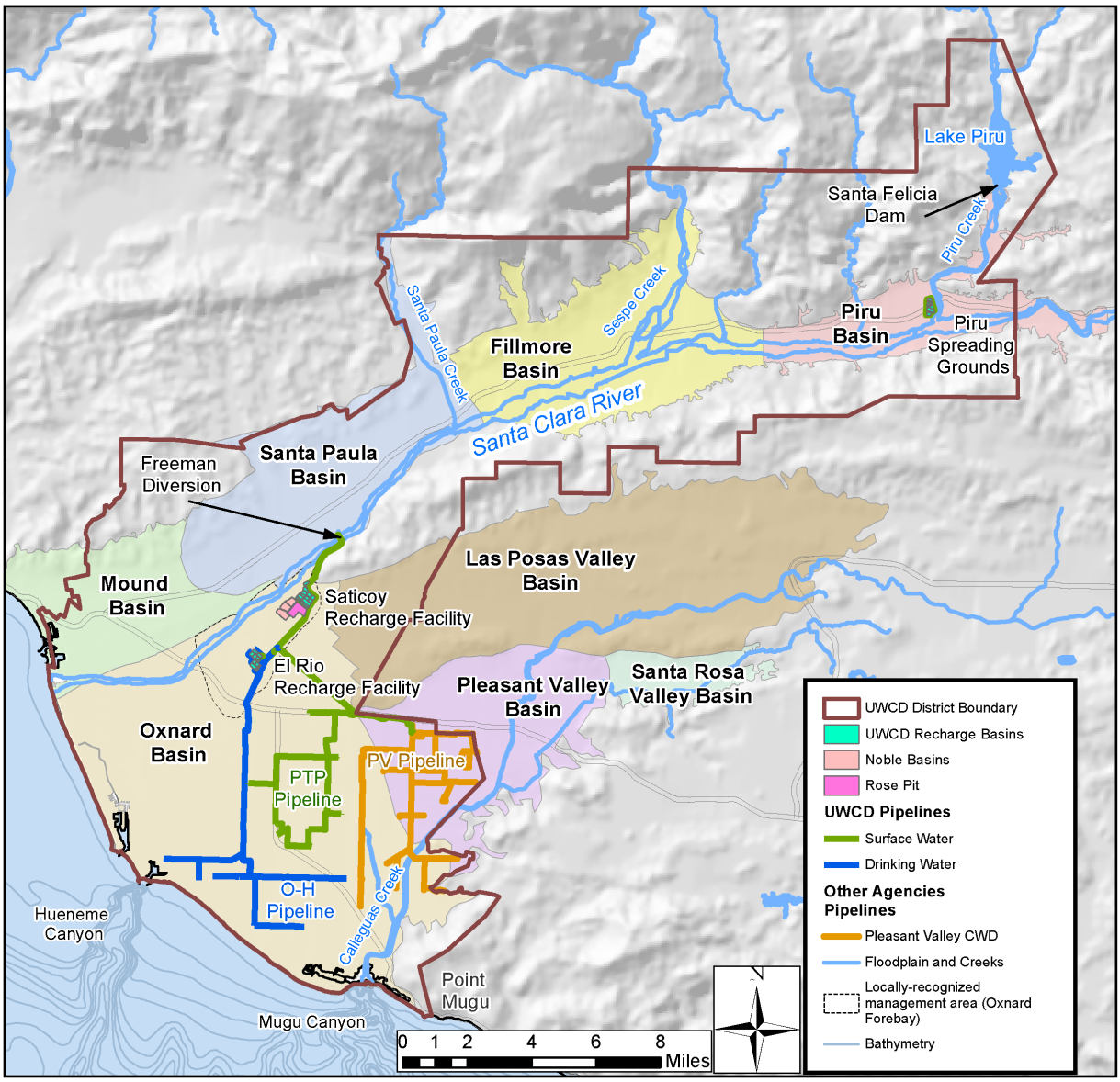
March 2022 Hydrologic Conditions Report
2021/22 Water Year

April 5, 2022



Note: This report may contain provisional data until final review at the end of the water year.

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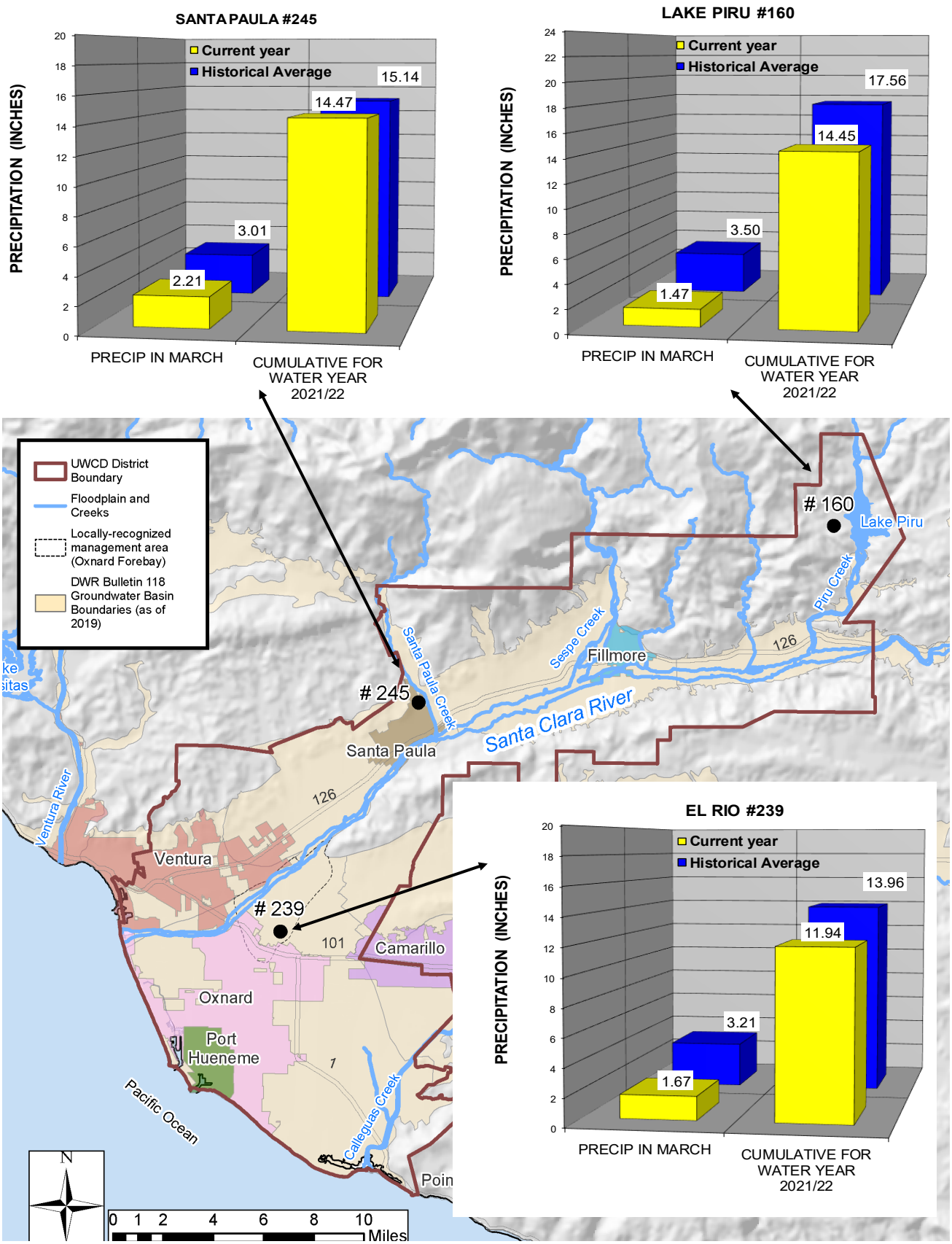
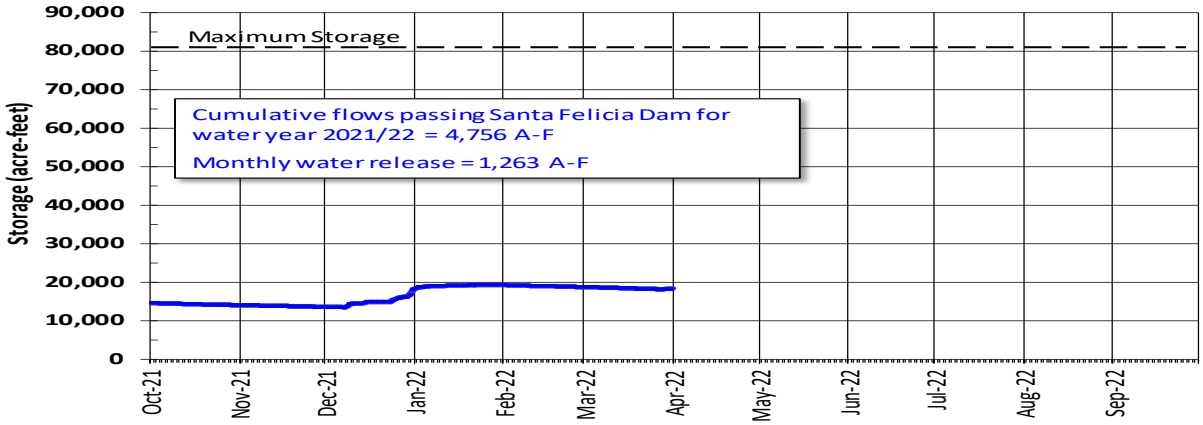


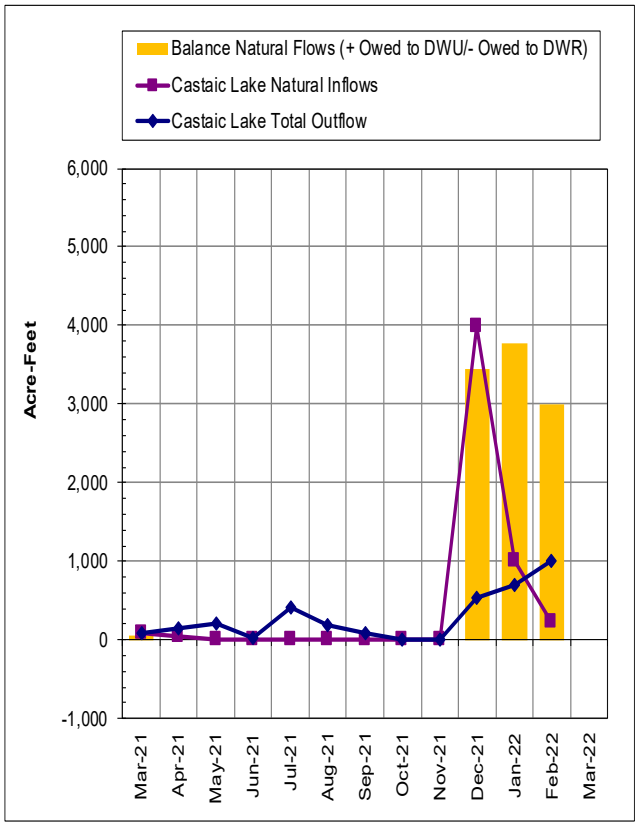
District-wide percent of normal precipitation = 88%

Lake Piru storage and outflow

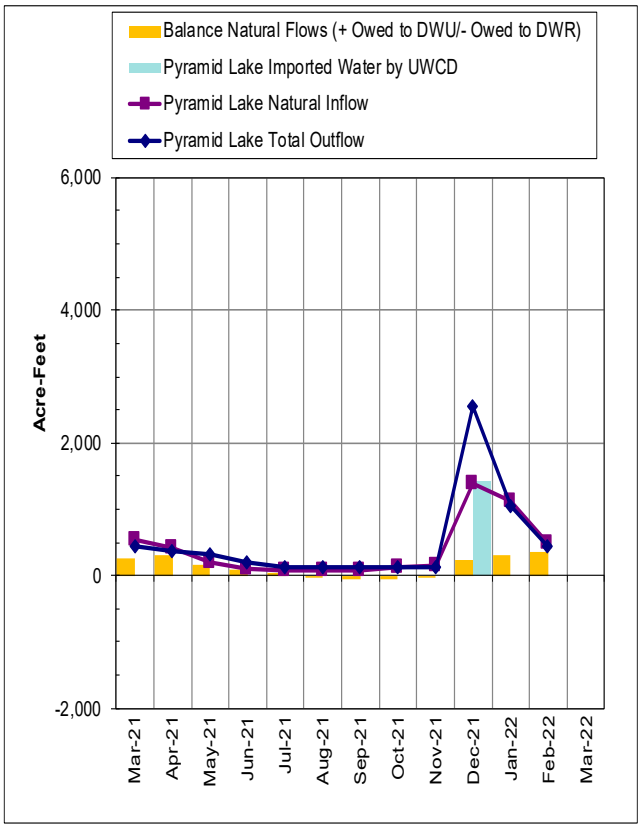


	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Hydro Plant Outflow (Acre-Feet)	0	0	0	0	0							
Cumulative Hydro Plant Outflow (A-F)	0	0	0	0	0							

