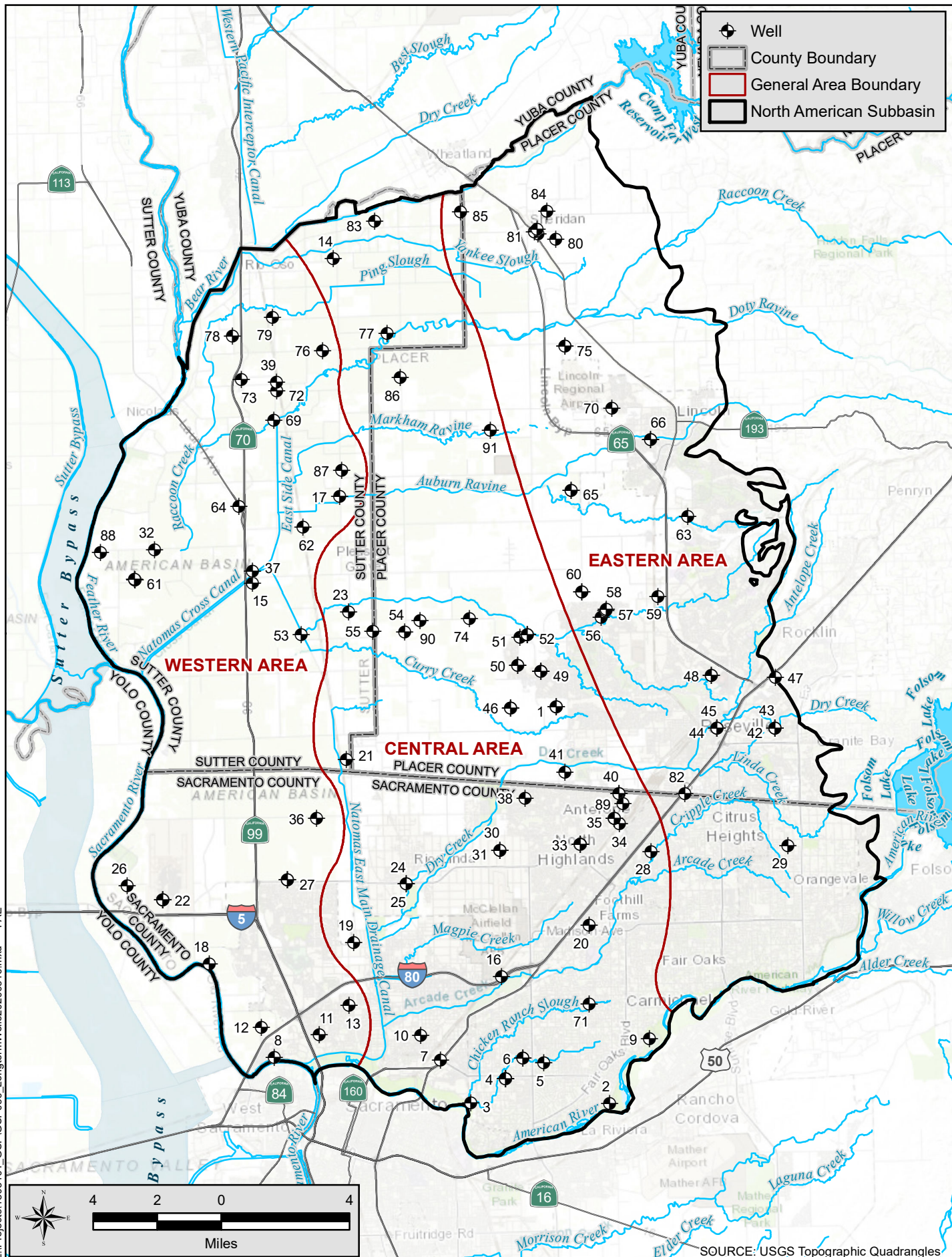
LEGEND:

	Laguna Formation Wells
	Mehrten Formation Wells
	Ione or Central Valley Fm. Wells

Short Term Hydrographs

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

Groundwater levels from multiple aquifers shown



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

SOURCE: USGS Topographic Quadrangles

North American Subbasin
Sutter, Placer and Sacramento Counties

North American Subbasin



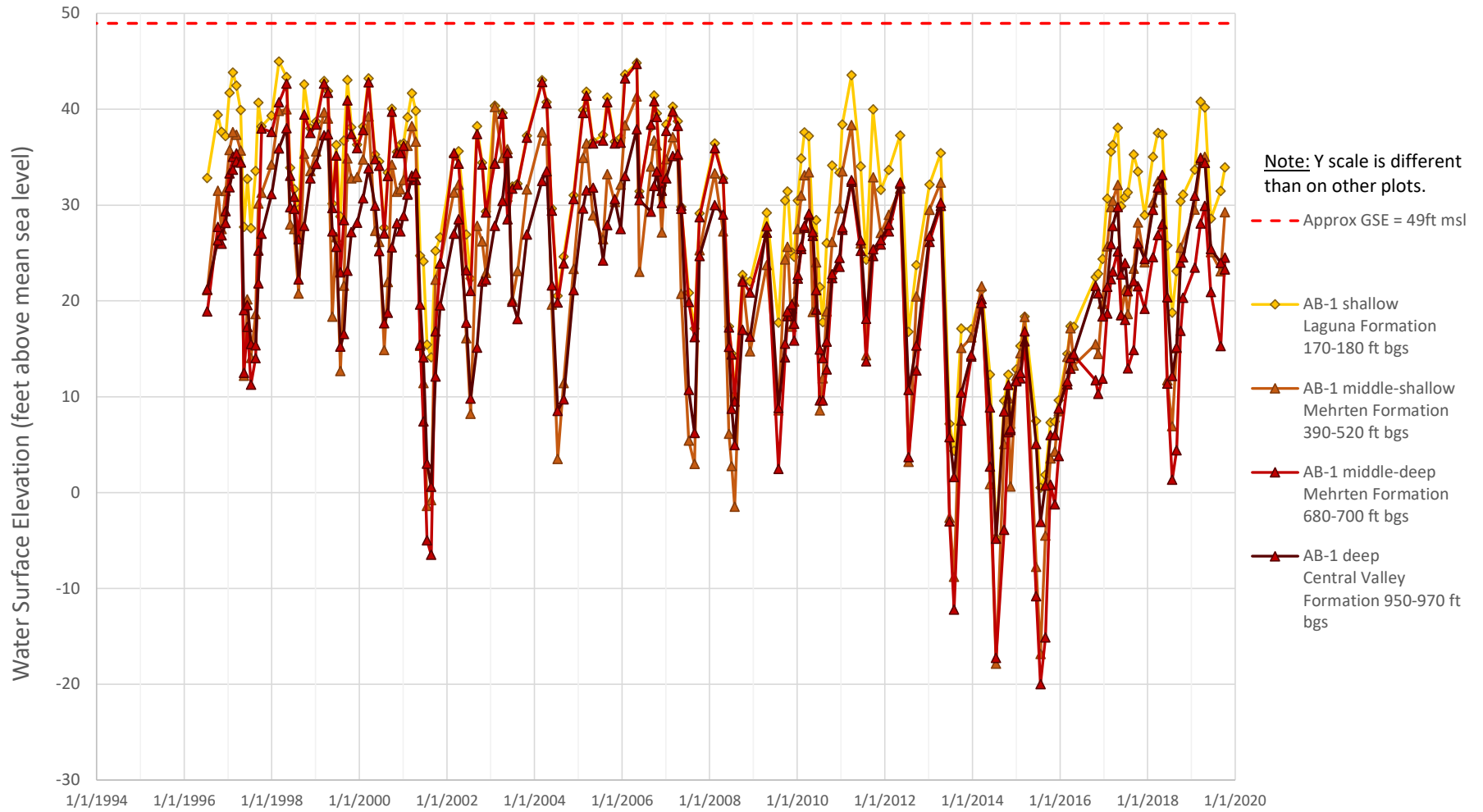
MARCH 2020

Long Term Wells

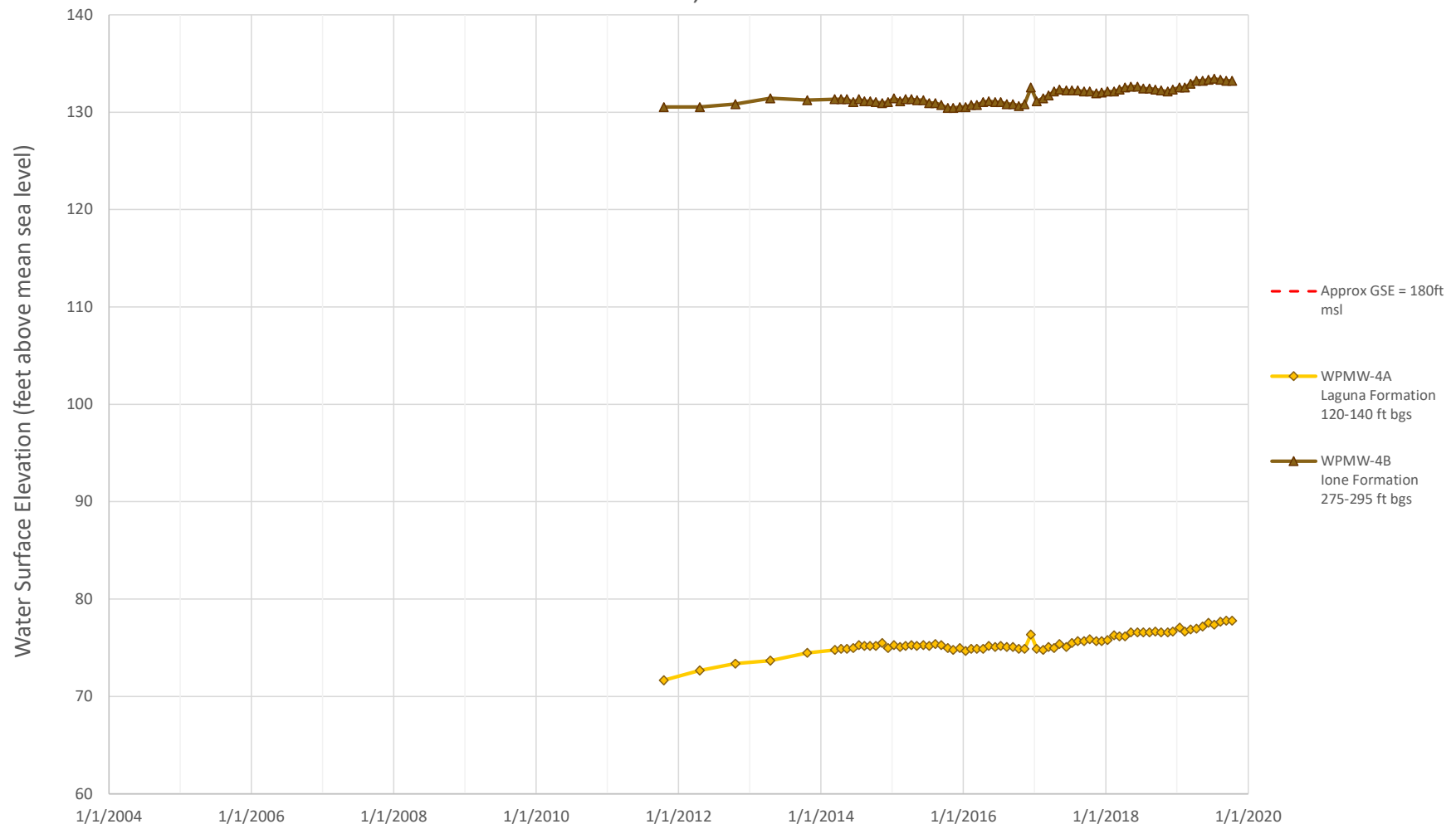
Local Well No. 39

AB-1 Nested Well

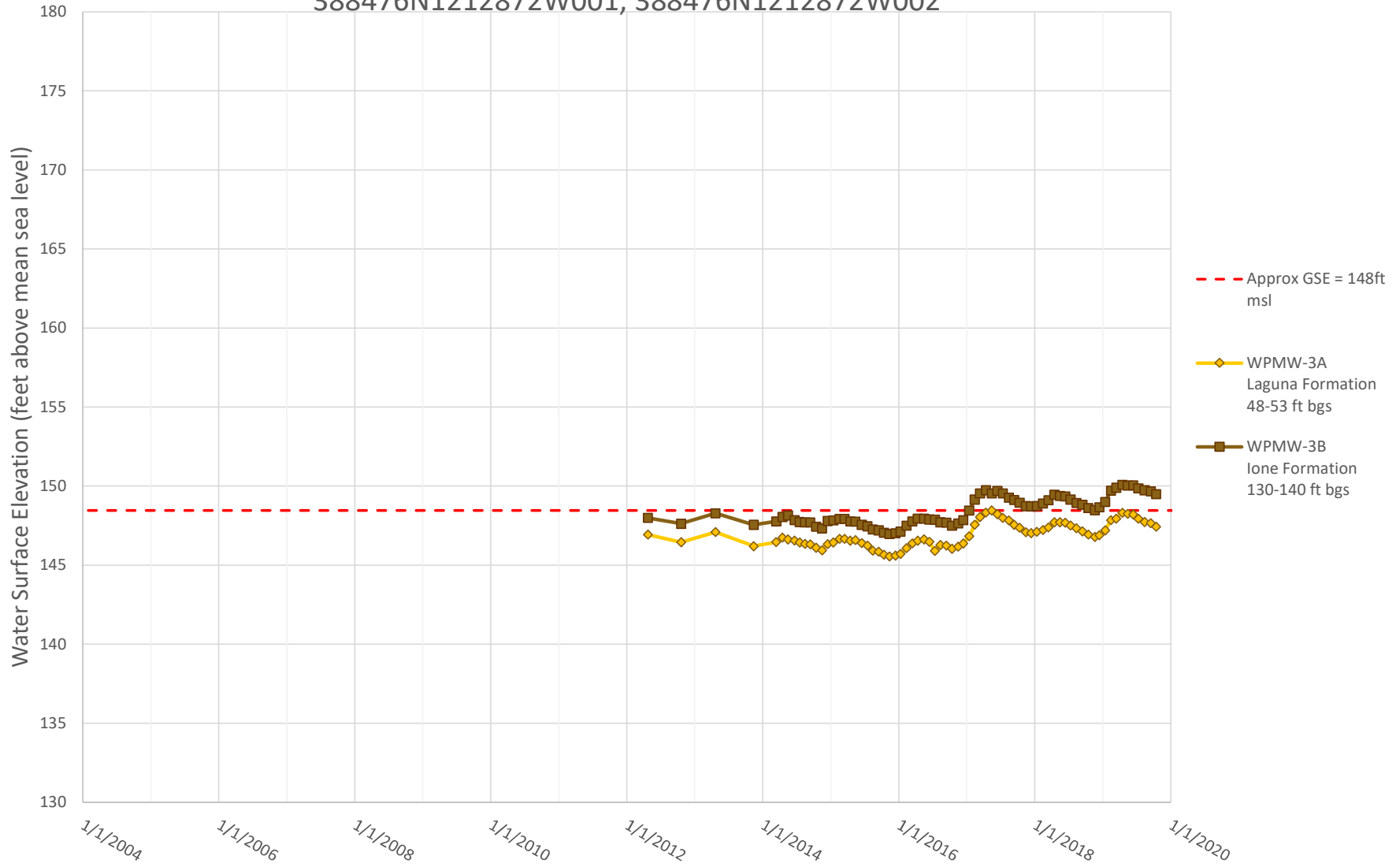
389116N1215238W003, 389117N1215238W001, 389116N1215238W002, 389116N1215238W001



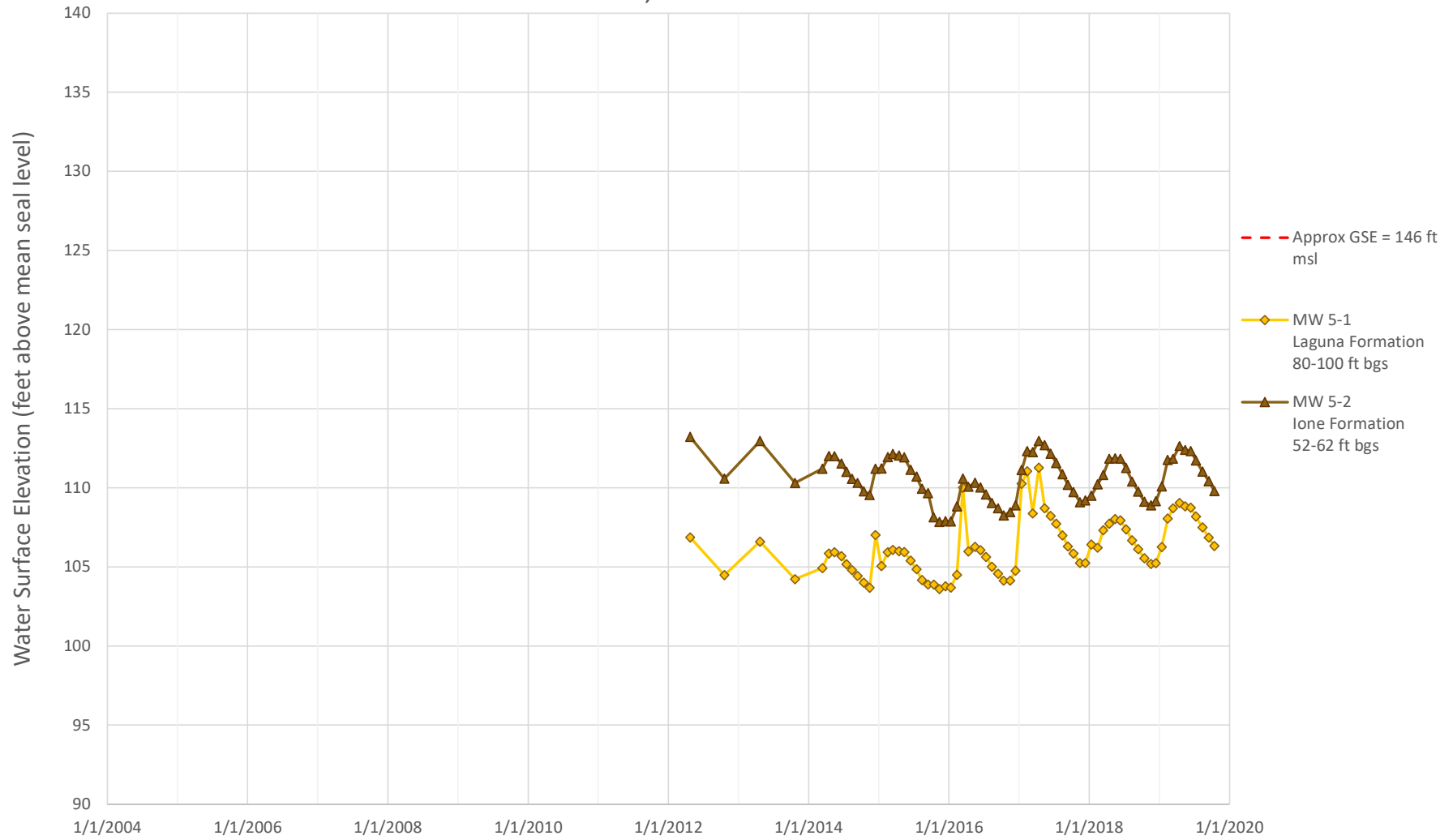
Local Well No. 48
WPMW-4 Nested Well
387755N1212753W001, 387755N1212753W002



Local Well No. 63
WPMW-3 Nested Well
388476N1212872W001, 388476N1212872W002



Local Well No. 66
MW-5 Nested Well
388826N1213078W001, 388826N1213078W002



Appendix L: Summary of Water Quality Detections

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

APPENDIX L Summary of Water Quality Detections

December 2021

WELL_ID	LATITUDE	LONGITUDE	AS_Date	AS	B_Date	B	CR6_Date	CR6	FE_Date	FE	MN_Date	MN	NO3N_Date	NO3N	TDS_Date	TDS
3100077-003	38.726602	-121.336563	7/10/2017	0	6/17/2010	0.1	8/14/2017	7.7	6/17/2010	280	6/17/2010	0	7/10/2017	0.76		
3100077-004	38.726284	-121.336527	7/10/2017	0	7/1/2010	0.1	8/14/2017	5.6	7/1/2010	100	7/1/2010	0	7/10/2017	1.66		
3100538-001	38.7505	-121.321972	3/23/2018	3.2	3/23/2018	0	4/20/2017	3	6/12/2019	130	3/23/2018	48	6/12/2019	2.5	3/23/2018	350
3104508-001	38.729952	-121.321616	4/20/2017	2.7	4/20/2017	0	4/20/2017	6.2	4/20/2017	0	4/20/2017	0	3/21/2019	1.2		
3105886-001	38.728166	-121.366194											3/21/2019	2.2		
3107126-001	38.91	-121.35											6/11/2004	2.2		
3110004-002	38.868006	-121.320358	1/9/2014	2.2	1/13/2003	0.5	11/20/2014	1.5	1/9/2014	100	1/9/2014	20	2/26/2019	3.6	1/15/2015	310
3110004-003	38.86973	-121.330213	4/27/2017	0	1/13/2003	0.3	11/20/2014	3.8	4/27/2017	0	4/27/2017	0	2/26/2019	1.5	4/27/2017	240
3110004-007	38.901373	-121.351602	5/8/2015	0	1/13/2003	0.4	1/13/2003	3.1	5/8/2015	150	5/8/2015	0	2/26/2019	4	5/8/2015	220
3110004-011	38.865086	-121.347261	11/16/2011	2.9			11/20/2014	4.4	11/16/2011	100	11/16/2011	0	3/1/2018	1.2	1/15/2015	200
3110004-012	38.867769	-121.338461	12/27/2011	2.7			4/27/2017	4.6	12/27/2011	0	12/27/2011	0	2/26/2019	2	1/15/2015	210
3110008-003	38.753022	-121.279492	1/8/2010	2	3/15/2005	0.11	11/20/2003	1	1/8/2010	100	1/8/2010	20	1/8/2010	2.5	1/8/2010	230
3110008-004	38.749947	-121.287425	11/20/2003	0			11/20/2003	1.7	11/20/2003	0	11/20/2003	0	11/20/2003	2.882	11/20/2003	260
3110008-005	38.750569	-121.285216	10/17/1995	0	8/24/2004	0.0006							8/24/2004	0.9	10/27/1992	460
3110008-006	38.736633	-121.277875	8/25/2016	0	3/15/2005	1.3	11/20/2003	3.2	8/25/2016	140	8/25/2016	0	8/23/2018	1.6	9/5/2013	400
3110008-007	38.726493	-121.258205	8/25/2016	0	3/15/2005	0.57	11/20/2003	3.7	8/25/2016	0	8/25/2016	0	8/23/2018	0.69	9/5/2013	310
3110008-008	38.805938	-121.33588	8/23/2018	0	3/15/2005	0.71	10/22/2002	3.5	8/23/2018	120	8/23/2018	0	8/23/2018	1.1	8/23/2018	720
3110008-015	38.785813	-121.332225	8/25/2016	0					8/25/2016	0	8/25/2016	0	8/23/2018	1.2	8/23/2018	350
3110025-005	38.818889	-121.31	9/12/2019	3.513	10/22/2003	0.81	8/21/2017	4.2	9/12/2019	0	9/12/2019	0	9/12/2019	2.98	9/12/2019	220
3110030-001	38.898247	-121.338122	6/20/1990	5	8/14/2002	0.4			6/20/1990	15	6/20/1990	5	6/20/1990	3	6/20/1990	252
3110040-001	38.75	-121.34722	7/9/2002	3.6	5/16/2001	0.33	12/12/2001	0	7/9/2002	170	7/9/2002	0	7/9/2002	1.1	7/9/2002	220
3110040-002	38.75	-121.34444	7/9/2002	4.1	5/16/2001	0	12/12/2001	0	7/9/2002	0	7/9/2002	0	7/9/2002	1.6	7/9/2002	200
3110048-001	38.983062	-121.375659	4/9/2018	2.1	4/22/2009	0.34	7/13/2016	2.2	4/9/2018	97.1	4/9/2018	3.71	7/18/2019	2.76	4/9/2018	247
3110048-002	38.980075	-121.369185	4/9/2018	2.54	4/22/2009	0.61	7/13/2016	2.1	4/9/2018	0	4/9/2018	1.47	4/9/2018	1.29	4/9/2018	249
3400117-001	38.602797	-121.50572											8/12/2019	0		
3400123-001	38.672825	-121.623796	11/27/2006	7					8/23/2007	100	8/23/2007	40	5/6/2019	0	8/23/2007	250
3400124-001	38.66	-121.33														
3400131-001	38.671667	-121.611111							6/15/1995	113	6/15/1995	32	11/28/2018	3.58		
3400139-002	38.689662	-121.589795	5/13/2019	40			5/13/2019	0	8/12/2019	330	8/12/2019	250	5/24/2007	0.5	8/12/2019	460
3400139-003	38.685083	-121.59011											5/24/2007	0.5		
3400139-004	38.643894	-121.493168											2/3/2005	0.5		
3400171-001	38.64	-121.53														
3400173-002	38.640638	-121.483861	2/14/2017	5.2	2/20/2002	0.16	2/14/2017	8.4	2/14/2017	0	2/14/2017	0	2/4/2019	2.1	2/14/2017	230
3400173-003	38.654819	-121.477561	2/15/2017	4.6	2/20/2002	0.16	2/15/2017	6.2	2/15/2017	100	2/15/2017	0	2/4/2019	0.63	2/15/2017	310
3400173-004	38.643894	-121.493168	2/4/2019	4.3			2/4/2019	5.5	5/21/2018	0	5/21/2018	0	2/4/2019	4.3	5/21/2018	450
3400173-005	38.646271	-121.502342	2/15/2017	3.8	2/20/2002	0.16	2/15/2017	8.7	2/15/2017	0	2/15/2017	0	2/15/2017	0.48	2/15/2017	200
3400179-001	38.6575	-121.378333	3/15/2018	0	3/15/2018	0.21	10/16/2014	3.6	3/15/2018	0	3/15/2018	0	3/20/2019	0.46	3/20/2019	190
3400179-002	38.658333	-121.380555	4/20/2017	0	4/20/2017	0	10/16/2014	4.5	4/20/2017	0	4/20/2017	0	3/20/2019	0.47	4/20/2017	190
3400190-001	38.675861	-121.326329	6/20/2013	0	6/20/2013	0.29	10/16/2014	5.7	6/20/2013	0	6/20/2013	0	3/20/2019	2.8	3/20/2019	340
3400191-001	38.65525	-121.379888	3/23/2018	2.6	3/23/2018	0	10/29/2014	0	3/23/2018	510	3/23/2018	0	3/20/2019	6.6	3/20/2019	300
3400191-002	38.685618	-121.361651	3/23/2018	2.1	3/23/2018	0	10/29/2014	0	3/23/2018	730	3/23/2018	0	3/20/2019	4.4	3/23/2018	230
3400191-003	38.656327	-121.378432	3/23/2018	0	3/23/2018	0	10/29/2014	0	3/23/2018	300	3/23/2018	0	3/20/2019	4.4	3/23/2018	250
3400196-001	38.62	-121.44														
3400225-001	38.61	-121.53	8/7/2001	9.1					8/7/2001	200	8/7/2001	350	8/7/2001	0		
3400226-001	38.605089	-121.522873	7/23/2004	0	7/23/2004	0			7/23/2004	0	7/23/2004	0	3/20/2019	0		
3400258-001	38.67	-121.37														
3400260-001	38.688055	-121.359444	2/28/2008	2.1					2/28/2008	0	2/28/2008	0	2/28/2008	0.54	2/28/2008	210
3400261-001	38.67	-121.34	8/20/2003	2					8/20/2003	0	8/20/2003	0	9/23/2004	2.7		
3400262-001	38.68	-121.44	4/28/2003	4					4/28/2003	0	4/28/2003	0	4/28/2003	0.9		
3400263-001	38.62	-121.48	2/28/2008	5.8					2/28/2008	0	2/28/2008	0	2/28/2008	0.5	2/28/2008	230
3400264-001	38.72	-121.39	10/2/2001	0					10/2/2001	0	10/2/2001	0	10/2/2001	0.5		
3400265-001	38.7	-121.36														
3400276-001	38.65	-121.54														
3400278-001	38.648694	-121.346694	8/10/2004	3.6	8/10/2004	0			8/10/2004	0	8/10/2004	0	12/18/2018	1.8		
3400278-002	38.650597	-121.344144	8/10/2004	3.6	8/10/2004	0			8/10/2004	0	8/10/2004	0	6/22/2017	0		
3400281-002	38.634611	-121.403111	3/12/2012	2.8								20	3/12/2012	0.5		

WELL_ID	LATITUDE	LONGITUDE	AS_Date	AS	B_Date	B	CR6_Date	CR6	FE_Date	FE	MN_Date	MN	NO3N_Date	NO3N	TDS_Date	TDS
3400283-001	38.648694	-121.346694							3/15/2010	0	3/15/2010	0	4/30/2018	7	3/15/2010	460
3400284-001	38.692607	-121.32344							7/28/2008	0	7/28/2008	0	4/16/2008	1.7	7/28/2008	300
3400298-001	38.592112	-121.327685											2/11/2009	0		
3400347-001	38.684099	-121.322031	6/17/2010	3.6	6/17/2010	3.1			6/17/2010	250	6/17/2010	10	6/24/2010	0	6/21/2007	290
3400356-001	38.684099	-121.322031											5/13/2019	0.4		
3400368-001	38.67	-121.23														
3400371-001	38.72	-121.39											7/20/2000	0.93		
3400372-001	38.72	-121.38														
3400383-001	38.618983	-121.536935	7/24/2008	3.1	6/28/2007	0			6/28/2007	0	6/28/2007	0	3/20/2019	0		
3400385-001	38.72	-121.39	10/2/2001	0					10/2/2001	0	10/2/2001	0	10/2/2001	0.93		
3400396-001	38.697778	-121.616944											3/20/2019	0		
3400406-001	38.619087	-121.53506	6/22/2007	5.8	6/3/2004	0			6/3/2004	0	6/3/2004	0	3/20/2019	0		
3400416-001	38.619722	-121.538333											11/29/2017	0		
3400456-001	38.698055	-121.43	9/18/2019	5	5/12/2016	0	12/30/2014	0	5/12/2016	0	5/12/2016	0	8/15/2019	5.5		
3400459-001	38.576666	-121.401666											8/2/2019	6.3		
3410001-001	38.606839	-121.3982	9/5/2017	2.2	10/23/2002	0	4/23/2014	6.5	9/5/2017	100	9/5/2017	20	7/15/2019	2.5	9/5/2017	230
3410001-002	38.59783	-121.398024	7/18/2017	0	10/23/2002	0	12/17/2013	4.8	10/18/2017	100	10/18/2017	20	7/15/2019	3.9	7/18/2017	320
3410001-003	38.6175	-121.411389							4/14/1987	30	4/14/1987	10				
3410001-004	38.611483	-121.410107	6/19/2014	2.1	5/6/2002	0	4/17/2014	4.4	6/19/2014	0	6/19/2014	0	8/10/2015	0.52	6/19/2014	210
3410001-005	38.623478	-121.396638	6/8/2011	2.3	11/17/2004	0	7/8/2002	6.3	6/8/2011	0	6/8/2011	0	7/30/2013	2.5	6/8/2011	190
3410001-006	38.613889	-121.38	1/11/1993	4					1/11/1993	71	1/11/1993	10	1/11/1993	0.79	1/11/1993	190
3410001-007	38.610999	-121.363391	9/27/2017	2	10/23/2002	0	11/12/2014	5.4	9/27/2017	100	9/27/2017	20	9/16/2019	3.9	9/27/2017	250
3410001-008	38.631667	-121.385556	10/11/1995	3					10/11/1995	490	10/11/1995	0	1/8/1997	0.54	2/25/1991	200
3410001-009	38.616331	-121.403703	12/15/2005	2	10/21/2002	0	10/21/2002	0	3/3/2005	1600	3/3/2005	20	1/23/2006	0.7	3/3/2005	190
3410001-010	38.608099	-121.408153	9/12/2017	2.5	10/21/2002	0	4/17/2014	4.4	9/12/2017	100	9/12/2017	20	6/13/2018	1.7	9/12/2017	290
3410001-011	38.619863	-121.396184	9/14/2017	2.7	10/21/2002	0	10/21/2002	0	9/14/2017	100	9/14/2017	20	7/30/2019	1.4	9/14/2017	230
3410001-012	38.617662	-121.403695	12/12/2017	2.1	10/21/2002	0	4/17/2014	7	2/6/2018	100	12/12/2017	20	4/10/2018	2.1	12/12/2017	340
3410001-013	38.598939	-121.370714	9/26/2017	2.9	6/23/2004	0	4/16/2014	3	9/26/2017	100	9/26/2017	20	7/11/2019	1.3	9/26/2017	180
3410001-014	38.61171	-121.386048	6/27/2006	2.8	10/21/2002	0	10/21/2002	3.7	9/14/2006	0	9/14/2006	0	3/12/2009	1.3	9/26/2006	220
3410001-015	38.59781	-121.381308	9/19/2017	2.6	10/17/2002	0	4/23/2014	4.5	9/19/2017	100	9/19/2017	20	7/11/2019	2.7	9/19/2017	170
3410001-016	38.631327	-121.37485	9/4/2014	0	10/21/2002	0	4/14/2014	3.2	9/4/2014	0	9/4/2014	0	7/12/2016	0	9/4/2014	190
3410001-017	38.61981	-121.403732	8/27/2014	0	10/21/2002	0	11/17/2014	5.2	8/27/2014	0	8/27/2014	0	2/8/2016	0.53	8/27/2014	160
3410001-018	38.623854	-121.374359	9/19/2017	2	10/17/2002	0	11/6/2014	6.6	9/19/2017	100	9/19/2017	20	7/11/2019	5.4	9/19/2017	350
3410001-019	38.597831	-121.359623	9/25/2017	2	10/23/2002	0	4/16/2014	3.1	9/25/2017	100	9/25/2017	20	7/11/2019	2.1	9/25/2017	270
3410001-020	38.618079	-121.359205	9/19/2017	2	10/15/2002	0	4/14/2014	4.8	9/19/2017	100	9/19/2017	20	7/10/2019	3.4	9/19/2017	340
3410001-021	38.615256	-121.419986	9/12/2017	2.6	10/17/2002	0	4/21/2014	7.9	9/12/2017	100	9/12/2017	20	7/29/2019	2.1	9/12/2017	250
3410001-022	38.604549	-121.42274	9/11/2017	2.5	10/17/2002	0	4/21/2014	2.1	9/11/2017	100	9/11/2017	20	7/25/2019	0.71	9/11/2017	300
3410001-023	38.614722	-121.349444	2/5/1998	0					2/5/1998	0	2/5/1998	40	5/16/2000	1	2/5/1998	240
3410001-024	38.641255	-121.370271	2/19/2001	0					2/19/2001	0	2/19/2001	0	2/19/2001	2.3	2/19/2001	280
3410001-025	38.60046	-121.359118	9/19/2017	2.7	10/21/2002	0	11/7/2013	1.4	9/19/2017	100	9/19/2017	20	7/26/2018	1	9/19/2017	130
3410001-026	38.627091	-121.384097	2/23/2005	2	10/21/2002	0	10/21/2002	0	2/23/2005	540	2/23/2005	20	2/23/2005	2	2/23/2005	220
3410001-027	38.605146	-121.390988	9/27/2017	2.5	11/7/2002	0	4/21/2014	7.1	9/27/2017	100	9/27/2017	20	7/17/2018	4.2	9/27/2017	260
3410001-028	38.63562	-121.381097	8/21/2014	0	11/17/2004	0	2/11/2015	11	8/21/2014	0	8/21/2014	0	8/21/2014	2.2	8/21/2014	240
3410001-029	38.630252	-121.397575	10/3/2017	2.3	10/7/2002	0.2	4/16/2014	6.6	10/3/2017	100	10/3/2017	20	10/3/2017	1.8	10/3/2017	230
3410001-030	38.617802	-121.424022	9/26/2017	2.4	11/17/2004	0	4/17/2014	7.3	9/26/2017	100	9/26/2017	20	7/9/2018	2.5	9/26/2017	260
3410001-031	38.61919	-121.371454	11/20/2007	2.2					11/20/2007	0	11/20/2007	0	11/20/2007	3.6	11/20/2007	240
3410001-032	38.622918	-121.413817	9/19/2017	2.3	10/15/2002	0	4/17/2014	6.6	9/19/2017	100	9/19/2017	20	7/9/2018	2.3	9/19/2017	250
3410001-033	38.601378	-121.424	7/10/2014	0	11/7/2002	0	4/23/2014	2.7	7/10/2014	290	7/10/2014	0	7/10/2014	1.5	7/10/2014	290
3410001-034	38.584674	-121.396539	9/11/2017	2	6/23/2004	0	4/16/2014	6.4	9/11/2017	100	9/11/2017	20	7/16/2019	5	9/11/2017	500
3410001-035	38.594464	-121.351844	9/28/2017	2	10/15/2002	0	4/16/2014	0	9/28/2017	100	9/28/2017	20	7/26/2018	2.3	9/28/2017	260
3410001-036	38.59115	-121.335446	7/25/1989	5.5					7/25/1989	22	7/25/1989	5.1	1/9/1997	0		
3410001-037	38.578611	-121.366667	2/5/1998	0					2/5/1998	0	2/5/1998	0	6/13/2000	2.5	2/5/1998	160
3410001-038	38.578371	-121.363395	6/9/2011	0	10/17/2002	0	10/17/2002	0	6/9/2011	0	6/9/2011	0	7/25/2012	0.5	6/9/2011	130
3410001-039	38.591742	-121.346413	6/20/2006	2.6	10/17/2002	0	10/17/2002	0	9/18/2006	0	9/18/2006	0	6/16/2010	0.32	9/18/2006	110
3410001-040	38.624895	-121.35055	6/8/1999	0					6/8/1999	0	6/8/1999	230	6/13/2000	0	6/8/1999	190
3410001-041	38.587778	-121.358056	2/4/1998	0					2/4/1998	0	2/4/1998	0	2/4/1998	1	2/4/1998	140

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3410001-042	38.628014	-121.358648	9/12/2017	2.6	10/15/2002	0	4/10/2014	3.4	9/12/2017	100	9/12/2017	20	7/11/2019	2	9/12/2017	240
3410001-043	38.580278	-121.338333							1/11/1993	30	1/11/1993	10	8/19/1997	0		
3410001-051	38.636187	-121.375067	9/11/2017	2	10/17/2002	0	4/16/2014	7.6	9/11/2017	100	9/11/2017	20	7/10/2019	2.4	9/11/2017	220
3410001-052	38.625054	-121.362252	9/11/2017	2.4	6/22/2004	0	4/17/2014	3.1	9/11/2017	100	9/11/2017	20	7/10/2019	1.9	9/11/2017	190
3410001-053	38.6075	-121.359167	7/26/1995	1					7/26/1995	310	1/13/1999	120	7/26/1995	3.8	7/26/1995	230
3410001-054	38.582422	-121.408379	9/13/2017	2.7	11/7/2002	0	4/16/2014	2.1	9/13/2017	100	8/8/2019	22	7/16/2019	2.7	9/13/2017	320
3410001-055	38.594474	-121.39864	12/13/2017	2.9	11/7/2002	0	4/23/2014	3.8	12/13/2017	100	12/13/2017	40	12/13/2017	1.8	12/13/2017	220
3410001-056	38.578749	-121.41096	9/13/2017	2.3	10/17/2002	0	4/16/2014	1.7	9/13/2017	100	9/13/2017	20	7/9/2018	1.1	9/13/2017	220
3410001-057	38.581667	-121.3425	10/13/1995	0					10/13/1995	0	10/13/1995	0	5/1/1996	0	10/13/1995	39
3410001-061	38.582786	-121.338489	3/20/2018	2.5	10/7/2002	0	4/17/2014	2.6	3/20/2018	100	9/26/2017	20	7/18/2019	0.82	9/26/2017	110
3410001-062	38.618056	-121.401944	9/5/2017	2	10/7/2002	0	4/10/2014	2.6	9/5/2017	100	9/5/2017	20	7/25/2019	0.86	9/5/2017	290
3410001-063	38.587249	-121.358393	7/28/1999	0					7/28/1999	0	7/28/1999	0	11/27/2001	2	7/28/1999	150
3410001-064	38.584121	-121.353432	9/12/2017	2.3	10/17/2002	0	4/10/2014	2.2	9/12/2017	100	9/12/2017	20	7/11/2019	0.73	9/12/2017	160
3410001-065	38.583196	-121.33679	9/21/2017	2.7	10/7/2002	0	4/23/2014	3.2	9/21/2017	100	9/21/2017	20	7/18/2019	1.1	9/21/2017	130
3410001-066	38.582214	-121.338203	9/12/2017	2.3	10/7/2002	0	4/17/2014	3.3	9/12/2017	100	9/12/2017	20	7/18/2019	0.91	9/12/2017	130
3410001-067	38.582481	-121.417169	10/1/2014	2.5	7/8/2002	0	4/21/2014	0	1/8/2015	430	1/8/2015	750	10/1/2014	0	10/1/2014	410
3410001-068	38.614258	-121.350454	9/17/1999	3					9/17/1999	0	9/17/1999	110	9/17/1999	0	9/17/1999	160
3410001-069	38.580609	-121.384004	9/28/2017	2	11/7/2002	0	4/10/2014	1.4	9/28/2017	100	9/28/2017	20	7/16/2019	3.4	9/28/2017	290
3410001-070	38.576006	-121.403088	9/12/2017	2.2	11/7/2002	0	4/10/2014	4.2	9/12/2017	100	9/12/2017	20	7/16/2019	2.6	9/12/2017	340
3410001-071	38.63056	-121.397787	9/14/2017	4.8	10/15/2002	0	4/10/2014	1.1	9/12/2019	100	9/12/2019	120	7/10/2019	0.73	9/14/2017	190
3410001-072	38.61744	-121.411527	9/12/2017	2	10/7/2002	0	4/10/2014	4.7	9/12/2017	100	9/12/2017	20	7/25/2019	2.4	9/12/2017	260
3410001-073	38.58058	-121.383962	9/7/2017	2	10/7/2002	0	4/21/2014	0	7/25/2019	100	7/25/2019	39	7/25/2019	0.4	9/7/2017	250
3410001-076	38.644265	-121.362069	7/10/2019	2	11/22/2001	0	4/15/2014	1.9	7/10/2019	100	7/10/2019	20	7/10/2019	2.2	7/10/2019	260
3410001-077	38.631522	-121.352911	7/10/2019	2.3	11/27/2001	0	4/17/2014	4.8	7/10/2019	100	7/10/2019	20	7/10/2019	3.8	7/10/2019	260
3410001-078	38.684818	-121.355931	7/9/2019	2.1	10/7/2002	0	4/16/2014	4.1	7/9/2019	100	7/9/2019	20	7/9/2019	0.95	7/9/2019	240
3410001-079	38.667577	-121.334161	7/24/2013	0	12/4/2001	0	12/13/2001	2	7/24/2013	0	7/24/2013	0	7/24/2013	0.88	7/24/2013	240
3410001-080	38.672567	-121.331573	7/17/2019	2	11/22/2001	0	4/10/2014	3.8	7/17/2019	100	7/17/2019	20	7/17/2019	4.8	7/17/2019	450
3410001-081	38.683333	-121.333333	7/22/2019	2			4/16/2014	1.8	7/22/2019	100	7/22/2019	41	7/22/2019	0.87	7/22/2019	340
3410001-082	38.648929	-121.338368	7/21/2016	0	11/30/2004	0	4/17/2014	2.1	7/21/2016	0	7/21/2016	0	7/18/2018	1.3	7/21/2016	180
3410001-083	38.663692	-121.347786	7/9/2019	2	11/27/2001	0	4/10/2014	4.4	7/9/2019	100	7/9/2019	20	7/9/2019	1.7	7/9/2019	220
3410001-084	38.666667	-121.35	7/28/1988	4					7/28/1988	630	7/28/1988	730	7/28/1988	0.2	7/28/1988	400
3410001-085	38.644208	-121.329841	7/17/2019	2	11/22/2001	0	4/17/2014	4.2	7/17/2019	100	7/17/2019	20	10/1/2019	4.7	7/17/2019	280
3410001-086	38.666667	-121.366667	4/29/1988	4					4/29/1988	60	4/29/1988	290	4/29/1988	0.7	4/29/1988	240
3410001-087	38.645858	-121.392317	7/11/2019	2.1	11/27/2001	0	4/10/2014	4	7/11/2019	100	7/11/2019	20	7/11/2019	0.43	7/11/2019	240
3410001-088	38.668746	-121.361	7/11/2013	0	11/27/2001	0	4/16/2014	7.4	6/4/2014	0	6/4/2014	0	10/19/2015	0.72	7/11/2013	210
3410001-089	38.653579	-121.379692	7/9/2019	2	6/22/2004	0	4/16/2014	5.1	7/9/2019	100	7/9/2019	20	7/9/2019	1.1	7/9/2019	240
3410001-090	38.683333	-121.35	6/30/1988	4					2/26/1991	180	2/26/1991	100	6/30/1988	0.2	6/30/1988	280
3410001-091	38.633333	-121.366667	2/1/1993	4					2/1/1993	30	2/1/1993	140	2/1/1993	0.2	2/1/1993	270
3410001-092	38.63889	-121.342759	7/20/2016	2.4	11/22/2001	0	4/16/2014	0	7/24/2018	100	7/24/2018	52	7/24/2018	0.4	7/20/2016	180
3410001-093	38.65	-121.366667	10/31/1996	4					10/31/1996	2300	10/31/1996	40	10/31/1996	0	10/31/1996	240
3410001-094	38.652299	-121.354305	7/10/2019	2	11/22/2001	0	4/16/2014	5.5	7/10/2019	100	7/10/2019	20	7/10/2019	0.85	7/10/2019	180
3410001-095	38.658062	-121.356402	6/21/2007	0	11/27/2001	0	12/13/2001	0	6/21/2007	0	6/21/2007	0	5/28/2009	1.3	6/21/2007	200
3410001-096	38.689669	-121.360198	7/9/2019	2.4	11/27/2001	0	4/10/2014	6.2	7/9/2019	100	7/9/2019	20	7/9/2019	3.3	7/9/2019	290
3410001-097	38.694158	-121.360024	7/11/2019	2.4	11/27/2001	0	4/16/2014	7.9	7/11/2019	100	7/11/2019	20	7/11/2019	3.1	7/11/2019	310
3410001-098	38.700217	-121.351805	7/9/2019	2.5	12/4/2001	0	11/14/2013	8.2	7/9/2019	100	7/9/2019	20	7/9/2019	1.5	7/9/2019	240
3410001-099	38.655401	-121.313482	6/21/2007	0	11/27/2001	0	12/13/2001	0	6/21/2007	0	6/21/2007	0	4/8/2010	5	6/21/2007	310
3410001-100	38.666667	-121.316667	10/12/1995	0					10/31/1996	780	10/31/1996	70	1/27/1998	7.7	10/31/1996	370
3410001-101	38.663926	-121.32579	7/7/2016	0	11/22/2001	0	4/17/2014	4.6	7/7/2016	0	7/7/2016	0	4/15/2019	5.9	7/7/2016	380
3410001-102	38.675049	-121.315501	7/15/2019	2	11/22/2001	0	4/16/2014	4.1	7/15/2019	100	7/15/2019	20	10/1/2019	5.7	7/15/2019	320
3410001-103	38.651225	-121.32298	11/13/2013	0	11/27/2001	0	11/14/2013	1.7	1/13/2014	0	1/13/2014	0	11/13/2013	0.84	11/13/2013	170
3410001-104	38.710442	-121.331662	7/10/2019	2	12/4/2001	0	4/10/2014	3.7	7/10/2019	100	7/10/2019	20	7/10/2019	1.4	7/10/2019	300
3410001-105	38.710528	-121.331667	7/10/2019	2	12/4/2001	0	4/10/2014	3	7/10/2019	100	7/10/2019	20	7/10/2019	1.3	7/10/2019	310
3410001-106	38.710517	-121.331659	7/8/2013	0	12/4/2001	0	2/19/2015	11	6/4/2014	0	6/4/2014	0	8/21/2014	3.4	7/8/2013	330
3410001-107	38.709903	-121.357066	7/14/2016	2.5	12/4/2001	0	4/16/2014	2.2	7/14/2016	0	7/14/2016	0	7/18/2018	0.52	7/14/2016	340
3410001-110	38.657778	-121.385278														
3410001-111	38.665363	-121.383099	7/11/2019	2.3	12/13/1995	0.1	4/24/2014	8.5	7/11/2019	100	7/11/2019	20	7/11/2019	3.4	7/11/2019	320

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3410001-112	38.651944	-121.3825														
3410001-114	38.646389	-121.4025														
3410001-116	38.646111	-121.409444	12/13/1995	3.1	12/13/1995	0.1			12/13/1995	50	12/13/1995	30	12/13/1995	1.4	12/13/1995	208
3410001-117	38.646111	-121.409444														
3410001-118	38.646111	-121.409444														
3410001-119	38.646111	-121.409444														
3410001-120	38.646111	-121.409444														
3410001-121	38.646111	-121.409444	12/13/1995	2.5	12/13/1995	0.1			12/13/1995	50	12/13/1995	30	12/13/1995	1.5	12/13/1995	209
3410001-122	38.646111	-121.409444														
3410001-124	38.671944	-121.404444														
3410001-125	38.673056	-121.390833	12/21/1998	0	12/13/1995	0.1			12/21/1998	0	12/21/1998	0	7/1/2002	5	12/21/1998	157
3410001-126	38.869722	-121.390278														
3410001-127	38.712268	-121.381099	7/29/2013	2.6	12/4/2001	0	11/11/2014	12	7/29/2013	0	7/29/2013	0	8/21/2014	2	7/29/2013	220
3410001-128	38.709783	-121.374669	6/17/2010	3.4	12/4/2001	0	12/13/2001	11	6/17/2010	110	6/17/2010	0	6/17/2010	1.8	6/17/2010	230
3410001-129	38.710651	-121.387666	7/29/2013	2.9	12/4/2001	0	2/26/2015	13	7/29/2013	0	7/29/2013	0	10/15/2014	2.1	7/29/2013	230
3410001-132	38.670226	-121.380503	10/11/1995	0					10/11/1995	1100	10/11/1995	130	4/30/1996	2		
3410001-133	38.682932	-121.376063	7/22/2019	2.1	11/4/2002	0.1	4/21/2014	6.2	7/22/2019	100	7/22/2019	20	7/22/2019	0.56	7/22/2019	240
3410001-135	38.68794	-121.385107	11/7/2016	0	11/4/2002	0.2	12/19/2013	2.9	11/7/2016	160	3/13/2018	24	3/13/2018	2.9	11/7/2016	270
3410001-136	38.685899	-121.372701	3/27/2018	3	11/4/2002	0	3/27/2018	9.5	3/27/2018	100	3/27/2018	20	3/27/2018	2.6	3/27/2018	280
3410001-137	38.692847	-121.375953	7/29/2013	0	11/4/2002	0	2/19/2015	12	6/30/2014	0	6/30/2014	0	8/21/2014	2.1	7/29/2013	260
3410001-138	38.676018	-121.36531	3/8/2005	3					4/23/2002	2800	4/23/2002	180	1/28/2004	2	4/23/2002	220
3410001-139	38.69191	-121.364477	7/19/2016	2.4	11/4/2002	0	11/4/2002	8.4	7/19/2016	0	7/19/2016	0	7/12/2018	0.84	7/19/2016	270
3410001-140	38.675278	-121.378889	2/5/1998	0					2/5/1998	0	2/5/1998	0	5/16/2000	1	2/5/1998	280
3410001-141	38.70172	-121.380618	10/11/1995	3.3					10/11/1995	0	10/11/1995	0	1/26/1995	0.54	1/29/1992	269
3410001-142	38.686782	-121.392424	7/11/2016	0	7/15/2002	0.3	4/21/2014	4.3	7/11/2016	0	7/11/2016	0	9/13/2017	1	7/11/2016	250
3410001-143	38.701228	-121.371968	2/4/1998	2					2/4/1998	0	2/4/1998	0	5/16/2000	0.7	2/4/1998	220
3410001-144	38.69798	-121.373877	7/23/2019	2.1	11/4/2002	0	11/21/2013	2.5	7/23/2019	100	7/23/2019	20	7/23/2019	0.52	7/23/2019	310
3410001-145	38.67526	-121.379573	7/10/2019	2	11/4/2002	0.4	4/10/2014	3.3	7/10/2019	100	7/10/2019	20	7/10/2019	0.51	7/10/2019	360
3410002-001	38.583333	-121.383333	2/8/2017	0	2/20/2002	0	2/8/2017	1.8	2/8/2017	0	2/8/2017	0	2/5/2019	2.7	2/8/2017	270
3410002-002	38.583333	-121.366667	2/8/2017	0	2/20/2002	0	2/8/2017	2.5	2/8/2017	0	2/8/2017	0	8/13/2019	1.5	2/8/2017	260
3410002-007	38.566667	-121.4	2/14/2017	0	2/20/2002	0	2/14/2017	1.4	2/14/2017	0	2/14/2017	0	2/4/2019	0.45	2/14/2017	140
3410002-009	38.566667	-121.4	2/10/1998	0					2/10/1998	0	2/10/1998	0	6/17/1999	0	2/10/1998	140
3410002-012	38.566667	-121.416667	5/8/2017	0	2/20/2002	0	11/14/2017	0	5/8/2017	0	5/8/2017	38	8/13/2019	0	5/8/2017	180
3410002-013	38.583333	-121.416667	2/14/2017	3.5	2/20/2002	0	2/14/2017	0	2/14/2017	0	2/14/2017	0	2/4/2019	0	2/14/2017	94
3410002-014	38.583333	-121.366667	5/8/2017	0	2/20/2002	0	11/14/2017	2.3	5/8/2017	0	5/8/2017	0	5/13/2019	1.1	5/8/2017	180
3410003-001	38.587545	-121.385145	2/6/2019	2	12/17/2002	0	11/18/2014	3.4	2/6/2019	440	2/6/2019	27	2/6/2019	0.4	2/6/2019	180
3410003-002	38.582537	-121.383219	2/28/2017	2	12/17/2002	0	11/18/2014	2.6	2/28/2017	100	2/28/2017	20	1/8/2019	3	2/28/2017	250
3410003-003	38.583333	-121.383333	4/15/1998	2.4					4/15/1998	200	6/17/1998	0	4/15/1998	1.3	4/15/1998	220
3410003-004	38.587611	-121.392074	1/25/2005	2.5	7/31/2003	0	7/31/2003	4.2	1/25/2005	40	1/25/2005	2	7/11/2007	5.2	1/25/2005	250
3410003-005	38.591017	-121.384139	7/11/2017	2.2	12/17/2002	0	11/18/2014	4.5	7/11/2017	100	7/11/2017	20	1/8/2019	4.2	7/11/2017	310
3410003-006	38.59211	-121.387633	2/28/2017	2.5	12/17/2002	0	11/18/2014	4.5	2/28/2017	100	2/28/2017	20	1/8/2019	2.6	2/28/2017	230
3410003-007	38.6	-121.383333	4/15/1998	3					4/15/1998	0	4/15/1998	0	2/1/1999	4.3	4/15/1998	240
3410003-008	38.600074	-121.391973	2/28/2017	2.8	12/17/2002	0	11/18/2014	4.6	2/28/2017	100	2/28/2017	20	1/8/2019	2.1	2/28/2017	190
3410004-001	38.645432	-121.313067	2/3/2004	0	1/29/2003	0	1/29/2003	3.5	2/3/2004	100	2/3/2004	0	2/3/2004	7.355	2/3/2004	340
3410004-002	38.6	-121.35	10/18/1995	3.1					10/18/1995	1300	10/18/1995	78	2/7/1995	0.5	3/1/1991	140
3410004-004	38.64988	-121.30798	1/28/2010	0	4/30/2003	0	7/23/2003	1.5	1/28/2010	0	1/28/2010	0	7/28/2011	5.9	1/28/2010	370
3410004-005	38.633333	-121.35	10/4/2001	0					10/3/2001	0	10/4/2001	44	10/4/2001	0	10/4/2001	150
3410004-006	38.622744	-121.335704	6/1/2017	0	11/4/2003	0	6/4/2015	1.5	6/1/2017	0	6/1/2017	0	3/7/2019	1.4	6/1/2017	180
3410004-007	38.594673	-121.334606	10/23/2002	0	10/23/2002	0	10/23/2002	1.4	10/23/2002	0	10/23/2002	0	10/23/2002	0	10/23/2002	110
3410004-008	38.65	-121.316667	8/1/1990	4					8/1/1990	580	8/1/1990	14	2/7/1995	0.38	8/1/1990	240
3410004-009	38.619652	-121.333354	6/1/2017	0	10/23/2003	0	6/4/2015	1.3	6/1/2017	0	6/1/2017	0	3/7/2019	1.2	6/1/2017	170
3410004-012	38.633333	-121.3	4/13/1995	0					4/13/1995	0	4/13/1995	0	5/2/1996	0.5	4/13/1995	45
3410004-014	38.633333	-121.3							1/28/1993	74	1/28/1993	130				
3410004-015	38.65	-121.316667	10/18/1995	0					10/18/1995	0	10/18/1995	0	2/7/1995	6.1	2/19/1991	250
3410004-016	38.645576	-121.306819	6/1/2017	3.6	4/30/2003	0	6/4/2015	3	6/1/2017	4700	6/1/2017	35	6/7/2018	5.1	6/1/2017	360
3410004-020	38.641845	-121.315446	6/1/2017	0	10/21/2003	0	6/4/2015	3.2	6/1/2017	110	6/1/2017	60	6/7/2018	5.6	6/1/2017	320

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3410004-021	38.604804	-121.342252	6/1/2017	0	10/23/2003	0	6/4/2015	0	6/1/2017	0	6/1/2017	0	3/7/2019	0.48	6/1/2017	120
3410006-001	38.661305	-121.292607	5/30/2019	0	10/21/2004	0	5/30/2019	0	5/30/2019	310	5/30/2019	290	11/14/2018	0.99	2/20/2013	190
3410006-002	38.713889	-121.266667	1/21/1998	2					1/21/1998	0	1/21/1998	0	1/21/1998	0.9	1/21/1998	360
3410006-003	38.708333	-121.283333	8/2/1990	4					10/5/1990	180	10/5/1990	12	10/5/1990	4.3	10/5/1990	390
3410006-005	38.683333	-121.283333	10/5/1990	4					1/26/1993	30	1/26/1993	10	10/5/1990	2.3	10/5/1990	210
3410006-006	38.666667	-121.277778	4/10/1987	4					4/10/1987	30	4/10/1987	10	10/25/2016	7.3	4/10/1987	250
3410006-007	38.705556	-121.308333	1/21/1998	0					1/21/1998	0	1/21/1998	0	1/21/1998	2.3	1/21/1998	300
3410006-008	38.679425	-121.289154	2/20/2013	0	10/21/2004	0.11	1/24/2019	1.8	2/20/2013	0	2/20/2013	0	1/24/2019	2.9	2/20/2013	260
3410006-010	38.698638	-121.269673	6/6/2018	4.6	10/21/2004	0	8/17/2016	2	6/6/2018	2900	6/6/2018	680	4/12/2018	0.92	2/20/2013	220
3410007-001	38.613787	-121.367811	6/24/2010	2.2	9/5/2002	0	9/25/2002	3.4	6/24/2010	0	6/24/2010	0	6/24/2010	1	6/24/2010	180
3410007-002	38.613607	-121.371676	8/18/2016	0	9/5/2002	0	8/13/2018	3.5	8/7/2019	0	8/7/2019	0	8/7/2019	1.1	8/7/2019	190
3410007-003	38.606352	-121.369707	8/22/2016	0	2/3/2003	0	8/5/2015	2.1	12/11/2018	940	8/22/2016	21	9/11/2018	2.6	8/22/2016	330
3410007-004	38.607768	-121.374083	8/17/2016	2.2	9/5/2002	0	8/13/2018	6.8	8/6/2019	0	8/6/2019	0	8/6/2019	0.87	8/6/2019	170
3410007-005	38.61458	-121.378552	8/18/2016	2.1	9/5/2002	0	8/13/2018	8.7	8/6/2019	410	8/6/2019	29	8/6/2019	1.8	8/6/2019	220
3410007-006	38.60731	-121.364767	6/28/2010	0	9/5/2002	0	8/5/2015	3.8	1/20/2012	0	1/20/2012	0	3/8/2012	0	6/28/2010	160
3410007-007	38.606531	-121.380719	6/21/2018	2.4	9/5/2002	0	8/14/2018	5.2	8/6/2019	230	8/6/2019	0	8/6/2019	3.5	8/6/2019	280
3410007-008	38.613172	-121.380739	8/16/2016	3	9/5/2002	0	8/14/2018	8.8	8/13/2019	130	8/13/2019	39	8/13/2019	1.5	8/13/2019	210
3410009-001	38.643048	-121.268528	6/26/2003	0	12/17/2003	0	12/17/2003	0	6/16/2004	0	6/16/2004	0	6/16/2004	0	6/16/2004	100
3410009-003	38.666667	-121.216667	2/8/2000	0					2/8/2000	0	2/8/2000	0	2/8/2000	0.9	2/8/2000	180
3410009-004	38.651282	-121.255173	6/6/2006	0	12/17/2003	0	12/17/2003	0	6/6/2006	0	6/6/2006	0	12/6/2007	2.5	6/6/2006	270
3410009-005	38.650805	-121.286999	6/26/2003	0	12/17/2003	0	6/16/2004	0	6/16/2004	0	6/16/2004	0	3/17/2005	0.5	6/16/2004	140
3410009-006	38.642768	-121.278261	5/10/2012	0	12/17/2003	0	11/8/2018	0	6/14/2012	0	6/14/2012	0	5/2/2019	0.45	6/14/2012	110
3410009-007	38.651297	-121.296666	5/10/2012	0	12/17/2003	0	11/8/2018	0	6/14/2012	0	6/14/2012	0	5/2/2019	0.56	6/14/2012	150
3410009-008	38.662066	-121.265396	6/6/2006	2.2	12/17/2003	0	12/17/2003	0	6/6/2006	0	6/6/2006	0	6/29/2007	0.5	6/6/2006	400
3410009-009	38.666667	-121.266667											1/22/1997	0.5		
3410009-010	38.659628	-121.25556	3/28/2019	0	12/17/2003	0	3/28/2019	0	6/14/2012	0	6/14/2012	0	5/2/2019	1.3	6/14/2012	150
3410013-001	38.694922	-121.332628	8/13/2018	0	8/13/2018	0.29	5/17/2017	1.57	8/13/2018	0	8/13/2018	0	8/6/2019	1.25	8/13/2018	280
3410013-002	38.69054	-121.34151	8/13/2018	0	8/13/2018	0.2	5/17/2017	1	8/13/2018	0	8/6/2019	43	8/6/2019	0.22	8/13/2018	260
3410013-003	38.683982	-121.31348	8/16/2018	0	8/16/2018	0	12/19/2017	2.14	8/29/2018	5500	8/16/2018	0	8/8/2019	1.71	8/16/2018	230
3410013-004	38.699328	-121.295627	8/7/2018	0	8/7/2018	0.24	5/9/2017	4.11	8/7/2018	0	8/7/2018	0	8/7/2018	3.1	8/7/2018	300
3410013-005	38.669042	-121.293798	8/7/2018	0	8/7/2018	0	5/9/2017	1.91	8/7/2018	0	8/7/2018	0	8/6/2019	2.82	8/7/2018	220
3410013-006	38.685052	-121.305855	8/8/2018	0	8/8/2018	0	5/9/2017	1	8/8/2018	0	8/8/2018	0	8/7/2019	1.67	8/8/2018	210
3410013-007	38.691478	-121.336784	8/19/2015	2	8/19/2015	0.1	5/9/2017	2.15	11/16/2016	480	8/19/2015	20	2/19/2018	1.79	8/19/2015	270
3410013-008	38.673506	-121.340002	8/16/2018	0	8/16/2018	0	9/19/2018	3.9	8/29/2018	960	8/16/2018	22	8/6/2019	2.38	8/16/2018	310
3410013-009	38.695662	-121.29509	8/7/2018	0	8/7/2018	0	5/9/2017	3.63	8/7/2018	0	8/7/2018	0	8/6/2019	4.41	8/7/2018	390
3410013-010	38.670117	-121.341406	8/15/2018	0	8/15/2018	0	5/10/2017	1	8/15/2018	570	8/15/2018	59	8/6/2019	1.44	8/15/2018	380
3410013-012	38.66565	-121.302524	8/13/2018	0	8/13/2018	0	5/8/2017	1.62	8/13/2018	0	8/13/2018	0	8/7/2019	2.89	8/13/2018	230
3410013-013	38.678824	-121.304628	8/13/2018	0	8/13/2018	0	5/8/2017	3.63	8/13/2018	100	8/13/2018	0	8/7/2019	3.58	8/13/2018	290
3410013-014	38.668822	-121.304482	8/8/2018	0	8/8/2018	0	5/8/2017	2.25	8/8/2018	0	8/8/2018	0	8/6/2019	2.02	8/8/2018	180
3410013-015	38.70124	-121.345319	8/6/2018	0	8/6/2018	0	5/8/2017	7.29	8/6/2018	0	8/6/2018	0	8/6/2019	1.21	8/6/2018	220
3410013-016	38.709473	-121.292244	8/13/2018	0	8/13/2018	0.61	2/13/2018	5.2	8/13/2018	0	8/13/2018	0	9/10/2019	1.89	8/13/2018	310
3410013-017	38.712243	-121.303547	8/24/2006	2	8/24/2006	0.539	9/17/2002	0	8/24/2006	0	8/24/2006	0	8/24/2006	2.1	8/24/2006	370
3410013-019	38.700287	-121.330955	8/6/2018	0	8/6/2018	0.35	10/19/2017	4.58	8/6/2018	0	8/6/2018	0	8/6/2019	1.85	8/6/2018	290
3410013-020	38.716217	-121.294262	8/24/2006	2	8/24/2006	0.85	9/5/2002	2.6	8/24/2006	0	8/24/2006	0	8/24/2006	2	8/24/2006	380
3410013-021	38.683333	-121.35	8/8/2018	0	8/8/2018	0	5/8/2017	2.43	8/8/2018	0	8/8/2018	0	8/6/2019	6.99	8/8/2018	390
3410013-022	38.7124	-121.306829	9/11/2012	2	9/11/2012	0.761	5/9/2017	1.86	9/11/2012	100	9/11/2012	10	4/5/2017	1.79	9/11/2012	340
3410013-023	38.695536	-121.313454	8/7/2018	0	8/7/2018	0.26	5/8/2017	3.66	8/7/2018	120	8/7/2018	0	8/7/2019	1.58	8/7/2018	250
3410013-024	38.680539	-121.31067	8/7/2018	0	8/7/2018	0	5/7/2019	3.51	8/7/2018	0	8/7/2018	0	8/6/2019	2.82	8/7/2018	260
3410013-025	38.718426	-121.313299	8/13/2018	0	8/13/2018	0.5	5/17/2017	4.09	8/13/2018	0	8/13/2018	0	8/13/2018	0.72	8/13/2018	290
3410013-026	38.701667	-121.344722	8/6/2018	0	8/6/2018	0.35	5/8/2017	4.56	8/6/2018	0	8/6/2018	0	8/6/2019	0.9	8/6/2018	260
3410013-027	38.709413	-121.317252	9/18/2012	1	9/18/2012	0.569	5/7/2014	3.5	9/18/2012	100	9/18/2012	10	5/5/2015	1.64	9/18/2012	320
3410013-028	38.698857	-121.32618	8/13/2018	0	8/13/2018	0.33	5/8/2017	2.52	8/13/2018	1100	8/13/2018	0	8/6/2019	1.38	8/13/2018	280
3410016-001	38.686538	-121.219546	12/3/2007	2	12/4/2001	0.3	9/25/2002	2.2	12/21/2004	0	12/21/2004	0	3/22/2007	2.5	12/21/2004	280
3410016-002	38.694541	-121.210813	1/17/2013	7.5	12/4/2001	1.5	9/25/2002	1.1	1/17/2013	130	1/17/2013	0	12/14/2016	2.5	1/17/2013	450
3410018-001	38.683333	-121.45	4/9/1987	8					4/9/1987	100	4/9/1987	10	4/9/1987	2.7	4/9/1987	280
3410018-002	38.7	-121.45	2/28/1991	7					2/28/1991	30	2/28/1991	10	2/28/1991	2	2/28/1991	200

