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

2013

Goal:

Protect water quality at public drinking water wells (nitrate and TDS) and irrigation

suitability (TDS). (Note TDS = total dissolved solids)

**BMOs**:

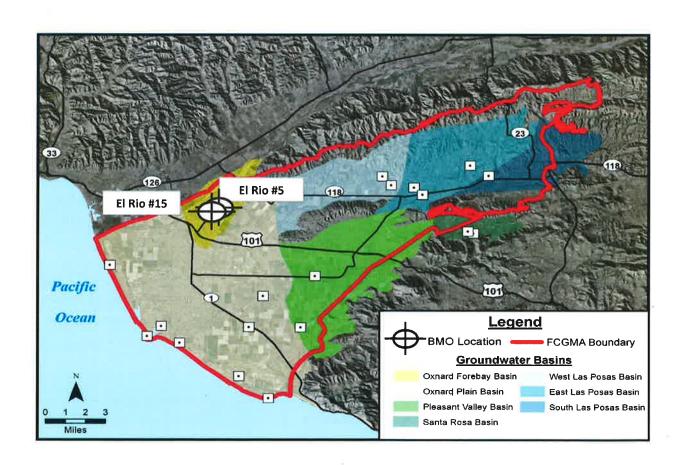
Nitrate Concentration: 22.5 mg/L-NO<sub>3</sub> (50% of State of California MCL)

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

**Status Summary:** 

In 2013, average nitrate concentrations were above the BMO at well El Rio #5 and below the BMO at well El Rio #15. Average TDS concentrations were below the BMO at both well locations. Declining water levels during 2013 have contributed to increasing nitrate and TDS concentrations, compared to those in 2012.

State Well Number	Depth	Nitrate (mg/L)		TDS (mg/L)		5-yr Trend	
(name)	(ft)	BMO	2013 Ave	вмо	2013 Ave	Nitrate	TDS
02N22W23B02S (El Rio #5)	135-277	22.5	40	1,200	1,028	4	Ŷ
02N22W23C05S (El Rio #15)	140-310	22.5	<b>1</b> 4	1,200	1,005	<b>1</b>	1



### FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD **OXNARD PLAIN - UPPER AQUIFER SYSTEM** 2013

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.

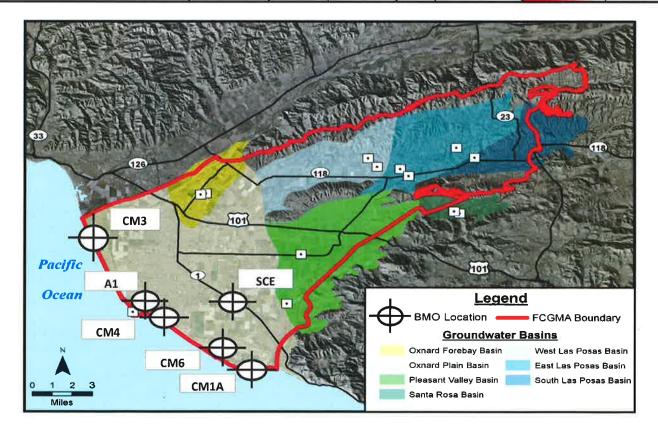
BMOs:

Water Levels: Average groundwater elevations suffient 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 met at two of the nine monitoring locations in 2013. A comparison of water levels over the past 5 years indicates that water levels are declining at all nine monitoring locations. Chloride BMOs were met at one third of the monitoring locations. Consistent with past results, chloride BMOs were not met near Port Hueneme (CM4) and Pt. Mugu (CM6 and CM1A).

State Well Number	Depth	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
(name)	(ft)	вмо	2013 Ave	вмо	2013 Ave	Water Level	Chloride
01N23W01C05S ( <b>CM3</b> -145)	120-145	3	7	150	44	1	
01N22W20J08S ( <b>A1</b> -195)	155-195	4	5	150	<b>1</b> 67	4	1
01N22W20J07S ( <b>A1</b> -320)	280-320	8	<b>4</b>	150	<b>3</b> 5	· V	- L
01N22W28G05S ( <b>CM4</b> -200)	180-200	5	<b>3</b>	150	<b>1</b> 64	4	
01N22W28G04S ( <b>CM4</b> -275)	255-275	8	2	150	6,620	<	
01N21W19L12S ( <b>SCE</b> -220)	200-220	5	<b>2</b> -4	150	<b>5</b> 9	4	
01S22W01H04S ( <b>CM6</b> -200)	180-200	5	<b>2</b> -8	150	<b>2</b> ,876	4	
01S22W01H03S ( <b>CM6</b> -330)	310-330	8	<b>2</b> 4	150	<b>2,294</b>	4	1
01S21W08L04S ( <b>CM1A</b> -220)	200-220	5	<b>-</b> 7	150	16,050	4	<b>→</b>



# FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN - LOWER AQUIFER SYSTEM 2013

Goal:

Prevent saline intrusion in the LAS. Sources are seawater inflow via aquifer outcrops in submarine canyons near Port Hueneme and Pt. Mugu and and marine sediments.

BMOs:

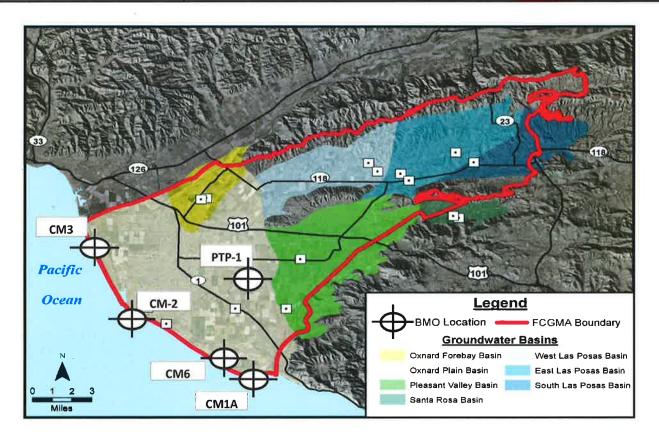
<u>Water Levels</u>: Average groundwater elevations suffient to maintain slight seaward groundwater gradient. Elevation varies with location.

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

**Status Summary:** 

In 2013, water level BMOs were not met. Average water levels were below their respective BMO by 97 feet (at the inland location). As long as water levels remain depressed, the potential for saline intrusion remains. Consistent with past results, chloride BMOs were not met near Port Hueneme (CM2) and Pt. Mugu (CM1A) (areas of documented seawater intrusion).

State Well Number	Depth	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
(name)	(ft)	вмо	2013 Ave	вмо	2013 Ave	Water Level	Chloride
01N23W01C04S ( <b>CM3</b> -695)	630-695	17	<b>0</b>	150	<b>3</b> 5	4	<b>⇒</b>
01N22W29D02S ( <b>CM2</b> -760)	720-760	19	-10	150	<b>1</b> 0,450	4	
01S22W01H01S ( <b>CM6</b> -550)	490-550	13	<b>2</b> -45	150	414	4	
01S21W08L03S ( <b>CM1A</b> -565)	525-565	14	-62	150	<b>5,718</b>		
01N21W07J02S (PTP #1)	590-1280	20	-77	150	41	4	<b>→</b>



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

2013

Goal:

Prevent inland migration of saline groundwater from coastal areas, underlying

sources, and fine-grained interbeds.

BMOs:

 $\underline{\text{Water Levels}} : \text{Average groundwater elevations sufficent to prevent landward migration}$ 

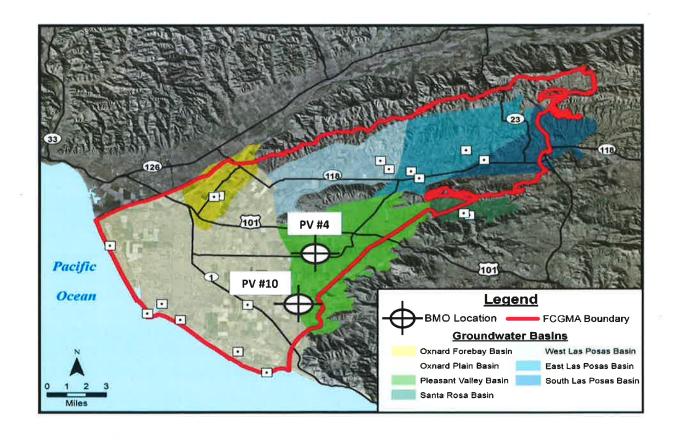
from coastal areas and minimize vertical gradients.

