

# FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN FOREBAY 2017

**Goal:** Protect water quality at public drinking water wells (nitrate and TDS) and irrigation suitability (TDS). (Note TDS = total dissolved solids)

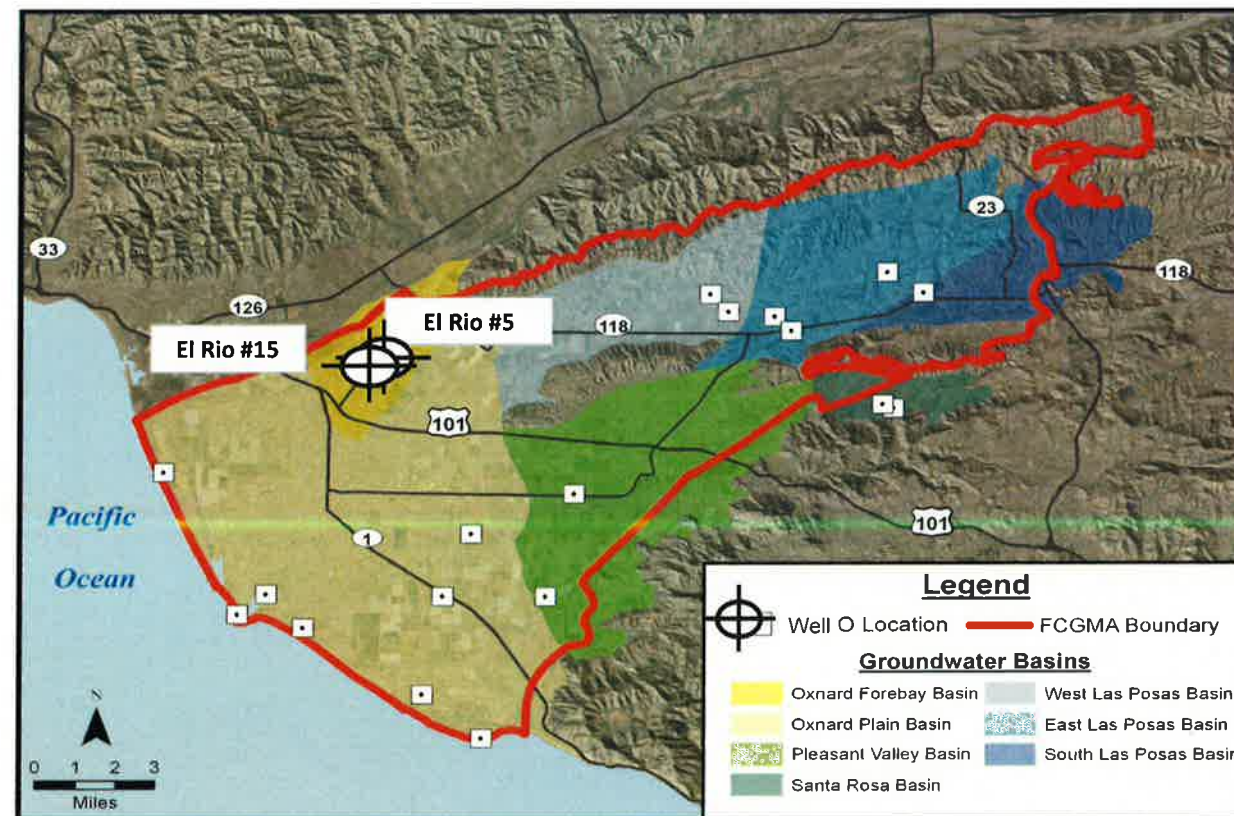
**BMOs:** Nitrate Concentration: <22.5 mg/L-NO<sub>3</sub> (50% of State of California MCL)

TDS Concentration: <1,200 mg/L (LARWQCB Basin Plan Objective)

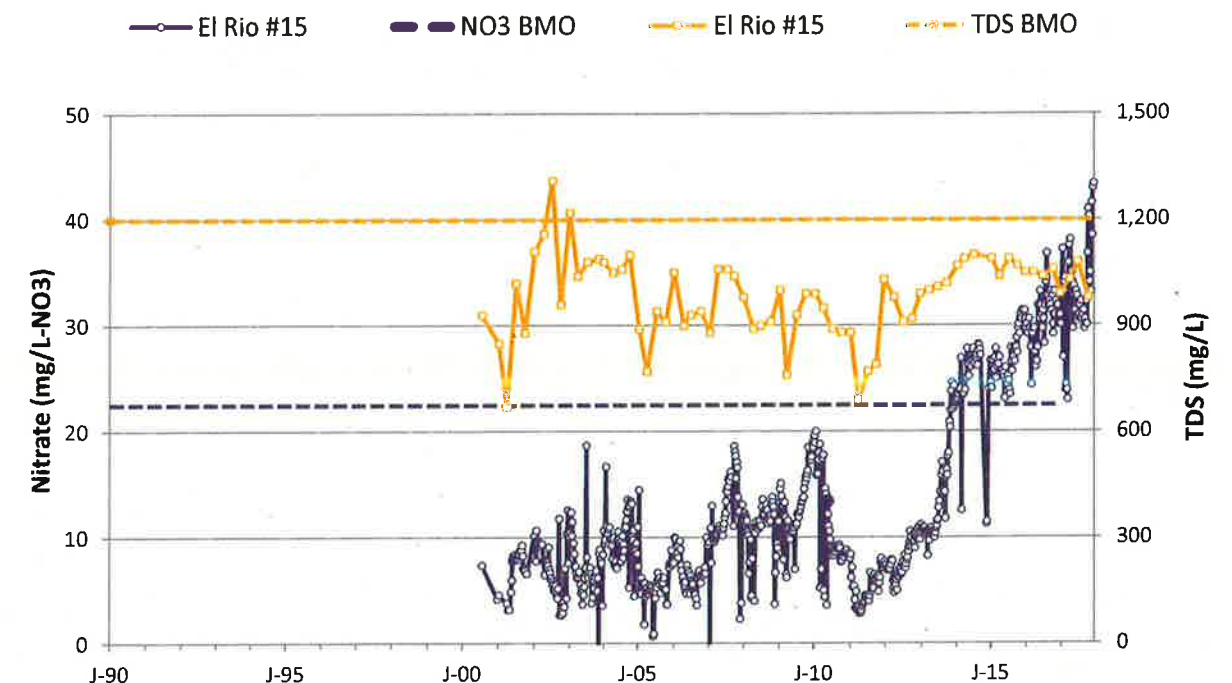
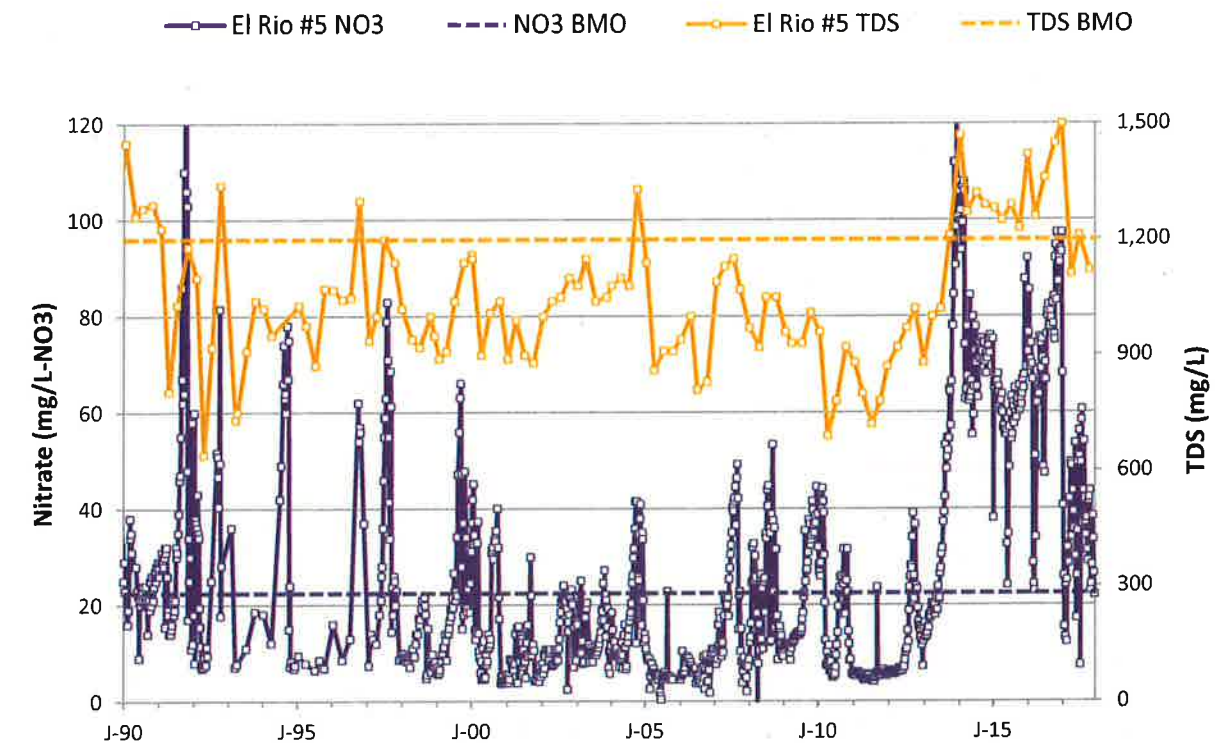
**Status Summary:** In 2017, average nitrate concentrations were above the BMO of 22.5 mg/L in both wells, with El Rio #5 at 39 mg/L and El Rio #15 at 33 mg/L. Average TDS concentrations were above the BMO at well El Rio #5 at 1,235 mg/L, yet below at well El Rio #15 at 1,020 mg/L. In general, over the past five-years nitrate concentrations increased at both locations, but decreased at well EL Rio #5 during past two-years. TDS concentrations generally increased at both well El Rio #5 and well El Rio #15.

