

FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
OXNARD PLAIN FOREBAY [part of Oxnard Subbasin]
2018

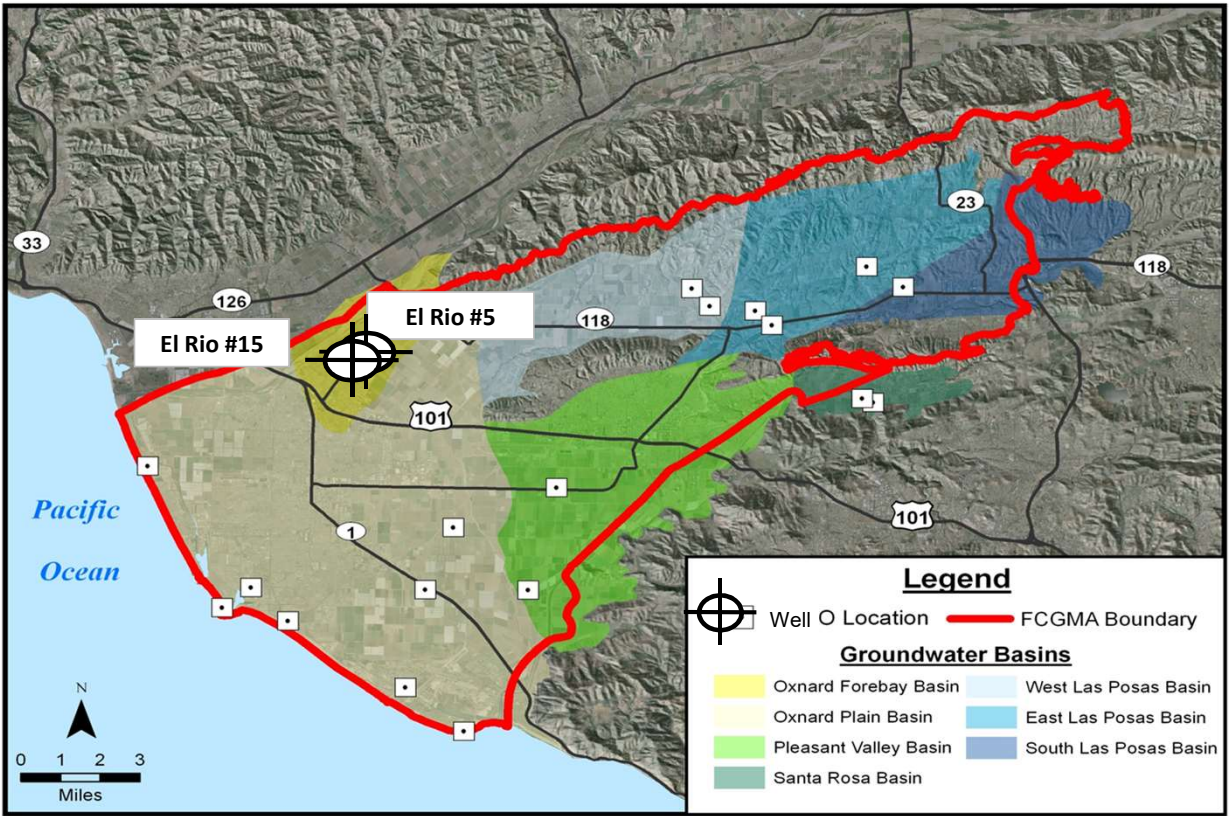
Goal: Protect water quality at public drinking water wells (nitrate and TDS) and irrigation suitability (TDS). (Note TDS = total dissolved solids)

BMOs: Nitrate Concentration: <22.5 mg/L-NO₃ (50% of State of California MCL)
TDS Concentration: <1,200 mg/L (LARWQCB Basin Plan Objective)

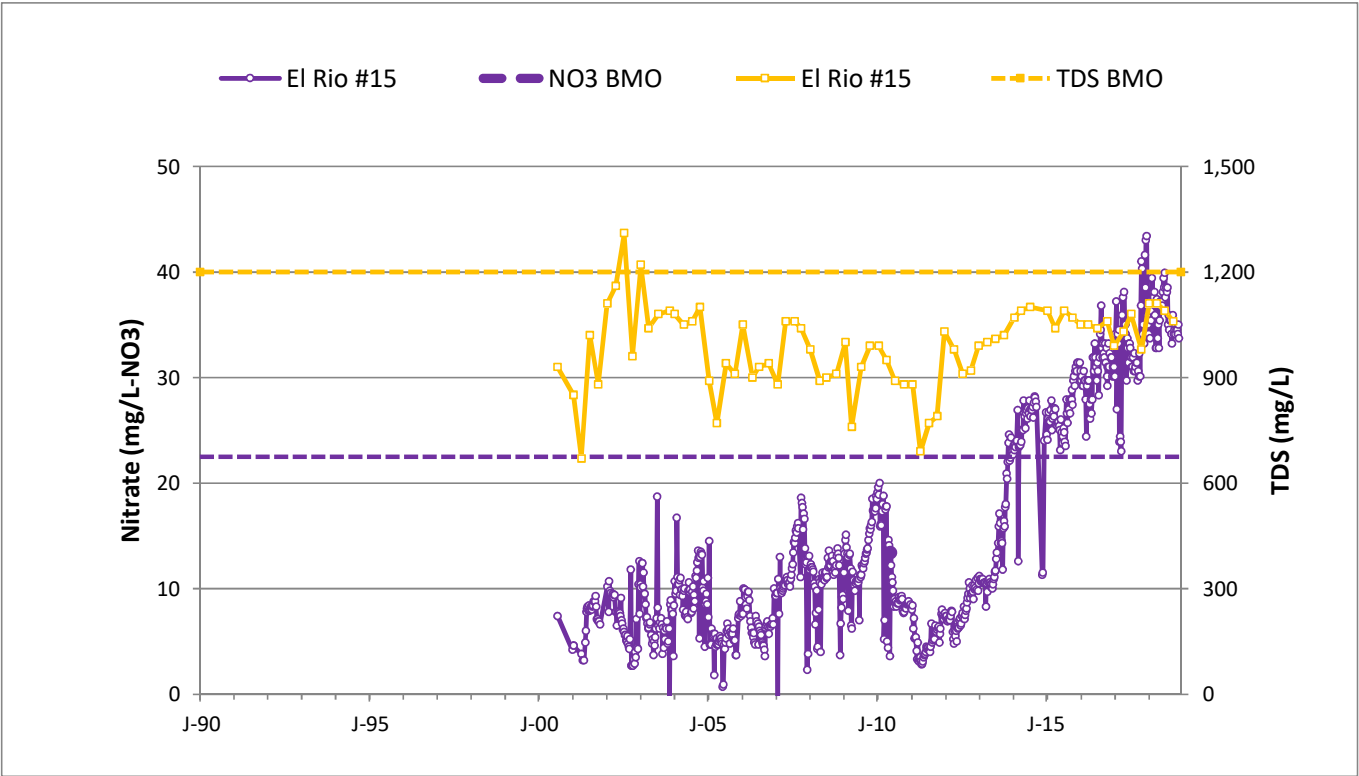
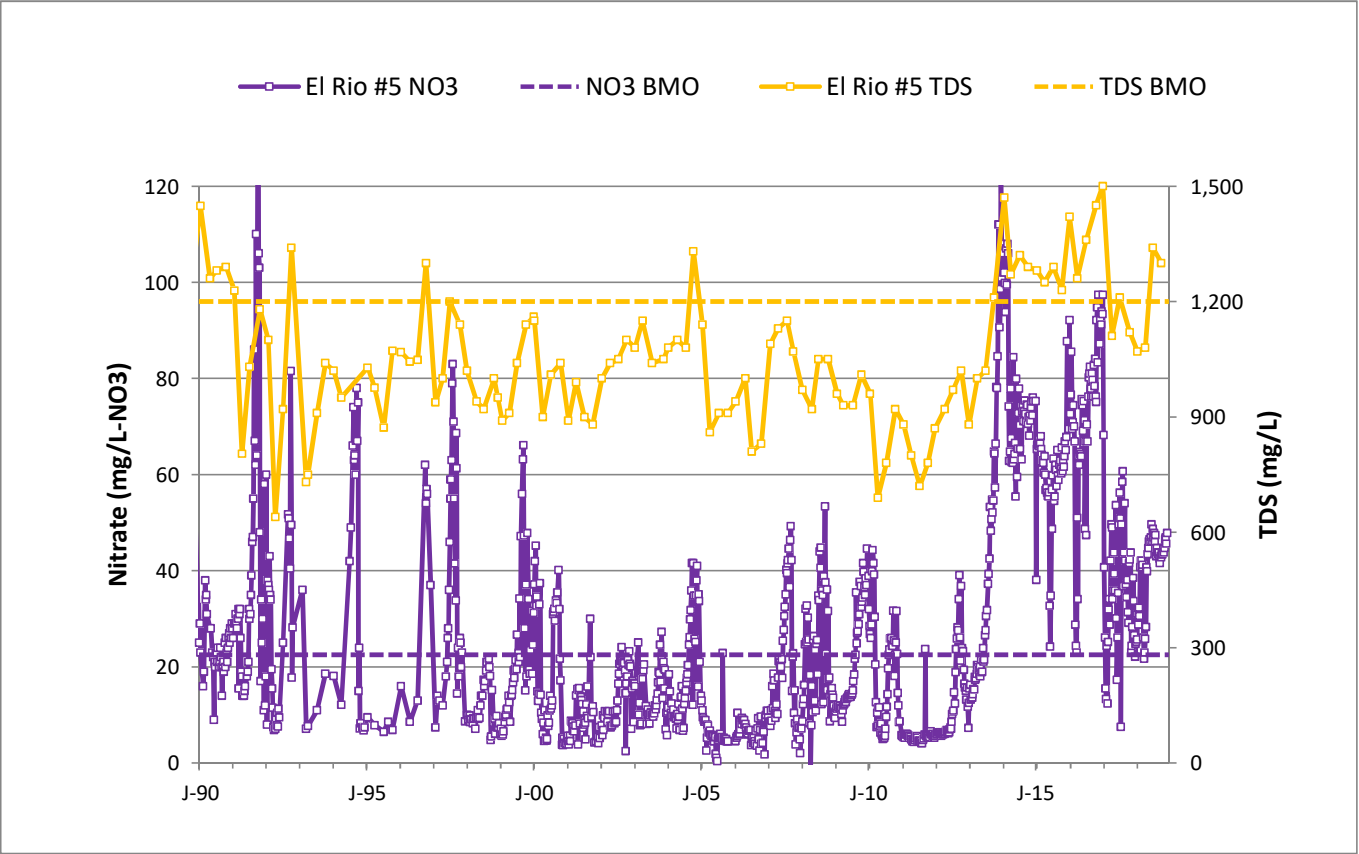
Status Summary: In 2018, average nitrate concentrations were above the BMO of less than 22.5 mg/L in both wells. Average TDS concentrations were below yet within 9% of the BMO at well El Rio #5 (1,198 mg/L, 0.2% of BMO), and at well El Rio #15 (1,093 mg/L, 8.9% of BMO). In general, over the past five-years, nitrate concentrations have decreased at well EL Rio #5 and increased at well El Rio #15. TDS concentrations generally fluctuated in same range 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	2018 Avg	BMO	2018 Avg	Nitrate	TDS
02N22W23B02S (El Rio #5)	135-277	<22.5	40	<1200	1,198	↓	→
02N22W23C05S (El Rio #15)	140-310	<22.5	36	<1200	1,093	↑	→