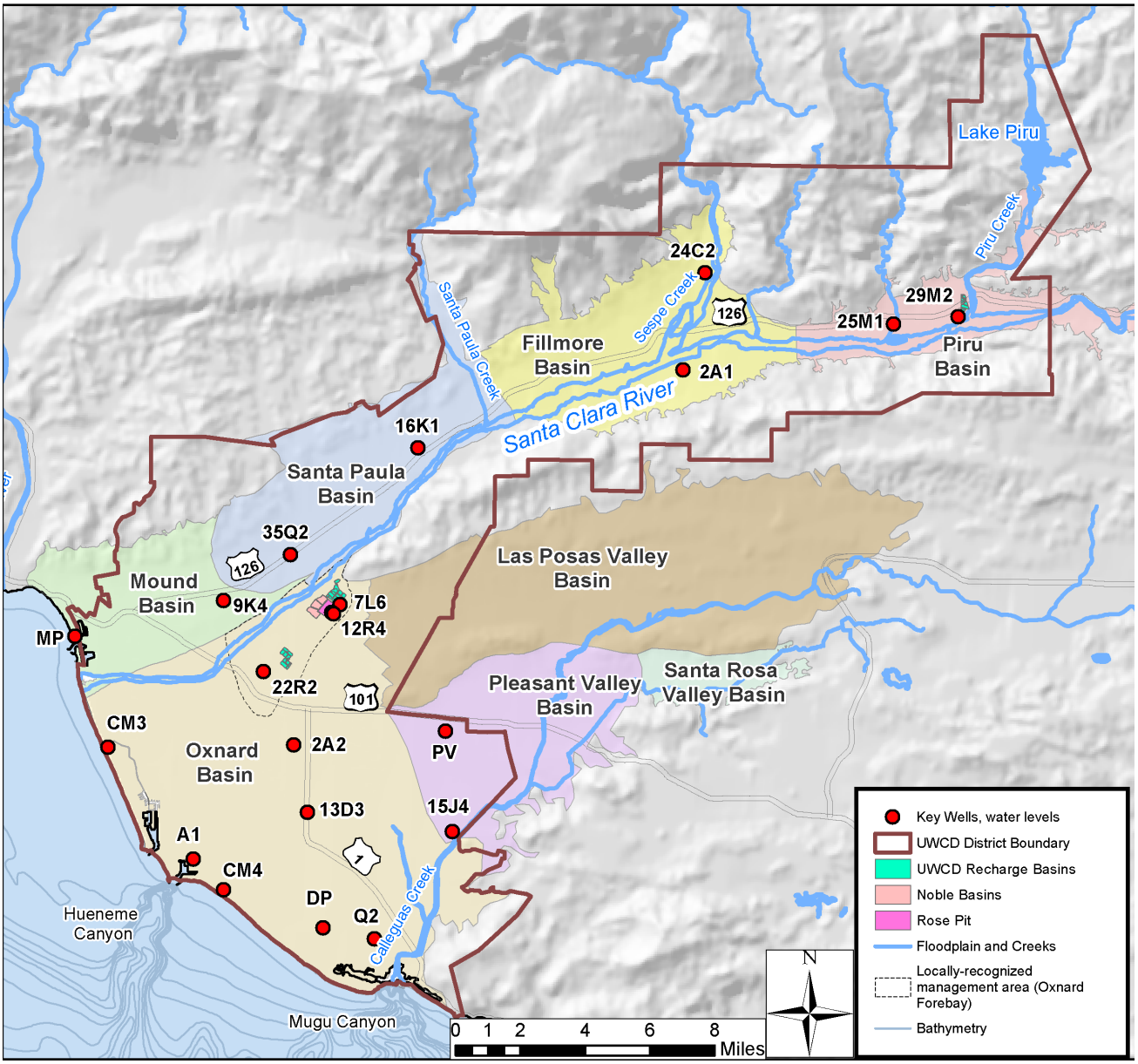
Castaic Lake releases to downstream water users (DWU)



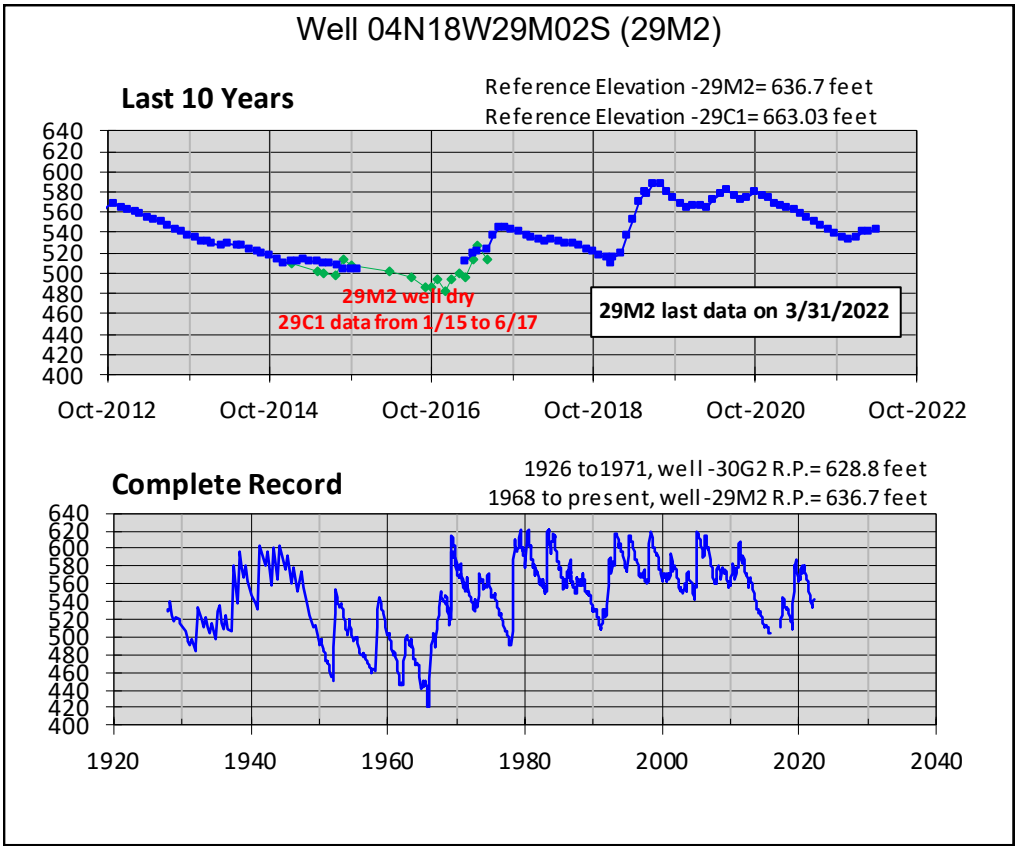
Pyramid Lake releases to UWCD

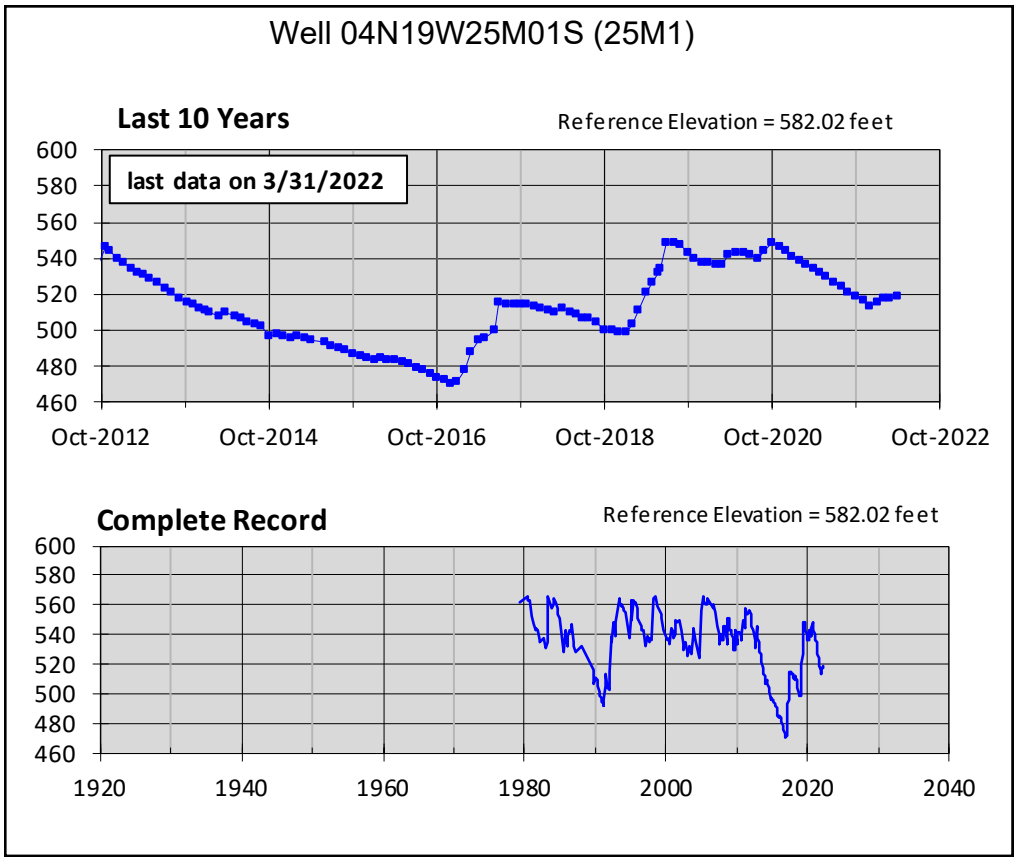


Locations of key wells, monthly groundwater elevation monitoring

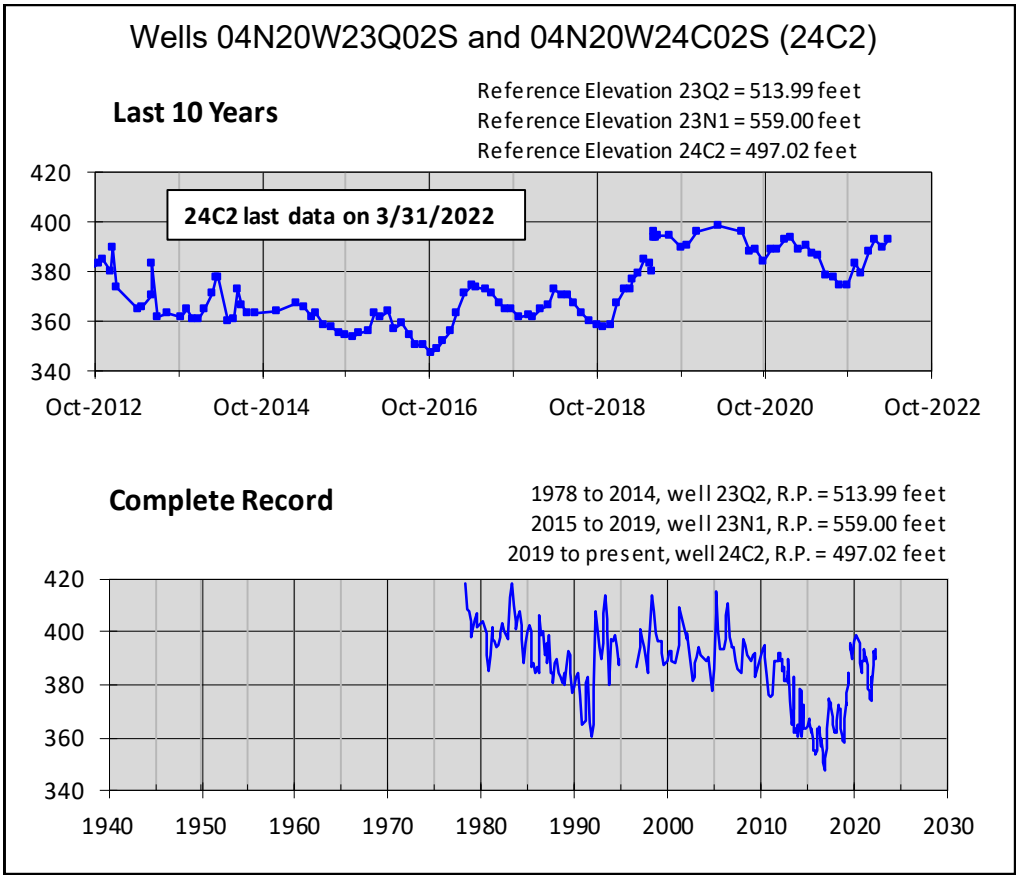


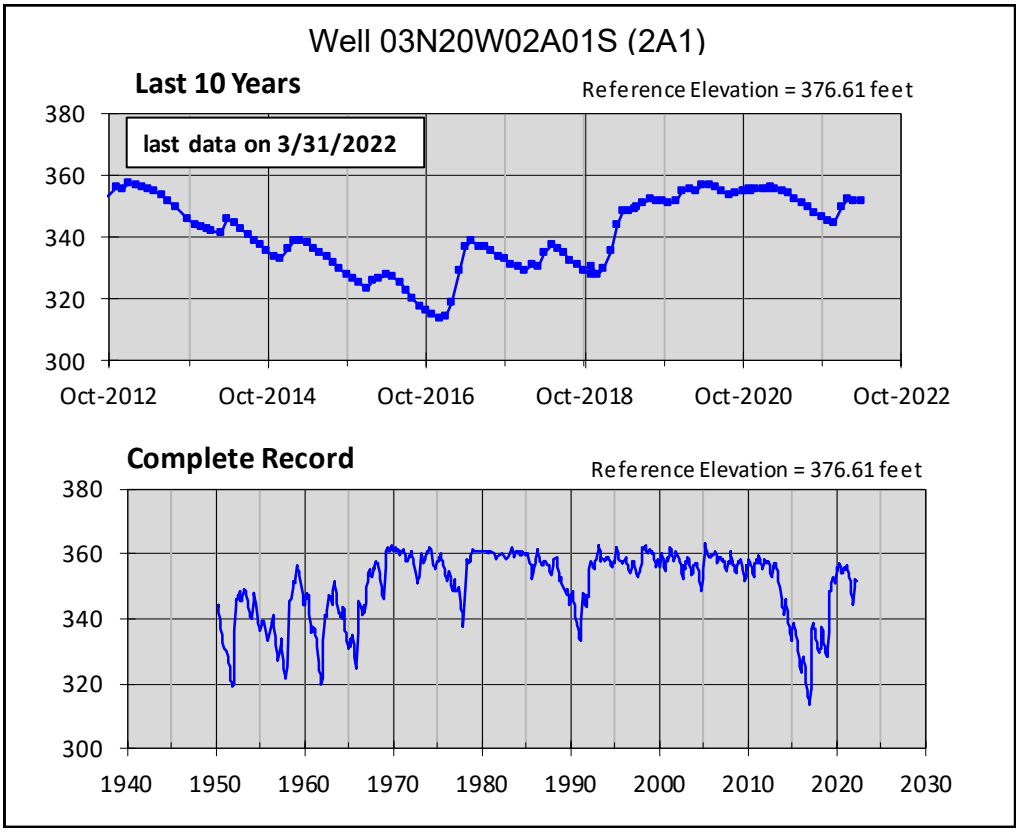
Piru Basin Key Wells
Groundwater Elevation Records





