

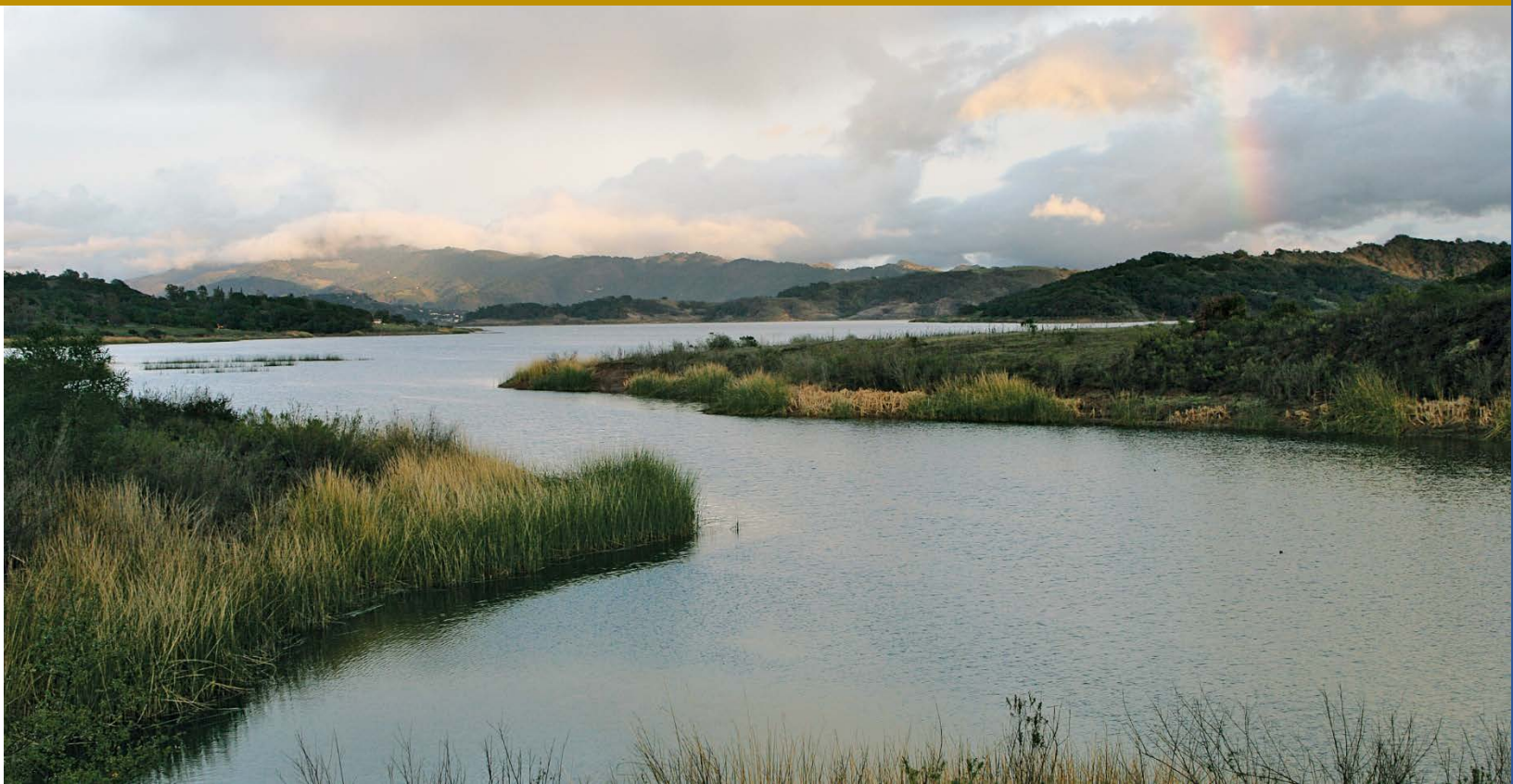


*Ventura Countywide  
Stormwater Quality  
Management Program*

2017-2018  
Permit Year

Ventura Countywide Stormwater Quality  
Management Program Annual Report

# Attachment D Monitoring Appendices A - E



December 14, 2018

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



## **Appendix A: Major Outfall Station Fact Sheets**

## Camarillo

**Waterbody:** Camarillo Hills Drain (tributary to Revolon Slough)

**Location:** Daily Rd. overcrossing (34°13'10.00"N, 119° 3'58.06"W)

**Pros:** Likely well-defined rating table

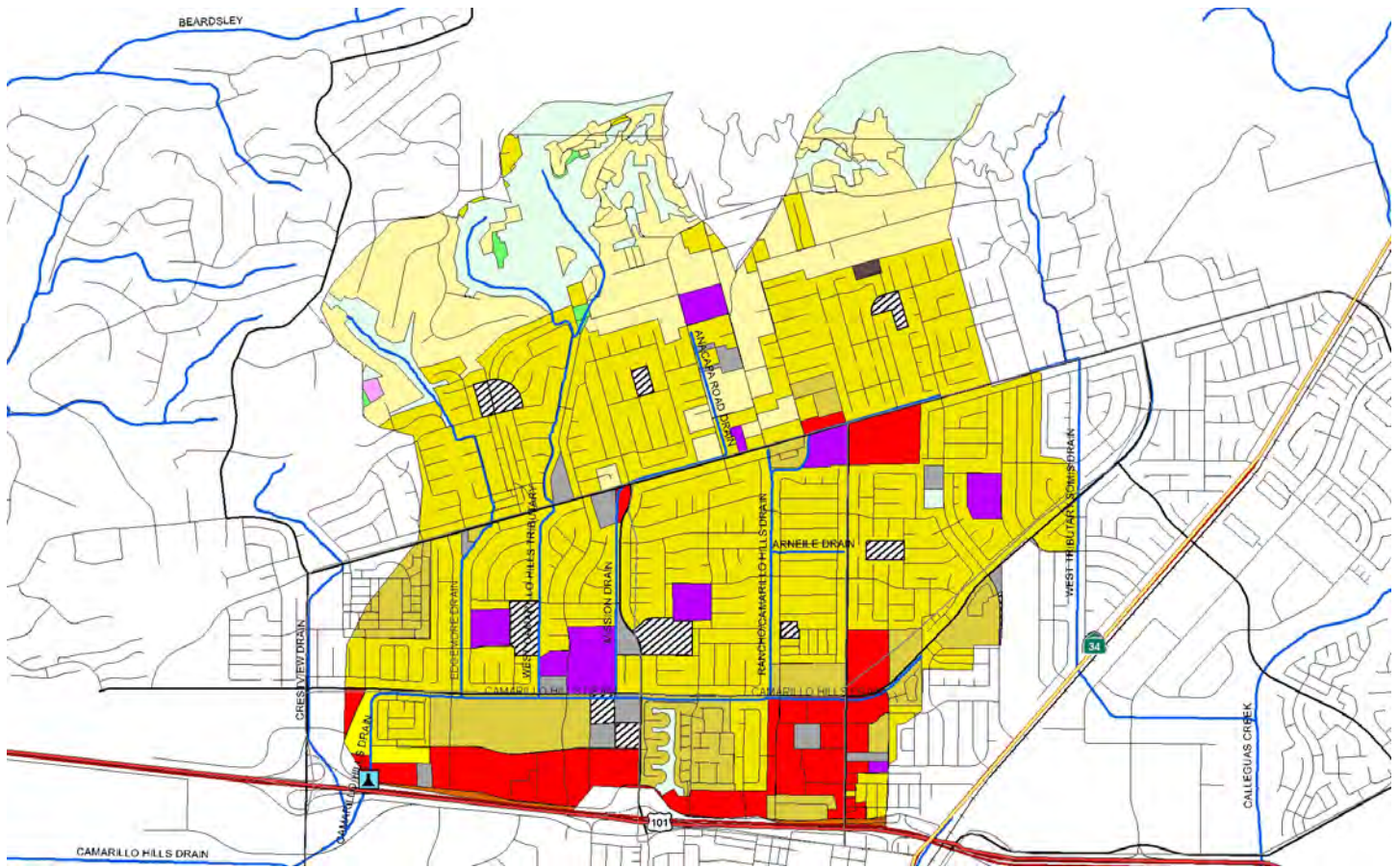
**Cons:** Moderate potential for vandalism

**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** None

**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff





### Entire City

Land Use	Acres	% of Total Watershed
Agriculture	1585.8	12.6%
Com_Indus. Mix	12.5	0.1%
Commer.	657.2	5.2%
Extraction	58.4	0.5%
Facility	129.5	1.0%
Industrial_1	32.2	0.2%
Industrial_3	622.6	4.9%
Military_2	5.7	0.1%
No Info Given	202.2	1.6%
Recreation	489.4	3.9%
Res.1	1305.9	10.4%
Res.2	443.4	3.5%
Res.3	3253.5	25.9%
Res.4	525.0	4.2%
Schools	325.0	2.6%
Transportation	954.2	7.6%
Under Construction	294.8	2.3%
Utilities	255.8	2.0%
Vacant Undifferentiated	1423.4	11.4%
<b>Totals</b>	<b>12576.4</b>	<b>100.0%</b>

### Selected Subwatershed

Land Use	Acres	% of Total Watershed
Agriculture	6.1	0.2%
Commercial	213.5	7.7%
Facility	48.5	1.7%
No Info Given	57.4	2.1%
Res.1	453.4	16.3%
Res.2	235.0	8.5%
Res.3	1365.5	49.1%
Res.4	15.2	0.5%
Schools	80.6	2.9%
Transportation	11.7	0.4%
Under Construction	2.6	0.1%
Utilities	2.3	0.1%
Vacant Undifferentiated	287.4	10.3%
<b>Totals</b>	<b>2779.1</b>	<b>100.0%</b>

## Fillmore

**Waterbody:** North Fillmore Drain (tributary to Sespe Creek)

**Location:** 75 yds. southwest of Old Telegraph Rd.  
(34°24'16.51"N, 118°55'50.47"W)

**Pros:** Some portion of vegetation could be cleared by City of Fillmore

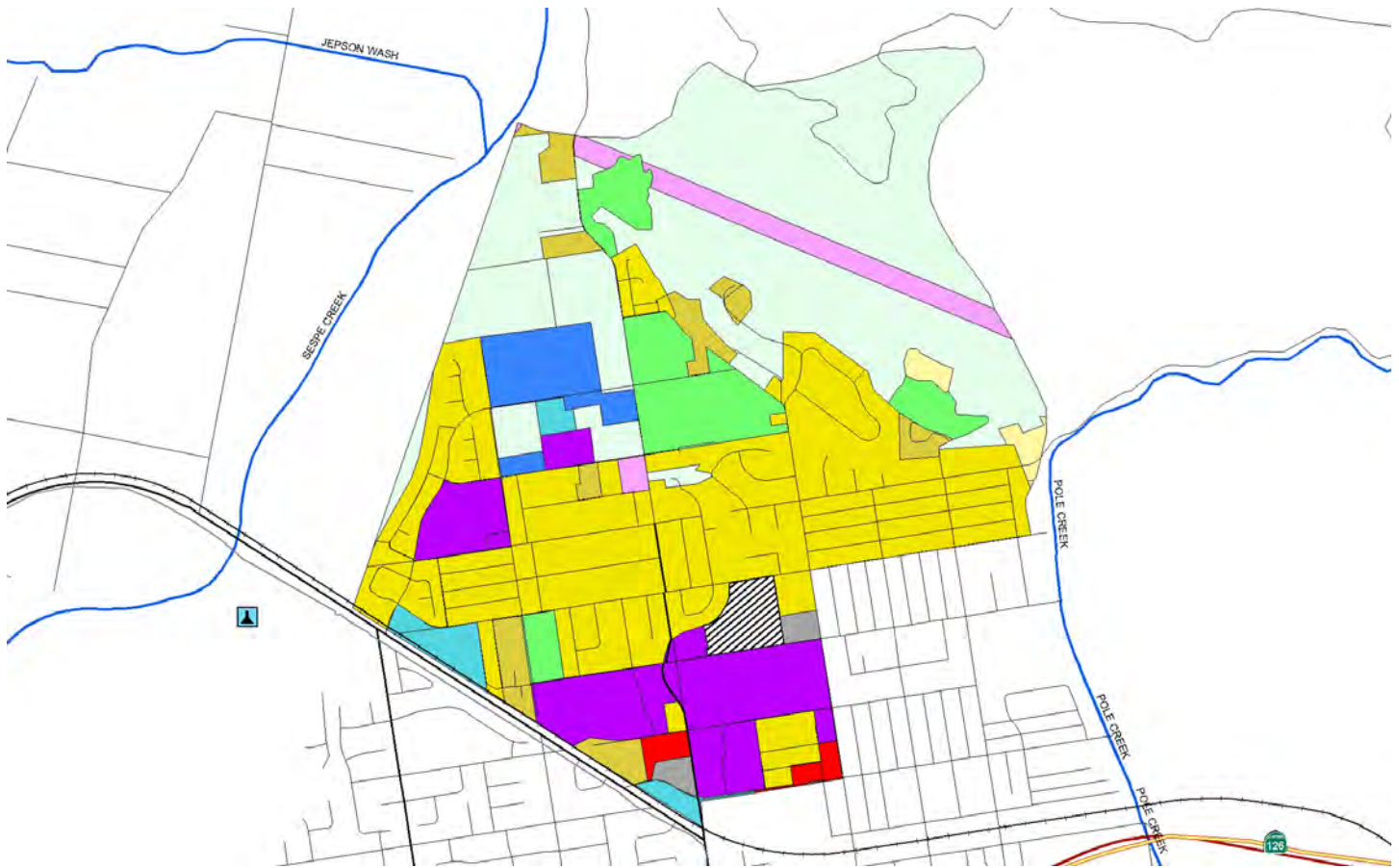
**Cons:** Potential for vandalism

**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** C Street Drain and Central Ave. Drain

**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff





**Entire City**

Land Use	Acres	% of Total Watershed
Agriculture	274.8	13.0%
Com_Indus. Mix	10.4	1.0%
Commercial	103.2	5.0%
Facility	27.3	1.0%
Industrial_1	31.3	2.0%
Industrial_3	28.7	1.0%
No Info Given	21.9	1.0%
Res.1	52.8	3.0%
Res.2	44.6	2.0%
Res.3	693.1	34.0%
Schools	87.6	4.0%
Transportation	6.4	0.0%
Under Constructoni	58.4	3.0%
Utilities	45.8	2.0%
Vacant Undifferentiated	582.5	28.0%
<b>Totals</b>	<b>2068.7</b>	<b>100.0%</b>

**Selected Subwatershed**

Land Use	Acres	% of Total Watershed
Agriculture	52.5	6.9%
Commercial	6.3	0.8%
Facility	5.1	0.7%
Industrial_1	14.1	1.9%
Industrial_3	23.4	3.1%
No Info Given	9.9	1.3%
Res.1	6.1	0.8%
Res.2	29.7	3.9%
Res.3	255.7	33.6%
Schools	75.3	9.9%
Utilities	23.1	3.0%
Vacant Undifferentiated	260.6	34.2%
<b>Totals</b>	<b>761.7</b>	<b>100.0%</b>

## Meiners Oaks (Unincorporated)

**Waterbody:** Happy Valley Drain (tributary to Ventura River)

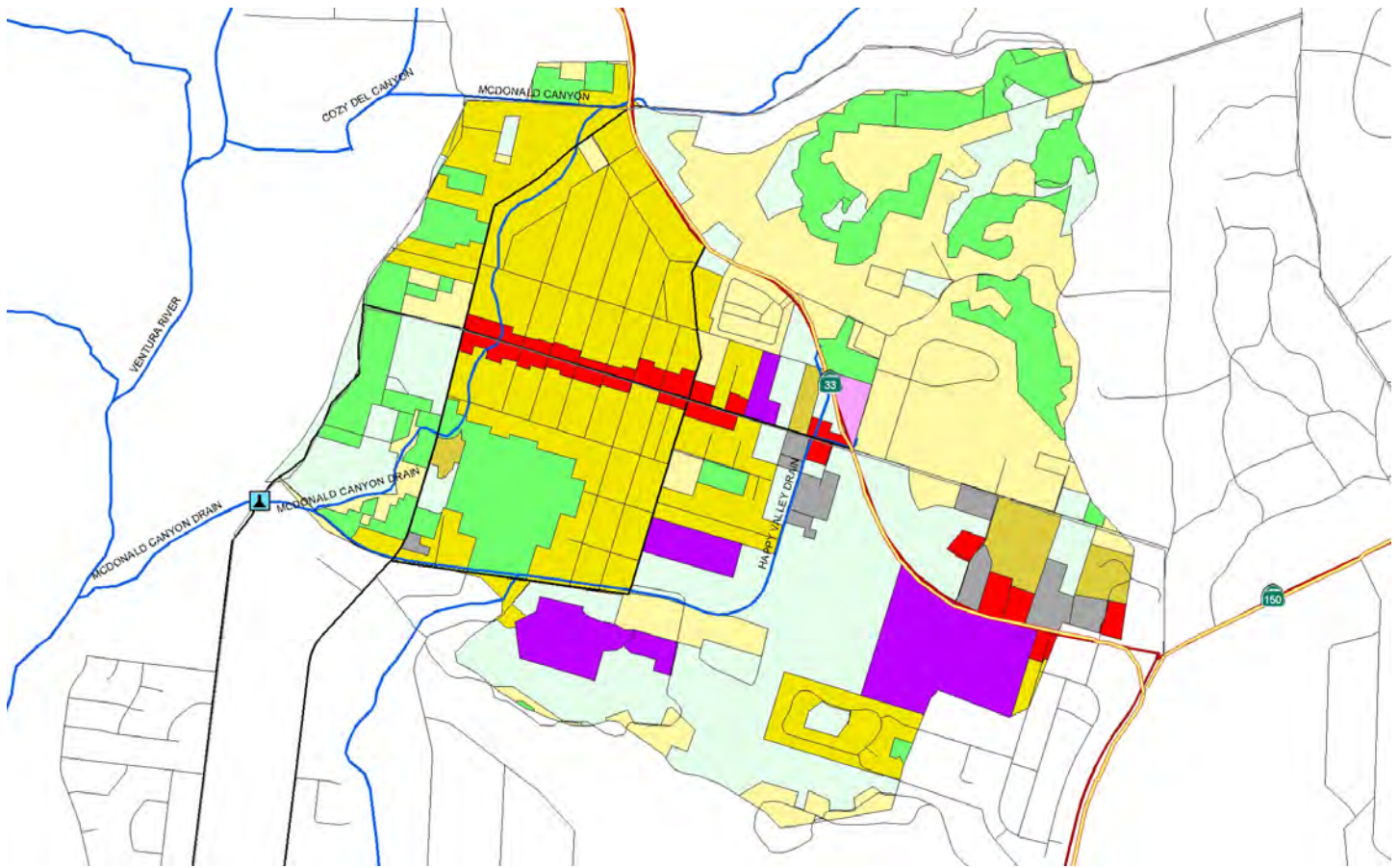
**Location:** Southwest of Lomita Rd. and Rice Rd. intersection (34°26'43.98"N, 119°17'25.18"W)

**Pros:** Good control, good access, existing stream flow gauge

**Dry Season Flow Potential:** Unknown at end of rainy season; unlikely later in summer







**Entire City**

Land Use	Acres	% of Total Watershed
Agriculture	658.0	21.5%
Cemeteries	0.0	0.0%
Commercial	33.0	1.1%
Facility	15.5	0.5%
Recreation	29.9	1.0%
Res.1	812.3	26.5%
Res.2	43.9	1.4%
Res.3	463.4	15.1%
Schools	46.5	1.5%
Utilities	19.3	0.6%
Vacant Undifferentiated	945.0	30.8%
<b>Totals</b>	<b>3066.8</b>	<b>100.0%</b>

**Selected Subwatershed**

Land Use	Acres	% of Total Watershed
Agriculture	152.1	14.8%
Commercial	30.8	3.0%
Facility	20.8	2.0%
Res.1	234.0	22.8%
Res.2	22.0	2.1%
Res.3	249.9	24.4%
Schools	63.6	6.2%
Utilities	3.8	0.4%
Vacant Undifferentiated	248.8	24.3%
<b>Totals</b>	<b>1025.9</b>	<b>100.0%</b>

## Moorpark

**Waterbody:** Gabbert Canyon Drain (tributary to Arroyo Las Posas)

**Location:** North side of SR 118 near southwest corner of So. Cal. Edison property (34°16'44.29"N, 118°54'19.40"W)

**Pros:** Likely well-defined rating table

**Cons:** Aerial deposition from vehicular traffic on 118, potential for vandalism

**Outstanding Site Selection Tasks:** Move sampling location shown on watershed map

**Other Potential Sites:** Upstream current location, although site would interfere with access road

**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff





## Ojai

**Waterbody:** Fox Canyon Barranca (tributary to San Antonio Creek)

**Location:** Concrete box channel upstream Ojai Valley Athletic Club and downstream pedestrian walkway (34°26'41.25"N, 119°14'28.43"W)

**Pros:** Numerous bridges to sample from, located behind VCWPD gate, likely well-defined rating table

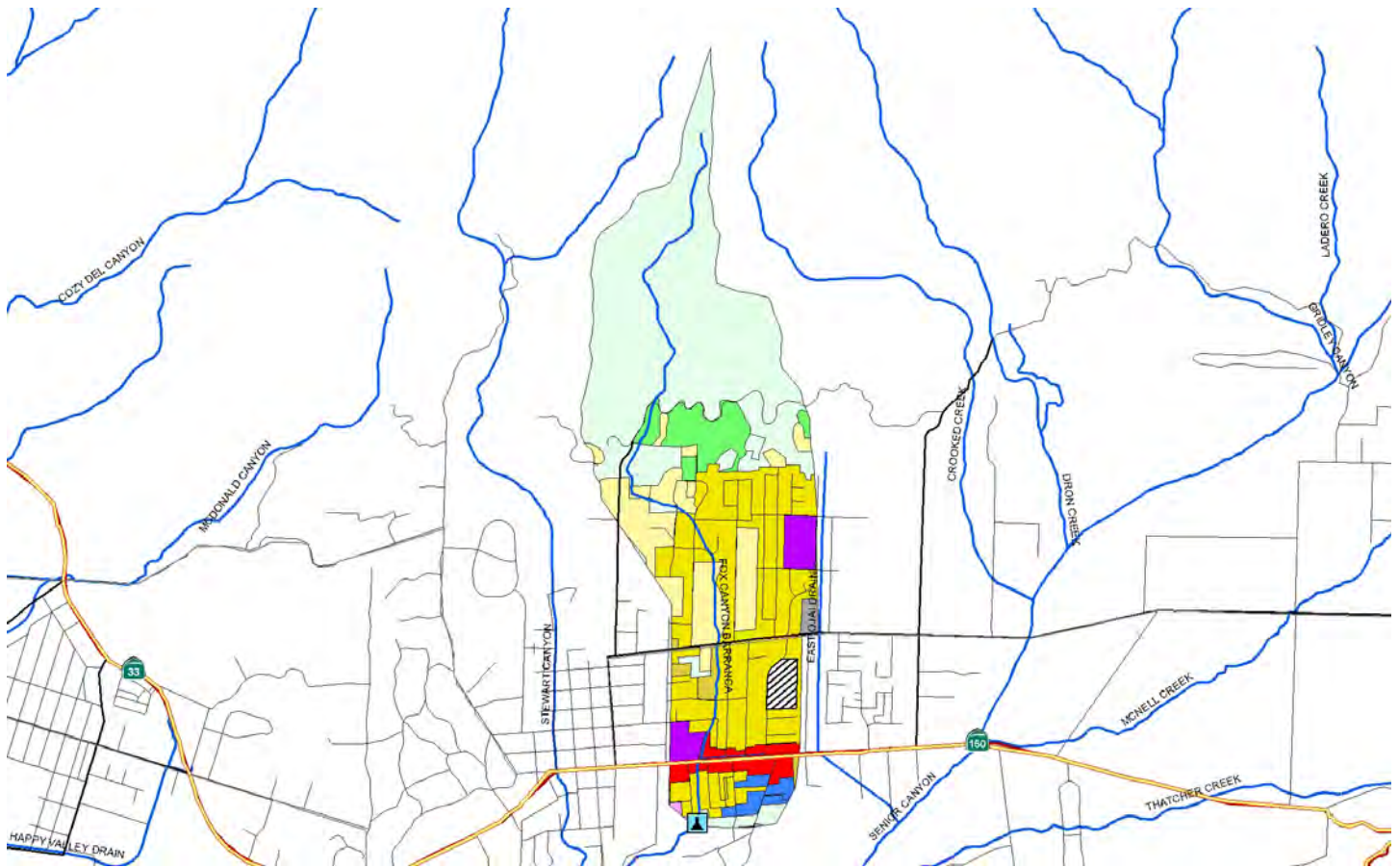
**Cons:** Some potential for vandalism

**Outstanding Site Selection Tasks:** Work with VCWPD O&M to ensure enclosure doesn't interfere with maintenance activities

**Other Potential Sites:** Downstream where Stewart Canyon crosses beneath Ventura St. (bioassessment #8)

**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff





**Entire Watershed**

Land Use	Acres	% of Total Watershed
Agriculture	83.1	3.0%
Cemeteries	3.8	0.1%
Com_Indus. Mix	7.6	0.3%
Commercial	155.1	5.6%
Facility	43.2	1.5%
Industrial_3	13.2	0.5%
No Info Given	55.6	2.0%
Recreation	312.1	11.2%
Res.1	620.7	22.2%
Res.2	61.3	2.2%
Res.3	534.8	19.1%
Res.4	3.3	0.1%
Schools	100.6	3.6%
Utilities	32.9	1.2%
Vacant Undifferentiated	767.1	27.5%
<b>Totals</b>	<b>2794.7</b>	<b>100.0%</b>

**Selected Subwatershed**

Land Use	Acres	% of Total Watershed
Agriculture	37.3	5.0%
Commercial	23.8	3.2%
Facility	4.1	0.6%
Industrial_3	11.4	1.5%
No Info Given	10.0	1.3%
Recreation	0.1	0.0%
Res.1	84.3	11.3%
Res.2	8.0	1.1%
Res.3	210.9	28.2%
Res.4	0.1	0.0%
Schools	20.2	2.7%
Utilities	1.0	0.1%
Vacant Undifferentiated	337.5	45.1%
<b>Totals</b>	<b>748.6</b>	<b>100.0%</b>

## Oxnard

**Waterbody:** El Rio Drain (tributary to Santa Clara River)

**Location:** Pedestrian bridge 50 yds. southwest bend of Winchester Dr. (34°14'10.10"N, 119°11'3.93"W)

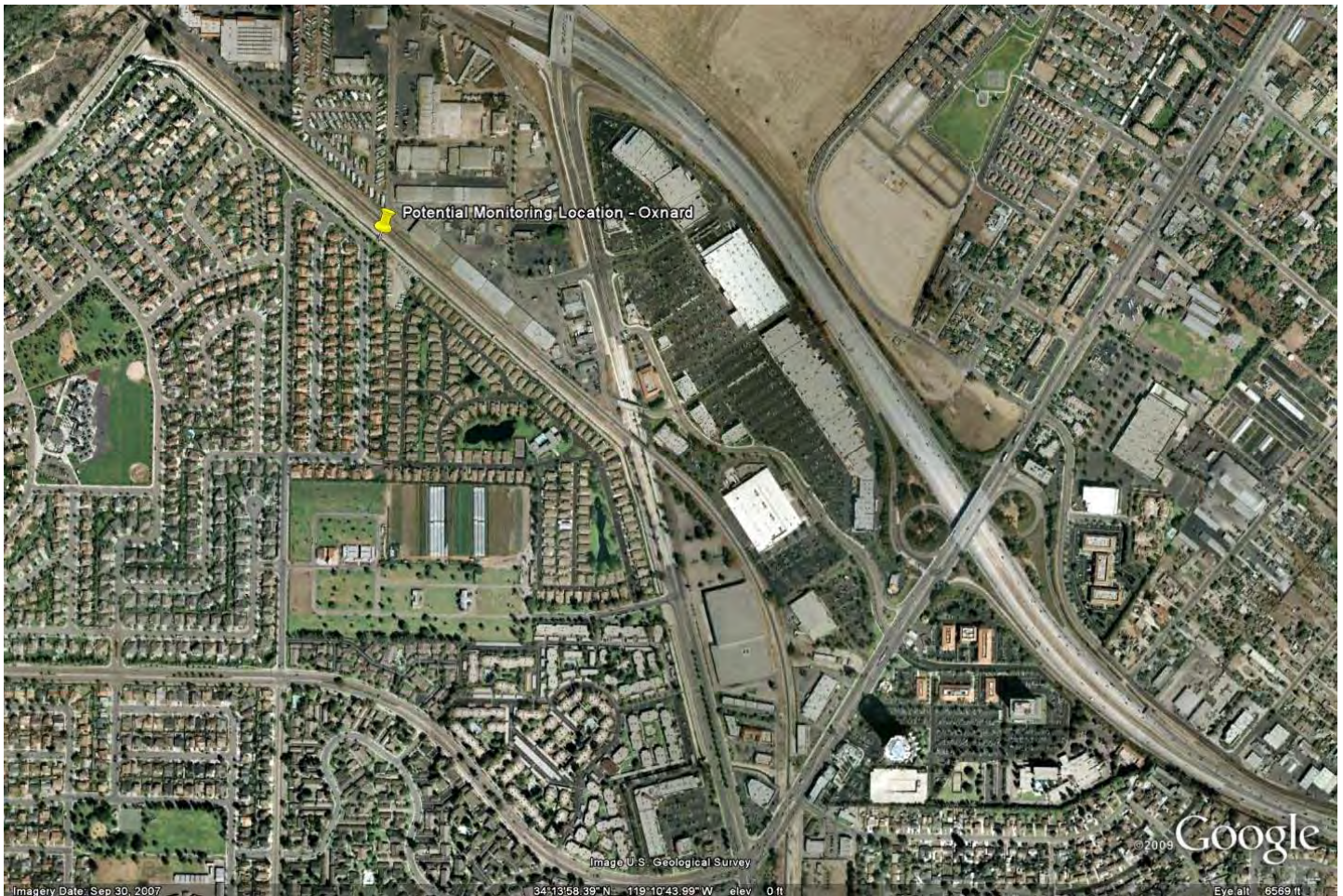
**Pros:** Likely well-defined rating table

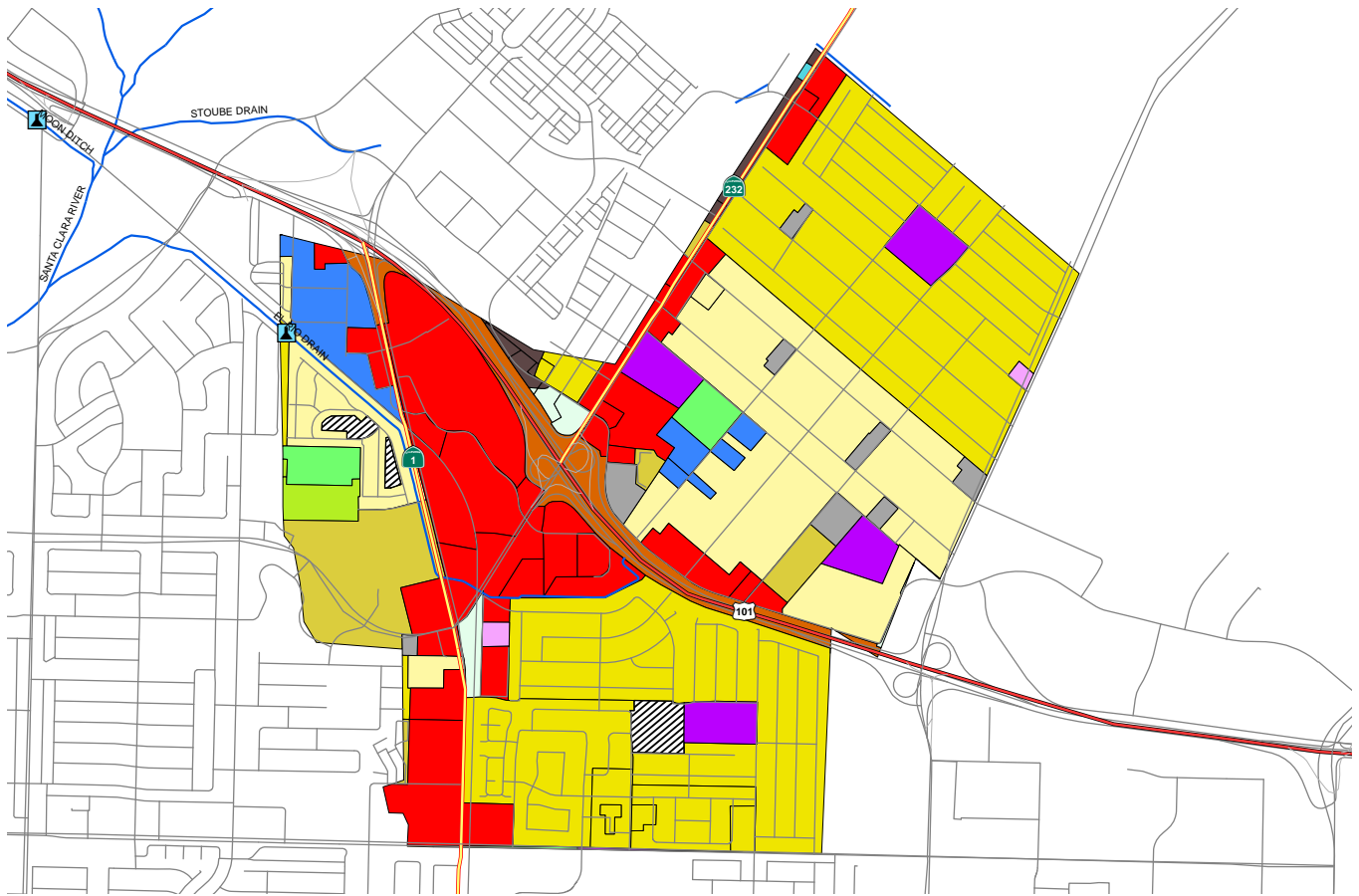
**Cons:** High potential for vandalism

**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** None

**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff





**Entire City**

Land Use	Acres	% of Total Watershed
Agriculture	969.4	5.6%
Cemeteries	22.4	0.1%
Com_Indus. Mix	165.1	0.9%
Commercial	1385.9	8.0%
Extraction	227.3	1.3%
Facility	244.8	1.4%
Industrial_1	163.7	1.0%
Industrial_3	1104.0	6.5%
Industrial_4	62.3	0.4%
Military_1	1.7	0.0%
Military_2	4.0	0.0%
No Info Given	371.6	2.2%
Recreation	679.4	3.9%
Res.1	369.1	2.2%
Res.2	1149.3	6.7%
Res.3	5892.4	34.3%
Res.4	163.0	1.0%
Schools	703.5	4.1%
Transportation	560.5	3.3%
Under Construction	802.6	4.7%
Utilities	298.0	1.8%
Vacant Undifferentiated	1740.2	10.1%
Water	82.0	0.5%
<b>Totals</b>	<b>17162.2</b>	<b>100.0%</b>

**Selected Subwatershed**

Land Use	Acres	% of Total Watershed
Agriculture	19.0	1.5%
Cemeteries	9.7	0.7%
Commercial	253.5	19.5%
Facility	22.1	1.7%
Industrial_1	0.7	0.1%
Industrial_3	40.4	3.1%
No Info Given	14.0	1.1%
Res.1	243.3	18.7%
Res.2	69.8	5.4%
Res.3	500.1	38.5%
Schools	42.9	3.3%
Transportation	55.3	4.3%
Under Construction	12.4	1.0%
Utilities	3.5	0.3%
Vacant Undifferentiated	11.7	0.9%
<b>Totals</b>	<b>1298.2</b>	<b>100.0%</b>

## Port Hueneme

**Waterbody:** Hueneme Drain (tributary to Pacific Ocean)

**Location:** Pump Station 300 yds. downstream Surfside Dr. (34°8'26.91"N, 119°11'17.58"W)

**Pros:** Grass-covered sides fairly stable

**Cons:** Lots of activity nearby, high potential for vandalism, stagnant water

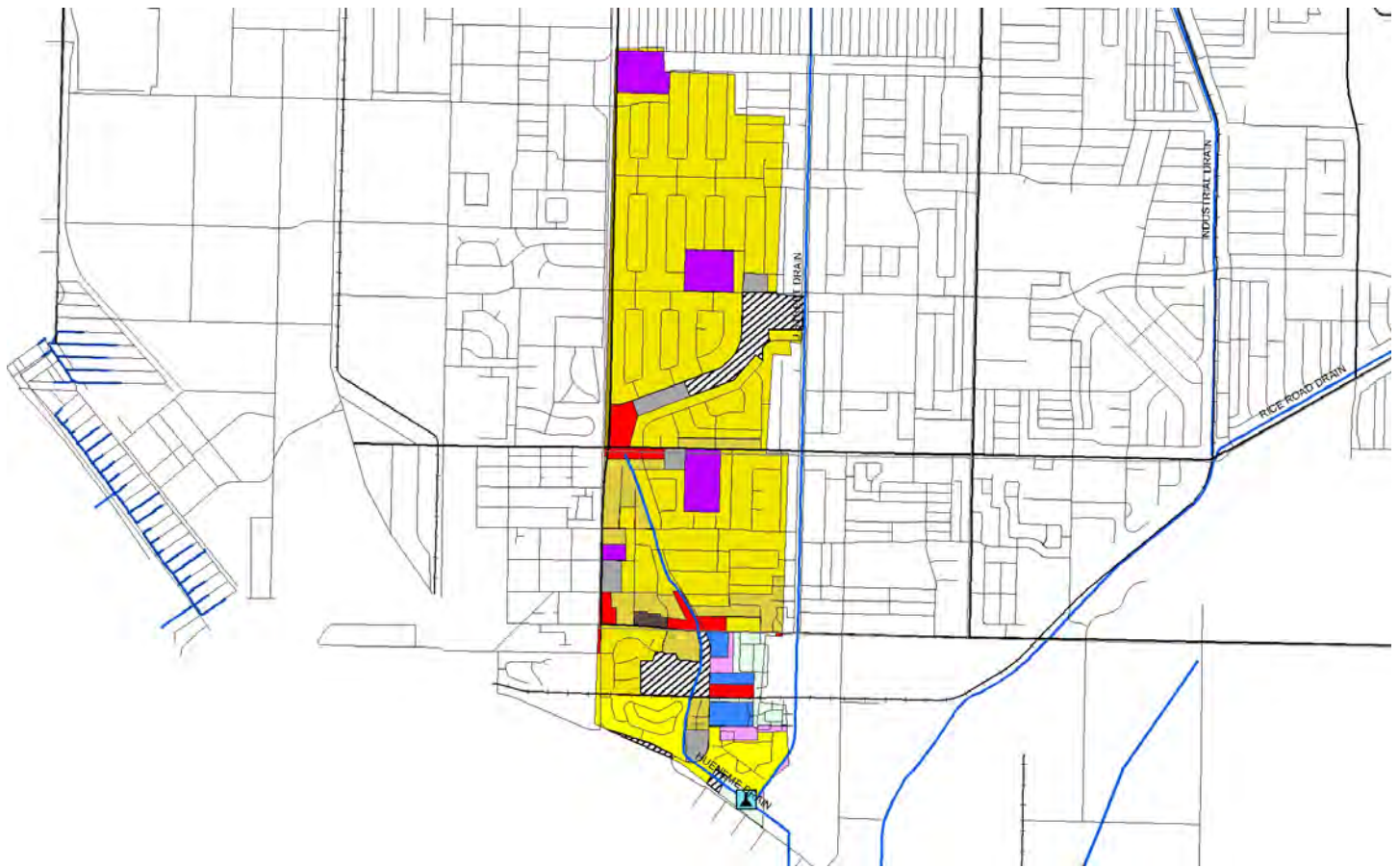
**Outstanding Site Selection Tasks:** Verify positive flow

**Other Potential Sites:** At Surfside Rd. at lower end of Bubbling Springs Park

**Dry Season Flow Potential:** Likely year-round flow due to urban runoff and groundwater contribution







### Entire City

Land Use	Acres	% of Total Watershed
Commercial	105.4	3.7%
Facility	20.4	0.7%
Industrial_1	32.5	1.1%
Industrial_3	34.9	1.2%
Military_2	1558.4	54.0%
No Info Given	53.7	1.9%
Recreation	38.5	1.3%
Res.2	308.3	10.7%
Res.3	432.9	15.0%
Res.4	104.3	3.6%
Schools	41.6	1.4%
Transportation	29.7	1.0%
Under Construction	2.1	0.1%
Utilities	6.0	0.2%
Vacant Undifferentiated	35.4	1.2%
Water	83.6	2.9%
<b>Totals</b>	<b>2887.9</b>	<b>100.0%</b>

### Selected Subwatershed

Land Use	Acres	% of Total Watershed
Commercial	19.2	3.3%
Facility	15.1	2.6%
Industrial_3	10.0	1.7%
Military_2	5.7	1.0%
No Info Given	35.8	6.1%
Res.2	45.5	7.7%
Res.3	359.1	60.9%
Res.4	40.9	6.9%
Schools	32.6	5.5%
Under Construction	2.1	0.4%
Utilities	6.5	1.1%
Vacant Undifferentiated	16.8	2.9%
<b>Totals</b>	<b>589.4</b>	<b>100.0%</b>





**Entire City**

Land Use	Acres	% of Total Watershed
Agriculture	210.3	7.0%
Cemeteries	19.4	0.7%
Com_Indus. Mix	4.6	0.2%
Commercial	235.4	7.8%
Extraction	30.5	1.0%
Facility	42.4	1.4%
Industrial_1	73.7	2.4%
Industrial_3	133.0	4.5%
No Info Given	33.5	1.1%
Recreation	4.7	0.2%
Res.1	266.9	8.9%
Res.2	86.8	2.9%
Res.3	1065.9	35.5%
Res.4	46.8	1.6%
Schools	91.7	3.1%
Transportation	166.4	5.5%
Under Construction	8.7	0.3%
Utilities	41.1	1.4%
Vacant Undifferentiated	440.6	14.7%
<b>Totals</b>	<b>3002.4</b>	<b>100.0%</b>