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OXNARD PLAIN FOREBAY [part of Oxnard Subbasin]
2018



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
OXNARD PLAIN - UPPER AQUIFER SYSTEM [part of Oxnard Subbasin]
2018

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.

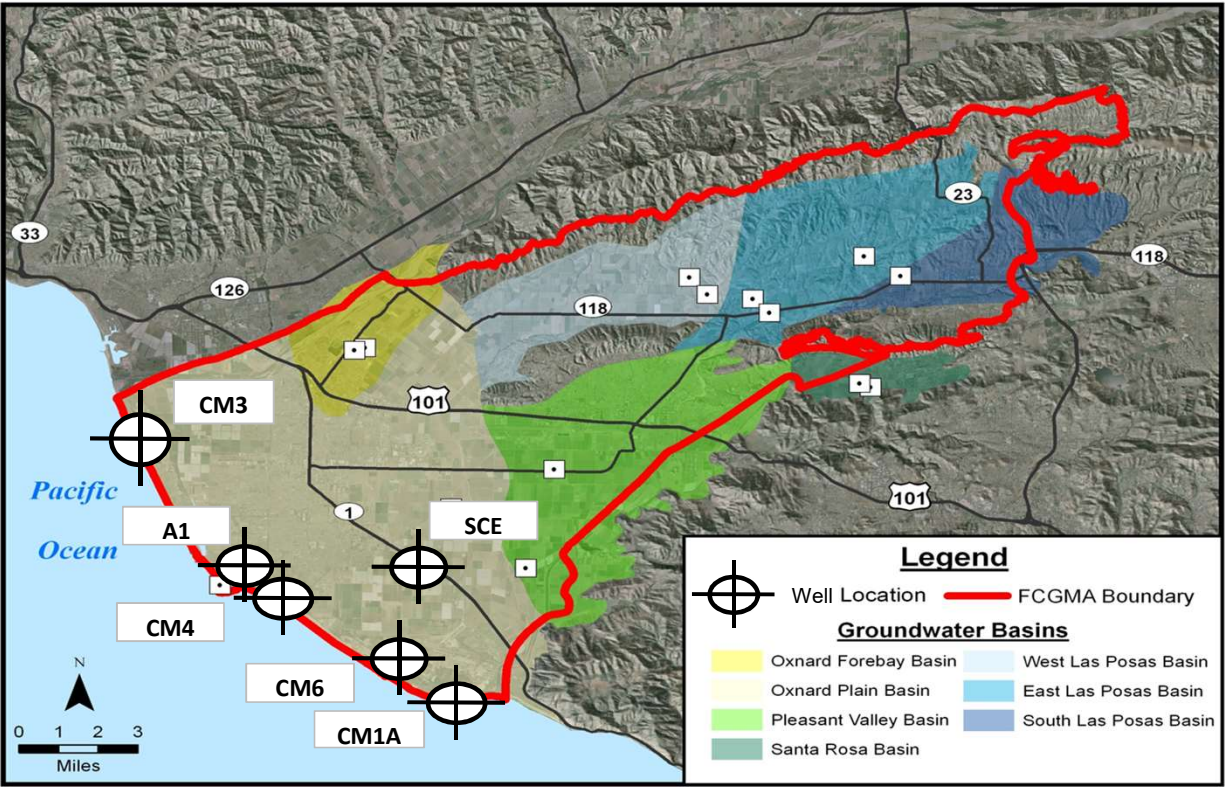
BMOs: Water Levels: Average groundwater elevations sufficient to maintain slight seaward groundwater gradient. Elevation varies with location.

