

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	08/29/23	08/30/23	10/17/23	08/30/23
	Time	15:20	12:50	8:50	7:40
Site Description	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	Weather	Clear	Clear	Clear	Clear
	Wind Condition	Calm	Calm	Slight breeze	Calm
	Air Temp. (°C)	23.9	36.1	16.1	20
Trash	Trash (general area)	Light	None	Moderate	Light
	Trash (stream banks)	Light	None	Light	Light
Observations	Water Clarity	Clear	Clear	Clear	Clear
	Water Color	Gray	Clear	Clear	Clear
	Odors	None	None	None	None
	Floatables	Sheen	Sheen	Garbage	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	Good	Good	Sattered vegetted debris	Good
	Biology	Ducks, seagulls, pets	Plants, small fish, ducks	Little black snails	Plants, trees, algae
	Algae (suspended)	None	None	None	Green
	Algae (substrate)	None	Brown	Green/35%	Green
	Dissolved Oxygen (%)	22.0	143.3	114.3	23.3
	Dissolved Oxygen (mg/L)	1.78	11.40	11.40	2.09
Conductivity (µS)	3300	3688	1789	1039	
Specific Conductance (µS)	3190	3653	2201	1161	
Salinity (ppt)	1.7	0.4	1.1	0.6	
Water Temp. (°C)	26.8	25.5	15.1	19.5	
Water Temp. (°F)	80.2	77.9	59.2	67.1	
pH	7.54	7.99	8.23	7.39	
Turbidity (NTU)	8.9	2.54	4.10	1.68	
Water Chemistry (Lab)	Total Organic Carbon (mg/L)	6.7	6.1	Lab Error*	3.4
	Total Hardness as CaCO ₃ (mg/L)	1,050	1,730	630	470
	Total Calcium (mg/L)	256	309	221	127
	Total Magnesium (mg/L)	100	232	19.0	36.9
	Dissolved Copper (µg/L)	0.37 (DNQ)	1.2	7	2.1
	Dissolved Lead (µg/L)	<0.083	0.089 (DNQ)	<1	0.093 (DNQ)
	Dissolved Zinc (µg/L)	3.3 (DNQ)	2.4 (DNQ)	<10	3.4 (DNQ)
	Total Coliform (MPN/100 mL)	198,630	21,870	>2,419.6	17,329
	<i>E. coli</i> (MPN/100 mL)	57,940	231	2,419.6	74
Estimated Flow	Flow Status	Flowing	Flowing	Flowing	Flowing
	Water Width (ft.)	20.0	2.0	1.3	1.0
	Water Depth (ft.)	0.33	1.30	0.01	0.15
	Flow Velocity (ft/s)	0.05	0.68	3.07	0.51
	Flow Rate (ft ³ /s)	0.33	1.76	0.04	0.08
Comments	Bird feathers floating.				

Note: Camarillo was initially sampled during the August event, however review of the data provided by the consultant sampling team showed that the sample was collected from a receiving water and not the outfall, and the preceding alternate outfall site was not appropriately documented for dry conditions. Camarillo was resampled on 10/17/2023.

* The laboratory did not store the sample at <4 degrees Celsius, so sample was not analyzed due to improper preservation.