Status Summary Table

State Well Number (name)	Depth (ft)	Nitrate (mg/L)		TDS (mg/L)		5-yr Trend	
		BMO	2017 Avg	BMO	2017 Avg	Nitrate	TDS
02N22W23B02S (El Rio #5)	135-277	22.5	39	<1200	1,235	↑	↑
02N22W23C05S (El Rio #15)	140-310	22.5	33	<1200	1,020	↑	↑



# FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN FOREBAY 2017



# FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN - UPPER AQUIFER SYSTEM 2017

**Goal:** Prevent saline intrusion in the Oxnard and Mugu Aquifers. Primary source is seawater inflow via aquifer outcrops in submarine canyons near Port Hueneme and Pt. Mugu.

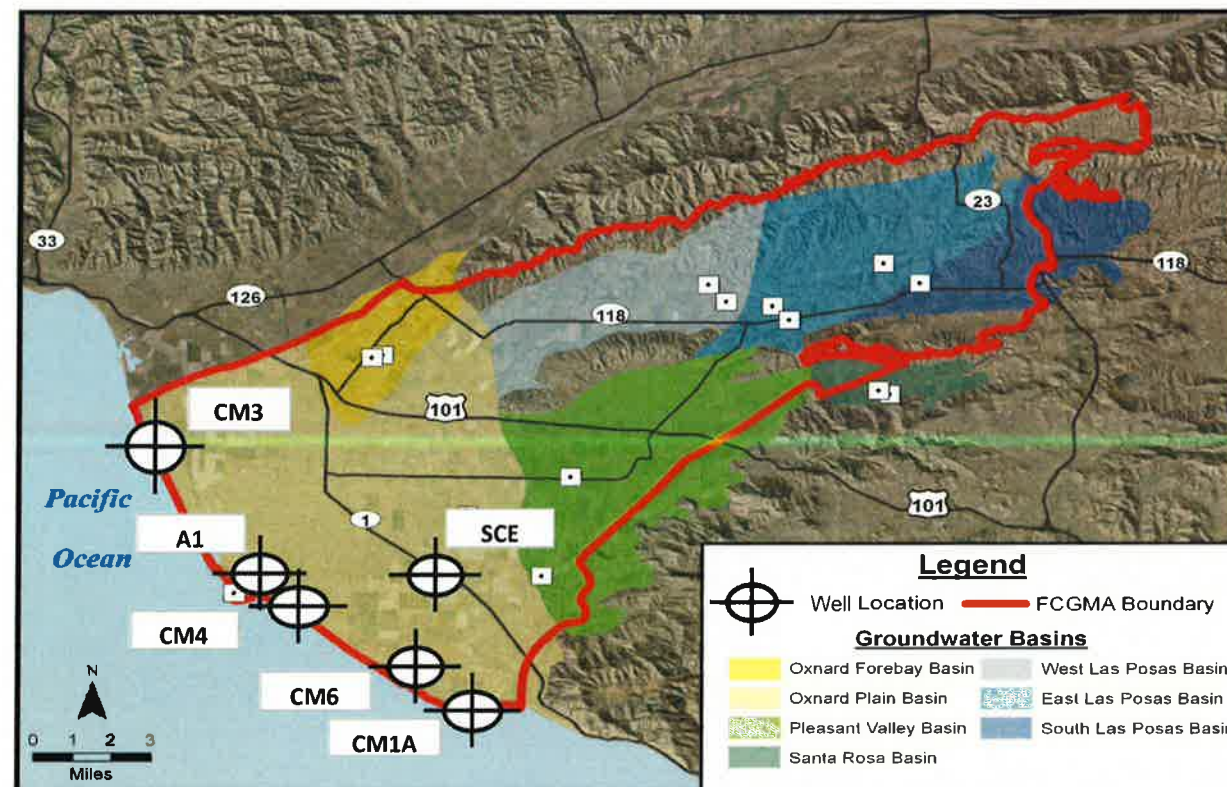
**BMOs:** Water Levels: Average groundwater elevations sufficient to maintain slight seaward groundwater gradient. Elevation varies with location.

Chloride Concentration: <150 mg/L Chloride (LARWQCB Basin Plan Objective).