**Selected Subwatershed**

Land Use	Acres	% of Total Watershed
Commercial	9.4	14.7%
Industrial_1	2.5	4.0%
Res.2	2.8	4.3%
Res.3	30.5	47.7%
Schools	6.4	10.0%
Transportation	6.8	10.6%
Utilities	4.9	7.6%
Vacant Undifferentiated	0.8	1.2%
<b>Totals</b>	<b>64.0</b>	<b>100.0%</b>

## Simi Valley

**Waterbody:** Bus Canyon Drain (tributary to Arroyo Simi)

**Location:** North of intersection at 5<sup>th</sup> St. and Los Angeles Ave. (34°16'18.59"N, 118°47'1.51"W)

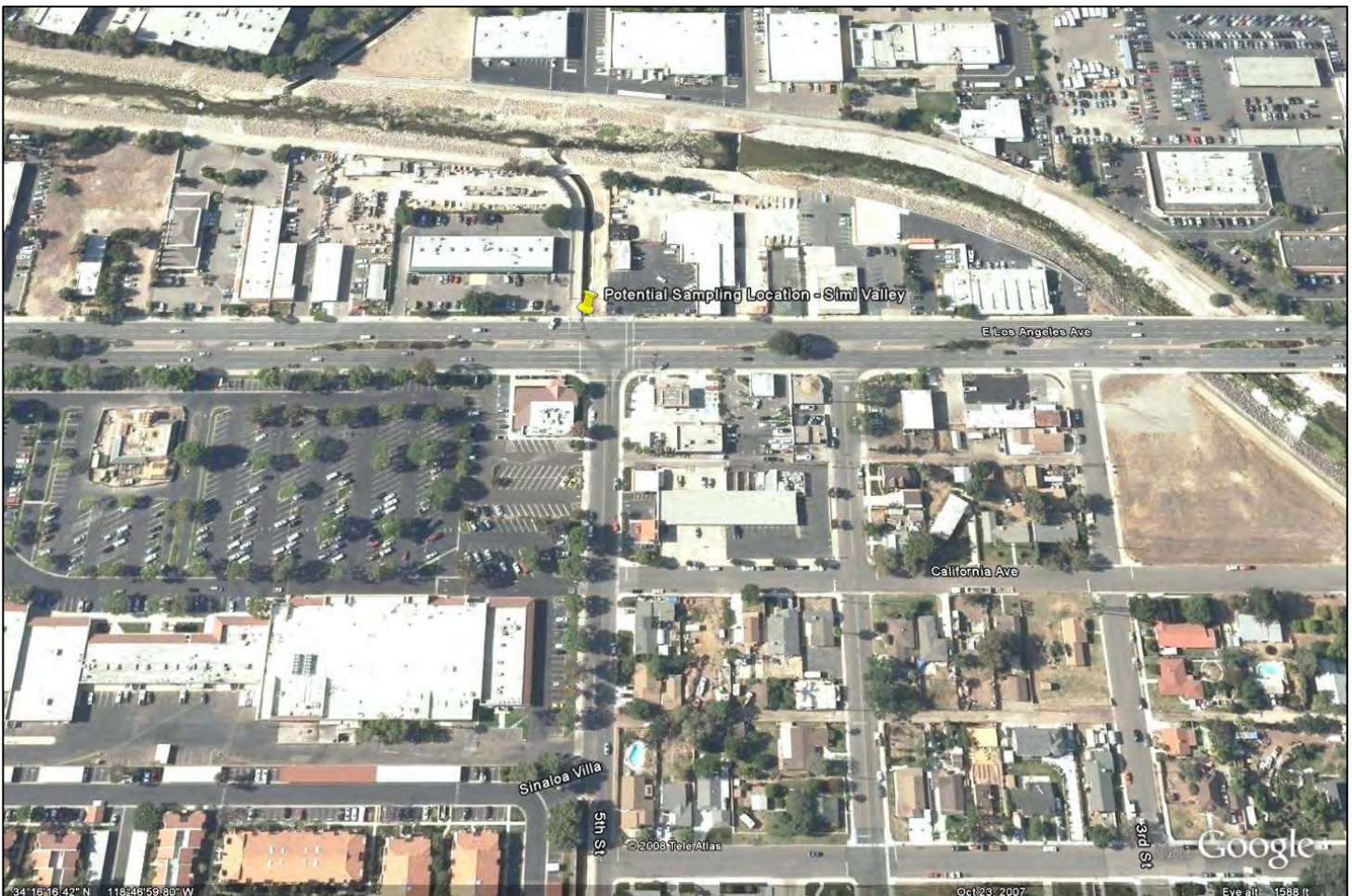
**Pros:** Likely well-defined rating table, located behind VCWPD gate

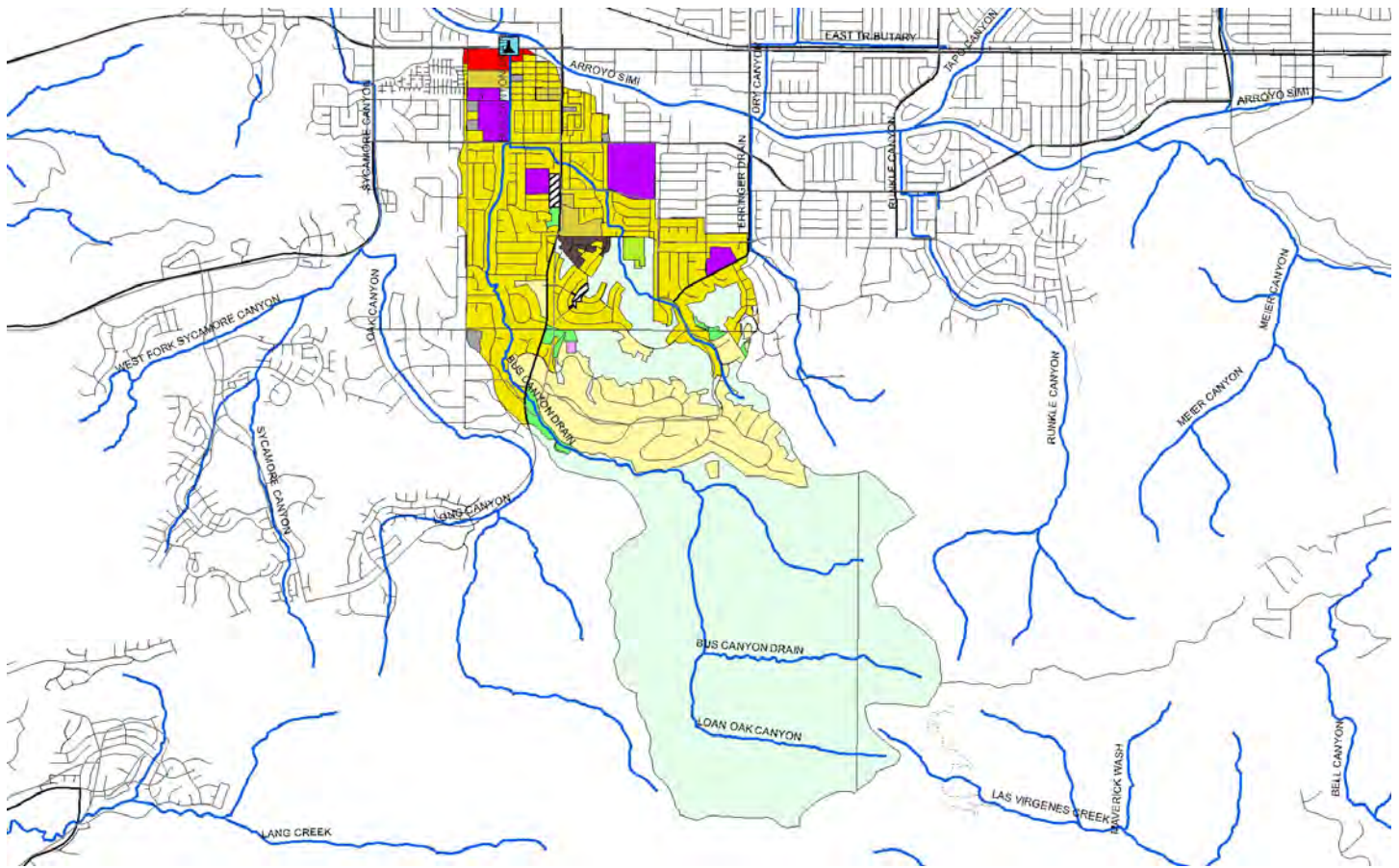
**Cons:** Pedestrian traffic on levee nearby

**Outstanding Site Selection Tasks:** Assess impacts of large groundwater discharge upstream, move sampling location shown on watershed map

**Other Potential Sites:** Upstream at 5<sup>th</sup> and Ventura Ave.

**Dry Season Flow Potential:** Likely year round flow due to urban runoff and groundwater discharge upstream





### Entire City

Land Use	Acres	% of Total Watershed
Agriculture	435.5	1.6%
Cemeteries	34.3	0.1%
Com_Indus. Mix	24.4	0.1%
Commercial	1051.4	3.9%
Extraction	111.8	0.4%
Facility	217.1	0.8%
Industrial_1	50.3	0.2%
Industrial_3	353.3	1.3%
Industrial_4	5.9	0.0%
No Info Given	382.0	1.5%
Recreation	560.9	2.0%
Res.1	1025.0	3.7%
Res.2	586.0	2.2%
Res.3	7947.7	29.5%
Res.4	110.7	0.4%
Schools	517.5	1.9%
Transportation	546.9	2.0%
Under Construction	385.6	1.4%
Utilities	261.0	1.0%
Vacant Undifferentiated	12291.5	45.6%
<b>Totals</b>	<b>26898.6</b>	<b>100.0%</b>

### Selected Subwatershed

Land Use	Acres	% of Total Watershed
Agriculture	33.0	1.0%
Cemeteries	10.1	0.3%
Commercial	22.6	0.7%
Facility	12.9	0.4%
No Info Given	9.4	0.3%
Res.1	395.5	11.9%
Res.2	40.3	1.2%
Res.3	782.9	23.6%
Schools	96.7	2.9%
Under Construction	15.5	0.5%
Utilities	1.8	0.1%
Vacant Undifferentiated	1900.0	57.2%
<b>Totals</b>	<b>3320.7</b>	<b>100.0%</b>

## Thousand Oaks

**Waterbody:** North Fork Arroyo Conejo (tributary to Conejo Creek)

**Location:** Hill Canyon WWTP sampling location R-1(34°12'49.16"N, 118°55'16.24"W)

**Pros:** Very secure, helpful staff onsite, fairly well-defined channel, accessible via concrete stairs

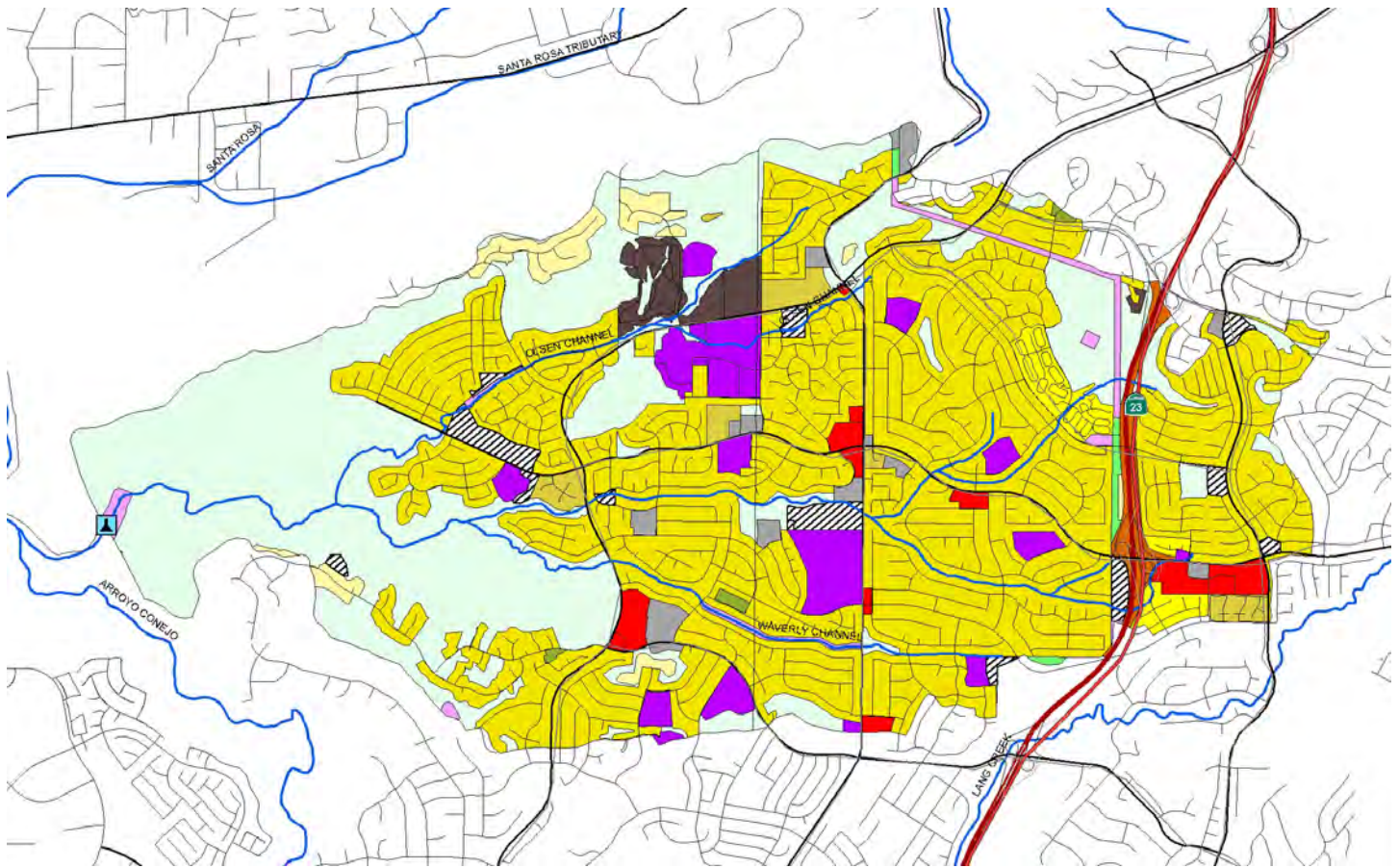
**Cons:** Late-night access to WWTP could present problem

**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** None

**Dry Season Flow Potential:** Likely year-round flow due to urban runoff





**Entire City**

Land Use	Acres	% of Total Watershed
Agriculture	207.0	0.6%
Com_Indus. Mix	23.2	0.1%
Commercial	1499.7	4.2%
Extraction	9.0	0.0%
Facility	291.6	0.8%
Industrial_1	94.3	0.3%
Industrial_3	457.7	1.3%
No Info Given	459.2	1.3%
Recreation	574.2	1.7%
Res.1	1683.9	4.7%
Res.2	1000.3	2.8%
Res.3	9323.6	26.4%
Res.4	288.1	0.8%
Schools	587.6	1.7%
Transportation	605.4	1.7%
Under Construction	281.6	0.8%
Utilities	260.6	0.7%
Vacant Undifferentiated	17465.1	49.7%
<b>Totals</b>	<b>35111.8</b>	<b>100.0%</b>

**Selected Subwatershed**

Land Use	Acres	% of Total Watershed
Agriculture	13.5	0.3%
Commercial	83.5	1.6%
Facility	67.3	1.3%
No Info Given	95.4	1.8%
Recreation	8.7	0.2%
Res.1	89.8	1.7%
Res.2	71.5	1.4%
Res.3	2643.8	51.0%
Res.4	84.0	1.6%
Schools	224.2	4.3%
Transportation	61.5	1.2%
Under Construction	79.4	1.5%
Utilities	53.3	1.0%
Vacant Undifferentiated	1603.6	31.0%
<b>Totals</b>	<b>5179.3</b>	<b>100.0%</b>

## Ventura

**Waterbody:** Moon Ditch (tributary to Santa Clara River)

**Location:** Between Leland St. and US 101, north of Johnson Dr. (34°14'35.86"N, 119°11'40.86"W)

**Pros:** Likely well-defined rating table, fairly good protection (located behind VCWPD gate)

**Cons:** Wide concrete bottom will spread out low flows, placement of intake somewhat difficult

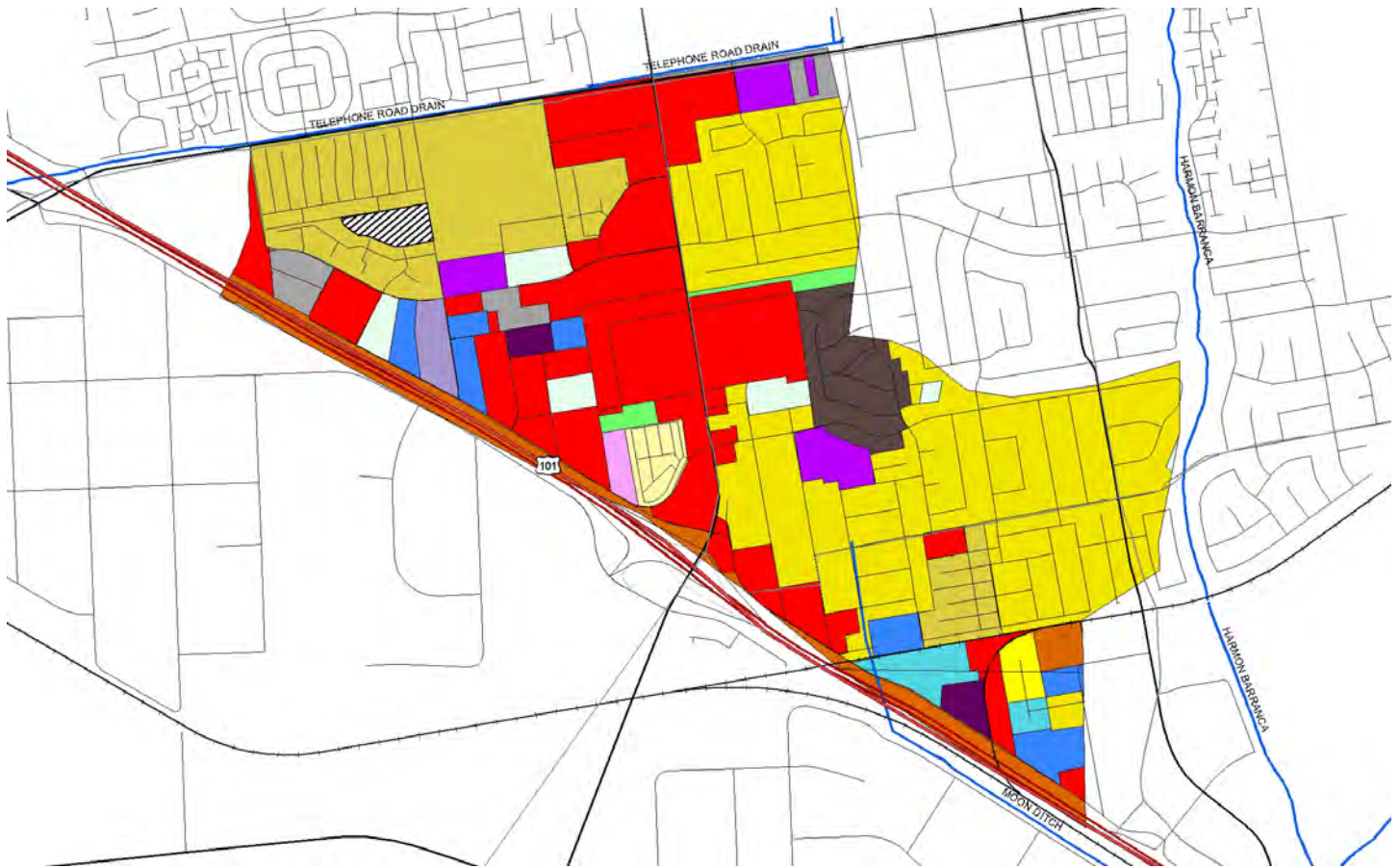
**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** None

**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff







**Entire City**

Land Use	Acres	% of Total Watershed
Agriculture	667.6	4.7%
Cemeteries	72.6	0.5%
Com_Indus. Mix	95.4	0.7%
Commercial	1402.9	10.0%
Extraction	39.2	0.3%
Facility	303.8	2.2%
Industrial_1	90.5	0.6%
Industrial_3	619.6	4.5%
Military_2	3.6	0.0%
No Info Given	285.7	2.1%
Recreation	516.3	3.7%
Res.1	361.1	2.6%
Res.2	924.0	6.6%
Res.3	5209.6	37.2%
Res.4	72.4	0.5%
Res.5	2.8	0.0%
Schools	495.8	3.6%
Transportation	570.0	4.1%
Under Construction	73.7	0.5%
Utilities	125.4	0.9%
Vacant Undifferentiated	2018.1	14.4%
Water	61.5	0.4%
<b>Totals</b>	<b>14011.6</b>	<b>100.0%</b>

**Selected Subwatershed**

Land Use	Acres	% of Total Watershed
Agriculture	5.8	0.8%
Com_Indus. Mix	6.5	0.9%
Commercial	171.7	24.3%
Extraction	6.3	0.9%
Facility	14.6	2.1%
Industrial_1	10.8	1.5%
Industrial_3	23.0	3.2%
No Info Given	5.4	0.8%
Res.1	8.7	1.2%
Res.2	109.1	15.4%
Res.3	234.8	33.2%
Res.4	4.8	0.7%
Schools	18.4	2.6%
Transportation	40.7	5.8%
Under Construction	26.6	3.8%
Utilities	3.5	0.5%
Vacant Undifferentiated	16.3	2.3%
<b>Totals</b>	<b>707.1</b>	<b>100.0%</b>

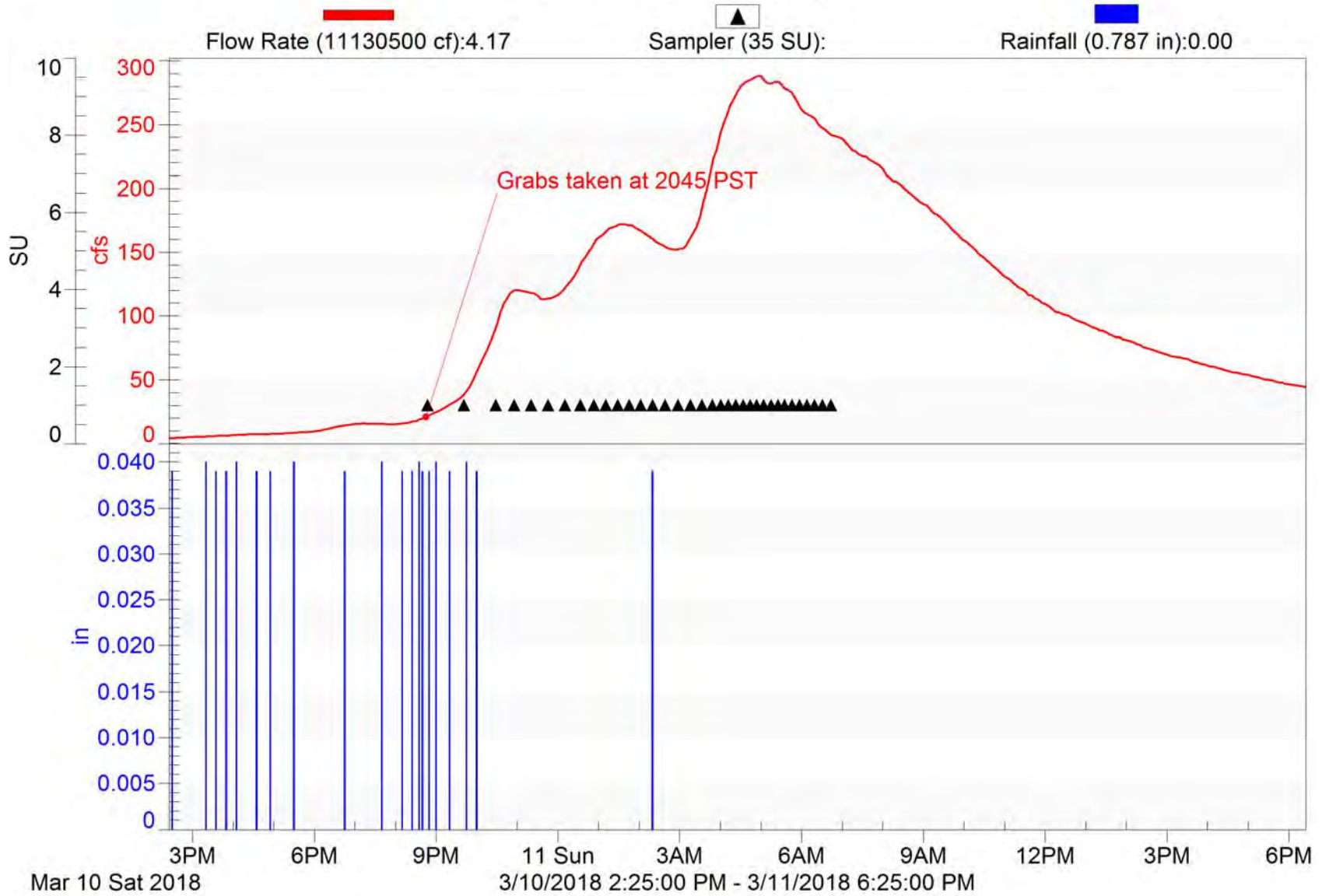
## Appendix B. Event Hydrographs





# ME-CC

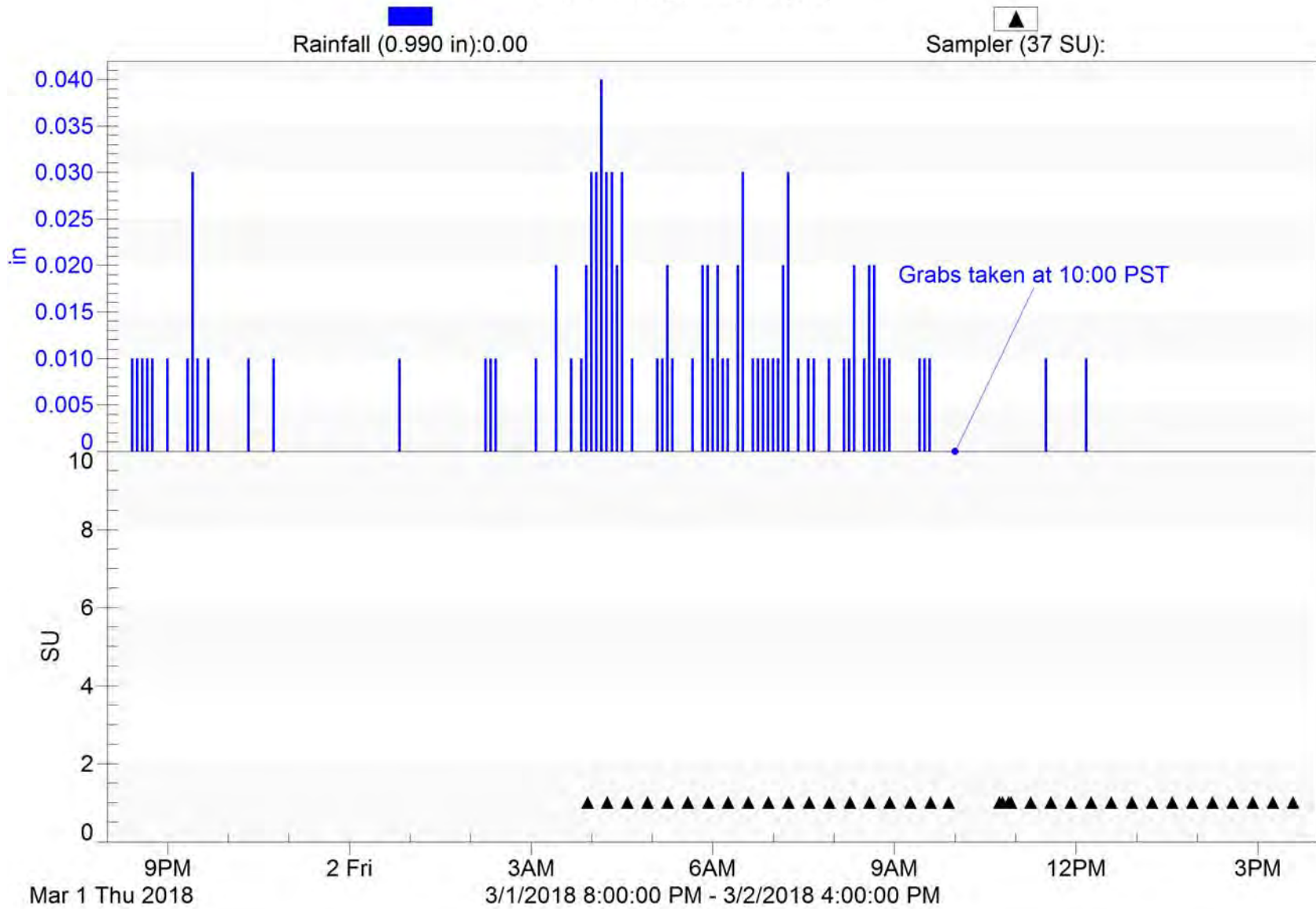
2017/18 NPDES Event 3 (Wet)





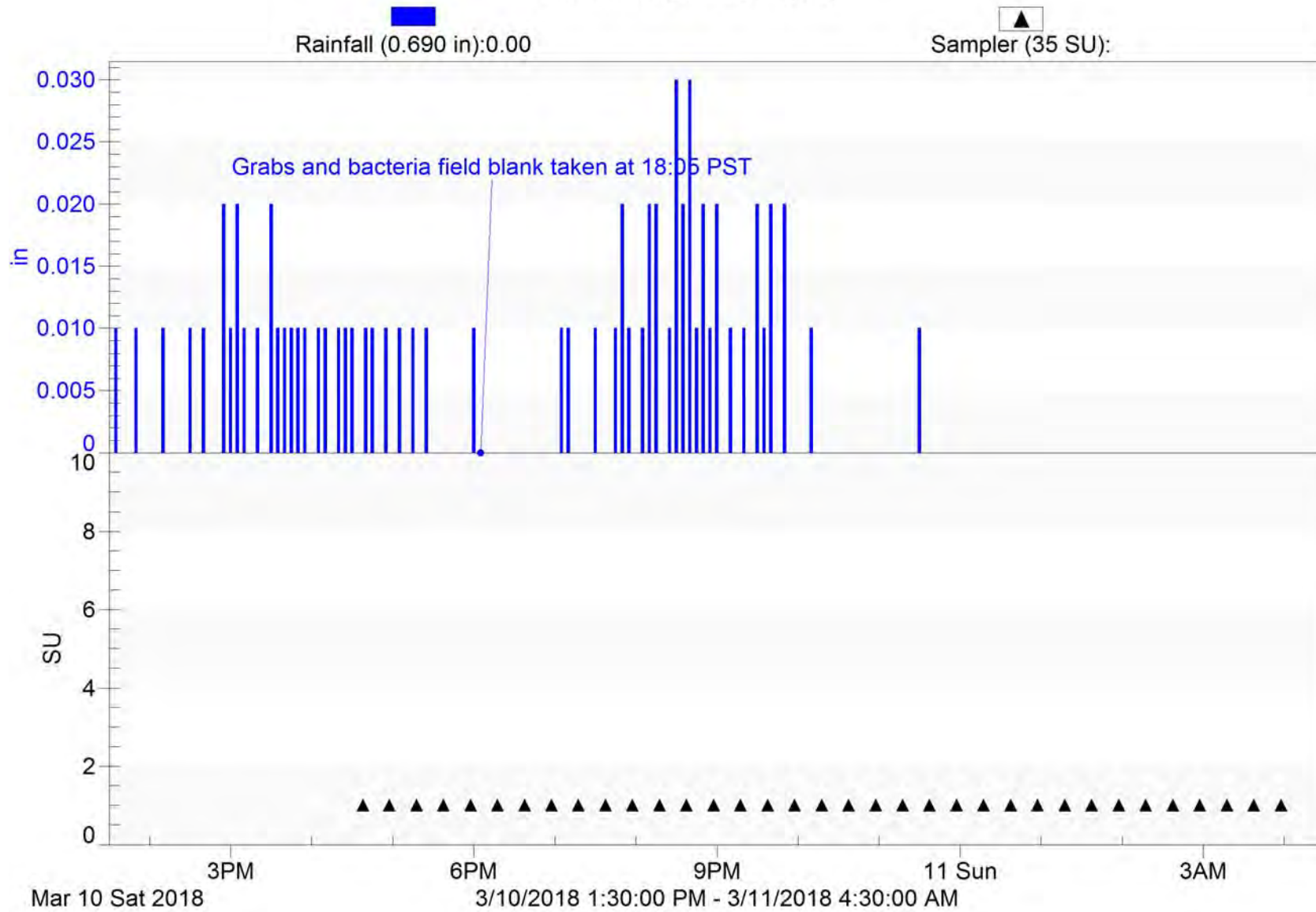
# ME-SCR

2017/18 NPDES Event #2 (Wet)



# ME-SCR

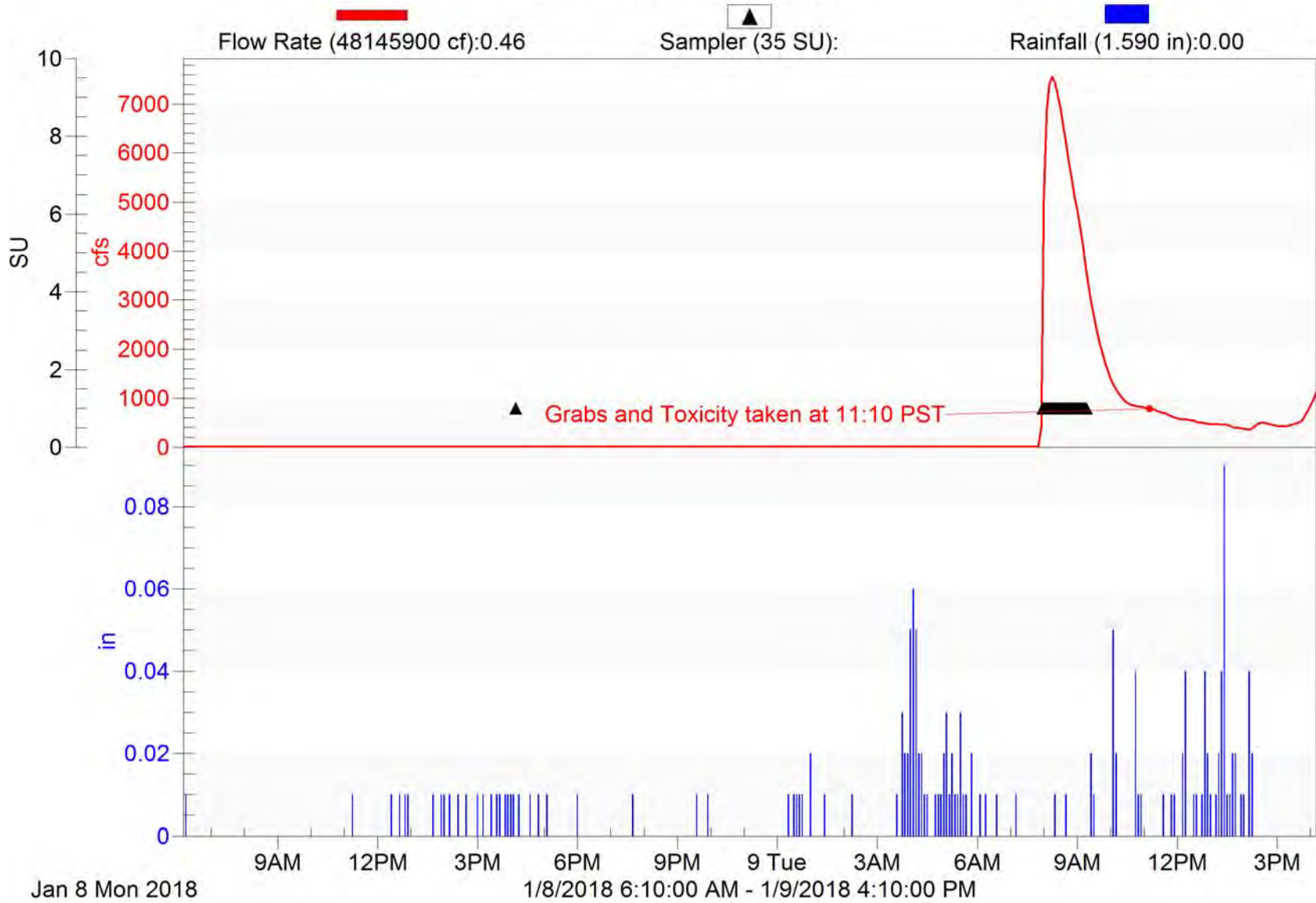
2017/18 NPDES Event #3 (Wet)





# ME-VR2

2017/18 NPDES Event #1 (Wet)



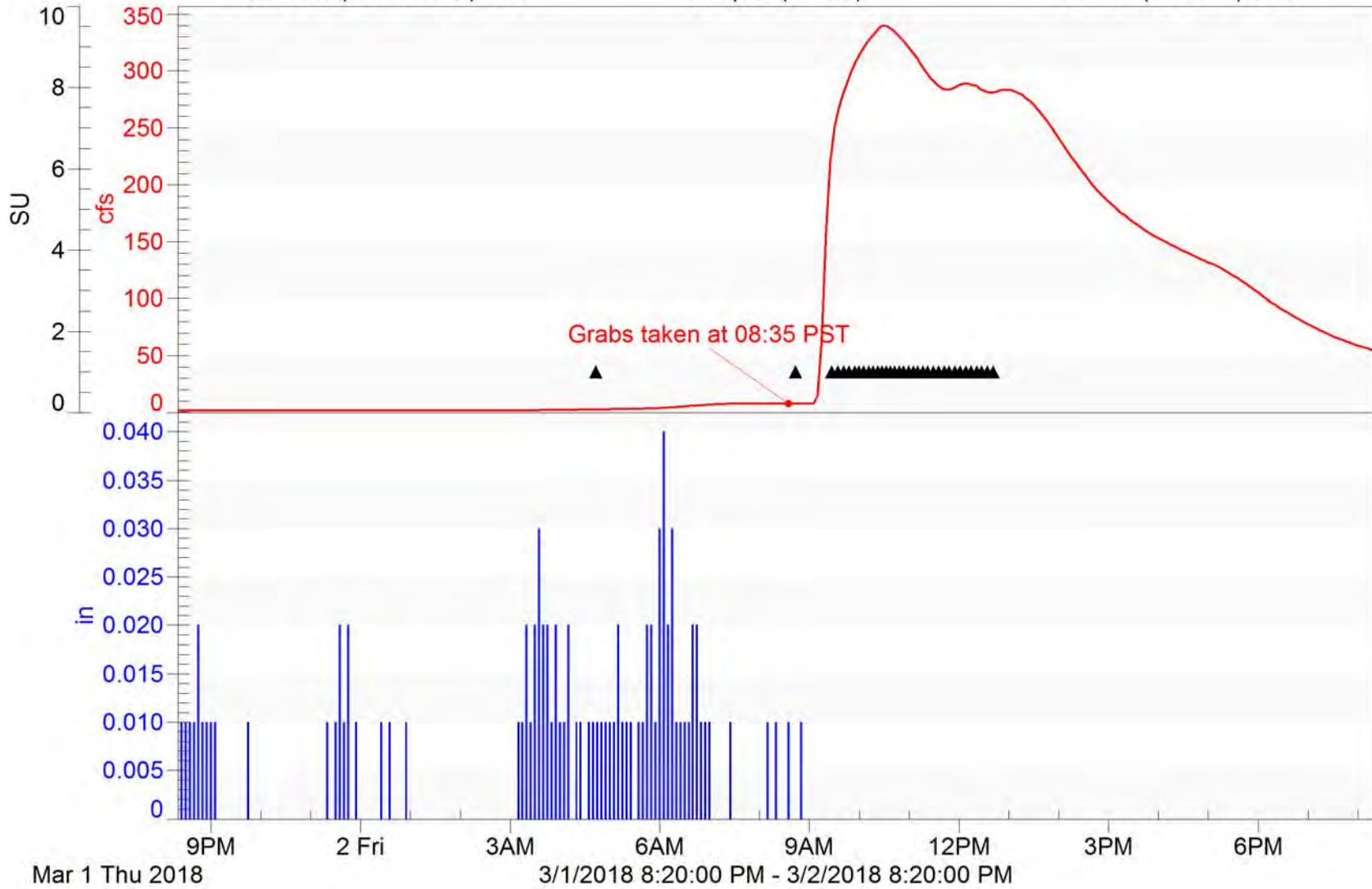
# ME-VR2

2017/18 NPDES Event #2 (Wet)