	Site ID	Moorpark-1	Ojai-1	Oxnard-2	Santa Paula-3
		MO-MPK	MO-OJA	DRY-OXN2	DRY-SPA3
	At Major Outfall?	Yes	Yes	No	No
	Location	Walnut Canyon	Fox Barranca	Stroube Drain	Peck Rd Drain
	Date	08/29/23	08/30/23	08/29/23	08/30/23
	Time	9:20	10:35	14:30	8:35
Site Description	Conveyence Type	Box culvert	Box culvert	Natural channel	Box culvert
	Dimensions	5' x 12'	6.5' x 12'	N/A	8' x 17'
	Dominant Land Use	Commercial & residential	Residential	Commercial & residential	Residential
	Site Elevation	460	720	70	224
Weather	Weather	Clear	Clear	Clear	Clear
	Wind Condition	Calm	Calm	Calm	Calm
	Air Temp. (°C)	28.9	32.8	27.2	21.7
Trash	Trash (general area)	Light	Not Recorded	Moderate	None
	Trash (stream banks)	Moderate	Not Recorded	Moderate	None
Observations	Water Clarity	Clear	Clear	Clear	Clear
	Water Color	Yellow	Clear	Brown	Clear
	Odors	None	None	None	None
	Floatables	None	None	None	None
	Foam	None	None	None	None
	Stains/ deposits	None	None	None	None
	Structural condition	Concrete channel	Concrete channel	Concrete channel to rip rap	Concrete channel
	Vegetation Condition	None	Good	Good	None
	Biology	Leaves	Leaves, branches, trees, flowers	Plants, trees, small fish	None
	Algae (suspended)	None	None	None	None
Water Chemistry (Field)	Algae (substrate)	None	Green	Brown and green	Brown
	Dissolved Oxygen (%)	67.1	151.2	100.5	116.3
	Dissolved Oxygen (mg/L)	6.04	12.55	9.16	10.45
	Conductivity (µS)	1438	1525	657	1249
	Specific Conductance (µS)	1593	1555	671	1426
	Salinity (ppt)	0.8	0.2	0.3	0.7
	Water Temp. (°C)	19.9	24.0	23.9	18.5
	Water Temp. (°F)	67.8	75.2	75.0	65.3
	pH	8.59	8.4	8.43	8.47
	Turbidity (NTU)	4.14	1.83	7.83	6.91
Water Chemistry (Lab)	Total Organic Carbon (mg/L)	13	2.9	12.0	3.1
	Total Hardness as CaCO ₃ (mg/L)	297	627	239	566
	Total Calcium (mg/L)	79.6	134	70	145
	Total Magnesium (mg/L)	24.0	71.3	15.7	49.3
	Dissolved Copper (µg/L)	5.5	1.5	2.7	2.10
	Dissolved Lead (µg/L)	0.2 (DNQ)	<0.083	<0.083	0.62
	Dissolved Zinc (µg/L)	17.0	1.7 (DNQ)	12.0	7.1 (DNQ)
	Total Coliform (MPN/100 mL)	307,600	41,060	4,611	17,329
<i>E. coli</i> (MPN/100 mL)	4,611	359	31	1,130	
Estimated Flow	Flow Status	Flowing	Flowing	Flowing	Flowing
	Water Width (ft.)	2.0	5.0	8.0	5.5
	Water Depth (ft.)	0.02	0.05	0.30	0.02
	Flow Velocity (ft/s)	0.72	1.08	0.58	0.57
	Flow Rate (ft ³ /s)	0.03	0.27	1.39	0.06
	Comments				

	Site ID	Simi Valley-1	Thousand Oaks-1	Ventura-1
		MO-SIM	MO-THO	MO-VEN
	At Major Outfall?	Yes	Yes	Yes
	Location	Bus Canyon Drain	North Fork Arroyo Concejo at Hill Canyon WWTP	Moon Ditch
	Date	08/29/23	08/29/23	08/30/23
	Time	8:05	10:30	9:25
Site Description	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	283	70
Weather	Weather	Clear	Clear	Clear
	Wind Condition	Calm	Calm	Calm
	Air Temp. (°C)	21.7	30	23.3
Trash	Trash (general area)	None	Light	Moderate
	Trash (stream banks)	Not Recorded	None	Light
Observations	Water Clarity	Not Recorded	Clear	Clear
	Water Color	Not Recorded	Clear	Brown
	Odors	Not Recorded	None	None
	Floatables	Not Recorded	None	None
	Foam	None	None	None
	Stains/ deposits	None	None	Red staining on concrete
	Structural condition	Concrete channel	Rip-rap with natural bottom	Concrete channel
	Vegetation Condition	None	Healthy	Green/Brown
	Biology	1 duck, sycamore leaves	Leaves, trees, grasses	Shrubs, grasses in cracks
	Algae (suspended)	None	None	None
Water Chemistry (Field)	Algae (substrate)	Brown	None	Green/Brown
	Dissolved Oxygen (%)	74.0	59.8	154.4
	Dissolved Oxygen (mg/L)	5.87	5.25	11.70
	Conductivity (µS)	3406	1654	9256
	Specific Conductance (µS)	3765	1766	8965
	Salinity (ppt)	2.0	0.9	5.0
	Water Temp. (°C)	20.0	21.7	26.7
	Water Temp. (°F)	68.0	71.0	80.0
	pH	7.99	8.09	8.95
	Turbidity (NTU)	1.64	7.30	3.41
Water Chemistry (Lab)	Total Organic Carbon (mg/L)	3.1	5.4	60
	Total Hardness as CaCO ₃ (mg/L)	1,400	591	2,720
	Total Calcium (mg/L)	348	101.0	465
	Total Magnesium (mg/L)	128	82.4	379
	Dissolved Copper (µg/L)	0.65	1.2	46
	Dissolved Lead (µg/L)	<0.083	<0.083	38.0
	Dissolved Zinc (µg/L)	<1.7	18	180
	Total Coliform (MPN/100 mL)	54,750	10,462	2,419,600
<i>E. coli</i> (MPN/100 mL)	1,076	495	1,565	
Estimated Flow	Flow Status	Flowing	Flowing	Flowing
	Water Width (ft.)	9.5	2.8	3.5
	Water Depth (ft.)	0.12	0.95	0.03
	Flow Velocity (ft/s)	1.81	1	2.70
	Flow Rate (ft ³ /s)	2.06	2.98	0.28
	Comments			

