

# 2018-2019 Permit Year

Ventura Countywide Stormwater Quality Management Program Annual Report

# Attachment D Monitoring Appendices A - E



Camarillo
County of Ventura
Fillmore
Moorpark
Ojai
Oxnard
Port Hueneme
Santa Paula
Simi Valley
Thousand Oaks
Ventura

Ventura County Watershed Protection District

Appendix	x A: Major Outf	all Station Fac	ct Sheets (Up	dated 2019)

# **Camarillo**

Station: MO-CAM (Camarillo-1)

Waterbody: Camarillo Hills Drain (tributary to

Revolon Slough)

Location: Daily Rd. overcrossing (34°13'10.40"N,

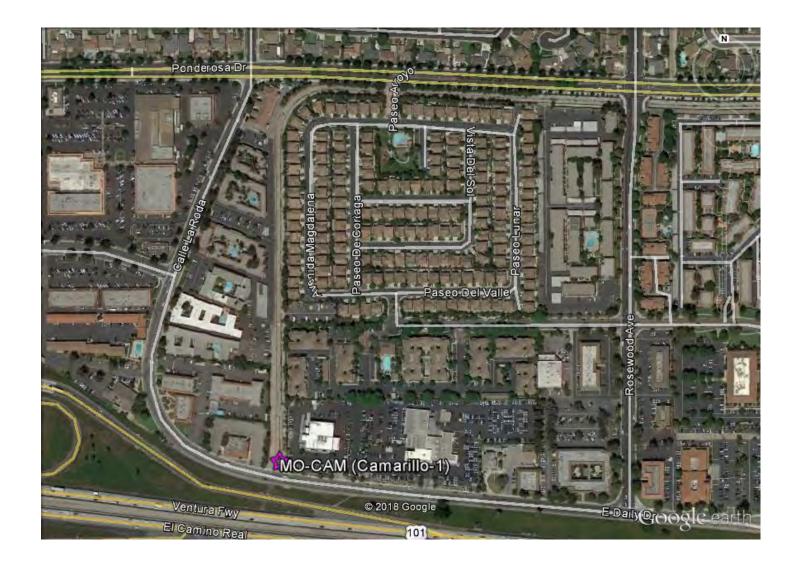
119° 3'58.00"W)

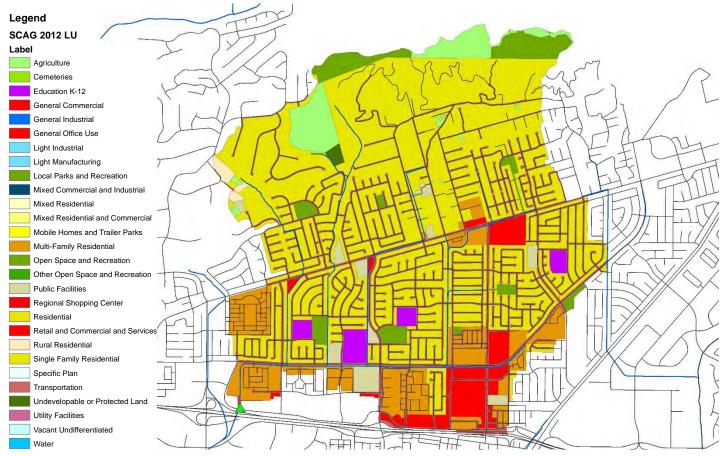
Known Issues: None

Dry Season Flow: Low flow typically present year-

round in dry weather due to urban runoff.







Entire City			
Land Use	Acres	% of Total Watershed	
Agriculture	1358.6	10.7%	
Education K-12	202.0	1.6%	
General Office Use	73.8	0.6%	
Light Industrial	950.1	7.5%	
Local Parks and Recreation	230.4	1.8%	
Mixed Commercial and Industrial	7.2	0.1%	
Mobile Homes and Trailer Parks	137.4	1.1%	
Multi-Family Residential	1521.5	12.0%	
Open Space and Recreation	3.0	0.02%	
Public Facilities	454.7	3.6%	
Retail and Commercial and Services	479.4	3.8%	
Rural Residential	18.9	0.1%	
Single Family Residential	3814.3	30.2%	
Transportation	2581.6	20.4%	
Undevelopable or Protected Land	461.8	3.7%	
Utility Facilities	353.5	2.8%	
Totals	12648.2	100.0%	

Land Use	Acres	% of Total Watershed
Agriculture	109.8	3.9%
Education K-12	47.6	1.7%
General Office Use	9.4	0.3%
Local Parks and Recreation	48.9	1.7%
Multi-Family Residential	272.9	9.6%
Open Space and Recreation	74.5	2.6%
Public Facilities	58.2	2.1%
Retail and Commercial and Services	118.3	4.2%
Rural Residential	12.1	0.4%
Single Family Residential	1598.2	56.5%
Transportation	468.4	16.5%
Undevelopable or Protected Land	6.4	0.2%
Utility Facilities	6.0	0.2%
Totals	2830.7	100.0%

# **Fillmore**

**Station:** MO-FIL (Fillmore-1)

Waterbody: North Fillmore Drain (tributary to

Sespe Creek)

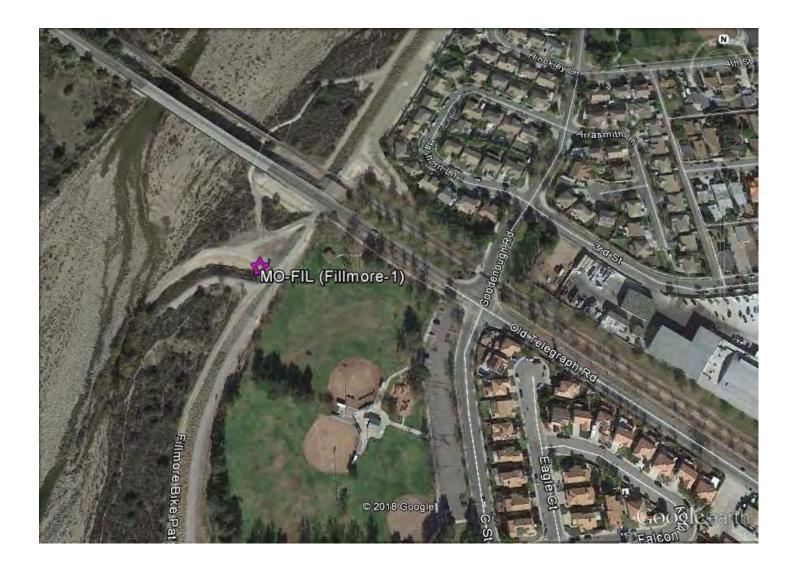
**Location:** 75 yds. southwest of Old Telegraph Rd.

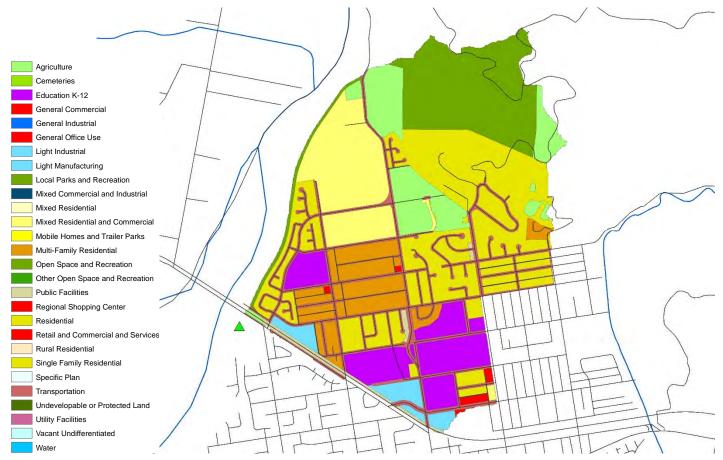
(34°24'16.70"N, 118°55'50.80"W)

**Known Issues:** Sediment build up around intake **Dry Season Flow Potential:** Typically year-round

low flow due to urban runoff







Land Use	Acres	% of Total Watershed
Agriculture	140.9	6.7%
Education K-12	81.9	3.9%
General Commercial	108.2	5.1%
General Industrial	2.1	0.1%
Light Industrial	132.5	6.3%
Local Parks and Recreation	70.7	3.3%
Mixed Residential and Commercial	120.6	5.7%
Multi-Family Residential	175.7	8.3%
Open Space and Recreation	0.2	0.01%
Transportation	311.5	14.8%
Public Facilities	53.6	2.5%
Single Family Residential	528.4	25.0%
Specific Plan	282.7	13.4%
Undevelopable or Protected Land	102.2	4.8%
Totals	2111.1	100.0%

Land Use	Acres	% of Total Watershed
Agriculture	66.6	9.4%
Education K-12	69.7	9.8%
General Commercial	3.8	0.5%
Light Industrial	17.7	2.5%
Mixed Residential and Commercial	84.2	11.9%
Multi-Family Residential	58.9	8.3%
Open Space and Recreation	111.7	15.7%
Public Facilities	8.7	1.2%
Single Family Residential	197.6	27.8%
Transportation	90.6	12.8%
Totals	709.5	100.0%

# **Meiners Oaks (Unincorporated)**

**Station:** MO-MEI (Unincorporated-1)

Waterbody: Happy Valley Drain (tributary to Ventura

River)

**Location:** Southwest of Lomita Rd. and Rice Rd. intersection (34°26'43.94"N, 119°17'25.15"W)

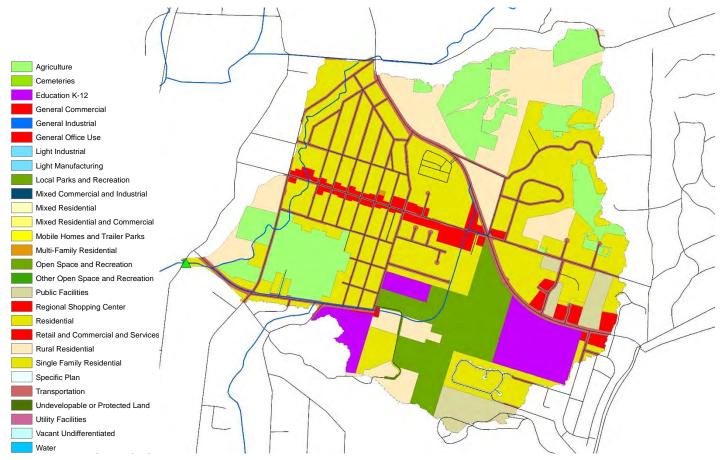
**Known Issues:** Homeless occasionally present under

bridge at site.

**Dry Season Flow Potential:** Dries up quickly after storms. Typically dry during dry weather events.







Land Use	Acres	% of Total Watershed
Agriculture	69.2	2.1%
Education K-12	7.4	0.2%
General Commercial	94.2	2.8%
General Industrial	323.3	9.6%
Heavy Industrial	113.1	3.4%
Multi-Family Residential	35.0	1.0%
Open Space and Recreation	118.2	3.5%
Transportation	498.4	14.9%
Rural Residential	26.8	0.8%
Single Family Residential	2063.7	61.6%
Undevelopable or Protected Land	2.4	0.1%
Totals	3351.6	100.0%

Land Use	Acres	% of Total Watershed
Agriculture	140.3	14.8%
Education K-12	60.0	6.3%
General Commercial	34.6	3.7%
Multi-Family Residential	0.2	0.0%
Open Space and Recreation	80.2	8.5%
Public Facilities	33.0	3.5%
Residential	0.9	0.1%
Rural Residential	139.6	14.8%
Single Family Residential	367.9	38.9%
Transportation	88.4	9.4%
Totals	945.2	100.0%

# **Moorpark**

**Station:** MO-MPK (Moorpark-1)

Waterbody: Walnut Canyon (tributary to Arroyo

Simi)

**Location:** North side of SR 118 near southwest corner of So. Cal. Edison property (34°16'44.14"N,

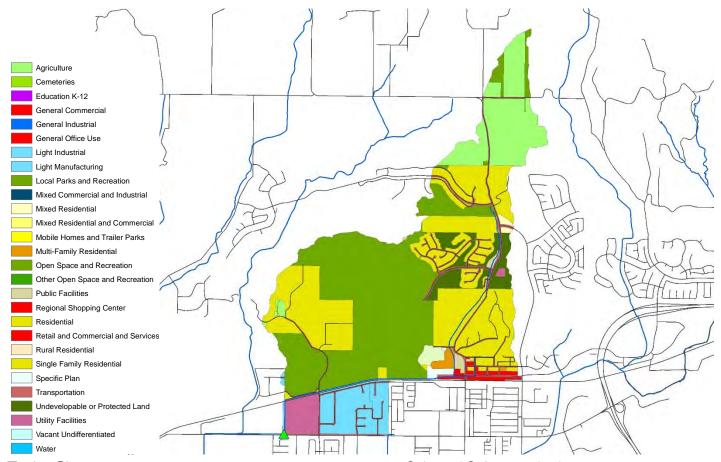
118°54'19.21"W) **Known Issues:** None

Dry Season Flow Potential: Intermittent year-round

flow due to urban runoff







Entire City		0/ 6/15 . 1397 . 1 1
Land Use	Acres	% of Total Watershed
Agriculture	81.1	1.0%
Education K-12	263.1	3.3%
General Commercial	158.1	2.0%
General Office Use	3.6	0.05%
Light Industrial	250.4	3.1%
Light Manufacturing	205.3	2.6%
Local Parks and	128.9	1.6%
Recreation Mixed Residential	396.0	5.0%
Mixed Residential and Commercial	450.1	5.6%
Multi-Family Residential	197.0	2.5%
Open Space and Recreation	1836.6	23.0%
Public Facilities	18.3	0.2%
Retail and Commercial and Services	7.3	0.1%
Single Family Residential	2405.6	30.1%
Specific Plan	10.0	0.1%
Transportation	1125.1	14.1%
Undevelopable or Protected Land	219.4	2.7%
Utility Facilities	47.1	0.6%
Water	178.4	2.2%
Totals	7981.6	100.0%

Land Use	Acres	% of Total Watershed
Agriculture	206.2	11.53%
Education K-12	13.1	0.73%
General Commercial	17.8	0.99%
General Office Use	0.5	0.03%
Light Industrial	27.9	1.56%
Light Manufacturing	82.9	4.63%
Mixed Residential	5.4	0.30%
Multi-Family Residential	11.4	0.64%
Open Space and Recreation	629.6	35.20%
Public Facilities	9.3	0.52%
Single Family Residential	561.7	31.40%
Specific Plan	8.0	0.45%
Transportation	96.4	5.39%
Undevelopable or Protected Land	71.4	3.99%
Utility Facilities	47.1	2.64%
Totals	1788.7	100.0%

### **Ojai**

Station: MO-OJA (Ojai-1)

Waterbody: Fox Canyon Barranca (tributary to San

Antonio Creek)

**Location:** Concrete box channel upstream Ojai Valley Athletic Club and downstream pedestrian walkway

(34°26'41.26"N, 119°14'28.32"W)

**Known Issues:** Repeated discharges directly upstream of station from Ojai Valley Athletic Club swimming

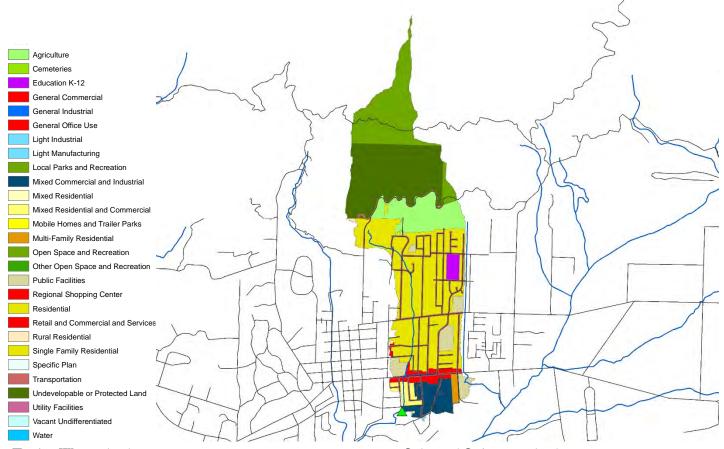
pool.

Dry Season Flow Potential: Frequently dry outside of

wet season storms.







**Entire Watershed** 

Land Use	Acres	% of Total Watershed
Agriculture	100.0	3.6%
Education K-12	48.5	1.7%
General Commercial	98.0	3.5%
Light Manufacturing	18.6	0.7%
Mixed Commercial and Industrial	39.7	1.4%
Mixed Residential and Commercial	64.0	2.3%
Multi-Family Residential	9.8	0.4%
Open Space and Recreation	244.9	8.8%
Public Facilities	530.2	19.0%
Rural Residential	0.1	0.0018%
Single Family Residential	1158.3	41.4%
Transportation	273.9	9.8%
Undevelopable or Protected Land	208.6	7.5%
Totals	2794.8	100.0%

Land Use	Acres	% of Total Watershed
Agriculture	69.4	9.38%
Education K-12	9.2	1.25%
General Commercial	15.9	2.15%
Light Manufacturing	0.3	0.04%
Mixed Commercial and Industrial	32.4	4.38%
Mixed Residential and Commercial	11.2	1.52%
Multi-Family Residential	5.1	0.69%
Open Space and Recreation	115	15.54%
Public Facilities	31.7	4.28%
Rural Residential	0.9	0.12%
Single Family Residential	228.1	30.83%
Transportation	65.2	8.81%
Undevelopable or Protected Land	155.4	21.00%
Totals	739.7	100.00%

# **Oxnard**

Station: MO-OXN (Oxnard-1)

Waterbody: El Rio Drain (tributary to Santa Clara

River)

**Location:** Pedestrian bridge 50 yds. southwest bend of

Winchester Dr. (34°14'10.13"N, 119°11'3.88"W)

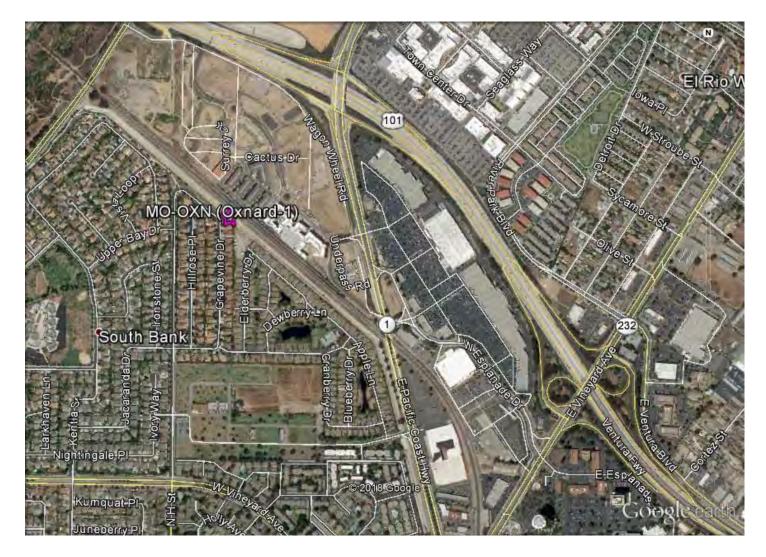
Known Issues: Frequent presence of homeless and

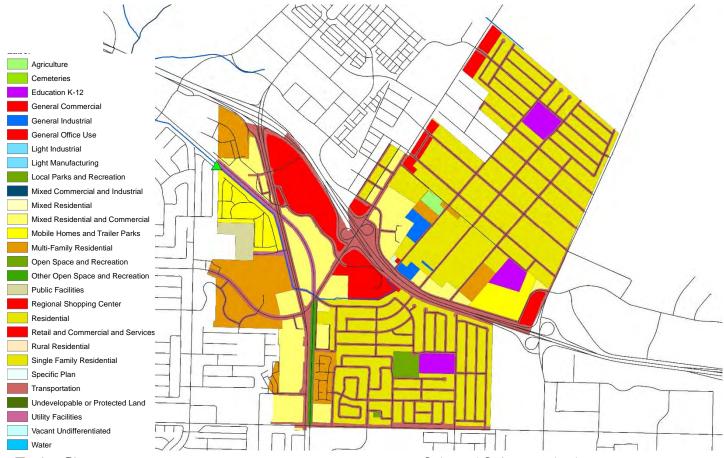
vandals in area.

**Dry Season Flow Potential:** Intermittent year-round flow due to urban runoff but is typically dry in the dry

season.







Elline City		
Land Use	Acres	% of Total Watershed
Agriculture	864.4	5.0%
Education K-12	644.7	3.7%
General Commercial	19.1	0.1%
General Industrial	73.3	0.4%
General Office Use	54.9	0.3%
Heavy Industrial	231.7	1.3%
Light Manufacturing	1555.7	9.0%
Military Installations	0.4	0.0%
Mixed Commercial and Industrial	346.5	2.0%
Mixed Residential and Commercial	814.3	4.7%
Mobile Homes and Trailer Parks	242.7	1.4%
Multi-Family Residential	1446.2	8.3%
Open Space and Recreation	807.3	4.7%
Other Open Space and Recreation	441.7	2.5%
Public Facilities	99.9	0.6%
Regional Shopping Center	339.3	2.0%
Residential	524.3	3.0%
Single Family Residential	3706.4	21.4%
Transportation	3718.5	21.4%
Undevelopable or Protected Land	1000.7	5.8%
Utility Facilities	413.9	2.4%
Totals	17346.1	100.0%

beleeted bubwatershed			
Land Use	Acres	% of Total Watershed	
Agriculture	3.9	0.3%	
Education K-12	28.8	2.3%	
General Commercial	14.7	1.2%	
General Industrial	9.5	0.8%	
General Office Use	23.7	1.9%	
Mixed Residential and	141.3	11.3%	
Commercial	171.5	11.5/0	
Mobile Homes and Trailer	53.1	4.3%	
Parks	33.1	4.370	
Multi-Family Residential	103.7	8.3%	
Open Space and	9.0	0.7%	
Recreation	9.0	0.770	
Other Open Space and	7.2	0.6%	
Recreation	1.2	0.070	
Public Facilities	11.9	1.0%	
Regional Shopping Center	52.8	4.2%	
Single Family Residential	503.9	40.5%	
Transportation	264.7	21.3%	
Utility Facilities	17.4	1.4%	
Totals	1245.6	100.0%	

# **Port Hueneme**

**Station:** MO-HUE (Port Hueneme-1) Waterbody: Hueneme Drain (tributary to

Pacific Ocean)

Location: Pump Station 300 yds. downstream Surfside Dr. (34°8'27.06"N, 119°11'17.72"W)

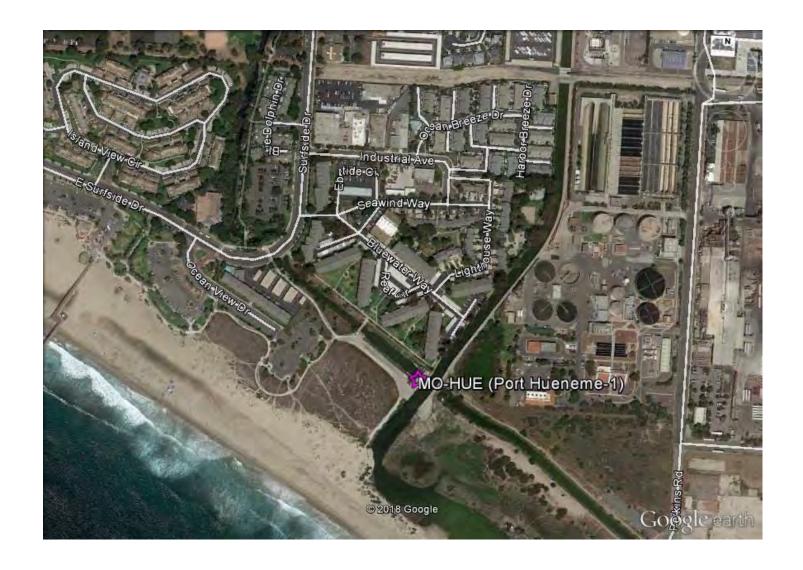
Known Issues: Water tends to back up at pump station when pumps are off. Salinity varies due

to ocean influence.

Dry Season Flow Potential: Year-round flow due to urban runoff and groundwater

contribution







Entire City		
Land Use	Acres	% of Total Watershed
Education K-12	33.4	1.2%
General Commercial	71.6	2.5%
Light Manufacturing	13.4	0.5%
Military Installations	1574.1	54.6%
Mixed Residential and Commercial	11.7	0.4%
Multi-Family Residential	330.1	11.4%
Open Space and Recreation	122.6	4.3%
Other Commercial	1.5	0.1%
Public Facilities	9.5	0.3%
Single Family Residential	317.0	11.0%
Transportation	386.4	13.4%
Undevelopable or		
Protected Land	12.4	0.4%
Utility Facilities	0.3	0.01%
Totals	2884.1	100.0%

Sciected Subwatershed		
Land Use	Acres	% of Total Watershed
Education K-12	27.1	4.5%
General Commercial	9.7	1.6%
General Industrial	1.3	0.2%
Light Manufacturing	8.1	1.3%
Multi-Family Residential	97.1	16.2%
Open Space and		
Recreation	44.6	7.4%
Public Facilities	8.9	1.5%
Single Family Residential	265.3	44.2%
Transportation	132.6	22.1%
Undevelopable or Protected Land	0.0	0.0%
Utility Facilities	0.3	0.1%
Vacant Undifferentiated	5.1	0.8%
Totals	599.9	100.0%

# Santa Paula

**Station:** MO-SPA (Santa Paula-1)

Waterbody: 11th Street Drain (tributary to Santa

Clara River)

**Location:** Upstream Santa Paula Airport

(34°20'54.98"N, 119° 3'20.10"W)

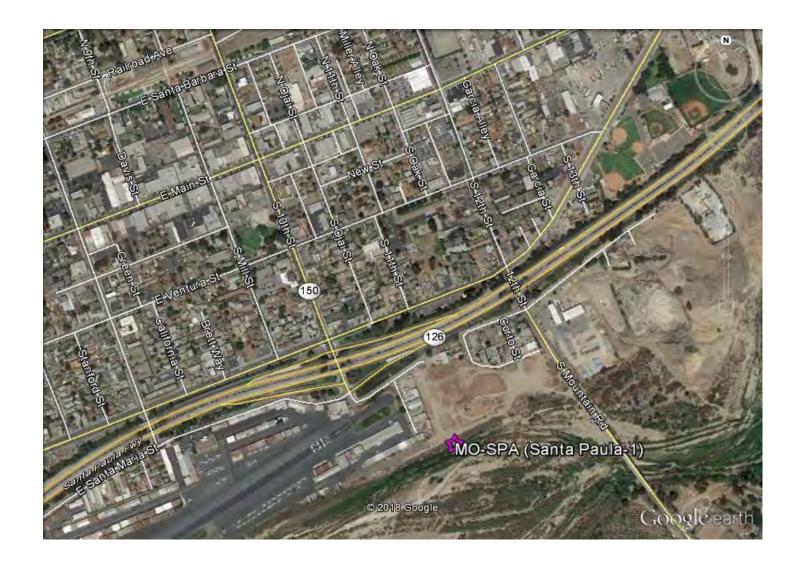
**Known Issues:** Homeless presence and vandalism

frequent in area.

Dry Season Flow Potential: Typically dry between

storms. Very infrequent dry weather flow.







Entire City		
Land Use	Acres	% of Total Watershed
Agriculture	454.6	12.4%
Education K-12	8.3	0.2%
General Office Use	24.2	0.7%
Light Industrial	145.6	4.0%
Light Manufacturing	80.6	2.2%
Local Parks and Recreation	68.8	1.9%
Mixed Commercial and Industrial	200.1	5.5%
Mixed Residential and Commercial	20.3	0.6%
Mobile Homes and Trailer Parks	82.1	2.2%
Multi-Family Residential	330.6	9.0%
Open Space and Recreation	298.4	8.2%
Public Facilities	159.2	4.4%
Retail and Commercial and Services	144.3	4.0%
Single Family Residential	828.0	22.7%
Specific Plan	211.0	5.8%
Transportation	597.3	16.3%
Totals	3653.5	100.0%

Land Use	Acres	% of Total Watershed
Agriculture	8.0	2.2%
Education K-12	8.3	2.2%
General Office Use	0.8	0.2%
Light Industrial	1.5	0.4%
Local Parks and Recreation	11.0	3.0%
Mixed Commercial and Industrial	18.6	5.0%
Mixed Residential and Commercial	0.9	0.2%
Mobile Homes and Trailer Parks	12.8	3.5%
Multi-Family Residential	71.2	19.3%
Open Space and Recreation	0.6	0.2%
Public Facilities	11.3	3.1%
Retail and Commercial and Services	9.7	2.6%
Single Family Residential	141.9	38.4%
Transportation	72.7	19.7%
Totals	369.2	100.0%

# Simi Valley

Station: MO-SIM (Simi Valley-1)

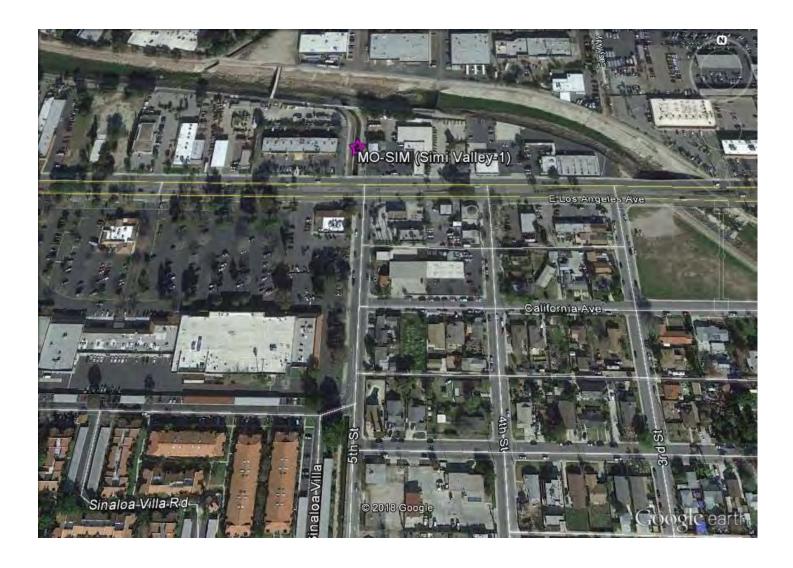
Waterbody: Bus Canyon Drain (tributary to Arroyo

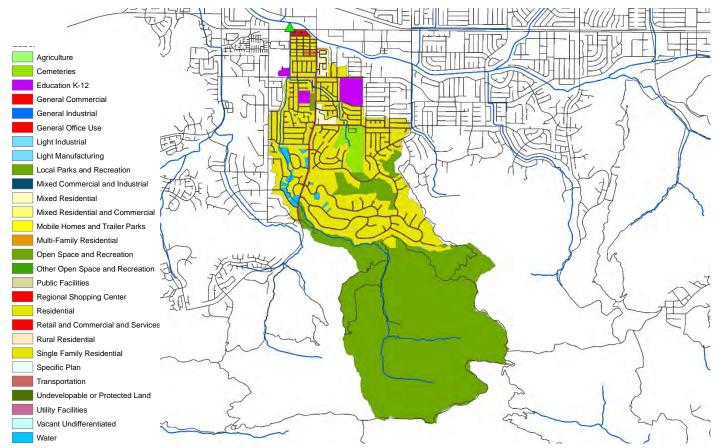
Simi)

**Location:** North of intersection at 5<sup>th</sup> St. and Los Angeles Ave. (34°16'19.55"N, 118°47'1.41"W)

**Known Issues:** Homeless have been known to camp in area. High salinity due to groundwater discharge **Dry Season Flow Potential:** Year-round flow due to urban runoff and/or groundwater discharge upstream







Entire Oity		% of Total
Land Use	Acres	Watershed
Agriculture	134.2	0.5%
Cemeteries	234.0	0.9%
Education College	84.9	0.3%
Education K-12	75.8	0.3%
General Office Use	97.4	0.4%
Golf Courses	856.8	3.2%
Light Industrial	1173.7	4.3%
Local Parks and Recreation	555.2	2.1%
Mixed Residential	987.4	3.6%
Mixed Residential and Commercial	143.6	0.5%
Mobile Homes and Trailer Parks	68.1	0.3%
Multi-Family Residential	550.7	2.0%
Open Space and Recreation	9693.6	35.8%
Other Commercial	39.5	0.1%
Public Facilities	87.9	0.3%
Retail and Commercial and Services	653.6	2.4%
Single Family Residential	7712.5	28.5%
State and National Parks and Recreation	54.5	0.2%
Transportation	3536.0	13.1%
Water	313.2	1.2%
Totals	27052.5	100.0%

Land Use	Acres	% of Total Watershed	
Cemeteries	62.3	2.0%	
Education K-12	59.4	1.9%	
Local Parks and Recreation	5.5	0.2%	
Mixed Residential	32.7	1.0%	
Multi-Family Residential	5.7	0.2%	
Open Space and Recreation	1747.4	55.3%	
Retail and Commercial and Services	5.6	0.2%	
Single Family Residential	967.4	30.6%	
Transportation	239.7	7.6%	
Water	34.6	1.1%	
Totals	3160.2	100.0%	

# **Thousand Oaks**

Station: MO-THO (Thousand Oaks-1)

Waterbody: North Fork Arroyo Conejo (tributary to

Conejo Creek)

Location: Hill Canyon WWTP sampling location R-

1 (34°12'48.03"N, 118°55'17.09"W)

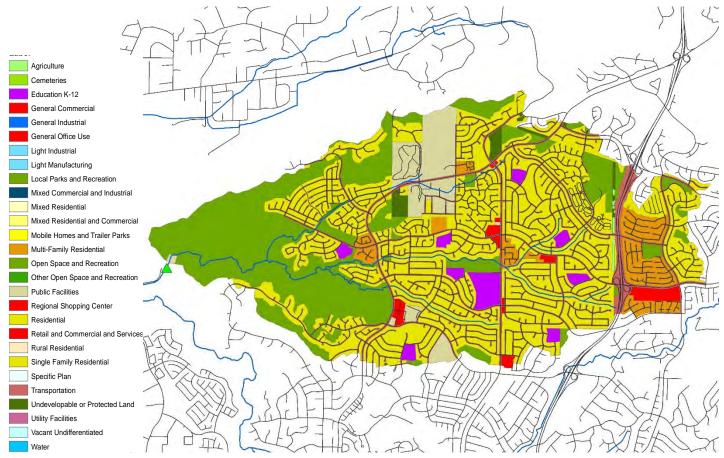
Known Issues: Rare access issues due to locked

gates.