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

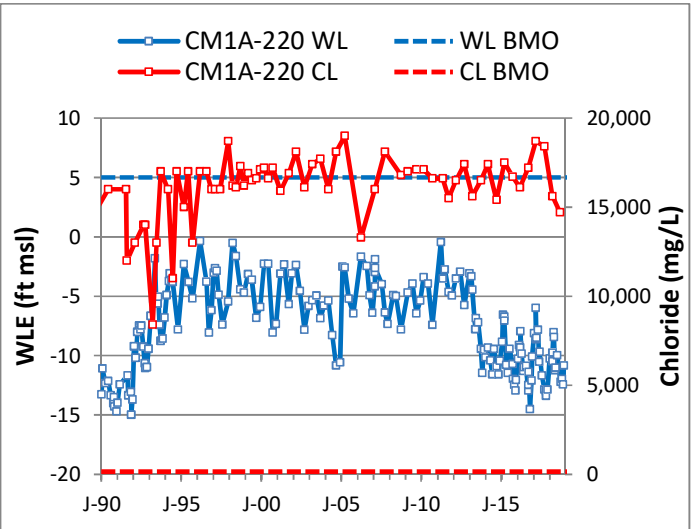
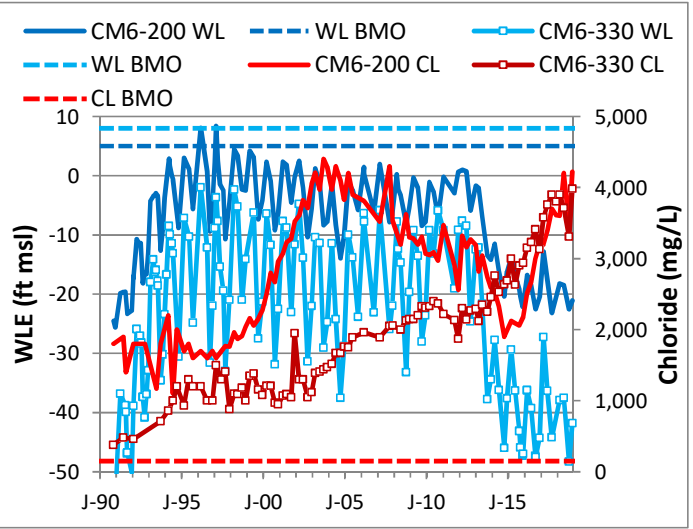
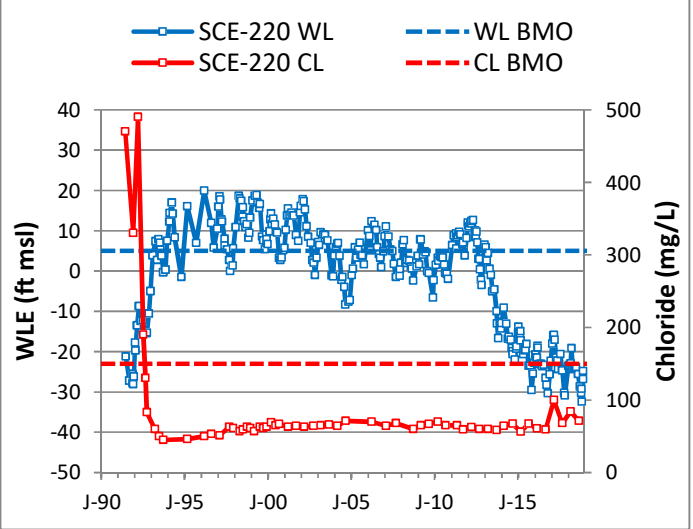
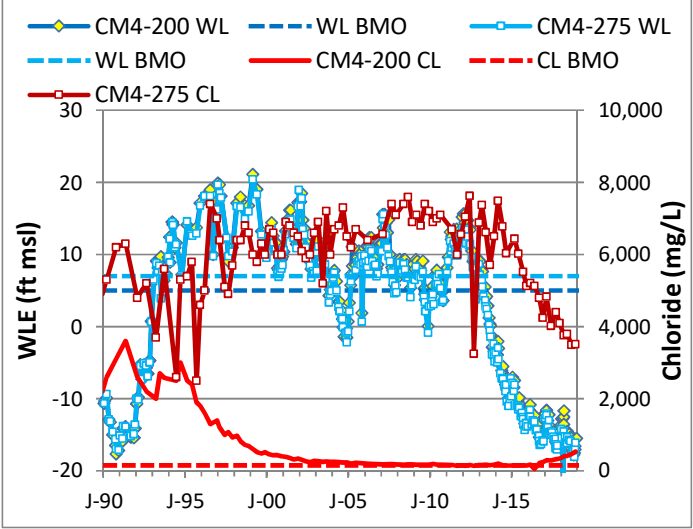
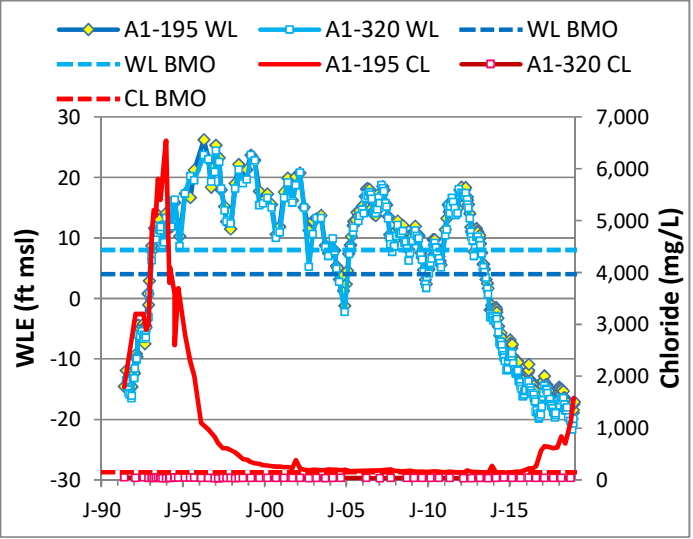
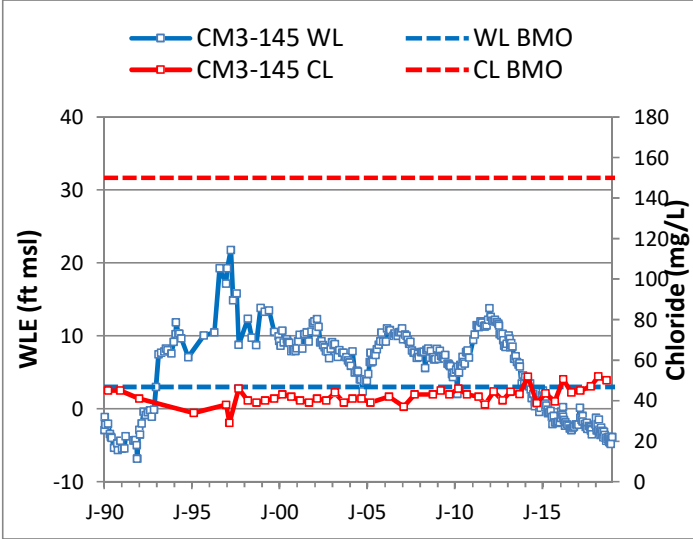
Status Summary: Water level BMOs were not met in 2018. A comparison of water levels indicates that water levels have declined at eight of nine monitoring locations over the past five years. Chloride BMOs were met at approximately 33% of the monitoring locations. Consistent with past results, chloride 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	2018 Avg	BMO	2018 Avg	Water Level	Chloride
01N23W01C05S (CM3-145)	120-145	3	-3	<150	51	↓	→
01N22W20J08S (A1-195)	155-195	4	-17	<150	1,057	↓	↑
01N22W20J07S (A1-320)	280-320	8	-19	<150	37	↓	→
01N22W28G05S (CM4-200)	180-200	5	-15	<150	453	↓	↑
01N22W28G04S (CM4-275)	255-275	8	-18	<150	3,643	↓	↑
01N21W19L12S (SCE-220)	200-220	5	-26	<150	78	↓	↑
01S22W01H04S (CM6-200)	180-200	5	-20	<150	3,870	↓	↑
01S22W01H03S (CM6-330)	310-330	8	-41	<150	3,725	↓	↑
01S21W08L04S (CM1A-220)	200-220	5	-11	<150	15,150	→	↓



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
OXNARD PLAIN - UPPER AQUIFER SYSTEM [part of Oxnard Subbasin]
2018



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
OXNARD PLAIN - LOWER AQUIFER SYSTEM [part of Oxnard Subbasin]
2018

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.

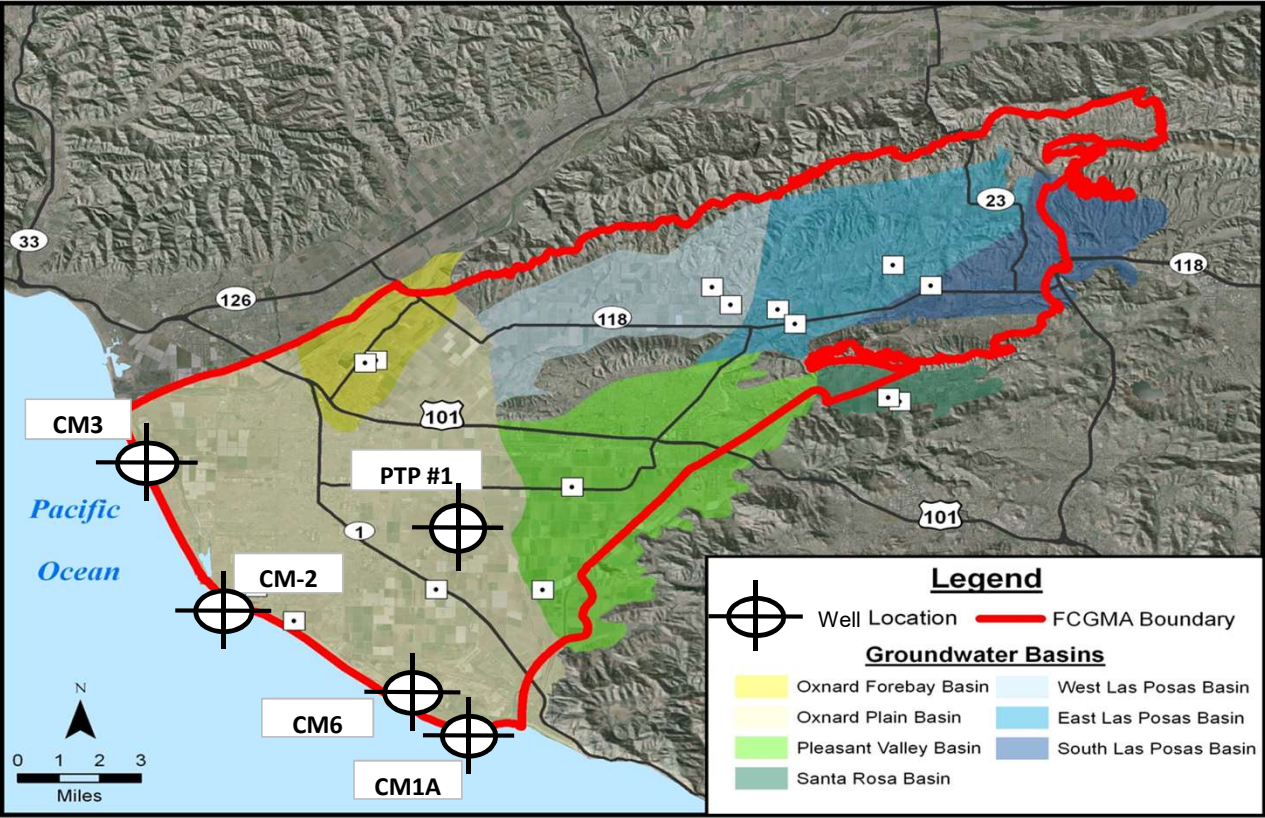
BMOs: Water Levels: Average groundwater elevations sufficient to maintain slight seaward groundwater gradient. Elevation varies with location.

