Appendix J. Dry-Weather Analytical Monitoring Results

Site ID	Port Hueneme-3	Unincorporated-2	Camarillo-1	Fillmore-1
	DRY-HUE3	DRY-UNI2	MO-CAM	MO-FIL
At Major Outfall?	No	No	Yes	Yes
Location	Bubbling Springs @ RR xing	MCW-12 Medea Creek @ Tamarind	Camarillo Hills Drain	North Fillmore Drain
Date	09/17/24	09/18/24	09/18/24	09/17/24
Time	1310	1125	0745	1040
Conveyence Type	Natural channel	Natural channel	Box culvert	Box culvert
Dimensions	N/A	N/A	8' x 24'	N/A
Dominant Land Use	Commercial & residential	Residential & rural	Commercial & residential	Residential
Site Elevation	0	946	104	430
Weather	Clear	Clear	Clear	Clear
Wind Condition	Slight breeze	Slight breeze	Calm	Calm
Air Temp. (ºC)	26	14	14	23
Trash (general area)	Light	None	Moderate	Light
Trash (stream banks)	Light	None	Light	Light
Water Clarity	Cloudy	Clear	Clear	Clear
Water Color	Clear	Clear	Clear	Brown
Odors	None	None	None	None
Floatables	Other	Other	None	None
Foam	None	None	None	None
Stains/ deposits	None	None	None	None
Structural condition	Natural channel	Rip-rap with natural bottom	Concrete channel	Rip rap with concrete bottom
Vegetation Condition	Manicured banks	Reeds/cattails	Few grasses in concrete seams	Thick cattail/willows growth
Biology	Ducks	Mosquito fish	Aquatic snails	Aquatic snails
Algae (suspended)	None	Brown/50%	None	None
Algae (substrate)	None	Green/5%	Brown/5%	None
Dissolved Oxygen (%)	29.6	103.8	100.2	57.6
Dissolved Oxygen (mg/L)	2.66	9.56	9.88	5.23
Conductivity (µS)	3033	3254	864	1617
Specific Conductance (µS)	3335	3691	1045	1125
Salinity (ppt)	1.8	2.0	0.5	0.6
Water Temp. (ºC)	20.1	18.8	15.9	20.0
Water Temp. (ºF)	68.2	65.8	60.6	68.0
pH	7.66	7.91	8.43	8.03
Turbidity (NTU)	20.8	1.0	3.0	42.9
Total Organic Carbon (mg/L)	6.1	5.3	16	3.7
Total Hardness as CaCO$_3$ (mg/L)	1060	2170	332	475
Total Calcium (mg/L)	266	385	89.6	129
Total Magnesium (mg/L)	97.3	293	26.3	37.3
Dissolved Copper (µg/L)	0.27 (DNQ)	1.5	6.7	2.6
Dissolved Lead (µg/L)	<0.083	<0.083	0.21	<0.083
Dissolved Zinc (µg/L)	2.0 (DNQ)	<1.7	6.4 (DNQ)	7.6 (DNQ)
Total Coliform (MPN/100 mL)	224,700	32,550	141,360	104,620
***E. coli* (MPN/100 mL)**	61,310	860	12,033	262
Flow Status	Flowing	Flowing	Flowing	Flowing
Water Width (ft.)	12.0	3.0	2.0	4.0
Water Depth (ft.)	1.00	0.01	0.01	0.80
Flow Velocity (ft/s)	<0.01	1.00	0.70	0.01
Flow Rate (ft^3/s)	<0.12	0.03	0.01	0.03
Comments	Pine needles/pollen floatables	Thin scum/pollen layer below stabilizer		

The row-group labels (left margin) are: Site Description, Weather, Trash, Observations, Water Chemistry (Field), Water Chemistry (Lab), Estimated Flow.

Site ID	Moorpark-1	Ojai-1	Oxnard-1	Santa Paula-2
	MO-MPK	**MO-OJA**	**MO-OXN**	**DRY-SPA2**
At Major Outfall?	Yes	Yes	Yes	No
Location	Walnut Canyon	Fox Barranca	El Rio Drain above MO-OXN	Fagan Canyon
Date	09/18/24	09/17/24	09/17/24	09/17/24
Time	0840	1150	0830	0955
Conveyence Type	Box culvert	Box culvert	Trapezoidal channel	Box culvert
Dimensions	5' x 12'	6.5' x 12'	5.5' x 12'(toe) x 34'(top)	6.5' x 20'
Dominant Land Use	Commercial & residential	Residential	Commercial & residential	Commercial & residential
Site Elevation	460	720	60	240
Weather	Clear	Partly cloudy	Clear	Clear
Wind Condition	Calm	Slight breeze	Calm	Calm
Air Temp. (°C)	15.5	23.5	17.5	21
Trash (general area)	None	None	High	None
Trash (stream banks)	None	Light	High	High
Water Clarity	Clear	Clear	Clear	Clear
Water Color	Clear	Clear	Clear	Clear
Odors	None	None	None	None
Floatables	None	None	None	None
Foam	None	None	None	None
Stains/ deposits	None	Some sediment	None	Small amount algae/sediments
Structural condition	Concrete channel	Concrete channel	Concrete channel	Concrete channel
Vegetation Condition	None	None	Weeds in concrete seams	None
Biology	Aquatic snails	None	None	Flies, small skimming insects
Algae (suspended)	None	None	None	None
Algae (substrate)	None	Green/70%	None	Green/40%
Dissolved Oxygen (%)	95.2	138.0	100.0	108.2
Dissolved Oxygen (mg/L)	9.82	11.80	9.55	10.14
Conductivity (µS)	1313	1357	1290	631
Specific Conductance (µS)	1667	1412	1517	718
Salinity (ppt)	0.9	0.7	0.8	0.4
Water Temp. (°C)	13.9	22.9	17.4	18.4
Water Temp. (°F)	57.0	73.2	63.3	65.1
pH	8.58	7.87	8.39	8.85
Turbidity (NTU)	3.0	1.9	4.6	4.4
Total Organic Carbon (mg/L)	35	2.3	17	2.9
Total Hardness as CaCO$_3$ (mg/L)	393	755	582	532
Total Calcium (mg/L)	79.4	196	142	127
Total Magnesium (mg/L)	47.3	64.3	55.3	52.4
Dissolved Copper (µg/L)	7.9	7.3	7.6	1.2
Dissolved Lead (µg/L)	<0.083	0.25	1.5	<0.083
Dissolved Zinc (µg/L)	2.6 (DNQ)	6.6 (DNQ)	14	6.1 (DNQ)
Total Coliform (MPN/100 mL)	41,060	2,481	173,290	45,690
E. coli **(MPN/100 mL)**	2,247	173	1,106	148
Flow Status	Flowing	Flowing	Flowing	Flowing
Water Width (ft.)	1.0	4.0	6.0	3.0
Water Depth (ft.)	0.01	0.01	0.05	0.01
Flow Velocity (ft/s)	0.20	1.00	0.30	0.50
Flow Rate (ft^3/s)	<0.01	0.04	0.09	0.02
Comments			Sampled ~500m upstream of station (where flowing)	