**Dry Season Flow Potential:** Year-round flow due to urban runoff however site does experience backwater effects from WWTP discharge in very dry weather.







Entire City  Land Use	Acres	% of Total Watershed
Agriculture	61.1	0.2%
Education K-12	423.0	1.2%
General Commercial	1049.4	3.0%
General Industrial	945.2	2.7%
Local Parks and Recreation	11.3	0.03%
Mixed Residential and Commercial	254.0	0.7%
Mobile Homes and Trailer Parks	144.2	0.4%
Multi-Family Residential	2068.3	5.8%
Open Space and Recreation	15007.8	42.3%
Other Open Space and Recreation	40.6	0.1%
Public Facilities	518.2	1.5%
Residential	633.8	1.8%
Single Family Residential	9531.2	26.9%
Transportation	4041.7	11.4%
Undevelopable or Protected Land	725.4	2.0%
Water	30.7	0.1%
Totals	35485.7	100.0%

Land Use	Acres	% of Total Watershed
Agriculture	7.9	0.2%
Education K-12	123.6	2.4%
General Commercial	73.7	1.4%
Local Parks and		
Recreation	3.5	0.1%
Multi-Family Residential	221.0	4.3%
Open Space and		
Recreation	1329.0	26.0%
Public Facilities	300.1	5.9%
Residential	8.4	0.2%
Single Family Residential	2175.4	42.6%
Transportation	818.1	16.0%
Undevelopable or		
Protected Land	50.6	1.0%
Totals	5111.4	100.0%

#### **Ventura**

Station: MO-VEN (Ventura-1)

Waterbody: Moon Ditch (tributary to Santa Clara

River)

Location: Between Leland St. and US 101, north of

Johnson Dr. (34°14'36.69"N, 119°11'42.06"W)

Known Issues: Wide concrete bottom spreads out

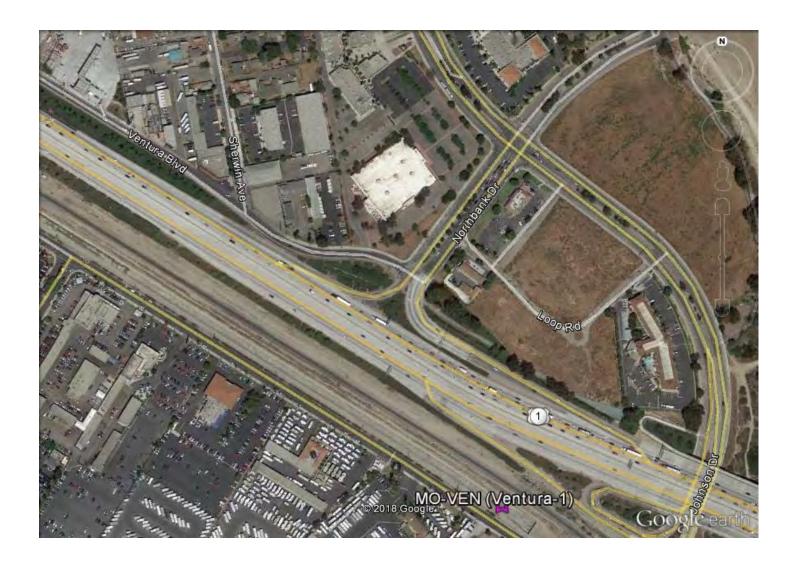
low flows.

Dry Season Flow Potential: Intermittent year-round

flow due to urban runoff and/or groundwater

discharge



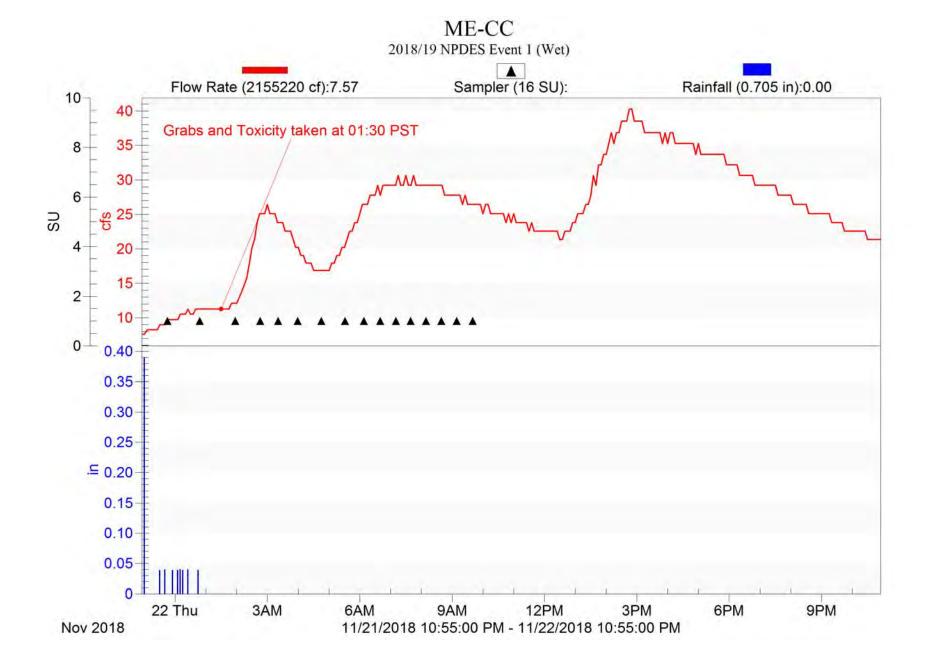


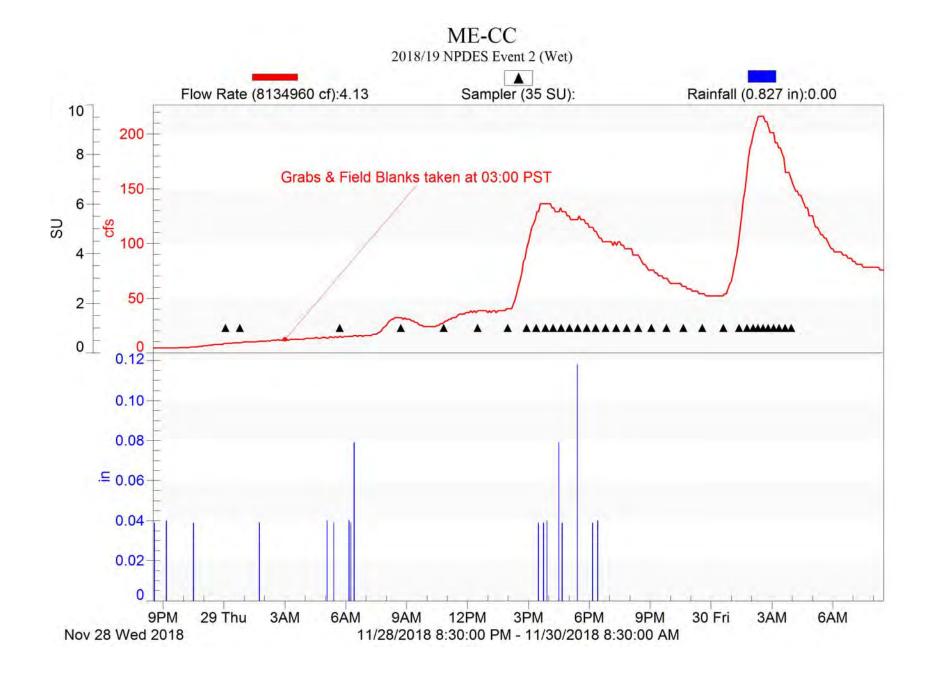


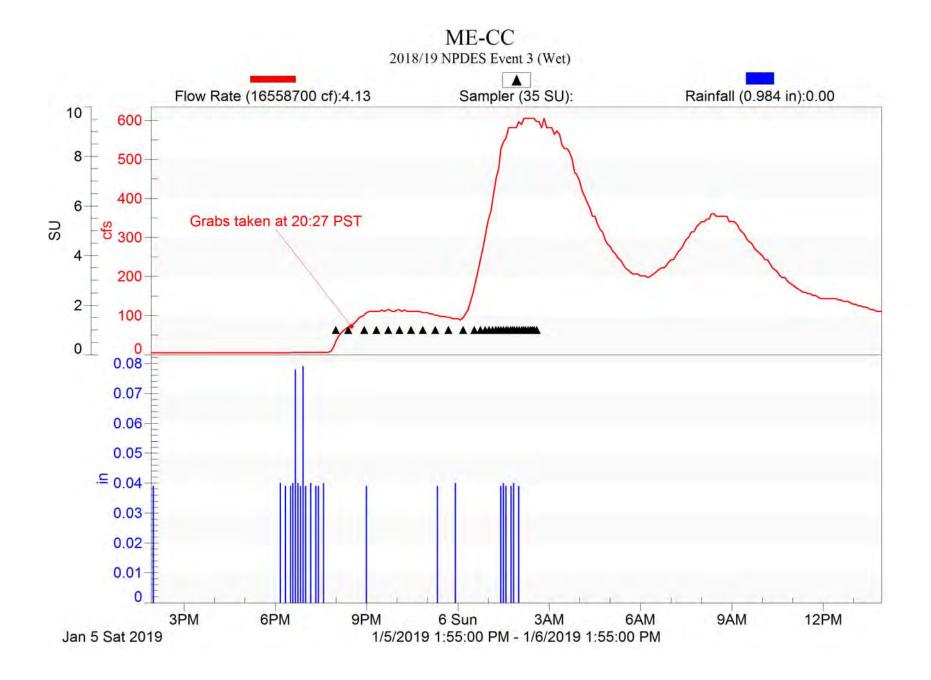
Land Use	Acres	% of Total Watershed
Agriculture	482.9	3.4%
Education K-12	6.8	0.05%
General Industrial	937.7	6.6%
Mixed Residential and Commercial	1447.0	10.2%
Multi-Family Residential	994.7	7.0%
Open Space and Recreation	1432.5	10.1%
Public Facilities/Schools	561.1	3.9%
Rural Residential	0.4	0.0%
Single Family Residential	4806.2	33.8%
Specific Plan	548.9	3.9%
Transportation	2989.6	21.0%
Totals	14207.8	100.0%

Land Use	Acres	% of Total Watershed
Agriculture	6.3	0.8%
Education K-12	6.8	0.9%
General Industrial	94.4	12.5%
Mixed Residential and Commercial	158.2	20.9%
Multi-Family Residential	161.0	21.3%
Open Space and Recreation	1.8	0.2%
Single Family Residential	123.7	16.4%
Transportation	203.1	26.9%
Totals	755.3	100.0%

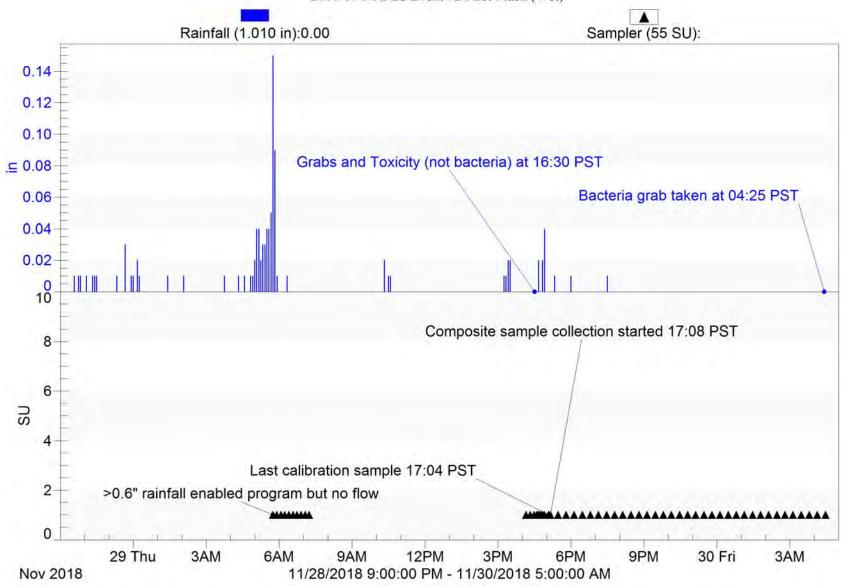
Appendix B. Event Hydrographs



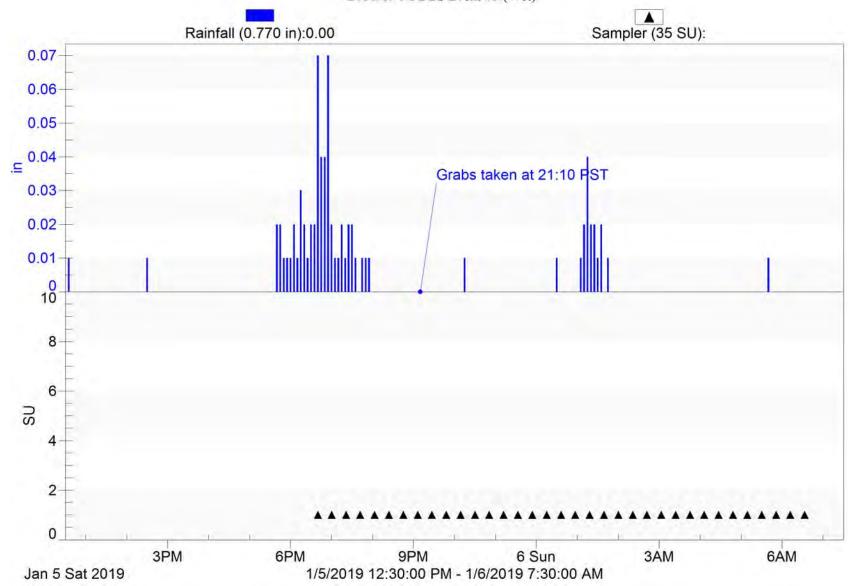




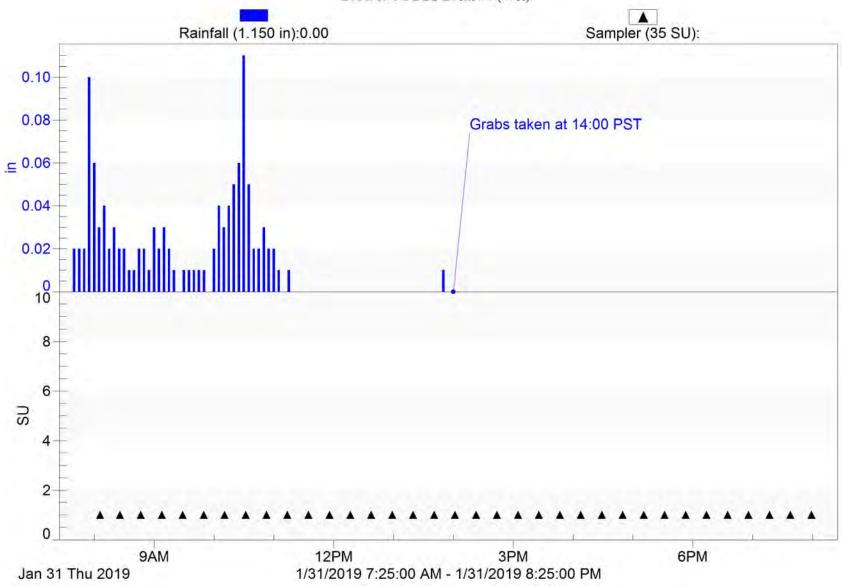
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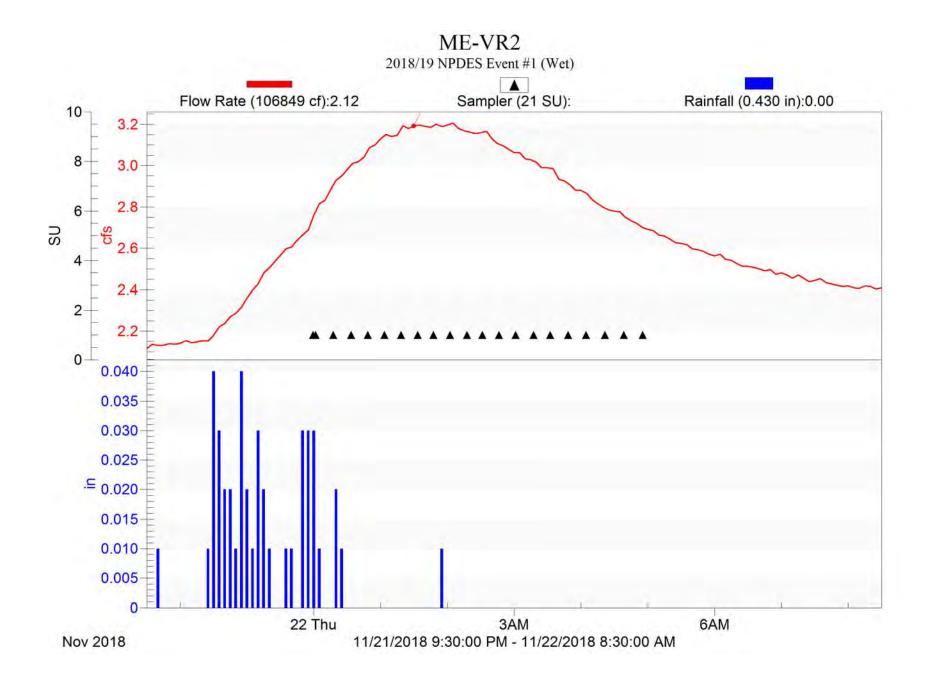


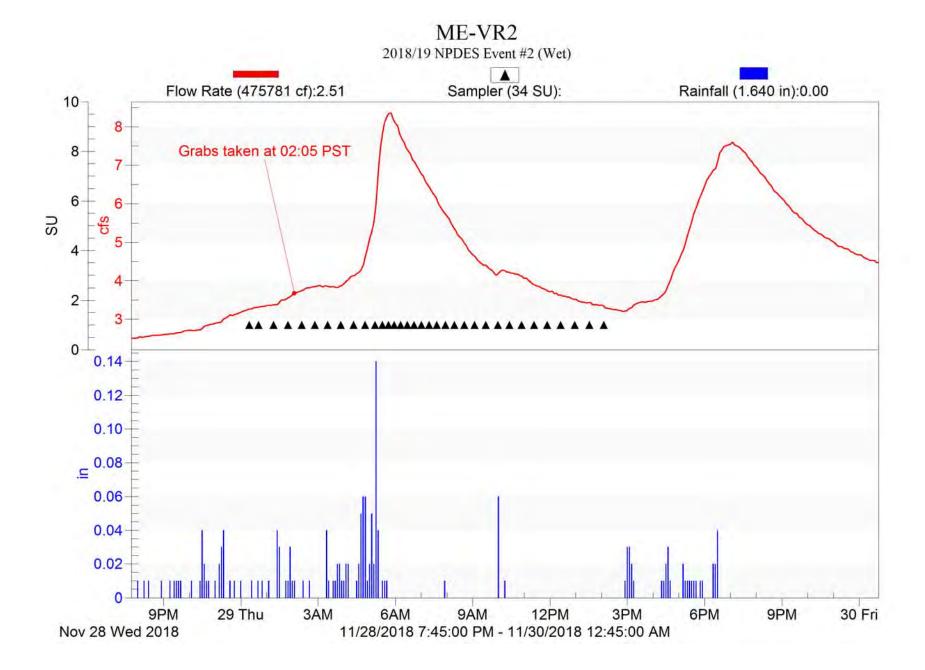
ME-SCR 2018/19 NPDES Event #3 (Wet)



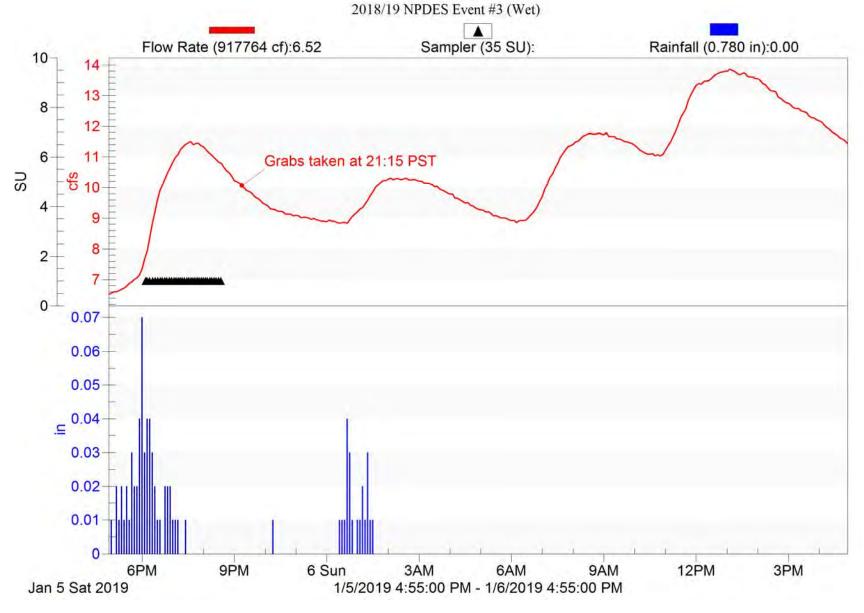
ME-SCR 2018/19 NPDES Event #4 (Wet)