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3410018-005	38.721801	-121.46774	3/5/2002	13	12/19/2002	0.2	12/19/2002	3.7	3/5/2002	0	3/5/2002	90	3/3/2005	0.5	3/5/2002	200
3410018-008	38.690277	-121.41111							2/28/1991	30	2/28/1991	10				
3410020-011	38.616667	-121.45	6/30/1990	5					6/30/1990	10	6/30/1990	10			6/30/1990	252
3410020-015	38.6125	-121.479167	4/3/2017	3.3			4/3/2017	0	4/3/2017	100	4/3/2017	20	4/3/2017	0.4	4/3/2017	252
3410020-016	38.616667	-121.479167	1/20/2015	3.5			2/19/2015	3.3	1/20/2015	100	1/20/2015	20	1/20/2015	2	1/20/2015	420
3410020-017	38.62266	-121.477813	8/24/2017	4.2			7/20/2017	6	8/24/2017	0	8/24/2017	20	7/8/2019	3.4	10/9/2017	466
3410020-018	38.627831	-121.477227	5/8/2017	2.6			7/10/2017	5.8	5/8/2017	0	5/8/2017	20	2/4/2019	2.4	5/8/2017	340
3410020-020	38.602689	-121.457994	1/11/1994	5					1/11/1994	120	1/11/1994	10	1/11/1994	1.2	1/11/1994	420
3410020-021	38.607083	-121.454779	10/12/2011	4.3					10/12/2011	4400	10/12/2011	122	10/10/2012	2.1	10/12/2011	446
3410020-022	38.607305	-121.443097	3/20/2017	2.3			3/20/2017	3.1	3/20/2017	100	3/20/2017	20	4/27/2018	1	3/20/2017	332
3410020-023	38.604956	-121.439486	3/7/2017	2			3/7/2017	3.1	3/7/2017	100	3/7/2017	20	4/20/2018	0.7	3/7/2017	418
3410020-024	38.612801	-121.450505	10/10/2011	3.2			12/3/2002	4.3	10/10/2011	184	10/10/2011	20	10/10/2012	1.5	10/10/2011	202
3410020-025	38.612294	-121.440456	10/9/2008	2					10/9/2008	334	10/9/2008	20	10/9/2008	4.1	10/9/2008	613
3410020-026	38.612369	-121.4322	12/3/2002	2			12/3/2002	360	12/3/2002	360	12/3/2002	20	12/3/2002	0.5	12/3/2002	258
3410020-027	38.620988	-121.443553	5/8/2017	2			5/8/2017	3.1	5/8/2017	0	5/8/2017	20	2/4/2019	1	5/8/2017	294
3410020-028	38.62044	-121.432285	5/8/2017	2			5/8/2017	3.8	5/8/2017	0	5/8/2017	20	2/26/2018	1.4	5/8/2017	293
3410020-029	38.618056	-121.468056	10/8/2018	4.6			3/20/2017	1.8	3/20/2017	100	3/20/2017	20	4/20/2018	2	3/20/2017	328
3410020-030	38.625119	-121.462605	5/8/2017	2			5/8/2017	3.7	5/8/2017	0	5/8/2017	20	2/4/2019	1.5	5/8/2017	321
3410020-031	38.626389	-121.455556	11/30/1988	5					11/30/1988	10	11/30/1988	10	11/30/1988	1	11/30/1988	225
3410020-032	38.628503	-121.43627	8/24/2017	3			8/24/2017	5.1	8/24/2017	0	8/24/2017	20	2/4/2019	1.3	10/9/2017	286
3410020-033	38.626808	-121.42959	10/10/2011	2.6			12/4/2002	2.3	10/10/2011	100	10/10/2011	20	10/10/2012	1.2	10/10/2011	178
3410020-034	38.638412	-121.446721	2/27/2018	2.4			7/10/2017	6.8	2/27/2018	100	2/27/2018	20	2/4/2019	2.9	3/12/2018	284
3410020-035	38.639934	-121.427293	2/27/2018	2.4			7/10/2017	6.5	2/27/2018	100	2/27/2018	20	2/4/2019	0.6	3/12/2018	226
3410020-036	38.639352	-121.417132														
3410020-037	38.651207	-121.469509	5/8/2017	3.7			7/10/2017	7.1	5/8/2017	0	5/8/2017	21.8	2/4/2019	1.2	5/8/2017	244
3410020-038	38.647475	-121.459256	5/8/2017	2.6			7/10/2017	7.7	7/8/2019	100	5/8/2017	20	2/4/2019	1.4	5/8/2017	250
3410020-039	38.627595	-121.432917	10/8/2003	2			12/3/2002	5	10/8/2003	100	10/8/2003	20	11/9/2004	2.7	10/8/2003	261
3410020-040	38.629597	-121.420726	5/9/2017	2.5			7/10/2017	6.4	5/9/2017	0	5/9/2017	20	2/4/2019	2.3	5/9/2017	271
3410020-041	38.641387	-121.435795	5/9/2017	2.2			7/10/2017	7.6	5/9/2017	0	5/9/2017	20	2/4/2019	2.9	5/9/2017	260
3410020-042	38.596923	-121.458973	3/7/2017	3.3			3/7/2017	0	7/8/2019	100	3/7/2017	20	3/5/2019	0.4	3/7/2017	234
3410020-044	38.613996	-121.456155	10/10/2011	2.5			12/3/2002	2.9	10/10/2011	194	10/10/2011	20	10/10/2012	3.7	10/10/2011	427
3410020-045	38.622276	-121.446858	5/9/2017	2			5/9/2017	4.5	5/9/2017	0	5/9/2017	20	2/4/2019	1.9	5/9/2017	334
3410020-046	38.623116	-121.427024	9/22/2014	2.5			4/6/2016	5	9/22/2014	100	9/22/2014	20	3/24/2016	1.4	9/22/2014	287
3410020-047	38.645833	-121.415278														
3410020-048	38.607222	-121.469444	3/9/1993	5					3/9/1993	10	3/9/1993	10	3/9/1993	0.5	3/9/1993	295
3410020-049	38.655	-121.446667	10/22/1990	5					10/22/1990	10	10/22/1990	10	10/22/1990	0.77	10/22/1990	228
3410020-050	38.668053	-121.438012	3/25/2014	3.9			11/3/2015	9.5	3/25/2014	100	3/25/2014	20	10/15/2015	1.6	3/25/2014	260
3410020-051	38.634413	-121.412516	2/27/2018	2.3			4/19/2016	2.2	2/27/2018	100	2/27/2018	20	2/4/2019	0.6	3/12/2018	260
3410020-052	38.599341	-121.445804	5/9/2017	3.7			5/9/2017	0	5/9/2017	0	5/9/2017	20	2/4/2019	0.4	5/9/2017	287
3410020-053	38.594444	-121.444444	5/22/1995	2					5/22/1995	740	5/22/1995	10	5/22/1995	0.036	5/22/1995	257
3410020-054	38.596324	-121.427308	8/24/2017	2.7			8/24/2017	1	8/24/2017	0	8/24/2017	20	2/4/2019	0.5	10/9/2017	286
3410020-055	38.617636	-121.469304	5/9/2017	2.4			5/9/2017	3.6	5/9/2017	0	5/9/2017	20	5/9/2017	1	5/9/2017	329
3410020-056	38.654657	-121.448564	5/9/2017	3.5			7/10/2017	6.5	5/9/2017	0	5/9/2017	20	2/4/2019	0.9	5/9/2017	251
3410020-057	38.658482	-121.466415	12/19/2018	5.2			7/10/2017	5.8	12/19/2018	100	12/19/2018	20	12/27/2018	0.72	12/19/2018	180
3410026-001	38.58961	-121.429343	5/31/2012	0			5/31/2012	600	5/31/2012	600	5/31/2012	49	5/31/2012	0	5/31/2012	220
3410026-002	38.588266	-121.423478	5/3/2018	4.9			4/1/2015	0	5/3/2018	0	5/3/2018	0	3/7/2019	0	5/3/2018	110
3410026-003	38.593617	-121.439154	5/3/2018	2.4			4/1/2015	2.5	5/3/2018	0	5/3/2018	0	3/7/2019	0	5/3/2018	270
3410026-004	38.593339	-121.432431	5/3/2018	2.4			4/1/2015	0	5/3/2018	0	5/3/2018	0	3/7/2019	0	5/3/2018	230
3410031-001	38.720833	-121.358333	5/16/2019	2	8/11/2015	0.1	5/9/2017	8.18	5/16/2019	120	5/16/2019	20	8/7/2019	2.08	8/11/2015	240
3410031-002	38.717222	-121.3575	8/8/2018	2.1	8/8/2018	0.27	5/8/2017	1	8/8/2018	0	8/8/2018	0	8/6/2019	0.8	8/8/2018	310
3410031-003	38.7	-121.383333	8/14/2018	2.6	8/14/2018	0	8/6/2019	14	8/30/2018	420	8/14/2018	0	8/6/2019	1.6	8/14/2018	190
3410031-004	38.718056	-121.382222	8/14/2018	2.5	8/14/2018	0	8/17/2017	6.31	8/14/2018	220	8/14/2018	210	8/8/2019	1.06	8/14/2018	210
3410031-005	38.716667	-121.4	8/5/2015	4	8/5/2015	0.1	5/2/2018	9.55	8/5/2015	110	8/5/2015	20	8/24/2016	3.86	8/5/2015	260
3410031-006	38.708333	-121.383611	8/14/2018	2.6	8/14/2018	0	8/6/2019	10	8/14/2018	0	8/14/2018	0	8/6/2019	1	8/14/2018	190
3410031-007	38.733333	-121.35	8/9/2018	3.1	8/9/2018	0.22	5/11/2017	4.41	8/9/2018	600	8/9/2018	0	8/8/2019	1.09	8/9/2018	160
3410031-008	38.733333	-121.35	8/9/2018	2.5	8/9/2018	0	5/11/2017	8.48	8/9/2018	0	8/9/2018	0	8/8/2019	3.8	8/9/2018	310

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3410031-009	38.715278	-121.378056	8/7/2018	2.1	8/7/2018	0.47	5/8/2017	1.72	8/7/2018	0	8/7/2018	0	8/6/2019	0.51	8/7/2018	250
3410031-010	38.705	-121.365556	8/7/2018	2.7	8/7/2018	0.47	5/9/2017	1.93	8/21/2018	260	8/8/2019	20	8/8/2019	0.42	8/7/2018	270
3410031-011	38.726944	-121.3825	8/7/2018	2.6	8/7/2018	0.24	11/5/2018	9.28	8/7/2018	180	3/4/2019	20	8/7/2018	1.3	8/7/2018	230
3410031-012	38.721111	-121.368611	8/7/2018	3.4	8/7/2018	0	8/8/2019	10.19	8/7/2018	0	8/7/2018	0	8/8/2019	1.51	8/7/2018	210
3410031-013	38.711667	-121.413889	8/14/2018	3.8	8/14/2018	0	5/8/2017	5.74	8/14/2018	150	8/14/2018	25	8/8/2019	2.2	8/14/2018	250
3410031-014	38.716111	-121.408889	8/14/2018	3.1	8/14/2018	0	5/8/2017	5	8/14/2018	210	8/14/2018	0	8/6/2019	1.93	8/14/2018	300
3410031-015	38.716667	-121.416667	8/14/2018	2.2	8/14/2018	0	5/8/2017	2.02	8/14/2018	180	8/14/2018	0	8/12/2019	2.61	8/14/2018	330
3410031-016	38.724444	-121.336111	8/8/2018	0	8/8/2018	0.21	5/8/2017	2.98	8/8/2018	0	8/8/2018	0	8/6/2019	1.03	8/8/2018	220
3410031-017	38.723056	-121.349722	8/8/2018	2.3	8/8/2018	0	5/8/2017	1.51	8/8/2018	180	8/8/2018	0	8/7/2019	0.95	8/8/2018	220
3410031-018	38.716389	-121.371944	8/7/2018	2.4	8/7/2018	0.26	5/9/2017	1.99	8/7/2018	610	8/7/2018	21	8/8/2019	0.5	8/7/2018	260
3410045-001	38.586137	-121.411513	8/7/2018	2.4	8/7/2018	0	5/9/2017	1.33	8/7/2018	0	8/7/2018	0	8/7/2019	1.12	8/7/2018	210
3410045-002	38.583085	-121.413054	8/7/2018	3.4	8/7/2018	0	5/9/2017	1	8/7/2018	0	8/7/2018	0	8/7/2019	0.28	8/7/2018	140
3410045-003	38.594423	-121.417465	8/7/2018	3.1	8/7/2018	0	5/9/2017	1.52	8/7/2018	0	8/7/2018	0	8/7/2019	1.28	8/7/2018	150
3410045-004	38.592566	-121.407256	7/12/2012	3	7/12/2012	0.05	5/6/2014	2.2	7/12/2012	100	8/11/2014	2831	8/11/2014	2.905	7/24/2012	250
3410045-005	38.600025	-121.410183	8/7/2018	2.5	8/7/2018	0	5/9/2017	4.02	8/7/2018	0	8/7/2018	0	8/7/2019	3.92	8/7/2018	270
3410301-001	38.655029	-121.206869											3/20/2019	0.41		
3901176-001	38.592112	-121.327685											5/16/2019	2.9		
3910005-049	38.8271	-121.232	6/12/2018	6.9			12/9/2014	3.9	6/12/2018	0	6/12/2018	0	8/6/2019	1.0	6/12/2018	400
5100106-001	38.744444	-121.595833											11/7/2000	0.1		
5100117-001	38.89568	-121.56893							5/1/1995	130	5/1/1995	54	12/20/2000	0.5		
5100117-002	38.902331	-121.570943							12/10/2008	1710	12/10/2008	85	6/21/2017	0	12/10/2008	280
5100117-003	38.896068	-121.567281							12/10/2008	165	12/10/2008	0	6/20/2018	0.12	12/10/2008	309
5100117-004	38.896379	-121.56981							8/18/1999	130	8/18/1999	54	6/20/2018	0		
5100135-001	38.911394	-121.544681							1/15/2003	100	1/15/2003	20	7/24/2019	0.83		
5100136-001	38.911667	-121.525833	11/12/1997	5.9					11/12/1997	100	11/12/1997	30	11/17/1999	2.3	11/12/1997	250
5100136-002	38.911927	-121.526004	4/11/2018	2.16			5/13/2015	6.8	3/14/2012	0	3/14/2012	0	4/17/2019	3.47	3/14/2012	352
5100138-001	38.947299	-121.524183	1/3/2017	8.7			9/9/2014	7.9	10/20/1999	100	10/20/1999	20	1/8/2019	1.33	5/12/2004	153
5100140-001	38.911233	-121.542832	5/19/2010	12.8			5/21/2008	0	5/21/2008	0	5/21/2008	0	5/19/2010	0.581	5/21/2008	101
5100140-002	38.911269	-121.542936	7/20/2016	4			10/10/2014	8.9	7/6/2010	194	7/6/2010	0	7/24/2019	1.88	7/6/2010	288
5100143-001	38.823397	-121.503832	5/18/2005	4.2					11/12/1997	100	11/12/1997	30	5/18/2005	2.1	11/12/1997	240
5100143-002	38.823303	-121.503779	8/21/2019	5.64			8/27/2015	6.5	5/17/2006	100	5/17/2006	20	5/15/2019	2.31	5/17/2006	214
5100153-001	38.771748	-121.5251	4/21/2004	7.7			4/27/2004	1.9	1/17/2001	100	1/17/2001	30	4/20/2005	3.4	4/5/2002	415
5100153-002	38.772313	-121.525061	7/7/2019	21	3/8/2005	0.15	9/11/2017	0	3/8/2005	4900	3/8/2005	270	1/8/2019	0	3/8/2005	300
5100159-001	38.784649	-121.617807							4/23/1996	30	4/23/1996	5	1/8/2019	0		
5100160-002	38.778461	-121.601924							12/30/2002	100	12/30/2002	130	1/8/2019	0		
5101205-001	38.909988	-121.543625							11/23/2005	100	11/23/2005	20	7/19/2006	1.45		
5103002-001	38.82383	-121.48433							10/20/1999	100	10/20/1999	20	1/12/2017	4.55		
5105002-001	38.881393	-121.60408							11/19/2003	799	11/29/2004	435	7/24/2019	0		
5105004-001	38.777769	-121.52437	5/17/2017	0			4/29/2015	0	10/16/2013	300	10/16/2013	182	6/19/2019	0	12/14/2016	28
5105004-002	38.777766	-121.525116	11/16/2016	5.9			6/19/2015	0	10/16/2013	542	10/16/2013	218	6/19/2019	0	12/14/2016	277
5105013-001	38.781319	-121.484797	7/7/2019	9.2			10/9/2017	12	2/29/2016	0	2/29/2016	0	1/8/2019	1.06	3/16/2016	200
5710003-024	38.6	-121.55	11/27/1990	12					11/27/1990	520	11/27/1990	290	11/27/1990	0.2	11/27/1990	580
USGS-383410121233001	38.5693503	-121.3927303	9/22/1982	2	9/22/1982	0.02			9/22/1982	30	9/22/1982	0			9/22/1982	153
USGS-383456121245801	38.5821277	-121.4171754	9/22/1982	4	9/22/1982	0.01			9/22/1982	0	9/22/1982	0			9/22/1982	109
USGS-383457121225601	38.5824055	-121.3832856	9/23/1982	2	9/23/1982	0.03			9/23/1982	10	9/23/1982	0			9/23/1982	186
USGS-383502121221801	38.5837944	-121.3727298			8/4/1971	0							8/4/1971	1.2	8/4/1971	165
USGS-383502121250301	38.5838333	-121.41775	9/14/2006	1.5	9/14/2006	0.01			9/14/2006	0	9/14/2006	0.83	9/14/2006	0.559	9/14/2006	NA
USGS-383524121212401	38.5898611	-121.356611	8/23/2017	2.1	8/23/2017	0.009							8/23/2017	0.593	8/23/2017	NA
USGS-383531121231101	38.5918497	-121.3874524	9/23/1982	1	9/23/1982	0.01			9/23/1982	0	9/23/1982	0			9/23/1982	209
USGS-383535121213001	38.5929609	-121.3593962	9/22/1982	2	9/22/1982	0.01			9/22/1982	0	9/22/1982	0			9/22/1982	153
USGS-383547121253101	38.5962939	-121.4263424	9/21/1982	2	9/21/1982	0.02			9/21/1982	0	9/21/1982	0			9/21/1982	402
USGS-383602121212701	38.6004607	-121.3585628	3/22/2005	2.7	3/22/2005	0.006			3/22/2005	0	3/22/2005	0	3/22/2005	0.832	3/22/2005	155
USGS-383604121325201	38.601016	-121.5488456	9/10/1982	12	9/10/1982	0.23			9/10/1982	350	9/10/1982	110			9/10/1982	176
USGS-383614121260601	38.6037937	-121.4360649			8/7/1970	0.1							8/7/1970	0.429	8/7/1970	NA
USGS-383622121234901	38.606016	-121.3980083	9/10/1982	3	9/10/1982	0.02			9/10/1982	0	9/10/1982	0			9/10/1982	167
USGS-383623121321301	38.6062936	-121.538012	9/10/1982	14	9/10/1982	0.3			9/10/1982	90	9/10/1982	550			9/10/1982	607

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USGS-383655121301601	38.6157528	-121.5054028	8/7/2017	77	8/7/2017	0.125			8/7/2017	1060	8/7/2017	3660	8/7/2017	0	8/7/2017	NA
USGS-383659121292201	38.6164833	-121.4903694	8/8/2017	4.2	8/8/2017	0.215			8/17/2005	0	8/17/2005	0.3	8/8/2017	3.83	8/8/2017	656
USGS-383700121241001	38.6166667	-121.4027778	9/29/1982	2	9/29/1982	0.02			9/29/1982	0	9/29/1982	0			9/29/1982	0
USGS-383703121280701	38.6175	-121.4688889	5/15/2014	3.3	5/15/2014	0.221			5/15/2014	0	5/15/2014	0	5/15/2014	2.07	5/15/2014	NA
USGS-383706121195601	38.6182381	-121.3332844	9/27/1982	1	9/27/1982	0.01			9/27/1982	0	9/27/1982	0			9/27/1982	173
USGS-383714121255001	38.62046	-121.4316204	9/21/1982	3	9/21/1982	0.26			9/21/1982	0	9/21/1982	0			9/21/1982	NA
USGS-383727121301801	38.6237972	-121.5060556	8/7/2017	4.6	8/7/2017	0.119			8/17/2005	0	8/7/2017	245	8/7/2017	0.661	8/7/2017	524
USGS-383738121333401	38.6271266	-121.5605127	9/14/2017	6.9	9/14/2017	0.048			9/14/2017	88.6	9/14/2017	394	9/14/2017	0	9/14/2017	152
USGS-383746121291101	38.6292139	-121.4877028	8/8/2017	5.9	8/8/2017	0.175			9/4/2012	8.4	8/8/2017	0.72	8/8/2017	6.07	8/8/2017	NA
USGS-383801121333801	38.6335154	-121.5616239	5/13/2008	24.6	5/13/2008	0.385			5/13/2008	14.9	5/13/2008	2.38	5/13/2008	0.182	5/13/2008	325
USGS-383808121294801	38.6354595	-121.4977332			8/11/1970	0.2							8/11/1970	0.497	8/11/1970	NA
USGS-383822121245901	38.6393485	-121.4174534	9/21/1982	4	9/21/1982	0.02			9/21/1982	280	9/21/1982	20			9/21/1982	0
USGS-383829121221001	38.641293	-121.3705077	9/29/1982	1	9/29/1982	0.02			9/29/1982	30	9/29/1982	0			9/29/1982	249
USGS-383846121335801	38.6462222	-121.5661944	10/18/2017	39.2	10/18/2017	0.697			10/18/2017	19.2	10/18/2017	289	10/18/2017	0	10/18/2017	420
USGS-383858121340801	38.6493484	-121.5699576	9/10/1982	27	9/10/1982	0.25			9/10/1982	220	9/10/1982	700			9/10/1982	NA
USGS-383900121270001	38.6585	-121.4664722	6/15/2005	4.2	6/15/2005	0.14			6/15/2005	6.9	6/15/2005	3.8	6/15/2005	0.34	6/15/2005	198
USGS-383901121220001	38.6503611	-121.3667778	10/2/2017	3.1	10/2/2017	0.015			10/2/2017	1.48	10/2/2017	1.48	10/2/2017	1.06	10/2/2017	192
USGS-383903121171301	38.6507374	-121.2880056	9/27/1982	1	9/27/1982	0.02			9/27/1982	10	9/27/1982	0			9/27/1982	NA
USGS-383903121181801	38.6507373	-121.3060616	9/27/1982	1	9/27/1982	0.06			9/27/1982	0	9/27/1982	30			9/27/1982	0
USGS-383904121280801	38.6510147	-121.4699548	9/21/1982	6	9/21/1982	0.12			9/21/1982	0	9/21/1982	0			9/21/1982	NA
USGS-383905121262401	38.6512926	-121.4410651			7/24/1969	0							7/24/1969	0.745	7/24/1969	201
USGS-383906121151601	38.6515707	-121.2555047	9/27/1982	2	9/27/1982	0.09			9/27/1982	20	9/27/1982	0			9/27/1982	178
USGS-383908121144001	38.6521263	-121.2455045	9/27/1982	1	9/27/1982	0			9/27/1982	10	9/27/1982	0			9/27/1982	253
USGS-383914121124901	38.653793	-121.2146703	6/17/2008	0.54	6/17/2008	0.009			6/17/2008	0	6/17/2008	0	6/17/2008	0.527	6/17/2008	NA
USGS-383918121122001	38.6549041	-121.2066146			7/25/1969	0							7/25/1969	0	7/25/1969	NA
USGS-383929121230501	38.6579592	-121.3857859	9/21/1982	1	9/21/1982	0.51			9/21/1982	0	9/21/1982	70			9/21/1982	312
USGS-383934121172201	38.6593482	-121.2905057			8/7/1970	0							8/7/1970	2.17	8/7/1970	NA
USGS-383943121132701	38.6618483	-121.2252262	9/27/1982	1	9/27/1982	0.05			9/27/1982	0	9/27/1982	0			9/27/1982	NA
USGS-383953121225601	38.6646257	-121.3832859	9/21/1982	2	9/21/1982	0.1			9/21/1982	0	9/21/1982	0			9/21/1982	226
USGS-384000121350001	38.67825	-121.5942778	4/5/2005	25.3	4/5/2005	0.496			4/5/2005	65.6	4/5/2005	120	4/5/2005	0	4/5/2005	632
USGS-384000121350002	38.67825	-121.5944167	4/6/2005	78.1	4/6/2005	0.985			4/6/2005	223	4/6/2005	82.7	4/6/2005	0	4/6/2005	0
USGS-384000121350003	38.67825	-121.5944167	4/7/2005	42.2	4/7/2005	2.2			4/7/2005	68.6	4/7/2005	55.6	4/7/2005	0	4/7/2005	501
USGS-384000121350004	38.67825	-121.5944167	4/7/2005	16.9	4/7/2005	1.43			4/7/2005	254	4/7/2005	254	4/7/2005	0	4/7/2005	656
USGS-384012121202801	38.6699034	-121.3421737	9/16/1982	2	9/16/1982	0.02			9/16/1982	0	9/16/1982	0			9/16/1982	NA
USGS-384017121364101	38.6712927	-121.612459	9/10/1982	20	9/10/1982	0.26			9/10/1982	0	9/10/1982	30			9/10/1982	231
USGS-384024121281301	38.67325	-121.4701944	8/22/2017	11.3	8/22/2017	0.038			8/22/2017	0.66	8/22/2017	0.66	8/22/2017	1.49	8/22/2017	299
USGS-384026121195401	38.6737922	-121.332729	9/17/1982	1	9/17/1982	0.22			9/17/1982	0	9/17/1982	40			9/17/1982	302
USGS-384046121243501	38.6793475	-121.4107866	9/30/1982	3	9/30/1982	0.07			9/30/1982	0	9/30/1982	0			9/30/1982	NA
USGS-384051121251801	38.6807363	-121.4227314			8/13/1974	0							8/13/1974	1.4	8/13/1974	NA
USGS-384058121295001	38.6826806	-121.4982889			8/10/1970	0							8/10/1970	0.836	8/10/1970	192
USGS-384100121210001	38.6941667	-121.3600278	3/11/2014	2.2	3/11/2014	0.135			3/11/2014	4.5	3/11/2014	0	3/11/2014	1.34	3/11/2014	NA
USGS-384100121230001	38.6879167	-121.3851667	4/10/2008	2.2	4/10/2008	0.394			4/10/2008	7.2	4/10/2008	0.47	4/10/2008	0.851	4/10/2008	281
USGS-384100121310002	38.6867778	-121.5219444	4/13/2005	25.3	4/13/2005	0.234			4/13/2005	293	4/13/2005	146	4/13/2005	0	4/13/2005	246
USGS-384100121310003	38.6867778	-121.5219444	4/14/2005	16.9	4/14/2005	0.196			4/14/2005	101	4/14/2005	16.5	4/14/2005	0	4/14/2005	242
USGS-384100121310004	38.6867778	-121.5219444	4/18/2005	46.5	4/18/2005	0.098			4/18/2005	44.4	4/18/2005	156	4/18/2005	0	4/18/2005	0
USGS-384100121350001	38.6857778	-121.5960556	3/28/2005	21.1	3/28/2005	1.53			3/28/2005	149	3/28/2005	145	3/28/2005	0	3/28/2005	654
USGS-384103121170401	38.6840698	-121.2855056	9/17/1982	1	9/17/1982	0.04			9/17/1982	0	9/17/1982	0			9/17/1982	NA
USGS-384108121211601	38.6854585	-121.3555074	9/17/1982	2	9/17/1982	0.07			9/17/1982	0	9/17/1982	0			9/17/1982	336
USGS-384112121130601	38.6865699	-121.2193928	3/16/2005	1.6	3/16/2005	0.379			3/16/2005	0	3/16/2005	0.62	3/16/2005	2.57	3/16/2005	259
USGS-384114121131401	38.6874167	-121.220611	9/14/2006	1.3	9/14/2006	0.014			9/14/2006	8.2	9/14/2006	5.65	9/14/2006	1.81	9/14/2006	230
USGS-384123121201001	38.6896251	-121.3371736	9/16/1982	2	9/16/1982	0.36			9/16/1982	20	9/16/1982	0			9/16/1982	263
USGS-384140121375001	38.6940833	-121.6316389	10/4/2017	9.5	10/4/2017	1.13			10/4/2017	37.3	10/4/2017	0.99	10/4/2017	0	10/4/2017	NA
USGS-384143121270601	38.6951803	-121.4527322	9/22/1982	6	9/22/1982	0.07			9/22/1982	0	9/22/1982	0			9/22/1982	0
USGS-384145121184101	38.6964	-121.3120389	9/4/2012	1.8	9/4/2012	0.032			9/4/2012	3.9	9/4/2012	1.33	9/4/2012	1.53	9/4/2012	261
USGS-384153121164601	38.698	-121.2795278	9/12/2017	0.08									9/12/2017	0	9/12/2017	70
USGS-384159121343901	38.6996252	-121.5785692			7/24/1969	0.1							7/24/1969	0.361	7/24/1969	NA

WELL_ID	LATITUDE	LONGITUDE	AS_Date	AS	B_Date	B	CR6_Date	CR6	FE_Date	FE	MN_Date	MN	NO3N_Date	NO3N	TDS_Date	TDS
USGS-384200121190001	38.7104722	-121.331611	4/1/2005	1.8	4/1/2005	0.563			4/1/2005	0	4/1/2005	1.11	4/1/2005	1.14	4/1/2005	306
USGS-384200121190002	38.7105	-121.3316944	4/1/2005	2.2	4/1/2005	0.096			4/1/2005	8.3	4/1/2005	1.36	4/1/2005	1.52	4/1/2005	209
USGS-384200121190003	38.7105556	-121.3316667	3/29/2005	1.7	3/29/2005	0.648			3/29/2005	0	3/29/2005	0.99	3/29/2005	1.26	3/29/2005	315
USGS-384200121190004	38.7105556	-121.3316667	3/30/2005	2.3	3/30/2005	0.058			3/30/2005	0	3/30/2005	0.49	3/30/2005	2.15	3/30/2005	222
USGS-384202121265201	38.700458	-121.4488432	9/22/1982	7	9/22/1982	0.18			9/22/1982	0	9/22/1982	0			9/22/1982	236
USGS-384211121232001	38.7031944	-121.389	8/22/2017	4.3	8/22/2017	0.014			8/22/2017	18.5	8/22/2017	0.92	8/22/2017	3.61	8/22/2017	223
USGS-384218121183101	38.7049026	-121.309673	9/17/1982	1	9/17/1982	0.08			9/17/1982	20	9/17/1982	0			9/17/1982	281
USGS-384220121213401	38.705458	-121.3605076			8/13/1974	0							8/13/1974	2.1	8/13/1974	269
USGS-384224121261401	38.7064722	-121.4384722	3/12/2014	4.5	3/12/2014	0.167			3/12/2014	0	3/12/2014	0	3/12/2014	1.54	3/12/2014	233
USGS-384230121364601	38.7082365	-121.6138482	9/30/1982	9	9/30/1982	1.6			9/30/1982	250	9/30/1982	260			9/30/1982	511
USGS-384234121134101	38.7095556	-121.2280278	9/11/2017	4.4	9/11/2017	0.483							9/11/2017	1.02	9/11/2017	340
USGS-384234121215601	38.7088167	-121.3664944	8/20/1998	3	8/20/1998	0.022			8/20/1998	0	8/20/1998	0	8/20/1998	2.2	8/20/1998	224
USGS-384242121193701	38.711569	-121.3280068			7/23/1969	0							7/23/1969	1.76	7/23/1969	NA
USGS-384243121224801	38.7118467	-121.3810637	9/21/1982	4	9/21/1982	0.02			9/21/1982	0	9/21/1982	0			9/21/1982	NA
USGS-384250121142101	38.7137913	-121.2402267			8/7/1970	1.4							8/7/1970	0.248	8/7/1970	353
USGS-384251121284301	38.7140687	-121.4796774	9/30/1982	16	9/30/1982	0.13			9/30/1982	30	9/30/1982	90			9/30/1982	171
USGS-384254121182101	38.7149023	-121.3068951	9/16/1982	1	9/16/1982	0.61			9/16/1982	10	9/16/1982	0			9/16/1982	302
USGS-384256121234801	38.7154577	-121.3977308			8/10/1970	0							8/10/1970	1.08	8/10/1970	NA
USGS-384257121243401	38.7157355	-121.410509	9/16/1982	3	9/16/1982	0.06			9/16/1982	0	9/16/1982	0			9/16/1982	NA
USGS-384301121195101	38.717	-121.3320278	10/2/2017	2.3	10/2/2017	0.018			5/22/2008	0	5/22/2008	0.14	10/2/2017	1.24	10/2/2017	239
USGS-384303121211701	38.7169944	-121.3556528	9/21/2005	3.1	9/21/2005	0.013			9/21/2005	0	9/21/2005	0.56	9/21/2005	1.88	9/21/2005	203
USGS-384306121193301	38.7182355	-121.3268957	9/17/1982	3	9/17/1982	0.05			9/17/1982	0	9/17/1982	0			9/17/1982	160
USGS-384316121250301	38.7210556	-121.4175278	10/16/2017	5.3	10/16/2017	0.036							10/16/2017	0.925	10/16/2017	NA
USGS-384318121230001	38.7216389	-121.3841778	8/21/2017	3.8	8/21/2017	0.014			8/21/2017	17.7	8/21/2017	1.43	9/20/2005	3.62	8/21/2017	287
USGS-384330121265601	38.7249018	-121.4499544	5/14/2008	6.9	5/14/2008	0.188			5/14/2008	0	5/14/2008	0.14	5/14/2008	1.2	5/14/2008	230
USGS-384330121293901	38.7251167	-121.4954417	7/10/2017	4.8	7/10/2017	0.06			8/16/2012	4.2	8/16/2012	0.53	7/10/2017	4.84	7/10/2017	NA
USGS-384347121140801	38.7298333	-121.2355	10/16/2017	1.4	10/16/2017	0.467							10/16/2017	6.4	10/16/2017	NA
USGS-384359121273901	38.7329572	-121.4618992	9/30/1982	18	9/30/1982	0.19			9/30/1982	0	9/30/1982	80			9/30/1982	0
USGS-384413121163801	38.7369444	-121.2772222	3/10/2014	2.3	3/10/2014	1.06			3/10/2014	12	3/10/2014	1.17	3/10/2014	2.16	3/10/2014	NA
USGS-384454121285701	38.7482346	-121.4835665			6/24/1974	0.1			7/15/1957	10			6/24/1974	2.26	6/24/1974	NA
USGS-384455121292101	38.7487778	-121.4898889	9/12/2017	8.1	9/12/2017	0.1			5/14/2008	0	5/14/2008	0	9/12/2017	3.48	9/12/2017	NA
USGS-384458121171001	38.7493458	-121.2871725	9/24/1982	2	9/24/1982	0.15			9/24/1982	0	9/24/1982	0			9/24/1982	240
USGS-384501121203701	38.7501791	-121.344674			7/23/1969	0							7/23/1969	1.24	7/23/1969	NA
USGS-384504121211401	38.7510124	-121.354952	9/17/1982	4	9/17/1982	0.07			9/17/1982	10	9/17/1982	0			9/17/1982	183
USGS-384510121242301	38.7535	-121.4045	9/14/1982	7	9/14/1982	0.21			9/14/1982	0	9/14/1982	0			9/14/1982	NA
USGS-384515121280801	38.7540678	-121.469955	8/2/1976	22	8/2/1976	0.39			8/2/1976	40	8/2/1976	110	8/2/1976	0.16	8/2/1976	189
USGS-384520121291901	38.7554566	-121.4896778			8/13/1971	0.2							8/13/1971	0.723	8/13/1971	194
USGS-384521121242401	38.7557345	-121.4077313			8/3/1976	0.17							8/3/1976	1.49	8/3/1976	NA
USGS-384525121352501	38.7568463	-121.5913478			8/2/1976	0.41							8/2/1976	0.12	8/2/1976	397
USGS-384529121293701	38.7579565	-121.494678			8/3/1976	0.18							8/3/1976	0.994	8/3/1976	NA
USGS-384539121171601	38.7607345	-121.2888394	6/4/1975	0	6/4/1975	0.1			6/4/1975	40	6/4/1975	0	6/4/1975	0.678	6/4/1975	NA
USGS-384624121271601	38.7732339	-121.4555106	8/3/1976	9	8/3/1976	0.28			8/3/1976	0	8/3/1976	0	8/3/1976	1.2	8/3/1976	201
USGS-384636121262701	38.7765672	-121.4418992	9/14/1982	8	9/14/1982	0.27			9/14/1982	0	9/14/1982	0			9/14/1982	NA
USGS-384638121265601	38.7771227	-121.4499549			8/12/1970	0.2							8/12/1970	0.971	8/12/1970	183
USGS-384643121360701	38.7785	-121.6019167	10/4/2017	8.2	10/4/2017	0.235			10/4/2017	55.2	10/4/2017	226	10/4/2017	0	10/4/2017	NA
USGS-384648121360901	38.7799013	-121.6035708	8/2/1976	7	8/2/1976	0.26			8/2/1976	0	8/2/1976	70	8/2/1976	0.061	8/2/1976	NA
USGS-384703121295001	38.7840669	-121.4982896	8/2/1976	7	8/2/1976	0.1			8/2/1976	0	8/2/1976	0	8/2/1976	2.19	8/2/1976	222
USGS-384724121354901	38.7899009	-121.5980152			7/23/1974	0.1			7/23/1974	40			7/23/1974	0.068	7/23/1974	370
USGS-384729121252501	38.7912891	-121.4246767	9/14/1982	6	9/14/1982	0.32			9/14/1982	0	9/14/1982	10			9/14/1982	NA
USGS-384730121362501	38.7915676	-121.6080156			8/2/1976	0.06							8/2/1976	0.61	8/2/1976	NA
USGS-384738121362701	38.7937898	-121.6085712	7/23/1974	20	7/23/1974	0.2			7/23/1974	150	7/23/1974	170	7/23/1974	0	7/23/1974	618
USGS-384747121250501	38.796289	-121.419121	9/14/1982	6	9/14/1982	0.18			9/14/1982	0	9/14/1982	0			9/14/1982	0
USGS-384748121275901	38.7965666	-121.4674557			8/3/1976	0.11							8/3/1976	2.48	8/3/1976	NA
USGS-384753121300401	38.7979554	-121.5021789	8/2/1976	8	8/2/1976	0.13			8/2/1976	0	8/2/1976	70	8/2/1976	2.48	8/2/1976	233
USGS-384758121190801	38.7993447	-121.3199518			6/25/1974	0.7							6/25/1974	3.61	6/25/1974	265
USGS-384807121370101	38.8018451	-121.618016	8/2/1976	1	8/2/1976	0.13			8/2/1976	20	8/2/1976	410	8/2/1976	0.655	8/2/1976	NA

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USGS-384809121201801	38.8026944	-121.3384444											8/9/2007	1.26		
USGS-384811121265901	38.8029554	-121.4507887	8/3/1976	10	8/3/1976	0.09			8/3/1976	20	8/3/1976	0	8/3/1976	2.1	8/3/1976	172
USGS-384813121281201	38.8035109	-121.471067	9/24/1970	0	7/9/1976	0.1			9/24/1970	0	9/24/1970	0	7/9/1976	1.31	7/9/1976	NA
USGS-384820121200701	38.80575	-121.3355278											8/7/2007	0.73		
USGS-384821121200801	38.8058333	-121.33575											2/28/2008	1.31		
USGS-384821121240001	38.8057332	-121.4010652	9/14/1982	5	9/14/1982	0.17			9/14/1982	10	9/14/1982	10			9/14/1982	0
USGS-384822121200701	38.8063056	-121.3353889											8/8/2007	1.25		
USGS-384832121320201	38.8087887	-121.5349579			8/2/1976	0.12							8/2/1976	0.791	8/2/1976	239
USGS-384904121263001	38.8176772	-121.4427331	9/14/1982	5	9/14/1982	0.23			9/14/1982	0	9/14/1982	0			9/14/1982	NA
USGS-384907121183601	38.8185109	-121.311063	9/17/1982	4	9/17/1982	0.83			9/17/1982	0	9/17/1982	0			9/17/1982	285
USGS-384926121284401	38.8237881	-121.4799565	8/3/1976	7	8/3/1976	0.07			8/3/1976	0	8/3/1976	0	8/3/1976	2.94	8/3/1976	217
USGS-384926121320201	38.8237883	-121.534958	8/2/1976	3	8/2/1976	0.08			8/2/1976	0	8/2/1976	0	8/2/1976	0.881	8/2/1976	492
USGS-384930121270601	38.8248992	-121.4527335			8/3/1976	0.09							8/3/1976	2.01	8/3/1976	NA
USGS-384930121273001	38.8248992	-121.4594004	9/14/1982	6	9/14/1982	0.16			9/14/1982	0	9/14/1982	0			9/14/1982	NA
USGS-384938121312801	38.8271214	-121.5255134	10/3/2017	4.7	10/3/2017	0.049			5/2/1968	140			10/3/2017	3.54	10/3/2017	435
USGS-384944121300501	38.8287879	-121.5024571			8/2/1976	0.03							8/2/1976	4.29	8/2/1976	314
USGS-384949121233501	38.8301771	-121.3941209	10/3/2017	4.6	10/3/2017	0.06			5/21/2008	0	5/21/2008	0	10/3/2017	1.22	10/3/2017	NA
USGS-385008121375701	38.8354552	-121.6335726			8/2/1976	0.09							8/2/1976	0.02	8/2/1976	97
USGS-385014121271501	38.8371389	-121.4540833	10/30/2017	2.9	10/30/2017	0.045							10/30/2017	3.47	10/30/2017	340
USGS-385017121203401	38.8379548	-121.3438419	9/14/1982	3	9/14/1982	0.24			9/14/1982	0	9/14/1982	0			9/14/1982	229
USGS-385020121291601	38.8387876	-121.4888458	8/3/1976	3	8/3/1976	0.06			8/3/1976	0	8/3/1976	0	8/3/1976	1.49	8/3/1976	218
USGS-385045121240801	38.8457322	-121.403288	8/5/1976	2	8/5/1976	0.03			8/5/1976	0	8/5/1976	0	8/5/1976	1.11	8/5/1976	205
USGS-385112121355401	38.8532322	-121.599405	8/11/1967	40	8/13/1974	0.2							8/13/1974	0	8/13/1974	507
USGS-385123121290001	38.8562872	-121.4844015			8/4/1976	0.04							8/4/1976	1.4	8/4/1976	NA
USGS-385155121353301	38.8651762	-121.5935717			8/4/1976	0.06							8/4/1976	0.099	8/4/1976	569
USGS-385200121195701	38.8666944	-121.3334167	9/13/2017	3	9/13/2017	0.332			9/13/2017	13	9/9/1982	0	9/13/2017	1.37	9/13/2017	212
USGS-385207121203301	38.8685097	-121.3435645	9/9/1982	2	9/9/1982	0.13			9/9/1982	0	9/9/1982	0			9/9/1982	226
USGS-385218121291101	38.8715645	-121.4874574	8/4/1976	5	8/4/1976	0.06			8/4/1976	0	8/4/1976	0	8/4/1976	2.1	8/4/1976	221
USGS-385222121201401	38.8726763	-121.3382867	9/9/1982	2	9/9/1982	0.17			9/9/1982	0	9/9/1982	0			9/9/1982	217
USGS-385231121361701	38.875176	-121.6057945	8/4/1976	2	8/4/1976	0.35			8/4/1976	150	8/4/1976	1400	8/4/1976	0.655	8/4/1976	1360
USGS-385256121362201	38.8822222	-121.606111	10/17/2017	37.1	10/17/2017	0.249			10/17/2017	1640	10/17/2017	307	10/17/2017	0	10/17/2017	913
USGS-385300121340001	38.8963889	-121.5698333	3/18/2014	6	3/18/2014	0.029			3/18/2014	5.5	3/18/2014	0	3/18/2014	0.194	3/18/2014	288
USGS-385310121173501	38.8860095	-121.294119	9/8/1982	0	9/8/1982	0.15			9/8/1982	3400	9/8/1982	300			9/8/1982	223
USGS-385318121252201	38.8881944	-121.4227778	10/31/2017	2.5	10/31/2017	0.051							10/31/2017	2.29	10/31/2017	189
USGS-385326121193601	38.8904537	-121.327731	9/8/1982	1	9/8/1982	0.17			9/8/1982	0	9/8/1982	0			9/8/1982	305
USGS-385328121255701	38.8910087	-121.4335673			8/5/1976	0.05							8/5/1976	1.11	8/5/1976	158
USGS-385332121343801	38.8921197	-121.5782939	8/4/1976	8	8/4/1976	0.03			8/4/1976	0	8/4/1976	0	8/4/1976	0.407	8/4/1976	241
USGS-385338121330701	38.8937863	-121.5530153			8/4/1976	0.04							8/4/1976	1.11	8/4/1976	NA
USGS-385340121255701	38.8944444	-121.4325	5/4/2005	1.4	5/4/2005	0.022			5/4/2005	0	5/4/2005	0	5/4/2005	3.27	5/4/2005	359
USGS-385341121185501	38.8946203	-121.3163419	9/8/1982	3	9/8/1982	1.1			9/8/1982	0	9/8/1982	0			9/8/1982	598
USGS-385347121191201	38.8962869	-121.3210643			6/25/1974	1.4							7/8/1964	4.07	6/25/1974	584
USGS-385348121240101	38.8965643	-121.4013443	8/5/1976	2	8/5/1976	0.14			8/5/1976	0	8/5/1976	0	8/5/1976	0.61	8/5/1976	NA
USGS-385350121163301	38.8971205	-121.2768964	9/8/1982	1	9/8/1982	6.8			9/8/1982	80	9/8/1982	40			9/8/1982	1100
USGS-385351121220001	38.8973978	-121.3677323			8/5/1976	0.28							8/5/1976	1.31	8/5/1976	202
USGS-385416121202301	38.9043422	-121.3407872	9/8/1982	2	9/8/1982	0.54			9/8/1982	0	9/8/1982	0			9/8/1982	222
USGS-385423121342701	38.9057222	-121.57525	10/17/2017	14.8	10/17/2017	0.067			10/17/2017	14.5	10/17/2017	61.8	10/17/2017	0	10/17/2017	190
USGS-385432121213001	38.9084167	-121.3590833	10/18/2017	1.2	10/18/2017	0.015			5/21/2008	0	5/21/2008	0	10/18/2017	4.94	10/18/2017	NA
USGS-385441121323801	38.9112857	-121.5449598	8/4/1976	12	8/4/1976	0.08			8/4/1976	0	8/4/1976	0	8/4/1976	0.768	8/4/1976	165
USGS-385450121270401	38.9137858	-121.4521793	8/5/1976	3	8/5/1976	0.07			8/5/1976	0	8/5/1976	0	8/5/1976	1.11	8/5/1976	NA
USGS-385455121335901	38.9151745	-121.5674606			8/4/1976	0.1							8/4/1976	0.16	8/4/1976	249
USGS-385501121220001	38.9168417	-121.3677326	8/5/1976	2	8/5/1976	0.27			8/5/1976	0	8/5/1976	0	8/5/1976	1.31	8/5/1976	197
USGS-385523121235201	38.9229525	-121.3988446			8/5/1971	0.1			8/4/1958	0			8/5/1971	0.068	8/5/1971	NA
USGS-385530121163601	38.9248976	-121.2777301	9/8/1982	1	9/8/1982	5.6			9/8/1982	10	9/8/1982	0			9/8/1982	505
USGS-385542121340001	38.9282297	-121.5677385	8/9/1976	2	8/9/1976	0.19			8/9/1976	0	8/9/1976	0	8/9/1976	0.768	8/9/1976	549
USGS-385546121312801	38.92925	-121.5254444	10/5/2017	3.4	10/5/2017	0.019			5/20/2008	0	5/20/2008	0.3	10/5/2017	2.3	10/5/2017	454
USGS-385558121291401	38.9326739	-121.4882917			8/9/1976	0							8/9/1976	2.71	8/9/1976	353

WELL_ID	LATITUDE	LONGITUDE	AS_Date	AS	B_Date	B	CR6_Date	CR6	FE_Date	FE	MN_Date	MN	NO3N_Date	NO3N	TDS_Date	TDS
USGS-385607121275801	38.935174	-121.46718	8/9/1976	0	8/9/1976	0			8/9/1976	0	8/9/1976	30	8/9/1976	1.69	8/9/1976	184
USGS-385625121222401	38.9402778	-121.3733333	9/24/1982	2	9/24/1982	0.05			9/24/1982	50	9/24/1982	0			9/24/1982	192
USGS-385626121261101	38.9404518	-121.437457			8/9/1976	0							8/9/1976	2.48	8/9/1976	228
USGS-385643121312101	38.9451735	-121.5235708			8/9/1976	0							8/9/1976	1.81	8/9/1976	NA
USGS-385703121294501	38.9507289	-121.4969034	8/9/1976	2	8/9/1976	0.18			8/9/1976	0	8/9/1976	0	8/9/1976	0.226	8/9/1976	181
USGS-385718121290401	38.9548956	-121.4855142	5/20/2008	1.8	5/20/2008	0.02			5/20/2008	0	5/20/2008	3.83	5/20/2008	2.11	5/20/2008	310
USGS-385720121282401	38.9554512	-121.4744028	10/2/1997	1	10/2/1997	0.032			10/2/1997	0	10/2/1997	1.76	10/2/1997	1.13	10/2/1997	303
USGS-385724121220901	38.956563	-121.3702332	8/12/1970	0	6/4/1975	0.1			6/4/1975	20	6/4/1975	0	6/4/1975	0.542	6/4/1975	195
USGS-385731121241101	38.9585071	-121.404123	8/9/1976	1	8/9/1976	0.07			8/9/1976	0	8/9/1976	0	8/9/1976	1.11	8/9/1976	178
USGS-385810121292501	38.9693396	-121.491348			8/9/1976	0							8/9/1976	4.52	8/9/1976	574
USGS-385820121271401	38.9723056	-121.4540278	10/5/2017	0.69	10/5/2017	0.016					10/5/2017	0.55	10/5/2017	4.75	10/5/2017	NA
USGS-385830121270501	38.9748953	-121.452458			8/5/1976	0.03							8/5/1976	3.39	8/5/1976	NA
USGS-385854121222901	38.9815623	-121.3757893			7/22/1969	0.4							7/22/1969	1.54	7/22/1969	323
USGS-385856121222501	38.9830833	-121.3756389	4/6/2005	1.7	4/6/2005	0.357			4/6/2005	0	4/6/2005	0	4/6/2005	3.31	4/6/2005	286
USGS-385914121215801	38.9871178	-121.367178	6/2/2008	2.1	6/2/2008	0.084			6/2/2008	0	6/2/2008	0.17	6/2/2008	1.63	6/2/2008	192
USGS-385914121273501	38.9871171	-121.4607918											7/25/1970	6.78	7/25/1970	462
USGS-385922121202601	38.9893402	-121.3416217	9/7/1982	5	9/7/1982	0.14			9/7/1982	220	9/7/1982	20			9/7/1982	NA
USGS-385929121260001	38.9912839	-121.4344022	8/5/1976	3	8/5/1976	0.36			8/5/1976	0	8/5/1976	0	8/5/1976	0.994	8/5/1976	NA
USGS-385932121212401	38.9922778	-121.3566944	10/31/2017	4.6	10/31/2017	0.092							10/31/2017	2.43	10/31/2017	172
USGS-385949121203001	38.99684	-121.342733	9/7/1982	4	9/7/1982	0.14			9/7/1982	20	9/7/1982	0			9/7/1982	145
USGS-390100121204201	39.0165619	-121.3460669	9/8/1982	2	9/8/1982	0.13			9/8/1982	0	9/8/1982	0			9/8/1982	NA
1.USGS and Public Supply Wells																
Min			8/11/1967	0	7/22/1969	0	10/3/2001	0	7/15/1957	0	9/24/1970	0	7/8/1964	0	7/22/1969	0
Max			9/18/2019	78.1	8/16/2018	6.8	8/8/2019	14	9/12/2019	5500	9/12/2019	3660	10/1/2019	10	9/12/2019	1360
Units in Raw Data				ug/l		mg/l		ug/l		ug/l		ug/l		mg/l		mg/l
MCL				10		1		10		300		50		10		500
Above MCL				29		14		9		44		62		0		22
# of wells with analytical results				482		410		252		488		488		494		451
Average				3.93		0.18		3.76		158.02		49.31		1.68		266.36
2.Public Supply Wells																
Min			4/9/1987	0	12/13/1995	0	10/3/2001	0	4/9/1987	0	4/9/1987	0	4/9/1987	0	4/9/1987	0
Max			9/18/2019	40	8/16/2018	3.1	8/8/2019	14	9/12/2019	5500	9/12/2019	2831	10/1/2019	10	9/12/2019	720
Units in Raw Data				ug/l		mg/l		ug/l		ug/l		ug/l		mg/l		mg/l
MCL				10		1		10		300		50		10		500
Above MCL				5		3		9		40		34		0		3
# of wells with analytical results				326		213		252		341		342		354		313
Average				2.4		0.1		3.8		196.3		38.3		1.8		258.4

Appendix M: Water Quality Trend Analysis Results

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

APPENDIX M Water Quality Trend Analysis Results

December 2021

**Graphs can be made available by request
using contact information on
nasbgroundwater.org**

APPENDIX M – WATER QUALITY TRENDS

METHODS AND APPROACH

A statistical trend analysis of the data was performed using the Mann-Kendall method when the well had more than five samples for a given element. This method is a nonparametric (for example, does not assume a distribution in the data) test for identifying trends in time-series data. The Mann-Kendall test for trend detection assumes that the sample data are serially independent since the presence of positive serial correlation increases the probability that the Mann-Kendall test detects trend even though no such trend exists. The accepted approach is to remove the serial correlation from the time series before application of the test. This process is called the pre-whitening (Zhang et al. 2001; Burn and Elnur 2002). After removing the effect of serial correlation from the respective time series by pre-whitening, the Mann-Kendall test compares the relative magnitudes of sample data rather than the data values themselves. The initial value of the Mann-Kendall statistic, S , was assumed to be 0 (that is, no trend). If a concentration from a later sampling event is higher than a concentration from an earlier sampling event, S is incremented by 1. Conversely, if the concentration from a later sampling event is lower than a concentration sampled earlier, S is decremented by 1. Then the Mann-Kendall statistic (S) is given by

$$S = \sum_{k=1}^{n-1} \sum_{j=k+1}^n \text{Sign}(x_j - x_k)$$

Where:

$$\begin{aligned} \text{Sign}(x_j - x_k) &= 1, \text{ if } x_j - x_k > 0 \\ &= 0, \text{ if } x_j - x_k = 0 \\ &= -1, \text{ if } x_j - x_k < 0 \end{aligned}$$

The net result of all such increments and decrements yields the final value of S . A very high positive value of S is an indicator of an increasing trend, and a very low negative value indicates a decreasing trend. However, it is necessary to compute the probability associated with S and the sample size, n , to statistically quantify the significance of the trend. Kendall (1975) describes a normal-approximation test statistic Z as follows:

$$\begin{aligned}
Z &= \frac{S - 1}{[\text{VAR}(S)]^{\frac{1}{2}}} \text{ if } S > 0 \\
&= 0, \text{ if } S = 0 \\
&= \frac{S - 1}{[\text{VAR}(S)]^{\frac{1}{2}}} \text{ if } S < 0
\end{aligned}$$

Probability value (P) is then computed with the normalized test statistic Z. The probability density function for a normal distribution with a mean of 0 and a standard deviation of 1 is given by the following equation:

$$f(z) = \frac{1}{\sqrt{2\pi}} e^{-\frac{z^2}{2}}$$

A P-value less than 0.05 (typically ≤ 0.05) is statistically significant. It indicates strong evidence against the null hypothesis (If the null hypothesis is true, the results are random). The trend is said to be decreasing if Z is negative and the computed probability P is less than the level of significance. The trend is said to be increasing if the Z is positive and the computed probability is less than the level of significance. If the computed probability is greater than the level of significance, there is no trend.

Total Dissolved Solids

Local_ID	Well_info_ID	chemical	h	p	s	tau	trend	var_s	z	datemin	datemax	Latitude_NAD83	Longitude_NAD83
2934	11N03E24D001M	TDS	FALSE	0.368	7	0.333	no trend	44.3	0.9	7/21/1964	8/18/2004	38.7906	-121.5973
2940	11N04E04R002M	TDS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	8/12/1971	8/24/2005	38.8255	-121.5259
2957	11N04E23P002M	TDS	FALSE	0.133	9	0.6	no trend	28.3	1.5	4/15/1965	8/18/2004	38.7837	-121.4982
2943	11N04E35J001M	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	8/13/1971	8/24/2005	38.7556	-121.4898
2083	11N06E17D001M	TDS	TRUE	0.001	584	0.281	increasing	31200	3.3	5/5/2004	3/26/2008	38.8064	-121.3353
2081	11N06E17D002M	TDS	FALSE	0.111	-363	-0.124	no trend	51691.7	-1.59	5/6/2004	3/26/2008	38.8027	-121.3384
2080	11N06E17D003M	TDS	FALSE	0.623	65	0.047	no trend	16994.3	0.49	5/5/2004	3/26/2008	38.8059	-121.3358
2082	11N06E17E001M	TDS	TRUE	0	564	0.353	increasing	21102.7	3.88	5/5/2004	3/26/2008	38.8058	-121.3354
2953	12N03E26R001M	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	6/13/1963	8/18/2004	38.8533	-121.5991
2967	12N04E05R005M	TDS	FALSE	0.26	7	0.467	no trend	28.3	1.13	8/25/1970	8/18/2004	38.9114	-121.5447
2956	12N04E25N001M	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	6/12/1969	8/25/2005	38.8546	-121.4859
2059	3100538-001	TDS	FALSE	0.089	6	1	no trend	8.7	1.7	3/18/2004	3/23/2018	38.7505	-121.321972
2057	3110004-002	TDS	FALSE	0.133	-9	-0.6	no trend	28.3	-1.5	4/24/2001	1/15/2015	38.868006	-121.320358
2068	3110004-003	TDS	FALSE	0.452	5	0.333	no trend	28.3	0.75	11/9/2004	4/27/2017	38.86973	-121.330213
2061	3110004-011	TDS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	12/7/2005	1/15/2015	38.865086	-121.347261
2069	3110008-003	TDS	FALSE	0.47	3	0.5	no trend	7.7	0.72	10/26/1992	1/8/2010	38.753022	-121.279492
2071	3110008-006	TDS	FALSE	0.221	6	0.6	no trend	16.7	1.22	10/27/1992	9/5/2013	38.736633	-121.277875
2066	3110008-007	TDS	FALSE	0.462	4	0.4	no trend	16.7	0.73	10/26/1992	9/5/2013	38.726493	-121.258205
2050	3110008-008	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	10/22/2002	8/23/2018	38.805938	-121.33588
2064	3110025-005	TDS	FALSE	0.181	-28	-0.267	no trend	407.3	-1.34	7/26/1989	9/12/2019	38.818889	-121.131
2063	3110040-001	TDS	FALSE	0.085	23	0.418	no trend	163	1.72	9/27/1988	7/9/2002	38.75	-121.34722
2067	3110040-002	TDS	FALSE	0.154	14	0.389	no trend	83.3	1.42	8/31/1989	7/9/2002	38.75	-121.34444
2054	3110048-001	TDS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	3/31/2004	4/9/2018	38.983062	-121.375659
2058	3110048-002	TDS	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	3/31/2004	4/9/2018	38.980075	-121.369185
145	3400173-002	TDS	FALSE	0.734	2	0.333	no trend	8.7	0.34	5/24/2001	2/14/2017	38.640638	-121.483861
79	3400179-001	TDS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	6/21/2007	3/20/2019	38.6575	-121.378333
57	3400190-001	TDS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	6/21/2007	3/20/2019	38.675861	-121.326329
272	3400191-001	TDS	FALSE	0.734	2	0.333	no trend	8.7	0.34	6/28/2007	3/20/2019	38.65525	-121.379888
193	3410001-001	TDS	FALSE	0.452	5	0.333	no trend	28.3	0.75	1/12/1993	9/5/2017	38.606839	-121.3982
242	3410001-002	TDS	FALSE	1	1	0.067	no trend	28.3	0	2/5/1998	7/18/2017	38.59783	-121.398024
258	3410001-004	TDS	FALSE	0.085	-10	-0.667	no trend	27.3	-1.72	1/12/1993	6/19/2014	38.611483	-121.410107
284	3410001-005	TDS	FALSE	0.452	5	0.333	no trend	28.3	0.75	2/25/1991	6/8/2011	38.623478	-121.396638
203	3410001-007	TDS	FALSE	0.548	5	0.238	no trend	44.3	0.6	7/9/1990	9/27/2017	38.610999	-121.363391
212	3410001-010	TDS	FALSE	0.23	9	0.429	no trend	44.3	1.2	7/10/1990	9/12/2017	38.608099	-121.408153
158	3410001-011	TDS	FALSE	0.902	-2	-0.071	no trend	65.3	-0.12	1/30/1992	9/14/2017	38.619863	-121.396184
228	3410001-012	TDS	FALSE	0.386	8	0.286	no trend	65.3	0.87	2/25/1991	12/12/2017	38.617662	-121.403695
82	3410001-013	TDS	FALSE	1	0	0	no trend	43.3	0	1/28/1992	9/26/2017	38.598939	-121.370714
146	3410001-014	TDS	FALSE	0.221	6	0.6	no trend	16.7	1.22	7/10/1990	9/26/2006	38.61171	-121.386048
260	3410001-015	TDS	FALSE	0.879	-2	-0.095	no trend	43.3	-0.15	11/1/1988	9/19/2017	38.59781	-121.381308
191	3410001-016	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	2/22/1991	9/4/2014	38.631327	-121.37485
124	3410001-017	TDS	FALSE	0.06	-11	-0.733	no trend	28.3	-1.88	1/30/1992	8/27/2014	38.61981	-121.403732
211	3410001-018	TDS	FALSE	0.764	3	0.143	no trend	44.3	0.3	2/22/1991	9/19/2017	38.623854	-121.374359
209	3410001-019	TDS	FALSE	0.072	13	0.619	no trend	44.3	1.8	1/27/1992	9/25/2017	38.597831	-121.359623
114	3410001-020	TDS	TRUE	0.035	15	0.714	increasing	44.3	2.1	1/27/1992	9/19/2017	38.618079	-121.359205
210	3410001-021	TDS	FALSE	0.095	12	0.571	no trend	43.3	1.67	7/9/1990	9/12/2017	38.615256	-121.419986
161	3410001-022	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	2/5/1998	9/11/2017	38.604549	-121.42274
222	3410001-025	TDS	FALSE	0.879	2	0.095	no trend	43.3	0.15	2/22/1991	9/19/2017	38.60046	-121.359118
113	3410001-027	TDS	FALSE	0.072	13	0.619	no trend	44.3	1.8	1/30/1992	9/27/2017	38.605146	-121.390988
244	3410001-028	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	1/30/1992	8/21/2014	38.63562	-121.381097
227	3410001-029	TDS	FALSE	0.848	2	0.133	no trend	27.3	0.19	1/30/1992	10/3/2017	38.630252	-121.397575
236	3410001-030	TDS	FALSE	1	1	0.067	no trend	28.3	0	1/29/1992	9/26/2017	38.617802	-121.424022
81	3410001-032	TDS	FALSE	0.26	-7	-0.467	no trend	28.3	-1.13	7/9/1990	9/19/2017	38.622918	-121.413817
104	3410001-033	TDS	FALSE	0.06	11	0.733	no trend	28.3	1.88	1/29/1992	7/10/2014	38.601378	-121.424
173	3410001-034	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	7/9/1990	9/11/2017	38.584674	-121.396539
169	3410001-035	TDS	FALSE	0.23	9	0.429	no trend	44.3	1.2	7/9/1990	9/28/2017	38.594464	-121.351844
19	3410001-038	TDS	FALSE	0.086	8	0.8	no trend	16.7	1.71	1/28/1992	6/9/2011	38.578371	-121.363395
20	3410001-039	TDS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	2/22/1991	9/18/2006	38.591742	-121.346413
168	3410001-042	TDS	FALSE	0.548	5	0.238	no trend	44.3	0.6	2/22/1991	9/12/2017	38.628014	-121.358648
184	3410001-051	TDS	FALSE	0.548	5	0.238	no trend	44.3	0.6	7/9/1990	9/11/2017	38.636187	-121.375067
111	3410001-052	TDS	FALSE	0.848	-2	-0.133	no trend	27.3	-0.19	7/9/1990	9/11/2017	38.625054	-121.362252
287	3410001-054	TDS	FALSE	1	1	0.048	no trend	44.3	0	2/11/1991	9/13/2017	38.582422	-121.408379
122	3410001-055	TDS	FALSE	0.133	11	0.524	no trend	44.3	1.5	11/1/1988	12/13/2017	38.594474	-121.39864
26	3410001-056	TDS	FALSE	0.23	-9	-0.429	no trend	44.3	-1.2	1/12/1993	9/13/2017	38.578749	-121.41096
3	3410001-061	TDS	FALSE	0.133	-11	-0.524	no trend	44.3	-1.5	5/7/1998	9/26/2017	38.582786	-121.338489
176	3410001-062	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	8/22/2000	9/5/2017	38.618056	-121.401944
12	3410001-064	TDS	FALSE	0.221	6	0.6	no trend	16.7	1.22	4/23/2002	9/12/2017	38.584121	-121.353432
13	3410001-065	TDS	TRUE	0.027	-10	-1	decreasing	16.7	-2.2	4/22/2002	9/21/2017	38.583196	-121.33679
4	3410001-066	TDS	FALSE	0.221	-6	-0.6	no trend	16.7	-1.22	4/23/2002	9/12/2017	38.582214	-121.338203
2	3410001-067	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	6/3/1999	10/1/2014	38.582481	-121.417169
225	3410001-069	TDS	FALSE	0.23	9	0.429	no trend	44.3	1.2	2/26/1992	9/28/2017	38.580609	-121.384004
255	3410001-070	TDS	FALSE	0.875	2	0.095	no trend	40.7	0.16	2/12/1991	9/12/2017	38.576006	-121.403088

205	3410001-071	TDS	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	4/17/2002	9/14/2017	38.63056	-121.397787
106	3410001-072	TDS	FALSE	0.806	2	0.2	no trend	16.7	0.24	4/17/2002	9/12/2017	38.61744	-121.411527
252	3410001-073	TDS	FALSE	0.462	-4	-0.4	no trend	16.7	-0.73	4/17/2002	9/7/2017	38.58058	-121.383962
58	3410001-076	TDS	FALSE	1	0	0	no trend	65.3	0	4/29/1988	7/10/2019	38.644265	-121.362069
69	3410001-077	TDS	FALSE	0.295	11	0.306	no trend	91	1.05	4/20/1988	7/10/2019	38.631522	-121.352911
86	3410001-078	TDS	FALSE	0.529	7	0.194	no trend	91	0.63	4/29/1988	7/9/2019	38.684818	-121.355931
259	3410001-079	TDS	FALSE	1	1	0.067	no trend	28.3	0	6/30/1988	7/24/2013	38.667577	-121.334161
110	3410001-080	TDS	FALSE	0.917	-2	-0.056	no trend	92	-0.1	6/23/1988	7/17/2019	38.672567	-121.331573
174	3410001-081	TDS	TRUE	0.049	-23	-0.511	decreasing	125	-1.97	6/30/1988	7/22/2019	38.683333	-121.333333
71	3410001-082	TDS	FALSE	0.142	15	0.417	no trend	91	1.47	10/19/1988	7/21/2016	38.648929	-121.338368
246	3410001-083	TDS	FALSE	0.454	7	0.25	no trend	64.3	0.75	4/29/1988	7/9/2019	38.663692	-121.347786
239	3410001-085	TDS	FALSE	0.474	-9	-0.2	no trend	125	-0.72	6/23/1988	7/17/2019	38.644208	-121.329841
49	3410001-087	TDS	FALSE	0.175	14	0.389	no trend	92	1.36	7/28/1988	7/11/2019	38.645858	-121.392317
218	3410001-088	TDS	FALSE	0.368	7	0.333	no trend	44.3	0.9	4/9/1987	7/11/2013	38.668746	-121.361
89	3410001-089	TDS	FALSE	0.419	-10	-0.222	no trend	124	-0.81	4/20/1988	7/9/2019	38.653579	-121.379692
132	3410001-092	TDS	FALSE	0.118	16	0.444	no trend	92	1.56	6/23/1988	7/20/2016	38.63889	-121.342759
185	3410001-094	TDS	FALSE	0.076	18	0.5	no trend	92	1.77	6/23/1988	7/10/2019	38.652299	-121.354305
196	3410001-095	TDS	FALSE	0.089	6	1	no trend	8.7	1.7	6/30/1988	6/21/2007	38.658062	-121.356402
297	3410001-096	TDS	FALSE	0.105	19	0.422	no trend	123	1.62	6/30/1988	7/9/2019	38.689669	-121.360198
102	3410001-097	TDS	FALSE	0.178	16	0.356	no trend	124	1.35	4/20/1988	7/11/2019	38.694158	-121.360024
256	3410001-098	TDS	FALSE	0.785	4	0.089	no trend	121.3	0.27	4/29/1988	7/9/2019	38.700217	-121.351805
295	3410001-099	TDS	FALSE	1	0	0	no trend	8.7	0	10/20/1988	6/21/2007	38.655401	-121.313482
46	3410001-101	TDS	FALSE	0.754	4	0.111	no trend	92	0.31	10/27/1988	7/7/2016	38.663926	-121.32579
231	3410001-102	TDS	FALSE	0.711	4	0.143	no trend	65.3	0.37	10/20/1988	7/15/2019	38.675049	-121.315501
101	3410001-103	TDS	FALSE	1	0	0	no trend	12	0	10/25/1988	11/13/2013	38.651225	-121.32298
163	3410001-104	TDS	FALSE	0.395	9	0.25	no trend	88.3	0.85	2/1/1993	7/10/2019	38.710442	-121.331662
180	3410001-105	TDS	FALSE	1	0	0	no trend	65.3	0	11/4/1996	7/10/2019	38.710528	-121.331667
262	3410001-106	TDS	FALSE	0.089	6	1	no trend	8.7	1.7	6/28/2001	7/8/2013	38.710517	-121.331659
85	3410001-107	TDS	FALSE	0.339	6	0.4	no trend	27.3	0.96	11/4/1996	7/14/2016	38.709903	-121.357066
127	3410001-111	TDS	FALSE	0.386	8	0.286	no trend	65.3	0.87	12/13/1995	7/11/2019	38.665363	-121.383099
254	3410001-127	TDS	FALSE	0.26	7	0.467	no trend	28.3	1.13	12/13/1995	7/29/2013	38.712268	-121.381099
283	3410001-128	TDS	FALSE	0.221	6	0.6	no trend	16.7	1.22	12/13/1995	6/17/2010	38.709783	-121.374669
149	3410001-129	TDS	TRUE	0.009	15	1	increasing	28.3	2.63	12/13/1995	7/29/2013	38.710651	-121.387666
118	3410001-133	TDS	FALSE	0.445	-7	-0.25	no trend	61.7	-0.76	2/25/1991	7/22/2019	38.682932	-121.376063
182	3410001-135	TDS	FALSE	0.06	-11	-0.733	no trend	28.3	-1.88	2/5/1998	11/7/2016	38.68794	-121.385107
99	3410001-136	TDS	FALSE	0.072	13	0.619	no trend	44.3	1.8	2/25/1991	3/27/2018	38.685899	-121.372701
141	3410001-137	TDS	FALSE	0.707	3	0.2	no trend	28.3	0.38	2/25/1991	7/29/2013	38.692847	-121.375953
183	3410001-139	TDS	FALSE	0.764	3	0.143	no trend	44.3	0.3	6/30/1988	7/19/2016	38.69191	-121.364477
280	3410001-142	TDS	FALSE	0.764	3	0.143	no trend	44.3	0.3	7/20/1989	7/11/2016	38.686782	-121.392424
197	3410001-144	TDS	FALSE	0.135	13	0.464	no trend	64.3	1.5	2/25/1991	7/23/2019	38.69798	-121.373877
213	3410001-145	TDS	FALSE	0.133	9	0.6	no trend	28.3	1.5	4/22/2002	7/10/2019	38.67526	-121.379573
315	3410002-001	TDS	FALSE	0.142	15	0.417	no trend	91	1.47	2/20/1991	2/8/2017	38.583333	-121.383333
117	3410002-002	TDS	FALSE	0.386	8	0.286	no trend	65.3	0.87	7/17/1990	2/8/2017	38.583333	-121.366667
28	3410002-007	TDS	FALSE	0.23	9	0.429	no trend	44.3	1.2	7/17/1990	2/14/2017	38.566667	-121.4
10	3410002-012	TDS	FALSE	1	1	0.067	no trend	28.3	0	7/17/1990	5/8/2017	38.566667	-121.416667
17	3410002-013	TDS	FALSE	0.902	-2	-0.071	no trend	65.3	-0.12	7/17/1990	2/14/2017	38.583333	-121.416667
249	3410002-014	TDS	FALSE	1	0	0	no trend	65.3	0	1/19/1993	5/8/2017	38.583333	-121.366667
152	3410003-001	TDS	FALSE	0.622	10	0.11	no trend	332.7	0.49	9/5/1990	2/6/2019	38.587545	-121.385145
153	3410003-002	TDS	FALSE	0.15	22	0.333	no trend	212.7	1.44	4/11/1986	2/28/2017	38.582537	-121.383219
245	3410003-004	TDS	FALSE	0.221	6	0.6	no trend	16.7	1.22	9/19/1990	1/25/2005	38.587611	-121.392074
162	3410003-005	TDS	FALSE	0.276	15	0.273	no trend	165	1.09	4/2/1987	7/11/2017	38.591017	-121.384139
251	3410003-006	TDS	FALSE	0.21	15	0.333	no trend	125	1.25	4/2/1987	2/28/2017	38.59211	-121.387633
238	3410003-008	TDS	FALSE	0.276	15	0.273	no trend	165	1.09	4/2/1987	2/28/2017	38.600074	-121.391973
74	3410004-001	TDS	FALSE	0.371	11	0.244	no trend	125	0.89	1/29/1998	2/3/2004	38.645432	-121.313067
83	3410004-004	TDS	FALSE	0.276	23	0.219	no trend	408.3	1.09	2/19/1991	1/28/2010	38.64988	-121.30798
175	3410004-005	TDS	FALSE	1	-1	-0.067	no trend	28.3	0	3/1/1991	10/4/2001	38.633333	-121.35
172	3410004-006	TDS	FALSE	0.323	-36	-0.156	no trend	1254.7	-0.99	8/1/1990	6/1/2017	38.622744	-121.335704
6	3410004-007	TDS	FALSE	0.928	2	0.044	no trend	124	0.09	8/1/1990	10/23/2002	38.594673	-121.334606
150	3410004-009	TDS	FALSE	0.494	-24	-0.104	no trend	1132.7	-0.68	2/19/1991	6/1/2017	38.619652	-121.333354
261	3410004-016	TDS	TRUE	0.037	80	0.316	increasing	1432.7	2.09	5/8/1987	6/1/2017	38.645576	-121.306819
248	3410004-020	TDS	FALSE	0.139	28	0.308	no trend	332.7	1.48	4/25/2002	6/1/2017	38.641845	-121.315446
139	3410004-021	TDS	FALSE	1	-1	-0.015	no trend	211.7	0	4/23/2002	6/1/2017	38.604804	-121.342252
290	3410006-001	TDS	FALSE	1	0	0	no trend	43.3	0	12/20/1990	2/20/2013	38.661305	-121.292607
198	3410006-008	TDS	FALSE	1	-1	-0.067	no trend	28.3	0	12/6/1990	2/20/2013	38.679425	-121.289154
130	3410007-001	TDS	FALSE	1	0	0	no trend	8.7	0	4/10/1992	6/24/2010	38.613787	-121.367811
229	3410007-002	TDS	FALSE	0.181	8	0.533	no trend	27.3	1.34	1/25/2001	8/7/2019	38.613607	-121.371676
216	3410007-003	TDS	FALSE	1	1	0.067	no trend	28.3	0	2/19/1991	8/22/2016	38.606352	-121.369707
269	3410007-004	TDS	FALSE	0.566	4	0.267	no trend	27.3	0.57	1/25/2001	8/6/2019	38.607768	-121.374083
77	3410007-005	TDS	FALSE	0.566	4	0.267	no trend	27.3	0.57	1/25/2001	8/6/2019	38.61458	-121.378552
195	3410007-007	TDS	FALSE	0.452	5	0.333	no trend	28.3	0.75	1/25/2001	8/6/2019	38.606531	-121.380719
253	3410007-008	TDS	FALSE	0.356	7	0.333	no trend	42.3	0.92	1/26/1993	8/13/2019	38.613172	-121.380739
166	3410009-001	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	1/28/1993	6/16/2004	38.643048	-121.268528