Row group labels (left column): Site Description, Weather, Trash, Observations, Water Chemistry (Field), Water Chemistry (Lab), Estimated Flow

Site ID	Simi Valley-1	Thousand Oaks-1	Ventura-1
	MO-SIM	**MO-THO**	**MO-VEN**

		Simi Valley-1 MO-SIM	Thousand Oaks-1 MO-THO	Ventura-1 MO-VEN
	At Major Outfall?	Yes	Yes	Yes
Site Description	**Location**	Bus Canyon Drain	North Fork Arroyo Conejo at Hill Canyon WWTP	Moon Ditch
	Date	09/18/24	09/18/24	09/17/24
	Time	0915	1025	0915
	Conveyence Type	Box culvert	Natural channel	Trapezoidal channel
	Dimensions	7' x 16'	N/A	7.5' x 20'(toe) x 35'(top)
	Dominant Land Use	Commercial & residential	Commercial, residential & rural	Commercial & residential
	Site Elevation	757	284	70
Weather	**Weather**	Clear	Clear	Clear
	Wind Condition	Slight breeze	Calm	Slight breeze
	Air Temp. (°C)	17.5	NR	21
Trash	**Trash (general area)**	Light	None	Light
	Trash (stream banks)	Moderate	None	Light
Observations	**Water Clarity**	Clear	Clear	Clear
	Water Color	Clear	Clear	Clear
	Odors	Other	None	None
	Floatables	None	None	None
	Foam	None	None	None
	Stains/ deposits	Sediments/sand	None	Pink tint seds/algae?
	Structural condition	Concrete channel	Rip-rap with natural bottom	Concrete channel
	Vegetation Condition	None	Riparian sycamores, grasses, willows	Grasses in concrete seams
	Biology	Aquatic snails	2" fish	None
	Algae (suspended)	None	None	None
	Algae (substrate)	Brown/70% Green/20%	Brown/50% Green/5%	Green/<1%
Water Chemistry (Field)	**Dissolved Oxygen (%)**	104.3	99.9	203.7
	Dissolved Oxygen (mg/L)	9.62	9.84	17.70
	Conductivity (µS)	2481	1665	7514
	Specific Conductance (µS)	2807	2012	8095
	Salinity (ppt)	1.5	1.0	4.5
	Water Temp. (°C)	18.9	16.1	21.1
	Water Temp. (°F)	66.0	61.0	70.0
	pH	8.03	8.37	9.09
	Turbidity (NTU)	0.8	0.7	3.2
Water Chemistry (Lab)	**Total Organic Carbon (mg/L)**	2.4	2.5	58
	Total Hardness as CaCO$_3$ (mg/L)	1270	780	3140
	Total Calcium (mg/L)	331	115	401
	Total Magnesium (mg/L)	108	120	518
	Dissolved Copper (µg/L)	0.43 (DNQ)	0.39 (DNQ)	17
	Dissolved Lead (µg/L)	<0.083	<0.083	0.23 (DNQ)
	Dissolved Zinc (µg/L)	<1.7	<1.7	11
	Total Coliform (MPN/100 mL)	32,550	8,664	198,630
	***E. coli* (MPN/100 mL)**	158	97	1,515
Estimated Flow	**Flow Status**	Flowing	Flowing	Flowing
	Water Width (ft.)	6.0	3.0	3.0
	Water Depth (ft.)	0.06	1.25	0.05
	Flow Velocity (ft/s)	1.50	0	0.10
	Flow Rate (ft^3/s)	0.50	0.75	0.02
	Comments	Petroleum odor		

# Appendix K. Formulas for WQO determination

BASIN PLAN and CALIFORNIA TOXICS RULE OBJECTIVES: FORMULAS

AMMONIA (BASIN PLAN)

Basin Plan Ammonia Objective formula selection is based on wet or dry event, COLD/MIGR designation status, early life stages (ELS) status, and salinity.