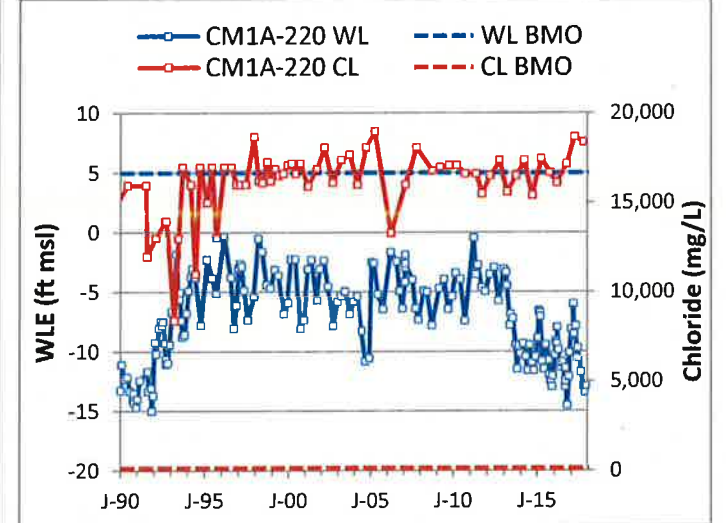
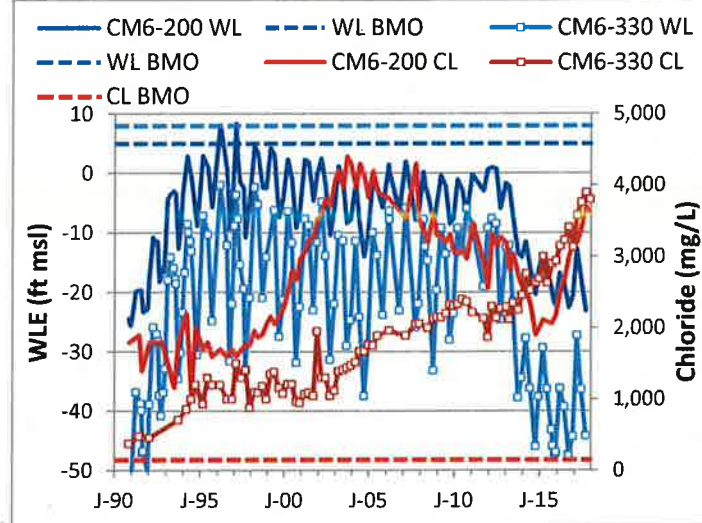
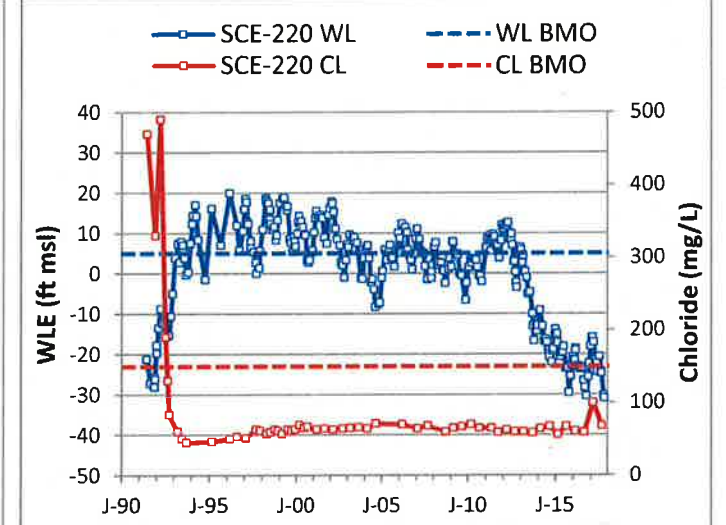
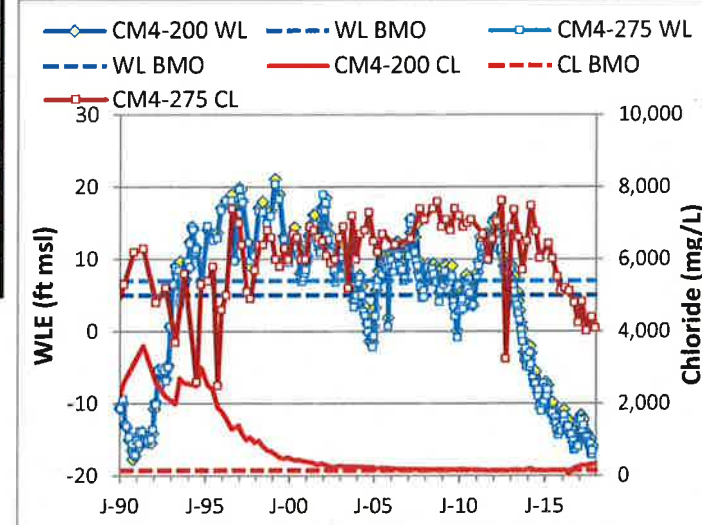
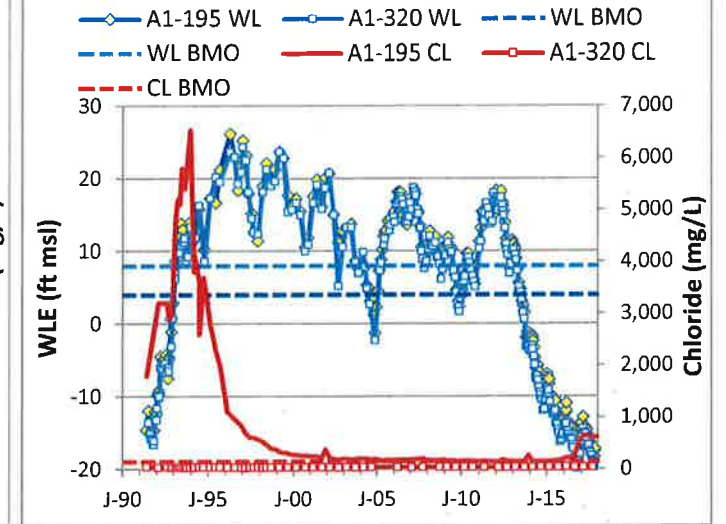
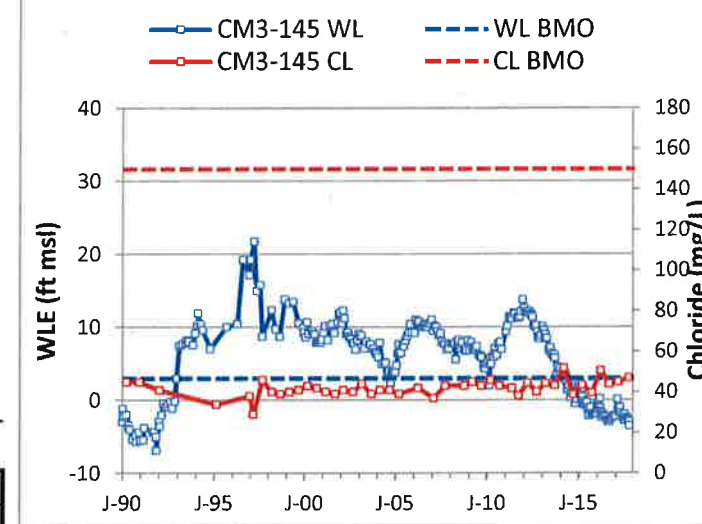
**Status Summary:** Water level BMOs were not met in 2016. A comparison of water levels indicates that water levels have declined at all nine monitoring locations over the past five years. Chloride BMOs were met at approximately 33% of the monitoring locations. Consistent with past results, chloride BMOs were not met near Port Hueneme (A1-195 and CM4) and Pt. Mugu (CM6 and CM1A).

Status Summary Table

State Well Number (name)	Depth (ft)	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
		BMO	2017 Avg	BMO	2017 Avg	Water Level	Chloride
01N23W01C05S (CM3-145)	120-145	3	-2	<150	46	↓	→
01N22W20J08S (A1-195)	155-195	4	-16	<150	630	↓	→
01N22W20J07S (A1-320)	280-320	8	-17	<150	36	↓	→
01N22W28G05S (CM4-200)	180-200	5	-14	<150	311	↓	→
01N22W28G04S (CM4-275)	255-275	8	-15	<150	4,338	↓	→
01N21W19L12S (SCE-220)	200-220	5	-22	<150	84	↓	→
01S22W01H04S (CM6-200)	180-200	5	-18	<150	3,478	↓	→
01S22W01H03S (CM6-330)	310-330	8	-36	<150	3,760	↓	→
01S21W08L04S (CM1A-220)	200-220	5	-10	<150	18,550	↓	→



# FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN - UPPER AQUIFER SYSTEM 2017



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD  
OXNARD PLAIN - LOWER AQUIFER SYSTEM  
2017

**Goal:** Prevent saline intrusion in the LAS. Sources are seawater inflow via aquifer outcrops in submarine canyons near Port Hueneme, and via vertical migration of saline water from the UAS and underlying formations into LAS aquifers in the vicinity of Pt. Mugu.

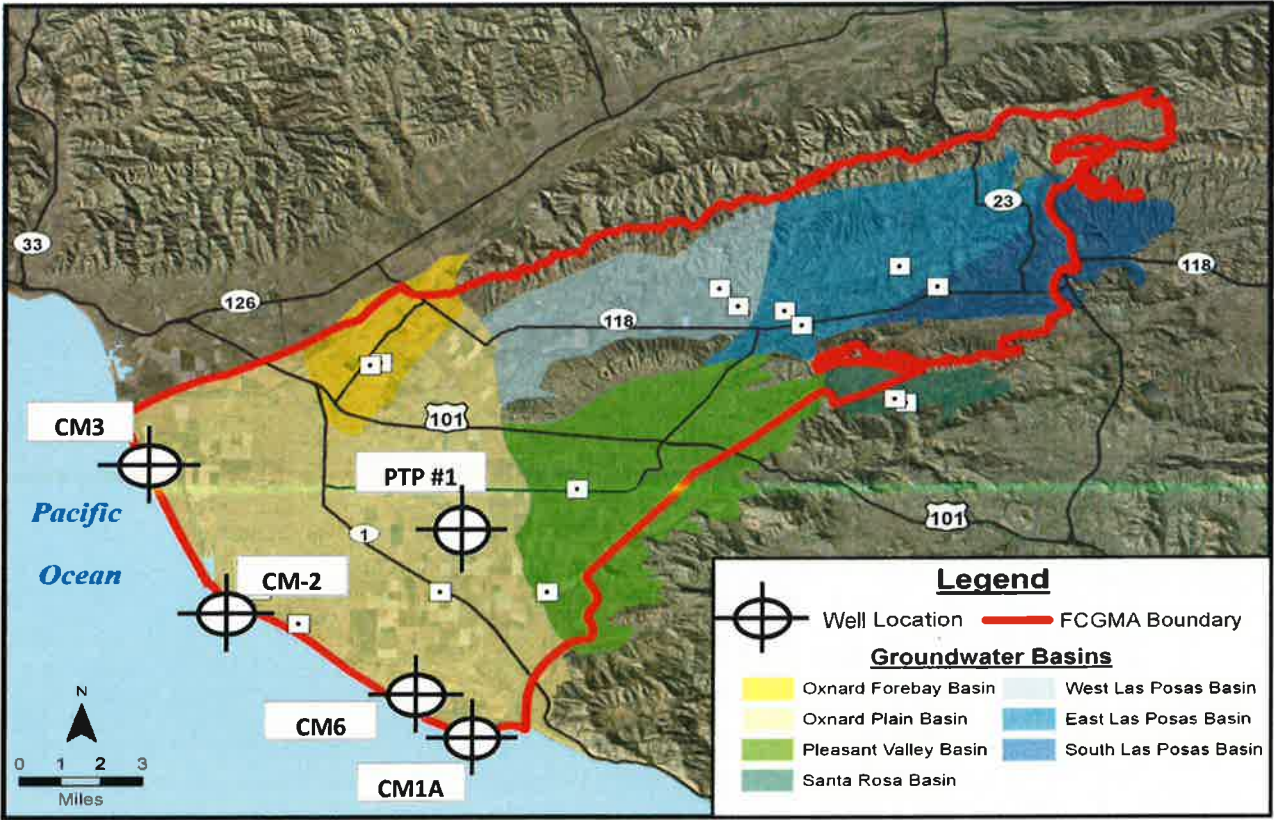
**BMOs:** Water Levels: Average groundwater elevations sufficient to maintain slight seaward groundwater gradient. Elevation varies with location.

