

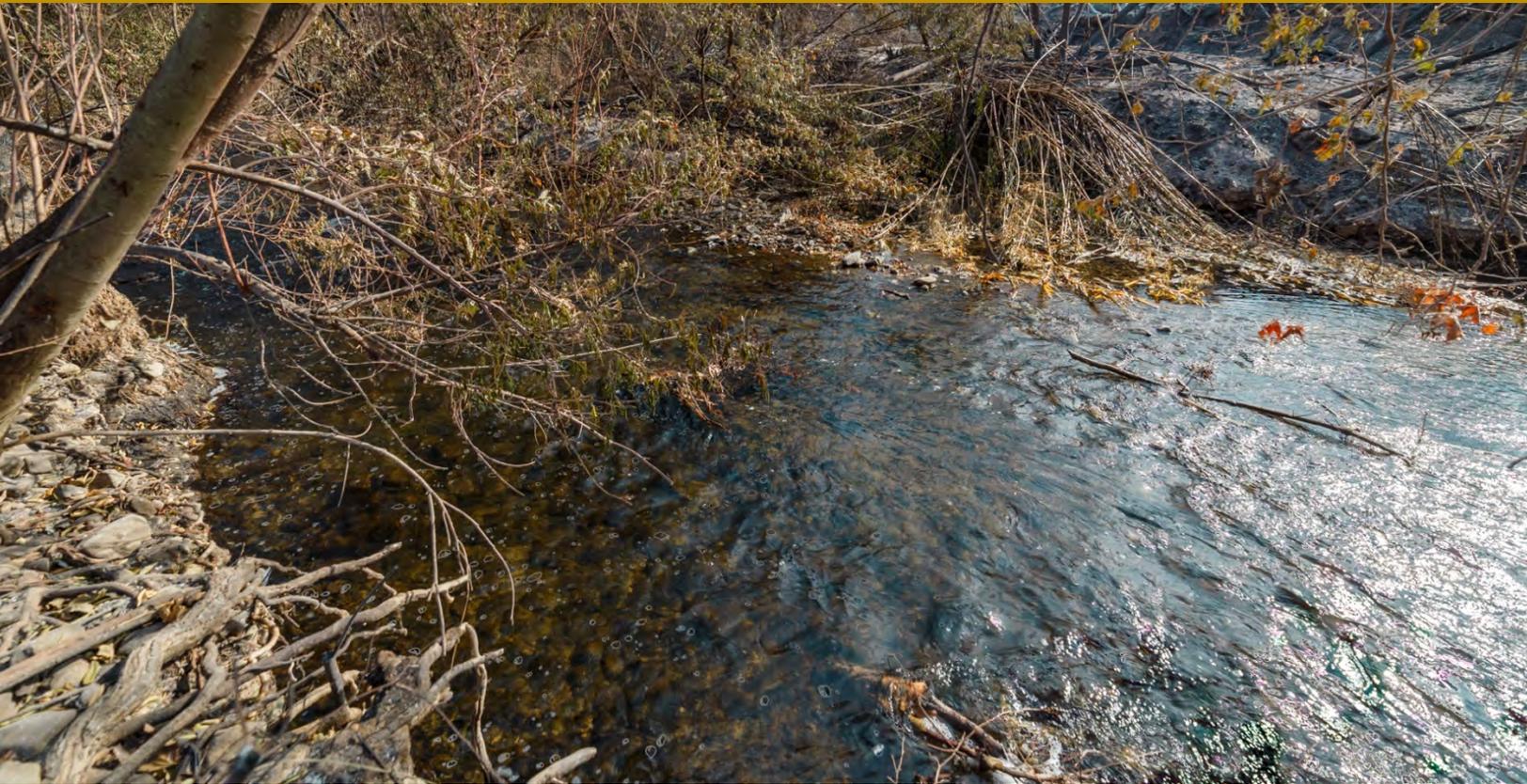


*Ventura Countywide  
Stormwater Quality  
Management Program*

2018-2019  
Permit Year

Ventura Countywide Stormwater Quality  
Management Program Annual Report

Attachment D Monitoring Appendices A - E



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

Ventura County Watershed Protection District

December 13, 2019

## **Appendix A: Major Outfall Station Fact Sheets (Updated 2019)**

## Camarillo

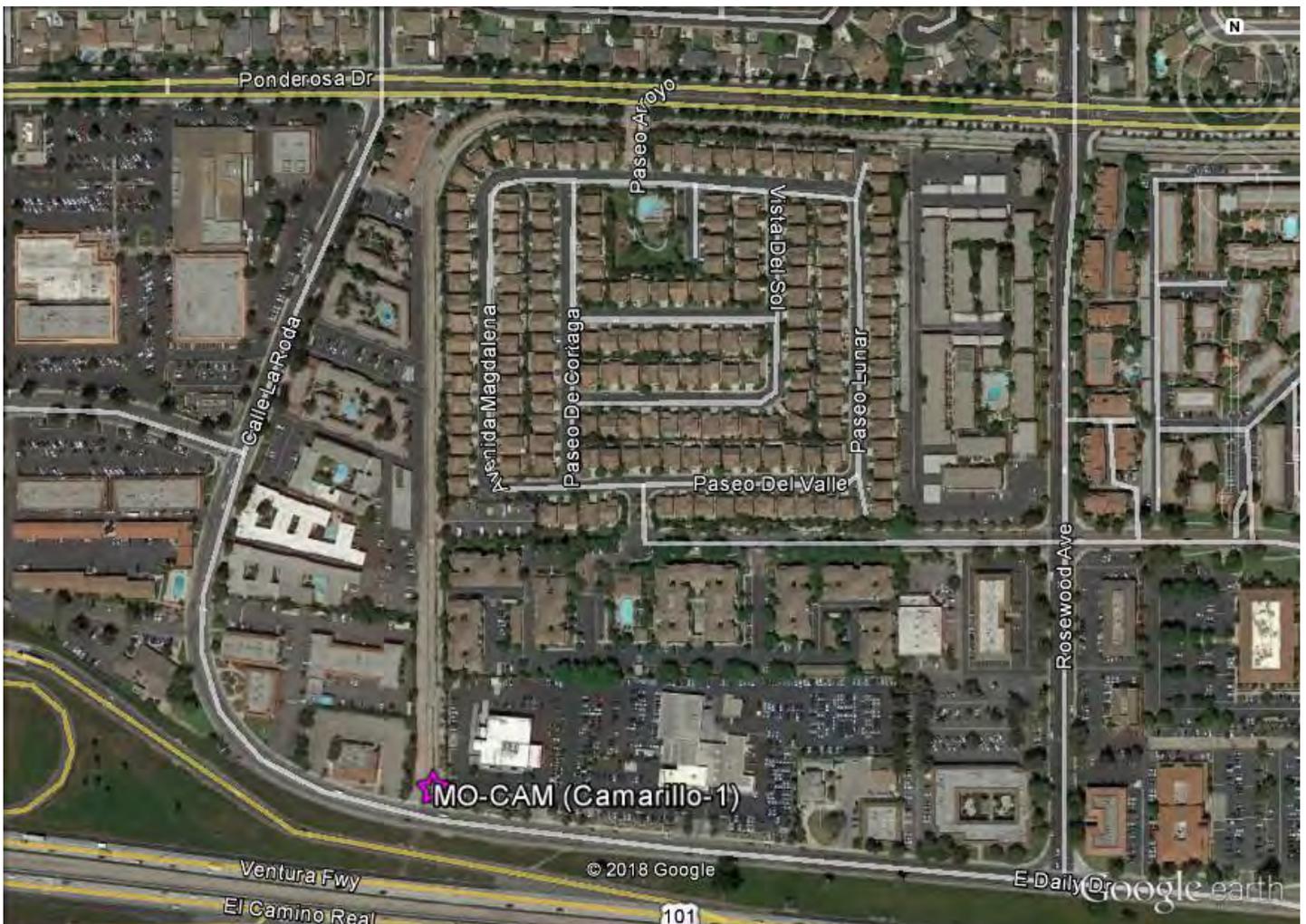
**Station:** MO-CAM (Camarillo-1)

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

**Location:** Daily Rd. overcrossing (34°13'10.40"N, 119° 3'58.00"W)

**Known Issues:** None

**Dry Season Flow:** Low flow typically present year-round in dry weather due to urban runoff.

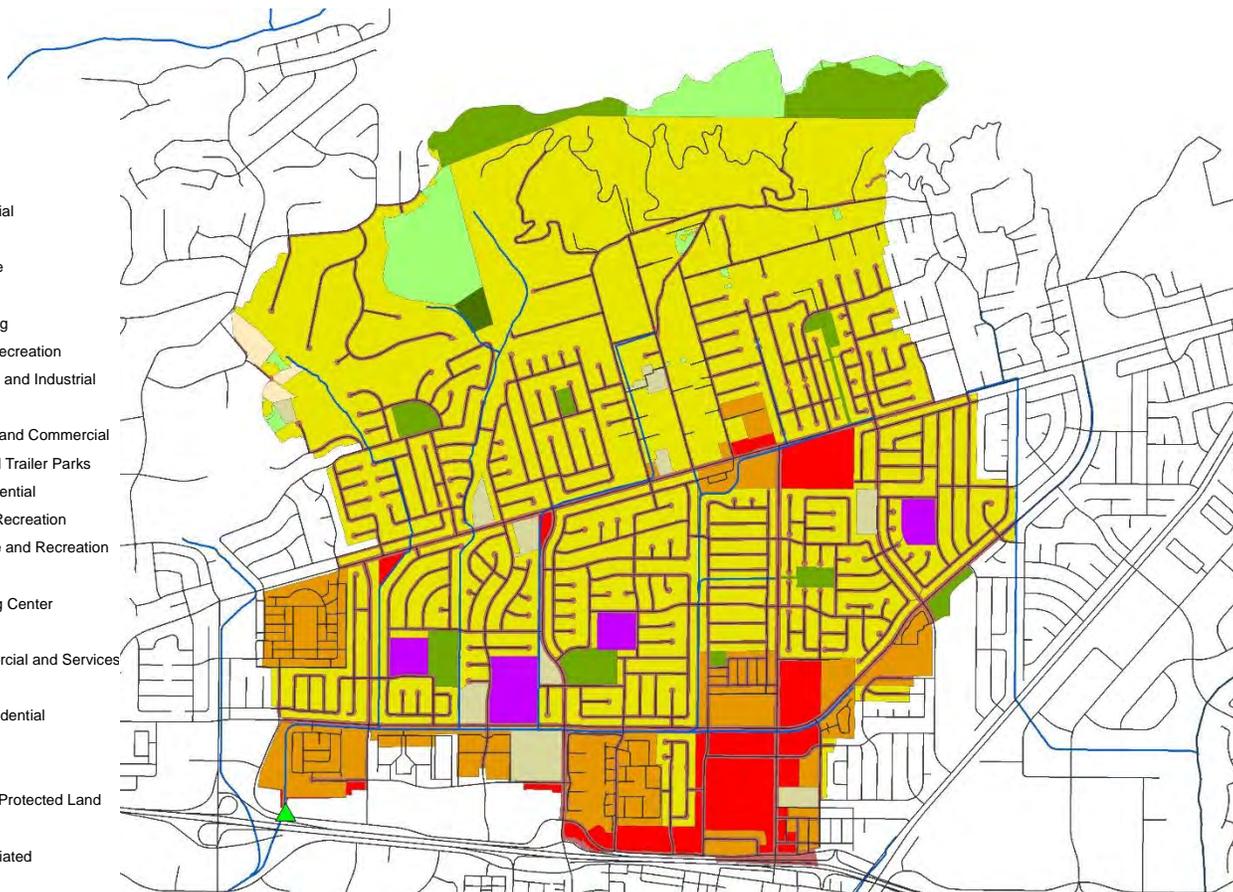


**Legend**

**SCAG 2012 LU**

**Label**

- Agriculture
- Cemeteries
- Education K-12
- General Commercial
- General Industrial
- General Office Use
- Light Industrial
- Light Manufacturing
- Local Parks and Recreation
- Mixed Commercial and Industrial
- Mixed Residential
- Mixed Residential and Commercial
- Mobile Homes and Trailer Parks
- Multi-Family Residential
- Open Space and Recreation
- Other Open Space and Recreation
- Public Facilities
- Regional Shopping Center
- Residential
- Retail and Commercial and Services
- Rural Residential
- Single Family Residential
- Specific Plan
- Transportation
- Undevelopable or Protected Land
- Utility Facilities
- Vacant Undifferentiated
- Water