Flow Rate (8027910 cf):1.43

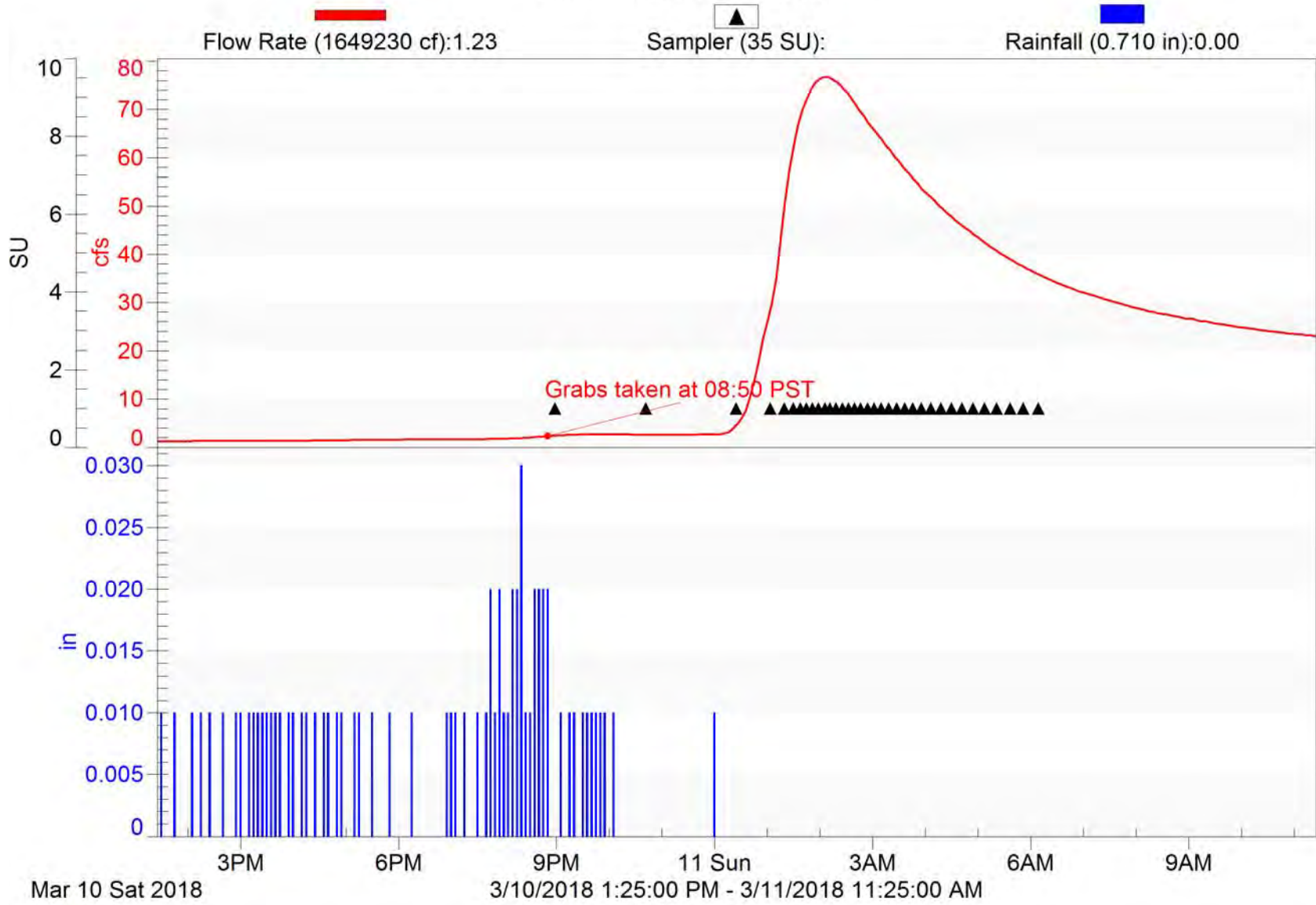
Sampler (35 SU):

Rainfall (0.920 in):0.00



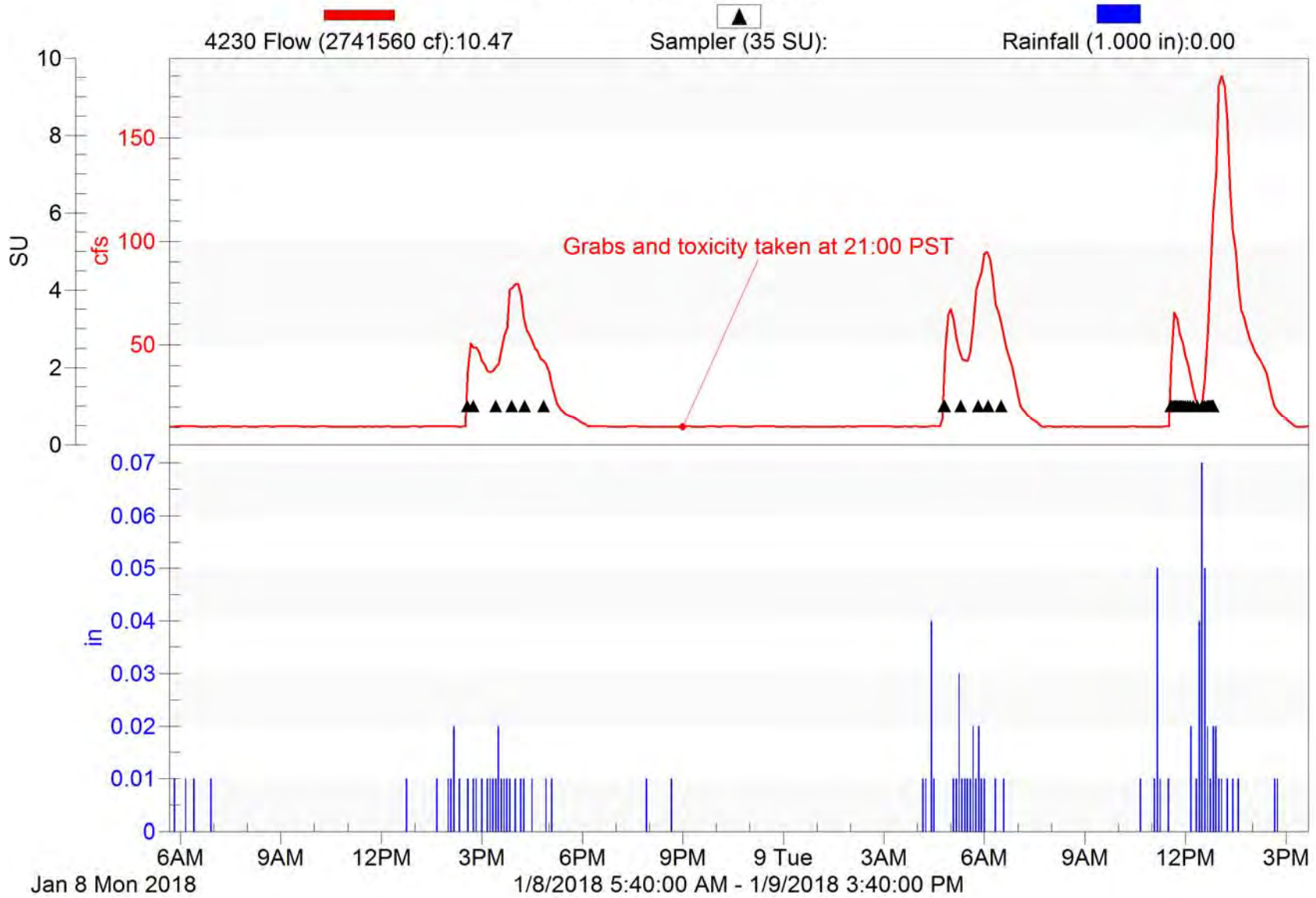
# ME-VR2

2017/18 NPDES Event #3 (Wet)



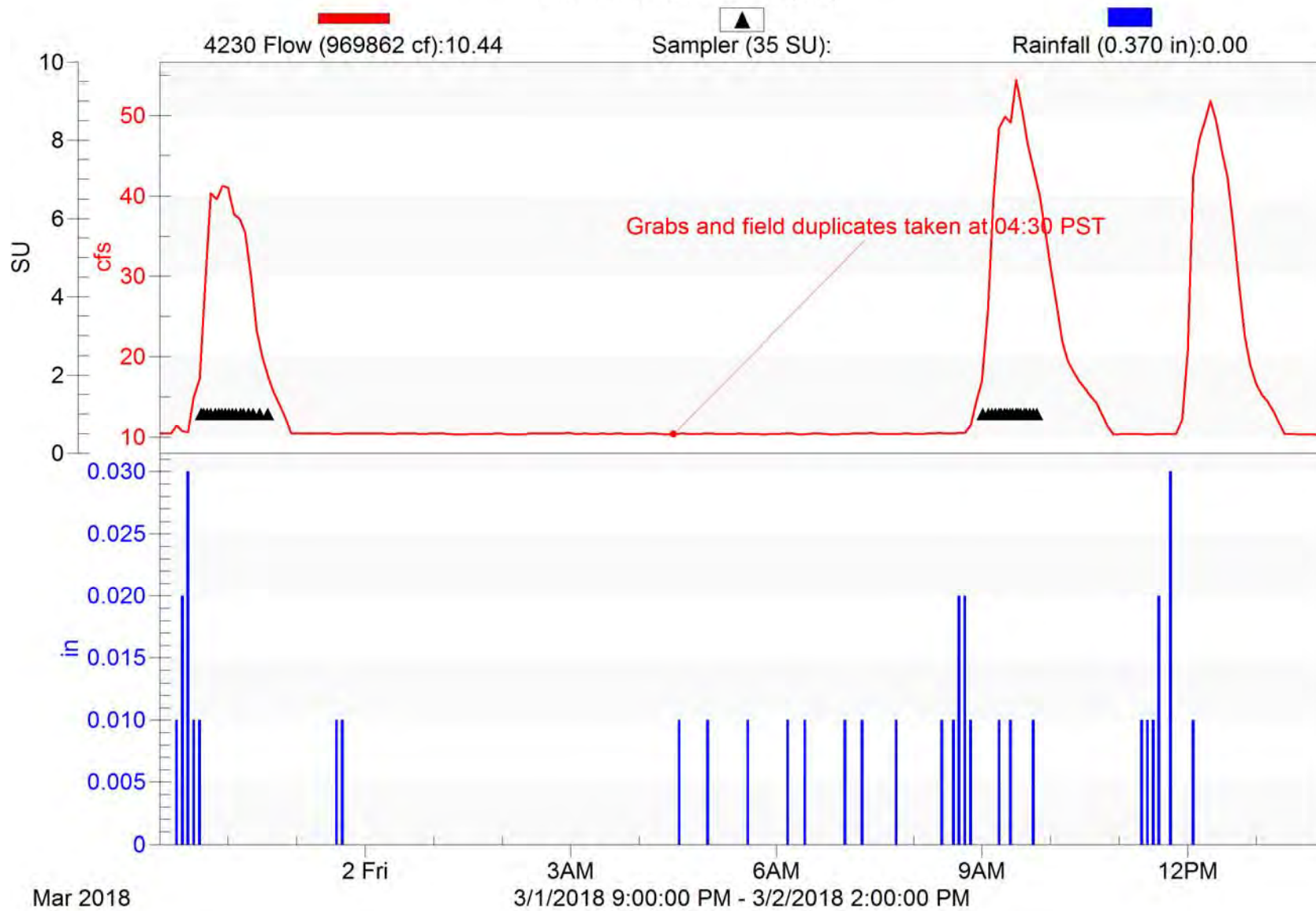
# Camarillo-1

2017/18 NPDES Event #1 (Wet)



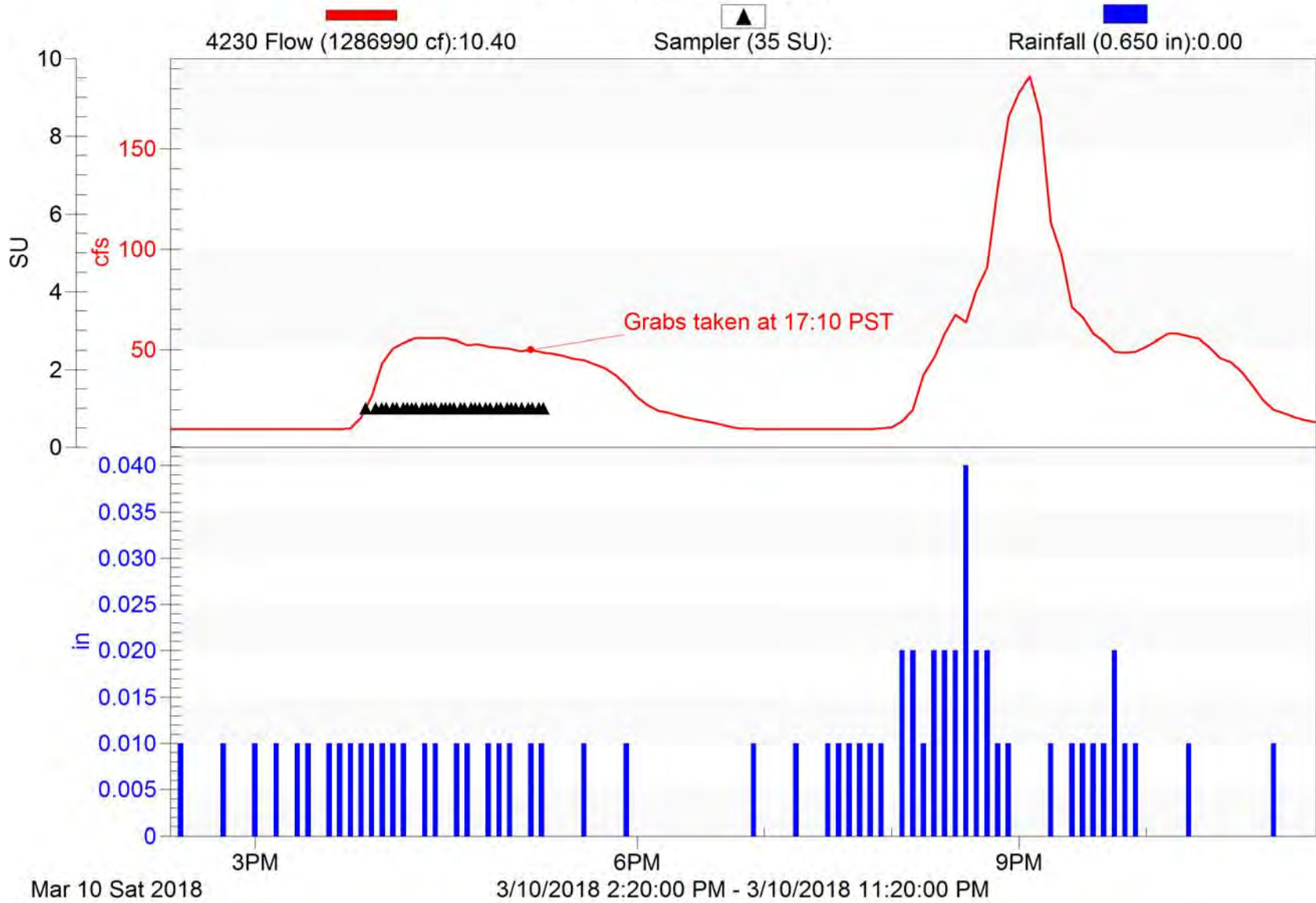
# Camarillo-1

2017/18 NPDES Event #2 (Wet)



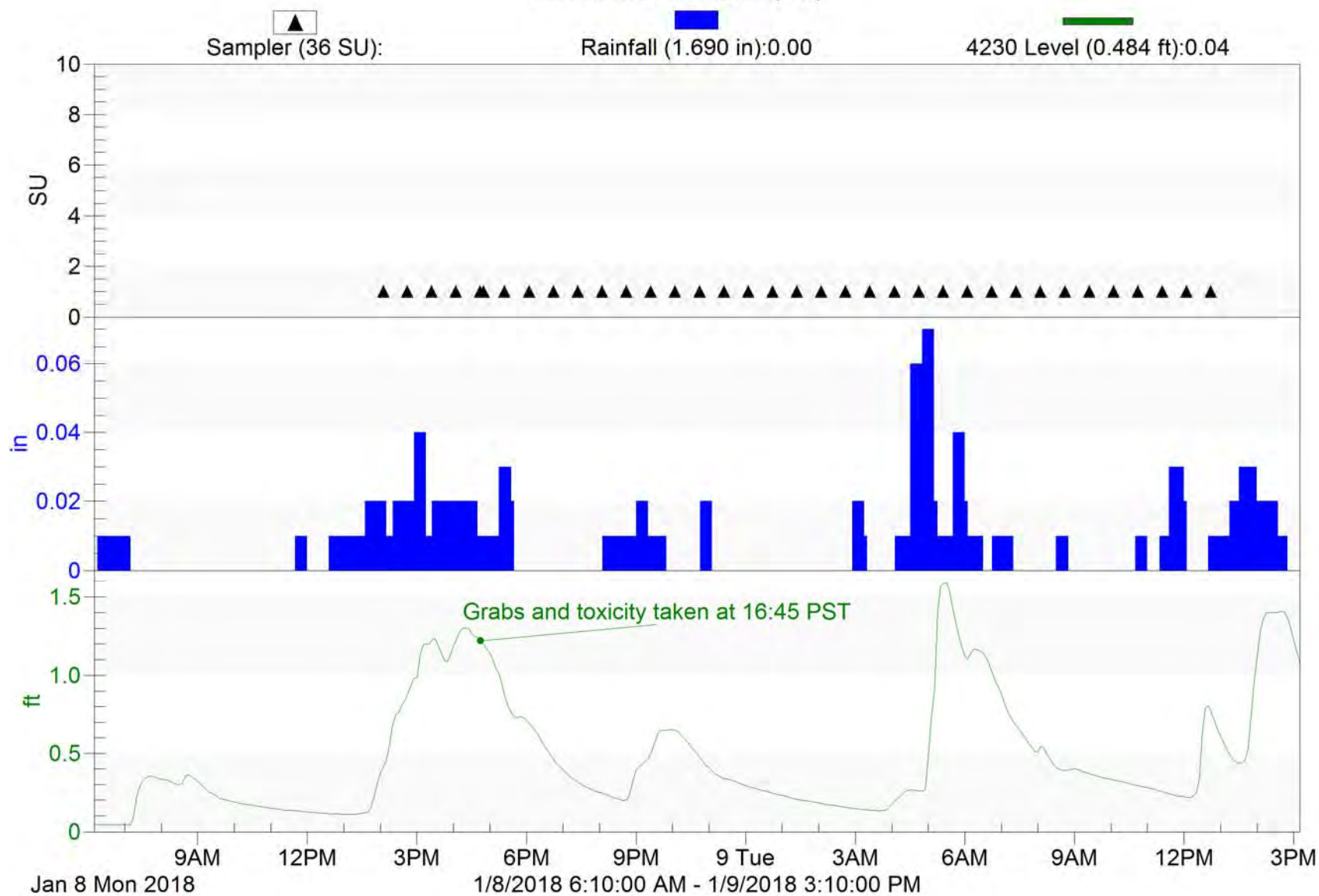
# Camarillo-1

2017/18 NPDES Event #3 (Wet)



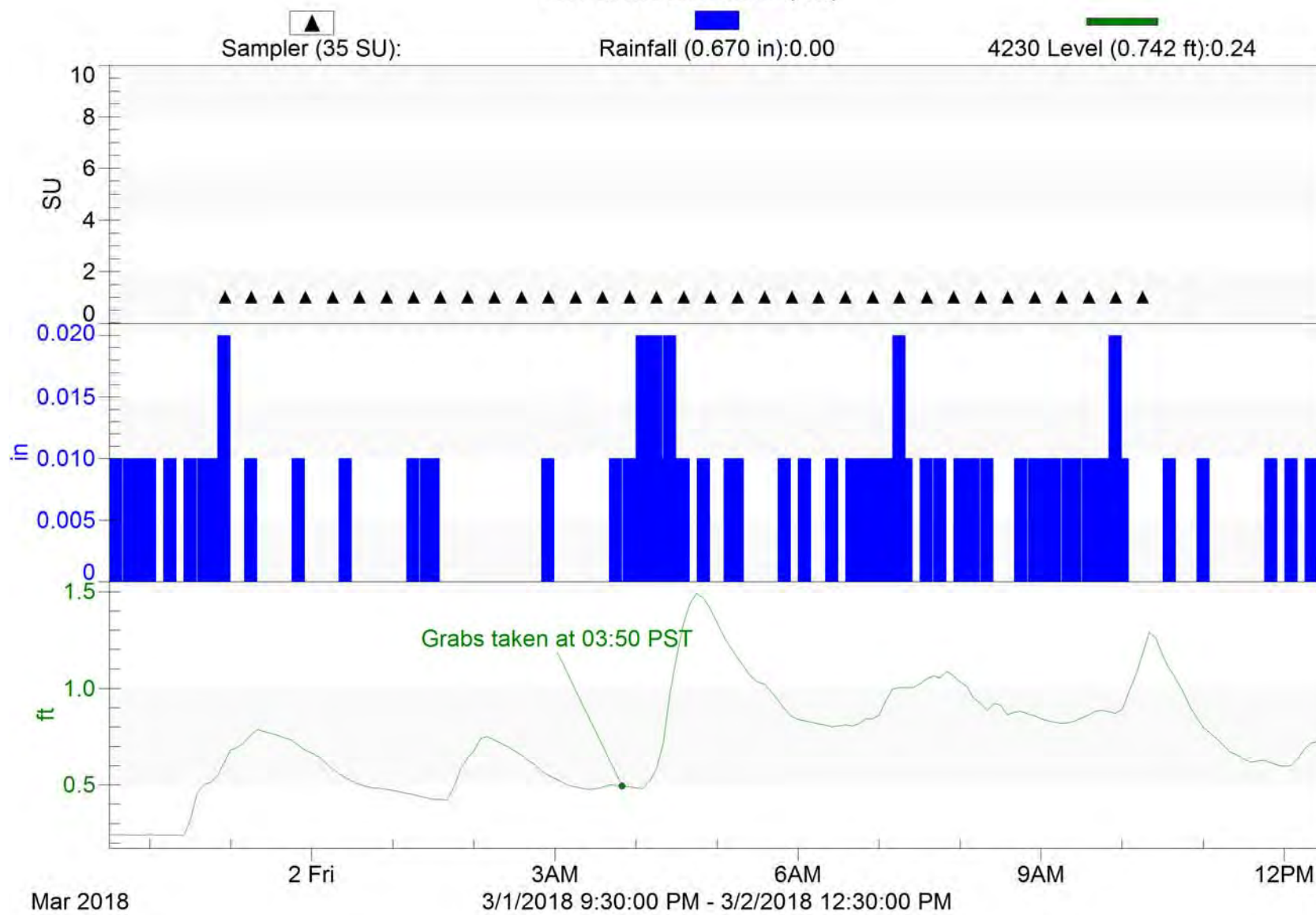
# Fillmore-1

2017/18 NPDES Event #1 (Wet)



# Fillmore-1

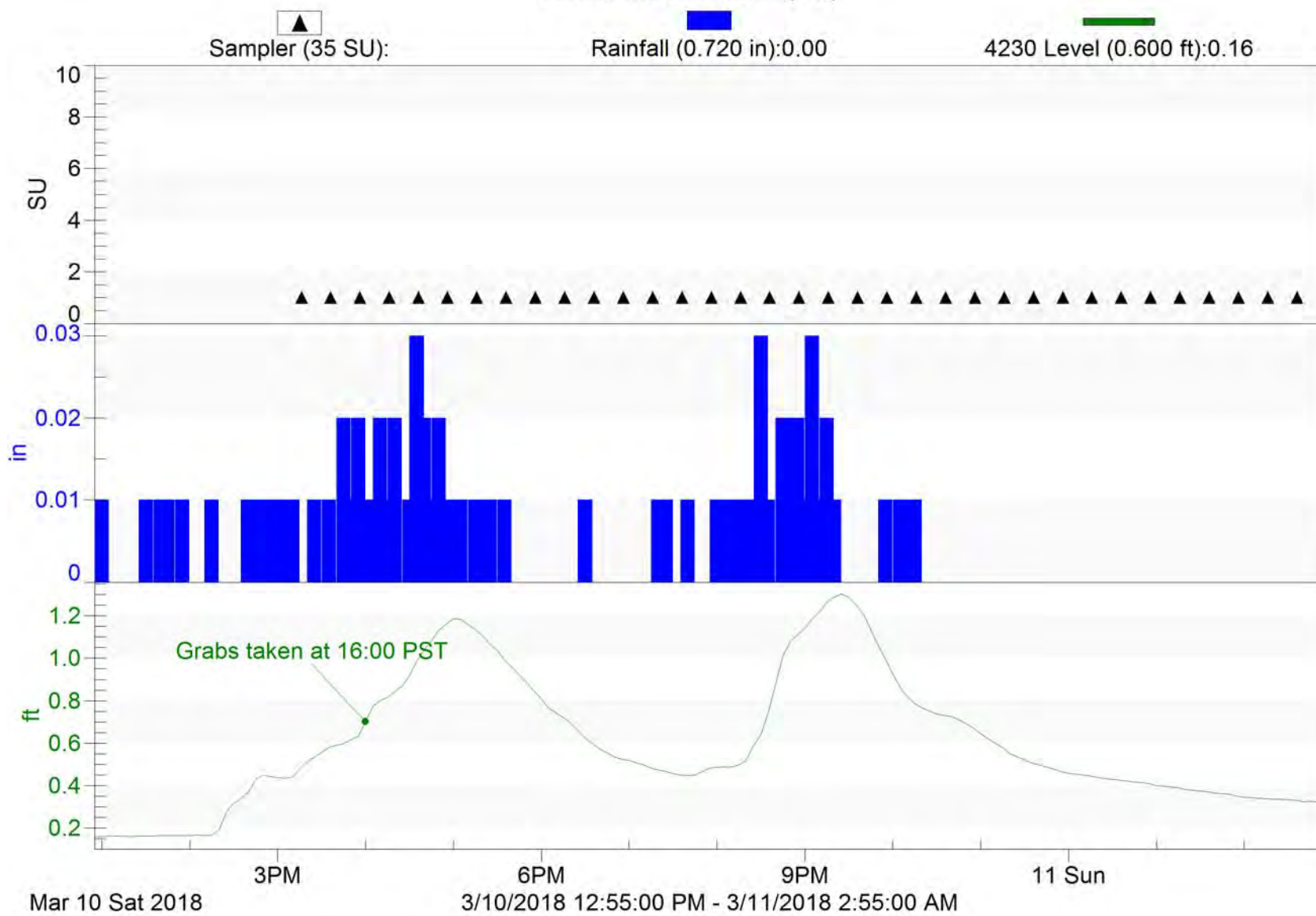
2017/18 NPDES Event #2 (Wet)





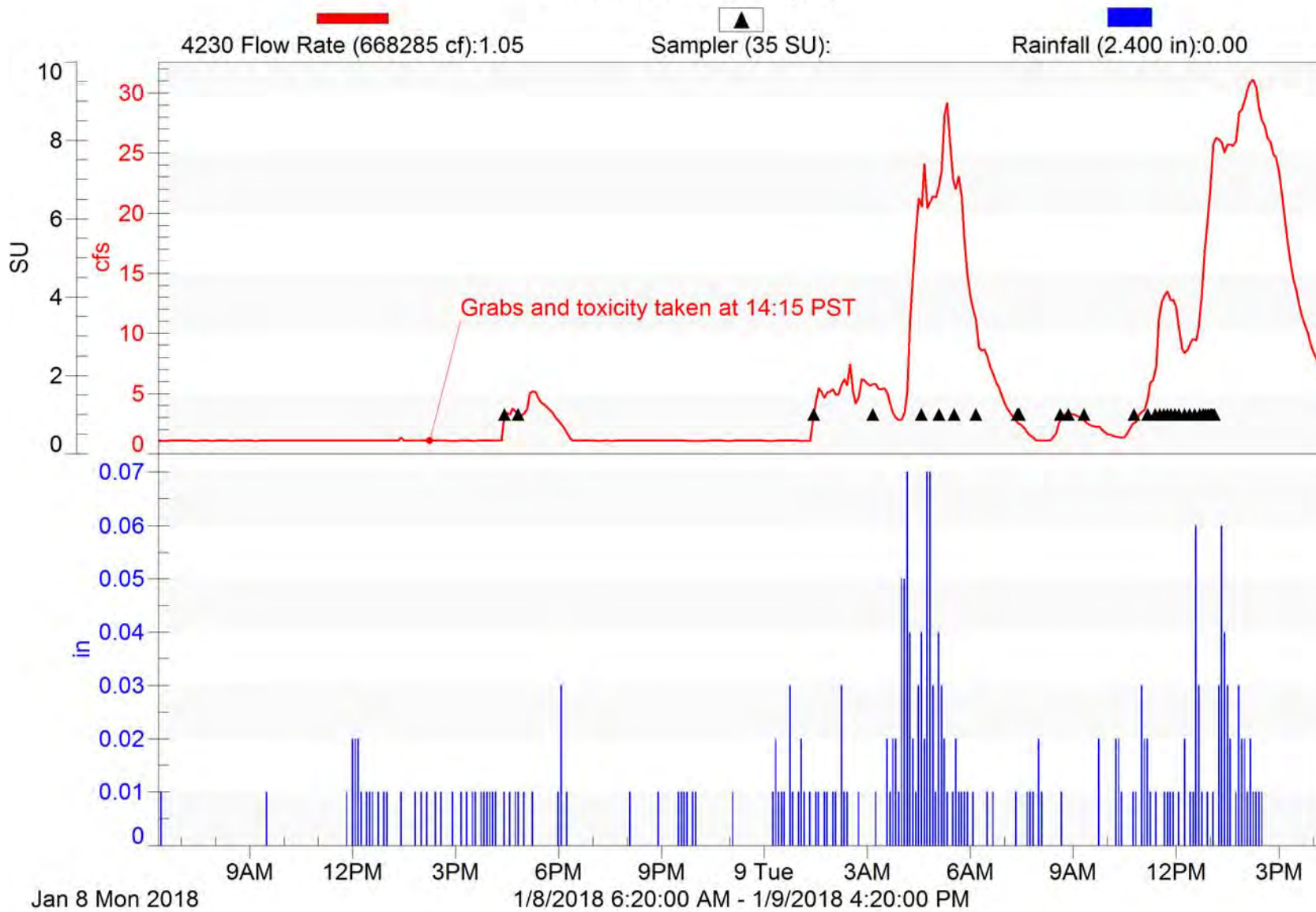
# Fillmore-1

2017/18 NPDES Event #3 (Wet)



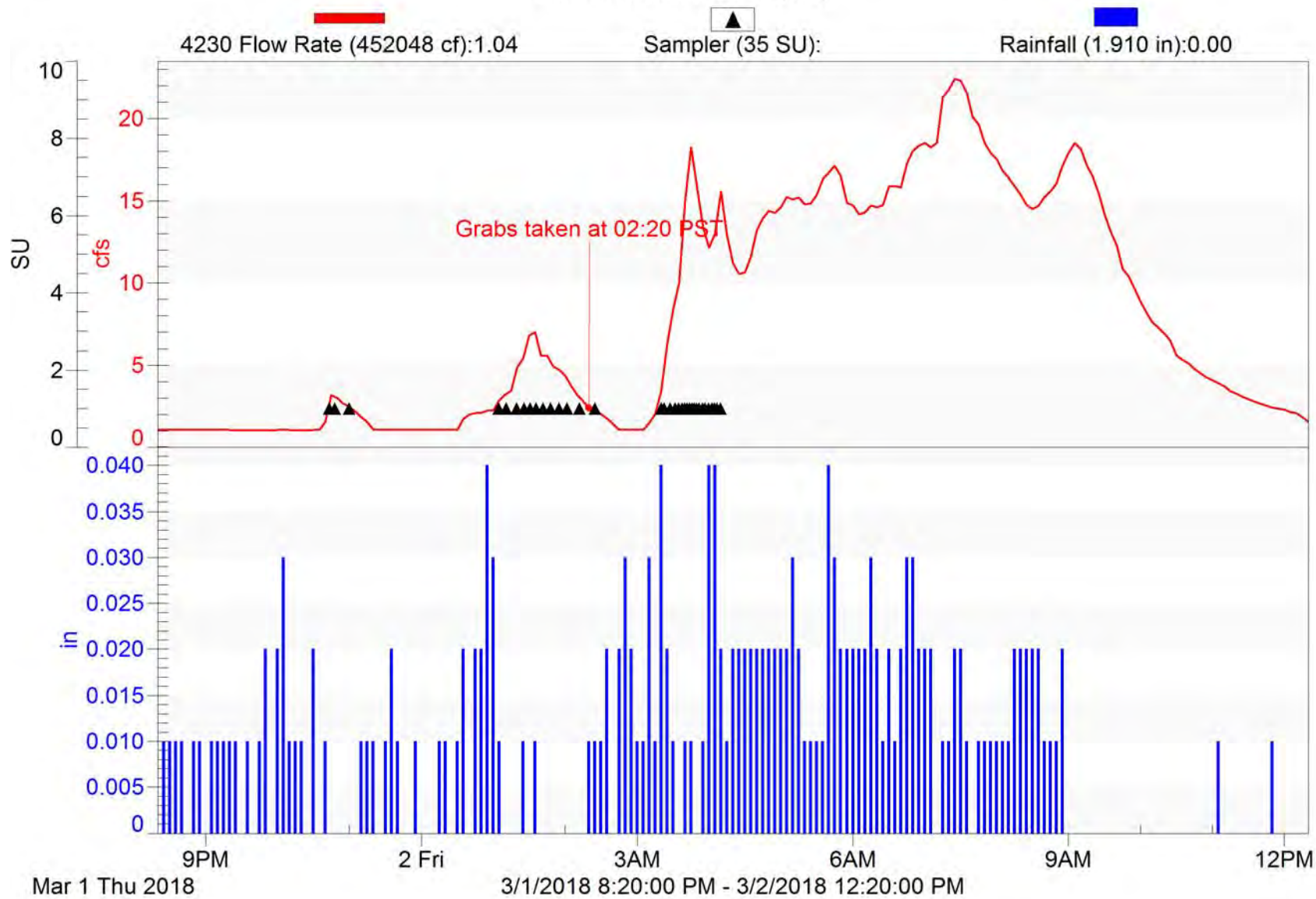
# Meiners Oaks-1

2017/18 NPDES Event #1 (Wet)



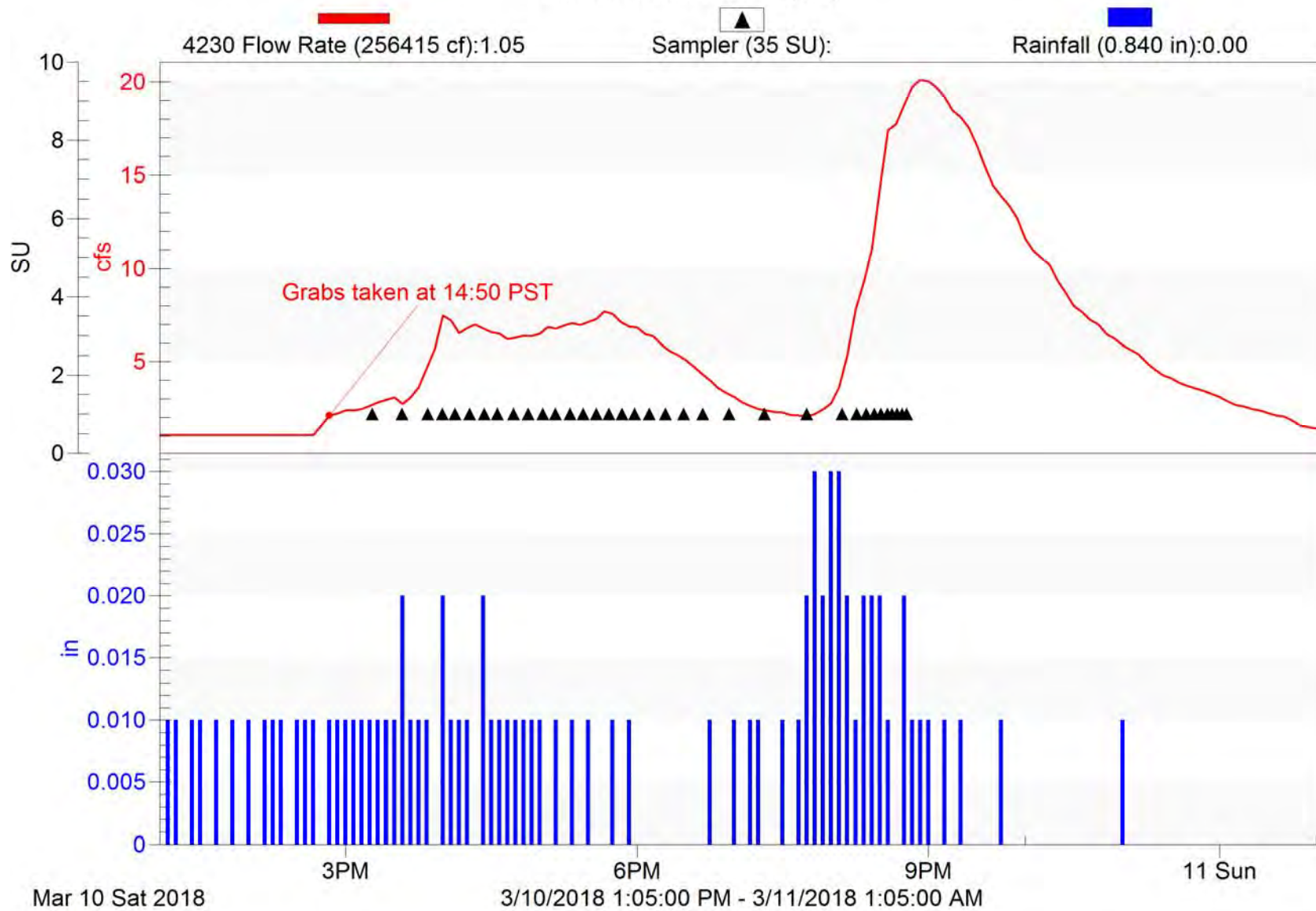
# Meiners Oaks-1

2017/18 NPDES Event #2 (Wet)



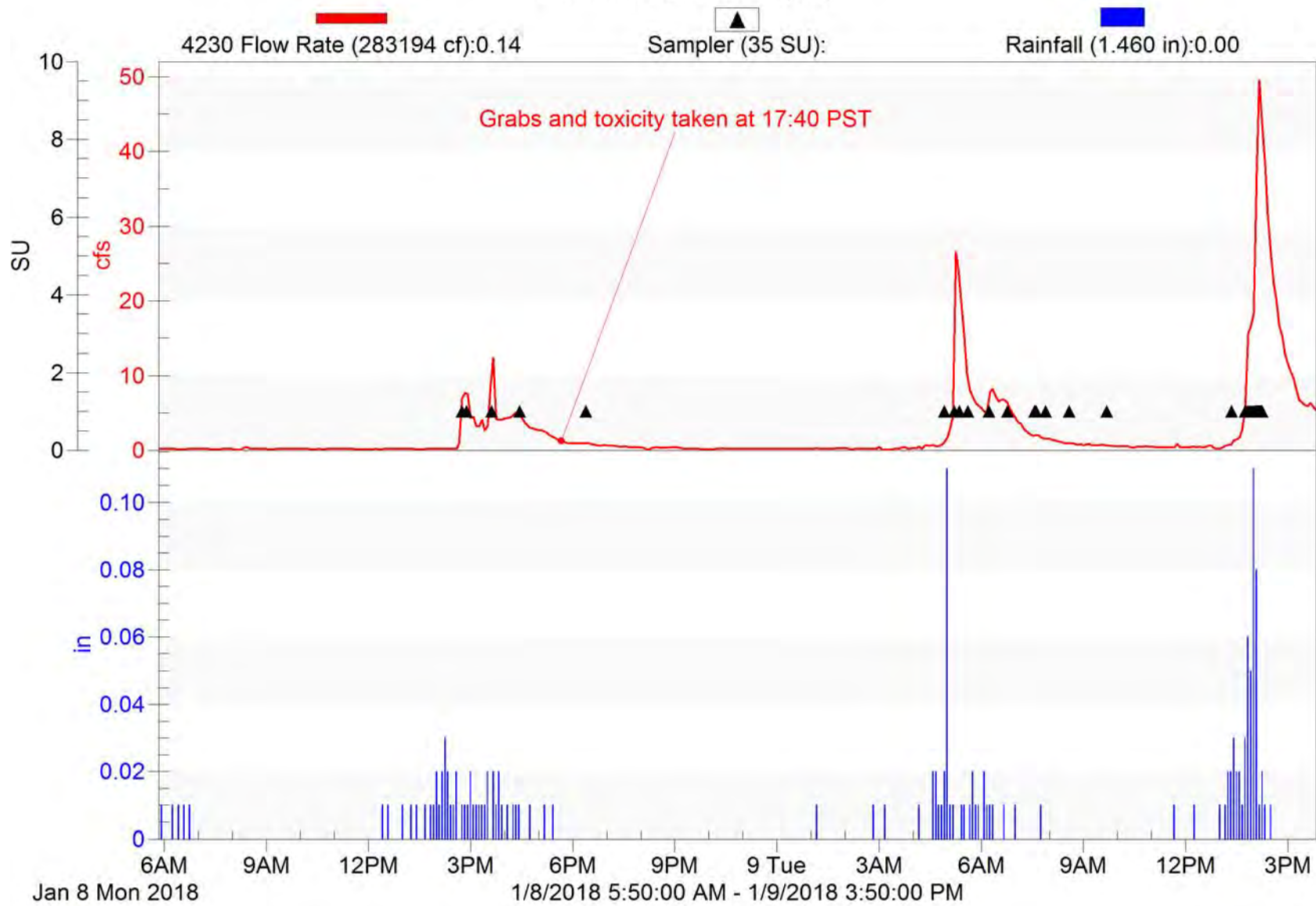
# Meiners Oaks-1

2017/18 NPDES Event #3 (Wet)



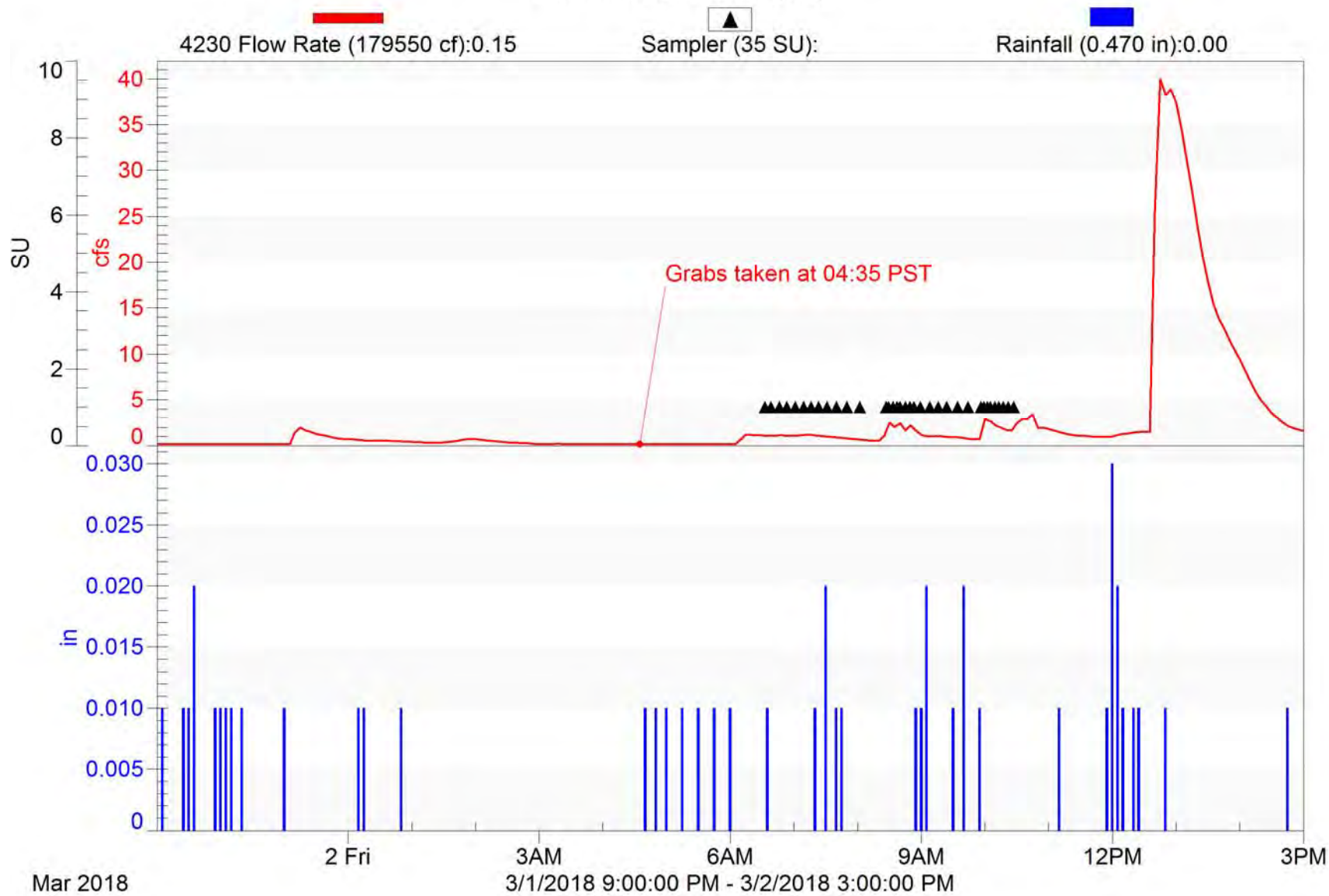
# Moorpark-1

2017/18 NPDES Event #1 (Wet)