See the flow charts below to determine which formula to use:

Basin Plan Ammonia Objectives for Wet Weather
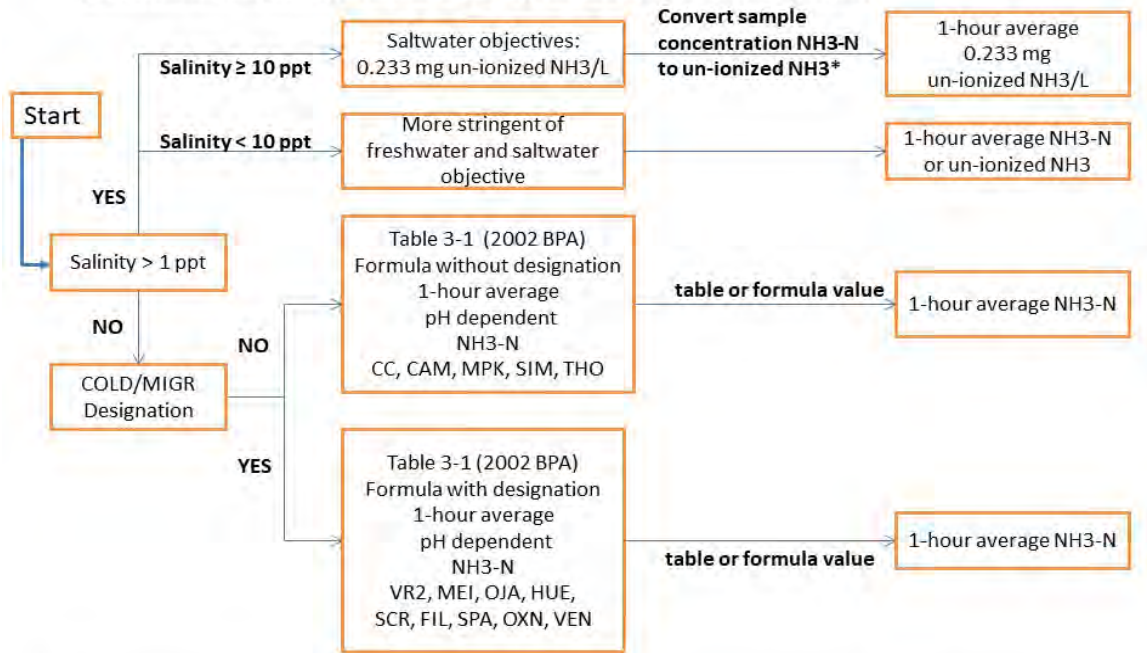
BPA 2005 p15-11 "Implementation actions to achieve applicable ammonia objectives must implement downstream objectives."
*See NH3-N to un-ionized NH3 conversion equation for saltwater objective

Table 3-1: One hour Average Objective for Total Ammonia-N for Freshwaters (mg N/L)

COLD and/or MIGR:

$$= \frac{0.275}{1 + 10^{7.204-pH}} + \frac{39.0}{1 + 10^{pH-7.204}}$$

NOT COLD and/or MIGR:

$$= \frac{0.411}{1 + 10^{7.204-pH}} + \frac{58.4}{1 + 10^{pH-7.204}}$$

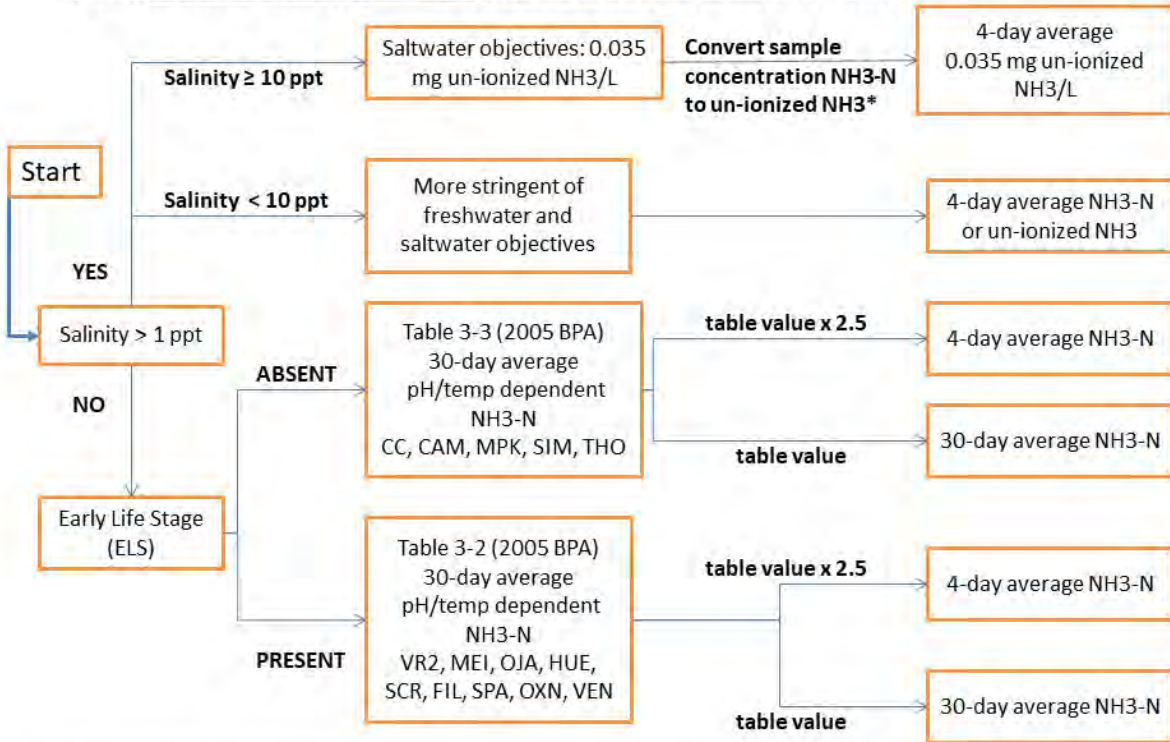## *NH3-N to un-ionized NH3 Conversion Equation for Saltwater Objective