105	3410009-004	TDS	FALSE	0.06	11	0.733	no trend	28.3	1.88	8/2/1990	6/6/2006	38.651282	-121.255173
78	3410009-005	TDS	FALSE	0.221	6	0.6	no trend	16.7	1.22	2/28/1991	6/16/2004	38.650805	-121.286999
201	3410009-006	TDS	TRUE	0.048	-20	-0.556	decreasing	92	-1.98	2/28/1991	6/14/2012	38.642768	-121.278261
234	3410009-007	TDS	FALSE	0.915	2	0.056	no trend	87.3	0.11	7/19/1989	6/14/2012	38.651297	-121.296666
217	3410009-008	TDS	TRUE	0.009	15	1	increasing	28.3	2.63	8/16/1990	6/6/2006	38.662066	-121.265396
164	3410009-010	TDS	TRUE	0.009	-26	-0.722	decreasing	92	-2.61	11/7/1991	6/14/2012	38.659628	-121.255556
93	3410013-001	TDS	FALSE	0.945	2	0.03	no trend	212.7	0.07	10/7/1992	8/13/2018	38.694922	-121.332628
159	3410013-002	TDS	FALSE	0.283	13	0.289	no trend	125	1.07	2/18/1992	8/13/2018	38.69054	-121.34151
51	3410013-003	TDS	FALSE	0.858	3	0.067	no trend	125	0.18	11/2/1988	8/16/2018	38.683982	-121.31348
240	3410013-004	TDS	FALSE	0.582	-9	-0.136	no trend	211.7	-0.55	7/2/1990	8/7/2018	38.699328	-121.295627
178	3410013-005	TDS	FALSE	0.679	7	0.106	no trend	209.7	0.41	7/2/1990	8/7/2018	38.669042	-121.293798
63	3410013-006	TDS	FALSE	0.099	-25	-0.379	no trend	211.7	-1.65	2/11/1992	8/8/2018	38.685052	-121.305855
156	3410013-007	TDS	FALSE	0.144	12	0.429	no trend	56.7	1.46	7/2/1990	8/19/2015	38.691478	-121.336784
270	3410013-008	TDS	FALSE	0.184	18	0.327	no trend	164	1.33	2/13/1991	8/16/2018	38.673506	-121.340002
224	3410013-009	TDS	FALSE	0.371	11	0.244	no trend	125	0.89	2/11/1992	8/7/2018	38.695662	-121.29509
92	3410013-010	TDS	FALSE	0.088	20	0.444	no trend	124	1.71	2/11/1992	8/15/2018	38.670117	-121.341406
237	3410013-012	TDS	FALSE	0.631	8	0.121	no trend	212.7	0.48	7/2/1990	8/13/2018	38.66565	-121.302524
223	3410013-013	TDS	FALSE	0.283	-13	-0.289	no trend	125	-1.07	2/12/1991	8/13/2018	38.678824	-121.304628
144	3410013-014	TDS	FALSE	0.858	3	0.067	no trend	125	0.18	2/12/1991	8/8/2018	38.668822	-121.304482
112	3410013-015	TDS	FALSE	0.531	9	0.164	no trend	163	0.63	2/18/1992	8/6/2018	38.70124	-121.345319
233	3410013-016	TDS	FALSE	0.938	-2	-0.036	no trend	164	-0.08	2/11/1993	8/13/2018	38.709473	-121.292244
265	3410013-017	TDS	FALSE	0.072	13	0.619	no trend	44.3	1.8	2/11/1992	8/24/2006	38.712243	-121.303547
247	3410013-019	TDS	FALSE	0.161	19	0.345	no trend	165	1.4	7/2/1990	8/6/2018	38.700287	-121.330955
226	3410013-020	TDS	FALSE	0.452	5	0.333	no trend	28.3	0.75	2/12/1991	8/24/2006	38.716217	-121.294262
88	3410013-021	TDS	FALSE	0.721	5	0.111	no trend	125	0.36	2/13/1991	8/8/2018	38.683333	-121.35
232	3410013-022	TDS	FALSE	0.445	7	0.25	no trend	61.7	0.76	2/18/1992	9/11/2012	38.7124	-121.306829
189	3410013-023	TDS	FALSE	0.917	-2	-0.056	no trend	92	-0.1	2/11/1992	8/7/2018	38.695536	-121.313454
66	3410013-024	TDS	FALSE	0.244	18	0.273	no trend	212.7	1.17	2/11/1992	8/7/2018	38.680539	-121.31067
220	3410013-025	TDS	FALSE	0.585	8	0.145	no trend	164	0.55	2/18/1992	8/13/2018	38.718426	-121.313299
188	3410013-026	TDS	FALSE	0.528	9	0.164	no trend	160.3	0.63	7/2/1990	8/6/2018	38.701667	-121.344722
119	3410013-027	TDS	FALSE	0.107	19	0.422	no trend	125	1.61	2/18/1992	9/18/2012	38.709413	-121.317252
165	3410013-028	TDS	FALSE	1	0	0	no trend	43.3	0	4/21/1997	8/13/2018	38.698857	-121.32618
147	3410016-002	TDS	FALSE	0.312	5	0.5	no trend	15.7	1.01	4/18/1991	1/17/2013	38.694541	-121.210813
24	3410020-015	TDS	FALSE	1	0	0	no trend	65.3	0	1/17/1992	4/3/2017	38.6125	-121.479167
11	3410020-016	TDS	FALSE	0.711	4	0.143	no trend	65.3	0.37	1/17/1992	1/20/2015	38.616667	-121.479167
293	3410020-017	TDS	TRUE	0.043	27	0.491	increasing	165	2.02	11/18/1988	10/9/2017	38.62266	-121.477813
84	3410020-018	TDS	FALSE	0.107	19	0.422	no trend	125	1.61	1/17/1992	5/8/2017	38.627831	-121.477227
292	3410020-021	TDS	FALSE	0.452	-5	-0.333	no trend	28.3	-0.75	1/21/1992	10/12/2011	38.607083	-121.454779
97	3410020-022	TDS	FALSE	0.592	7	0.156	no trend	125	0.54	11/18/1988	3/20/2017	38.607305	-121.443097
136	3410020-023	TDS	FALSE	0.536	-6	-0.214	no trend	65.3	-0.62	1/21/1992	3/7/2017	38.604956	-121.439486
314	3410020-024	TDS	FALSE	0.152	17	0.378	no trend	125	1.43	11/18/1988	10/10/2011	38.612801	-121.450505
129	3410020-025	TDS	FALSE	0.086	8	0.8	no trend	16.7	1.71	1/21/1992	10/9/2008	38.612294	-121.440456
215	3410020-027	TDS	FALSE	0.592	7	0.156	no trend	125	0.54	1/22/1992	5/8/2017	38.620988	-121.443553
279	3410020-028	TDS	FALSE	0.68	7	0.106	no trend	211.7	0.41	11/18/1988	5/8/2017	38.62044	-121.432285
108	3410020-029	TDS	FALSE	0.251	12	0.333	no trend	92	1.15	1/17/1992	3/20/2017	38.618056	-121.468056
107	3410020-030	TDS	FALSE	0.348	-10	-0.278	no trend	92	-0.94	1/17/1992	5/8/2017	38.625119	-121.462605
59	3410020-032	TDS	FALSE	0.21	-15	-0.333	no trend	125	-1.25	1/16/1991	10/9/2017	38.628503	-121.43627
55	3410020-033	TDS	FALSE	0.754	4	0.111	no trend	92	0.31	11/16/1988	10/10/2011	38.626808	-121.42959
171	3410020-034	TDS	FALSE	0.436	11	0.2	no trend	165	0.78	1/16/1991	3/12/2018	38.638412	-121.446721
73	3410020-035	TDS	FALSE	0.35	-13	-0.236	no trend	165	-0.93	1/16/1991	3/12/2018	38.639934	-121.427293
133	3410020-037	TDS	FALSE	1	-1	-0.018	no trend	165	0	1/16/1991	5/8/2017	38.651207	-121.469509
264	3410020-038	TDS	FALSE	0.436	11	0.2	no trend	165	0.78	1/16/1991	5/8/2017	38.647475	-121.459256
50	3410020-039	TDS	FALSE	0.221	-6	-0.6	no trend	16.7	-1.22	1/22/1992	10/8/2003	38.627595	-121.432917
56	3410020-040	TDS	FALSE	1	1	0.018	no trend	165	0	10/22/1990	5/9/2017	38.629597	-121.420726
278	3410020-041	TDS	FALSE	0.39	12	0.218	no trend	164	0.86	1/16/1991	5/9/2017	38.641387	-121.435795
22	3410020-042	TDS	FALSE	0.063	-16	-0.571	no trend	65.3	-1.86	1/21/1992	3/7/2017	38.596923	-121.458973
294	3410020-044	TDS	FALSE	0.266	10	0.357	no trend	65.3	1.11	10/16/1990	10/10/2011	38.613996	-121.456155
194	3410020-045	TDS	FALSE	0.161	19	0.345	no trend	165	1.4	10/19/1990	5/9/2017	38.622276	-121.446858
134	3410020-046	TDS	TRUE	0.005	-28	-0.778	decreasing	92	-2.81	1/22/1992	9/22/2014	38.623116	-121.427024
157	3410020-050	TDS	FALSE	0.474	-9	-0.2	no trend	125	-0.72	1/16/1991	3/25/2014	38.668053	-121.438012
42	3410020-051	TDS	FALSE	0.64	-7	-0.127	no trend	165	-0.47	1/16/1991	3/12/2018	38.634413	-121.412516
296	3410020-052	TDS	FALSE	0.592	-7	-0.156	no trend	125	-0.54	3/8/1993	5/9/2017	38.599341	-121.445804
214	3410020-054	TDS	FALSE	0.533	-9	-0.164	no trend	165	-0.62	1/21/1992	10/9/2017	38.596324	-121.427308
33	3410020-055	TDS	FALSE	0.35	-13	-0.236	no trend	165	-0.93	1/17/1992	5/9/2017	38.617636	-121.469304
91	3410020-056	TDS	FALSE	0.466	-8	-0.222	no trend	92	-0.73	1/12/1994	5/9/2017	38.654657	-121.448564
291	3410020-057	TDS	FALSE	0.386	-8	-0.286	no trend	65.3	-0.87	1/18/1995	12/19/2018	38.658482	-121.466415
30	3410026-001	TDS	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	2/21/1991	5/31/2012	38.58961	-121.429343
7	3410026-002	TDS	FALSE	0.806	2	0.2	no trend	16.7	0.24	2/21/1991	5/3/2018	38.588266	-121.423478
31	3410026-003	TDS	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	2/21/1991	5/3/2018	38.593617	-121.439154
18	3410026-004	TDS	FALSE	0.221	-6	-0.6	no trend	16.7	-1.22	2/21/1991	5/3/2018	38.593339	-121.432431
206	3410031-001	TDS	FALSE	1	0	0	no trend	161.3	0	3/24/1988	8/11/2015	38.720833	-121.358333
190	3410031-002	TDS	FALSE	0.323	12	0.267	no trend	124	0.99	9/10/1993	8/8/2018	38.717222	-121.3575

94	3410031-003	TDS	FALSE	0.928	2	0.044	no trend	121.3	0.09	2/12/1991	8/14/2018	38.7	-121.383333
221	3410031-004	TDS	FALSE	0.584	11	0.121	no trend	333.7	0.55	10/29/1987	8/14/2018	38.718056	-121.382222
61	3410031-005	TDS	FALSE	0.592	7	0.156	no trend	125	0.54	2/26/1992	8/5/2015	38.716667	-121.4
160	3410031-006	TDS	FALSE	0.113	24	0.364	no trend	210.7	1.58	11/2/1988	8/14/2018	38.708333	-121.383611
2073	3410031-007	TDS	TRUE	0.035	-28	-0.509	decreasing	164	-2.11	2/12/1991	8/9/2018	38.733333	-121.35
2056	3410031-008	TDS	FALSE	0.39	12	0.218	no trend	164	0.86	10/7/1992	8/9/2018	38.733333	-121.35
208	3410031-009	TDS	FALSE	0.471	-9	-0.2	no trend	123	-0.72	1/15/1992	8/7/2018	38.715278	-121.378056
72	3410031-010	TDS	FALSE	0.343	-10	-0.278	no trend	90	-0.95	8/29/1995	8/7/2018	38.705	-121.365556
289	3410031-011	TDS	FALSE	0.207	34	0.222	no trend	684.7	1.26	6/21/1990	8/7/2018	38.726944	-121.3825
135	3410031-012	TDS	FALSE	0.858	-3	-0.067	no trend	125	-0.18	6/12/1992	8/7/2018	38.721111	-121.368611
45	3410031-013	TDS	FALSE	0.471	9	0.2	no trend	123	0.72	2/25/1992	8/14/2018	38.711667	-121.413889
54	3410031-014	TDS	FALSE	0.213	17	0.309	no trend	165	1.25	4/15/1987	8/14/2018	38.716111	-121.408889
95	3410031-015	TDS	FALSE	0.221	6	0.6	no trend	16.7	1.22	2/11/1993	8/14/2018	38.716667	-121.416667
241	3410031-016	TDS	FALSE	0.246	-12	-0.333	no trend	90	-1.16	7/16/1996	8/8/2018	38.724444	-121.336111
80	3410031-017	TDS	FALSE	0.386	8	0.286	no trend	65.3	0.87	4/30/1998	8/8/2018	38.723056	-121.349722
257	3410031-018	TDS	TRUE	0.039	24	0.533	increasing	124	2.07	1/9/1996	8/7/2018	38.716389	-121.371944
288	3410045-001	TDS	FALSE	0.436	11	0.2	no trend	165	0.78	2/25/1992	8/7/2018	38.586137	-121.411513
138	3410045-002	TDS	FALSE	0.718	-5	-0.111	no trend	123	-0.36	2/25/1992	8/7/2018	38.583085	-121.413054
116	3410045-003	TDS	FALSE	0.371	-11	-0.244	no trend	125	-0.89	1/21/1993	8/7/2018	38.594423	-121.417465
243	3410045-004	TDS	FALSE	0.348	-10	-0.278	no trend	92	-0.94	7/3/1990	7/24/2012	38.592566	-121.407256
96	3410045-005	TDS	FALSE	0.64	7	0.127	no trend	165	0.47	2/12/1991	8/7/2018	38.600025	-121.410183
2907	5105004-001	TDS	FALSE	0.53	-8	-0.178	no trend	124	-0.63	11/29/2000	12/14/2016	38.777769	-121.52437
2906	5105004-002	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	10/21/2009	12/14/2016	38.777766	-121.525116
1880	USGS-383655121301601	TDS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	8/3/1998	8/7/2017	38.6157528	-121.5054028
1894	USGS-383659121292201	TDS	FALSE	1	0	0	no trend	8.7	0	8/5/1998	8/8/2017	38.6164833	-121.4903694
1835	USGS-383703121280701	TDS	FALSE	1	1	0.067	no trend	28.3	0	9/21/1982	5/15/2014	38.6175	-121.4688889
1876	USGS-383727121301801	TDS	FALSE	1	0	0	no trend	8.7	0	8/6/1998	8/7/2017	38.6237972	-121.5060556
1859	USGS-383746121291101	TDS	FALSE	0.063	-67	-0.29	no trend	1257.7	-1.86	8/4/1998	8/8/2017	38.6292139	-121.4877028
1855	USGS-383900121270001	TDS	FALSE	0.368	-7	-0.333	no trend	44.3	-0.9	6/14/2005	6/15/2005	38.6585	-121.4664722
1860	USGS-384145121184101	TDS	FALSE	0.284	34	0.179	no trend	950	1.07	8/17/1998	9/4/2012	38.6964	-121.3120389
1869	USGS-384224121261401	TDS	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	9/22/1982	3/12/2014	38.7064722	-121.4384722
1866	USGS-384301121195101	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	6/5/1996	10/2/2017	38.717	-121.3320278
1902	USGS-384318121230001	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	8/19/1998	8/21/2017	38.7216389	-121.3841778
1882	USGS-384330121265601	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	7/24/1969	5/14/2008	38.7249018	-121.4499544
1882	USGS-384330121265601	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	7/24/1969	5/14/2008	38.7249018	-121.4499544
1868	USGS-384330121293901	TDS	TRUE	0.041	64	0.337	increasing	950	2.04	8/11/1997	7/10/2017	38.7251167	-121.4954417
2806	USGS-384413121163801	TDS	FALSE	1	1	0.048	no trend	44.3	0	9/24/1982	3/10/2014	38.7369444	-121.2772222
3035	USGS-384455121292101	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	8/7/1996	9/12/2017	38.7487778	-121.4898889
3035	USGS-384455121292101	TDS	FALSE	0.308	4	0.667	no trend	8.7	1.02	8/7/1996	9/12/2017	38.7487778	-121.4898889
2812	USGS-384949121233501	TDS	FALSE	1	0	0	no trend	8.7	0	8/7/1996	10/3/2017	38.8301771	-121.3941209
2812	USGS-384949121233501	TDS	FALSE	1	0	0	no trend	8.7	0	8/7/1996	10/3/2017	38.8301771	-121.3941209
2813	USGS-385432121213001	TDS	FALSE	1	0	0	no trend	8.7	0	6/3/1996	10/18/2017	38.9084167	-121.3590833
2813	USGS-385432121213001	TDS	FALSE	1	0	0	no trend	8.7	0	6/3/1996	10/18/2017	38.9084167	-121.3590833
3034	USGS-385546121312801	TDS	FALSE	0.368	7	0.333	no trend	44.3	0.9	6/3/1965	10/5/2017	38.92925	-121.5254444
3034	USGS-385546121312801	TDS	FALSE	0.368	7	0.333	no trend	44.3	0.9	6/3/1965	10/5/2017	38.92925	-121.5254444
3042	USGS-385718121290401	TDS	FALSE	0.133	9	0.6	no trend	28.3	1.5	5/19/1965	5/20/2008	38.9548956	-121.4855142
3042	USGS-385718121290401	TDS	FALSE	0.133	9	0.6	no trend	28.3	1.5	5/19/1965	5/20/2008	38.9548956	-121.4855142
2857	USGS-385914121215801	TDS	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	9/7/1982	6/2/2008	38.9871178	-121.367178
2857	USGS-385914121215801	TDS	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	9/7/1982	6/2/2008	38.9871178	-121.367178

Arsenic

Local_ID	Well_Info_ID	chemical	h	p	s	tau	trend	var_s	z	datemin	datemax	Latitude_NAD83	Longitude_NAD83
2083	11N06E17D001M	AS	TRUE	0.027	37	0.407	increasing	266.3	2.21	12/13/2005	3/26/2008	38.8064	-121.3353
2081	11N06E17D002M	AS	FALSE	0.205	-109	-0.133	no trend	7253.7	-1.27	12/13/2005	3/26/2008	38.8027	-121.3384
2080	11N06E17D003M	AS	TRUE	0.028	36	0.462	increasing	255.3	2.19	12/13/2005	3/26/2008	38.8059	-121.3358
2082	11N06E17E001M	AS	TRUE	0.003	53	0.582	increasing	301.7	2.99	12/13/2005	3/26/2008	38.8058	-121.3354
2065	3100077-003	AS	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	2/26/2004	7/10/2017	38.726602	-121.336563
2062	3100077-004	AS	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	2/26/2004	7/10/2017	38.726284	-121.336527
2059	3100538-001	AS	FALSE	1	0	0	no trend	16.7	0	8/19/1999	3/23/2018	38.7505	-121.321972
2060	3104508-001	AS	FALSE	0.47	3	0.5	no trend	7.7	0.72	2/19/2004	4/20/2017	38.729952	-121.321616
2069	3110008-003	AS	FALSE	0.211	6	0.286	no trend	16	1.25	10/26/1992	1/8/2010	38.753022	-121.279492
2071	3110008-006	AS	FALSE	0.61	5	0.179	no trend	61.7	0.51	10/26/1992	8/25/2016	38.736633	-121.277875
2066	3110008-007	AS	FALSE	0.507	6	0.214	no trend	56.7	0.66	10/26/1992	8/25/2016	38.726493	-121.258205
2050	3110008-008	AS	FALSE	0.452	-5	-0.333	no trend	28.3	-0.75	10/22/2002	8/23/2018	38.805938	-121.33588
2064	3110025-005	AS	FALSE	0.82	-7	-0.046	no trend	695	-0.23	7/26/1989	9/12/2019	38.818889	-121.31
2063	3110040-001	AS	FALSE	0.729	-8	-0.076	no trend	407.3	-0.35	9/27/1988	7/9/2002	38.75	-121.34722
2067	3110040-002	AS	FALSE	0.625	-9	-0.115	no trend	267.7	-0.49	8/31/1989	7/9/2002	38.75	-121.34444
145	3400173-002	AS	FALSE	0.089	6	1	no trend	8.7	1.7	5/24/2001	2/14/2017	38.640638	-121.483861
8	3400383-001	AS	FALSE	0.26	7	0.467	no trend	28.3	1.13	8/23/2001	7/24/2008	38.618983	-121.536935
60	3400456-001	AS	FALSE	0.402	39	0.12	no trend	2058.3	0.84	6/27/2013	9/18/2019	38.698055	-121.43
193	3410001-001	AS	FALSE	1	1	0.022	no trend	116.3	0	1/12/1993	9/5/2017	38.606839	-121.3982
242	3410001-002	AS	FALSE	0.105	-19	-0.422	no trend	123	-1.62	10/13/1995	7/18/2017	38.59783	-121.398024
258	3410001-004	AS	FALSE	1	-1	-0.036	no trend	64.3	0	1/12/1993	6/19/2014	38.611483	-121.410107
284	3410001-005	AS	FALSE	0.402	-9	-0.25	no trend	91	-0.84	2/25/1991	6/8/2011	38.623478	-121.396638
203	3410001-007	AS	FALSE	1	-1	-0.018	no trend	163	0	7/9/1990	9/27/2017	38.610999	-121.363391
128	3410001-009	AS	FALSE	0.242	-5	-0.333	no trend	11.7	-1.17	2/2/1993	12/15/2005	38.616331	-121.403703
212	3410001-010	AS	FALSE	0.754	-5	-0.091	no trend	163	-0.31	7/10/1990	9/12/2017	38.608099	-121.408153
158	3410001-011	AS	FALSE	0.876	-3	-0.055	no trend	163	-0.16	1/30/1992	9/14/2017	38.619863	-121.396184
228	3410001-012	AS	FALSE	0.752	-5	-0.091	no trend	160.3	-0.32	2/25/1991	12/12/2017	38.617662	-121.403695
82	3410001-013	AS	FALSE	1	-1	-0.018	no trend	148.3	0	1/28/1992	9/26/2017	38.598939	-121.370714
146	3410001-014	AS	FALSE	0.316	8	0.286	no trend	48.7	1	7/10/1990	6/27/2006	38.611171	-121.386048
260	3410001-015	AS	FALSE	0.934	2	0.036	no trend	147.3	0.08	11/1/1988	9/19/2017	38.59781	-121.381308
191	3410001-016	AS	FALSE	0.385	-10	-0.222	no trend	107.3	-0.87	2/22/1991	9/4/2014	38.631327	-121.37485
124	3410001-017	AS	FALSE	0.367	-11	-0.244	no trend	123	-0.9	1/30/1992	8/27/2014	38.61981	-121.403732
211	3410001-018	AS	FALSE	0.75	-5	-0.091	no trend	157.7	-0.32	2/22/1991	9/19/2017	38.623854	-121.374359
209	3410001-019	AS	FALSE	0.672	7	0.106	no trend	200.3	0.42	1/27/1992	9/25/2017	38.597831	-121.359623
114	3410001-020	AS	FALSE	1	1	0.018	no trend	156.3	0	1/27/1992	9/19/2017	38.618079	-121.359205
210	3410001-021	AS	FALSE	1	-1	-0.018	no trend	163	0	7/9/1990	9/12/2017	38.615256	-121.419986
161	3410001-022	AS	FALSE	0.419	-10	-0.222	no trend	124	-0.81	10/13/1995	9/11/2017	38.604549	-121.422274
222	3410001-025	AS	FALSE	0.636	-7	-0.127	no trend	160.3	-0.47	2/22/1991	9/19/2017	38.60046	-121.359118
148	3410001-026	AS	FALSE	0.308	4	0.667	no trend	8.7	1.02	7/10/1990	2/23/2005	38.627091	-121.384097
113	3410001-027	AS	FALSE	0.788	-4	-0.089	no trend	124	-0.27	1/30/1992	9/27/2017	38.605146	-121.390988
244	3410001-028	AS	FALSE	0.853	3	0.067	no trend	116.3	0.19	1/30/1992	8/21/2014	38.63562	-121.381097
227	3410001-029	AS	FALSE	0.522	9	0.164	no trend	156.3	0.64	1/30/1992	10/3/2017	38.630252	-121.397575
236	3410001-030	AS	FALSE	0.266	-13	-0.289	no trend	116.3	-1.11	1/29/1992	9/26/2017	38.617802	-121.424022
81	3410001-032	AS	FALSE	0.578	7	0.156	no trend	116.3	0.56	7/9/1990	9/19/2017	38.622918	-121.413817
104	3410001-033	AS	FALSE	0.395	-9	-0.25	no trend	88.3	-0.85	1/29/1992	7/10/2014	38.601378	-121.424
173	3410001-034	AS	FALSE	0.584	7	0.156	no trend	120.3	0.55	7/9/1990	9/11/2017	38.584674	-121.396539
169	3410001-035	AS	FALSE	0.856	-3	-0.067	no trend	121	-0.18	7/9/1990	9/28/2017	38.594464	-121.351844
19	3410001-038	AS	FALSE	0.461	-8	-0.222	no trend	90	-0.74	1/28/1992	6/9/2011	38.578371	-121.363395
20	3410001-039	AS	FALSE	0.834	-3	-0.083	no trend	91	-0.21	2/22/1991	6/20/2006	38.591742	-121.346413
168	3410001-042	AS	FALSE	0.696	-6	-0.109	no trend	164	-0.39	2/22/1991	9/12/2017	38.628014	-121.358648
184	3410001-051	AS	FALSE	0.936	2	0.036	no trend	156.7	0.08	7/9/1990	9/11/2017	38.636187	-121.375067
111	3410001-052	AS	FALSE	0.651	-6	-0.133	no trend	122	-0.45	7/9/1990	9/11/2017	38.625054	-121.362252
287	3410001-054	AS	FALSE	0.937	-2	-0.036	no trend	161.3	-0.08	2/11/1991	9/13/2017	38.582422	-121.408379
122	3410001-055	AS	FALSE	0.848	-3	-0.067	no trend	108.3	-0.19	11/1/1988	12/13/2017	38.594474	-121.39864
26	3410001-056	AS	FALSE	0.564	7	0.156	no trend	108.3	0.58	1/12/1993	9/13/2017	38.578749	-121.41096
3	3410001-061	AS	FALSE	0.979	-2	-0.008	no trend	1416	-0.03	5/7/1998	3/20/2018	38.582786	-121.338489
176	3410001-062	AS	FALSE	0.295	-11	-0.306	no trend	91	-1.05	8/22/2000	9/5/2017	38.618056	-121.401944
12	3410001-064	AS	FALSE	0.886	-2	-0.071	no trend	48.7	-0.14	4/23/2002	9/12/2017	38.584121	-121.353432
13	3410001-065	AS	FALSE	1	1	0.028	no trend	74.3	0	4/22/2002	9/21/2017	38.583196	-121.33679
4	3410001-066	AS	FALSE	0.378	-9	-0.25	no trend	82.3	-0.88	4/23/2002	9/12/2017	38.582214	-121.338203
2	3410001-067	AS	FALSE	0.466	-8	-0.222	no trend	92	-0.73	6/3/1999	10/1/2014	38.582481	-121.417169
225	3410001-069	AS	FALSE	0.578	9	0.136	no trend	207	0.56	2/26/1992	9/28/2017	38.580609	-121.384004
255	3410001-070	AS	FALSE	0.327	15	0.227	no trend	204.3	0.98	2/12/1991	9/12/2017	38.576006	-121.403088
205	3410001-071	AS	FALSE	0.23	-9	-0.429	no trend	44.3	-1.2	4/17/2002	9/14/2017	38.63056	-121.397787
106	3410001-072	AS	FALSE	0.19	7	0.25	no trend	21	1.31	4/17/2002	9/12/2017	38.61744	-121.411527
252	3410001-073	AS	FALSE	0.19	7	0.25	no trend	21	1.31	4/17/2002	9/7/2017	38.58058	-121.383962
58	3410001-076	AS	FALSE	0.949	2	0.026	no trend	244.7	0.06	6/5/1984	7/10/2019	38.644265	-121.362069
69	3410001-077	AS	FALSE	0.442	-15	-0.165	no trend	331.7	-0.77	3/7/1984	7/10/2019	38.631522	-121.352911
86	3410001-078	AS	FALSE	1	1	0.015	no trend	211.7	0	6/5/1984	7/9/2019	38.684818	-121.355931
259	3410001-079	AS	FALSE	0.797	-4	-0.073	no trend	136.7	-0.26	6/4/1984	7/24/2013	38.667577	-121.334161
110	3410001-080	AS	FALSE	0.956	-2	-0.022	no trend	328	-0.06	6/4/1984	7/17/2019	38.672567	-121.331573
174	3410001-081	AS	FALSE	0.699	-7	-0.09	no trend	240.3	-0.39	6/5/1984	7/22/2019	38.683333	-121.333333
71	3410001-082	AS	FALSE	1	-1	-0.008	no trend	279.7	0	6/4/1984	7/21/2016	38.648929	-121.338368
246	3410001-083	AS	FALSE	0.614	9	0.115	no trend	251	0.5	5/17/1984	7/9/2019	38.663692	-121.347786

239	3410001-085	AS	FALSE	0.881	-4	-0.038	no trend	402.7	-0.15	6/4/1984	7/17/2019	38.644208	-121.329841
49	3410001-087	AS	FALSE	0.868	-4	-0.044	no trend	328	-0.17	6/5/1984	7/11/2019	38.645858	-121.392317
218	3410001-088	AS	FALSE	0.712	-7	-0.09	no trend	265	-0.37	5/17/1984	7/11/2013	38.668746	-121.361
89	3410001-089	AS	FALSE	0.252	-24	-0.229	no trend	402.7	-1.15	3/7/1984	7/9/2019	38.653579	-121.379692
132	3410001-092	AS	FALSE	1	1	0.011	no trend	268.3	0	6/4/1984	7/20/2016	38.63889	-121.342759
185	3410001-094	AS	FALSE	0.52	11	0.121	no trend	241.7	0.64	5/17/1984	7/10/2019	38.652299	-121.354305
196	3410001-095	AS	FALSE	1	-1	-0.022	no trend	59.7	0	5/17/1984	6/21/2007	38.658062	-121.356402
297	3410001-096	AS	FALSE	0.298	-22	-0.21	no trend	407.3	-1.04	6/30/1988	7/9/2019	38.689669	-121.360198
102	3410001-097	AS	FALSE	0.07	-34	-0.374	no trend	330.7	-1.81	12/13/1984	7/11/2019	38.694158	-121.360024
256	3410001-098	AS	FALSE	0.659	9	0.075	no trend	328.3	0.44	5/9/1984	7/9/2019	38.700217	-121.351805
295	3410001-099	AS	FALSE	0.19	-7	-0.25	no trend	21	-1.31	10/20/1988	6/21/2007	38.655401	-121.313482
46	3410001-101	AS	FALSE	0.142	-12	-0.154	no trend	56	-1.47	10/27/1988	7/7/2016	38.663926	-121.32579
231	3410001-102	AS	FALSE	0.741	5	0.076	no trend	146.3	0.33	10/20/1988	7/15/2019	38.675049	-121.315501
101	3410001-103	AS	FALSE	0.175	-8	-0.222	no trend	26.7	-1.36	10/25/1988	11/13/2013	38.651225	-121.32298
163	3410001-104	AS	FALSE	0.573	-10	-0.128	no trend	255.3	-0.56	2/1/1993	7/10/2019	38.710442	-121.331662
180	3410001-105	AS	FALSE	0.755	-5	-0.076	no trend	163.7	-0.31	10/12/1995	7/10/2019	38.710528	-121.331667
262	3410001-106	AS	FALSE	0.799	-3	-0.107	no trend	61.7	-0.25	6/28/2001	7/8/2013	38.710517	-121.331659
85	3410001-107	AS	FALSE	0.701	5	0.111	no trend	108.3	0.38	11/4/1996	7/14/2016	38.709903	-121.357066
127	3410001-111	AS	FALSE	1	1	0.018	no trend	160.3	0	12/13/1995	7/11/2019	38.665363	-121.383099
254	3410001-127	AS	FALSE	0.433	11	0.2	no trend	163	0.78	12/13/1995	7/29/2013	38.712268	-121.381099
283	3410001-128	AS	FALSE	0.343	10	0.278	no trend	90	0.95	12/13/1995	6/17/2010	38.709783	-121.374669
149	3410001-129	AS	FALSE	0.582	-8	-0.145	no trend	161.3	-0.55	12/13/1995	7/29/2013	38.710651	-121.387666
118	3410001-133	AS	FALSE	1	1	0.015	no trend	209	0	2/25/1991	7/22/2019	38.682932	-121.376063
182	3410001-135	AS	FALSE	0.138	-17	-0.378	no trend	116.3	-1.48	2/5/1998	11/7/2016	38.68794	-121.385107
99	3410001-136	AS	FALSE	0.189	-17	-0.309	no trend	148.3	-1.31	2/25/1991	3/27/2018	38.685899	-121.372701
141	3410001-137	AS	FALSE	0.145	-17	-0.378	no trend	120.3	-1.46	2/25/1991	7/29/2013	38.692847	-121.379593
183	3410001-139	AS	FALSE	0.35	-13	-0.236	no trend	165	-0.93	5/17/1984	7/19/2016	38.69191	-121.364477
280	3410001-142	AS	FALSE	0.241	-16	-0.291	no trend	164	-1.17	7/20/1989	7/11/2016	38.686782	-121.392424
197	3410001-144	AS	FALSE	0.358	-16	-0.205	no trend	266.7	-0.92	2/25/1991	7/23/2019	38.69798	-121.373877
213	3410001-145	AS	FALSE	0.659	5	0.139	no trend	82.3	0.44	4/22/2002	7/10/2019	38.67526	-121.379573
315	3410002-001	AS	FALSE	0.936	-2	-0.036	no trend	155.3	-0.08	2/20/1991	2/8/2017	38.583333	-121.383333
117	3410002-002	AS	FALSE	0.799	-3	-0.107	no trend	61.7	-0.25	7/17/1990	2/8/2017	38.583333	-121.366667
28	3410002-007	AS	FALSE	0.212	-11	-0.393	no trend	64.3	-1.25	7/17/1990	2/14/2017	38.566667	-121.4
10	3410002-012	AS	FALSE	0.368	-7	-0.333	no trend	44.3	-0.9	7/17/1990	5/8/2017	38.566667	-121.416667
17	3410002-013	AS	FALSE	0.902	2	0.071	no trend	65.3	0.12	7/17/1990	2/14/2017	38.583333	-121.416667
249	3410002-014	AS	FALSE	0.799	-3	-0.107	no trend	61.7	-0.25	1/19/1993	5/8/2017	38.583333	-121.366667
152	3410003-001	AS	FALSE	1	1	0.013	no trend	265	0	9/5/1990	2/6/2019	38.587545	-121.385145
153	3410003-002	AS	FALSE	0.813	-4	-0.073	no trend	161.3	-0.24	4/11/1986	2/28/2017	38.582537	-121.383219
245	3410003-004	AS	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	9/19/1990	1/25/2005	38.587611	-121.392074
162	3410003-005	AS	FALSE	0.592	-7	-0.156	no trend	125	-0.54	4/2/1987	7/11/2017	38.591017	-121.384139
251	3410003-006	AS	FALSE	0.348	10	0.278	no trend	92	0.94	4/2/1987	2/28/2017	38.59211	-121.387633
238	3410003-008	AS	FALSE	0.788	-4	-0.089	no trend	124	-0.27	4/2/1987	2/28/2017	38.600074	-121.391973
74	3410004-001	AS	FALSE	1	1	0.022	no trend	106.3	0	10/24/1995	2/3/2004	38.645432	-121.313067
83	3410004-004	AS	FALSE	0.257	20	0.19	no trend	281.3	1.13	2/19/1991	1/28/2010	38.64988	-121.30798
175	3410004-005	AS	FALSE	0.242	-5	-0.333	no trend	11.7	-1.17	3/1/1991	10/4/2001	38.633333	-121.35
172	3410004-006	AS	FALSE	0.158	-49	-0.194	no trend	1157.7	-1.41	8/1/1990	6/1/2017	38.622744	-121.335704
6	3410004-007	AS	FALSE	1	-1	-0.018	no trend	73	0	8/1/1990	10/23/2002	38.594673	-121.334606
150	3410004-009	AS	FALSE	0.832	-8	-0.032	no trend	1092.7	-0.21	2/19/1991	6/1/2017	38.619652	-121.333354
261	3410004-016	AS	FALSE	0.151	55	0.199	no trend	1411.7	1.44	5/8/1987	6/1/2017	38.645576	-121.306819
248	3410004-020	AS	FALSE	0.585	7	0.077	no trend	121	0.55	4/25/2002	6/1/2017	38.641845	-121.315446
139	3410004-021	AS	FALSE	0.373	-14	-0.212	no trend	212.7	-0.89	4/23/2002	6/1/2017	38.604804	-121.342252
290	3410006-001	AS	FALSE	1	-1	-0.036	no trend	37	0	12/20/1990	5/30/2019	38.661305	-121.292607
198	3410006-008	AS	FALSE	0.242	-5	-0.333	no trend	11.7	-1.17	12/6/1990	2/20/2013	38.679425	-121.289154
98	3410006-010	AS	FALSE	0.308	4	0.667	no trend	8.7	1.02	10/21/2004	6/6/2018	38.698638	-121.269673
130	3410007-001	AS	FALSE	0.221	-6	-0.6	no trend	16.7	-1.22	4/10/1992	6/24/2010	38.613787	-121.367811
229	3410007-002	AS	FALSE	0.133	-9	-0.6	no trend	28.3	-1.5	10/2/1995	8/18/2016	38.613607	-121.371676
216	3410007-003	AS	FALSE	0.368	-7	-0.333	no trend	44.3	-0.9	2/19/1991	8/22/2016	38.606352	-121.369707
269	3410007-004	AS	FALSE	0.707	3	0.2	no trend	28.3	0.38	10/2/1995	8/17/2016	38.607768	-121.374083
77	3410007-005	AS	FALSE	0.133	-9	-0.6	no trend	28.3	-1.5	10/2/1995	8/18/2016	38.61458	-121.378552
142	3410007-006	AS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	10/2/1995	6/28/2010	38.60731	-121.364767
195	3410007-007	AS	FALSE	0.707	-3	-0.2	no trend	28.3	-0.38	10/2/1995	6/21/2018	38.606531	-121.380719
253	3410007-008	AS	FALSE	0.707	3	0.2	no trend	28.3	0.38	1/26/1993	8/16/2016	38.613172	-121.380739
166	3410009-001	AS	FALSE	0.211	-6	-0.286	no trend	16	-1.25	1/28/1993	6/26/2003	38.643048	-121.268528
105	3410009-004	AS	FALSE	0.857	-3	-0.067	no trend	123	-0.18	8/2/1990	6/6/2006	38.651282	-121.255173
78	3410009-005	AS	FALSE	0.19	-7	-0.25	no trend	21	-1.31	2/28/1991	6/26/2003	38.650805	-121.286999
201	3410009-006	AS	FALSE	0.524	8	0.121	no trend	120.7	0.64	2/28/1991	5/10/2012	38.642768	-121.278261
234	3410009-007	AS	FALSE	0.155	-10	-0.182	no trend	40	-1.42	7/19/1989	5/10/2012	38.651297	-121.296666
217	3410009-008	AS	TRUE	0.012	24	0.667	increasing	83.3	2.52	8/16/1990	6/6/2006	38.662066	-121.265396
164	3410009-010	AS	FALSE	0.141	22	0.282	no trend	203.3	1.47	11/7/1991	3/28/2019	38.659628	-121.25556
93	3410013-001	AS	FALSE	0.838	-3	-0.067	no trend	95.7	-0.2	10/7/1992	8/13/2018	38.694922	-121.332628
159	3410013-002	AS	FALSE	0.524	-8	-0.145	no trend	120.7	-0.64	2/18/1992	8/13/2018	38.69054	-121.34151
51	3410013-003	AS	FALSE	0.239	14	0.311	no trend	122	1.18	11/2/1988	8/16/2018	38.683982	-121.31348
240	3410013-004	AS	FALSE	0.265	15	0.273	no trend	157.7	1.11	7/2/1990	8/7/2018	38.699328	-121.295627
178	3410013-005	AS	TRUE	0.043	26	0.473	increasing	152.7	2.02	7/2/1990	8/7/2018	38.669042	-121.293798
63	3410013-006	AS	FALSE	0.132	20	0.364	no trend	159.3	1.51	2/11/1992	8/8/2018	38.685052	-121.305855

156	3410013-007	AS	FALSE	0.081	10	0.476	no trend	26.7	1.74	7/2/1990	8/19/2015	38.691478	-121.336784
270	3410013-008	AS	FALSE	0.235	16	0.291	no trend	159.3	1.19	2/13/1991	8/16/2018	38.673506	-121.340002
224	3410013-009	AS	FALSE	0.363	11	0.244	no trend	121	0.91	2/11/1992	8/7/2018	38.695662	-121.29509
92	3410013-010	AS	FALSE	0.235	16	0.291	no trend	159.3	1.19	2/11/1992	8/15/2018	38.670117	-121.341406
237	3410013-012	AS	FALSE	0.068	27	0.409	no trend	203	1.82	7/2/1990	8/13/2018	38.66565	-121.302524
223	3410013-013	AS	FALSE	0.306	-12	-0.267	no trend	115.3	-1.02	2/12/1991	8/13/2018	38.678824	-121.304628
144	3410013-014	AS	FALSE	0.239	14	0.311	no trend	122	1.18	2/12/1991	8/8/2018	38.668822	-121.304482
112	3410013-015	AS	FALSE	0.772	4	0.089	no trend	107.3	0.29	2/18/1992	8/6/2018	38.70124	-121.345319
233	3410013-016	AS	FALSE	0.466	10	0.182	no trend	152.7	0.73	2/11/1993	8/13/2018	38.709473	-121.329244
265	3410013-017	AS	FALSE	0.119	9	0.6	no trend	26.3	1.56	2/11/1992	8/24/2006	38.712243	-121.303547
247	3410013-019	AS	FALSE	0.098	21	0.382	no trend	146.3	1.65	7/2/1990	8/6/2018	38.700287	-121.330955
226	3410013-020	AS	FALSE	0.558	3	0.2	no trend	11.7	0.59	2/12/1991	8/24/2006	38.716217	-121.294262
88	3410013-021	AS	FALSE	0.28	14	0.255	no trend	144.7	1.08	2/13/1991	8/8/2018	38.683333	-121.35
232	3410013-022	AS	FALSE	0.319	9	0.321	no trend	64.3	1	2/18/1992	9/11/2012	38.7124	-121.306829
189	3410013-023	AS	TRUE	0.006	-28	-0.622	decreasing	96.7	-2.75	2/11/1992	8/7/2018	38.695536	-121.313454
66	3410013-024	AS	FALSE	0.636	7	0.127	no trend	161	0.47	2/11/1992	8/7/2018	38.680539	-121.31067
220	3410013-025	AS	FALSE	0.888	-3	-0.045	no trend	201	-0.14	2/18/1992	8/13/2018	38.718426	-121.313299
188	3410013-026	AS	FALSE	0.186	17	0.309	no trend	146.3	1.32	7/2/1990	8/6/2018	38.701667	-121.344722
119	3410013-027	AS	FALSE	0.098	22	0.4	no trend	161.3	1.65	2/18/1992	9/18/2012	38.709413	-121.317252
165	3410013-028	AS	FALSE	0.211	-6	-0.286	no trend	16	-1.25	4/21/1997	8/13/2018	38.698857	-121.32618
125	3410016-001	AS	FALSE	1	1	0.167	no trend	7.7	0	1/28/1993	12/3/2007	38.686538	-121.219546
147	3410016-002	AS	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	4/18/1991	1/17/2013	38.694541	-121.210813
126	3410018-005	AS	FALSE	0.089	-6	-1	no trend	8.7	-1.7	2/28/1991	3/5/2002	38.721801	-121.46774
24	3410020-015	AS	FALSE	0.902	2	0.071	no trend	65.3	0.12	1/17/1992	4/3/2017	38.6125	-121.479167
11	3410020-016	AS	FALSE	0.536	6	0.214	no trend	65.3	0.62	1/17/1992	1/20/2015	38.616667	-121.479167
293	3410020-017	AS	FALSE	1	0	0	no trend	164	0	11/18/1988	8/24/2017	38.62266	-121.477813
84	3410020-018	AS	FALSE	0.858	-3	-0.067	no trend	125	-0.18	1/17/1992	5/8/2017	38.627831	-121.477227
292	3410020-021	AS	FALSE	0.566	4	0.267	no trend	27.3	0.57	1/21/1992	10/12/2011	38.607083	-121.454779
97	3410020-022	AS	FALSE	0.419	-10	-0.222	no trend	124	-0.81	11/18/1988	3/20/2017	38.607305	-121.443097
136	3410020-023	AS	FALSE	0.799	-3	-0.107	no trend	61.7	-0.25	1/21/1992	3/7/2017	38.604956	-121.439486
314	3410020-024	AS	FALSE	0.718	-5	-0.111	no trend	123	-0.36	11/18/1988	10/10/2011	38.612801	-121.450505
129	3410020-025	AS	FALSE	1	-1	-0.1	no trend	13	0	1/21/1992	10/9/2008	38.612294	-121.440456
215	3410020-027	AS	FALSE	0.578	-7	-0.156	no trend	116.3	-0.56	1/22/1992	5/8/2017	38.620988	-121.443553
279	3410020-028	AS	FALSE	0.37	-14	-0.212	no trend	210.7	-0.9	11/18/1988	5/8/2017	38.62044	-121.432285
108	3410020-029	AS	FALSE	0.428	17	0.162	no trend	408.3	0.79	1/17/1992	10/8/2018	38.618056	-121.468056
107	3410020-030	AS	FALSE	0.602	-6	-0.167	no trend	92	-0.52	1/17/1992	5/8/2017	38.625119	-121.462605
59	3410020-032	AS	FALSE	0.696	-6	-0.109	no trend	164	-0.39	1/16/1991	8/24/2017	38.628503	-121.43627
55	3410020-033	AS	FALSE	1	1	0.028	no trend	82.3	0	11/16/1988	10/10/2011	38.626808	-121.42959
171	3410020-034	AS	FALSE	0.696	-6	-0.109	no trend	164	-0.39	1/16/1991	2/27/2018	38.638412	-121.446721
73	3410020-035	AS	FALSE	1	1	0.018	no trend	163	0	1/16/1991	2/27/2018	38.639934	-121.427293
133	3410020-037	AS	FALSE	0.938	-2	-0.036	no trend	164	-0.08	1/16/1991	5/8/2017	38.651207	-121.469509
264	3410020-038	AS	FALSE	0.638	-7	-0.127	no trend	163	-0.47	1/16/1991	5/8/2017	38.647475	-121.459256
50	3410020-039	AS	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	1/22/1992	10/8/2003	38.627595	-121.432917
56	3410020-040	AS	FALSE	0.585	8	0.145	no trend	164	0.55	10/22/1990	5/9/2017	38.629597	-121.420726
278	3410020-041	AS	FALSE	0.271	-17	-0.258	no trend	211.7	-1.1	1/16/1991	5/9/2017	38.641387	-121.435795
22	3410020-042	AS	FALSE	0.902	2	0.071	no trend	65.3	0.12	1/21/1992	3/7/2017	38.596923	-121.458973
294	3410020-044	AS	FALSE	0.799	3	0.107	no trend	61.7	0.25	10/16/1990	10/10/2011	38.613996	-121.456155
194	3410020-045	AS	FALSE	0.815	-4	-0.073	no trend	164	-0.23	10/19/1990	5/9/2017	38.622276	-121.446858
134	3410020-046	AS	FALSE	0.834	3	0.083	no trend	91	0.21	1/22/1992	9/22/2014	38.623116	-121.427024
157	3410020-050	AS	FALSE	0.474	9	0.2	no trend	125	0.72	1/16/1991	3/25/2014	38.668053	-121.438012
42	3410020-051	AS	FALSE	0.81	-4	-0.073	no trend	155.3	-0.24	1/16/1991	2/27/2018	38.634413	-121.412516
296	3410020-052	AS	FALSE	0.283	13	0.289	no trend	125	1.07	3/8/1993	5/9/2017	38.599341	-121.445804
214	3410020-054	AS	FALSE	0.533	9	0.164	no trend	165	0.62	1/21/1992	8/24/2017	38.596324	-121.427308
33	3410020-055	AS	FALSE	0.537	-10	-0.152	no trend	212.7	-0.62	1/17/1992	5/9/2017	38.617636	-121.469304
91	3410020-056	AS	TRUE	0.012	29	0.644	increasing	125	2.5	1/12/1994	5/9/2017	38.654657	-121.448564
291	3410020-057	AS	FALSE	0.651	16	0.076	no trend	1096.7	0.45	1/18/1995	12/19/2018	38.658482	-121.466415
30	3410026-001	AS	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	2/21/1991	5/31/2012	38.58961	-121.429343
7	3410026-002	AS	FALSE	0.806	2	0.2	no trend	16.7	0.24	2/21/1991	5/3/2018	38.588266	-121.423478
31	3410026-003	AS	FALSE	1	0	0	no trend	16.7	0	2/21/1991	5/3/2018	38.593617	-121.439154
18	3410026-004	AS	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	2/21/1991	5/3/2018	38.593339	-121.432431
206	3410031-001	AS	FALSE	1	-1	-0.018	no trend	160.3	0	3/24/1988	5/16/2019	38.720833	-121.358333
190	3410031-002	AS	FALSE	0.711	-5	-0.111	no trend	116.3	-0.37	9/10/1993	8/8/2018	38.717222	-121.3575
94	3410031-003	AS	TRUE	0.008	-30	-0.545	decreasing	120.7	-2.64	2/12/1991	8/14/2018	38.7	-121.383333
221	3410031-004	AS	FALSE	0.453	-16	-0.152	no trend	398.7	-0.75	10/29/1987	8/14/2018	38.718056	-121.382222
61	3410031-005	AS	FALSE	0.442	-9	-0.2	no trend	108.3	-0.77	2/26/1992	8/5/2015	38.716667	-121.4
160	3410031-006	AS	TRUE	0.021	-31	-0.47	decreasing	168.3	-2.31	11/2/1988	8/14/2018	38.708333	-121.383611
2073	3410031-007	AS	TRUE	0.001	41	0.745	increasing	148.3	3.28	2/12/1991	8/9/2018	38.733333	-121.35
2056	3410031-008	AS	FALSE	0.235	-16	-0.291	no trend	159.3	-1.19	10/7/1992	8/9/2018	38.733333	-121.35
208	3410031-009	AS	FALSE	0.611	6	0.133	no trend	96.7	0.51	1/15/1992	8/7/2018	38.715278	-121.378056
72	3410031-010	AS	FALSE	0.667	5	0.139	no trend	86.3	0.43	8/29/1995	8/7/2018	38.705	-121.365556
289	3410031-011	AS	FALSE	1	1	0.008	no trend	483.7	0	6/21/1990	8/7/2018	38.726944	-121.3825
135	3410031-012	AS	FALSE	0.203	11	0.393	no trend	61.7	1.27	6/12/1992	8/7/2018	38.721111	-121.368611
45	3410031-013	AS	FALSE	0.651	-6	-0.133	no trend	122	-0.45	2/25/1992	8/14/2018	38.711667	-121.413889
54	3410031-014	AS	FALSE	0.631	-7	-0.127	no trend	156.3	-0.48	4/15/1987	8/14/2018	38.716111	-121.408889
95	3410031-015	AS	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	2/11/1993	8/14/2018	38.716667	-121.416667

241	3410031-016	AS	TRUE	0.047	-19	-0.528	decreasing	82.3	-1.98	7/16/1996	8/8/2018	38.724444	-121.336111
80	3410031-017	AS	FALSE	0.521	-6	-0.214	no trend	60.7	-0.64	4/30/1998	8/8/2018	38.723056	-121.349722
257	3410031-018	AS	FALSE	0.854	-3	-0.067	no trend	118.3	-0.18	1/9/1996	8/7/2018	38.716389	-121.371944
288	3410045-001	AS	FALSE	0.43	-11	-0.2	no trend	160.3	-0.79	2/25/1992	8/7/2018	38.586137	-121.411513
138	3410045-002	AS	FALSE	0.113	18	0.4	no trend	115.3	1.58	2/25/1992	8/7/2018	38.583085	-121.413054
116	3410045-003	AS	FALSE	0.711	5	0.111	no trend	116.3	0.37	1/21/1993	8/7/2018	38.594423	-121.417465
243	3410045-004	AS	FALSE	0.175	14	0.389	no trend	92	1.36	7/3/1990	7/12/2012	38.592566	-121.407256
96	3410045-005	AS	FALSE	0.636	7	0.127	no trend	160.3	0.47	2/12/1991	8/7/2018	38.600025	-121.410183
2074	3910005-049	AS	FALSE	0.602	-6	-0.167	no trend	92	-0.52	6/9/2009	6/12/2018	38.8271	-121.232
2908	5100136-002	AS	FALSE	0.221	6	0.6	no trend	16.7	1.22	3/12/2003	4/11/2018	38.911927	-121.526004
2901	5100138-001	AS	FALSE	0.764	3	0.143	no trend	44.3	0.3	2/11/1991	1/3/2017	38.947299	-121.524183
2902	5100140-001	AS	FALSE	0.537	-16	-0.118	no trend	589.3	-0.62	2/11/1991	5/19/2010	38.911233	-121.542832
2900	5100143-001	AS	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	2/11/1991	5/18/2005	38.823397	-121.503832
2905	5100143-002	AS	FALSE	0.451	-12	-0.182	no trend	212.7	-0.75	9/21/2005	8/21/2019	38.823303	-121.503779
2904	5100153-002	AS	FALSE	0.051	262	0.183	no trend	17963	1.95	3/8/2005	7/7/2019	38.772313	-121.525061
2907	5105004-001	AS	FALSE	0.063	-16	-0.571	no trend	65.3	-1.86	11/29/2000	5/17/2017	38.777769	-121.52437
2909	5105013-001	AS	FALSE	0.38	17	0.187	no trend	331.7	0.88	2/29/2016	7/7/2019	38.781319	-121.484797
1859	USGS-383746121291101	AS	FALSE	0.711	-4	-0.143	no trend	65.3	-0.37	8/4/1998	8/8/2017	38.6292139	-121.4877028
1860	USGS-384145121184101	AS	FALSE	0.368	7	0.333	no trend	44.3	0.9	8/17/1998	9/4/2012	38.6964	-121.3120389
1868	USGS-384330121293901	AS	FALSE	1	1	0.048	no trend	44.3	0	8/11/1997	7/10/2017	38.7251167	-121.4954417
2806	USGS-384413121163801	AS	FALSE	0.308	4	0.667	no trend	8.7	1.02	9/24/1982	3/10/2014	38.7369444	-121.277222

Nitrate as Nitrogen

Local_ID	Well_Info_ID	chemical	h	p	s	tau	trend	var_s	z	datemin	datemax	Latitude_NAD83	Longitude_NAD83
2934	11N03E24D001M	NO3N	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	7/21/1964	8/18/2004	38.7906	-121.5973
2940	11N04E04R002M	NO3N	FALSE	0.089	-6	-1	no trend	8.7	-1.7	5/2/1968	8/24/2005	38.8255	-121.5259
2083	11N06E17D001M	NO3N	TRUE	0	567	0.368	increasing	20007.7	4	5/5/2004	3/26/2008	38.8064	-121.3353
2081	11N06E17D002M	NO3N	FALSE	0.301	-137	-0.092	no trend	17276.3	-1.03	5/6/2004	3/26/2008	38.8027	-121.3384
2080	11N06E17D003M	NO3N	FALSE	0.099	175	0.169	no trend	11151	1.65	5/5/2004	3/26/2008	38.8059	-121.3358
2082	11N06E17E001M	NO3N	TRUE	0	515	0.334	increasing	20015	3.63	5/5/2004	3/26/2008	38.8058	-121.3354
2953	12N03E26R001M	NO3N	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	6/13/1963	8/18/2004	38.8533	-121.5991
2967	12N04E05R005M	NO3N	FALSE	1	0	0	no trend	8.7	0	8/25/1970	8/18/2004	38.9114	-121.5447
2065	3100077-003	NO3N	FALSE	0.074	-21	-0.467	no trend	125	-1.79	2/26/2004	7/10/2017	38.726602	-121.336563
2062	3100077-004	NO3N	TRUE	0.029	-22	-0.611	decreasing	92	-2.19	2/26/2004	7/10/2017	38.726284	-121.336527
2059	3100538-001	NO3N	FALSE	0.065	42	0.35	no trend	493.3	1.85	3/18/2004	6/12/2019	38.7505	-121.321972
2060	3104508-001	NO3N	FALSE	0.098	-52	-0.274	no trend	950	-1.65	7/17/2003	3/21/2019	38.729952	-121.321616
2077	3105886-001	NO3N	FALSE	0.086	26	0.394	no trend	212.7	1.71	6/21/2007	3/21/2019	38.728166	-121.366194
2057	3110004-002	NO3N	TRUE	0.034	76	0.329	increasing	1254.7	2.12	4/24/2001	2/26/2019	38.868006	-121.320358
2068	3110004-003	NO3N	FALSE	0.156	51	0.221	no trend	1244.3	1.42	12/30/2002	2/26/2019	38.86973	-121.330213
2070	3110004-007	NO3N	FALSE	0.308	4	0.667	no trend	8.7	1.02	4/24/2001	2/26/2019	38.901373	-121.351602
2061	3110004-011	NO3N	FALSE	0.432	20	0.147	no trend	585.3	0.79	12/7/2005	3/1/2018	38.865086	-121.347261
2072	3110004-012	NO3N	FALSE	0.075	37	0.352	no trend	408.3	1.78	6/14/2005	2/26/2019	38.867769	-121.338461
2069	3110008-003	NO3N	FALSE	0.347	13	0.236	no trend	163	0.94	10/26/1992	1/8/2010	38.753022	-121.279492
2071	3110008-006	NO3N	FALSE	0.398	-18	-0.171	no trend	405.3	-0.84	10/27/1992	8/23/2018	38.736633	-121.277875
2066	3110008-007	NO3N	TRUE	0.003	-55	-0.604	decreasing	333.7	-2.96	10/26/1992	8/23/2018	38.726493	-121.258205
2050	3110008-008	NO3N	FALSE	1	-1	-0.048	no trend	44.3	0	8/24/2004	8/23/2018	38.805938	-121.335588
2051	3110008-015	NO3N	FALSE	0.086	8	0.8	no trend	16.7	1.71	1/8/2010	8/23/2018	38.785813	-121.332225
2064	3110025-005	NO3N	TRUE	0.031	53	0.39	increasing	581	2.16	7/26/1989	9/12/2019	38.818889	-121.31
2063	3110040-001	NO3N	FALSE	0.351	18	0.198	no trend	332.7	0.93	9/27/1988	7/9/2002	38.75	-121.34722
2067	3110040-002	NO3N	FALSE	0.193	20	0.303	no trend	212.7	1.3	8/31/1989	7/9/2002	38.75	-121.34444
2054	3110048-001	NO3N	FALSE	0.324	-19	-0.209	no trend	333.7	-0.99	4/21/2004	7/18/2019	38.983062	-121.375659
2058	3110048-002	NO3N	FALSE	0.087	-23	-0.418	no trend	165	-1.71	4/21/2004	4/9/2018	38.980075	-121.369185
40	3400117-001	NO3N	FALSE	1	-1	-0.013	no trend	103.7	0	2/14/2005	8/12/2019	38.602797	-121.50572
15	3400123-001	NO3N	TRUE	0.049	-31	-0.341	decreasing	233	-1.97	2/3/2005	5/6/2019	38.672825	-121.623796
38	3400131-001	NO3N	FALSE	1	1	0.167	no trend	7.7	0	6/15/1995	11/28/2018	38.671667	-121.611111
145	3400173-002	NO3N	FALSE	0.381	-26	-0.152	no trend	813.3	-0.88	7/26/2001	2/4/2019	38.640638	-121.483861
235	3400173-003	NO3N	FALSE	0.537	16	0.118	no trend	589.3	0.62	10/25/2001	2/4/2019	38.654819	-121.477561
316	3400173-004	NO3N	FALSE	0.118	16	0.444	no trend	92	1.56	4/6/2009	2/4/2019	38.643894	-121.493168
167	3400173-005	NO3N	FALSE	0.171	-37	-0.242	no trend	692.3	-1.37	7/26/2001	2/15/2017	38.646271	-121.502342
79	3400179-001	NO3N	FALSE	0.599	16	0.094	no trend	813.3	0.53	8/17/2001	3/20/2019	38.6575	-121.378333
199	3400179-002	NO3N	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	4/28/2008	3/20/2019	38.658333	-121.380555
57	3400190-001	NO3N	FALSE	0.195	47	0.203	no trend	1257.7	1.3	10/2/2001	3/20/2019	38.675861	-121.326329
272	3400191-001	NO3N	TRUE	0.019	84	0.364	increasing	1256.7	2.34	8/17/2001	3/20/2019	38.65525	-121.379888
285	3400191-002	NO3N	FALSE	0.118	16	0.444	no trend	92	1.56	7/30/2009	3/20/2019	38.685618	-121.361651
121	3400191-003	NO3N	FALSE	1	0	0	no trend	92	0	7/30/2009	3/20/2019	38.656327	-121.378432
36	3400226-001	NO3N	FALSE	0.939	3	0.02	no trend	681	0.08	7/6/2000	3/20/2019	38.605089	-121.522873
44	3400278-001	NO3N	FALSE	0.869	-4	-0.044	no trend	330.7	-0.16	7/10/2000	12/18/2018	38.648694	-121.346694
43	3400278-002	NO3N	FALSE	0.631	8	0.121	no trend	212.7	0.48	8/22/2001	6/22/2017	38.650597	-121.344144
67	3400283-001	NO3N	FALSE	0.371	11	0.244	no trend	125	0.89	8/12/2009	4/30/2018	38.648694	-121.346694
302	3400284-001	NO3N	TRUE	0.023	-34	-0.515	decreasing	210.7	-2.27	3/15/2001	4/16/2008	38.692607	-121.323444
48	3400347-001	NO3N	FALSE	0.178	-16	-0.356	no trend	124	-1.35	7/17/2003	6/24/2010	38.684099	-121.322031
65	3400356-001	NO3N	FALSE	0.396	25	0.146	no trend	798.3	0.85	7/12/2000	5/13/2019	38.684099	-121.322031
8	3400383-001	NO3N	FALSE	0.429	-34	-0.113	no trend	1741.3	-0.79	7/20/2000	3/20/2019	38.618983	-121.536935
39	3400396-001	NO3N	FALSE	0.062	-46	-0.338	no trend	580.7	-1.87	9/5/2002	3/20/2019	38.697778	-121.616944
23	3400406-001	NO3N	FALSE	0.175	-77	-0.177	no trend	3133	-1.36	8/7/2001	3/20/2019	38.619087	-121.53506
60	3400456-001	NO3N	FALSE	0.284	-34	-0.179	no trend	950	-1.07	6/20/2012	8/15/2019	38.698055	-121.43
309	3400459-001	NO3N	TRUE	0.011	-91	-0.394	decreasing	1257.7	-2.54	2/18/2010	8/2/2019	38.576666	-121.401666
193	3410001-001	NO3N	TRUE	0.014	112	0.345	increasing	2057.3	2.45	1/12/1993	7/15/2019	38.606839	-121.3982
242	3410001-002	NO3N	TRUE	0.037	80	0.316	increasing	1432.7	2.09	1/25/1995	7/15/2019	38.59783	-121.398024
258	3410001-004	NO3N	FALSE	0.739	12	0.057	no trend	1090	0.33	1/12/1993	8/10/2015	38.611483	-121.410107
284	3410001-005	NO3N	FALSE	0.107	47	0.275	no trend	812.3	1.61	2/25/1991	7/30/2013	38.623478	-121.396638
203	3410001-007	NO3N	TRUE	0.008	129	0.368	increasing	2299	2.67	7/9/1990	9/16/2019	38.610999	-121.363391
128	3410001-009	NO3N	FALSE	0.807	-5	-0.064	no trend	267.7	-0.24	2/2/1993	1/23/2006	38.616331	-121.403703
212	3410001-010	NO3N	FALSE	0.118	72	0.222	no trend	2057.3	1.57	7/10/1990	6/13/2018	38.608099	-121.408153
158	3410001-011	NO3N	FALSE	0.127	66	0.22	no trend	1814	1.53	1/30/1992	7/30/2019	38.619863	-121.396184
228	3410001-012	NO3N	FALSE	0.174	154	0.137	no trend	12656.7	1.36	2/25/1991	4/10/2018	38.617662	-121.403695
82	3410001-013	NO3N	FALSE	0.409	-34	-0.123	no trend	1596	-0.83	1/28/1992	7/11/2019	38.598939	-121.370714
146	3410001-014	NO3N	FALSE	0.24	27	0.225	no trend	490.3	1.17	7/10/1990	3/12/2009	38.61171	-121.386048
260	3410001-015	NO3N	TRUE	0.002	136	0.453	increasing	1831.3	3.15	11/1/1988	7/11/2019	38.59781	-121.381308
191	3410001-016	NO3N	FALSE	0.428	-29	-0.126	no trend	1249	-0.79	2/22/1991	7/12/2016	38.631327	-121.37485
124	3410001-017	NO3N	FALSE	0.865	7	0.03	no trend	1253	0.17	1/30/1992	2/8/2016	38.61981	-121.403732
211	3410001-018	NO3N	FALSE	0.972	7	0.003	no trend	29784.3	0.03	2/22/1991	7/11/2019	38.623854	-121.374359
209	3410001-019	NO3N	FALSE	0.366	42	0.129	no trend	2057.3	0.9	1/27/1992	7/11/2019	38.597831	-121.359623
114	3410001-020	NO3N	TRUE	0.037	236	0.209	increasing	12656.7	2.09	1/27/1992	7/10/2019	38.618079	-121.359205

210	3410001-021	NO3N	TRUE	0.026	102	0.314	increasing	2048.7	2.23	7/9/1990	7/29/2019	38.615256	-121.419986
161	3410001-022	NO3N	FALSE	0.636	20	0.072	no trend	1614.7	0.47	1/26/1995	7/25/2019	38.604549	-121.42274
123	3410001-023	NO3N	FALSE	0.764	-3	-0.143	no trend	44.3	-0.3	4/13/1987	5/16/2000	38.614722	-121.349444
64	3410001-024	NO3N	FALSE	0.707	3	0.2	no trend	28.3	0.38	1/27/1992	2/19/2001	38.641255	-121.370271
222	3410001-025	NO3N	TRUE	0.027	101	0.311	increasing	2053.7	2.21	2/22/1991	7/26/2018	38.60046	-121.359118
148	3410001-026	NO3N	FALSE	0.185	19	0.288	no trend	184.3	1.33	7/10/1990	2/23/2005	38.627091	-121.384097
113	3410001-027	NO3N	TRUE	0.032	87	0.315	increasing	1607.7	2.14	1/30/1992	7/17/2018	38.605146	-121.390988
244	3410001-028	NO3N	TRUE	0.027	74	0.352	increasing	1088	2.21	1/30/1992	8/21/2014	38.63562	-121.381097
227	3410001-029	NO3N	TRUE	0.048	71	0.307	increasing	1249	1.98	1/30/1992	10/3/2017	38.630252	-121.397575
236	3410001-030	NO3N	TRUE	0.009	81	0.426	increasing	944.3	2.6	1/29/1992	7/9/2018	38.617802	-121.424022
170	3410001-031	NO3N	FALSE	0.548	5	0.238	no trend	44.3	0.6	1/28/1992	11/20/2007	38.61919	-121.371454
81	3410001-032	NO3N	FALSE	0.139	50	0.238	no trend	1094.7	1.48	7/9/1990	7/9/2018	38.622918	-121.413817
104	3410001-033	NO3N	FALSE	0.113	46	0.269	no trend	807.3	1.58	1/29/1992	7/10/2014	38.601378	-121.424
173	3410001-034	NO3N	TRUE	0	-1179	-0.449	decreasing	43973	-5.62	7/9/1990	7/16/2019	38.584674	-121.396539
169	3410001-035	NO3N	FALSE	0.441	32	0.116	no trend	1616.7	0.77	7/9/1990	7/26/2018	38.594464	-121.351844
25	3410001-037	NO3N	FALSE	0.072	13	0.619	no trend	44.3	1.8	1/27/1992	6/13/2000	38.578611	-121.366667
19	3410001-038	NO3N	FALSE	0.069	-52	-0.304	no trend	786.7	-1.82	1/28/1992	7/25/2012	38.578371	-121.363395
20	3410001-039	NO3N	FALSE	0.797	-7	-0.051	no trend	545	-0.26	2/22/1991	6/16/2010	38.591742	-121.346413
90	3410001-040	NO3N	FALSE	1	-1	-0.1	no trend	13	0	1/27/1992	6/13/2000	38.624895	-121.35055
168	3410001-042	NO3N	TRUE	0.027	90	0.326	increasing	1623.3	2.21	2/22/1991	7/11/2019	38.628014	-121.358648
184	3410001-051	NO3N	FALSE	0.153	147	0.148	no trend	10449	1.43	7/9/1990	7/10/2019	38.636187	-121.375067
111	3410001-052	NO3N	TRUE	0.039	79	0.312	increasing	1431.7	2.06	7/9/1990	7/10/2019	38.625054	-121.362252
287	3410001-054	NO3N	FALSE	0.107	-70	-0.233	no trend	1831.3	-1.61	2/11/1991	7/16/2019	38.582422	-121.408379
122	3410001-055	NO3N	TRUE	0.004	117	0.424	increasing	1621.7	2.88	11/1/1988	12/13/2017	38.594474	-121.39864
26	3410001-056	NO3N	FALSE	0.122	-71	-0.218	no trend	2049.7	-1.55	1/12/1993	7/9/2018	38.578749	-121.41096
3	3410001-061	NO3N	FALSE	0.195	-47	-0.203	no trend	1257.7	-1.3	5/7/1998	7/18/2019	38.582786	-121.338489
176	3410001-062	NO3N	FALSE	0.489	22	0.116	no trend	920.7	0.69	8/22/2000	7/25/2019	38.618056	-121.401944
12	3410001-064	NO3N	FALSE	0.904	5	0.024	no trend	1095.7	0.12	5/31/2000	7/11/2019	38.584121	-121.353432
13	3410001-065	NO3N	FALSE	0.319	-34	-0.162	no trend	1094.7	-1	2/22/2000	7/18/2019	38.583196	-121.33679
4	3410001-066	NO3N	FALSE	0.974	-2	-0.011	no trend	945.3	-0.03	2/22/2000	7/18/2019	38.582214	-121.338203
2	3410001-067	NO3N	FALSE	0.211	-6	-0.286	no trend	16	-1.25	6/3/1999	10/1/2019	38.582481	-121.417169
225	3410001-069	NO3N	FALSE	0.506	-69	-0.07	no trend	10449	-0.67	2/26/1992	7/16/2019	38.580609	-121.384004
255	3410001-070	NO3N	TRUE	0.018	-226	-0.25	decreasing	9122.7	-2.36	2/12/1991	7/16/2019	38.576006	-121.403088
205	3410001-071	NO3N	TRUE	0.026	59	0.386	increasing	680.3	2.22	3/21/2002	7/10/2019	38.63056	-121.397787
106	3410001-072	NO3N	FALSE	0.183	33	0.243	no trend	577	1.33	3/21/2002	7/25/2019	38.61744	-121.411527
252	3410001-073	NO3N	FALSE	0.43	-21	-0.137	no trend	643	-0.79	3/21/2002	7/25/2019	38.58058	-121.383962
58	3410001-076	NO3N	FALSE	0.402	37	0.114	no trend	1843.7	0.84	6/5/1984	7/10/2019	38.644265	-121.362069
69	3410001-077	NO3N	TRUE	0.036	155	0.246	increasing	5389	2.1	3/7/1984	7/10/2019	38.631522	-121.352911
86	3410001-078	NO3N	FALSE	0.196	63	0.179	no trend	2301	1.29	6/5/1984	7/9/2019	38.684818	-121.355931
259	3410001-079	NO3N	FALSE	0.532	-36	-0.083	no trend	3138.7	-0.62	6/4/1984	7/24/2013	38.667577	-121.334161
110	3410001-080	NO3N	FALSE	0.54	37	0.08	no trend	3457	0.61	6/4/1984	7/17/2019	38.672567	-121.331573
174	3410001-081	NO3N	FALSE	0.897	5	0.026	no trend	946.3	0.13	6/5/1984	7/22/2019	38.683333	-121.333333
71	3410001-082	NO3N	FALSE	1	0	0	no trend	4165.3	0	6/4/1984	7/18/2018	38.648929	-121.338368
246	3410001-083	NO3N	FALSE	0.215	51	0.185	no trend	1624.3	1.24	5/17/1984	7/9/2019	38.663692	-121.347786
239	3410001-085	NO3N	FALSE	0.868	38	0.013	no trend	49707.3	0.17	6/4/1984	10/1/2019	38.644208	-121.329841
49	3410001-087	NO3N	FALSE	0.537	-32	-0.085	no trend	2516.7	-0.62	6/5/1984	7/11/2019	38.645858	-121.392317
218	3410001-088	NO3N	FALSE	1	1	0.004	no trend	1624.3	0	5/17/1984	10/19/2015	38.668746	-121.361
89	3410001-089	NO3N	FALSE	0.985	2	0.005	no trend	2842	0.02	3/7/1984	7/9/2019	38.653579	-121.379692
132	3410001-092	NO3N	FALSE	0.605	29	0.067	no trend	2929	0.52	6/4/1984	7/24/2018	38.63889	-121.342759
185	3410001-094	NO3N	FALSE	0.06	91	0.259	no trend	2290.3	1.88	5/17/1984	7/10/2019	38.652299	-121.354305
196	3410001-095	NO3N	TRUE	0.039	51	0.375	increasing	586.3	2.06	5/17/1984	5/28/2009	38.658062	-121.356402
297	3410001-096	NO3N	FALSE	0.659	21	0.065	no trend	2058.3	0.44	6/30/1988	7/9/2019	38.689669	-121.360198
102	3410001-097	NO3N	FALSE	0.791	13	0.04	no trend	2056.3	0.26	12/13/1984	7/11/2019	38.694158	-121.360024
256	3410001-098	NO3N	FALSE	0.185	68	0.18	no trend	2553.3	1.33	5/9/1984	7/9/2019	38.700217	-121.351805
295	3410001-099	NO3N	FALSE	0.313	75	0.119	no trend	5387	1.01	10/20/1988	4/8/2010	38.655401	-121.313482
46	3410001-101	NO3N	TRUE	0	800	0.296	increasing	45911.3	3.73	10/27/1988	4/15/2019	38.663926	-121.32579
231	3410001-102	NO3N	TRUE	0.011	408	0.223	increasing	25821.3	2.53	10/20/1988	10/1/2019	38.675049	-121.315501
101	3410001-103	NO3N	FALSE	0.063	46	0.338	no trend	584.7	1.86	10/25/1988	11/13/2013	38.651225	-121.32298
163	3410001-104	NO3N	FALSE	0.763	13	0.047	no trend	1579	0.3	2/1/1993	7/10/2019	38.710442	-121.331662
180	3410001-105	NO3N	FALSE	0.821	9	0.039	no trend	1253	0.23	1/18/1995	7/10/2019	38.710528	-121.331667
262	3410001-106	NO3N	FALSE	0.053	29	0.439	no trend	209	1.94	6/28/2001	8/21/2014	38.710517	-121.331659
85	3410001-107	NO3N	FALSE	0.228	-38	-0.2	no trend	942.7	-1.21	11/4/1996	7/18/2018	38.709903	-121.357066
127	3410001-111	NO3N	FALSE	0.553	22	0.095	no trend	1254.7	0.59	12/13/1995	7/11/2019	38.665363	-121.383099
254	3410001-127	NO3N	FALSE	0.652	11	0.092	no trend	492.3	0.45	12/13/1995	8/21/2014	38.712268	-121.381099
283	3410001-128	NO3N	FALSE	0.441	15	0.165	no trend	329.7	0.77	12/13/1995	6/17/2010	38.709783	-121.374669
149	3410001-129	NO3N	TRUE	0.01	74	0.433	increasing	804.7	2.57	12/13/1995	10/15/2014	38.710651	-121.387666
118	3410001-133	NO3N	FALSE	0.146	63	0.21	no trend	1815.7	1.46	2/25/1991	7/22/2019	38.682932	-121.376063
182	3410001-135	NO3N	TRUE	0.004	95	0.452	increasing	1084.3	2.85	1/26/1995	3/13/2018	38.68794	-121.385107
99	3410001-136	NO3N	TRUE	0.042	67	0.319	increasing	1050.3	2.04	2/25/1991	3/27/2018	38.685899	-121.372701
141	3410001-137	NO3N	FALSE	0.312	34	0.162	no trend	1065.3	1.01	2/25/1991	8/21/2014	38.692847	-121.375953
230	3410001-138	NO3N	FALSE	0.085	10	0.667	no trend	27.3	1.72	8/19/1997	1/28/2004	38.676018	-121.36531