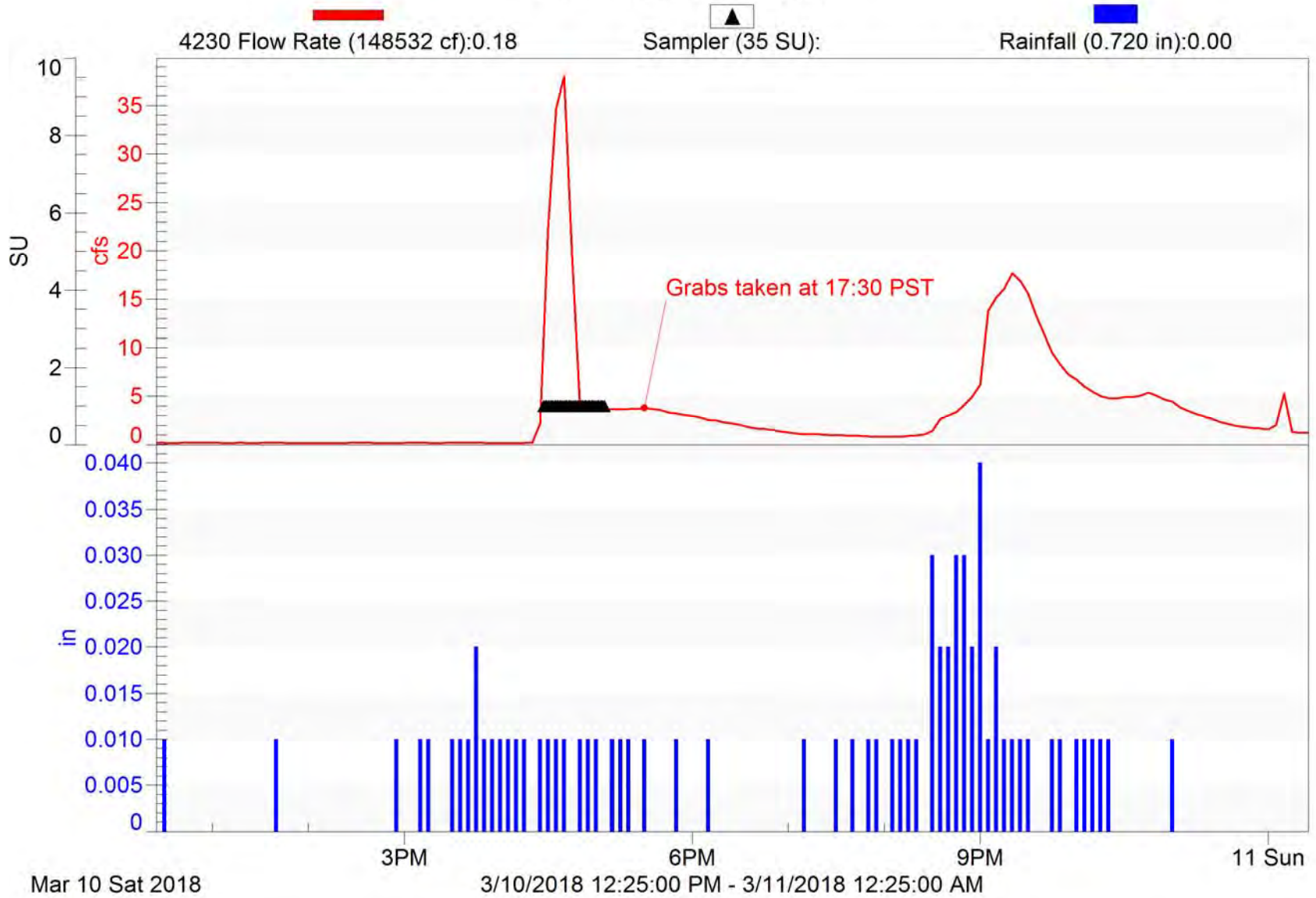
# Moorpark-1

2017/18 NPDES Event #2 (Wet)



# Moorpark-1

2017/18 NPDES Event #3 (Wet)

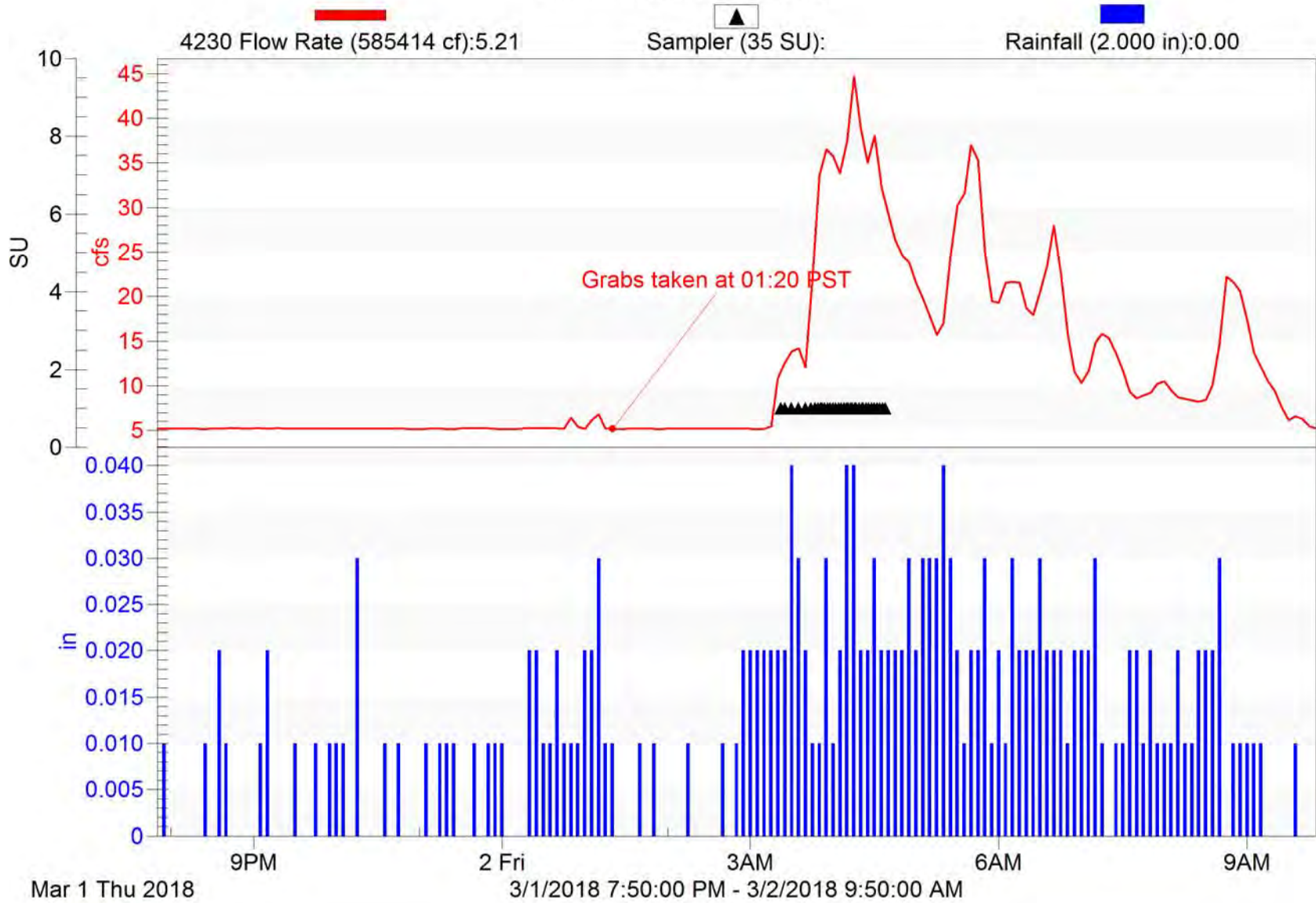






# Ojai-1

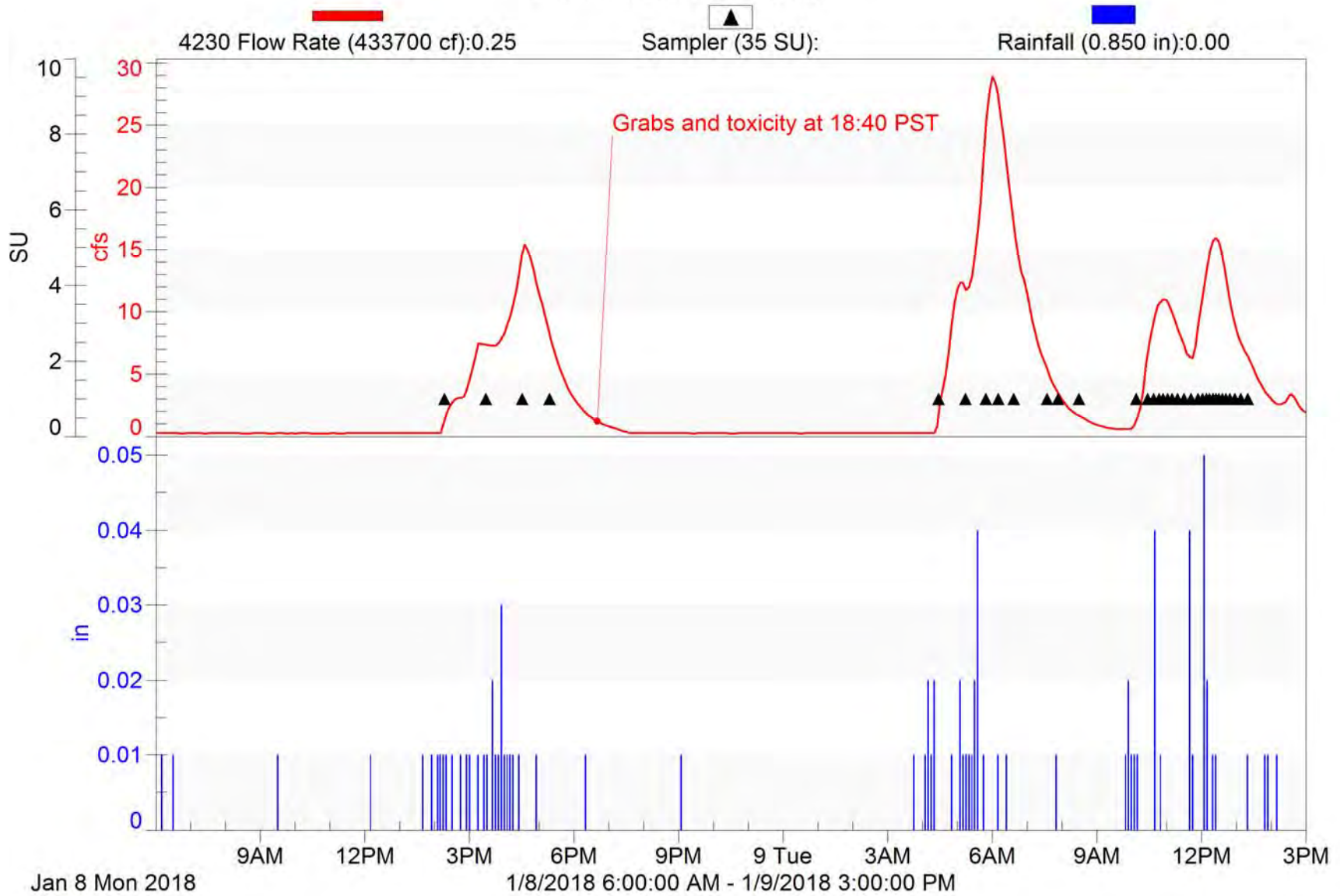
2017/18 NPDES Event #2 (Wet)





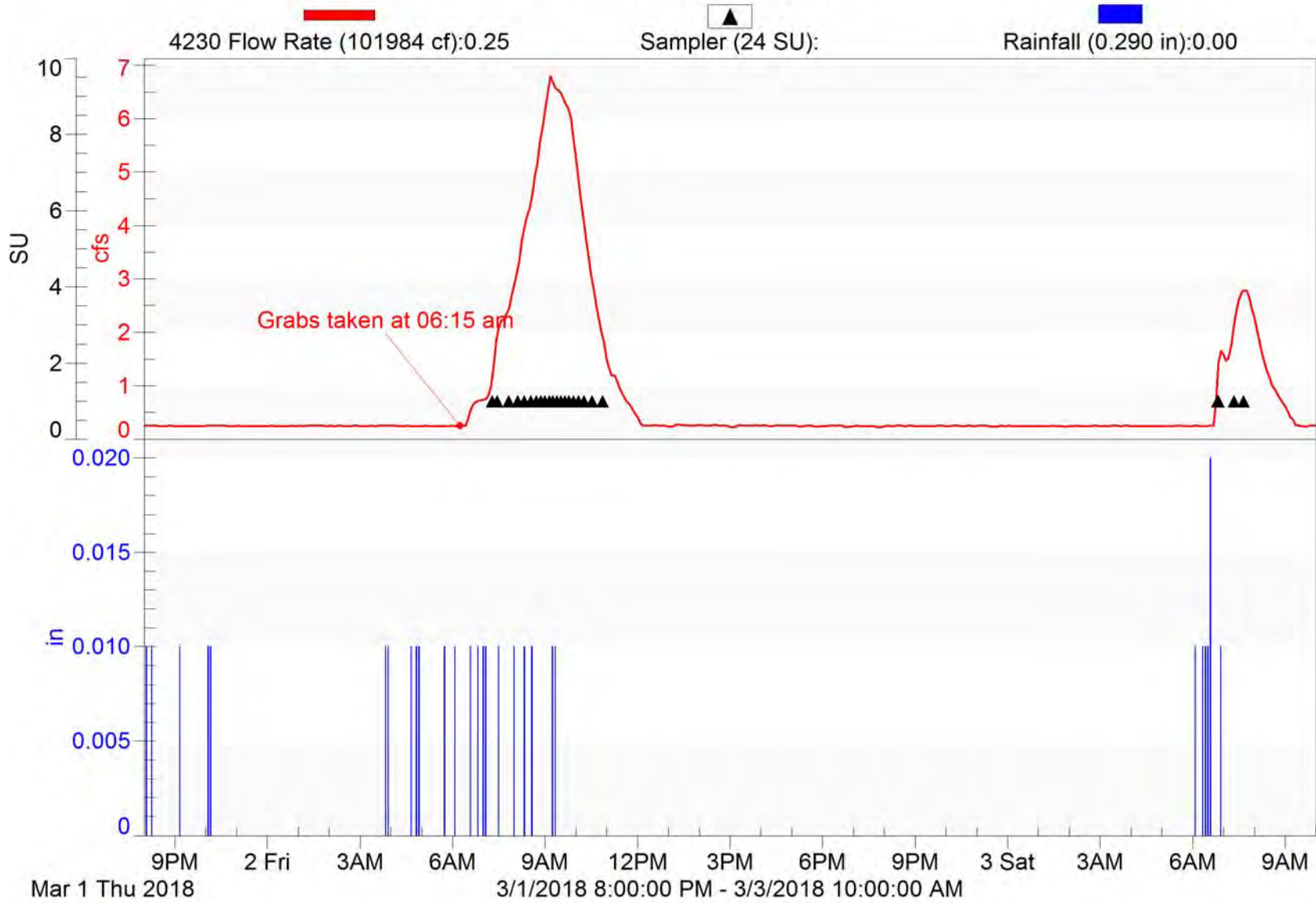
# Oxnard-1

2017/18 NPDES Event #1 (Wet)



# Oxnard-1

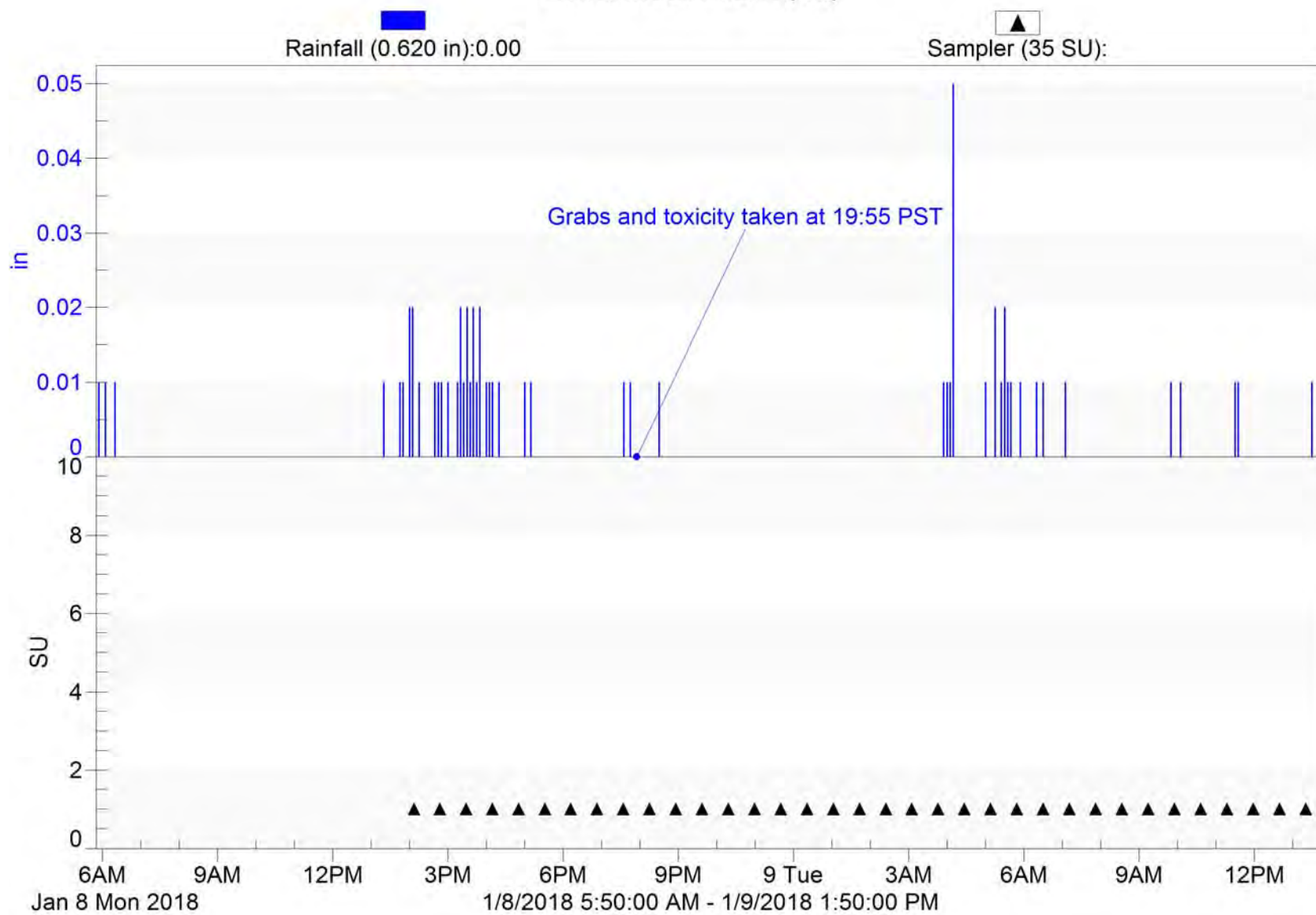
2017/18 NPDES Event #2 (Wet)





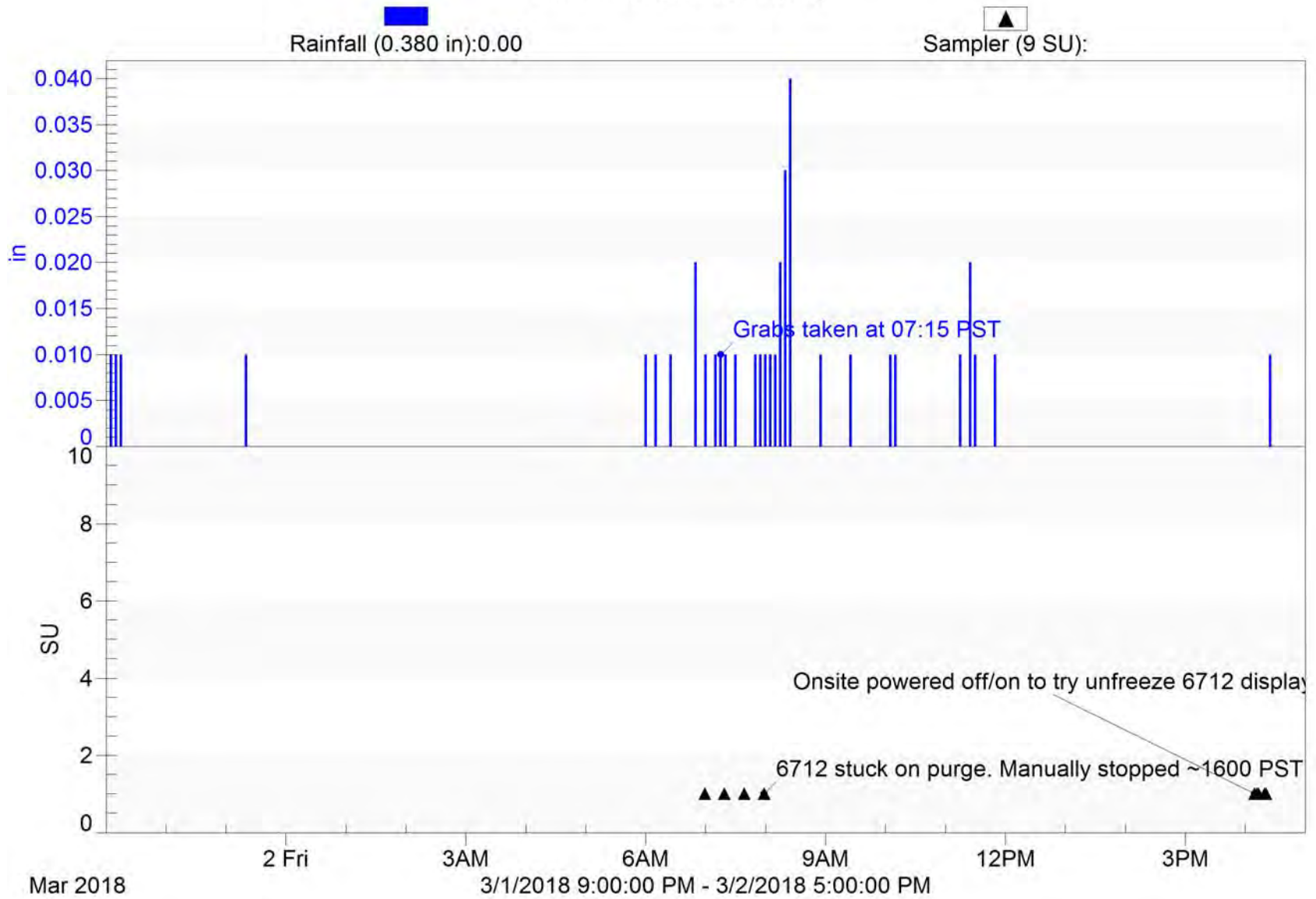
# Port Hueneme-1

2017/18 NPDES Event #1 (Wet)



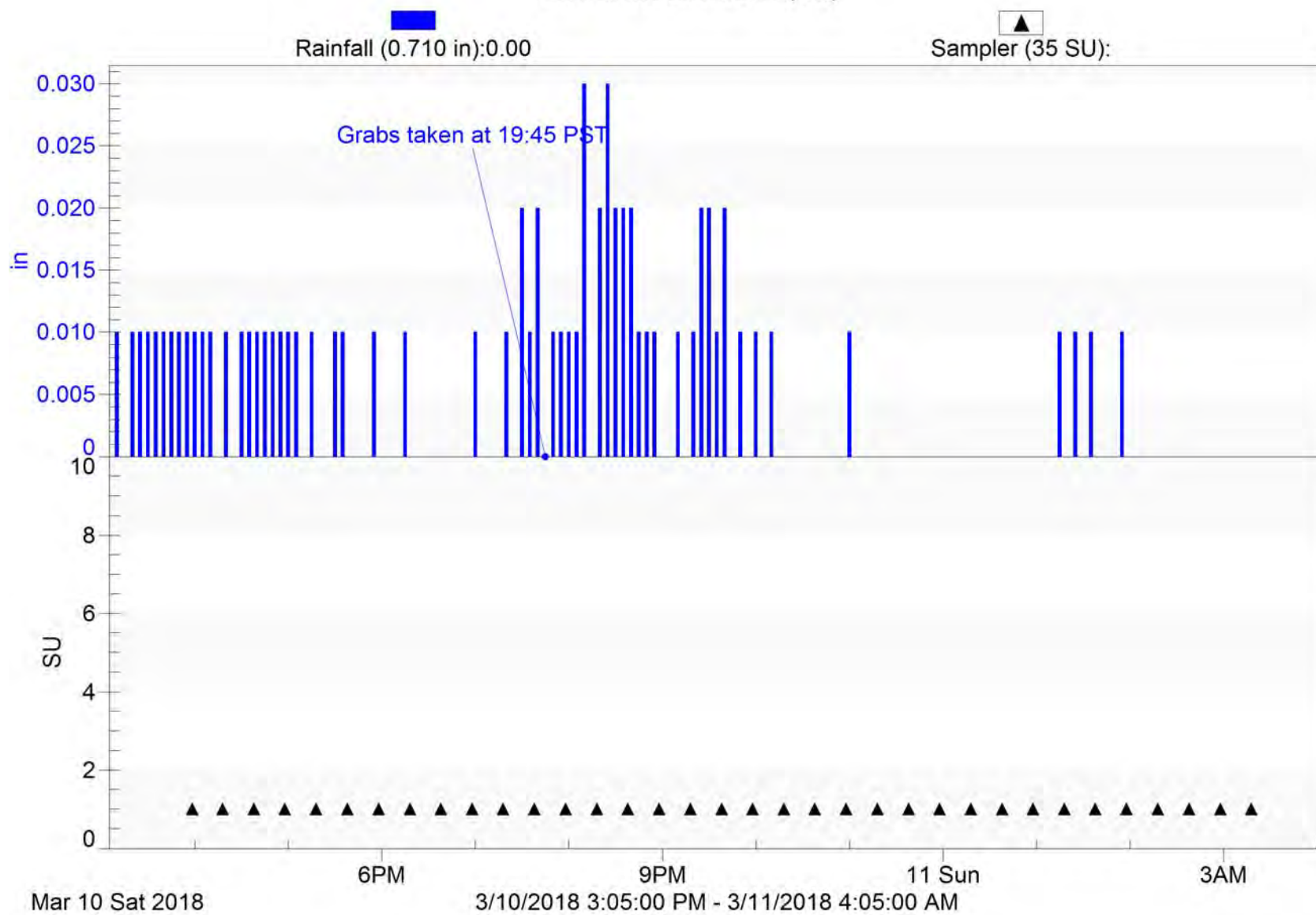
# Port Hueneme-1

2017/18 NPDES Event #2 (Wet)



# Port Hueneme-1

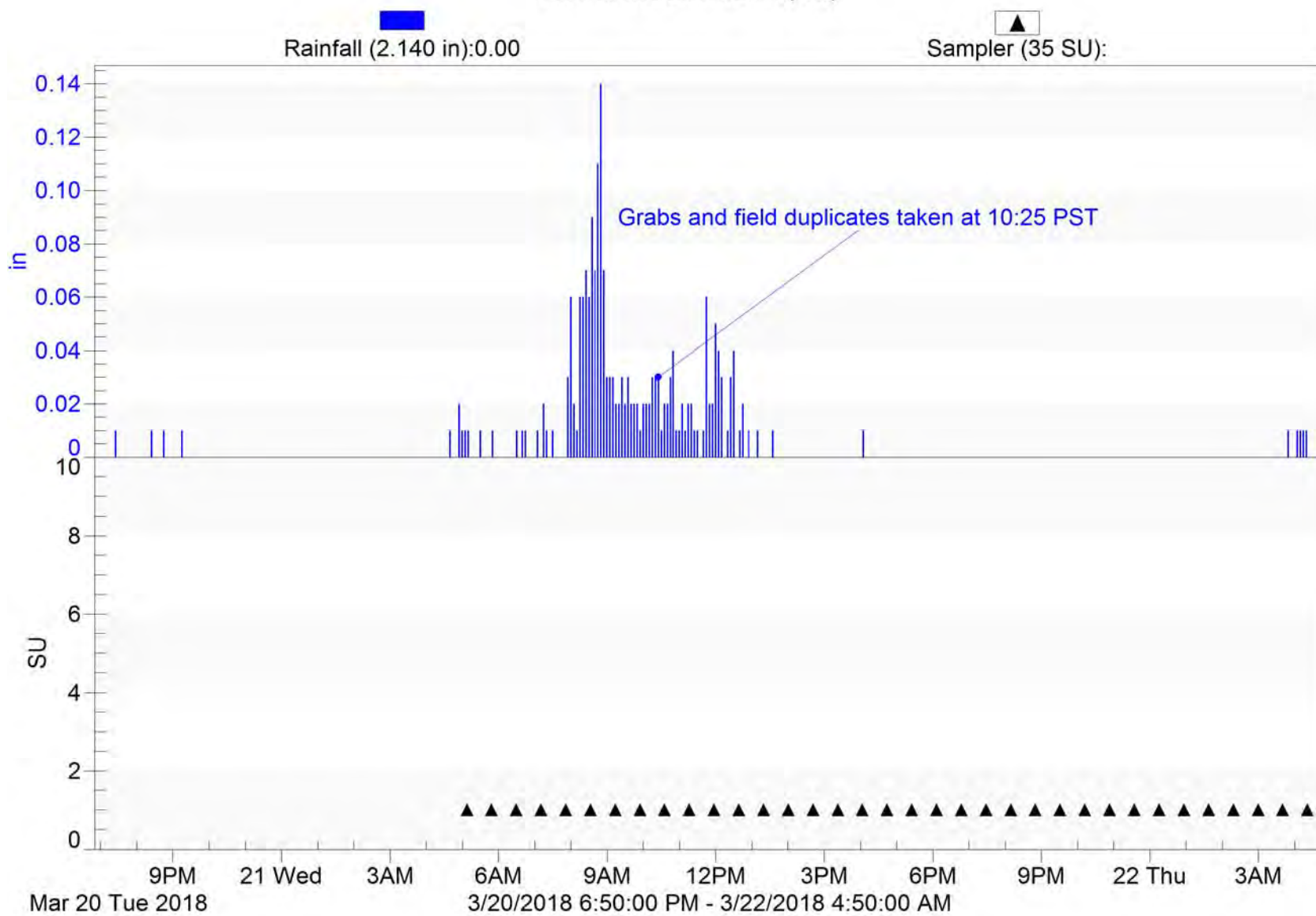
2017/18 NPDES Event #3 (Wet)





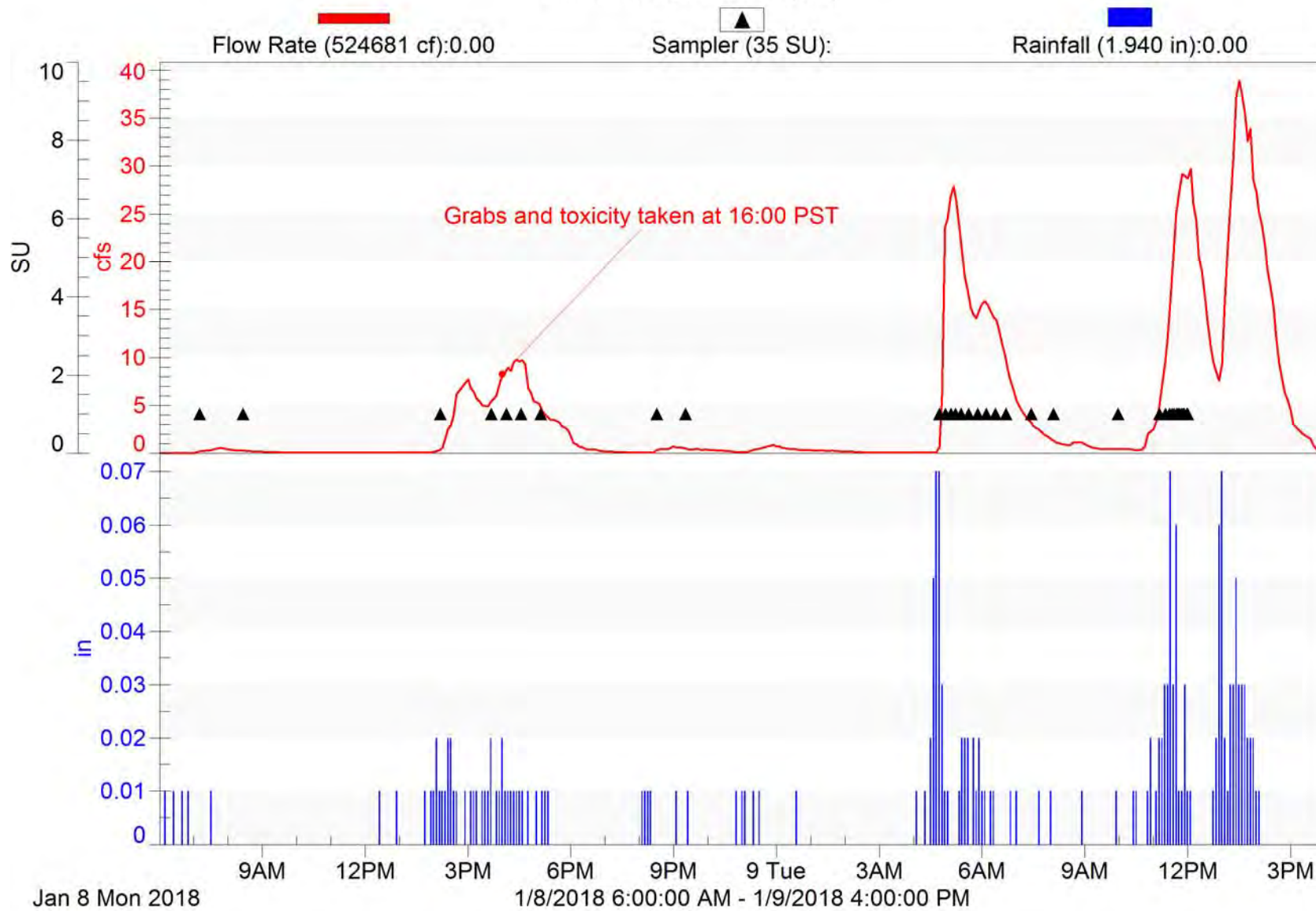
# Port Hueneme-1

2017/18 NPDES Event #4 (Wet)



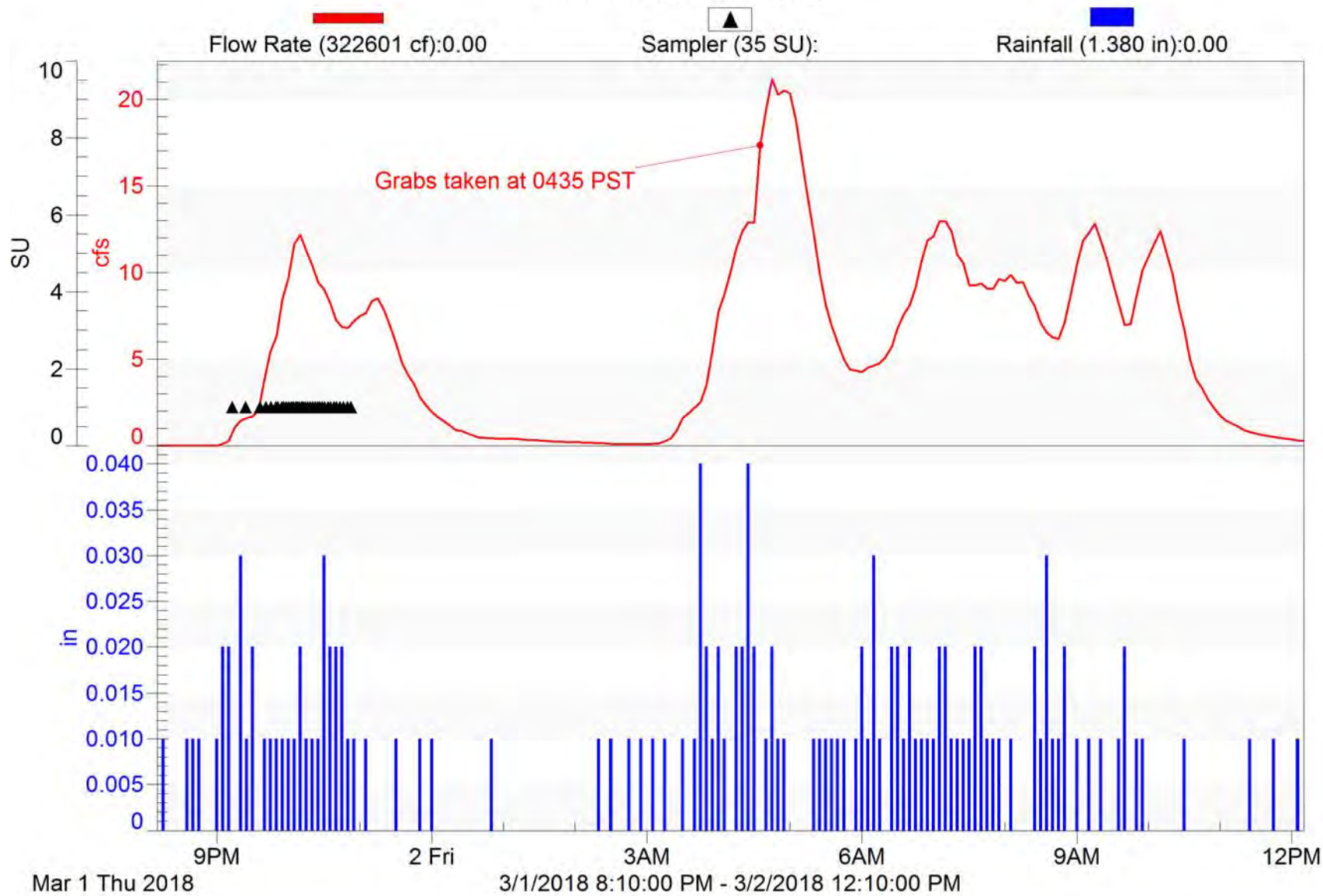
# Santa Paula-1

2017/18 NPDES Event #1 (Wet)



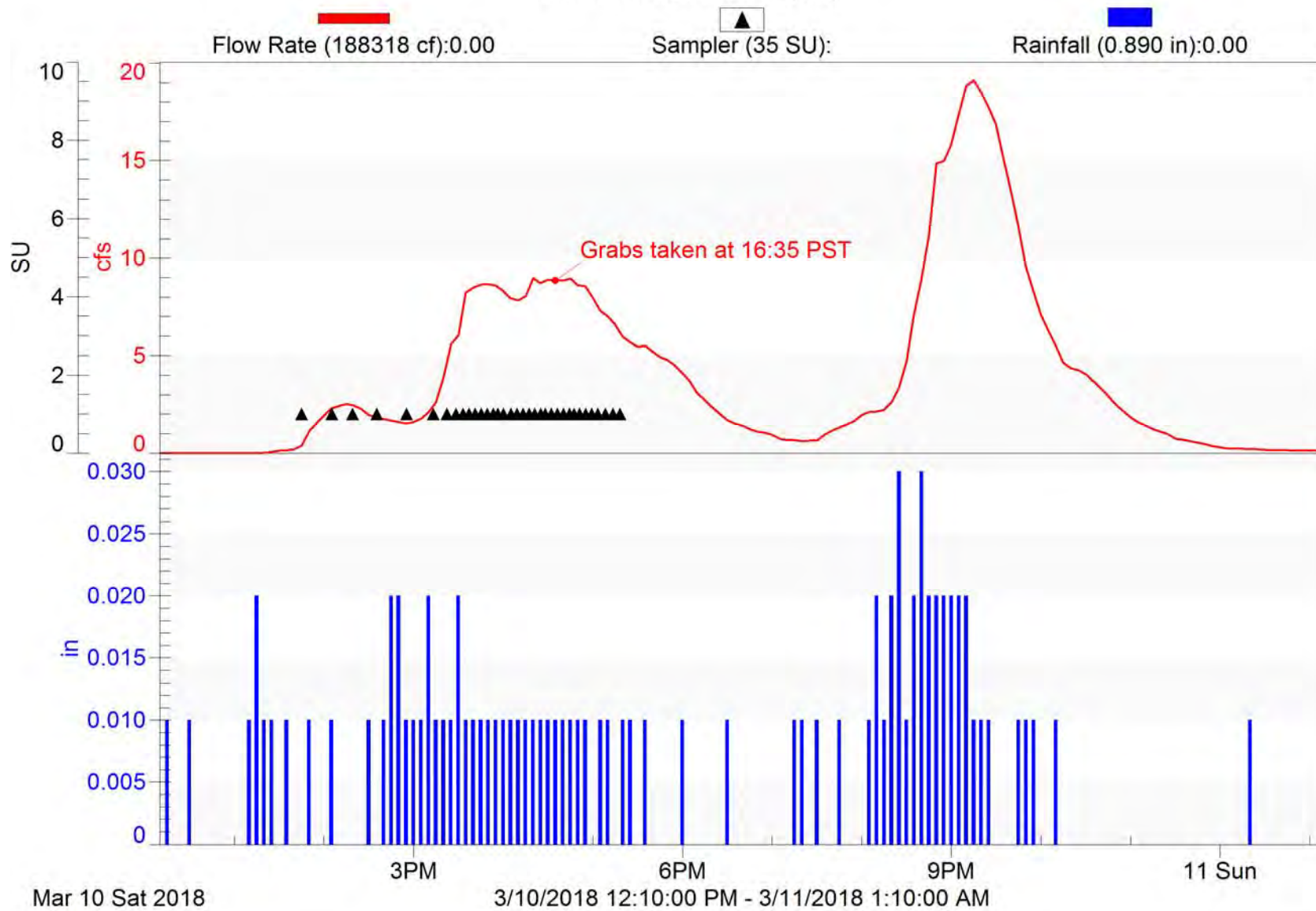
# Santa Paula-1

2017/18 NPDES Event #2 (Wet)