Appendix K. Formulas for WQO determination

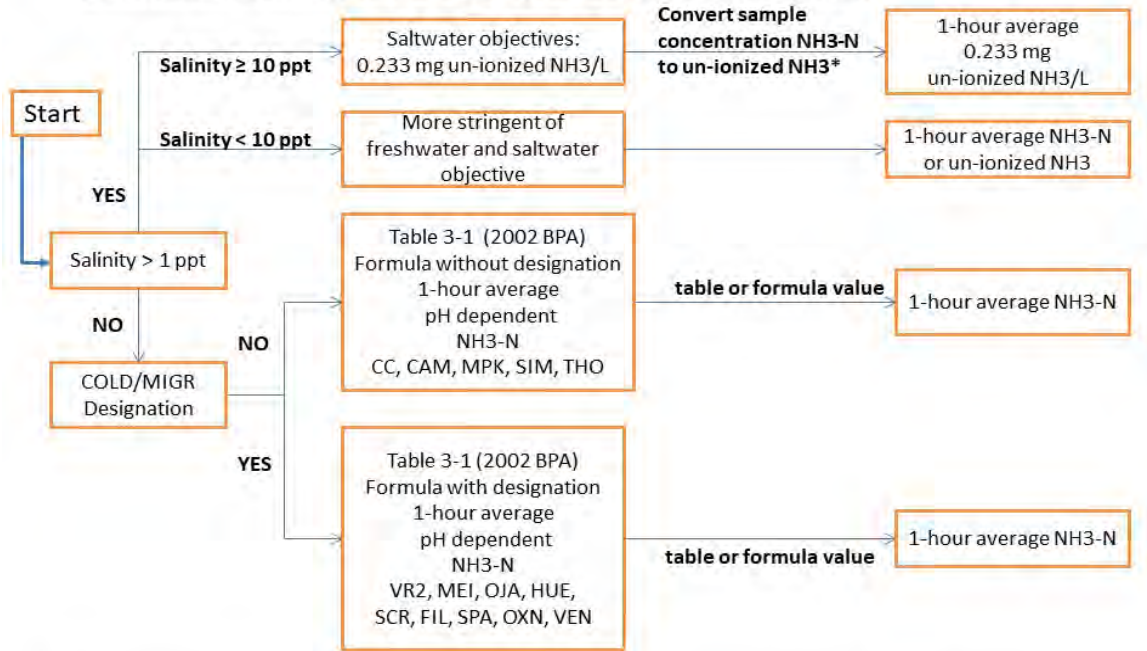
BASIN PLAN and CALIFORNIA TOXICS RULE OBJECTIVES: FORMULAS

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**

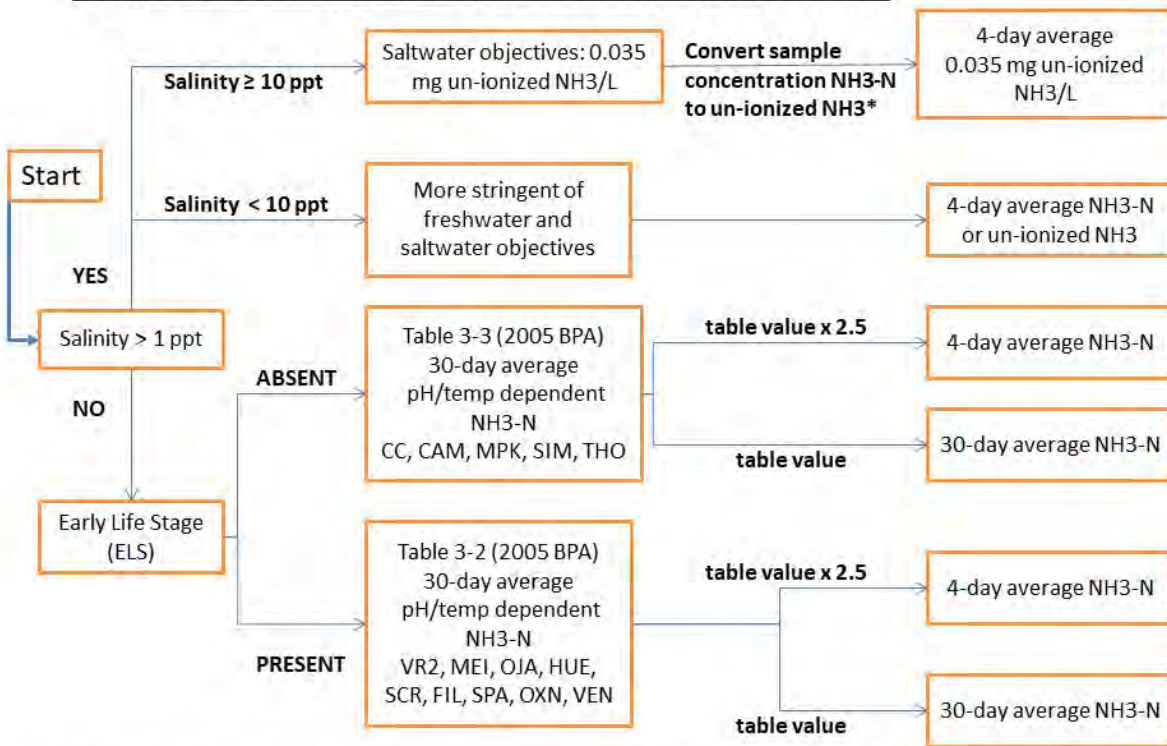
$$= \text{Sample Result (in NH}_3\text{ - N)} * 1 / (1 + 10^{\left[(9.245 + 0.116 * \frac{19.9273 * S}{1000 - 1.005109 * S}) + 0.0324(298 - T) + \frac{(0.0415)P}{T} - pH \right]})$$