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

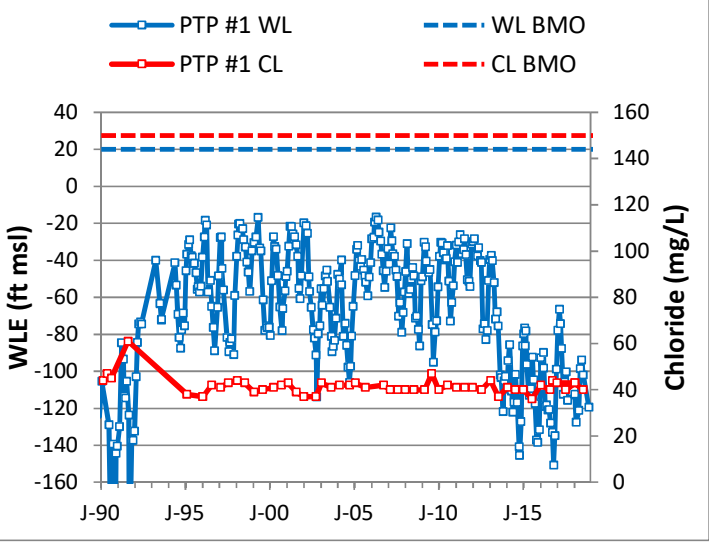
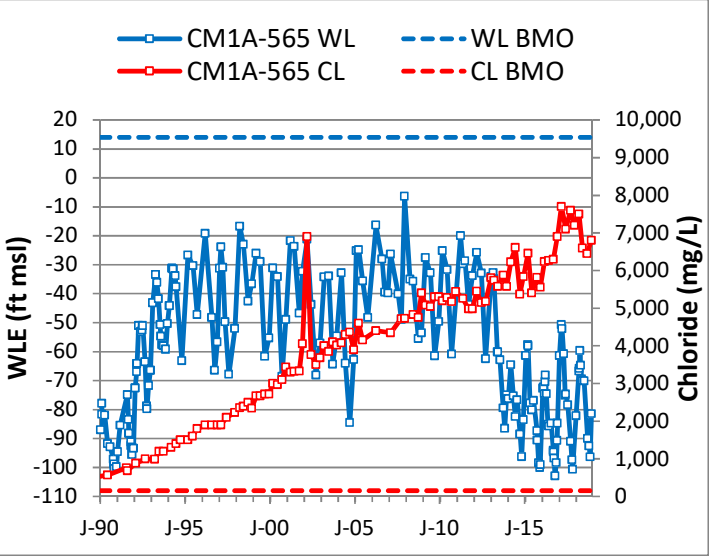
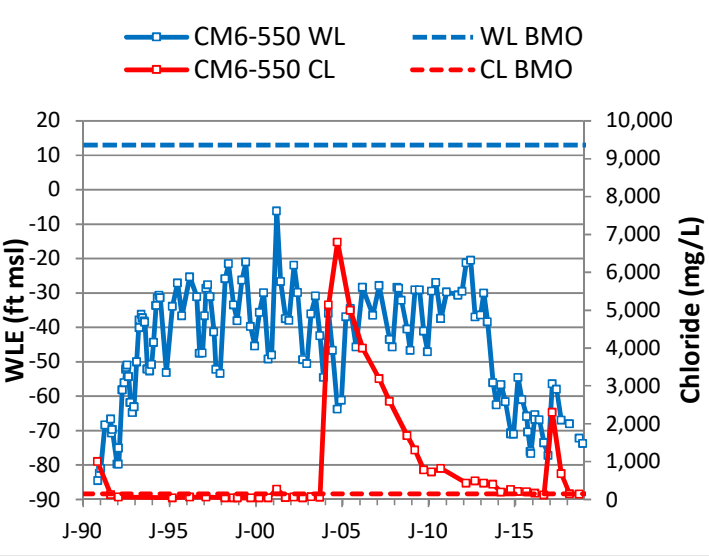
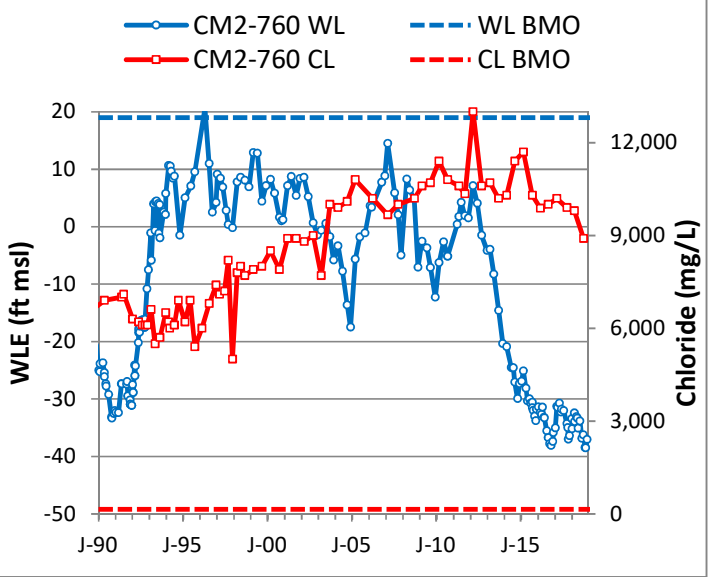
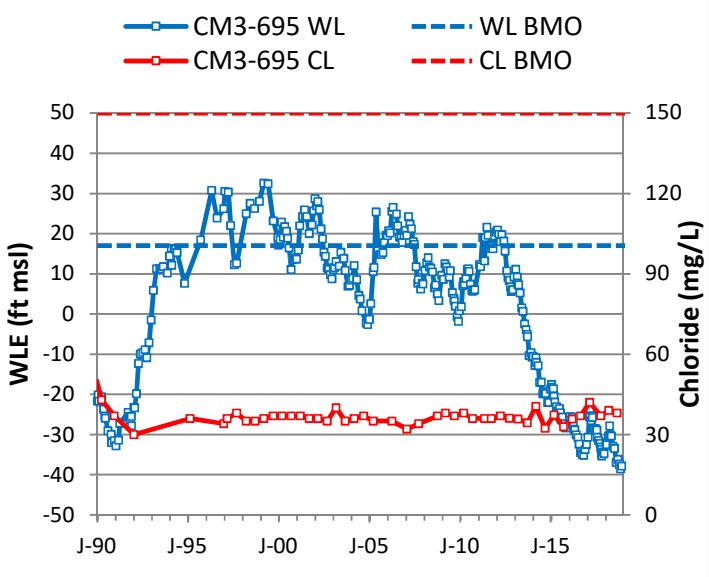
Status Summary: In 2018, water level BMOs were not met. Average water level at inland PTP #1 location was below its respective BMO by 131 feet. As long as water levels remain depressed, the potential for saline intrusion remains. Chloride BMOs were not met near Port Hueneme (CM2) and Pt. Mugu (CM1A) (areas of documented seawater intrusion), consistent with past monitoring.

Status Summary Table

State Well Number (name)	Depth (ft)	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
		BMO	2018 Avg	BMO	2018 Avg	Water Level	Chloride
01N23W01C04S (CM3-695)	630-695	17	-34	<150	39	↓	→
01N22W29D02S (CM2-760)	720-760	19	-35	<150	9,350	↓	↓
01S22W01H01S (CM6-550)	490-550	13	-71	<150	149	↓	↑
01S21W08L03S (CM1A-565)	525-565	14	-76	<150	6,838	→	↑
01N21W07J02S (PTP #1)	590-1280	20	-111	<150	42	→	→



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
OXNARD PLAIN - LOWER AQUIFER SYSTEM [part of Oxnard Subbasin]
2018



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
PLEASANT VALLEY BASIN [Pleasant Valley Basin]
2018

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

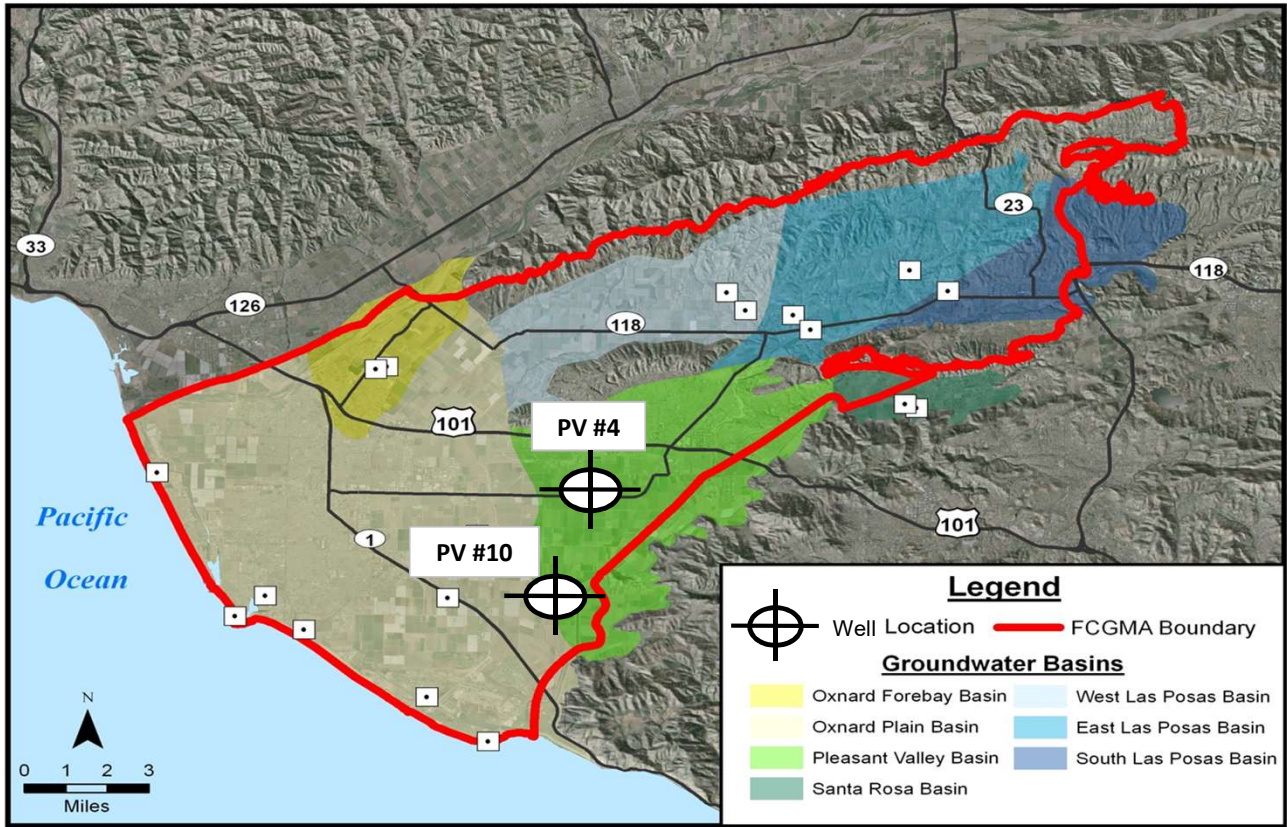
BMOs: Water Levels: Average groundwater elevations sufficient to prevent landward migration from coastal areas and minimize vertical gradients.