Chloride Concentration: <150 mg/L Chloride (LARWQCB Basin Plan Objective).

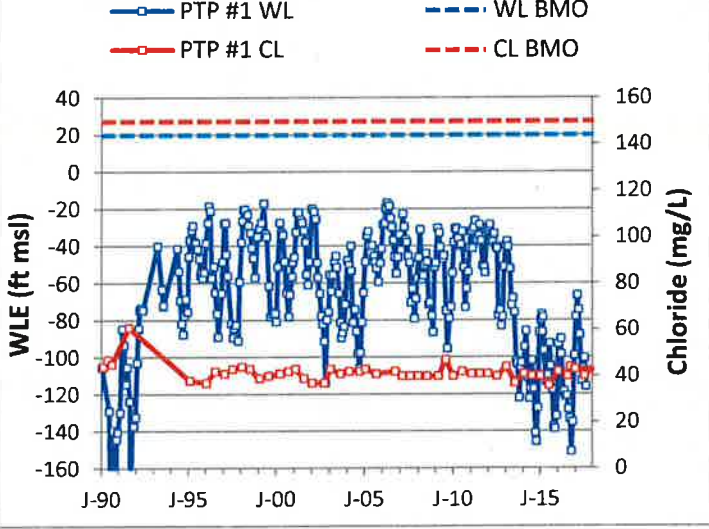
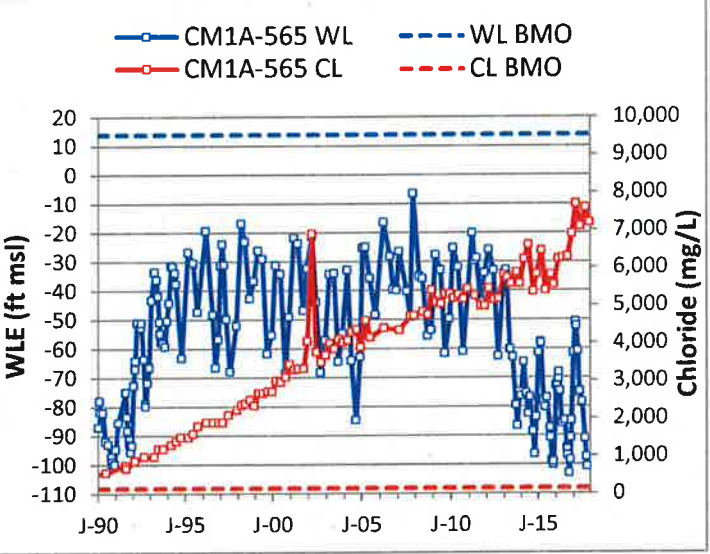
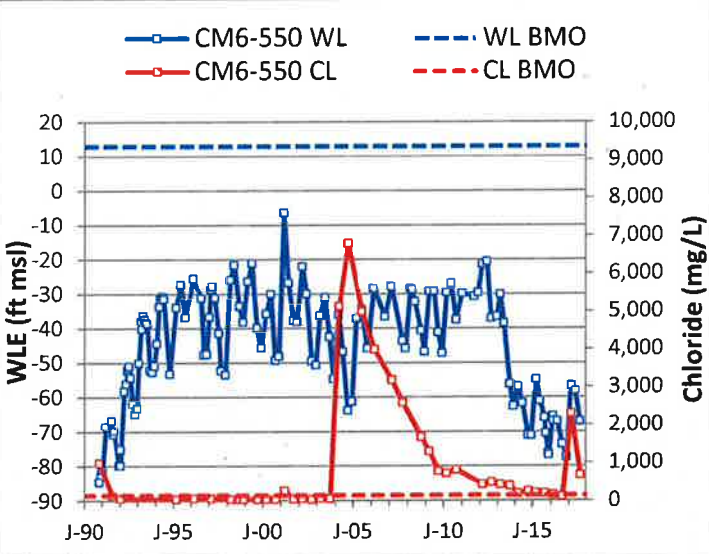
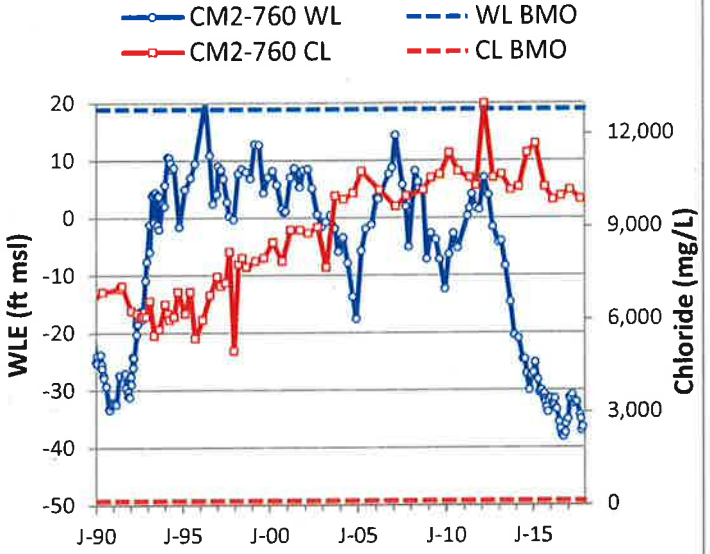
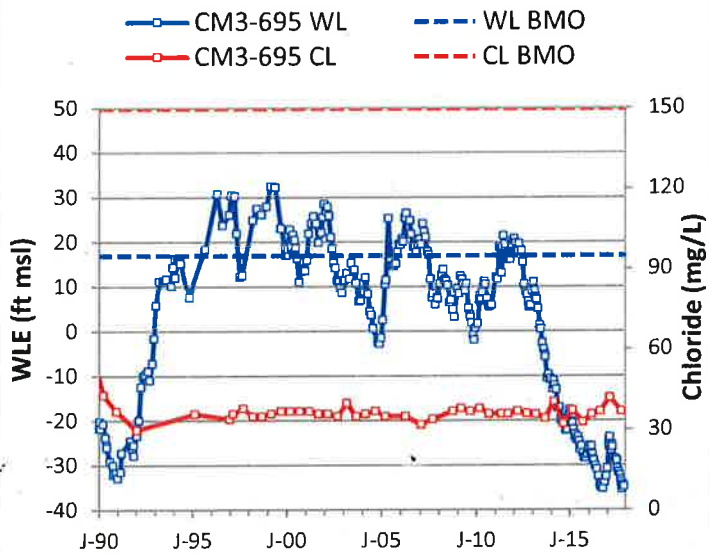
**Status Summary:** In 2017, water level BMOs were not met. Average water level at inland PTP #1 location was below its respective BMO by 113 feet. As long as water levels remain depressed, the potential for saline intrusion remains. Chloride BMOs were not met near Port Hueneme (CM2) and Pt. Mugu (CM6 and CM1A) (areas of documented seawater intrusion), consistent with the past monitoring.

Status Summary Table

State Well Number (name)	Depth (ft)	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
		BMO	2017 Avg	BMO	2017 Avg	Water Level	Chloride
01N23W01C04S (CM3-695)	630-695	17	-30	<150	40	<div></div>	<div></div>
01N22W29D02S (CM2-760)	720-760	19	-33	<150	10,050	<div></div>	<div></div>
01S22W01H01S (CM6-550)	490-550	13	-60	<150	680	<div></div>	<div></div>
01S21W08L03S (CM1A-565)	525-565	14	-74	<150	7,400	<div></div>	<div></div>
01N21W07J02S (PTP #1)	590-1280	20	-93	<150	42	<div></div>	<div></div>



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD  
OXNARD PLAIN - LOWER AQUIFER SYSTEM  
2017



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD  
PLEASANT VALLEY BASIN  
2017

**Goal:** Prevent inland migration of saline groundwater from coastal areas, underlying sources, and fine-grained interbeds.