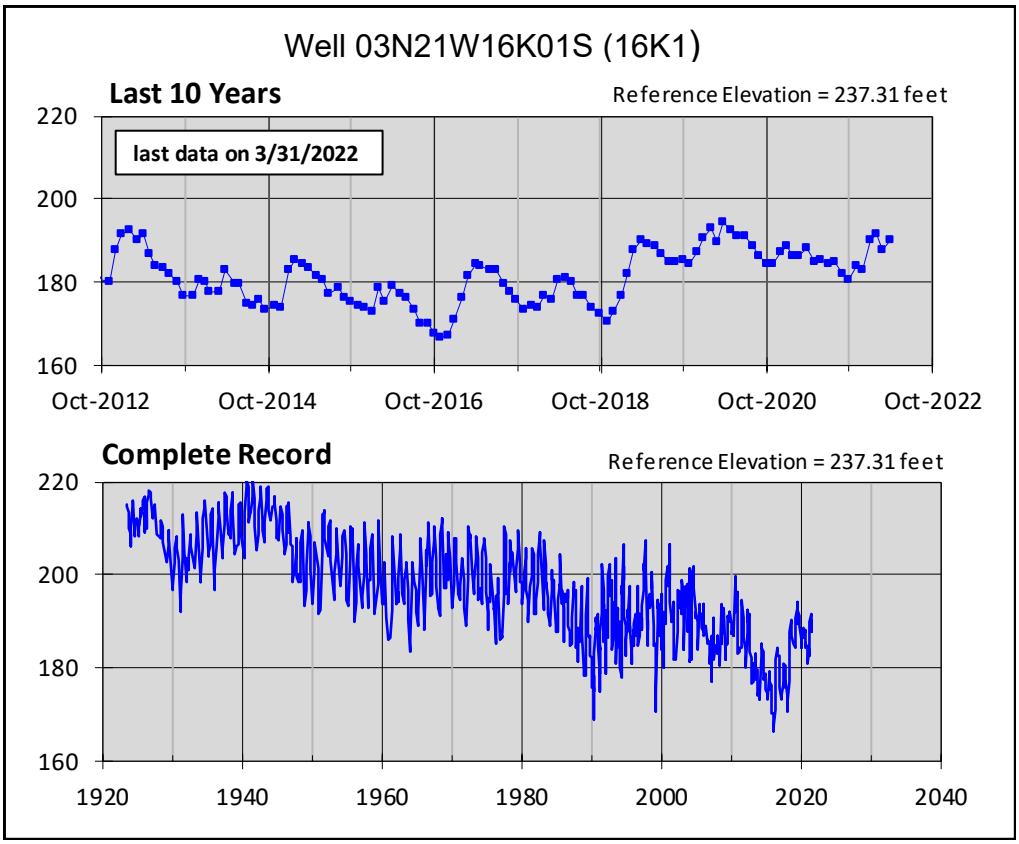
Fillmore Basin Key Wells
Groundwater Elevation Records