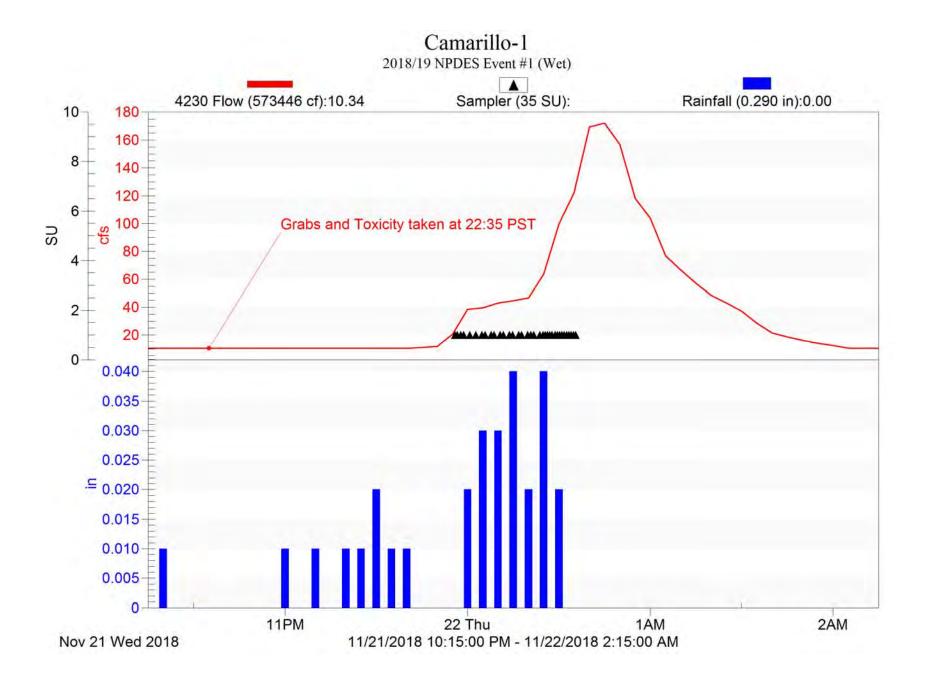


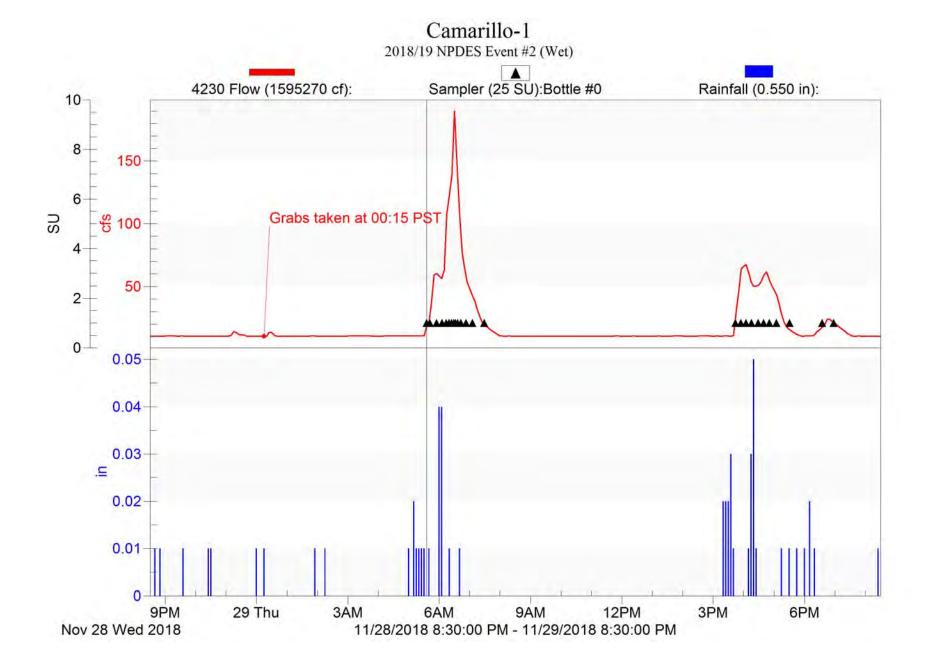


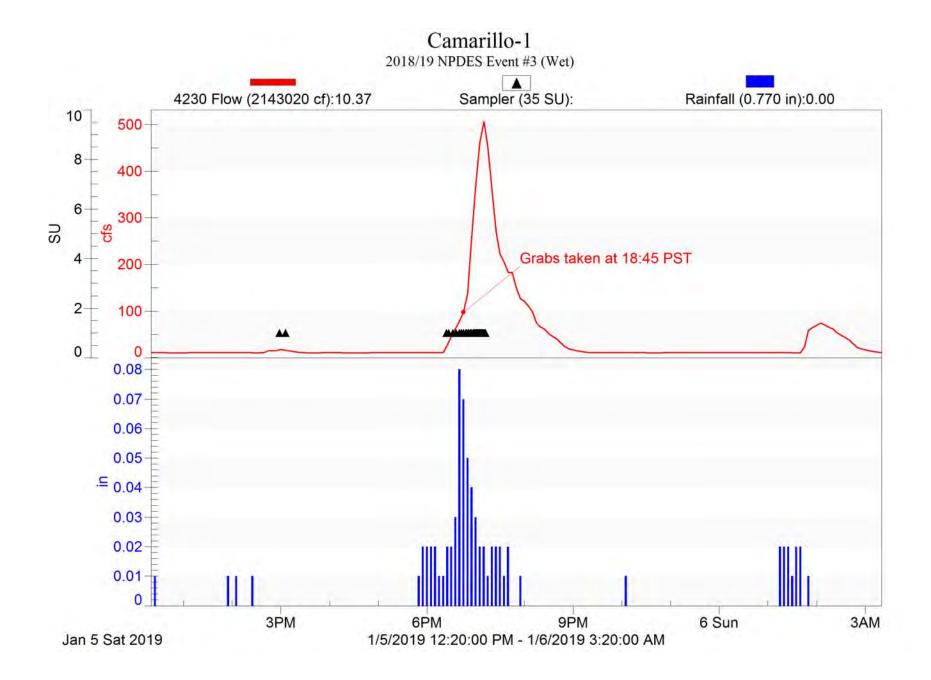


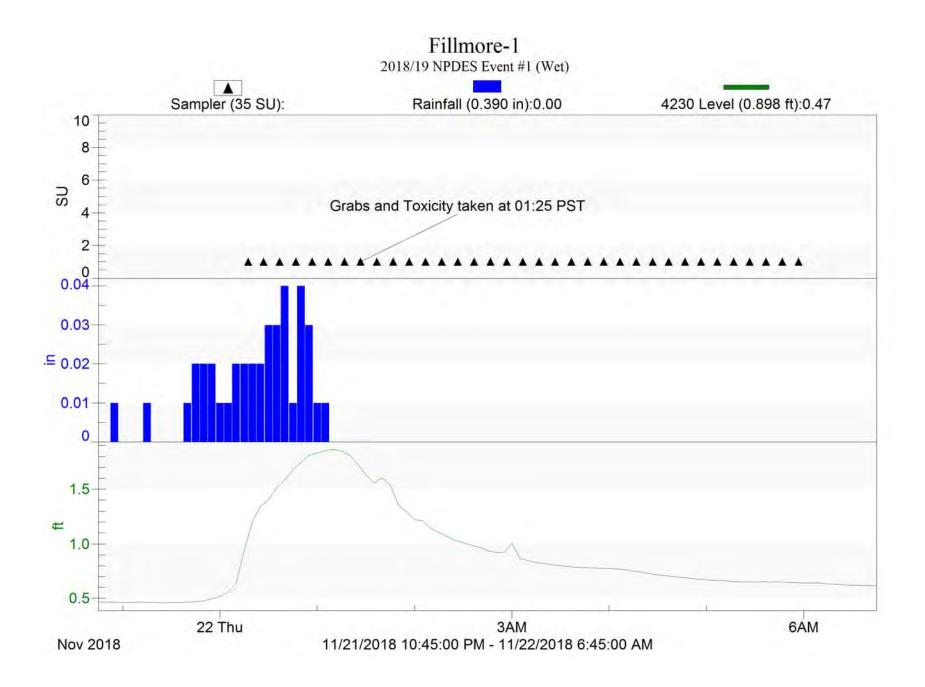
ME-VR2

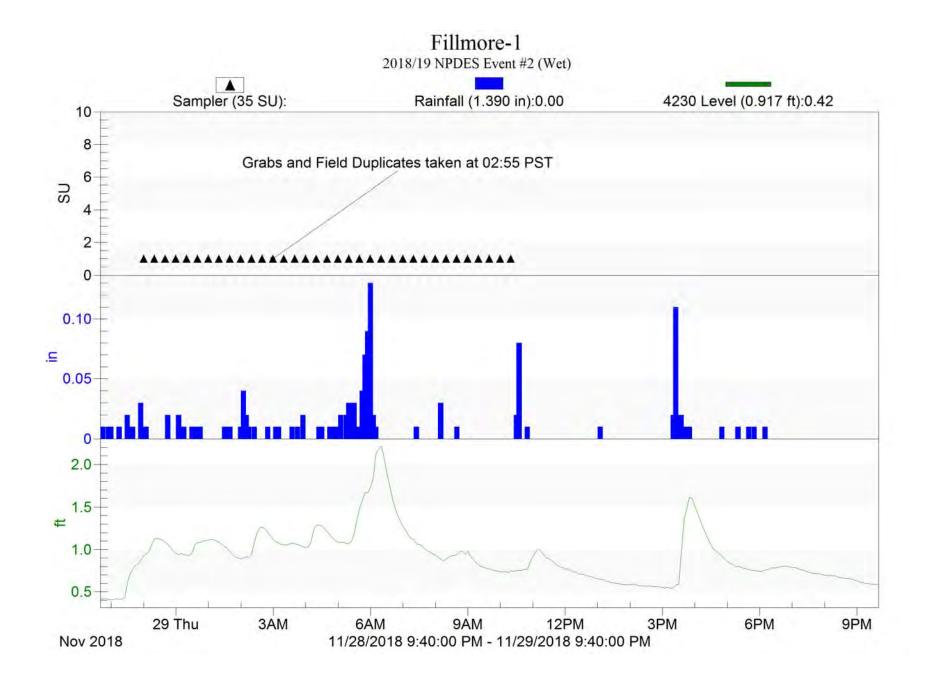


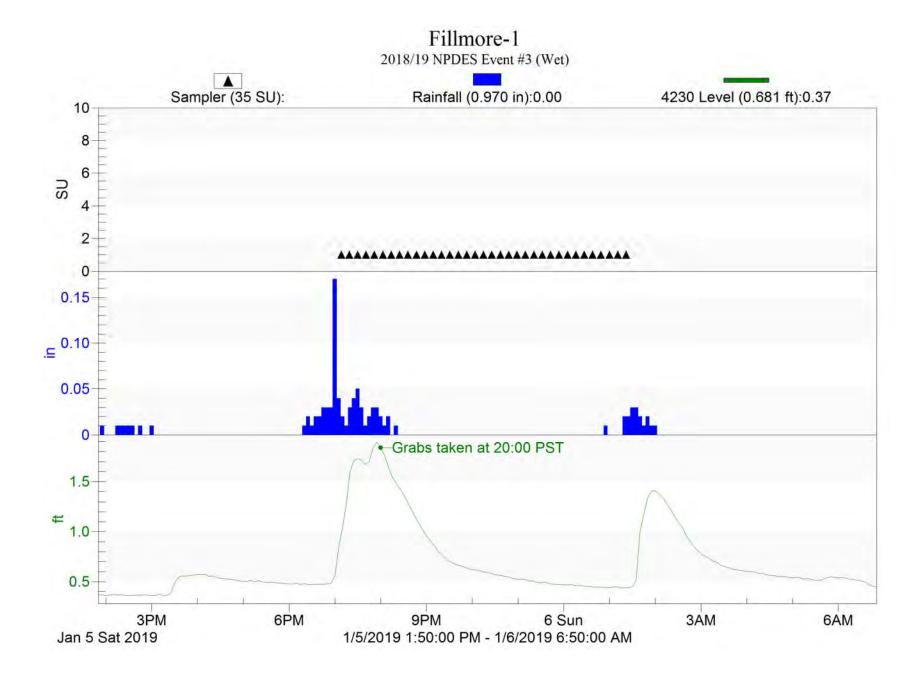


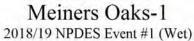


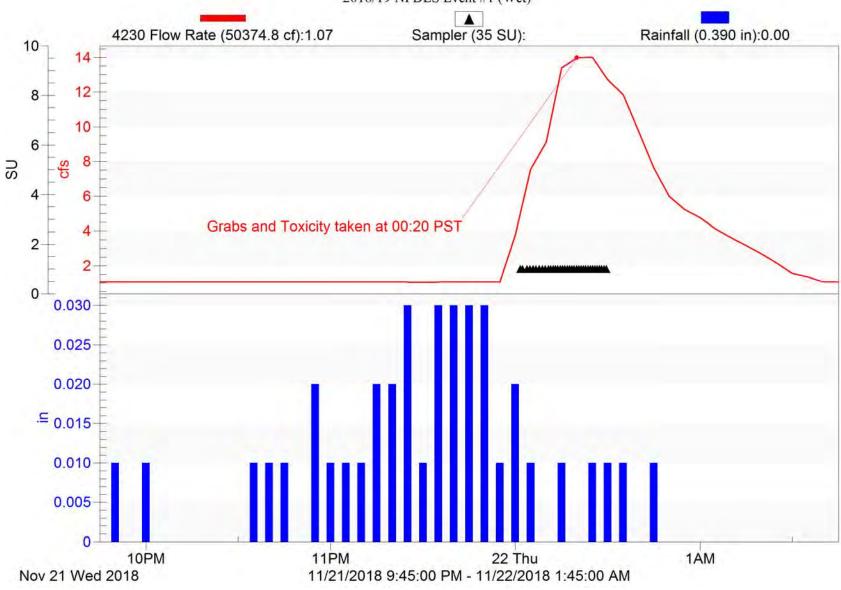


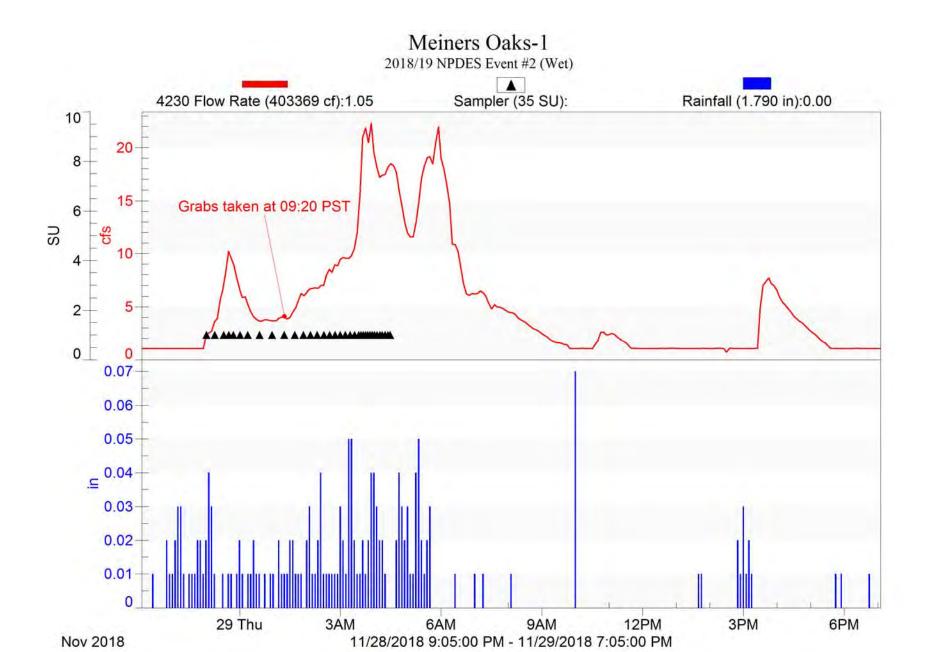


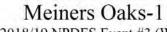


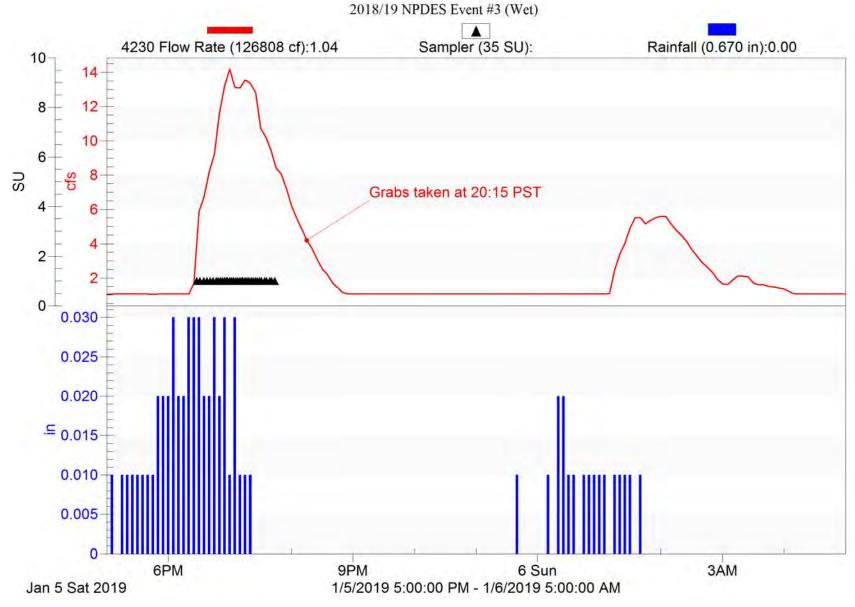


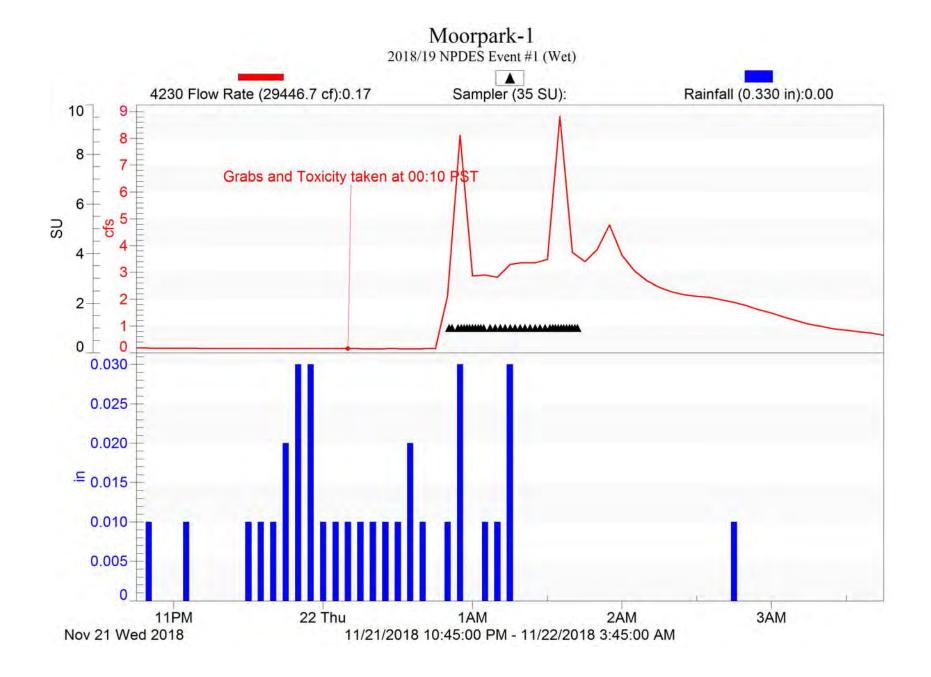


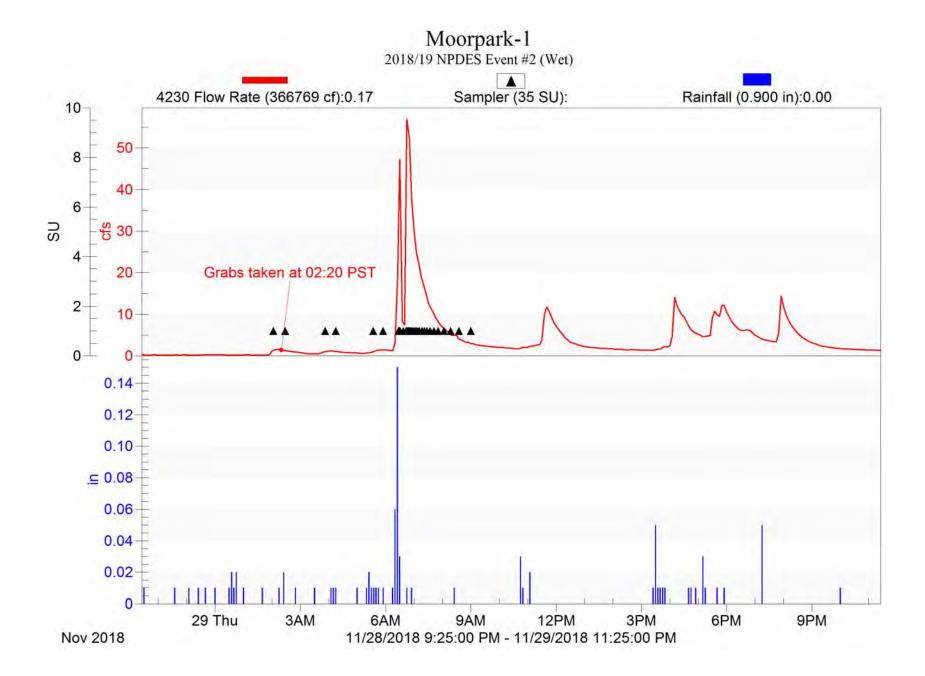


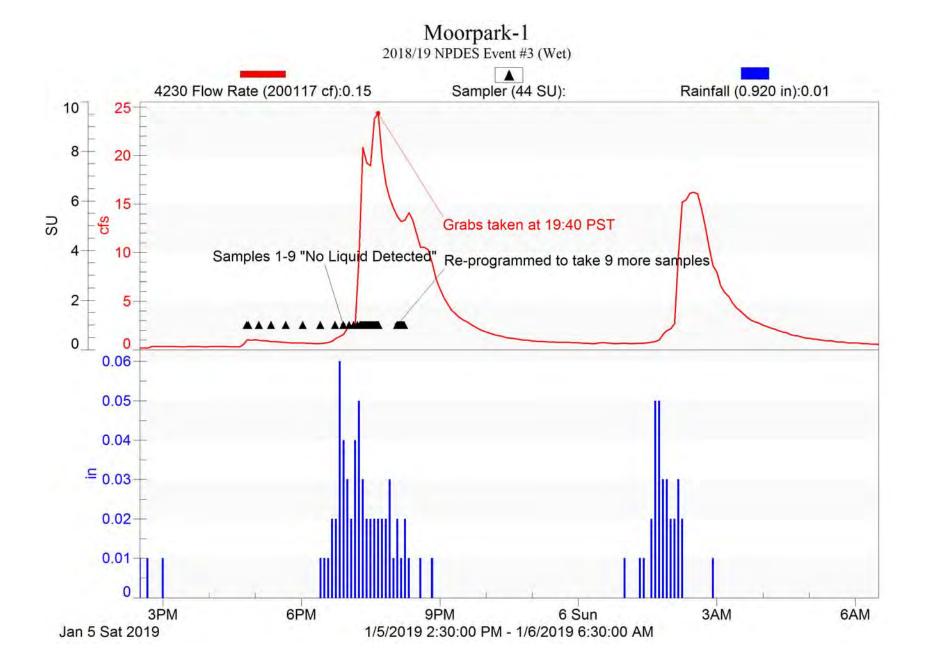






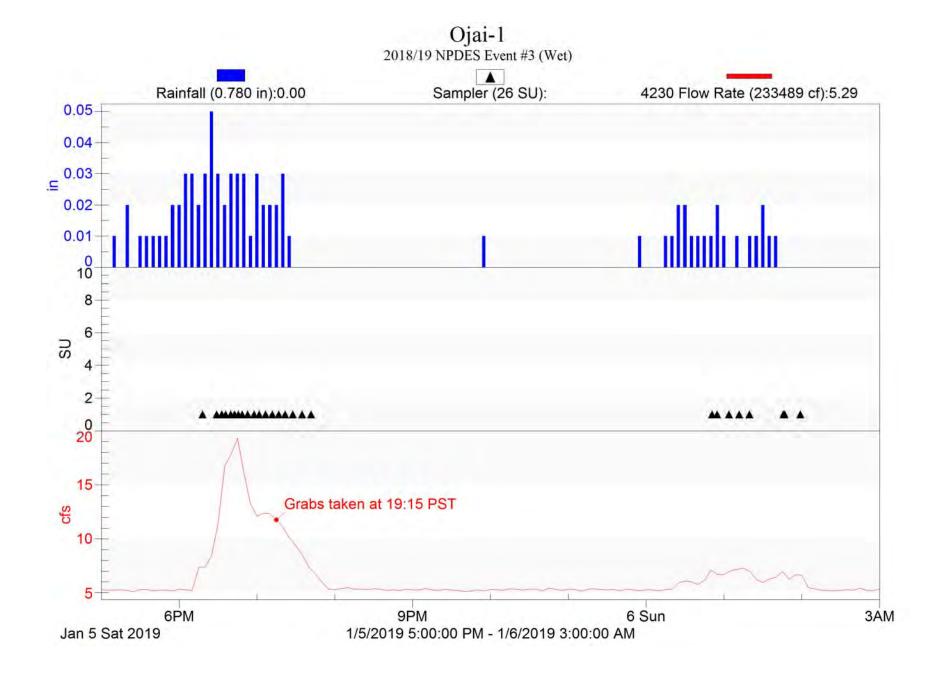




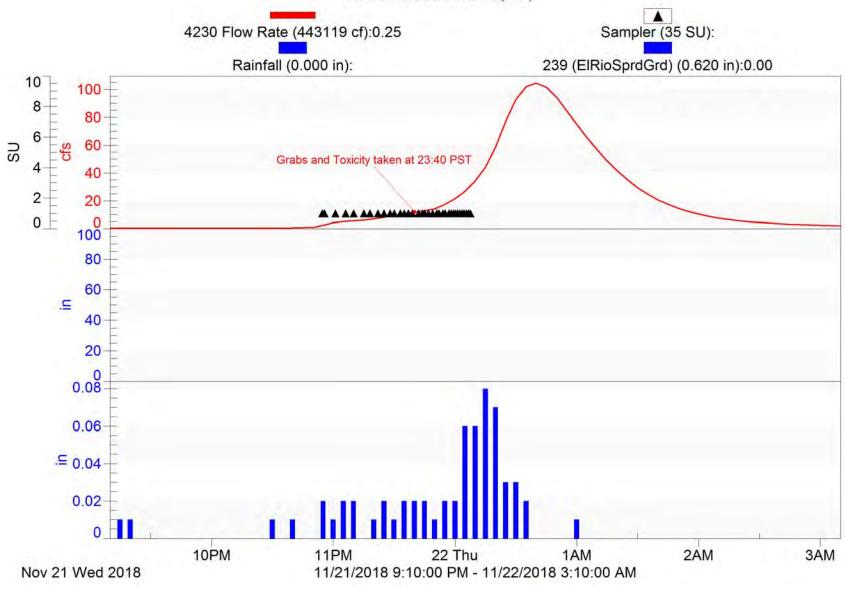


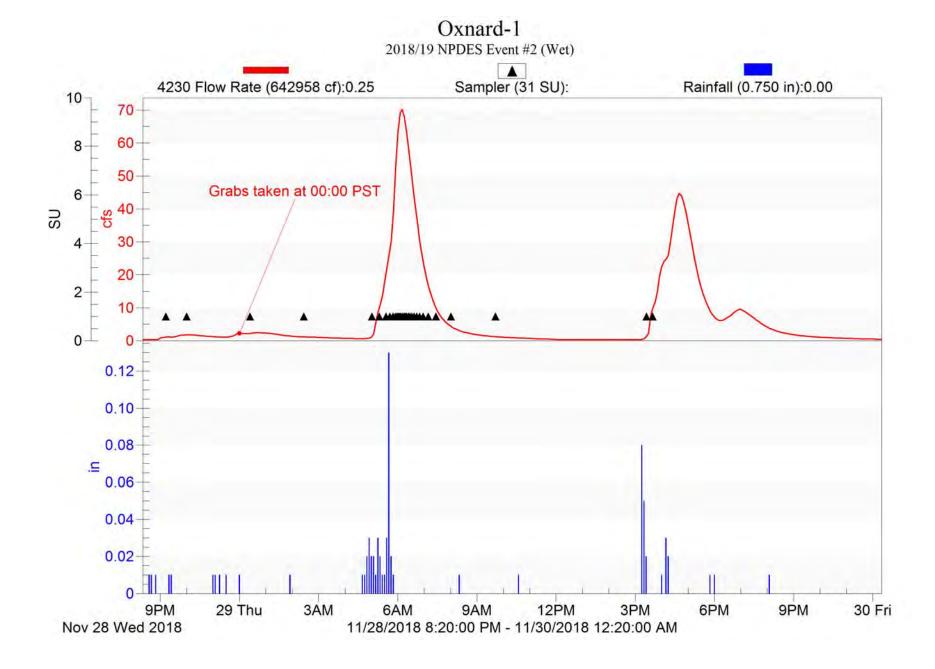
Ojai-1 2018/19 NPDES Event #1 (Wet) 4230 Flow Rate (61134.8 cf):5.25 Rainfall (0.380 in):0.01 Sampler (15 SU): 10 10-8 9 6 SU Grabs and Toxicity taken at 23:15 PST 6 0.030 0.025 0.020 .⊑ 0.015 0.010 0.005 22 Thu 0:30 22:00 22:30 23:00 23:30 Nov 21 Wed 2018 11/21/2018 9:45:00 PM - 11/22/2018 12:45:00 AM

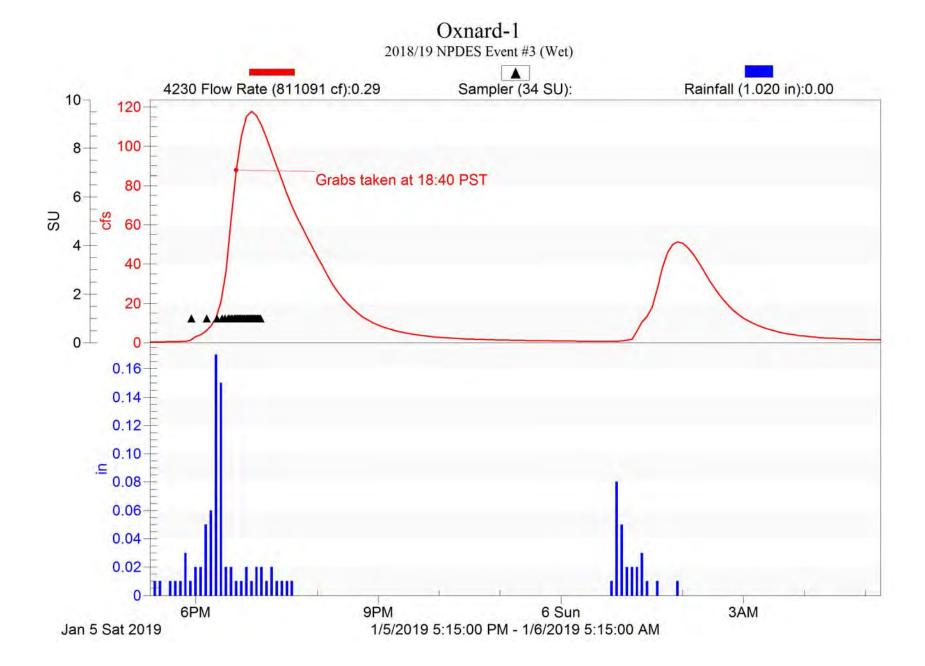
Ojai-1 2018/19 NPDES Event #2 (Wet) 4230 Flow Rate (344400 cf):5.22 Rainfall (1.600 in):0.00 Sampler (35 SU): 10 60 8 50 40 6 S 30 Grabs taken at 00:30 PST 20 2 10 0-0.08 0.07 0.06 0.05 ⊆ 0.04 0.03 0.02 0.01 29 Thu 3AM 6AM Nov 2018 11/28/2018 9:25:00 PM - 11/29/2018 6:25:00 AM



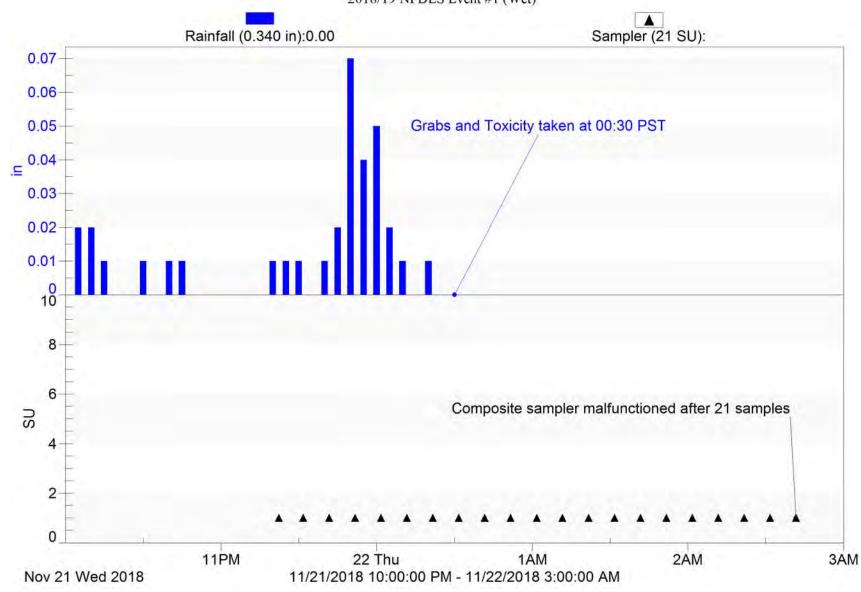
Oxnard-1 2018/19 NPDES Event #1 (Wet)



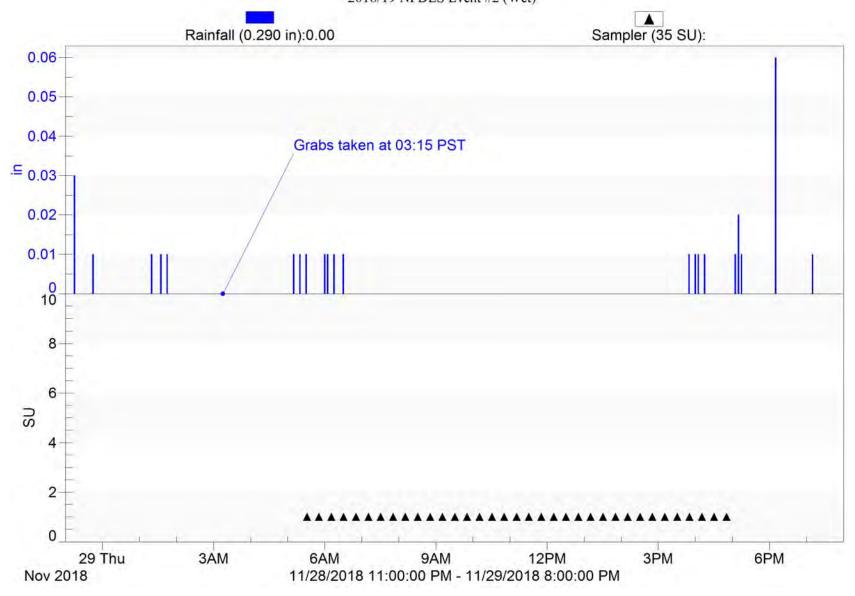




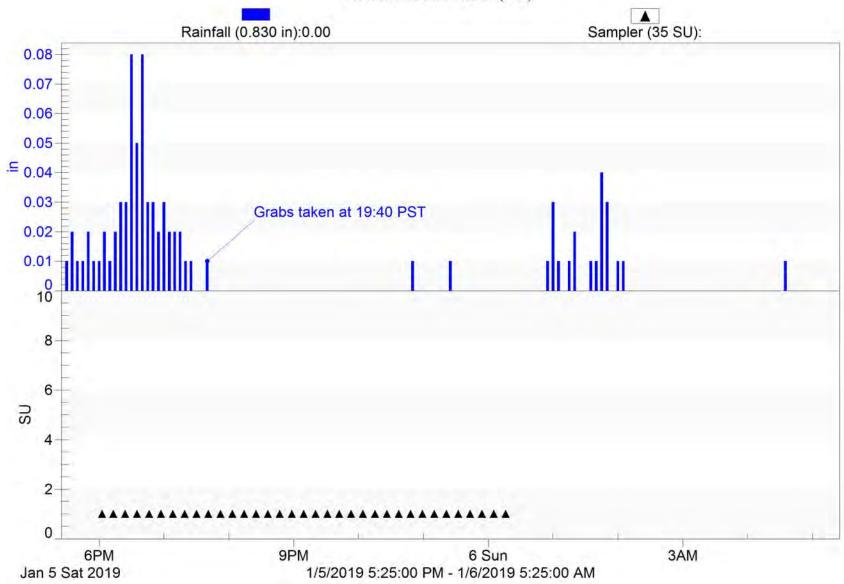
Port Hueneme-1 2018/19 NPDES Event #1 (Wet)

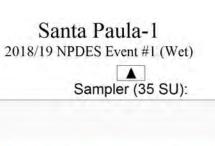


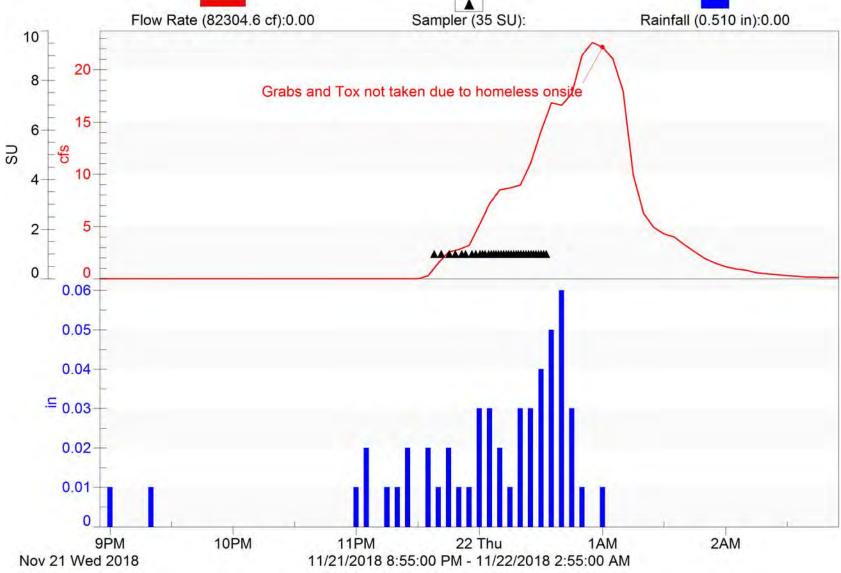
Port Hueneme-1 2018/19 NPDES Event #2 (Wet)



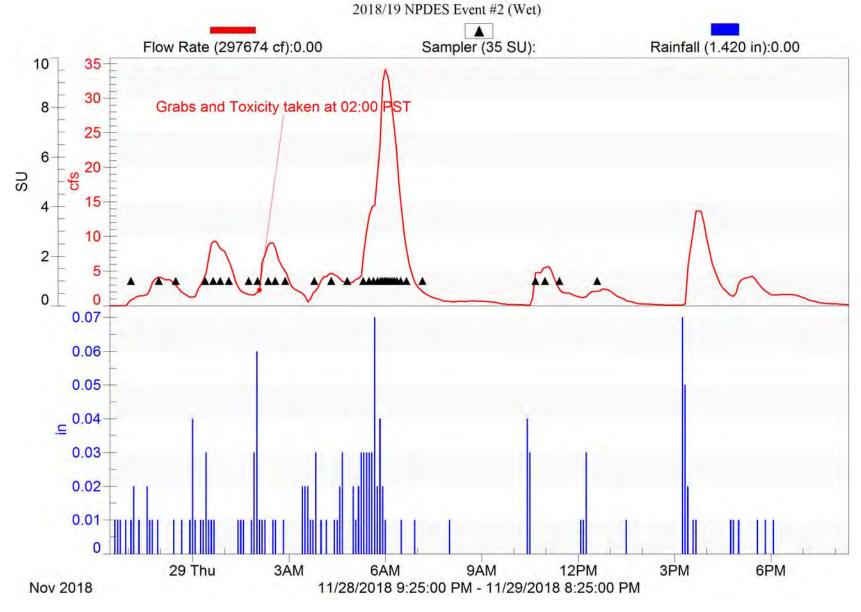
Port Hueneme-1 2018/19 NPDES Event #3 (Wet)