**Entire City**

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

**Selected Subwatershed**

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

## Fillmore

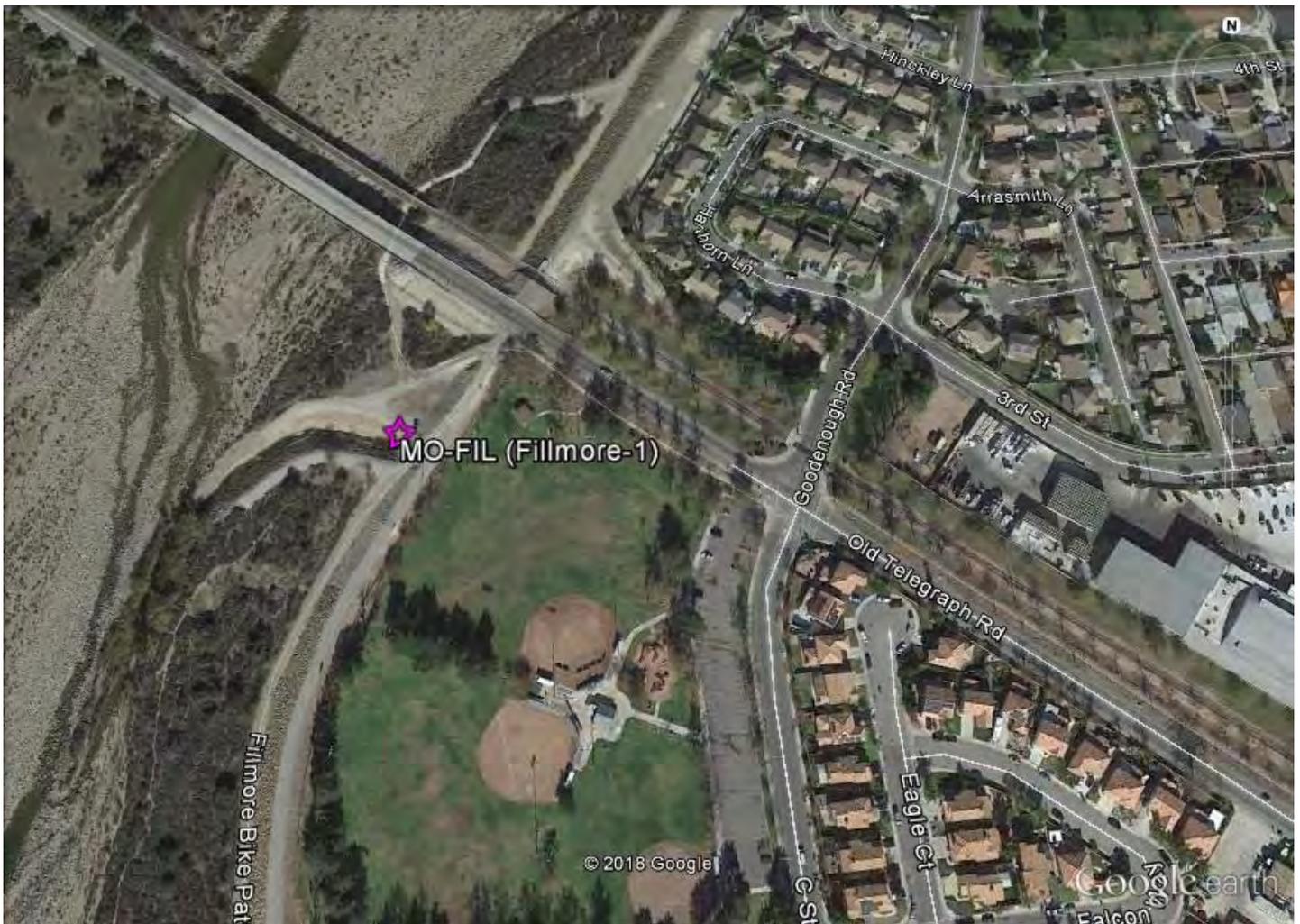
**Station:** MO-FIL (Fillmore-1)

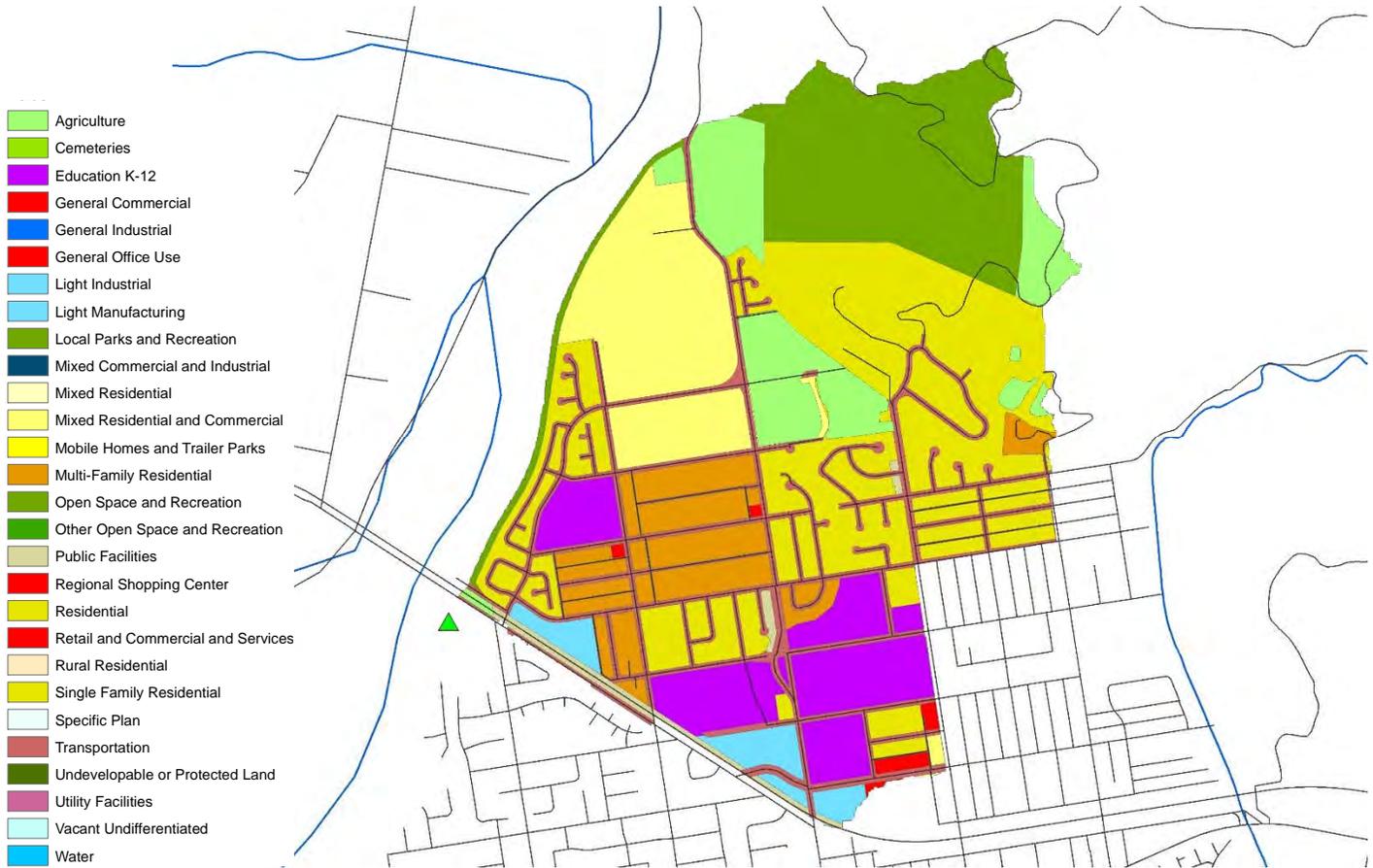
**Waterbody:** North Fillmore Drain (tributary to Sespe Creek)