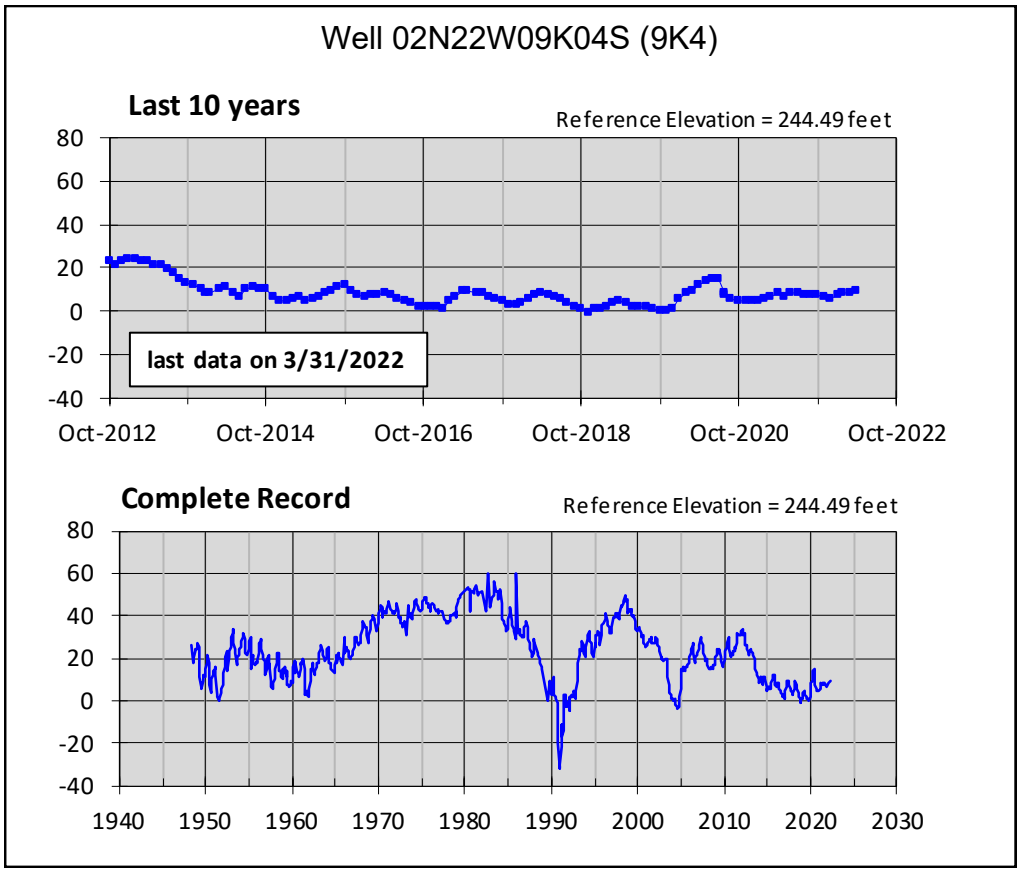


Groundwater Elevation Records

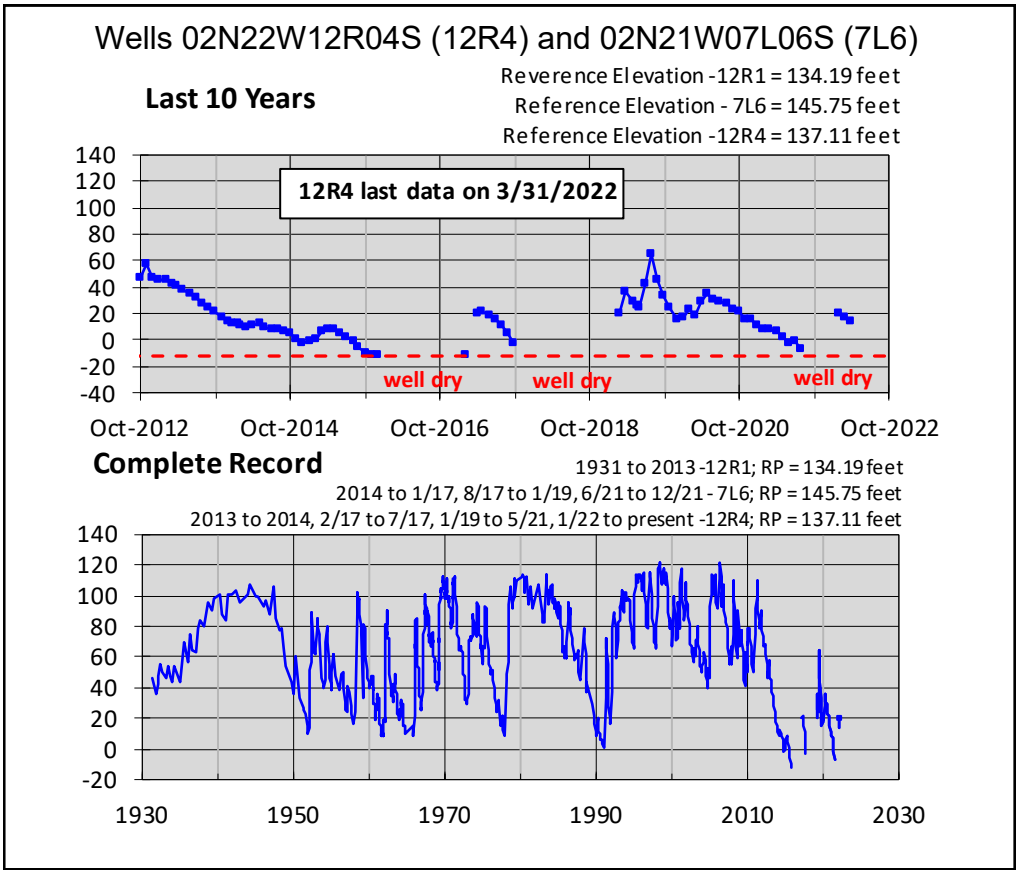
Santa Paula Basin Key Well

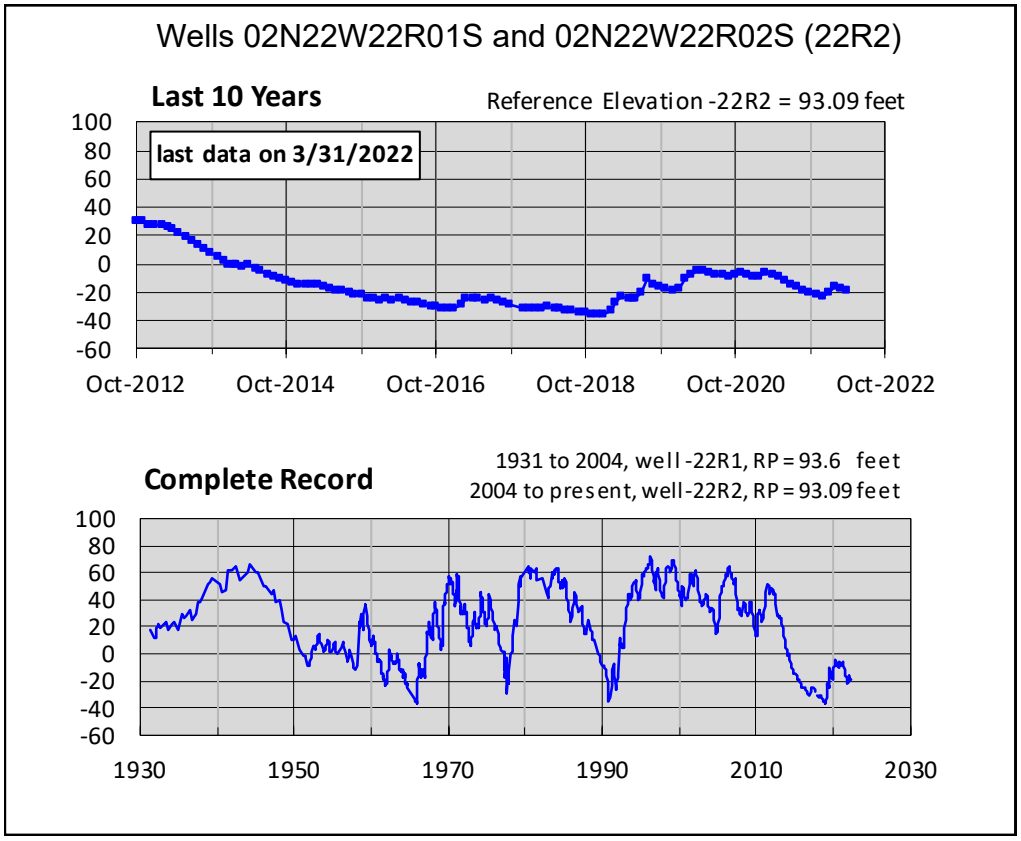


Mound Basin Key Well

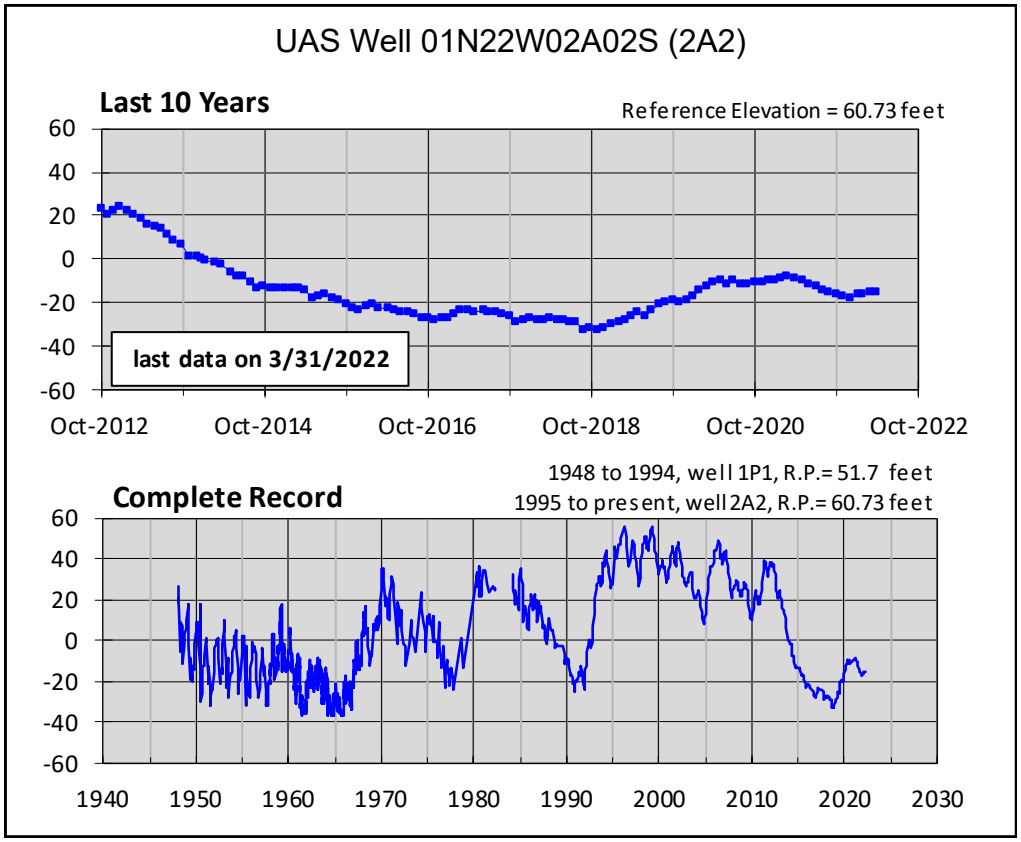


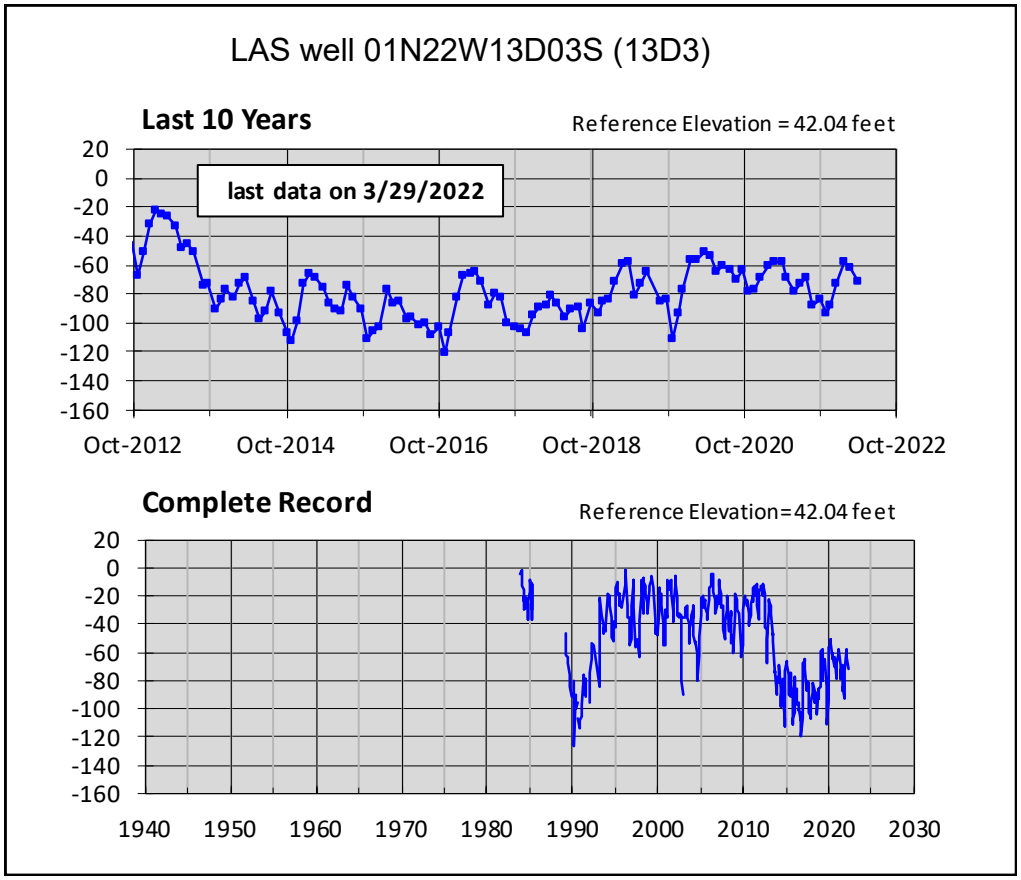
Oxnard Basin—Forebay Key Wells
Groundwater Elevation Records



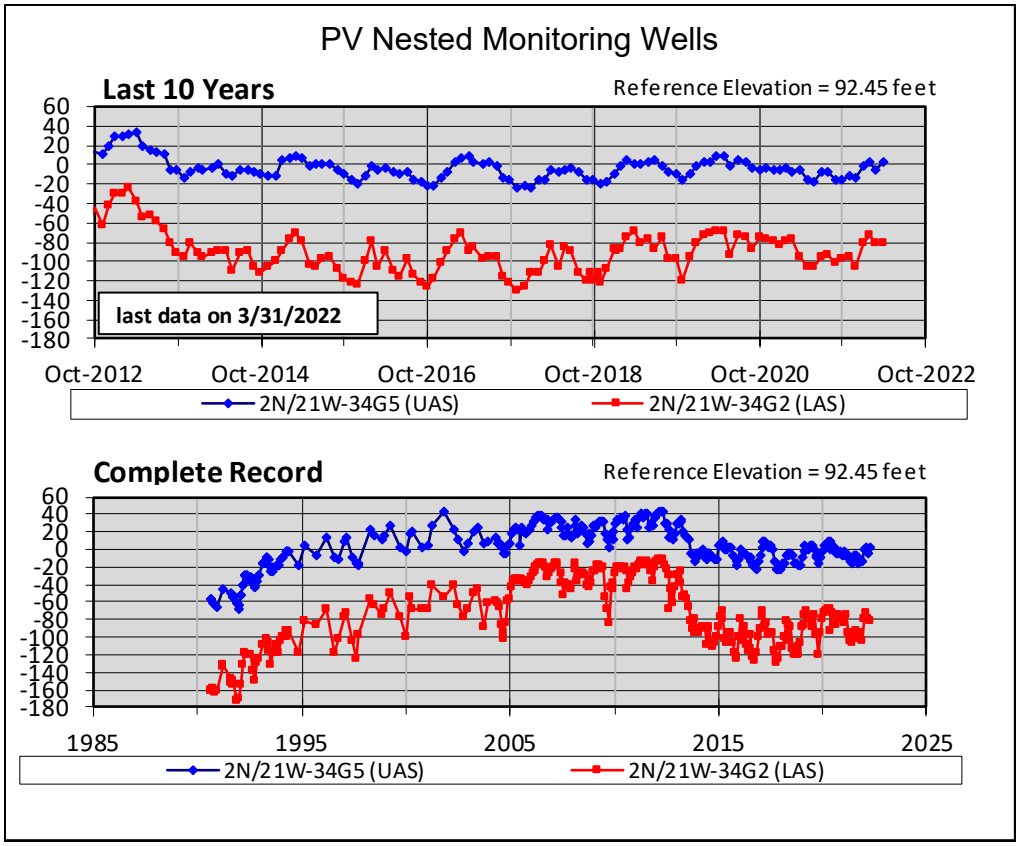


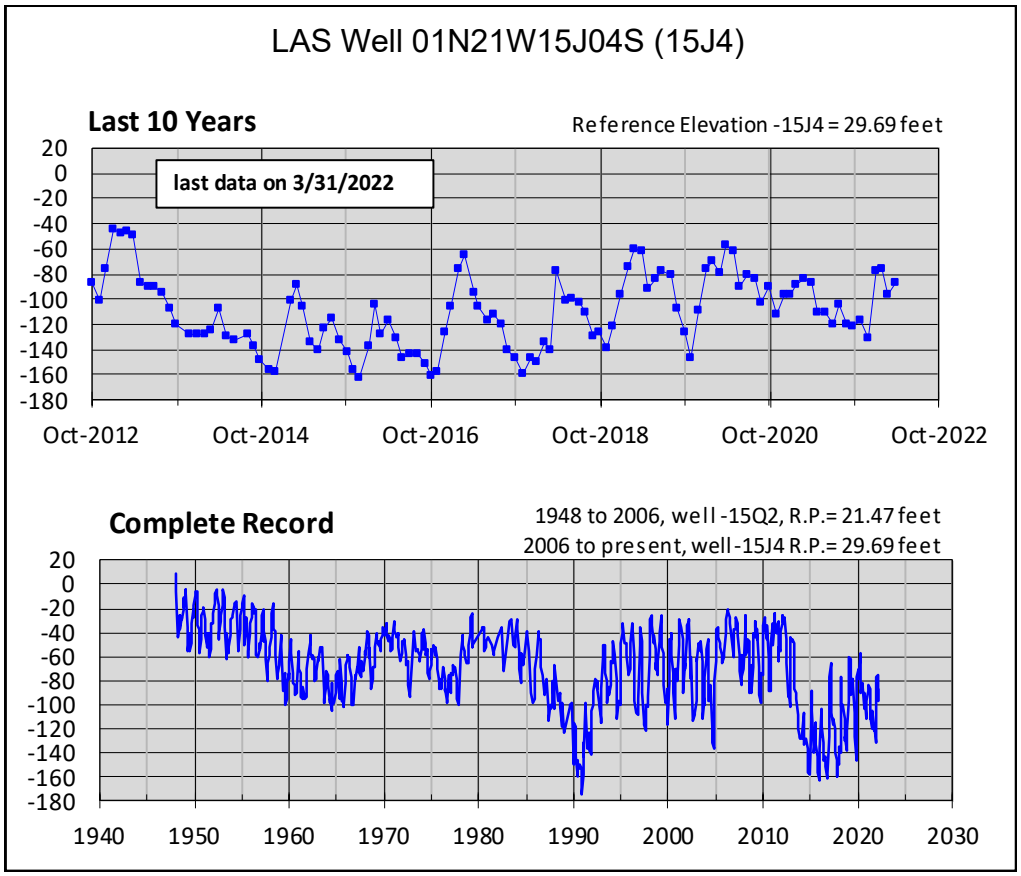
Oxnard Basin Key Wells
Groundwater Elevation Records



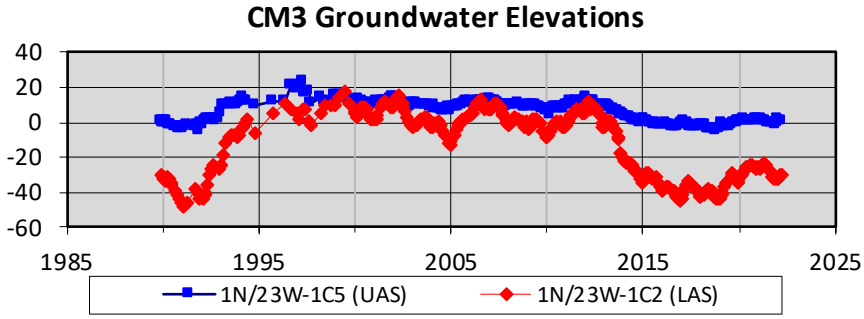


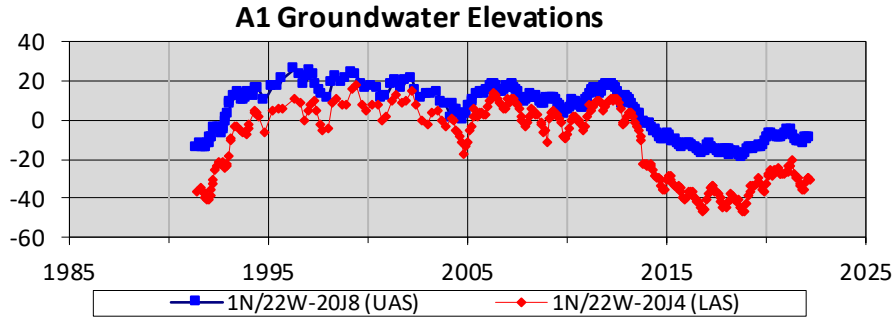
Pleasant Valley Basin Key Wells
Groundwater Elevation Records

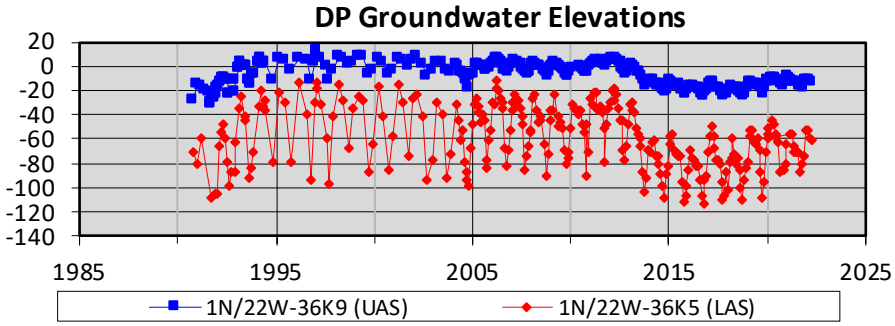


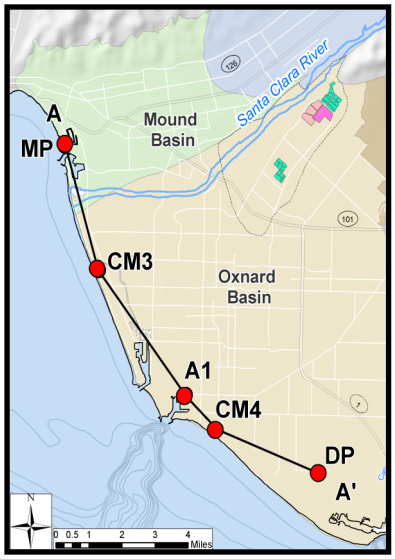


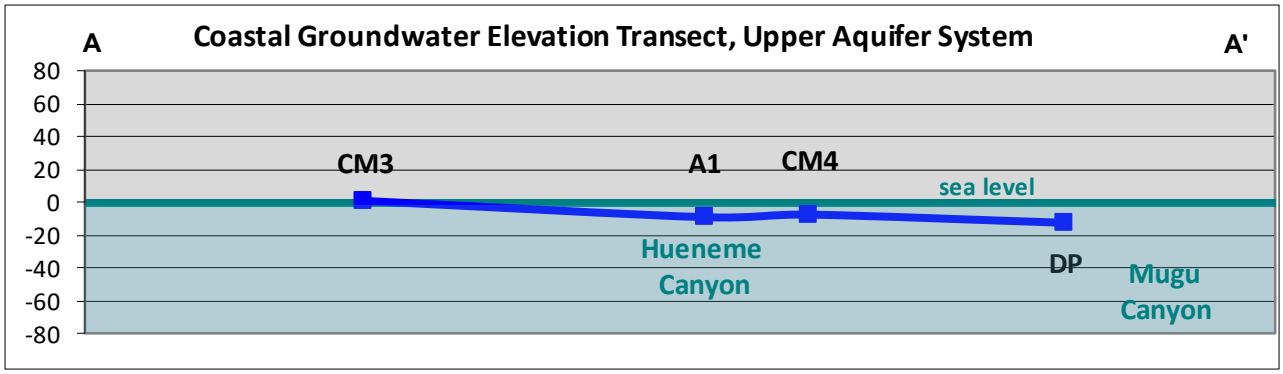
Oxnard Plain Coastal Key Wells—Nested Monitoring Wells