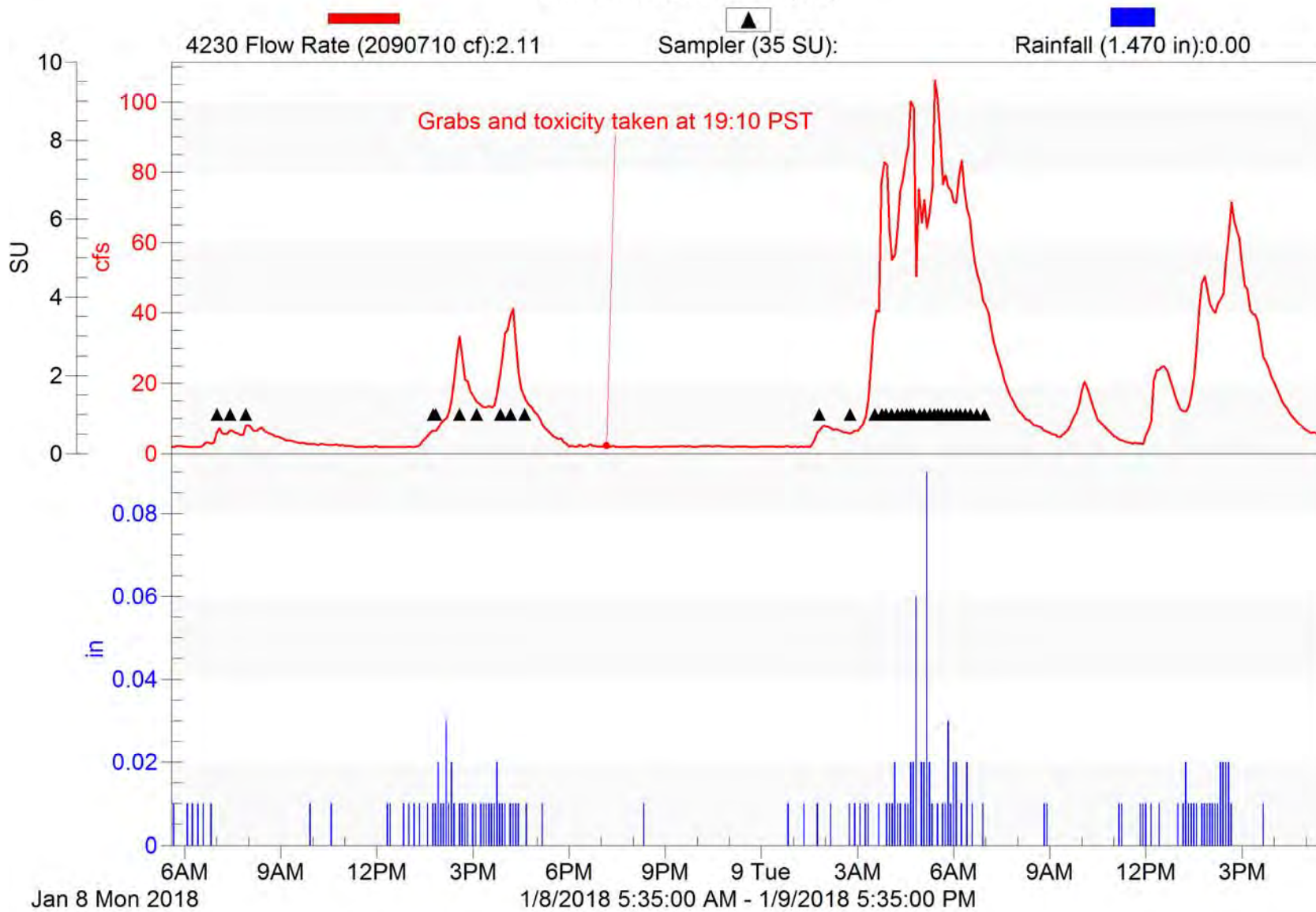
# Santa Paula-1

2017/18 NPDES Event #3 (Wet)



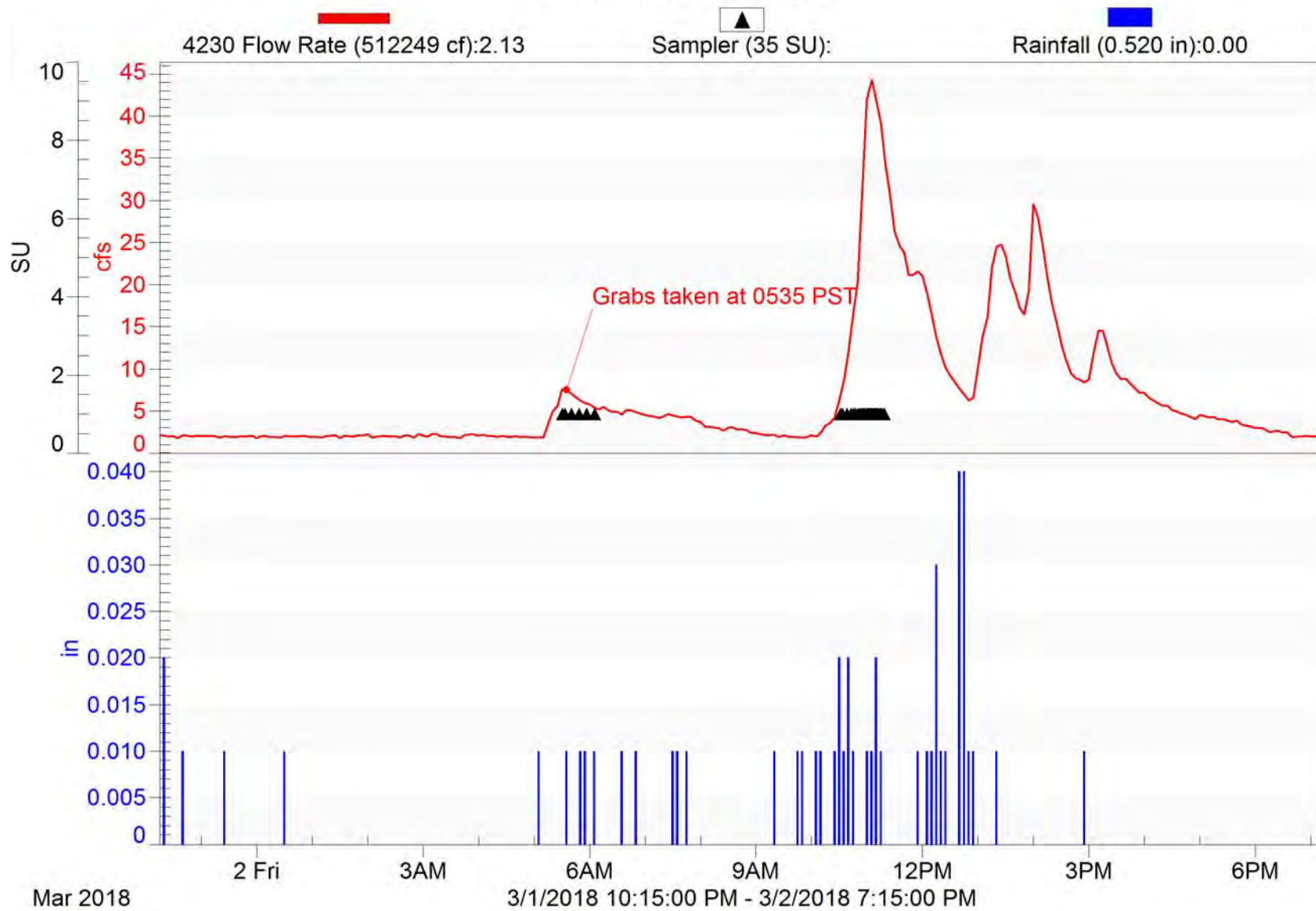
# Simi Valley-1

2017/18 NPDES Event #1 (Wet)



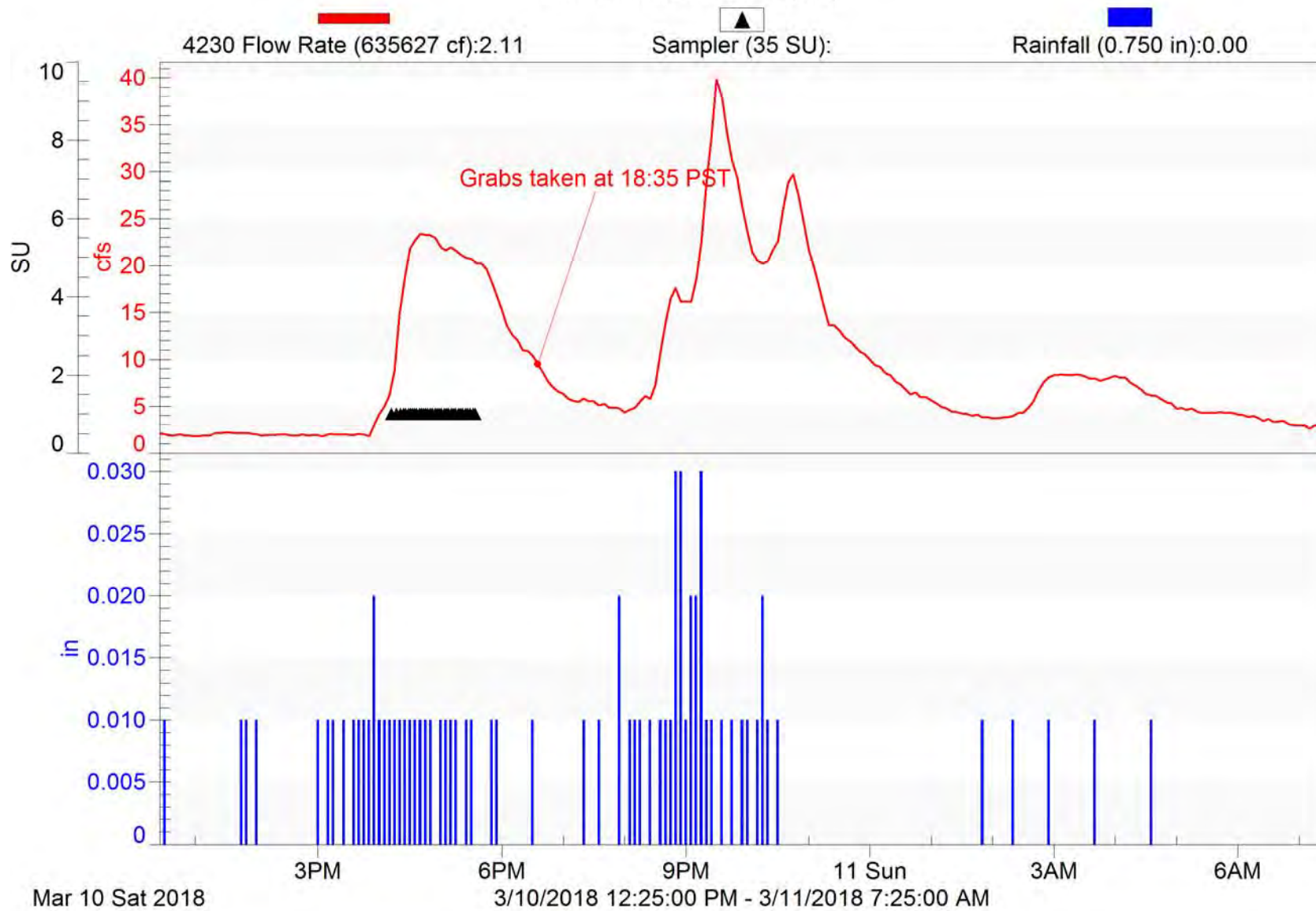
# Simi Valley-1

2017/18 NPDES Event #2 (Wet)



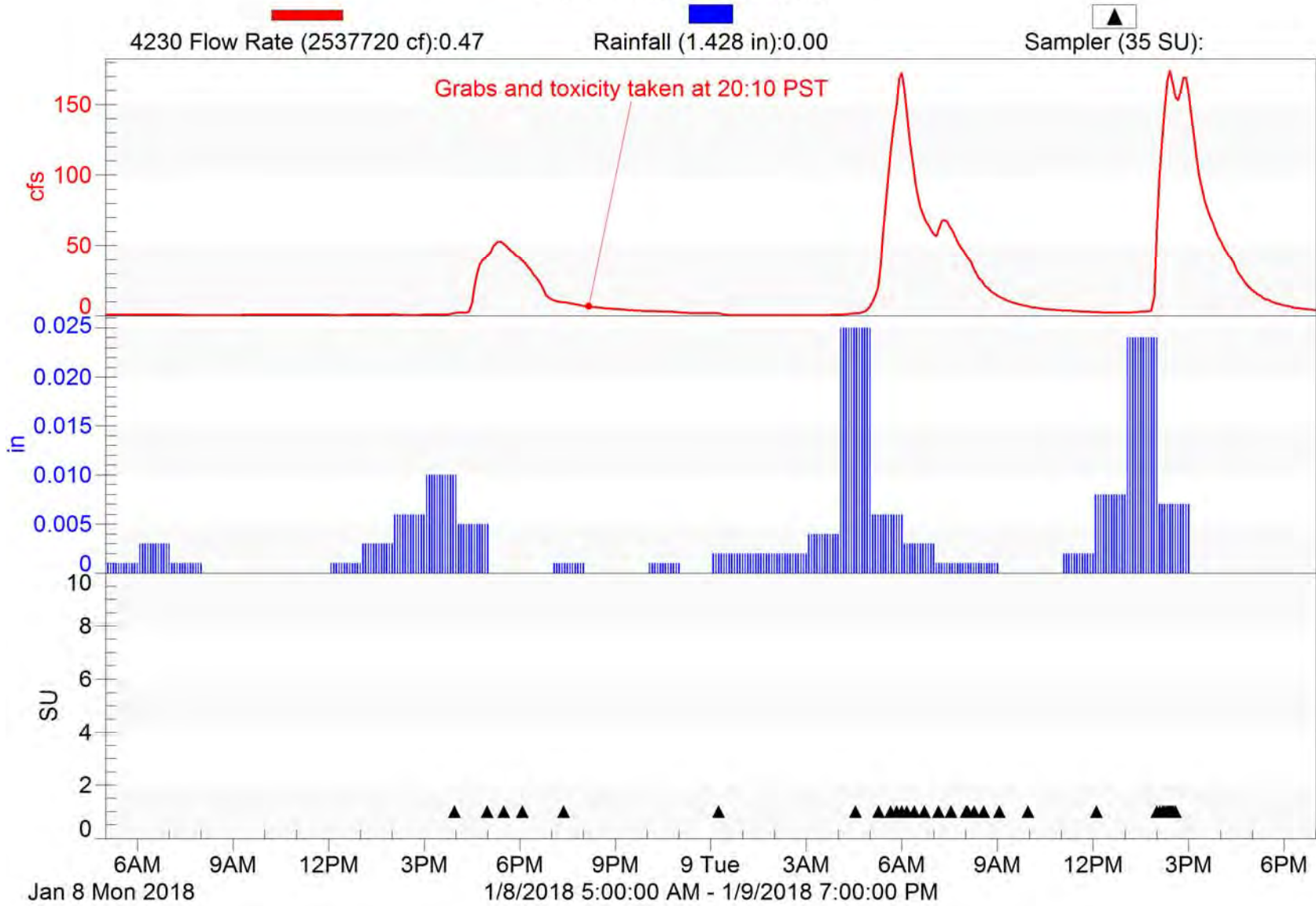
# Simi Valley-1

2017/18 NPDES Event #3 (Wet)



# Thousand Oaks-1

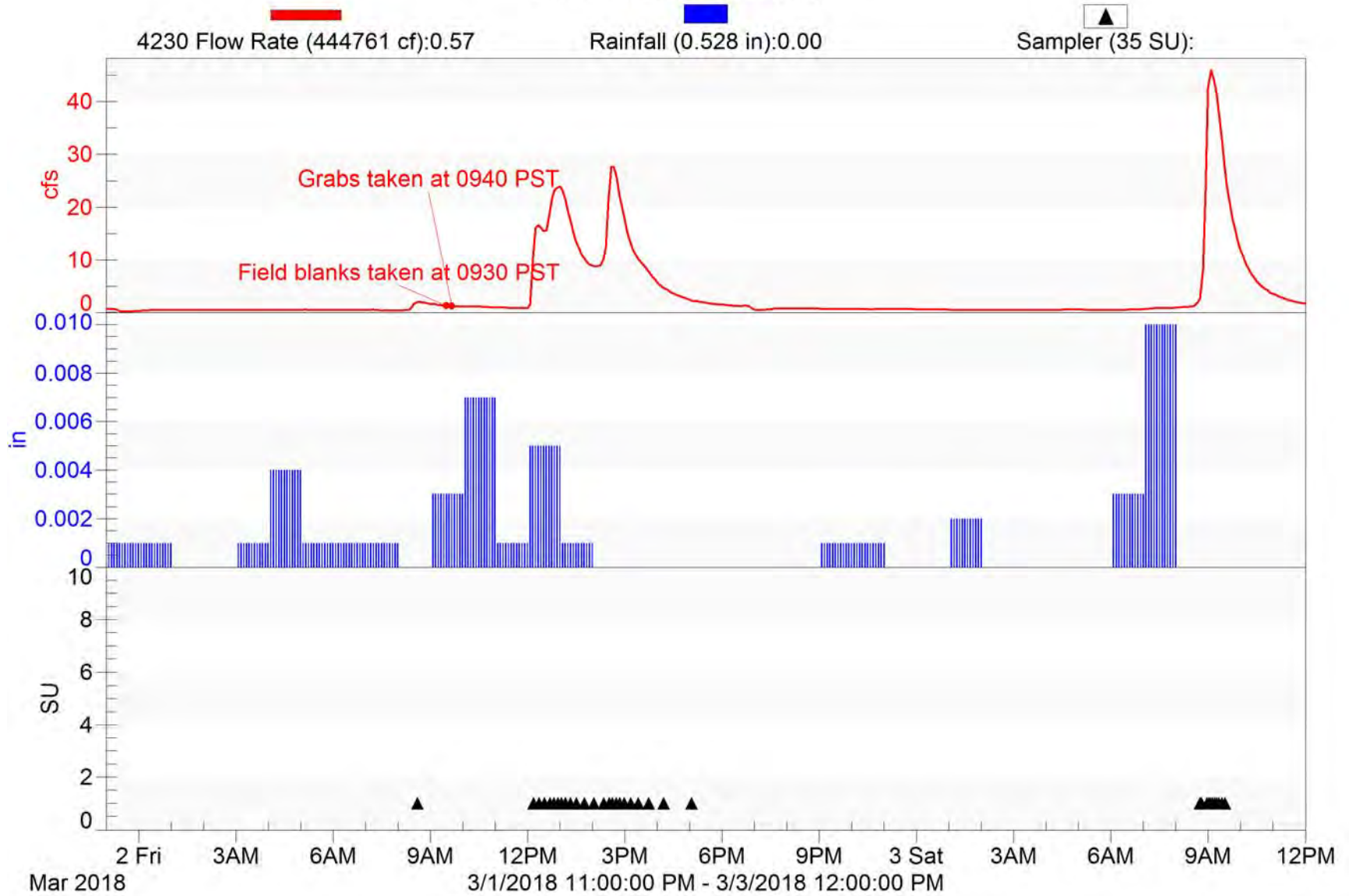
2017/18 NPDES Event #1 (Wet)





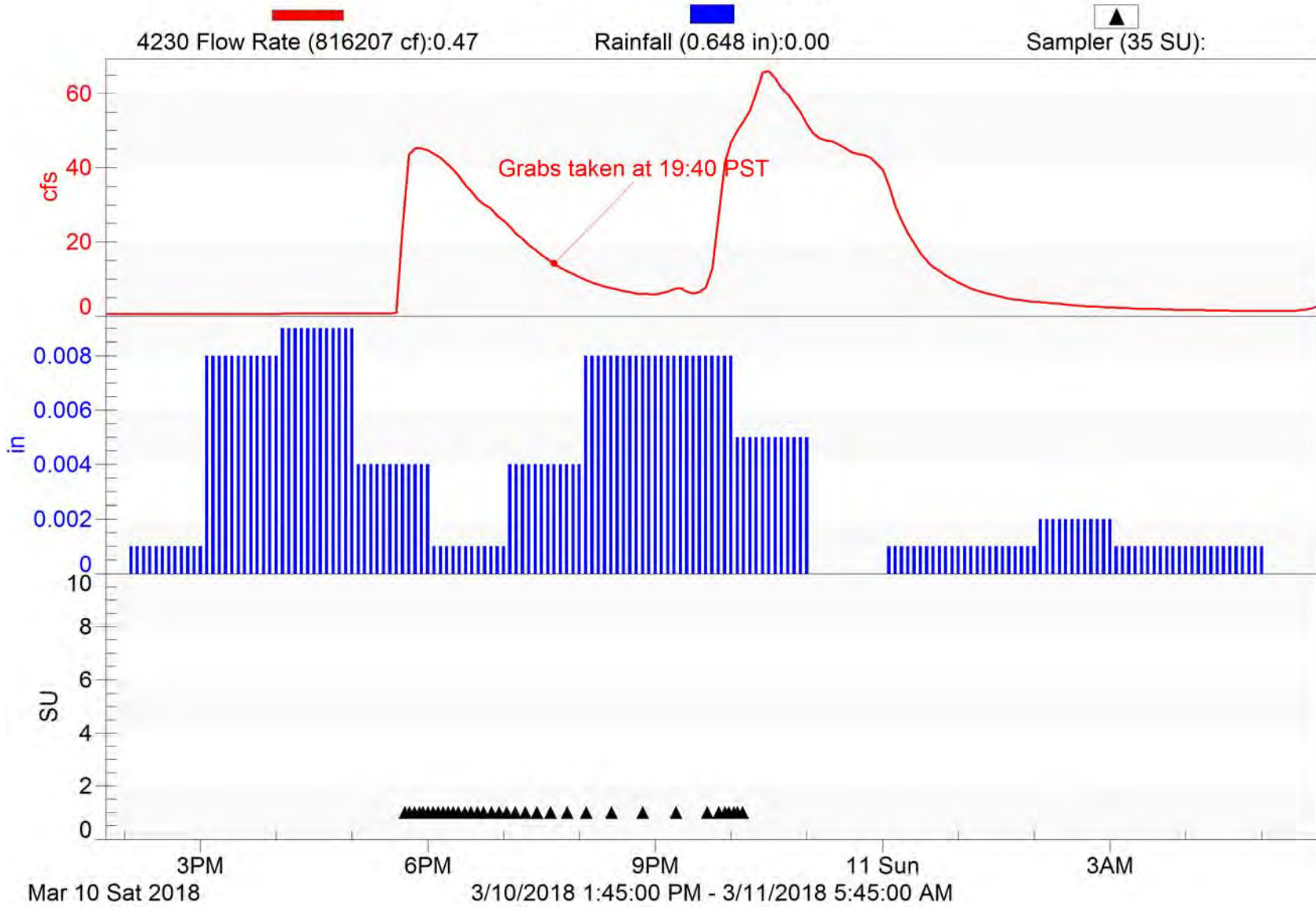
# Thousand Oaks-1

2017/18 NPDES Event #2 (Wet)



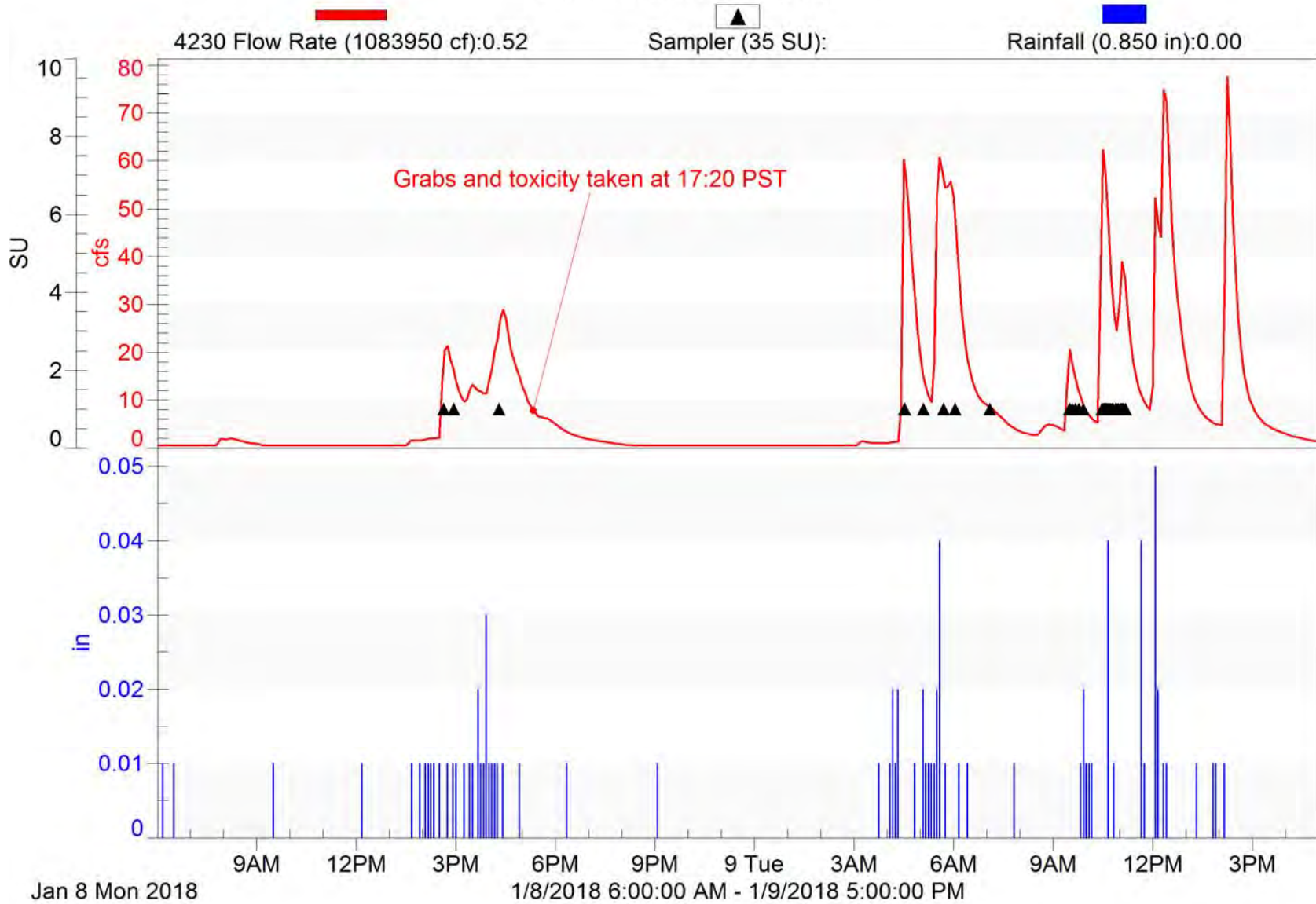
# Thousand Oaks-1

2017/18 NPDES Event #3 (Wet)



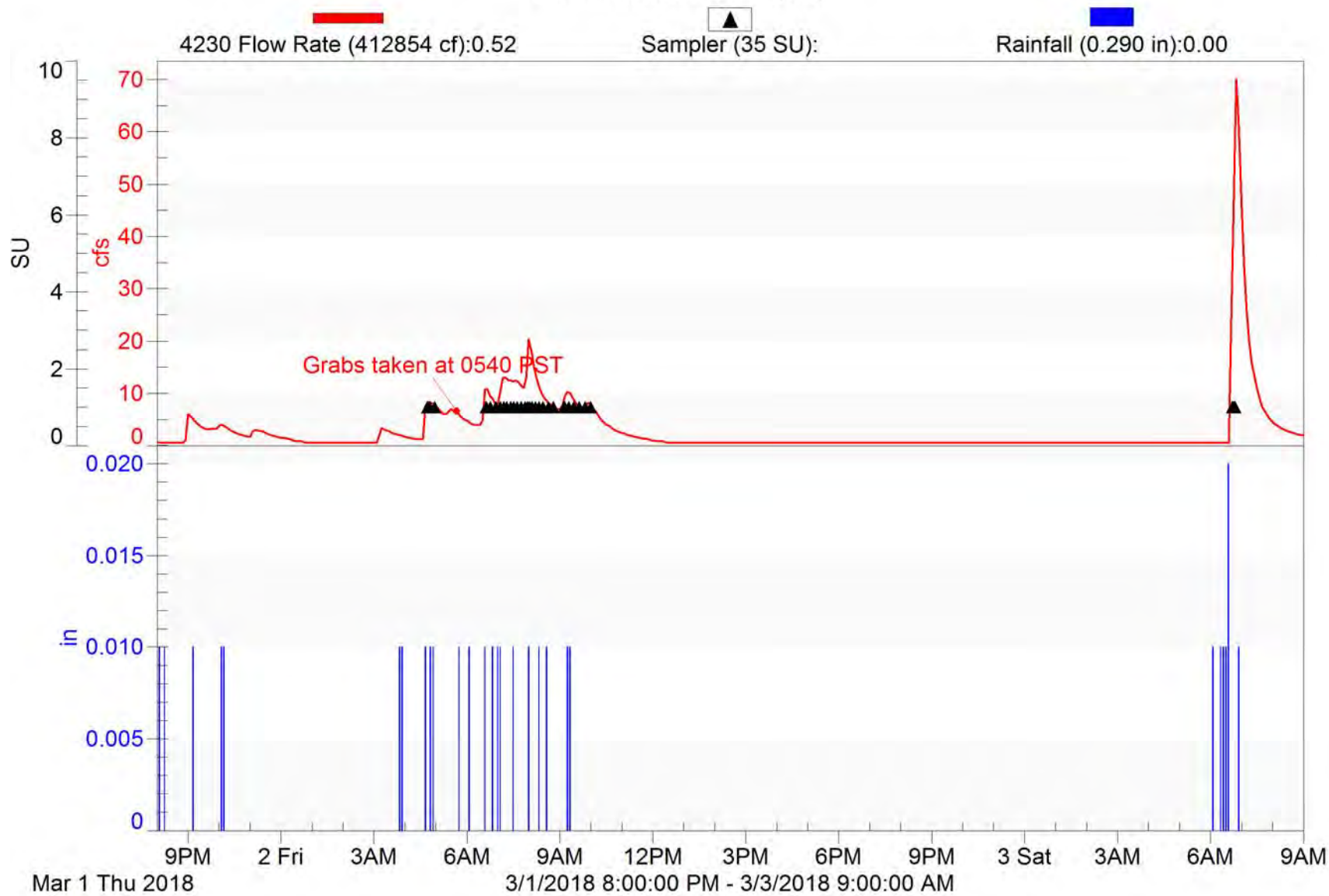
# Ventura-1

2017/18 NPDES Event #1 (Wet)



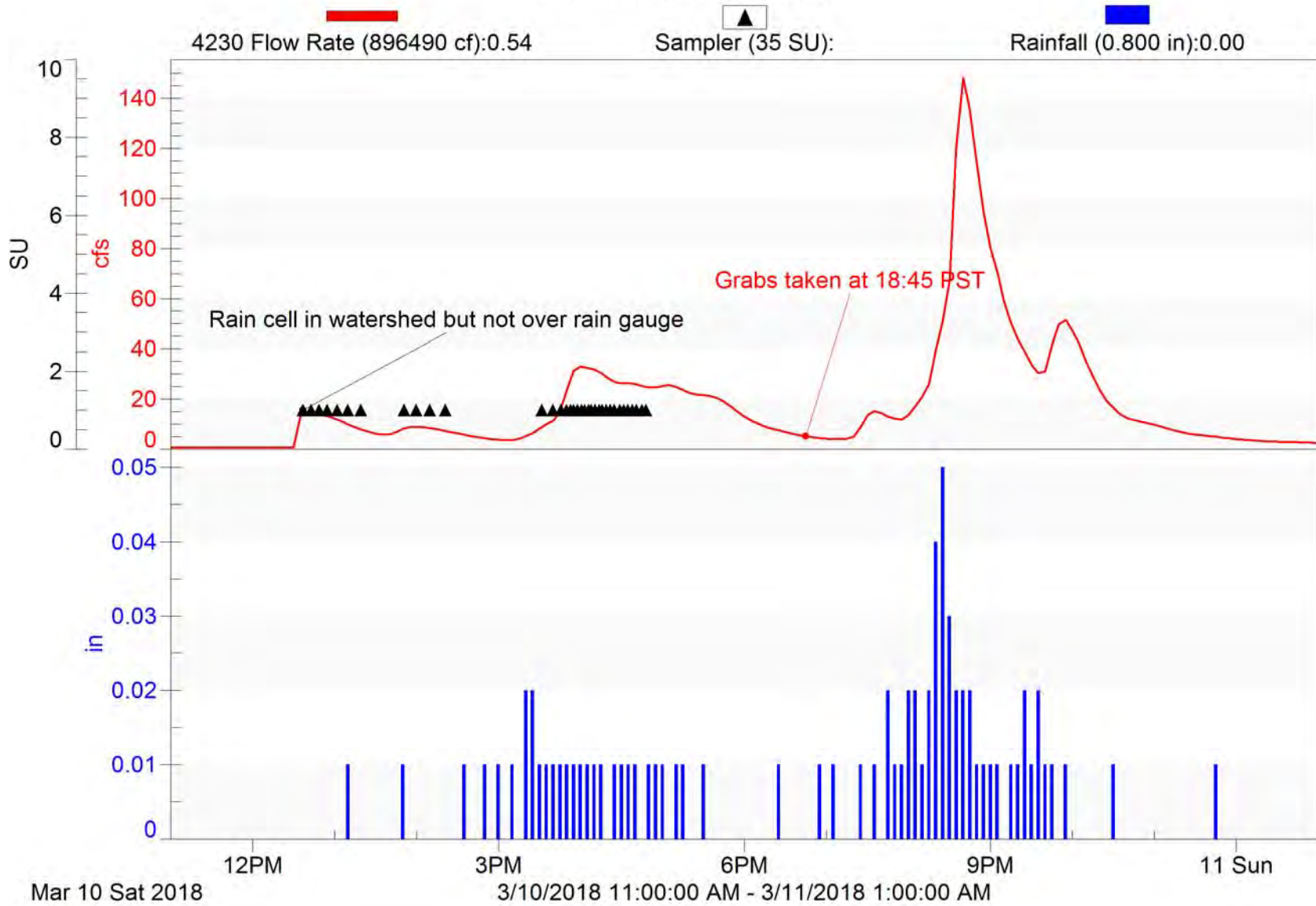
# Ventura-1

2017/18 NPDES Event #2 (Wet)



# Ventura-1

2017/18 NPDES Event #3 (Wet)



## **Appendix C. NRCS Curve Number Methodology Discussion**



# 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)

KVM_CAT1	SHORT_	Name
Agriculture	Abandoned Orchards and Vineyards	Orchard
Agriculture	Horse Ranches	open
Agriculture	Nurseries	Orchard
Agriculture	Orchards and Vineyards	Orchard
Agriculture	Vacant With Limited Improvements	open
Com_Indus. Mix	Mixed Commercial and Industrial	Comm
Commer.	Commercial Recreation	Comm
Commer.	Commercial Storage	Comm
Commer.	Low- to Medium-Rise Major Office Use	comm
Commer.	Modern Strip Development	comm
Commer.	Retail Centers (Non-Strip with Contiguous Interconnected Off-Street Parking)	comm
Extraction	WHOLESALE AND WAREHOUSING	indhigh
Facility	Fire Stations**	indlow
Facility	Government Offices	indlow
Facility	Major Medical Health Care Facilities	comm
Facility	Other Public Facilities	indlow
Facility	Other Special Use Facilities	indlow
Facility	Police and Sheriff Stations**	indlow
Facility	Religious Facilities	indlow
Facility	Special Care Facilities	indlow
Industrial_1	Open Storage	indlow
Industrial_1	Packing Houses and Grain Elevators	indlow
Industrial_3	Manufacturing, Assembly, and Industrial Services	indhigh
No Info Given		open
Recreation	Other Open Space and Recreation	open
Res.1	Low Density Single Family Residential	reslow
Res.1	Trailer Parks and Mobile Home Courts, High Density	reshigh
Res.2	Low-Rise Apartments, Condominiums, and Townhouses	reshigh
Res.2	Rural Residential Low Density	resrural
Res.3	High Density Single Family Residential	reshigh
Res.4	Duplexes, Triplexes, and 2- or 3-Unit Condominiums and Townhouses	reshigh
Res.4	Medium-Rise Apartments and Condominiums	reshigh
Res.4	Mixed Urban	comm
Schools	Elementary Schools**	indlow
Schools	Junior High Schools**	indlow
Schools	Senior High Schools**	indlow
Transportation	Freeways and Major Roads	paved
Transportation	Mixed Transportation	paved
Transportation	Truck Terminals	paved
Under Constructi	Under Construction	indlow
Utilities	Electrical Power Facilities	indlow
Vacant Undiffere	Vacant Undifferentiated (rural)	brushfair
Vacant Undiffere	Vacant Undifferentiated (city)	open

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	Composite 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.

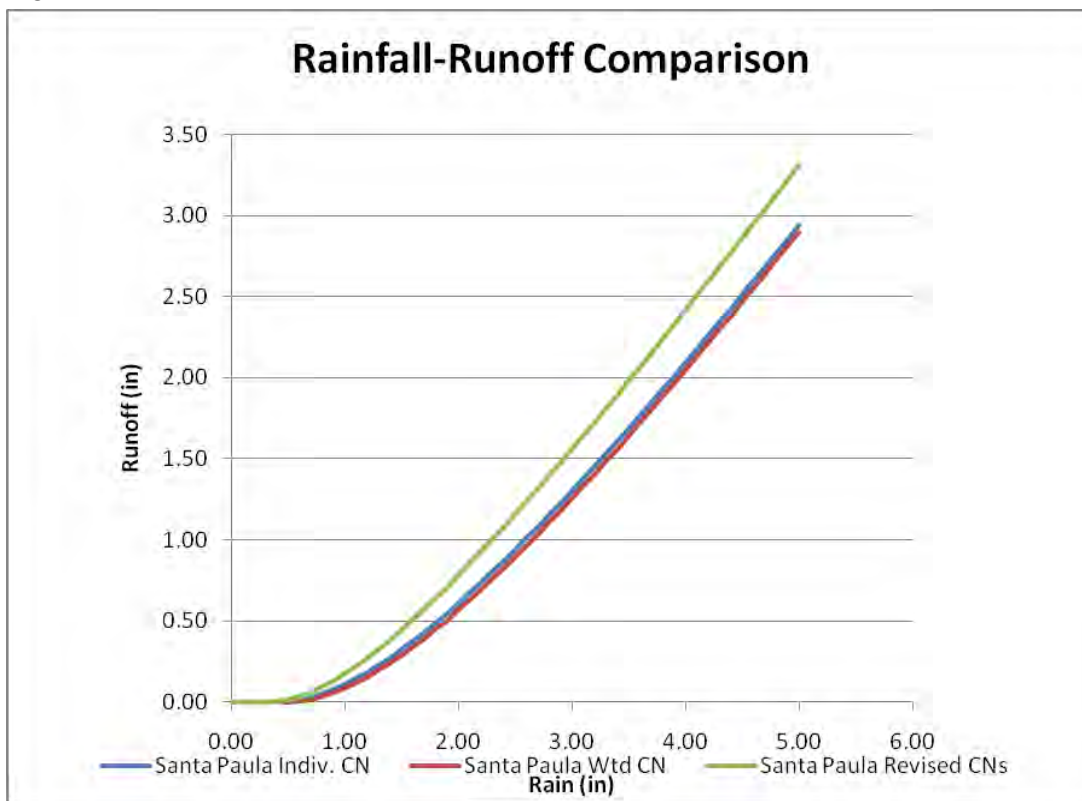
Table 3: Storm Yield Results- Weighted Average Curve Numbers with Updated CNs

Watershed Name	Size ac	Composite CN	Rain (in)	Initial Abs S (no units)	Rain Cutoff (in)	Yield (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.