**Location:** 75 yds. southwest of Old Telegraph Rd.  
(34°24'16.70"N, 118°55'50.80"W)

**Known Issues:** Sediment build up around intake

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





**Entire City**

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

**Selected Subwatershed**

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

## Meiners Oaks (Unincorporated)

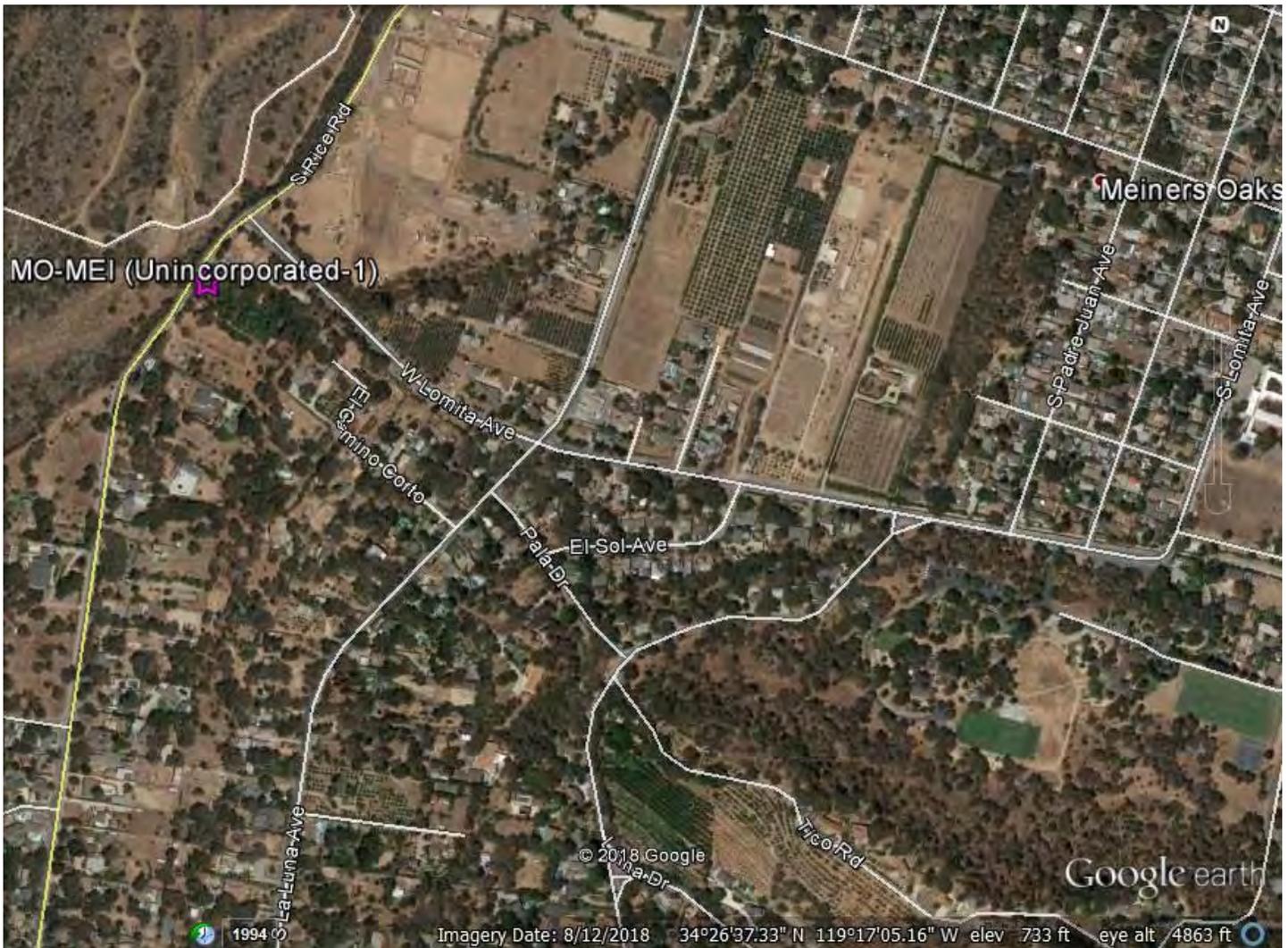
**Station:** MO-MEI (Unincorporated-1)

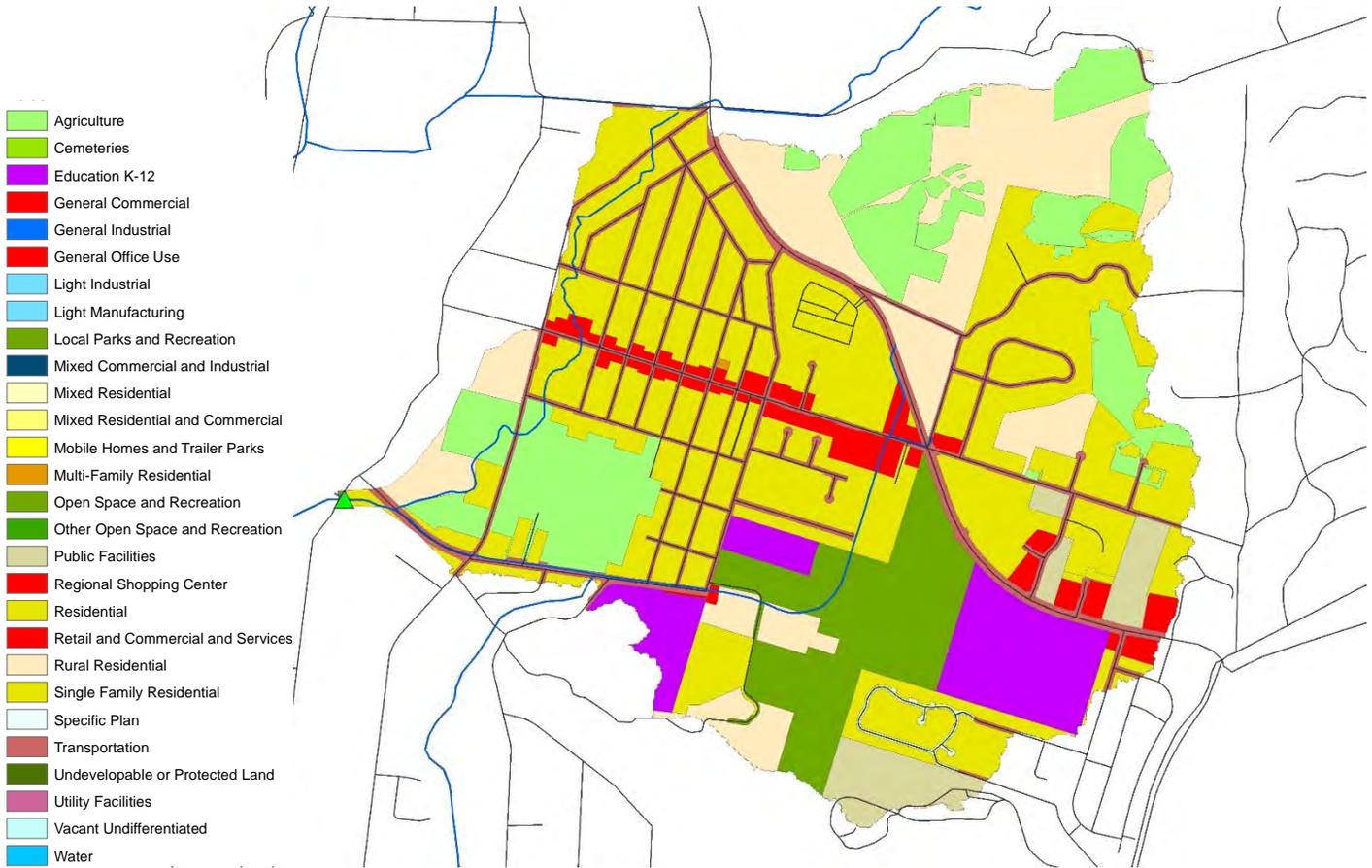
**Waterbody:** Happy Valley Drain (tributary to Ventura River)

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

**Known Issues:** Homeless occasionally present under bridge at site.

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





**Entire City**

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

**Selected Subwatershed**

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

## Moorpark

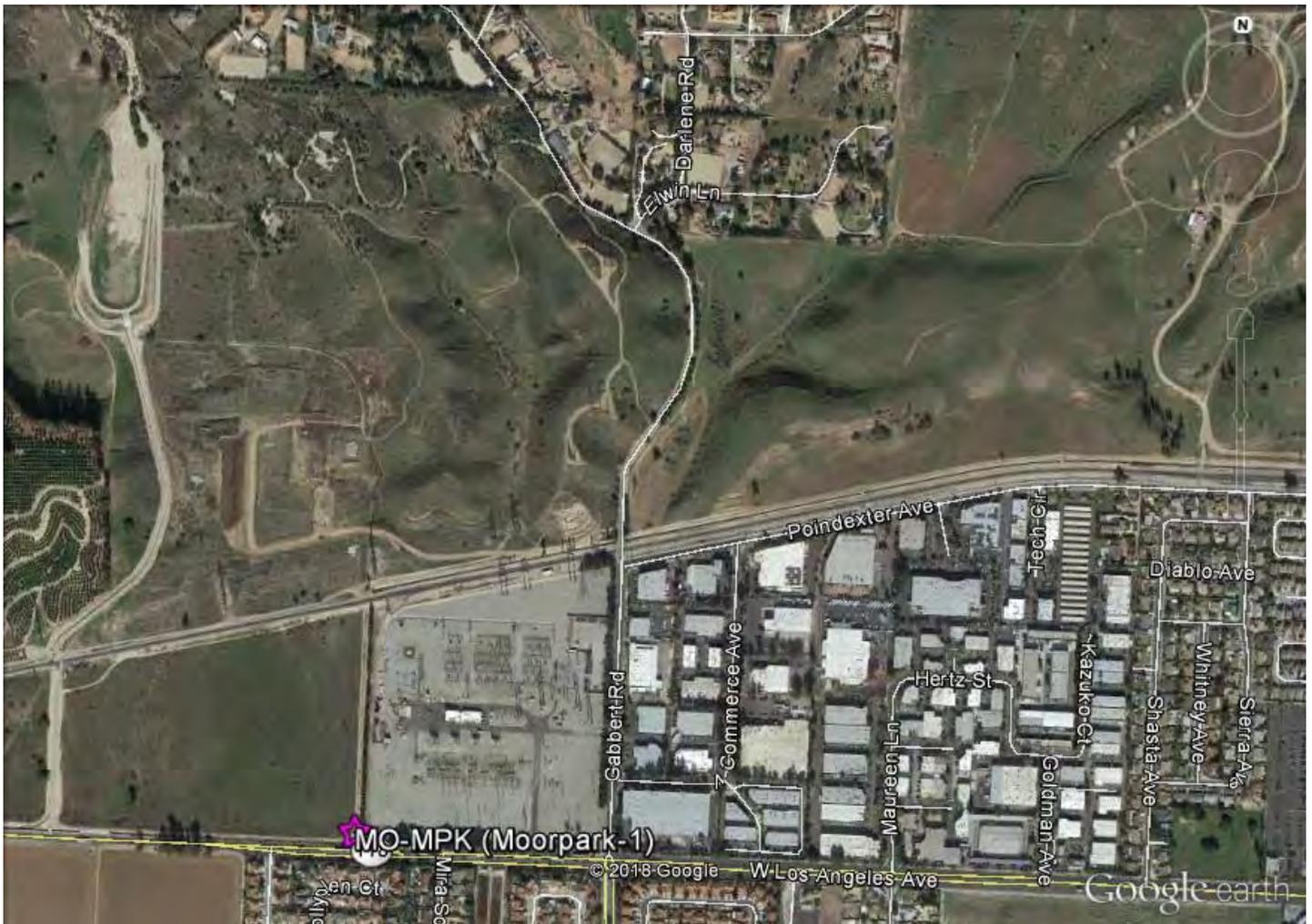
**Station:** MO-MPK (Moorpark-1)