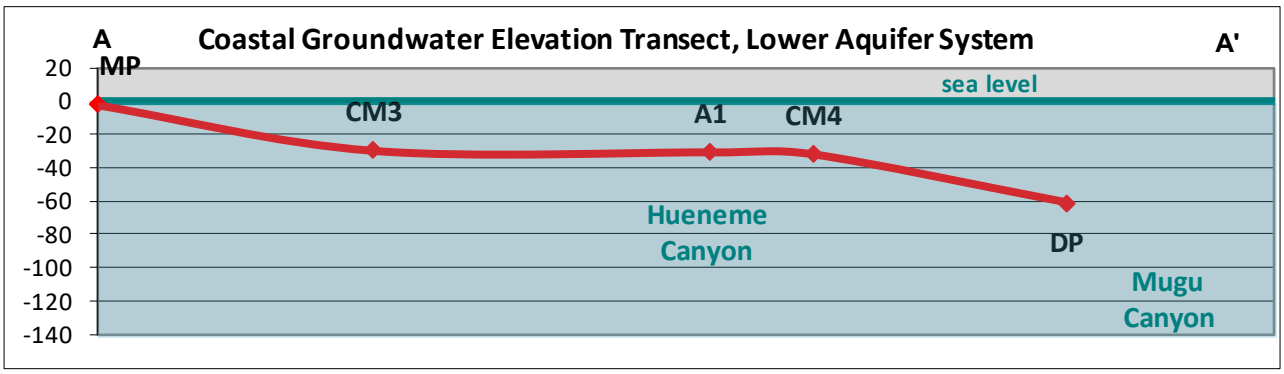












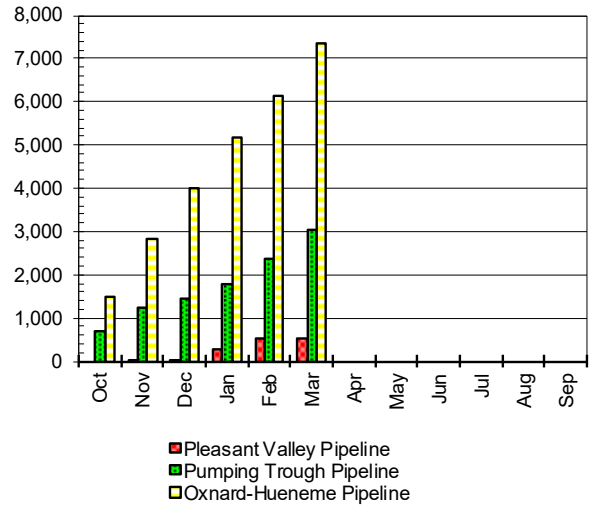
Monthly Water Deliveries, acre-feet (Water Year 2021/22)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
PV Pipeline (surface water)	0.0	0.0	7.5	274.9	222.5	0.0						
PV Pipeline (saticoy well field)	0.0	0.1	0.0	0.0	0.0	0.0						
Total to Pleasant Valley Pipeline	0.0	0.1	7.5	274.9	222.5	0.0						
Saticoy Well Field	0.0	0.0	0.0	0.0	0.0	0.0						
PTP (surface water)	0.0	0.0	37.3	296.5	501.0	301.9						
PTP (groundwater)	695.3	557.9	139.7	36.7	123.4	342.6						
PTP (Saticoy well field)	0.0	0.0	0.0	0.0	0.0	0.0						
Total PTP	695.3	557.9	177.0	333.2	624.4	644.5						
O-H Pipeline (groundwater)	1,497.9	1,346.1	1,161.3	1,148.7	993.9	1,210.7						
Total Surface Water Delivery (PTP & PV)	0.0	0.0	44.8	571.4	723.5	301.9						
Total Groundwater Delivery (OH & PTP)	2,193.2	1,904.0	1,301.0	1,185.4	1,117.3	1,553.3						
Total Delivery, Surface Water & GW	2,193.2	1,904.0	1,345.8	1,756.8	1,840.8	1,855.2						

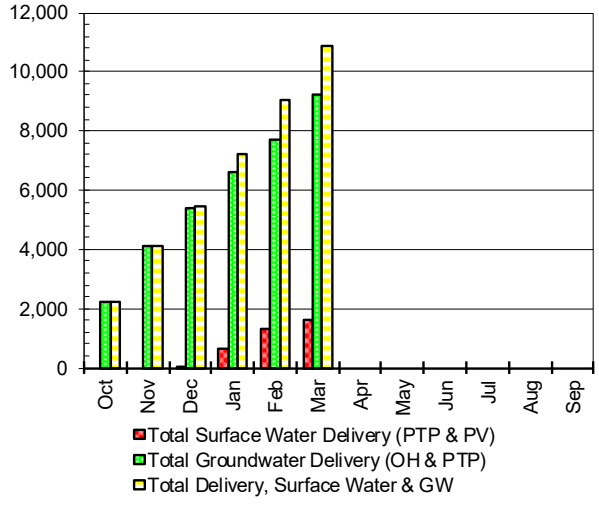
Cumulative Water Deliveries, acre-feet (Water Year 2021/22)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
PV Pipeline (surface water)	0.0	0.0	7.5	282.4	504.9	504.9						
PV Pipeline (saticoy well field)	0.0	0.1	0.1	0.1	0.1	0.1						
Total to Pleasant Valley Pipeline	0.0	0.1	7.6	282.5	505.0	505.0						
Saticoy Well Field	0.0	0.0	0.0	0.0	0.0	0.0						
PTP (surface water)	0.0	0.0	37.3	333.8	834.8	1,136.7						
PTP (groundwater)	695.3	1,253.2	1,392.9	1,429.5	1,552.9	1,895.5						
PTP (Saticoy well field)	0.0	0.0	0.0	0.0	0.0	0.0						
Total PTP	695.3	1,253.2	1,430.2	1,763.3	2,387.7	3,032.2						
O-H Pipeline (groundwater)	1,497.9	2,844.0	4,005.3	5,154.0	6,147.9	7,358.6						
Total Surface Water Delivery (PTP & PV)	0.0	0.0	44.8	616.2	1,339.7	1,641.6						
Total Groundwater Delivery (OH & PTP)	2,193.2	4,097.2	5,398.2	6,583.5	7,700.8	9,254.1						
Total Delivery, Surface Water & GW	2,193.2	4,097.2	5,443.0	7,199.7	9,040.5	10,895.7						

Cumulative deliveries by system



Cumulative deliveries by source/type



Monthly diversion and recharge totals by facility, 2021/22, in acre-feet

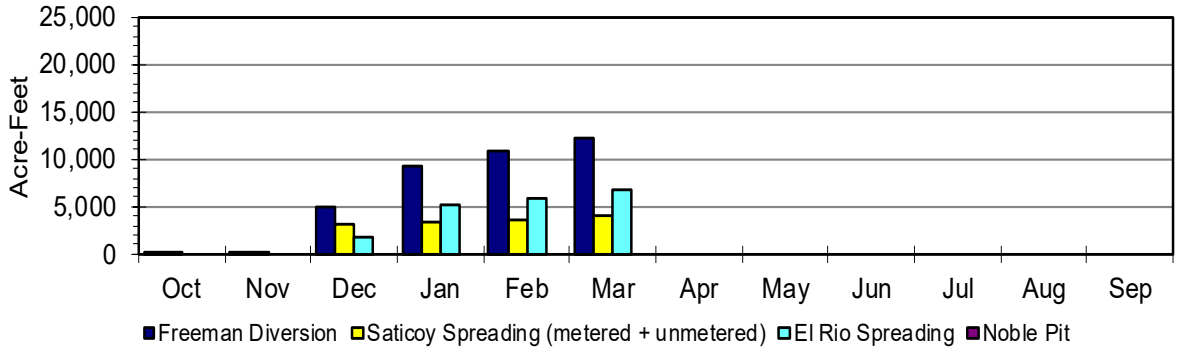
Month	Piru Spreading	Freeman Diversion	Saticoy Spreading (metered + unmetered)	El Rio Spreading	Noble Pit
Oct	0	2	2	0	0
Nov	0	76	76	0	0
Dec	0	4,936	3,037	1,860	0
Jan	0	4,168	371	3,262	0
Feb	0	1,702	204	807	0
Mar	0	1,445	468	744	0
Apr					
May					
Jun					
Jul					
Aug					
Sep					

Lloyd-Butler diversion was not available at the time this report was prepared and therefore not accounted for in the calculation of Saticoy Spreading.

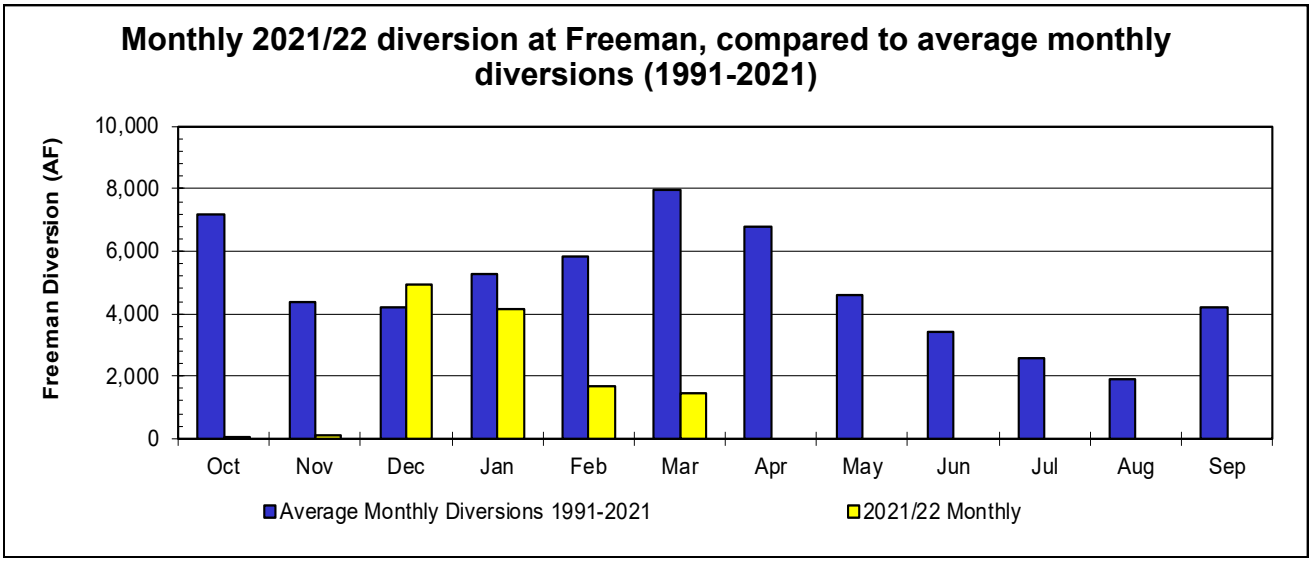
Cumulative diversion and recharge totals by facility, 2021/22, in acre-feet

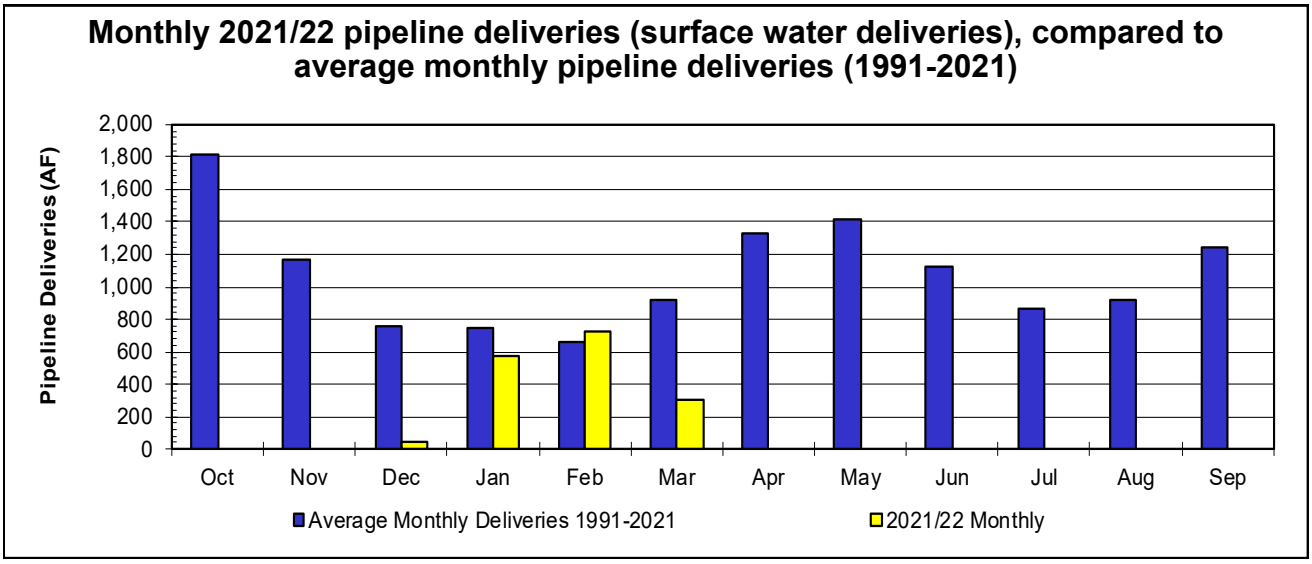
Month	Piru Spreading	Freeman Diversion	Saticoy Spreading (metered + unmetered)	El Rio Spreading	Noble Pit
Oct	0	2	2	0	0
Nov	0	78	78	0	0
Dec	0	5,014	3,115	1,860	0
Jan	0	9,182	3,486	5,122	0
Feb	0	10,884	3,690	5,929	0
Mar	0	12,329	4,158	6,673	0
Apr					
May					
Jun					
Jul					
Aug					
Sep					