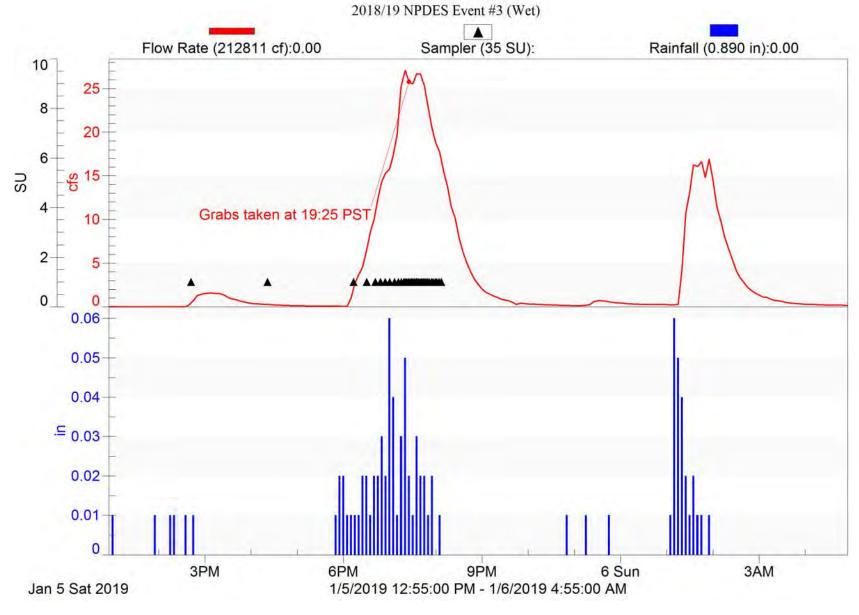


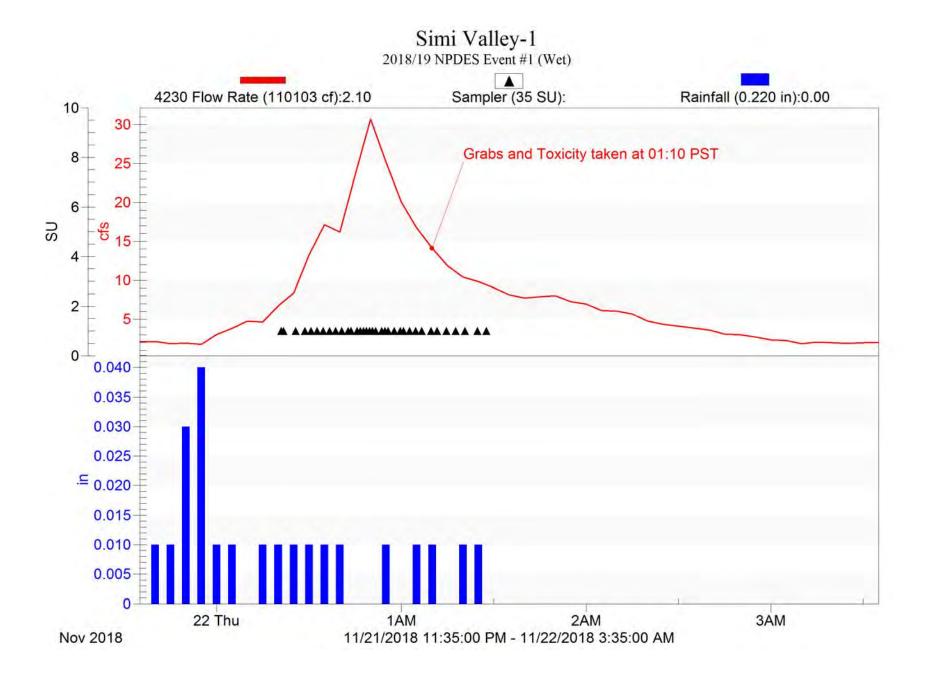


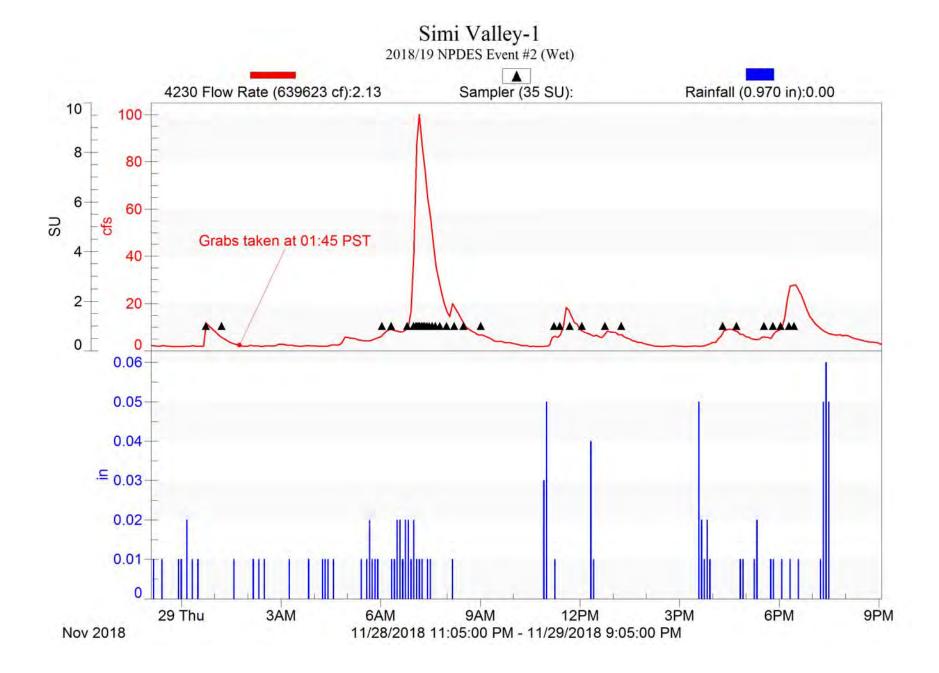
Santa Paula-1

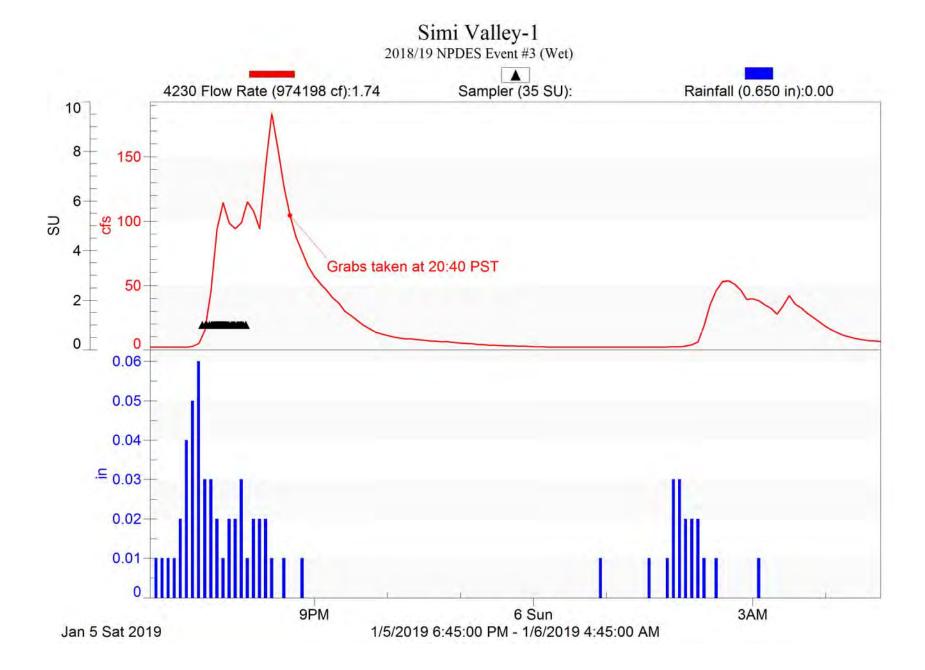


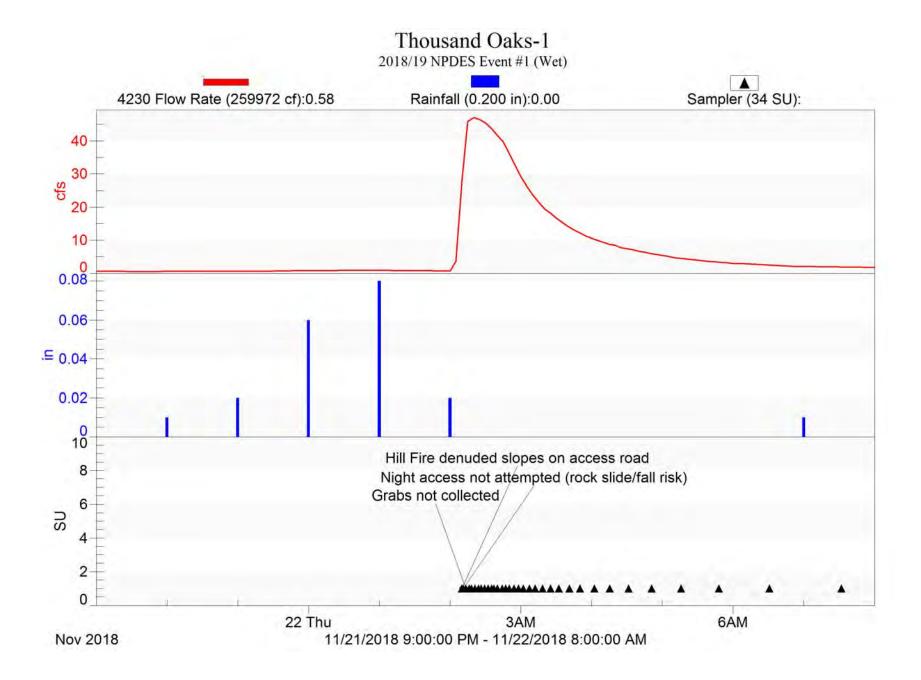
Santa Paula-1

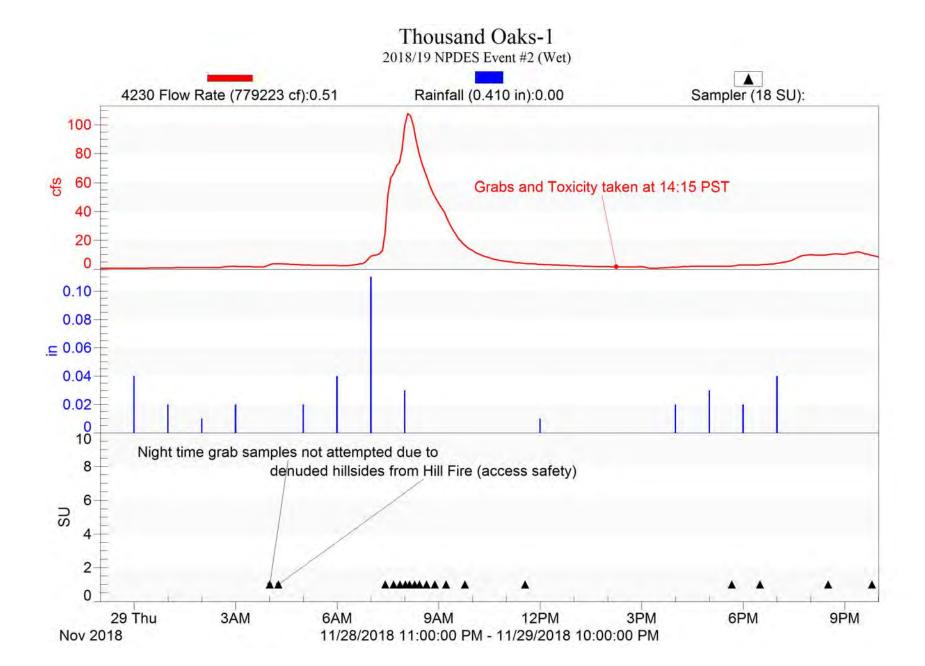






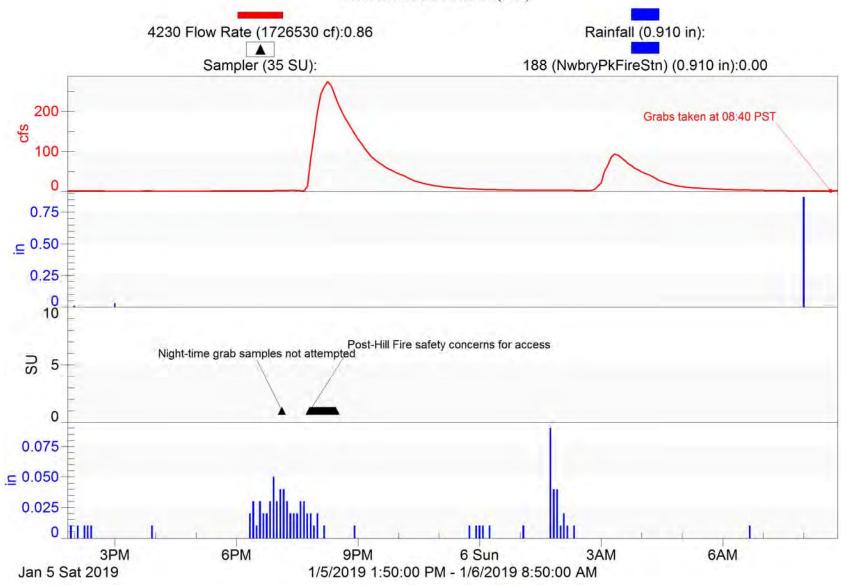






# Thousand Oaks-1

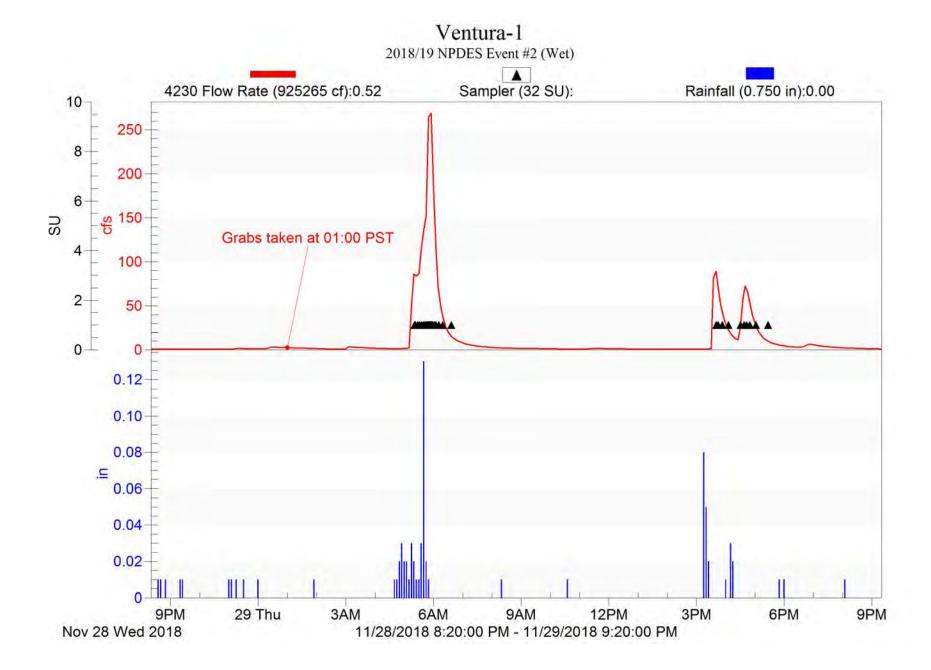
2018/19 NPDES Event #3 (Wet)



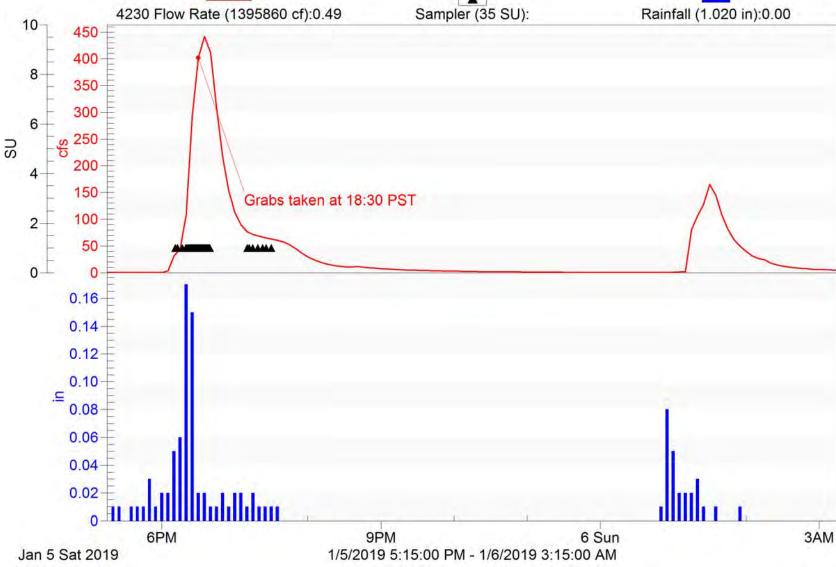
Ventura-1 2018/19 NPDES Event #1 (Wet) Sampler (35 SU): 4230 Flow Rate (507182 cf):0.52 222 (GovCtr) (0.600 in):0.00 Rainfall (0.000 in): 10 8 Grabs and Toxicity taken at 23:15 PST 100 SU Rainfall not recorded for MO-VEN event 1 50 0 100 80 60 .⊆ 40 20 0.05 0.04 .⊑ 0.03 0.02 0.01 10PM 1AM 2AM 9PM 11PM 22 Thu

Nov 21 Wed 2018

11/21/2018 8:30:00 PM - 11/22/2018 2:30:00 AM







Appendix	C. NRCS Curv	ve Number M	lethodology	Discussion	n



# Ventura County Watershed Protection District

Planning & Regulatory Hydrology Section MEMORANDUM

DATE: September 4, 2009 Updated August 12, 2010

TO: Tommy Liddell

VIA: Bruce Rindahl

FROM: Mark Bandurraga

## **SUBJECT: NPDES Monitoring Site Yield Evaluation**

Per your request, we have used the land use and watershed information you provided to prepare a spreadsheet that can be used to estimate the runoff quantities from storm forecasts. The runoff quantity is estimated using the NRCS Curve Number approach that is a common method in hydrology. The results show that the weighed Curve Numbers estimated from the evaluation range from a low of about 74 for the rural Fox Canyon Drain watershed in Ojai to a high of about 91 for the urbanized watershed in the City of Ventura. The methodology and files used to calculate the Curve Numbers are described in this memo for the watersheds shown in Figures 1-4.

In August 2010 you requested results for another 7 monitoring sites across the county. This memo describes the additional work done for that request.

#### **Curve Number Calculation Methodology**

### Land Use Data

Land Use data used in the study were provided by the Water Quality Section already clipped to the monitoring site boundaries and in a geodatabase. The land use data were extracted from the Assessor's Parcel database which is considered to be current as of the date of extraction (Feb 12, 2009). The various classifications in the file based on the assessor's 4-digit site use codes were sorted and assigned hydrologic land use names associated with the various classifications contained in the Curve Number (CN) Table from the Hydrology Manual (2006) as shown in Table

- 1. The categories in the land use file corresponded well with the land uses in the VCWPD CN Table with the following exceptions:
  - 1. Vacant undifferentiated land was assumed be open brush in fair condition in rural areas and open space with 50% grass cover in urban areas.
  - 2. Mixed urban land uses were assumed to correspond to commercial properties with 50% effective impervious.
  - 3. Fire stations, public buildings, and schools were assigned to the low industrial use category with an effective impervious value of 36% due to the potential for large landscaped areas.

Table 1 Land Uses In NPDES Database (Assessor's Land Uses)

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# Soils Information

The soils information was obtained from the District soils shapefile that groups the soil info into categories 1 through 7 corresponding to the NRCS soil categories D through A, respectively. The soils info was clipped to the watershed boundaries using the watershed shapefile. The areas

obtained from the soils files were checked against the total watershed areas to make sure they were identical.

#### Combined Soils and Land Use Information and Weighted Curve Numbers

The soils and land use shapefiles were then unioned in GIS to obtain the combinations of soil type and land uses in the watersheds. The resulting table was imported into excel and sorted to group the various land uses. The land uses were then assigned a name associated with the data in the District CN Table. Based on the name and soil number, excel functions "match" and "offset" were used to obtain a CN from the CN Table. The weighted soil number and Curve Number for each watershed were calculated using the areas, soil numbers, and CN's. The weighted soil types were checked against the data in the original watershed soil files and were found to be the same. The weighted Curve Numbers were linked to a summary worksheet to be used to calculate the yields by the Water Quality Section. This procedure was also applied to the 7 additional watersheds added to the study in August 2010.

The results are shown in Table 2.

Table 2: Storm Yield Results- Weighted Average Curve Numbers

Watershed Name	Size ac	Compo- site CN	Rain (in)	Initial Abs S (no units)	Rain cutoff (in)	Yield (in)	% Yield
Camarillo	2,779	85.12	5.00	1.75	0.35	3.38	68%
Happy Valley	1,026	77.29	5.00	2.94	0.59	2.65	53%
Fox	749	74.19	5.00	3.48	0.70	2.38	48%
Ventura	707	90.93	5.00	1.00	0.20	3.97	79%
Fillmore	762	74.77	5.00	3.37	0.67	2.43	49%
Port Hueneme	589	85.60	5.00	1.68	0.34	3.43	69%
Moorpark	1,816	63.34	5.00	5.79	1.16	1.53	31%
Oxnard	1,374	84.07	5.00	1.89	0.38	3.28	66%
Simi Valley	3,321	71.04	5.00	4.08	0.82	2.12	42%
Santa Paula	64	80.07	5.00	2.49	0.50	2.90	58%
Thousand Oaks	5,179	81.54	5.00	2.26	0.45	3.04	61%

Between the first request and present, the Hydrology Section has updated their Curve Number tables to make them more consistent with reported infiltration rates in the Hydrology Manual. The resultant CNs were used in the study to see the effect on the yields as shown in Table 3.

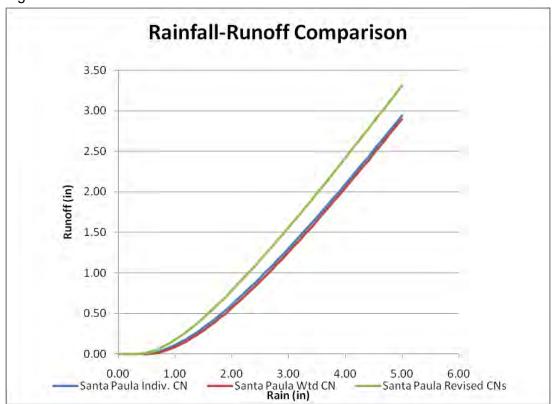
Table 3: Storm Yield Results- Weighted Average Curve Numbers with Updated CNs

	Size	Compo-	Rain	Initial Abs	Rain Cutoff	Yield	
Watershed Name	ac	site CN	(in)	S (no units)	(in)	(in)	% Yield
Camarillo	2,779	84.72	5.00	1.80	0.36	3.34	67%
Happy Valley	1,026	77.22	5.00	2.95	0.59	2.64	53%
Fox	749	73.48	5.00	3.61	0.72	2.32	46%
Ventura	707	91.24	5.00	0.96	0.19	4.01	80%
Fillmore	762	74.39	5.00	3.44	0.69	2.40	48%
Port Hueneme	589	86.14	5.00	1.61	0.32	3.48	70%
Moorpark	1,816	64.63	5.00	5.47	1.09	1.63	33%
Oxnard	1,374	84.01	5.00	1.90	0.38	3.27	65%
Simi Valley	3,321	71.11	5.00	4.06	0.81	2.13	43%
Santa Paula	64	84.22	5.00	1.87	0.37	3.29	66%
Thousand Oaks	5,179	81.27	5.00	2.30	0.46	3.01	60%

The results showed that the revised CNs provided yields that were 1 or 2% higher than the 2006 CN set except for the Santa Paula watershed. This watershed was soil type 6, which had CNs that were more affected by the updates than most of the CNs for the other soils.

While working on the 2<sup>nd</sup> request, it was realized that the Hydrology Section could provide more precise estimates of flow at lower rainfall levels by analyzing each soil/land use combination individually and summing the results rather than using a weighted average CN in the runoff equation. So the individual CN results were calculated and summed for both the 7 sites in this update and the previous 4 sites. The resultant spreadsheets provide tables of runoff vs rainfall data. Figure 1 shows a comparison of the rainfall and runoff from a highly developed watershed Camarillo using the weighted average CN, individual CNs, and revised individual CNs.





#### Conclusions and Limitations

The provided weighted CNs can be used to estimate runoff from low to moderately saturated watersheds. It has been our experience that it is necessary to use Antecedent Moisture Condition III CNs for highly saturated watersheds which only occurs after many days of heavy rainfall such as January 10, 2005. The provided CNs probably will overpredict the runoff coming from the first storms of the season due to the very dry antecedent moisture conditions present then. If necessary further work can be done to provide CNs representing AMC I conditions. Also, the CNs assigned to the various land uses can be calibrated after enough storms have occurred to evaluate the predictive accuracy of the current yield equations provided to the NPDES group. It should also be possible to provide forecasts of runoff from the HSPF forecast model of the Ventura River watershed that more accurate reflect saturated/unsaturated conditions.

## List of Files in Work Directory K:\PR\hydrology\Watersheds\NPDES\Monitoring\_Sites

Filename	Description
GIS	Contains GIS files used in evaluation
GIS2010	Contains 2010 GIS files used in updated evaluation
ClippedLandUse.mdb	Geodatabase with land uses clipped to watershed boundaries
	provided by WQ section
*_SelectedWatershed.shp	shapefiles showing boundaries of monitoring watersheds
*soils.shp	soils shapefiles clipped to watershed boundaries
*soilsunion.shp	Union of soils and land use data shapefile for watersheds
Allsoil.shp	VCWPD soils shapefile showing numbers for hydrology calcs
NPDES_MonitoringSitesR	9-09 CN data
unoff9-09.xls	
NPDES_MonitoringSitesR	8-10 updated analysis for 11 sites total
unoff8-10.xls	
NPDES_MonitoringSitesR	8-10 analysis using revised CNs
unoff8-10RevCNs.xls	
MonitoringSites9-09.mxd	ArcMap project file for analysis

### Ventura Watershed



Figure 2

# Meiners Oaks Happy Valley Watershed



Figure 3

# Ojai Fox Watershed

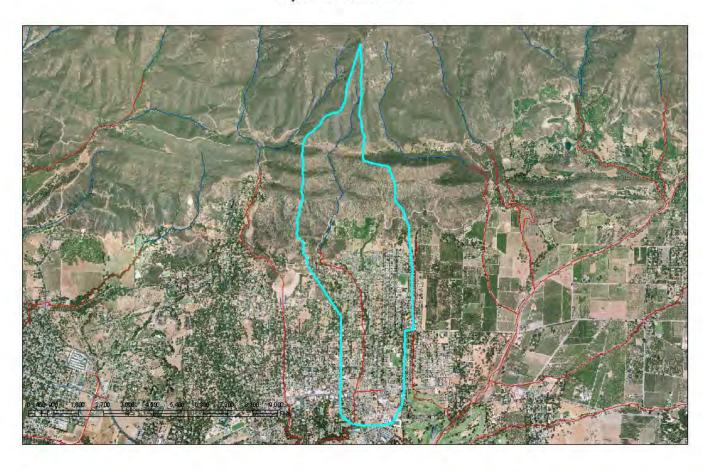


Figure 4

### Camarillo Hills Drain Watershed

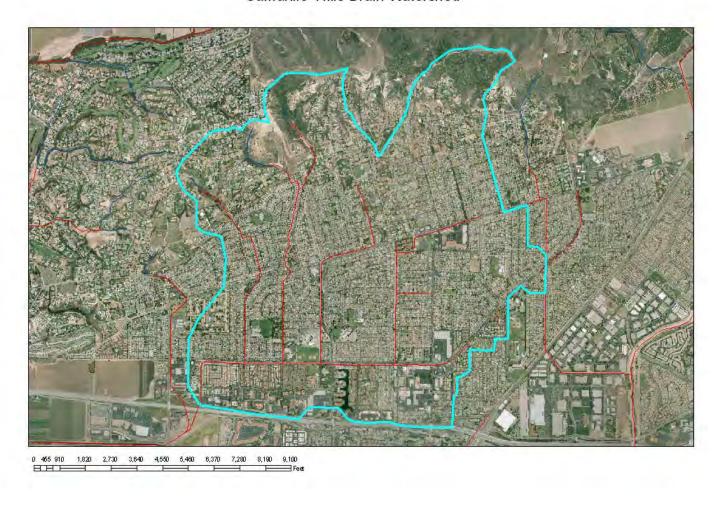


Figure 5

# Simi Valley Watershed

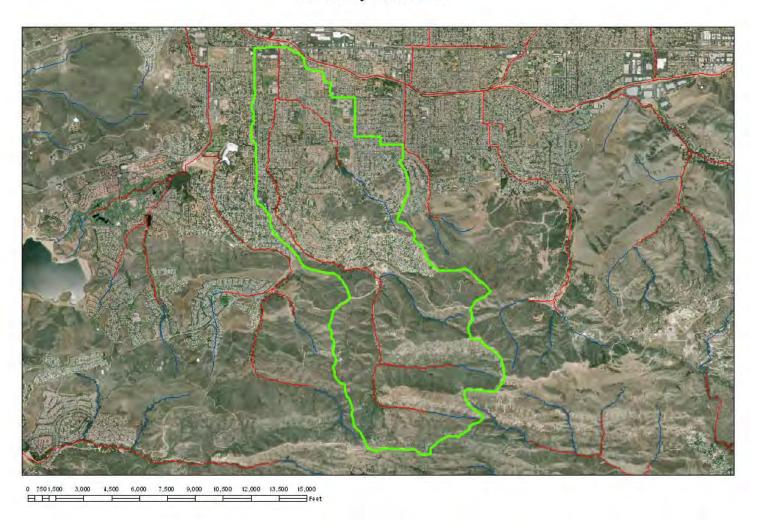


Figure 6

#### Oxnard Watershed



Figure 7

# Moorpark Watershed



Figure 8

### Port Hueneme Watershed



Figure 9

### Fillmore Watershed

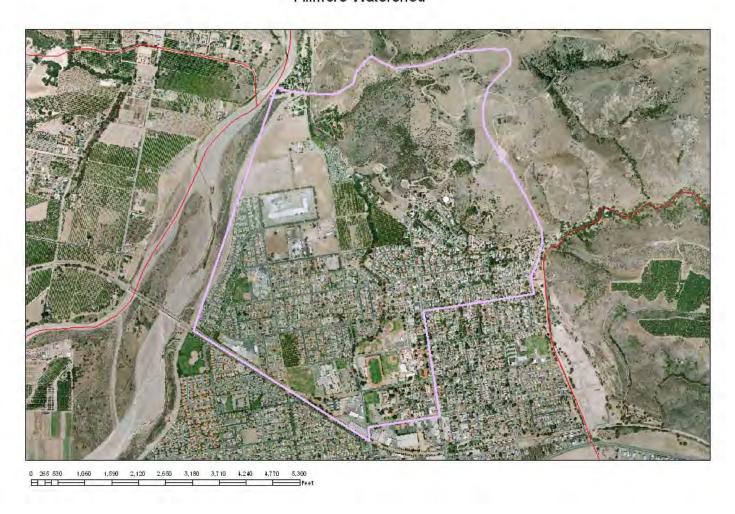


Figure 10

### Thousand Oaks Watershed

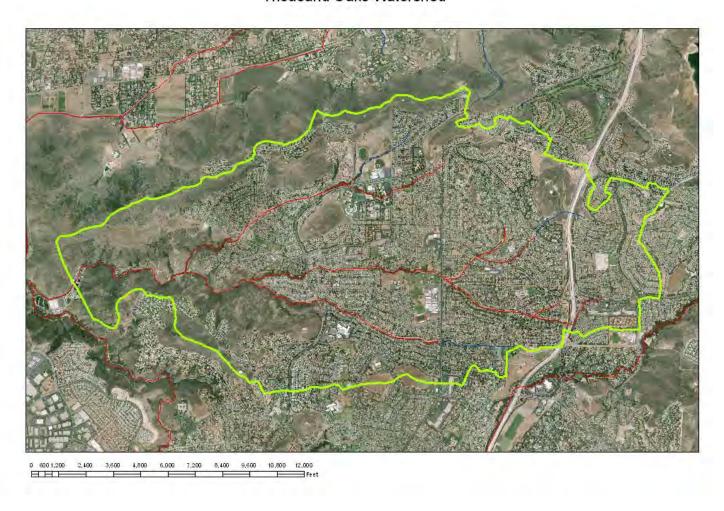


Figure 11

### Santa Paula Watershed



Figure 12

Appendix D. Event Summaries

<u>Site</u>	<u>Event</u>	<u>Visit</u>	<u>Staff</u>	<u>Date</u>	Arrival Time	PST/ PDT	Flowmeter Level (feet)	Flowmeter Flow (cfs)	Outside Staff (ft)	Fridge T <u>°C</u> Turned	Flush (L)	Pump Count	Program/6712 Display Flow: 1 pulse/500mlx35, program	Comp bottle status/ Estimated Vol (L)	Comp Duration (nearest half hrs)			Toxicity Time	Notes Inside of house very dusty. (Since last visit in October.) Desiccant turning pink but still
ME-CC ME-CC	1 1	1 2	KH JM,PD	11/20/2018 11/22/2018		PST PST	1.089 1.244	NA	1.08	on 3	4L Distilled	72,484	disabled Sample 3 after 1 pulse Sample 17 after 1 pulse. Turned	Uncapped bottle 3L			0130	0130	ok.  Turned fridge off, propped open, and
ME-CC	1	3	JM,PD	11/22/2018	1002	PST	1.378			7	2L Distilled	187,515		Overflowed		1006			unplugged to drain.
ME-VR2	1	1	WBC	11/20/2018	1526	PST	1.258			1	2L Distilled	34,831	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle					Intake looks good.
ME-VR2	1	2	DL,MD	11/22/2018		PST	1.365			2			Sample 8 after 1 pulse	4L			0130	0130	-
ME-VR2	1	3	DL,SG	11/22/2018	1015	PST	1.297			2	2L Distilled	239,368	Program disabled Time: 10 min/500mlx35, program	15L		1020			
ME-SCR ME-SCR	1 1	1 2				PST PST					4L Distilled		disabled	Uncapped bottle					Set up but no runoff
ME-SCR	1	3				PST							Flow: 1 pulse/500mlx35, program	`					
MO-OJA	1	1	WBC	11/20/2018	1350	PST	0.101	5		2	2L Distilled	23,817	disabled	Uncapped bottle					Programmed onsite
MO-OJA	1	2	DL,MD	11/21/2018		PST	0.1	5	No flow	1			Program disabled	Empty			2315	2315	-
MO-OJA	1	3	DL,SG	11/22/2018	0921	PST	0.0991	5	<toe< td=""><td>2</td><td>2L Distilled</td><td>65,367</td><td>Program disabled</td><td>7L</td><td></td><td>0925</td><td></td><td></td><td>Removed 2105 from office 9:18. Cycled</td></toe<>	2	2L Distilled	65,367	Program disabled	7L		0925			Removed 2105 from office 9:18. Cycled
MO-MEI	1	1	WBC	11/20/2018	1442	PST	0.08	1	dry	Turned on	2L Distilled	21,889	Flow: 1 pulse/500mlx35, program disabled	n Uncapped bottle					power on 2105 in MEI. Programmed onsite. 4230 desiccant brown.
MO-MEI MO-MEI	1	2	DL,MD DL,SG	11/22/2018 11/22/2018		PST PST	0.244 0.082	12 1	0.2 <toe< td=""><td>2</td><td>2L Distilled</td><td>107,053</td><td>Continuously pumping Program done</td><td>00:10 8L 00:40 Full 17L</td><td></td><td>0950</td><td>0020</td><td>0020</td><td>Comp bottle left onsite since pickup not possible until Friday with the holiday. Turned fridge off, propped open</td></toe<>	2	2L Distilled	107,053	Continuously pumping Program done	00:10 8L 00:40 Full 17L		0950	0020	0020	Comp bottle left onsite since pickup not possible until Friday with the holiday. Turned fridge off, propped open
IVIO-IVILI		,	DL,30	11/22/2010	0342	FJI	0.082	1	1100	Turned	ZL Distilled	107,033	Time: 10 min/500mlx35, program			0330			4230 desiccant purple. Cleared around
MO-FIL	1	1	WBC	11/21/2018		PST	0.568			on	2L Distilled	21,059	disabled	Uncapped bottle					intake.
MO-FIL MO-FIL	1	2	SG,EL KH,WBC	11/22/2018 11/22/2018		PST PST	1.711 0.571			-2 3	2L Distilled	173,151	Program done	20% 19L		0925	0125	0125	Large amounts of trash in creek Turned fridge off, propped open
IVIO-I IL	-		KII,WBC	11/22/2010	0323	131	0.371			Turned	ZL Distilled	173,131	Flow: 1 pulse/500mlx35, program			0323			4230 desiccant pink but none on truck to
MO-OXN	1	1	KH	11/20/2018		PST	0.108	0.2	dry	on	4L Distilled	37,065	disabled	Uncapped bottle					replace it. Lots of graffiti on house
MO-OXN MO-OXN	1	2	SG,EL JM,PD	11/21/2018 11/22/2018		PST PST	0.69 0.11	12 0.3	0.5 dry	2 4	2L Distilled	168,984	Sample 16 after 1 pulse Program done	NR 19L		0904	2340	2340	Turned fridge off, propped open
IVIO-OXIV			JIVI,F D	11/22/2010	0300	131	0.11	0.5	u.,	Turned	ZL Distilled	100,364	Flow: 1 pulse/500mlx35, program			0304			4230 desiccant pink but none on truck to
MO-CAM	1	1	KH	11/20/2018		PST	0.033	10	~1 cfs	on	4L Distilled	35,277	disabled	Uncapped bottle					replace it.
MO-CAM MO-CAM	1	2	LM,AA JM,PD	11/21/2018 11/22/2018		PST PST	0.033 0.031	10 10	<oss <oss< td=""><td>-3 5</td><td>2L Distilled</td><td>123,332</td><td>Program disabled Program done</td><td>Empty 18L</td><td></td><td>1026</td><td>2235</td><td>2235</td><td>Turned fridge off, propped open</td></oss<></oss 	-3 5	2L Distilled	123,332	Program disabled Program done	Empty 18L		1026	2235	2235	Turned fridge off, propped open
IVIO-CAIVI		3	JIVI,PD	11/22/2018	1023	P31	0.031	10	1033	Turned	ZL DIStilled	123,332	Flow: 1 pulse/500mlx35, program			1026			rumeu mage on, propped open
MO-SIM	1	1	KH	11/20/2018	1320	PST	0.141	2	~1 cfs	on	4L Distilled	19,934	disabled	Uncapped bottle					4230 desiccant mostly pink.
MO-SIM	1	2.1	LM,AA	11/22/2018	0100	PST	0.391	20	NR	4 0	a. a	04.500	Sample 24 after 1 pulse Program done	Full			0110	0110	Turned fridge off proposed open
MO-SIM	1	2.2	LM,AA	11/22/2018		PST	0.247	7		Turned	2L Distilled	94,503	Flow: 1 pulse/500mlx35, program						Turned fridge off, propped open
MO-MPK	1	1	WBC	11/21/2018	1126	PST	0.072	0.2	<oss< td=""><td>on</td><td>2L Distilled</td><td>59,416</td><td>disabled</td><td>Uncapped bottle</td><td></td><td></td><td></td><td></td><td>Cycled power on 2105</td></oss<>	on	2L Distilled	59,416	disabled	Uncapped bottle					Cycled power on 2105
MO-MPK	1	2	LM,AA	11/22/2018	0000	PST	0.072	0.2	0	3			Program disabled	Empty			0010	0010	
МО-МРК	1	3	KH,WBC	11/22/2018	1000	PST	0.069	0.2	<toe< td=""><td>4</td><td>2L Distilled</td><td>200,955</td><td>Program done</td><td>18L</td><td></td><td>1000</td><td></td><td></td><td>Channel full of tumbleweeds upstream of site. Turned fridge off, propped open</td></toe<>	4	2L Distilled	200,955	Program done	18L		1000			Channel full of tumbleweeds upstream of site. Turned fridge off, propped open
мо-тно	1	1	KH	11/20/2018	1230	PST	1.986	0	NR	2	4L Distilled	18,686	Flow: 1 pulse/500mlx35, program disabled	n Uncapped bottle					4230 desiccant blue. Hill Fire burnt along access road. No after dark access until we see how the hillsides fare in the rain. Many potential rock fall/slide areas.
MO 7::5	_	2	WII 1475.5	44/22/22:-	1020	DC=	2.415	_	2.4	2	21 Discour	105 105	Errors have ocurred. Program	Overflow		1025	Meter	N:C	No more liquid #24 24 /0540 0725\
MO-THO	1	1	WBC	11/22/2018		PST	0.04	1	2.1 NR	Turned on	2L Distilled 2L Distilled	195,196 19,983	disabled. Flow: 1 pulse/500mlx35, program disabled	Overflowed  Uncapped bottle		1026	only	NS	No more liquid #31-34 (0518-0735) Replaced 4230 desiccant. Programmed onsite. Flow started 2304 and at 2310 - 4230 0.956, 88cfs. OSS 0.9 @ 2317. Comp bottle left
MO-VEN	1	2	JM,PD	11/21/2018	2201	PST	0.039	1		4			22:01 program disabled. 23:41 program done.				2315	2315	onsite since pickup not possible until Friday with the holiday.+

																Comp				
								Flowmeter							Comp bottle	Duration				
						Arrival	PST/	Level	Flowmeter	Outside	Fridge T		Pump		status/	(nearest	Comp	Grab	Toxicity	_
Sit	e	Event	Visit	Staff	Date	Time	PDT	(feet)	Flow (cfs)	Staff (ft)	<u>°C</u>	Flush (L)	Count	Program/6712 Display	Estimated Vol (L)	half hrs)	Time	Time	Time	<u>Notes</u>
MO-V	EN	1	3	DL,SG	11/22/2018	1041	PST	0.045	1	<oss< th=""><th>1</th><th>2L Distilled</th><th>115,382</th><th>Program done</th><th>19L</th><th></th><th>1045</th><th></th><th></th><th>Turned fridge off, propped open</th></oss<>	1	2L Distilled	115,382	Program done	19L		1045			Turned fridge off, propped open
														Time: 10 min/500mlx35, progran	1					
MO-F	UE	1	1	KH	11/20/2018	1500	PST	NA	NA		0	4L Distilled	29,980	disabled	Uncapped bottle					
MO-F	UE	1	2	JM,PD	11/22/2018	0020	PST	NA	NA		3.5			Sample 8 in 00:06	5L			0030	0030	
														Display only showing 1/2 pixels.						
														Unplugged/replugged power and						
MO-F	UE	1	3	JM,PD	11/22/2018	0934	PST	NA	NA		3.5	2L Distilled	NR	all pixels appeared.	12L		0936			
																				Cycled power on 2105. Replaced light bulb
																				for house. Programmed 2105 onsite. Many
											Turned			Flow: 1 pulse/500mlx35, progran	า					footprints in areas indicative of homeless
MO-S	PA	1	1	WBC	11/21/2018	0938	PST	NA	NA	No flow	on	2L Distilled	50,632	disabled	Uncapped bottle					activity.
																				Bicycle leaning against house so unknown
																				persons in area. Crew did not approach for
MO-S	PA	1	2	SG,EL	11/22/2018	~0100	PST	NA	NA											safety reasons.
																				Turned fridge off, propped open. No
																				evidence of bike but a partial box of fresh
MO-S	PA	1	3	KH,WBC	11/22/2018	0900	PST	NA	NA	Damp	2	2L Distilled	204,136	Program done	16.5L		0905			(not rained on) donuts at back of house.