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

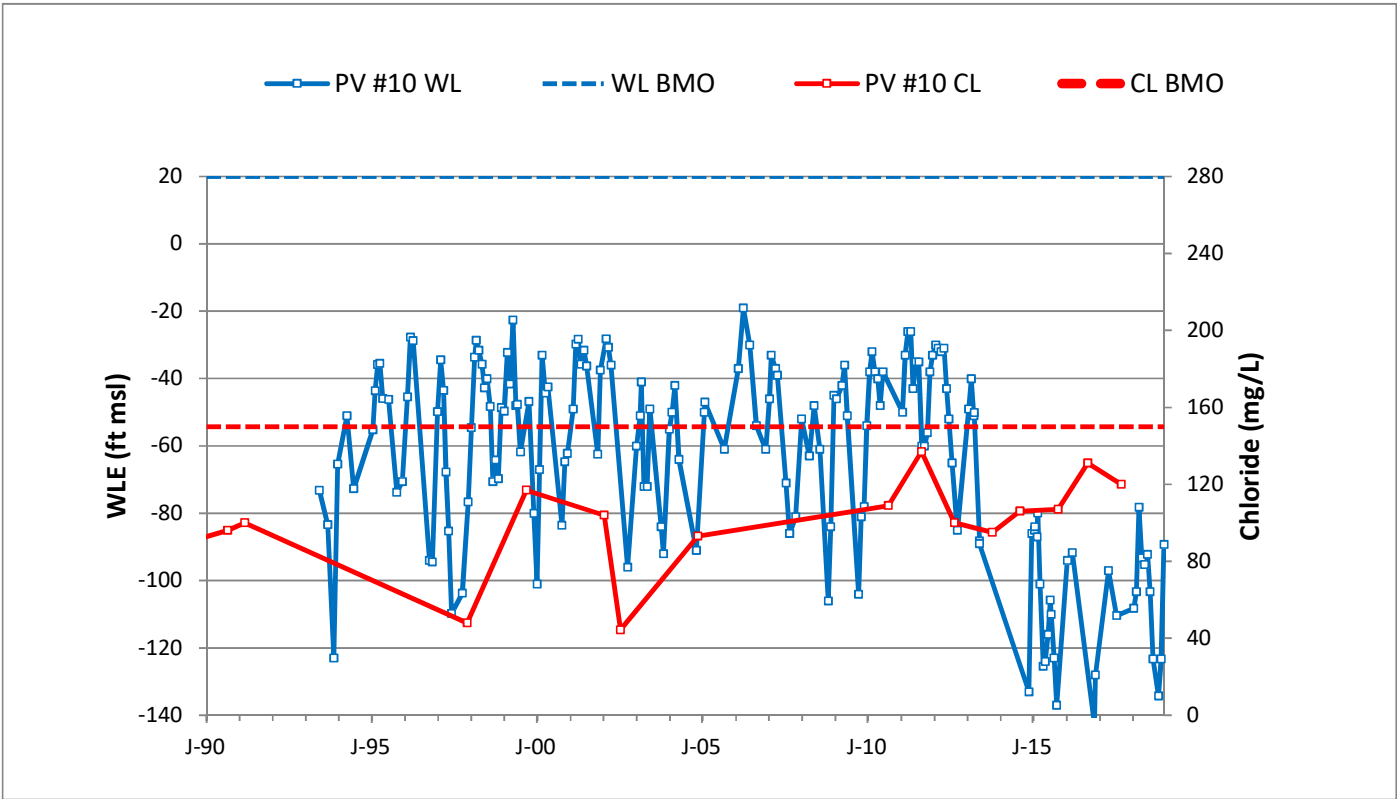
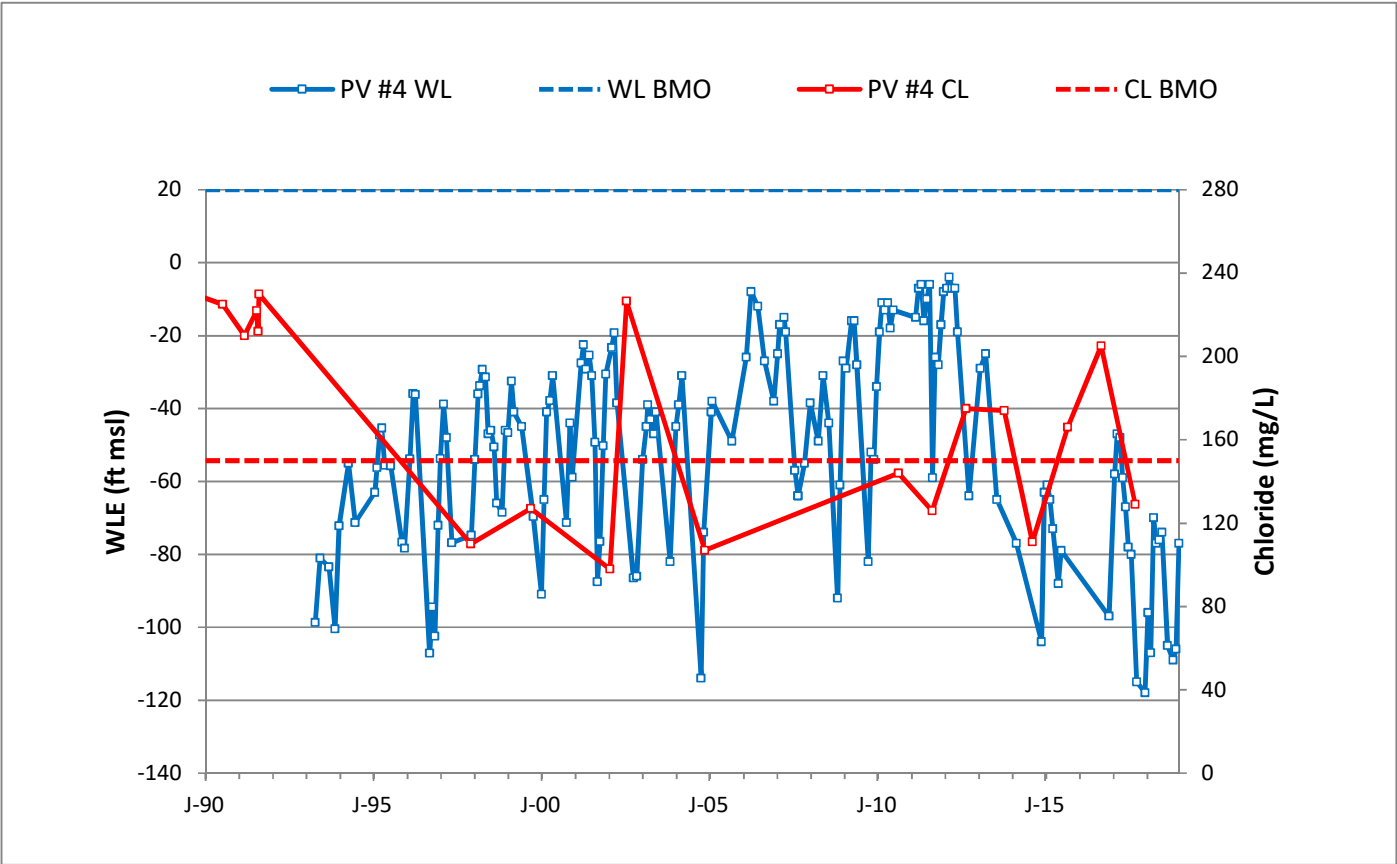
Status Summary: In 2018, water level BMOs were not met at either location. Water levels have generally remained within the same range of seasonal fluctuation during the last 5 years, remaining significantly below the BMOs. Chloride data was not available for both well locations, therefore the status with respect to the BMO could not be determined. Over the past 5-years, the chloride concentrations have fluctuated yet overall increased at PV #4 and PV#10.