Figure 1



### 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 accurately 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 unoff9-09.xls	9-09 CN data
NPDES_MonitoringSitesR unoff8-10.xls	8-10 updated analysis for 11 sites total
NPDES_MonitoringSitesR unoff8-10RevCNs.xls	8-10 analysis using revised CNs
MonitoringSites9-09.mxd	ArcMap project file for analysis

# Ventura Watershed

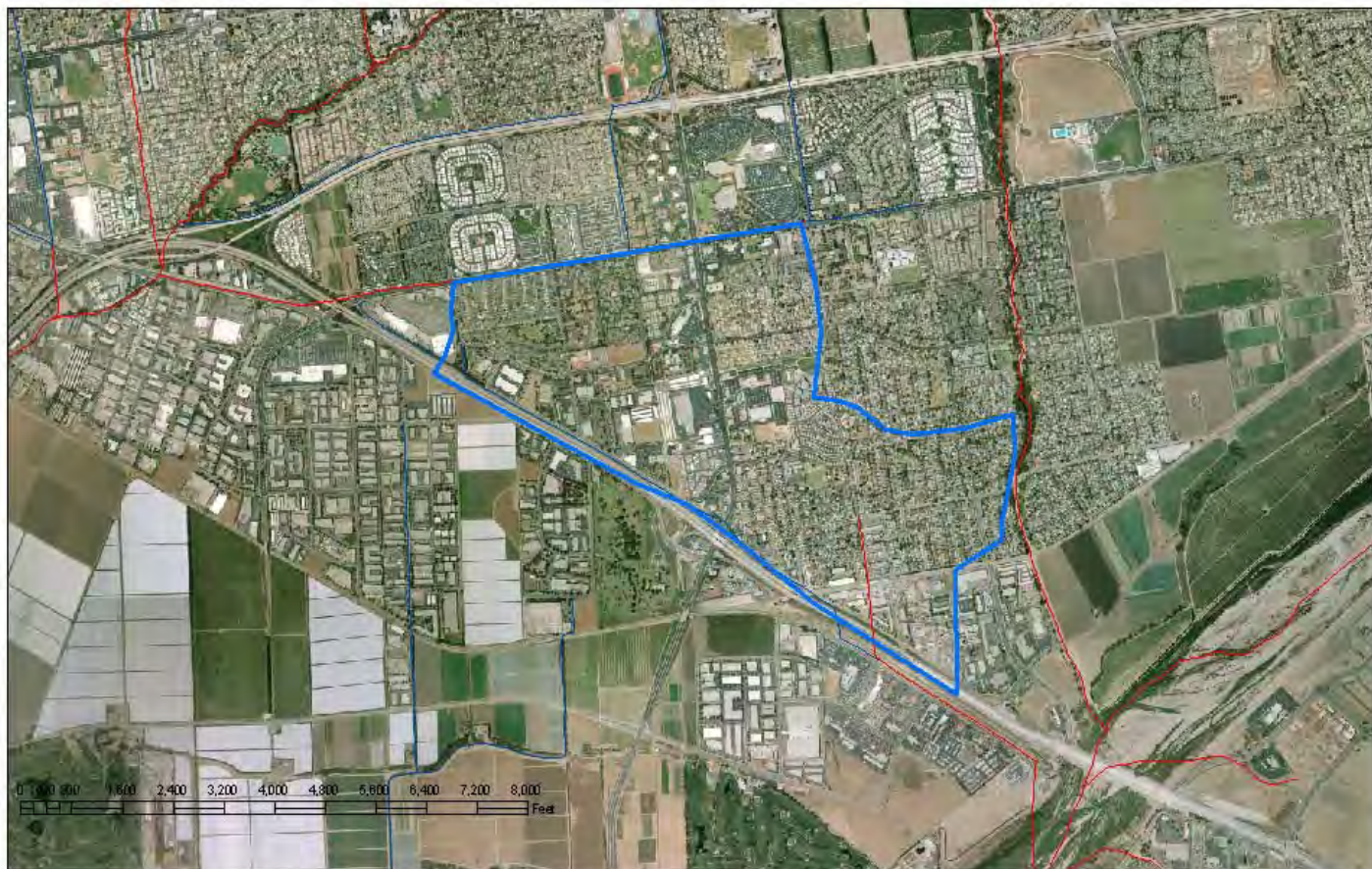


Figure 2

# Meiners Oaks Happy Valley Watershed



Figure 3

# Ojai Fox Watershed

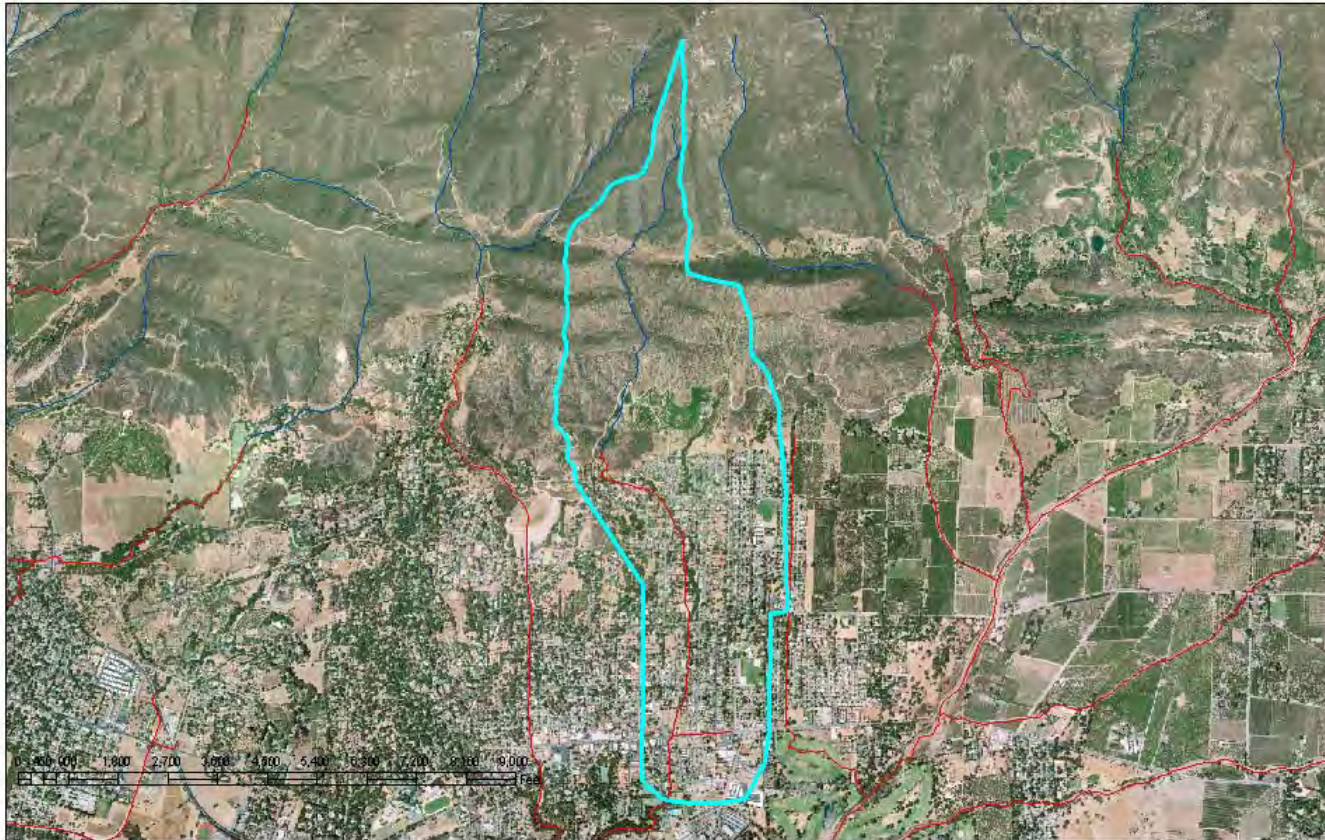


Figure 4

### Camarillo Hills Drain Watershed

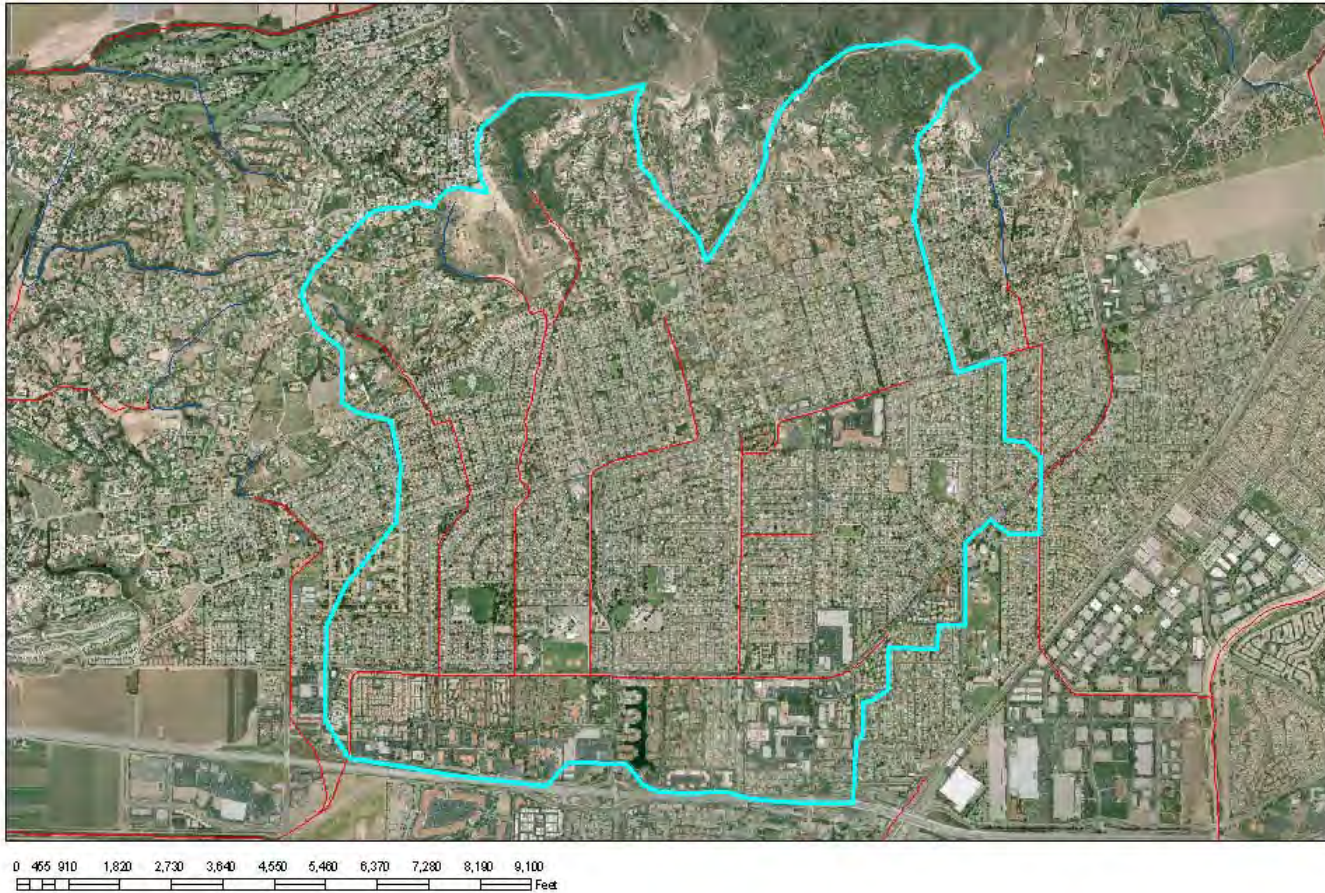
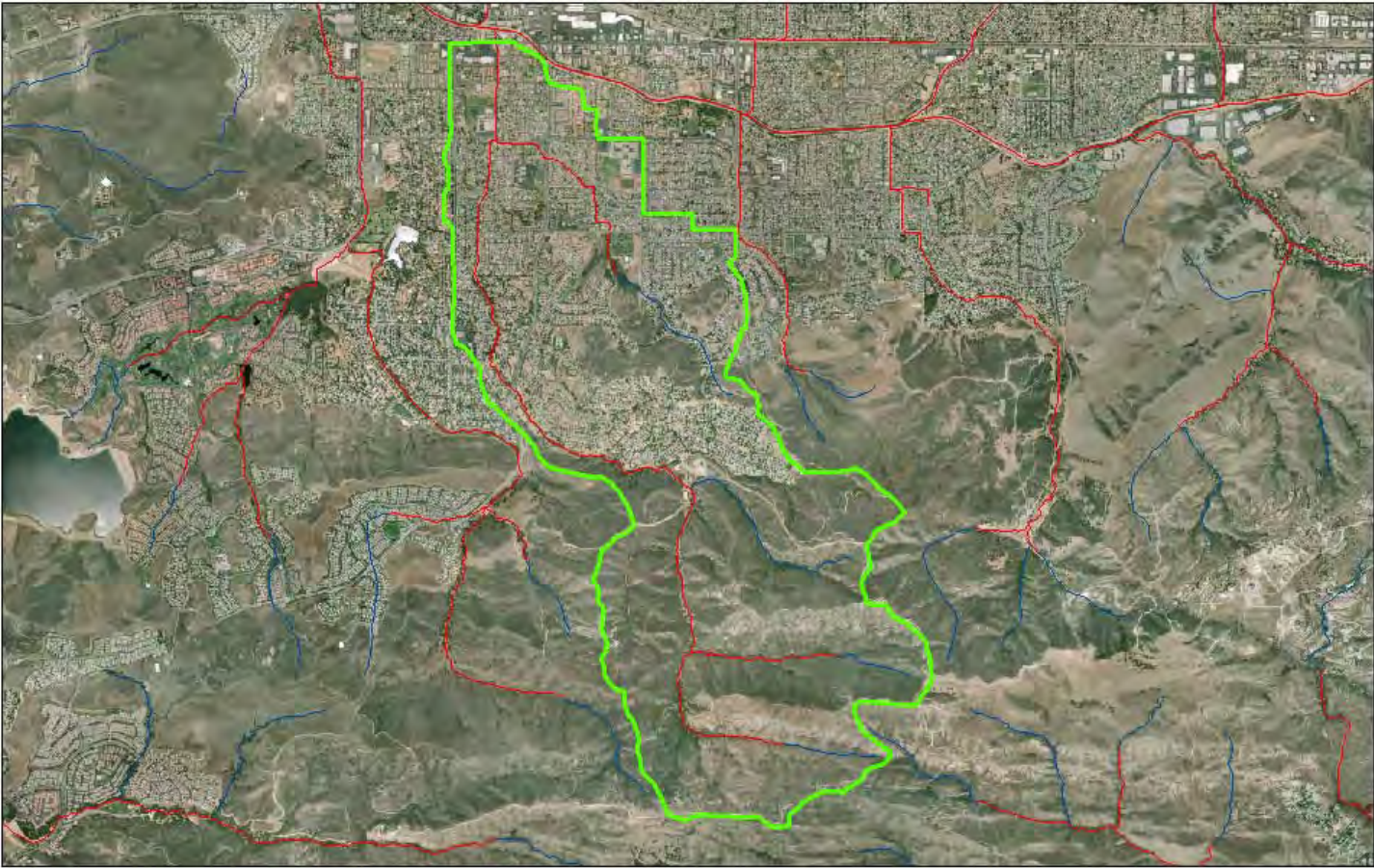


Figure 5

Simi Valley Watershed



0 1,500 3,000 4,500 6,000 7,500 9,000 10,500 12,000 13,500 15,000 Feet

Figure 6



Oxnard Watershed



Figure 7

### Moorpark Watershed

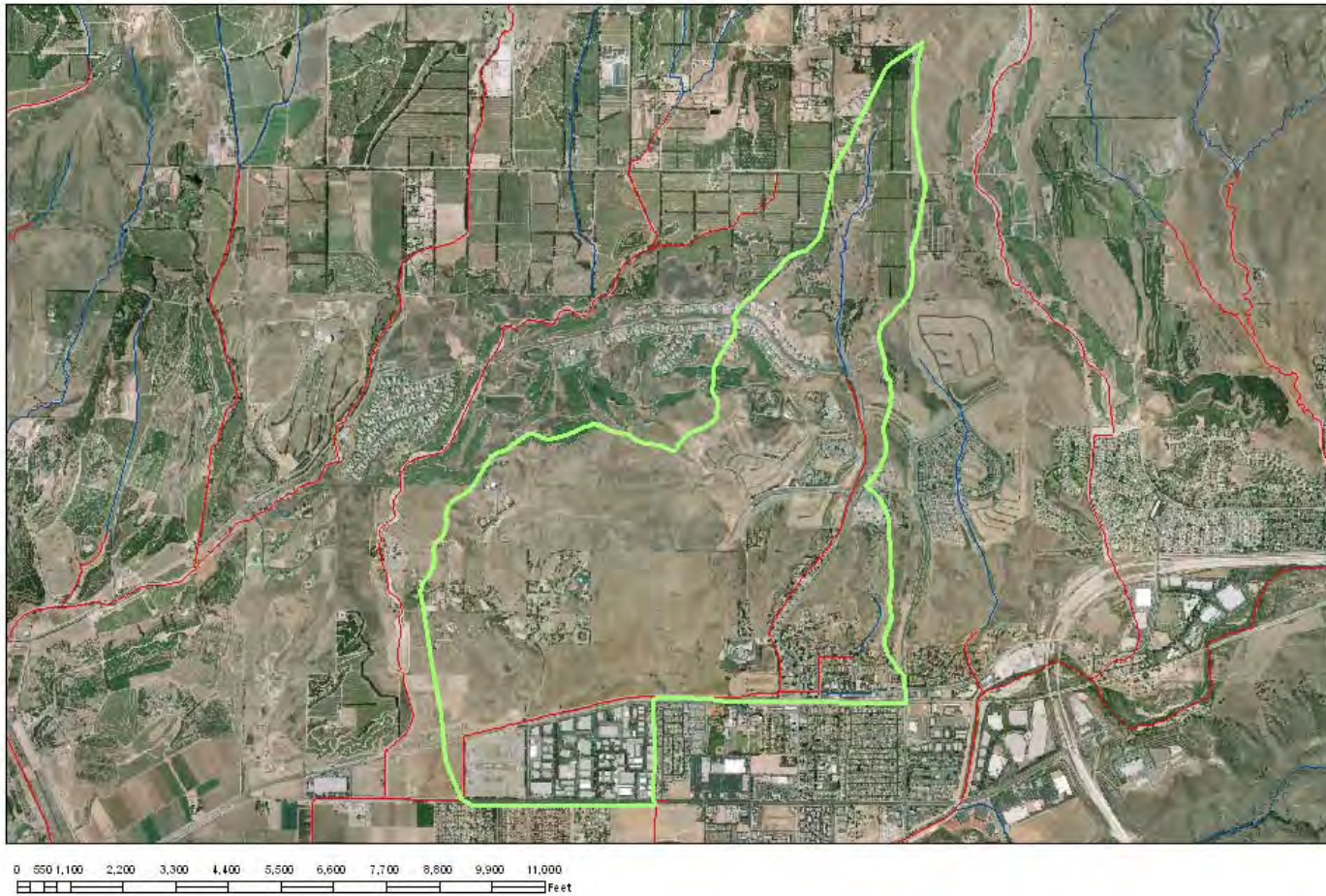


Figure 8

### Port Hueneme Watershed



Figure 9

# Fillmore Watershed



Figure 10

# Thousand Oaks Watershed



Figure 11

Santa Paula Watershed



Figure 12

## Appendix D. Event Summaries

Site	Event	Visit	Staff	Date	Arrival Time	PST/PDT	Flowmeter		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 Time	Grab Time	Toxicity Time	Notes
							Level (feet)	Flow (cfs)											
ME-CC	1	1	LM	1/7/2018	1625	PST	1.059	5		Turned on	4L Distilled	109,716	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles
ME-CC	1	2	JM,TS	1/9/2018	0940	PST	1.575	75		15			Sample 4 after 1 pulse			0940	0940		Fridge fuse ok. Added ice to fridge. Drained fridge. Turned fridge off, propped it open.
ME-CC	1	3	LM,DW	1/10/2018	1030	PST	1.504	59		1	2L Distilled	491,787	Program done	Overflowed		1035			
ME-VR2	1	1	KH,DL	1/7/2018	1300	PST	1.088	NA	~1.11	1	4L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles
ME-VR2	1	2	JM,TS	1/9/2018	1110	PST	4.504	NA		3			Program done.	Full/overflowed		1110	1110	1110	
ME-VR2	1	3	KH,DL	1/10/2018	1155	PST	2.82	NA	~3' in sediment		4L Distilled	383,590	Program done.				1200		High water mark ~'9'. Collected grabs for Regional Board. Intake location currently unknown (due to ~3' sediment deposition)
ME-SCR	1	1	LM	1/7/2018	1735	PST	5.795	NA	NA	2	4L Distilled	55,590	Time: 41 min/500mlx35, program started, so changed start time to 0800	Bottle in, lid off					Left grab & tox bottles. Left outside light on. Lowered swing arm and removed rope (put in house).
ME-SCR	1	2	WBC	1/8/2018	0752	PST							Connected 6712 to 2105. Reprogrammed for no delay to start, program disabled						
ME-SCR	1	3	JM,TS	1/9/2018	1245	PST	5.976			3			Sample 31 in 21 min	Bottle full		1245	1245	1245	Collected grabs for Regional Board
MO-OJA	1	1	KH,DL	1/7/2018	1155	PST	0.101	5	<0.1 cfs	2	4L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles
MO-OJA	1	2	WBC,TS	1/8/2018	1300	PST	0.101	5	5 cfs est	1			Program disabled	0L			1315	1315	Stage hadn't risen so visited site to check if debris was clogging bubbler. Stage rose while on way to site. Turned 6712 off
MO-OJA	1	3	WBC	1/9/2018	0300	PST	0.22			2	2L Distilled		Sample 3 in 1 pulse						
MO-OJA	1	4	WBC	1/10/2018	1030	PST	0.1	5	NR	2	2L Distilled	105,933	Program done.	Bottle full		1030			Turned 6712 off
MO-MEI	1	1	KH,DL	1/7/2018	1227	PST	0.08	1	Dry	Turned on	4L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles. Cleared debris from near bubbler/intake.
MO-MEI	1	2	WBC,TS	1/8/2018	1415	PST	0.75	1	~0.75	0			Program disabled	0L			1415	1415	
MO-MEI	1	3	WBC	1/10/2018	0950	PST	0.081	1		2	2L Distilled	96,486	Program done.	18.5L		0950			Turned fridge off and propped open with positioning rack.
MO-FIL	1	1	LM	1/7/2018	1230	PST	0.044	NA		Turned on	4L Distilled	25,699	Time: 40 min/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles
MO-FIL	1	2	WBC,TS	1/8/2018	1645	PST	1.24	NA		0			Sample 5 in 00:07:30	2.5L			1645	1645	Sample 5 delivered 0mL so stopped program, took 6712 grab sample (delivered correctly), restarted program
MO-FIL	1	3	KH,DL	1/10/2018	0907	PST	0.151	NA		2	4L Distilled	184,435	Program done.	18.5L		0910			Turned fridge off and propped open with positioning rack. Turned 6712 off.
MO-OXN	1	1	KH,DL	1/7/2018	1520	PST	0.108	0.2	Dry	Turned on	4L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles. Bubbler line torqued 90 degrees into air. Bent back to ~0.05' from toe. Needs fixed after event.
MO-OXN	1	2	JM,DL	1/8/2018	1835	PST	0.225	1.4	~0.27	4			Sample 5 after 1 pulse				1840	1835	
MO-OXN	1	3	KH,DL	1/10/2018	1035	PST	0.109	0.2	<0.1 cfs	-4	4L Distilled	154,013	Program done. Errors have occurred (power failed/restored 1/8/18 @ 18:31).	17L		1035			Turned fridge off and propped open with positioning rack. Turned 6712 off.
MO-CAM	1	1	KH,DL	1/7/2018	1450	PST	0.035	10	<0.1 cfs	Turned on	4L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles
MO-CAM	1	2	JM,DL	1/8/2018	2047	PST	0.033	10		0			Program disabled	3.5L			2047	2100	
MO-CAM	1	3	KH,DL	1/10/2018	1007	PST	0.031	10	<0.1	-2	4L Distilled	109,137	Program done.	17L + 2L ice		1010			Turned fridge off and propped open with positioning rack. Turned 6712 off.
MO-SIM	1	1	LM	1/7/2018	1430	PST	0.141	2	wet to toe	Turned on	4L Distilled	15,703	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles
MO-SIM	1	2	LM,PD	1/8/2018	1905	PST	0.145	2		3			Program disabled	4L			1910	1910	
MO-SIM	1	3	SG,DL	1/9/2018	1241	PST	0.412	22	0.4	4	4L Distilled	86,982	Program done.	18L		1240			Fridge needs turned off and propped open.
MO-MPK	1	1	LM	1/7/2018	1330	PST	0.069	0.2	<0.1 cfs	Turned on	4L Distilled	20,390	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab & tox bottles



MO-MPK	1	2	LM,PD	1/8/2018	1730	PST	0.145	1.5	4				Sample 5 after 1 pulse, Errors have occurred.	2L	1740	1740	Used bucket to fill samples (safety)
MO-MPK	1	3	LM,DW	1/10/2018	0905	PST	0.071	0.1	2	2L Distilled	177,060		Program done.	90% full	0910		Turned fridge off and propped it open.
MO-THO	1	1	LM	1/7/2018	1535	PST	2.041	0	2	0.5	4L Distilled	27,555	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off			Left grab & tox bottles
MO-THO	1	2	LM,PD	1/8/2018	2008	PST	2.456	7	~2.5	2			Sample 6 after 1 pulse	4L	2010	2010	
MO-THO	1	3	LM,DW	1/10/2018	0945	PST	2.064	1	1.9	5	2L Distilled	187,363	Program done.	Full	0950		High water mark ~8'
MO-VEN	1	1	KH,DL	1/7/2018		PST					2L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off			Left grab & tox bottles
MO-VEN	1	2	JM,DL	1/8/2018	1707	PST	0.259	10		1			Sample 4 after 1 pulse	2L	1720	1707	
MO-VEN	1	3	SG,DL	1/9/2018	1345	PST	0.182	6		0	4L Distilled	95,745	Program done	18L	1345		Fridge needs turned off and propped open.
MO-HUE	1	1	KH,DL	1/7/2018	1400	PST	NA	NA		2	4L Distilled		Time: 40 min/500mlx35, program disabled	Bottle in, lid off			Left grab & tox bottles
MO-HUE	1	2	JM,DL	1/8/2018	1945	PST	NA	NA		3			Sample 10	3.5L	1945	1955	program display? Site needs flushed, pump counts, etc.
MO-HUE	1	3	JM,TS	1/9/2018	1500	PST	NA	NA				NR	NR	NR	1500		
MO-SPA	1	1	LM	1/7/2018	1200	PST	NA	NA	No flow	on	4L Distilled	26,990	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off			Left grab & tox bottles
MO-SPA	1	2	WBC,TS	1/8/2018	1600	PST	NA	NA	NA	2			Sample 5 after 1 pulse	2L	1600	1600	
MO-SPA	1	3	SG,DL	1/9/2018	1430	PST	NA	NA	Flow present	-2	4L Distilled	177,411	Program done.	18L	1430		Fridge needs turned off and propped open.

**Event Notes:**

NR: Not recorded  
All times are recorded here in PST  
Forecast Rain: 2-4" coast and valleys, 1.5-6.5" mountains  
Actual Rainfall: 0.6-2.5 coasts and valleys,  
Storm Control: Kelly Hahs

**Sample Tracking:**

Bacteria samples to VCHCA:  
01/08/2018 @ 17:40 (MEI/OJA/SPA/FIL) by WB Carey  
01/08/2018 @ 21:15 (SIM/MPK/THO) by Lara Meeker  
01/08/2018 @ 21:35 (VEN/OXN/HUE/CAM) by Jim McCrory and Dave Laa  
01/09/2018 @ 13:55 (VR2/SCR/CC) by Jim McCrory

Toxicity samples to Pacific EcoRisk (via FedEx Custom Critical):  
01/09/2018 @ 15:12 (All sites) by Kelly Hahs

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier):  
01/09/2018 @ 16:10 (All grabs plus composites for SCR/VR2/VEN/SPA/SIM/HUE) to Hector Sanchez by Kelly Hah  
01/10/2018 @ 12:45 (Composites for SCR/VR2/VEN/SPA/SIM/HUE) to Einar Honegger by Bill Care

**Meters:**

MEI/OJA/SPA/FIL: Beckman 255 # 2151, YSI 85 # 05E1126  
THO/SIM/MPK: Beckman 255 #2554, YSI 85 #05E1042  
VEN/OXN/HUE/CAM: Beckman 410 #NR, YSI 85 #NR  
CC/SCR/VR2: Beckman 255 #2554, YSI 85 #05E1042

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

Site	Event	Visit	Staff	Date	Arrival Time	PST/PDT	Flowmeter			Fridge T °C	Flush (L)	Pump Count	Program/6712 Display	Comp bottle status/ Estimated Vol (L)	Comp Duration (nearest half hrs)	Comp Time	Grab Time	Toxicity	Notes
							Level (feet)	Flowmeter Flow (cfs)	Outside Staff (ft)										
ME-CC	2	1	KH,DL	2/28/2018	1245	PST	1.145	10	1.14	Added	4L Distilled	498,927	disabled	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off				Left grab bottles. Replaced 4230 external desiccant
ME-CC	2	2	JM(GC),TS	3/2/2018	1200	PST	1.155	11		3			Program disabled			1200*			*Bacteria sample only
ME-CC	2	3	WBC,PD	3/3/2018	0915	PST	1.275	20	1.28	0	2L Distilled	669,299	Sample 16 after 1 pulse	18L		0915	0915**		All but bacteria
ME-VR2	2	1	KH,DL	2/28/2018	1500	PST	1.101		1.2	3	4L Distilled	383,590 Replaced auxiliary	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Calibrated 6712. Left grab bottles + Regional Board sample bottles (ThomasFireRunoff). Replaced desiccant
ME-VR2	2	2	JM(GC),TS	3/2/2018	0835	PST	1.518			0			Sample 2 after 1 pulse	0.5L		0835			
ME-VR2	2	3	KH,DL	3/3/2018	0900	PST	1.994		2.59^	1	2L Distilled	377,790	Program done.	Overflowed			0907		^OSS at pond at wing wall (not currently in equilibrium with main channel where bubbler orifice is. HWM ~3'(?))
ME-SCR	2	1	KH,AS	3/1/2018	1155	PST	5.018			4	4L Distilled	279,262	Time: 20 min/500mlx35, program disabled	Bottle in, lid off					Left grab bottles + Regional Board sample bottles (ThomasFireRunoff). Swing arm already lowered
ME-SCR	2	2	JM(GC),TS	3/2/2018	1000	PST	5.356			2			Sample 19	Full		10:00			Remixed sample, dumped half, recalibrated 6712, reprogrammed for 17 samples.
ME-SCR	2	3	WBC,PD	3/3/2018	0759	PST	10.294			4	2L Distilled	550,681	Program done	16L		0758			Restarted program Raised swing arm
MO-OJA	2	1	WBC	3/1/2018	1015	PST	0.1	5	Trickle	3	4L Distilled	117,829	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles + Regional Board sample bottles (ThomasFireRunoff). Replaced 4230 desiccant.
MO-OJA	2	2	SG,AS	3/2/2018	0108	PST	0.114	5		0			Program disabled	Empty			0120		
MO-OJA	2	3	JM(GC),TS	3/2/2018	0720	PST	0.212	15		2	2L Distilled	208,397	Program done.	NR			0720		
MO-MEI	2	1	WBC	2/28/2018	1458	PST	0.081	1	Dry	Turned on	4L Distilled	106,841	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles + Regional Board sample bottles (ThomasFireRunoff)
MO-MEI	2	2	SG,AS	3/2/2018	0213	PST	0.133	3		0			Sample 14 after 1 pulse	20-30% full			0220		
MO-MEI	2	3	JM(GC),TS	3/2/2018	0755	PST	0.308	18		1	2L Distilled	190,848	Program done.	NR			0755		
MO-FIL	2	1	KH,AS	3/1/2018	1055	PST	0.28			Turned on	4L Distilled	189,694	Time: 20 min/500mlx35, program disabled	Bottle in, lid off					Left grab bottles. Replaced 4230 external desiccant. Cleared debris near intake/bubbler orifice
MO-FIL	2	2	SG,AS	3/2/2018	0343	PST	0.496			-4			Sample 16 in 00:07	30% full			0350		
MO-FIL	2	3	WBC	3/2/2018	1106	PST	0.727			-3	2L Distilled	341,804	Program done.	18.5L			1110		
MO-OXN	2	1	KH,DL	2/28/2018	1400	PST	0.106	0.2	dry +small ponds	Turned on	4L Distilled	159,730	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles. Replaced 4230 external desiccant
MO-OXN	2	2	DL,PD	3/2/2018	0608	PST	0.109	0.2	0.1	0			Program disabled	Empty			0615		
MO-OXN	2	3	KH,DL	3/3/2018	0756	PST	0.296	2.4	0.38	5	2L Distilled	252,740	Sample 25 after 1 pulse	12.5L			0800		Bubbler still needs resecured to wall
MO-CAM	2	1	KH,DL	2/28/2018	1334	PST	0.036	10	<0.1 cfs	Turned on	4L Distilled	114,861	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles and field duplicate bottles. Replaced 4230 external desiccant
MO-CAM	2	2	DL,PD	3/2/2018	0423	PST	0.033	10	0.1	3			Program disabled	4L			0430		
MO-CAM	2	3	WBC,PD	3/3/2018	0839	PST	0.033		<toe ~8cfs	-2	2L Distilled	202,951	Program done.	17L			0839		
MO-SIM	2	1	KH,DL	2/28/2018	1105	PST	0.137	2		Turned on	4L Distilled	96,622	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles and field blanks (+blankwater). Replaced 4230 external desiccant
MO-SIM	2	2	LM,JM(RE)	3/2/2018	0526	PST	0.218	6	0.2	2			Program disabled	Empty			0535		
MO-SIM	2	3	LM,JM(RE)	3/3/2018	0847	PST	0.252	8	0.2	4	4L Distilled	172,492	Program done.	Full			0850		
MO-MPK	2	1	KH,DL	2/28/2018	1000	PST	0.077	0.2	<bubbler	Turned on	4L Distilled	182,562	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles. Replaced 4230 external desiccant. Cleared plant debris from near intake+ bubbler
MO-MPK	2	2	LM,JM(RE)	3/2/2018	0426	PST	0.071	0.1	<0.1 cfs	4			Program disabled	Empty			0435		
MO-MPK	2	3	LM,JM(RE)	3/3/2018	0800	PST	0.646	30.7	0.6	2	4L Distilled	321,498	Program done.	Full			0805		
MO-THO	2	1	KH,DL	2/28/2018	1200	PST	2	0	1.95	2	4L Distilled	192,881	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles
MO-THO	2	2	LM,JM(RE)	3/2/2018	0625	PST	2.045	0	2	4			Program disabled	<1L			0940		No flow. Will come back later for grabs
MO-THO	2	2	LM,JM(RE)	3/2/2018	0926	PST	2.174	1	2.08	2			Program disabled	2L					Field blanks at 0930
MO-THO	2	3	LM,JM(RE)	3/3/2018	0937	PST	2.795	23	2.8	2	2L Distilled	NR	Program done.	Full			0940		HWM ~3'.

MO-VEN	2	1	KH,DL	2/28/2018	1435	PST	0.041	1	Dry	Turned on	4L Distilled	105,584	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off			Left grab bottles + Regional Board sample bottles (ThomasFireRunoff). Replaced 4230 external desiccant
MO-VEN	2	2	DL,PD	3/2/2018	0521	PST	0.195	6	0.2	2			Program disabled	1L	0540		
MO-VEN	2	3	KH,DL	3/3/2018	0824	PST	0.125	3	0.1	5	2L Distilled	202,774	Program done. Errors occurred [sample 23, 28 (08:48, 09:38) No more liquid detected].	17.5L	0830		Left grab bottles + FWS pyrethroids study grab bottle
MO-HUE	2	1	KH,AS	3/1/2018	1255	PST	NA	NA	NR	2	4L Distilled	169,199	Time: 20 min/500mlx35, program disabled	Bottle in, lid off			
MO-HUE	2	2	DL,PD	3/2/2018	0700	PST	NA	NA	NR	2			Sample 2 in 00:12	<1L	0715		6712 purging since 0800. Had to disconnect power cable to power down. Keypad unresponsive
MO-HUE	2	3	WBC	3/2/2018	1600	PST	NA	NA					VOID EVENT DUE TO 6712 MALFUNCTION				
MO-SPA	2	1	KH,AS	3/1/2018	1005	PST	NA	NA	Dry	Turned on	4L Distilled	185,824	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off			Left grab bottles + Regional Board sample bottles (ThomasFireRunoff)
MO-SPA	2	2	SG,AS	3/2/2018	0428	PST	NA	NA	Flow	0	2L Distilled	338,947	Program done	85 % full	0520 0435		

**Event Notes:**

NR: Not recorded  
 All times are recorded here in PST  
 Forecast Rain: Varied, mostly 1-3" mountains. Less for east county.  
 Actual Rainfall: 0.2-4 across the county  
 Storm Control: Kelly Hahs

**Sample Tracking:**

Bacteria samples to VCHCA:  
 03/02/2018 @ 06:25 (MEI/OJA/SPA/FIL) by Steven Greer  
 03/02/2018 @ 10:30 (SIM/MPK/THO+FB) by Lara Meecker  
 03/02/2018 @ 07:50 (VEN/OXN/HUE/CAM+FD) by Dave Laak  
 03/02/2018 @ 12:42 (VR2/SCR/CC) by Jim McCrory

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier):  
 03/02/2018 @ 13:55 (All grabs except CC plus composites for MEI/OJA/SPA/FIL) to Hector Sanchez by Bill Carey  
 03/03/2018 @ 12:00 (Grabs for CC plus composites for CC/SCR/VR2/CAM/VEN/OXN/SPA/SIM/MPK/THO) to Jaime Posadas by Bill Carey

**Meters:**

MEI/OJA/SPA/FIL: NR  
 THO/SIM/MPK: Beckman 410 #130240875, YSI 85 #03D0375  
 VEN/OXN/HUE/CAM: Beckman 255 #2151, YSI 85 #05E1042  
 SCR/VR2: 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

Site	Event	Visit	Staff	Date	Arrival Time	PST/PDT	Flowmeter		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 Time	Grab Time	Toxicity Time	Notes	
							Level (feet)	Flow (cfs)												
ME-CC	3	1	KH	3/9/2018	1402	PST	0.998	1	~1	Added ice	4L Distilled	718,325	Flow: 20 pulse/500mlx35, program disabled	Bottle in, lid off					Calibrated 6712. Left grab bottles + field duplicates	
ME-CC	3	2	LM,AS	3/10/2018	2040	PST	1.282	21					Sample 1 while onsite	Empty			2045		Added a little ice, didn't need much.	
ME-CC	3	3	KH,LM	3/11/2018	1024	PDT	1.855	176	~1.8		2L Distilled	1,089,954	Program done	Full			1025		Collected field dups Change tubing CC. Emptied ice from fridge, propped open to drain, fridge light staying on	
ME-VR2	3	1	LM,DL	3/9/2018	1238	PST	1.123			-1, turned slightly cooler	4L Distilled	411,119	Flow: 128 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles + Regional Board sample bottles (ThomasFireRunoff)	
ME-VR2	3	2	DL,JM	3/10/2018	2037	PST	1.185						Reprogrammed to 40 pulses. Sample 1 while onsite	Empty			2050			
ME-VR2	3	3	DL,PD	3/11/2018	0956	PDT	1.941			Took photos of HWM	3	2L Distilled	743,316	Program done. Warning replace pump tubing	Full, overflowed a little			1000		Change both pump tubes before next event.
ME-SCR	3	1	LM,DL	3/9/2018	0940	PST	6.198			5, turned slightly cooler	4L Distilled	NR	Time: 20 min/500mlx35, program disabled	Bottle in, lid off					Lowered swing arm, calibrated sampler, left grab bottles (+bacti field blank) + Regional Board sample bottles (ThomasFireRunoff)	
ME-SCR	3	2	SG,PD	3/10/2018	1800	PST	6.081			0			Sample 6 in 14:45	NR			1805		Collected bacti field blank	
ME-SCR	3	3	KH,LM	3/11/2018	1118	PDT	6.282			4	2L Distilled	785,796	Program done	12L			1125		Raised swing arm	
MO-OJA	3	1	LM,DL	3/9/2018	1130	PST	0.1	5	<OSS, <0.1 cfs	2	4L Distilled	213,902	Flow: 7 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles + Regional Board sample bottles (ThomasFireRunoff)	
MO-OJA	3	2	SG,PD	3/10/2018	1400	PST	0.1	5	~3 cfs	0								1410		
MO-OJA	3	3	DL,PD	3/11/2018	0900	PDT	0.101	5	<OSS, ~0.5 CFS	4	2L Distilled	304,639	Program done	Full				0905		
MO-MEI	3	1	LM,DL	3/9/2018	1210	PST	0.082	1		Turned on	4L Distilled	195,803	Flow: 7 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles + Regional Board sample bottles (ThomasFireRunoff)	
MO-MEI	3	2	SG,PD	3/10/2018	1440	PST	0.081	1	Dry At toe	-2			Program disabled					1450		
MO-MEI	3	3	DL,PD	3/11/2018	0923	PDT	0.08	1	<OSS, ~0.5 CFS	1	2L Distilled	279,951	Program done	Full				0925		
MO-FIL	3	1	KH	3/9/2018	1055	PST	0.202				4L Distilled	347,655	Time: 20 min/500mlx35, program disabled	Bottle in, lid off					Left grab bottles	
MO-FIL	3	2	SG,PD	3/10/2018	1550	PST	0.746			-2			Sample 4	15-20% full			1600			
MO-FIL	3	3	KH,LM	3/11/2018	0848	PDT	0.302			3	2L Distilled	499,007	Program done	18L			0850			
MO-OXN	3	1	DL	3/10/2018	0805	PST	0.108	0.2		Turned on	4L Distilled	257,527	Flow: 6 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles.	
MO-OXN	3	2	DL,JM	3/10/2018	1752	PST	0.673	11.3	0.8	-2	2L Distilled	389,464	Finished while on site. Program done	16L			1815	1800	Light burnt out in house. Bubbler still needs resecured to channel, therefore 4230 stage reads low	
MO-CAM	3	1	KH	3/9/2018	1513	PST	0.035	10	<0.01 cfs	Turned on	4L Distilled	208,607	Flow: 15 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles	
MO-CAM	3	2	DL,JM	3/10/2018	1701	PST	0.342	51	0.3	5	2L Distilled	296,046	Finished while on site. Program done	17L			1725	1710		
MO-SIM	3	1	KH	3/9/2018	135	PST	0.139	2	Wet at bubbler	Turned on	4L Distilled	177,719	Flow: 6 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles	
MO-SIM	3	2	LM,AS	3/10/2018	1820	PST	0.297	11	0.25	2	2L Distilled	251,844	Program done	Full			1850	1835		
MO-MPK	3	1	KH	3/9/2018	1135	PST	0.075	NR	<0.01 cfs	Turned on	4L Distilled	326,460	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles. 2105 direct connect to set pacing	
MO-MPK	3	2	LM,AS	3/10/2018	1715	PST	0.213	3.7	0.2	4	2L Distilled	464,137	Program done	Full			1725	1730		
MO-THO	3	1	KH	3/9/2018	1320	PST	2.013	NR	~2.1	2	4L Distilled	359,009	Flow: 20 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles	
MO-THO	3	2	LM,AS	3/10/2018	1930	PST	2.69	16	2.6	3			Sample 23 after 10 pulses	1/2 full			1940			
MO-THO	3	3	KH,LM	3/11/2018	0945	PDT	2.21	NR	2.18	4	2L Distilled	520,161	Program done	18L			0945		High water mark ~3.5'	
MO-VEN	3	1	DL	3/10/2018	0723	PST	0.04	1	<OSS (thalweg only)	Turned on	4L Distilled	207,493	Flow: 10 pulse/500mlx35, program disabled	Bottle in, lid off					Left grab bottles + Regional Board sample bottles (ThomasFireRunoff). Cleared debris from intake	