NR: Not recorded

All times are recorded here in PST

Forecast Rain: 0.25-0.75" across the county

Actual Rainfall: ~0.25-0.5" across the county

Storm Control: Kelly Hahs

SPA - no grabs (homeless), THO - no grabs (access road concerns post-Hill Fire), SCR - no flow

Sample Tracking:

Bacteria samples to VCHCA:

11/22/2018 @ 02:20 (VR2/MEI/OJA) by Dave Laak

11/22/1018 @ 02:22 (CAM(+FD)/SIM/MPK) by Arne Anselm

11/22/2018 @ 02:30 (FIL/OXN) by Steven Greer

11/22/2018 @ 02:15 (CC/HUE/VEN) by Jaime McClain

Toxicity samples to Pacific EcoRisk (via Redline Courier)

11/22/2018 @ 15:10 (All sites) by Bill Carey

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier (Reliable Messenger Service))

11/22/2018 @ 05:30 (All sampled grabs and composites) to David Levy by Bill Carey

Meters:

CAM/MPK/SIM (AA,LM): Beckman 255 # 2151, YSI 85 # 05E1126

OJA/MEI/VR2 (DL,MD): Beckman 255 # 2554, YSI 85 # 03D0379

CC/HUE/VEN (JM,PD): Beckman 410 # 130240875, YSI 85 # 05E1042

FIL/OXN (SG,EL): Beckman 410 # 110341139, YSI 85 # 01G0625

Deg F	Deg C	Deg C
29	-2	-1.667
30	-1	-1.111
31	-1	-0.556
32	0	0
33	1	0.556
34	1	1.111
35	2	1.667
36	2	2.222
37	3	2.778
38	3	3.333
39	4	3.889
40	4	4.444
41	5	5.000
42	6	5.556
43	6	6.111
44	7	6.667
45	7	7.222

<u>Site</u>	Event	<u>Visit</u>	<u>Staff</u>	<u>Date</u>	Arrival Time	PST/ PDT	Flowmeter Level (feet)	Flowmeter Flow (cfs)	Outside Staff (ft)	Fridge T <u>°C</u> Turned	Flush (L)	Pump Count	Program/6712 Display Flow: 1 pulse/500mlx35, program	Comp bottle status/ Estimated Vol (L)	 Comp Time		Toxicity Time	<u>Notes</u> Grab bottles and field blanks/water placed
ME-CC	2	1.1	DL DL	11/28/2018 11/28/2018		PST PST	1.074	NA NA	1.08	on	4L Distilled 2L Distilled	192,730 232,514	disabled Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				onsite. 4230 desiccant good. Calibrated volume to 540 ml. Flushed line and reprogrammed 1 pulse.
ME-CC ME-CC	2 2	2 3	JM,MD PD,KB	11/29/2018 11/29/2018 11/30/2018	0245	PST PST	1.219 1.82	NA NA	Photo 2	4 5	2L Distilled	464,367	Sample 3 after 1 pulse Flow paced is done	Overflowed	0525	0300		Dark conditions so photo too grainy for OSS determination Turned Fridge off and propped open.
IVIE-CC		3	FD,KB	11/30/2016	0323	rai	1.02	INA			ZL Distilleu	404,307	Flow: 1 pulse/500mlx35, program		0323			Desiccant good 4330, needs replaced 6712.
ME-VR2	2	1	WBC	11/28/2018	0815	PST	1.307	NA	NA	2	4L Distilled	243,625	disabled	Installed, lid off.				Grab bottles placed onsite.
ME-VR2	2	2	DL,KF	11/29/2018	0154	PST	1.397	NA	NA	2			Sample 5 after 1 pulse	2L		0205		·
										_			Program disabled. Replace pump					
ME-VR2	2	3	KH,WBC	11/29/2018	1455	PST	1.372	NA	NA	2	2L Distilled	568,326	tubing.	18.5L	1455			Turned 6712 off
ME-SCR	2	1	DL	11/28/2018	1413	PST	1.084	NA	NA	1	4L Distilled	42,398	Time: 10 min/500mlx35, program disabled.	Installed, lid off.				Lowered swing arm. Grab bottles still onsite.
ME-SCR ME-SCR	2	2	KH,WBC KH,JM	11/29/2018 11/30/2018		PST	1.084	NA NA	NA NA	2	2L Distilled	539,711	Program had enabled but flow <intake. 20="" 6712="" arm.="" backed="" delivery="" done<="" high="" lower="" min="" off="" pacing.="" program="" recalibrated.="" reprogrammed="" so="" stopper="" swing="" td="" to="" volume=""><td></td><td>0431</td><td>1630</td><td></td><td>Flow started ~1500 PST. Collected all grabs except bacteria because lab unable to accept it tonight. Grabs - bacteria only. Turned outside light and 6712 off. Raised swing arm and secured to railing.</td></intake.>		0431	1630		Flow started ~1500 PST. Collected all grabs except bacteria because lab unable to accept it tonight. Grabs - bacteria only. Turned outside light and 6712 off. Raised swing arm and secured to railing.
IVIE-3CK		3	KIT,JIVI	11/30/2016	0421	F31	1.064	INA	14/-1		ZL DIStilleu	339,711	r rogram done	172	0431	0423		Cycled power 2105 and programmed
MO-OJA MO-OJA	2 2	1 2	WBC DL,KF	11/28/2018 11/29/2018	0022	PST PST	0.099 0.1	5 5	No flow 0	3 2	4L Distilled	68,335	Flow: 1 pulse/500mlx35, program disabled. Program disabled.	Installed, lid off. Empty		0030		enable/pacing onsite. 4230 desiccant good. Grab bottles placed onsite.
MO-OJA	2	3	KH,WBC	11/29/2018	0608	PST	0.13	7		1	2L Distilled	158,309	Program done	18L	0610			Turned 6712 off
MO-MEI MO-MEI	2 2	1 2	WBC DL,KF	11/28/2018 11/29/2018		PST PST	0.081 0.144	4	Channel dry 0.1	Turned on 2	4L Distilled	110,602	Flow: 1 pulse/500mlx35, program disabled Sample 10 after 1 pulse	Installed, lid off. 3L		0120		4230 desiccant okay. Programmed enable/pacing onsite. Grab bottles placed onsite.
MO-MEI	2	3	KH,WBC	11/29/2018	0630	PST	0.227	10		3	2L Distilled	195,748	Program done	17L	0630			Turned off 6712 and fridge (propped open).
										Turned			Time: 20 min/500mlx35, program					Cleared intake of sand. 4230 desiccant
MO-FIL	2	1	WBC	11/28/2018	1157	PST	0.393	NA		on	4L Distilled	176,822	disabled	Installed, lid off.				good. Grab bottles placed onsite.
MO-FIL	2	2	PD,TD	11/29/2018	0245	PST	1.169	NA		4			Sample 13 in 00:04	5L		0255		
NAO 511	2	3	LAADW	44/20/2040	4245	DCT	0.60			-2	OL Distillant	227 446	Program done	Full	1250			Turned off 6712 and fridge (propped open).
MO-FIL	2	3	LM,DW	11/29/2018	1245	PST	0.69	NA		Turned	2L Distilled	327,416	Flow: 1 pulse/500mlx35, program		1250			Turried on 6712 and mage (propped open).
MO-OXN	2	1	DL	11/28/2018	1308	PST	0.109	0.2	Dry	on	4L Distilled	173,828	disabled	Installed, lid off.				Grab bottles placed onsite.
MO-OXN	2	2	PD,TD	11/29/2018			0.283	2.2	0.25	4		,	Sample 3 after 1 pulse	1L		0000		*11/28/2018
	_			/ /									6 1 22 6 4 1					- 1 (6540 1611 4
MO-OXN	2	3	LM,DW	11/29/2018	1545	PST	0.712	12.5		-3	2L Distilled	291,509	Sample 32 after 1 pulse	Near full	1546			Turned off 6712 and fridge (propped open).
MO-CAM	2	1	DL	11/28/2018	0837	PST	0.033	10	Dry	Turned on	4L Distilled	128,467	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Changed desiccant. Grab bottles placed onsite.
MO-CAM	2	2	JM,MD	11/29/2018		PST	0.033	10	0	-4	4L Distilled	120,407	Program disabled	Empty		0015		onsite.
	_	_	****,****	,,									Program disabled, errors have					
MO-CAM	2	3	PD,KB	11/30/2018	0550	PST	0.034	10	0	-2	2L Distilled	195,413	ocurred.	14L	0555			Turned off fridge and propped open.
	_		ъ.	44 /05 /55	05:-	B.C=	0.4	_		Turned		00	Flow: 1 pulse/500mlx35, program					Changed desiccant. Grab bottles placed
MO-SIM MO-SIM	2 2	1 2	DL JM,MD	11/28/2018 11/29/2018		PST PST	0.149 0.173	2 3	<toe ~1</toe 	on 0	4L Distilled	99,502	disabled  Brogram disabled	Installed, lid off. 1L		0145		onsite.
MO-SIM	2	3	KH.JM	11/29/2018		PST	0.173	2	<toe< td=""><td>4</td><td>2L Distilled</td><td>174.527</td><td>Program disabled Program done</td><td>11 19L</td><td>0530</td><td>0145</td><td></td><td>Turned off fridge and propped open.</td></toe<>	4	2L Distilled	174.527	Program disabled Program done	11 19L	0530	0145		Turned off fridge and propped open.
.410 31141		,		11/30/2018	0330	131	0.170			Turned	LE DISTINCU	117,521	Flow: 1 pulse/500mlx35, program		3330			Changed desiccant. Grab bottles placed
МО-МРК	2	1	WBC	11/28/2018	1323	PST	0.075	0.2		on	4L Distilled	204,464	disabled	Installed, lid off.				onsite.
MO-MPK	2	2	JM,MD	11/29/2018		PST	0.141	1.5	~1	4			Sample 2 after 1 pulse Program done. Errors have	5L		0220		
1													occurred. No more liquid samples					Turned off 6712 and fridge (propped open).
MO-MPK	2	3	LM,DW	11/29/2018	1340	PST	0.155	1.8		4	2L Distilled	367,651	2-7.	Overflowed	1340			Drained fridge (~2" water in bottom).

														Comp				
						Flowmeter							Comp bottle	Duration				
				Arrival	PST/	Level	Flowmeter	Outside	Fridge T		Pump		status/	(nearest	Comp	Grab	Toxicity	<u>-</u>
Event	Visit	Staff	Date	Time	PDT	(feet)	Flow (cfs)	Staff (ft)	<u>°C</u>	Flush (L)	Count	Program/6712 Display	Estimated Vol (L)	half hrs)	Time	Time	Time	Notes
												Flow: 1 pulse/500mlx35, program						
2	1	DL	11/28/2018	1030	PST	2.084	1	2.02	1	4L Distilled	199,900	disabled	Installed, lid off.					Desiccant good. Grab bottles placed onsite.
2	3	LM,DW	11/29/2018	1405	PST	2.199	2	2.2	2			Program disabled	Half full			1415	1415	
												Errors have ocurred. Program						No more liquid samples 1-2, good 3-18, then
2	2	KH,JM	11/30/2018	0605	PST	2.083	1		4	2L Distilled	295,677	disabled.	19L		0610			disabled. Turned 6712 off.
																		Cycled power 2105 and programmed
									Turned			Flow: 1 pulse/500mlx35, program						enable/pacing onsite. 4230 desiccant good.
2	1	WBC	11/28/2018	1615	PST	0.04	1		on	4L Distilled	119,072	disabled	Installed, lid off.					Grab bottles placed onsite.
2	2	PD,TD	11/29/2018	0045	PST	0.113	2	0.1	0			Program disabled	Empty			0100		
												S .						
2	3	PD,KB	11/30/2018	NR	PST	0.043	1	0	2	2L Distilled	204,631	Program disabled	17L		0420			Turned off 6712 and fridge (propped open).
																		6712 power failed during flushing. Pump
2	1.1	DL	11/28/2018	1203	PST	NA	NA			Power failed		Power failed	Installed, lid off.					head to be replaced for event
												Time: 20 min/500mlx35, program						
2	1.2	WBC	11/28/2018	1530	PST	NA	NA			4L Distilled		disabled						Replaced pump head.
2	2	DL,KF	11/29/2018	0304	PST	NA	NA	4	1			Program disabled	Empty			0315		
2	3	PD,KB	11/30/2018	0455	PST	NA	NA		2	2L Distilled	161,905	Program done	17L		0455			Turned off 6712.
									Turned			Flow: 1 pulse/500mlx35, program						
2	1	WBC	11/28/2018	1117	PST	NA	NA	No flow	on	4L Distilled	207,905	disabled	Installed, lid off.					Grab bottles still onsite.
											,		,					2105 not feeding data to server since 2200
																		so cycled power and it resumed feeding ~
																		0150. (Pulled wrong fuse first - 6712 lost
2	2	PD,TD	11/29/2018	0150	PST	NA	NA	Flowing	2			Sample 9 after 1 pulse	4L			0200	0200	power)
								· ·				Program done, errors have						. ,
												occurred (samples 1-35 good, so						
												error likely result of wrong fuse						
2	3	KH,WBC	11/29/2018	1240	PST	NA	NA	Flowing	1	2L Distilled	361,498	pulled ~0150 PST)	17L		1240			Turned off 6712 and fridge (propped open).
	2 2 2 2 2 2 2 2 2	2 1 2 3 2 2 2 2 3 2 1.1 2 1.2 2 2 2	2 1 DL 2 3 LM,DW 2 2 KH,JM  2 1 WBC 2 2 PD,TD 2 3 PD,KB 2 1.1 DL 2 1.2 WBC 2 2 DL,KF 2 3 PD,KB 2 1 WBC 2 1 PD,TD	Event         Visit         Staff         Date           2         1         DL         11/28/2018           2         3         LM,DW         11/29/2018           2         2         KH,JM         11/30/2018           2         1         WBC         11/28/2018           2         2         PD,TD         11/29/2018           2         3         PD,KB         11/30/2018           2         1.1         DL         11/28/2018           2         1.2         WBC         11/28/2018           2         2         DL,KF         11/29/2018           2         1         WBC         11/28/2018           2         1         WBC         11/28/2018	Event         Visit         Staff         Date         Time           2         1         DL         11/28/2018         1030           2         3         LM,DW         11/29/2018         1405           2         2         KH,JM         11/30/2018         0605           2         1         WBC         11/28/2018         1615           2         2         PD,TD         11/29/2018         0045           2         3         PD,KB         11/30/2018         NR           2         1.1         DL         11/28/2018         1203           2         1.2         WBC         11/28/2018         1530           2         2         DL,KF         11/29/2018         0304           2         3         PD,KB         11/30/2018         0455           2         1         WBC         11/28/2018         1117           2         2         PD,TD         11/29/2018         0150	Event         Visit         Staff         Date         Time         PDT           2         1         DL         11/28/2018         1030         PST           2         3         LM,DW         11/29/2018         1405         PST           2         2         KH,JM         11/30/2018         0605         PST           2         1         WBC         11/28/2018         1615         PST           2         2         PD,TD         11/29/2018         0045         PST           2         3         PD,KB         11/30/2018         NR         PST           2         1.1         DL         11/28/2018         1203         PST           2         1.2         WBC         11/28/2018         1530         PST           2         2         DL,KF         11/29/2018         0304         PST           2         3         PD,KB         11/30/2018         0455         PST           2         1         WBC         11/28/2018         1117         PST           2         2         PD,TD         11/29/2018         0150         PST	Event         Visit         Staff         Date         Time         PDT         (feet)           2         1         DL         11/28/2018         1030         PST         2.084           2         3         LM,DW         11/29/2018         1405         PST         2.199           2         2         KH,JM         11/30/2018         0605         PST         2.083           2         1         WBC         11/28/2018         1615         PST         0.04           2         2         PD,TD         11/29/2018         0045         PST         0.113           2         3         PD,KB         11/30/2018         NR         PST         0.043           2         1.1         DL         11/28/2018         1203         PST         NA           2         1.2         WBC         11/28/2018         1530         PST         NA           2         2         DL,KF         11/29/2018         0304         PST         NA           2         3         PD,KB         11/30/2018         0455         PST         NA           2         1         WBC         11/28/2018         1117         PST         <	Event         Visit         Staff         Date         Arrival Time Time         PDT (feet)         Flowmeter Flow (cfs)           2         1         DL         11/28/2018         1030         PST         2.084         1           2         3         LM,DW         11/29/2018         1405         PST         2.084         1           2         2         KH,JM         11/30/2018         0605         PST         2.083         1           2         1         WBC         11/28/2018         1615         PST         0.04         1           2         2         PD,TD         11/29/2018         0045         PST         0.043         1           2         3         PD,KB         11/30/2018         NR         PST         0.043         1           2         1.1         DL         11/28/2018         1203         PST         NA         NA           2         1.2         WBC         11/28/2018         1530         PST         NA         NA           2         2         DL,KF         11/29/2018         0304         PST         NA         NA           2         3         PD,KB         11/30/2018         0	Event         Visit         Staff         Date         Arrival Time         PST/ Time         Level (feet)         Flow neter Flow (cfs)         Outside Staff (ft)           2         1         DL         11/28/2018         1030         PST         2.084         1         2.02           2         3         LM,DW         11/29/2018         1405         PST         2.199         2         2.2           2         2         KH,JIM         11/30/2018         0605         PST         2.083         1           2         1         WBC         11/28/2018         1615         PST         0.04         1           2         2         PD,TD         11/29/2018         0045         PST         0.113         2         0.1           2         3         PD,KB         11/30/2018         NR         PST         0.043         1         0           2         1.1         DL         11/28/2018         1203         PST         NA         NA           2         1.2         WBC         11/28/2018         1530         PST         NA         NA         NA           2         2         DL,KF         11/29/2018         0304         PST </td <td>Event         Visit         Staff         Date         Time or Time         PDT         Level (feet)         Flow (cfs)         Country         Fridge T (feet)         Flow (cfs)         Staff (ft)         °C           2         1         DL         11/28/2018         1030         PST         2.084         1         2.02         1           2         3         LM,DW         11/29/2018         1405         PST         2.083         1         4           2         2         KH,JM         11/30/2018         0605         PST         2.083         1         4           2         1         WBC         11/28/2018         1615         PST         0.04         1         0         0           2         1         WBC         11/29/2018         0045         PST         0.043         1         0         2           2         3         PD,KB         11/30/2018         NR         PST         0.043         1         0         2           2         1.1         DL         11/28/2018         1203         PST         NA         NA         NA           2         1.2         WBC         11/28/2018         1530         PST</td> <td>  Figure   F</td> <td>  Nit   Staff   Date   Time   PDT   Level   Flowmeter   Flow (cfs)   Staff (ft)   C   Flush (L)   Count    </td> <td>  Name</td> <td>  Event   Visit   Staff   Date   Time   PDT   Evel   Flow (rfs)   Staff (ft)   C   Flow (fs)   Staff (ft)   C   Flow (fs)   Flow (fs)   Staff (ft)   C   Flow (fs)   Flow (fs)</td> <td>  Note   Note  </td> <td>  Figure   F</td> <td>  Figure   F</td> <td>  Note   Note  </td>	Event         Visit         Staff         Date         Time or Time         PDT         Level (feet)         Flow (cfs)         Country         Fridge T (feet)         Flow (cfs)         Staff (ft)         °C           2         1         DL         11/28/2018         1030         PST         2.084         1         2.02         1           2         3         LM,DW         11/29/2018         1405         PST         2.083         1         4           2         2         KH,JM         11/30/2018         0605         PST         2.083         1         4           2         1         WBC         11/28/2018         1615         PST         0.04         1         0         0           2         1         WBC         11/29/2018         0045         PST         0.043         1         0         2           2         3         PD,KB         11/30/2018         NR         PST         0.043         1         0         2           2         1.1         DL         11/28/2018         1203         PST         NA         NA         NA           2         1.2         WBC         11/28/2018         1530         PST	Figure   F	Nit   Staff   Date   Time   PDT   Level   Flowmeter   Flow (cfs)   Staff (ft)   C   Flush (L)   Count	Name	Event   Visit   Staff   Date   Time   PDT   Evel   Flow (rfs)   Staff (ft)   C   Flow (fs)   Staff (ft)   C   Flow (fs)   Flow (fs)   Staff (ft)   C   Flow (fs)   Flow (fs)	Note   Note	Figure   F	Figure   F	Note   Note

NR: Not recorded

All times are recorded here in PST

Forecast Rain: (NWS) 1-2" coasts and valleys, 1.5-3" mountains. Most forecasts agree 0.8-1.25" for our sites.

Actual Rainfall: ~ 0.3-3" across the county

Storm Control: Kelly Hahs

#### Sample Tracking:

Bacteria samples to VCHCA: 11/29/2018 @ 0415 (VR2/MEI/OJA/HUE) by Dave Laak 11/29/1018 @ 0335 (CAM/SIM/MPK/CC(+FBJ) by Megan Desillier 11/29/2018 @ 0355 (OXN/VEN/SPA/FIL) by Peter Doran 11/29/2018 @ 1520 (THO) by Lara Meeker 11/30/2018 @ 0700 (SCR) by Kelly Hahs

Toxicity samples to Pacific EcoRisk (via FedEx Custom Critical): 11/30/2018 @ 07:30 (SPA/THO/SCR) by Kelly Hahs

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier (Reliable Messenger Service)): 11/30/2018 @ 09:15 (All sampled grabs and composites) to David Levy by Kelly Hahs

#### Meters:

CAM/MPK/SIM/CC (JM,MD): Beckman 255 # 2151, YSI 85 # 05E1126 OJA/MEI/VRZ/HUE (DL,KF): Beckman 410 # 130240875, YSI 85 # 05E1042 OXN/VEN/SPA/FIL (PD,TD): Beckman 410 # 110341139, YSI 85 # 01G0625 THO (LM,DW): Beckman 255 # 2554, YSI 85 # 03D0379 SCR (KH,WBC): Beckman 255 # 2151, YSI 85 # 05E1126

Deg F	Deg C	Deg C
29	-2	-1.667
30	-1	-1.111
31	-1	-0.556
32	0	0
33	1	0.556
34	1	1.111
35	2	1.667
36	2	2.222
37	3	2.778
38	3	3.333
39	4	3.889
40	4	4.444
41	5	5.000
42	6	5.556
43	6	6.111
44	7	6.667
45	7	7.222

							Flowmeter							Comp bottle	Comp Duration				
Site	Event	Visit	Staff	Date	Arrival Time	PST/ PDT	<u>Level</u> (feet)	Flow (cfs)	Outside Staff (ft)	Fridge T <u>°C</u>	Flush (L)	Pump Count	Program/6712 Display	status/ Estimated Vol (L)	(nearest half hrs)	<u>Comp</u> <u>Time</u>		Toxicity Time	<u>Notes</u>
ME-CC	3	1	WBC	1/4/2010	1008	PST	1 112	NA			4L Distilled	659,940	Flow: 1 pulse/500mlx35, program	Installed, lid off.					Calibrated 6712 to 440ml. 4230 desiccant
ME-CC	3	1 2	SG,DW	1/4/2019 1/5/2019	2018	PST	1.112 1.621	NA NA		2	4L Distilled	059,940	disabled Sample 3 after 1 pulse	5%			2027		pink. Grab bottles placed in house.  Turned fridge off, drained, propped lid
ME-CC	3	3	KH,WBC	1/6/2019	0925	PST	2.279	NA		2	2L Distilled	839,325	Program done	Overflowed		0925			open. 4230 desiccant is pink.
												Replaced aux tube.							Site not feeding data to Flowlink so cycled power on 2105ci. Calibrated 6712 to 500 ml. Desiccant 1/2 pink. Grab bottles placed in
ME-VR2 ME-VR2	3 3	1 2	KH WBC,DY	1/5/2019 1/5/2019	0805 2100	PST PST	1.566 1.724	NA NA		2	2L Distilled 2L Distilled	Set to 0. 370,615	disabled Program done	Installed, lid off. 17.5		2120	2115		house. Turned off 6712.
			· · · · · · · · · · · · · · · · · · ·							-3,		•							
ME-SCR	3	1	DL	1/4/2019	1436	PST	5.894	NA	NA	Turned warmer	4L Distilled	544,484	Time: 12 min/500mlx35, program disabled	Installed, lid off.					Lowered swing arm, rope in house. Grab bottles placed in house.
ME-SCR	3	2	JM,PD	1/5/2019	2054	PST	6.036	NA	NA	0	12 Distinct	31.,.01	Sample 8 in 00:01	8			2110		bottles placed in nouse.
ME-SCR	3	3	KH,WBC	1/6/2019	1000	PST	6.313	NA	NA	2	2L Distilled	859,460	Program done	Overflowed		1000			Turned off 6712 and outside light. Raised intake and tied to rail.
																			Site not feeding data to Flowlink so cycled
																			power on 2105ci. Desiccant pink. Grab
MO-OJA	3	1	WBC	1/4/2019	1550	PST	0.099	5		2	4L Distilled	161,788	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.					bottles (+FD) placed in house. Programmed 2105 direct connection.
MO-OJA	3	2	WBC,DY	1/5/2019	1900	PST	0.099	12		2	4L Distilled	101,700	Sample 11 after 1 pulse	5			1915		2103 direct connection.
MO-OJA	3	3	EL,SG	1/6/2019	0833	PST	0.102	5	0	2	2L Distilled	230,310	Program disabled	13		0836			Turned 6712 off
140 1451	2		121.1	4 /5 /2040	0004	рст	0.004		channel	Turned	AL Distilled	204.076	Flow: 1 pulse/500mlx35, program						Cook haddles also ad in house
MO-MEI MO-MEI	3	1 2	KH WBC,DY	1/5/2019 1/5/2019	0904 2000	PST PST	0.081 0.163	5	dry	on 4	4L Distilled 2L Distilled	201,076 286,541	disabled Program done	Installed, lid off. 16.5		2020	2015		Grab bottles placed in house. Turned fridge off, propped open.
				_, _,						Turned			Time: 11 min/500mlx35, program						Dug out intake strainer. 4230 desiccant
MO-FIL	3	1	WBC	1/4/2019	1317	PST	0.477	NA	NA	on	4L Distilled	327,416	disabled	Installed, lid off.					pink. Grab bottles placed in house.
MO-FIL MO-FIL	3	2	JM,PD EL,SG	1/5/2019 1/6/2019	1950 0931	PST PST	1.899 0.39	NA NA	NA NA	4 1	2L Distilled	483,917	Sample 6 in 00:07 Program done	4 19		0934	2000		Turned off fridge and 6712
			22,00	1,0,2013	0551		0.55			Turned	ZZ D ISCINCO	103,317	Flow: 1 pulse/500mlx35, program	-		0331			4230 desiccant blue. Grab bottles placed in
MO-OXN	3	1	DL	1/4/2019	1302	PST	0.109	0.2	dry	on	4L Distilled	296,292	disabled	Installed, lid off.					house.
MO-OXN	3	2	SG,DW	1/5/2019	NR	PST	1.65	57.3	2.25	2	21 22 121	400 774	Sample 9 after 1 pulse	25%		2440	1840		Toward off feider assessed asses
MO-OXN	3	3	SG,DW	1/5/2019	2135	PST	0.383	3.9		Turned	2L Distilled	430,771	Program done Flow: 1 pulse/500mlx35, program	Full		2140			Turned off fridge, propped open.  4230 Desiccant pink. Grab bottles placed in
MO-CAM	3	1	DL	1/4/2019	0930	PST	0.035	10	no flow	on	4L Distilled	200,720	disabled	Installed, lid off.					house.
MO-CAM	3	2	DL,MC	1/5/2019	1833	PST	0.4	63	0.35	2			Sample 6 after 1 pulse	3			1845		
																			Distributer arm loose and ~1" water in bottom of fridge. Turned off fridge, drained,
MO-CAM	3	3	DL,MC	1/5/2019	2210	PST	0.034	10	0.05	3	2L Distilled	288,537	Program done	14		2215			propped lid open. 6712 off.
			, -	, , , , , , , , , , , , , , , , , , , ,						Turned		,	Flow: 1 pulse/500mlx35, program	ı					4230 Desiccant pink with blue. Grab bottles
MO-SIM	3	1	DL	1/4/2019	1025	PST	0.138	2	0	on	4L Distilled	179,576	disabled	Installed, lid off.					placed in house. Turned off 6712 and fridge, propped open.
MO-SIM	3	2	DL,MC	1/5/2019	2030	PST	1.162	146	1	5	2L Distilled	253,998	Program done	19		2055	2040		Water very muddy (Woolsey Fire burned Bus Canyon watershed).
IVIO-SIIVI			DL,IVIC	1/3/2013	2030	131	1.102	140			2L Distilled	233,336	1 Togram done	13		2033	2040		Site not feeding data to Flowlink so cycled
																			power on 2105ci. Programmed 2105ci direct
МО-МРК	3	1	КН	1/5/2019	1125	PST	0.072	0.2	<0.1, toe	Turned on	4L Distilled	373,736	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.					connection. Desiccant 1/2 pink. Grab bottles placed in house.
													Program done, errors have occurred. No liquid detected						
МО-МРК	3	2	DL,MC	1/5/2019	1928	PST	0.501	19.4	0.6	3			samples 1-9. Reprogrammed 9 samples. Sample after 1 pulse.	7			1940		
MO-MPK	3	3	DL,MC	1/5/2019	2126	PST	0.199	3.2	0.2	4	2L Distilled	566,322	Program done	19		2130			Turned off fridge and propped open. Turned off 6712.

															comp				
							Flowmeter							Comp bottle	Duration				
					Arrival	PST/	Level	Flowmeter	Outside	Fridge T		Pump		status/	(nearest	Comp	Grab	Toxicity	
Site	Event	Visit	Staff	Date	Time	PDT	(feet)	Flow (cfs)	Staff (ft)	<u>°C</u>	Flush (L)	Count	Program/6712 Display	Estimated Vol (L)	half hrs)	Time	Time	Time	Notes
		-			_										-				Replaced distributer arm style (to elbow).
													Flow: 1 pulse/500mlx35, program						4230 desiccant blue. Grab bottles placed
мо-тно	3	1	DL	1/4/2019	1105	PST	2.087	1	2.21	2	4L Distilled	300,362	disabled	Installed, lid off.					onsite.
																			Grabs not collected during storm due to rain
																			intensity/flood warning in Hill Canyon Burn
													Program done, errors have						area (for safety) but collected at sample
													occurred. Sample 1 no more						pickup (no bacti due to lab schedule).
мо-тно	3	2	KH,WBC	1/6/2019	0830	PST	2.181	1		1	2L Distilled	465.740	liquid. Samples 2-35 good.	20		0830	0840		Turned 6712 off.
				, , ,						Turned		,	Flow: 1 pulse/500mlx35, program						4230 desiccant half pink, half blue. Grab
MO-VEN	3	1	DL	1/4/2019	1356	PST	0.043	1		on	4L Distilled	209.322	disabled	Installed, lid off.					bottles placed in house.
MO-VEN	3	2	JM,PD	1/5/2019	1818	PST	0.863	74	2.2	3		,	Sample 4 after 1 pulse	1			1830		
MO-VEN	3	3	SG,DW	1/5/2019	2203		0.113	3		2	2L Distilled	303.661	Program done	Full		2205			Turned off fridge, propped open.
				-, -,								,	Time: 11 min/500mlx35, program						5 /1 11 1
MO-HUE	3	1	DL	1/4/2019	1210	PST	NA	NA		2	4L Distilled	166.951	disabled	Installed, lid off.					Grab bottles placed onsite.
MO-HUE	3	2	SG,DW	1/5/2019	1932	PST	NA NA	NA	~4'	2	4E Distilled	100,551	Sample 10 in 00:02	35%			1940		Grab bottles placed offsite.
MO-HUE	3	2	EL,SG	1/6/2019	1023		NA NA	NA	4	0	2L Distilled	322.223	Program done	18		1025	1340		Turned 6712 off
IVIO-IIOL	,		LL,30	1/0/2013	1023	F 31	INA	INA			ZL Distilled	322,223	r rogram done	10		1023			Cycled power on 2105ci. Programmed
																			· · ·
										T			Flance 4 and a /500 and 25 and and						pacing 2105ci direct connection. Cleared
		_	14/00	4/4/2040		D.C.T.				Turned	4. 5: .:!!	254 700	Flow: 1 pulse/500mlx35, program						some vegetation around house. Placed grab
MO-SPA	3	1	WBC	1/4/2019	1455	PST	NA	NA	no flow	on	4L Distilled	364,780	disabled	Installed, lid off.			4005		bottles onsite.
MO-SPA	3	2	JM,PD	1/5/2019	1917	PST	NA	NA		3			Sample 12 after 1 pulse	4			1925		
				4 /5 /2015	202-	D.C.			Flourin-	2	21 21 111 1	E47.045	Drogram dono	16		2025			Turned 6712 and fridge off property
MO-SPA	3	3	JM,PD	1/5/2019	2025	PST	NA	NA	Flowing	3	2L Distilled	517,813	Program done	16		2028			Turned 6712 and fridge off, propped open.