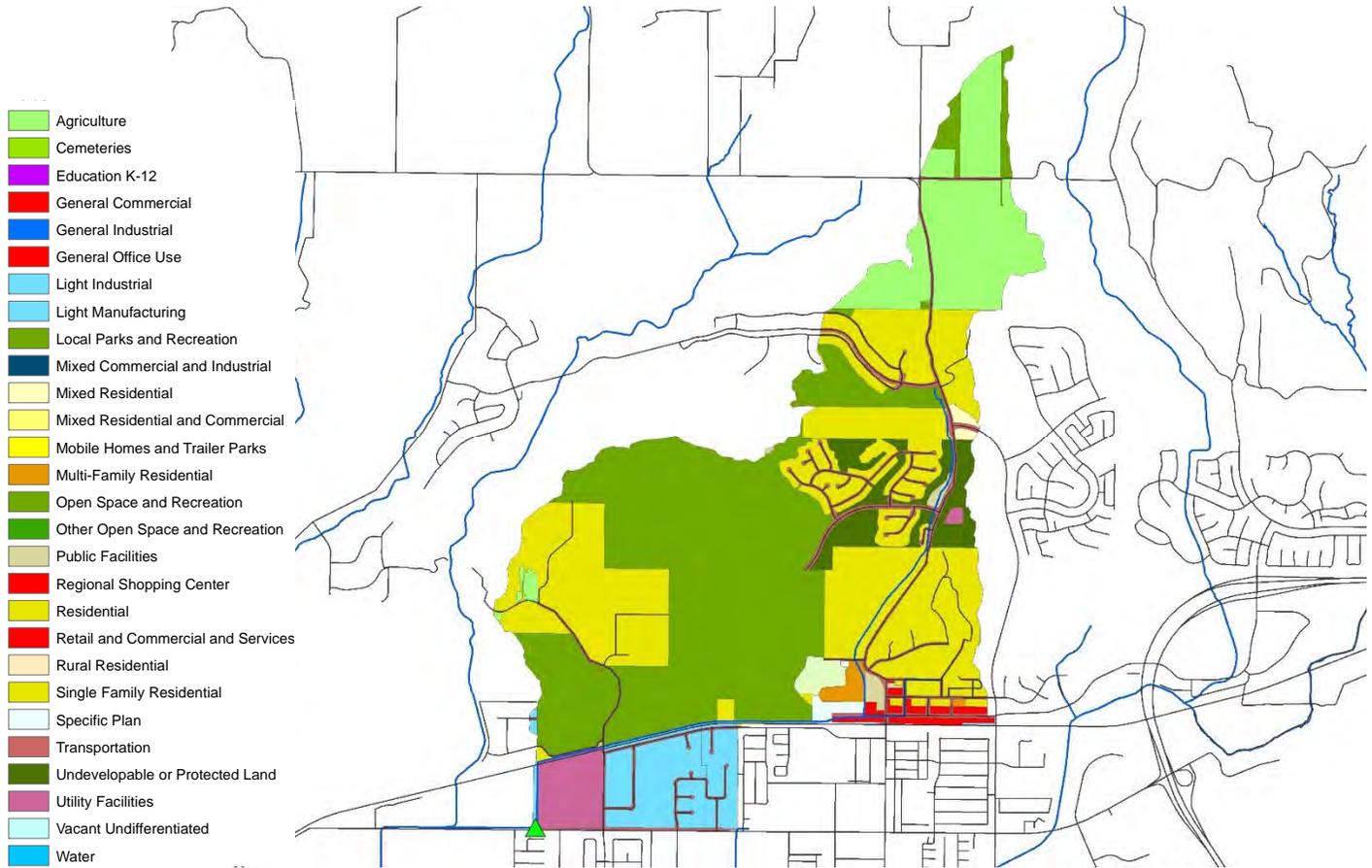
**Waterbody:** Walnut Canyon (tributary to Arroyo Simi)

**Location:** North side of SR 118 near southwest corner of So. Cal. Edison property (34°16'44.14"N, 118°54'19.21"W)

**Known Issues:** None

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





**Entire City**

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

**Selected Subwatershed**

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

## Ojai

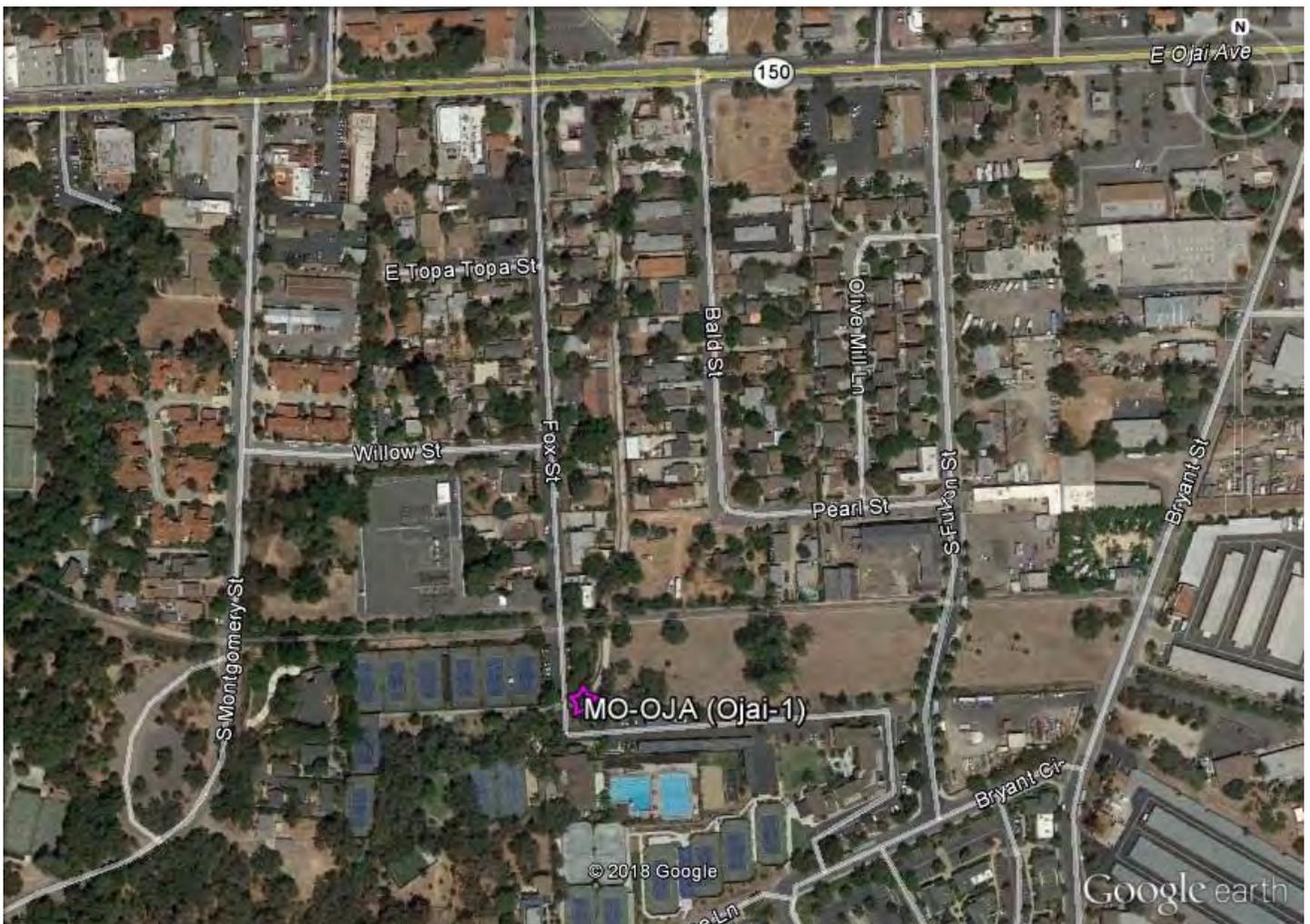
**Station:** MO-OJA (Ojai-1)

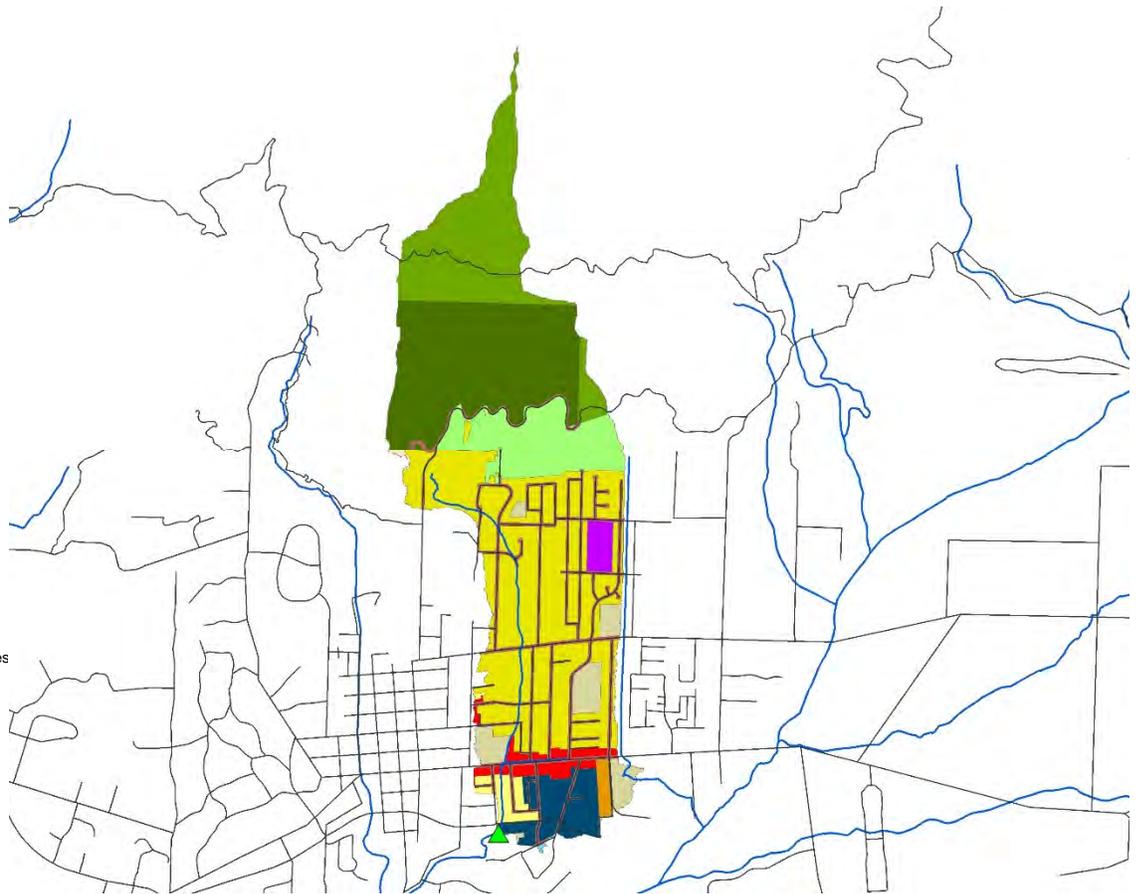
**Waterbody:** Fox Canyon Barranca (tributary to San Antonio Creek)

**Location:** Concrete box channel upstream Ojai Valley Athletic Club and downstream pedestrian walkway (34°26'41.26"N, 119°14'28.32"W)