183	3410001-139	NO3N	FALSE	0.579	22	0.087	no trend	1432.7	0.55	5/17/1984	7/12/2018	38.69191	-121.364477
200	3410001-140	NO3N	FALSE	0.462	4	0.4	no trend	16.7	0.73	1/26/1995	5/16/2000	38.675278	-121.378889
280	3410001-142	NO3N	TRUE	0.001	120	0.519	increasing	1256.7	3.36	7/20/1989	9/13/2017	38.686782	-121.392424
267	3410001-143	NO3N	FALSE	0.452	5	0.333	no trend	28.3	0.75	7/9/1990	5/16/2000	38.701228	-121.371968
197	3410001-144	NO3N	FALSE	0.441	34	0.113	no trend	1833.3	0.77	2/25/1991	7/23/2019	38.69798	-121.373877
213	3410001-145	NO3N	FALSE	0.879	5	0.033	no trend	695	0.15	3/25/2002	7/10/2019	38.67526	-121.379573
315	3410002-001	NO3N	FALSE	0.104	92	0.211	no trend	3133.3	1.63	2/20/1991	2/5/2019	38.583333	-121.383333
117	3410002-002	NO3N	TRUE	0.028	-95	-0.317	decreasing	1832.3	-2.2	7/17/1990	8/13/2019	38.583333	-121.366667
28	3410002-007	NO3N	FALSE	0.884	8	0.023	no trend	2300	0.15	7/17/1990	2/4/2019	38.566667	-121.4
9	3410002-009	NO3N	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	8/2/1989	6/17/1999	38.566667	-121.4
10	3410002-012	NO3N	FALSE	0.429	-37	-0.105	no trend	2071.7	-0.79	7/17/1990	8/13/2019	38.566667	-121.416667
17	3410002-013	NO3N	FALSE	0.313	-47	-0.134	no trend	2079.7	-1.01	7/17/1990	2/4/2019	38.583333	-121.416667
249	3410002-014	NO3N	TRUE	0.002	-150	-0.427	decreasing	2300	-3.11	1/19/1993	5/13/2019	38.583333	-121.366667
152	3410003-001	NO3N	FALSE	0.877	11	0.021	no trend	4155	0.16	9/5/1990	2/6/2019	38.587545	-121.385145
153	3410003-002	NO3N	TRUE	0.022	111	0.316	increasing	2299	2.29	4/11/1986	1/8/2019	38.582537	-121.383219
245	3410003-004	NO3N	FALSE	0.166	29	0.276	no trend	408.3	1.39	9/19/1990	7/11/2007	38.587611	-121.392074
162	3410003-005	NO3N	TRUE	0.028	95	0.317	increasing	1832.3	2.2	4/2/1987	1/8/2019	38.591017	-121.384139
251	3410003-006	NO3N	TRUE	0.002	126	0.457	increasing	1623.3	3.1	4/2/1987	1/8/2019	38.59211	-121.387633
238	3410003-008	NO3N	TRUE	0	189	0.582	increasing	2058.3	4.14	4/2/1987	1/8/2019	38.600074	-121.391973
74	3410004-001	NO3N	FALSE	0.1	28	0.359	no trend	268.7	1.65	2/7/1995	2/3/2004	38.645432	-121.313067
83	3410004-004	NO3N	FALSE	0.082	89	0.235	no trend	2561	1.74	2/19/1991	7/28/2011	38.64988	-121.30798
175	3410004-005	NO3N	FALSE	1	-1	-0.036	no trend	64.3	0	3/1/1991	10/4/2001	38.633333	-121.35
172	3410004-006	NO3N	TRUE	0.044	-317	-0.179	decreasing	24568.3	-2.02	8/1/1990	3/7/2019	38.622744	-121.335704
6	3410004-007	NO3N	FALSE	0.495	12	0.154	no trend	260	0.68	8/1/1990	10/23/2002	38.594673	-121.334606
150	3410004-009	NO3N	FALSE	0.773	44	0.027	no trend	22182	0.29	2/19/1991	3/7/2019	38.619652	-121.333354
261	3410004-016	NO3N	FALSE	0.142	161	0.149	no trend	11883.7	1.47	5/8/1987	6/7/2018	38.645576	-121.306819
248	3410004-020	NO3N	TRUE	0	214	0.46	increasing	3460.7	3.62	4/25/2002	6/7/2018	38.641845	-121.315446
139	3410004-021	NO3N	FALSE	0.776	-32	-0.03	no trend	11885.3	-0.28	4/23/2002	3/7/2019	38.604804	-121.342252
290	3410006-001	NO3N	FALSE	1	0	0	no trend	948	0	12/20/1990	11/14/2018	38.661305	-121.292607
207	3410006-007	NO3N	FALSE	1	0	0	no trend	8.7	0	8/2/1990	1/21/1998	38.705556	-121.308333
198	3410006-008	NO3N	FALSE	0.383	34	0.134	no trend	1430.7	0.87	12/6/1990	1/24/2019	38.679425	-121.289154
98	3410006-010	NO3N	FALSE	0.868	4	0.044	no trend	324	0.17	6/24/2004	4/12/2018	38.698638	-121.269673
130	3410007-001	NO3N	FALSE	0.102	34	0.324	no trend	407.3	1.64	4/10/1992	6/24/2010	38.613787	-121.367811
229	3410007-002	NO3N	TRUE	0.006	111	0.402	increasing	1619.7	2.73	1/23/1995	8/7/2019	38.613607	-121.371676
216	3410007-003	NO3N	FALSE	0.367	33	0.143	no trend	1257.7	0.9	2/19/1991	9/11/2018	38.606352	-121.369707
269	3410007-004	NO3N	FALSE	0.073	73	0.264	no trend	1607.7	1.8	1/23/1995	8/6/2019	38.607768	-121.374083
77	3410007-005	NO3N	TRUE	0.004	116	0.42	increasing	1620.7	2.86	1/23/1995	8/6/2019	38.61458	-121.378552
142	3410007-006	NO3N	FALSE	0.68	11	0.081	no trend	588.3	0.41	1/23/1995	3/8/2012	38.60731	-121.364767
195	3410007-007	NO3N	FALSE	0.068	70	0.277	no trend	1430	1.82	1/23/1995	8/6/2019	38.606531	-121.380719
253	3410007-008	NO3N	FALSE	0.08	76	0.253	no trend	1831.3	1.75	1/26/1993	8/13/2019	38.613172	-121.380739
166	3410009-001	NO3N	FALSE	0.436	-8	-0.178	no trend	80.7	-0.78	1/28/1993	6/16/2004	38.643048	-121.268528
100	3410009-003	NO3N	FALSE	0.707	3	0.2	no trend	28.3	0.38	11/9/1988	2/8/2000	38.666667	-121.216667
105	3410009-004	NO3N	TRUE	0.009	81	0.426	increasing	935.7	2.62	8/2/1990	12/6/2007	38.651282	-121.255173
78	3410009-005	NO3N	FALSE	0.449	13	0.167	no trend	251	0.76	2/28/1991	3/17/2005	38.650805	-121.286999
201	3410009-006	NO3N	FALSE	0.119	-144	-0.167	no trend	8419.3	-1.56	2/28/1991	5/2/2019	38.642768	-121.278261
234	3410009-007	NO3N	FALSE	0.054	-172	-0.21	no trend	7886	-1.93	7/19/1989	5/2/2019	38.651297	-121.296666
217	3410009-008	NO3N	FALSE	0.337	52	0.128	no trend	2818	0.96	8/16/1990	6/29/2007	38.662066	-121.265396
164	3410009-010	NO3N	TRUE	0	-589	-0.322	decreasing	25779	-3.66	11/7/1991	5/2/2019	38.659628	-121.25556
93	3410013-001	NO3N	FALSE	0.358	50	0.123	no trend	2842	0.92	10/7/1992	8/6/2019	38.694922	-121.332628
159	3410013-002	NO3N	FALSE	0.117	84	0.207	no trend	2804	1.57	2/18/1992	8/6/2019	38.69054	-121.34151
51	3410013-003	NO3N	TRUE	0.002	136	0.453	increasing	1831.3	3.15	11/2/1988	8/8/2019	38.683982	-121.31348
240	3410013-004	NO3N	FALSE	0.051	-181	-0.21	no trend	8512.3	-1.95	7/2/1990	8/7/2018	38.699328	-121.295627
178	3410013-005	NO3N	TRUE	0.023	122	0.3	increasing	2838	2.27	7/2/1990	8/6/2019	38.669042	-121.293798
63	3410013-006	NO3N	FALSE	0.227	72	0.155	no trend	3450	1.21	2/11/1992	8/7/2019	38.685052	-121.305855
156	3410013-007	NO3N	FALSE	0.195	50	0.198	no trend	1432.7	1.29	7/2/1990	2/19/2018	38.691478	-121.336784
270	3410013-008	NO3N	TRUE	0.008	128	0.365	increasing	2292.7	2.65	2/13/1991	8/6/2019	38.673506	-121.340002
224	3410013-009	NO3N	FALSE	0.499	-115	-0.059	no trend	28425	-0.68	2/11/1992	8/6/2019	38.695662	-121.29509
92	3410013-010	NO3N	TRUE	0.011	-543	-0.201	decreasing	45915	-2.53	2/11/1992	8/6/2019	38.670117	-121.341406
237	3410013-012	NO3N	TRUE	0.024	127	0.292	increasing	3137	2.25	7/2/1990	8/7/2019	38.66565	-121.302524
223	3410013-013	NO3N	TRUE	0.005	-269	-0.298	decreasing	9126.3	-2.81	2/12/1991	8/7/2019	38.678824	-121.304628
144	3410013-014	NO3N	FALSE	0.117	76	0.217	no trend	2291.3	1.57	2/12/1991	8/6/2019	38.668822	-121.304482
112	3410013-015	NO3N	FALSE	0.295	54	0.143	no trend	2562	1.05	2/18/1992	8/6/2019	38.70124	-121.345319
233	3410013-016	NO3N	TRUE	0	7337	0.413	increasing	755319.7	8.44	2/11/1993	9/10/2019	38.709473	-121.292244
265	3410013-017	NO3N	FALSE	0.054	36	0.396	no trend	330	1.93	2/11/1992	8/24/2006	38.712243	-121.303547
247	3410013-019	NO3N	TRUE	0.001	164	0.434	increasing	2545.3	3.23	7/2/1990	8/6/2019	38.700287	-121.330955
226	3410013-020	NO3N	FALSE	0.533	10	0.11	no trend	208.7	0.62	2/12/1991	8/24/2006	38.716217	-121.294262
88	3410013-021	NO3N	TRUE	0	910	0.366	increasing	40585.3	4.51	2/13/1991	8/6/2019	38.683333	-121.31
232	3410013-022	NO3N	TRUE	0	4775	0.536	increasing	269178.3	9.2	2/18/1992	4/5/2017	38.7124	-121.306829
189	3410013-023	NO3N	TRUE	0	212	0.487	increasing	3140.7	3.77	2/11/1992	8/7/2019	38.695536	-121.313454
66	3410013-024	NO3N	FALSE	0.051	116	0.249	no trend	3460.7	1.95	2/11/1992	8/6/2019	38.680539	-121.31067
220	3410013-025	NO3N	TRUE	0.004	123	0.41	increasing	1832.3	2.85	2/18/1992	8/13/2018	38.718426	-121.313299

188	3410013-026	NO3N	TRUE	0.046	102	0.27	increasing	2560	2	7/2/1990	8/6/2019	38.701667	-121.344722
119	3410013-027	NO3N	TRUE	0	1514	0.627	increasing	38714	7.69	2/18/1992	5/5/2015	38.709413	-121.317252
165	3410013-028	NO3N	TRUE	0.003	115	0.455	increasing	1429	3.02	6/19/1995	8/6/2019	38.698857	-121.32618
125	3410016-001	NO3N	FALSE	0.099	25	0.379	no trend	211.7	1.65	1/28/1993	3/22/2007	38.686538	-121.219546
147	3410016-002	NO3N	TRUE	0.023	56	0.412	increasing	584.7	2.27	4/18/1991	12/14/2016	38.694541	-121.210813
126	3410018-005	NO3N	FALSE	0.297	14	0.255	no trend	155.3	1.04	2/28/1991	3/3/2005	38.721801	-121.46774
24	3410020-015	NO3N	FALSE	0.156	32	0.267	no trend	476.7	1.42	1/17/1992	4/3/2017	38.6125	-121.479167
11	3410020-016	NO3N	FALSE	0.139	-28	-0.308	no trend	332.7	-1.48	1/17/1992	1/20/2015	38.616667	-121.479167
293	3410020-017	NO3N	FALSE	0.607	-27	-0.071	no trend	2558.3	-0.51	11/18/1988	7/8/2019	38.62266	-121.477813
84	3410020-018	NO3N	TRUE	0.024	92	0.333	increasing	1623.3	2.26	1/17/1992	2/4/2019	38.627831	-121.477227
292	3410020-021	NO3N	FALSE	0.36	16	0.205	no trend	268.7	0.92	1/21/1992	10/10/2012	38.607083	-121.454779
97	3410020-022	NO3N	FALSE	0.405	23	0.15	no trend	697	0.83	11/18/1988	4/27/2018	38.607305	-121.443097
136	3410020-023	NO3N	FALSE	0.692	-9	-0.086	no trend	408.3	-0.4	1/21/1992	4/20/2018	38.604956	-121.439486
314	3410020-024	NO3N	FALSE	0.234	35	0.205	no trend	815	1.19	11/18/1988	10/10/2012	38.612801	-121.450505
129	3410020-025	NO3N	FALSE	0.076	18	0.5	no trend	92	1.77	1/21/1992	10/9/2008	38.612294	-121.440456
215	3410020-027	NO3N	TRUE	0.022	93	0.337	increasing	1624.3	2.28	1/22/1992	2/4/2019	38.620988	-121.443553
279	3410020-028	NO3N	TRUE	0	231	0.77	increasing	1829.7	5.38	11/18/1988	2/26/2018	38.62044	-121.432285
108	3410020-029	NO3N	FALSE	0.484	18	0.132	no trend	589.3	0.7	1/17/1992	4/20/2018	38.618056	-121.468056
107	3410020-030	NO3N	FALSE	0.894	-6	-0.024	no trend	1396	-0.13	1/17/1992	2/4/2019	38.625119	-121.462605
59	3410020-032	NO3N	FALSE	0.543	-24	-0.095	no trend	1430.7	-0.61	1/16/1991	2/4/2019	38.628503	-121.43627
55	3410020-033	NO3N	TRUE	0.012	73	0.427	increasing	817	2.52	11/16/1988	10/10/2012	38.626808	-121.42959
171	3410020-034	NO3N	TRUE	0.016	104	0.347	increasing	1833.3	2.41	1/16/1991	2/4/2019	38.638412	-121.446721
73	3410020-035	NO3N	FALSE	0.157	58	0.21	no trend	1623.3	1.41	1/16/1991	2/4/2019	38.639934	-121.427293
133	3410020-037	NO3N	FALSE	0.181	58	0.193	no trend	1815.3	1.34	1/16/1991	2/4/2019	38.651207	-121.469509
264	3410020-038	NO3N	FALSE	0.206	52	0.188	no trend	1625.3	1.27	1/16/1991	2/4/2019	38.647475	-121.459256
50	3410020-039	NO3N	FALSE	0.118	16	0.444	no trend	92	1.56	1/22/1992	11/9/2004	38.627595	-121.432917
56	3410020-040	NO3N	FALSE	1	-1	-0.003	no trend	2294.3	0	10/22/1990	2/4/2019	38.629597	-121.420726
278	3410020-041	NO3N	TRUE	0	170	0.523	increasing	2057.3	3.73	1/16/1991	2/4/2019	38.641387	-121.435795
22	3410020-042	NO3N	FALSE	0.893	4	0.033	no trend	493.3	0.14	1/21/1992	3/5/2019	38.596923	-121.458973
294	3410020-044	NO3N	FALSE	0.3	24	0.2	no trend	493.3	1.04	10/16/1990	10/10/2012	38.613996	-121.456155
194	3410020-045	NO3N	FALSE	0.161	61	0.203	no trend	1832.3	1.4	10/19/1990	2/4/2019	38.622276	-121.446858
134	3410020-046	NO3N	TRUE	0.003	98	0.467	increasing	1096.7	2.93	1/22/1992	3/24/2016	38.623116	-121.427024
157	3410020-050	NO3N	FALSE	0.79	8	0.052	no trend	693.3	0.27	1/16/1991	10/15/2015	38.668053	-121.438012
42	3410020-051	NO3N	FALSE	0.432	-27	-0.129	no trend	1093.7	-0.79	1/16/1991	2/4/2019	38.634413	-121.412516
296	3410020-052	NO3N	FALSE	0.795	10	0.043	no trend	1204.7	0.26	3/8/1993	2/4/2019	38.599341	-121.445804
214	3410020-054	NO3N	TRUE	0.013	95	0.375	increasing	1429	2.49	1/21/1992	2/4/2019	38.596324	-121.427308
33	3410020-055	NO3N	FALSE	0.065	-62	-0.295	no trend	1096.7	-1.84	1/17/1992	5/9/2017	38.617636	-121.469304
91	3410020-056	NO3N	TRUE	0.014	100	0.362	increasing	1614.7	2.46	1/12/1994	2/4/2019	38.654657	-121.448564
291	3410020-057	NO3N	FALSE	0.921	-3	-0.029	no trend	403.7	-0.1	1/18/1995	12/27/2018	38.658482	-121.466415
30	3410026-001	NO3N	FALSE	0.242	-5	-0.333	no trend	11.7	-1.17	2/21/1991	5/31/2012	38.58961	-121.429343
7	3410026-002	NO3N	FALSE	0.737	7	0.051	no trend	319.7	0.34	2/21/1991	3/7/2019	38.588266	-121.423478
31	3410026-003	NO3N	FALSE	0.161	-22	-0.183	no trend	224.7	-1.4	2/21/1991	3/7/2019	38.593617	-121.439154
18	3410026-004	NO3N	FALSE	0.132	-14	-0.133	no trend	74.7	-1.5	2/21/1991	3/7/2019	38.593339	-121.432431
206	3410031-001	NO3N	FALSE	0.081	94	0.232	no trend	2831.3	1.75	3/24/1988	8/7/2019	38.720833	-121.358333
190	3410031-002	NO3N	FALSE	0.44	38	0.108	no trend	2300	0.77	9/10/1993	8/6/2019	38.717222	-121.3575
94	3410031-003	NO3N	TRUE	0.014	99	0.359	increasing	1597	2.45	2/12/1991	8/6/2019	38.7	-121.383333
221	3410031-004	NO3N	TRUE	0.004	161	0.37	increasing	3124.3	2.86	10/29/1987	8/8/2019	38.718056	-121.382222
61	3410031-005	NO3N	TRUE	0	159	0.53	increasing	1805	3.72	2/26/1992	8/24/2016	38.716667	-121.4
160	3410031-006	NO3N	TRUE	0.001	162	0.429	increasing	2557.3	3.18	11/2/1988	8/6/2019	38.708333	-121.383611
2073	3410031-007	NO3N	TRUE	0.003	158	0.389	increasing	2834.7	2.95	2/12/1991	8/8/2019	38.733333	-121.35
2056	3410031-008	NO3N	FALSE	0.53	76	0.062	no trend	14288	0.63	10/7/1992	8/8/2019	38.733333	-121.35
208	3410031-009	NO3N	FALSE	0.089	-87	-0.23	no trend	2549.7	-1.7	1/15/1992	8/6/2019	38.715278	-121.378056
72	3410031-010	NO3N	FALSE	0.104	-79	-0.225	no trend	2297	-1.63	9/10/1993	8/8/2019	38.705	-121.365556
289	3410031-011	NO3N	FALSE	0.154	89	0.179	no trend	3801.7	1.43	6/21/1990	8/7/2018	38.726944	-121.3825
135	3410031-012	NO3N	TRUE	0.027	74	0.352	increasing	1096.7	2.2	6/12/1992	8/8/2019	38.721111	-121.368611
45	3410031-013	NO3N	TRUE	0.007	151	0.347	increasing	3125	2.68	2/25/1992	8/8/2019	38.711667	-121.413889
54	3410031-014	NO3N	FALSE	0.056	108	0.248	no trend	3138.7	1.91	4/15/1987	8/6/2019	38.716111	-121.408889
95	3410031-015	NO3N	FALSE	0.3	24	0.2	no trend	493.3	1.04	2/11/1993	8/12/2019	38.716667	-121.416667
241	3410031-016	NO3N	TRUE	0	189	0.582	increasing	2013	4.19	7/16/1996	8/6/2019	38.724444	-121.336111
80	3410031-017	NO3N	FALSE	0.396	31	0.134	no trend	1247	0.85	4/30/1998	8/7/2019	38.723056	-121.349722
257	3410031-018	NO3N	TRUE	0.006	-111	-0.402	decreasing	1599	-2.75	1/9/1996	8/8/2019	38.716389	-121.371944
288	3410045-001	NO3N	FALSE	0.293	75	0.126	no trend	4954.3	1.05	2/25/1992	8/7/2019	38.586137	-121.411513
138	3410045-002	NO3N	FALSE	0.403	41	0.117	no trend	2291.7	0.84	2/25/1992	8/7/2019	38.583085	-121.413054
116	3410045-003	NO3N	FALSE	0.617	-25	-0.071	no trend	2299	-0.5	1/21/1993	8/7/2019	38.594423	-121.417465
243	3410045-004	NO3N	FALSE	0.98	-2	-0.007	no trend	1623.3	-0.02	7/3/1990	8/11/2014	38.592566	-121.407256
96	3410045-005	NO3N	FALSE	0.066	94	0.249	no trend	2560	1.84	2/12/1991	8/7/2019	38.600025	-121.410183
35	3410301-001	NO3N	FALSE	0.462	-4	-0.4	no trend	16.7	-0.73	3/9/2005	3/20/2019	38.655029	-121.206869
2074	3910005-049	NO3N	FALSE	0.881	79	0.009	no trend	270133	0.15	6/9/2009	8/6/2019	38.8271	-121.232
2894	5100117-001	NO3N	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	5/1/1995	12/20/2000	38.89568	-121.56893
2893	5100117-002	NO3N	TRUE	0.011	-68	-0.398	decreasing	696.7	-2.54	5/1/1995	6/21/2017	38.902331	-121.570943
2897	5100117-003	NO3N	TRUE	0.026	-65	-0.342	decreasing	829.7	-2.22	5/1/1995	6/20/2018	38.896068	-121.567281

2896	5100117-004	NO3N	FALSE	0.121	-38	-0.279	no trend	568	-1.55	11/5/2002	6/20/2018	38.896379	-121.56981
2913	5100135-001	NO3N	FALSE	0.207	55	0.183	no trend	1829.7	1.26	7/5/1995	7/24/2019	38.911394	-121.544681
2915	5100136-001	NO3N	FALSE	1	0	0	no trend	8.7	0	12/15/1994	11/17/1999	38.911667	-121.525833
2908	5100136-002	NO3N	TRUE	0.028	59	0.386	increasing	697	2.2	11/13/2002	4/17/2019	38.911927	-121.526004
2901	5100138-001	NO3N	TRUE	0.033	109	0.288	increasing	2561	2.13	9/5/1989	1/8/2019	38.947299	-121.524183
2902	5100140-001	NO3N	FALSE	0.651	-11	-0.092	no trend	489.7	-0.45	2/11/1991	5/19/2010	38.911233	-121.542832
2910	5100140-002	NO3N	FALSE	1	0	0	no trend	92	0	7/6/2010	7/24/2019	38.911269	-121.542936
2900	5100143-001	NO3N	FALSE	0.837	4	0.061	no trend	212.7	0.21	2/11/1991	5/18/2005	38.823397	-121.503832
2905	5100143-002	NO3N	FALSE	0.592	-14	-0.103	no trend	589.3	-0.54	9/21/2005	5/15/2019	38.823303	-121.503779
2903	5100153-001	NO3N	FALSE	0.597	21	0.083	no trend	1433.7	0.53	11/21/1994	4/20/2005	38.771748	-121.5251
2904	5100153-002	NO3N	TRUE	0.009	-81	-0.426	decreasing	949	-2.6	3/8/2005	1/8/2019	38.772313	-121.525061
2911	5100159-001	NO3N	FALSE	1	-1	-0.007	no trend	181	0	3/29/1996	1/8/2019	38.784649	-121.617807
2898	5100160-002	NO3N	FALSE	0.798	-7	-0.041	no trend	548.3	-0.26	2/28/2002	1/8/2019	38.778461	-121.601924
2914	5101205-001	NO3N	FALSE	1	-1	-0.018	no trend	165	0	7/5/1995	7/19/2006	38.909988	-121.543625
2912	5103002-001	NO3N	FALSE	0.149	78	0.192	no trend	2842	1.44	7/5/1995	1/12/2017	38.82383	-121.48433
2895	5105002-001	NO3N	TRUE	0.029	-25	-0.275	decreasing	121	-2.18	11/19/2003	7/24/2019	38.881393	-121.60408
2907	5105004-001	NO3N	TRUE	0.003	-121	-0.372	decreasing	1603.7	-3	11/29/2000	6/19/2019	38.777769	-121.52437
2906	5105004-002	NO3N	FALSE	1	0	0	no trend	125	0	10/21/2009	6/19/2019	38.777766	-121.525116
847	T0606700736-U-1	NO3N	FALSE	0.73	4	0.111	no trend	75.3	0.35	4/13/2012	7/24/2014	38.6643785	-121.2619887
1263	T0606700736-U-2	NO3N	FALSE	1	0	0	no trend	92	0	4/13/2012	7/24/2014	38.6644124	-121.2616867
1581	T0606700736-U-3	NO3N	FALSE	0.063	-18	-0.5	no trend	83.3	-1.86	4/13/2012	7/24/2014	38.6643082	-121.261563
775	T0606700736-U-4	NO3N	FALSE	1	0	0	no trend	92	0	4/13/2012	7/24/2014	38.6645843	-121.261931
1237	T0606700736-U-7	NO3N	FALSE	0.142	-15	-0.417	no trend	91	-1.47	4/13/2012	7/24/2014	38.6639123	-121.2616611
1510	T0606700736-U-8	NO3N	FALSE	0.443	8	0.222	no trend	83.3	0.77	4/13/2012	7/24/2014	38.6644205	-121.2623142
1457	T0606700736-U-9	NO3N	FALSE	1	0	0	no trend	92	0	4/13/2012	7/24/2014	38.6651105	-121.2622752
1859	USGS-383746121291101	NO3N	FALSE	0.21	-15	-0.333	no trend	125	-1.25	8/4/1998	8/8/2017	38.6292139	-121.4877028
1860	USGS-384145121184101	NO3N	FALSE	0.754	4	0.111	no trend	92	0.31	8/17/1998	9/4/2012	38.6964	-121.3120389
1868	USGS-384330121293901	NO3N	FALSE	0.592	-7	-0.156	no trend	125	-0.54	8/11/1997	7/10/2017	38.7251167	-121.4954417
2803	USGS-384820121200701	NO3N	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	7/8/2007	8/7/2007	38.80575	-121.3355278
2804	USGS-384821121200801	NO3N	FALSE	0.466	8	0.222	no trend	92	0.73	8/6/2007	2/28/2008	38.8058333	-121.33575
2802	USGS-384822121200701	NO3N	FALSE	0.308	4	0.667	no trend	8.7	1.02	8/8/2007	8/8/2007	38.8063056	-121.3353889
3034	USGS-385546121312801	NO3N	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	6/3/1965	10/5/2017	38.92925	-121.5254444
3034	USGS-385546121312801	NO3N	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	6/3/1965	10/5/2017	38.92925	-121.5254444
3042	USGS-385718121290401	NO3N	FALSE	0.308	4	0.667	no trend	8.7	1.02	5/19/1965	5/20/2008	38.9548956	-121.4855142
3042	USGS-385718121290401	NO3N	FALSE	0.308	4	0.667	no trend	8.7	1.02	5/19/1965	5/20/2008	38.9548956	-121.4855142

Boron

Local_ID	Well_Info_ID	chemical	h	p	s	tau	trend	var_s	z	datemin	datemax	Latitude_NAD83	Longitude_NAD83
2934	11N03E24D001M	B	FALSE	0.242	7	0.467	no trend	26.3	1.17	7/21/1964	8/18/2004	38.7906	-121.5973
2940	11N04E04R002M	B	FALSE	0.371	-3	-0.5	no trend	5	-0.89	8/12/1971	8/24/2005	38.8255	-121.5259
2957	11N04E23P002M	B	FALSE	1	0	0	no trend	0	0	4/15/1965	8/18/2004	38.7837	-121.4982
2943	11N04E35J001M	B	FALSE	1	0	0	no trend	0	0	6/19/1968	8/24/2005	38.7556	-121.4898
2083	11N06E17D001M	B	TRUE	0	642	0.417	increasing	19908	4.54	5/5/2004	3/26/2008	38.8064	-121.3353
2081	11N06E17D002M	B	FALSE	0.884	-15	-0.01	no trend	9182.3	-0.15	5/6/2004	3/26/2008	38.8027	-121.3384
2080	11N06E17D003M	B	TRUE	0.031	228	0.22	increasing	11019.3	2.16	5/5/2004	3/26/2008	38.8059	-121.3358
2082	11N06E17E001M	B	TRUE	0	622	0.404	increasing	19728	4.42	5/5/2004	3/26/2008	38.8058	-121.3354
2953	12N03E26R001M	B	FALSE	0.149	5	0.833	no trend	7.7	1.44	6/13/1963	8/18/2004	38.8533	-121.5991
2967	12N04E05R005M	B	FALSE	0.26	-7	-0.467	no trend	28.3	-1.13	8/25/1970	8/18/2004	38.9114	-121.5447
2956	12N04E25N001M	B	FALSE	0.181	-8	-0.533	no trend	27.3	-1.34	6/12/1969	8/25/2005	38.8546	-121.4859
2059	3100538-001	B	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	3/18/2004	3/23/2018	38.7505	-121.321972
2060	3104508-001	B	FALSE	1	-1	-0.167	no trend	7.7	0	2/19/2004	4/20/2017	38.729952	-121.321616
172	3410004-006	B	FALSE	1	1	0.1	no trend	13	0	1/29/2002	11/4/2003	38.622744	-121.335704
150	3410004-009	B	FALSE	1	1	0.1	no trend	13	0	1/29/2002	10/23/2003	38.619652	-121.333354
261	3410004-016	B	FALSE	1	0	0	no trend	8.7	0	1/29/2002	4/30/2003	38.645576	-121.306819
248	3410004-020	B	FALSE	1	0	0	no trend	16.7	0	4/25/2002	10/21/2003	38.641845	-121.315446
93	3410013-001	B	FALSE	0.386	-8	-0.286	no trend	65.3	-0.87	3/18/2003	8/13/2018	38.694922	-121.332628
159	3410013-002	B	FALSE	0.536	-6	-0.214	no trend	65.3	-0.62	3/18/2003	8/13/2018	38.69054	-121.34151
51	3410013-003	B	FALSE	0.898	2	0.071	no trend	60.7	0.13	6/18/2002	8/16/2018	38.683982	-121.31348
240	3410013-004	B	FALSE	0.063	16	0.571	no trend	65.3	1.86	6/20/2001	8/7/2018	38.699328	-121.295627
178	3410013-005	B	FALSE	0.898	2	0.071	no trend	60.7	0.13	6/19/2002	8/7/2018	38.669042	-121.293798
63	3410013-006	B	FALSE	0.706	4	0.143	no trend	63.3	0.38	6/20/2001	8/8/2018	38.685052	-121.305855
156	3410013-007	B	FALSE	1	-1	-0.067	no trend	28.3	0	7/22/2003	8/19/2015	38.691478	-121.336784
270	3410013-008	B	FALSE	0.826	3	0.083	no trend	82.3	0.22	9/17/2002	8/16/2018	38.673506	-121.340002
224	3410013-009	B	FALSE	0.352	8	0.286	no trend	56.7	0.93	3/18/2003	8/7/2018	38.695662	-121.29509
92	3410013-010	B	FALSE	0.898	2	0.071	no trend	60.7	0.13	6/19/2002	8/15/2018	38.670117	-121.341406
237	3410013-012	B	FALSE	0.618	5	0.179	no trend	64.3	0.5	6/20/2001	8/13/2018	38.66565	-121.302524
223	3410013-013	B	FALSE	0.898	2	0.071	no trend	60.7	0.13	6/18/2002	8/13/2018	38.678824	-121.304628
144	3410013-014	B	FALSE	0.898	2	0.071	no trend	60.7	0.13	6/19/2002	8/8/2018	38.668822	-121.304482
112	3410013-015	B	FALSE	0.352	8	0.286	no trend	56.7	0.93	3/19/2003	8/6/2018	38.70124	-121.345319
233	3410013-016	B	TRUE	0.035	-18	-0.643	decreasing	65.3	-2.1	6/18/2002	8/13/2018	38.709473	-121.292244
265	3410013-017	B	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	6/18/2002	8/24/2006	38.712243	-121.303547
247	3410013-019	B	FALSE	0.536	-6	-0.214	no trend	65.3	-0.62	6/20/2001	8/6/2018	38.700287	-121.330955
226	3410013-020	B	FALSE	0.221	-6	-0.6	no trend	16.7	-1.22	6/20/2001	8/24/2006	38.716217	-121.294262
88	3410013-021	B	FALSE	0.8	3	0.107	no trend	62.3	0.25	6/20/2001	8/8/2018	38.683333	-121.35
232	3410013-022	B	FALSE	0.339	6	0.4	no trend	27.3	0.96	6/18/2002	9/11/2012	38.7124	-121.306829
189	3410013-023	B	FALSE	1	0	0	no trend	65.3	0	6/20/2001	8/7/2018	38.695536	-121.313454
66	3410013-024	B	FALSE	0.8	3	0.107	no trend	62.3	0.25	6/20/2001	8/7/2018	38.680539	-121.31067
220	3410013-025	B	FALSE	1	1	0.048	no trend	44.3	0	6/18/2002	8/13/2018	38.718426	-121.313299
188	3410013-026	B	FALSE	0.711	-4	-0.143	no trend	65.3	-0.37	6/20/2001	8/6/2018	38.701667	-121.344722
119	3410013-027	B	FALSE	0.707	3	0.2	no trend	28.3	0.38	6/18/2002	9/18/2012	38.709413	-121.317252
165	3410013-028	B	FALSE	0.711	4	0.143	no trend	65.3	0.37	6/20/2001	8/13/2018	38.698857	-121.32618
206	3410031-001	B	FALSE	0.181	8	0.533	no trend	27.3	1.34	6/25/2001	8/11/2015	38.720833	-121.358333
190	3410031-002	B	FALSE	0.266	10	0.357	no trend	65.3	1.11	6/19/2002	8/8/2018	38.717222	-121.3575
94	3410031-003	B	FALSE	0.879	2	0.095	no trend	43.3	0.15	6/25/2001	8/14/2018	38.7	-121.383333
221	3410031-004	B	FALSE	0.266	-10	-0.357	no trend	65.3	-1.11	6/19/2002	8/14/2018	38.718056	-121.382222
61	3410031-005	B	FALSE	0.759	3	0.143	no trend	42.3	0.31	6/25/2001	8/5/2015	38.716667	-121.4
160	3410031-006	B	FALSE	0.618	5	0.179	no trend	64.3	0.5	6/25/2001	8/14/2018	38.708333	-121.383611
2073	3410031-007	B	FALSE	0.548	5	0.238	no trend	44.3	0.6	6/25/2001	8/9/2018	38.733333	-121.35
2056	3410031-008	B	FALSE	0.518	7	0.194	no trend	86.3	0.65	6/25/2001	8/9/2018	38.733333	-121.35
208	3410031-009	B	FALSE	0.063	-16	-0.571	no trend	65.3	-1.86	6/19/2002	8/7/2018	38.715278	-121.378056
72	3410031-010	B	FALSE	0.174	12	0.429	no trend	65.3	1.36	6/19/2002	8/7/2018	38.705	-121.365556
289	3410031-011	B	FALSE	1	0	0	no trend	65.3	0	6/19/2002	8/7/2018	38.726944	-121.3825
135	3410031-012	B	FALSE	0.806	-2	-0.2	no trend	16.7	-0.24	6/25/2001	8/7/2018	38.721111	-121.368611
45	3410031-013	B	FALSE	0.898	2	0.071	no trend	60.7	0.13	6/19/2002	8/14/2018	38.711667	-121.413889
54	3410031-014	B	FALSE	0.548	5	0.238	no trend	44.3	0.6	6/25/2001	8/14/2018	38.716111	-121.408889
241	3410031-016	B	FALSE	0.902	2	0.071	no trend	65.3	0.12	6/19/2002	8/8/2018	38.724444	-121.336111
80	3410031-017	B	FALSE	0.902	-2	-0.071	no trend	65.3	-0.12	6/19/2002	8/8/2018	38.723056	-121.349722
257	3410031-018	B	FALSE	0.23	9	0.429	no trend	44.3	1.2	6/25/2001	8/7/2018	38.716389	-121.371944
288	3410045-001	B	FALSE	0.8	3	0.107	no trend	62.3	0.25	6/26/2001	8/7/2018	38.586137	-121.411513
138	3410045-002	B	FALSE	0.898	2	0.071	no trend	60.7	0.13	2/27/2002	8/7/2018	38.583085	-121.413054
116	3410045-003	B	FALSE	0.8	3	0.107	no trend	62.3	0.25	6/26/2001	8/7/2018	38.594423	-121.417465
243	3410045-004	B	FALSE	0.697	-3	-0.2	no trend	26.3	-0.39	6/26/2001	7/12/2012	38.592566	-121.407256
96	3410045-005	B	FALSE	0.898	2	0.071	no trend	60.7	0.13	2/27/2002	8/7/2018	38.600025	-121.410183
1859	USGS-383746121291101	B	FALSE	0.902	-2	-0.071	no trend	65.3	-0.12	8/4/1998	8/8/2017	38.6292139	-121.4877028
1855	USGS-383900121270001	B	FALSE	0.734	2	0.333	no trend	8.7	0.34	6/14/2005	6/15/2005	38.6585	-121.4664722
1860	USGS-384145121184101	B	FALSE	0.368	7	0.333	no trend	44.3	0.9	8/17/1998	9/4/2012	38.6964	-121.3120389
1868	USGS-384330121293901	B	FALSE	0.23	9	0.429	no trend	44.3	1.2	8/11/1997	7/10/2017	38.7251167	-121.4954417
2806	USGS-384413121163801	B	FALSE	1	0	0	no trend	8.7	0	9/24/1982	3/10/2014	38.7369444	-121.2772222

3034	USGS-385546121312801	B	FALSE	0.613	3	0.3	no trend	15.7	0.51	6/3/1965	10/5/2017	38.92925	-121.5254444
3034	USGS-385546121312801	B	FALSE	0.613	3	0.3	no trend	15.7	0.51	6/3/1965	10/5/2017	38.92925	-121.5254444

Iron

Local_ID	Well_Info_ID	chemical	h	p	s	tau	trend	var_s	z	datemin	datemax	Latitude_NAD83	Longitude_NAD83
2083	11N06E17D001M	FE	FALSE	0.357	24	0.074	no trend	624.7	0.92	5/5/2004	3/26/2008	38.8064	-121.3353
2081	11N06E17D002M	FE	FALSE	0.341	69	0.05	no trend	5104.3	0.95	5/6/2004	3/26/2008	38.8027	-121.3384
2080	11N06E17D003M	FE	TRUE	0.047	78	0.283	increasing	1499.3	1.99	5/5/2004	3/26/2008	38.8059	-121.3358
2082	11N06E17E001M	FE	FALSE	0.663	-17	-0.048	no trend	1351	-0.44	5/5/2004	3/26/2008	38.8058	-121.3354
2059	3100538-001	FE	TRUE	0.008	25	0.694	increasing	82.3	2.64	8/19/1999	6/12/2019	38.7505	-121.321972
2060	3104508-001	FE	FALSE	0.613	-3	-0.3	no trend	15.7	-0.51	2/19/2004	4/20/2017	38.729952	-121.321616
2071	3110008-006	FE	FALSE	0.707	-3	-0.2	no trend	28.3	-0.38	10/31/1995	8/25/2016	38.736633	-121.277875
2066	3110008-007	FE	FALSE	0.794	-2	-0.2	no trend	14.7	-0.26	10/31/1995	8/25/2016	38.726493	-121.258205
2050	3110008-008	FE	FALSE	0.411	5	0.333	no trend	23.7	0.82	10/22/2002	8/23/2018	38.805938	-121.33588
2064	3110025-005	FE	FALSE	0.536	-13	-0.096	no trend	375.7	-0.62	7/26/1989	9/12/2019	38.818889	-121.31
2063	3110040-001	FE	FALSE	0.324	13	0.236	no trend	148.3	0.99	9/27/1988	7/9/2002	38.75	-121.34722
2067	3110040-002	FE	FALSE	0.078	-17	-0.472	no trend	82.3	-1.76	8/31/1989	7/9/2002	38.75	-121.34444
2054	3110048-001	FE	FALSE	0.089	6	1	no trend	8.7	1.7	2/5/2003	4/9/2018	38.983062	-121.375659
2058	3110048-002	FE	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	2/5/2003	4/9/2018	38.980075	-121.369185
145	3400173-002	FE	FALSE	1	-1	-0.167	no trend	7.7	0	5/24/2001	2/14/2017	38.640638	-121.483861
235	3400173-003	FE	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	10/25/2001	2/15/2017	38.654819	-121.477561
272	3400191-001	FE	FALSE	0.149	5	0.833	no trend	7.7	1.44	8/17/2001	3/23/2018	38.65525	-121.379888
193	3410001-001	FE	FALSE	1	-1	-0.018	no trend	156.3	0	4/14/1987	9/5/2017	38.606839	-121.3982
242	3410001-002	FE	FALSE	0.522	-9	-0.164	no trend	156.3	-0.64	4/14/1987	10/18/2017	38.59783	-121.398024
258	3410001-004	FE	FALSE	0.675	5	0.139	no trend	91	0.42	10/31/1988	6/19/2014	38.611483	-121.410107
284	3410001-005	FE	FALSE	0.445	-7	-0.25	no trend	61.7	-0.76	10/31/1988	6/8/2011	38.623478	-121.396638
203	3410001-007	FE	FALSE	0.522	-9	-0.164	no trend	156.3	-0.64	7/24/1989	9/27/2017	38.610999	-121.363391
128	3410001-009	FE	FALSE	0.734	2	0.333	no trend	8.7	0.34	4/14/1987	3/3/2005	38.616331	-121.403703
212	3410001-010	FE	FALSE	0.326	15	0.227	no trend	203	0.98	4/14/1987	9/12/2017	38.608099	-121.408153
158	3410001-011	FE	FALSE	0.266	-13	-0.289	no trend	116.3	-1.11	10/31/1988	9/14/2017	38.619863	-121.396184
228	3410001-012	FE	FALSE	0.439	-29	-0.115	no trend	1307.7	-0.77	5/7/1987	2/6/2018	38.617662	-121.403695
82	3410001-013	FE	FALSE	0.068	-21	-0.467	no trend	120.3	-1.82	7/25/1989	9/26/2017	38.598939	-121.370714
146	3410001-014	FE	FALSE	0.396	-6	-0.286	no trend	34.7	-0.85	11/1/1988	9/14/2006	38.61171	-121.386048
260	3410001-015	FE	FALSE	0.441	-10	-0.182	no trend	136.7	-0.77	11/1/1988	9/19/2017	38.59781	-121.381308
191	3410001-016	FE	FALSE	0.205	-12	-0.333	no trend	75.3	-1.27	11/1/1988	9/4/2014	38.631327	-121.37485
124	3410001-017	FE	FALSE	0.67	-5	-0.139	no trend	88.3	-0.43	7/24/1989	8/27/2014	38.61981	-121.403732
211	3410001-018	FE	FALSE	0.324	-13	-0.236	no trend	148.3	-0.99	11/1/1988	9/19/2017	38.623854	-121.374359
209	3410001-019	FE	FALSE	0.436	-8	-0.178	no trend	80.7	-0.78	11/1/1988	9/25/2017	38.597831	-121.359623
114	3410001-020	FE	FALSE	1	1	0.028	no trend	47.7	0	1/27/1992	9/19/2017	38.618079	-121.359205
210	3410001-021	FE	FALSE	0.743	-5	-0.091	no trend	148.3	-0.33	4/14/1987	9/12/2017	38.615256	-121.419986
161	3410001-022	FE	FALSE	0.853	3	0.067	no trend	116.3	0.19	10/31/1988	9/11/2017	38.604549	-121.42274
64	3410001-024	FE	FALSE	0.149	-5	-0.833	no trend	7.7	-1.44	7/24/1989	2/19/2001	38.641255	-121.370271
222	3410001-025	FE	FALSE	1	1	0.022	no trend	95.7	0	4/13/1987	9/19/2017	38.60046	-121.359118
148	3410001-026	FE	FALSE	0.452	5	0.333	no trend	28.3	0.75	10/31/1988	2/23/2005	38.627091	-121.384097
113	3410001-027	FE	FALSE	0.602	-6	-0.167	no trend	92	-0.52	1/30/1992	9/27/2017	38.605146	-121.390988
244	3410001-028	FE	FALSE	1	1	0.022	no trend	125	0	7/24/1989	8/21/2014	38.63562	-121.381097
227	3410001-029	FE	FALSE	0.667	-4	-0.143	no trend	48.7	-0.43	1/30/1992	10/3/2017	38.630252	-121.397575
236	3410001-030	FE	FALSE	1	0	0	no trend	75.3	0	7/21/1989	9/26/2017	38.617802	-121.424022
81	3410001-032	FE	FALSE	0.458	-10	-0.182	no trend	147.3	-0.74	10/31/1988	9/19/2017	38.622918	-121.413817
104	3410001-033	FE	FALSE	0.803	3	0.107	no trend	64.3	0.25	7/21/1989	7/10/2014	38.601378	-121.424
173	3410001-034	FE	FALSE	0.522	-9	-0.164	no trend	156.3	-0.64	5/7/1987	9/11/2017	38.584674	-121.396539
169	3410001-035	FE	FALSE	0.436	8	0.178	no trend	80.7	0.78	7/9/1990	9/28/2017	38.594464	-121.351844
25	3410001-037	FE	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	4/13/1987	2/5/1998	38.578611	-121.366667
19	3410001-038	FE	TRUE	0.022	-34	-0.374	decreasing	208.7	-2.28	7/25/1989	6/9/2011	38.578371	-121.363395
20	3410001-039	FE	FALSE	1	-1	-0.067	no trend	19.7	0	10/31/1988	9/18/2006	38.591742	-121.346413
168	3410001-042	FE	FALSE	0.564	-7	-0.156	no trend	108.3	-0.58	11/1/1988	9/12/2017	38.628014	-121.358648
184	3410001-051	FE	FALSE	1	1	0.018	no trend	119.7	0	4/13/1987	9/11/2017	38.636187	-121.375067
111	3410001-052	FE	FALSE	1	1	0.022	no trend	95.7	0	4/13/1987	9/11/2017	38.625054	-121.362252
287	3410001-054	FE	FALSE	0.442	-9	-0.2	no trend	108.3	-0.77	2/11/1991	9/13/2017	38.582422	-121.408379
122	3410001-055	FE	FALSE	0.452	7	0.194	no trend	63.7	0.75	11/1/1988	12/13/2017	38.594474	-121.39864
26	3410001-056	FE	FALSE	0.452	7	0.194	no trend	63.7	0.75	11/1/1988	9/13/2017	38.578749	-121.41096
3	3410001-061	FE	FALSE	0.662	15	0.059	no trend	1024.3	0.44	5/7/1998	3/20/2018	38.582786	-121.338489
176	3410001-062	FE	FALSE	0.211	6	0.286	no trend	16	1.25	8/22/2000	9/5/2017	38.618056	-121.401944
12	3410001-064	FE	FALSE	0.211	6	0.286	no trend	16	1.25	4/23/2002	9/12/2017	38.584121	-121.353432
13	3410001-065	FE	FALSE	1	-1	-0.048	no trend	35.7	0	4/22/2002	9/21/2017	38.583196	-121.33679
4	3410001-066	FE	FALSE	1	1	0.048	no trend	27.7	0	4/23/2002	9/12/2017	38.582214	-121.338203
2	3410001-067	FE	FALSE	0.321	23	0.192	no trend	492.3	0.99	6/3/1999	1/8/2015	38.582481	-121.417169
225	3410001-069	FE	FALSE	0.505	14	0.133	no trend	380	0.67	7/27/1989	9/28/2017	38.580609	-121.384004
255	3410001-070	FE	FALSE	0.919	-2	-0.044	no trend	96.7	-0.1	2/12/1991	9/12/2017	38.576006	-121.403088
205	3410001-071	FE	TRUE	0	666	0.403	increasing	15307.3	5.37	4/17/2002	9/12/2019	38.63056	-121.397787
106	3410001-072	FE	FALSE	0.68	-8	-0.052	no trend	288.7	-0.41	4/17/2002	9/12/2017	38.61744	-121.411527
252	3410001-073	FE	FALSE	0.148	44	0.21	no trend	884	1.45	4/17/2002	7/25/2019	38.58058	-121.383962
58	3410001-076	FE	FALSE	0.927	2	0.036	no trend	120.7	0.09	6/5/1984	7/10/2019	38.644265	-121.362069
69	3410001-077	FE	FALSE	0.94	2	0.026	no trend	176.7	0.08	3/7/1984	7/10/2019	38.631522	-121.352911
86	3410001-078	FE	FALSE	0.747	-6	-0.066	no trend	240.7	-0.32	6/5/1984	7/9/2019	38.684818	-121.355931

259	3410001-079	FE	FALSE	0.454	-7	-0.25	no trend	64.3	-0.75	6/4/1984	7/24/2013	38.667577	-121.334161
110	3410001-080	FE	TRUE	0.019	-66	-0.314	decreasing	762	-2.35	6/4/1984	7/17/2019	38.672567	-121.331573
174	3410001-081	FE	FALSE	0.292	-18	-0.231	no trend	260	-1.05	6/5/1984	7/22/2019	38.683333	-121.333333
71	3410001-082	FE	FALSE	0.126	-27	-0.297	no trend	288.3	-1.53	6/4/1984	7/21/2016	38.648929	-121.338368
246	3410001-083	FE	FALSE	1	0	0	no trend	147.3	0	5/17/1984	7/9/2019	38.663692	-121.347786
239	3410001-085	FE	FALSE	0.407	-15	-0.165	no trend	285.7	-0.83	6/4/1984	7/17/2019	38.644208	-121.329841
49	3410001-087	FE	FALSE	0.94	2	0.026	no trend	176.7	0.08	6/5/1984	7/11/2019	38.645858	-121.392317
218	3410001-088	FE	FALSE	0.102	-17	-0.378	no trend	95.7	-1.64	5/17/1984	6/4/2014	38.668746	-121.361
89	3410001-089	FE	FALSE	0.499	-12	-0.132	no trend	264.7	-0.68	3/7/1984	7/9/2019	38.653579	-121.379692
132	3410001-092	FE	FALSE	0.549	52	0.06	no trend	7256.7	0.6	6/4/1984	7/24/2018	38.63889	-121.342759
185	3410001-094	FE	FALSE	0.457	-14	-0.154	no trend	305.3	-0.74	5/17/1984	7/10/2019	38.652299	-121.354305
196	3410001-095	FE	FALSE	1	0	0	no trend	43.3	0	5/17/1984	6/21/2007	38.658062	-121.356402
297	3410001-096	FE	FALSE	0.175	-22	-0.282	no trend	239.3	-1.36	6/30/1988	7/9/2019	38.689669	-121.360198
102	3410001-097	FE	FALSE	0.726	-6	-0.077	no trend	203.3	-0.35	12/13/1984	7/11/2019	38.694158	-121.360024
256	3410001-098	FE	FALSE	0.912	-3	-0.033	no trend	329	-0.11	5/9/1984	7/9/2019	38.700217	-121.351805
295	3410001-099	FE	FALSE	1	-1	-0.067	no trend	19.7	0	10/20/1988	6/21/2007	38.655401	-121.313482
46	3410001-101	FE	FALSE	0.833	-4	-0.051	no trend	203.3	-0.21	10/27/1988	7/7/2016	38.663926	-121.32579
231	3410001-102	FE	FALSE	0.207	-35	-0.205	no trend	725	-1.26	10/20/1988	7/15/2019	38.675049	-121.315501
101	3410001-103	FE	FALSE	1	-1	-0.048	no trend	27.7	0	10/25/1988	1/13/2014	38.651225	-121.32298
163	3410001-104	FE	FALSE	0.237	-14	-0.255	no trend	120.7	-1.18	2/26/1991	7/10/2019	38.710442	-121.331662
180	3410001-105	FE	FALSE	0.919	-2	-0.044	no trend	96.7	-0.1	10/12/1995	7/10/2019	38.710528	-121.331667
262	3410001-106	FE	FALSE	0.096	-7	-0.7	no trend	13	-1.66	6/28/2001	6/4/2014	38.710517	-121.331659
85	3410001-107	FE	FALSE	1	0	0	no trend	44.3	0	11/4/1996	7/14/2016	38.709903	-121.357066
127	3410001-111	FE	FALSE	0.919	-2	-0.044	no trend	96.7	-0.1	12/13/1995	7/11/2019	38.665363	-121.383099
254	3410001-127	FE	FALSE	0.288	-8	-0.381	no trend	43.3	-1.06	12/13/1995	7/29/2013	38.712268	-121.381099
283	3410001-128	FE	FALSE	1	1	0.067	no trend	19.7	0	12/13/1995	6/17/2010	38.709783	-121.374669
149	3410001-129	FE	FALSE	0.211	-6	-0.286	no trend	16	-1.25	12/13/1995	7/29/2013	38.710651	-121.387666
118	3410001-133	FE	FALSE	0.249	-13	-0.289	no trend	108.3	-1.15	7/9/1990	7/22/2019	38.682932	-121.376063
182	3410001-135	FE	FALSE	0.064	21	0.467	no trend	116.3	1.85	11/1/1988	11/7/2016	38.68794	-121.385107
99	3410001-136	FE	FALSE	0.497	16	0.133	no trend	488.7	0.68	5/7/1987	3/27/2018	38.685899	-121.372701
141	3410001-137	FE	FALSE	0.287	-11	-0.306	no trend	88.3	-1.06	11/1/1988	6/30/2014	38.692847	-121.375953
183	3410001-139	FE	FALSE	0.365	-12	-0.218	no trend	147.3	-0.91	5/17/1984	7/19/2016	38.69191	-121.364477
280	3410001-142	FE	FALSE	0.089	-17	-0.472	no trend	88.3	-1.7	7/20/1989	7/11/2016	38.686782	-121.392424
267	3410001-143	FE	FALSE	0.47	-3	-0.5	no trend	7.7	-0.72	4/13/1987	2/4/1998	38.701228	-121.371968
197	3410001-144	FE	FALSE	1	1	0.018	no trend	119.7	0	4/13/1987	7/23/2019	38.69798	-121.373877
213	3410001-145	FE	FALSE	0.242	5	0.333	no trend	11.7	1.17	4/22/2002	7/10/2019	38.67526	-121.379573
315	3410002-001	FE	FALSE	0.688	-6	-0.109	no trend	155.3	-0.4	2/20/1991	2/8/2017	38.583333	-121.383333
117	3410002-002	FE	FALSE	0.926	-2	-0.044	no trend	115.3	-0.09	7/17/1990	2/8/2017	38.583333	-121.366667
28	3410002-007	FE	FALSE	0.853	-3	-0.067	no trend	116.3	-0.19	8/2/1989	2/14/2017	38.566667	-121.4
10	3410002-012	FE	FALSE	0.67	-5	-0.139	no trend	88.3	-0.43	8/2/1989	5/8/2017	38.566667	-121.416667
17	3410002-013	FE	FALSE	0.602	-22	-0.073	no trend	1620.7	-0.52	7/17/1990	2/14/2017	38.583333	-121.416667
249	3410002-014	FE	FALSE	0.228	-12	-0.333	no trend	83.3	-1.2	7/17/1990	5/8/2017	38.583333	-121.366667
152	3410003-001	FE	TRUE	0.007	65	0.478	increasing	571.7	2.68	7/20/1989	2/6/2019	38.587545	-121.385145
153	3410003-002	FE	FALSE	0.124	26	0.333	no trend	264	1.54	4/11/1986	2/28/2017	38.582537	-121.383219
245	3410003-004	FE	FALSE	0.602	-6	-0.167	no trend	92	-0.52	7/20/1989	1/25/2005	38.587611	-121.392074
162	3410003-005	FE	TRUE	0.034	48	0.4	increasing	491.3	2.12	4/2/1987	7/11/2017	38.591017	-121.384139
251	3410003-006	FE	FALSE	0.694	6	0.109	no trend	161.3	0.39	4/2/1987	2/28/2017	38.59211	-121.387633
238	3410003-008	FE	FALSE	0.211	26	0.248	no trend	400	1.25	4/2/1987	2/28/2017	38.600074	-121.391973
74	3410004-001	FE	FALSE	0.36	10	0.222	no trend	96.7	0.92	10/24/1995	2/3/2004	38.645432	-121.313067
83	3410004-004	FE	FALSE	0.914	3	0.029	no trend	341	0.11	2/19/1991	1/28/2010	38.64988	-121.30798
175	3410004-005	FE	FALSE	0.466	8	0.222	no trend	92	0.73	11/9/1988	10/4/2001	38.633333	-121.35
172	3410004-006	FE	FALSE	0.245	-43	-0.17	no trend	1307.7	-1.16	8/1/1990	6/1/2017	38.622744	-121.335704
6	3410004-007	FE	TRUE	0.035	-19	-0.345	decreasing	73	-2.11	8/1/1990	10/23/2002	38.594673	-121.334606
150	3410004-009	FE	FALSE	0.912	4	0.016	no trend	734.7	0.11	2/19/1991	6/1/2017	38.619652	-121.333354
261	3410004-016	FE	FALSE	0.982	-2	-0.006	no trend	2014	-0.02	5/8/1987	6/1/2017	38.645576	-121.306819
248	3410004-020	FE	FALSE	0.094	27	0.297	no trend	241.7	1.67	4/25/2002	6/1/2017	38.641845	-121.315446
139	3410004-021	FE	FALSE	1	-1	-0.015	no trend	87.7	0	4/23/2002	6/1/2017	38.604804	-121.342252
290	3410006-001	FE	FALSE	0.631	-7	-0.127	no trend	156.3	-0.48	7/19/1989	5/30/2019	38.661305	-121.292607
207	3410006-007	FE	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	7/19/1989	1/21/1998	38.705556	-121.308333
198	3410006-008	FE	FALSE	1	-1	-0.048	no trend	27.7	0	12/6/1990	2/20/2013	38.679425	-121.289154
98	3410006-010	FE	FALSE	0.371	3	0.5	no trend	5	0.89	10/21/2004	6/6/2018	38.698638	-121.269673
130	3410007-001	FE	FALSE	1	-1	-0.1	no trend	15.7	0	4/10/1992	6/24/2010	38.613787	-121.367811
229	3410007-002	FE	FALSE	0.586	12	0.114	no trend	407.3	0.55	11/7/1988	8/7/2019	38.613607	-121.371676
216	3410007-003	FE	FALSE	0.917	2	0.056	no trend	92	0.1	7/19/1989	12/11/2018	38.606352	-121.369707
269	3410007-004	FE	FALSE	1	0	0	no trend	407.3	0	7/19/1989	8/6/2019	38.607768	-121.374083
77	3410007-005	FE	FALSE	0.214	26	0.248	no trend	404.7	1.24	11/7/1988	8/6/2019	38.61458	-121.378552
142	3410007-006	FE	TRUE	0.012	-29	-0.644	decreasing	125	-2.5	7/19/1989	1/20/2012	38.60731	-121.364767
195	3410007-007	FE	FALSE	1	-1	-0.028	no trend	91	0	7/19/1989	8/6/2019	38.606531	-121.380719
253	3410007-008	FE	TRUE	0.032	16	0.571	increasing	48.7	2.15	1/26/1993	8/13/2019	38.613172	-121.380739
166	3410009-001	FE	FALSE	1	-1	-0.1	no trend	13	0	2/28/1991	6/16/2004	38.643048	-121.268528
100	3410009-003	FE	FALSE	1	-1	-0.167	no trend	7.7	0	11/9/1988	2/8/2000	38.666667	-121.216667

105	3410009-004	FE	FALSE	0.3	-10	-0.278	no trend	75.3	-1.04	8/2/1990	6/6/2006	38.651282	-121.255173
78	3410009-005	FE	FALSE	1	-1	-0.067	no trend	19.7	0	11/9/1988	6/16/2004	38.650805	-121.286999
201	3410009-006	FE	FALSE	0.161	-18	-0.273	no trend	147.3	-1.4	7/19/1989	6/14/2012	38.642768	-121.278261
234	3410009-007	FE	FALSE	0.175	-8	-0.222	no trend	26.7	-1.36	7/19/1989	6/14/2012	38.651297	-121.296666
217	3410009-008	FE	FALSE	1	-1	-0.048	no trend	27.7	0	8/16/1990	6/6/2006	38.662066	-121.265396
164	3410009-010	FE	TRUE	0.019	-24	-0.533	decreasing	96.7	-2.34	11/7/1991	6/14/2012	38.659628	-121.255556
93	3410013-001	FE	FALSE	0.943	2	0.03	no trend	194	0.07	10/7/1992	8/13/2018	38.694922	-121.332628
159	3410013-002	FE	FALSE	0.407	-13	-0.197	no trend	209	-0.83	2/18/1992	8/13/2018	38.69054	-121.34151
51	3410013-003	FE	FALSE	0.622	10	0.11	no trend	332.7	0.49	11/2/1988	8/29/2018	38.683982	-121.31348
240	3410013-004	FE	FALSE	0.841	5	0.048	no trend	397.7	0.2	4/15/1987	8/7/2018	38.699328	-121.295627
178	3410013-005	FE	FALSE	0.954	-2	-0.022	no trend	303.3	-0.06	4/15/1987	8/7/2018	38.669042	-121.293798
63	3410013-006	FE	FALSE	0.852	-4	-0.051	no trend	260	-0.19	2/11/1992	8/8/2018	38.685052	-121.305855
156	3410013-007	FE	FALSE	0.086	50	0.292	no trend	813.3	1.72	4/15/1987	11/16/2016	38.691478	-121.336784
270	3410013-008	FE	FALSE	0.804	6	0.057	no trend	404.7	0.25	11/2/1988	8/29/2018	38.673506	-121.340002
224	3410013-009	FE	FALSE	0.725	-6	-0.091	no trend	202	-0.35	4/15/1987	8/7/2018	38.695662	-121.29509
92	3410013-010	FE	FALSE	0.675	13	0.076	no trend	817	0.42	4/14/1989	8/15/2018	38.670117	-121.341406
237	3410013-012	FE	FALSE	0.66	-9	-0.099	no trend	331.7	-0.44	7/2/1990	8/13/2018	38.66565	-121.302524
223	3410013-013	FE	FALSE	0.161	38	0.248	no trend	696	1.4	4/15/1987	8/13/2018	38.678824	-121.304628
144	3410013-014	FE	FALSE	0.85	-4	-0.051	no trend	250	-0.19	11/2/1988	8/8/2018	38.668822	-121.304482
112	3410013-015	FE	FALSE	0.296	15	0.227	no trend	179.7	1.04	2/18/1992	8/6/2018	38.70124	-121.345319
233	3410013-016	FE	FALSE	0.374	13	0.197	no trend	182.3	0.89	2/11/1993	8/13/2018	38.709473	-121.292244
265	3410013-017	FE	FALSE	0.751	3	0.143	no trend	39.7	0.32	2/11/1992	8/24/2006	38.712243	-121.303547
247	3410013-019	FE	FALSE	0.738	-7	-0.077	no trend	323	-0.33	4/15/1987	8/6/2018	38.700287	-121.330955
226	3410013-020	FE	TRUE	0.033	-18	-0.643	decreasing	63.3	-2.14	11/2/1988	8/24/2006	38.716217	-121.294262
88	3410013-021	FE	FALSE	0.954	-2	-0.022	no trend	303.3	-0.06	11/2/1988	8/8/2018	38.683333	-121.31
232	3410013-022	FE	FALSE	0.336	-10	-0.278	no trend	87.3	-0.96	2/18/1992	9/11/2012	38.7124	-121.306829
189	3410013-023	FE	FALSE	0.349	18	0.198	no trend	330	0.94	7/28/1989	8/7/2018	38.695536	-121.313454
66	3410013-024	FE	FALSE	0.729	6	0.091	no trend	208	0.35	2/11/1992	8/7/2018	38.680539	-121.31067
220	3410013-025	FE	FALSE	0.363	-25	-0.163	no trend	697	-0.91	8/15/1989	8/13/2018	38.718426	-121.313299
188	3410013-026	FE	FALSE	1	-1	-0.011	no trend	304.3	0	4/15/1987	8/6/2018	38.701667	-121.344722
119	3410013-027	FE	FALSE	0.938	-2	-0.03	no trend	167.3	-0.08	2/18/1992	9/18/2012	38.709413	-121.317252
165	3410013-028	FE	FALSE	0.369	8	0.286	no trend	60.7	0.9	4/21/1997	8/13/2018	38.698857	-121.32618
125	3410016-001	FE	FALSE	1	-1	-0.167	no trend	7.7	0	8/2/1990	12/21/2004	38.686538	-121.219546
147	3410016-002	FE	FALSE	1	1	0.1	no trend	13	0	4/18/1991	1/17/2013	38.694541	-121.210813
126	3410018-005	FE	FALSE	0.13	-7	-0.7	no trend	15.7	-1.52	7/28/1989	3/5/2002	38.721801	-121.46774
24	3410020-015	FE	FALSE	0.618	5	0.179	no trend	64.3	0.5	1/17/1992	4/3/2017	38.6125	-121.479167
11	3410020-016	FE	FALSE	0.902	2	0.071	no trend	65.3	0.12	1/17/1992	1/20/2015	38.616667	-121.479167
293	3410020-017	FE	FALSE	1	0	0	no trend	121.3	0	11/18/1988	8/24/2017	38.62266	-121.477813
84	3410020-018	FE	FALSE	0.564	-7	-0.156	no trend	108.3	-0.58	1/17/1992	5/8/2017	38.627831	-121.477227
292	3410020-021	FE	FALSE	0.452	-5	-0.333	no trend	28.3	-0.75	1/21/1992	10/12/2011	38.607083	-121.454779
97	3410020-022	FE	FALSE	0.65	6	0.133	no trend	121.3	0.45	11/18/1988	3/20/2017	38.607305	-121.443097
136	3410020-023	FE	FALSE	0.174	-12	-0.429	no trend	65.3	-1.36	1/21/1992	3/7/2017	38.604956	-121.439486
314	3410020-024	FE	FALSE	0.067	20	0.444	no trend	107.3	1.83	11/18/1988	10/10/2011	38.612801	-121.450505
129	3410020-025	FE	FALSE	0.089	6	1	no trend	8.7	1.7	1/21/1992	10/9/2008	38.612294	-121.440456
215	3410020-027	FE	FALSE	0.578	6	0.133	no trend	80.7	0.56	1/22/1992	5/8/2017	38.620988	-121.443553
279	3410020-028	FE	FALSE	0.697	6	0.091	no trend	164.7	0.39	11/18/1988	5/8/2017	38.62044	-121.432285
108	3410020-029	FE	FALSE	0.638	4	0.19	no trend	40.7	0.47	1/17/1992	3/20/2017	38.618056	-121.468056
107	3410020-030	FE	FALSE	0.136	-15	-0.417	no trend	88.3	-1.49	1/17/1992	5/8/2017	38.625119	-121.462605
59	3410020-032	FE	FALSE	0.295	-41	-0.149	no trend	1460.3	-1.05	1/16/1991	8/24/2017	38.628503	-121.43627
55	3410020-033	FE	FALSE	0.894	-2	-0.071	no trend	56.7	-0.13	11/16/1988	10/10/2011	38.626808	-121.42959
171	3410020-034	FE	FALSE	0.365	10	0.182	no trend	98.7	0.91	1/16/1991	2/27/2018	38.638412	-121.446721
73	3410020-035	FE	FALSE	0.365	10	0.182	no trend	98.7	0.91	1/16/1991	2/27/2018	38.639934	-121.427293
133	3410020-037	FE	FALSE	0.926	-2	-0.044	no trend	115.3	-0.09	1/16/1991	5/8/2017	38.651207	-121.469509
264	3410020-038	FE	FALSE	0.546	14	0.103	no trend	463.3	0.6	1/16/1991	7/8/2019	38.647475	-121.459256
50	3410020-039	FE	FALSE	1	1	0.1	no trend	13	0	1/22/1992	10/8/2003	38.627595	-121.432917
56	3410020-040	FE	FALSE	0.934	-2	-0.036	no trend	147.3	-0.08	10/22/1990	5/9/2017	38.629597	-121.420726
278	3410020-041	FE	FALSE	1	-1	-0.015	no trend	146.3	0	1/16/1991	5/9/2017	38.641387	-121.435795
22	3410020-042	FE	TRUE	0.027	-32	-0.485	decreasing	196	-2.21	1/21/1992	7/8/2019	38.596923	-121.458973
294	3410020-044	FE	FALSE	0.144	12	0.429	no trend	56.7	1.46	10/16/1990	10/10/2011	38.613996	-121.456155
194	3410020-045	FE	FALSE	0.87	-3	-0.055	no trend	148.3	-0.16	10/19/1990	5/9/2017	38.622276	-121.446858
134	3410020-046	FE	FALSE	1	1	0.028	no trend	47.7	0	1/22/1992	9/22/2014	38.623116	-121.427024
157	3410020-050	FE	FALSE	0.499	8	0.178	no trend	107.3	0.68	1/16/1991	3/25/2014	38.668053	-121.438012
42	3410020-051	FE	FALSE	0.927	2	0.036	no trend	120.7	0.09	1/16/1991	2/27/2018	38.634413	-121.412516
296	3410020-052	FE	FALSE	0.564	-7	-0.156	no trend	108.3	-0.58	3/8/1993	5/9/2017	38.599341	-121.445804
214	3410020-054	FE	FALSE	0.146	-18	-0.327	no trend	136.7	-1.45	1/21/1992	8/24/2017	38.596324	-121.427308
33	3410020-055	FE	FALSE	0.071	-23	-0.418	no trend	148.3	-1.81	1/17/1992	5/9/2017	38.617636	-121.469304
91	3410020-056	FE	FALSE	0.689	10	0.048	no trend	507.3	0.4	1/12/1994	5/9/2017	38.654657	-121.448564
291	3410020-057	FE	FALSE	0.669	5	0.076	no trend	87.7	0.43	1/18/1995	12/19/2018	38.658482	-121.466415
30	3410026-001	FE	FALSE	0.089	6	1	no trend	8.7	1.7	2/21/1991	5/31/2012	38.58961	-121.429343
7	3410026-002	FE	FALSE	1	-1	-0.1	no trend	13	0	2/21/1991	5/3/2018	38.588266	-121.423478
31	3410026-003	FE	FALSE	0.289	-4	-0.4	no trend	8	-1.06	2/21/1991	5/3/2018	38.593617	-121.439154