NR: Not recorded

All times are recorded here in PST

Forecast Rain: (NWS) 0.5-1" coasts and valleys, 1-2" mountains, orographic enhancement south-facing slopes. Other forecasts vary 0.25-1.3" across the county.

Actual Rainfall: 0.3-1" across the county

Storm Control: Kelly Hahs and Lara Meeker

Sample Tracking:

Bacteria samples to VCHCA:

01/05/2019 @ 21:57 (VR2/MEI/OJA+FD) by Danielle Yaconelli

01/05/2019 @ 22:40 (CAM/SIM/MPK) by Dave Laak

01/05/2019 @ 21:45 (VEN/SPA/FIL/SCR) by Jaime McClain

01/05/2019 @ 21:15 (OXN/HUE/CC) by Steven Greer

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier (Essential Courier)): 01/06/2019 @ 13:00 (All sampled grabs and composites) to Joshua Johnson by Kelly Hahs

Meters:

CAM/MPK/SIM (DL,MC): Beckman 410 # 110341139, YSI 85 # 03D0379 OJA/MEI/VR2 (WBC,DY): Beckman 255 # 2554, YSI 85 # 05E1042 VEN/SPA/FIL/SCR (JM,PD): Beckman 255 # 2151, YSI 85 # 01G0625 OXN/HUE/CC (SG,DW): Beckman 410 # 130240875, YSI 85 # 05E1126 THO (KH,WBC): Beckman 255 # 2151, YSI 85 # 01G0625

Deg F	Deg C	Deg C
29	-2	-1.667
30	-1	-1.111
31	-1	-0.556
32	0	0
33	1	0.556
34	1	1.111
35	2	1.667
36	2	2.222
37	3	2.778
38	3	3.333
39	4	3.889
40	4	4.444
41	5	5.000
42	6	5.556
43	6	6.111
44	7	6.667
45	7	7.222

															comp				
							Flowmeter							Comp bottle	Duration				
					<b>Arrival</b>	PST/	Level	Flowmeter	Outside	Fridge T		Pump		status/	(nearest	Comp	Grab	Toxicity	=
<u>Site</u>	Event	Visit	Staff	Date	Time	PDT	(feet)	Flow (cfs)	Staff (ft)	<u>°C</u>	Flush (L)	Count	Program/6712 Display	Estimated Vol (L)	half hrs)	Time	Time	<u>Time</u>	<u>Notes</u>
																			Lowered swing arm, rope in house. Grab
																			bottles placed in house. Changed 6712
																			tubing reset counts to zero. Calibrated
																			sampler. Found ant remains spread all over
												Reset to	Time: 21 min/500mlx35, program						inside of pump (e.g. on rollers, wall, and
ME-SCR	4	1	KH	1/30/2019	1000	PST	6.967	NA	NA	-2	4L Distilled	zero	disabled	Installed, lid off.					floor) when changing tubing.
ME-SCR	4	2	KH,WBC	1/31/2019	1340	PST	8.414	NA	NA	1			Sample 18 in 00:14	9L			14:00		
ME-SCR	4	3	WBC,DL	2/1/2019	0900	PST	6.317	NA	NA	1	2L Distilled	NR	Program done	17.5L		0900			Raised intake and tied to rail.

Event Notes:	Deg F	Deg C	Deg C
NR: Not recorded	29	-2	-1.667
All times are recorded here in PST	30	-1	-1.111
Forecast Rain: (NWS) 0.25-0.75" coasts and valleys	31	-1	-0.556
Actual Rainfall: 1.15"	32	0	0
Storm Control: Kelly Hahs	33	1	0.556
	34	1	1.111
	35	2	1.667
Sample Tracking:	36	2	2.222
Bacteria samples to VCHCA (Cameron Chandler):	37	3	2.778
01/31/2019 @ 14:32 (SCR) by Kelly Hahs	38	3	3.333
	39	4	3.889
Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier (Hector Sanchez)):	40	4	4.444
02/01/2019 @ 10:00 (All sampled grabs and composite) to Hector Sanchez by Bill Carey	41	5	5.000
	42	6	5.556
Meters:	43	6	6.111
SCR: NR	l		
CAM/MPK/SIM (DL,MC): Beckman 410 # 110341139, YSI 85 # 03D0379	44	7	6.667
OJA/MEI/VR2 (WBC,DY): Beckman 255 # 2554. YSI 85 # 05E1042	45	7	7.222

VEN/SPA/FIL/SCR (JM,PD): Beckman 255 # 2151, YSI 85 # 01G0625 OXN/HUE/CC (SG,DW): Beckman 410 # 130240875, YSI 85 # 05E1126 THO (KH,WBC): Beckman 255 # 2151, YSI 85 # 01G0625

<u>Site</u>	Event	Visit	<u>Staff</u>	<u>Date</u>	Arrival Time	PST/ PDT	Flowmeter Level (feet)	Flowmeter Flow (cfs)	Outside Staff (ft)	Fridge T °C	Flush (L)	Pump Count	Program/6712 Display	Comp bottle status/ Estimated Vol (L)	Comp Duration (nearest half hrs)	Comp		Toxicity Time	_ Notes
													Time: 41 min/500mlx35. Program						Lowered swing arm. Grab bottles placed
ME-SCR	5	1	KH,WBC	5/1/2019	10:15	PDT	8.168	NA	NA	0	4L Distilled	362,413	started	bottle, lid off					onsite. Sample 1 volume good.
ME-SCR	5	2	KH,WBC	5/2/2019	10:20	DDT	8.115	NA	NA	2	2L Distilled	656,846	Program done	17	24	10:25	10.25		Raised swing arm. Grabs taken in diversion canal. Turned 6712 off.
IVIE-SCI			KII,WDC	3/2/2013	10.20	FDI	0.113	INA			ZL Distilled	030,840	r rogram done		24	10.23	10.23		Replaced 4230 desiccant. Cleared debris
										Turned			Time: 41 min/500mlx35. Program	Installed labeled					around intake. Grab bottles placed onsite.
MO-FIL	5	1	KH,WBC	5/1/2019	08:16	PDT	0.441	NA	NA	on	4L Distilled	490,456	started	bottle, lid off					Sample 1 volume good.
MO-FIL	5	2	KH,WBC	5/2/2019	09:14	PDT	0.37	NA	NA	2	2L Distilled	643,485	Program done	18	24	09:20	09:20		Turned fridge off. Propped open with postioning rack.
				.,,								,							Installed silicone dam and calibration line.
																			Replaced 4230 desiccant. Grab bottles
									trickle flow	Turned			Time: 41 min/500mlx35. Program	Installed labeled					placed onsite. Installed Oxnard module 2105ci and renamed Ventura-1x. Sample 1
MO-VEN	5	1	KH,WBC	5/1/2019	11:10	PDT	0.042		<oss< td=""><td>on</td><td>4L Distilled</td><td>309,395</td><td>started</td><td>bottle, lid off</td><td></td><td></td><td></td><td></td><td>volume good.</td></oss<>	on	4L Distilled	309,395	started	bottle, lid off					volume good.
			,									,	Program done, errors occurred.	,					Removed silicone dam and calibration line.
NAO MEN	5	2	KILIMBC	F /2 /2010	44.40	DDT	0.043		trickle flow <oss< td=""><td>4</td><td>Distillant</td><td>405.064</td><td>No more liquid samples 7-11 (14:46-17:30)</td><td>18</td><td>24</td><td>44.25</td><td>44.25</td><td></td><td>Turned fridge off, propped lid open. Removed temporary 2105ci.</td></oss<>	4	Distillant	405.064	No more liquid samples 7-11 (14:46-17:30)	18	24	44.25	44.25		Turned fridge off, propped lid open. Removed temporary 2105ci.
MO-VEN MO-OXN	5	1	KH,WBC DRY	5/2/2019	11:18	PDT	0.043		<b>\033</b>	4	2L Distilled 4L Distilled	405,861	(14.40-17.50)	18	24	11:25	11:25		Removed temporary 2103Ci.
MO-OXN	5	2	J			PDT					2L Distilled								
MO-SPA	5	1	DRY			PDT	NA	NA			4L Distilled								
MO-SPA	5	2				PDT	NA	NA			2L Distilled		Time: 41 min/F00mly2F Bragram	Installed labeled				_	Cycled newer on 2105si. Blaced grab bettles
ME-VR2	5	1	WBC,DW	5/7/2019	10:25	PDT	0.398	NA		4	4L Distilled	382,994	Time: 41 min/500mlx35. Program started	bottle, lid off					Cycled power on 2105ci. Placed grab bottles onsite.
			-,	.,,								, , , , , , , , , , , , , , , , , , , ,							
ME-VR2	5	2	WBC,DW	5/8/2019	10:15	PDT	0.395	NA		3	2L Distilled	726,604	Program done	15.5	24	10:15	10:15		Cycled power on 2105ci. Turned 6712 off.
MO-OJA	5	1	WBC,DW	5/7/2019	09:05	PDT	0.102	5	trickle flow <oss< td=""><td>2</td><td>4L Distilled</td><td>230,310</td><td>Time: 41 min/500mlx35. Program started</td><td>Installed labeled bottle, lid off</td><td></td><td></td><td></td><td></td><td>Installed silicone dam and low flow strainer.</td></oss<>	2	4L Distilled	230,310	Time: 41 min/500mlx35. Program started	Installed labeled bottle, lid off					Installed silicone dam and low flow strainer.
IVIO-OJA	,	1	WBC,DW	3/1/2013	03.03	, ,	0.102	3	trickle flow	2	4L Distilled	230,310	starteu	bottle, lid off					installed silicone dam and low now strainer.
MO-OJA	5	2	WBC,DW	5/8/2019	09:10	PDT	0.102	5	<oss< td=""><td>3</td><td>2L Distilled</td><td>328,097</td><td>Program done</td><td>16.8</td><td>24</td><td>09:10</td><td>09:10</td><td></td><td>Turned 6712 off.</td></oss<>	3	2L Distilled	328,097	Program done	16.8	24	09:10	09:10		Turned 6712 off.
MO IIIIE	-	1	WBC,DW	5/7/2019	11:25	PDT	NA	NA		2	4L Distilled	322,223	Time: 41 min/500mlx35. Program						Placed grab bottles onsite. Replaced 2105ci
MO-HUE MO-HUE	5 5	1 2	WBC,DW WBC,DW	5/8/2019	12:15		NA NA	NA NA		4	2L Distilled	483,751	started Program done	bottle, lid off 17.5	24	12:15	12:15		desiccant. Turned 6712 off.
MO-MEI	5	1	DRY			PDT					4L Distilled	,							
MO-MEI	5	2				PDT					2L Distilled								
ME-CC	5 5	1 2	KH,WBC	5/13/2019 5/14/2019			1.125 1.217	NA NA		Turned on 4	4L Distilled  2L Distilled	Changed tubing rese to 0 536,653	t Time: 41 min/800ml (delivers ~450ml) x35, program started "Sample 35 in 00:33". Stopped program.	Installed labeled bottle, lid off	24	11:20	11:20		Replaced 4230 and 2105ci desiccant. 6712 needs dessicant. Would not calibrate, so workaround to get ~ 450ml samples is prepurge 5,000 and post-purge 500 counts,800 ml sample for 30L bottle. Programming will need updated for next event. Tried recalibrating with liquid detector on but not working. Turned 6712 and fridge off, propped open.
																			Installed silicone dam and calibration line.
									trickle flow	Turned			Time: 41 min/500mlx35. Program	Installed labeled					Replaced pink 4230 and 2105ci desiccant.  Grab bottles placed onsite. Sample 1
MO-CAM	5	1	KH,WBC	5/13/2019	12:00	PDT	0.035	10	<0.1 cfs	on	4L Distilled	293,637	started	bottle, lid off					volume good.
									trickle flow				"Sample 35 in 00:20". Stopped						Removed silicone dam and calibration line.  Turned fridge off, propped lid open. Turned
MO-CAM	5	2	KH,WBC	5/14/2019	12:00	PDT	0.033	10	<0.1 cfs	18	2L Distilled	381,211	program.	18	24	12:10	12:10		6712 off.
MO-SIM	5	1 2	KH,WBC	5/13/2019			0.144	2	OSS <toe &lt;1 cfs OSS<toe &lt;1 cfs</toe </toe 	Turned on	4L Distilled 2L Distilled	259,563	Time: 41 min/500mlx35, program started. Sample 1 "Error no more liquid" so resecured intake below water line and reprogrammed.  Program done	Installed labeled bottle, lid off	24	09:40	09:40		Installed calibration line and secured in channel with concrete block. Replaced pink 4230 desiccant. Grab bottles placed onsite. Sample 1 volume good. Reconnected intake line. Replaced pink 2105ci desiccant. Turned fridge off, propped lid open.

							Flowmeter							Comp bottle	Duration				
					Arrival	PST/	Level	Flowmeter	Outside	Fridge T		Pump		status/	(nearest	Comp	Grab	Toxicity	
<u>Site</u>	Event	Visit	Staff	<u>Date</u>	Time		(feet)	Flow (cfs)	Staff (ft)	°C	Flush (L)	Count	Program/6712 Display	Estimated Vol (L)	half hrs)			Time	<u>Notes</u>
МО-МРК	5	1	KH,WBC	5/13/2019	08:25	PDT	0.071	0.2	trickle flow <0.1 cfs	on	4L Distilled	571,807	Time: 41 min/500mlx35, program disabled	Installed labeled bottle, lid off					Cleared debris from collection area. Installed silicone dam and calibration line. Replaced pink 4230 desiccant. Grab bottles placed onsite. Sample 1 volume good. Removed silicone dam and calbration line. Replaced pink 2105ci desiccant. Turned
МО-МРК	5	2	KH,WBC	5/14/2019	08:47	PDT	0.074	0.2	trickle flow <0.1 cfs	4	4L Distilled	720,255	Program done	18	24	08:55	08:55		fridge off, propped lid open. Turned 6712 off.
мо-тно мо-тно	5 5	1 2	KH,WBC KH,WBC	5/13/2019 5/14/2019	10:20 10:28		2.086 2.128	1 1	2.1	2 4	4L Distilled 2L Distilled	472,174 654,100	Time: 41 min/500mlx35, program disabled Program done	Installed labeled bottle, lid off Overflowed	24	10:40	10:40		4230 desiccant purple. 2105 desiccant replaced. 6712 needs desiccant. Grab bottles placed onsite. 6712 pre-purge purges as programmed, but then stops purging and display continues to say purging. Disconnected power to reset. Same thing happened. Changed AC power to connect to pump instead of battery. Initially nothing happened but then the display came up. Ran program but still hanging up on purge cycle. After 1-2 minutes sampler then pumps sample. Sample 1 volume good. Turned 6712 off.

NR: Not recorded All times are recorded here in PDT Forecast Rain: Dry weather Storm Control: NA

#### Sample Tracking:

Bacteria samples to VCHCA: 05/02/2019 @ 12:12 (SCR/FIL/VEN) to Cameron Chandler by Kelly Hahs 05/08/2019 @ 12:45 (VR2/OJA/HUE) to Salvador Barragan by W.B. Carey 05/14/2019 @ 12:50 (CC/CAM/THO/SIM/MPK) to Salvador Barragan by Kelly Hahs

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier): 05/02/2019 @ 14:00 (SCR/FIL/VEN) to Hector Sanchez by Kelly Hahs 05/08/2019 @ 13:55 (VR2/OJA/HUE) to Bruce Markovich by W.B. Carey 05/14/2019 @ 13:40 (CC/CAM/THO/SIM/MPK) to Bruce Markovich by W.B. Carey

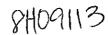
#### Meters:

SCR/OXN/VEN/SPA/FIL (KH,WBC): OJA/MEI/VR2/HUE (WBC,DW): CAM/MPK/SIM/THO/CC (KH,WBC):

Beckman 255 # 2151, YSI 85 # 05E1126 Beckman 255 # 2554, YSI 85 # 03D0379 Beckman 410 # 130240875, YSI 85 # 05E1042 Beckman 410 # 110341139, YSI 85 # 01G0625

Deg F	Deg C	Deg C
29	-2	-1.667
30	-1	-1.111
31	-1	-0.556
32	0	0
33	1	0.556
34	1	1.111
35	2	1.667
36	2	2.222
37	3	2.778
38	3	3.333
39	4	3.889
40	4	4.444
41	5	5.000
42	6	5.556
43	6	6.111
44	7	6.667
45	7	7.222

Appendix E. Chain-of Custody Forms





## Ventura County Watershed Protection District NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season

Pre-season - Weck Laboratories. Invoice Contract No. AE17-001

Sampling Date:	8/9/						F	Proje	ect N	lum	ber:	2018/19-PRE
Sampling Team:	KIHA	<del>۱۱۸ م۰ ۱۱۸</del>	<u>5. (</u>	AR	アガ							
			ν,		NO2+NO3-N)	see list in side bar) y)			id HNO3 (see notes #2)	b SOP		* Metals by EPA 200.8, Total: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn
SAMPLE ID	DATE/TIME C	OLLECTED	EPA 525.2	EPA 625-CTR	EPA 353.2 (NO.	EPA 200.8* (total only, see list in side bar) EPA 245.1. Hg (total only)	-	No action required	Clean with detergent and HNO3 (see notes #2)	Please dispose of per Lab SOP	Bottle Quantity	NOTES
EB lines	8/9/18	0845	Х	Х	×	Х					7	See note #1
EB composite	10	1240	Х	Х	X	Х					1	To be split in lab. See note #1
			-									
20 L carboy and lid							$\neg$		х		1	Please place tape or plastic bag over top
Blue cube cooler							$\dashv$	х			1	
Black bag								х			1	
Waste Dilute HNO3												
Relinquished	Printed Name Signature Affiliation		Kolla	El S	kly	y 1+A S		S Date	-/Tir	ne .		8/9/18/ 150x
Received	Printed Name Signature		<u>                                     </u>	Ā	<u>\</u>	Go1	···-			9-	-	
	Affiliation	Weck Lal	bş				1	Date	/Tir	ne -	ζ	5/9/18 150 y
'	1. Please use t											
Relingx	2. Please clear	Alu Alu			)	8/ 8/	19	I &	ed v	vate (	<u>r pe</u> 7-l 7:	45 4.2°C
Ventura Countyw Management Pro			rt	-		Page D	≣ - 2	ι "		•		Attachment D Appendix E



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season Bacteriological - VCHCA Lab (SIDE 1 of 2)

Sampling Date: Sampling Team		18 ak+Megan Des			ect Number:	2018/1	9-1 (\	Wet)
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	ME-CC		X	X		71	1	
	ME-SCR		X	X			1	
	ME-VR2	11/22/19 01:30	X	x			1	
	MO-CAM		X	X			1	
	MO-OJA	11/21/18 23:15	X	х			1	
	MO-MEI	11/22/18 00:20	X	х	11 2 1 1		1	
	MO-VEN	111	X	Х			1	
	FB-1		X	х			1	
Relinquished	Printed Name Signature Affiliation	David Lag		2	e/Time	1/22/1	18	02:20
Received	Printed Name	Denise Vor	T	à	rgen	,		
	Signature Affiliation	PH LOD	2	BO	Time III	22	19	0293
Other Notes:		cal analyses within 6 hours o			-,,	1	-	
Julei Notes:	1:10 1:100, and 1:100		ı san	ipie c			1	
	1.10 1.100, and 1.100	o amutous for 15. con		_		4, )	_	



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE 1 of 2)

Sampling Date: Sampling Team:	Arne A.	1-11/22/2018 Lara M.		Projec	ct Nun	ber	2018/	19-1	(Wet)
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)				Number of Bottles	NOTES
	ME-CC		х	х				1	
	ME-SCR		X	Х				1	
	ME-VR2		х	X	711	1		1	
	MO-CAM	11/21/18 22:35	х	X	*			1	
	мо-оја		Х	X				1	
	MO-MEI		Х	X				1	
	MO-VEN		Х	х				1	
	FB-1		X	x				1	
Relinquished Received	Printed Name Signature Affiliation Printed Name	ARNE AND Denis lan	7	Date/			1/-	22.	-18 02:22
	Signature Affiliation	Delita Un P.H. Lab		Date/	Time	įή	22	18	6660
		al analyses within 6 hours of	sam	ple co	llection	n tin	ne		
	1:10 1:100, and 1:1000	dilutions for E. coli							



# Chain of Custody Record Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE 2 of 2)

11/21/18 -11/22/18 Sampling Date: Project Number: 2018/19-1 (Wet)

Sampling Team: Total Coliform (Tray Method - WQ IDEXX (Tray Method - WQ IDEXX C. 4 Number of Bottles coli LAB USE DATE/TIME E. ONLY SAMPLE ID COLLECTED NOTES X 1 MOSPA X X X 1 MO-FIL MO-SIM X X 11/22/18 01:10 1 11/24/18 00:10 X X MO-MPK 1 MO-THO X 1 X MO-QXN 1 MO-HUE 1 11/21/18 22:35 X FD-1 X 1 Relinquished Printed Name Signature 02:20 Date/Time 1112 2/18 Affiliation Received Printed Name Signature Affiliation Date/Time \ Other Notes: Perform bacteriological analyses within 6 hours of sample collection time 1:10 1:100, and 1:1000 dilutions for E. coli



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE 2 of 2)

Sampling Date: Sampling Team:	11/24/18-1 Steven S.	Green, Emily	low	Proje	ect Nur	nber	: 2018/	19-1 (	Wet)
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)				Number of Bottles	NOTES
	MO-SPA		X	x				1	
	MO-FIL	11/22/18 0125	X	X				1	SFIEL
	MO-SIM		X	х				1	
	MO-MPK		X	X			* >	1	
	мо-тно		X	X				1	
	MO-OXN	11/22/18 10:40	X	X				1	SG, EL
	MO-HUE		X	x	MIT			1	
	FD-1		X	x				1	
					1	7			
Relinquished	Printed Name Signature Affiliation	Steven S. Gm.	7		/Time		12/	8	
Received	Printed Name	Denbelon	to	Dr	06	2			
	Signature	ideia los	100	W	×-		V	100	
	Affiliation	44 Lab		Date,	/Time	77	SS	18	0860
Other Notes:	Perform bacteriologic	cal analyses within 6 hours of	of san	nple c	ollectio	on tir	ne		
	1:10 1:100, and 1:100	0 dilutions for E. coli							



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season Bacteriological - VCHCA Lab (SIDE 2 of 2)

11/21/118/11/22/18 Project Number: 2018/19-1 (Wet) Sampling Team: JM 1.PD Total Coliform (Tray Method - WQ IDEXX (Tray Method - WQ IDEXX Number of Bottles coli LAB USE DATE/TIME E. ONLY SAMPLE ID COLLECTED NOTES X X 1 MO-SPA MO-FIL X X 1 X X MO-SIM 1 X X 1 MO-MPK X X MO-THO 1 X X MO-OXN 1 X 11/22/118/00/30 X 1 MO-HUE FD-1 X X Jaime Meclanon Relinquished Printed Name Signature 0213 Consultant Date/Time 11/22/18 Affiliation Received Printed Name Signature Affiliation Perform bacteriological analyses within 6 hours of sample collection time Other Notes: 1:10 1:100, and 1:1000 dilutions for E. coli



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season Bacteriological - VCHCA Lab (SIDE 1 of 2)

11/21/18/11/22/18 Sampling Date: Project Number: 2018/19-1 (Wet) Sampling Team: Total Coliform (Tray Method - WQ IDEXX E. coli (Tray Method - WQ IDEXX Number of Bottles LAB USE DATE/TIME ONLY SAMPLE ID COLLECTED NOTES X X ME-CC 11/22/18 1 0130 ME-SCR X X 1 X X 1 ME-VR2 X X MO-CAM 1 X X MO-OJA 1 X X MO-MEI 1 11/21/18 /2315 X X MO-VEN 1 X X FB-1 1 Jaime Mcclan Relinquished Printed Name Signature owntant Date/Time 11/22/18 Affiliation Printed Name Received Signature Affiliation Date/Time Perform bacteriological analyses within 6 hours of sample collection time Other Notes: 1:10 1:100, and 1:1000 dilutions for E. coli



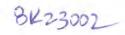
# Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 1 of 2)

Sampling Date:	11/21-22/18		- 2				Project Num	nber: 2018/	19-1 (	(Wet) Grabs
Sampling Team:	DL +MD LM+	AA	, 1	M	+ 0	D /	ig tel			
	DATE/TIME	Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits			Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
SAMPLE ID	COLLECTED	Oil	Cyan	GRC	MT	Trav			Zun	NOTES
ME-CC	11/22/18/0130	2	1	2	3	1			9	1m + pp
ME-SCR		2	1	2	3	1		-	9	- No flaw
ME-VR2	11/22/18 0130	2	1	2	3	1			9	DL+MD
MO-CAM	11/21/18 2235	3	1	2	3	1			10	LM+AA
MO-OJA	11/21/18 2315	2	1	2	3	1			9	DL+MD
MO-MEI	11/22/18 0020	2	1	2	3	1			9	DL+MD
MO-VEN	11/21/18/2315	2	1	2	3	1			9	1m + PD
MO-OXN	11/21/18 2340	2	1	2	3	1			9	SG+ BUEL
FD-1	11/21/18 2235	2	1	2	3	1			9	LMEAA
Relinquished	Printed Name Signature Affiliation		T	-	0	5	W-B-	-	2-1	
Received	Printed Name	21	2	Le	, _ ,		Date/ Time	11-2.	5 (	, 0,30
	Signature	11.	1	0	0	200	all h	1 , 7 1	1. 5.	
Other Notes:	Travel blanks are only to EPA 624 has replaced EI		naly	zed i	if sar	nple				





# Ventura County Watershed Protection District

### NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 2 of 2)

Sampling Date:	11/21+22/18									ber:	2018	3/19	-1 (	Wet) Grabs
ampling Team:	DL+mD LM+	A	<b>\</b>	JN	1+1	0,	56	FEI	_					
144		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits							Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
SAMPLE ID	DATE/TIME COLLECTED	Oil 8	Cyan	GRO	MTB	Trav							Num	NOTES
MO-SPA		2	1	2	3_	1	-	L		_		-	9-	
MO-FIL	11/22/18 0125	2	1	2	3	1							9	SHTEL
MO-SIM	11/22/18 0110	2	1	2	3	1							9	LM EAA
10-HUE	11/22/18/0030	2	1	2	3	1							9	JM+ PD
MO-THO		2	1	2	3_	1							9-	-
MO-MPK	11/22/18 0010	2	1	2	3	1							9	LM & AA
									F					E .
Relinquished	Printed Name 6	1.8	. (	AF	ZE:	1		1						
	Signature	w. V	B.		ar.	ely	D	ate/	Гime		(1	- 2	-3	-18 2530
Received	Printed Name Signature	10.	10	2	e u	7								
	Affiliation Re.	v'al	10	92	A	05	ex	ate/	Γime	-	117	2 3	1, 8	0530
Other Notes:	Travel blanks are only to EPA 624 has replaced E								of M	TBE	or 2	2-CL	EVI	Ξ)
	Intywide Stormwater Quality It Program 2018/19 Annual R	epor		/23	/18	Page	073; DE - 10				0	32		Attachment D Appendix E



Management Program 2018/19 Annual Report

# Chain of Custody Record

# Ventura County Watershed Protection District

### NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Composites - Weck Laboratories (SIDE 1 of 2)

Sampling Date:	11/2	2/18							6	Proj	ect N	Num	ber:	201	8/19	9-1 (	Wet) Composites
Sampling Team:	KHAI	NBC, I	m	+ 0	A	- 7	IM	1+7	D	, [	ال	15	G				
SAMPLEID			ubsample for imazapyr and NID as CTAS (see V-11 COC)	Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO3-N, Total Chlorine Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	9+8	3OD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	hosphorus-P Total & Dissolved	525-CTR, 8270SIM-PAH, 8270SIM-Phenols *	15.3-Herb 547-Glyphosate, 608-CTR	25.2 Reg+507, 525-OPP-LL	ORO/ORO (EPA 8015B)	LLK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
ME-CC			S	X	X	X	X	X	X	X	Х	X	X	X	X	1	Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test  NOTES  JM, PD  DL, SG  DL, SG  DL, SG  DL, SG  DL, SG  DL, SG
ME-SCR				X		X	X	Х	X	X	X	X	х	X	X	1	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test  NOTES  JM, PD  DL, SG  DL, SG  DL, SG  DL, SG  DL, SG
ME-VR2	11/22/18	1020	X	Х	Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND  Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra  volume per old many and set of MS/MSD where extra  volume per mit (all test  * NOTES  * X X X X X X X X X X X X X X X X X X												
MO-CAM	Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Al, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Ag, Ag, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 8, Total & Dissolved: Sb, Ag, Ag, Ag, Be, Be, Cd, Cr, Cy, Fe, Ni, Pb, Se, Ti, Zn, Hg  Metals by 200, 7, Total Ch, Ph, Se, Ti, Zn, Hg  Metals by 200, 7, Total Ch, Ph, Se, Ti, Zn, Hg  Metals by 200, 7, Total Ch, Ph, Se, Ti, Zn, Hg  Metals by 200, 7, Total Ch, Ph, Se, Ti, Zn, Hg  Metals by 200, 7, The Sh, Se, Ti, Zn, Hg  Metals by 200, 7, The Sh, Se, Ti, Zn, Hg  Metals by 200, 7, The Sh,																
MO-OJA	Metals by 200.8, Total & Dissolved: Sb, Age, Al, A., Mg (for Hardness calc.), AND Na, K 608 include alpha- & garma-chlordane g																
MO-MEI	Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Bg, Cd, Cr, Cr, U, Fg, N, Pb). Se, Tl, Zn, Hg Metals by 200.7, Total & Dissolved: Sb, Ag, AJ, As, Bg, Cd, Cr, Cr, U, Fg, N, Pb). Se, Tl, Zn, Hg Metals by 200.7, Total (Conly): Se, Mg (for Hardness calc.), AND Na, K Mg (for Hardness calc.), AND																
MO-VEN	Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (Gn)  Metals by 200.8, Total & Dissolved: Sb, Ag, AJ, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (Gn)  Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (Gn)  Metals by 200.7																
Relinquished Received	Signature Affiliation Printed Nar		W	- B	- (	RE	rey	ν		Dat	e/Ti	ime		11	-2	3	18 0530
Other Notes:	Affiliation  1) Filter for	dissolved i	meta	ls an			m co	ondu	ctivi	ity as				11	2	3/	14 0530





# Ventura County Watershed Protection District

## NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Composites - Weck Laboratories (SIDE 2 of 2)

Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Fe, Cd, Cr, Cu, Fe, Ni, Pb, Se, Se, Tr, Zh, Hg, Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Nia, Ke, Se, Se, The Hardness calc.), AND Nia, Ke, Se, Se, Se, Se, Se, Se, Se, Se, Se, S	Sampling Date:	11/22/18							Proj	ect N	Vum	ber:	201	8/19	)-1 (	Wet) Composites
Dissolved: 5b, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K   608 include alpha- & gamma-chlordane   Same extraction with low-level spike for 3 methods: 655CTR, Br. Ph. Ph. Ph. Ph. Ph. Ph. Ph. Ph. Ph. Ph	Sampling Team:	KHTWBC, LM	TA	A :	10	1	-P	D-	D	Lt	5	G				
MO-SPA	SAMPLE ID			Dissolved Inorganic Carbon and Dissolved Organic Carbon	total & dissolved (+ Hardness), & Barium (total	Cr+6	COD, MBAS,	Cl, F, SO4	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *		525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	CLO4, Turb, TDS, TSS, VSS,	Number of Bottles	Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
MO-FIL    11/22/18/0925   X X X X X X X X X X X X X X X X X X	MO-SPA	1 2 2 2						_		X		_				
MO-SIM  MO-MPK  MO-MPK  MO-MPK  MO-MPK  MO-MPK  MO-THO  MO-CXN  MO-OXN  MO-OXN  MO-OXN  MO-HUE  MO-HUE  MO-HUE  MO-HUE  MO-HUE  MO-B - CARE  Signature  Affiliation  MO-B - CARE  VCWPD  Date/Time  MO-DXN  MO-DXN  MO-DXN  MO-HUE  MO-B - CARE  Signature  MO-B - CARE  Signature  MO-B - CARE  NO-DXN  MO-HUE  MO-DXN  MO-DXN  MO-HUE  MO-DXN  MO-HUE  MO-DXN  MO-HUE  MO-DXN  MO-HUE  MO-DXN  MO-HUE  MO-DXN  MO-DXN  MO-HUE  MO-DXN  MO-HUE  MO-DXN  MO-HUE  MO-DXN  MO-DX	MO-FIL		1 14	X	Х	X	X	X	X	X	X	X	X	X	1	
Metals by 200.8, Total & Dissolved: \$5, Age, Al, Pb, Se, Tl, Zn, Hg   Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K   Gog (color):	MO-SIM															
Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Tr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Tr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, As, As, As, As, As, As, As, As, As	MO-MPK															
### Wetals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg    Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg    Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Pb, Se, Ti, Zn, Hg   Metals by 200.7, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Pb, Ni,	мо-тно															
Metals by 200.8, Total & Dissolved: Sb. Ag. Al, As, Be. Cd., Cr. Cu. Fe, Ni, Pb. Se, Ti, Zn. Hg  Metals by 200.8, Total & Dissolved: Sb. Ag. Al, As, Be. Cd., Cr. Cu. Fe, Ni, Pb. Se, Ti, Zn. Hg  Metals by 200.7, Total (only): Ca. Mg (for Hardness calc.), AND  Na, K  608 include alpha-& gamma-chlordane  Printed Name  Signature  Affiliation  Metals by 200.8, Total & Dissolved: Sb. Ag. Al, As, Be. Cd., Cr. Cu. Fe, Ni, Pb. Se, Ti, Zn. Hg  Metals by 200.7, Total (only): Ca. Mg (for Hardness calc.), AND  Na, K  608 include alpha-& gamma-chlordane  Printed Name  Signature  Affiliation  Metals by 200.8, Total & Dissolved: Sb. Ag. Al, As, Be. Cd., Cr. Cu. Fe, Ni, Pb. Se, Ti, Zn. Hg  Metals by 200.8, Total & Dissolved: Sb. Ag. Al, As, Be. Cd., Cr. Cu. Fe, Ni, Pb. Se, Ti, Zn. Hg  Metals by 200.7, Total (only): Ca. Mg (for Hardness calc.), AND  Na, K  608 include alpha-& gamma-chlordane  "Same extraction with low-level spike for 3 methods: 625CTR, 827SIM-Ph.Hg. Bl. Co. Mg (Fr. Spike For 2)  Metals by 200.8, Total & Dissolved: Sb. Ag. Al, As, Be. Cd., Cr. Cu. Fe, Ni, Pb. Se, Ti, Zn. Hg  Metals by 200.7, Total (only): Ca. Mg (for Hardness calc.), AND  Na, K  608 include alpha-& gamma-chlordane  "Same extraction with low-level spike for 3 methods: 625CTR, 827SIM-Ph.Hg. Bl. Cd. Cd. Bl. Cd. Cd. Cd. Cd. Cd. Cd. Cd. Cd. Cd. Cd	MO-OXN															
Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 200.7, Total (only: Ca, Mg (for Hardness calc.), AND Na, K   Se, Tl, Zn, Hg   Metals by 2	MO-HUE															
		Signature Affiliation  Printed Name Signature	W.	B.	200	1										
Other Notes:  1) Filter for dissolved metals and perform conductivity analyses immediately.  2) Please do not dilute limited volume samples when enacting priority list (low reporting limits are important).		1) Filter for dissolved me			erfor	m c	ondı	ıctiv	ity a	nalys	ses in	mme	diat	ely.		