$$= Sample\ Result\ (in\ NH3-N)\ *1/(1 + 10^{\left[\left(9.245+0.116*\frac{19.9273*S}{1000-1.005109*S}\right)+0.0324(298-T)+\frac{(0.0415)P}{T}-pH\right]})$$

Where T= temperature expressed in °K (Note: Kelvin = Celsius + 273)

S = salinity (ppt)

P = pressure (assumed to be 1 atm)

Basin Plan Ammonia Objectives for Dry Weather

Start

Salinity ≥ 10 ppt → Saltwater objectives: 0.035 mg un-ionized NH3/L → Convert sample concentration NH3-N to un-ionized NH3* → 4-day average 0.035 mg un-ionized NH3/L

Salinity < 10 ppt → More stringent of freshwater and saltwater objectives → 4-day average NH3-N or un-ionized NH3

YES

Salinity > 1 ppt

NO

ABSENT → Table 3-3 (2005 BPA) 30-day average pH/temp dependent NH3-N CC, CAM, MPK, SIM, THO → table value x 2.5 → 4-day average NH3-N; table value → 30-day average NH3-N

Early Life Stage (ELS)

PRESENT → Table 3-2 (2005 BPA) 30-day average pH/temp dependent NH3-N VR2, MEI, OJA, HUE, SCR, FIL, SPA, OXN, VEN → table value x 2.5 → 4-day average NH3-N; table value → 30-day average NH3-N

BPA 2005 p15-11 "Implementation actions to achieve applicable ammonia objectives must implement downstream objectives."
*See NH3-N to un-ionized NH3 conversion equation for saltwater objective.   4-day average objective = 2.5 x 30-day average objective

Table 3-2: 30-Day Average Objective for Total Ammonia-N for Freshwaters Applicable to Waters Subject to the "Early Life Stage Present" Condition (mg N/L)

$$= \left(\frac{0.0577}{1 + 10^{7.688-pH}} + \frac{2.487}{1 + 10^{pH-7.688}} \right) * MIN\left(2.85, 1.45 * 10^{0.028*(25-T)}\right)$$

Where T= temperature expressed in °C.
Highest four-day average within the 30-day period shall not exceed 2.5 times the 30-day average objective as calculated above.

Table 3-3: 30-Day Average Objective for Total Ammonia-N for Freshwaters Applicable to Waters Subject to the "Early Life Stage Absent" Condition (mg N/L)

$$= \left(\frac{0.0577}{1 + 10^{7.688-pH}} + \frac{2.487}{1 + 10^{pH-7.688}} \right) * 1.45 * 10^{0.028*(25-MAX(T,7))}$$

Where T= temperature expressed in °C.
Highest four-day average within the 30-day period shall not exceed 2.5 times the 30-day average objective as calculated above.

NH3-N to un-ionized NH3 Conversion Equation for Saltwater Objective

$$= Sample\ Result\ (in\ NH3-N)\ *1/(1+10^{\left[\left(9.245+0.116*\frac{19.9273*S}{1000-1.005109*S}\right)+0.0324(298-T)+\frac{(0.0415)P}{T}-pH\right]})$$

Where T= temperature expressed in °K (Note: Kelvin = Celsius + 273)
S = salinity (ppt)
P = pressure (assumed to be 1 atm)

PENTACHLOROPHENOL (CTR)

$$CMC = \exp(1.005(pH) - 4.869)$$
$$CCC = \exp(1.005(pH) - 5.134)$$

METALS (CTR)
[cadmium, chromium, copper, lead, nickel, silver, zinc]

$$CMC = WER * (Acute\ Conversion\ Factor) * (\exp\{m_A[1n(hardness)] + b_A\})$$
$$CCC = WER * (Chronic\ Conversion\ Factor) * (\exp\{m_C[1n(hardness)] + b_C\})$$

Note1: CCC formula contains error in CTR (says "Acute" not "Chronic" for Conversion Factor).
Note2: see note to Table 2 of Paragraph (b)(2) in the CTR, "The term conversion factor represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column."
Note3: Conversion factors (CF) are provided as values in a table for chromium, copper, nickel, silver, and zinc. CF for cadmium and lead are calculated based on hardness, i.e.

$$Cadmium\ Acute\ CF = 1.136672 - [(\ln\{hardness\})(0.041838)]$$
$$Cadmium\ Chronic\ CF = 1.101672 - [(\ln\{hardness\})(0.041838)]$$
$$Lead\ Acute\ and\ Chronic\ CF = 1.46203 - [(\ln\{hardness\})(0.145712)]$$

Note4: Only two WER in Ventura County and no stations discharge within the applicable reaches - Lower Calleguas Creek (Reach 2 which is Portrero Rd south to Mugu Lagoon) has a WER for copper of 3.69 and Mugu Lagoon copper WER is 1.51.