Status Summary Table

State Well Number (name)	Depth (ft)	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
		BMO	2018 Avg	BMO	2018 Avg	Water Level	Chloride
01N21W03K01S (PV #4)	403-1433	20	█ -90	<150	No Data	➡	⬆
01N21W21H02S (PV #10)	503-863	20	█ -104	<150	No Data	➡	⬆



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
PLEASANT VALLEY BASIN [Pleasant Valley Basin]
2018



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
ARROYO SANTA ROSA BASIN [part of the Arroyo Santa Rosa Valley Basin]
2018

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

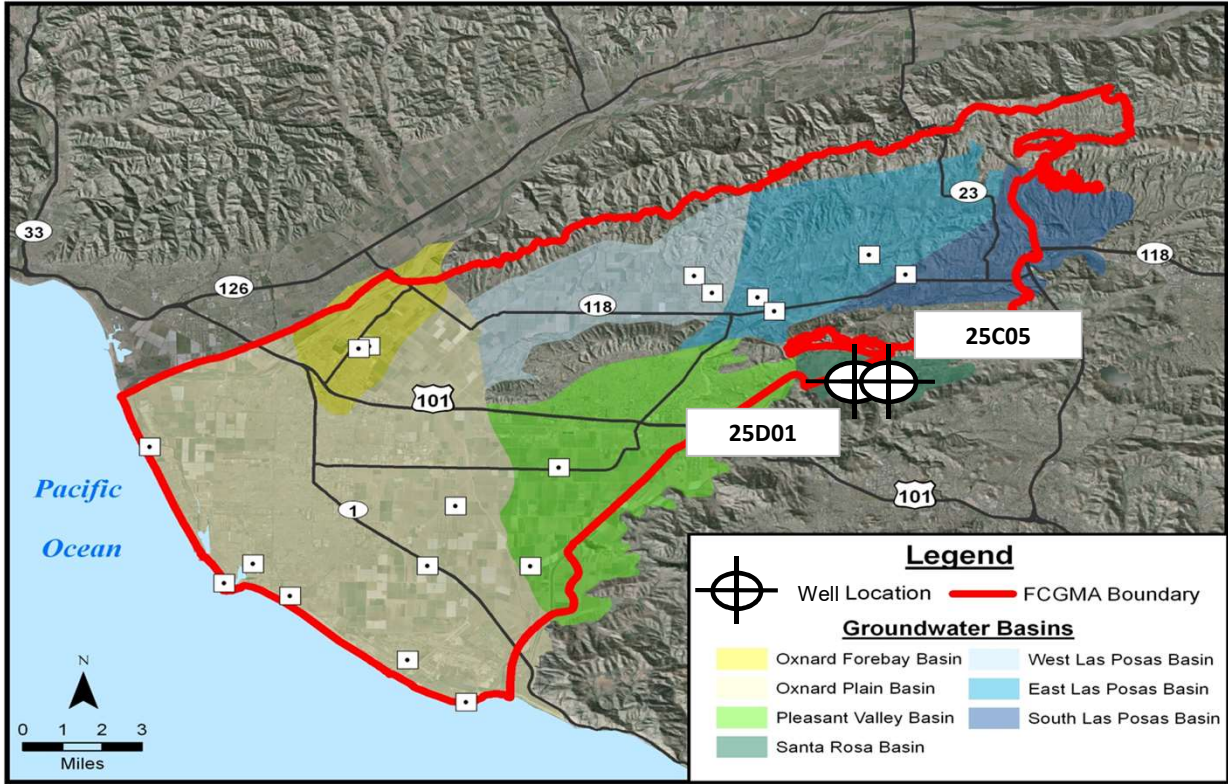
BMOs: Nitrate Concentration: <45 mg/L-NO₃ (LARWQCB Basin Plan Objective & State of CA MCL)

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

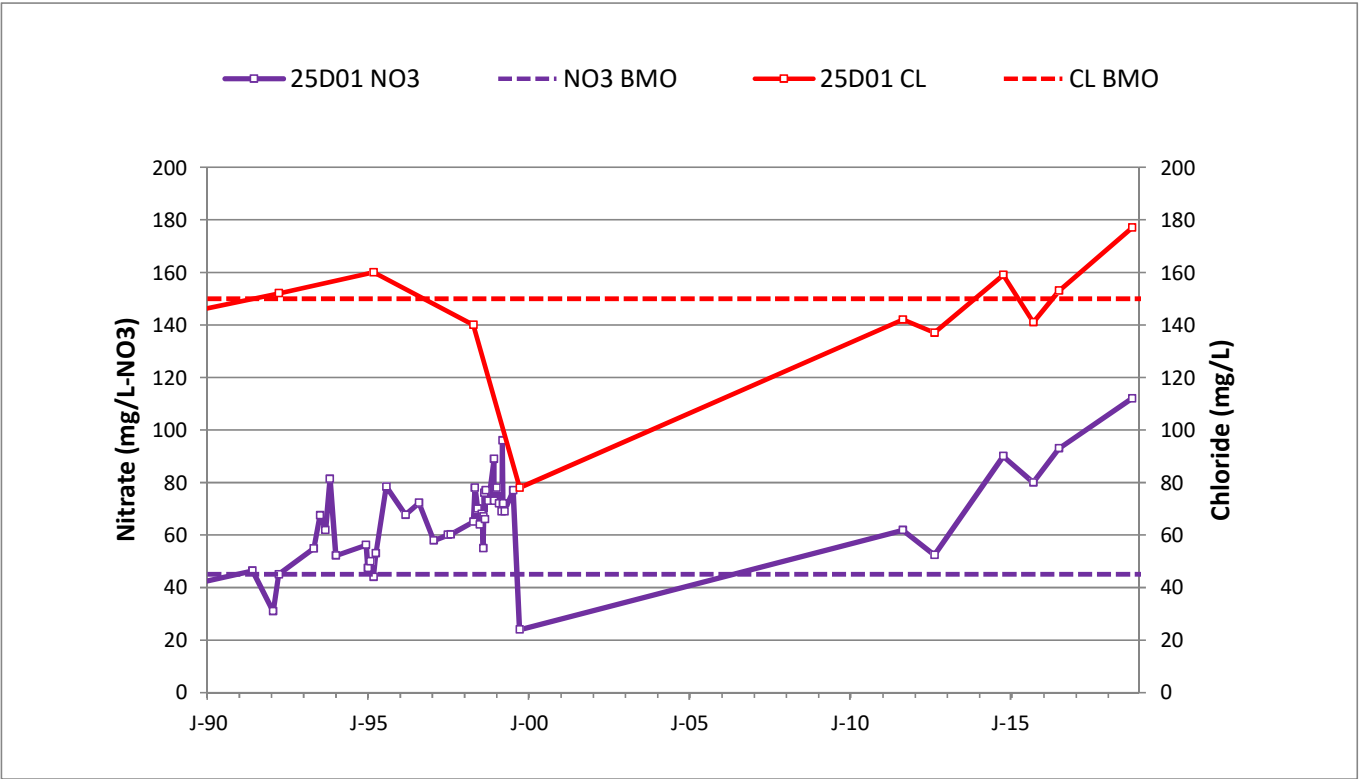
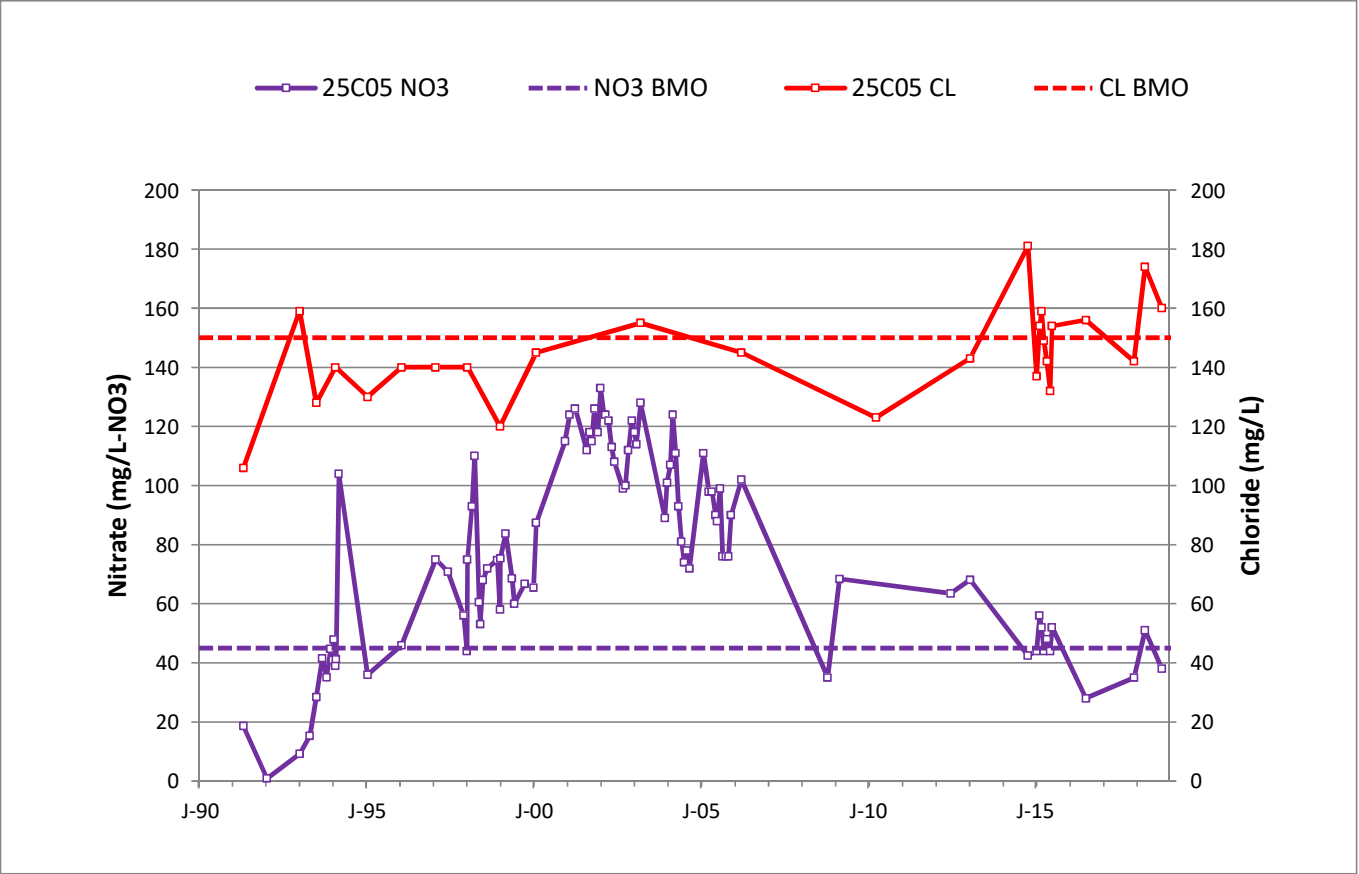
Status Summary: In 2018, average nitrate concentrations were above the BMO of less than 45mg/L in both wells. in well 25D01. Chloride concentrations were above the BMO of less than 150 mg/L in both wells. Over the past 5 years: nitrate concentrations have fluctuated but decreased at 25C05 and increased at 25D01; and chloride concentrations have fluctuated within a range above and below the BMO at 25C05 and increased at 25D01.