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



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)

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

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)

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

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

$$= \text{Sample Result (in NH}_3 - \text{N)} * 1 / (1 + 10^{\left[\left(9.245 + 0.116 * \frac{19.9273 * S}{1000 - 1.005109 * S} \right) + 0.0324(298 - T) + \frac{(0.0415)P}{T} - pH \right]})$$

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]

$$CMC = WER * (\text{Acute Conversion Factor}) * (\exp\{m_A[\ln(\text{hardness})] + b_A\})$$

$$CCC = WER * (\text{Chronic Conversion Factor}) * (\exp\{m_C[\ln(\text{hardness})] + b_C\})$$

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.

$$\text{Cadmium Acute CF} = 1.136672 - [(\ln\{\text{hardness}\}) (0.041838)]$$

$$\text{Cadmium Chronic CF} = 1.101672 - [(\ln\{\text{hardness}\}) (0.041838)]$$

$$\text{Lead Acute and Chronic CF} = 1.46203 - [(\ln\{\text{hardness}\}) (0.145712)]$$





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

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

Watershed			Calleguas					Santa Clara				Ventura			-	
Classification	Constituent	Method (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
Anion	Chloride	EPA 300.0	--	--	--	--	--	--	--	--	--	--	--	↓	--	--
Anion	Fluoride	EPA 300.0	--	--	↓	--	--	↓	--	--	--	--	↓	↓	--	▲
Anion	Perchlorate	EPA 314.0/331	X	X	X	X	X	X	--	X	X	X	X	X	X	X
Anion	Sulfate, Total	EPA 300.0	--	--	--	--	--	↓	--	--	--	--	--	--	--	--
Bacteriological	E. Coli	MMO-MUG	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bacteriological	Enterococcus	Enterolert	--	X	X	X	NS	--	X	X	X	X	--	X	X	X
Bacteriological	Fecal Coliform	SM 9221 E	--	--	--	--	--	--	◆	--	--	--	--	--	--	--
Bacteriological	Total Coliform	MMO-MUG	--	--	--	--	--	◆	--	--	--	--	--	--	--	--
Cation	Calcium, Total	EPA 200.7	--	--	--	--	--	--	--	--	--	↓	--	↓	↓	--
Cation	Magnesium, Total	EPA 200.7	--	--	--	--	--	--	↓	↓	--	↓	--	↓	↓	--
Cation	Potassium, Total	EPA 200.7	--	--	--	--	--	--	--	--	--	--	↓	--	--	--
Cation	Sodium, Total	EPA 200.7	--	--	--	--	--	↓	--	--	--	--	↓	--	--	--
Conventional	Alkalinity as CaCO3	SM 2320 B	--	--	--	--	--	↓	--	--	--	--	--	↓	↓	--
Conventional	BOD	SM 5210 B	--	--	--	--	--	--	--	--	--	--	--	↓	--	--
Conventional	COD	EPA 410.4	↓	--	↓	--	--	--	--	--	--	--	--	↓	--	--
Conventional	Conductivity	Field	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Cyanide, Total	ASTM D7511	↑	↑	--	↑	--	--	--	↑	--	--	X	↑	↑	↑
Conventional	DO	Field	--	--	--	--	--	--	↓	--	--	--	--	--	--	--
Conventional	Dissolved Inorganic Carbon	SM 5310 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Dissolved Organic Carbon	SM 5310 B	--	--	--	--	--	--	--	--	--	--	--	--	--	◆
Conventional	Hardness as CaCO3, Total	EPA 200.7	--	--	--	--	--	--	--	↓	--	↓	--	↓	↓	--
Conventional	MBAS	SM 5540 C	X	--	↓	--	--	X	--	--	--	--	X	↓	--	--
Conventional	Phenolics	EPA 420.4	↓	↓	↓	--	↓	↓	↓	↓	--	↓	↓	↓	↓	--
Conventional	Salinity	Field	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Specific Conductance	Field	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Specific Conductance	SM 2510 B	--	--	--	--	--	--	--	--	--	--	--	↓	--	--
Conventional	Temperature	Field	--	--	--	--	↓	↓	--	--	--	--	--	--	--	--
Conventional	Total Chlorine Residual	SM 4500-Cl G	--	X	X	X	X	X	X	X	X	X	X	X	X	X
Conventional	Total Dissolved Solids	SM 2540 C	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Total Organic Carbon	SM 5310 B	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Total Suspended Solids	SM 2540 D	--	--	--	--	--	--	--	--	--	--	--	◆	--	--
Conventional	Turbidity	EPA 180.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventional	Volatile Suspended Solids	EPA 160.4	--	--	--	--	--	--	--	--	--	--	◆	--	--	--
Conventional	pH	Field	--	↓	--	--	↓	--	--	--	--	--	--	↓	↓	↓
Hydrocarbon	Diesel Range Organics	EPA 8015B	--	↓	--	--	--	◆	--	--	--	--	--	--	--	--
Hydrocarbon	Oil Range Organics	EPA 8015B	X	↓	--	↓	X	X	↓	↓	↓	--	X	↓	--	X
Metal	Aluminum, Dissolved	EPA 200.8	--	--	--	--	--	X	--	--	--	--	--	↑	--	↑
Metal	Aluminum, Total	EPA 200.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metal	Antimony, Dissolved	EPA 200.8	--	--	--	--	↓	X	--	--	--	--	X	X	--	--
Metal	Antimony, Total	EPA 200.8	--	--	--	--	--	X	--	--	--	--	X	↓	--	--
Metal	Arsenic, Dissolved	EPA 200.8	↓	--	↓	--	--	--	↓	--	--	--	--	--	↓	--
Metal	Arsenic, Total	EPA 200.8	--	--	--	--	--	--	--	--	--	--	--	--	--	↓
Metal	Barium, Total	EPA 200.8	--	--	--	--	--	--	--	--	↓	--	--	--	--	--

