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

### **Updated January 2012**

<u>Goal</u>: 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)

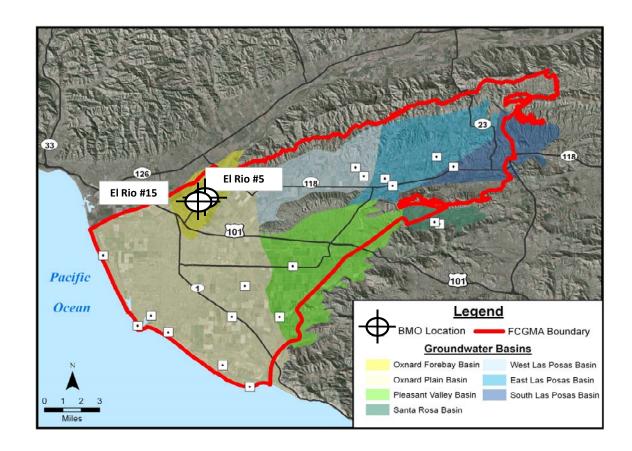
**Status Summary:** Average nitrate and TDS concentrations were well below the BMOs in 2011. Short term nitrate

exceedances are managed by blending with other water sources. Increasing water levels during

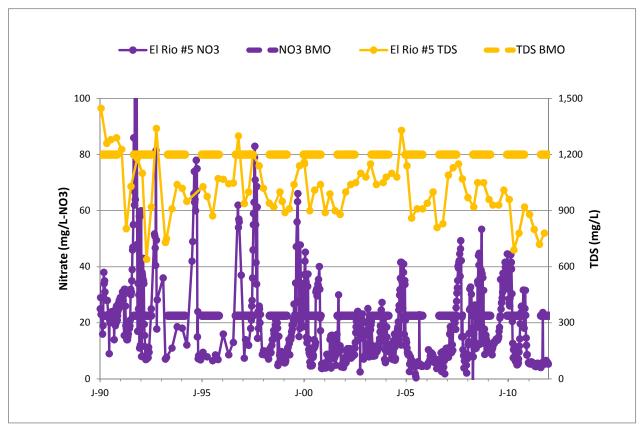
the last two years have contributed to declining nitrate and TDS concentrations. TDS

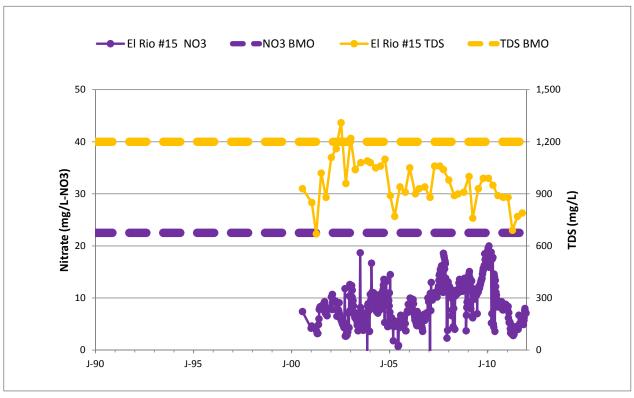
concentrations are now near their lowest point in two decades.

State Well Number	Depth	Nitra	te (mg/L)	TDS	6 (mg/L)	5-yr Trend	
(name)	(ft)	вмо	2011 Ave	вмо	2011 Ave	Nitrate	TDS
02N22W23B02S (El Rio #5)	135-277	22.5	6	1,200	795	<b>↓</b>	•
02N22W23C05S (El Rio #15)	140-310	22.5	5	1,200	783	<b>1</b>	•



## FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN FOREBAY Updated January 2012





## FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN - UPPER AQUIFER SYSTEM Updated January 2012

**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.

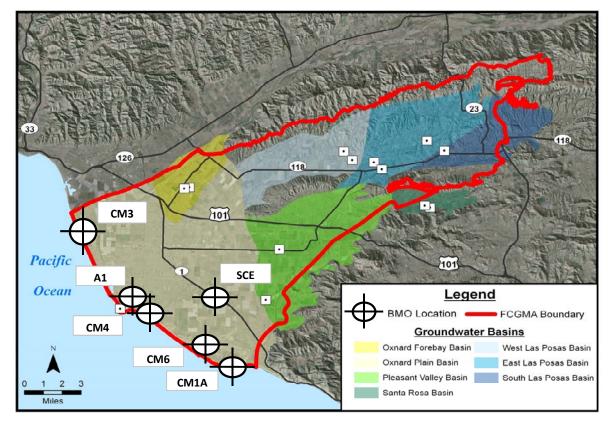
Chloride Concentration: 150 mg/L Chloride (LARWQCB Basin Plan Objective).