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

**Status Summary:** 

In 2013, water level BMOs were not met at either location. Water levels have fluctuated annually within the same general range during the last 5 years, remaining significantly below the BMOs. The chloride BMO is met at the southern-most of the two monitoring locations. The chloride concentration at the northeastern monitoring location has generally been rising since January 2005. With depressed water levels, the risk of increasing chloride concentrations remains.

Γ	State Well Number	Depth	Water Level (ft msl)		Chlo	ride (mg/L)	5-yr Trend	
L	(name)	(ft)	BMO 2013 Ave		вмо	2013 Ave	Water Level	Chloride
	01N21W03K01S (PV #4)	403-1433	20	<b>4</b> 0	150	<b>174</b>	<b>→</b>	1
Г	01N21W21H02S (PV #10)	503-863	20	-61	150	95		



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

#### 2013

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)

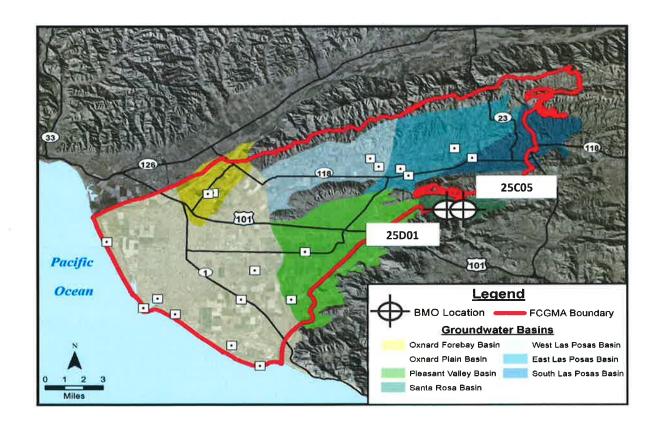
Chloride Concentration: 150 mg/L (LARWQCB Basin Plan Objective)

**Status Summary:** 

No Nitrate and Chloride water quality data was available for well 25D01, for 2013. For the water quality sample collected from 25C05 in 2013, the Nitrate concentration exceeded its BMO (68 vs. 45 mg/L) and the chloride concentration was slightly below the BMO (143 vs. 150 mg/L). Based on the available data for well 25C05, Nitrate and Chloride concentrations over the past 5 years have remained at approximately the same concentrations. Nitrate and Chloride data at 25D01 is not available for the 2000 to 2010 and 2013 period, therefore the 5 year trend is inconclusive.

State Well Number	Depth	Nitrate (mg/L)		Chloride (mg/L)		5-yr Trend *	
(name)	(ft)	вмо	2013 Ave	вмо	2013 Ave	Nitrate	Chloride
02N20W25C05S	160-260	45	68	150	<b>143</b>		
02N20W25D01S	Unknown	45	NO DATA	150	NO DATA	•	

Note: \* = Trend evaluation for 25D01 is inconclusive; no nitrate and chloride data between 2000 and 2010.



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

#### 2013

Goal:

Maintain chloride and TDS concentrations suitable for irrigation of salt-sensitive crops, particulary avocados and berries. BMOs for SLP are equal to the concentrations observed in surface water in 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: No data is availble for the six BMO monitoring locations for 2013. Chloride and TDS BMOs have generally been exceeded in the ELP Basin for many years, in the area of the expanding plume of poor quality water. Chloride and TDS BMOs were met at 08F01 in the West Las Posas Basin. Data are insufficient to determine the five-year trend at three monitoring locations. For the past five years, chloride and TDS concentration trends are slightly rising in the ELP. Chloride and TDS concentrations generally remain at the same concentration the BMO location in the WLP Basin.

State Well Number	Depth	Chloride (mg/L)		TDS (mg/L)		5-yr Trend	
(name)	(ft)	ВМО	2013 Ave	вмо	2013 Ave	Chloride	TDS
02N20W09F01S (ELP)	906-1,290	100	<b>[0]</b> 179	500	<b>1,540</b>	1	1
02N20W09R01S (ELP)	456-724	100	<b>190</b>	500	1,720	1	1
02N20W01E01S (ELP)	567-907	100	No Data	500	No Data	Insufficient Data	
02N20W06R01S (WLP)	1,090-1,512	100	No Data	600	No Data	Insufficient Data	
02N20W08F01S (WLP)	752-1,406	100	12	600	373		⇨
02N19W06N03S (SLP)	101-121	160	No Data	1500	No Data	No L	Data