Pacific EcoRisk 2250 Cordelia Rd., Fairfield, CA 94534 (707) 207-7760 FAX (707) 207-7916

## **CHAIN-OF-CUSTODY RECORD**

		unty Watershed		District	Invoice To:	Ventura Count	y Public Works Agency				R	<b>EQUES</b>	TED A	NALY:	SIS			
Address:	800 South V	ictoria Ave., L	#1610		Address:	Engineering S	Services Division		0		0	-					0.11	П
	Ventura, CA	93009				800 South Vi	ctoria Ave., L#1670	3	(8)	8	a 22.0	las			100	11 4	10	
						Ventura, CA	93009-1670	EPA	purpuratus) on, EPA 1008.0	Capricornutum 1, EPA 1003.0	ia Survival EPA 1002.0	promeras EPA		1				
Phone:	(805) 658-4	375			Phone:				EP.	000	Su	Pre E		10.				
Attn:	Kelly Hahs				Attn:	Karen Goo	dman	Growth,	Du,	A 1	dubia tion, E	Growth,						
E-mail:	Kelly.Hahs@	ventura.org			E-mail:			Gro	Urchin (S. pu Fertilization,	Sp. FP	300	Gro						
Project Name:	NPDES Sto	rmwater Monit	oring Progr	am - 2018/1	9-1 (Wet)			and	芸芸	£ 5,	nia	and (		0.1		( . ()		
	Contract No							1 a a	25	Selenastrum C Algal Growth, I	Ceriodaphnia dubiand Reproduction,	ala		V 1				
01: 10		Sample	Sample	Sample	Grab/	1	Container	NIV.	Purple U	a le	P R	Survival 1000.0						
Client S	ample ID	Date	Time	Matrix*	Comp	Number	Туре	Sul	P. S.	Se	a e	Sul 100				100		
MO-	OXN	11/21/18	1340	STRMW	Grab	2	2.5-gal jerrican					Х	i i	1			,	
MO-	HUE	11/22/18	0030	STRMW	Grab	2	2.5-gal jerrican				Х		.11	i L	45 r	4		
MO-	THO	-		STRMW	Grab	2	2.5 gal jerrican			V == 1	×			_				
MO-	MPK	4/22/18	0000	STRMW	Grab	2	2.5-gal jerrican			X								$\vdash$
MO-	-SIM	WEUR	0110	STRMW	Grab	2	2.5-gal jerrican				X		12.1					
MO	-FIL	11/22/18	0129	STRMW	Grab	2	2.5-gal jerrican				X							1
_MO-	<del>SPA</del>	17-710	0,1-7	STRMW	Grab	2	2.5 gal jerrican					×						+
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amples collec						DEL MAINS												
omments/Spe	ciai instructi	on:				RELINQUIS						IVED E	Y:(	Arbon .	ICT.	NON	MAT	3
							W-B-CAR				Signa		1	u	12	1/1	1	
		centration only				Print:	W.B. Cu	14			Print:		1	2		, ,		
erform TIE if >	•50% effect; ı	notify client imm	nediately if	toxicity is ob	served		in: VCWPD	/			-	nization	1	GE	CIN	5/0	1520	اتا
			4.			Date:	1-22-18	Time:	151	0	Date:		-	18		Time:	311	00
IO-HUE: If sali	nity >2ppt, po	erform addition	al topsmelt	test for com	parison	RELINQUIS	HED BY: 11	1			1	IVED E		17.7				
						Signature:	ALCON TO			1	Signa	ture:	work	2 -	1 100	1227		
						Print: (7)	some Bus	Mer	Anit	3	Print:	-	Tro	VOI	Fic.	100		
					)÷	Organizatio	in: PEXN		- /		Organ	nization	: P	ER	1.11	1-18		
						Date: / I	1-10	Time	200	2 4			23/			-	080	.'-

# **CHAIN-OF-CUSTODY RECORD**

Pacific EcoRisk 2250 Cordelia Rd., Fairfield, CA 94534 (707) 207-7760 FAX (707) 207-7916

	Ventura County Watershed Protection District				Invoice To:	Ventura County	y Public Works Agency	REQUESTED ANALYSIS																
	800 South Victoria Ave., L#1610				Address:	Engineering S	amnis) EPA	purpuratus) on, EPA 1008.0		0	_													
	Ventura, CA 93009-1610					800 South Vi			Selenastrum Capricornutum Algal Growth, EPA 1003.0	Survival EPA 1002.0	prometas) , EPA													
						Ventura, CA				Survival PA 1002	PA			A - 4										
Phone: (805) 658-4375					Phone:			IPL EP.	000	Su	E E													
Attn: Kelly Hahs					Attn:	Karen Goo	nerinops Growth,	on,	oric A	dubia ction, E	Growth,													
E-mail: Kelly.Hahs@ventura.org					E-mail:		Gro	Urchin (S. pt Fertilization,	S T	cti &	Gro			) V										
Project Name: NPDES Stormwater Monitoring Program - 2018/19-					9-1 (Wet)			P P	[충월	Mt 43	phnia dubia production, I	and												
P.O.#/Ref:	Contract No.	AE18-015						al and	구등	astr	Ceriodaphnia and Reproduc	0 0 0 C												
Client C	Io ID	Sample	Sample	Sample Matrix*	Grab/	Container		rviv	Purple Urchin (S. A Sperm Fertilization	len (	riginal R	Survival a												
Client S	ample ID	Date Date	Time		Comp	Number	Туре	Su	J. S.	Se	\Q \ <u>\\ \\\ \\\ \\\ \\\\ \\\\\\\\\\\\\\</u>	Su 10												
ME-CC		11/22/18	0130	STRMW	Grab	2	2.5-gal jerrican	Х																
ME SCR				STRMW	Grab	-2	2.5-gal jerrican		X					-										
ME-VR2		1/22/18	0130	STRMW	Grab	2	2.5-gal jerrican	Х																
MO-CAM		11/21/18	22 35	STRMW	Grab	2	2.5-gal jerrican					Х												
MO-OJA		11/21/14	2315	STRMW	Grab	2	2.5-gal jerrican					Х												
MO-MEI		11/22/196	0020	STRMW	Grab	2	2.5-gal jerrican					Х												
MO-VEN		11/21/19	2315	STRMW	Grab	2	2.5-gal jerrican				X													
							<u> </u>	-							-	-	-							
Samples collec	ted by:																<u> </u>							
Comments/Special Instruction:						RELINQUISHED BY:				************	RECEIVED BY:													
						Signature: W.B CAREY					Signature:													
All sites/species: 100% concentration only						Print: W.B. Carey						Print: FRANK BUSTAMANTE												
Perform TIE if >50% effect; notify client immediately if toxicity is observed						Organization: VCWPy						Organization: VENLINE CORIETA  Date: 1 22 6 Time: 3/Opr  RECEIVED BY:												
							Date: 11-22-18 Time: 1510 RELINQUISHED BY:																	
																			Signature:					
							Print: Former Gustam Ante					Print: Trey Fischell Organization: PER												



#### **CHAIN-OF-CUSTODY RECORD**

Pacific EcoRisk 2250 Cordelia Rd., Fairfield, CA 94534 (707) 207-7760 FAX (707) 207-7916

Ventura Coun	ty Watershed	Protection	District	Invoice To:	Ventura County	Public Works Agency				RE	QUES	TED A	NALYS	SIS		
800 South Vic	toria Ave., L	#1610						0.		0	-					
Ventura, CA 9	93009				800 South Vic	ctoria Ave., L#1670	5	(800	8		SBIAS					
					Ventura, CA!	93009-1670	PA	rati A 10	utui 3.0	1017	PA					
(805) 658-437	75			Phone:			Trans.	EP EP	500	Su						
Kelly Hahs				Attn:	Karen Good	dman	wt	no.	Pric A	ibia In, E	wt					
				E-mail:				n (S	S III	a du						
		oring Progr	am - 2018/19	<b>2</b> (Wet)			and	등분	wet a	hni	and					
Contract No. /	AE18-015		*******				val out	e D π	Gro	dap	yal a					
Client Sample   Sample   Sample   Grab/   Container					Spirivi 100	ld r	gal	erio Id F	JIVI JOO							
	Date	Time					- 0 -	<u> </u>	ω ₹	g g	- W -			$\rightarrow$		
			The state of the s	251 700							-X			$\rightarrow$		
		111					-			_X_						
	11-29-18	1715			-	2.5-gal jerrican			150	Х						
in the same of the					2			-X-								
MO-SIM STRMW Grab 2 2.5-gal jerrica				2.5-gal jerrican	-			-X-	_	1000						
FIL			STRMW	Grab	2	2.5 gal jerrican			-	_ X	-					
SPA	11/27/18	0200	STRMW	Grab	2	2.5-gal jerrican					Х				1 4	
-SCR	V	1630	STAMW	Greb	2	(1		×				10				
							-								_	_
ted by:							l		<b>.</b>							
	1:				RELINQUIS	HED BY:			20000000000000	RECE	IVED B	Υ:				
					Signature:	rdh Atte	2			Signat	ture:	TIP	300			
s: 100% conce	ntration only				Print:	PARTE						KTY	72	PF	2 n	11
50% effect; no	tify client imr	nediately if	toxicity is ob	served						Organization:					1	
	•	-	-	. 4	Date: 11						1-2-					
nity >2ppt, perl	form addition	al topsmelt	test for comp	parison												
		•			Signaturez	DB ~	PB J				ture:	10	us	~		
					1	1 0					278 n.i.V. Print: V. Vlea dine va					
					Print: V/V	K TOD V	- X	b 1	N.	Print:	V	Par.	1	MB w	0	
					Print: \( \) Organizatio	Anno	tex	26	4		y- K	Ma	d	zer	9	
	800 South Vice Ventura, CA 9 (805) 658-437 Kelly Hahs Kelly Hahs Kelly Hahs NPDES Storm Contract No. Ample ID OXN HUE THO MPK SIM FIL SPA	800 South Victoria Ave., L Ventura, CA 93009  (805) 658-4375  Kelly Hahs  Kelly Hahs  Kelly Hahs@ventura.org  NPDES Stormwater Monit Contract No. AE18-015  Sample Date  Date  OXN  HUE  THO  11-29-18  MPK  SIM  FIL  SPA  11/27/18  THO  11/27/18  THO  SPA  11/27/18  THO  THO  THO  THO  THO  THO  THO  TH	800 South Victoria Ave., L#1610 Ventura, CA 93009  (805) 658-4375 Kelly Hahs Kelly Hahs Kelly Hahs@ventura.org NPDES Stormwater Monitoring Progr Contract No. AE18-015  Tho Sample Date Time  OXN HUE THO 11-29-18 1415  SPA 11/27/18 02-00 1-50R  ted by: cial Instruction:  s: 100% concentration only 50% effect; notify client immediately if the second concentration only 50% effect; notify client immediately if the second concentration only	Wentura, CA 93009  (805) 658-4375  Kelly Hahs  Kelly Hahs  Kelly Hahs@ventura.org  NPDES Stormwater Monitoring Program - 2018/19  Contract No. AE18-015  ample ID  Sample Time Matrix*  STRMW  HUE STRMW  THO 11-29-18 1415 STRMW  STRMW  FIL STRMW  FIL STRMW  FIL STRMW  FIL STRMW  FIL STRMW  STRMW  FIL STRMW  STR	800 South Victoria Ave., L#1610  Ventura, CA 93009  (805) 658-4375  Kelly Hahs  Kelly Hahs  NPDES Stormwater Monitoring Program - 2018/192 (Wet)  Contract No. AE18-015  Sample ID  Sample Date  Time  Matrix*  Grab/ Comp  STRMW  Grab  THO  11-29-18  STRMW  Grab  STRM	800 South Victoria Ave., L#1610  Ventura, CA 93009  Ventura, CA 93009  Reliver Hahs  R	South Victoria Ave., L#1610   Address:   Engineering Services Division   800 South Victoria Ave., L#1670   Ventura, CA 93009   Ventura, CA 93009-1670   Ventura, CA 93009	Address: Engineering Services Division  Nentura, CA 93009  (805) 658-4375  Phone:  Kelly Hahs  Kelly Hahs  Kelly Hahs  Nentura org  NPDES Stormwater Monitoring Program - 2018/192 (Wet)  Contract No. AE18-015  Ample ID  Sample Date  Time  STRMW  Grab  STRMW  Grab  STRMW  Grab  STRMW  Grab  STRMW  Grab  2 2.5 gal jerrican  THO  11-29-18  STRMW  Grab  STRMW  Grab  STRMW  Grab  STRMW  Grab  2 2.5 gal jerrican  THO  11-29-18  STRMW  Grab  STRMW  Grab  STRMW  Grab  STRMW  Grab  STRMW  Grab  2 2.5 gal jerrican  THO  STRMW  Grab  STRMW  STRMW  Grab  STRMW  Grab  STR	Address: Engineering Services Division  Ventura, CA 93009  (805) 658-4375  Phone: Kelly Hahs  Kelly Hahs  Kelly Hahs  NPDES Stormwater Monitoring Program - 2018/192 (Wet)  Contract No. AE18-015  Ample Date  Time  STRMW  Grab  STRMW  Grab  STRMW  Grab  STRMW  Grab  2 2.5-gal jerrican  Fill  STRMW  Grab  2 2.5-gal jerrican  Fill  STRMW  Grab  STRMW  Grab  STRMW  Grab  2 2.5-gal jerrican  Fill  STRMW  Grab  STRMW  Grab	Address   Engineering Services Division   800 South Victoria Ave., L#1670   Ventura, CA 93009   Ventura, CA 93009   Ventura, CA 93009-1670   Ven	Address   Engineering Services Division   S00 South Victoria Ave., L#1670   Ventura, CA 93009   Ventura, CA 93009   Ventura, CA 93009-1670   Ven	South Victoria Ave., L#1610   Address:   Engineering Services Division   800 South Victoria Ave., L#1670   Ventura, CA 93009   Ventura, CA 93009   Ventura, CA 93009-1670   Ventura, CA 93009-1670	Address   Engineering Services Division   S00 South Victoria Ave., L#1670   Ventura, CA 93009   Ventura, CA 93009   Ventura, CA 93009   Ventura, CA 93009-1670   Ventura,	South Victoria Ave., L#1610   Address: Engineering Services Division 800 South Victoria Ave., L#1670   Ventura, CA 93009	Received by:   Rece	Solution   Solution

\*Example Matrix Codes: (EFF - Effluent) (FW = Freshwater); (SW = Saltwater); (WW = Wastewater); (STRMW = Stormwater); (SED = Sediment), or other



Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season Bacteriological - VCHCA Lab (SIDE 1 of 1)

Project Number: 2018/19-2 (Wet) Sampling Date: Desillier Jaime Sampling Team: Total Coliform (Tray Method - WQ IDEXX coli (Tray Method - WQ IDEXX Number of Bottles LAB USE DATE/TIME E. ONLY SAMPLE ID COLLECTED NOTES X X ME-CC 29/18 0300 MO-MP X X 1 X X 1 MO-CAM X X 1 FB-1 11/29/18 0300 X X 1 Relinquished Printed Name Signature Affiliation Date/Time 112915 Received Printed Name Signature 112918 Affiliation Date/Time Other Notes: Perform bacteriological analyses within 6 hours of sample collection time 1:10 1:100, and 1:1000 dilutions for E. coli



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE of )

Sampling Date:	11/29/18			Pr	oject Numb	er: 2018	/19-2	(Wet)				
Sampling Team:	Peter Oor	an + Tim Delan	ey	_			a					
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	F coli (Tray Method - WO IDEXX)	con (11s) memon		Number of Borrles	NOTES				
	MO-SPA	11-29.18/0200	X	X	2		1					
	MO-FIL .	11.29.18/0255	X	X	5		1					
	MO SIM		- 35	-			1					
	MOMBIE		- 77	7			-					
	молно		Y	x			- 1					
	MO-OXN	11-29-18 / 0000	х	Х			1					
	Morning		77	47			+					
	FD-1	11.21.10/0255	X	Х			1					
7	MO CAM		×	×	٤		1					
Relinquished	Printed Name Signature Affiliation	PETER DRAM Rincon		Da	nte/Time <u> </u>	1-29-18	1/	355				
Received	Printed Name	"Vadia her										
	Signature					11 -						
	Affiliation	Lab	-	Date/Time 1/29180 355								
ther Notes:	Perform bacteriologi	cal analyses within 6 hours	of san	npl	e collection	time						
	1:10 1:100, and 1:100	00 dilutions for E. coli										



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season Bacteriological - VCHCA Lab (SIDE 1 of 1)

Sampling Date: 2018/19-2 (Wet)

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)		Number of Bottles	NOTES
	AU CCD		1	A			
	ME-VR2	11/29/18 02:05	X	x		1	
	-mo-cmm		v	v		-	
	MO-OJA	11/29/18 00:30	X	X	11/16	1	
	MO-MEI	11/29/18 01:20	Х	X		1	
	me		22	77		-	
	FD-1	1	v	v		-	
	MO-HUE	11/29/18 03:15	×	×		1	
Relinquished Received	Printed Name Signature Affiliation Printed Name Signature Affiliation	David Lagrence Vew PD	3	Date/T	1/29/1		04:15 C. C. C. C. T.

1:10 1:100, and 1:1000 dilutions for E. coli



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE 1 of 1)

			fethod - WQ IDEXX)	WQ IDEXX)							
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX	E. coli (Tray Method - WQ IDEXX)				Number of Bottles	NOTES		
	ATT CC		v	v				1			
	-ME-SCR		X	X				1-			
	MO-THO	11-29-18 1415	X	X				1	MEDW		
	MO CAN		77	V				-			
	ero-oju		11	77			_	7			
	MOMEL		V	V			-		,		
	MOTHER		21	21			-	-			
	ED 1		x	x				1			
					0 5						
elinquished	Printed Name  Signature  Affiliation	Lava Meeker Jana Y IC WPD	n	) Date,	Time _	11-	29-1	8	15:19		
eceived	Printed Name Nation Libert										
	Signature	ture									
	Affiliation	PHICH -	I	Date/	Time _	1/3	918	)	1576		
ther Notes:	Perform bacteriological	analyses within 6 hours of	f sam	ple co	ollection	ı time					
	1:10 1:100, and 1:1000 d										



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season Bacteriological - VCHCA Lab (SIDE 1 of 1)

Sampling Date:	11/30/18			Proje	ect Nun	nber:	2018/	19-2	(Wet)
Sampling Team	: KHAHS,	J. McClain							
LAB USE ONLY	SAMPLE ID	-DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX )				Number of Bottles	NOTES
	ME-SO	R11/30/18 0425	X	х				1	
	MO-MEI		Х	X		14		1	
	мо-оја		X	X		1		1	
	мо-ние		Х	X				1	
delinquished	Printed Name Signature Affiliation Printed Name	KELLY HAT TOUTHOS VOUDE Nation We		Date/	Time _	(1	130,	/18	10700
Other Notes:	Signature (	ll analyses within 6 hours of			Time _			5 (	307W
	1:10 1:100, and 1:1000								



Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 1 of 2)

Sampling Date:	11/29/18											Project Number: 2018/19-2 (Wet) Grabs						
Sampling Team:	Kelly Hohs R. II Core		Jan	wie.	εVic	Clai												
	Love mecker D.	d'	W	ilk	250	20	1	J	1.00	J	1	F-8/C	aak tellie Forther. Reter Du					
SAMPLE ID ME-CC	DATE/TIME COLLECTED	Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	3 (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits						Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.					
	11/29/18 0300	2	1	2	3	1	7					9	JM, MD					
ME-SCR	The state of the s	2	1	2	3	1						9						
	11/29/18 1630	-		-		1	-	H		H		-	KH, WBC					
ME-VR2	11/29/18 02:05	2	1	2	3	1		H		4		9	DLKF					
MO-CAM	112a/18 0015	3	1	2	3	1					27/4	10	74,40					
MO-OJA	11/29/18 00:30	2	1	2	3	1						9	DLJKF					
MO-MEI	1/29/18 01:20	2	1	2	3	1						9	DL,KF					
MO-VEN	11/29/18 0100	2	1	2	3	1						9	PD,TD					
MO-OXN	11/29/13 0000	2	1	2	3	1						9	PD,TD					
ED-1 F3-1	11/29/18 0300	2	1	2	3	1						9	JM, MD					
Relinquished Received	Signature	LY	td	S	its	Dat	te/T	ime	- 11		30/1							
Othor Notes		ha	male	Lon	£	min la -							1					
Other Notes:	Travel blanks are only to EPA 624 has replaced E		_		_	_			I IVI	LDE	or 2-0	LLEVI	2)					
									To		~ IA	1.1	20/19 11:10 19:0					



Ventura County Watershed Protection District & 3000

# NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 2 of 2)

	DATE/TIME	Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits			The of Design	Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travelalanks.	
SAMPLE ID	COLLECTED		Cya			Tra					NOTES	
MO-SPA	11/29/18 0200	, 2	1	2	3	1				9	POITS	
MO-FIL	11/29/18 0253	2	1	2	3	1				9	PD, TD	
MO-SIM	11/29/10 014	2	1	2	3	1			9	9	IM,MD	
MO-HUE	11/29/18 03:1	5 2	1	2	3	1			9	9	OLIKE	
МО-ТНО	11/29/18 14:15	2	1	2	3	1			9	9	LM, DW	
MO-MPK	11/29/18 022		1	2	3	1				9	IM, MD	
FD-I	upa/18 0255	2		2	7	1			-	7	PD, TD	
Relinquished	Signature	Kelli dle Icus	K	Ho	ah	5	Date/Tir	me\	130/18	3 /	0915	
Received	Printed Name    DAUII LOV 3											
	Affiliation /	-m	>			-	Date/Tir	ne	1301	g	0915	
Other Notes:	Travel blanks are only	to be	maly	zed i	f sar	nples	have hits of	MTBE o	or 2-CLEV	VE)	)	



#### Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Composites - Weck Laboratories (SIDE 1 of 2)

Sampling Date:	11/29+30/18		roject Number: 2018/19-2 (Wet) Composites												
ampling Team:	Kelly Habs, Jai	ine 1	Nc C	19	in	Pe	ter	Do/	an	Kie	evn	or P	site	lik	Lara Meeter, Deanly
SAMPLE ID	DATE/TIME COLLECTED	Dissolved Inorganic Carbon and Dissolved Organic Carbon		Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
ME-CC	11/30/18/0525	X	X		X	X	X	X	X	X	X	X	X	1	PDIKE
ME-SCR	11/30/18/0431	X		X	X	X	X	X	X	X	X	X	X	1	PD, KB KH, JM
ME-VR2	11/29/18 1455	X		X	X	X	X	X	X	X	X	X	Х	1	KHWBC
MO-CAM	11/30/18 0555	X		X	X	X	X	X	X	Х	X	X	Х	1	PD, KB
мо-оја		X		X	X	X	X	X	X	X	X	X	X	1	THE WISC
MO-MEI		X		Х	Х	X	X	X	X	X	X	X	X	1	
MO-VEN	11/30/18/ 0420	X		Х	X	X	X	X	X	X	X	X	Х	1	D, KB
		112		5.5	Time!				1		67	-	1	1	
Relinquished Received	7 TO 1 TO 1 TO 1	COLY COLY	Ad	5		4+1			e/Ti			1/3	30)	118	,
	-1								1,6			11		- /	1
Other Notes:	1) Filter for dissolved i	FF -7. 2 - 1		400			100					4.0			



Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Composites - Weck Laboratories (SIDE 2 of 2)

Sampling Date:	N / 29 + 30 / 18  Project Number: 2018/19-2 (Wet) Composites  KH TM " TH WBC" LM DW PD KB														
Sampling Team:	KH, TM; tH, V	UBC	با	Μ,	Dr	υ ',	P	D,	K	5					
	DATE/TIME		Dissolved Inorganic Carbon and Dissolved Organic Carbon	als, total & dissolved (+ Hardness), & Barium (total only)	6	O, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
SAMPLE ID	DATE/TIME COLLECTED		Diss	Metals,	9+3O	BOD,	NO3	Phos	625-	515.3	525.2	DRC	ALK	Nun	NOTES
MO-SPA	11/29/18 1240	Fill III	X	X	X	X	X	X	X	X	X	X	X	1	KH, WBC
MO-FIL	11-79-18 1250	DE	X	Х	X	X	X	X	X	Х	X	X	X	1	LM, DW
MO-SIM	11/30/18 0530		Х	Х	Х	Х	X	X	X	Х	X	X	X	1	KH, TM
MO-MPK	11-29-18 1340	112	X	X	X	X	X	X	X	Х	Х	Х	X	1	LM, DW
MO-THO	11/30/18 0610		Х	X	Х	Х	Х	X	X	Х	X	X	X	1	KH, JM
MO-OXN	11-29-18 1545		X	X	X	X	Х	X	X	X	X	X	X	1	LM,DW
MO-HUE	11-30-15/0455		X	X	X	X	X	X	X	X	X	X	X	1	PD, KB
Relinquished Received	Printed Name  Signature  Affiliation  Printed Name  Signature  Affiliation  Affiliation  Date/Time 11/30/18 9 15/16														
Other Notes:	Affiliation //o  1) Filter for dissolved n	netals at	nd pe	erfor	m c	ondu	ctiv				-				1-1-11
	lute limited volume sampl													mne	ortant)



#### Ventura County Watershed Protection District

#### NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

**Equipment - Weck Laboratories** 

Sampling Date: Sampling Team:	11/29+30/18 K. HARTS		1	Project Nu	mber: 2018/19-2 (Wet) Cleaning
	EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide necl	k carboy and lid	3	N,		Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
20 L narrow necl silicone stopper	k carboy and lid (+assembly) or	9			
Blue cube cooler	7- x	8			
Grey bucket	1,0	4			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Black bottle bag		10			
Bottle harness		2			
Relinquished Received	Printed Name  Signature  Affiliation  Printed Name  Signature  Affiliation  Affiliation	1/20	<u></u>	Date/Time	11/30/18/0915 11/30/18 9:15 Am
Other Notes:					Januline 11/30/18 11:20



#### Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Composites - Weck Laboratories (SIDE 1 of 1)

Sampling Team:	K. HAHS, W	B. (	CA	RE	Y			_								
SAMPLE ID	DATE/TIME COLLECTED		Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO3-N, Total Chlorine Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
ME-CC			X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-SCR		23	X		X	X	X	X	X	X	X	X	X	X	1	
ME-VR2			X		X	X	X	X	X	X	X	X	X	X	1	
MO-CAM			X		X	X	X	X	X	X	X	X	X	X	1	
МО-ОЈА	11/29/18 0610		X		X	X	X	X	X	X	X	X	X	X	1	
MO-MEI	V 0630		X		X	X	X	X	X	X	X	X	X	Х	1	
MO-VEN			X		X	X	X	X	X	X	X	X	X	X	4	
Relinquished	Printed Name Signature	Lei	P	n	5		9	·	~r	ee	7			,	83	
	Affiliation	V	Lu	1	> D				Dat	e/T	ime		11/	7	9	12018 0830
Received	Printed Name EDG	Jax	h		Ka	inga	ef									
	Affiliation							1	Dat	e/T	ime	_1	il	29	11	8 8.30
Other Notes:	1) Filter for dissolved n			_	_		_			_		_	_			ed 11-29
-1	lute limited volume sampl						_						_		7	
Please wo	) (w colled de	tex	N	27	+	44	CL	2 1	rin	SP	+	W 16	14	1.1	oe.	rstandard memo



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE 1 of 1) aak Michelle Carter Project Number: 2018/19-3 (Wet) Sampling Date: > Daw L Sampling Team: Total Coliform (Tray Method - WQ IDEXX coli (Tray Method - WQ IDEXX Number of Bottles LAB USE DATE/TIME **ONLY** SAMPLE ID COLLECTED E. NOTES X X 1 18:45 X X 1 X X 20:40 MO-MET X X 1 X X 1 X X 1 Relinquished Printed Name Signature Affiliation Date/Time Received Printed Name Signature Affiliation Date/Time

Other Notes:

Perform bacteriological analyses within 6 hours of sample collection time

1:10 1:100, and 1:1000 dilutions for E. coli



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE 1 of )

Sampling Date Sampling Team		2019 and Danieve Yo	100	Project	t Number: 2	018/19-3 (	Wet)						
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	1-1		Number of Bottles	NOTICE						
ONLI	MANAGE ME'V	2 1/5/19 21:15	X	X		Z   1	NOTES						
	Marin MO .	SA 1/5/19 19:15	X	X		1	Table 1						
	MEVR2 MO		X	X		1							
	Moran FD -	1 1/5/19 19:15	1	×		-	(ACO)						
м	Mo-ojn		X	¥.		1							
	MC-MEI		X	X		-							
	Me		Y	¥		-							
	I Company		-	v		-							
Relinquished	Printed Name	Danjelle Yaco	nel	ı;		kala d							
	Signature Affiliation	VCWED Y		Date/Ti	ime 1/5	19 =	4:57						
Received	Printed Name Cameron Charles												
	Signature												
	Affiliation	PHL	I	Date/Ti	me 1/5	119	2157						
Other Notes:	Perform bacteriologica	l analyses within 6 hours of	sam	ple colle	ection time								
	1:10 1:100, and 1:1000												



1-

#### Chain of Custody Record

Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season Bacteriological - VCHCA Lab (SIDE 1 of 1)

Sampling Date:	1/5/17	Project Number: 2018/19-3 (Wet)
	1	

Sampling Team: JM+PD Total Coliform (Tray Method - WQ IDEXX (Tray Method - WQ IDEXX Number of Bottles coli LAB USE DATE/TIME **ONLY** SAMPLE ID COLLECTED E. **NOTES** CMO-VEN 1/5/19 X X 1830 1 1/5/17 X X 1925 1/5/19 X X 1 2000 X 1/5/19 X 2110 Mcclain Relinquished Printed Name Signature Affiliation Rincon consultants Date/Time 1/5/19 2145 Received Printed Name Signature Affiliation Date/Time Perform bacteriological analyses within 6 hours of sample collection time Other Notes: 1:10 1:100, and 1:1000 dilutions for E. coli



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE 1 of 1)

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX	E. coli (Tray Method - WQ IDEXX)		Townships of Paris of	Number of Bottles	NOTES
ak.	ME-CC	1/5/19 20:27	X	X			1	NOTES
	MO-HUE		X	Х	1	1	1	and the second s
	MO-OXN		X	X		1		
	FD-1		X	X		1		
	No oja			×		-	-	
	Monte		100	¥		-		
	NOVEN		X	X		-		
100	Por		X	-		-	,	
linquished	Printed Name Signature Affiliation	Steven S. O. Steven VCUPD	f. (	Cate/Ti	ime/	3/201	٩	9:15pm
ceived	Printed Name	Cameron (	h.	in d	1-6	, i		
	Signature 2	mn 0	Le	n	v			
	Affiliation _	PHL	1	Date/Ti	me /	371	9	9115
					-			12

Attachment D Appendix E



Ventura Countywide Stormwater Quality Management Program 2018/19 Annual Report

#### Chain of Custody Record

#### Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 1 of 2)