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

**Dry Season Flow Potential:** Frequently dry outside of wet season storms.





**Entire Watershed**

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

**Selected Subwatershed**

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

## Oxnard

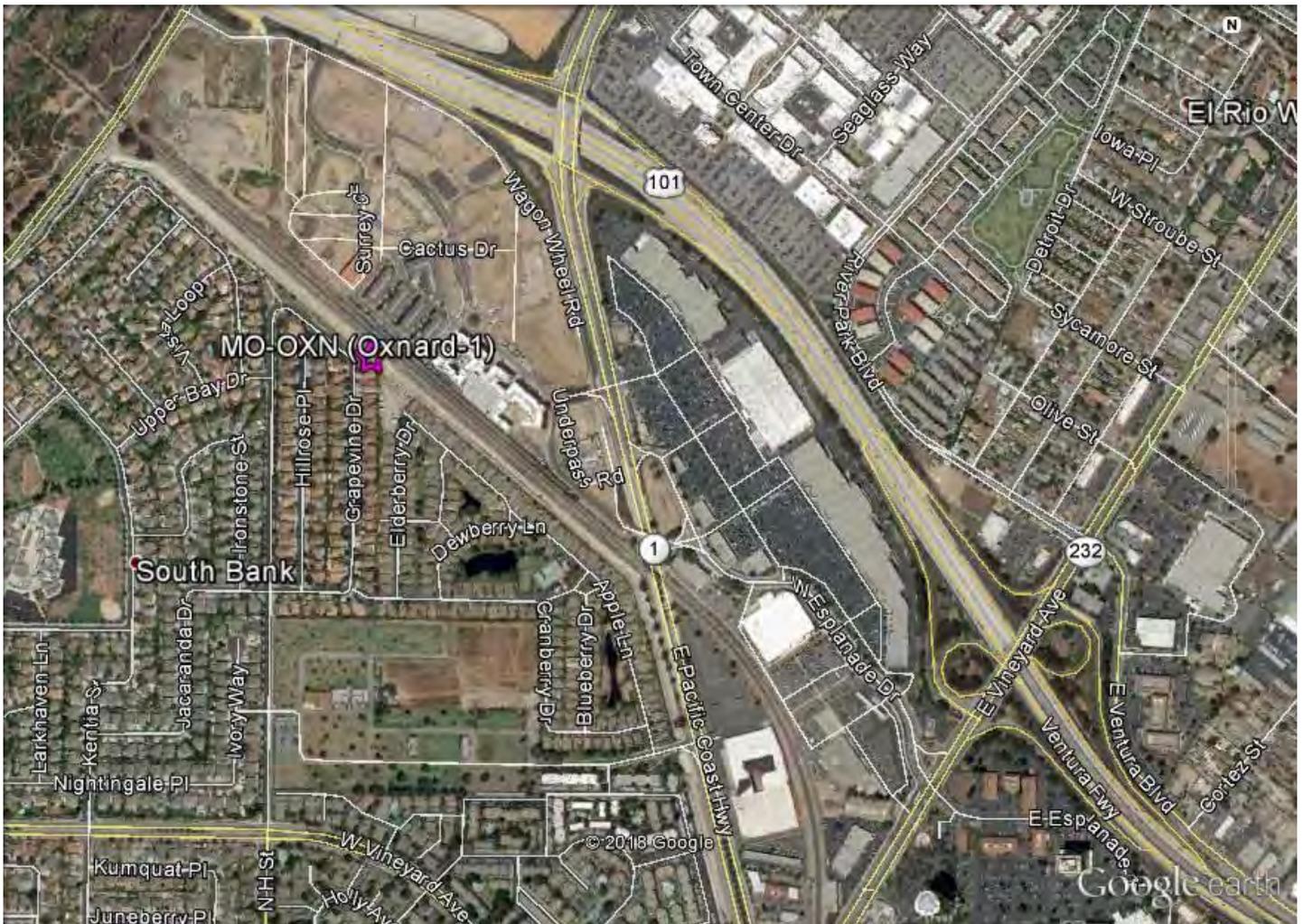
**Station:** MO-OXN (Oxnard-1)

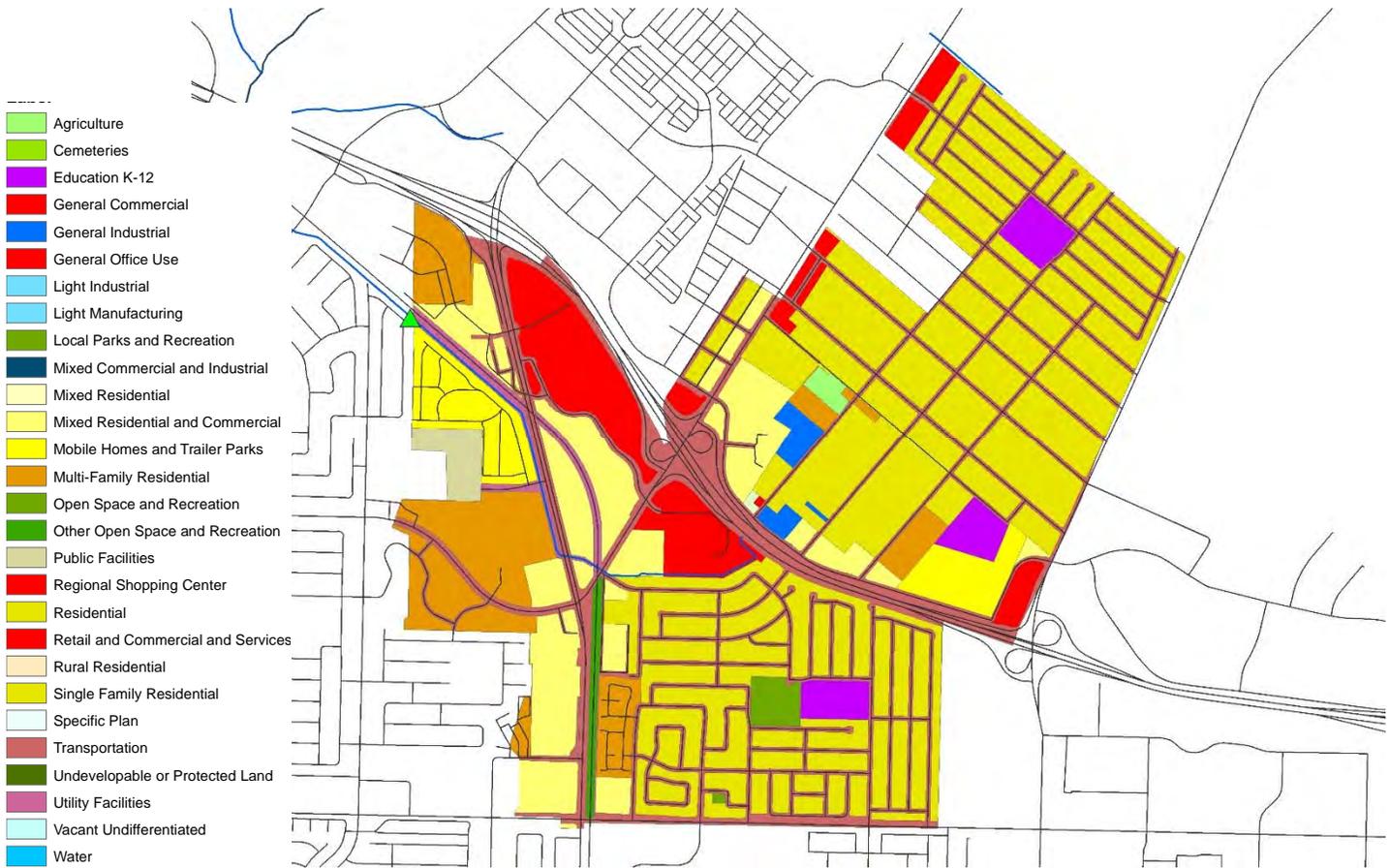
**Waterbody:** El Rio Drain (tributary to Santa Clara River)

**Location:** Pedestrian bridge 50 yds. southwest bend of Winchester Dr. (34°14'10.13"N, 119°11'3.88"W)

**Known Issues:** Frequent presence of homeless and vandals in area.

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





### Entire City

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

### Selected Subwatershed

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

## Port Hueneme

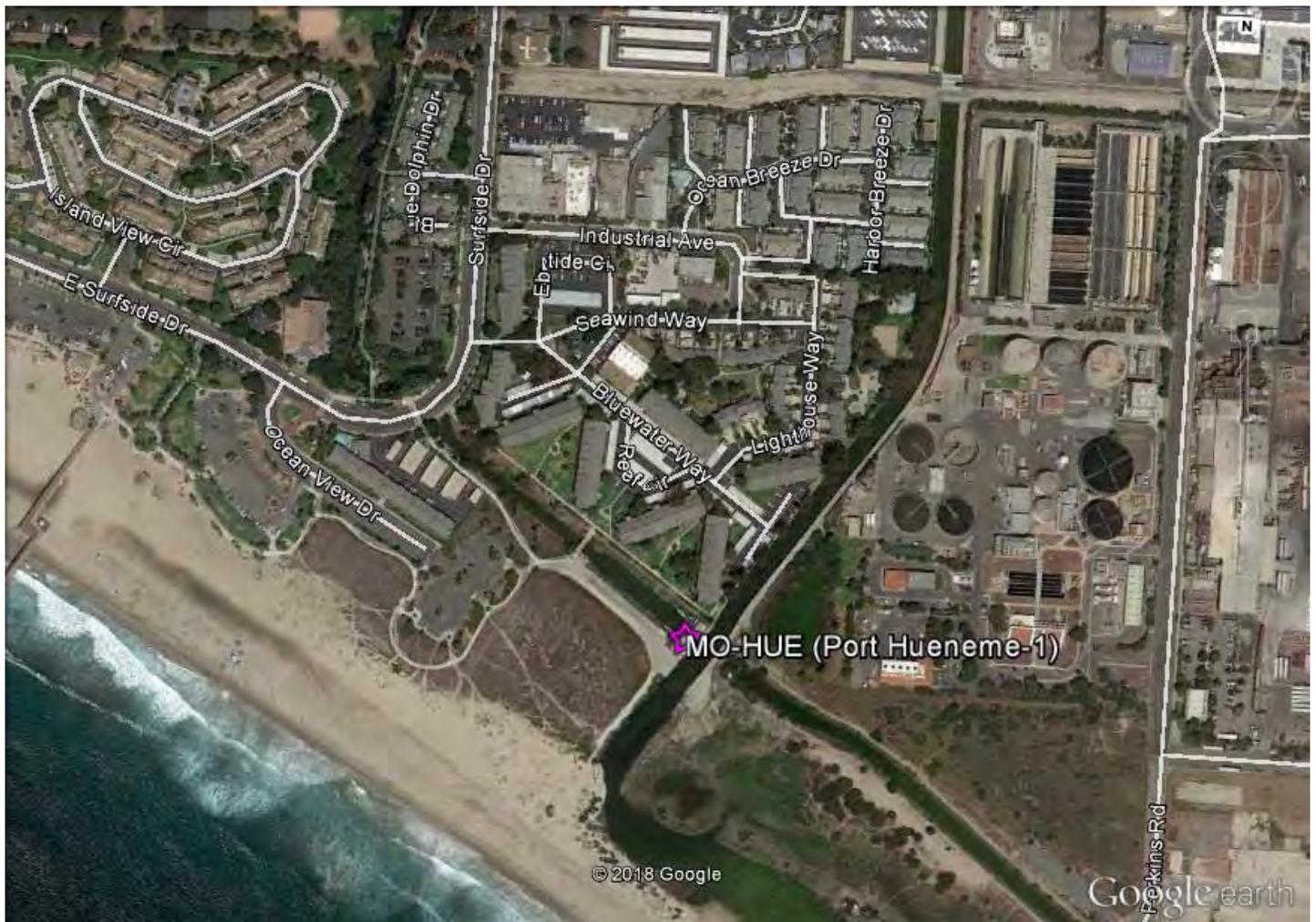
**Station:** MO-HUE (Port Hueneme-1)