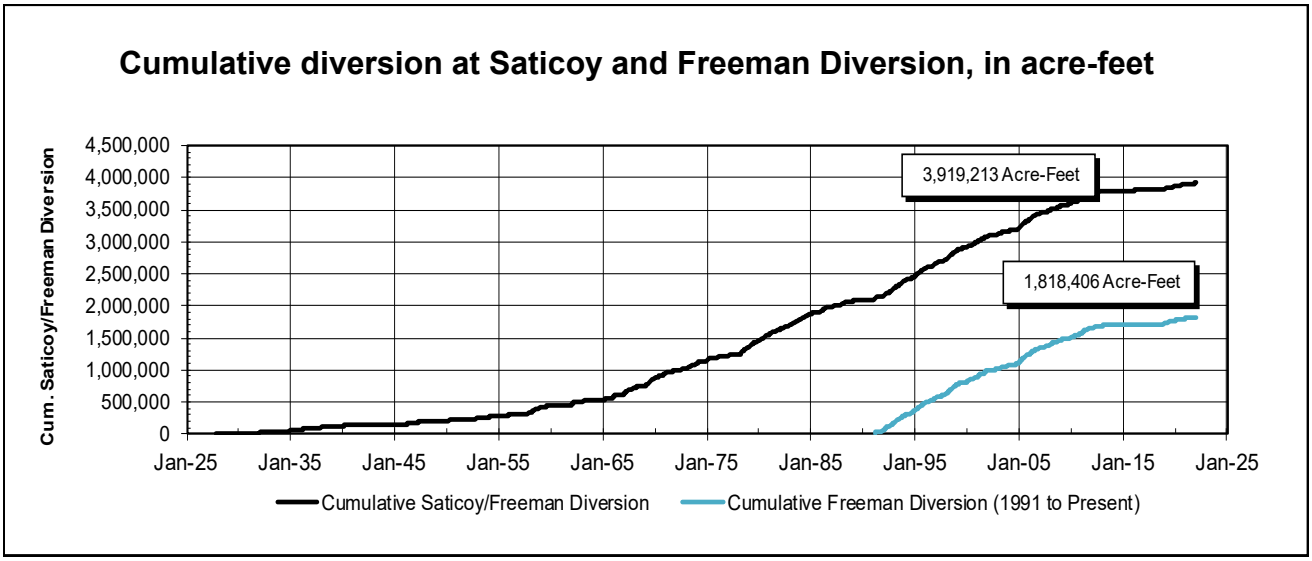
Cumulative diversion at Freeman, and distribution to recharge facilities

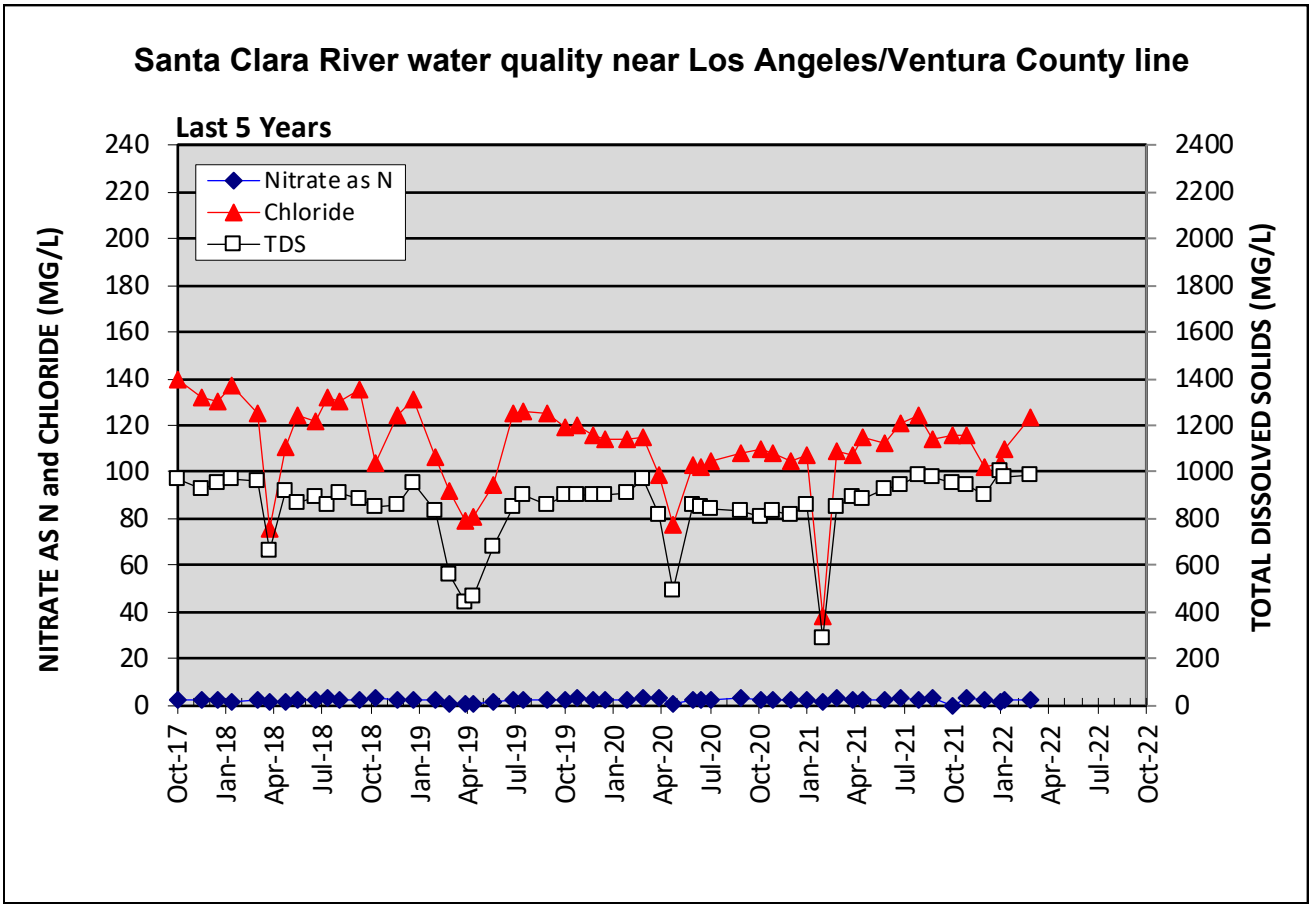


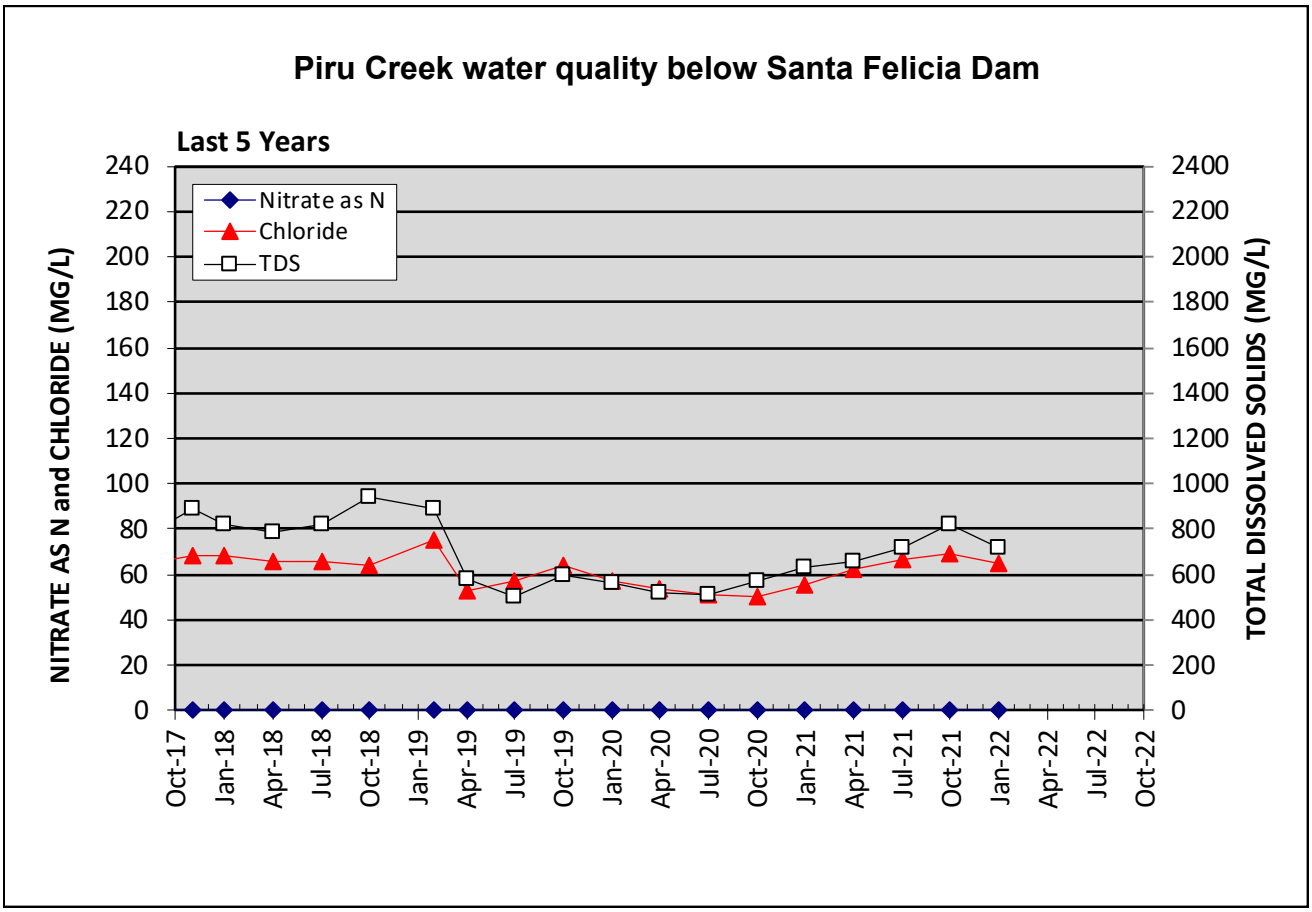
Cumulative diversions to Piru Spreading Grounds, 2021/22 = 0 AF

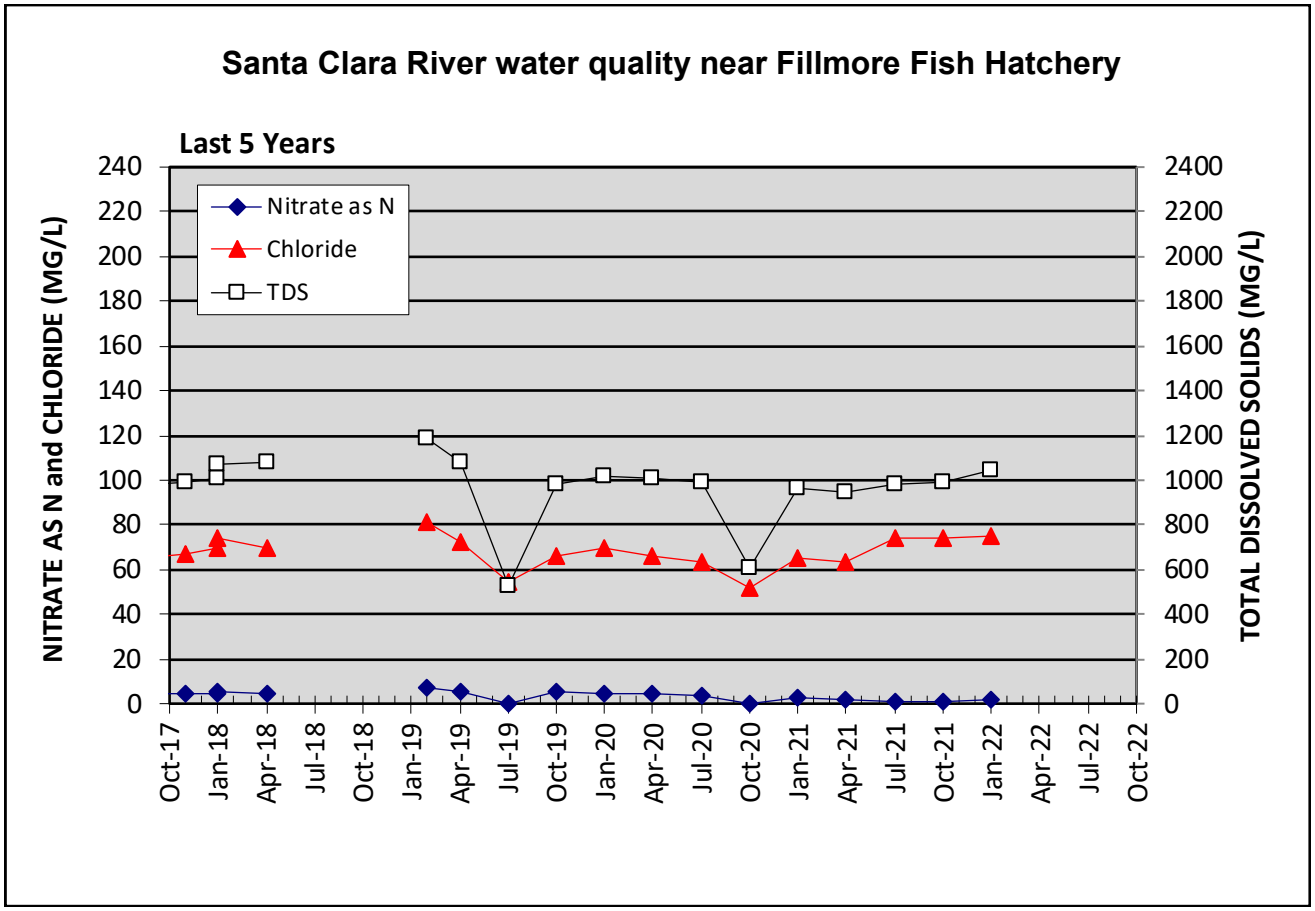

Monthly 2021/22 diversion at Freeman, compared to average monthly diversions (1991-2021)
Freeman Diversion (AF)
10,000
8,000
6,000
4,000
2,000
0
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Average Monthly Diversions 1991-2021
2021/22 Monthly