Appendix L. Quantitative Trends Analysis Summary Tables

Notes for Tables:

Trends analyses were conducted as described in the annual monitoring report. The results are presented here. Constituents that were "X" (dataset did not meet the criteria to perform a trends analysis) and/or "NS" (constituent was not sampled at the monitoring location) for all sites for the weather condition are not presented in the tables below.

Index:

↓   **Green** arrows indicate statistically significant trends of decreasing concentration or increasing concentration for DO (improving water quality)

↑   **Red** arrows indicate statistically significant trends of increasing concentration or decreasing concentration for DO (declining water quality)

◆   **Blue diamonds** indicate statistically significant trends of increasing concentration for a constituent with no water quality objective.

▲   **Purple triangles** indicate statistically significant trends of increasing concentration, but all data were below the lowest applicable water quality objective.

--   indicates no significant trends observed

X   indicates dataset not meeting the criteria to perform a trend analysis

NS   indicates constituent was not sampled at the monitoring location

             indicates trends that have changed this year

Classification	Constituent (1)	ME-CC	MO-CAM	MO-MPK	MO-SIM	MO-THO	ME-SCR	MO-FIL	MO-OXN	MO-SPA	MO-VEN	ME-VR2	MO-OJA	MO-MEI	MO-HUE
		Calleguas					Santa Clara					Ventura			Coastal
Anion	Chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anion	Fluoride	--	--	--	--	--	--	--	--	--	--	↓	--	--	▲
Anion	Perchlorate	X	X	X	X	X	X	--	X	X	X	X	X	X	X
Anion	Sulfate, Total	--	--	--	--	--	↓	--	--	--	--	--	--	--	--
Bacteriological	E. Coli	--	--	--	--	--	↑	--	--	--	--	--	--	--	--
Bacteriological	Enterococcus	--	X	X	X	NS	--	X	X	X	X	--	X	X	X
Bacteriological	Fecal Coliform	--	--	--	--	--	--	◆	--	--	--	--	--	--	--
Bacteriological	Total Coliform	--	--	--	--	--	◆	--	--	--	--	--	--	--	--
Cation	Calcium, Total	--	--	--	--	--	--	--	--	--	↓	--	↓	↓	--
Cation	Magnesium, Total	--	--	--	--	--	--	↓	↓	--	↓	--	↓	↓	--
Cation	Potassium, Total	--	--	--	--	--	--	--	--	--	--	↓	--	--	--
Cation	Sodium, Total	--	--	--	--	--	↓	--	--	--	--	↓	--	--	--
Conventional	Alkalinity as CaCO3	--	--	--	--	--	↓	--	--	--	--	--	↓	↓	--
Conventional	BOD	--	--	--	--	↓	--	--	--	--	--	--	↓	--	--
Conventional	COD	↓	--	↓	--	↓	--	--	--	--	--	--	↓	↓	--
Conventional	Conductivity	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Cyanide, Total	↑	--	--	↑	--	--	--	--	--	--	X	--	--	--
Conventional	Dissolved Inorganic Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Dissolved Organic Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	◆
Conventional	DO	--	--	--	--	--	--	◆	--	--	--	--	--	--	--
Conventional	Hardness as CaCO3, Total	--	--	--	--	--	--	↓	↓	--	↓	--	↓	↓	--
Conventional	MBAS	--	--	--	--	--	--	--	--	--	--	↓	↓	--	--
Conventional	pH	--	↓	--	--	--	--	--	--	--	--	--	↓	--	↓
Conventional	Phenolics	↓	↓	↓	--	↓	↓	↓	↓	--	↓	↓	↓	↓	--
Conventional	Salinity	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Specific Conductance-Field	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Specific Conductance-Lab	--	--	--	--	--	--	--	↓	--	--	--	↓	--	--
Conventional	Temperature	--	--	--	--	↓	↓	--	--	--	--	--	--	--	--
Conventional	Total Chlorine Residual	--	X	X	X	X	X	X	X	X	X	X	X	X	X
Conventional	Total Dissolved Solids	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Total Organic Carbon	--	--	↓	--	↓	--	--	--	--	--	--	--	--	--
Conventional	Total Suspended Solids	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Classification	Constituent (1)	Calleguas					Santa Clara					Ventura			Coastal
		ME-CC	MO-CAM	MO-MPK	MO-SIM	MO-THO	ME-SCR	MO-FIL	MO-OXN	MO-SPA	MO-VEN	ME-VR2	MO-OJA	MO-MEI	MO-HUE
Conventional	Turbidity	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Volatile Suspended Solids	--	--	--	--	--	--	--	--	--	--	◆	--	--	--
Hydrocarbon	Diesel Range Organics	--	↓	--	--	--	◆	--	--	--	--	--	--	--	--
Hydrocarbon	Oil Range Organics	X	↓	--	↓	X	X	↓	↓	↓	--	X	↓	--	X
Metal	Aluminum, Dissolved	--	--	↓	--	--	X	--	--	--	--	--	--	--	--
Metal	Aluminum, Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metal	Antimony, Dissolved	--	--	--	--	↓	X	--	--	--	--	X	X	--	--
Metal	Antimony, Total	--	↓	--	↓	↓	X	--	--	↓	--	X	↓	↓	--
Metal	Arsenic, Dissolved	--	--	↓	--	--	--	↓	--	--	--	↓	--	↓	--
Metal	Arsenic, Total	--	--	--	--	--	--	↓	--	--	--	--	--	↓	--
Metal	Barium, Total	--	--	--	--	--	--	↓	↓	--	--	--	--	--	--
Metal	Beryllium, Total	--	--	--	--	--	--	--	--	--	--	▲	--	--	X
Metal	Cadmium, Dissolved	--	X	X	--	X	X	--	X	--	X	X	X	X	X
Metal	Cadmium, Total	--	--	--	--	--	--	--	--	--	--	--	↓	--	--
Metal	Chromium VI	--	--	--	--	--	↓	--	--	--	--	--	--	--	--
Metal	Chromium, Dissolved	--	--	↓	--	--	X	--	--	--	--	X	--	--	--
Metal	Chromium, Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metal	Copper, Dissolved	↓	--	--	--	↓	--	--	↓	--	--	--	--	--	↓
Metal	Copper, Total	--	--	--	--	↓	--	--	↓	--	--	--	--	↓	--
Metal	Iron, Dissolved	↓	--	↓	--	↓	--	--	--	--	--	--	--	--	--
Metal	Iron, Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metal	Lead, Dissolved	X	--	↓	--	X	X	--	--	↓	--	X	--	↓	X
Metal	Lead, Total	--	--	--	--	--	--	--	--	↓	--	--	--	↓	--
Metal	Mercury, Total	↓	↓	↓	--	--	--	X	↓	↓	↓	X	↓	↓	X
Metal	Nickel, Dissolved	--	--	↓	--	↓	--	--	--	--	--	--	--	--	↓
Metal	Nickel, Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metal	Selenium, Dissolved	↓	X	--	--	--	--	↓	--	--	--	--	X	X	--
Metal	Selenium, Total	↓	--	--	--	↓	--	↓	↓	--	--	--	↓	X	↓
Metal	Silver, Total	X	X	X	X	X	--	X	X	X	X	X	X	X	X
Metal	Thallium, Total	--	X	--	X	X	--	X	X	X	X	X	X	X	X
Metal	Zinc, Dissolved	--	--	--	--	↓	X	--	--	--	--	X	↓	--	--