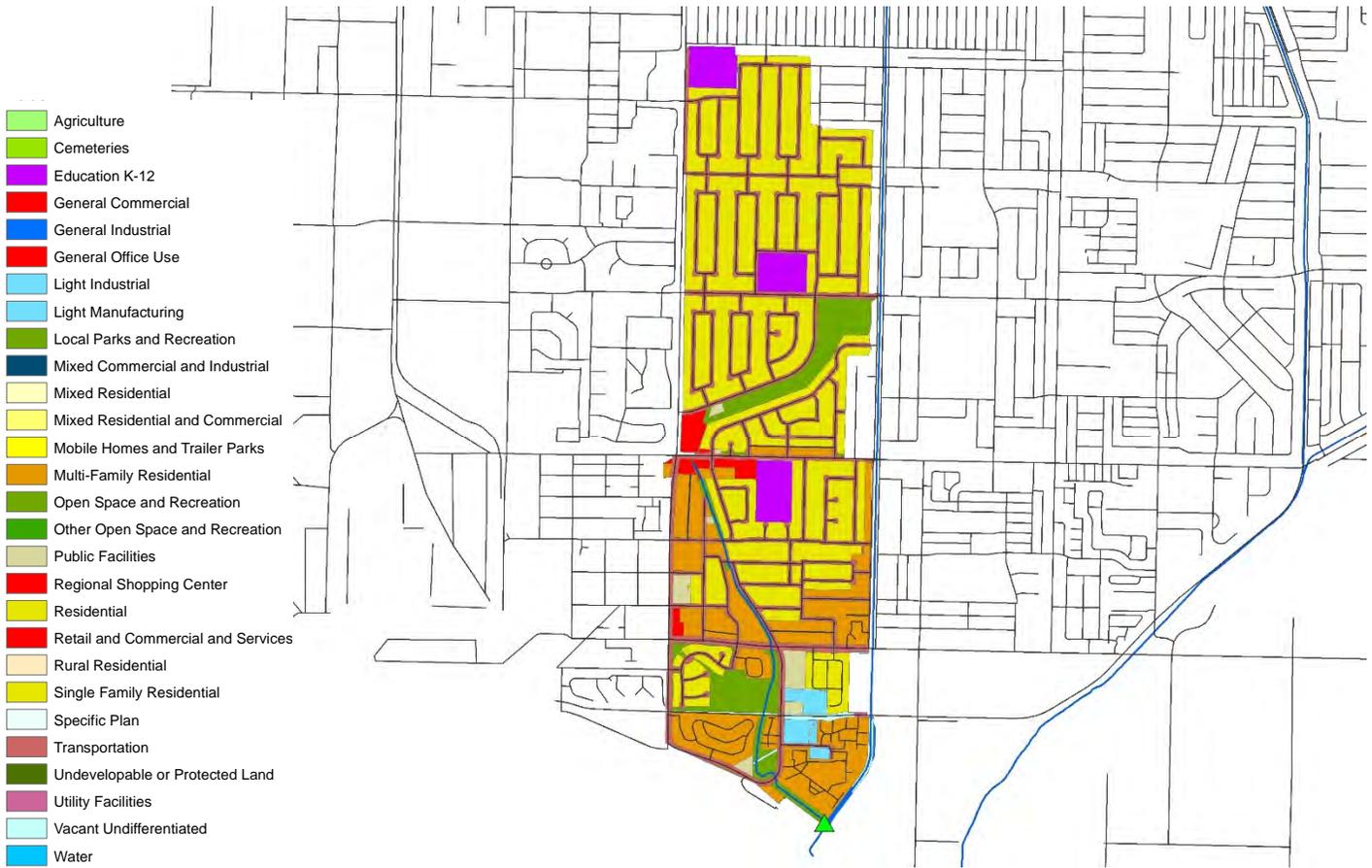
**Waterbody:** Hueneme Drain (tributary to Pacific Ocean)

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

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

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





**Entire City**

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

**Selected Subwatershed**

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

## Santa Paula

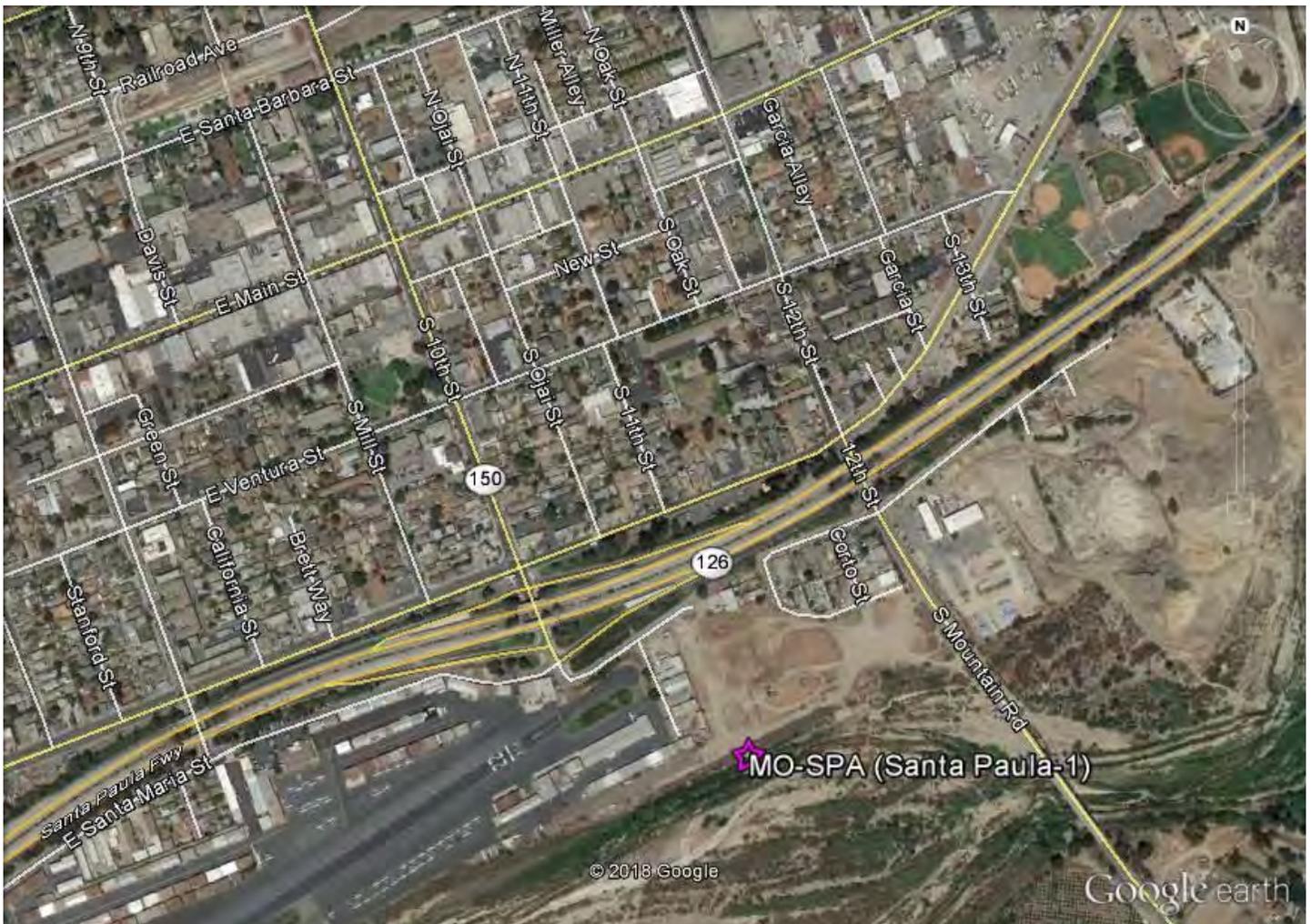
**Station:** MO-SPA (Santa Paula-1)

**Waterbody:** 11<sup>th</sup> Street Drain (tributary to Santa Clara River)

**Location:** Upstream Santa Paula Airport  
(34°20'54.98"N, 119° 3'20.10"W)

**Known Issues:** Homeless presence and vandalism frequent in area.

**Dry Season Flow Potential:** Typically dry between storms. Very infrequent dry weather flow.





**Entire City**

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

**Selected Subwatershed**

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

## Simi Valley

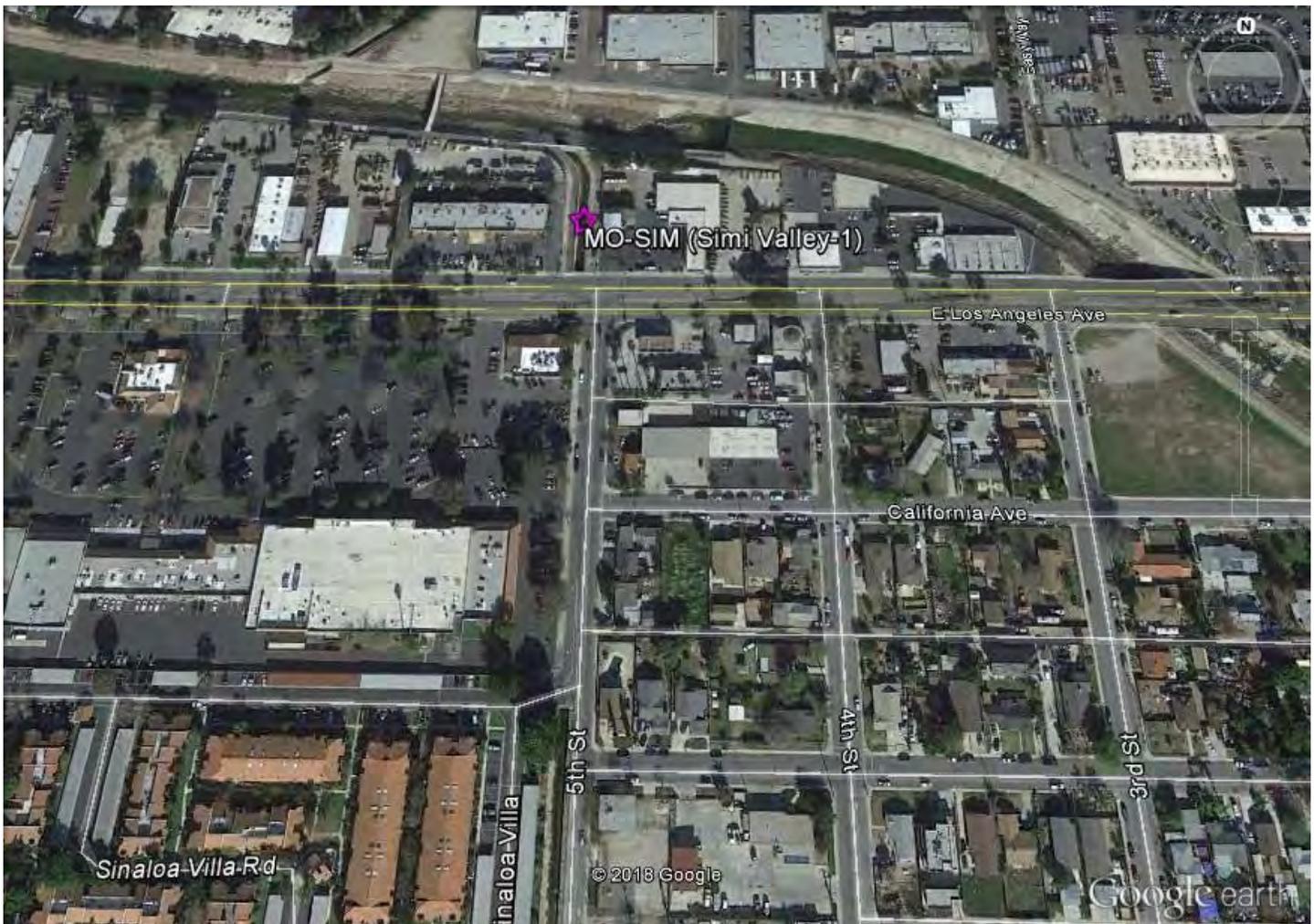
**Station:** MO-SIM (Simi Valley-1)