Monthly 2021/22 pipeline deliveries (surface water deliveries), compared to average monthly pipeline deliveries (1991-2021)
Pipeline Deliveries (AF)
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Average Monthly Deliveries 1991-2021
2021/22 Monthly


Cumulative diversion at Saticoy and Freeman Diversion, in acre-feet
Cum. Saticoy/Freeman Diversion
4,500,000
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
3,919,213 Acre-Feet
1,818,406 Acre-Feet
Jan-25
Jan-35
Jan-45
Jan-55
Jan-65
Jan-75
Jan-85
Jan-95
Jan-05
Jan-15
Jan-25
Cumulative Saticoy/Freeman Diversion
Cumulative Freeman Diversion (1991 to Present)


Santa Clara River water quality near Los Angeles/Ventura County line
Last 5 Years
Nitrate as N
Chloride
TDS
NITRATE AS N and CHLORIDE (MG/L)
TOTAL DISSOLVED SOLIDS (MG/L)
0
20
40
60
80
100
120
140
160
180
200
220
240
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22


Piru Creek water quality below Santa Felicia Dam
Last 5 Years
Nitrate as N
Chloride
TDS
NITRATE AS N and CHLORIDE (MG/L)
TOTAL DISSOLVED SOLIDS (MG/L)
0
20
40
60
80
100
120
140
160
180
200
220
240
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22


Santa Clara River water quality near Fillmore Fish Hatchery
Last 5 Years
Nitrate as N
Chloride
TDS
NITRATE AS N and CHLORIDE (MG/L)
TOTAL DISSOLVED SOLIDS (MG/L)
0
20
40
60
80
100
120
140
160
180
200
220
240
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
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Jan-21
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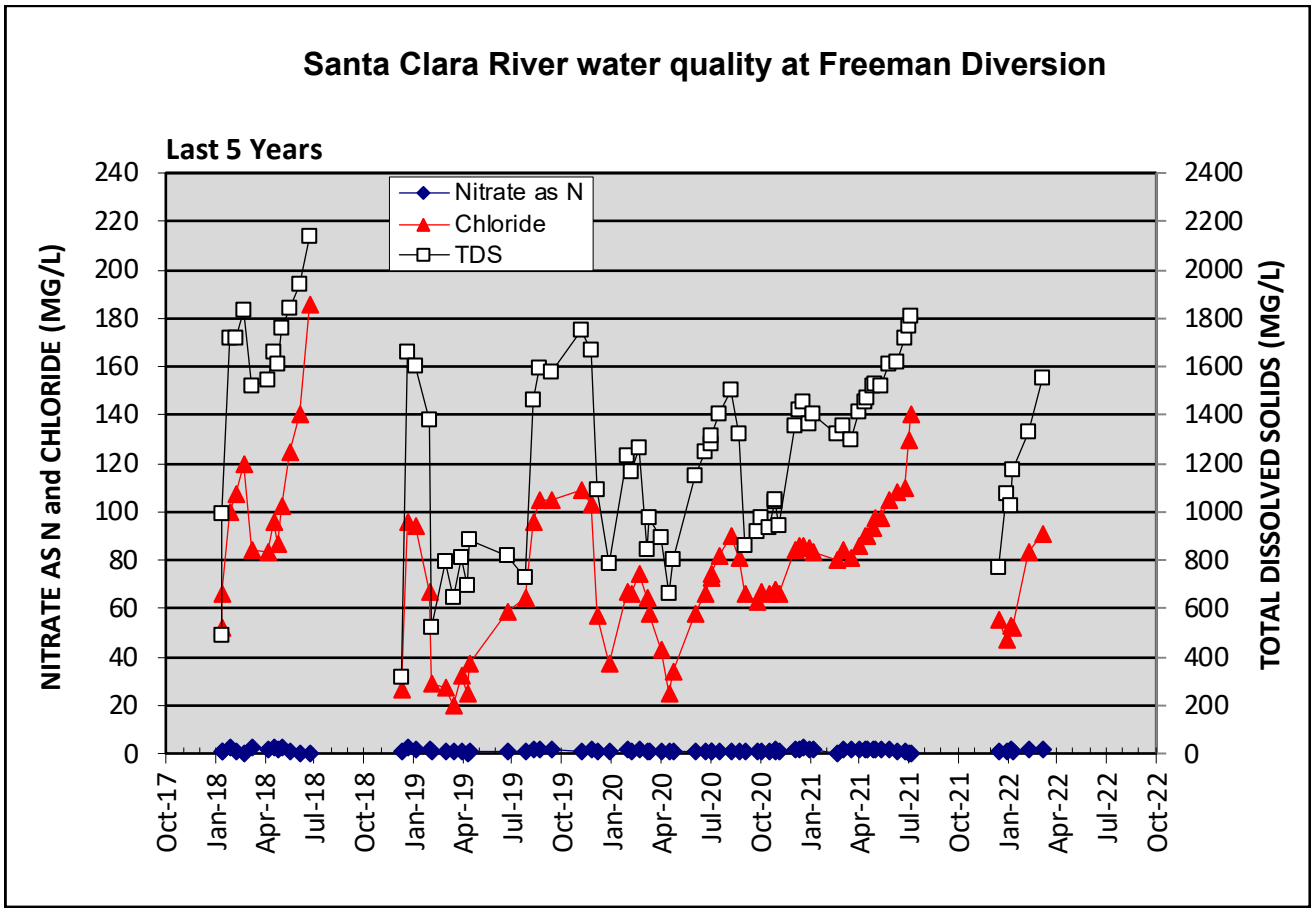
Jan-22
Apr-22
Jul-22
Oct-22