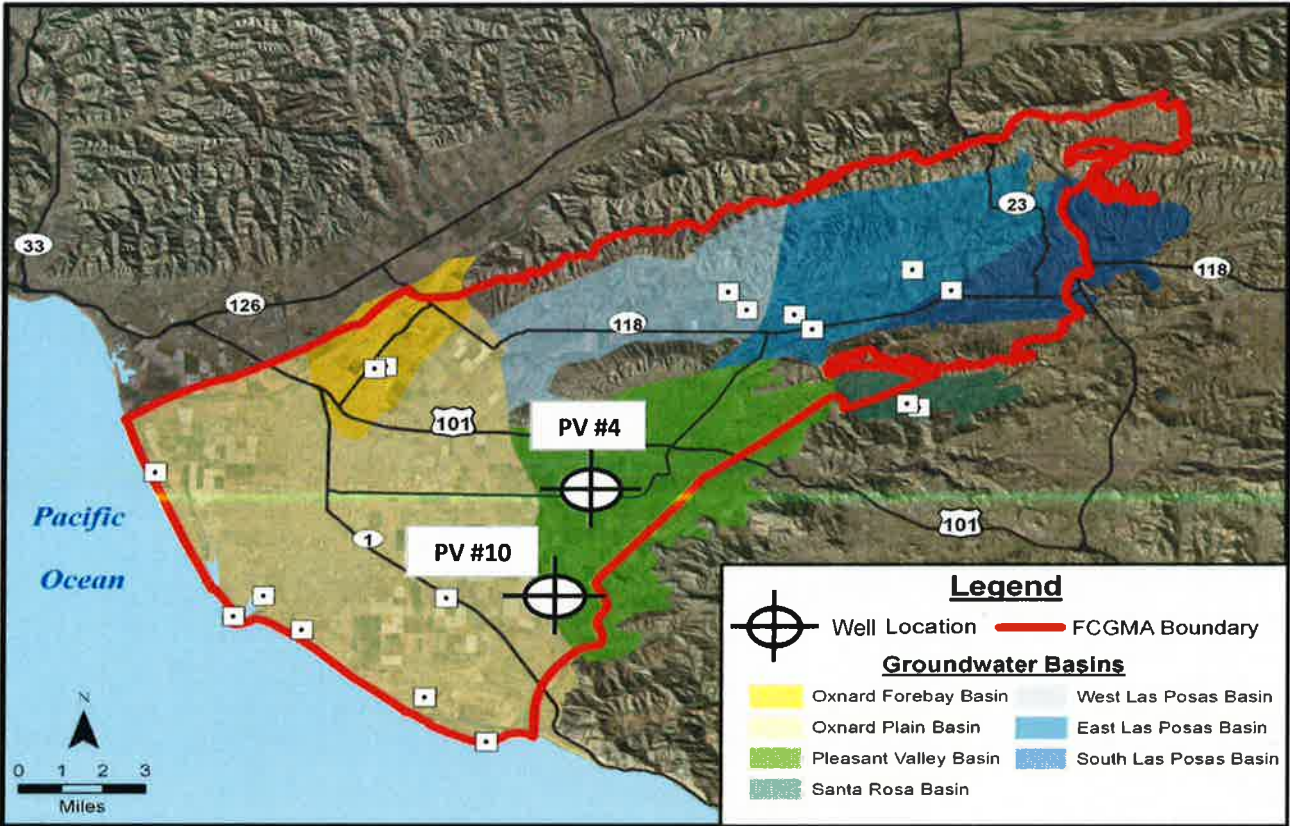
**BMOs:** Water Levels: Average groundwater elevations sufficient to prevent landward migration from coastal areas and minimize vertical gradients.

Chloride Concentration: <150 mg/L Chloride (LARWQCB Basin Plan Objective).

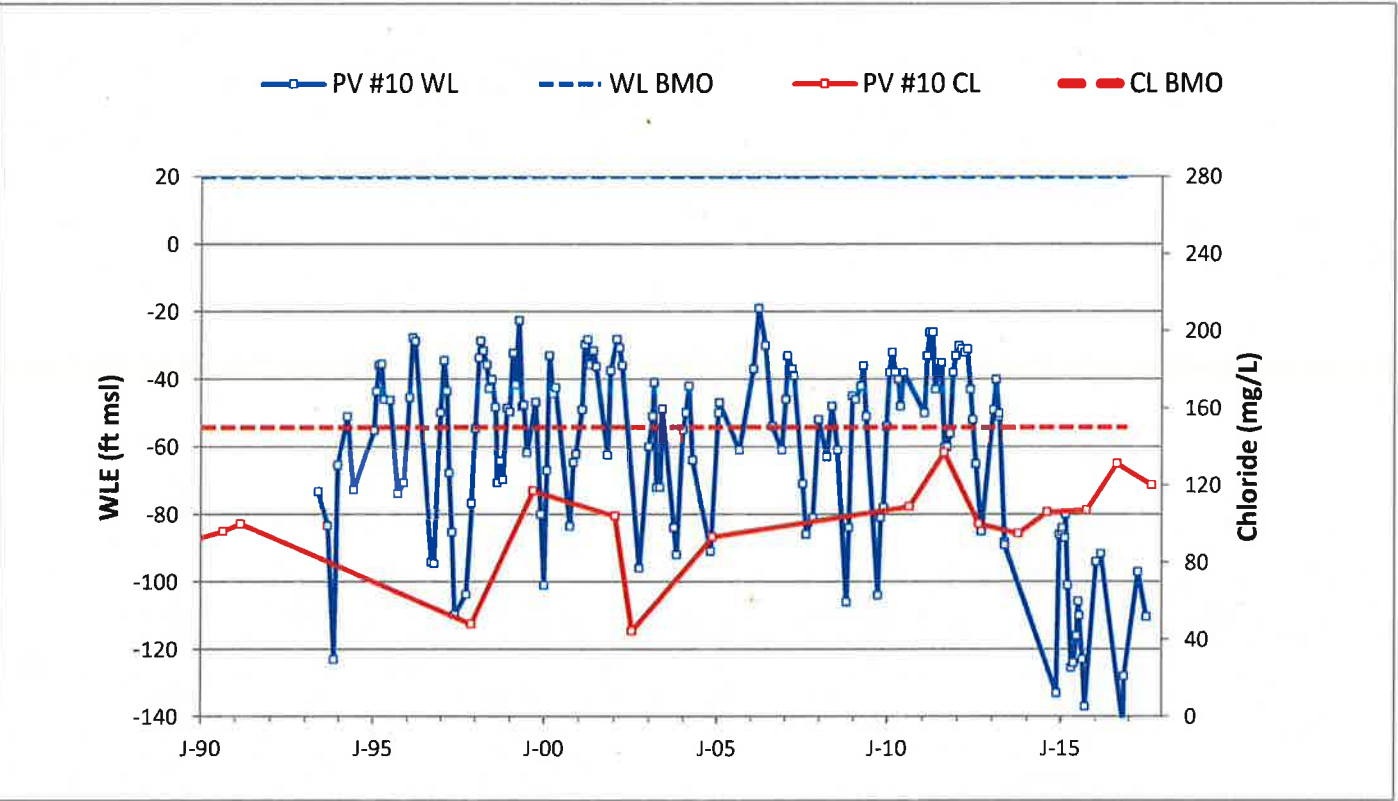
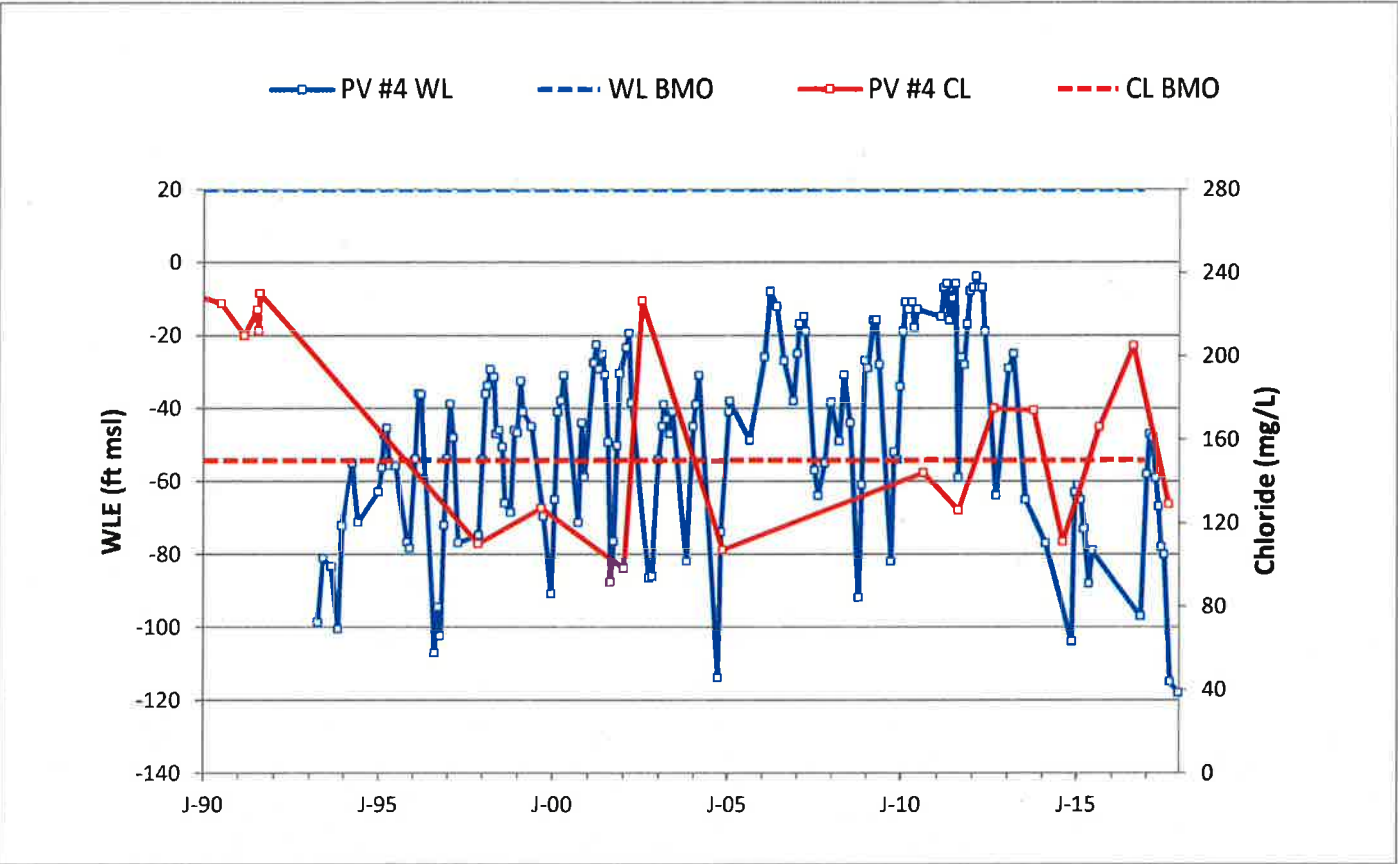
**Status Summary:** In 2017, water level BMOs were not met at either location. Water levels have fluctuated annually yet the overall water levels have declined during the last 5 years, remaining significantly below the BMOs. The chloride BMO was met at both monitoring locations. Over the past 5-years, the chloride concentrations have fluctuated yet overall declined at PV #4 and increased at PV#10.