Status Summary Table

State Well Number (name)	Depth (ft)	Nitrate (mg/L)		Chloride (mg/L)		5-yr Trend	
		BMO	2018 Avg	BMO	2018 Avg	Nitrate	Chloride
02N20W25C05S	160-260	< 45	45	<150	167	↓	→
02N20W25D01S	Unknown	< 45	112	<150	177	↑	↑



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
ARROYO SANTA ROSA BASIN [part of the Arroyo Santa Rosa Valley Basin]
2018



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
LAS POSAS BASINS [Las Posas Valley Basin]
2018

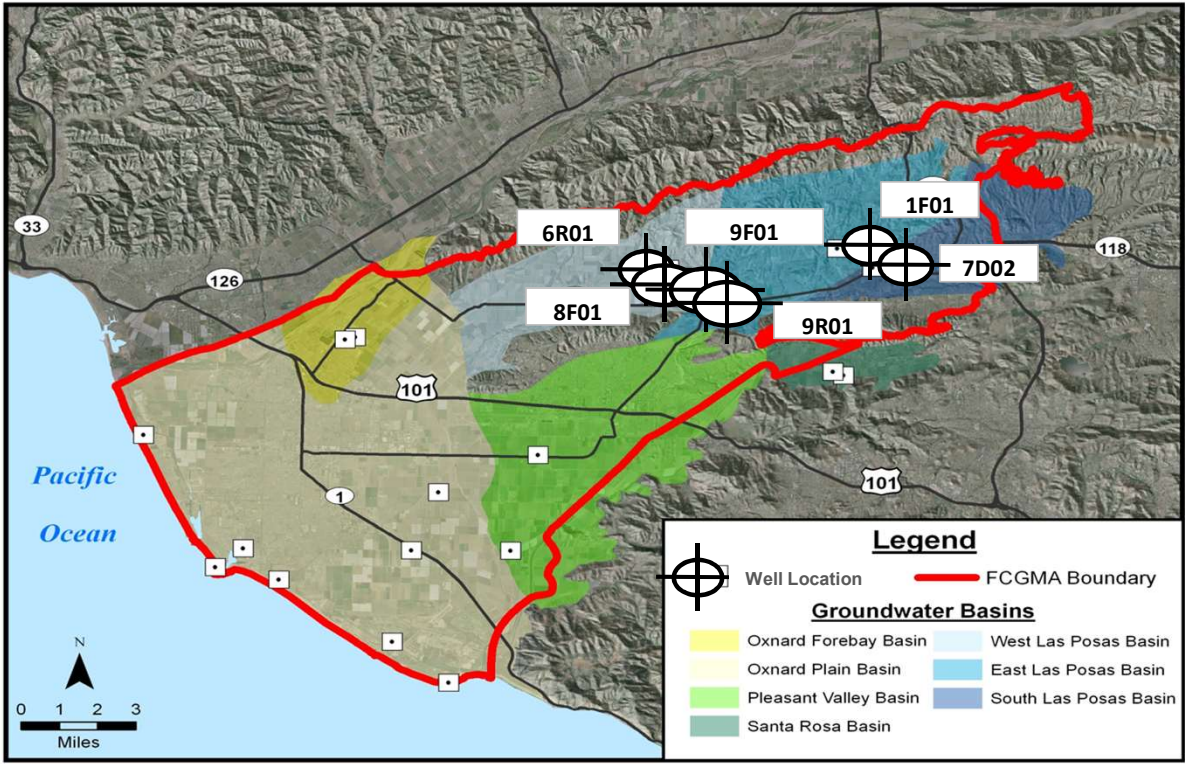
Goal: Maintain chloride and TDS concentrations suitable for irrigation of salt-sensitive crops, particularly avocados and berries. BMOs for South Las Posas (SLP) Basin were set equal to the average concentration in surface water in the Arroyo Las Posas.

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.

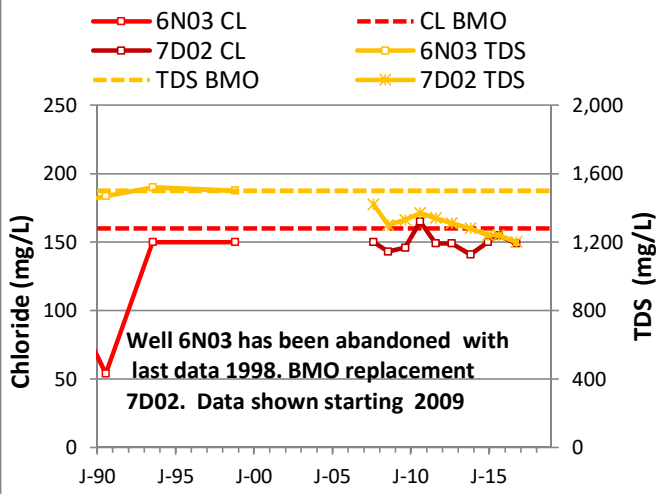
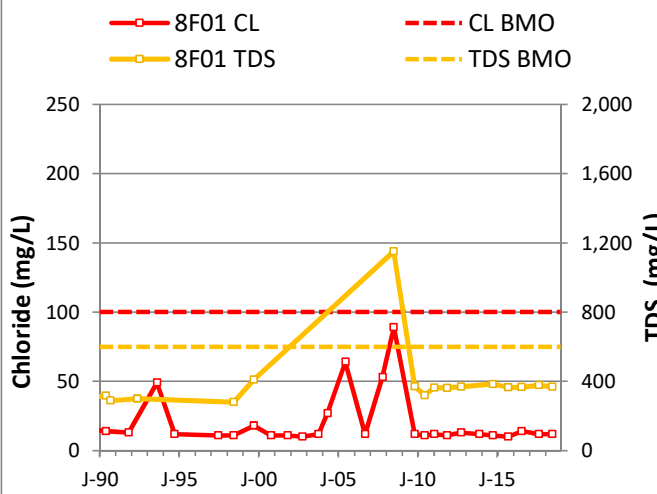
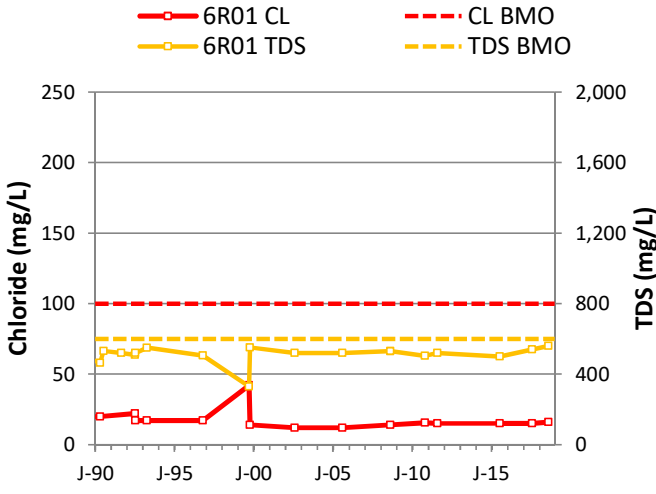
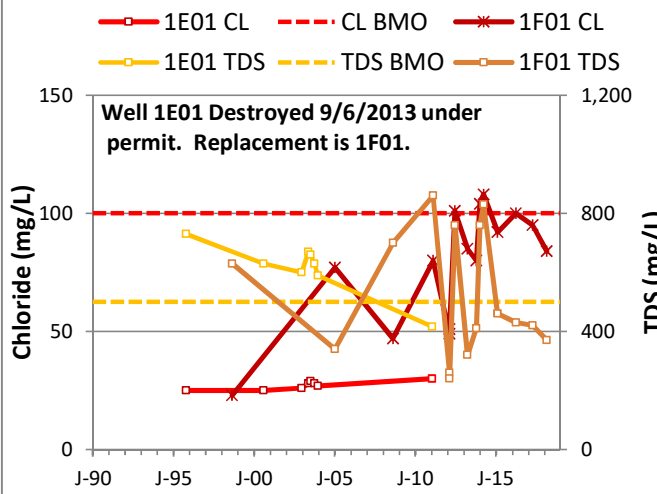
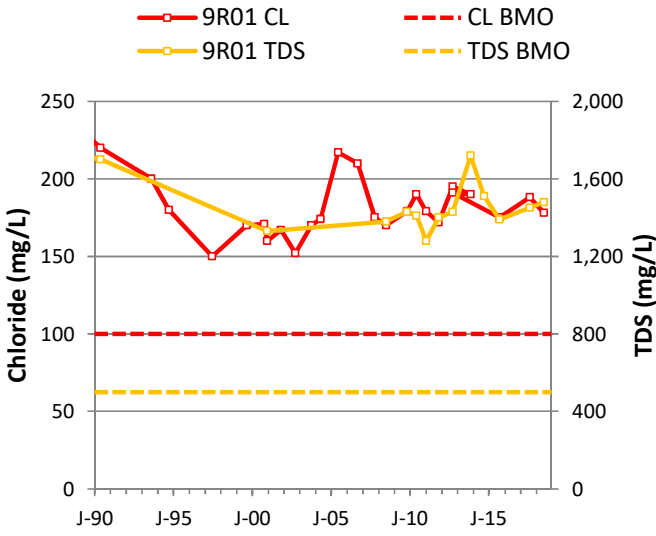
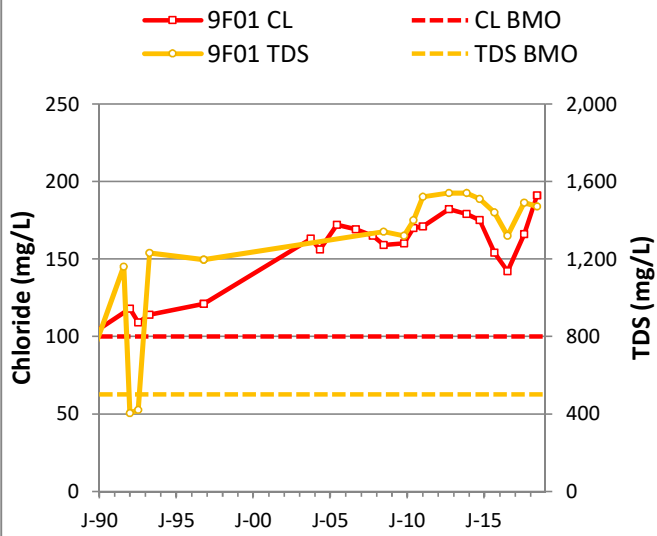
Status Summary: BMO monitoring locations 1E01 and 6N03 were replaced with 1F01 and 7D02 respectively. No data was available for 2018 at BMO monitoring location 7D02 (SLP). In the ELP, the chloride and TDS BMOs were not met at the locations in the southwestern portion of the basin. In the WLP, the chloride 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 and TDS was generally remaining within a range of fluctuation or increasing, but did decline at one location (1F01).