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

Classification	Watershed	Constituent	Method (1)	Calleguas				Santa Clara				Ventura				
				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
Metal		Beryllium, Total	EPA 200.8	--	--	--	--	--	--	--	--	--	X	--	--	X
Metal		Cadmium, Dissolved	EPA 200.8	--	X	X	--	X	X	--	X	--	X	X	X	X
Metal		Cadmium, Total	EPA 200.8	--	--	--	--	--	--	--	--	↓	--	--	--	--
Metal		Chromium VI	EPA 218.6	--	--	--	--	--	--	▲	--	--	--	--	--	--
Metal		Chromium, Dissolved	EPA 200.8	--	--	↓	--	--	X	--	--	--	▲	X	--	--
Metal		Chromium, Total	EPA 200.8	--	--	--	--	--	--	--	--	--	--	--	--	--
Metal		Copper, Dissolved	EPA 200.8	↓	--	--	--	↓	--	--	--	--	--	↓	--	--
Metal		Copper, Total	EPA 200.8	--	--	--	--	--	--	--	↓	--	--	--	--	--
Metal		Iron, Dissolved	EPA 200.7	--	--	↓	--	--	--	--	--	--	--	--	--	--
Metal		Iron, Total	EPA 200.7	--	--	--	--	--	--	--	--	--	--	--	--	--
Metal		Lead, Dissolved	EPA 200.8	X	--	↓	--	X	X	--	--	↓	--	X	--	X
Metal		Lead, Total	EPA 200.8	--	--	--	--	--	--	--	--	↓	--	--	--	--
Metal		Mercury, Total	EPA 245.1	↓	X	--	--	--	--	X	↓	↓	X	X	X	X
Metal		Nickel, Dissolved	EPA 200.8	--	--	↓	--	--	--	--	--	--	--	--	--	--
Metal		Nickel, Total	EPA 200.8	--	--	--	--	--	--	--	--	--	--	--	--	--
Metal		Selenium, Dissolved	EPA 200.8	↓	X	--	--	↓	--	↓	--	--	--	--	X	X
Metal		Selenium, Total	EPA 200.8	↓	--	--	--	↓	--	↓	↓	--	--	--	↓	X
Metal		Silver, Total	EPA 200.8	X	X	X	X	X	--	X	X	X	X	X	X	X
Metal		Thallium, Total	EPA 200.8	--	X	X	X	X	--	X	X	X	X	X	X	X
Metal		Zinc, Dissolved	EPA 200.8	--	--	--	--	↓	X	--	--	--	--	X	↓	--
Metal		Zinc, Total	EPA 200.8	--	--	--	--	--	--	--	--	--	--	--	--	--
Nutrient		Ammonia as N	EPA 350.1	↓	--	↓	--	↓	--	--	--	--	--	--	--	--
Nutrient		Nitrate + Nitrite as N	EPA 353.2	--	--	--	--	↓	--	--	↓	--	↓	--	--	--
Nutrient		Nitrate as N	EPA 353.2	--	X	X	X	X	NS	X	X	X	X	X	X	X
Nutrient		Phosphorus as P, Dissolved	EPA 200.7	--	--	--	--	--	--	--	--	--	--	--	--	--
Nutrient		Phosphorus as P, Total	EPA 200.7	--	--	--	--	--	--	--	--	--	--	--	--	--
Nutrient		TKN	EPA 351.2	--	--	--	--	↓	--	--	--	--	--	--	--	--
Organic		Bis(2-ethylhexyl)phthalate	EPA 525.2	X	--	X	X	X	X	X	X	--	X	X	X	X
Organic		Diethyl phthalate	EPA 625.1	X	↓	X	↓	X	X	X	X	X	X	--	X	X
Organic		Dimethyl phthalate	EPA 625.1	X	X	X	X	↓	X	X	X	X	X	X	X	↓
Pesticide		Chlorpyrifos	EPA 625.1m	↓	X	X	X	X	X	X	--	↓	X	X	X	X
Pesticide		DCPA (Dacthal)	EPA 515.4	↓	X	--	X	X	--	X	X	X	X	X	X	X
Pesticide		Glyphosate (2)	EPA 547	--	--	--	▲	--	X	--	▲	▲	--	X	--	↓
Pesticide		Malathion	EPA 625.1m	--	--	--	--	↓	X	↓	--	↓	--	X	X	↓
Pesticide		Pentachlorophenol	EPA 515.4	X	X	--	▲	X	X	X	X	↑	X	X	↑	X
Pesticide		Pentachlorophenol	EPA 625.1	X	X	--	X	X	X	X	X	--	X	X	X	X
Pesticide		Pentachlorophenol	EPA 8270C	X	X	--	X	X	X	X	X	--	X	X	X	↑