Status Summary Table

State Well Number (name)	Depth (ft)	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
		BMO	2017 Avg	BMO	2017 Avg	Water Level	Chloride
01N21W03K01S (PV #4)	403-1433	20	-74	<150	129	↓	↓
01N21W21H02S (PV #10)	503-863	20	-104	<150	120	↓	↑



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD  
PLEASANT VALLEY BASIN  
2017



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD  
ARROYO SANTA ROSA BASIN  
2017

**Goal:** Meet LARWQCB Basin Plan Objectives for nitrate and chloride.

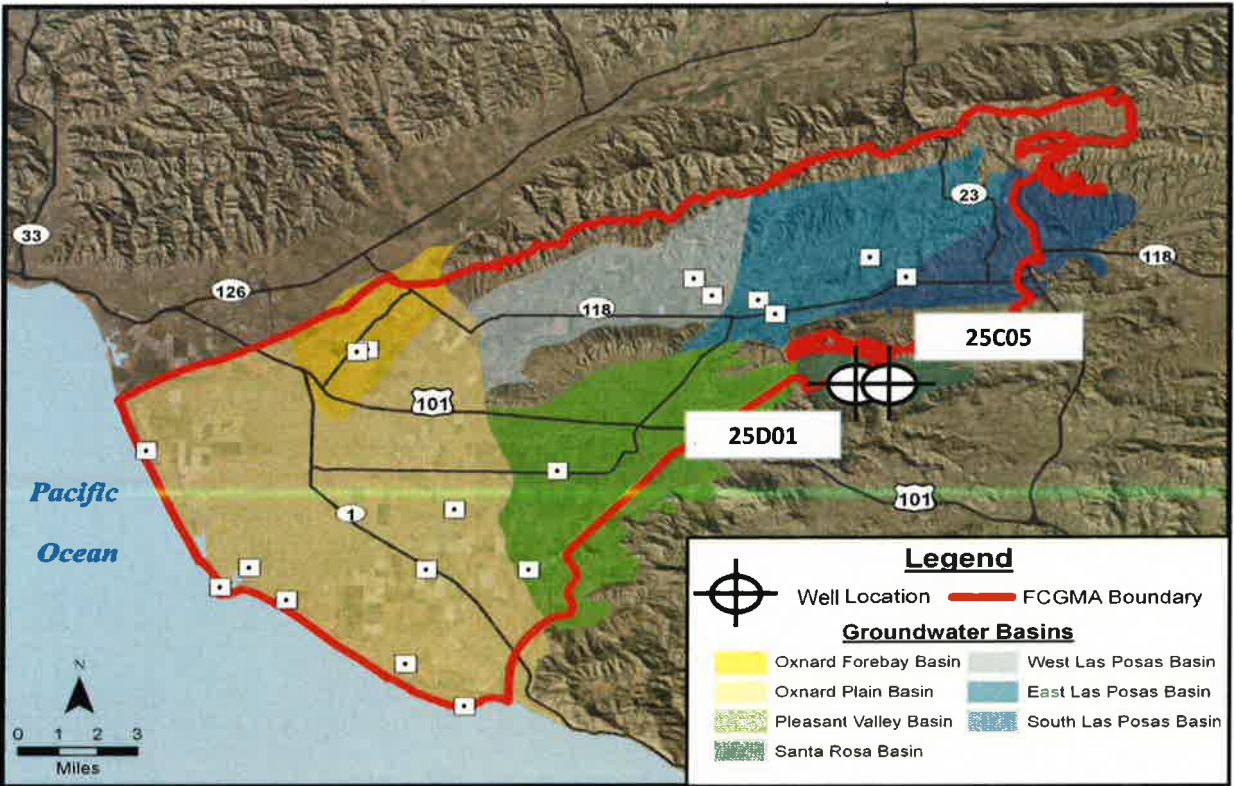
**BMOs:** Nitrate Concentration: <45 mg/L-NO<sub>3</sub> (LARWQCB Basin Plan Objective & State of CA MCL)

Chloride Concentration: <150 mg/L (LARWQCB Basin Plan Objective)