Status Summary: Water level BMOs were met at all locations except near Pt. Mugu in 2011. Water levels rose

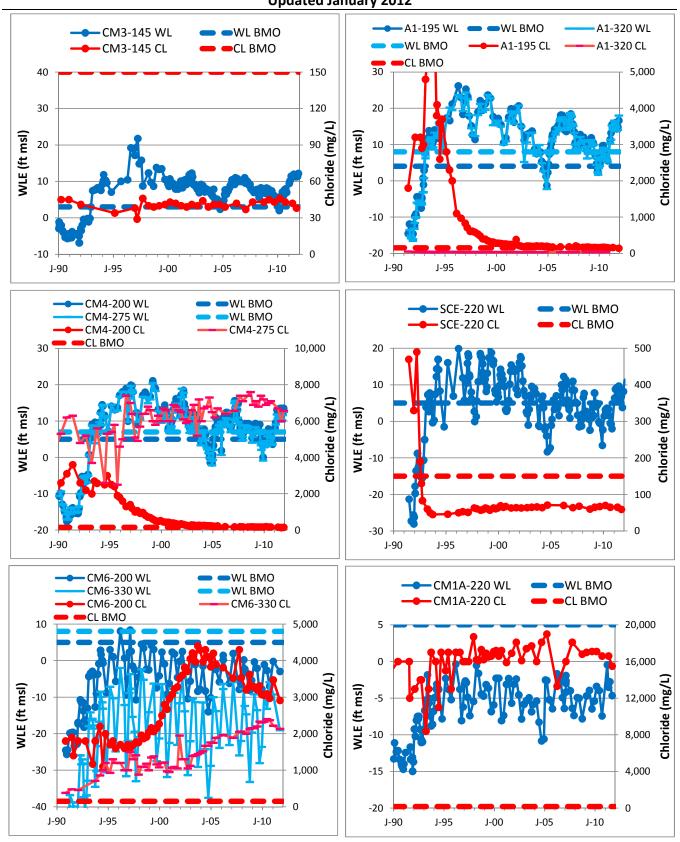
roughly 10 feet during the past two years, reversing a decling trend that began in 2007. Consistent with past results, chloride BMOs were not met near Port Hueneme and Pt. Mugu

(these are areas of documented saline intrusion).

State Well Number	Depth	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
(name)	(ft)	вмо	2011 Ave	вмо	2011 Ave	<b>Water Level</b>	Chloride
01N23W01C05S ( <b>CM3</b> -145)	120-145	3	11	150	<b>4</b> 0	$\Rightarrow$	$\Rightarrow$
01N22W20J08S ( <b>A1</b> -195)	155-195	4	15	150	151	$\Diamond$	$\Leftrightarrow$
01N22W20J07S ( <b>A1</b> -320)	280-320	8	15	150	36	$\Rightarrow$	$\Rightarrow$
01N22W28G05S ( <b>CM4</b> -200)	180-200	5	12	150	151	$\Diamond$	$\Rightarrow$
01N22W28G04S ( <b>CM4</b> -275)	255-275	7	11	150	6,421	$\Rightarrow$	$\Rightarrow$
01N21W19L12S (SCE-220)	200-220	5	<b>8</b>	150	<b>6</b> 2	$\Rightarrow$	$\Rightarrow$
01S22W01H04S ( <b>CM6</b> -200)	180-200	5	-2	150	3,191	<b>+</b>	•
01S22W01H03S ( <b>CM6</b> -330)	310-330	8	-14	150	2,177	$\Rightarrow$	<b>1</b>
01S21W08L04S ( <b>CM1A</b> -220)	200-220	5	<b>9</b> -3	150	16,050	$\Diamond$	$\Rightarrow$



## FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN - UPPER AQUIFER SYSTEM Updated January 2012



## FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN - LOWER AQUIFER SYSTEM Updated January 2012

**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.

<u>BMOs</u>: <u>Water Levels</u>: Average groundwater elevations suffient to maintain slight seaward

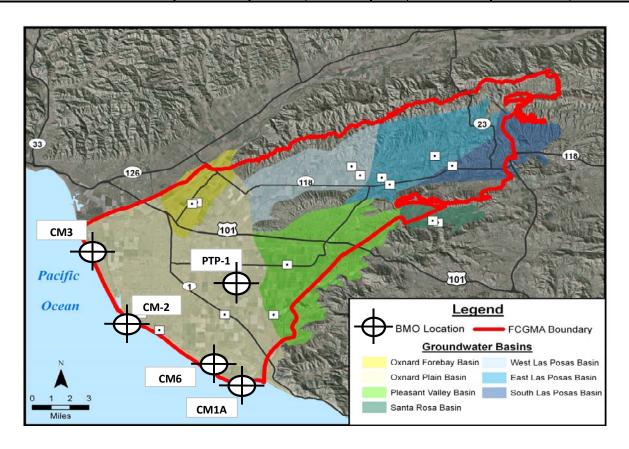
groundwater gradient. Elevation varies with location.

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

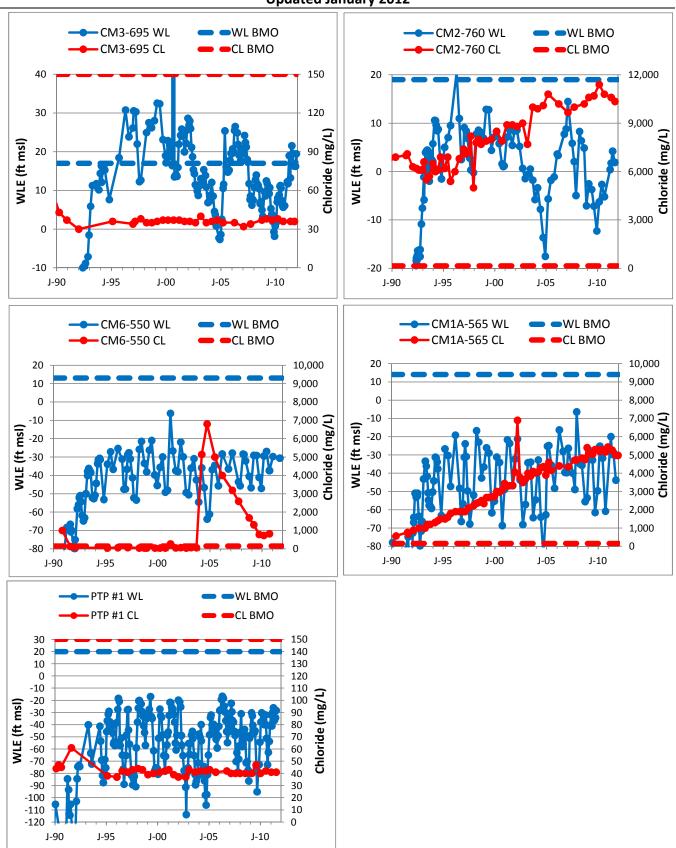
Status Summary: In 2011, water level BMOs were met only at the northern most location along the coast

(CM3). Water levels at remaining locations continue to be significantly below their respective BMO. 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) (these are areas of documented intrusion).

State Well Number	Depth	Water Level (ft msl)		Chloride (mg/L)		5-yr Trend	
(name)	(ft)	вмо	2011 Ave	вмо	2011 Ave	Water Level	Chloride
01N23W01C04S ( <b>CM3</b> -695)	630-695	17	17	150	36	1	$\Leftrightarrow$
01N22W29D02S ( <b>CM2</b> -760)	720-760	19	2	150	10,475	1	<b>1</b>
01S22W01H01S ( <b>CM6</b> -550)	490-550	13	-30	150	No Data	$\Rightarrow$	•
01S21W08L03S ( <b>CM1A</b> -565)	525-565	14	-31	150	5,074	$\Rightarrow$	<b>†</b>
01N21W07J02S (PTP #1)	590-1280	20	-33	150	41	$\Rightarrow$	



# FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD OXNARD PLAIN - LOWER AQUIFER SYSTEM Updated January 2012



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

### **Updated January 2012**

**Goal:** Prevent inland migration of saline groundwater from coastal areas, underlying

sources, and fine-grained interbeds.