Classification	Constituent (1)	ME-CC	MO-CAM	MO-MPK	MO-SIM	MO-THO	ME-SCR	MO-FIL	MO-OXN	MO-SPA	MO-VEN	ME-VR2	MO-OJA	MO-MEI	MO-HUE
		Calleguas					Santa Clara					Ventura			Coastal
Metal	Zinc, Total	--	--	--	--	--	--	--	--	--	--	--	↓	↓	--
Nutrient	Ammonia as N	↓	--	↓	--	↓	--	--	--	--	--	--	↓	--	--
Nutrient	Nitrate + Nitrite as N	--	↓	--	--	↓	--	--	↓	↓	↓	--	--	--	--
Nutrient	Nitrate as N	--	X	X	X	X	NS	X	X	X	X	X	X	X	X
Nutrient	Phosphorus as P, Dissolved	--	--	--	--	--	--	--	--	↓	--	--	--	--	--
Nutrient	Phosphorus as P, Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nutrient	TKN	--	--	--	--	↓	--	--	--	--	--	--	--	--	--
Organic	Bis(2-ethylheXyl)phthalate	X	--	X	X	X	X	X	X	--	X	X	X	X	X
Organic	Diethyl phthalate	↓	↓	↓	↓	X	X	X	X	X	X	--	X	X	X
Organic	Dimethyl phthalate	X	X	X	X	↓	X	X	X	X	X	X	X	X	↓
Pesticide	Chlorpyrifos	↓	X	X	X	X	X	X	--	↓	X	X	X	X	X
Pesticide	DCPA (Dacthal)	↓	X	--	X	X	--	X	X	X	X	X	X	X	X
Pesticide	Glyphosate (2)	--	--	--	▲	↓	X	--	▲	▲	--	X	--	↓	X
Pesticide	Malathion	--	↓	--	--	↓	X	↓	--	↓	--	X	X	X	↓
Pesticide	Pentachlorophenol_EPA 625.1	X	X	--	--	X	X	X	X	--	X	X	--	--	X
Pesticide	Pentachlorophenol_EPA 515.4	X	X	--	▲	X	X	X	X	↑	X	X	↑	↑	X
Pesticide	Pentachlorophenol_EPA 8270C	X	X	--	X	X	X	X	X	--	X	X	X	↑	X

(1) Constituents that have more than one method listed in the summary tables are for samples analyzed during the same event by more than one method with different detection limits. For all other constituents, all methods for the constituents were combined for the analysis.

(2) The only available water quality objective for this constituent is a maximum contaminant level (MCL) that only applies to waterbodies with a MUN beneficial use designation. Only MO-OJA and MO-MEI are in reaches with an existing MUN designation, but comparisons to the MUN objective are shown for reference when it is the only available objective.