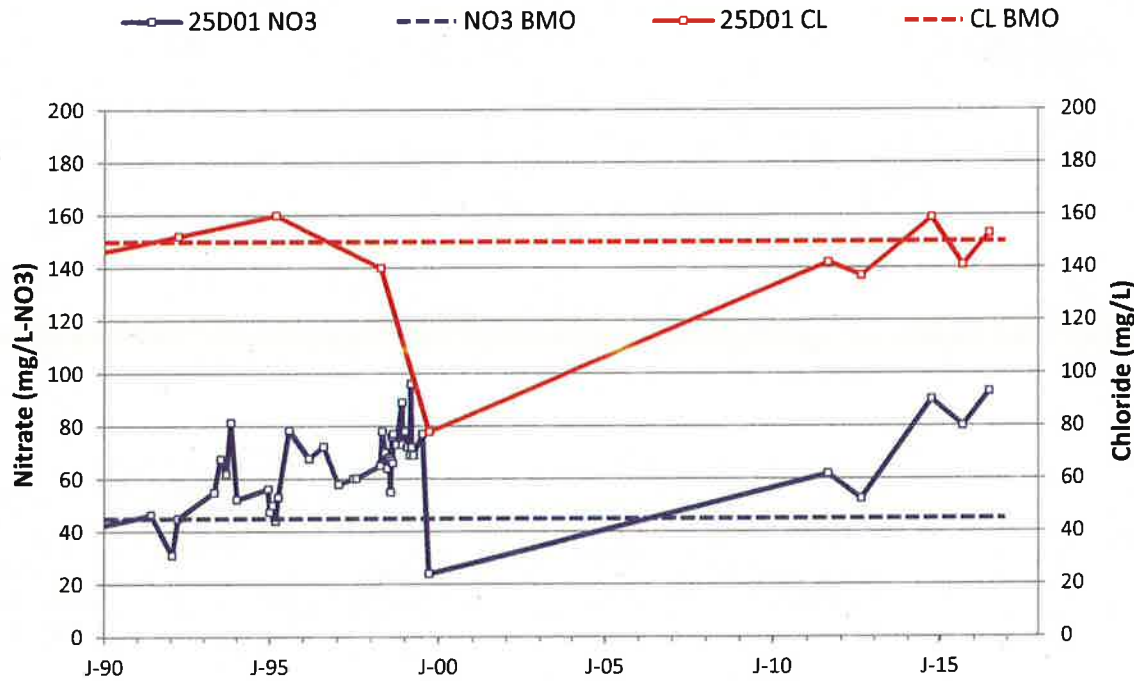
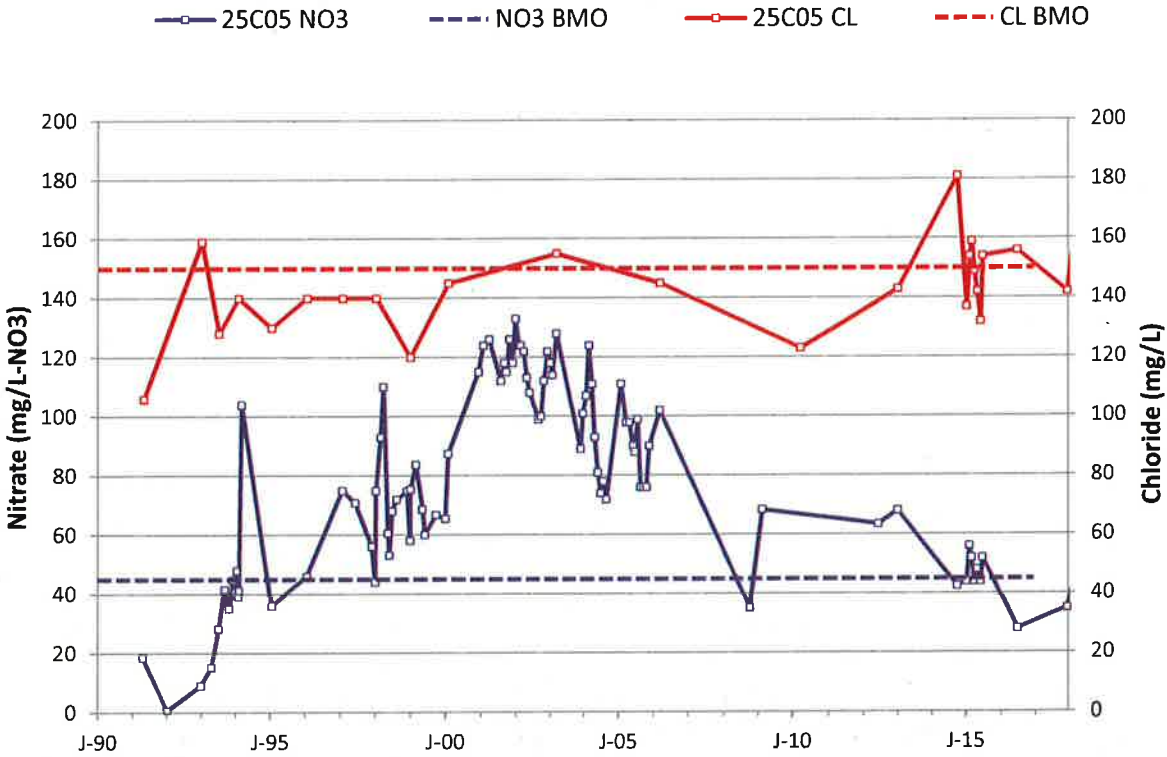
**Status Summary:** No data were available for 2017 at BMO monitoring location 25D01. Analytical results for monitoring location 25C05 indicate that the nitrate and chloride concentrations were below the BMO of 45 mg/L and less than 150 mg/L respectively. Over the past 5 years: nitrate concentrations have decreased at 25C05 and increased at 25D01; and chloride concentrations have increased at 25C05 and fluctuated but are roughly the same at 25D01.

Status Summary Table

State Well Number (name)	Depth (ft)	Nitrate (mg/L)		Chloride (mg/L)		5-yr Trend *	
		BMO	2017 Avg	BMO	2017 Avg	Nitrate	Chloride
02N20W25C05S	160-260	45	35	<150	142	↓	→
02N20W25D01S	Unknown	45	No Data	<150	No Data	↑	↑



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD  
ARROYO SANTA ROSA BASIN  
2017



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD  
LAS POSAS BASINS  
2017

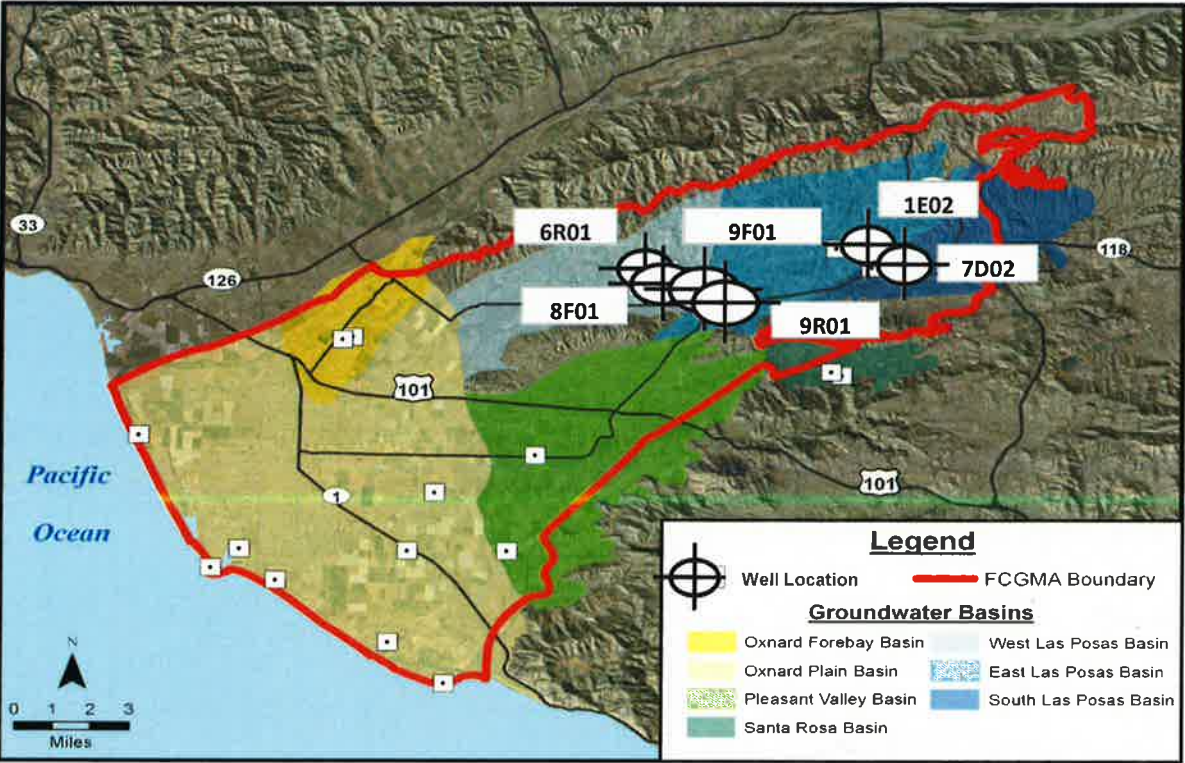
**Goal:** Maintain chloride and TDS concentrations suitable for irrigation of salt-sensitive crops, particularly avocados and berries. BMOs for South Las Posas (SLP) Basin were set equal to the average concentration in surface water in the Arroyo Las Posas.

**BMOs:** Chloride Concentration: WLP & ELP: <100 mg/L; SLP: <160 mg/L.  
TDS Concentration: ELP: <500 mg/L; WLP: <600 mg/L; and SLP: <1,500 mg/L.