(1) Laboratory analytical methods for constituents have been updated and some constituents have been measured by more than one analytical method over time. The trend analysis incorporated the laboratory analyses information based on section 9.4.5 of the Ventura Countywide Stormwater Quality Management Program: 2021-2022 Annual Report (2021-2022 Annual Report). Analytical methods in this summary table are consistent with Table 9-2 and Table 9-3 of the 2021-2022 Annual Report.

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

Classification	Watershed	Constituent	Method (1)	Calleguas					Santa Clara				Ventura			-
				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

(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. No waterbodies in this table have 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

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

Watershed			Calleguas					Santa Clara				Ventura				
Classification	Constituent	Method (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
Anion	Chloride	EPA 300.0	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Anion	Fluoride	EPA 300.0	↓	--	--	--	--	--	--	--	X	--	↓	--	X	--
Anion	Sulfate, Total	EPA 300.0	--	--	X	--	--	↓	↓	X	X	X	--	X	NS	--
Bacteriological	E. Coli	MMO-MUG	↑	--	--	--	--	--	--	--	X	--	--	--	X	--
Bacteriological	Enterococcus	Enterolert	--	X	X	X	X	--	X	X	NS	X	--	X	NS	X
Bacteriological	Fecal Coliform	SM 9221 E	--	--	X	--	--	--	--	X	X	--	--	--	X	--
Bacteriological	Total Coliform	MMO-MUG	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Cation	Calcium, Total	EPA 200.7	--	--	--	--	--	--	↓	◆	X	--	--	--	X	◆
Cation	Magnesium, Total	EPA 200.7	--	--	--	◆	--	--	--	◆	X	--	--	--	X	--
Cation	Potassium, Total	EPA 200.7	--	--	X	--	--	--	--	X	X	X	--	X	NS	--
Cation	Sodium, Total	EPA 200.7	↓	--	X	--	--	--	--	X	X	X	--	X	NS	--
Conventional	Alkalinity as CaCO3	SM 2320 B	--	--	--	--	--	--	↓	--	X	--	--	--	X	--
Conventional	BOD	SM 5210 B	X	◆	--	X	X	X	X	X	X	--	X	--	X	--
Conventional	COD	EPA 410.4	--	--	--	--	--	--	--	X	X	--	--	--	X	--
Conventional	Conductivity	Field	--	--	◆	◆	--	--	--	--	X	--	--	--	X	--
Conventional	Cyanide, Total	ASTM D7511	X	--	X	X	--	X	X	X	X	X	X	X	X	X
Conventional	DO	Field	--	--	--	--	--	--	↓	--	X	--	--	--	X	--
Conventional	Discharge	Field	X	--	--	--	--	X	--	X	X	--	X	X	NS	NS
Conventional	Dissolved Inorganic Carbon	SM 5310 B	--	--	X	--	--	--	--	X	X	X	↓	X	NS	--
Conventional	Dissolved Organic Carbon	SM 5310 B	--	--	X	--	--	--	--	X	X	X	--	X	NS	--
Conventional	Hardness as CaCO3, Total	EPA 200.7	--	--	--	--	--	--	--	◆	X	--	--	--	X	--
Conventional	MBAS	SM 5540 C	X	--	↓	X	X	X	X	X	X	--	X	--	X	--
Conventional	Phenolics	EPA 420.4	X	--	--	--	--	↓	X	X	X	--	↓	↓	X	--
Conventional	Salinity	Field	--	--	◆	◆	--	--	--	--	X	--	--	--	X	--
Conventional	Specific Conductance	Field	--	--	◆	◆	--	--	--	--	X	--	--	--	X	--
Conventional	Specific Conductance	SM 2510 B	--	--	--	◆	--	--	--	◆	X	--	--	--	X	--
Conventional	Temperature	Field	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Conventional	Total Dissolved Solids	SM 2540 C	--	--	--	◆	--	--	--	◆	X	--	--	--	X	--