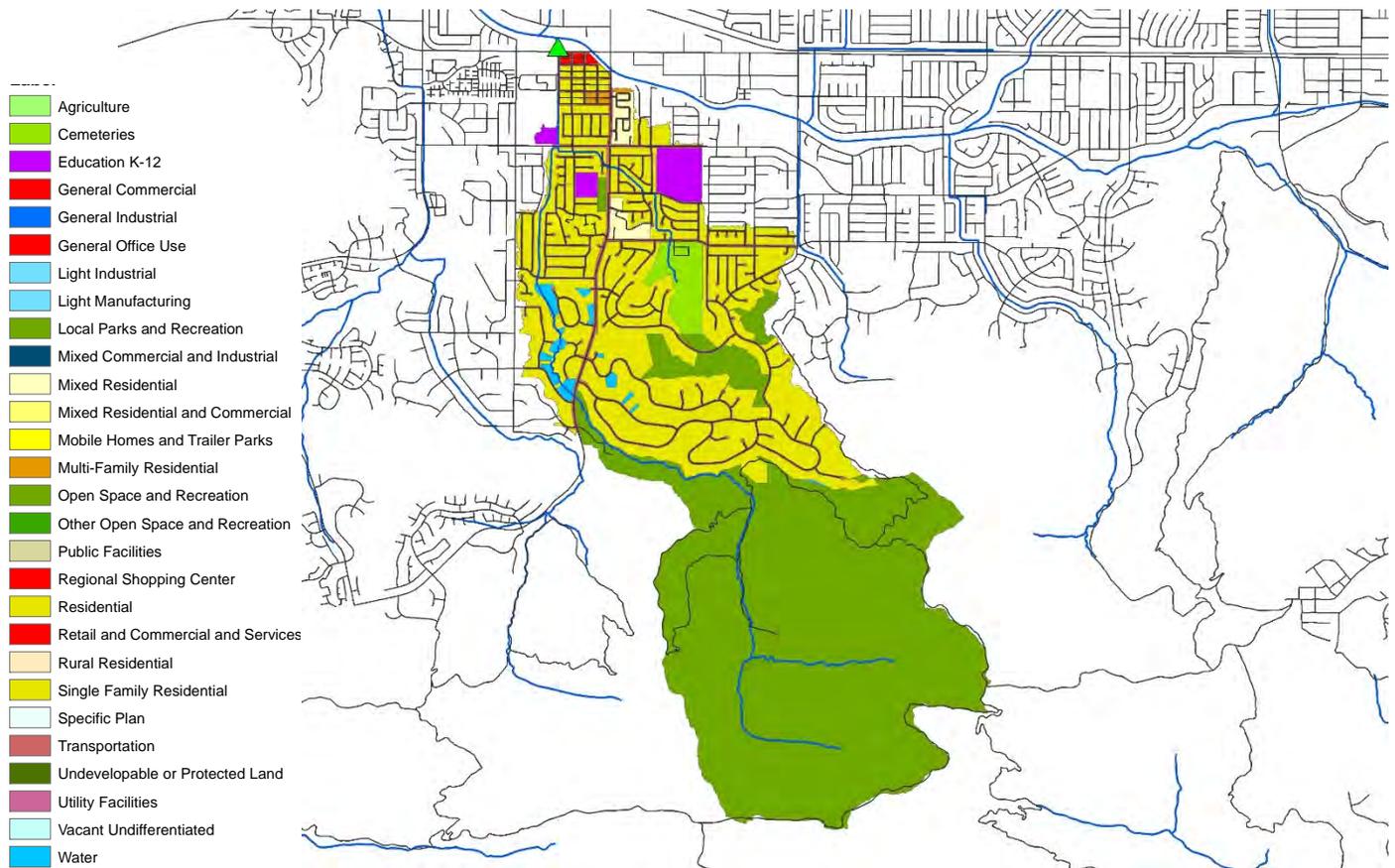
**Waterbody:** Bus Canyon Drain (tributary to Arroyo Simi)

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

**Known Issues:** Homeless have been known to camp in area. High salinity due to groundwater discharge

**Dry Season Flow Potential:** Year-round flow due to urban runoff and/or groundwater discharge upstream





### Entire City

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

### Selected Subwatershed

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

## Thousand Oaks

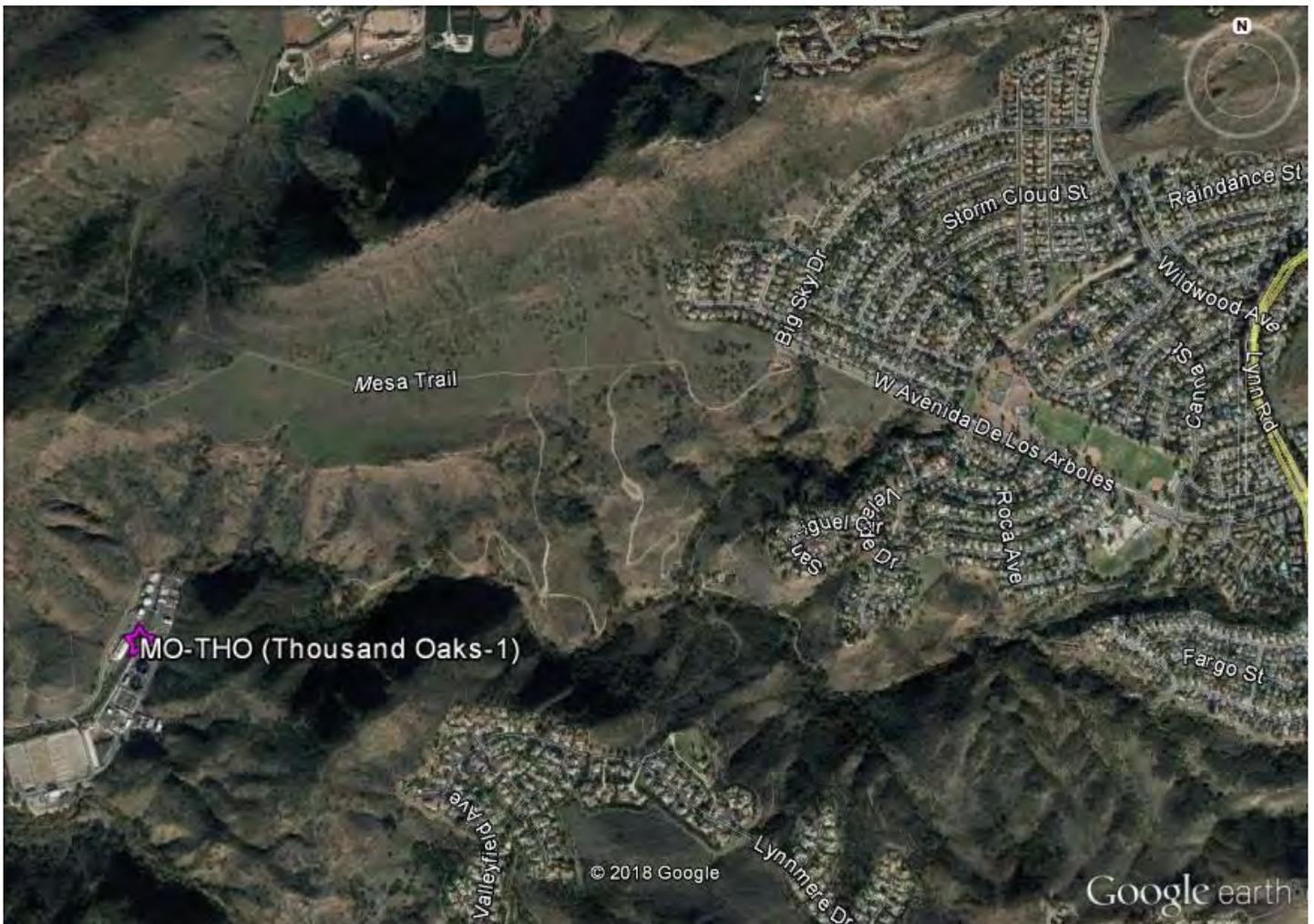
**Station:** MO-THO (Thousand Oaks-1)