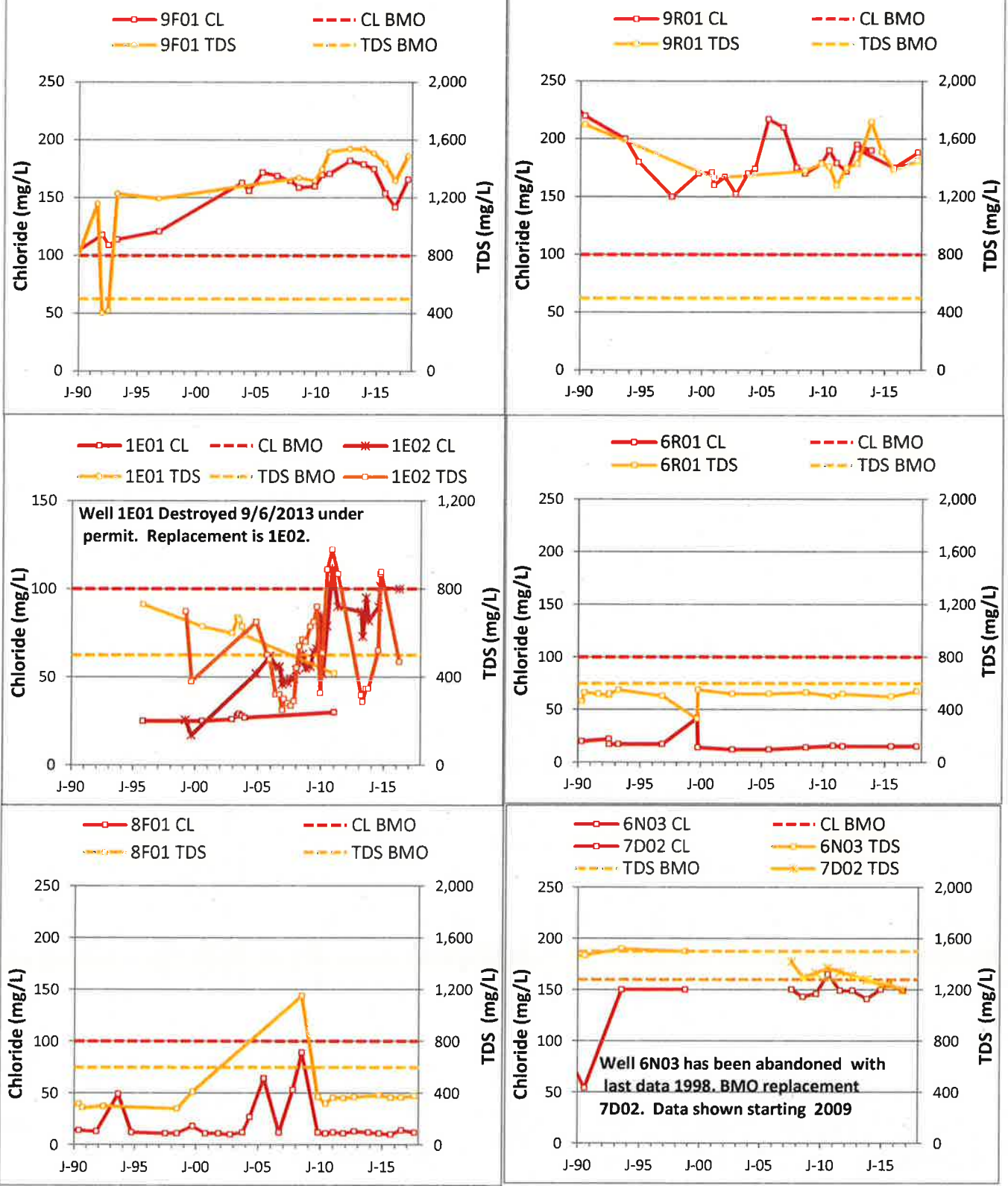
**Status Summary:** BMO monitoring locations 1E01 and 6N03 were replaced with 1E02 and 7D02 respectively. No data were available for 2017 at BMO monitoring locations 1E02 (ELP) and 7D02 (SLP). In the ELP, the chloride and TDS BMOs were not met at the locations for which data were available. In the WLP, the chloride and TDS BMOs were met. No data were available for evaluation of BMOs in the SLP. The five-year trend in the Las Posas basins for chloride was generally remaining within a range of fluctuation. For TDS, the general trend is decreasing concentrations in the ELP, and generally remaining the same or increasing in WLP.

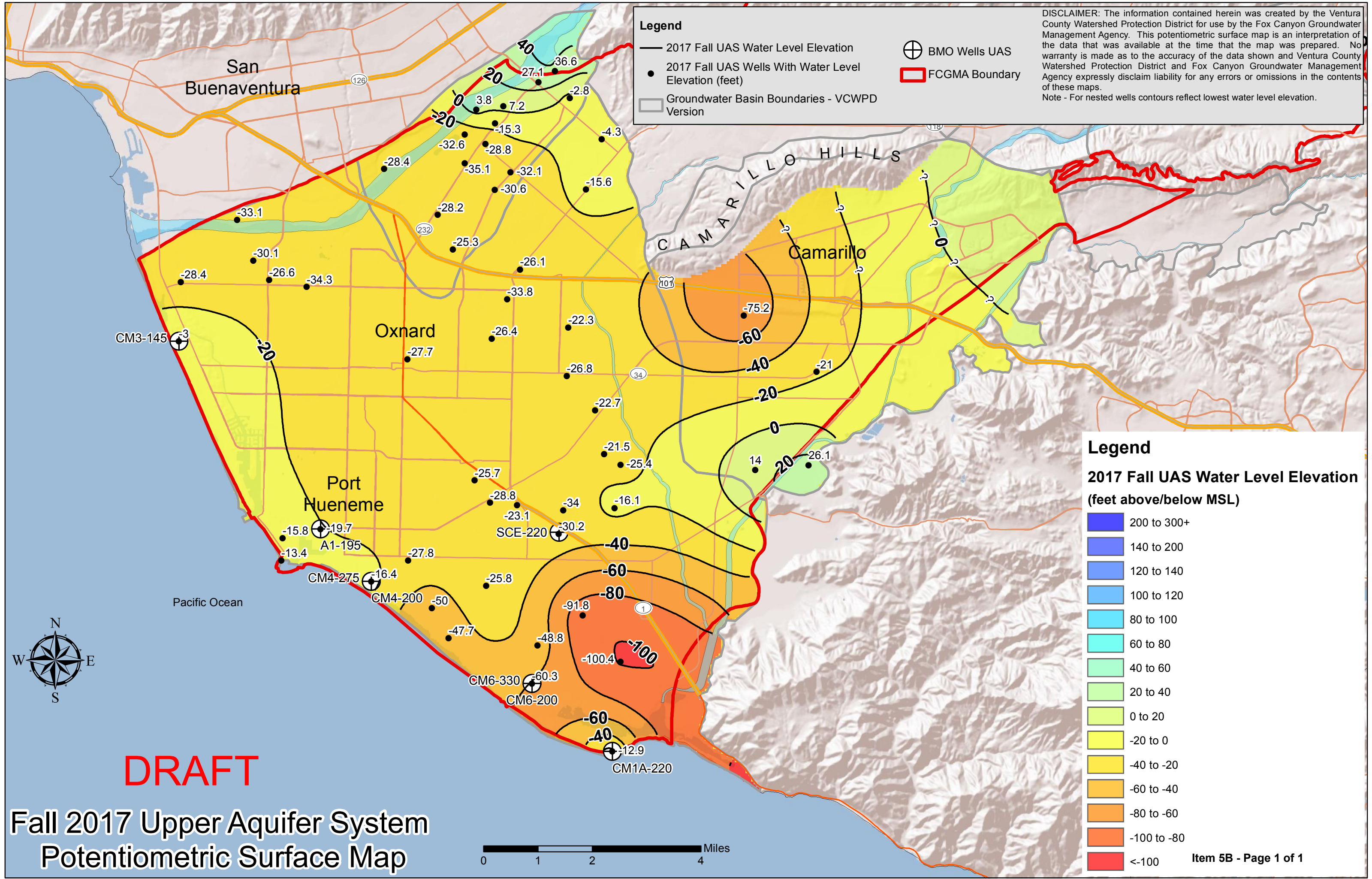
Status Summary Table

State Well Number (name)	Depth (ft)	Chloride (mg/L)		TDS (mg/L)		5-yr Trend	
		BMO	2017 Avg	BMO	2017 Avg	Chloride	TDS
02N20W09F01S (ELP)	906-1,290	100	166	<500	1,490	↓	↓
02N20W09R01S (ELP)	456-724	<100	188	<500	1,450	→	↓
02N20W01E02S (ELP) Replacement	680-1,000	100	No Data	<500	No Data	↓	↓
02N20W06R01S (WLP)	1,090-1,512	<100	15	<600	540	→	↓
02N20W08F01S (WLP)	752-1,406	100	12	<600	378	→	↓
02N19W07D02S (SLP) Replacement	98-170	<160	No Data	<1500	No Data	→	↓



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD  
LAS POSAS BASINS  
2017





**DRAFT**

**Fall 2017 Upper Aquifer System Potentiometric Surface Map**

# Fall 2017 Lower Aquifer System Potentiometric Surface Map