**BMOs:** Water Levels: Average groundwater elevations suffient to prevent landward migration

from coastal areas and minimize vertical gradients.

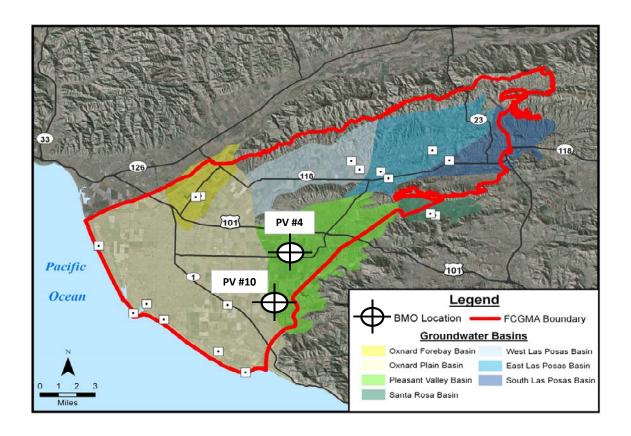
Chloride Concentration: 150 mg/L Chloride (LARWQCB Basin Plan Objective).

Status Summary: In 2011, water level BMOs were not met at either location. Despite rising water levels during the

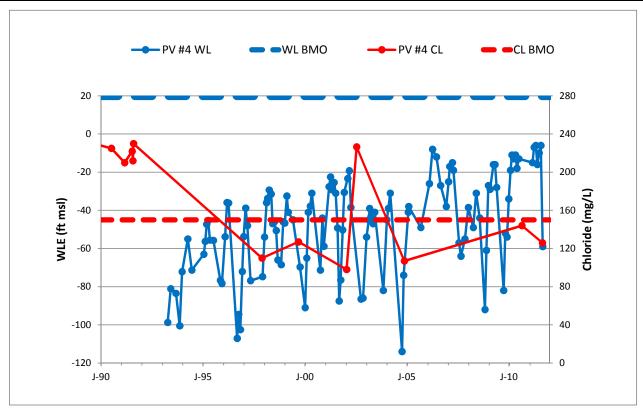
past three years, water levels remain significantly below the BMOs. Chloride BMOs continue to be met at both locations, although concentrations are close to the BMOs and increasing since 2005. With depressed water levels, the risk of increasing chloride concentrations remains.

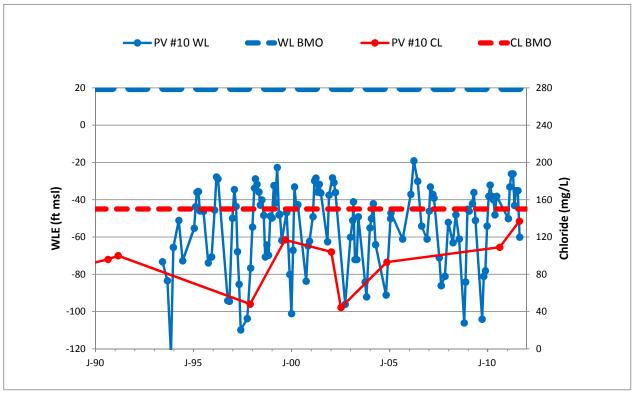
State Well Number	Depth	Water Level (ft msl)		Chlo	ride (mg/L)	5-yr Trend	
(name)	(ft)	вмо	2011 Ave	вмо	2011 Ave	Water Level	Chloride*
01N21W03K01S (PV #4)	403-1433	20	-17	150	126	1	
01N21W21H02S ( <b>PV #10</b> )	503-863	20	-39	150	137	1	<b>†</b>

Note: \* = Trend evaluation is inconclusive; no chloride data between 2004 and 2010.



# FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD PLEASANT VALLEY BASIN Updated January 2012





## FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD ARROYO SANTA ROSA BASIN Updated January 2012

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

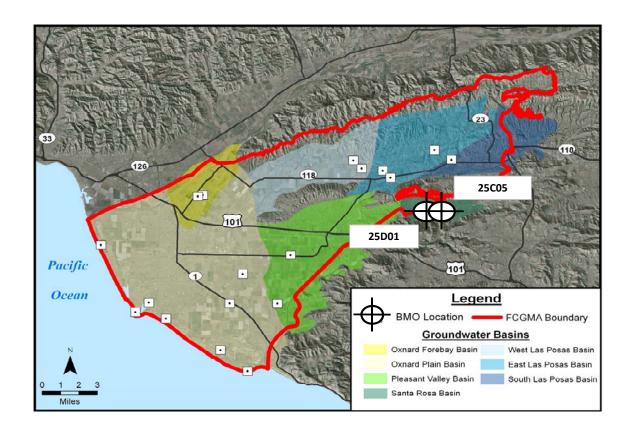
BMOs: Nitrate Concentration: 45 mg/L-NO<sub>3</sub> (LARWQCB Basin Plan Objective & State of CA MCL)

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

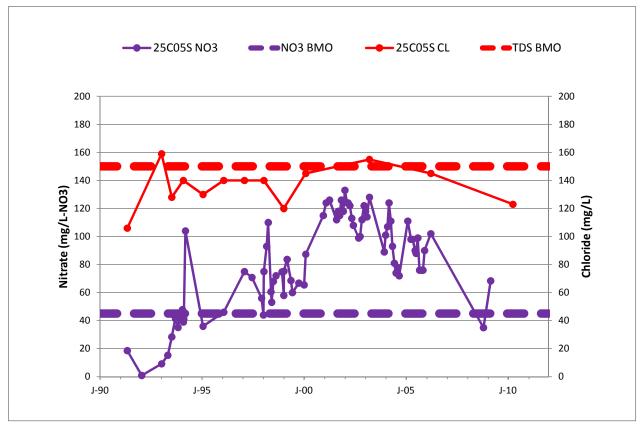
**Status Summary:** Data for 2011 were limited to one of the two BMO locations (25D1). Nitrate exceeded its

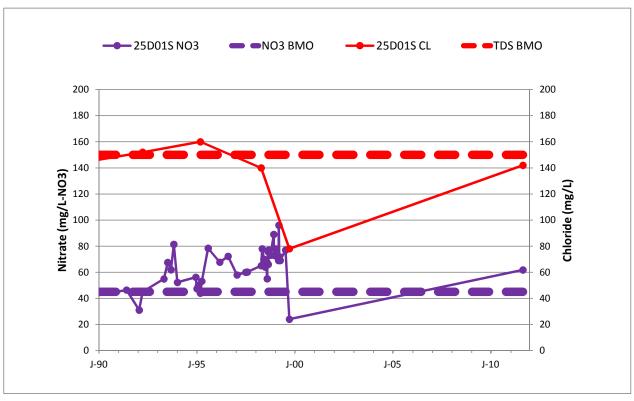
BMO (62 vs. 45 mg/L) and chloride was slightly below its BMO (142 vs. 150 mg/L). Available data are not adequate for determining trends during the previous five years. Comparision of recent results with historical data suggests that nitrate and chloride concentrations may be similar to or slightly less than concetrations in the late 1990s and early 2000s.

State Well Number	Depth	Nitrate (mg/L)		Chloride (mg/L)		5-yr Trend	
(name)	(ft)	вмо	2011 Ave	вмо	2011 Ave	Nitrate	Chloride
02N20W25C05S	160-260	45	No Data	150	No Data	•	1
02N20W25D01S	Unknown	45	62	150	142	Insufficient Data	