MO-VEN	3	2	DL,JM	3/10/2018	1837	PST	0.185	6	0.19	4	2L Distilled	304,294	Program done. Errors have occurred.	18L	1907	1845	
MO-HUE	3	1	DL	3/10/2018	0852	PST	NA	NA		4	4L Distilled	6,100	Time: 20 min/500mlx35, program disabled	Bottle in, lid off			Left grab bottles + UCSB bottle (pyrethroids study)
MO-HUE	3	2	DL,JM	3/10/2018	1937	PST	NA	NA	4.4	3			Sample 13 in 00:17	1/3 full		1945	
MO-HUE	3	3	DL,PD	3/11/2018	1051	PDT	NA	NA		2	2L Distilled	158,628	Program done	Full		1055	
MO-SPA	3	1	KH	3/9/2018	1015	PST	NA	NA	<0.001 cfs	Turned on	4L Distilled	343,956	Flow: 5 pulse/500mlx35, program disabled	Bottle in, lid off			Left grab bottles + Regional Board sample bottles (ThomasFireRunoff)
MO-SPA	3	2	SG,PD	3/10/2018	1629	PST	NA	NA	Flowing	0	2L Distilled	497,277	Sample 26 after 2 pulses, program done	NR, 17L		1725	1635

**Event Notes:**

Times in PDT not PST

NR: Not recorded

3/11/2018 started PDT. Times prior to 3/11 are PST. Times on 3/11 are PDT

Forecast Rain: 0.25-1" across County, with wettest being west county (up to SLO) southwest facing slopes receiving up to 1-3

Actual Rainfall: 0.6-1.2" across county

Storm Control: Kelly Hahs

**Sample Tracking:**

Bacteria samples to VCHCA (to Lauren Stead):

03/10/2018 @ 18:51 PST (MEI/OJA/SPA/FIL/SCR+FB) by S Greer

03/10/2018 @ 21:42 (SIM/MPK/THO/CC+FD) by Lara Meeker

03/10/2018 @ 21:45 (VEN/OXN/HUE/CAM/VR2) by D Laak

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier):

03/11/2018 @ 14:00 (All grabs and composites for all sites) to Hugo Chavez (Essential Courier) by Kelly Hah:

**Meters:**

MEI/OJA/SPA/FIL/SCR:

THO/SIM/MPK/CC: Beckman 255 #2151, YSI 85 #05E1042

VEN/OXN/HUE/CAM/VR2: Beckman 255 #2554, 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

Site	Event	Visit	Staff	Date	Arrival Time	PST/ PDT	Flowmeter	Outside Staff (ft)	Fridge T °C	Flush (L)	Pump Count	Program/6712 Display	Comp	Comp Grab Time	Toxicity Time	Notes
							Level (feet)						Flowmeter Flow (cfs)			
MO-HUE	4	1	KH	3/20/2018	0920	PDT	NA	NA	2	4L Distilled	164,574	Time: 41 min/500mlx35, program disabled	Bottle in, lid off			Grab bottles + field duplicates + UCSB bottle (pyrethroids study) prepped for site Water very dark. Pumphouse pumps running.
MO-HUE	4	2	DL,LM	3/21/2018	117	PDT	NA	NA	4					1125		
MO-HUE	4	3	WBC,KH	3/22/2018	0818	PDT	NA	NA	4	2L Distilled	318,122	Program done	17.5L	0820		

**Event Notes:**

Times in PDT not PST

NR: Not recorded

Forecast Rain: 2-6" coast and valleys over several days

Actual Rainfall: 2.5-6" across county

Storm Control: Kelly Hahs

**Sample Tracking:**

Bacteria samples to VCHCA (to Nadia West):

03/21/2018 @ 12:20 PDT (HUE) by Lara Meeker

Chemistry samples to Weck Laboratories, Inc. (via Weck courier):

03/22/2018 @ 09:05 PDT (HUE grabs and composite) to Hector Sanchez by Kelly Hahs

**Meters:**

HUE: Beckman 410 #110341139, YSI 85 #05E112f

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

Site	Event	Visit	Staff	Date	Arrival Time	PST/PDT	Flowmeter	Flowmeter Flow (cfs)	Outside Staff (ft)	Fridge T °C	Flush (L)	Pump Count	Program/6712 Display	Comp bottle status/ Estimated Vol (L)	Comp Duration	Comp Time	Grab Time	Toxicity	Notes
							Level (feet)								(nearest half hrs)				
ME-SCR	5	1	KH,WBC	6/5/2018	1040	PDT	6.525			4	4L Distilled	792,669	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Lowered swing arm and secured to rail to keep above sediment in channel. Fridge stuck on so turned off. Raised swing arm.
ME-SCR	5	2	WBC,AS	6/6/2018	1037	PDT	6.552			-10	2L Distilled	989,182	Program done	10L		1040	1045		Cleared sediment in channel from near intake and bubbler to redirect flow past them. 4230 dessicant pink. Turned fridge and 6712 off.
MO-FIL	5	1	KH,WBC	6/5/2018	0800	PDT	0.391--> 0.354			Turned on	4L Distilled	504,928	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					
MO-FIL	5	2	WBC,AS	6/6/2018	0742	PDT	0.316			4	4L Distilled		Program done	Full		0745	0745		
MO-OXN	5	1	KH,WBC	6/5/2018	0930	PDT	0.109	0.2	Channel Dry	Turned on	4L Distilled	394,924	Time: 30 min/500mlx35, delay start 6 hrs. Program"Start 15:50 TU 5-JUN".	Bottle in, lid off					Channel completely dry. Delayed start 6 hours in case flow starts. Used silicone dam for sampling. Program errors: No liquid detected samples 1-35.
MO-OXN	5	2	WBC,AS	6/6/2018	0957	PDT	0.11	0.3	Channel Dry	4		634,978	Program done. Errors have occurred.	Empty					
MO-VEN	5	1	KH,WBC	6/5/2018	0855	PDT	0.041		<<oss (trickle)	Turned on	4L Distilled	310,288	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Used silicone dam and calibration line for sampling.
MO-VEN	5	2	WBC,AS	6/6/2018	0905	PDT	0.098	2	<<oss (trickle)	2	4L Distilled	459,333	Program done. Errors have occurred.	6L		0915	0920		Turned fridge and 6712 off. Removed dam.
MO-SPA	5	1	KH,WBC	6/5/2018	0730	PDT	DRY		DRY	Turned on	4L Distilled	503,265	Programmed to sample every 1 pulse.	Bottle in, lid off					Used silicone dam in case of overnight flow. No flow so no samples taken. Turned off fridge and 6712.
MO-SPA	5	2	WBC,AS	6/6/2018	0720	PDT	DRY		DRY	NR	4L Distilled		Sample 1 after 1 pulse.	DRY					
ME-CC	5	1	KH,WBC	5/29/2018	1012	PDT	NR			Broken. Added ice.	4L Distilled	Replaced	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Calibrated sample volume. Removed ice from fridge, propped lid open. Turned 6712 off.
ME-CC	5	2	KH,LM	5/30/2018	1043	PDT	1.055			4	4L Distilled	409,178	Program done	Overflowed		1045	1055		
MO-CAM	5	1	KH,WBC	5/29/2018	1105	PDT	0.033	10	<<oss (trickle)	Turned on	4L Distilled	303,198	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Used silicone dam and calibration line for sampling.
MO-CAM	5	2	KH,LM	5/30/2018	1130	PDT	0.035	10	<<oss (trickle)	5	4L Distilled	393,443	Program done.	18L		1135	1145		Turned fridge and 6712 off. Removed dam.
MO-SIM	5	1	KH,WBC	5/29/2018	0835	PDT	0.153	2	~0.15	Turned on	4L Distilled	258,094	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Used calibration line for sampling.
MO-SIM	5	2	KH,LM	5/30/2018	0830	PDT	0.167	3		0	4L Distilled	335,531	Program done.	17L		0900	0840		
MO-MPK	5	1	KH,WBC	5/29/2018	0755	PDT	0.075	0.2	<<oss (trickle)	Turned on	4L Distilled	469,323	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Used silicone dam and calibration line for sampling. Unplugged 6712 from 2015ci.
MO-MPK	5	2	KH,LM	5/30/2018	0750	PDT	0.072	0.2	No flow	2	4L Distilled	681,919	Program done. Errors have occurred: No liquid detected Sample 7-35 (11:10-06:18).	3L		0800	Dry		Channel was scraped. Equipment was moved. Flow stopped sometime overnight so no grabs. Limited volume sample.
MO-THO	5	1	KH,WBC	5/29/2018	0917	PDT	2.032	0		2	4L Distilled	526,140	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					One YSI reading erratically so switched to other meter for measurements. Turned 6712 off.
MO-THO	5	2	KH,LM	5/30/2018	0945	PDT	2.02	0		4	4L Distilled	691,428	Program done.	18L		0950	0950		
MO-HUE	5	1	KH,WBC	5/29/2018	1148	PDT	NA			3	4L Distilled		Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					
MO-HUE	5	2	KH,LM	5/30/2018	1245	PDT	NA			4	NA	NA	Stuck in purge cycle sample 23. Smell burning rubber. Unplugged power to 6712 (keypad not working).	9L		1245	1255		Dead bird at steps near grab sample area. Can't flush lines or check programming.
ME-VR2	5	1	KH,WBC	6/20/2018	0920	PDT	1.073			0	4L Distilled		Replaced upper and lower tubes	Bottle in, lid off. Sample 1 vol good.					Replaced dessicant external 4230 and internal 2105ci. Calibrate amount good.

ME-VR2	5	2	KH,WBC	6/21/2018	1110	PDT	1.051			4	4L Distilled	354,696	Program done.	18L but evidence of overflow.	1110	1115	Crack in comp bottle base resulting in leakage. Inverted, transported to shop and transferred to undamaged comp bottle for shipment to laboratory.
MO-OJA	5	1	KH,WBC	6/20/2018	0820	PDT	0.101	5	<<oss (trickle)	2	4L Distilled	310,256	Time: 41 min/500mlx35	Bottle in, lid off. Sample 1 vol good.			Cleared debris and leaf litter from area near intake. Used silicone dam and calibration line for sampling.
MO-OJA	5	2	KH,WBC	6/21/2018	0920	PDT	0.099	5	<<oss (trickle)	4	4L Distilled	404,757	Program done.	18L	0925	0925	Turned fridge and 6712 off. Removed dam.
MO-MEI	5	1	KH,WBC	6/20/2018		PDT	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	Has been dry for weeks. No evidence of recent flow
MO-MEI	5	2	KH,WBC	6/21/2018		PDT	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	Has been dry for weeks. No evidence of recent flow

**Event Notes:**

NA: Not applicable  
NR: Not recorded

**Sample Tracking:**

Bacteria samples to VCHCA:  
05/30/18 @ 13:44 PDT (CC/CAM/SIM/THO/HUE) by Kelly Hahs  
06/06/18 @ 11:40 PDT (SCR/FIL/VEN) by WB Carey  
06/21/18 @ 12:00 PDT (VR2/OJA) by Kelly Hahs

Toxicity samples to ABC:  
NA

Grab and composite samples to Weck Laboratories, Inc. by Weck-provided courier  
05/30/18 @ 14:55 PDT (CC/CAM/MPK(CompOnly)/SIM/THO/HUE) by Kelly Hahs to David Levy (Reliable Messenger Service)  
06/06/18 @ 15:30 PDT (SCR/FIL/VEN) by WB Carey to David Levy (Reliable Messenger Service)  
06/21/18 @ 13:30 PDT (VR2/OJA) by Kelly Hahs to Allan Goldberg (Weck Labs)

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**



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

7411065

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

Sampling Date: 8/10/17 + 8/11/17 Project Number: 2017/18-PRE

Sampling Team: K. HATS, WB CAREY

SAMPLE ID	DATE/TIME COLLECTED	EPA 525.2	EPA 625-CTR	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	8/10/17 10:15	4	2	1				7	See note #1
EB composite	8/11/17 10:30	X	X	X				1	To be split in lab. See note #1
20 L carboy and lid						X		1	Please place tape or plastic bag over top
Blue cube cooler					X			1	
Black bag					X			1	
Waste Dilute HNO3									

\* Metals by EPA 200.8, Total:  
 Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb,  
 Se, Ti, Zn

Relinquished Printed Name Kelly Hats  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 8/11/17 / 1034

Received Printed Name Carlos Navarro  
 Signature [Signature]  
 Affiliation Weck Labs Date/Time 8/11/17 / 1034

Other Notes: 1. Please use for MS/MSD analysis when sample volume permits.  
2. Please clean with detergent, nitric acid, and deionized water per SOP.

[Signature] 8/11/17 307 1.30



7J03118

**Chain of Custody Record**  
**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: 10/2/17 Project Number: 2017/18-PRE

Sampling Team: K.HAHS

SAMPLE ID	DATE/TIME COLLECTED			EPA 200.8 (Total Nickel and Total Copper)					Bottle Quantity	NOTES
Bottle 1	10/2/17 13:25			X					1	EB lines
Bottle 2	↓ 13:27			X					1	EB composite

Relinquished Printed Name KELLY HAHS

Signature *Kelly HaHS*

Affiliation VCWPD Date/Time 10/3/17 / 1400

Received Printed Name CARLOS NAVARRO

Signature *Carlos Navarro*

Affiliation Weck Labs Date/Time 10/3/17 / 1400

Other Notes: 1. Please use for MS/MSD analysis when sample volume permits.

*Carlos Navarro* 10/3/17 508

*Angela* 10/3/17 17:08



**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~~ 1 of 1)

Sampling Date: 1-8-2018 Project Number: 2017/18-1 (Wet)

Sampling Team: Lara Mecker & Peter Doran

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	MO-SPA		X	X		X	X			1	
	MO-FIL		X	X		X	X			1	
	MO-SIM	19:10 1/8/18	X	X		X	X			1	
	MO-MPK	1/8/18 17:40	X	X		X	X			1	
	MO-THO	1/8/18 20:10	X	X		X	X			1	
	MO-oxn		X	X		X	X			1	
	MO-HUE		X	X		X	X			1	

Relinquished Printed Name Lara Mecker  
 Signature WPD [Signature]  
 Affiliation \_\_\_\_\_ Date/Time 1/8/18 21:15

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation PHLAW Date/Time 1/8/18 21:15

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
1:10 1:100, and 1:1000 dilutions for Enterococcus and E. coli



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

Sampling Date: 1/8/18 Project Number: 2017/18-1 (Wet)

Sampling Team: J. McCray, D. Laak

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)		Fecal Coliform (25 Tube Method - MPNX)		<del>Enterococcus (Tray Method - WQ IDEXX)</del>		E. coli (Tray Method - WQ IDEXX)		Total Coliform (Tray Method - WQ IDEXX)		Number of Bottles	NOTES
			X	X	X	X	X	X	X	X				
<del>ME-CC</del>			X	X	X	X	<del>X</del>	<del>X</del>	X	X			1	
<del>ME-SCR</del>			X	X	X	X	<del>X</del>	<del>X</del>	X	X			1	
<del>ME-VR2</del>			X	X	X	X	<del>X</del>	<del>X</del>	X	X			1	
MO-CAM		1/8/18 2047	X	X					X	X			1	
<del>MO-OJA</del>			X	X					X	X			1	
<del>MO-MEI</del>			X	X					X	X			1	
MO-VEN		1/8/18 1720	X	X					X	X			1	
<del>EB-1</del>			X	X					X	X			1	

Relinquished Printed Name David Laak  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/8/18 21:35

Received Printed Name Nadira Um Bura  
 Signature [Signature]  
 Affiliation PH Labs Date/Time 1/8/18 21:35

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
1:10 1:100, and 1:1000 dilutions for ~~Enterococcus~~ and 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)**

Sampling Date: 1/8/18 Project Number: 2017/18-1 (Wet)

Sampling Team: see side 1

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
<del>MO-SPA</del>			X	X	X	X				1	
<del>MO-FIL</del>			X	X	X	X				1	
<del>MO-SIM</del>			X	X	X	X				1	
<del>MO-MPK</del>			X	X	X	X				1	
<del>MO-THO</del>			X	X	X	X				1	
MO-OXN		1/8/18 1840	X	X	X	X				1	
MO-HUE		1/8/18 1945	X	X	X	X				1	

Relinquished Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

Received Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

*see side 1*

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
1:10 1:100, and 1:1000 dilutions for ~~Enterococcus~~ and E. coli



**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: 1/9/18 Project Number: 2017/18-1 (Wet)

Sampling Team: J. McCrory, J. McCrory, T. Schmidt

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	ME-CC	1-9-18/9:40	X	X	X	X	1	
	ME-SCR	1-9-18/12:45	X	X	X	X	1	
	ME-VR2	1-9-18/11:10	X	X	X	X	1	
	<del>FB 1</del>		X	X	X	X	1	

Relinquished Printed Name Jim McCrory  
 Signature [Signature]  
 Affiliation (GCE) VCWPD Date/Time 1-9-18/11:53

Received Printed Name Nadia Van Buren  
 Signature [Signature]  
 Affiliation PH LAB Date/Time 01/09/18 1355

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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 1 of 2)**

Sampling Date: 1-8-18 Project Number: 2017/18-1 (Wet)

Sampling Team: WBC & TS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX )	Fecal Coliform (25 Tube Method - MPNX )	<del>Bacterococcus (Tray Method - WQ IDEXX )</del>	E. coli (Tray Method - WQ IDEXX )	Total Coliform (Tray Method - WQ IDEXX )			Number of Bottles	NOTES
<del>ME-CC</del>	<del>ME-CC</del>		X	X	<del>X</del>	X	X			1	
<del>ME-SCR</del>	<del>ME-SCR</del>		X	X	<del>X</del>	X	X			1	
<del>ME-VR2</del>	<del>ME-VR2</del>		X	X	<del>X</del>	X	X			1	
<del>MO-CAM</del>	<del>MO-CAM</del>		X	X	<del>X</del>	X	X			1	
MO-OJA		1/8/18 13:15	X	X		X	X			1	
MO-MEI		1/8/18 14:15	X	X		X	X			1	
<del>MO-VEN</del>	<del>MO-VEN</del>		X	X	<del>X</del>	X	X			1	
<del>FB-1</del>	<del>FB-1</del>		X	X	<del>X</del>	X	X			1	

Relinquished Printed Name W-B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPP Date/Time 1-8-18/1740

Received Printed Name Nadia Van Buren  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 1/8/18 @ 1740

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
1:10 1:100, and 1:1000 dilutions for ~~Enterococcus~~ and 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)**

Sampling Date: 1-8-18 Project Number: 2017/18-1 (Wet)

Sampling Team: WBC & TS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	MO-SPA	1/8/18 16:00	X	X		X	X			1	
	MO-FIL	1/8/18 16:45	X	X		X	X			1	
	<del>MO-SIM</del>		<del>X</del>	<del>X</del>		<del>X</del>	<del>X</del>			<del>1</del>	
	<del>MO-MPK</del>		<del>X</del>	<del>X</del>		<del>X</del>	<del>X</del>			<del>1</del>	
	<del>MO-THO</del>		<del>X</del>	<del>X</del>		<del>X</del>	<del>X</del>			<del>1</del>	
	<del>MO-OXN</del>		<del>X</del>	<del>X</del>		<del>X</del>	<del>X</del>			<del>1</del>	
	<del>MO-HUE</del>		<del>X</del>	<del>X</del>		<del>X</del>	<del>X</del>			<del>1</del>	

Relinquished Printed Name W-B. CAREY  
 Signature W-B. Carey  
 Affiliation VCWPD Date/Time 1-8-18 / 1740

Received Printed Name Nadia Van Buren  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 01/08/18 1740

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
1:10 1:100, and 1:1000 dilutions for ~~Enterococcus~~ and E. coli



Filters



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 1 of 2)**

Sampling Date: 1-8-18

Project Number: 2017/18-1 (Wet)

Sampling Team: WBC & TS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter							Number of Bottles	NOTES
<del>MB-CC</del>	<del>MB-CC</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>1</del>	<del>2 DNA Filters</del>
<del>ME-SCR</del>	<del>ME-SCR</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>1</del>	<del>2 DNA Filters</del>
<del>ME-VR2</del>	<del>ME-VR2</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>1</del>	<del>2 DNA Filters</del>
<del>MO-CAM</del>	<del>MO-CAM</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>1</del>	<del>2 DNA Filters</del>
MO-OJA		1/8/18 13:15	X							1	2 DNA Filters
MO-MEI		1/8/18 14:15	X							1	2 DNA Filters
<del>MO-VEN</del>	<del>MO-VEN</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>1</del>	<del>2 DNA Filters</del>
<del>FB-1</del>	<del>FB-1</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>1</del>	<del>2 DNA Filters</del>
<del>FD-1</del>	<del>FD-1</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>1</del>	<del>2 DNA Filters</del>

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 1-8-18 / 1740

Received Printed Name Nadia Van Buren  
 Signature [Signature]  
 Affiliation PCHCA Date/Time 010818 @ 1740

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time





**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)

**DNA FILTERS**

Sampling Date: 1/9/18 Project Number: ~~2016/17-1 (wet)~~ 2017/18-1 (wet)  
 Sampling Team: J. McCrory, Tevin Schmidt

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
	ME-CC	1-9-18 9:40	X								1	2 DNA Filters
	ME-SCR	1-9-18 11:10 12:45	X								1	2 DNA Filters
	ME-VR2	1-9-18 11:10 12:45	X								1	2 DNA Filters

Relinquished Printed Name JIM MCCORRY  
 Signature [Signature]  
 Affiliation (GCE) VCHWD Date/Time 1-9-18 / 11:54

Received Printed Name Nadia Van Buren  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 01/09/18 1355

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 1 of 2)**

Sampling Date: 1/8/18 Project Number: 2017/18-1 (Wet)

Sampling Team: J. McCrory, D. Laak

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
<del>ME-CC</del>	<del>ME-CC</del>		X								1	2 DNA Filters
<del>ME-SCR</del>	<del>ME-SCR</del>		X								1	2 DNA Filters
<del>ME-VR2</del>	<del>ME-VR2</del>		X								1	2 DNA Filters
MO-CAM		1/8/18 2047	X								1	2 DNA Filters
<del>MO-OJA</del>	<del>MO-OJA</del>		X								1	2 DNA Filters
<del>MO-MEI</del>	<del>MO-MEI</del>		X								1	2 DNA Filters
MO-VEN		1/8/18 1720	X								1	2 DNA Filters
<del>FB-1</del>	<del>FB-1</del>		X								1	2 DNA Filters
<del>FD-1</del>	<del>FD-1</del>		X								1	2 DNA Filters

Relinquished Printed Name David Laak  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/8/18 2135

Received Printed Name Madia Un Ben  
 Signature [Signature]  
 Affiliation PHLab Date/Time 01/08/18 2135

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 2 of 2)**

Sampling Date: 1/8/18 Project Number: 2017/18-1 (Wet)

Sampling Team: see side 1

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
	<del>MO-SPA</del>		X								1	<del>2 DNA Filters</del>
	<del>MO-FIL</del>		X								1	<del>2 DNA Filters</del>
	<del>MO-SIM</del>		X								1	<del>2 DNA Filters</del>
	<del>MO-MPK</del>		X								1	<del>2 DNA Filters</del>
	<del>MO-THO</del>		X								1	<del>2 DNA Filters</del>
	MO-OXN	1/8/18 1840	X								1	2 DNA Filters
	MO-HUE	1/8/18 1945	X								1	2 DNA Filters

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

8A09163



**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: 1/8/18 + 1/9/18 Project Number: 2017/18-1 (Wet) Grabs  
 Sampling Team: Jim McCoy, Devin Schmidt, Wb. CAREY, David Laak, Lara Meeter, Peter Dacan

SAMPLE 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	NOTES
ME-CC	1/9/18 0940	2	1	2	3	1							9	Jim M / Devin S
ME-SCR	↓ 1245	2	1	2	3	1							9	↓
ME-VR2	↓ 1110	2	1	2	3	1							9	↓
MO-CAM	1/8/18 <sup>20:47</sup> 21:00	3	1	2	3	1							10	Jim M / David Laak
MO-OJA	1/8/18 13:15	2	1	2	3	1							9	Devin S / William B.C.
MO-MEI	1/8/18 14:15	2	1	2	3	1							9	Devin S / William B.C.
MO-VEN	1/8/18 <sup>17:20</sup> 17:30	2	1	2	3	1							9	Jim M / Dave L
MO-OXN	1/8/18 18:35	2	1	2	3	1							9	Jim M / David Laak
ED 1	* 1840	2	1	2	3	1							9	

Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

\* SAMPLE TIME CORRECTION per Kelly Habs 1/13/18

Relinquished Printed Name Kelly Habs  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/9/18 / 16:10

Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WECKLABS Date/Time 1-9-18 16:10

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

Hector 1-9-18 18:47 [Signature] 1/9/18 5:12  
 Ventura Countywide Stormwater Quality Management Program 2017/18 Annual Report Page DE - 16 Attachment D Appendix E





**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 2 of 2)**

Sampling Date: 1/8/18 + 1/9/18 Project Number: 2017/18-1 (Wet) Grabs

Sampling Team: see side 1

SAMPLE ID	DATE/TIME COLLECTED	Analytes						Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits			
MO-SPA	1/8/18 16:00	2	1	2	3	1	9	Tevin S. / William B.C.	
MO-FIL	1/8/18 16:45	2	1	2	3	1	9	Tevin S. / William B.C.	
MO-SIM	1/8/18 19:10	2	1	2	3	1	9	Lara M / Peter D	
MO-HUE	<del>1/8/18 17:40/m</del> 1/8/18 19:50/m	2	1	2	3	1	9	<del>Lara M / Peter D</del> Dimm / Dave L	
MO-THO	1/8/18 20:10	2	1	2	3	1	9	Lara M / Peter D	
MO-MPK	1/8/18 17:40	2	1	2	3	1	9	Lara M / Peter D	

Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

Relinquished Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

Received Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

8A09143



**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: 1/9/18 Project Number: 2017/18-1 (Wet) Composites

Sampling Team: Jim McCrory, Terin Schmidt, Scott Greer, Dave Leak

SAMPLE ID	DATE/TIME COLLECTED	Subsample 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)	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	NOTES
<del>ME-CC</del>			X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-SCR	1/9/18 1245		X	X	X	X	X	X	X	X	X	X	X	X	1	JM, TS
ME-VR2	1/9/18 1110	X	X	X	X	X	X	X	X	X	X	X	X	X	1	JM, TS
<del>MO-CAM</del>			X	X	X	X	X	X	X	X	X	X	X	X	1	
<del>MO-OJA</del>			X	X	X	X	X	X	X	X	X	X	X	X	1	
<del>MO-MEI</del>			X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-VEN	1/9/18 13:45		X	X	X	X	X	X	X	X	X	X	X	X	1	SG, DL

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

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/9/18/16:10

Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WRIGHT LABS Date/Time 1-9-18 16:10

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).  
 3) Imazapyr (EPA 538) and NID as CTAS (SM 5540D) are to be processed under a separate COC



**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)**

Sampling Date: \_\_\_\_\_

Project Number: 2017/18-1 (Wet) Composites

Sampling Team: \_\_\_\_\_

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	NOTES	
MO-SPA	1/9/18 14:30					X	X	X	X	X	X	X	X	X	X	X	1	SG, DL
<del>MO-FIL</del>						<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
MO-SIM	1/9/18 12:40					X	X	X	X	X	X	X	X	X	X	X	1	SG, DL
<del>MO-MPK</del>						<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-THO</del>						<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-OXN</del>						<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-HUE</del>						<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
MO-HUE	1/9/18* 15:00					X	X	X	X	X	X	X	X	X	X	X	1	JM, TS

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

Relinquished *\* SAMPLE TIME PROVIDED BY KELLY HALLS*

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

Received *see side 1*

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

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).



8A10050

**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 1)**

Sampling Date: 1/10/18 Project Number: 2017/18-1 (Wet) Composites  
 Sampling Team: K. Hols, Dax Laak, L. MECKER, D. WILKINSON, Bill Carey

SAMPLE ID	DATE/TIME COLLECTED	NO3-N, Total Chlorine Residual	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	NOTES
ME-CC	1/10/18 10:35	X	X	X	X	X	X	X	X	X	X	X	X	1	LM, DW
MO-MPK	9:10		X	X	X	X	X	X	X	X	X	X	X	1	LM, DW
MO-THO	9:50		X	X	X	X	X	X	X	X	X	X	X	1	LM, DW
MO-OJA	10:30		X	X	X	X	X	X	X	X	X	X	X	1	WBC
MO-MEI	9:50		X	X	X	X	X	X	X	X	X	X	X	1	WBC
MO-CAM	1010		X	X	X	X	X	X	X	X	X	X	X	1	KH, DL
MO-FIL	0910		X	X	X	X	X	X	X	X	X	X	X	1	KH, DL
MO-oxn	✓ 1035		X	X	X	X	X	X	X	X	X	X	X	1	KH, DL

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, 8270SIM-PAH, & 8270SIM-PHENOLS

Lab to select samples for MS/MSD where extra volume permits (all test

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation UCWPO Date/Time 1-10-18 1245

Received Printed Name EIVAR HANSEN  
 Signature [Signature]  
 Affiliation weck Date/Time 1-10-18 12:45

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).

Jerry [Signature] 1/10/18 1440



8A10050

**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Equipment - Weck Laboratories**

Sampling Date: 1/10/18 Project Number: 2017/18-1 (Wet) Cleaning  
 Sampling Team: WBC

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid	2			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler	8			
Black bags	8			
20 L narrow neck carboy, 2 lids, attachment assembly	6			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 1-10-18 1245

Received Printed Name EINAR HONEGGAR  
 Signature [Signature]  
 Affiliation weck Date/Time 1/10/2018 12:45

Other Notes: \* Please clean with detergent, nitric, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organics contamination). Record the bottles cleaned with methanol.

Jamahn 1/10/18 1440



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

# CHAIN-OF-CUSTODY RECORD

<b>Results To:</b> Ventura County Watershed Protection District		<b>Invoice To:</b> Ventura County Public Works Agency		<b>REQUESTED ANALYSIS</b>																
<b>Address:</b> 800 South Victoria Ave., L#1610 Ventura, CA 93009-1610		<b>Address:</b> Engineering Services Division 800 South Victoria Ave, L#1670 Ventura, CA 93009-1670		Topsmelt (Atherinops affinis) Survival and Growth, EPA	Purple Urchin (S. purpuratus) Sperm Fertilization, EPA 1008.0	Selenastrum Capricornutum Algal Growth, EPA 1003.0	Ceriodaphnia dubia Survival and Reproduction, EPA 1002.0	Fathead Minnow (P. promelas) Survival and Growth, EPA 1000.0												
<b>Phone:</b> (805) 658-4375	<b>Phone:</b>																			
<b>Attn:</b> Kelly Hahs	<b>Attn:</b> Victoria Escoto																			
<b>E-mail:</b> Kelly.Hahs@ventura.org	<b>E-mail:</b>																			
<b>Project Name:</b> NPDES Stormwater Monitoring Program - 2017/18-1 (Wet)																				
<b>P.O.#/Ref:</b> Contract No. AE18-015																				
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Grab/Comp	Container															
					Number	Type														
1 ME-CC	1/9/18	0940	FW	Grab	2	2.5-gal jerrican	X												JM	
2 ME-SCR		1245	FW	Grab	2	2.5-gal jerrican		X											JM, TS	
3 ME-VR2	✓	1110	FW	Grab	2	2.5-gal jerrican	X												JM, TS	
4 MO-CAM	1/8/18	2100	FW	Grab	2	2.5-gal jerrican						X							JM, DL	
5 MO-OJA		1315	FW	Grab	2	2.5-gal jerrican							X						WBC, TS	
6 MO-MEI		1415	FW	Grab	2	2.5-gal jerrican								X					WBC, TS	
7 MO-VEN	✓	1707	FW	Grab	2	2.5-gal jerrican						X							JM, DL	
8																				
9																				
10																				
<b>Samples collected by:</b>																				
<b>Comments/Special Instruction:</b>  All sites/species: 100% concentration only Perform TIE if >50% effect; notify client immediately if toxicity is observed				<b>RELINQUISHED BY:</b> KELLY HAHS				<b>RECEIVED BY:</b>												
				Signature: <i>[Signature]</i>				Signature: <i>[Signature]</i>												
				Print: KELLY HAHS				Print: Vernie Chaban												
				Organization: VWP				Organization: Fed Ex CC												
				Date: 1/9/18 Time: 1512				Date: 1/9/18 Time: 1512												
				<b>RELINQUISHED BY:</b>				<b>RECEIVED BY:</b>												
Signature:				Signature: <i>[Signature]</i>																
Print:				Print: Samantha Cowdin																
Organization:				Organization: PER																
Date:				Date: 1/10/18				Time: 0745												

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





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

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet)

Sampling Team: Lara Meeker, Jaime McClain

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	ME-CC		X	X	X	X	1	
	ME-SCR		X	X	X	X	1	
	ME-VR2		X	X	X	X	1	
	MO-CAM		X	X	X	X	1	
	MO-OJA		X	X	X	X	1	
	MO-MEI		X	X	X	X	1	
	MO-VEN		X	X	X	X	1	
	FB-1	3/2/18/ 0930	X	X	X	X	1	THO
	ED-1		X	X	X	X	1	

Relinquished Printed Name Lara Meeker  
 Signature [Signature]  
 Affiliation WPP Date/Time 3-2-18 10:26

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 03/02/18 @ 1030

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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)

Sampling Date: 3/2/2018 Project Number: 2017/18-2 (Wet)  
 Sampling Team: Lara Meeker, Jaime McClain

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	<i>E. coli</i> (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
<del>MO-SPA</del>			X	X	X	X	1	
<del>MO-PIL</del>			X	X	X	X	1	
MO-SIM		3/2/18/0535	X	X	X	X	1	
MO-MPK		3/2/18/0435	X	X	X	X	1	
MO-THO		3/2/18/0940	X	X	X	X	1	
<del>MO-oxn</del>			X	X	X	X	1	
<del>MO-HUE</del>			X	X	X	X	1	

Relinquished Printed Name Lara Meeker  
 Signature [Signature]  
 Affiliation WPD Date/Time 3-2-18 10:26

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



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

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet)  
 Sampling Team: J. McCroby, T. Schmidt

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	ME-CC	3/2/18 12:00	X	X	X	X	1	
	ME-SCR	3/2/18 10:00	X	X	X	X	1	
	ME-VR2	3/2/18 8:35	X	X	X	X	1	
	MO-CAM		X	X	X	X	1	
	MO-OJA		X	X	X	X	1	
	MO-MEI		X	X	X	X	1	
	MO-VEN		X	X	X	X	1	
	FB-1		X	X	X	X	1	
	FD-1		X	X	X	X	1	

Relinquished Printed Name JIM MCCROBY  
 Signature [Signature]  
 Affiliation GEE Date/Time 3-2-18 12:40

Received Printed Name SALVADOR Y. BARRAGAN  
 Signature [Signature]  
 Affiliation P.H. LAB Date/Time 3/2/18 12:42

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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 1 of 2)**

Sampling Date: March 3/2/18 Project Number: 2017/18-2 (Wet)  
 Sampling Team: Dave Laak + Peter Doran

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
<del>ME-CC</del>	<del>ME-CC</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	<del></del>
<del>ME-SCR</del>	<del>ME-SCR</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	<del></del>
<del>ME-VR2</del>	<del>ME-VR2</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	<del></del>
MO-CAM		3/2/18 04:30	X	X	X	X	1	
<del>MO-OJA</del>	<del>MO-OJA</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	<del></del>
<del>MO-MEI</del>	<del>MO-MEI</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	<del></del>
MO-VEN		3/2/18 - 0540	X	X	X	X	1	
<del>FB-1</del>	<del>FB-1</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	<del></del>
FD-1		3/2/18 04:30	X	X	X	X	1	MO-CAM

Relinquished Printed Name David Laak  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 3/2/18 07:50

Received Printed Name Nada  
 Signature [Signature]  
 Affiliation Pit Lab Date/Time 030218 CITC

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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)**

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet)  
 Sampling Team: Dave Laak & Peter Doran

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	<i>E. coli</i> (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	<del>MO-SPA</del>		X	X	X	X	1	
	<del>MO-PHL</del>		X	X	X	X	1	
	<del>MO-SIM</del>		X	X	X	X	1	
	<del>MO-MPK</del>		X	X	X	X	1	
	<del>MO-THO</del>		X	X	X	X	1	
	MO-OXN	3/2/18 06:15	X	X	X	X	1	
	MO-HUE	3/2/18 07:15	X	X	X	X	1	

Relinquished Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

Received Printed Name See other side \_\_\_\_\_  
 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



**Chain of Custody Record**  
 Ventura County Watershed Protection District  
 NPDES Stormwater Monitoring Program  
 Project: NPDES Stormwater Wet Season  
 DNA FILTERS - VCHCA Lab (SIDE 1 of 2)

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet)  
 Sampling Team: Lara Meeker, Jaime McClain

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter							Number of Bottles	NOTES
	ME-CC		X							1	2 DNA Filters
	ME-SCR		X							1	2 DNA Filters
	ME-VR2		X							1	2 DNA Filters
	MO-CAM		X							1	2 DNA Filters
	MO-OJA		X							1	2 DNA Filters
	MO-MEI		X							1	2 DNA Filters
	MO-VEN		X							1	2 DNA Filters
	FB-1		X							1	2 DNA Filters

Relinquished Printed Name: Lara Meeker  
 Signature: [Signature]  
 Affiliation: WPD Date/Time: 3-2-18 10:26

Received Printed Name: Nadia West  
 Signature: [Signature]  
 Affiliation: PH Lab Date/Time: 030218 0321 @ 1030

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 2 of 2)**

Sampling Date: 3/2/2018 Project Number: 2017/18-2 (Wet)  
 Sampling Team: Lova Meeker, Jaime McClain

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
	<del>MO-SPA</del>	<del></del>	X								1	<del>2 DNA Filters</del>
	<del>MO-EIL</del>	<del></del>	X								1	<del>2 DNA Filters</del>
	MO-SIM	3/2/18/0535	X								1	2 DNA Filters
	MO-MPK	3/2/18/0435	X								1	2 DNA Filters
	MO-THO	3/2/18/0940	X								1	2 DNA Filters
	<del>MO-oxn</del>	<del></del>	X								1	<del>2 DNA Filters</del>
	<del>MO-HUE</del>	<del></del>	X								1	<del>2 DNA Filters</del>

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

see side 1



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 1 of 2)**

Sampling Date: 3/2/2018 Project Number: 2017/18-2 (Wet)  
 Sampling Team: Steven G, Andy S

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
	ME-CC		X								1	2 DNA Filters
	ME-SCR		X								1	2 DNA Filters
	ME-VR2		X								1	2 DNA Filters
	MO-CAM		X								1	2 DNA Filters
	MO-OJA	3/2/18 01:20	X								1	2 DNA Filters
	MO-MEI	3/2/18 02:20	X								1	2 DNA Filters
	MO-VEN		X								1	2 DNA Filters
	FB-1		X								1	2 DNA Filters

Relinquished Printed Name: Steven S. Green  
 Signature: [Signature]  
 Affiliation: VOWPD:WRB Date/Time: 3/2/18

Received Printed Name: Vicki Van Buren  
 Signature: [Signature]  
 Affiliation: PH Lab Date/Time: 030218 @ 0625

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 2 of 2)**

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet)

Sampling Team: SG AS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter							Number of Bottles	NOTES
	MO-SPA	3/2/18 0435	X							1	2 DNA Filters
	MO-FIL	3/2/18 0350	X							1	2 DNA Filters
	MO-SIM		X							1	2 DNA Filters
	MO-MPK		X							1	2 DNA Filters
	MO-THO		X							1	2 DNA Filters
	MO-OXN		X							1	2 DNA Filters
	MO-HUE		X							1	2 DNA Filters

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

SEE SIDE 1





**Chain of Custody Record**  
 Ventura County Watershed Protection District  
 NPDES Stormwater Monitoring Program  
 Project: NPDES Stormwater Wet Season  
 DNA FILTERS - VCHCA Lab (SIDE 1 of 1)

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet)  
 Sampling Team: J. McCrory, T. Schmidt

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
	ME-CC		X								1	2 DNA Filters
	ME-SCR	3-2-18 10:00	X								1	2 DNA Filters
	ME-VR2	3-2-18 8:35	X								1	2 DNA Filters
	MO-CAM		X								1	2 DNA Filters
	MO-OJA		X								1	2 DNA Filters
	MO-MEI		X								1	2 DNA Filters
	MO-VEN		X								1	2 DNA Filters
	FB-1		X								1	2 DNA Filters

Relinquished Printed Name Jim McCrory  
 Signature [Signature]  
 Affiliation GCE Date/Time 3-2-18 / 12:40

Received Printed Name SALVADOR Y. BARRAGAN  
 Signature [Signature]  
 Affiliation P.H. Lab Date/Time 3-2-18 12:42

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 1 of 2)**

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet)  
 Sampling Team: Dave Laak + Peter Doran

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
	<del>ME-CC</del>		X								1	<del>2 DNA Filters</del>
	<del>ME-SCR</del>		X								1	<del>2 DNA Filters</del>
	<del>ME-VR2</del>		X								1	<del>2 DNA Filters</del>
	MO-CAM	3/2/18 04:30	X								1	2 DNA Filters
	<del>MO-OJA</del>		X								1	<del>2 DNA Filters</del>
	<del>MO-MEI</del>		X								1	<del>2 DNA Filters</del>
	MO-VEN	3/2/18 05:40	X								1	2 DNA Filters
	<del>FB-1</del>		X								1	<del>2 DNA Filters</del>

Relinquished Printed Name David Laak  
 Signature [Signature]  
 Affiliation Vcwpp Date/Time 3/2/18 07:50

Received Printed Name Nidia  
 Signature [Signature]  
 Affiliation pH Lab Date/Time 03/02/18 @ 07:30

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 2 of 2)**

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet)  
 Sampling Team: Dave Laak + Peter Poran

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter							Number of Bottles	NOTES
	MO-SPA		X							1	2 DNA Filters
	MO-PHL		X							1	2 DNA Filters
	MO-SIM		X							1	2 DNA Filters
	MO-MPK		X							1	2 DNA Filters
	MO-THO		X							1	2 DNA Filters
	MO-OXN	3/2/18 06:15	X							1	2 DNA Filters
	MO-HUE	3/2/18 07:15	X							1	2 DNA Filters

Relinquished Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

Received Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

See other site →

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time

8C02092



**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: 3-2-18 Project Number: 2017/182 (Wet) Grabs

Sampling Team: JM, TS, DL, PD, SG, AS,

SAMPLE 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	NOTES
														Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
ME-CC		2	1	2	3	1								
ME-SCR	3/2/18 10:00	2	1	2	3	1							9	JM/TS
ME-VR2	3/2/18 8:35	2	1	2	3	1							9	JM/TS
MO-CAM	3/2/18 04:30	2	1	2	3	1							10	DL/PD only measure 2 only containers per
MO-OJA	3/2/18 01:20	2	1	2	3	1							9	SG, AS
MO-MEI	3/2/18 02:20	2	1	2	3	1							9	SG, AS
MO-VEN	3/2/18 05:40	2	1	2	3	1							9	DL/PD
MO-OXN	3/2/18 06:15	2	1	2	3	1							9	DL/PD
FD-1	3/2/18 04:30	2	1	2	3	1							9	MO-CAM - DL/PD

Relinquished Printed Name WILLIAM CAREY  
 Signature William Carey  
 Affiliation VCWPD Date/Time 3-2-18/1355

Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WECK LABS Date/Time 3-2-18/13:55

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

Hector Sanchez Jamie [Signature] 3/2/18 10:17



**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 2 of 2)**

Sampling Date: 3/2/18 Project Number: 2017/18-2 (Wet) Grabs  
 Sampling Team: LM, JM, SG, AS, DL, PD

SAMPLE ID	DATE/TIME COLLECTED	Analytes						Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits			
MO-SPA	3/2/18 04:35	2	1	2	3	1	9	SG/AS	
MO-FIL	3/2/18 03:50	2	1	2	3	1	9	SG/AS	
MO-SIM	3/2/18 0535	2	1	2	3	1	9	LM/JM	
MO-HUE	3/2/18 07:15	2	1	2	3	1	9	DL/PD	
MO-THO	3/2/18 0940	2	1	2	3	1	9	LM/JM 1 vial for 8260 REJECTED EMPTY	
MO-MPK	3/2/18 0435	2	1	2	3	1	9	LM/JM	
FB-1	3/2/18 0930	2	1	2	3	1	9	LM/JM THO	

Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

Relinquished Printed Name WILLIAM CAREY  
 Signature William Carey  
 Affiliation VCWPD Date/Time 3-2-18/1355

Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WELLS Date/Time 3-2-18/13:55

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

Hector Sanchez Jammyman 3/2/18 10:17  
6:17 PM 1.52 Attachment D Appendix E

203002



**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: 3/3/18 Project Number: 2017/18-2 (Wet) Grabs  
 Sampling Team: P. DORAN, B. CAREY

SAMPLE 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	NOTES
ME-CC	3/3/18/0915	2	1	2	3	1											9	PD, BC
<del>ME-SCR</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>											<del>9</del>	
<del>ME-VR2</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>											<del>9</del>	
<del>MO-CAM</del>		<del>3</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>											<del>10</del>	
<del>MO-OJA</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>											<del>9</del>	
<del>MO-MEI</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>											<del>9</del>	
<del>MO-VEN</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>											<del>9</del>	
<del>MO-OXN</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>											<del>9</del>	
<del>ED-1</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>											<del>9</del>	

Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

Relinquished Printed Name WILLIAM CAREY  
 Signature William Carey  
 Affiliation VCWPD Date/Time 3-3-18/1200

Received Printed Name Jaime Posadas  
 Signature [Signature]  
 Affiliation WECK Date/Time 3-3-18/1200 3/3/18 14:00

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

802090



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Composites - Week Laboratories (SIDE 1 of 2)**

\*Project # correction  
 2 per Kelly Hahs. BG  
 3/05/18

Sampling Date: 3-2-18

Project Number: 2017/18-1 (Wet) Composites

Sampling Team: JM, TS

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	NOTES
ME-CC		X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-SCR		X	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	X	1	
MO-CAM		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-OJA	3-2-18/0720	X	X	X	X	X	X	X	X	X	X	X	X	1	JM/TS
MO-MEI	3-2-18/0755	X	X	X	X	X	X	X	X	X	X	X	X	1	JM/TS
MO-VEN		X	X	X	X	X	X	X	X	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

Relinquished Printed Name WILLIAM CAREY

Signature William Carey

Affiliation UCWPD Date/Time 3-2-18/1355

Received Printed Name Heather Sanchez

Signature [Signature]

Affiliation WACKLABS Date/Time 3-2-18/1355

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).