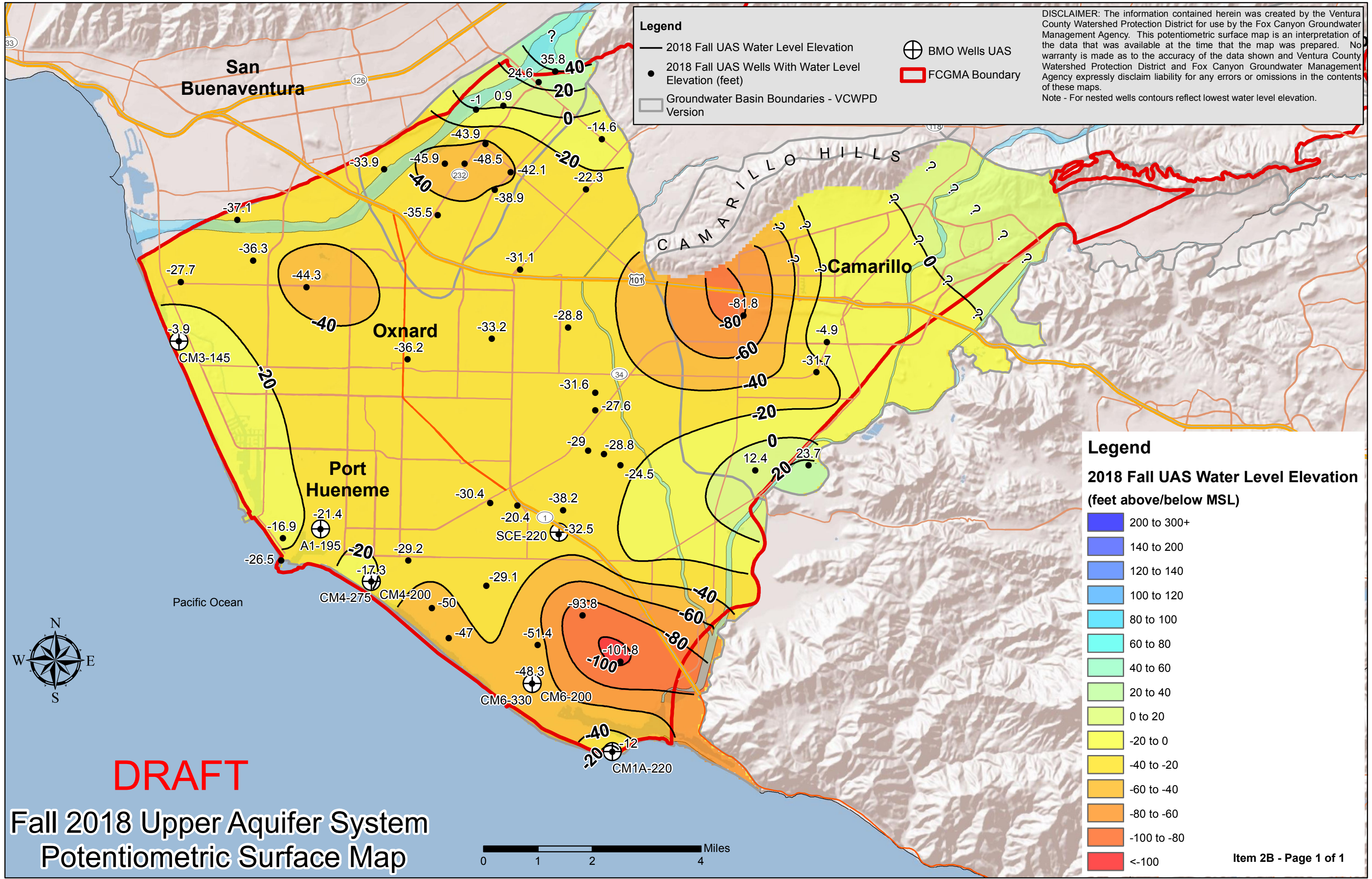
Status Summary Table

State Well Number (name)	Depth (ft)	Chloride (mg/L)		TDS (mg/L)		5-yr Trend	
		BMO	2018 Avg	BMO	2018 Avg	Chloride	TDS
02N20W09F01S (ELP)	906-1,290	<100	191	<500	1,470	↑	→
02N20W09R01S (ELP)	456-724	<100	178	<500	1,480	→	→
02N20W01F01S (ELP) Replacement	622-910	<100	84	<500	370	↓	↓
02N20W06R01S (WLP)	1,090-1,512	<100	16	<600	560	→	↑
02N20W08F01S (WLP)	752-1,406	<100	12	<600	369	→	→
02N19W07D02S (SLP) Replacement	98-170	<160	No Data	<1500	No Data	Insufficient Data	



FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD
LAS POSAS BASINS [Las Posas Valley Basin]
2018





Legend

- 2018 Fall UAS Water Level Elevation
- 2018 Fall UAS Wells With Water Level Elevation (feet)
- Groundwater Basin Boundaries - VCWPD Version
- ⊕ BMO Wells UAS
- ▭ FCGMA Boundary

DISCLAIMER: The information contained herein was created by the Ventura County Watershed Protection District for use by the Fox Canyon Groundwater Management Agency. This potentiometric surface map is an interpretation of the data that was available at the time that the map was prepared. No warranty is made as to the accuracy of the data shown and Ventura County Watershed Protection District and Fox Canyon Groundwater Management Agency expressly disclaim liability for any errors or omissions in the contents of these maps.
Note - For nested wells contours reflect lowest water level elevation.

Legend

**2018 Fall UAS Water Level Elevation
(feet above/below MSL)**

- 200 to 300+
- 140 to 200
- 120 to 140
- 100 to 120
- 80 to 100
- 60 to 80
- 40 to 60
- 20 to 40
- 0 to 20
- 20 to 0
- 40 to -20
- 60 to -40
- 80 to -60
- 100 to -80
- <-100

DRAFT
**Fall 2018 Upper Aquifer System
Potentiometric Surface Map**

0 1 2 4 Miles

Fall 2018 Lower Aquifer System Potentiometric Surface Map