Conventional	Total Organic Carbon	SM 5310 B	--	--	--	◆	◆	--	◆	--	X	--	--	--	X	◆
Conventional	Total Suspended Solids	SM 2540 D	--	--	X	--	X	--	--	--	X	--	--	--	X	--
Conventional	Turbidity	EPA 180.1	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Conventional	Volatile Suspended Solids	EPA 160.4	X	--	X	X	X	--	X	--	X	◆	X	X	X	--
Conventional	pH	Field	--	--	--	--	--	--	↑	--	X	--	--	--	X	--
Hydrocarbon	Diesel Range Organics	EPA 8015B	--	--	X	X	X	X	X	X	X	--	X	X	X	X
Metal	Aluminum, Dissolved	EPA 200.8	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Metal	Aluminum, Total	EPA 200.8	--	--	--	↓	--	--	--	--	X	--	--	--	X	--
Metal	Antimony, Dissolved	EPA 200.8	X	--	--	X	X	X	X	--	X	--	X	X	X	X
Metal	Antimony, Total	EPA 200.8	X	--	--	X	X	X	X	--	X	--	X	X	X	X
Metal	Arsenic, Dissolved	EPA 200.8	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Arsenic, Total	EPA 200.8	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Barium, Total	EPA 200.8	--	--	--	--	--	--	--	X	X	--	--	--	X	--
Metal	Cadmium, Dissolved	EPA 200.8	--	--	X	--	X	X	--	X	X	--	X	X	X	X
Metal	Cadmium, Total	EPA 200.8	--	--	--	↓	X	X	--	X	X	--	X	X	X	X

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

Classification	Constituent	Method (1)	Watershed		Calleguas				Santa Clara				Ventura			
			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
Metal	Chromium VI	EPA 218.6	--	--	--	--	--	--	--	X	X	X	--	--	X	X
Metal	Chromium, Dissolved	EPA 200.8	--	--	--	↓	--	X	--	X	X	--	X	--	X	X
Metal	Chromium, Total	EPA 200.8	--	--	--	↓	--	--	--	--	X	--	X	--	X	--
Metal	Copper, Dissolved	EPA 200.8	↓	--	--	--	--	--	▲	--	X	--	--	--	X	--
Metal	Copper, Total	EPA 200.8	↓	--	--	--	--	--	◆	--	X	--	--	--	X	--
Metal	Iron, Dissolved	EPA 200.7	X	--	X	X	X	X	X	X	X	--	--	X	X	--
Metal	Iron, Total	EPA 200.7	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Lead, Dissolved	EPA 200.8	X	X	X	X	X	X	X	--	X	--	X	X	X	X
Metal	Lead, Total	EPA 200.8	X	--	X	X	X	--	--	--	X	--	X	--	X	--
Metal	Nickel, Dissolved	EPA 200.8	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Nickel, Total	EPA 200.8	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Metal	Selenium, Dissolved	EPA 200.8	--	--	X	--	--	--	↓	--	X	--	--	--	X	X
Metal	Selenium, Total	EPA 200.8	--	--	X	↓	--	--	↓	--	X	--	--	--	X	--
Metal	Zinc, Dissolved	EPA 200.8	↓	--	--	X	--	X	--	--	X	--	X	--	X	X
Metal	Zinc, Total	EPA 200.8	↓	--	X	X	X	--	--	--	X	--	X	--	X	X
Nutrient	Ammonia as N	EPA 350.1	X	--	X	X	--	X	--	X	X	X	X	X	X	--
Nutrient	Nitrate + Nitrite as N	EPA 353.2	--	--	X	--	--	--	--	X	X	X	--	--	X	X
Nutrient	Nitrate as N	EPA 353.2	--	NS	NS	NS	NS	X	X	NS	NS	X	X	X	X	X
Nutrient	Phosphorus as P, Dissolved	EPA 200.7	--	--	--	X	--	--	--	--	X	◆	X	--	X	--
Nutrient	Phosphorus as P, Total	EPA 200.7	--	--	--	--	--	--	--	--	X	--	--	--	X	--
Nutrient	TKN	EPA 351.2	--	--	--	X	--	--	--	--	X	--	--	--	X	--
Organic	Diethyl phthalate	EPA 625.1	X	↓	X	↓	X	X	X	X	X	X	X	X	X	X
Organic	Dimethyl phthalate	EPA 625.1	X	X	X	X	↓	X	X	X	X	X	X	X	X	↓
Pesticide	2,4-D	EPA 515.4	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Pesticide	DCPA (Dacthal)	EPA 515.4	↓	--	--	X	X	--	X	X	X	--	X	X	X	X
Pesticide	Glyphosate (2)	EPA 547	X	▲	X	X	X	X	X	X	X	X	X	X	X	X