↓	**Green** arrows indicate statistically significant trends of decreasing concentration or increasing concentration for DO (improving water quality)
↑	**Red** arrows indicate statistically significant trends of increasing concentration or decreasing concentration for DO (declining water quality)
◆	**Blue diamonds** indicate statistically significant trends of increasing concentration for a constituent with no water quality objective.
▲	**Purple triangles** indicate statistically significant trends of increasing concentration, but all data were below the lowest applicable water quality objective.
--	indicates no significant trends observed
X	indicates dataset not meeting the criteria to perform a trend analysis
NS	indicates constituent was not sampled at the monitoring location
	indicates trends that have changed this year

Dry Weather Data - Excluding constituents that were "X" and/or "NS" for all sites

| Classification | Constituent (1) | Calleguas | | | | | Santa Clara | | | | | Ventura | | | Coastal |
		ME-CC	MO-CAM	MO-MPK	MO-SIM	MO-THO	ME-SCR	MO-FIL	MO-OXN	MO-SPA	MO-VEN	ME-VR2	MO-OJA	MO-MEI	MO-HUE
Anion	Chloride	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Anion	Fluoride	↓	--	--	--	--	--	--	--	X	--	↓	--	X	--
Anion	Sulfate, Total	--	--	X	--	--	↓	↓	X	X	X	--	X	NS	--
Bacteriological	E. Coli	↑	--	--	--	--	--	--	--	X	--	--	--	X	--
Bacteriological	Enterococcus	--	X	X	X	X	--	X	X	NS	X	--	X	NS	X
Bacteriological	Fecal Coliform	--	--	X	--	--	--	--	X	X	--	--	--	X	--
Bacteriological	Total Coliform	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Cation	Calcium, Total	--	--	--	--	--	--	↓	◆	X	--	--	--	X	◆
Cation	Magnesium, Total	--	--	--	◆	--	--	--	◆	X	--	--	--	X	--
Cation	Potassium, Total	--	--	X	--	--	--	--	X	X	X	--	X	NS	--
Cation	Sodium, Total	↓	--	X	--	--	--	--	X	X	X	--	X	NS	--
Conventional	Alkalinity as CaCO3	--	--	--	--	--	--	↓	--	X	--	↓	--	X	--
Conventional	BOD	X	--	--	X	X	X	X	X	X	--	X	--	X	--
Conventional	COD	--	--	--	--	--	--	--	X	X	--	--	--	X	--
Conventional	Conductivity	--	--	◆	◆	--	--	--	--	X	--	--	--	X	--
Conventional	Cyanide, Total	X	X	X	X	--	X	X	X	X	X	X	X	X	X
Conventional	Dissolved Inorganic Carbon	--	--	X	--	--	--	--	X	X	X	↓	X	NS	--
Conventional	Dissolved Organic Carbon	--	--	X	--	--	--	--	X	X	X	--	X	NS	--
Conventional	DO	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Conventional	Hardness as CaCO3, Total	--	--	--	◆	--	--	↓	◆	X	--	--	--	X	--
Conventional	MBAS	X	--	↓	X	X	X	--	X	X	--	X	--	X	--
Conventional	pH	--	--	--	--	--	--	↑	--	X	--	--	--	X	--
Conventional	Phenolics	X	--	--	--	--	↓	X	X	X	--	↓	↓	X	--
Conventional	Salinity	--	--	◆	◆	--	--	--	--	X	--	--	--	X	--
Conventional	Specific Conductance-Field	--	--	◆	◆	--	--	--	--	X	--	--	--	X	--
Conventional	Specific Conductance-Lab	--	--	--	--	--	--	↓	◆	X	--	--	--	X	--
Conventional	Temperature	--	↓	--	--	--	--	--	--	X	--	--	--	X	--
Conventional	Total Dissolved Solids	--	--	--	◆	--	--	--	◆	X	--	--	--	X	--
Conventional	Total Organic Carbon	--	--	--	◆	--	--	--	--	X	--	--	--	X	◆
Conventional	Total Suspended Solids	--	--	X	--	X	--	--	--	X	--	--	--	X	--
Conventional	Turbidity	--	--	--	--	--	--	--	--	X	--	--	--	X	--

Dry Weather Data - Excluding constituents that were "X" and/or "NS" for all sites

Classification	Constituent (1)	Calleguas					Santa Clara					Ventura			Coastal
		ME-CC	MO-CAM	MO-MPK	MO-SIM	MO-THO	ME-SCR	MO-FIL	MO-OXN	MO-SPA	MO-VEN	ME-VR2	MO-OJA	MO-MEI	MO-HUE
Conventional	Volatile Suspended Solids	X	--	X	X	X	--	X	--	X	--	X	X	X	--
Hydrocarbon	Diesel Range Organics	--	--	X	X	X	X	X	X	X	--	X	X	X	X
Metal	Aluminum, Dissolved	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Metal	Aluminum, Total	--	--	--	↓	--	--	--	--	X	--	--	--	X	--
Metal	Antimony, Dissolved	X	--	--	X	X	X	X	--	X	--	X	X	X	X
Metal	Antimony, Total	X	--	--	X	X	X	X	--	X	--	X	X	X	X
Metal	Arsenic, Dissolved	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Arsenic, Total	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Barium, Total	--	--	--	--	▲	--	--	X	X	--	--	--	X	--
Metal	Cadmium, Dissolved	--	--	X	--	X	X	--	X	X	↓	X	X	X	X
Metal	Cadmium, Total	↓	--	--	↓	X	X	--	X	X	↓	X	X	X	X
Metal	Chromium VI	--	--	--	--	--	--	--	X	X	X	--	--	X	X
Metal	Chromium, Dissolved	--	--	--	↓	--	X	--	X	X	--	X	--	X	X
Metal	Chromium, Total	--	--	--	↓	--	--	--	--	X	--	X	--	X	--
Metal	Copper, Dissolved	↓	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Copper, Total	↓	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Iron, Dissolved	X	--	X	X	X	X	X	X	X	--	--	X	X	--
Metal	Iron, Total	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Lead, Dissolved	X	X	X	X	X	X	X	--	X	--	X	--	X	X
Metal	Lead, Total	--	--	X	X	X	--	--	--	X	--	X	--	X	--
Metal	Nickel, Dissolved	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Nickel, Total	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Selenium, Dissolved	--	--	X	↓	↓	--	↓	--	X	--	--	--	X	--
Metal	Selenium, Total	--	--	X	↓	--	--	↓	--	X	--	--	--	X	--
Metal	Zinc, Dissolved	↓	--	--	X	--	X	--	--	X	--	X	--	X	X
Metal	Zinc, Total	↓	--	X	X	X	--	--	--	X	--	X	--	X	X
Nutrient	Ammonia as N	--	↓	X	X	--	X	--	X	X	X	X	X	X	--
Nutrient	Nitrate + Nitrite as N	--	--	X	--	--	--	--	X	X	X	--	--	X	--
Nutrient	Nitrate as N	--	NS	NS	NS	NS	X	X	NS	NS	X	X	X	X	X
Nutrient	Phosphorus as P, Dissolved	--	--	--	X	--	--	--	--	X	--	X	--	X	--
Nutrient	Phosphorus as P, Total	--	--	--	--	--	--	--	--	X	--	--	--	X	--