Sampling Date: Sampling Team:	1/5/19 + 1/6/ sec not						Project Number: 2018	/19 <b>3</b> (	Wet) Grabs
CAMPLE ID	DATE/TIME COLLECTED	Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits		Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
SAMPLE ID ME-CC	1/5/19 20:27	2	1	2	3	1		9	NOTES 5G,0₩
ME-SCR	115/19 2110	2	1	2	3	1		9	Jm/PD
ME-VR2	1/5/19 2115	2	1	2	3	1		9	WBC, DY
MO-CAM	1/5/19 1845	3	1	2	3	1		10	DL/MC
MO-OJA	1/5/19 1915	2	1	2	3	1		9	W8C, 07
MO-MEI	1/5/19 2015	2	1	2	3	1		9	WBC,0Y
MO-VEN	1/5/19 1830	2	1	2	3	1		9	JM/PD
MO-OXN	15/19 1840	2	1	2	3	1		9	5G, OW
FD-1	115/19 1915	2	1	2	3	1		9	WBC, DY
Relinquished	Printed Name Signature Affiliation	احال	4	LY The	h	A	2	/19/	1300
Received	Printed Name Signature	51	10	v			dinson	-	
Other Notes:	Affiliation 255		_	_		-	Date/Time	CLEVE	9 1:00 PM

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#### Ventura County Watershed Protection District

#### NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 2 of 2)

Sampling Date: Sampling Team:	1/5/	19 + 1/6	6/1	9				Project Number: 2018	/19 <b>-3</b> (	Wet) Grabs
SAMPLE ID		:/TIME ECTED	Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits		Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
MO-SPA	1/5/19	1925	2	1	2	3	1		9	JM / PD
MO-FIL	115/19	2000	2	1	2	3	1		9	JM / PD
MO-SIM	1/5/19	2040	2	1	2	3	1		9	DLIME
MO-HUE	1/5/19	1940	2	1	2	3	1		9	SG, DW
мо-тно-			2	-1-	2	3	1		9-	
MO-MPK	1/5/19	1940	2	1	2	3	1		9	DL/MC
MO-THO	1/6/19	0840	2	1	2	3	)		9	KH,WBC
Relinquished  Received	Printed Nar Signature Affiliation Printed Nar Signature Affiliation		K CC	الر	èc	1	H)	Date/Time/_ Date/Time/_	6/19	9 1:00
Other Notes:		ks are only to			_	_	_	have hits of MTBE or 2-td 2-Cleve	CLEVE	2)

Attachment D Appendix E



Ventura Countywide Stormwater Quality Management Program 2018/19 Annual Report

#### Chain of Custody Record

#### Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Composites - Weck Laboratories (SIDE 2 of 2)

ampling Date:		19 +1		1_	_		-		Proj	ect N	Vum	ber:	201	8/19	)-3 (	Wet) Composites
ampling Team:	DATE	/TIME	<del>le</del> s	Dissolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Ghphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
SAMPLE ID IO-SPA	1/5/19	202 B	-	X	X	S X	X X	X	X	У	X 51	X 52	X	X	1	NOTES  JM/PD
O-FIL				X	X	X		X	X	X	X	X	X	X	1	
O-FIL	1	0934	-	X	X	X	X	X	X	X	X	X	X	X	1	DL/MC
O-MPK	1/5/19	2055		X	X	X	X	X	X	X	X	X	X	X	1	DLIMC
O-THO	1/5/19			X	X	X	X	X	X	X	X	X	X	X	1	KH, WBC
O-OXN		0830	-	X	X	X	X	X	X	X	X	X	X	X	1	
O-HUE	1/5/19	2140		X	X	X	X	X	X	X	X	X	X	X	1	SG, DW
O-HUE	1/6/19	1025		A	Λ	Λ	Λ	Λ	Λ	Λ	Λ	Λ	Λ	Λ	1	SG,EL
elinquished eceived	Printed Na Signature Affiliation Printed Na Signature Affiliation	me Ja	KE TOIL VCJ Sh	30	Y 500	1	1A		Dat	e/Ti	1	1	16	6-	9/	1300 19 1:00p
Other Notes:	1) Filter for	r dissolved r	netals a	nd po	erfor	m co	ondu	ctivi	ty aı	nalys	es ir	nme	diate	ely.		
		olume samp						_	_	_						



#### Ventura County Watershed Protection District

#### NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Composites - Weck Laboratories (SIDE 1 of 2)

Sampling Date:	1 5	19 + 11	6/1	9					Proj	ect 1	Nun	nber:	201	8/1	9-3	(Wet) Composites
Sampling Team:		See														
SAMPLE ID	DATE/T		Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO3-N, Total Chlorine Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
ME-CC	1/6/19	09:25	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, WBC
ME-SCR	116/19	10:00	X		X	X	X	X	X	X	X	X	X	X	1	KH, WBC
ME-VR2	1/5/19	2120	X		X	X	X	X	X	X	X	X	X	X	1	WBC, DY
MO-CAM	1/5/19	2215	X		X	X	X	X	X	X	X	X	X	X	1	DL/MC
MO-OJA 97	45/19	1920	X		X	X	X	X	X	X	X	X	X	X	1	SG, EL 1/6/19 0836
MO-MEI	1/5/19	2020	X		X	X	X	X	X	X	X	X	X	X	1	5G.0W
MO-VEN	1/5/19	8805	X		X	X	X	X	X	X	X	X	X	X	1	SG, DW
Relinquished Received	Printed Name Signature Affiliation Printed Name Signature Affiliation	VCh	toll	-/	1	y 5	+11	ın	Date		ime		1/4	6	9,	19 1:00 pm
Other Notes:	1) Filter for d	issolved met	als an	d ne	rfor	n cc	ndı	ctivi	trior	alve	ne in	nme	diata	lv		
2) Please do not dilu															mno	etant)



# Ventura County Watershed Protection District

# NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

**Equipment - Weck Laboratories** 

Sampling Date: 1/6/19 Sampling Team:			Project Nur	mber: 2018/19-3 (Wet) Cleaning
EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid	- 1			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
20 L narrow neck carboy and lid (+assembly) or silicone stopper	13			a social was cleared with medianos.
Blue cube cooler		0.1	14	
Grey bucket				Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Black bottle bag			(III)	
Bottle harness			(1)	
*				
	when a	John	Date/Time  Date/Time	
Other Notes:				



Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season

Bacteriological - VCHCA Lab (SIDE 1 of 1)

Sampling Date:	1/31/19		_ P	rojec	t Nun				(West)
Sampling Team	WBC, KH								
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Conform (25 rubers, 1 Mphy)		E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)		Number of Bottles	NOTES
	THE GC		7	_	v	v		1	
	ME-SCR	1/31/19/1400	ζ.		X	X		1	
	4-III-1/D-0				77	H	$\blacksquare$		
	MOGME			2 000		v		1	+
	ме еул				7.	I.		1	
	MO MEI								
	140-140N				v	y		1	
	DD 4					,,			
	(File				77	**	$\Box$		
			No. No.			*	1=-1		
elinquished	Printed Name	KELLY HA	15						
	Signature	rally the							
	Affiliation	Vengo	Da	te/T	ime _	1/3	31/1	9	/1432
ceived	Printed Name	Lameron Cha	wie	/					
	Signature	ann A	ras	4	/				
	Affiliation	PHL	Da	te/T	ime	[]	311	19	1432
ner Notes:	Perform bacteriologic	al analyses within 6 hours of	sample	coll	ection	time			
	1:10 1:100, and 1:1000				- 2011				

Attachment D Appendix E



Ventura Countywide Stormwater Quality
Management Program 2018/19 Annual Report

#### Chain of Custody Record

# Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 1 of 1)

Sampling Date:	1/31/19						Project Num	nber: 2018/1	9-1	Wet) Grabs
ampling Team:	WOC KH									
	DATE/TIME	Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)		Travel Blanks (EPA 624)-only analyze if hits			Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
SAMPLE ID	COLLECTED	Oil	Cyan	GRC	MT	Trav				NOTES
ME-CC		2		2	3	1			9=	
ME-SCR	1/31/19 1400	2	1	2	3	1			9	
ME VR2		2	1	2	3	1			9.	
MO-CAM		3	1	2	3	1			10-	
MO-OJA		2	1	2	3	1			9.	
MO-MEI		2	m ju	2	-3	-			9	
MO-VEN		2	-4-	2	-3	1			9.	
MO-OWN	19	2	-	2	3	1			9 0	
		2	T	2	3	winne			9.	
	n. 15. 1.1	>	_			V				
Relinquished	Printed Name W-				0					
	Signature W. Affiliation	cw.			126	-	Date/Time	0-1-19	10	200
	11	1	1		_	_		2-(-1)	/ (0	
Received	Printed Name	d.	w		Su	1	hos			
	Signature(	18	/					.el 5 - 52	,	
	Affiliation We	H	de	13	>	_	Date/Time	2-1-19	110	00
Other Notes:	Travel blanks are only to							TBE or 2-CI	EVE	)
	EPA 624 has replaced E	PA 5	24.2	2 for	MTB	BE an	d 2-Cleve			
11.1	< 1					T	20			101

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# Ventura County Watershed Protection District

#### NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Composites - Weck Laboratories (SIDE 1 of 1)

Sampling Date:	2-1-19							Proj	ect l	Nun	nber:	201	8/1	니 9毫(	Wet) Composites
Sampling Team:	W.B. CAREY	£ D	- 1	AA	K										
SAMPLE ID	DATE/TIME COLLECTED	Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO3-N, Total Chlorine Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	⟨ Cr+6	k BOD, COD, MBAS, TKN, Ammonia, TOC	× NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	× Phosphorus-P Total & Dissolved	K 625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	4 515.3-Herb 547-Glyphosate, 608-CTR	∠ 525.2 Reg+507, 525-OPP-LL	< DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	- Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
ME-SCR	2-1-19/0900	X		Х	X	X	X	X	X	X	Х	X	Х	1	
ME VRO		×		V	V	V	N	X	X	X	X	Y	Х	-1-	
MO CAM		X		Y	X	X	X	Y	Y	Y	V	Y	Y	1	
MO OJA		V		X	X	X	X	X	V	V	X	X	X		
MO MET		X		V	V	**	X	Α	X	X	X	X	*	-	
MUTAN		- X					-	×		X	X	X	N.		
Relinquished Received	Signature	B. C 1-B.	C			-		Date	e/Ti	ime	2	~(-	- 19	/	tooo
Received		to				a	No	h	2						
	Signature  Affiliation	eck	20	B				Date	e/Ti	me	2	-1-	19	110	000
Other Notes:	1) Filter for dissolved m	netals an	d pe	rfor	n cc	ondu	ctivi	ty ar	nalys	es in	nme	diate	ely.		
2) Please do not dil	ute limited volume sample													mpoi	ctant).



# Ventura County Watershed Protection District

# NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Wet Season (Contract AE17-001)

Equipment - Weck Laboratories

Sampling Date: Sampling Team:	2-1-19 W-B-CAREY 9 D- 1	LAAŁ	1	Project Nu	mber: 2018/19 (Wet) Cleaning
	EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide nec	k carboy and lid				Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
20 L narrow nec silicone stopper	k carboy and lid (+assembly) or	(			
Blue cube cooles	r				
Grey bucket				1	Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Black bottle bag					
Bottle harness				1	
Relinquished	Printed Name W-B-C	Carey		Date/Time	e_2-1-19/1000
Received	Printed Name Signature Affiliation Wack	LAT	Sur. 35	Date/Time	e 2-1-19/1000
Other Notes:	-				



Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Workseason Dy Wedler
Bacteriological - VCHCA Lab (SIDE & of &)

Sampling Date	5/2/19				Pro	ject Nı	ımbo	er: 2 <del>0</del>	17/18-2	2018/19-5 (Oy) SC
Sampling Tean	K. HAHS	W.C	. LAREY				_			( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (
LAB USE ONLY	SAMPLE ID		ATE/TIME OLLECTED	conferment to two method shifting	Fecal coms. (0. This inchor - MI (Mr.)	E coli (Trav Method WO MEVY)	Total Coliforn (Teas Method WO IDENY)	(414)	Number of Bottles	NOTES
	M <del>O SPA</del>			k	Х	Z	_		1	DRY
	MO-FIL	5/2	19 09:20	X	Х	Х	X		1	
	ME-SCR		10:25	X	X	Х	X		1	
	MO-VEN		11:25	X	k	Х	X		1	
	MO-THO			7		v	V			
	MO-OXN				1	X	X		1	DRY
	MS HUR			+	ł		*		-	
				g j			-			
elinquished	Printed Name	*	CELLY HA	H						
	Signature	6	. 111	,						
	Affiliation		were		Date,	/Time	5	5/2	/19	11212
ceived	Printed Name		meron	1	200	en d		e v		1010
	Signature	(n	m	1	no	201	/			
	Affiliation	12	11	I	Date,	/Time	4	in	119	1212
her Notes:	Perform bacteriological	analyse	s within 6 hours of	sam	ple c	ollectic	on tir	me		· ·
	1:10 1:100, and 1:1000									



Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program
Project: NPDES Stormwater

Bacteriological - VCHCA Lab (SIDE 2 of 2)

2018/19-5 (DY) VRW+HUE

Sampling Date Sampling Tean		,	-	Proje	ect Nu	mber:	2017/16	2-6	Wen) VENTHUE
LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Out C L'eem (25 Tube Method Mitter)	ten Soif a (25 Tale Mothed Affility)	E. coli (Tray Method - WO IDEXX)	Total Coliform (Tray Method - WQ IDEXX )		Number of Bottles	NOTE
		R2 5-8-19/1015	k		X			1	NOTES
	Men I Me M		k	#	X	X		1	
		OJA 5-8-19/0910	1		X	X		1	
	MO MO MO THE	5-8-19/1215		#	X	х	717	1	
	мо-тно-			#	A	A		-	
	MO-OXN				x	Y			
	MOTHER				x	v		njes.	
								1	
	1						0 0		
Relinquished Received	Printed Name Signature Affiliation Printed Name Signature	W.B. CAREY W.B. CAREY WONPO SALVADARY	1/3	Date/	Time	5 AG	-8-19 AA)		
Other Notes:	Perform bacteriologica 1:10 1:100 and 1:1000	analyses within 6 hours of	1	Pate/		time		- 8	8./9



Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Project: NPDES Stormwater Dry Weather

Bacteriological - VCHCA Lab (SIDE 1 of 1) 5/14/19 Sampling Date: Project Number: 2018/19-5 (Dry) CCW MB CAREY Sampling Team: Total Coliform (Tray Method - WQ IDEXX coli (Tray Method - WQ IDEXX) Number of Bottles LAB USE DATE/TIME **ONLY** SAMPLE ID E. COLLECTED **NOTES** ME-CC 5/14/19 X X 1 11:20 MO-CAM X X 1 12:10 MO-MPK X 0855 X 1 MO-SIM X X 1 0940 MO-THO X X 1 1040 KELLY HAHS Relinquished Printed Name Signature Affiliation Date/Time Received Printed Name Signature Affiliation Other Notes: Perform bacteriological analyses within 6 hours of sample collection time 1:10 1:100, and 1:1000 dilutions for E. coli





# Ventura County Watershed Protection District NPDES Stormwater Monitoring Program roject: NPDES Stormwater Dry Weather (Contract AF

Project: NPDES Stormwater Dry Weather (<u>Contract AE17-001</u>) Grabs - Weck Laboratories (SIDE 1 of 1)

-	5/14/19							Proj	ect l	Vun	ıber	: 201	8/1	9-5 (	Dry) Grabs CCW
	W.B. CARE	7								_					
	DATE/TIME	& Grease (EPA 1664A)	mide (ASTM D7511)	O (EPA 8015B)	BE & 2CLEVE (EPA 624)	vel Blanks (EPA 624)-only analyze if hits					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			nber of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
<u> </u>	COLLECTED											_			NOTES
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		ربر	191	D	· · · · ·	10	,	Dat	e/Ti	me		5-	14	- 10	7/1340
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ıntywide	e Stormwater Quain	Repo	•	(		Pa	⊸ ge Di	Ę <b>,</b>	13	· ·	-	<b>c</b> ]	,,/	9	5 Altachment 2 Appendix E
	Printe Signal Affilia Trave EPA	DATE/TIME COLLECTED  5/14/19 11:20  12:10  0855  0940  1040  Printed Name Signature Affiliation  Printed Name Signature Affiliation  Travel blanks are only to EPA 624 has replaced Electronic to the second collected and th	Printed Name Affiliation Printed Name Signature Affiliation Printed Name Signature Affiliation Printed Name Signature Affiliation Travel blanks are only to be a	Printed Name  Printed Name  Affiliation  Printed Name  Affiliation  Printed Name  Signature  Affiliation  Travel blanks are only to be analyted.  Travel blanks are only to be analyted.  Particle of the printed of the	Printed Name  Printed Name  Affiliation  Printed Name  Signature  Affiliation  Travel blanks are only to be analyzed in EPA 624 has replaced EPA 524.2 for the state of the st	N.B. CAREY   (1)	N.B. CAREY	DATE/TIME COLLECTED	DATE/TIME COLLECTED   O   O   O   O   O   O   O   O   O	DATE/TIME   COLLECTED   COLL	DATE/TIME   COLLECTED   COLL	DATE/TIME COLLECTED IO 1 2 3 1	DATE/TIME COLLECTED   IO   O   O   O   O   O   O   O   O	N. 8. CAR € Y    Collected   Collected	N. 8. CAR€Y



#### Ventura County Watershed Protection District NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Dry Weather (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 1 of 1)

Sampling Date:	5b/19		Project Number: 2018/19-5 (Dry) Grabs SCRW	
Sampling Team:	KHAHS (	o.B. CAREY		_
SAMBLE ID	DATE/TIME	Oil & Grease (EPA 1664A) Cyanide (ASTM D7511) GRO (EPA 8015B) MTBE & 2CLEVE (EPA 624) Travel Blanks (EPA 624)-only analyze if hits	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.	
SAMPLE ID ME-SCR	5/2/19 io: 25		Z NOTES	_
MO-FIL	5/2/19 10:25		9	_
MO-OXN		2 1 2 3 1	9 DRY	
M <del>O-SPA</del>		3 1 2 3 1	10 DRY	_
MO-VEN	5/2/19 11:25	2 1 2 3 1	9	_
Relinquished	Printed Name	ELLY HATS		
	Signature	allys		
	Affiliation	60	Date/Time 5/2/19/1400	
Received	Printed Name	actor Sa.	1 ch	
	Signature	<u> </u>		
	Affiliation 132	CKILL33	Date/Time 5-2-19 / 1400	
Other Notes:		o be analyzed if samples EPA 524.2 for MTBE and	have hits of MTBE or 2-CLEVE)	
	Lector	Sauch	- Janohnen sizin 1438 Town 3.3°C	
	>-02-1	17 16 28	Attacker and D.A	

Ventura Countywide Stormwater Quality Management Program 2018/19 Annual Report ✓ ₱age DE - 44

Attachment D Appendix E





# Ventura County Watershed Protection District

NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Dry Weather (Contract AE17-001)

Grabs - Weck Laboratories (SIDE 1 of 1)

Sampling Date:	5-8-19						Pr	oject	Nun	iber:	2018/1	.9-5 (.	Dry) Grabs VRW + HUE	
Sampling Team:	wee & bw					•								
	DATE/TIME	Oil & Grease (EPA 1664A)	Cyamide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits						Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.	
SAMPLE ID ME-VR2	COLLECTED	<u>5</u>	<u>ථ</u> 1	2	3 <b>M</b>	1 L		+				Ž   10	NOTES	
MO VEL	5-8-19/1015	2	1	2	3	1	_	+	+			9		
MO-OJA	5-8-19/0910	2	1	2	3	1	$\dashv$	+	*		+	9		
MO-HUE	5-8-19/1215	2	1	2	3	1	$\dashv$	+	+			9		
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Relinquished	Printed Name W.	P.	ه م	R #	<u>.                                    </u>	-			•					
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		cw	PA	<u> </u>	<del></del>		, E	ate/	Time		-B-l	2 / <b>#</b>	<del>330</del> 1355	
Received	Printed Name	N	7_	1	ו <i>א</i> יבי	1/								
	Signature		1	<u> </u>		À	~~					•		
	Affiliation	_)			<u> </u>		E	ate/	Γime	5	195/2	19	1400	
Other Notes:	Travel blanks are only to	be a	analv	zed	if saı	nnle	s have	hits	of M	TBE	or 2-Cl	EVE	***	
	EPA 624 has replaced E										01 11 01		7	
;	Pelmausled:	X.	7t	لم	V,	le	_5	B	19	<i>r</i> .			·	-013)
Ventura Cou Managemen	ntywide Stormwater Quality t Program 2018/19 Annual I	Repo	rt-	M	امر ( مر	Pag	5/ e DE	45	19	17	50 50	J	ime Attachmen Drinkandik ESO 2	2.7'



# CENTURA COUNTY

Ventura Countywide Stormwale Adams Management Program 2018/19 Annual Report

#### Chain of Custody Record

#### Ventura County Watershed Protection District NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Dry Weather (*Contract AE17-001*)
Composites - Weck Laboratories (SIDE 1 of 1)

Sampling Date:		5/14/19				•			-	Proj	ect l	Num	ber:	201	8/19	9-5 (	Dry) Composites CCW
Sampling Team:		WiB. CAP	(E)	<u>/</u>													
SAMPLE ID ME-CC MO-CAM MO-MPK MO-SIM MO-THO	Ļ	DATE/TIME COLLECTED 1/19 11:20 12:10 0855 0940 / 1040		X X X X Dissolved Inorganic Carbon and Dissolved Organic Carbon	X NO3-N, Total Chlorine Residual	X X X X Metals, total & dissolved (+ Hardness), & Barium (total only)		X X X X BOD, COD, MBAS, TKN, Ammonia, TOC	X   X   X   X   NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	X X X X Phosphorus-P Total & Dissolved	X X X X X 825-CTR, 8270SIM-PAH, 8270SIM-Phenols *	X X X X 515.3-Herb 547-Gyphosate, 608-CTR	X   X   X   X   525.2 Reg+507, 525-OPP-LL	X X X DRO/ORO (EPA 8015B)	X X X X X ALK, CLO4, Turb, TDS, TSS, VSS, Cond	1 Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K 608 include alpha- & gamma-chlordane * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS Lab to select samples for MS/MSD where extra volume permits (all test
		W. 1004 W				-											
			·														
Relinquished	Prin	ited Name	<i>i</i> - 6	<u> </u>	<u></u>	Λſ	<b>EY</b>			÷							
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Received	Prin	ited Name	<u>フ</u>	Mo	ak	A		1							ē		
	Sign	ature 1	X	-1	Su	L.l.	1	<u>/ (                                    </u>	AND DESCRIPTION OF	<u> </u>					<del>_,</del>		
	Affi	liation	2/4	K_	La	bs		_	ı	Date	e/Ti	me	3/	114	<u> </u>	9	13AD
Other Notes:		ilter for dissolved															
2) Please do not dilt	ite lin	nited volume samp	les v	vhen	ena	cting	g pri	ority	list	(low)	rep	ortin	g lin	otts :	are i	npo	rtant).
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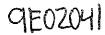
1550



# Chain of Custody Record Ventura County Watershed Protection District NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Dry Weather (Contract AE17-001) Equipment - Weck Laboratories

Sampling Date: Sampling Team:	5/14 w.8. c				Project	Number	:: 2018/19-5 (Dry) Cleaning CCW
	EQUIPMENT		Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required		NOTES
18.5 L wide neck		-					Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
20 L narrow neck silicone stopper	carboy and lid (+ass	embly) or	5				Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Silicone stoppers							
Blue cube cooler					5		· · ·
Grey bucket							
Black bottle bag					5		
Bottle harness							
			-				
Relinquished	Printed Name Signature Affiliation	w.B. c w.B. Vcw1	Cas	rly_	Date/Ti	me	5/14/19 1340
Received	Printed Name  Signature  Affiliation	B. Ma West 1	Las		Date/Tir	me <u>5/</u>	14/19 2340
Other Notes:  Ventura Count	* Allow to air dry (  Record the bottles	cleaned with m	ethanol.	ge DE	to avoid	organic	1550 Attachment D Appendix E
Management F	rogram 2018/119 Annu 201	ral Report \	amal	14	5/1	1/19	1870



# hed Protection of the Protecti

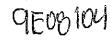
#### Chain of Custody Record

#### Ventura County Watershed Protection District NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Dry Weather (*Contract AE17-001*)

Composites - Weck Laboratories (SIDE 1 of 1)

Sampling Date:	5/	2/19							Proj	ect l	Nun	ber:	201	8/1	9-5 (	Dry) Composites SCRW
Sampling Team:	<u>k.H</u>	AHS W	. <u>B. 0</u>	ARE	ξ <u>Υ</u>											
SAMPLE ID  ME-SCR  MC-TIL  MO-OXIN  MO-OXIN  MO-OXIN  MO-OXIN  MO-OXIN	DATE COLL 5/2/19	E/TIME ECTED [0:25		🗶 🕆 🛠 🛠 🛣 Dissolved Inorganic Carbon and Dissolved Organic Carbon	2	X X X X X X X X X X X X X X X X X X X	X X X X BOD, COD, MBAS, TKN, Ammonia, TOC	X X X X X NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	X X X X X Phosphorus-P Total & Dissolved	X X X X X X X 825-CTR, 8270SIM-PAH, 8270SIM-Phenols *	X X X X X X 515.3-Herb 547-Glyphosate, 608-CTR	X X X X X X 525.2 Reg+507, 525-OPP-LL	X X X	X X X X X ALK, CLO4, Turb, TDS, TSS, VSS, Cond	1 1 1 Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K 608 include alpha- & gamma-chlordane * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS Lab to select samples for MS/MSD where extra volume permits (all test  NOTES
Relinquished	Printed Na	ame (	CELL	<u> </u>	+	AH	<u> </u>			_						
Received	Signature Affiliation Printed Na Signature Affiliation	ame	ta ta	4	7	- (h	<u></u>	G_	Dat	\ <u>\</u>				-	2/1	1/1400 2-19 /1400
Other Notes: 2) Please do not dilu	1) Filter fo te limited v	or dissolved r	netals a les whe	nd pe n ena	rfor	m co	ondu ority	ctivi list	ity ar (10w	alys rep	es ir	nme g lin	diate	ıl <del>y</del> .		
i s					<u>c</u>		-)			-1		<u>م</u>	~ '			
Hach	Sa	neh			•	J		net 1	<b>4</b>	1		5	lz	Jo	ì	1436 1.7°C T-00
Ventura Cou Managerhen	ntywide Sto LProgran	ormwater Qua 2018/19 Amu	ality ıal Repo	ort			Pag	je DI	≣ - 48	5						Attachment D Appendix E



# TENTURA COUNTY

#### Chain of Custody Record

#### Ventura County Watershed Protection District NPDES Stormwater Monitoring Program

Project: NPDES Stormwater Dry Weather (<u>Contract AE17-001</u>)
Composites - Weck Laboratories (SIDE 1 of 1)

Sampling Date:	5-8-19		•									`	8/19	)-5 (1	Dry) Composites VRW+HUE
Sampling Team:	wec \$ ow														
SAMPLE ID	DATE/TIME COLLECTED		Dissolved Inorganic Carbon and Dissolved Organic Carbon		Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	Metals by200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K  608 include alpha- & gamma-chlordane  * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test
ME-VR2	5-8-19/1015		X	X	Х	Х	X	X	X	X	X	X	Х	1	
M <del>O MEI</del>			X	X	X	X	Х	X	X	X	X	X	Х	1	
MO-OJA	5-8-19/0910		X	X	X	X	X	X	Х	Х	X	X	X	1	
MO-HUE	5-8-19/1215		X	X	X	X	X	Х	Х	X	X	X	x	1	
	· · · · · · · · · · · · · · · · · · ·														
Relinquished  Received	Signature U	8.C N.B. VCh	C	rei		7	•	Dat	e/T	ime		5-2	§ -1	9/	+330 l335
	Signature		],	4		T			/						
	Affiliation	To.	- Je	, <u>~ a</u>	<u>- Ų</u>	γŞ	<u>. /                                   </u>	Dat	e/T	ime	<u>5/</u>	b	/1_	9	1400
Other Notes:	1) Filter for dissolved i													,,,-	
2) Please do not dil	ute limited volume samp	tes wh	en en	actin	g pri	ority	r list	(low	rep	ortir	ıg lir	nits	are i	mpo	ertant).

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Ventrika Chyntywide Stormwater Starily 5 Page DE - 494.75

Management Program 2018/19 Annual Report Line ( 5/8/19 175

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# Ventura County Watershed Protection District NPDES Stormwater Monitoring Program

# Equipment - Weck Laboratories

Sampling Date:	如 5-	8-19			Project I	Numbe	er: 2018/19-5 (Dry) Cleaning VRW+HUE
Sampling Team:	WAC	1 DW		•			
		<u> </u>	T	<u> </u>		1	
			Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required		
185 L wide neck	EQUIPMENT		-9	O E			NOTES  Please place tape or plastic bag over top and note on wrap
20 L narrow neck	carboy and lid (+as	sembly) or					if bottle was cleaned with methanol.  Please place tape or plastic bag over top and note on wrap
silicone stopper		<u>.</u>	3				if bottle was cleaned with methanol.
Silicone stoppers			2				\$3
Blue cube cooler	<u>,                                    </u>	<del> </del>	3				
Grey bucket	·	<u> </u>					
Black bottle bag		···.	<b>&amp;</b>				
Bottle harness		-	2	ļ			
	<u>-</u> -						
Relinquished	Printed Name	W.B. CA	REY				
	Signature	w.B. C	arey	<u> </u>			
	Affiliation	VCWP	0	/):	Date/Ti	me	5-8-19/ 1330 1355
Received	Printed Name	* Vi	-k*	non			
	Signature	Kul	W			>	
	Affiliation	Weca		<u>.</u> ]	Date/Ti	me <u>5</u>	18/19 1400
Other Notes:	* Allow to air dry	(don't rinse) af	ter meth	anol step	to avoid	/ organi	ics contamination).
	Record the bottle			8		, ,	
	Lelinguis wide Storkwater Qu rogram 2018/19 Anni		J. Pag	44 LE 194 DE 150	25/8 181.0	B/1:	Attachment D Appendix E



#### Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Major Outfall Dry Weather Monitoring Bacteriological - VCHCA Lab



Sampling Date:

8/20/19

Sample Event: DRY 2019

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX	E. coli (Tray Method - WQ IDEXX )	Number of Bottles	NOTES
	Camarillo-1				-	MO-CAM
	Fillmore-1	8/20/19 0935	×	×	1	MO-FIL
	Moorpark-1			DE		MO-MPK
	Ojai- <b>6</b>	8/20/19 11:35	×	×	1	MOLDIA DRY-OTAG
	Oxnard-2	8/20/19 0810	×	*	1	MODINA DRY-OTAG
	Port Hueneme-3	8/20/19 0810	x	×	ı	DRY-HUE3 dolmary # 2
	Santa Paula-3	8/20/19 1045		×	1	DRY-SPA
	Simi Valley-1					MO-SIM
	Thousand Oaks-1					мо-тно
	Unincorporated-4					DRY-UNI4

Relinquished	Printed Name	KELLY HAHS				1
	Signature	Glichters				/ Pot then one-3
	Affiliation	VEGED	Date/Time	8/20/19	1340/	8/20/29
Received	Printed Name	Camara Cl	render	1	Lold	& Bough
	Signature	in do	nn		93N. Y!	BANDS 14:4
	Affiliation	PML	Date/Time	8/201	19 134	0 /20/19
Other Notes:	1:10, 1:100, and 1:1	000 dilutions				1

Ventura-



# Chain of Custody Record Ventura County Watershed Protection District NPDES Stormwater Monitoring Program Major Outfall Dry Weather Monitoring Bacteriological - VCHCA Lab

Sampling Date: 8/21/19 Sample Event: DRY 2019

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	Camarillo-1	8/21/19 0730	×	>			1	MO-CAM
	Fillmore-1							MO-FIL
	Moorpark-2	8/21/19 0815	×	×			1	MOMENT DRY-
	Ojai-1							MO-OJA
	Oxnard-1							MO-OXN
	Port Hueneme-3							DRY-HUE3
	Santa Paula-2							DRY-SPA2
	Simi Valley-1	8/21/19 1020	×	*			1	MO-SIM MO-51M
	Thousand Oaks-1	8/21/19 1020	×	×			1	MO-THO
	Unincorporated-4	8/21/19 0945	×	*			,	DRY-UNI4
	Ventura-1						1	MO-VEN
inquished reived	Printed Name Signature Affiliation Printed Name Signature	KELLY HAKS WWPO Madia WAT	•	Date/*		3/21/19	-	1059
	Signature Affiliation	PHLah		Date/1	Time 05	21196	3	1059



Management Program

#### Chain of Custody Record

#### Ventura County Watershed Protection District NPDES Stormwater Monitoring Program

Major Outfall Dry Weather Monitoring Grabs - Weck Laboratories

Invoice Contract No. AE17-001

Sam	olina	Date:
CALII	ршц	Date.

8/20/19 + 8/21/19

Sample Event: DRY 2019

Sampling Team:

W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED	Total Hardness	TOC	Dissolved Metals by 200.8 (Lead, Zinc, Copper)		Number of Bottles	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.  Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.)
Camarillo-1	8/2/19 0730	х	X	X			
Fillmore-1	8/20/19 0935	X	X	х	-		
Moorpark <b>2</b>	8/21/19 0815	Х	X	X			
Ojai- <b>6</b>	8/20/19 1135	Х	Х	X			
Oxnard- <b>2</b>	8/20/19 0810	Х	X	х			
Port Hueneme-3	8/20/19 1410	х	Х	x			
Santa Paula- <b>3</b>	8/20/19 1045		X	х			
Simi Valley-1	8/21/19 0910		х	Х			
Thousand Oaks-1	8/21/19 1020		Х	x			
Unincorporated-4	8/21/19 0945	x	x	X			
Ventura- <b>5</b>	8/20/19 1305	X	X	X	_		

Relinquished	Printed Name	KELLY	HAHS			·	
	Signature	tolly	69	**	· <u>, ·</u>	<del>.</del>	
	Affiliation	VCENT	20	Date/Time	8/21/19	/ 1335	
Received	Printed Name	K811/A	3 Wal	End			
	Signature	3	Isla 4	3	)		
	Affiliation	week 1	30	Date/Time	3/2/19	1340	
Other Notes:					1 - 1 - 0	<del>2 ''                                  </del>	
		11.18	DE-1	151	11/21	0276	<u> </u>
Ventura	a Countywide Stormw	Mer Outly	Pa	ge DE - 58	26	& Attachynomy D	Appendix E