802090



**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)**

Sampling Date: 3-2-18 Project Number: 2017/18-1 (Wet) Composites

Sampling Team: SG, AS & WBC

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	NOTES	
MO-SPA	3/2/18 05:20				X	X	X	X	X	X	X	X	X	X	X	X	1	SG/AS
MO-FIL	3/2/18 11:10				X	X	X	X	X	X	X	X	X	X	X	X	1	WBC
MO-SIM					X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-MPK					X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-THO					X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-OXN					X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-HUE					X	X	X	X	X	X	X	X	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

Relinquished Printed Name WILLIAM CAREY

Signature William Carey

Affiliation VCWPD Date/Time 3-2-18/1355

Received Printed Name Hector Sanchez

Signature [Signature]

Affiliation WELKLABS Date/Time 3-2-18 / 13:55

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).





**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Equipment - Weck Laboratories**

Sampling Date: 3-2-18

Project Number: 2017/18-2 (Wet) Cleaning

Sampling Team: WBC

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.
Blue cube cooler			4	
Black bags			4	
20 L narrow neck carboy, 2 lids, attachment assembly	3			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name WILLIAM CAREY  
 Signature William Carey  
 Affiliation VCWPD Date/Time 3-2-18/1355

Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WECKLABS Date/Time 3-2-18/13:55

Other Notes: \* Please clean with detergent, nitric, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organics contamination). Record the bottles cleaned with methanol.

Hector Sanchez  
3-2-18 6:17 PM



**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: 3/3/18 Sampling Number: 2017/18-2 (Wet) Composites  
 Sampling Team: K. HAYS, D. LOOK, P. DORAN, B. CAREY

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	NOTES
ME-CC	3/3/18 0915	X	X	X	X	X	X	X	X	X	X	X	X	1	PD, BC
ME-SCR	0758	X	X	X	X	X	X	X	X	X	X	X	X	1	PD, BC
ME-VR2	3 0907	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, DL
MO-CAM	0839	X	X	X	X	X	X	X	X	X	X	X	X	1	PD, BC
MO-VEN	↓ 0830	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, DL

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)

Relinquished Printed Name WILLIAM CAREY  
 Signature William Carey  
 Affiliation VCWPD Date/Time 3-3-18/1200

Received Printed Name Jaime Posadas  
 Signature Jaime Posadas  
 Affiliation Weck Date/Time 3-3-18/1200

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).

8003001



**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)**

Sampling Date: 3/3/18 Project Number: 2017/18-2(Wet) Composites

Sampling Team: K. HAHS, D. LAAK, L. Meeker, J. Mc

SAMPLE ID	DATE/TIME COLLECTED																NOTES
																	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)
MO-SIM	3/3/18 0850																LM, JM
MO-MPK	0805																LM, JM
MO-THO	0940																LM, JM
MO-OXN	0800																KH, DL
MO-HUE																	Cleaning only

Relinquished Printed Name WILLIAM CAREY  
 Signature William Carey  
 Affiliation VCWPA Date/Time 3-3-18/1200

Received Printed Name Jaine Rosadas  
 Signature Jaine Pt  
 Affiliation Weck Date/Time 3-3-18/1200 3/3/18 1430

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).



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Equipment - Weck Laboratories**

Sampling Date: 3/3/18  
 Sampling Team: WBC

Project Number: 2017/18-2 (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	5			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			10	
Black bags			10	
20 L narrow neck carboy, 2 lids, attachment assembly	6			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name WILLIAM CAREY  
 Signature William Carey  
 Affiliation VCWPA Date/Time 3-3-18/1200

Received Printed Name Jaime Rosadas  
 Signature Jaime Rosadas  
 Affiliation WECK Date/Time 3-3-18/1200 3/3/18 14:30

Other Notes: \* Please clean with detergent, nitric, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organics contamination). Record the bottles cleaned with methanol.



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

Sampling Date: 3/10/2018 Project Number: 2017/18-3 (Wet)  
 Sampling Team: Steven S. Greer, Peter D.

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX )	Fecal Coliform (25 Tube Method - MPNX )	E. coli (Tray Method - WQ IDEXX )	Total Coliform (Tray Method - WQ IDEXX )	Number of Bottles	NOTES
	ME-CC		X	X	X	X	1	
	ME-SCR	3/10/18 18:05 PST	X	X	X	X	1	
	ME-VR2		X	X	X	X	1	
	MO-CAM		X	X	X	X	1	
	MO-OJA	3/10/18 14:10 PST	X	X	X	X	1	
	MO-MEI	3/10/18 14:50 PST	X	X	X	X	1	
	MO-VEN		X	X	X	X	1	
	FB-1	3/10/18 18:05 PST	X	X	X	X	1	(ME-SCR)
	FD-1		X	X	X	X	1	(ME-CC)

Relinquished Printed Name Steven S. Greer  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 3/10/18

Received Printed Name Lauren Stead  
 Signature [Signature]  
 Affiliation VC PHL Date/Time 3/10/18 @ 6:51pm

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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)**

Sampling Date: 3/10/18 Project Number: 2017/18-3 (Wet)  
 Sampling Team: SG, AMB, P.D

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	<i>E. coli</i> (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	MO-SPA	3/10/18 16:35 PST	X	X	X	X	1	
	MO-FIL	3/10/18 16:00 PST	X	X	X	X	1	
	MO-SIM		X	X	X	X	1	
	MO-MPK		X	X	X	X	1	
	MO-THO		X	X	X	X	1	
	MO-OXN		X	X	X	X	1	
	MO-HUE		X	X	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



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

Sampling Date: 3/10/18 Project Number: 2017/18-3 (Wet)  
 Sampling Team: Lara Meeker, A.S.

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	ME-CC	3/10/18 2045	X	X	X	X	1	
	<del>ME-SCR</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	1	
	<del>ME-VR2</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	1	
	<del>MO-CAM</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	1	
	<del>MO-OJA</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	1	
	<del>MO-MEI</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	1	
	<del>MO-VEN</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	1	
	<del>FB-1</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	1	(ME-SCR)
	FD-1	3/10/18 2045	X	X	X	X	1	(ME-CC)

Relinquished Printed Name Lara Meeker  
 Signature [Signature]  
 Affiliation WPD Date/Time 3/10/18 2136

Received Printed Name Lavenstead  
 Signature [Signature]  
 Affiliation VC PHL Date/Time 3/10/18 9:42pm

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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)**

Sampling Date: 3/10/18 Project Number: 2017/18-3 (Wet)  
 Sampling Team: Lara Meeker, AS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	<i>E. coli</i> (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	<del>MO-SPA</del>		X	X	X	X	1	
	<del>MO-FIL</del>		X	X	X	X	1	
	MO-SIM	3/10/18 1835	X	X	X	X	1	
	MO-MPK	3/10/18 17:30	X	X	X	X	1	
	MO-THO	3/10/18 1940	X	X	X	X	1	
	<del>MO-oxn</del>		X	X	X	X	1	
	<del>MO-HUE</del>		X	X	X	X	1	

Relinquished Printed Name Lara Meeker  
 Signature [Signature]  
 Affiliation WPD Date/Time 3/10/18 2136

Received Printed Name Lauren Stead  
 Signature [Signature]  
 Affiliation VCPHL Date/Time 3/10/18 9:42pm

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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 1 of 2)**

Sampling Date: 3/10/18 Project Number: 2017/18-3 (Wet)  
 Sampling Team: DL, JM

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	<i>E. coli</i> (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	<del>ME-CC</del>		X X	X X	X X	X X	1	
	<del>ME-SCR</del>		X X	X X	X X	X X	1	
	ME-VR2	3-10-18 20:50	X X	X X	X X	X X	1	DL/JM
	MO-CAM	3-10-18 17:10	X X	X X	X X	X X	1	
	<del>MO-OJA</del>		X X	X X	X X	X X	1	
	<del>MO-MEI</del>		X X	X X	X X	X X	1	
	MO-VEN	3-10-18 18:45	X X	X X	X X	X X	1	
	FB-1		X X	X X	X X	X X	1	(ME-SCR)
	FD-1		X X	X X	X X	X X	1	(ME-CC)

Relinquished Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

Received Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Date/Time \_\_\_\_\_

*SEE OTHER SIDE*

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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**  
**DNA FILTERS - VCHCA Lab (SIDE 1 of 2)**

Sampling Date: 3/10/18 Project Number: 2017/18-3 (Wet)  
 Sampling Team: D.L., JM

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter							Number of Bottles	NOTES
	<del>ME-CC</del>		X							1	<del>2 DNA Filters</del>
	<del>ME-SCR</del>		X							1	<del>2 DNA Filters</del>
	ME-VR2	3-10-18 20:50	X							1	2 DNA Filters
	MO-CAM	3-10-18 17:10	X							1	2 DNA Filters
	<del>MO-OJA</del>		X							1	<del>2 DNA Filters</del>
	<del>MO-MEI</del>		X							1	<del>2 DNA Filters</del>
	MO-VEN	3-10-18 18:45	X							1	2 DNA Filters
	FB-1		X							1	2 DNA Filters

Relinquished Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_  
 Date/Time \_\_\_\_\_

Received Printed Name \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Affiliation \_\_\_\_\_  
 Date/Time \_\_\_\_\_

SEE OTHER SIDE

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season**  
**DNA FILTERS - VCHCA Lab (SIDE 2 of 2)**

Sampling Date: 3-10-18 Project Number: 2017/18-3 (Wet)  
 Sampling Team: Dave Look & Jim McElroy

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter							Number of Bottles	NOTES
	MO-SPA		X							1	2 DNA Filters
	MO-FIL		X							1	2 DNA Filters
	MO-SIM		X							1	2 DNA Filters
	MO-MPK		X							1	2 DNA Filters
	MO-THO		X							1	2 DNA Filters
	MO-OXN	3-10-18 18:00	X							1	2 DNA Filters
	MO-HUE	3-10-18 19:45	X							1	2 DNA Filters

Relinquished Printed Name David Look  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 3-10-18 2:45

Received Printed Name Laura Stead  
 Signature [Signature]  
 Affiliation VC PHL Date/Time 3/10/18 9:45pm

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
 Ventura County Watershed Protection District  
 NPDES Stormwater Monitoring Program  
 Project: NPDES Stormwater Wet Season  
 DNA FILTERS - VCHCA Lab (SIDE 1 of 2)

Sampling Date: 3/10/18 Project Number: 2017/18-3 (Wet)  
 Sampling Team: Lara Meeker, A.S.

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
	ME-CC	3/10/18 2045	X								1	2 DNA Filters
	ME-SCR		X								1	2 DNA Filters
	ME-VR2		X								1	2 DNA Filters
	MO-CAM		X								1	2 DNA Filters
	MO-OJA		X								1	2 DNA Filters
	MO-MEI		X								1	2 DNA Filters
	MO-VEN		X								1	2 DNA Filters
	FB-1		X								1	2 DNA Filters

Relinquished Printed Name Lara Meeker  
 Signature [Signature]  
 Affiliation WPD Date/Time 3/10/18 8:14 PM 2136

Received Printed Name Lauren Stead  
 Signature [Signature]  
 Affiliation VC PHL Date/Time 3/10/18 9:42pm

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time



**Chain of Custody Record**  
 Ventura County Watershed Protection District  
 NPDES Stormwater Monitoring Program  
 Project: NPDES Stormwater Wet Season  
 DNA FILTERS - VCHCA Lab (SIDE 2 of 2)

Sampling Date: 3/10/18 Project Number: 2017/18-3 (Wet)  
 Sampling Team: Lara Meeker, A.S.

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter							Number of Bottles	NOTES
	MO-SPA		X							1	2 DNA Filters
	MO-FIL		X							1	2 DNA Filters
	MO-SIM	3/10/18 1835	X							1	2 DNA Filters
	MO-MPK	3/10/18 1730	X							1	2 DNA Filters
	MO-THO	3/10/18 1940	X							1	2 DNA Filters
	MO-oxn		X							1	2 DNA Filters
	MO-HUE		X							1	2 DNA Filters

Relinquished Printed Name Lara Meeker  
 Signature [Signature]  
 Affiliation WPD Date/Time 3/10/18 2:36

Received Printed Name Lauren Stead  
 Signature [Signature]  
 Affiliation VC PHL Date/Time 3/10/18 9:42pm

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time

8C11002



**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: 3/10/18

Project Number: 2017/18-3 (Wet) Grabs

Sampling Team: LM, AS, SG, PD, DL, JM

SAMPLE 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	NOTES
		1	2	3	4	5	6												
ME-CC	3/10/18 2045 PST	2	1	2	3	1												9	LM, AS
ME-SCR	3/10/18 18:05 PST	2	1	2	3	1												9	SG, PD
ME-VR2	3/10/18 20:50 PST	2	1	2	3	1												9	DL, JM
MO-CAM	3/10/18 17:10 PST	3	1	2	3	1												10	DL, JM
MO-OJA	3/10/18 14:10 PST	2	1	2	3	1												9	SG, PD
MO-MEI	3/10/18 14:50 PST	2	1	2	3	1												9	SG, PD
MO-VEN	3/10/18 18:45 PST	2	1	2	3	1												9	DL, JM
MO-OXN	3/10/18 18:00 PST	2	1	2	3	1												9	DL, JM
FD-1	3/10/18 2045 PST	2	1	2	3	1												9	(ME-CC) LM, AS

Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

Relinquished Printed Name KELLY HAYS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 3/11/18 / 1400 PDT

Received Printed Name HUGO CHAVEZ  
 Signature [Signature]  
 Affiliation ESSENTIAL Date/Time 3/11/18 @ 2:00 PM

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve  
[Signature] 3/11/18  
 1545 4.102

BC11002



**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 2 of 2)**

Sampling Date: 3/10/18 Project Number: 2017/18-3 (Wet) Grabs  
 Sampling Team: LM, AS, SG, PD, DL, JM

SAMPLE ID	DATE/TIME COLLECTED						Travel Blanks (EPA 624)-only analyze if hits								Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)											
MO-SPA	3/10/18 16:35 PST	2	1	2	3	1									9	SG, PD
MO-FIL	3/10/18 16:00 PST	2	1	2	3	1									9	SG, PD
MO-SIM	3/10/18 18:35 PST	2	1	2	3	1									9	LM, AS
MO-HUE	3/10/18 19:45 PST	2	1	2	3	1									9	DL, JM
MO-THO	3/10/18 19:40 PST	2	1	2	3	1									9	LM, AS
MO-MPK	3/10/18 17:30 PST	2	1	2	3	1									9	LM, AS

Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

Relinquished Printed Name KELLY HAYS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 3/11/18 1400 PDT

Received Printed Name HUGO CRANE  
 Signature [Signature]  
 Affiliation ESSENTIAL Date/Time 3/11/18 @ 2:01 PM

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve  
3/11/18 15:45



8C11001



**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: 3/10/18 + 3/11/18 Project Number: 2017/18-3 (Wet) Composites

Sampling Team: LM, AS, DL, JM, SG, PD, KH

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	NOTES
* ME-CC	3/11/18 10:25 AM	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, LM
* ME-SCR	3/11/18 11:25 PDT	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, LM
* ME-VR2	3/11/18 10:00 PDT	X	X	X	X	X	X	X	X	X	X	X	X	1	DL, PD
MO-CAM	3/10/18 17:10 PST	X	X	X	X	X	X	X	X	X	X	X	X	1	DL, JM
MO-VEN	3/10/18 18:45 PST	X	X	X	X	X	X	X	X	X	X	X	X	1	DL, JM
* MO-FIL	3/11/18 0850 PDT	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, LM

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, 8270SIM-PAH, & 8270SIM-PHENOLS  
 Lab to select samples for MS/MSD where extra volume permits (all test

Relinquished Printed Name Kelly Hahn

Signature [Signature]  
 Affiliation \_\_\_\_\_ Date/Time 3/11/18 / 1400 PDT

Received Printed Name Hugo Chavez

Signature [Signature]  
 Affiliation ESSENTIAL Date/Time 3/11/18 @ 2:01 PM

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).  
[Signature] 3/11/18  
 1545

8C1001



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Composites - Week Laboratories (SIDE 2 of 2)**

Sampling Date: 3/10/18 + 3/11/18 Project Number: 2017/18-3 (Wet) Composites

Sampling Team: LM, AS, DL, JM, SG, PD, KH

SAMPLE ID	DATE/TIME COLLECTED	Dissolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (+ Hardness), & Barium (total only)	Ct+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	NOTES
MO-SIM	3/10/18 1835PST	X	X	X	X	X	X	X	X	X	X	X	1	LM, AS
MO-MPK	3/10/18 1730PST	X	X	X	X	X	X	X	X	X	X	X	1	LM, AS
* MO-THO	3/11/18 0945PDT	X	X	X	X	X	X	X	X	X	X	X	1	KH, LM
MO-OXN	3/10/18 1800 PST	X	X	X	X	X	X	X	X	X	X	X	1	DL, JM
* MO-HUE	3/11/18 10:55PDT	X	X	X	X	X	X	X	X	X	X	X	1	Cleaning only DL, PD
MO-SPA	3/10/18 17:25PST	X	X	X	X	X	X	X	X	X	X	X	1	SG, PD
* MO-MEI	3/11/18 0925PDT	X	X	X	X	X	X	X	X	X	X	X	1	DL, PD
* MO-OJA	3/11/18 0905PDT	X	X	X	X	X	X	X	X	X	X	X	1	DL, PD

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

Time in \*PDT Relinquished Printed Name KELLY HAHS

Signature [Signature]

Affiliation VCD Date/Time 3/11/18 / 1400 PDT

Received Printed Name Hugo Chavez

Signature [Signature]

Affiliation ESSENTIAL Date/Time 3/11/18 @ 2:00 PM

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).

## Brandon Gee

---

**From:** Hahs, Kelly <Kelly.Hahs@ventura.org>  
**Sent:** Wednesday, March 14, 2018 1:44 PM  
**To:** Brandon Gee  
**Subject:** Composite sample time corrections to COC/WeckConnect

Hi Brandon,

I found a few issues with our composite (8C11001) sample times for event 3. Some are wrong on the COC (Sorry! Teams were tired) and one is wrong on WeckConnect. Can you fix them please?

ME-CC should be 10:25 AM

MO-CAM should be 5:25 PM

MO-VEN should be 7:07 PM

MO-SIM should be 6:50 PM

MO-MPK should be 5:25 PM

MO-OXN should be 6:15 PM

Sorry for the inconvenience!

Kelly

Kelly Hahs

Water Resources Specialist IV

Ventura County Watershed Protection District

800 South Victoria Avenue

Ventura, CA 93009-1610

(805) 658-4375

[www.vcstormwater.org](http://www.vcstormwater.org)



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Equipment - Weck Laboratories**

Sampling Date: 3/11/18 Project Number: 2017/18-3 (Wet) Cleaning  
 Sampling Team: K. HAHS

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid	5			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			14	
Black bags			14	
20 L narrow neck carboy, 2 lids, attachment assembly	9			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCPD Date/Time 3/11/18 / 1400 PDT

Received Printed Name HUGO CHAVES  
 Signature [Signature]  
 Affiliation ESSENTIAL Date/Time 3/11/18 @ 2:00 PM

Other Notes: \* Please clean with detergent, nitric, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organics contamination). Record the bottles cleaned with methanol.



**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: 3/21/18 Project Number: 2017/18-4 (Wet)  
 Sampling Team: Lara Meeker, David Laak

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	MO-HUE	3/21/18 1125	X	X	X	X	1	PDT
	FD-1	3/21/18 1125	X	X	X	X	1	PDT

Relinquished Printed Name: Lara Meeker  
 Signature: [Signature]  
 Affiliation: VC WPD Date/Time: 3/21/18 1220 PDT

Received Printed Name: Nadia West  
 Signature: [Signature]  
 Affiliation: PH Lab Date/Time: 3/21/18 @ 1220

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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 (Contract AE17-001)**  
**Grabs - Weck Laboratories (SIDE 1 of 1)**

8C22033

Sampling Date: 3/21/18 Project Number: 2017/18-4 (Wet) Grabs  
 Sampling Team: Lara Meeker, David Laak

SAMPLE 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.	NOTES
MO-HUE	3/21/18 1125	2	1	2	3	1							9	PDT	
FD-1	3/21/18 1125	2	1	2	3	1							9	PDT	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation Ventura County Watershed Protection District Date/Time 3/22/18  
 Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WECKLABS Date/Time 3-22-18 0905

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve  
Hector Sanchez 3-22-18 11:20 James [Signature] 3/22/18 1120 2.40



8022030

**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 1)**

Sampling Date: 3/22/18 Project Number: 2017/18-4 (Wet) Composites  
 Sampling Team: K. HAHS, WB. CAREY

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	NOTES
MO-HUE	3/22/18 0820	X	X	X	X	X	X	X	X	X	X	X	1	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, 8270SIM-PAH, & 8270SIM-PHENOLS  Lab to select samples for MS/MSD where extra volume permits (all test

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 3/22/18

Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WECKLABS Date/Time 3-22-18 0905 AM

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).



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Equipment - Weck Laboratories**

Sampling Date: 3/22/18 Project Number: 2017/18-4 (Wet) Cleaning  
 Sampling Team: K. HAHNS

EQUIPMENT	Clean with detergent and HNO <sub>3</sub>	Clean with detergent, HNO <sub>3</sub> , and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid	✖			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler				
Black bags				
20 L narrow neck carboy, 2 lids, attachment assembly	X			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Grey tub/composite bottle bucket			X	

Relinquished Printed Name KELLY HAHNS  
 Signature [Signature]  
 Affiliation VIEWPS Date/Time 3/22/18/

Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WECKLAB Date/Time 3-22-18 0905

Other Notes: \* Please clean with detergent, nitric, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organics contamination). Record the bottles cleaned with methanol.

Note: No black bag for bottle.



6 carbays returned 7/24/18



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

Sampling Date: 5/30/18 Project Number: 2017/18-21(Wet) 5 (Dry)  
 Sampling Team: L. MEEKER, K. HAHS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 ml Method - IDEXX)	Fecal Coliform (25 ml Method - IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	ME-CC	5/30/18 1055	X	X	X	X	1	
	<del>ME-CC</del> MO-CAM	1145	X	X	X	X	1	
	<del>ME-CC</del> MO-THO	0950	X	X	X	X	1	
	<del>ME-CC</del> MO-SIM	0840	X	X	X	X	1	
	<del>ME-CC</del> MO-APK		X	X	X	X	1	DRY
	<del>ME-CC</del> MO-HLE	5/30/18 1255	X	X	X	X	1	
	<del>ME-CC</del> MO-YEN		X	X	X	X	1	
	<del>ME-CC</del>		X	X	X	X	1	
	<del>ME-CC</del>		X	X	X	X	1	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 5/30/18 / 1344

Received Printed Name Nadia West  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 053018 1344

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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 1 of 2)

Sampling Date: June 6, 2018 Project Number: 2017/18-207et <sup>5(dry)</sup>  
 Sampling Team: Andy Spruka & Bill Casey

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	E. coli (5T Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
<del>ME-SUR</del>	<del>ME-VI2</del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>ME-SUR</del>	<del>MO-TIE</del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>ME-SUR</del>	<del>MO-SJA</del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-SJA</del>	ME-SUR	6-6-18 1045		X	X	1	
<del>MO-SJA</del>	MO-FIL	6-6-18 0745		X	X	1	
<del>MO-MEI</del>	<del>MO-SJA</del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-VEN</del>	<del>MO-SJA</del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-VEN</del>	MO-VEN	6-6-18 0920		X	X	1	
<del>MO-VEN</del>	<del>MO-TIE</del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>1</del>	

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 6-6-18/1140

Received Printed Name Nadia West  
 Signature [Signature]  
 Affiliation Pitt Lab Date/Time 6-6-18 @ 1140

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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 1 of 1)  
**Bacteriological**

Sampling Date: 6/21/18

Project Number: 2017/18-~~1222~~ 5(04)

Sampling Team: N.B. CAREY, K. HAHS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	<del>Heat Coliform (25 Tube Method - MPN)</del>	<del>Fecal Coliform (25 Tube Method - MPN)</del>	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	<del>ME-VRZ</del> ME-VRZ	6/21/18 1115	X	X	X	X	1	
	<del>ME-VRZ (MD-09A)</del>		X	X	X	X	1	DRY
	ME-VRZ MD-09A	6/21/18 0925	X	X	X	X	1	
	<del>MD-09A</del>				X	X	1	
	<del>MD-09A</del>				X	X	1	
	<del>MD-09A</del>				X	X	1	
	<del>MD-09A</del>				X	X	1	
	<del>MD-09A</del>				X	X	1	
	<del>MD-09A</del>				X	X	1	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 6/21/18

Received Printed Name SARAH BARRALAN  
 Signature [Signature]  
 Affiliation VCHCA-LAB Date/Time 6/21/18 12:00

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time  
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 Dry Weather (Contract AE17-001)**  
**Grabs - Weck Laboratories (SIDE 1 of 1)**

BE30115

Sampling Date: 5/30/18 Project Number: 2017/18-5 (Dry) Grabs  
 Sampling Team: L. MEEKER, K. HAHS

SAMPLE 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	NOTES
ME-CC	5/30/18 1055	2	1	2	3	1							9	
MO-CAM	↓ 1145	2	1	2	3	1							9	
<del>MO-MPK</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>							<del>9</del>	DRY
MO-SIM	5/30/18 0840	2	1	2	3	1							9	
MO-THO	↓ 0960	2	1	2	3	1							9	
MO-HUE	↓ 1255	2	1	2	3	1							9	

Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation Ventura County Watershed Protection District Date/Time 5/30/18 / 1500

Received Printed Name [Signature]  
 Signature DAVID LEVY  
 Affiliation AMS Date/Time 2:55 PM

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

Jamethman 5/30/18 1841 2:10



BF06055

**Chain of Custody Record**  
**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: JUNE 6<sup>th</sup>, 2018 Project Number: 2017/18-5 (Dry) Grabs  
 Sampling Team: W.B. CAREY & A. SPYRKA

SAMPLE 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	NOTES	
<del>ME-VR2</del>		2	1	2	3	1										Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
<del>MO-MEH</del>		2	1	2	3	1										
<del>MO-OJA</del>		2	1	2	3	1										
ME-SCR	6-6-18/1045	3	1	2	3	1								10		
MO-FIL	6-6-18/0745	2	1	2	3	1								9		
<del>MO-OWN</del>		2	1	2	3	1								9		
<del>MO-SPA</del>		2	1	2	3	1								9		
MO-VEN	6-6-18/0920	2	1	2	3	1								9		
<del>MO-LUE</del>		2	1	2	3	1								9		

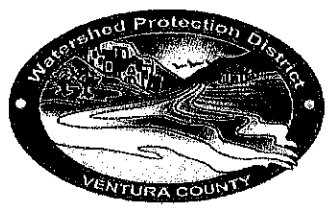
Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPA Date/Time 6-6-18/1530

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation Wentworth Date/Time 6-6-18/1530

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

James [Signature] 6/6/18 17:45 18°C

8F21050



**Chain of Custody Record**  
**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: 6/21/18 Project Number: 2017/18-5 (Dry) Grabs  
 Sampling Team: W.B. CAREY, K. HAHS

SAMPLE 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	NOTES
ME-VR2	6/21/18 1115	2	1	2	3	1									9	
<del>MO-MEI</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>									9	DRY
MO-OJA	6/21/18 0925	2	1	2	3	1									9	
<del>ME-SCR</del>		<del>3</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>									9	
<del>MO-EH</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>									9	
<del>MO-ON</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>									9	
<del>MO-SPA</del>		<del>3</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>									9	
<del>MO-VEH</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>									9	
<del>MO-MUL</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>									9	

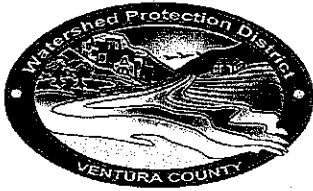
Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 6/21/18 1330

Received Printed Name ALLAN GOLDBERG  
 Signature [Signature]  
 Affiliation WECKLABS Date/Time 6/21/18 1330

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE)  
EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

[Signature] 6/21/18 1625  
[Signature] 6/21/18 16:25 Attachment D Appendix E 3.2



**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)

8E30080

Sampling Date: 5/30/18

Project Number: 2017/18-5 (Dry) Composites

Sampling Team: L. MEEKER, K. HAHS

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	NOTES
ME-CC	5/30/18 1045	X	X	X	X	X	X	X	X	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)
MO-CAM	1135	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-MPK	0800	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-SIM	0900	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-THO	0950	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-HUE	1245	X	X	X	X	X	X	X	X	X	X	X	X	1	
		X	X	X	X	X	X	X	X	X	X	X	X	1	

Relinquished Printed Name KELLY HAHS

Signature [Signature]

Affiliation Ventura Date/Time 5/30/18/1500

Received Printed Name [Signature]

Signature DAVID LEVY

Affiliation RMS Date/Time 2:45 PM

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).



8E30080

**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Equipment - Weck Laboratories**

Sampling Date: 5/30/18

Sampling Team: L. MEEKER, K. HAHS

Project Number: 2017/18-2 (504) Cleaning <sup>5(04)</sup>

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	Please dispose of. (NOT USED)	NOTES
18.5 L wide neck carboy and lid	2				Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			6		
Black bags			6		
20 L narrow neck carboy, 2 lids, attachment assembly	4				Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
3 bottles w/ sodium azide <sup>PREV</sup>				3	

Relinquished Printed Name KELLY HAHS

Signature [Signature]

Affiliation VWPD Date/Time 5/30/18 / 1500

Received Printed Name [Signature]

Signature DAVID LEVY

Affiliation RMS Date/Time 2:55 PM

Other Notes: \* Please clean with detergent, nitric, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organics contamination). Record the bottles cleaned with methanol.





**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)**

8F06049

Sampling Date: JUNE 6<sup>th</sup>, 2018  
 Sampling Team: W.B. CAREY & A. SPYRKA

Project Number: 2017/18-5 (Dry) Composites

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	NOTES	
<del>ME-VRZ</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-MEN</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-OJA</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
ME-SCR	6-6-18/1040				X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-FIL	6-6-18/0745				X	X	X	X	X	X	X	X	X	X	X	X	1	
<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
MO-VEN	6-6-18/0915				X	X	X	X	X	X	X	X	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

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 6-6-18/1530

Received Printed Name DAVID LAY  
 Signature [Signature]  
 Affiliation Rebecca Rossner Date/Time 6-6-18/1530

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).

James [Signature] California Appendix 2-1c



8700049

**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Wet Season (Contract AE17-001)**  
**Equipment - Weck Laboratories**

Sampling Date: 6-6-18  
 Sampling Team: W.B. CAREY & A. SPYRKA

Project Number: 2017/18-2 (5 (dry) 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.
Blue cube cooler	2		3	
Black bags			3	
20 L narrow neck carboy, 2 lids, attachment assembly	2			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 6-6-18/1530

Received Printed Name Janelina  
 Signature [Signature]  
 Affiliation Restoration Date/Time 6-6-18/1530

Other Notes: \* Please clean with detergent, nitric, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organics contamination). Record the bottles cleaned with methanol.

Janelina 6/6/18 17:45

8F21047



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Project: NPDES Stormwater Dry Weather (Contract AE17-001)**  
**Composites - Week Laboratories (SIDE 1 of 1)**

Sampling Date: 6/21/18 Project Number: 2017/18-5 (Dry) Composites

Sampling Team: W.B. CAREY K. HAYS

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 (353.0), 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	NOTES
ME-VR2	6/21/18 1110	X	X	X	X	X	X	X	X	X	X	X	1	
MO-MEI		X	X	X	X	X	X	X	X	X	X	X	1	DRY
MO-OJA	6/21/18 0925	X	X	X	X	X	X	X	X	X	X	X	1	
<del>ME-SCP</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-FIL</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-OJN</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-...</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-VEN</del>		<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	

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, 8270SIM-PAH, & 8270SIM-PHENOLS  
 Lab to select samples for MS/MSD where extra volume permits (all test)

Relinquished Printed Name KELLY HAYS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 6/21/18 / 1330

Received Printed Name ALLAN GOLDBERG  
 Signature [Signature]  
 Affiliation WECKLABS Date/Time 6/21/18 1330

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).  
Relinquish to Allan G. 6/21/18 1625  
[Signature]



**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: 6/21/18 Project Number: 2017/18-5 (Dry) Cleaning  
 Sampling Team: K. HAHS

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	1			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Silicone stoppers	3			
Blue cube cooler			2	
Grey bucket			2	
Black bottle bag			2	
Bottle harness			2	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 6/21/18 / 1330

Received Printed Name ALLAN G  
 Signature [Signature]  
 Affiliation WECK Date/Time 6/21/18 1330

Other Notes: \* Allow to air dry (don't rinse) after methanol step to avoid organics contamination).  
Record the bottles cleaned with methanol.  
[Signature] [Signature] 6/21/18 1625



Rec'd  
incubated @  
1512

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

Sampling Date: 8/20/18 Sample Event: DRY 2018  
 Sampling Team: W.B. CAREY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)						Number of Bottles	NOTES
	<del>Gamarrillo-1</del>	—	X	X							<del>MO-CAM</del>
1	Fillmore-1	8/20/18 1120	X	X						1	MO-FIL
	<del>Moospark-1</del>	—									<del>MO-MPK</del>
2	Ojai-6	8/20/18 1225	X	X						1	<del>MO-OJA</del> DRY-OJA6
3	Oxnard-2	8/20/18 0840	X	X						1	<del>MO-oxn</del> DRY-oxn2
	Port Hueneme-3	8/20/18 1430									DRY-HUE3 rec'd 1512
4	Santa Paula-4	8/20/18 1040	X	X						1	DRY-SPA4
	<del>Simi Valley-1</del>	—									<del>MO-SIM</del>
	<del>Thousand Oaks-1</del>	—									<del>MO-THO</del>
	<del>Unincorporated-1</del>	—									<del>DRY-UNI</del>
5	Ventura-5	8/20/18 1320	X	X						1	<del>MO-ven</del> DRY-ven5

Relinquished Printed Name KELLY HAYS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 8/20/18/1405

Received Printed Name SAL Y. BARRAGAN  
 Signature [Signature]  
 Affiliation P.H. Lab Date/Time 8/20/18 14:05 \*

Other Notes: 1:10, 1:100, and 1:1000 dilutions  
Port Hueneme-3 relinquished 8/20/18 1512 Kelly Hays



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

Sampling Date: 8/21/18 Sample Event: DRY 2018  
 Sampling Team: W.B. CAREY

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	8/21/18 0740	X	X						1	MO-CAM
	<del>Fillmore-1</del>	—									<del>MO-FIL</del>
	Moorpark-1	8/21/18 0840	X	X						1	MO-MPK
	<del>Ojai-1</del>	—									<del>MO-OJA</del>
	<del>Ormond-1</del>	—									<del>MO-ORN</del>
	<del>Port Huachuca-3</del>	—									<del>DRY-HUE3</del>
	<del>Santa Paula-2</del>	—									<del>DRY-SPA2</del>
	Simi Valley-1	8/21/18 0925	X	X						1	MO-SIM
	Thousand Oaks-1	↓ 1100	X	X						1	MO-THO
	Unincorporated-4	↓ 1010	X	X						1	DRY-UNI4
	<del>Ventura-1</del>	—									<del>MO-VEN</del>

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 8/21/18 / 1147

Received Printed Name Nadia West  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 082118 @ 1148

Other Notes: 1:10, 1:100, and 1:1000 dilutions



**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Major Outfall Dry Weather Monitoring**  
**Grabs - Weck Laboratories**

*8/21/18*  
*8/21/18*

Invoice Contract No. AE17-001

Sampling Date: 8/20/18 + 8/21/18

Sample Event: DRY 2018

Sampling Team: W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED	Total Hardness	TOC	Dissolved Metals by 200.8 (Lead, Zinc, Copper)	Number of Bottles	NOTES
Camarillo-1	8/21/18 0740	X	X	X	4	MO-CAM
Fillmore-1	8/20/18 1120	X	X	X	4	MO-FIL
Moorpark-1	8/21/18 0840	X	X	X	4	MO-MPK
Ojai-6	8/20/18 1225	X	X	X	4	DRY-COAG
Oxnard-2	↓ 0840	X	X	X	4	DRY-OXN2
Port Hueneme-3	↓ 1430	X	X	X	4	DRY-HUE3
Santa Paula-4	↓ 1040	X	X	X	4	DRY-SPA4
Simi Valley-1	8/21/18 0925	X	X	X	4	MO-SIM
Thousand Oaks-1	↓ 1100	X	X	X	4	MO-THO
Unincorporated-4	↓ 1010	X	X	X	4	DRY-UN14
Ventura-5	8/20/18 1320	X	X	X	4	DRY-VEN5

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.)

Relinquished Printed Name KELLY HAYS  
 Signature *Kelly Hays*  
 Affiliation VCWPD Date/Time 8/21/18 / 1358

Received Printed Name BRUCE MARKOVICH  
 Signature *Bruce Markovich*  
 Affiliation WECKLABS Date/Time 8/21/18 / 1358

Other Notes: Need labels for your 20 8/21/18 3:00  
*[Signature]* 8/21/18 4:30