## FOX CANYON GMA BASIN MANAGEMENT OBJECTIVES REPORT CARD ARROYO SANTA ROSA BASIN Updated January 2012





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

### **Updated January 2012**

**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.

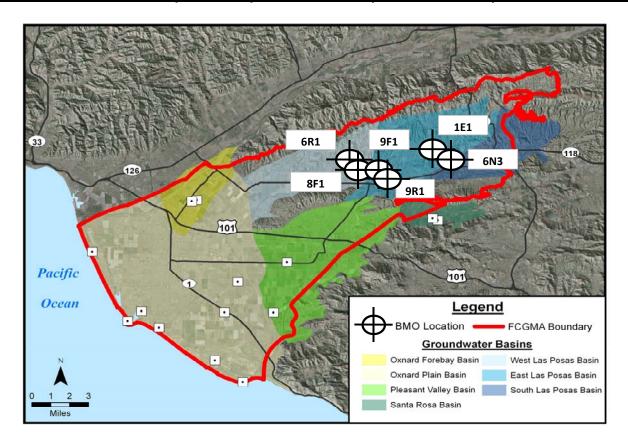
TDS Concentration: ELP: 500 mg/L; WLP: 600 mg/L; and SLP: 1,500 mg/L.

Status Summary: In 2011, chloride and TDS BMOs were met at all locations except 9F1 and 9R1, which are

located within the expanding plume of poor quality water in the East Las Posas Basin. Concentration trends are generally stable at the BMO locations, however, none of the locations are situated at the leading edge of the plume where rising concentrations

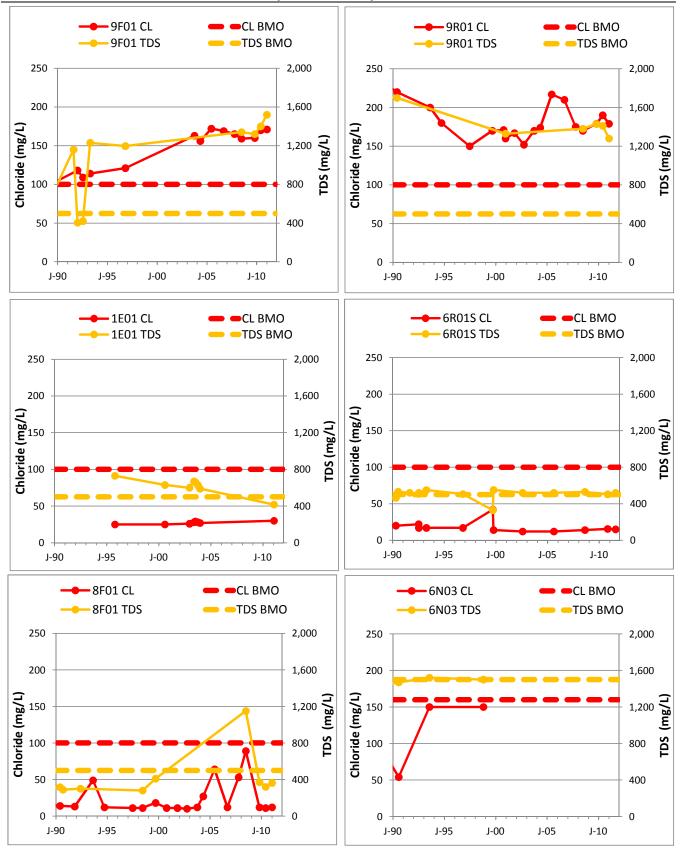
are being observed. New BMOs will be proposed in the basin-specific plan.

State Well Number	Depth	Chloride (mg/L)		TDS (mg/L)		5-yr Trend	
(name)	(ft)	вмо	2011 Ave	вмо	2011 Ave	Chloride	TDS
02N20W09F01S (ELP)	906-1,290	100	171	500	1,520	$\Rightarrow$	$\Diamond$
02N20W09R01S (ELP)	456-724	100	179	500	1,280	$\Rightarrow$	$\Rightarrow$
02N20W01E01S (ELP)	567-907	100	30	500	416	Insufficient Data	
02N20W06R01S (WLP)	1,090-1,512	100	15	600	520	$\Rightarrow$	$\Diamond$
02N20W08F01S (WLP)	752-1,406	100	12	600	363	$\Rightarrow$	$\uparrow$
02N19W06N03S (SLP)	101-121	160	No Data	1500	No Data	No E	Data



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

**Updated January 2012** 



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