18	3410026-004	FE	FALSE	0.13	-7	-0.7	no trend	15.7	-1.52	2/21/1991	5/3/2018	38.593339	-121.432431
206	3410031-001	FE	FALSE	0.055	60	0.316	no trend	945.3	1.92	3/24/1988	5/16/2019	38.720833	-121.358333
190	3410031-002	FE	FALSE	0.731	5	0.091	no trend	135.7	0.34	9/10/1993	8/8/2018	38.717222	-121.3575
94	3410031-003	FE	TRUE	0.048	62	0.326	increasing	950	1.98	4/14/1989	8/30/2018	38.7	-121.383333
221	3410031-004	FE	FALSE	0.052	68	0.294	no trend	1188.7	1.94	10/29/1987	8/14/2018	38.718056	-121.382222
61	3410031-005	FE	FALSE	0.241	-16	-0.291	no trend	164	-1.17	2/26/1992	8/5/2015	38.716667	-121.4
160	3410031-006	FE	FALSE	0.781	-6	-0.066	no trend	324	-0.28	11/2/1988	8/14/2018	38.708333	-121.383611
2073	3410031-007	FE	FALSE	0.458	19	0.14	no trend	588.3	0.74	11/2/1988	8/9/2018	38.733333	-121.35
2056	3410031-008	FE	FALSE	0.404	13	0.197	no trend	207	0.83	10/7/1992	8/9/2018	38.733333	-121.35
208	3410031-009	FE	FALSE	0.62	7	0.127	no trend	146.3	0.5	1/15/1992	8/7/2018	38.715278	-121.378056
72	3410031-010	FE	TRUE	0.026	28	0.509	increasing	147.3	2.22	8/29/1995	8/21/2018	38.705	-121.365556
289	3410031-011	FE	FALSE	0.082	141	0.172	no trend	6493	1.74	6/21/1990	8/7/2018	38.726944	-121.3825
135	3410031-012	FE	FALSE	0.783	6	0.066	no trend	330	0.28	6/12/1992	8/7/2018	38.721111	-121.368611
45	3410031-013	FE	FALSE	0.31	19	0.209	no trend	315	1.01	11/2/1988	8/14/2018	38.711667	-121.413889
54	3410031-014	FE	FALSE	0.115	23	0.348	no trend	195	1.58	4/15/1987	8/14/2018	38.716111	-121.408889
95	3410031-015	FE	FALSE	0.089	6	1	no trend	8.7	1.7	2/11/1993	8/14/2018	38.716667	-121.416667
241	3410031-016	FE	FALSE	1	1	0.022	no trend	106.3	0	7/16/1996	8/8/2018	38.724444	-121.336111
80	3410031-017	FE	FALSE	0.1	16	0.444	no trend	83.3	1.64	4/30/1998	8/8/2018	38.723056	-121.349722
257	3410031-018	FE	TRUE	0.026	28	0.509	increasing	147.3	2.22	1/9/1996	8/7/2018	38.716389	-121.371944
288	3410045-001	FE	FALSE	0.95	2	0.026	no trend	250	0.06	11/3/1988	8/7/2018	38.586137	-121.411513
138	3410045-002	FE	FALSE	0.344	11	0.244	no trend	111.7	0.95	2/25/1992	8/7/2018	38.583085	-121.413054
116	3410045-003	FE	FALSE	1	-1	-0.018	no trend	158.3	0	2/25/1992	8/7/2018	38.594423	-121.417465
243	3410045-004	FE	FALSE	0.53	-16	-0.118	no trend	570.7	-0.63	4/20/1987	7/12/2012	38.592566	-121.407256
96	3410045-005	FE	FALSE	0.943	2	0.03	no trend	194	0.07	11/2/1988	8/7/2018	38.600025	-121.410183
2907	5105004-001	FE	FALSE	0.902	2	0.071	no trend	65.3	0.12	11/29/2000	10/16/2013	38.777769	-121.52437
1859	USGS-383746121291101	FE	FALSE	0.064	-21	-0.467	no trend	116.3	-1.85	8/4/1998	9/4/2012	38.6292139	-121.4877028
1860	USGS-384145121184101	FE	FALSE	0.178	-16	-0.356	no trend	124	-1.35	8/17/1998	9/4/2012	38.6964	-121.3120389
1868	USGS-384330121293901	FE	FALSE	0.917	2	0.056	no trend	92	0.1	8/11/1997	8/16/2012	38.7251167	-121.4954417
2806	USGS-384413121163801	FE	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	9/24/1982	3/10/2014	38.7369444	-121.2772222

Manganese

Local_ID	Well_Info_ID	chemical	h	p	s	tau	trend	var_s	z	datemin	datemax	Latitude_NAD83	Longitude_NAD83
2083	11N06E17D001M	MN	FALSE	1	0	0	no trend	1625.3	0	5/5/2004	3/26/2008	38.8064	-121.3353
2081	11N06E17D002M	MN	FALSE	1	0	0	no trend	15158	0	5/6/2004	3/26/2008	38.8027	-121.3384
2080	11N06E17D003M	MN	FALSE	1	0	0	no trend	817	0	5/5/2004	3/26/2008	38.8059	-121.3358
2082	11N06E17E001M	MN	FALSE	1	0	0	no trend	1625.3	0	5/5/2004	3/26/2008	38.8058	-121.3354
2059	3100538-001	MN	FALSE	0.613	3	0.3	no trend	15.7	0.51	8/19/1999	3/23/2018	38.7505	-121.321972
2060	3104508-001	MN	FALSE	1	1	0.1	no trend	13	0	2/19/2004	4/20/2017	38.729952	-121.321616
2071	3110008-006	MN	FALSE	0.652	3	0.2	no trend	19.7	0.45	10/31/1995	8/25/2016	38.736633	-121.277875
2066	3110008-007	MN	FALSE	0.613	-3	-0.3	no trend	15.7	-0.51	10/31/1995	8/25/2016	38.726493	-121.258205
2050	3110008-008	MN	FALSE	0.411	-5	-0.333	no trend	23.7	-0.82	10/22/2002	8/23/2018	38.805938	-121.33588
2064	3110025-005	MN	FALSE	0.516	-15	-0.11	no trend	464.3	-0.65	7/26/1989	9/12/2019	38.818889	-121.31
2063	3110040-001	MN	TRUE	0.029	-28	-0.509	decreasing	152.7	-2.19	9/27/1988	7/9/2002	38.75	-121.34722
2067	3110040-002	MN	FALSE	0.078	-17	-0.472	no trend	82.3	-1.76	8/31/1989	7/9/2002	38.75	-121.34444
2054	3110048-001	MN	FALSE	0.734	2	0.333	no trend	8.7	0.34	2/5/2003	4/9/2018	38.983062	-121.375659
2058	3110048-002	MN	FALSE	0.734	2	0.333	no trend	8.7	0.34	2/5/2003	4/9/2018	38.980075	-121.369185
145	3400173-002	MN	FALSE	1	-1	-0.167	no trend	7.7	0	5/24/2001	2/14/2017	38.640638	-121.483861
272	3400191-001	MN	FALSE	1	0	0	no trend	8.7	0	8/17/2001	3/23/2018	38.65525	-121.379888
193	3410001-001	MN	FALSE	0.482	-10	-0.182	no trend	164	-0.7	4/14/1987	9/5/2017	38.606839	-121.3982
242	3410001-002	MN	FALSE	0.436	-11	-0.2	no trend	165	-0.78	4/14/1987	10/18/2017	38.59783	-121.398024
258	3410001-004	MN	FALSE	0.377	-8	-0.222	no trend	62.7	-0.88	10/31/1988	6/19/2014	38.611483	-121.410107
284	3410001-005	MN	FALSE	0.352	-8	-0.286	no trend	56.7	-0.93	10/31/1988	6/8/2011	38.623478	-121.396638
203	3410001-007	MN	FALSE	0.669	-6	-0.109	no trend	136.7	-0.43	7/24/1989	9/27/2017	38.610999	-121.363391
128	3410001-009	MN	FALSE	1	0	0	no trend	8.7	0	4/14/1987	3/3/2005	38.616331	-121.403703
212	3410001-010	MN	FALSE	0.374	-13	-0.197	no trend	182.3	-0.89	4/14/1987	9/12/2017	38.608099	-121.408153
158	3410001-011	MN	FALSE	0.263	-12	-0.267	no trend	96.7	-1.12	10/31/1988	9/14/2017	38.619863	-121.396184
228	3410001-012	MN	FALSE	0.886	-3	-0.045	no trend	195	-0.14	5/7/1987	12/12/2017	38.617662	-121.403695
82	3410001-013	MN	FALSE	0.564	-7	-0.156	no trend	108.3	-0.58	7/25/1989	9/26/2017	38.598939	-121.370714
146	3410001-014	MN	FALSE	0.396	-6	-0.286	no trend	34.7	-0.85	11/1/1988	9/14/2006	38.61171	-121.386048
260	3410001-015	MN	FALSE	0.391	-11	-0.2	no trend	135.7	-0.86	11/1/1988	9/19/2017	38.59781	-121.381308
191	3410001-016	MN	FALSE	1	-1	-0.028	no trend	47.7	0	11/1/1988	9/4/2014	38.631327	-121.37485
124	3410001-017	MN	FALSE	0.316	-9	-0.25	no trend	63.7	-1	7/24/1989	8/27/2014	38.61981	-121.403732
211	3410001-018	MN	FALSE	0.436	8	0.178	no trend	80.7	0.78	11/1/1988	9/19/2017	38.623854	-121.374359
209	3410001-019	MN	FALSE	0.578	6	0.133	no trend	80.7	0.56	11/1/1988	9/25/2017	38.597831	-121.359623
114	3410001-020	MN	FALSE	1	1	0.028	no trend	47.7	0	1/27/1992	9/19/2017	38.618079	-121.359205
210	3410001-021	MN	FALSE	1	1	0.018	no trend	119.7	0	4/14/1987	9/12/2017	38.615256	-121.419986
161	3410001-022	MN	FALSE	0.436	8	0.178	no trend	80.7	0.78	10/31/1988	9/11/2017	38.604549	-121.42274
64	3410001-024	MN	FALSE	1	-1	-0.167	no trend	7.7	0	7/24/1989	2/19/2001	38.641255	-121.370271
222	3410001-025	MN	FALSE	1	1	0.022	no trend	95.7	0	4/13/1987	9/19/2017	38.60046	-121.359118
148	3410001-026	MN	FALSE	0.848	2	0.133	no trend	27.3	0.19	10/31/1988	2/23/2005	38.627091	-121.384097
113	3410001-027	MN	FALSE	0.817	-3	-0.083	no trend	74.3	-0.23	1/30/1992	9/27/2017	38.605146	-121.390988
244	3410001-028	MN	TRUE	0.021	-25	-0.556	decreasing	108.3	-2.31	7/24/1989	8/21/2014	38.63562	-121.381097
227	3410001-029	MN	FALSE	0.474	-6	-0.214	no trend	48.7	-0.72	1/30/1992	10/3/2017	38.630252	-121.397575
236	3410001-030	MN	FALSE	1	0	0	no trend	75.3	0	7/21/1989	9/26/2017	38.617802	-121.424022
81	3410001-032	MN	FALSE	0.321	-13	-0.236	no trend	146.3	-0.99	10/31/1988	9/19/2017	38.622918	-121.413817
104	3410001-033	MN	FALSE	1	-1	-0.048	no trend	27.7	0	7/21/1989	7/10/2014	38.601378	-121.424
173	3410001-034	MN	FALSE	0.873	3	0.055	no trend	156.3	0.16	5/7/1987	9/11/2017	38.584674	-121.396539
169	3410001-035	MN	FALSE	0.436	8	0.178	no trend	80.7	0.78	7/9/1990	9/28/2017	38.594464	-121.351844
25	3410001-037	MN	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	4/13/1987	2/5/1998	38.578611	-121.366667
19	3410001-038	MN	FALSE	0.084	-24	-0.308	no trend	176.7	-1.73	7/25/1989	6/9/2011	38.578371	-121.363395
20	3410001-039	MN	FALSE	1	-1	-0.067	no trend	19.7	0	10/31/1988	9/18/2006	38.591742	-121.346413
168	3410001-042	MN	FALSE	0.436	8	0.178	no trend	80.7	0.78	11/1/1988	9/12/2017	38.628014	-121.358648
184	3410001-051	MN	FALSE	1	1	0.018	no trend	119.7	0	4/13/1987	9/11/2017	38.636187	-121.375067
111	3410001-052	MN	FALSE	1	1	0.022	no trend	95.7	0	4/13/1987	9/11/2017	38.625054	-121.362252
287	3410001-054	MN	TRUE	0.002	-196	-0.395	decreasing	3794	-3.17	2/11/1991	8/8/2019	38.582422	-121.408379
122	3410001-055	MN	FALSE	0.324	-10	-0.278	no trend	83.3	-0.99	11/1/1988	12/13/2017	38.594474	-121.39864
26	3410001-056	MN	FALSE	0.443	-8	-0.222	no trend	83.3	-0.77	11/1/1988	9/13/2017	38.578749	-121.41096
3	3410001-061	MN	FALSE	0.937	2	0.036	no trend	161.3	0.08	5/7/1998	9/26/2017	38.582786	-121.338489
176	3410001-062	MN	FALSE	0.211	6	0.286	no trend	16	1.25	8/22/2000	9/5/2017	38.618056	-121.401944
12	3410001-064	MN	FALSE	0.211	6	0.286	no trend	16	1.25	4/23/2002	9/12/2017	38.584121	-121.353432
13	3410001-065	MN	FALSE	0.61	-4	-0.19	no trend	34.7	-0.51	4/22/2002	9/21/2017	38.583196	-121.33679
4	3410001-066	MN	FALSE	0.211	6	0.286	no trend	16	1.25	4/23/2002	9/12/2017	38.582214	-121.338203
2	3410001-067	MN	FALSE	0.685	10	0.083	no trend	493.3	0.41	6/3/1999	1/8/2015	38.582481	-121.417169
225	3410001-069	MN	FALSE	0.089	-37	-0.308	no trend	449	-1.7	7/27/1989	9/28/2017	38.580609	-121.384004
255	3410001-070	MN	FALSE	1	1	0.022	no trend	59.7	0	2/12/1991	9/12/2017	38.576006	-121.403088
205	3410001-071	MN	FALSE	0.979	5	0.003	no trend	22174	0.03	4/17/2002	9/12/2019	38.63056	-121.397787
106	3410001-072	MN	FALSE	0.123	17	0.111	no trend	107.7	1.54	4/17/2002	9/12/2017	38.61744	-121.411527
252	3410001-073	MN	FALSE	0.975	2	0.01	no trend	1031.3	0.03	4/17/2002	7/25/2019	38.58058	-121.383962
58	3410001-076	MN	FALSE	0.927	2	0.036	no trend	120.7	0.09	6/5/1984	7/10/2019	38.644265	-121.362069
69	3410001-077	MN	FALSE	1	1	0.013	no trend	175.7	0	3/7/1984	7/10/2019	38.631522	-121.352911
86	3410001-078	MN	FALSE	0.747	-6	-0.066	no trend	240.7	-0.32	6/5/1984	7/9/2019	38.684818	-121.355931
259	3410001-079	MN	TRUE	0.042	-17	-0.607	decreasing	61.7	-2.04	6/4/1984	7/24/2013	38.667577	-121.334161
110	3410001-080	MN	FALSE	0.974	2	0.01	no trend	930.7	0.03	6/4/1984	7/17/2019	38.672567	-121.331573
174	3410001-081	MN	FALSE	1	-1	-0.013	no trend	224.3	0	6/5/1984	7/22/2019	38.683333	-121.333333
71	3410001-082	MN	TRUE	0.006	-48	-0.527	decreasing	289.3	-2.76	6/4/1984	7/21/2016	38.648929	-121.338368
246	3410001-083	MN	FALSE	0.934	2	0.03	no trend	147.3	0.08	5/17/1984	7/9/2019	38.663692	-121.347786

239	3410001-085	MN	FALSE	0.464	-13	-0.143	no trend	268.3	-0.73	6/4/1984	7/17/2019	38.644208	-121.329841
49	3410001-087	MN	FALSE	0.94	2	0.026	no trend	176.7	0.08	6/5/1984	7/11/2019	38.645858	-121.392317
218	3410001-088	MN	FALSE	1	-1	-0.022	no trend	95.7	0	5/17/1984	6/4/2014	38.668746	-121.361
89	3410001-089	MN	FALSE	0.385	-15	-0.165	no trend	259.7	-0.87	3/7/1984	7/9/2019	38.653579	-121.379692
132	3410001-092	MN	TRUE	0.039	-324	-0.183	decreasing	24491	-2.06	6/4/1984	7/24/2018	38.63889	-121.342759
185	3410001-094	MN	FALSE	0.94	2	0.026	no trend	176.7	0.08	5/17/1984	7/10/2019	38.652299	-121.354305
196	3410001-095	MN	FALSE	1	1	0.048	no trend	44.3	0	5/17/1984	6/21/2007	38.658062	-121.356402
297	3410001-096	MN	FALSE	0.671	-7	-0.09	no trend	199.7	-0.42	6/30/1988	7/9/2019	38.689669	-121.360198
102	3410001-097	MN	FALSE	0.404	11	0.141	no trend	143.7	0.83	12/13/1984	7/11/2019	38.694158	-121.360024
256	3410001-098	MN	FALSE	0.651	-10	-0.095	no trend	396	-0.45	5/9/1984	7/9/2019	38.700217	-121.351805
295	3410001-099	MN	FALSE	0.462	-4	-0.4	no trend	16.7	-0.73	10/20/1988	6/21/2007	38.655401	-121.313482
46	3410001-101	MN	FALSE	0.219	-21	-0.269	no trend	265	-1.23	10/27/1988	7/7/2016	38.663926	-121.32579
231	3410001-102	MN	TRUE	0.01	-38	-0.576	decreasing	204	-2.59	10/20/1988	7/15/2019	38.675049	-121.315501
101	3410001-103	MN	FALSE	0.875	2	0.095	no trend	40.7	0.16	10/25/1988	1/13/2014	38.651225	-121.32298
163	3410001-104	MN	FALSE	0.423	9	0.164	no trend	99.7	0.8	2/26/1991	7/10/2019	38.710442	-121.331662
180	3410001-105	MN	FALSE	0.505	23	0.11	no trend	1087	0.67	10/12/1995	7/10/2019	38.710528	-121.331667
262	3410001-106	MN	FALSE	1	0	0	no trend	16.7	0	6/28/2001	6/4/2014	38.710517	-121.331659
85	3410001-107	MN	FALSE	1	0	0	no trend	44.3	0	11/4/1996	7/14/2016	38.709903	-121.357066
127	3410001-111	MN	FALSE	1	1	0.028	no trend	47.7	0	12/13/1995	7/11/2019	38.665363	-121.383099
254	3410001-127	MN	FALSE	0.314	-6	-0.4	no trend	24.7	-1.01	12/13/1995	7/29/2013	38.712268	-121.381099
283	3410001-128	MN	FALSE	0.289	-4	-0.4	no trend	8	-1.06	12/13/1995	6/17/2010	38.709783	-121.374669
149	3410001-129	MN	FALSE	0.242	-5	-0.333	no trend	11.7	-1.17	12/13/1995	7/29/2013	38.710651	-121.387666
118	3410001-133	MN	FALSE	1	0	0	no trend	96.7	0	7/9/1990	7/22/2019	38.682932	-121.376063
182	3410001-135	MN	FALSE	0.694	13	0.062	no trend	931.7	0.39	11/1/1988	3/13/2018	38.68794	-121.385107
99	3410001-136	MN	FALSE	0.486	16	0.133	no trend	464	0.7	5/7/1987	3/27/2018	38.685899	-121.372701
141	3410001-137	MN	FALSE	1	-1	-0.036	no trend	37	0	11/1/1988	6/30/2014	38.692847	-121.375953
183	3410001-139	MN	FALSE	0.397	-11	-0.2	no trend	139.7	-0.85	5/17/1984	7/19/2016	38.69191	-121.364477
280	3410001-142	MN	FALSE	1	-1	-0.028	no trend	47.7	0	7/20/1989	7/11/2016	38.686782	-121.392424
267	3410001-143	MN	FALSE	0.47	-3	-0.5	no trend	7.7	-0.72	4/13/1987	2/4/1998	38.701228	-121.371968
197	3410001-144	MN	FALSE	0.805	4	0.073	no trend	147.3	0.25	4/13/1987	7/23/2019	38.69798	-121.373877
213	3410001-145	MN	FALSE	0.242	5	0.333	no trend	11.7	1.17	4/22/2002	7/10/2019	38.67526	-121.379573
315	3410002-001	MN	FALSE	0.606	7	0.127	no trend	135.7	0.52	2/20/1991	2/8/2017	38.583333	-121.383333
117	3410002-002	MN	FALSE	0.926	-2	-0.044	no trend	115.3	-0.09	7/17/1990	2/8/2017	38.583333	-121.366667
28	3410002-007	MN	FALSE	0.711	-5	-0.111	no trend	116.3	-0.37	8/2/1989	2/14/2017	38.566667	-121.4
10	3410002-012	MN	FALSE	0.834	3	0.083	no trend	91	0.21	8/2/1989	5/8/2017	38.566667	-121.416667
17	3410002-013	MN	FALSE	0.941	2	0.03	no trend	183.3	0.07	7/17/1990	2/14/2017	38.583333	-121.416667
249	3410002-014	MN	FALSE	0.913	-2	-0.056	no trend	83.3	-0.11	7/17/1990	5/8/2017	38.583333	-121.366667
152	3410003-001	MN	FALSE	0.103	30	0.33	no trend	316	1.63	7/20/1989	2/6/2019	38.587545	-121.385145
153	3410003-002	MN	FALSE	0.056	32	0.41	no trend	264	1.91	4/11/1986	2/28/2017	38.582537	-121.383219
245	3410003-004	MN	FALSE	1	1	0.048	no trend	44.3	0	7/20/1989	1/25/2005	38.587611	-121.392074
162	3410003-005	MN	FALSE	0.126	23	0.348	no trend	207	1.53	4/2/1987	7/11/2017	38.591017	-121.384139
251	3410003-006	MN	TRUE	0.04	27	0.491	increasing	160.3	2.05	4/2/1987	2/28/2017	38.59211	-121.387633
238	3410003-008	MN	FALSE	0.346	20	0.19	no trend	407.3	0.94	4/2/1987	2/28/2017	38.600074	-121.391973
74	3410004-001	MN	TRUE	0.036	-24	-0.436	decreasing	120.7	-2.09	10/24/1995	2/3/2004	38.645432	-121.313067
83	3410004-004	MN	FALSE	0.424	17	0.162	no trend	399.7	0.8	2/19/1991	1/28/2010	38.64988	-121.30798
175	3410004-005	MN	FALSE	0.754	4	0.111	no trend	92	0.31	11/9/1988	10/4/2001	38.633333	-121.35
172	3410004-006	MN	TRUE	0	-152	-0.551	decreasing	1596	-3.78	5/8/1987	6/1/2017	38.622744	-121.335704
6	3410004-007	MN	FALSE	0.155	-10	-0.182	no trend	40	-1.42	8/1/1990	10/23/2002	38.594673	-121.334606
150	3410004-009	MN	FALSE	0.912	4	0.016	no trend	734.7	0.11	2/19/1991	6/1/2017	38.619652	-121.333354
261	3410004-016	MN	FALSE	0.298	45	0.15	no trend	1787	1.04	5/8/1987	6/1/2017	38.645576	-121.306819
248	3410004-020	MN	FALSE	0.207	24	0.264	no trend	332.7	1.26	4/25/2002	6/1/2017	38.641845	-121.315446
139	3410004-021	MN	FALSE	1	-1	-0.015	no trend	87.7	0	4/23/2002	6/1/2017	38.604804	-121.342252
290	3410006-001	MN	FALSE	0.213	17	0.309	no trend	165	1.25	7/19/1989	5/30/2019	38.661305	-121.292607
207	3410006-007	MN	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	7/19/1989	1/21/1998	38.705556	-121.308333
198	3410006-008	MN	FALSE	1	-1	-0.048	no trend	27.7	0	12/6/1990	2/20/2013	38.679425	-121.289154
98	3410006-010	MN	FALSE	1	0	0	no trend	8.7	0	10/21/2004	6/6/2018	38.698638	-121.269673
130	3410007-001	MN	FALSE	0.707	-3	-0.2	no trend	28.3	-0.38	4/10/1992	6/24/2010	38.613787	-121.367811
229	3410007-002	MN	FALSE	0.084	-16	-0.444	no trend	75.3	-1.73	11/7/1988	8/7/2019	38.613607	-121.371676
216	3410007-003	MN	FALSE	0.711	-4	-0.143	no trend	65.3	-0.37	7/19/1989	8/22/2016	38.606352	-121.369707
269	3410007-004	MN	FALSE	1	-1	-0.028	no trend	47.7	0	7/19/1989	8/6/2019	38.607768	-121.374083
77	3410007-005	MN	FALSE	0.205	12	0.333	no trend	75.3	1.27	11/7/1988	8/6/2019	38.61458	-121.378552
142	3410007-006	MN	FALSE	0.537	-10	-0.152	no trend	212.7	-0.62	7/19/1989	1/20/2012	38.60731	-121.364767
195	3410007-007	MN	FALSE	0.084	-16	-0.444	no trend	75.3	-1.73	7/19/1989	8/6/2019	38.606531	-121.380719
253	3410007-008	MN	FALSE	1	1	0.048	no trend	27.7	0	1/26/1993	8/13/2019	38.613172	-121.380739
166	3410009-001	MN	FALSE	1	-1	-0.1	no trend	13	0	2/28/1991	6/16/2004	38.643048	-121.268528
100	3410009-003	MN	FALSE	1	-1	-0.167	no trend	7.7	0	11/9/1988	2/8/2000	38.666667	-121.216667
105	3410009-004	MN	FALSE	1	-1	-0.036	no trend	37	0	8/2/1990	6/6/2006	38.651282	-121.255173
78	3410009-005	MN	FALSE	1	-1	-0.067	no trend	19.7	0	11/9/1988	6/16/2004	38.650805	-121.286999
201	3410009-006	MN	FALSE	1	-1	-0.018	no trend	73	0	7/19/1989	6/14/2012	38.642768	-121.278261
234	3410009-007	MN	FALSE	0.175	-8	-0.222	no trend	26.7	-1.36	7/19/1989	6/14/2012	38.651297	-121.296666
217	3410009-008	MN	FALSE	0.548	5	0.238	no trend	44.3	0.6	8/16/1990	6/6/2006	38.662066	-121.265396
164	3410009-010	MN	FALSE	0.611	6	0.133	no trend	96.7	0.51	11/7/1991	6/14/2012	38.659628	-121.25556
93	3410013-001	MN	FALSE	0.889	3	0.045	no trend	204.3	0.14	10/7/1992	8/13/2018	38.694922	-121.332628
159	3410013-002	MN	FALSE	0.816	-16	-0.03	no trend	4163.3	-0.23	2/18/1992	8/6/2019	38.69054	-121.34151
51	3410013-003	MN	FALSE	0.408	11	0.2	no trend	146.3	0.83	11/2/1988	8/16/2018	38.683982	-121.31348

240	3410013-004	MN	FALSE	1	1	0.01	no trend	361	0	4/15/1987	8/7/2018	38.699328	-121.295627
178	3410013-005	MN	FALSE	1	1	0.011	no trend	302.3	0	4/15/1987	8/7/2018	38.669042	-121.293798
63	3410013-006	MN	FALSE	1	-1	-0.015	no trend	211.7	0	2/11/1992	8/8/2018	38.685052	-121.305855
156	3410013-007	MN	FALSE	0.508	7	0.194	no trend	82.3	0.66	4/15/1987	8/19/2015	38.691478	-121.336784
270	3410013-008	MN	FALSE	0.07	29	0.372	no trend	238.3	1.81	11/2/1988	8/16/2018	38.673506	-121.340002
224	3410013-009	MN	FALSE	0.72	6	0.091	no trend	194	0.36	4/15/1987	8/7/2018	38.695662	-121.29509
92	3410013-010	MN	FALSE	0.064	58	0.305	no trend	948	1.85	4/14/1989	8/15/2018	38.670117	-121.341406
237	3410013-012	MN	FALSE	0.503	13	0.143	no trend	320.3	0.67	7/2/1990	8/13/2018	38.66565	-121.302524
223	3410013-013	MN	FALSE	0.683	-10	-0.083	no trend	484.7	-0.41	4/15/1987	8/13/2018	38.678824	-121.304628
144	3410013-014	MN	FALSE	0.72	6	0.091	no trend	194	0.36	11/2/1988	8/8/2018	38.668822	-121.304482
112	3410013-015	MN	FALSE	1	1	0.015	no trend	201	0	2/18/1992	8/6/2018	38.70124	-121.345319
233	3410013-016	MN	FALSE	0.699	6	0.091	no trend	167.3	0.39	2/11/1993	8/13/2018	38.709473	-121.292244
265	3410013-017	MN	FALSE	0.61	-4	-0.19	no trend	34.7	-0.51	2/11/1992	8/24/2006	38.712243	-121.303547
247	3410013-019	MN	FALSE	1	1	0.011	no trend	302.3	0	4/15/1987	8/6/2018	38.700287	-121.330955
226	3410013-020	MN	FALSE	1	-1	-0.036	no trend	55.7	0	11/2/1988	8/24/2006	38.716217	-121.294262
88	3410013-021	MN	FALSE	0.698	7	0.09	no trend	238.3	0.39	11/2/1988	8/8/2018	38.683333	-121.35
232	3410013-022	MN	FALSE	0.726	4	0.111	no trend	73.3	0.35	2/18/1992	9/11/2012	38.7124	-121.306829
189	3410013-023	MN	FALSE	0.298	-20	-0.22	no trend	332.7	-1.04	7/28/1989	8/7/2018	38.695536	-121.313454
66	3410013-024	MN	FALSE	0.833	-4	-0.061	no trend	202	-0.21	2/11/1992	8/7/2018	38.680539	-121.31067
220	3410013-025	MN	FALSE	0.363	-25	-0.163	no trend	697	-0.91	8/15/1989	8/13/2018	38.718426	-121.313299
188	3410013-026	MN	FALSE	1	1	0.011	no trend	302.3	0	4/15/1987	8/6/2018	38.701667	-121.344722
119	3410013-027	MN	FALSE	0.699	6	0.091	no trend	167.3	0.39	2/18/1992	9/18/2012	38.709413	-121.317252
165	3410013-028	MN	FALSE	1	-1	-0.036	no trend	64.3	0	4/21/1997	8/13/2018	38.698857	-121.32618
125	3410016-001	MN	FALSE	1	-1	-0.167	no trend	7.7	0	8/2/1990	12/21/2004	38.686538	-121.219546
147	3410016-002	MN	FALSE	0.289	-4	-0.4	no trend	8	-1.06	4/18/1991	1/17/2013	38.694541	-121.210813
126	3410018-005	MN	FALSE	0.26	7	0.467	no trend	28.3	1.13	7/28/1989	3/5/2002	38.721801	-121.46774
24	3410020-015	MN	FALSE	0.203	-11	-0.393	no trend	61.7	-1.27	1/17/1992	4/3/2017	38.6125	-121.479167
11	3410020-016	MN	FALSE	1	0	0	no trend	56.7	0	1/17/1992	1/20/2015	38.616667	-121.479167
293	3410020-017	MN	FALSE	0.203	17	0.309	no trend	157.7	1.27	11/18/1988	8/24/2017	38.62266	-121.477813
84	3410020-018	MN	FALSE	0.36	-10	-0.222	no trend	96.7	-0.92	1/17/1992	5/8/2017	38.627831	-121.477227
292	3410020-021	MN	FALSE	1	1	0.067	no trend	28.3	0	1/21/1992	10/12/2011	38.607083	-121.454779
97	3410020-022	MN	FALSE	0.788	-4	-0.089	no trend	124	-0.27	11/18/1988	3/20/2017	38.607305	-121.443097
136	3410020-023	MN	FALSE	1	1	0.036	no trend	64.3	0	1/21/1992	3/7/2017	38.604956	-121.439486
314	3410020-024	MN	FALSE	0.78	4	0.089	no trend	115.3	0.28	11/18/1988	10/10/2011	38.612801	-121.450505
129	3410020-025	MN	FALSE	0.613	-3	-0.3	no trend	15.7	-0.51	1/21/1992	10/9/2008	38.612294	-121.440456
215	3410020-027	MN	FALSE	1	0	0	no trend	96.7	0	1/22/1992	5/8/2017	38.620988	-121.443553
279	3410020-028	MN	FALSE	0.206	18	0.273	no trend	180.7	1.26	11/18/1988	5/8/2017	38.62044	-121.432285
108	3410020-029	MN	FALSE	1	-1	-0.028	no trend	91	0	1/17/1992	3/20/2017	38.618056	-121.468056
107	3410020-030	MN	FALSE	0.629	-6	-0.133	no trend	107.3	-0.48	1/17/1992	5/8/2017	38.625119	-121.462605
59	3410020-032	MN	FALSE	0.211	-26	-0.217	no trend	399.3	-1.25	1/16/1991	8/24/2017	38.628503	-121.43627
55	3410020-033	MN	FALSE	0.073	17	0.472	no trend	79.7	1.79	11/16/1988	10/10/2011	38.626808	-121.42959
171	3410020-034	MN	FALSE	1	1	0.018	no trend	143.7	0	1/16/1991	2/27/2018	38.638412	-121.446721
73	3410020-035	MN	FALSE	1	1	0.018	no trend	143.7	0	1/16/1991	2/27/2018	38.639934	-121.427293
133	3410020-037	MN	FALSE	0.629	7	0.127	no trend	154.3	0.48	1/16/1991	5/8/2017	38.651207	-121.469509
264	3410020-038	MN	FALSE	0.144	17	0.309	no trend	119.7	1.46	1/16/1991	5/8/2017	38.647475	-121.459256
50	3410020-039	MN	FALSE	1	-1	-0.1	no trend	15.7	0	1/22/1992	10/8/2003	38.627595	-121.432917
56	3410020-040	MN	FALSE	0.492	9	0.164	no trend	135.7	0.69	10/22/1990	5/9/2017	38.629597	-121.420726
278	3410020-041	MN	FALSE	1	1	0.015	no trend	179.7	0	1/16/1991	5/9/2017	38.641387	-121.435795
22	3410020-042	MN	FALSE	0.659	-5	-0.139	no trend	82.3	-0.44	1/21/1992	3/7/2017	38.596923	-121.458973
294	3410020-044	MN	FALSE	0.521	6	0.214	no trend	60.7	0.64	10/16/1990	10/10/2011	38.613996	-121.456155
194	3410020-045	MN	FALSE	0.492	9	0.164	no trend	135.7	0.69	10/19/1990	5/9/2017	38.622276	-121.446858
134	3410020-046	MN	FALSE	0.659	-5	-0.139	no trend	82.3	-0.44	1/22/1992	9/22/2014	38.623116	-121.427024
157	3410020-050	MN	FALSE	0.145	17	0.378	no trend	120.3	1.46	1/16/1991	3/25/2014	38.668053	-121.438012
42	3410020-051	MN	FALSE	0.203	17	0.309	no trend	157.7	1.27	1/16/1991	2/27/2018	38.634413	-121.412516
296	3410020-052	MN	FALSE	0.853	-3	-0.067	no trend	116.3	-0.19	3/8/1993	5/9/2017	38.599341	-121.445804
214	3410020-054	MN	FALSE	0.629	-6	-0.133	no trend	107.3	-0.48	1/21/1992	8/24/2017	38.596324	-121.427308
33	3410020-055	MN	FALSE	0.941	2	0.03	no trend	183.3	0.07	1/17/1992	5/9/2017	38.617636	-121.469304
91	3410020-056	MN	TRUE	0.002	-82	-0.39	decreasing	687.3	-3.09	1/12/1994	5/9/2017	38.654657	-121.448564
291	3410020-057	MN	TRUE	0.027	-31	-0.47	decreasing	184.3	-2.21	1/18/1995	12/19/2018	38.658482	-121.466415
30	3410026-001	MN	FALSE	0.308	-4	-0.667	no trend	8.7	1.02	2/21/1991	5/31/2012	38.58961	-121.429343
7	3410026-002	MN	FALSE	0.289	-4	-0.4	no trend	8	-1.06	2/21/1991	5/3/2018	38.588266	-121.423478
31	3410026-003	MN	FALSE	0.289	-4	-0.4	no trend	8	-1.06	2/21/1991	5/3/2018	38.593617	-121.439154
18	3410026-004	MN	FALSE	1	1	0.1	no trend	15.7	0	2/21/1991	5/3/2018	38.593339	-121.432431
206	3410031-001	MN	FALSE	0.944	3	0.018	no trend	808.3	0.07	3/24/1988	5/16/2019	38.720833	-121.358333
190	3410031-002	MN	FALSE	0.731	5	0.091	no trend	135.7	0.34	9/10/1993	8/8/2018	38.717222	-121.3575
94	3410031-003	MN	FALSE	0.552	-13	-0.124	no trend	406.3	-0.6	4/14/1989	8/14/2018	38.7	-121.383333
221	3410031-004	MN	FALSE	0.071	65	0.281	no trend	1255.7	1.81	10/29/1987	8/14/2018	38.718056	-121.382222
61	3410031-005	MN	FALSE	1	-1	-0.018	no trend	154.3	0	2/26/1992	8/5/2015	38.716667	-121.4
160	3410031-006	MN	FALSE	1	1	0.011	no trend	302.3	0	11/2/1988	8/14/2018	38.708333	-121.383611
2073	3410031-007	MN	FALSE	0.225	-23	-0.253	no trend	329	-1.21	11/2/1988	8/9/2018	38.733333	-121.35
2056	3410031-008	MN	FALSE	0.72	6	0.091	no trend	194	0.36	10/7/1992	8/9/2018	38.733333	-121.35
208	3410031-009	MN	FALSE	0.408	11	0.2	no trend	146.3	0.83	1/15/1992	8/7/2018	38.715278	-121.378056
72	3410031-010	MN	FALSE	0.146	24	0.308	no trend	250	1.45	8/29/1995	8/8/2019	38.705	-121.365556
289	3410031-011	MN	FALSE	0.056	-215	-0.191	no trend	12534	-1.91	6/21/1990	3/4/2019	38.726944	-121.3825
135	3410031-012	MN	FALSE	1	0	0	no trend	407.3	0	6/12/1992	8/7/2018	38.721111	-121.368611

45	3410031-013	MN	FALSE	0.073	26	0.394	no trend	194	1.79	11/2/1988	8/14/2018	38.711667	-121.413889
54	3410031-014	MN	FALSE	0.72	6	0.091	no trend	194	0.36	4/15/1987	8/14/2018	38.716111	-121.408889
95	3410031-015	MN	FALSE	0.734	2	0.333	no trend	8.7	0.34	2/11/1993	8/14/2018	38.716667	-121.416667
241	3410031-016	MN	FALSE	0.772	4	0.089	no trend	107.3	0.29	7/16/1996	8/8/2018	38.724444	-121.336111
80	3410031-017	MN	FALSE	0.826	3	0.083	no trend	82.3	0.22	4/30/1998	8/8/2018	38.723056	-121.349722
257	3410031-018	MN	FALSE	0.059	23	0.418	no trend	135.7	1.89	1/9/1996	8/7/2018	38.716389	-121.371944
288	3410045-001	MN	FALSE	1	1	0.013	no trend	249	0	11/3/1988	8/7/2018	38.586137	-121.411513
138	3410045-002	MN	FALSE	0.262	13	0.289	no trend	114.3	1.12	2/25/1992	8/7/2018	38.583085	-121.413054
116	3410045-003	MN	FALSE	0.747	5	0.091	no trend	154.3	0.32	2/25/1992	8/7/2018	38.594423	-121.417465
243	3410045-004	MN	TRUE	0.022	93	0.337	increasing	1624.3	2.28	4/20/1987	8/11/2014	38.592566	-121.407256
96	3410045-005	MN	FALSE	0.72	6	0.091	no trend	194	0.36	11/2/1988	8/7/2018	38.600025	-121.410183
2907	5105004-001	MN	FALSE	0.386	-8	-0.286	no trend	65.3	-0.87	11/29/2000	10/16/2013	38.777769	-121.52437
1859	USGS-383746121291101	MN	FALSE	0.64	-7	-0.127	no trend	165	-0.47	8/4/1998	8/8/2017	38.6292139	-121.4877028
1855	USGS-383900121270001	MN	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	6/14/2005	6/15/2005	38.6585	-121.4664722
1860	USGS-384145121184101	MN	TRUE	0.049	-23	-0.511	decreasing	125	-1.97	8/17/1998	9/4/2012	38.6964	-121.3120389
1868	USGS-384330121293901	MN	FALSE	0.251	-12	-0.333	no trend	92	-1.15	8/11/1997	8/16/2012	38.7251167	-121.4954417
2806	USGS-384413121163801	MN	FALSE	0.734	2	0.333	no trend	8.7	0.34	9/24/1982	3/10/2014	38.7369444	-121.277222

Hexavalent Chromium

Local_ID	Well_Info_ID	chemical	h	p	s	tau	trend	var_s	z	datemin	datemax	Latitude_NAD83	Longitude_NAD83
2064	3110025-005	CR6	FALSE	1	-1	-0.167	no trend	7.7	0	12/12/2001	8/21/2017	38.818889	-121.31
145	3400173-002	CR6	FALSE	1	0	0	no trend	16.7	0	7/26/2001	2/14/2017	38.640638	-121.483861
235	3400173-003	CR6	FALSE	0.089	-6	-1	no trend	8.7	-1.7	2/20/2002	2/15/2017	38.654819	-121.477561
167	3400173-005	CR6	FALSE	0.089	-6	-1	no trend	8.7	-1.7	7/26/2001	2/15/2017	38.646271	-121.502342
191	3410001-016	CR6	FALSE	0.462	-4	-0.4	no trend	16.7	-0.73	6/6/2002	4/14/2014	38.631327	-121.37485
114	3410001-020	CR6	FALSE	1	0	0	no trend	8.7	0	5/9/2002	4/14/2014	38.618079	-121.359205
244	3410001-028	CR6	FALSE	1	1	0.167	no trend	7.7	0	7/15/2002	2/11/2015	38.63562	-121.381097
86	3410001-078	CR6	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	7/19/2001	4/16/2014	38.684818	-121.355931
262	3410001-106	CR6	FALSE	0.707	-3	-0.2	no trend	28.3	-0.38	7/19/2001	2/19/2015	38.710517	-121.331659
254	3410001-127	CR6	FALSE	1	1	0.167	no trend	7.7	0	7/19/2001	11/11/2014	38.712268	-121.381099
149	3410001-129	CR6	FALSE	0.312	5	0.5	no trend	15.7	1.01	7/19/2001	2/26/2015	38.710651	-121.387666
99	3410001-136	CR6	FALSE	0.848	-2	-0.133	no trend	27.3	-0.19	7/18/2002	3/27/2018	38.685899	-121.372701
141	3410001-137	CR6	FALSE	0.613	-3	-0.3	no trend	15.7	-0.51	7/11/2002	2/19/2015	38.692847	-121.375953
315	3410002-001	CR6	FALSE	0.707	-3	-0.2	no trend	28.3	-0.38	3/20/2001	2/8/2017	38.583333	-121.383333
117	3410002-002	CR6	FALSE	0.452	-5	-0.333	no trend	28.3	-0.75	3/20/2001	2/8/2017	38.583333	-121.366667
28	3410002-007	CR6	FALSE	1	-1	-0.067	no trend	28.3	0	3/20/2001	2/14/2017	38.566667	-121.4
10	3410002-012	CR6	FALSE	0.579	-3	-0.3	no trend	13	-0.55	3/20/2001	11/14/2017	38.566667	-121.416667
17	3410002-013	CR6	FALSE	1	0	0	no trend	28.3	0	3/20/2001	2/14/2017	38.583333	-121.416667
249	3410002-014	CR6	FALSE	1	0	0	no trend	27.3	0	3/20/2001	11/14/2017	38.583333	-121.366667
74	3410004-001	CR6	FALSE	0.312	5	0.5	no trend	15.7	1.01	6/12/2001	1/29/2003	38.645432	-121.313067
83	3410004-004	CR6	FALSE	0.266	10	0.357	no trend	65.3	1.11	6/12/2001	7/23/2003	38.64988	-121.30798
172	3410004-006	CR6	FALSE	1	0	0	no trend	268.7	0	6/12/2001	6/4/2015	38.622744	-121.335704
6	3410004-007	CR6	FALSE	0.433	6	0.286	no trend	40.7	0.78	4/11/2001	10/23/2002	38.594673	-121.334606
150	3410004-009	CR6	FALSE	0.951	-2	-0.026	no trend	266.7	-0.06	6/12/2001	6/4/2015	38.619652	-121.333354
261	3410004-016	CR6	FALSE	1	1	0.022	no trend	120.3	0	6/12/2001	6/4/2015	38.645576	-121.306819
248	3410004-020	CR6	FALSE	0.902	2	0.071	no trend	65.3	0.12	4/25/2002	6/4/2015	38.641845	-121.315446
139	3410004-021	CR6	FALSE	0.272	-8	-0.381	no trend	40.7	-1.1	4/23/2002	6/4/2015	38.604804	-121.342252
229	3410007-002	CR6	FALSE	0.462	4	0.4	no trend	16.7	0.73	3/12/2002	8/13/2018	38.613607	-121.371676
216	3410007-003	CR6	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	6/13/2002	8/5/2015	38.606352	-121.369707
269	3410007-004	CR6	TRUE	0.027	10	1	increasing	16.7	2.2	3/12/2002	8/13/2018	38.607768	-121.374083
77	3410007-005	CR6	FALSE	0.462	4	0.4	no trend	16.7	0.73	3/12/2002	8/13/2018	38.61458	-121.378552
195	3410007-007	CR6	FALSE	0.707	3	0.2	no trend	28.3	0.38	3/12/2002	8/14/2018	38.606531	-121.380719
253	3410007-008	CR6	FALSE	1	0	0	no trend	8.7	0	3/12/2002	8/14/2018	38.613172	-121.380739
166	3410009-001	CR6	FALSE	1	0	0	no trend	8.7	0	6/27/2001	12/17/2003	38.643048	-121.268528
105	3410009-004	CR6	FALSE	1	0	0	no trend	8.7	0	6/27/2001	12/17/2003	38.651282	-121.255173
78	3410009-005	CR6	FALSE	0.371	-3	-0.5	no trend	5	-0.89	6/27/2001	12/17/2003	38.650805	-121.286999
201	3410009-006	CR6	FALSE	0.148	-11	-0.306	no trend	47.7	-1.45	6/27/2001	11/8/2018	38.642768	-121.278261
234	3410009-007	CR6	FALSE	1	0	0	no trend	92	0	6/27/2001	11/8/2018	38.651297	-121.296666
217	3410009-008	CR6	FALSE	1	0	0	no trend	8.7	0	6/27/2001	12/17/2003	38.662066	-121.265396
164	3410009-010	CR6	FALSE	0.544	-25	-0.077	no trend	1565	-0.61	6/27/2001	3/28/2019	38.659628	-121.25556
93	3410013-001	CR6	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	3/25/2002	5/17/2017	38.694922	-121.332628
159	3410013-002	CR6	FALSE	1	1	0.167	no trend	7.7	0	6/5/2002	5/17/2017	38.69054	-121.34151
51	3410013-003	CR6	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	6/5/2002	12/19/2017	38.683982	-121.313348
240	3410013-004	CR6	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	3/25/2002	5/9/2017	38.699328	-121.295627
178	3410013-005	CR6	FALSE	0.734	2	0.333	no trend	8.7	0.34	3/25/2002	5/9/2017	38.669042	-121.293798
63	3410013-006	CR6	FALSE	0.308	4	0.667	no trend	8.7	1.02	7/25/2002	5/9/2017	38.685052	-121.305855
156	3410013-007	CR6	FALSE	0.734	2	0.333	no trend	8.7	0.34	7/28/2003	5/9/2017	38.691478	-121.336784
270	3410013-008	CR6	FALSE	1	0	0	no trend	16.7	0	6/5/2002	9/19/2018	38.673506	-121.340002
224	3410013-009	CR6	FALSE	0.308	4	0.667	no trend	8.7	1.02	3/25/2002	5/9/2017	38.695662	-121.29509
92	3410013-010	CR6	FALSE	1	0	0	no trend	8.7	0	3/25/2002	5/10/2017	38.670117	-121.341406
237	3410013-012	CR6	FALSE	0.308	4	0.667	no trend	8.7	1.02	3/25/2002	5/8/2017	38.66565	-121.302524
223	3410013-013	CR6	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	3/25/2002	5/8/2017	38.678824	-121.304628
144	3410013-014	CR6	FALSE	0.221	6	0.6	no trend	16.7	1.22	6/5/2002	5/8/2017	38.668822	-121.304482
112	3410013-015	CR6	FALSE	0.734	2	0.333	no trend	8.7	0.34	3/25/2002	5/8/2017	38.70124	-121.345319
233	3410013-016	CR6	FALSE	0.308	4	0.667	no trend	8.7	1.02	3/25/2002	2/13/2018	38.709473	-121.292244
247	3410013-019	CR6	FALSE	0.089	-6	-1	no trend	8.7	-1.7	3/25/2002	10/19/2017	38.700287	-121.330955
189	3410013-023	CR6	FALSE	0.221	6	0.6	no trend	16.7	1.22	6/5/2002	5/8/2017	38.695536	-121.313454
188	3410013-026	CR6	FALSE	0.462	-4	-0.4	no trend	16.7	-0.73	3/25/2002	5/8/2017	38.701667	-121.344722
119	3410013-027	CR6	FALSE	1	0	0	no trend	8.7	0	3/25/2002	5/7/2014	38.709413	-121.317252
165	3410013-028	CR6	FALSE	1	0	0	no trend	8.7	0	6/5/2002	5/8/2017	38.698857	-121.32618
3103	3410018-016	CR6	FALSE	0.617	-8	-0.121	no trend	196	-0.5	1/28/2014	6/27/2019	38.67821521	-121.4400672
3104	3410018-017	CR6	FALSE	1	-1	-0.018	no trend	148.3	0	4/16/2014	6/27/2019	38.70652939	-121.4385374
3105	3410018-018	CR6	FALSE	0.221	-6	-0.6	no trend	16.7	-1.22	4/16/2014	3/13/2018	38.699946	-121.448704
3106	3410018-019	CR6	FALSE	0.331	-15	-0.227	no trend	207	-0.97	1/28/2014	6/27/2019	38.6908207	-121.4118831

3107	3410018-020	CR6	FALSE	0.221	-6	-0.6	no trend	16.7	-1.22	4/16/2014	3/14/2018	38.683913	-121.457232
3108	3410018-021	CR6	FALSE	0.65	6	0.133	no trend	121.3	0.45	4/16/2014	6/27/2019	38.67497323	-121.459362
3109	3410018-022	CR6	FALSE	1	0	0	no trend	124	0	1/28/2014	6/27/2019	38.68524743	-121.4196703
3110	3410018-023	CR6	FALSE	1	0	0	no trend	16.7	0	1/28/2014	3/14/2018	38.6887253	-121.4487616
3111	3410018-025	CR6	FALSE	0.346	-32	-0.152	no trend	1084	-0.94	5/2/2011	6/27/2019	38.697725	-121.39672
3101	3410018-031	CR6	FALSE	0.328	-17	-0.218	no trend	267.7	-0.98	4/16/2014	6/27/2019	38.69494633	-121.4521593
3102	3410018-033	CR6	FALSE	0.462	-4	-0.4	no trend	16.7	-0.73	4/16/2014	3/26/2019	38.683947	-121.462511
84	3410020-018	CR6	FALSE	0.755	-5	-0.091	no trend	165	-0.31	7/8/2002	7/10/2017	38.627831	-121.477227
171	3410020-034	CR6	FALSE	0.917	2	0.056	no trend	92	0.1	7/9/2002	7/10/2017	38.638412	-121.446721
73	3410020-035	CR6	FALSE	0.649	4	0.19	no trend	43.3	0.46	7/9/2002	7/10/2017	38.639934	-121.427293
133	3410020-037	CR6	FALSE	0.213	-17	-0.309	no trend	165	-1.25	7/8/2002	7/10/2017	38.651207	-121.469509
264	3410020-038	CR6	FALSE	0.276	15	0.273	no trend	165	1.09	7/10/2002	7/10/2017	38.647475	-121.459256
56	3410020-040	CR6	FALSE	1	-1	-0.028	no trend	91	0	7/9/2002	7/10/2017	38.629597	-121.420726
278	3410020-041	CR6	FALSE	0.876	-3	-0.055	no trend	165	-0.16	7/9/2002	7/10/2017	38.641387	-121.435795
157	3410020-050	CR6	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	7/10/2002	11/3/2015	38.668053	-121.438012
91	3410020-056	CR6	FALSE	0.902	-2	-0.071	no trend	65.3	-0.12	7/10/2002	7/10/2017	38.654657	-121.448564
291	3410020-057	CR6	FALSE	0.673	14	0.074	no trend	950	0.42	12/2/2002	7/10/2017	38.658482	-121.466415
206	3410031-001	CR6	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	3/25/2002	5/9/2017	38.720833	-121.358333
190	3410031-002	CR6	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	6/4/2002	5/8/2017	38.717222	-121.3575
94	3410031-003	CR6	FALSE	0.183	42	0.221	no trend	950	1.33	3/25/2002	8/6/2019	38.7	-121.383333
221	3410031-004	CR6	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	3/25/2002	8/17/2017	38.718056	-121.382222
61	3410031-005	CR6	FALSE	0.064	-46	-0.338	no trend	589.3	-1.85	3/25/2002	5/2/2018	38.716667	-121.4
160	3410031-006	CR6	FALSE	0.401	-25	-0.146	no trend	815	-0.84	3/25/2002	8/6/2019	38.708333	-121.383611
2073	3410031-007	CR6	FALSE	1	0	0	no trend	8.7	0	3/25/2002	5/11/2017	38.733333	-121.35
2056	3410031-008	CR6	FALSE	0.734	2	0.333	no trend	8.7	0.34	6/5/2002	5/11/2017	38.733333	-121.35
208	3410031-009	CR6	FALSE	1	0	0	no trend	8.7	0	6/4/2002	5/8/2017	38.715278	-121.378056
72	3410031-010	CR6	FALSE	1	0	0	no trend	8.7	0	6/4/2002	5/9/2017	38.705	-121.365556
289	3410031-011	CR6	FALSE	0.755	-5	-0.091	no trend	165	-0.31	6/4/2002	11/5/2018	38.726944	-121.3825
135	3410031-012	CR6	FALSE	0.732	6	0.091	no trend	212.7	0.34	6/4/2002	8/8/2019	38.721111	-121.368611
45	3410031-013	CR6	FALSE	0.089	-6	-1	no trend	8.7	-1.7	3/25/2002	5/8/2017	38.711667	-121.413889
54	3410031-014	CR6	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	6/4/2002	5/8/2017	38.716111	-121.408889
241	3410031-016	CR6	FALSE	0.734	-2	-0.333	no trend	8.7	-0.34	6/4/2002	5/8/2017	38.724444	-121.336111
80	3410031-017	CR6	FALSE	1	0	0	no trend	8.7	0	6/4/2002	5/8/2017	38.723056	-121.349722
257	3410031-018	CR6	FALSE	0.308	-4	-0.667	no trend	8.7	-1.02	3/25/2002	5/9/2017	38.716389	-121.371944
288	3410045-001	CR6	FALSE	1	0	0	no trend	8.7	0	6/5/2002	5/9/2017	38.586137	-121.411513
138	3410045-002	CR6	FALSE	1	0	0	no trend	8.7	0	6/4/2002	5/9/2017	38.583085	-121.413054
116	3410045-003	CR6	FALSE	0.089	6	1	no trend	8.7	1.7	6/4/2002	5/9/2017	38.594423	-121.417465
96	3410045-005	CR6	FALSE	1	0	0	no trend	8.7	0	6/4/2002	5/9/2017	38.600025	-121.410183
2909	5105013-001	CR6	FALSE	0.128	-9	-0.429	no trend	27.7	-1.52	2/29/2016	10/9/2017	38.781319	-121.484797
1075	SL185602928-EX-1	CR6	FALSE	0.692	-9	-0.086	no trend	408.3	-0.4	3/21/2006	6/24/2010	38.5948499	-121.3917114
1374	SL185602928-F-1	CR6	FALSE	0.06	-39	-0.371	no trend	408.3	-1.88	6/27/2007	9/19/2012	38.5967632	-121.3919666
935	SL185602928-F-10	CR6	FALSE	0.124	-35	-0.292	no trend	489.7	-1.54	3/22/2007	9/20/2012	38.5972826	-121.3912015
1345	SL185602928-F-2	CR6	FALSE	0.107	19	0.422	no trend	125	1.61	6/27/2007	6/25/2010	38.5967632	-121.3917771
846	SL185602928-F-3	CR6	FALSE	0.876	3	0.055	no trend	165	0.16	3/22/2007	6/25/2010	38.5967603	-121.3915766
1385	SL185602928-F-4	CR6	FALSE	0.161	-19	-0.345	no trend	165	-1.4	3/22/2007	6/25/2010	38.5967465	-121.3913754
1470	SL185602928-F-5	CR6	FALSE	0.834	7	0.041	no trend	817	0.21	3/22/2007	9/20/2012	38.5967608	-121.3911558
1422	SL185602928-F-6	CR6	TRUE	0	-82	-0.683	decreasing	493.3	-3.65	3/22/2007	9/19/2012	38.5972848	-121.3920357
971	SL185602928-F-7	CR6	FALSE	1	1	0.018	no trend	165	0	3/22/2007	6/28/2010	38.5972856	-121.3918353
1580	SL185602928-F-8	CR6	FALSE	0.913	3	0.033	no trend	333.7	0.11	3/22/2007	9/20/2012	38.5972826	-121.3916167
1298	SL185602928-F-9	CR6	FALSE	0.544	-17	-0.111	no trend	697	-0.61	3/22/2007	9/20/2012	38.5972862	-121.3913874
1369	SL185602928-SP-1A	CR6	FALSE	0.079	-40	-0.333	no trend	493.3	-1.76	3/21/2006	6/24/2010	38.594695	-121.3918783

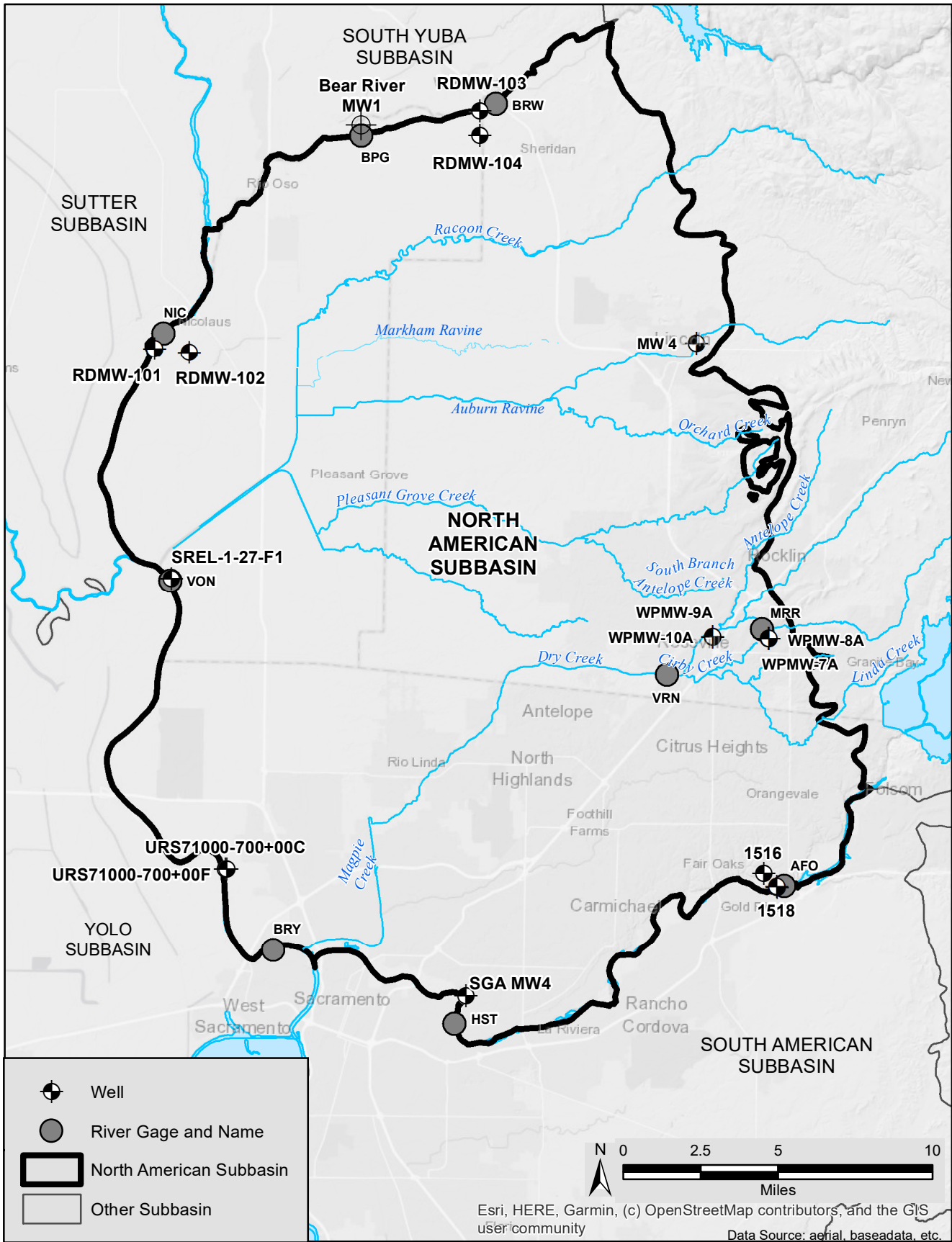
Appendix N: Surface Water Interactions

NORTH AMERICAN SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

APPENDIX N Surface Water/Groundwater Interaction Hydrographs

December 2021

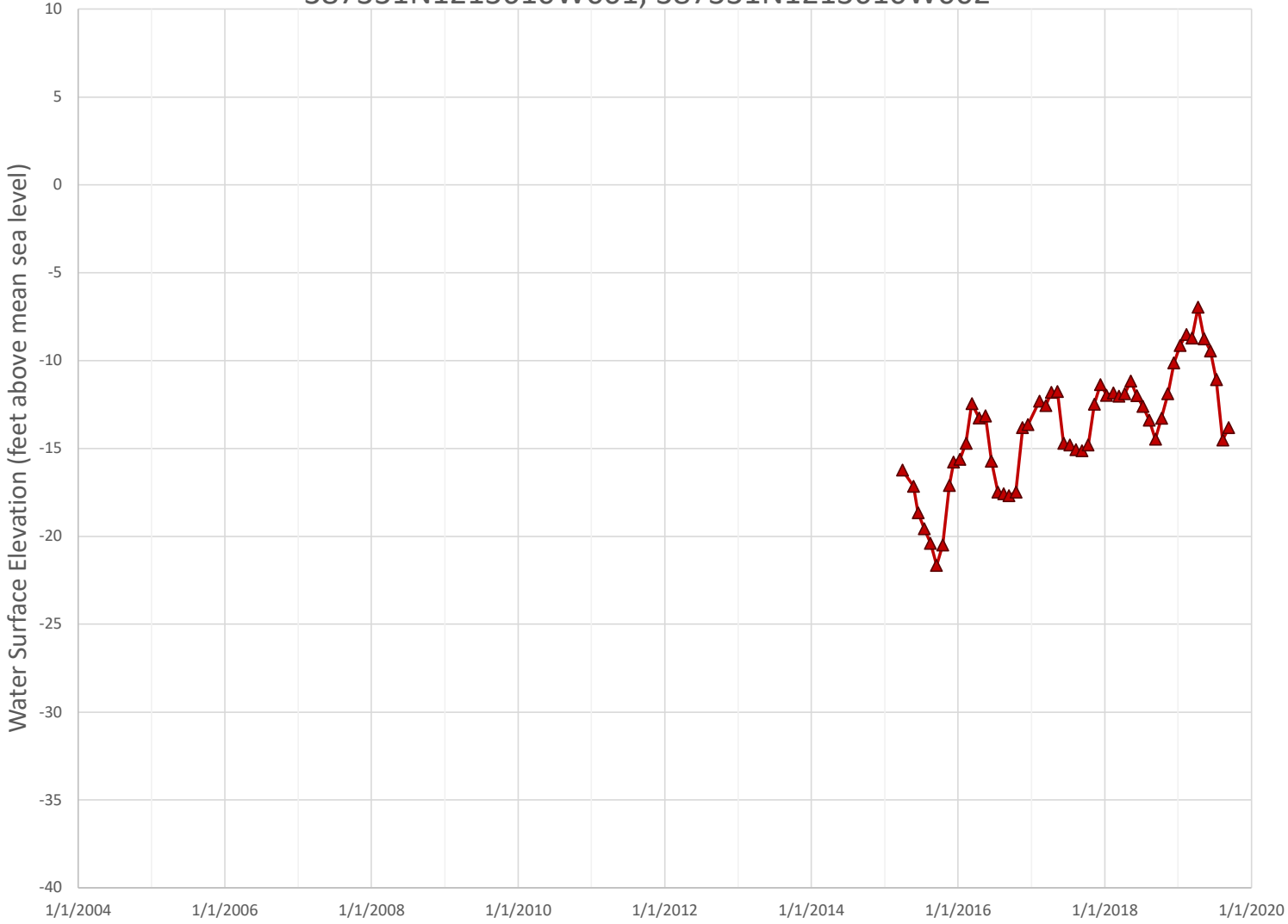
APPENDIX N
SURFACE WATER/GROUNDWATER
INTERACTION HYDROGRAPHS



Z:\Projects\1803104_GSP\NAmerican_Sub_SurfaceWater\GWMonitoringLocations.mxd PAE

North American Subbasin		Surface Water/Groundwater Monitoring Locations
North American Subbasin		

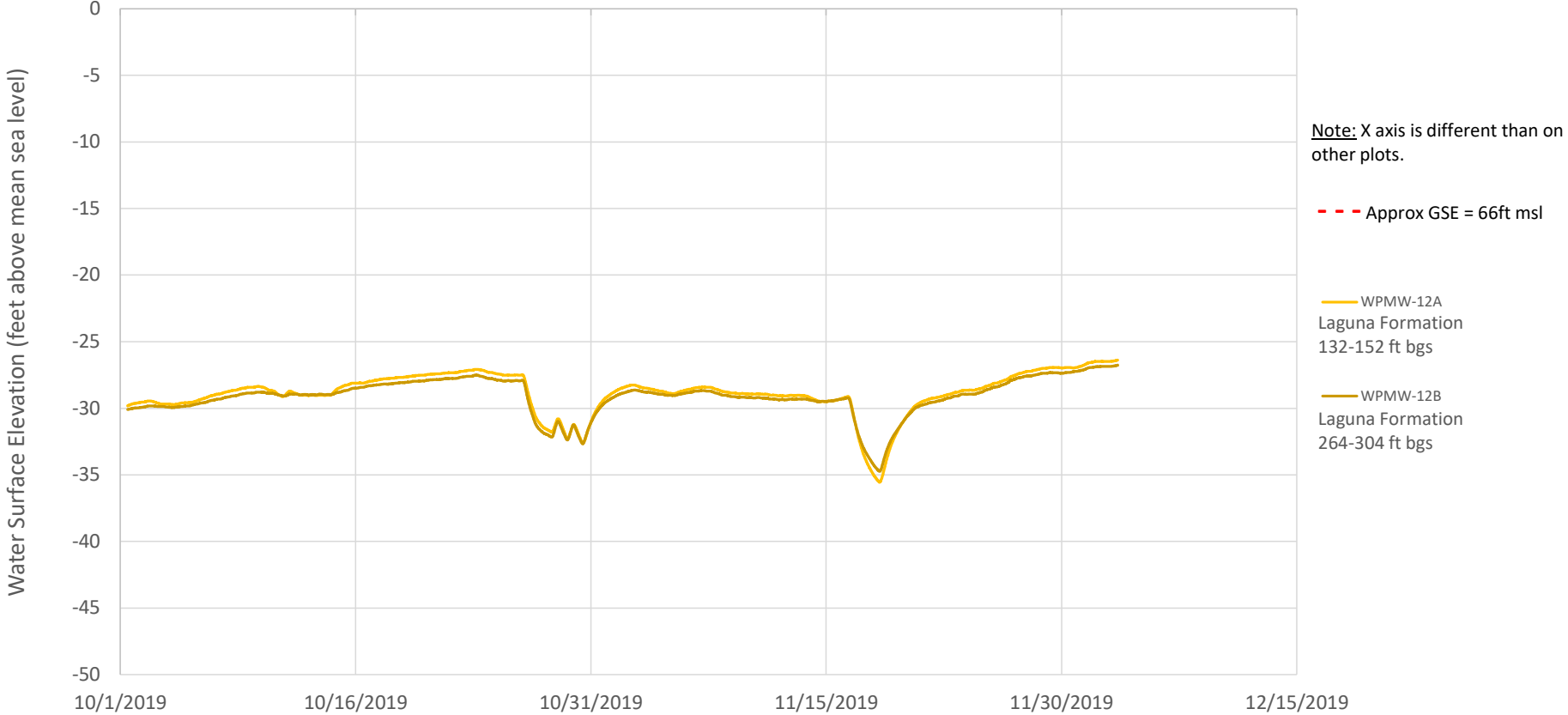
Local Well No. 41
WPMW-5 Nested Well
387331N1213610W001, 387331N1213610W002



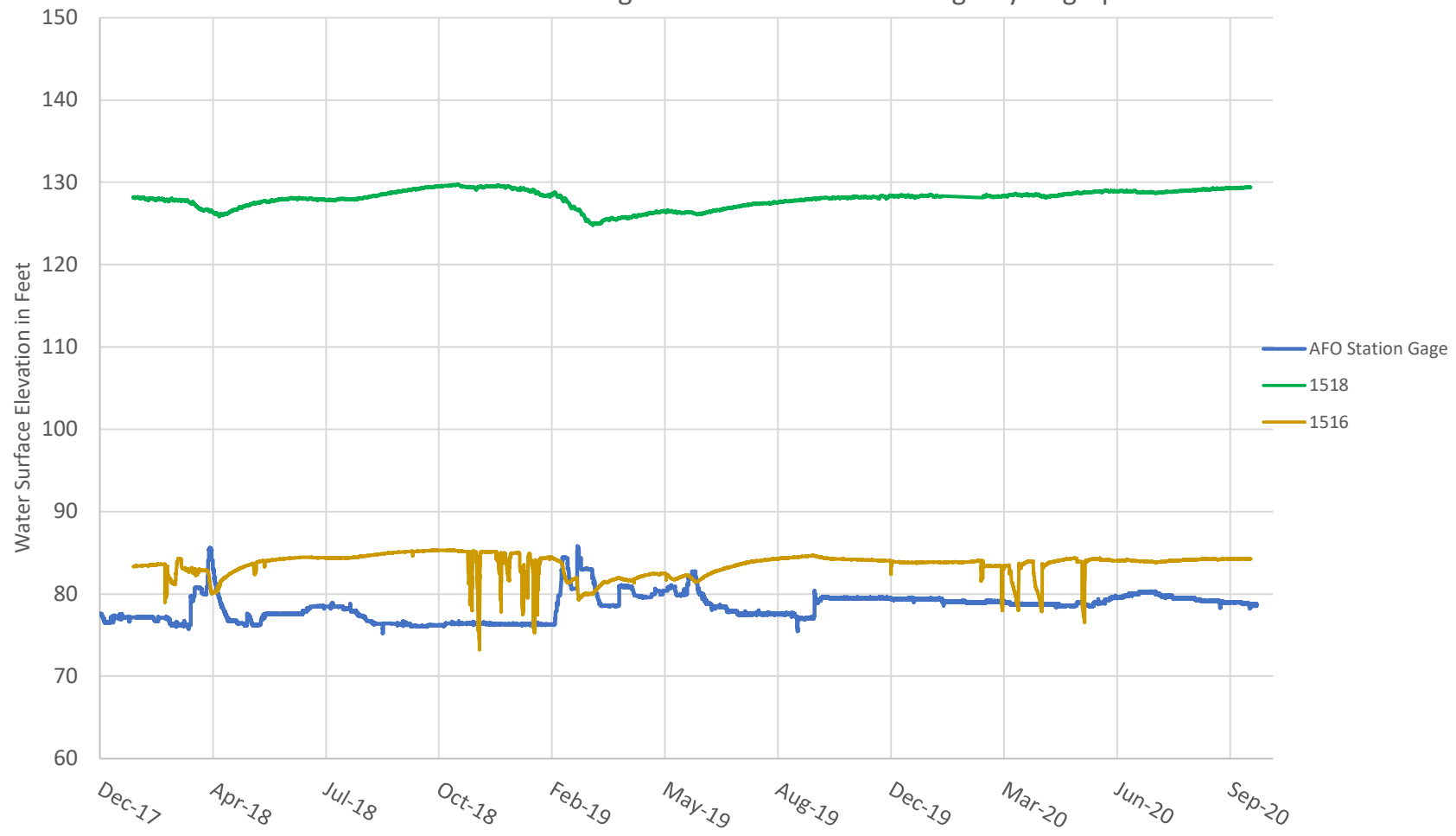
Note: WPMW-5A is dry.