(1) Laboratory analytical methods for constituents have been updated and some constituents have been measured by more than one analytical method over time. The trend analysis incorporated the laboratory analyses information based on section 9.4.5 of the Ventura Countywide Stormwater Quality Management Program: 2021-2022 Annual Report (2021-2022 Annual Report). Analytical methods in this summary table are consistent with Table 9-2 and Table 9-3 of the 2021-2022 Annual Report.

(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. No waterbodies in this table have an existing MUN designation, but comparisons to the MUN objective are shown for reference when it is the only available objective.

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- "--" 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

Dry Weather Data - Alternate Sites

Watershed				Calleguas					Santa Clara				Ventura		
Classification	Constituent	Units	Method (1)	DRY-CAM4	DRY-MPK2	DRY-JUN2	DRY-JUN4	DRY-ONX2	DRY-SPA2	DRY-SPA3	DRY-SPA4	DRY-OJA6	DRY-OJA7	DRY-VEN5	DRY-HUE3
Bacteriological	E. Coli	MPN/100 mL	MMO-MUG	X	X	X	--	--	--	X	X	--	X	--	↑
Bacteriological	Total Coliform	MPN/100 mL	MMO-MUG	X	--	--	--	--	--	X	--	--	X	--	--
Cation	Calcium, Total	mg/L	EPA 200.7	X	--	--	--	--	--	X	--	--	X	--	--
Cation	Magnesium, Total	mg/L	EPA 200.7	X	--	--	--	--	--	X	--	↓	X	--	--
Conventional	Conductivity	µmhos/cm	Field	X	--	X	--	↓	--	X	X	↓	X	--	--
Conventional	DO	mg/L	Field	X	X	X	--	--	X	X	X	--	X	--	--
Conventional	Discharge	cfs	Field	X	X	X	--	--	--	X	X	X	X	X	--
Conventional	Hardness as CaCO3, Total	mg/L	EPA 200.7	X	--	--	--	--	--	X	--	↓	X	--	--
Conventional	Salinity	mg/L	Field	X	--	X	--	--	X	X	X	--	X	--	--
Conventional	Specific Conductance	µmhos/cm	Field	X	--	X	--	--	--	X	X	--	X	--	--
Conventional	Temperature	°C	Field	X	--	X	--	--	--	X	--	--	X	--	◆
Conventional	Total Organic Carbon	mg/L	SM 5310 B	X	--	--	--	--	--	X	--	↓	X	--	--
Conventional	Turbidity	NTU	EPA 180.1	X	--	X	--	--	--	X	--	--	X	--	--
Conventional	pH	pH Units	Field	X	--	X	--	--	--	X	--	--	X	--	--
Metal	Copper, Dissolved	µg/L	EPA 200.8	X	--	X	--	--	X	X	X	X	X	--	X
Metal	Copper, Total	µg/L	EPA 200.8	NS	NS	X	NS	NS	X	NS	NS	NS	NS	NS	X
Metal	Lead, Dissolved	µg/L	EPA 200.8	X	X	X	X	X	X	X	X	X	X	X	X
Metal	Lead, Total	µg/L	EPA 200.8	NS	NS	X	NS	NS	X	NS	NS	NS	NS	NS	X
Metal	Zinc, Dissolved	µg/L	EPA 200.8	X	X	X	X	X	X	X	X	X	X	X	X
Metal	Zinc, Total	µg/L	EPA 200.8	NS	NS	X	NS	NS	X	NS	NS	NS	NS	NS	X

(1) Laboratory analytical methods for constituents have been updated and some constituents have been measured by more than one analytical method over time. The trend analysis incorporated the laboratory analyses information based on section 9.4.5 of the Ventura Countywide Stormwater Quality Management Program: 2021-2022 Annual Report (2021-2022 Annual Report). Analytical methods in this summary table are consistent with Table 9-2 and Table 9-3 of the 2021-2022 Annual Report.

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