Santa Clara River water quality at Freeman Diversion
Last 5 Years
Nitrate as N
Chloride
TDS
NITRATE AS N and CHLORIDE (MG/L)
TOTAL DISSOLVED SOLIDS (MG/L)
0
20
40
60
80
100
120
140
160
180
200
220
240
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
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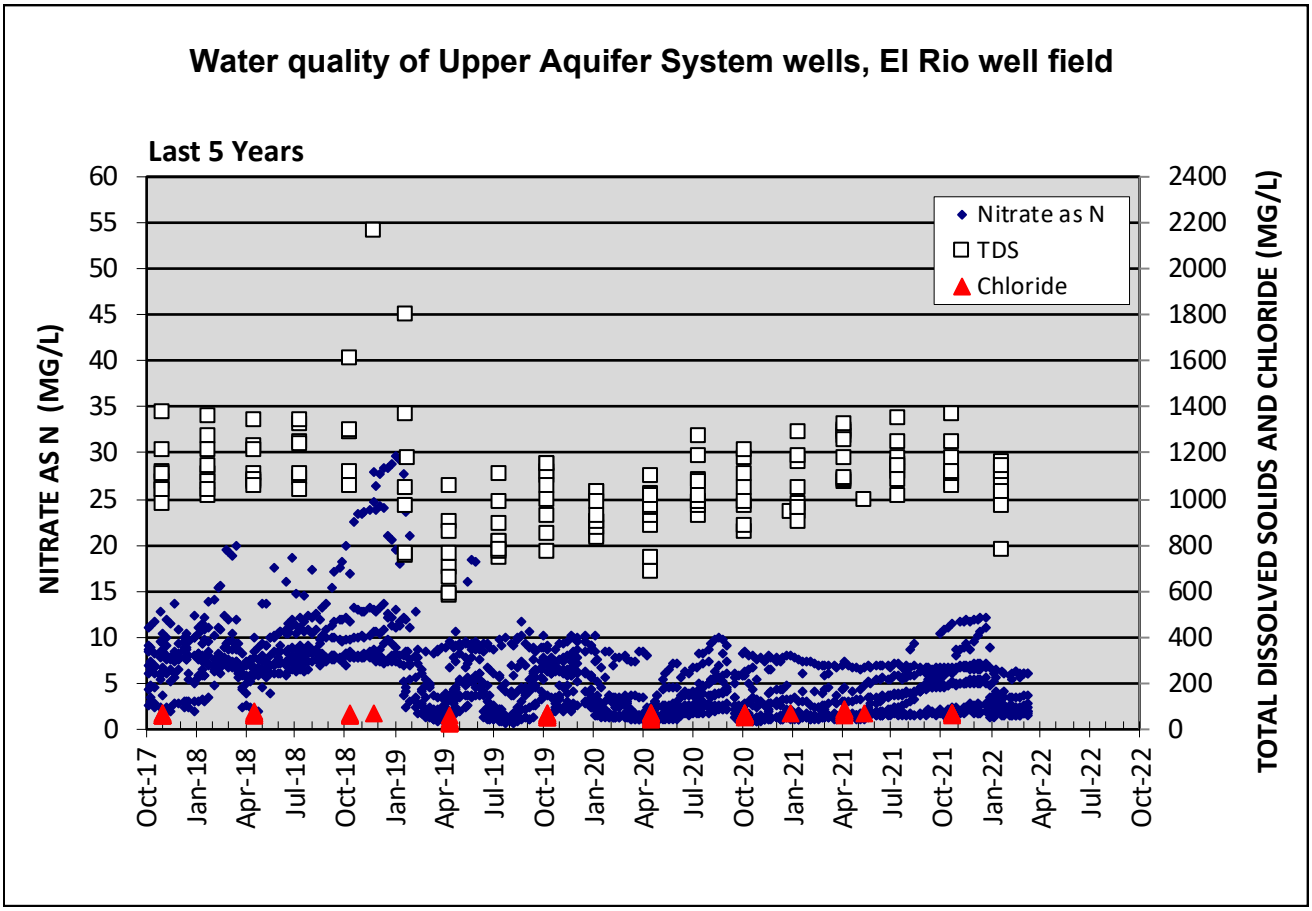
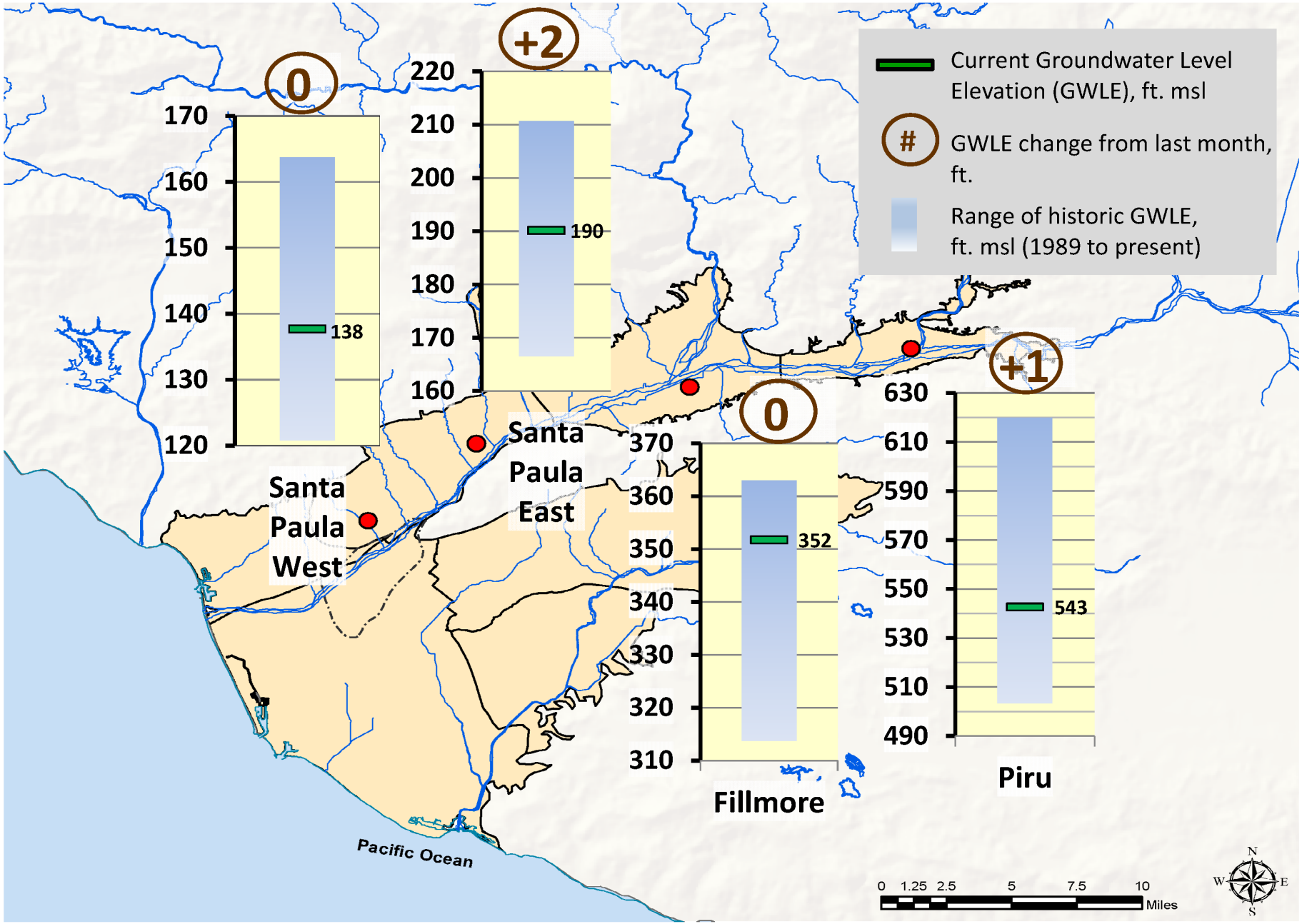
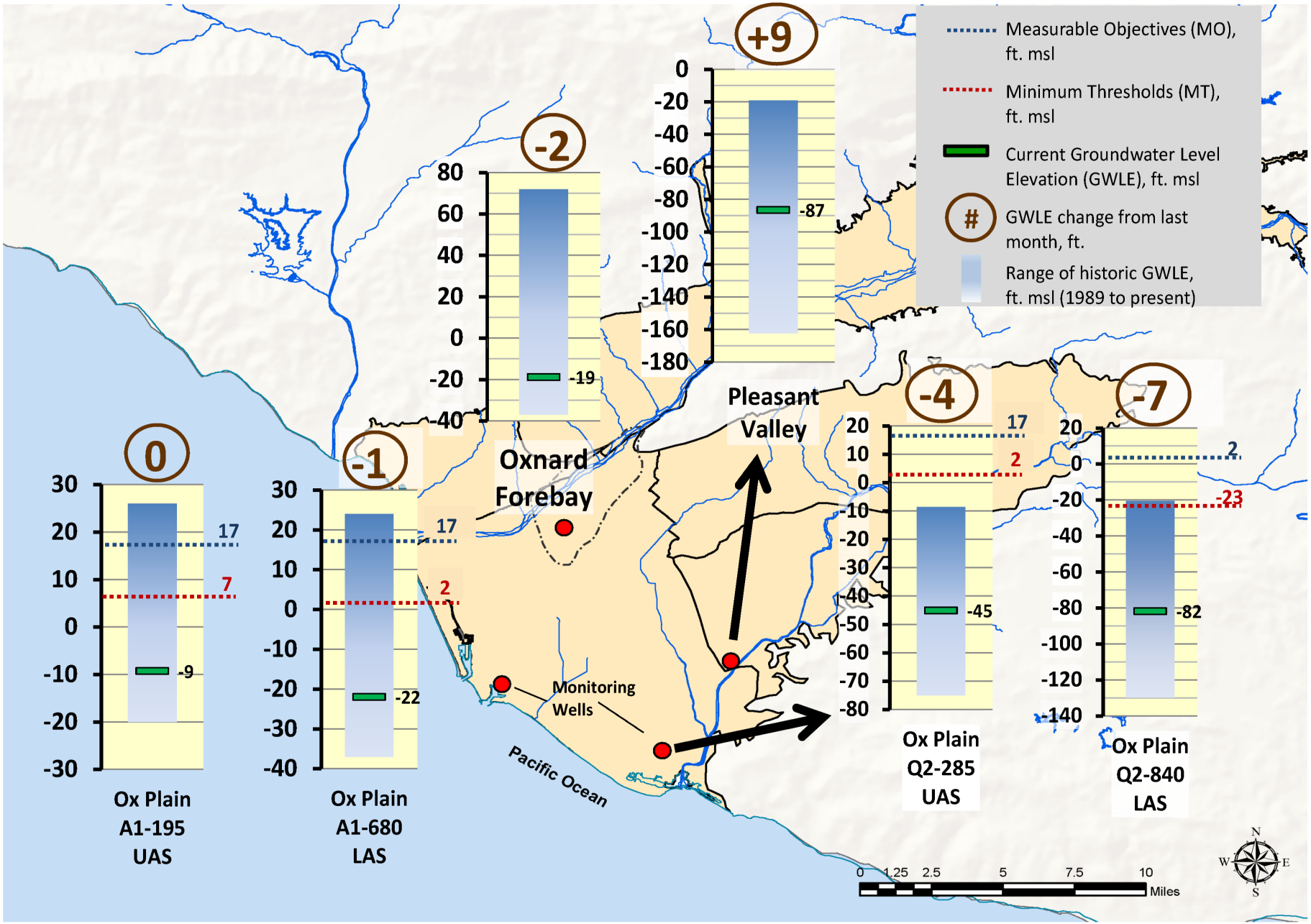
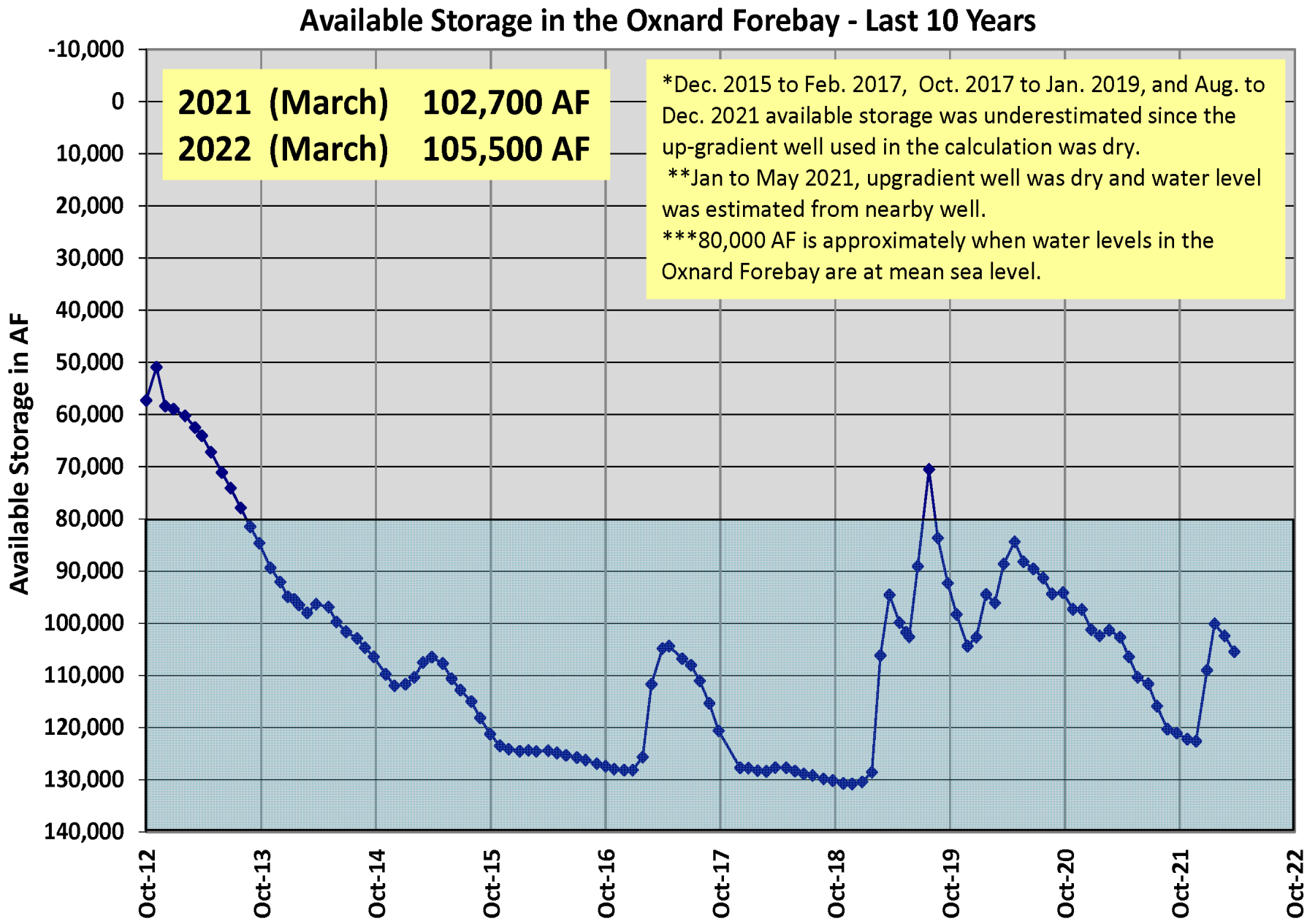
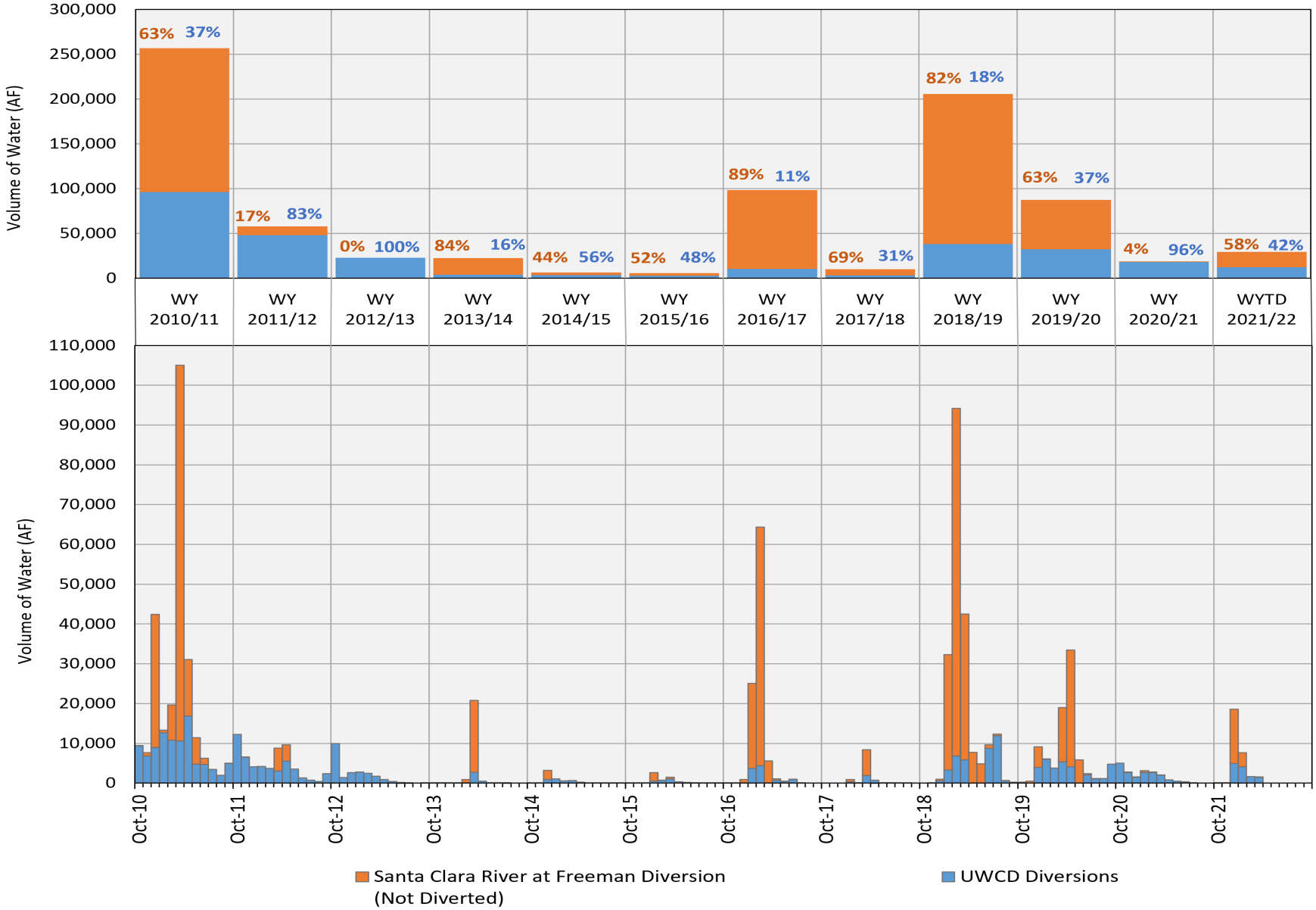
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22


Water quality of Upper Aquifer System wells, El Rio well field
Last 5 Years
NITRATE AS N (MG/L)
TOTAL DISSOLVED SOLIDS AND CHLORIDE (MG/L)
Nitrate as N
TDS
Chloride
0
5
10
15
20
25
30
35
40
45
50
55
60
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
Oct-17
Jan-18
Apr-18
Jul-18
Oct-18
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22


Current Groundwater Level Elevation (GWLE), ft. msl
#
GWLE change from last month, ft.
Range of historic GWLE, ft. msl (1989 to present)
0
170
160
150
140
130
120
138
Santa Paula West
+2
220
210
200
190
180
170
160
190
Santa Paula East
0
370
360
350
340
330
320
310
352
Fillmore
+1
630
610
590
570
550
530
510
490
543
Piru
Pacific Ocean
0 1.25 2.5 5 7.5 10
Miles
N
W
E
S


Measurable Objectives (MO), ft. msl
Minimum Thresholds (MT), ft. msl
Current Groundwater Level Elevation (GWLE), ft. msl
GWLE change from last month, ft.
Range of historic GWLE, ft. msl (1989 to present)
+9
-87
-2
-19
0
-9
17
7
-1
-22
17
2
-4
-45
17
2
-7
-82
2
-23
Oxnard Forebay
Pleasant Valley
Monitoring Wells
Pacific Ocean
Ox Plain A1-195 UAS
Ox Plain A1-680 LAS
Ox Plain Q2-285 UAS
Ox Plain Q2-840 LAS
0 1.25 2.5 5 7.5 10 Miles
N
W
E
S


Available Storage in the Oxnard Forebay - Last 10 Years
2021 (March) 102,700 AF
2022 (March) 105,500 AF
*Dec. 2015 to Feb. 2017, Oct. 2017 to Jan. 2019, and Aug. to Dec. 2021 available storage was underestimated since the up-gradient well used in the calculation was dry.
**Jan to May 2021, upgradient well was dry and water level was estimated from nearby well.
***80,000 AF is approximately when water levels in the Oxnard Forebay are at mean sea level.
Available Storage in AF
-10,000
0
10,000
20,000
30,000
40,000
50,000
60,000
70,000
80,000
90,000
100,000
110,000
120,000
130,000
140,000
Oct-12
Oct-13
Oct-14
Oct-15
Oct-16
Oct-17
Oct-18
Oct-19
Oct-20
Oct-21
Oct-22



Water Year (WY) = October 1 to September 30; WYTD = Water Year To Date