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

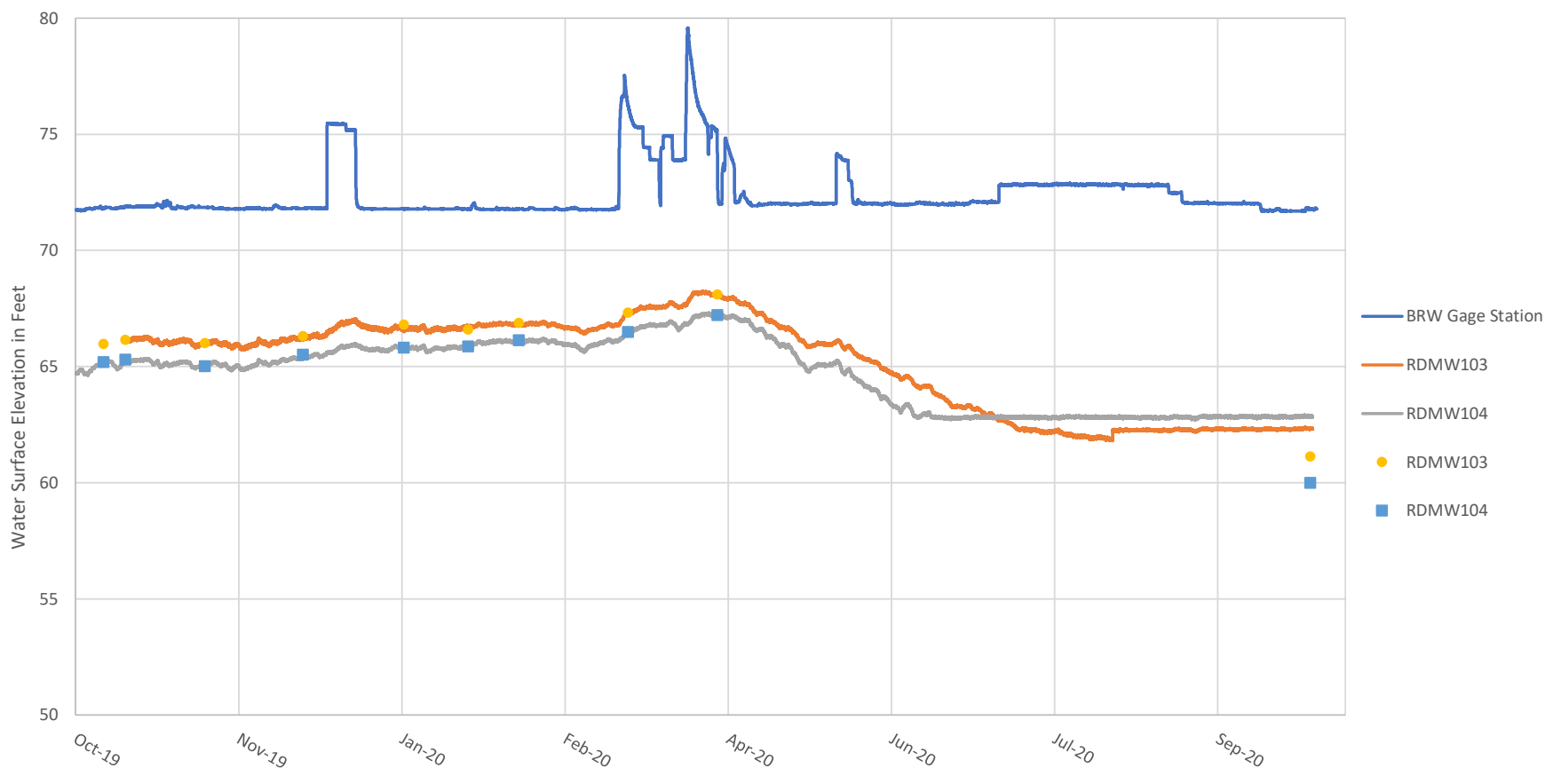
Local Well No.91
WPMW-12 Nested Well Hydrograph
388026N1214432W002, 388026N1214432W004



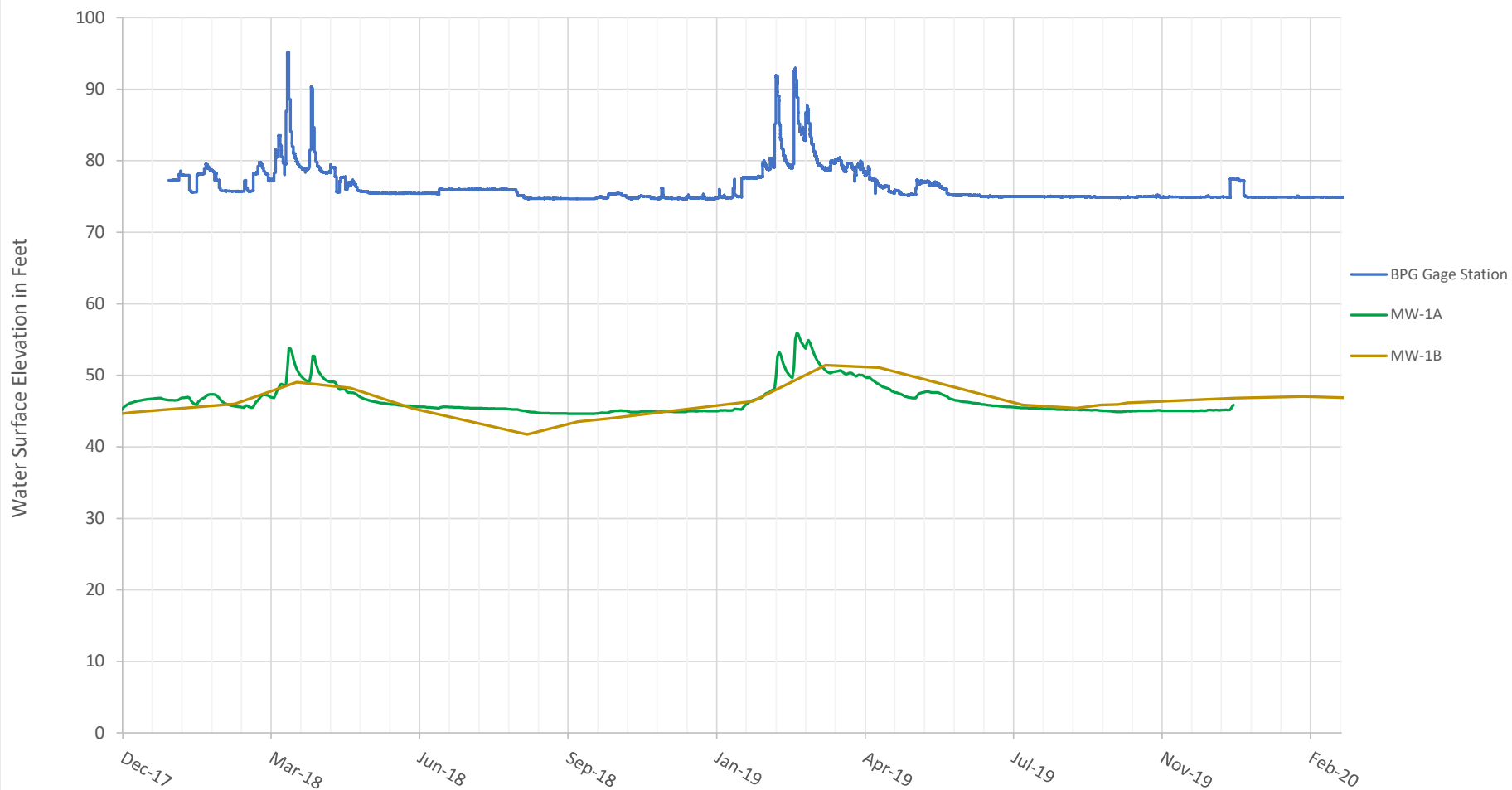
Surface Water/Groundwater Interaction 1516 & 1518 Monitoring Wells and AFO Station Gage Hydrographs



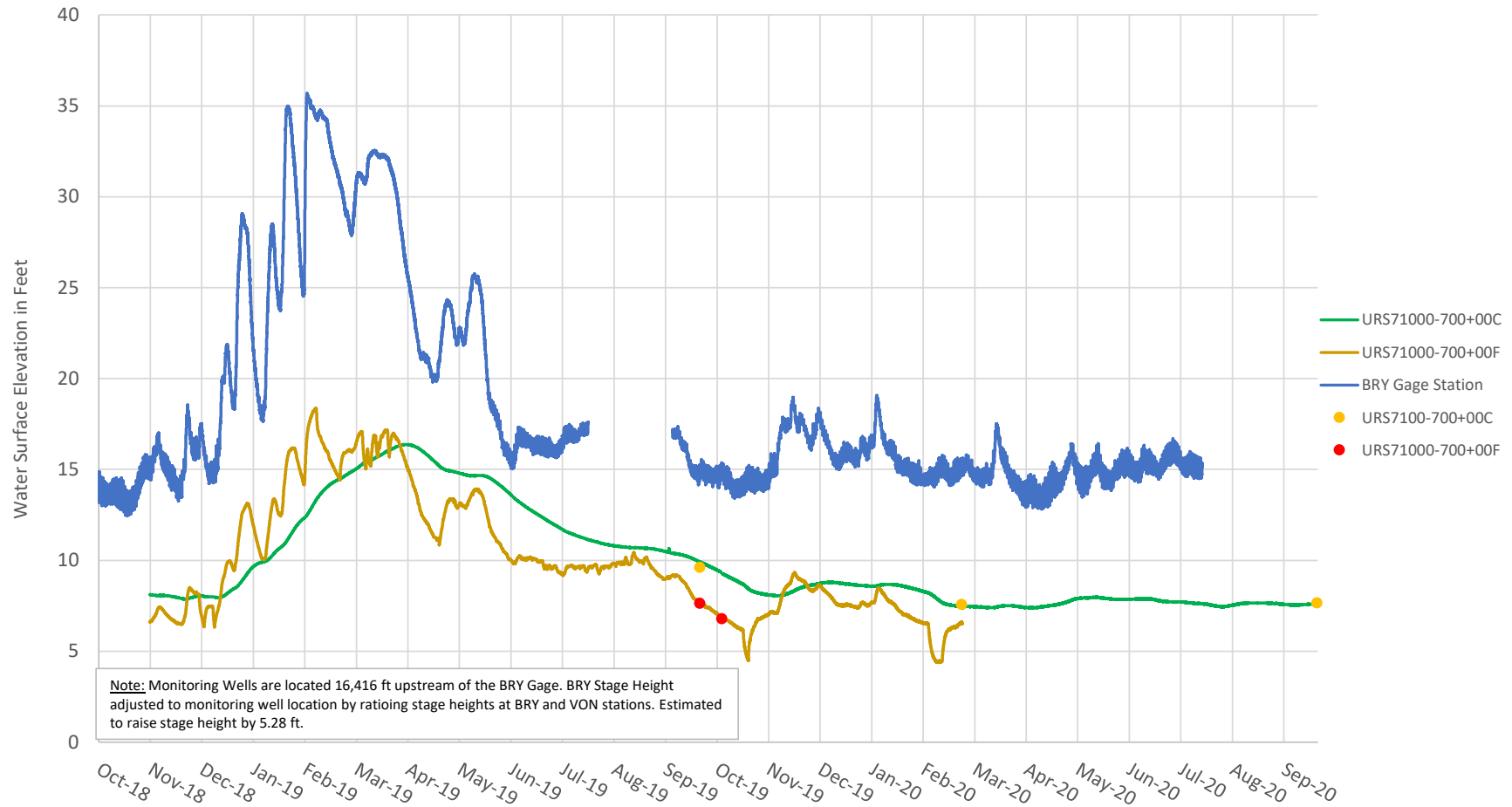
Surface Water Groundwater Interaction - Bear River
RDMW-103, RDMW-104 Monitoring Wells and Bear River Stage Hydrographs



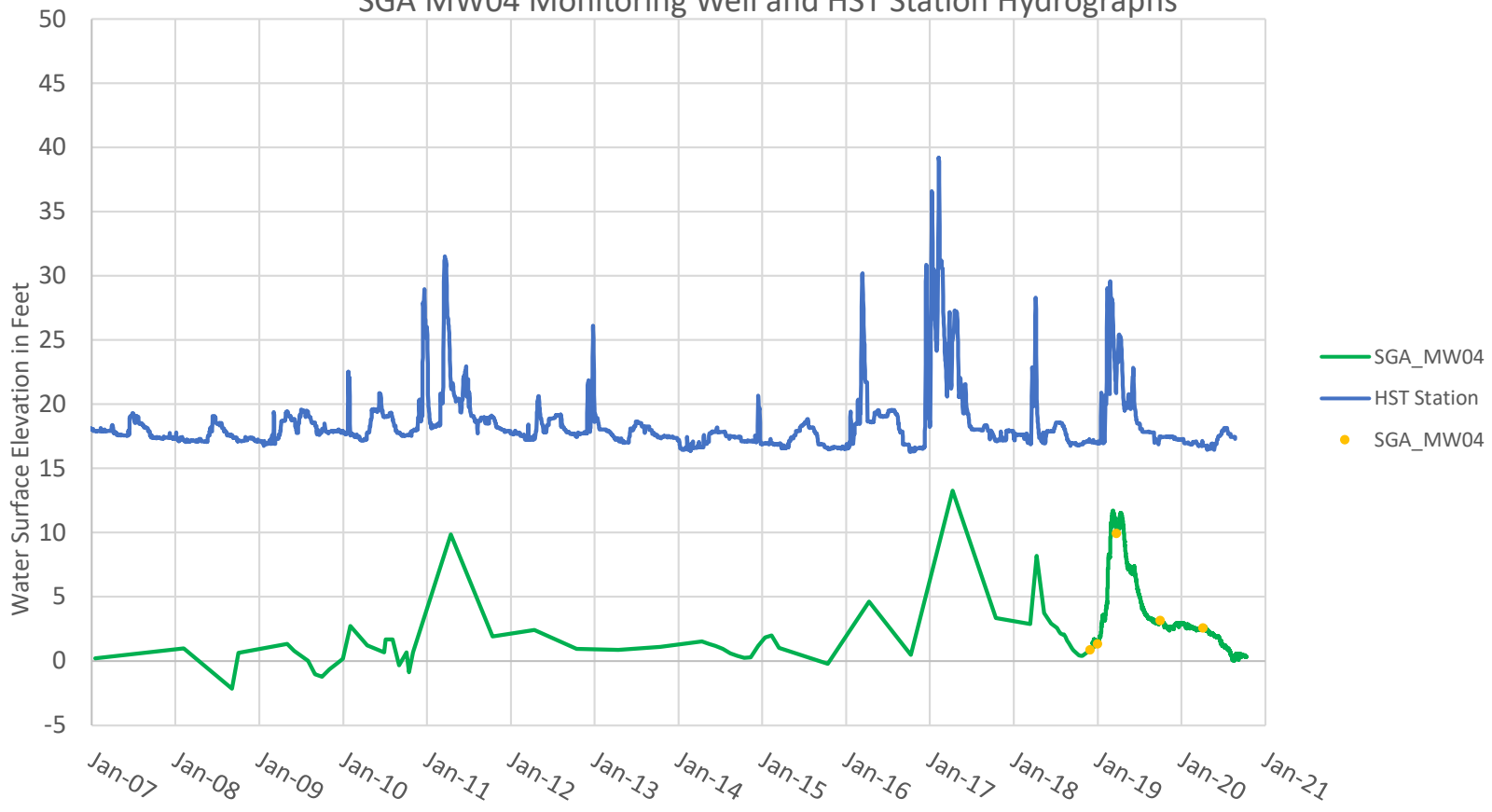
Surface Water/Groundwater Interaction MW-1 Nested Monitoring Well and BPG Station Hydrographs



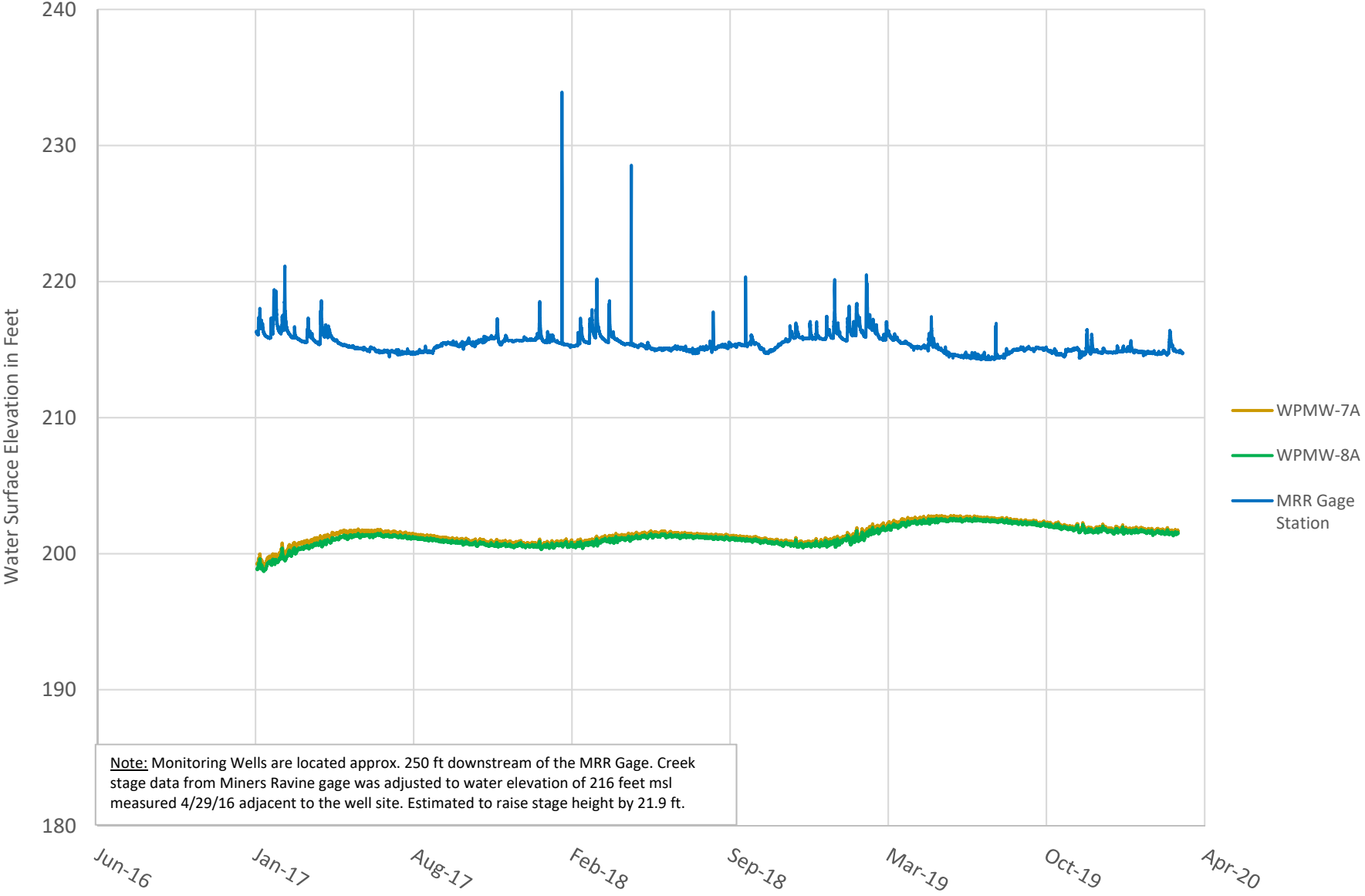
Surface Water/Groundwater Interaction - Feather River URS 71000-700 Monitoring Wells and Sacramento River Stage Hydrographs



Surface Water/Groundwater Intercation SGA MW04 Monitoring Well and HST Station Hydrographs

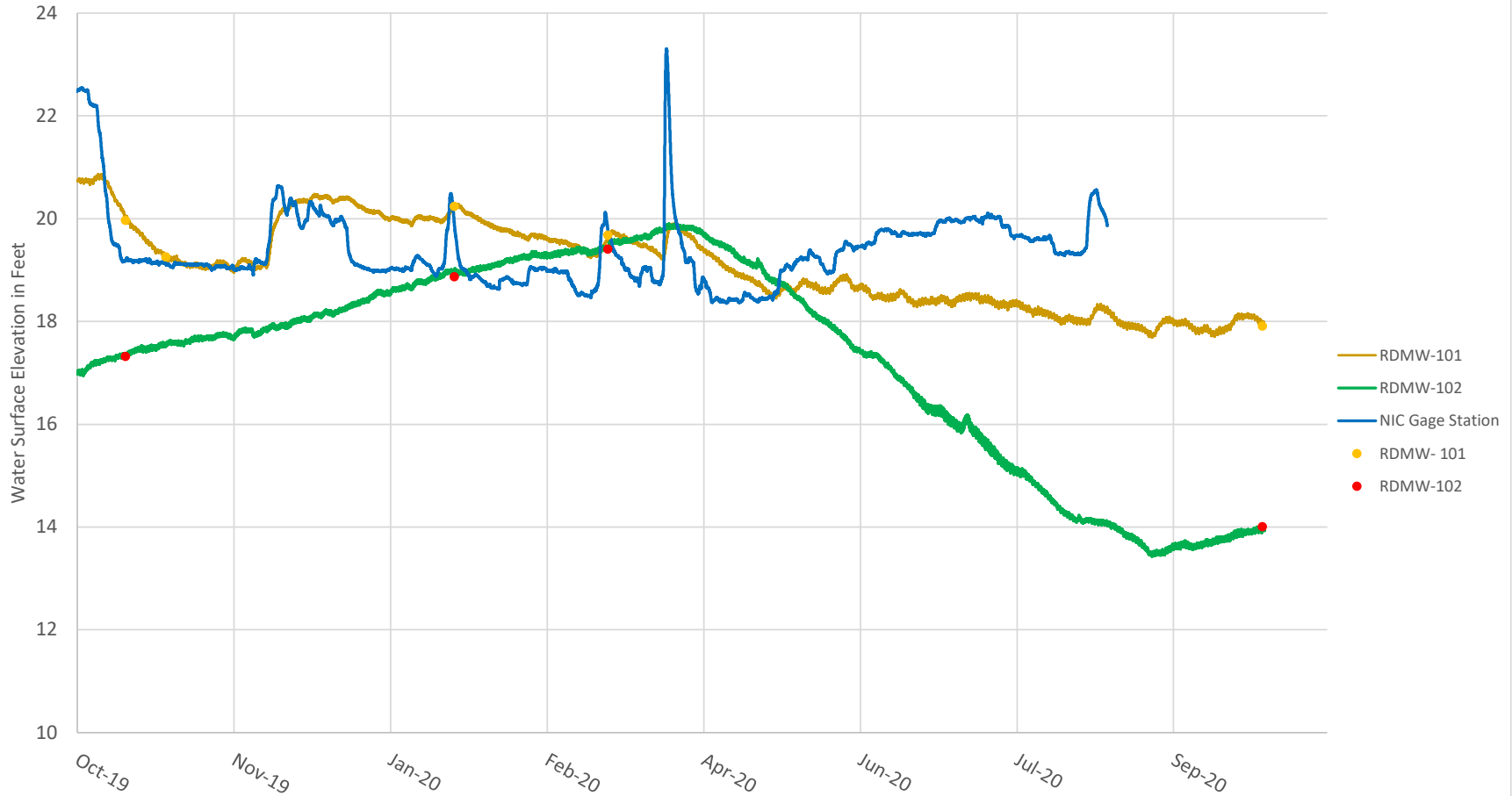


Surface Water/Groundwater Interaction WPMW-7A, WPMW-8A Monitoring Wells and MRR Station Hydrographs



Note: Monitoring Wells are located approx. 250 ft downstream of the MRR Gage. Creek stage data from Miners Ravine gage was adjusted to water elevation of 216 feet msl measured 4/29/16 adjacent to the well site. Estimated to raise stage height by 21.9 ft.

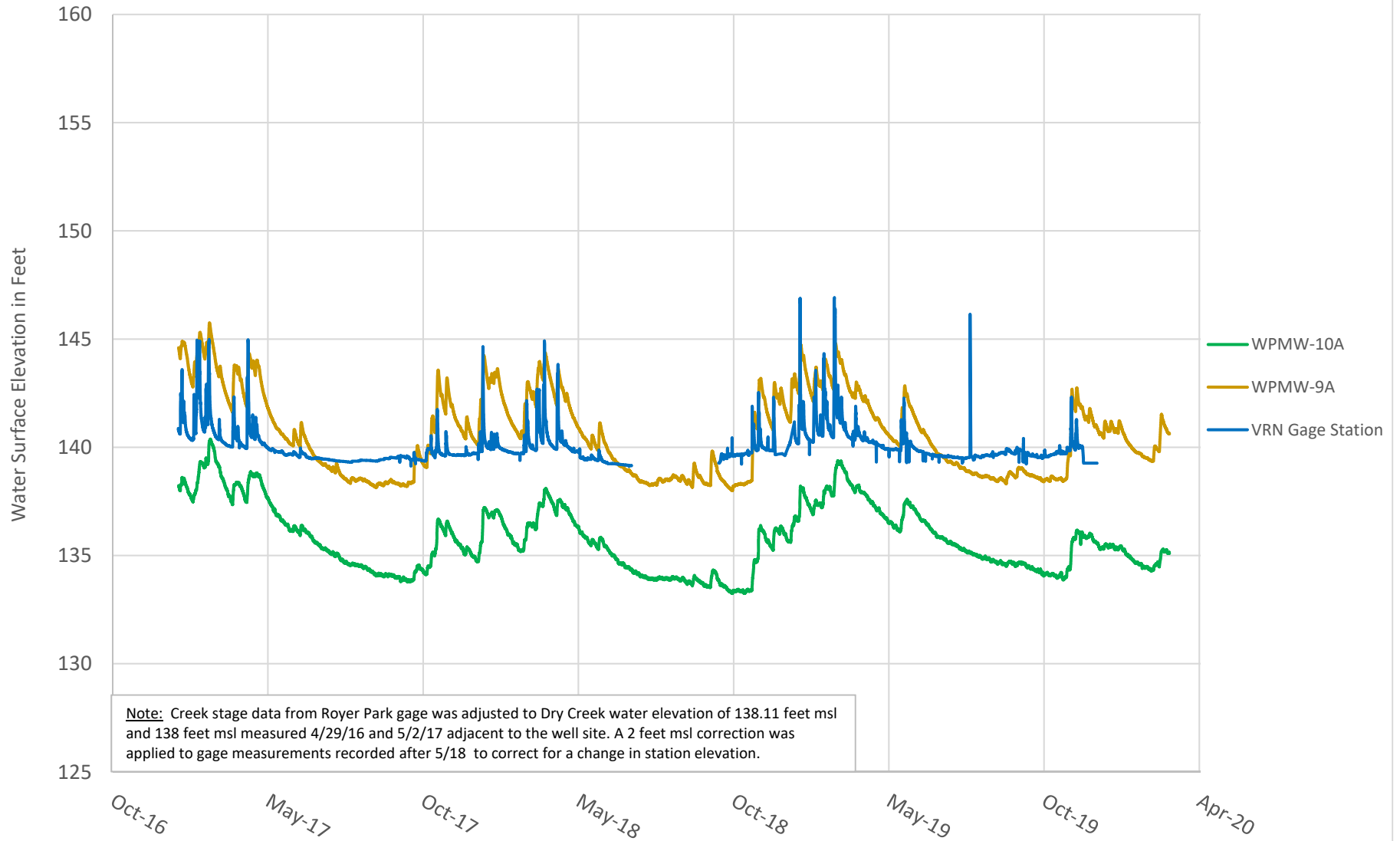
Surface Water/Groundwater Interaction - Feather River
RDMW-101, RDMW-102 Monitoring Wells and Feather River Stage Hydrographs



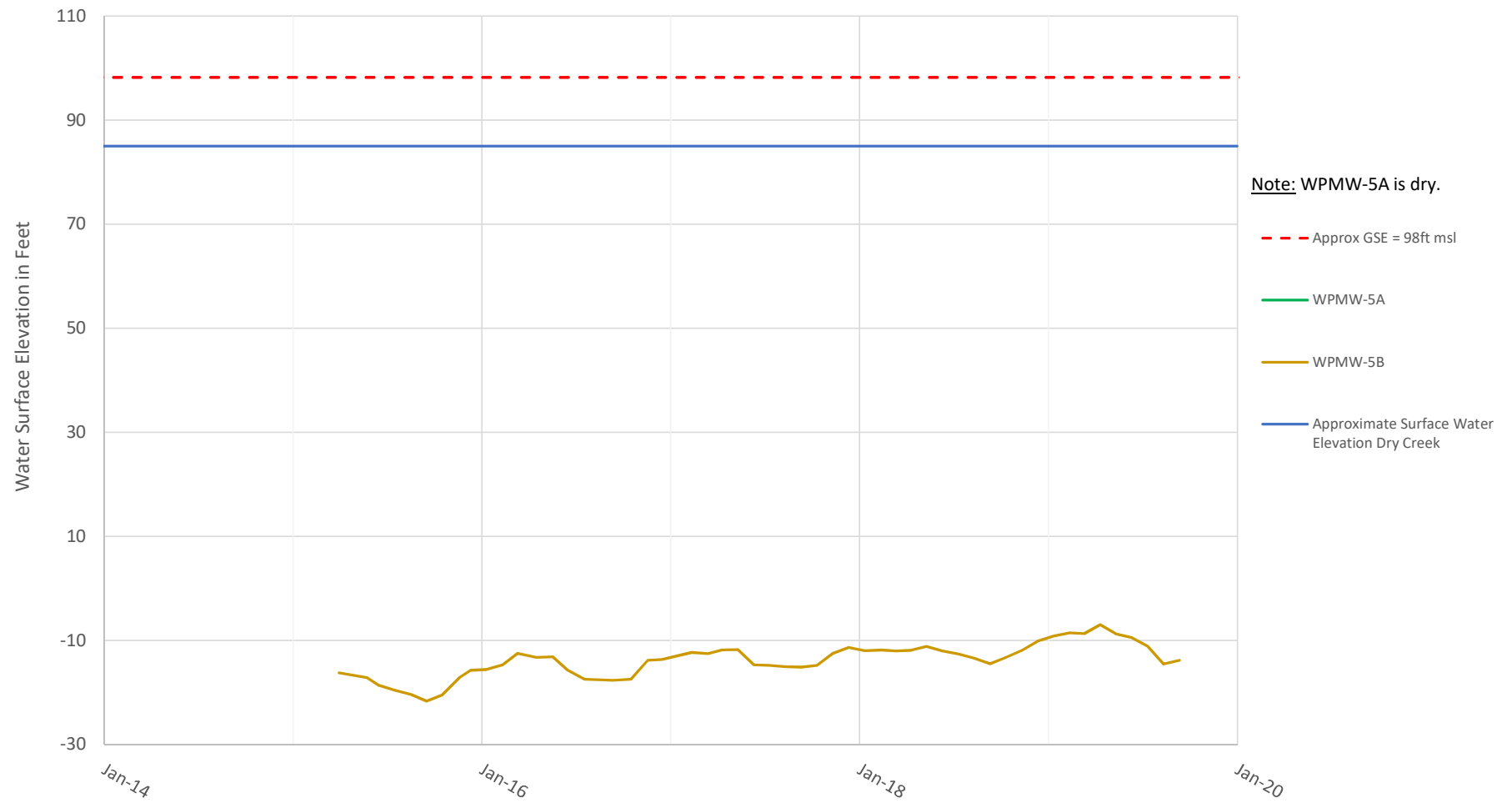
Surface Water/Groundwater Interaction - Sacramento River
SREL-1-27-F1 Monitoring Well and Sacramento River Stage Hydrographs



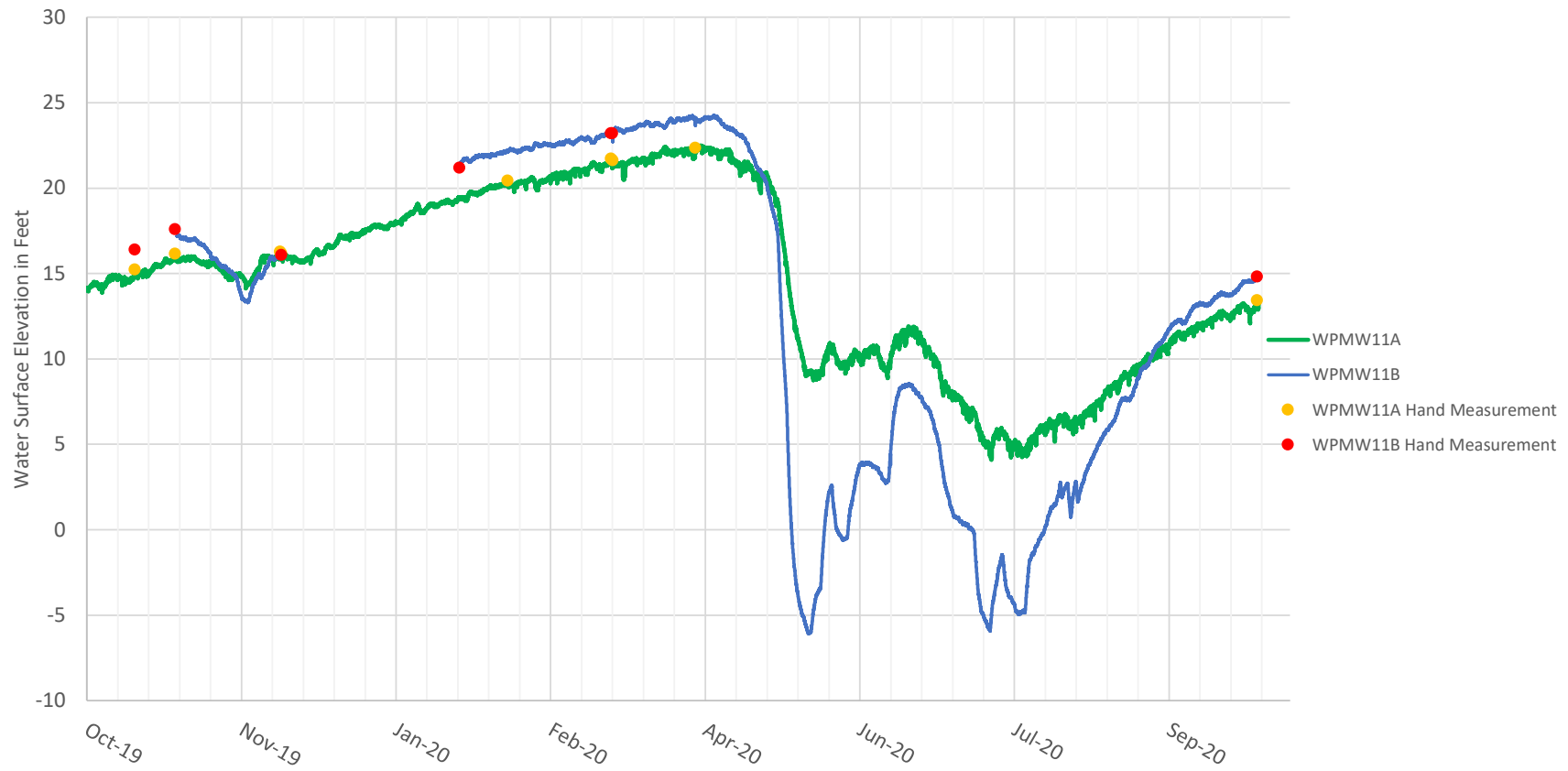
Surface Water/Groundwater Interaction WPMW-9A, WPMW-10A Monitoring Wells and VRN Station Hydrographs



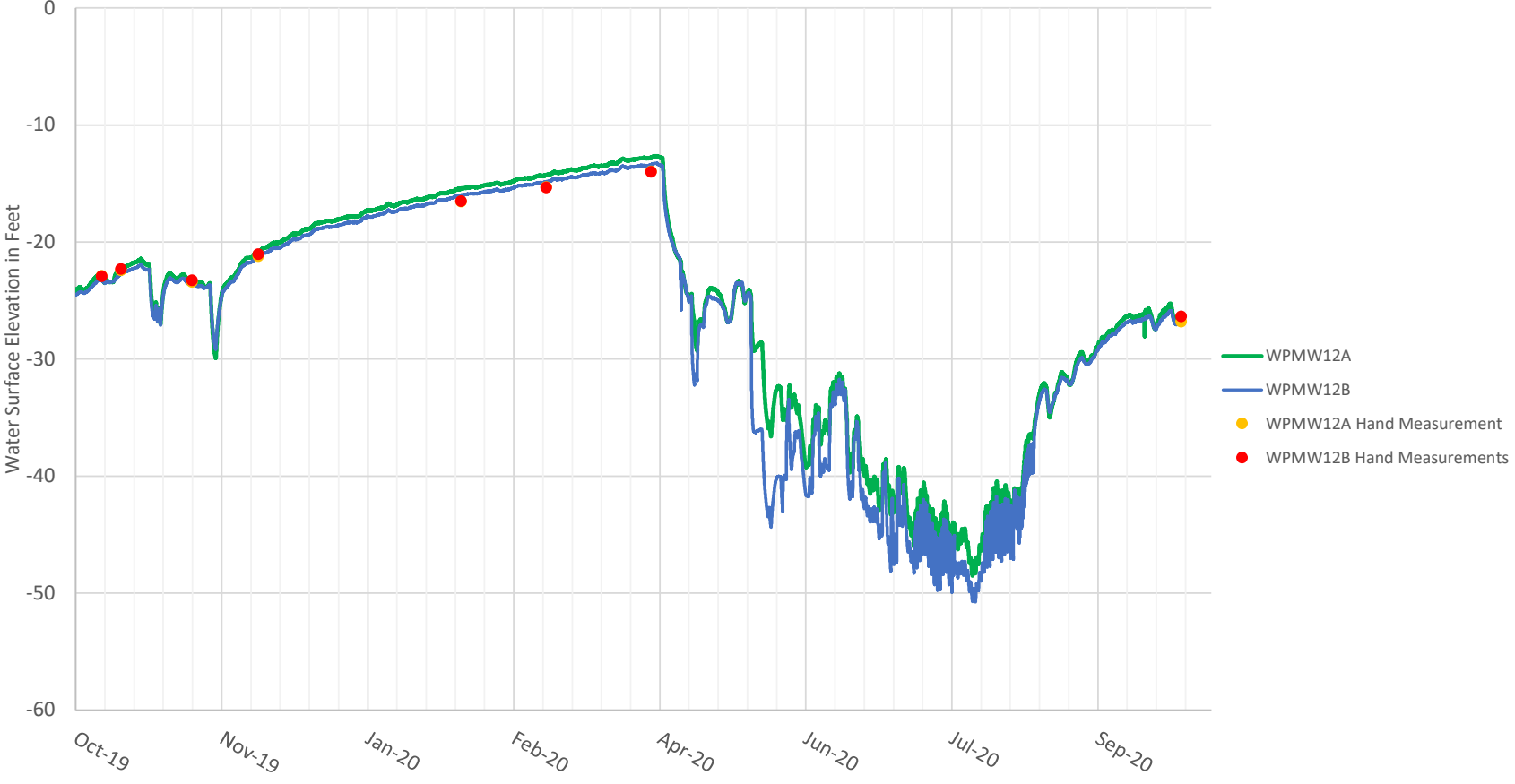
Surface Water/Groundwater Interaction WPMW-5A, WPMW-5B, and Dry Creek Hydrographs



WPMW-11 Nested Well Hydrograph



WPMW-12 Nested Monitoring Well





July 8, 2019
File No.: 20161893.005A

Mr. John Bassett, PE
SAFCA
1007 7th Street, 7th Floor
Sacramento, California 95814

**Subject: Piezometer Reading Summary, 2018-2019 Flood Season
Natomas Cross Canal
Sacramento and American Rivers
Sacramento and Sutter Counties, California**

Dear Mr. Bassett:

Kleinfelder is pleased to present this Piezometer Reading Summary Report for the 2018-2019 flood season based upon piezometer readings taken along the Natomas Cross Canal South Levee (NCCSL), Sacramento River East Levee (SREL), and American River North Levee (ARNL) see Figure 1-1, located in Sacramento and Sutter Counties, California. This report provides groundwater level data at specific locations along the NCCSL, SREL, and ARNL and a compilation of piezometer readings from a series of measurements completed during the 2018-2019 flood season. The purpose of this report is to present the measurements taken in piezometers installed by Kleinfelder and previously installed by others.

Piezometer locations are shown on Figures 2-1 through 2-9. Plots of piezometer readings showing groundwater elevation, approximate piezometer station, location, and levee improvement are shown on Figures 3-1 through 3-39. The stage of the Sacramento and American rivers, as appropriate, are shown on the piezometer reading plots along with the referenced gauge station.

BACKGROUND

Piezometers have been installed by Kleinfelder and others between approximately 2001 and 2009. Elevation references in this report are in feet and are based on the North American Vertical Datum of 1988 (NAVD88). Elevations may be converted to the previously used National Geodetic Vertical Datum of 1929 (NGVD29) by using the conversion factor Elevation 0 NGVD29 = Elevation +2.28 NAVD88 (Psomas 2009).

Kleinfelder published a report summarizing groundwater levels and piezometer readings taken between December 2017 and April 2018 for the 2017-2018 flood season entitled "Piezometer Reading Summary, 2017-2018 Flood Season, Natomas Cross Canal, Sacramento and American Rivers, Sacramento and Sutter Counties, California," dated June 11, 2018.

Kleinfelder previously published a report summarizing groundwater levels and piezometer readings taken between November 2016 and June 2017 for the 2016-2017 flood season for the Natomas Cross Canals entitled "Piezometer Reading Summary, 2016-2017 Flood Season, Natomas Cross Canals, Sacramento and American Rivers, Sacramento and Sutter Counties, California," dated February 22, 2018.

Kleinfelder published a report summarizing groundwater levels and piezometer readings taken in March 2016 for the 2015-2016 flood season for the Natomas Cross Canals entitled “Piezometer Reading Summary, 2015-2016 Flood Season, Natomas Cross Canals, Sacramento and American Rivers, Sacramento and Sutter Counties, California,” dated December 22, 2016.

Kleinfelder published a report summarizing groundwater levels and piezometer readings taken between October 2011 and April 2016 for the Natomas Cross Canal entitled “Groundwater Level Data Report, Natomas Cross Canal South Levee, Natomas Levee Improvement Program, Sutter County, California,” dated August 8, 2016.

Kleinfelder published a report summarizing groundwater levels and piezometer readings taken between May 2009 and August 2011 for the subject project titled “Groundwater Level Data Report, Natomas Cross Canal South Levee, Natomas Levee Improvement Program, Sutter County, California,” dated August 25, 2011.

Piezometers are read based on the following table.

Table 1: Current RD1000 Levee Patrol Criteria and Activation WSE for Piezometer Reading ³

Locations	Stage Forecast	RD1000 Patrol Frequency Interval	Comments
American River / NEMDC / Sacramento River (downstream of Sacramento Weir)		24-48 hours	Activation WSE at I Street Gage for Piezometer Readings El. 15 (NAVD88) Reading intervals twice a week as the river is rising or falling between El. 15 and 24.3 (NAVD88). Every other day readings at WSE above El. 24.3 (NAVD88)
	I Street 25.5 ¹	6 hours	
	I Street 27.3 ¹	3 hours	
	I Street 29.3 ¹	2 hours	
	I Street 29.8 ¹	1 hour	
	I Street 30.8 ¹	30 minutes	
Sacramento River (upstream of Sacramento Weir) / NCC / PGCC		24-48 hours	Activation WSE at Verona Gage for Piezometer Readings El. 27 (NAVD88) El. 27.7 (USED) Reading intervals twice a week as the river is rising or falling between El. 27.7 and 31 (USED) [El. 27 and 30.3 NAVD88]. Every other day readings at WSE above El. 31 (USED) [El. 30.3 NAVD88]
	I Street 27.3 ¹ and/or Verona 32.0 ²	6 hours	
	I Street 29.3 ¹ and/or Verona 37.0 (36.3) ²	3 hours	
	I Street 31.3 ¹ and/or Verona 40.0 (39.3) ²	2 hours	
	I Street 33.3 ¹ and/or Verona 41.0 (40.3) ²	1 hour	
	I Street 34.3 ¹ and/or Verona 42.0 (41.3) ²	30 minutes	

Notes:

¹ WSEs were converted to elevation at I Street Gaging Station, NAVD88, in feet.

² WSEs were converted to elevation at Verona Gaging Station, USED, in feet with a conversion to NAVD88 provided in parenthesis.

³ The water surface elevations and levee patrol frequencies included in this table are used as guidelines for levee patrol staffing and flood fight readiness. Actual patrol frequency will be based on site specific observed conditions. Any signs of levee distress including, but not limited to, seepage carrying soil material, boils, sloughing, or erosion should be addressed with more frequent patrols and/or flood fight activities as appropriate.

OBSERVATIONS

Recent piezometer readings were taken between January and April 2019 during periods of high water levels in the Natomas Cross Canal, Sacramento River, and American River. Piezometer readings from this period are graphically shown on Figures 3-1 through 3-39. These readings were made to record the response of groundwater levels along the Natomas Cross Canal, Sacramento River, and American River to the fluctuation in these bodies of water. Tables 2, 3, and 4 summarize the piezometer readings located along the NCCSL, SREL, and ARNL, respectively. All elevations provided are referenced to NAVD88. Table 5 summarizes the name, station, and figure showing each of the piezometers.

**Table 2: Natomas Cross Canal South Levee
Piezometer Groundwater Surface Elevations**

Date	NCC-3-T1 El. +32.4	NCC-21-C1 El. +49.1	NCC-21-F1 El. +21.5	NCC-21-R1 El. +45.2		
1/22/19	15.1	19.4	18.9	25.2		
1/25/19	20.4	19.2	18.7	23.7		
2/5/19	21.0	19.4	19.1	23.9		
2/8/19	21.8	19.7	19.2	25.8		
2/15/19	24.0	20.4	19.8	29.6		
2/18/19	24.9	20.5	19.8	30.8		
2/20/19	25.2	20.4	19.7	29.6		
2/22/19	24.9	20.1	19.4	27.0		
2/27/19	25.2	20.7	20.5	29.6		
3/1/19	-- ²	20.9	20.1	31.7		
3/4/19	26.0	21.0	20.1	31.8		
3/6/19	26.2	21.2	20.6	31.6		
3/8/19	26.2	21.6	20.2	31.9		
3/11/19	26.2	20.9	20.0	31.5		
3/13/19	26.0	20.7	19.8	31.0		
3/15/19	26.1	20.6	19.8	30.5		
3/19/19	26.0	20.5	19.7	29.6		
3/22/19	25.7	20.4	19.6	28.2		
3/26/19	25.8	20.5	19.9	27.2		
3/29/19	26.0	20.9	20.2	30.1		

**Table 2: Natomas Cross Canal South Levee
Piezometer Groundwater Surface Elevations**

Date	NCC-3-T1 El. +32.4	NCC-21-C1 El. +49.1	NCC-21-F1 El. +21.5	NCC-21-R1 El. +45.2		
4/1/19	26.1	20.8	20.0	30.0		
4/8/19	26.1	20.8	19.9	30.6		
4/10/19	26.1	20.7	19.8	30.4		
4/12/19	26.1	20.7	19.8	30.9		
4/16/19	25.6	20.4	19.6	30.2		
4/19/19	25.8	20.3	19.5	29.6		
4/22/19	25.4	20.1	19.2	28.1		
4/25/19	24.9	19.8	19.1	26.0		
Date	NCC-53-T1 El. +27.1	NCC-56-T1 El. +28.3	NCC-58-T1 El. +33.2	NCC-61-T1 El. +28.1	NCC-63-T1 El. +26.4	
1/22/19	18.9	17.7	19.4	19.2	18.5	
1/25/19	18.7	17.5	19.1	19.0	18.4	
2/5/19	18.8	17.5	18.8	19.0	18.5	
2/8/19	19.1	17.8	19.5	19.4	18.7	
2/15/19	20.0	18.6	20.3	20.4	19.6	
2/18/19	20.0	18.5	20.7	20.6	19.5	
2/20/19	19.9	18.4	20.7	20.4	19.4	
2/22/19	19.5	18.1	20.0	19.9	19.2	
2/27/19	18.7	19.6	19.9	20.9	20.1	
3/1/19	20.5	19.0	21.4	21.2	20.1	
3/4/19	20.6	18.9	21.5	21.2	20.0	
3/6/19	20.8	19.3	21.7	21.3	20.2	
3/8/19	20.6	19.0	21.8	21.4	20.2	
3/11/19	20.3	18.6	21.4	21.0	19.7	
3/13/19	20.1	18.5	21.2	20.7	19.5	
3/15/19	-- ²	18.5	21.1	20.6	19.4	
3/19/19	19.8	18.3	-- ²	20.3	19.2	
3/22/19	19.6	18.1	20.4	20.0	-- ²	
3/26/19	19.8	18.3	-- ²	20.0	19.2	
3/29/19	20.2	18.6	-- ²	20.5	19.6	
4/1/19	-- ²	18.5	20.9	20.5	19.5	
4/8/19	19.9	18.4	20.8	20.4	19.2	
4/10/19	19.8	18.3	20.8	20.3	19.1	
4/12/19	20.3	18.3	20.8	20.2	19.1	
4/16/19	19.5	18.2	20.6	20.0	18.9	
4/19/19	19.5	18.2	20.6	20.0	18.9	
4/22/19	19.2	17.9	20.2	19.6	18.6	

**Table 2: Natomas Cross Canal South Levee
Piezometer Groundwater Surface Elevations**

Date	NCC-53-T1 El. +27.1	NCC-56-T1 El. +28.3	NCC-58-T1 El. +33.2	NCC-61-T1 El. +28.1	NCC-63-T1 El. +26.4
4/25/19	19.0	17.7	19.6	19.2	18.5
Date	NCC-116-T1 El. +26.1	NCC-116-C1 El. +49.0	NCC-116-C2 El. +49.1	NCC-118-T1 El. +26.3	NCC-121-T1 El. +32.3
1/22/19	21.4	21.8	-- ⁵	21.9	22.5
1/25/19	21.2	21.6	-- ⁵	21.5	22.0
2/5/19	20.5	20.9	-- ⁵	21.2	22.0
2/8/19	21.2	21.4	-- ⁵	21.6	22.3
2/15/19	21.8	22.2	-- ⁵	22.5	23.4
2/18/19	22.3	22.7	-- ⁵	22.6	23.4
2/20/19	22.4	22.8	-- ⁵	22.5	23.2
2/22/19	22.1	22.5	-- ⁵	22.2	22.7
2/27/19	22.3	22.7	-- ⁵	23.0	24.0
3/1/19	22.8	23.1	-- ⁵	23.2	24.0
3/4/19	23.1	23.6	-- ⁵	23.3	24.0
3/6/19	23.3	23.7	-- ⁵	23.4	24.1
3/8/19	23.3	23.7	-- ⁵	23.5	24.2
3/11/19	23.3	23.7	-- ⁵	23.3	24.0
3/13/19	23.1	23.6	-- ⁵	23.2	23.8
3/15/19	24.1	23.5	-- ⁵	23.1	23.7
3/19/19	22.9	23.3	-- ⁵	23.0	23.6
3/22/19	22.7	23.2	-- ⁵	22.8	23.4
3/26/19	22.6	23.0	-- ⁵	22.9	23.4
3/29/19	22.9	23.4	-- ⁵	23.3	23.9
4/1/19	23.1	23.4	-- ⁵	23.5	24.0
4/8/19	22.6	23.0	-- ⁵	23.8	24.6
4/10/19	22.2	22.5	-- ⁵	23.3	24.1
4/12/19	22.0	22.3	-- ⁵	23.4	24.3
4/16/19	22.1	22.4	-- ⁵	23.1	23.9
4/19/19	22.4	22.9	-- ⁵	23.5	24.2
4/22/19	22.5	23.0	-- ⁵	23.2	23.8
4/25/19	22.4	22.8	-- ⁵	22.9	23.5

**Table 2: Natomas Cross Canal South Levee
Piezometer Groundwater Surface Elevations**

Date	NCC-123-T1 El. +29.4	NCC-125-T1 El. +29.7	NCC-135-C1 El. +49.1	NCC-135-C2 El. +48.8		
1/22/19	22.2	22.6	23.8	23.8		
1/25/19	21.9	22.4	23.6	23.6		
2/5/19	22.0	22.6	23.7	23.7		
2/8/19	22.0	22.4	23.5	23.5		
2/15/19	22.9	23.2	24.1	24.2		
2/18/19	22.6	22.9	23.8	23.9		
2/20/19	22.5	22.7	23.6	23.8		
2/22/19	22.3	22.5	23.5	22.5		
2/27/19	23.4	23.8	24.6	24.4		
3/1/19	23.2	23.4	24.3	24.4		
3/4/19	23.2	23.4	24.3	24.4		
3/6/19	23.4	23.8	24.6	24.6		
3/8/19	23.3	23.5	24.4	24.5		
3/11/19	23.1	23.2	24.2	24.2		
3/13/19	23.0	23.2	24.1	24.1		
3/15/19	23.0	23.1	24.0	24.0		
3/19/19	22.9	23.0	23.8	23.9		
3/22/19	22.8	23.0	23.8	23.8		
3/26/19	23.0	23.2	23.7	24.0		
3/29/19	23.3	23.4	24.2	24.2		
4/1/19	23.3	23.4	23.9	24.0		
4/8/19	24.0	24.1	24.4	24.6		
4/10/19	23.6	23.9	24.6	24.6		
4/12/19	23.8	24.0	24.5	24.7		
4/16/19	23.4	23.7	24.5	24.5		
4/19/19	23.7	24.0	24.7	24.7		
4/22/19	23.4	23.6	24.4	24.4		
4/25/19	23.2	23.5	24.2	24.2		
Date	NCC-183-C1 El. +49.0	NCC-183-T1 El. +29.2	NCC-221-C1 El. +49.2	NCC-221-C2 El. +49.1	NCC-221-T1 El. +30.6	
1/22/19	23.1	-- ²	25.3	28.5	24.9	
1/25/19	22.9	23.3	25.0	25.7	24.8	
2/5/19	23.0	23.4	24.8	25.7	23.8	
2/8/19	23.1	23.5	25.7	27.6	24.6	
2/15/19	24.0	24.4	26.7	31.3	26.3	
2/18/19	23.9	24.4	27.4	31.9	27.0	
2/20/19	23.7	22.2	27.3	30.6	27.0	

**Table 2: Natomas Cross Canal South Levee
Piezometer Groundwater Surface Elevations**

Date	NCC-183-C1 El. +49.0	NCC-183-T1 El. +29.2	NCC-221-C1 El. +49.2	NCC-221-C2 El. +49.1	NCC-221-T1 El. +30.6
2/22/19	23.5	23.8	26.4	27.9	26.3
2/27/19	24.1	24.7	26.8	30.2	25.7
3/1/19	24.3	24.8	28.0	32.8	27.4
3/4/19	24.2	24.7	28.1	32.7	27.8
3/6/19	24.3	24.8	28.3	32.3	27.8
3/8/19	24.3	24.7	28.2	32.7	27.9
3/11/19	24.0	24.4	28.0	32.3	27.7
3/13/19	23.8	24.2	27.7	31.8	27.6
3/15/19	23.7	24.2	27.5	31.3	27.4
3/19/19	23.4	-- ²	27.3	30.5	27.2
3/22/19	23.6	23.7	26.8	29.0	26.9
3/26/19	23.3	23.8	26.7	27.9	26.7
3/29/19	23.7	24.1	27.4	30.8	26.8
4/1/19	23.6	24.1	27.6	30.9	26.8
4/8/19	23.4	23.9	27.3	31.4	26.9
4/10/19	23.3	23.8	27.2	31.3	26.9
4/12/19	23.2	23.7	27.3	31.2	26.8
4/16/19	23.1	23.6	26.8	31.0	26.7
4/19/19	23.1	23.6	26.6	30.5	26.5
4/22/19	23.1	23.5	26.1	29.0	26.2
4/25/19	22.8	23.2	25.4	26.8	25.3
Date	NCC-223-C1 El. +49.5	NCC-223-T1 El. +28.1	NCC-228-F1 El. +31.5	NCC-228-T1 El. +30.5	NCC-228-C1 El. +46.4
1/22/19	28.5	22.4	25.8	26.5	27.4
1/25/19	25.4	21.8	25.0	25.2	25.4
2/5/19	25.6	20.8	24.4	24.7	25.2
2/8/19	27.3	21.5	26.0	26.4	26.9
2/15/19	31.6	23.7	27.5	28.5	29.9
2/18/19	31.9	24.0	28.5	29.4	30.6
2/20/19	30.5	23.9	28.2	28.9	29.6
2/22/19	27.6	23.5	26.9	27.6	27.5
2/27/19	30.4	23.0	27.5	28.4	29.4
3/1/19	33.0	23.6	29.3	30.1	31.5
3/4/19	32.8	24.0	29.4	30.1	31.5
3/6/19	32.4	24.4	29.5	30.1	31.2
3/8/19	32.8	24.5	29.5	30.1	31.6
3/11/19	32.4	24.5	29.3	30.1	31.2

**Table 2: Natomas Cross Canal South Levee
Piezometer Groundwater Surface Elevations**

Date	NCC-223-C1 El. +49.5	NCC-223-T1 El. +28.1	NCC-228-F1 El. +31.5	NCC-228-T1 El. +30.5	NCC-228-C1 El. +46.0	
3/13/19	31.9	24.4	28.9	29.8	30.7	
3/15/19	31.4	24.3	28.7	29.4	30.4	
3/19/19	30.4	24.1	28.3	29.0	29.7	
3/22/19	28.9	23.9	27.5	27.9	28.5	
3/26/19	27.7	23.6	27.2	27.4	27.7	
3/29/19	31.0	23.7	28.4	-- ²	30.0	
4/1/19	30.9	23.7	-- ²	29.2	30.1	
4/8/19	31.5	24.1	28.6	29.3	30.4	
4/10/19	31.4	24.1	28.4	29.2	30.2	
4/12/19	31.4	24.1	28.5	29.2	30.2	
4/16/19	31.2	24.1	28.1	29.0	30.0	
4/19/19	30.6	23.8	27.9	28.6	29.5	
4/22/19	28.9	23.4	27.0	27.6	28.2	
4/25/19	26.8	22.6	26.0	26.1	26.4	
Date	NCC-231-T1 El. +31.1	NCC-233-T1 El. +31.9	NCC-240-C1 El. +49.1	NCC-240-C2 El. +49.3	NCC-240-T1 El. +31.4	NCC-240-F1 El. +32.4
1/22/19	25.8	25.4	24.4	29.2	24.4	24.4
1/25/19	25.1	25.0	24.5	25.9	24.5	24.5
2/5/19	24.5	24.2	24.0	26.8	24.0	24.0
2/8/19	26.0	25.9	25.4	27.9	25.3	25.3
2/15/19	27.6	27.0	26.2	32.7	26.2	26.1
2/18/19	28.7	28.2	27.4	32.7	27.4	27.4
2/20/19	28.4	28.2	27.7	31.2	27.6	27.6
2/22/19	26.9	27.1	27.0	28.2	26.9	26.9
2/27/19	27.7	27.4	27.2	31.6	27.1	27.1
3/1/19	29.6	29.2	28.5	33.8	28.4	28.4
3/4/19	29.7	29.4	28.9	33.5	28.9	28.9
3/6/19	29.8	29.5	29.2	33.1	29.2	29.0
3/8/19	29.9	29.6	29.2	33.6	29.2	29.2
3/11/19	29.6	29.3	29.1	33.1	29.1	29.1
3/13/19	29.3	29.0	28.8	32.6	28.8	28.8
3/15/19	29.0	28.8	28.6	32.0	28.6	28.6
3/19/19	28.6	28.5	28.4	31.1	28.4	28.4
3/22/19	27.9	27.8	-- ⁷	-- ⁷	27.9	27.9
3/26/19	27.5	27.7	27.9	28.3	27.8	27.8
3/29/19	28.7	28.4	28.4	31.6	29.0	28.3
4/1/19	29.0	28.8	28.8	31.5	28.8	28.8

**Table 2: Natomas Cross Canal South Levee
Piezometer Groundwater Surface Elevations**

Date	NCC-231-T1 El. +31.1	NCC-233-T1 El. +31.9	NCC-240-C1 El. +49.1	NCC-240-C2 El. +49.3	NCC-240-T1 El. +31.4	NCC-240-F1 El. +32.4
4/8/19	28.9	28.6	28.4	32.1	28.4	28.4
4/10/19	28.8	28.5	28.3	32.0	28.3	28.3
4/12/19	28.8	28.6	28.4	31.9	28.4	28.4
4/16/19	28.4	28.1	27.9	31.7	27.9	27.9
4/19/19	28.2	28.0	27.8	31.1	27.7	27.8
4/22/19	27.3	27.2	27.2	29.4	27.2	27.2
4/25/19	26.3	26.3	26.6	27.0	26.6	26.6

Notes:

1. "El." = ground surface elevation at piezometer location.
2. "--" = Not measured.
3. Groundwater elevation in feet (NAVD88)
4. Piezometer water levels measured at top of casing
5. Well is dry.
6. Well is flooded.
7. Erroneous data point removed

**Table 3: Sacramento River East Levee
Piezometer Groundwater Surface Elevations**

Date	SREL 1-27-F1 El. +27.4	SREL-27-R1 El. +44.9	SREL1-27-C1 El. +48.2	SREL1-27-C2 El. +48.7	SREL1-27-T1 El. +32.2
1/22/19	15.5	24.1	23.6	-- ⁵	23.3
1/25/19	19.7	23.7	23.6	-- ⁵	23.3
2/5/19	19.5	22.8	22.7	-- ⁵	22.8
2/8/19	20.5	24.9	24.5	-- ⁵	24.2
2/15/19	-- ⁶	26.5	25.7	-- ⁵	25.6
2/18/19	-- ⁶	28.5	27.7	-- ⁵	27.2
2/20/19	23.7	28.4	27.9	-- ⁵	27.4
2/22/19	23.0	27.2	27.0	-- ⁵	26.6
2/27/19	-- ⁶	27.2	25.9	-- ⁵	27.0
3/1/19	-- ⁶	32.8	29.1	-- ⁵	28.6
3/4/19	-- ⁶	30.7	30.1	-- ⁵	29.3
3/6/19	-- ⁶	30.9	30.3	-- ⁵	29.6
3/8/19	-- ⁶	31.2	30.6	-- ⁵	29.7
3/11/19	-- ⁶	31.2	30.5	-- ⁵	29.7
3/13/19	-- ⁶	30.8	30.4	-- ⁵	29.5
3/15/19	-- ⁶	30.5	30.1	-- ⁵	29.4
3/19/19	-- ⁶	30.0	29.5	-- ⁵	29.1
3/22/19	-- ⁶	29.5	29.0	-- ⁵	28.5
3/26/19	-- ⁶	28.4	28.3	-- ⁵	28.2
3/29/19	-- ⁶	29.7	29.2	-- ⁵	28.9
4/1/19	-- ⁶	30.1	29.6	-- ⁵	29.1
4/8/19	-- ⁶	30.4	30.0	-- ⁵	29.4
4/10/19	-- ⁶	30.4	30.0	-- ⁵	29.3
4/12/19	-- ⁶	30.4	30.0	-- ⁵	29.3
4/16/19	-- ⁶	29.0	29.7	-- ⁵	29.0
4/19/19	-- ⁶	29.8	-- ²	-- ⁵	28.9
4/22/19	-- ⁶	28.8	28.7	-- ⁵	28.0
4/25/19	-- ⁶	27.4	27.6	-- ⁵	27.0
Date	SREL 1B-72-R1 El. +44.6	SREL 1B-84-R1 El. +44.2	SREL 1B-168- R2 El. +44.3	SREL 1B-195- R1 El. +43.0	
1/22/19	28.2	25.9	14.0	24.5	
1/25/19	25.1	24.8	16.5	21.9	

**Table 3: Sacramento River East Levee
Piezometer Groundwater Surface Elevations**

Date	SREL 1B-72-R1 El. +44.6	SREL 1B-84-R1 El. +44.2	SREL 1B-168- R2 El. +44.3	SREL 1B-195- R1 El. +43.0
2/5/19	25.2	23.2	17.4	22.2
2/8/19	27.1	26.2	18.7	23.6
2/15/19	30.5	28.1	20.7	27.3
2/18/19	32.0	30.0	30.0	27.4
2/20/19	30.8	29.8	29.3	26.5
2/22/19	28.0	27.9	28.4	24.3
2/27/19	29.2	-- ⁶	19.2	26.6
3/1/19	32.5	-- ⁶	18.2	28.3
3/4/19	33.0	32.1	31.8	28.2
3/6/19	32.7	32.3	32.0	27.9
3/8/19	33.1	32.6	32.4	28.2
3/11/19	32.8	-- ⁷	32.1	27.9
3/13/19	32.3	-- ⁷	31.7	27.5
3/15/19	31.8	-- ⁷	31.3	27.1
3/19/19	30.8	30.9	30.6	26.4
3/22/19	29.2	29.6	29.9	25.2
3/26/19	27.9	28.3	29.2	24.3
3/29/19	30.8	30.4	29.6	26.7
4/1/19	31.0	30.7	30.0	26.6
4/8/19	31.7	31.4	30.7	27.0
4/10/19	31.6	31.3	30.7	27.1
4/12/19	31.5	31.3	30.7	26.9
4/16/19	31.5	31.2	30.6	27.0
4/19/19	30.8	30.7	30.2	26.6
4/22/19	29.2	29.4	29.6	25.5
4/25/19	26.8	27.4	28.8	24.5
Date	I-5 Well El. +26.4	SREL 9-423-T1 El. +44.2		
1/22/19	12.2	14.1		
1/25/19	12.9	14.2		
2/5/19	13.4	15.0		
2/8/19	14.4	15.6		
2/15/19	16.9	17.4		
2/18/19	18.9	17.8		
2/20/19	19.8	17.9		

**Table 3: Sacramento River East Levee
Piezometer Groundwater Surface Elevations**

Date	I-5 Well El. +26.4	SREL 9-423-T1 El. +44.2			
2/22/19	19.9	17.6			
2/27/19	20.3	18.9			
3/1/19	21.5	19.3			
3/4/19	22.5	19.6			
3/6/19	23.6	20.0			
3/8/19	23.2	20.0			
3/11/19	23.0	19.8			
3/13/19	22.8	19.6			
3/15/19	22.7	19.5			
3/19/19	22.3	19.2			
3/22/19	21.8	18.9			
3/26/19	21.8	19.1			
3/29/19	22.0	19.5			
4/1/19	22.2	19.4			
4/8/19	22.2	19.4			
4/10/19	22.2	19.3			
4/12/19	22.2	19.4			
4/16/19	22.0	19.2			
4/19/19	21.8	19.0			
4/22/19	21.3	18.6			
4/25/19	20.6	--			
Date	DH-7-1 (shallow) El. +41.4	DH-7-1 (deep) El. +41.4	2F-01-05 El. +24.1	2F-01-15 El. +28.4	2F-01-15 El. +23.0
1/22/19	-- ⁵	-- ⁵	14.4	-- ⁸	16.3
1/25/19	-- ⁵	12.3	13.9	-- ⁸	14.5
2/5/19	-- ⁵	13.8	13.7	-- ⁸	14.6
2/8/19	-- ⁵	14.4	14.4	-- ⁸	16.2
2/15/19	-- ⁵	16.6	15.8	-- ⁸	20.4
2/18/19	-- ⁵	17.8	15.8	-- ⁸	20.6
2/20/19	-- ⁵	18.9	15.6	-- ⁸	19.4
2/22/19	-- ⁵	19.0	15.0	-- ⁸	18.5
2/27/19	-- ⁵	18.9	16.4	-- ⁸	20.9
3/1/19	-- ⁵	19.9	16.4	-- ⁸	21.6
3/4/19	-- ⁵	21.3	16.5	-- ⁸	21.2

**Table 3: Sacramento River East Levee
Piezometer Groundwater Surface Elevations**

Date	DH-7-1 (shallow) El. +41.4	DH-7-1 (deep) El. +41.4	2F-01-05 El. +24.1	2F-01-15 El. +28.4	2F-01-15 El. +23.0
3/6/19	-- ⁵	21.9	16.3	-- ⁸	21.2
3/8/19	23.2	22.2	16.1	-- ⁸	21.3
3/11/19	24.2	22.8	15.6	-- ⁸	21.0
3/13/19	24.6	23.1	15.9	-- ⁸	20.3
3/15/19	24.6	23.1	15.7	-- ⁸	19.7
3/19/19	24.3	22.9	15.4	-- ⁸	18.9
3/22/19	23.9	22.4	15.4	-- ⁸	14.4
3/26/19	23.4	22.3	15.5	-- ⁸	17.3
3/29/19	23.1	21.9	15.9	-- ⁸	19.2
4/1/19	23.3	22.3	15.9	-- ⁸	19.2
4/8/19	23.7	22.6	15.8	-- ⁸	20.0
4/10/19	23.8	22.8	15.2	-- ⁸	19.8
4/12/19	24.0	22.9	15.5	-- ⁸	19.8
4/16/19	24.0	22.8	15.5	-- ⁸	19.7
4/19/19	23.9	22.8	15.8	-- ⁸	19.2
4/22/19	23.6	22.4	15.5	-- ⁸	18.2
4/25/19	23.2	21.9	15.0	-- ⁸	16.7
Date	URS071000_ 700+00C El. +41.7	URS071000_ 700+00F El. +24.2	URS071000_ 700+00T El. +26.5		
1/22/19	10.7	12.6	12.4		
1/25/19	11.1	12.4	12.2		
2/5/19	11.6	11.4	11.1		
2/8/19	11.5	13.0	12.8		
2/15/19	12.6	14.7	14.6		
2/18/19	13.0	15.7	15.6		
2/20/19	13.4	15.8	15.7		
2/22/19	13.6	15.1	14.9		
2/27/19	14.0	15.9	15.7		
3/1/19	14.3	17.2	17.2		
3/4/19	14.9	18.1	17.9		
3/6/19	15.2	16.9	16.7		
3/8/19	15.3	16.6	16.2		

**Table 3: Sacramento River East Levee
Piezometer Groundwater Surface Elevations**

Date	URS071000_ 700+00C El. +41.7	URS071000_ 700+00F El. +24.2	URS071000_ 700+00T El. +26.5
3/11/19	15.6	15.5	15.6
3/13/19	15.7	15.1	15.2
3/15/19	15.8	14.7	14.7
3/19/19	16.0	-- ²	14.2
3/22/19	16.2	15.5	15.4
3/26/19	16.4	15.6	15.4
3/29/19	16.6	16.2	16.1
4/1/19	16.8	16.6	16.5
4/8/19	17.2	16.2	16.1
4/10/19	17.2	15.4	15.3
4/12/19	17.4	15.4	16.3
4/16/19	17.7	16.7	16.3
4/19/19	17.7	16.6	16.4
4/22/19	17.8	16.2	16.1
4/25/19	17.9	15.4	15.2

Notes:

1. "El." = ground surface elevation at piezometer location.
2. "--" = Not measured.
3. Groundwater elevation in feet (NAVD88)
4. Piezometer water levels measured at top of casing
5. Well is dry.
6. Well is flooded.
7. Well is buried.
8. Well not located.