Dry Weather Data - Excluding constituents that were "X" and/or "NS" for all sites

Classification	Constituent (1)	Calleguas ME-CC	MO-CAM	MO-MPK	MO-SIM	MO-THO	Santa Clara ME-SCR	MO-FIL	MO-OXN	MO-SPA	MO-VEN	Ventura ME-VR2	MO-OJA	MO-MEI	Coastal MO-HUE
Nutrient	TKN	--	--	--	X	--	--	--	--	X	--	--	--	X	--
Organic	Diethyl phthalate	--	↓	X	↓	X	X	X	X	X	X	X	X	X	X
Organic	Dimethyl phthalate	X	X	X	X	↓	X	X	X	X	X	X	X	X	↓
Pesticide	2,4-D	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Pesticide	DCPA (Dacthal)	↓	--	--	X	X	--	X	X	X	--	X	X	X	X
Pesticide	Glyphosate (2)	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Pesticide	Malathion	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Pesticide	Prometryn	--	X	X	X	X	X	X	X	X	X	X	X	X	X

(1) Constituents that have more than one method listed in the summary tables are for samples analyzed during the same event by more than one method with different detection limits. For all other constituents, all methods for the constituents were combined for the analysis.

(2) The only available water quality objective for this constituent is a maximum contaminant level (MCL) that only applies to waterbodies with a MUN beneficial use designation. Only MO-OJA and MO-MEI are in reaches with an existing MUN designation, but comparisons to the MUN objective are shown for reference when it is the only available objective.

↓   **Green** arrows indicate statistically significant trends of decreasing concentration or increasing concentration for DO (improving water quality)

↑   **Red** arrows indicate statistically significant trends of increasing concentration or decreasing concentration for DO (declining water quality)

♦   **Blue diamonds** indicate statistically significant trends of increasing concentration for a constituent with no water quality objective.

▲   **Purple triangles** indicate statistically significant trends of increasing concentration, but all data were below the lowest applicable water quality objective.

--   indicates no significant trends observed

X   indicates dataset not meeting the criteria to perform a trend analysis

NS   indicates constituent was not sampled at the monitoring location

[yellow box] indicates trends that have changed this year

Dry Weather Data - Alternate Sites - Excluding constituents that were "X" and/or "NS" for all sites

Watershed		Callegaus			Santa Clara				Ventura			Malibu	Coastal
Classification	**Constituent**	DRY-CAM4	DRY-MPK2	DRY-UNI4	DRY-OXN2	DRY-SPA2	DRY-SPA3	DRY-SPA4	DRY-OJA6	DRY-OJA7	DRY-VEN5	DRY-UNI2	DRY-HUE3
Bacteriological	E. Coli	X	X	--	--	--	X	X	--	X	--	X	↑
Bacteriological	Total Coliform	X	--	--	--	--	X	--	--	X	--	--	--
Cation	Calcium, Total	X	--	--	--	--	X	--	--	X	--	--	--
Cation	Magnesium, Total	X	--	--	--	--	X	--	↓	X	--	--	--
Conventional	Conductivity	X	--	--	↓	--	X	X	↓	X	--	X	--
Conventional	DO	X	X	--	--	X	X	X	--	X	--	X	--
Conventional	Hardness as CaCO3, Total	X	--	--	--	--	X	--	↓	X	--	--	--
Conventional	Salinity	X	--	--	--	X	X	X	--	X	--	X	--
Conventional	Specific Conductance-Field	X	--	--	--	--	X	X	--	X	--	X	--
Conventional	Temperature	X	--	--	--	--	X	--	--	X	--	X	◆
Conventional	Total Organic Carbon	X	--	--	--	--	X	--	↓	X	--	--	--
Conventional	Turbidity	X	--	--	--	--	X	--	--	X	--	X	--
Conventional	pH	X	--	--	--	--	X	--	--	X	--	X	--
Metal	Copper, Dissolved	X	--	--	--	X	X	X	X	X	--	X	X

↓   **Green** arrows indicate statistically significant trends of decreasing concentration or increasing concentration for DO (improving water quality)

↑   **Red** arrows indicate statistically significant trends of increasing concentration or decreasing concentration for DO (declining water quality)

◆   **Blue diamonds** indicate statistically significant trends of increasing concentration for a constituent with no water quality objective.

▲   **Purple triangles** indicate statistically significant trends of increasing concentration, but all data were below the lowest applicable water quality objective.

--   indicates no significant trends observed

X   indicates dataset not meeting the criteria to perform a trend analysis