**Table 4: American River North Levee
Piezometer Groundwater Surface Elevations**

Date	MW-1 El. +52.0	MW-2 El. +38.6
1/22/19	12.4	5.8
1/25/19	12.3	6.0
2/5/19	11.5	5.9
2/8/19	12.4	6.1
2/15/19	16.0	7.1
2/18/19	18.1	8.0
2/20/19	18.0	8.4
2/22/19	17.2	8.6
2/27/19	18.2	-- ⁶
3/1/19	19.5	-- ⁶
3/4/19	19.9	10.0
3/6/19	20.1	-- ⁶
3/8/19	20.3	10.4
3/11/19	20.5	10.8
3/13/19	19.9	11.0
3/15/19	19.4	11.0
3/19/19	18.4	10.9
3/22/19	17.6	10.7
3/26/19	16.7	10.5
3/29/19	16.9	10.4
4/1/19	17.2	10.6
4/8/19	18.3	10.9
4/10/19	18.5	11.0
4/12/19	18.7	11.1
4/16/19	18.7	11.2
4/19/19	18.3	11.3
4/22/19	17.8	11.2
4/25/19	17.2	11.0

Notes:

1. "El." = ground surface elevation at piezometer location.
2. "--" = Not measured.
3. Groundwater elevation in feet (NAVD88)
4. Piezometer water levels measured at top of casing
5. Well is dry.
6. Well is flooded.

Table 5: Summary of Piezometer Locations

Levee Segment	Approximate Station	Piezometer Name	Figure No.
NCC	3+00	NCC-3-T1	2-1
NCC	21+00	NCC-21-R1, NCC-21-C1, NCC-21-F1	2-1
NCC	53+00	NCC-53-T1	2-2
NCC	56+00	NCC-56-T1	2-2
NCC	58+00	NCC-58-T1	2-2
NCC	61+00	NCC-61-T1	2-2
NCC	63+00	NCC-63-T1	2-2
NCC	116+00	NCC-116-C1, NCC-116-C2, NCC-116-T1	2-3
NCC	118+00	NCC-118-T1	2-3
NCC	121+00	NCC-121-T1	2-3
NCC	123+00	NCC-123-T1	2-3
NCC	125+00	NCC-125-T1	2-3
NCC	135+00	NCC-135-C1, NCC-135-C2, NCC-135-F1	2-3
NCC	183+00	NCC-183-C1, NCC-183-T1	2-4
NCC	221+00	NCC-221-C1, NCC-221-C2, NCC-221-T1	2-4
NCC	223+00	NCC-223-C1, NCC-223-T1	2-4
NCC	228+00	NCC-228-C1, NCC-228-T1, NCC-228-F1	2-4
NCC	231+00	NCC-231-T1	2-4
NCC	233+00	NCC-233-T1	2-4
NCC	240+00	NCC-240-C1, NCC-240-C2, NCC-240-T1, NCC-240-F1	2-5
SREL	27+00	SREL 1-27-R1, SREL 1-27-C1, SREL 1- 27-C2, SREL 1-27-T1, SREL 1-27-F1	2-6
SREL	72+00	SREL 1B-72-R1	2-6
SREL	84+00	SREL 1B-84-R1	2-6
SREL	168+00	SREL 1B-168-R2	2-6
SREL	195+00	SREL 1B-195-R1	2-6
SREL	336+00	SREL 7-336-T1	2-7
SREL	423+00	SREL 9-423-T1	2-7
SREL	449+00	I-5 Well	2-7
SREL	678+00	2F-01-05	2-8
SREL	700+00	URS71000_700-00C, URS71000_700+00T, URS71000_700+00F	2-8
SREL	715+00	DH-7-1 (shallow), DH-7-1 (deep)	2-8
SREL	758+00	2F-01-15	2-8
SREL	810+00	2F-01-19	2-8
ARNL	3339+50	MW-1, MW-2	2-9

LIMITATIONS

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions, and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee, or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

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stacy

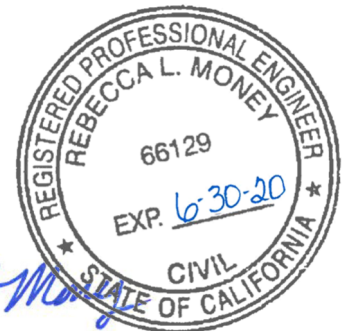
We appreciate the opportunity to work with you on this project. If you have any questions regarding this report, please contact us.

Respectfully submitted,

KLEINFELDER, INC.



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Project Manager

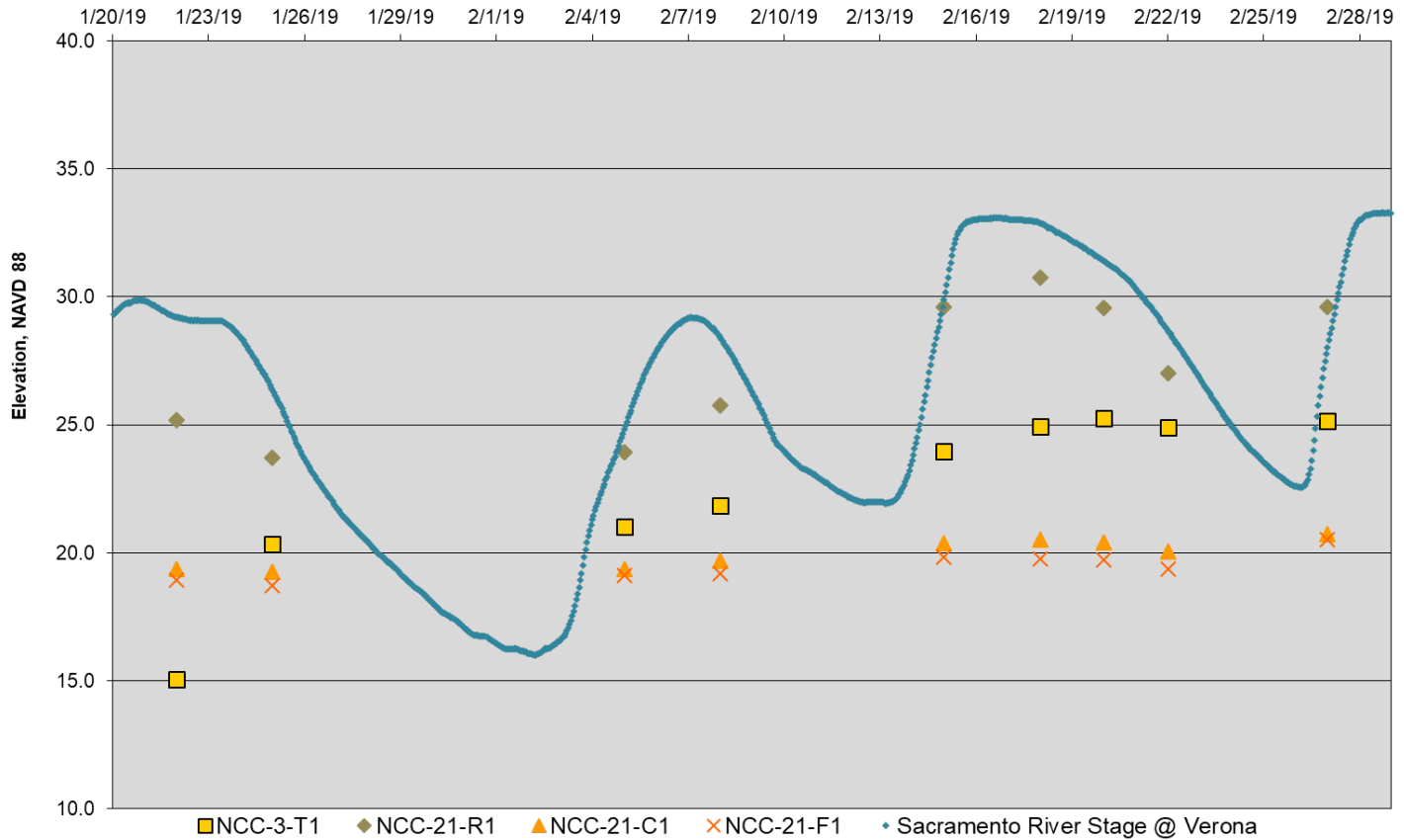
ATTACHMENTS

Figure 1-1: Site Location Map
Figures 2-1 through 2-9: Piezometer Location Maps
Figures 3-1 through 3-39: Groundwater Data

Note: Piezometers match locations on FIGURE 2-1

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Natomas Cross Canal Groundwater Level Elevations - Stations 0+00 to 30+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	3+00	Landside Toe	32.4	NCC-3-T1	Cutoff Wall
	21+00	Riverside	43	NCC-21-R1	
		Crown	49.1	NCC-21-C1	
		Field	21.5	NCC-21-F1	



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 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 0+00 TO 30+00
 JANUARY AND FEBRUARY 2019**

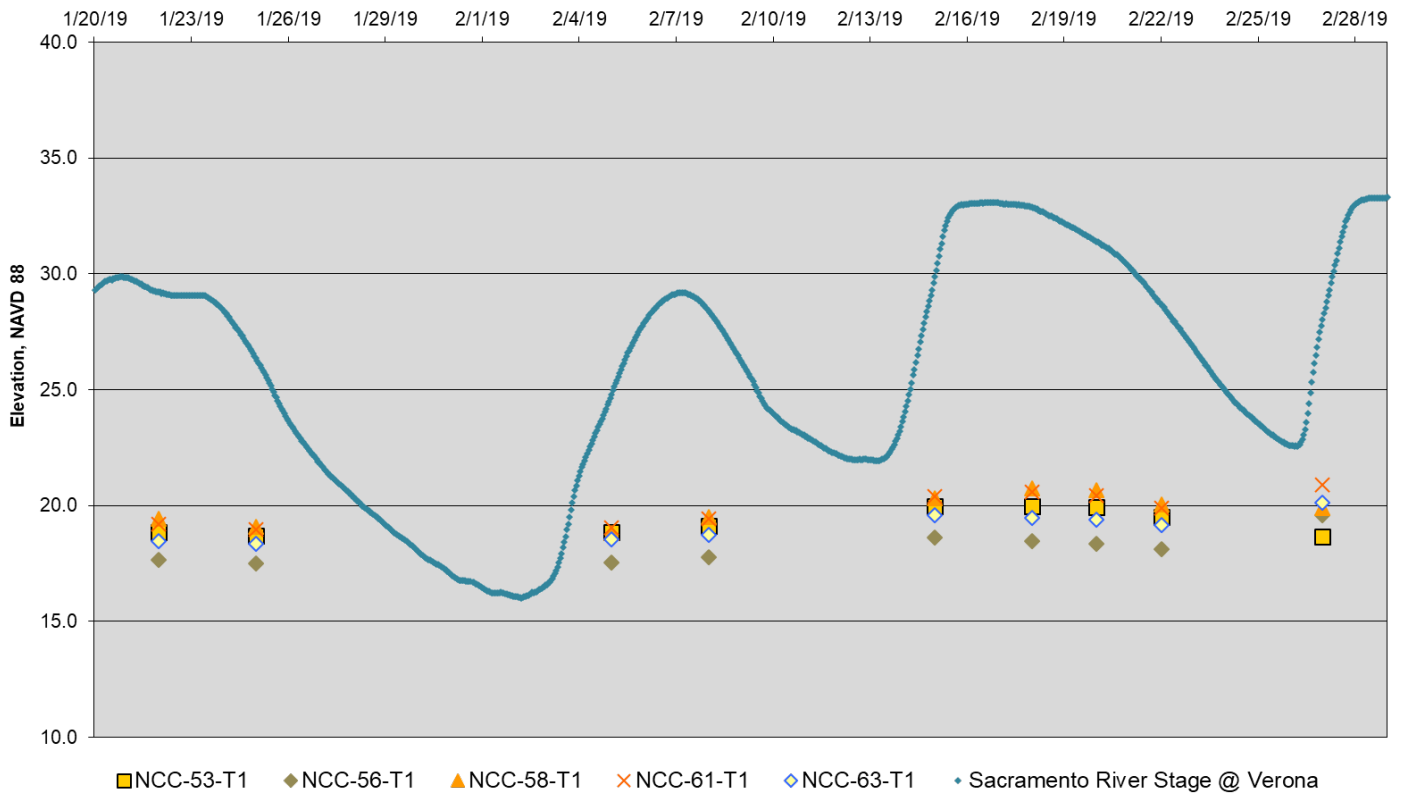
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 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-1

Note: Piezometers match locations on FIGURE 2-2

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Natomas Cross Canal Groundwater Level Elevations - Stations 30+00 to 80+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	53+00	Landside Toe	27.1	NCC-53-T1	Cutoff Wall
	56+00		28.3	NCC-56-T1	Pumping Plant + Window
	58+00		33.2	NCC-58-T1	Pumping Plant + Window
	61+00		28.1	NCC-61-T1	Cutoff Wall
	63+00		26.4	NCC-63-T1	Cutoff Wall



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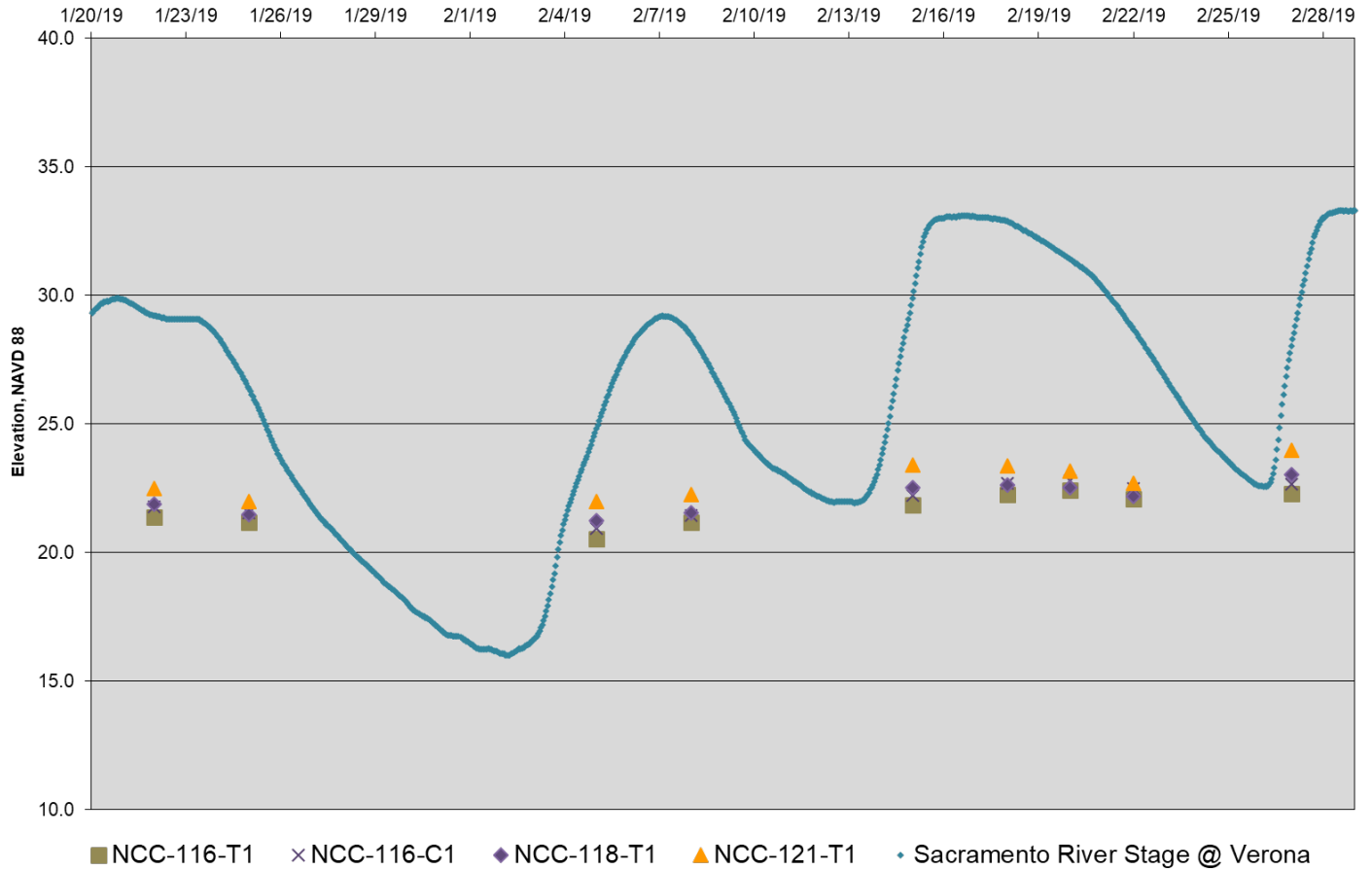
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FIGURE
3-2

Note: Piezometers match locations on FIGURE 2-3

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Natomas Cross Canal Groundwater Level Elevations - Stations 105+00 to 160+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC Note: NCC-116-C2 dry.	116+00	Waterside of COW	49	NCC-116-C1	Cutoff Wall
		Landside of COW	49.1	NCC-116-C2	
		Landside Toe	26.1	NCC-116-T1	
	118+00	Landside Toe	26.3	NCC-118-T1	Cutoff Wall
	121+00	Landside Toe	32.3	NCC-121-T1	Pumping Plant + Window



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 105+00 TO 160+00 (1 of 2)
 JANUARY AND FEBRUARY 2019**

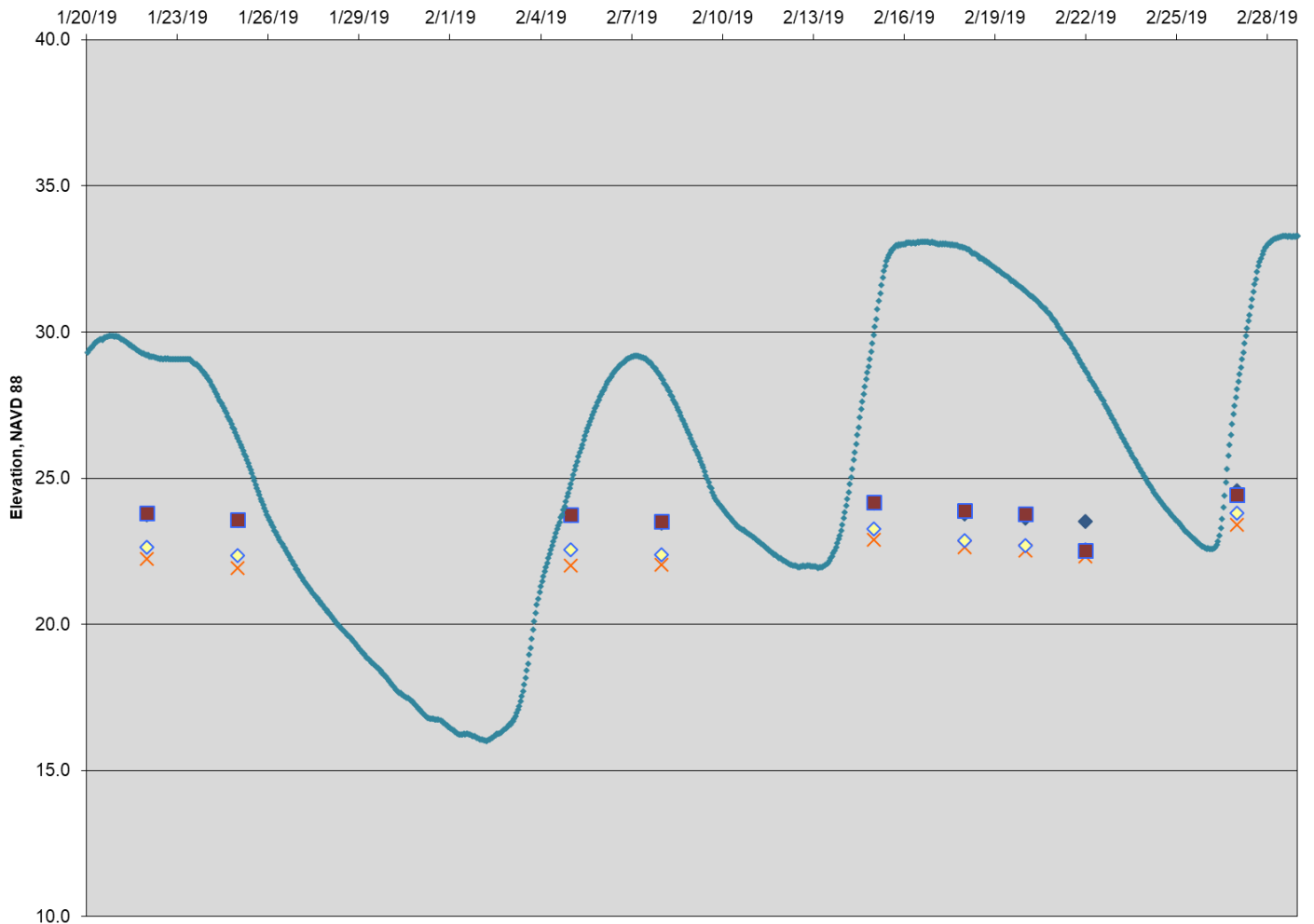
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FIGURE
3-3

Note: Piezometers match locations on FIGURE 2-3

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Natomas Cross Canal Groundwater Level Elevations - Stations 105+00 to 160+00 (2 of 2)



× NCC-123-T1
 ◇ NCC-125-T1
 ◆ NCC-135-C1
 ■ NCC-135-C2
 ● Sacramento River Stage @ Verona

Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	123+00	Landside Toe	49	NCC-123-T1	Cutoff Wall
	125+00	Landside Toe	49.1	NCC-125-T1	
	135+00	Landside of COW	26.1	NCC-135-C1	
		Waterside of COW	26.3	NCC-135-C2	
		Field	32.3	NCC-135-F1	

Note: NCC-135-F1 destroyed and not measured.



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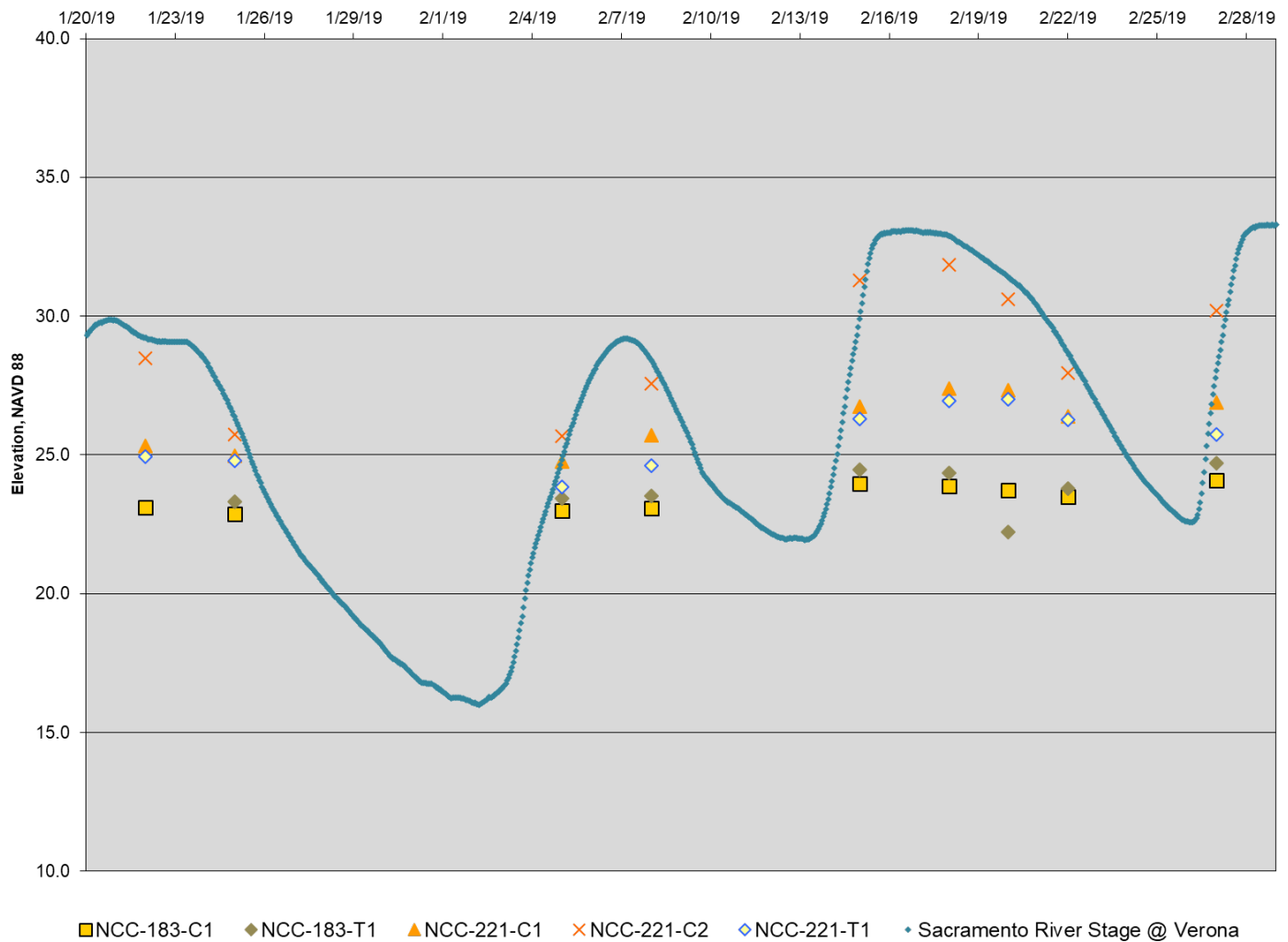
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FIGURE
3-4

Note: Piezometers match locations on FIGURE 2-4

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Natomas Cross Canal Groundwater Level Elevations - Stations 180+00 to 230+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	183+00	Crown	49	NCC-183-C1	Cutoff Wall
		Landside Toe	29.2	NCC-183-T1	
	221+00	Landside of COW	49.2	NCC-221-C1	
		Waterside of COW	49.1	NCC-221-C2	
		Landside Toe	30.6	NCC-221-T1	



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 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 180+00 TO 230+00 (1 of 2)
 JANUARY AND FEBRUARY 2019**

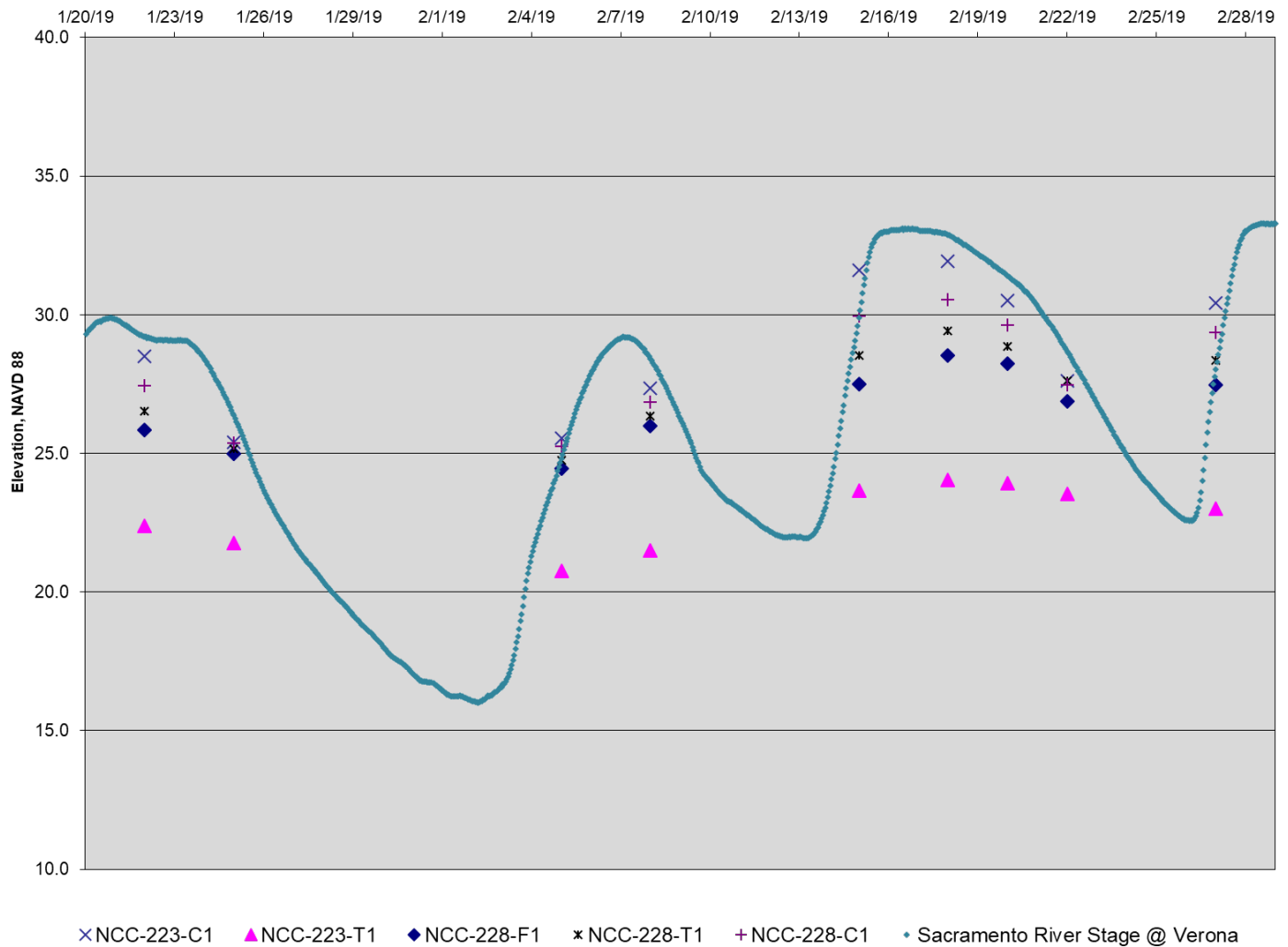
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FIGURE
3-5

Note: Piezometers match locations on FIGURE 2-4

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Natomas Cross Canal Groundwater Level Elevations - Stations 180+00 to 230+00 (2 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	223+00	Crown	49.5	NCC-223-C1	Highway 99/70 Window
		Landside Toe	28.1	NCC-223-T1	
	228+00	Field	31.5	NCC-228-F1	
		Landside Toe	30.5	NCC-228-T1	
		Crown	46.4	NCC-228-CA	



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 STATIONS 180+00 TO 230+00 (2 of 2)
 JANUARY AND FEBRUARY 2019**

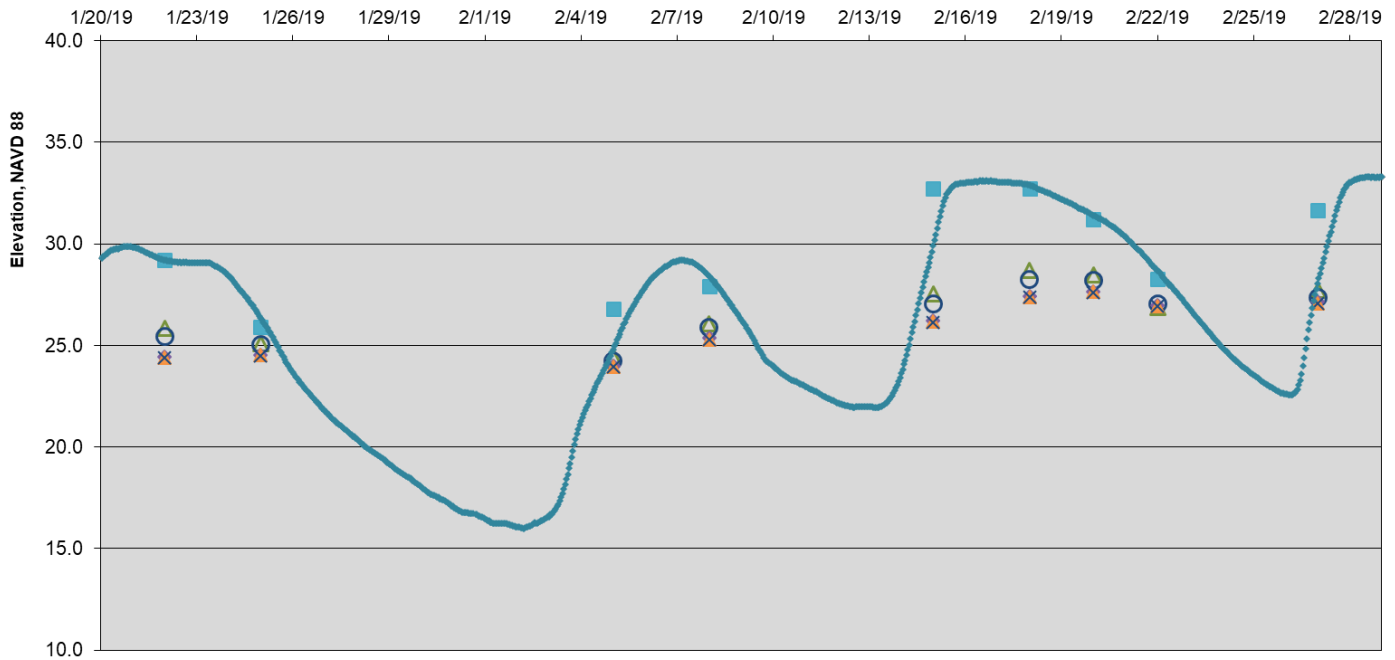
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FIGURE
3-6

Note: Piezometers match locations on FIGURE 2-5

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Natomas Cross Canal Groundwater Level Elevations - Stations 230+00 to 240+00



▲ NCC-231-T1 ○ NCC-233-T1 ◆ NCC-240-C1 ■ NCC-240-C2 ▲ NCC-240-T1 × NCC-240-F1 • Sacramento River Stage @ Verona

Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	231+00	Landside Toe	31.1	NCC-231-T1	Highway 99/70
	233+00	Landside Toe	31.9	NCC-233-T1	Cutoff Wall
	240+00	Landside of COW	49.1	NCC-240-C1	Cutoff Wall
		Waterside of COW	49.3	NCC-240-C2	
		Landside Toe	31.4	NCC-240-T1	
		Field	32.4	NCC-240-F1	

Note:
 224+00 to 231+00 Hwy 99/70 Window
 231+00 to 253+00 Full Cutoff Wall



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 230+00 TO 240+00
 JANUARY AND FEBRUARY 2019**

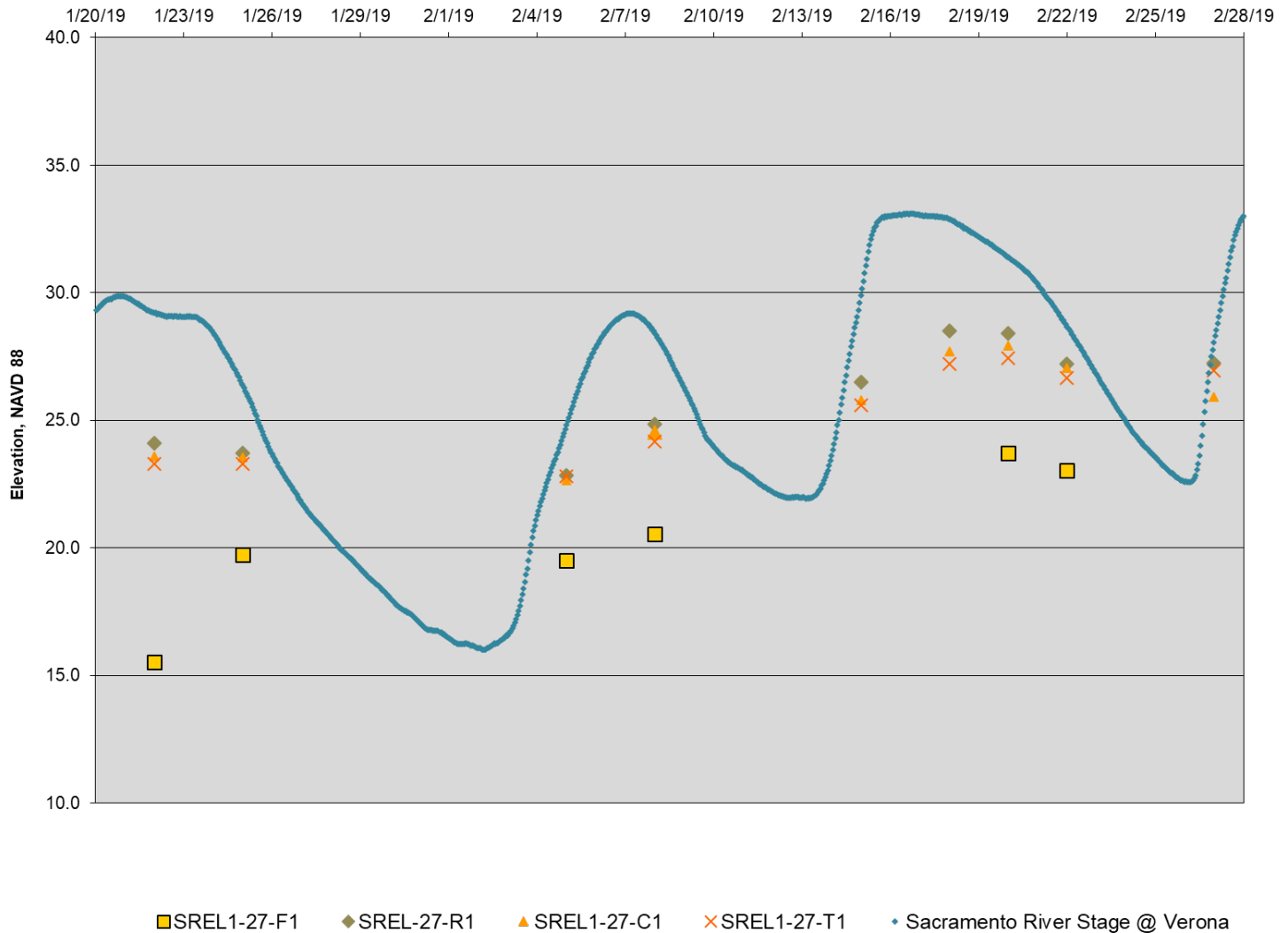
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-7

Note: Piezometers match locations on FIGURE 2-6

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Sacramento River Groundwater Level Elevations - Stations 0+00 to 200+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	27+00	Field	27.4	SREL-1-27-F1	Cutoff Wall
		Riverside	44.9	SREL-1-27-R1	
		Waterside of	48.2	SREL-1-27-C1	
		Landside of COW	48.7	SREL-1-27-C2	
		Landside Toe	32.2	SREL-1-27-T1	



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 FILE NAME: GW_Plots.pub

**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 0+00 TO 200+00 (1 of 2)
 JANUARY AND FEBRUARY 2019**

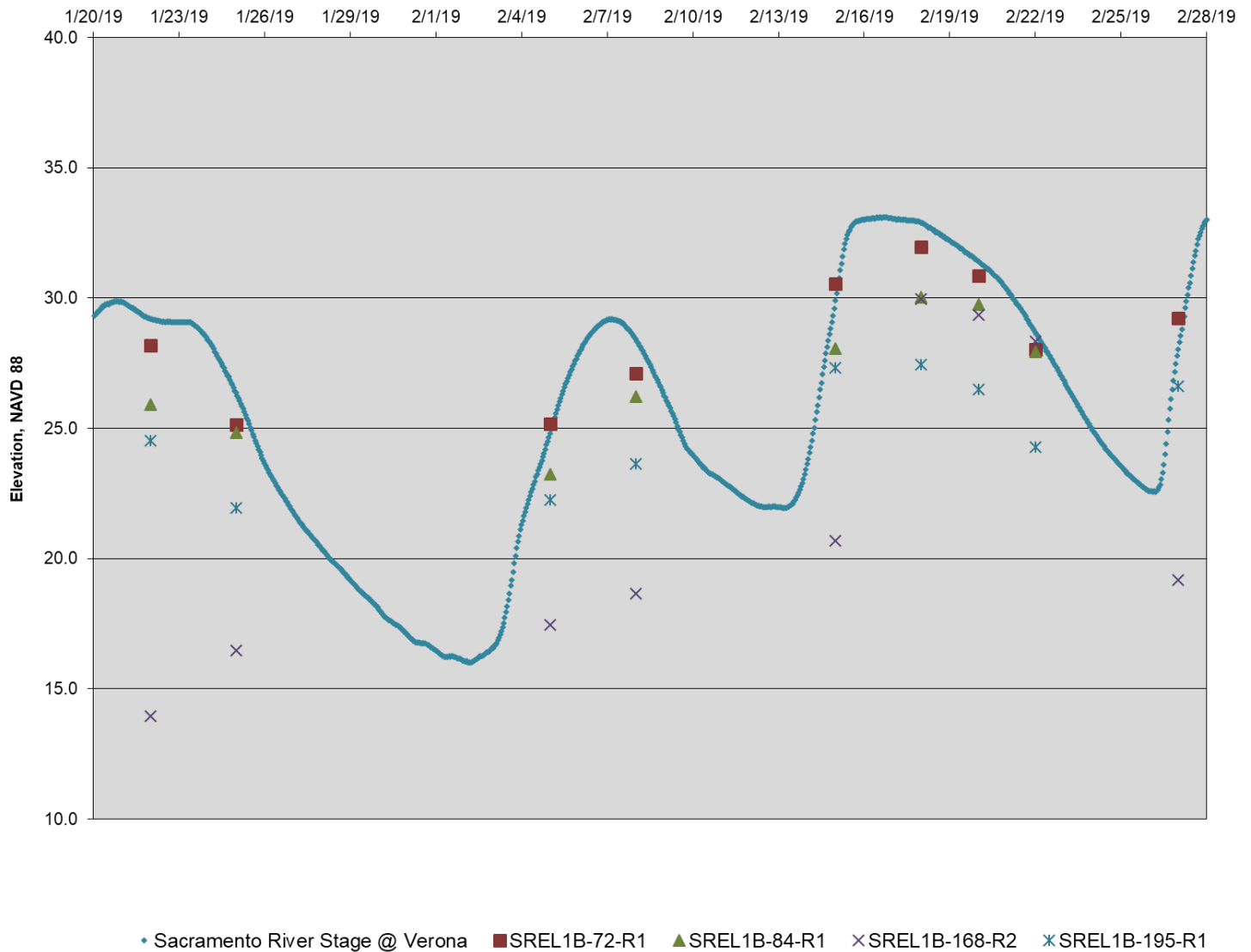
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-8

Note: Piezometers match locations on FIGURE 2-6

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Sacramento River Groundwater Level Elevations - Stations 0+00 to 200+00 (2 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	72+00	Riverside	44.6	SREL1B-72-R1	Cutoff Wall
SREL	84+00		44.2	SREL1B-84-R1	
SREL	168+00		44.3	SREL1B-168-R2	
SREL	195+00		43	SREL1B-195-R1	



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 FILE NAME: GW_Plots.pub

**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 0+00 TO 200+00 (2 of 2)
 JANUARY AND FEBRUARY 2019**

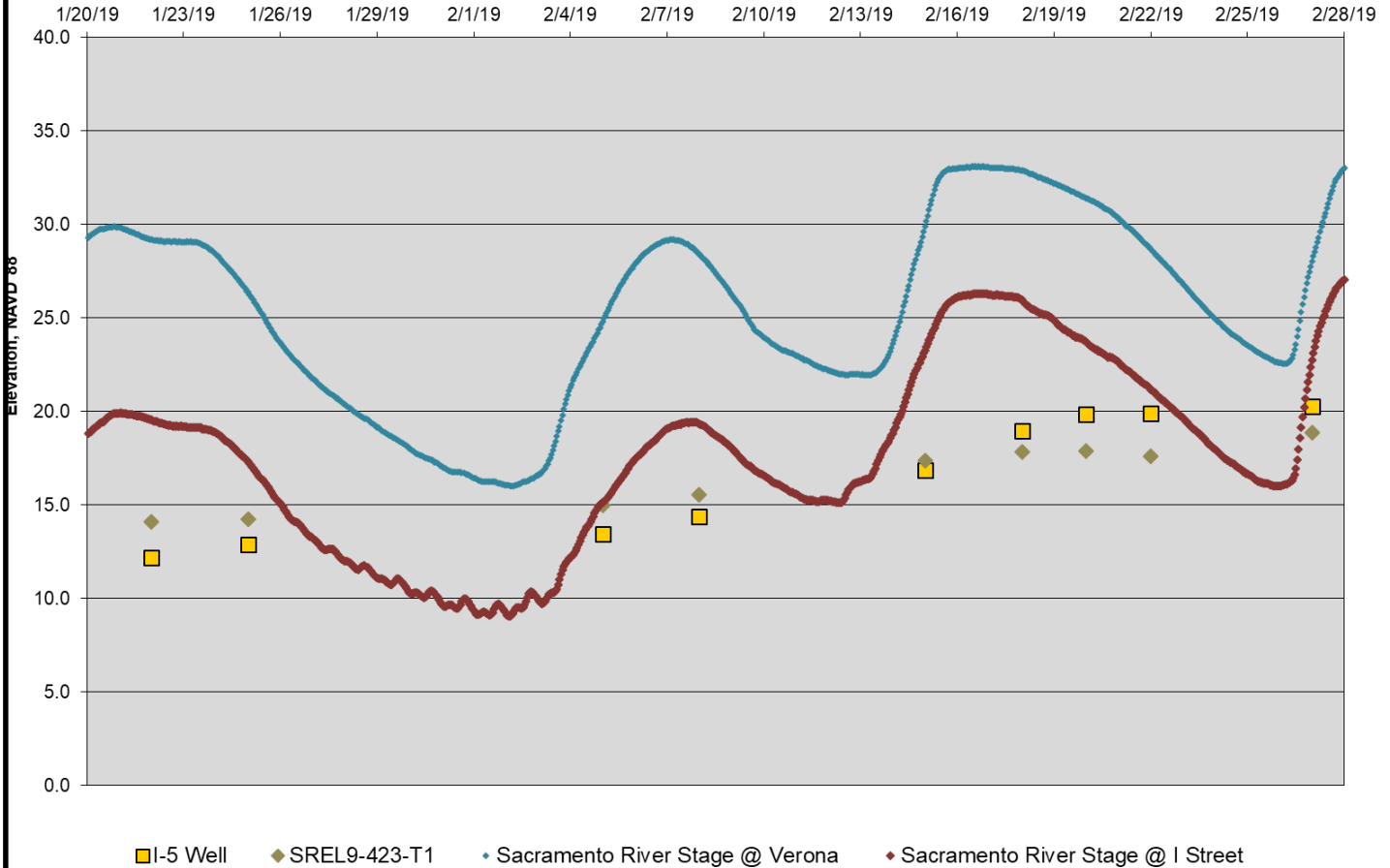
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-9

Note: Piezometers match locations on FIGURE 2-7

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Sacramento River Groundwater Elevation Stations - 330+00 to 450+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	336+00	Landside Toe	34.4	SREL7-336-T1	Cutoff Wall
SREL	423+00	Landside Toe	30.1	SREL9-423-T1	
SREL	449+00	Landside Toe	26.45	I-5 Well	Window

Note:
SREL 7-336-T1 damaged.



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 FILE NAME: GW_Plots.pub

**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 330+00 TO 450+00
 JANUARY AND FEBRUARY 2019**

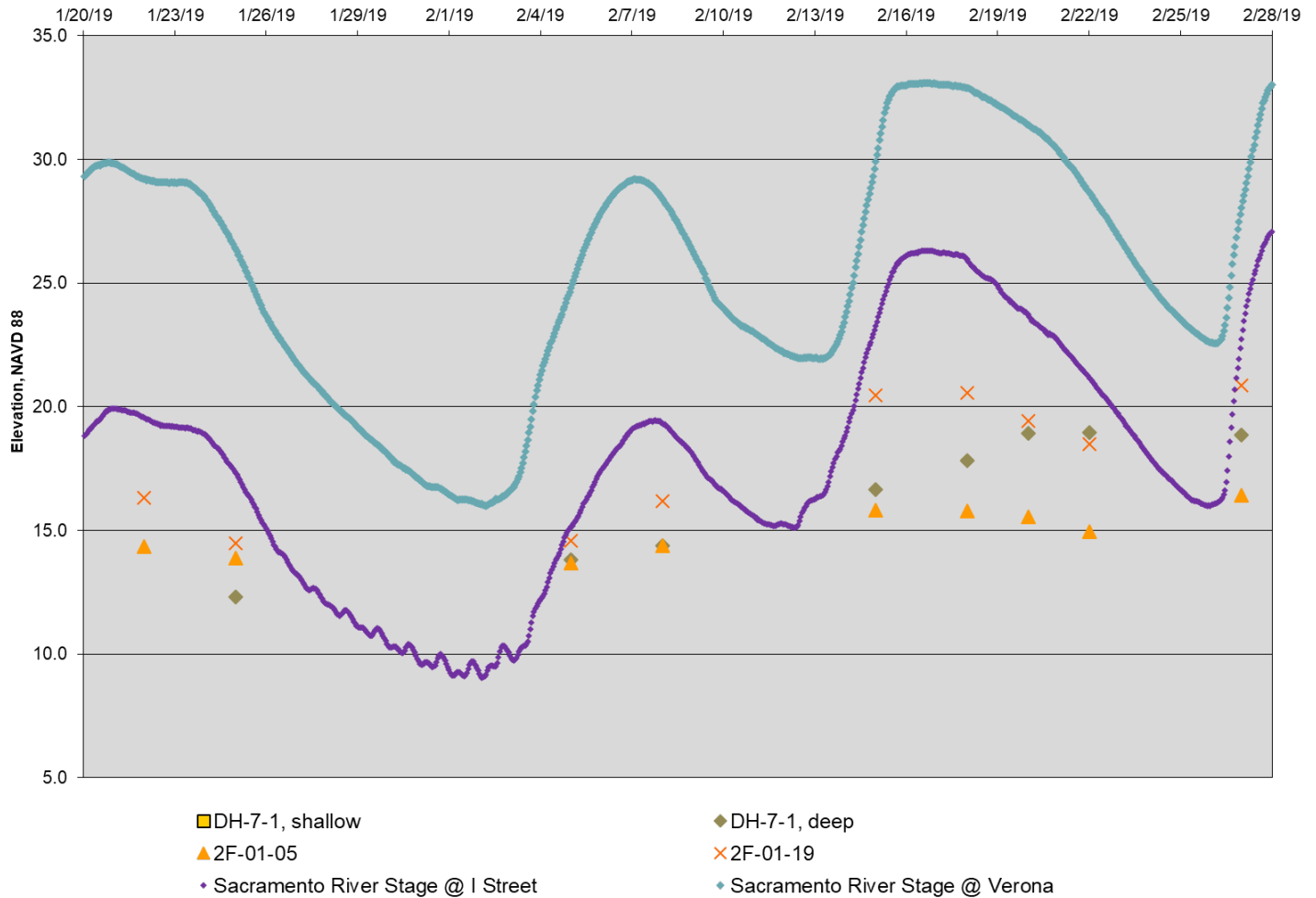
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-10

Note: Piezometers match locations on FIGURE 2-8

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Sacramento River Groundwater Elevations - Stations 670+00 to 830+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	678+00	Landside Toe	24.1	2F-01-05	No Improvement
	715+00	Crown	41.4	DH-7-1 (shallow), DH-7-1 (deep)	
	758+00	Landside Toe	27.5	2F-01-15	
	810+00	Field	23.0	2F-01-19	

Note:
 DH-7-1 Shallow was encountered to be dry.
 2F-01-15 could not be located.



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**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 670+00 TO 830+00 (1 of 2)
 JANUARY AND FEBRUARY 2019**

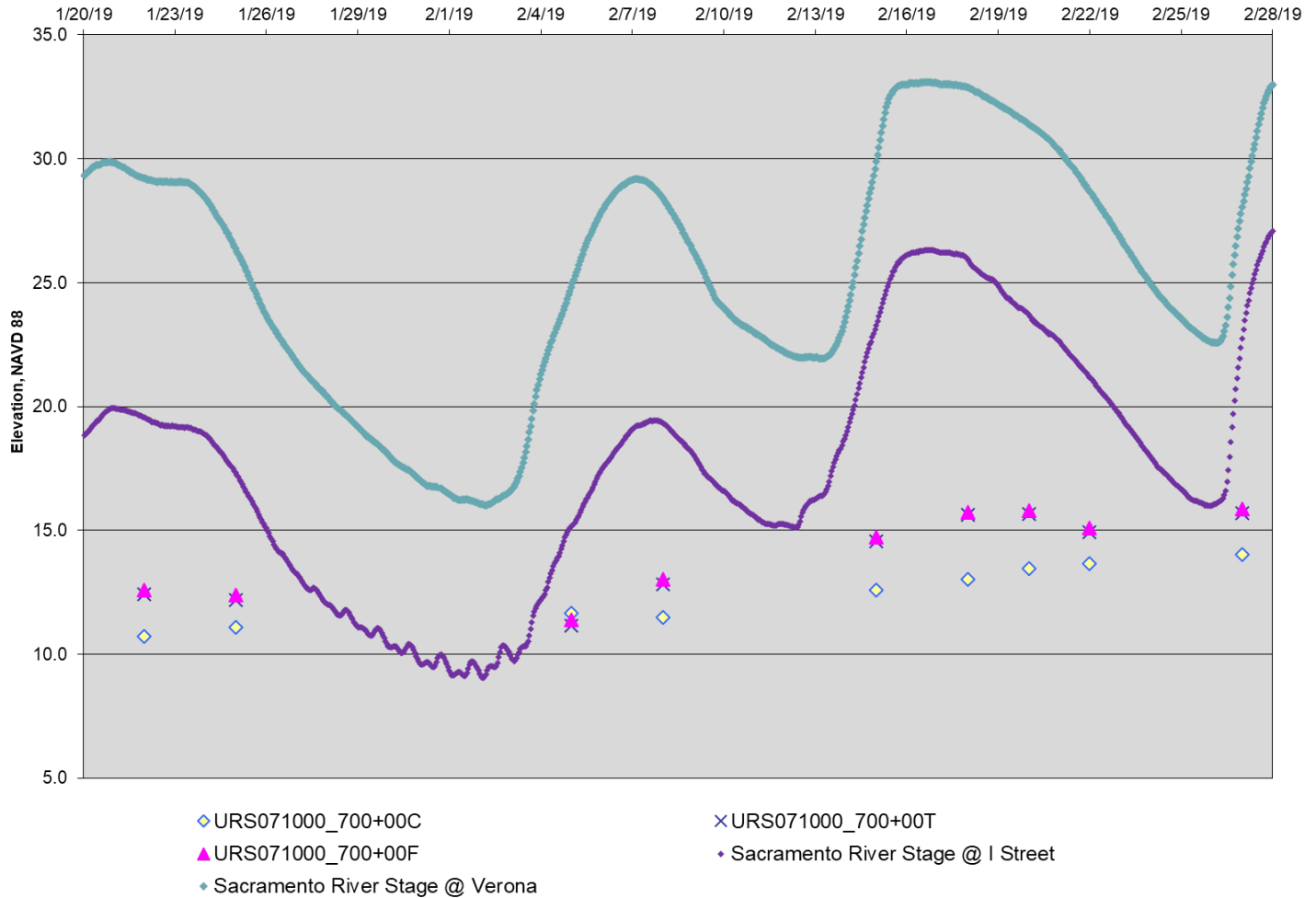
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-11

Note: Piezometers match locations on FIGURE 2-8

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Sacramento River Groundwater Elevations - Stations 670+00 to 830+00 (2 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	700+00	Crown	41.7	URS71000_700+00C	No Improvement
		Landside Toe	26.5	URS71000_700+00T	
		Field	24.2	URS71000_700+00F	



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**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 670+00 TO 830+00 (2 of 2)
 JANUARY AND FEBRUARY 2019**

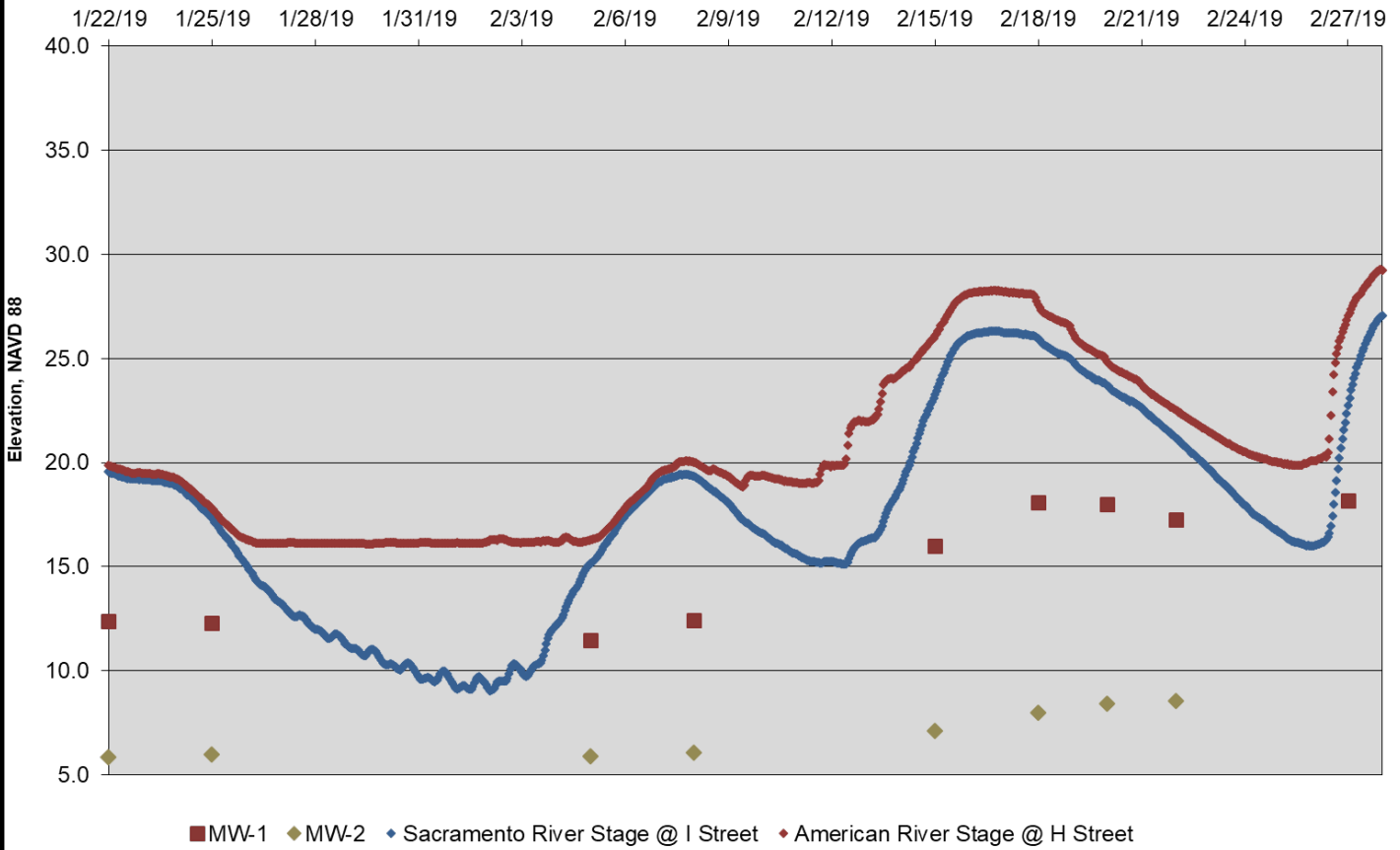
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-12

Note: Piezometers match locations on FIGURE 2-9

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American River Groundwater Level Elevations



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
ARNL	3339+50	Landside of CDW	52.0	MW-1	Cutoff Wall
		Landside Toe	38.6	MW-2	



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**GROUNDWATER DATA
 AMERICAN RIVER NORTH LEVEE
 STATION 3330+00 to 3350+00
 JANUARY AND FEBRUARY 2019**

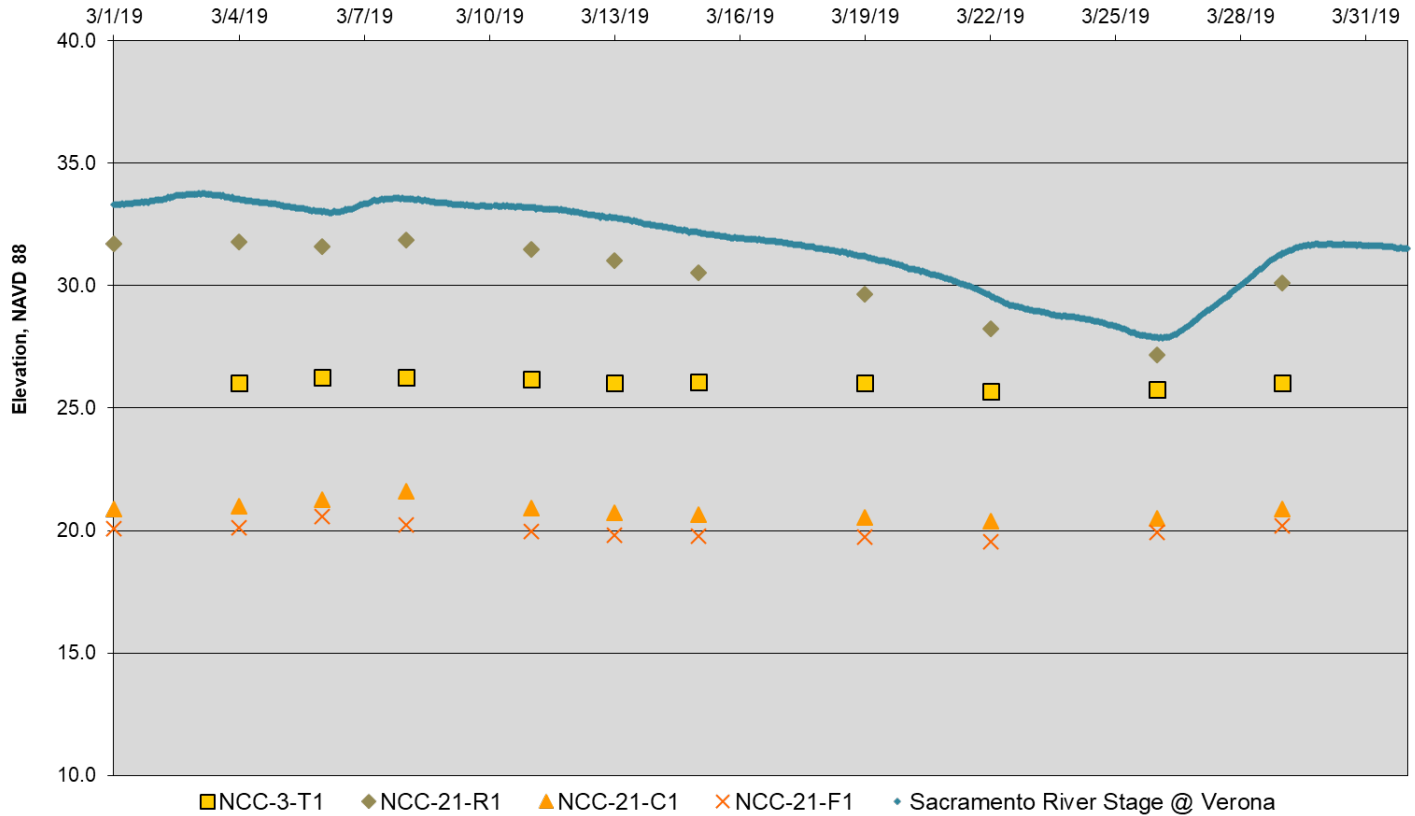
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-13

Note: Piezometers match locations on FIGURE 2-1

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Natomas Cross Canal Groundwater Level Elevations - Stations 0+00 to 30+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	3+00	Landside Toe	32.4	NCC-3-T1	Cutoff Wall
	21+00	Riverside	43	NCC-21-R1	
		Crown	49.1	NCC-21-C1	
		Field	21.5	NCC-21-F1	



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 0+00 TO 30+00
 MARCH 2019**

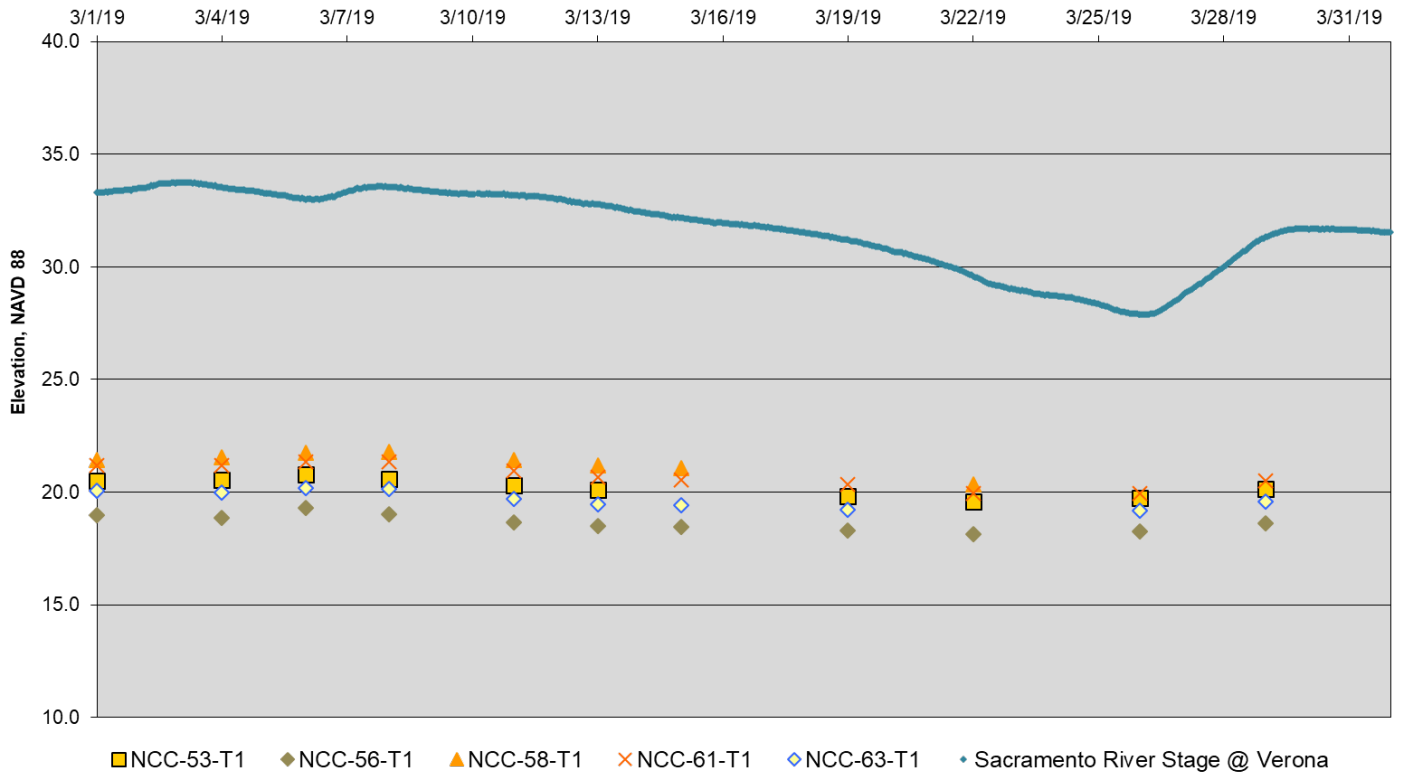
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-14

Note: Piezometers match locations on FIGURE 2-2

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Natomas Cross Canal Groundwater Level Elevations - Stations 30+00 to 80+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	53+00	Landside Toe	27.1	NCC-53-T1	Cutoff Wall
	56+00		28.3	NCC-56-T1	Pumping Plant + Window
	58+00		33.2	NCC-58-T1	Pumping Plant + Window
	61+00		28.1	NCC-61-T1	Cutoff Wall
	63+00		26.4	NCC-63-T1	Cutoff Wall



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEEVE
 STATIONS 30+00 TO 80+00
 MARCH 2019**

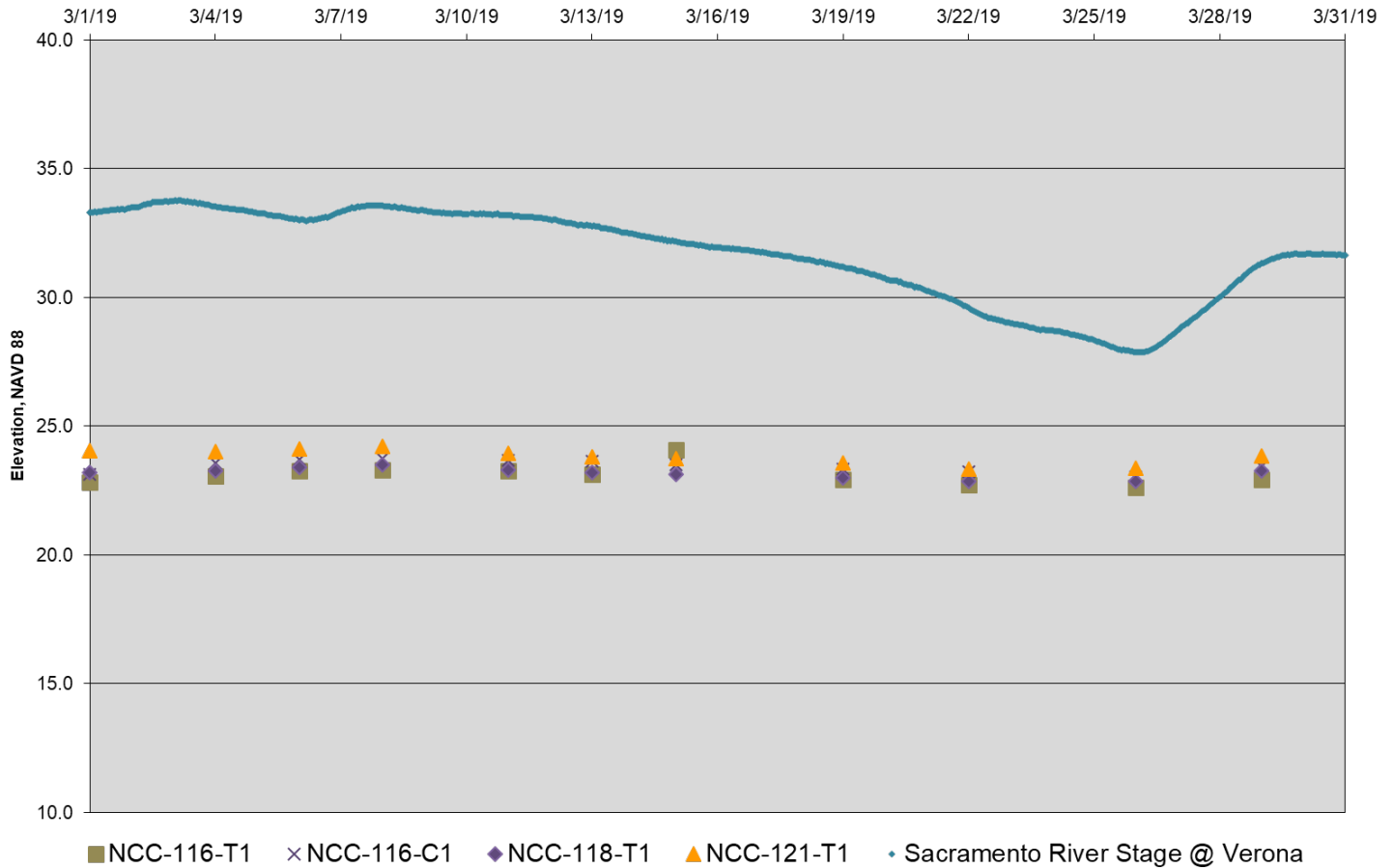
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-15

Note: Piezometers match locations on FIGURE 2-3

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Natomas Cross Canal Groundwater Level Elevations - Stations 105+00 to 160+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	116+00	Waterside of COW	49	NCC-116-C1	Cutoff Wall
		Landside of COW	49.1	NCC-116-C2	
		Landside Toe	26.1	NCC-116-T1	
	118+00	Landside Toe	26.3	NCC-118-T1	Cutoff Wall
	121+00	Landside Toe	32.3	NCC-121-T1	Pumping Plant + Window

Note: NCC-116-C2 dry.



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 105+00 TO 160+00 (1 of 2)
 MARCH 2019**

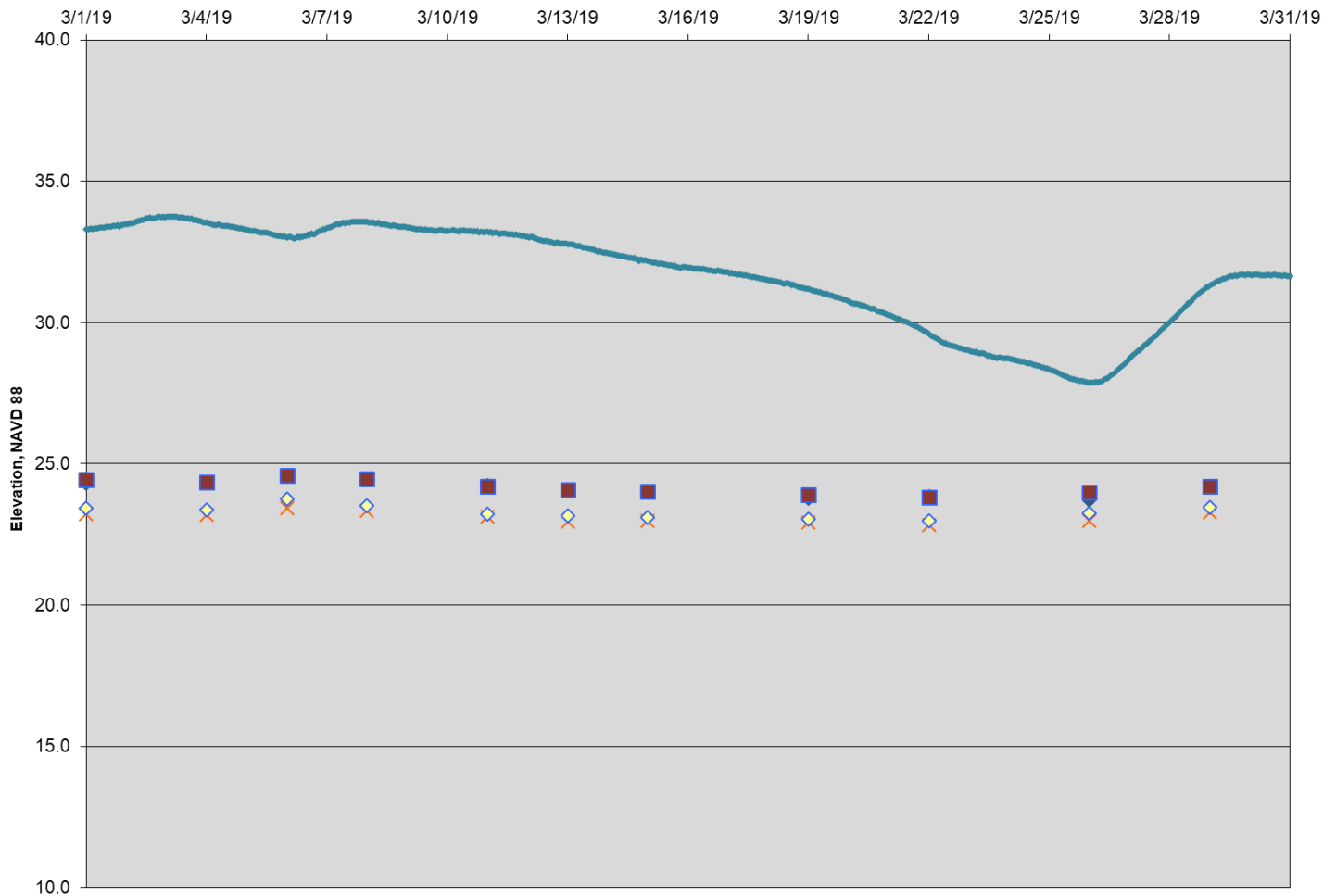
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-16

Note: Piezometers match locations on FIGURE 2-3

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Natomas Cross Canal Groundwater Level Elevations - Stations 105+00 to 160+00 (2 of 2)



× NCC-123-T1
 ◇ NCC-125-T1
 ◆ NCC-135-C1
 ■ NCC-135-C2
 ◆ Sacramento River Stage @ Verona

Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	123+00	Landside Toe	49	NCC-123-T1	Cutoff Wall
	125+00	Landside Toe	49.1	NCC-125-T1	
	135+00	Landside of COW	26.1	NCC-135-C1	
		Waterside of COW	26.3	NCC-135-C2	
		Field	32.3	NCC-135-F1	

Note: NCC-135-F1 destroyed and not measured.



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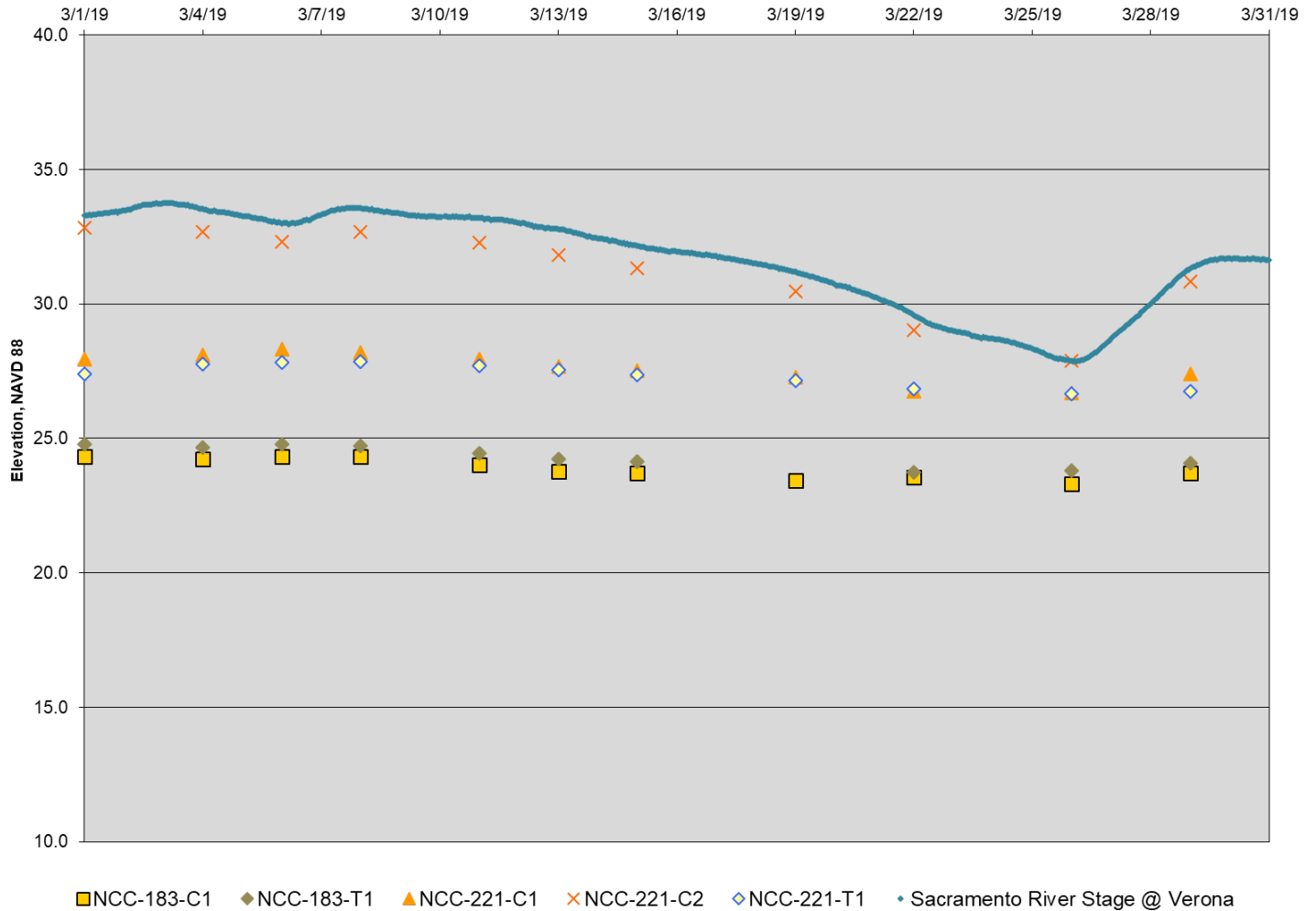
GROUNDWATER DATA
NATOMAS CROSS CANAL SOUTH LEVEE
STATIONS 105+00 TO 160+00 (2 of 2)
MARCH 2019
 GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-17

Note: Piezometers match locations on FIGURE 2-4

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Natomas Cross Canal Groundwater Level Elevations - Stations 180+00 to 230+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	183+00	Crown	49	NCC-183-C1	Cutoff Wall
		Landside Toe	29.2	NCC-183-T1	
	221+00	Landside of COW	49.2	NCC-221-C1	
		Waterside of COW	49.1	NCC-221-C2	
		Landside Toe	30.6	NCC-221-T1	



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 FILE NAME: GW_Plots.pub

**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 180+00 TO 230+00 (1 of 2)
 MARCH 2019**

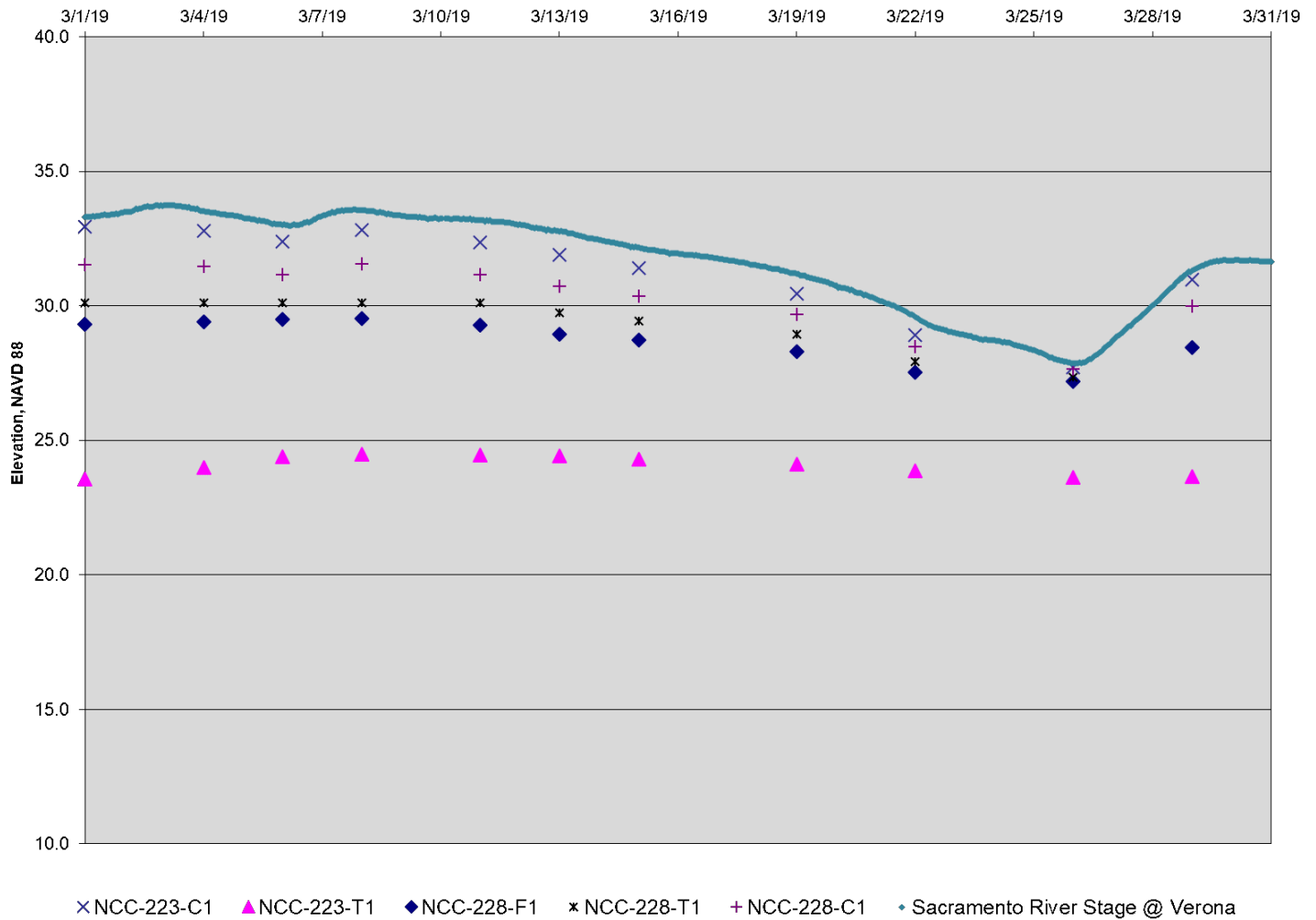
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-18

Note: Piezometers match locations on FIGURE 2-4

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Natomas Cross Canal Groundwater Level Elevations - Stations 180+00 to 230+00 (2 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	223+00	Crown	49.5	NCC-223-C1	Highway 99/70 Window
		Landside Toe	28.1	NCC-223-T1	
	228+00	Field	31.5	NCC-228-F1	
		Landside Toe	30.5	NCC-228-T1	
		Crown	46.4	NCC-228-CA	



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 180+00 TO 230+00 (2 of 2)
 MARCH 2019**

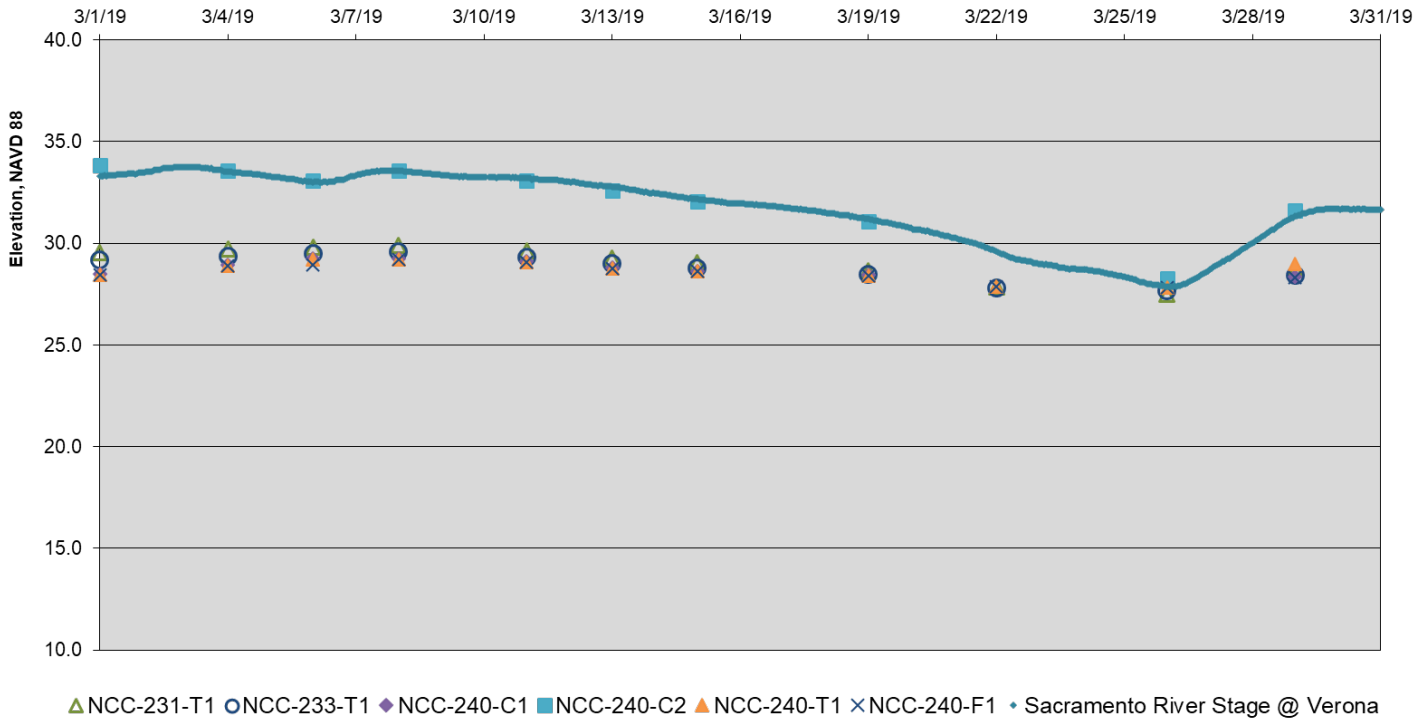
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-19

Note: Piezometers match locations on FIGURE 2-5

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Natomas Cross Canal Groundwater Level Elevations - Stations 230+00 to 240+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	231+00	Landside Toe	31.1	NCC-231-T1	Highway 99/70
	233+00	Landside Toe	31.9	NCC-233-T1	Cutoff Wall
	240+00	Landside of COW	49.1	NCC-240-C1	Cutoff Wall
		Waterside of COW	49.3	NCC-240-C2	
		Landside Toe	31.4	NCC-240-T1	
Field	32.4	NCC-240-F1			

Note:
 224+00 to 231+00 Hwy 99/70 Window
 231+00 to 253+00 Full Cutoff Wall



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 230+00 TO 240+00
 MARCH 2019**

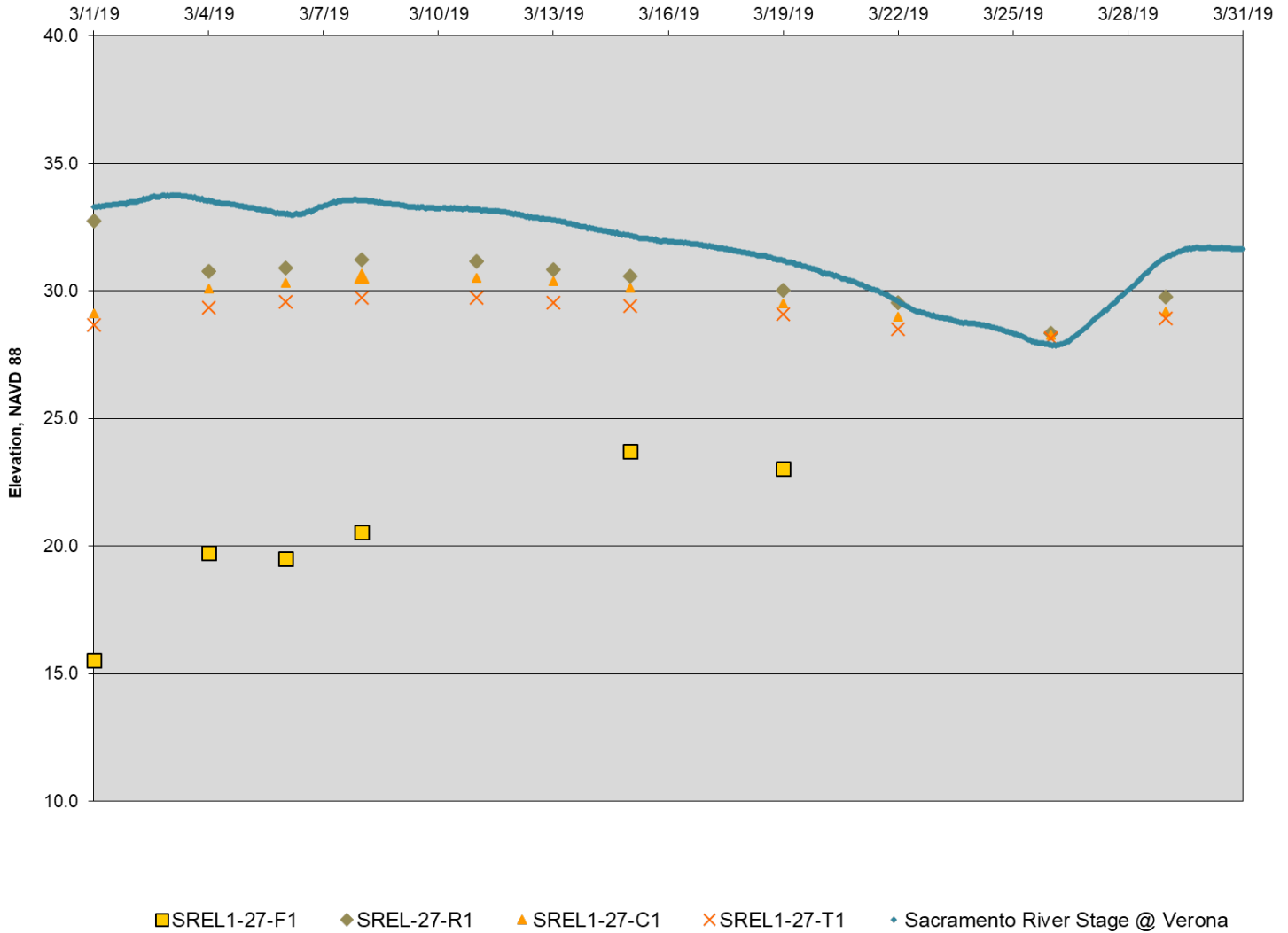
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-20

Note: Piezometers match locations on FIGURE 2-6

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Sacramento River Groundwater Level Elevations - Stations 0+00 to 200+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	27+00	Field	27.4	SREL-1-27-F1	Cutoff Wall
		Riverside	44.9	SREL-1-27-R1	
		Waterside of	48.2	SREL-1-27-C1	
		Landside of COW	48.7	SREL-1-27-C2	
		Landside Toe	32.2	SREL-1-27-T1	



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**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 0+00 TO 200+00 (1 of 2)
 MARCH 2019**

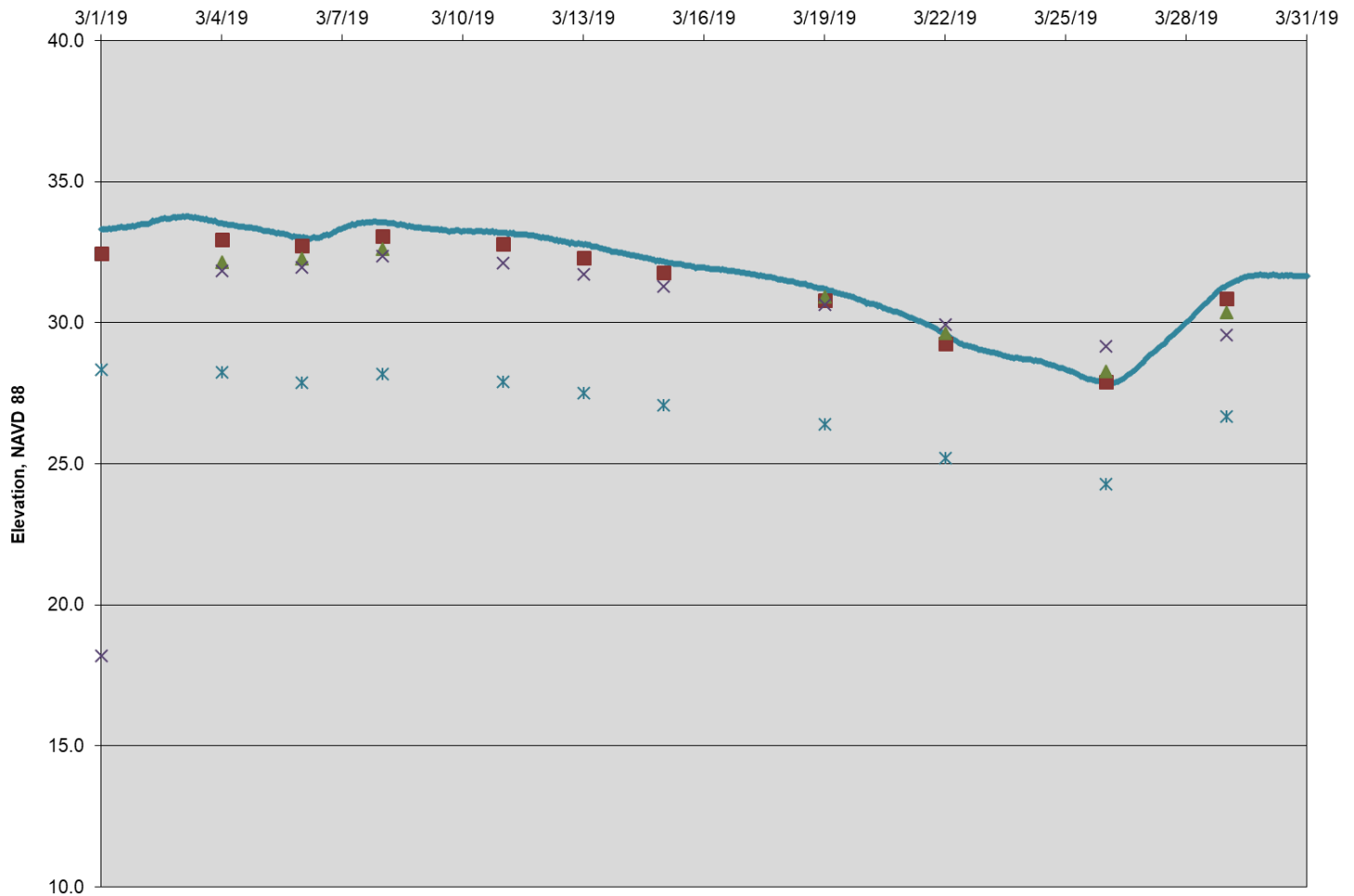
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-21

Note: Piezometers match locations on FIGURE 2-6

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Sacramento River Groundwater Level Elevations - Stations 0+00 to 200+00 (2 of 2)



• Sacramento River Stage @ Verona ■ SREL1B-72-R1 ▲ SREL1B-84-R1 × SREL1B-168-R2 * SREL1B-195-R1

Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	72+00	Riverside	44.6	SREL1B-72-R1	Cutoff Wall
SREL	84+00		44.2	SREL1B-84-R1	
SREL	168+00		44.3	SREL1B-168-R2	
SREL	195+00		43	SREL1B-195-R1	



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**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 0+00 TO 200+00 (2 of 2)
 MARCH 2019**

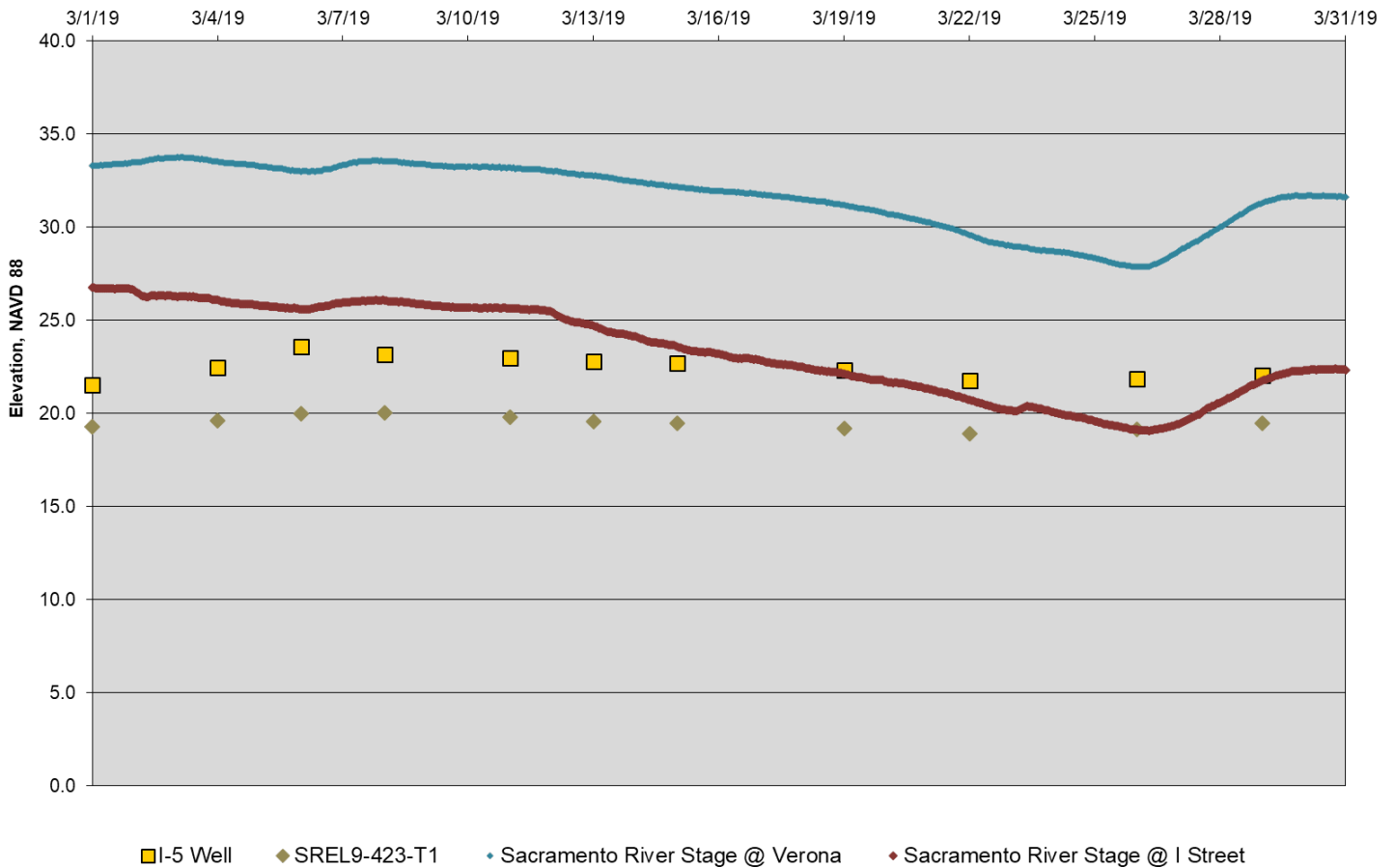
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-22

Note: Piezometers match locations on FIGURE 2-7

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Sacramento River Groundwater Elevation Stations - 330+00 to 450+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	336+00	Landside Toe	34.4	SREL7-336-T1	Cutoff Wall
SREL	423+00	Landside Toe	30.1	SREL9-423-T1	
SREL	449+00	Landside Toe	26.45	I-5 Well	Window

Note:
SREL 7-336-T1 damaged.



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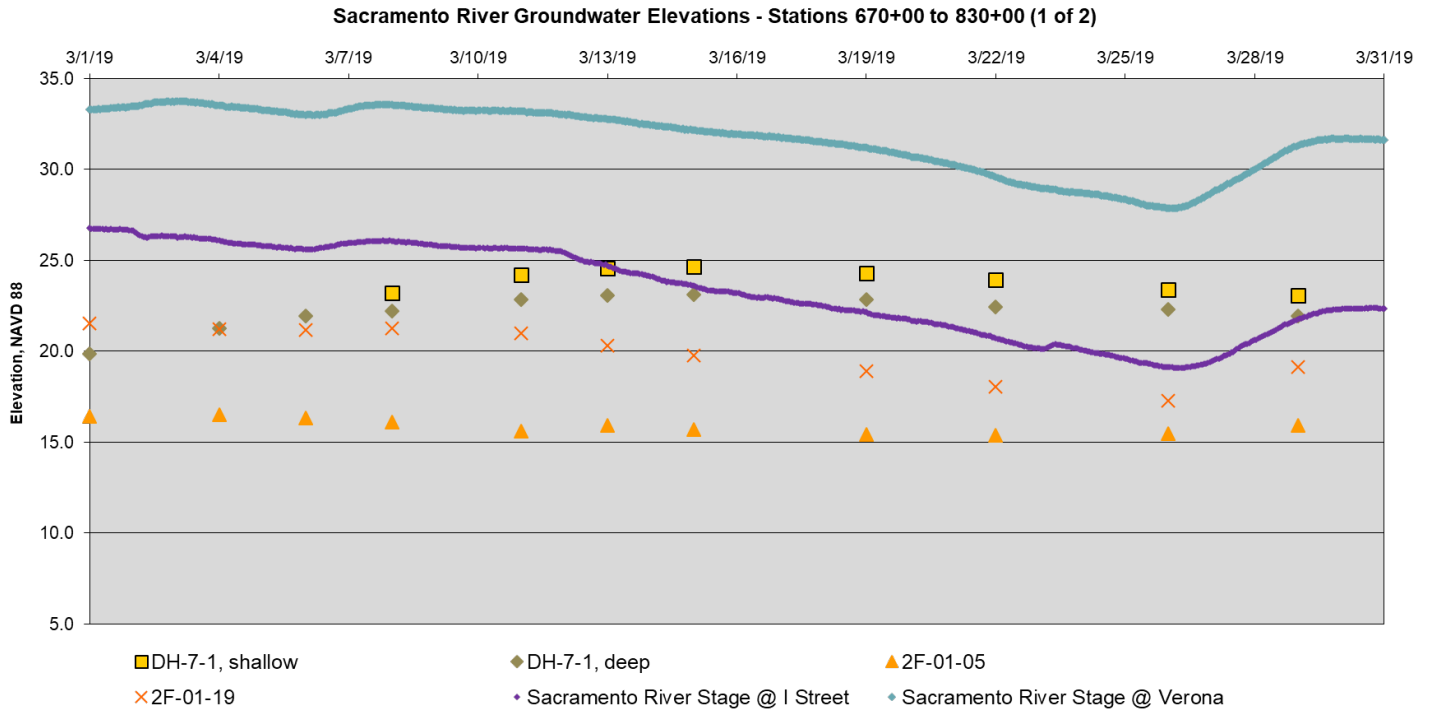
**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 330+00 TO 450+00
 MARCH 2019**

GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-23

Note: Piezometers match locations on FIGURE 2-8

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Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	678+00	Landside Toe	24.1	2F-01-05	No Improvement
	715+00	Crown	41.4	DH-7-1 (shallow), DH-7-1 (deep)	
	758+00	Landside Toe	27.5	2F-01-15	
	810+00	Field	23.0	2F-01-19	

Note:
 DH-7-1 Shallow was encountered to be dry.
 2F-01-15 could not be located.



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**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 670+00 TO 830+00 (1 of 2)
 MARCH 2019**

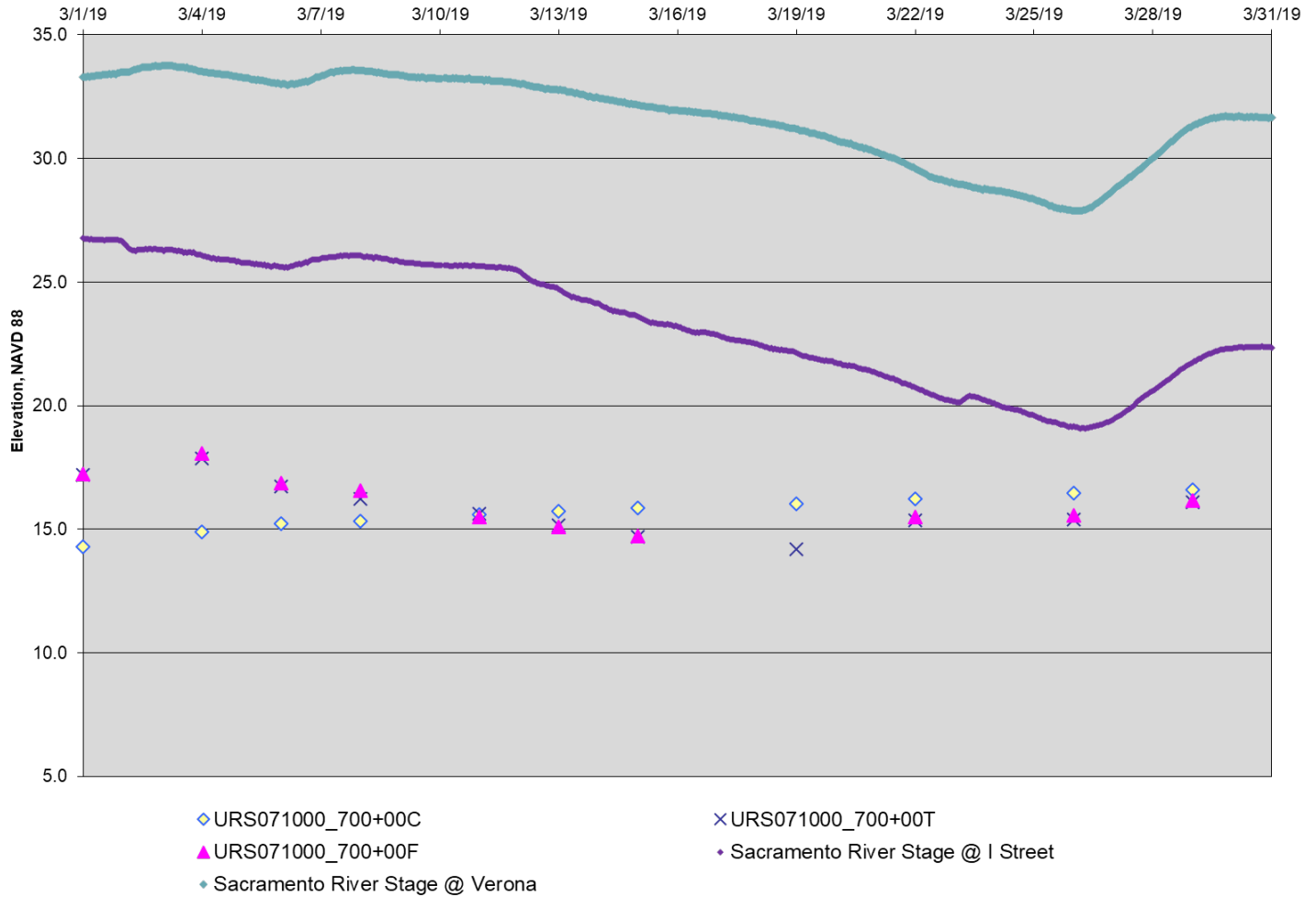
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-24

Note: Piezometers match locations on FIGURE 2-8

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Sacramento River Groundwater Elevations - Stations 670+00 to 830+00 (2 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
SREL	700+00	Crown	41.7	URS71000_700+00C	No Improvement
		Landside Toe	26.5	URS71000_700+00T	
		Field	24.2	URS71000_700+00F	



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**GROUNDWATER DATA
 SACRAMENTO RIVER EAST LEVEE
 STATIONS 670+00 TO 830+00 (2 of 2)
 MARCH 2019**

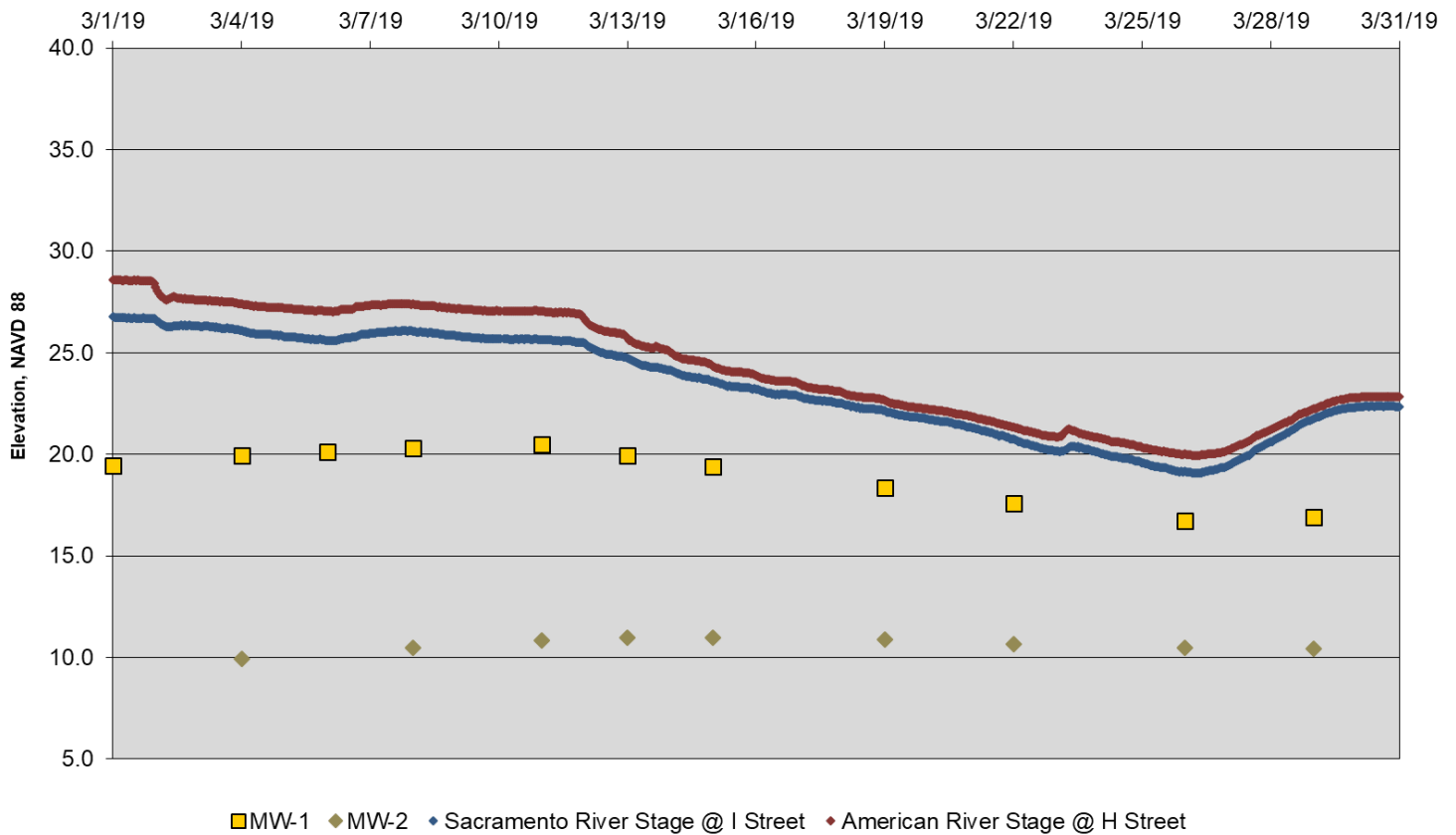
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
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 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-25

Note: Piezometers match locations on FIGURE 2-9

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American River Groundwater Level Elevations



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
ARNL	3339+50	Landside of COW	52.0	MW-1	Cutoff Wall
		Landside Toe	38.6	MW-2	



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**GROUNDWATER DATA
 AMERICAN RIVER NORTH LEVEE
 STATION 3330+00 to 3350+00
 MARCH 2019**

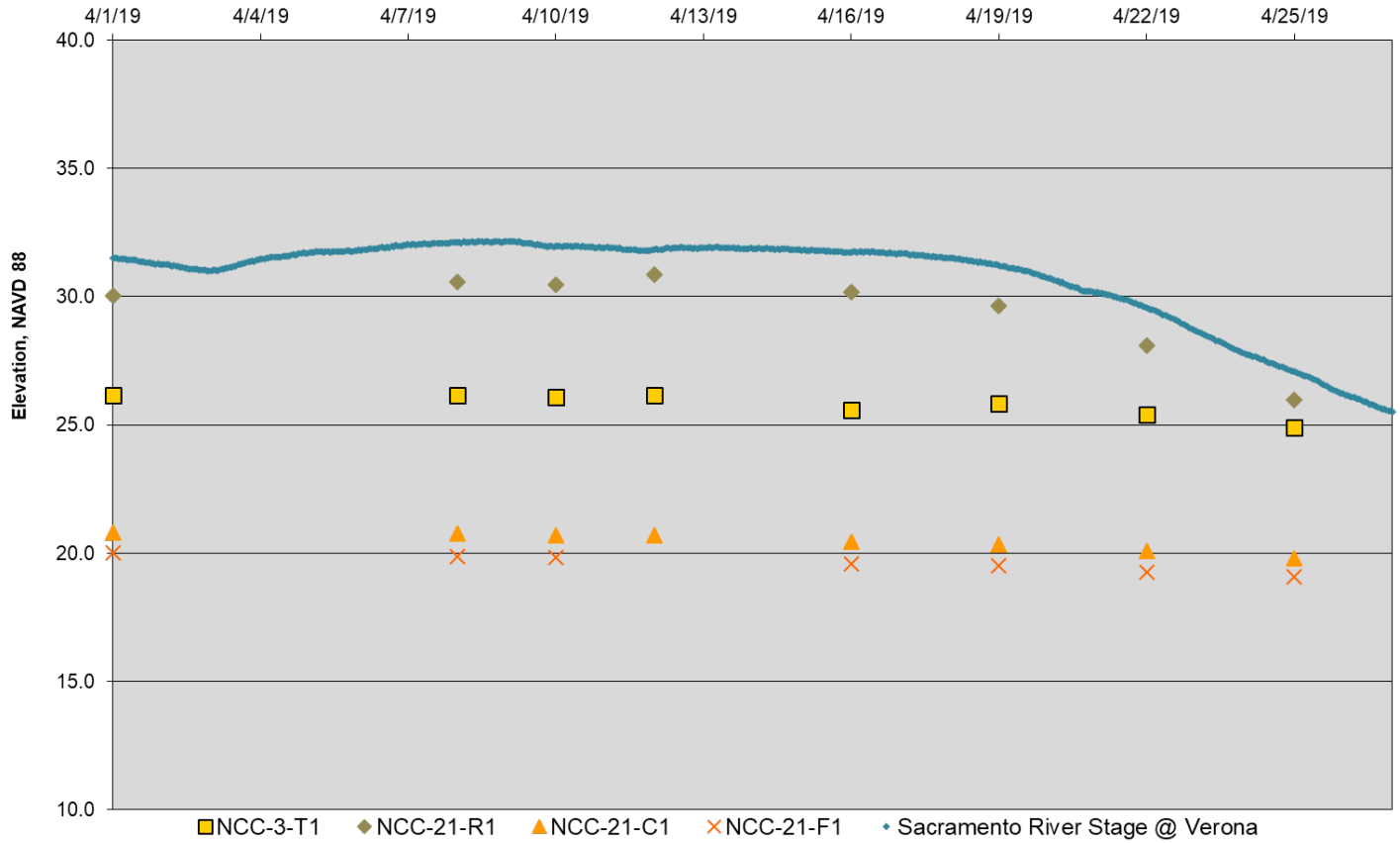
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
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FIGURE
3-26

Note: Piezometers match locations on FIGURE 2-1

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Natomas Cross Canal Groundwater Level Elevations - Stations 0+00 to 30+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	3+00	Landside Toe	32.4	NCC-3-T1	Cutoff Wall
	21+00	Riverside	43	NCC-21-R1	
		Crown	49.1	NCC-21-C1	
		Field	21.5	NCC-21-F1	



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 0+00 TO 30+00
 APRIL 2019**

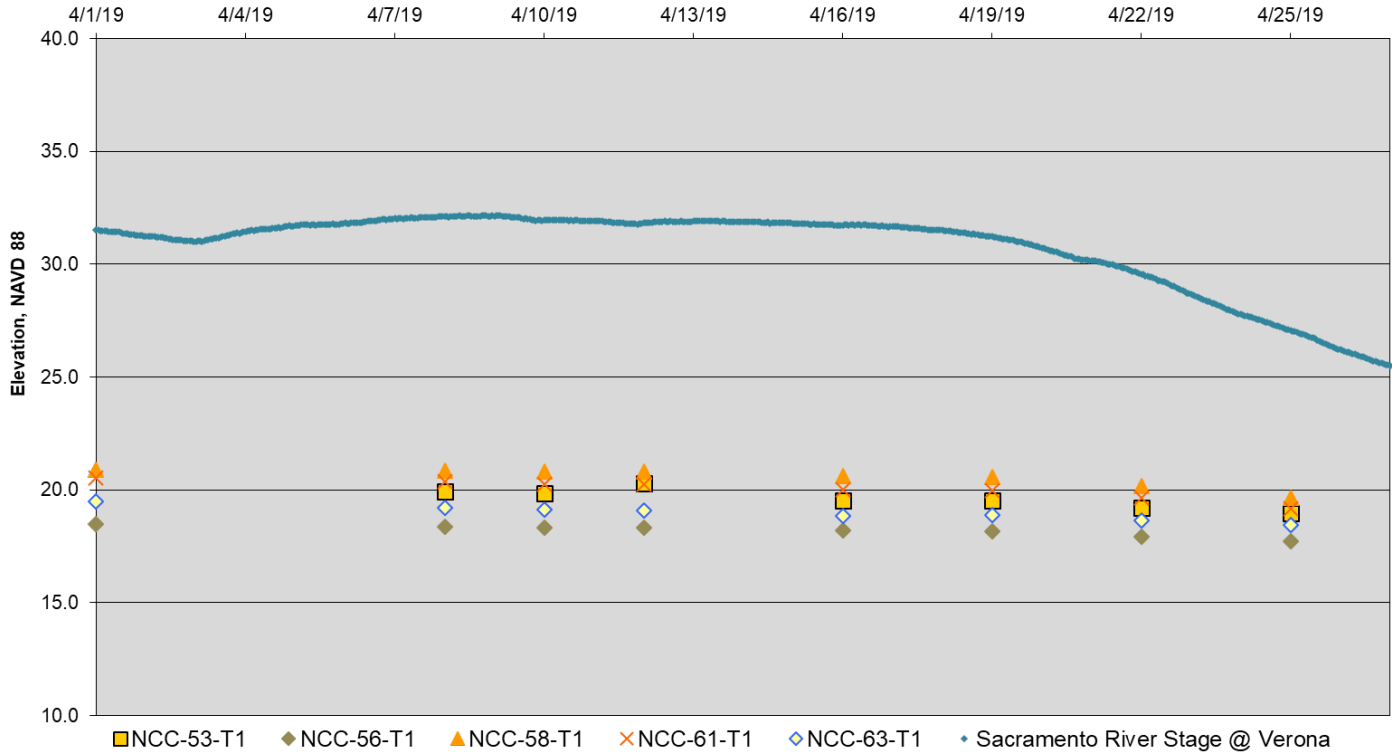
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
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 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-27

Note: Piezometers match locations on FIGURE 2-2

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Natomas Cross Canal Groundwater Level Elevations - Stations 30+00 to 80+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	53+00	Landside Toe	27.1	NCC-53-T1	Cutoff Wall
	56+00		28.3	NCC-56-T1	Pumping Plant + Window
	58+00		33.2	NCC-58-T1	Pumping Plant + Window
	61+00		28.1	NCC-61-T1	Cutoff Wall
	63+00		26.4	NCC-63-T1	Cutoff Wall



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEEVE
 STATIONS 30+00 TO 80+00
 APRIL 2019**

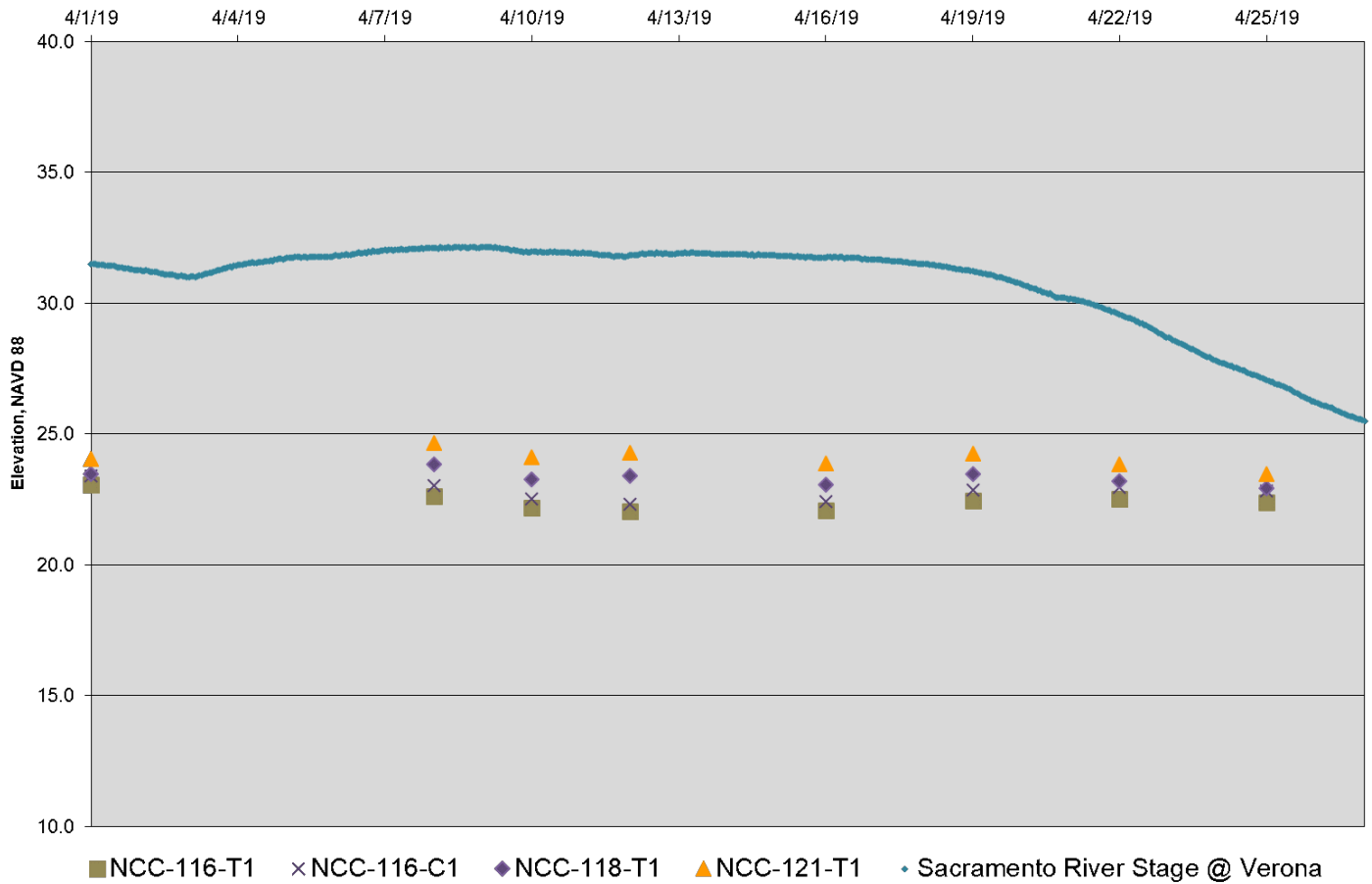
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 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-28

Note: Piezometers match locations on FIGURE 2-3

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Natomas Cross Canal Groundwater Level Elevations - Stations 105+00 to 160+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	116+00	Waterside of COW	49	NCC-116-C1	Cutoff Wall
		Landside of COW	49.1	NCC-116-C2	
		Landside Toe	26.1	NCC-116-T1	
	118+00	Landside Toe	26.3	NCC-118-T1	Cutoff Wall
	121+00	Landside Toe	32.3	NCC-121-T1	Pumping Plant + Window

Note: NCC-116-C2 dry.



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 105+00 TO 160+00 (1 of 2)
 APRIL 2019**

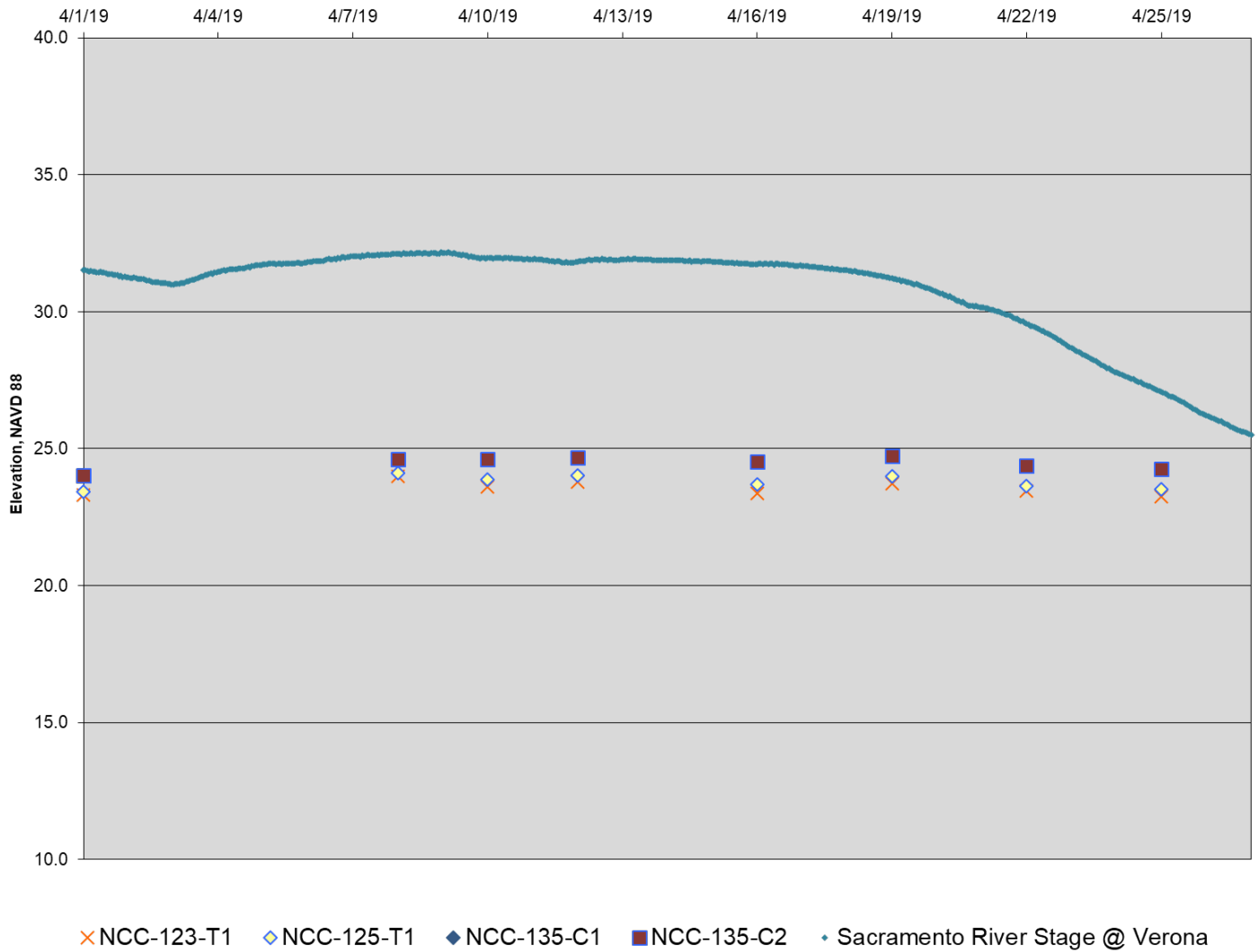
GROUNDWATER LEVEL DATA REPORT
 NATOMAS CROSS CANAL AND
 SACRAMENTO AND AMERICAN RIVERS
 SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA

FIGURE
3-29

Note: Piezometers match locations on FIGURE 2-3

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Natomas Cross Canal Groundwater Level Elevations - Stations 105+00 to 160+00 (2 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	123+00	Landside Toe	49	NCC-123-T1	Cutoff Wall
	125+00	Landside Toe	49.1	NCC-125-T1	
	135+00	Landside of COW	26.1	NCC-135-C1	
		Waterside of COW	26.3	NCC-135-C2	
		Field	32.3	NCC-135-F1	

Note: NCC-135-F1 destroyed and not measured.



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 105+00 TO 160+00 (2 of 2)
 APRIL 2019**

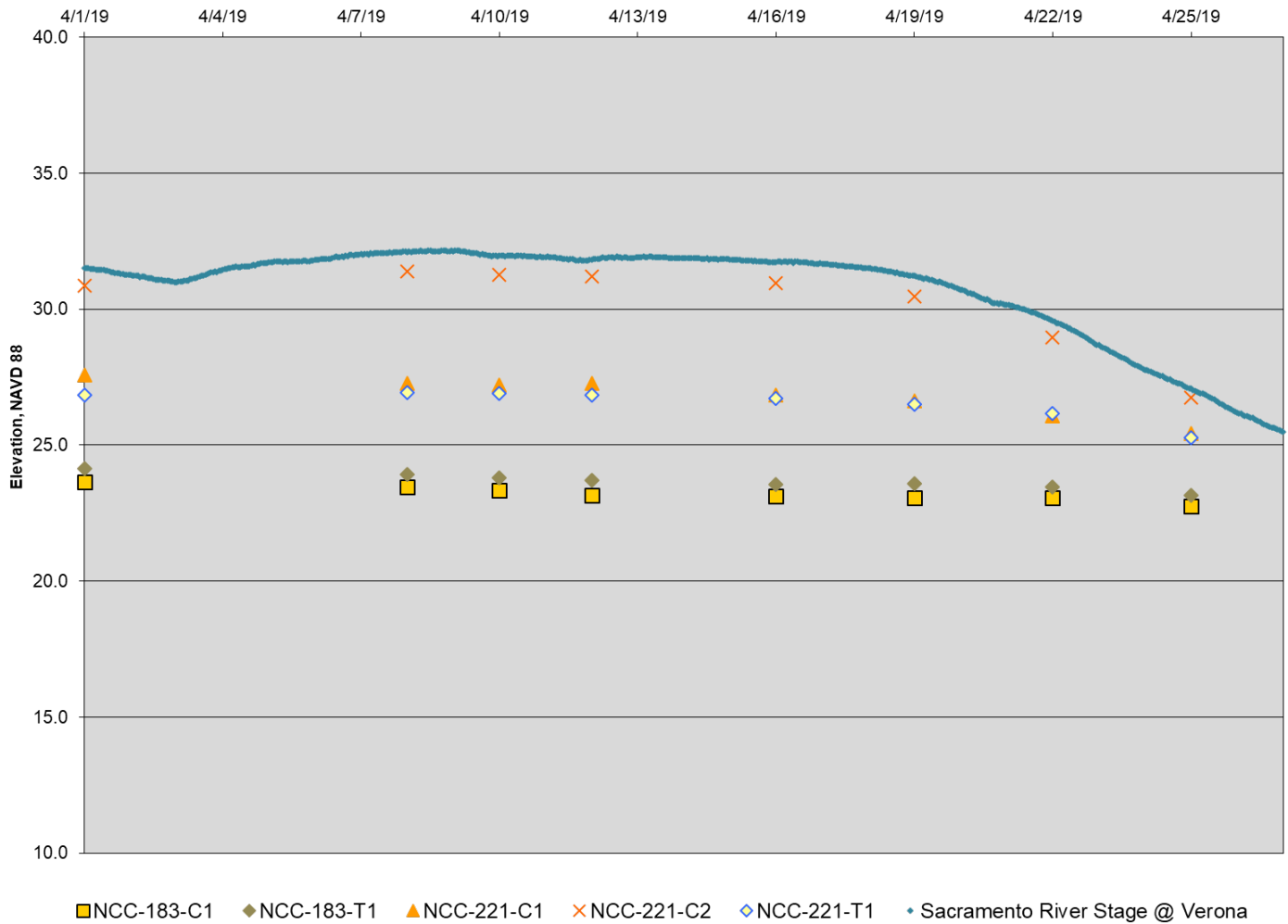
GROUNDWATER LEVEL DATA REPORT
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FIGURE
3-30

Note: Piezometers match locations on FIGURE 2-4

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Natomas Cross Canal Groundwater Level Elevations - Stations 180+00 to 230+00 (1 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	183+00	Crown	49	NCC-183-C1	Cutoff Wall
		Landside Toe	29.2	NCC-183-T1	
	221+00	Landside of COW	49.2	NCC-221-C1	
		Waterside of COW	49.1	NCC-221-C2	
		Landside Toe	30.6	NCC-221-T1	



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 180+00 TO 230+00 (1 of 2)
 APRIL 2019**

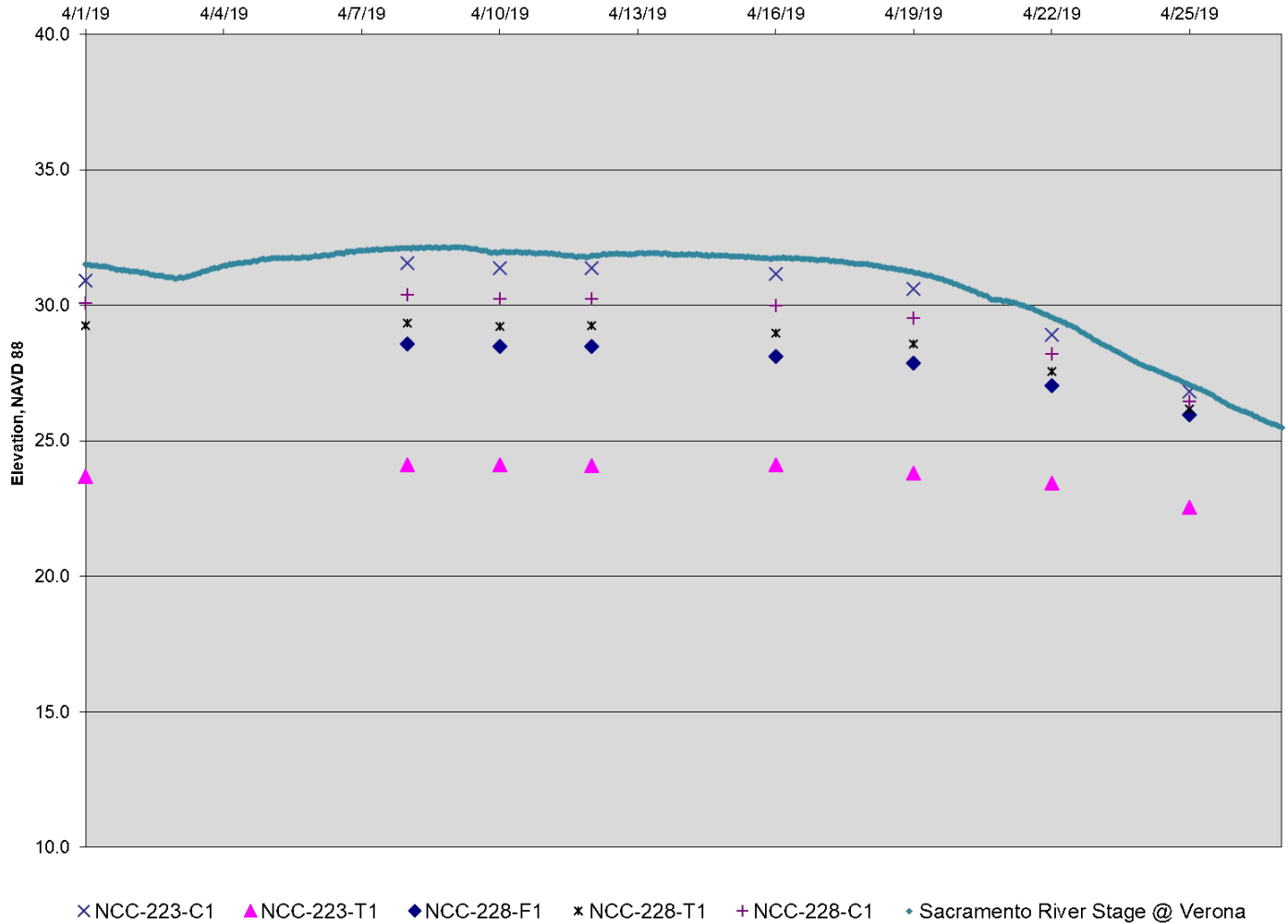
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FIGURE
3-31

Note: Piezometers match locations on FIGURE 2-4

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Natomas Cross Canal Groundwater Level Elevations - Stations 180+00 to 230+00 (2 of 2)



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	223+00	Crown	49.5	NCC-223-C1	Highway 99/70 Window
		Landside Toe	28.1	NCC-223-T1	
	228+00	Field	31.5	NCC-228-F1	
		Landside Toe	30.5	NCC-228-T1	
		Crown	46.4	NCC-228-CA	



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**GROUNDWATER DATA
 NATOMAS CROSS CANAL SOUTH LEVEE
 STATIONS 180+00 TO 230+00 (2 of 2)
 APRIL 2019**

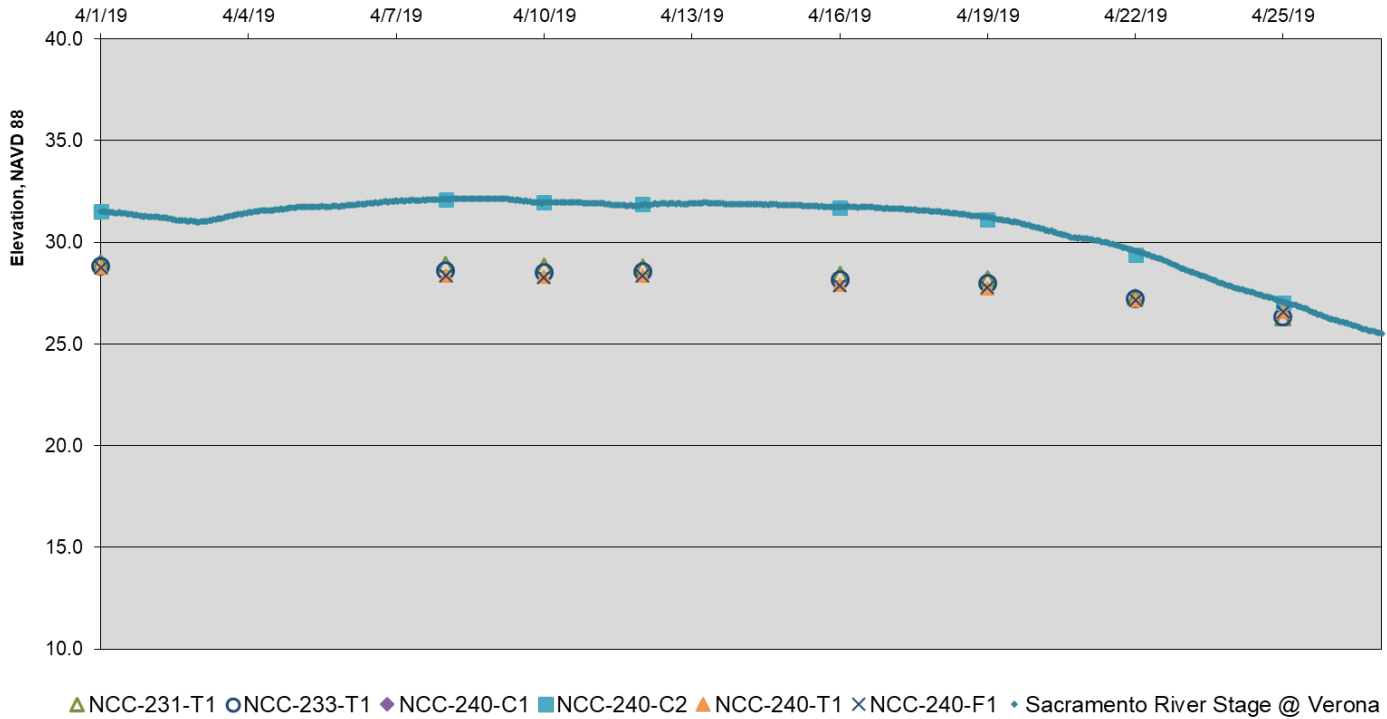
GROUNDWATER LEVEL DATA REPORT
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FIGURE
3-32

Note: Piezometers match locations on FIGURE 2-5


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Natomas Cross Canal Groundwater Level Elevations - Stations 230+00 to 240+00



Levee Segment	Approximate Station	Location(s)	Elevation	Piezometer Name	Comments
NCC	231+00	Landside Toe	31.1	NCC-231-T1	Highway 99/70
	233+00	Landside Toe	31.9	NCC-233-T1	Cutoff Wall
	240+00	Landside of COW	49.1	NCC-240-C1	Cutoff Wall
		Waterside of COW	49.3	NCC-240-C2	
		Landside Toe	31.4	NCC-240-T1	
		Field	32.4	NCC-240-F1	

Note:
 224+00 to 231+00 Hwy 99/70 Window
 231+00 to 253+00 Full Cutoff Wall

 <p>KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com</p>	PROJECT NO. 20161893	<p align="center">GROUNDWATER DATA NATOMAS CROSS CANAL SOUTH LEVEE STATIONS 230+00 TO 240+00 APRIL 2019</p> <p align="center">GROUNDWATER LEVEL DATA REPORT NATOMAS CROSS CANAL AND SACRAMENTO AND AMERICAN RIVERS SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA</p>	<p align="center">FIGURE 3-33</p>
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