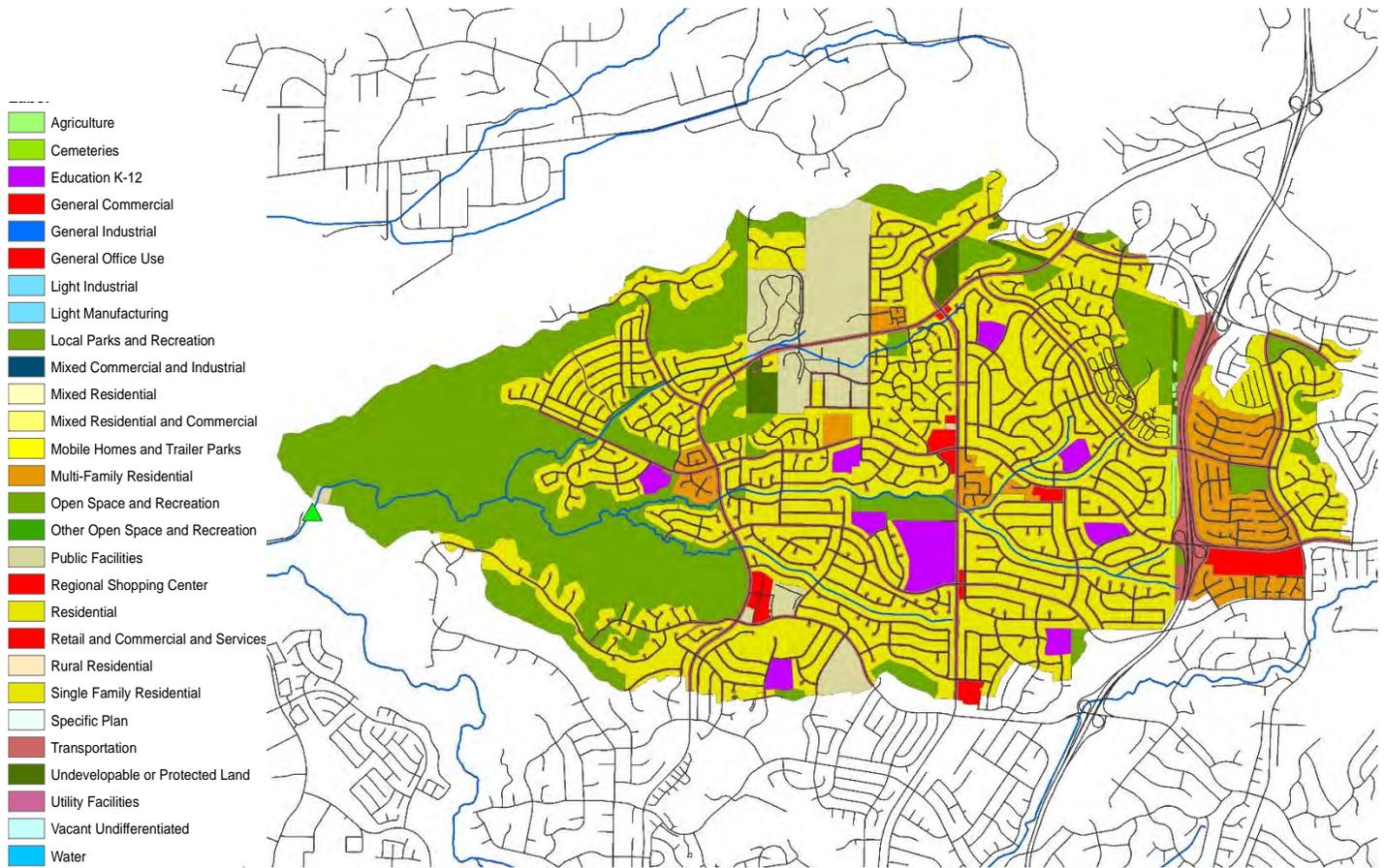
**Waterbody:** North Fork Arroyo Conejo (tributary to Conejo Creek)

**Location:** Hill Canyon WWTP sampling location R-1 (34°12'48.03"N, 118°55'17.09"W)

**Known Issues:** Rare access issues due to locked gates.

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





### Entire City

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

### Selected Subwatershed

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

## Ventura

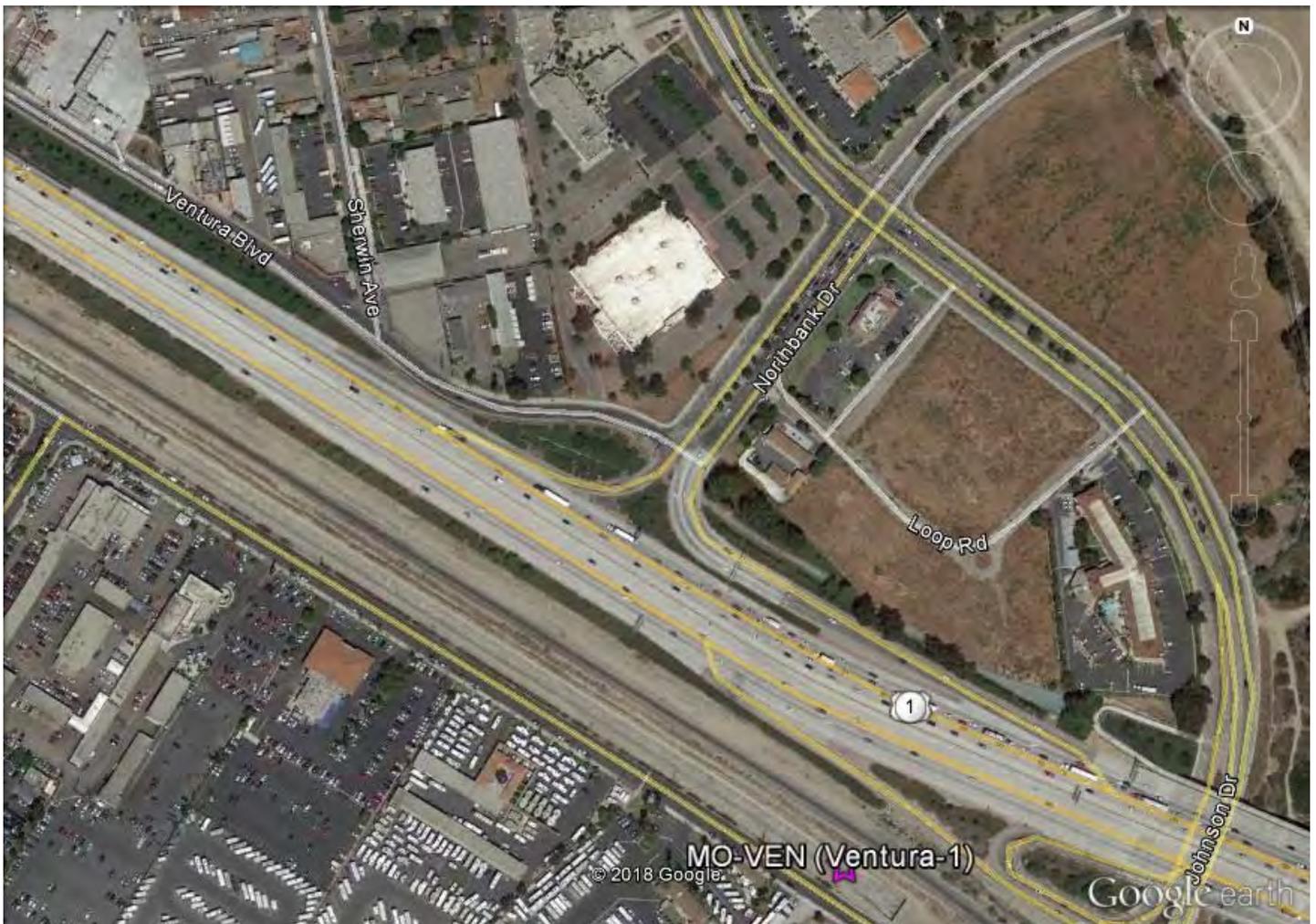
**Station:** MO-VEN (Ventura-1)

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

**Location:** Between Leland St. and US 101, north of Johnson Dr. (34°14'36.69"N, 119°11'42.06"W)

**Known Issues:** Wide concrete bottom spreads out low flows.

**Dry Season Flow Potential:** Intermittent year-round flow due to urban runoff and/or groundwater discharge





### Entire City

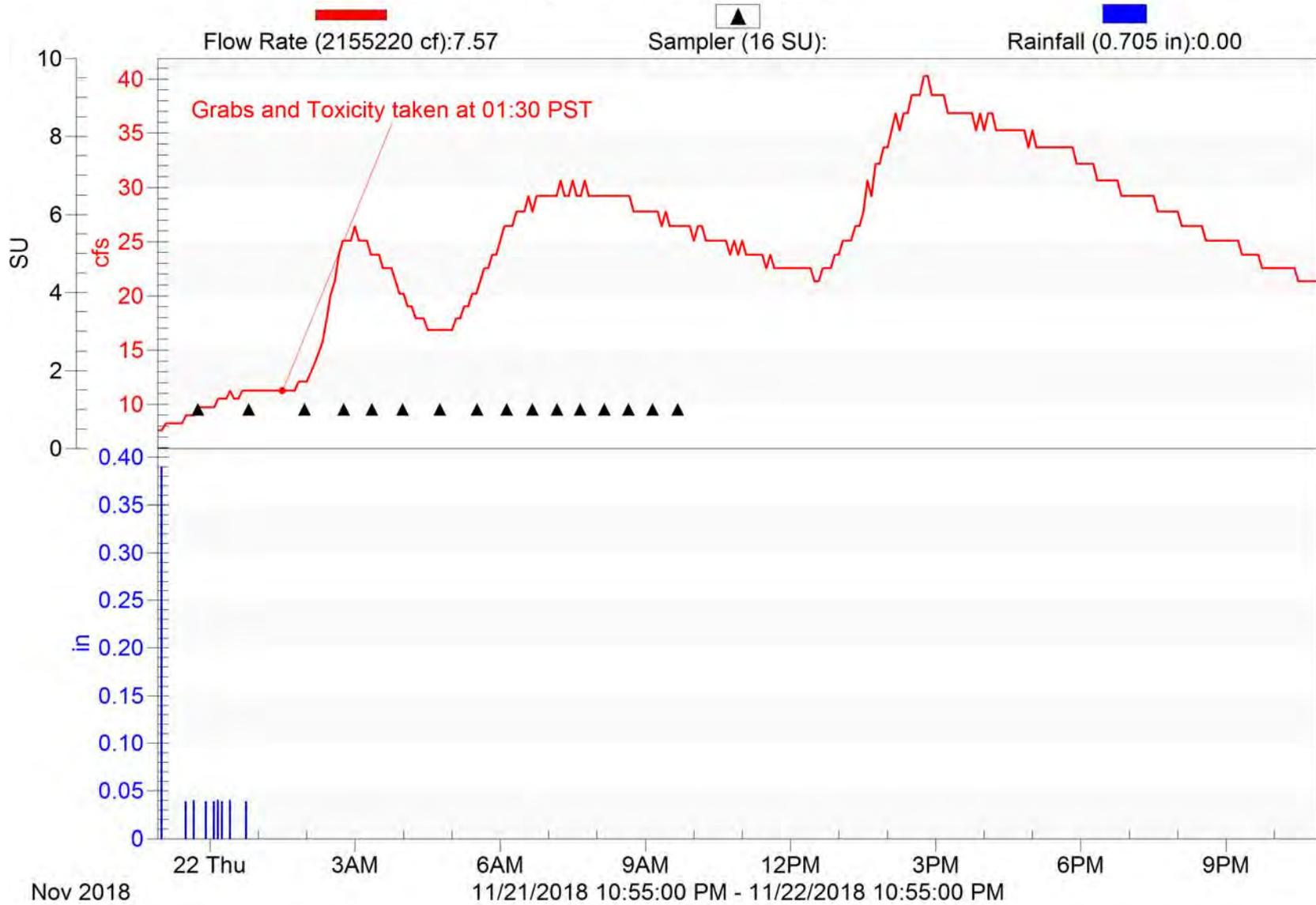
Land Use	Acres	% of Total Watershed
Agriculture	482.9	3.4%
Education K-12	6.8	0.05%
General Industrial	937.7	6.6%
Mixed Residential and Commercial	1447.0	10.2%
Multi-Family Residential	994.7	7.0%
Open Space and Recreation	1432.5	10.1%
Public Facilities/Schools	561.1	3.9%
Rural Residential	0.4	0.0%
Single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

### Selected Subwatershed

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

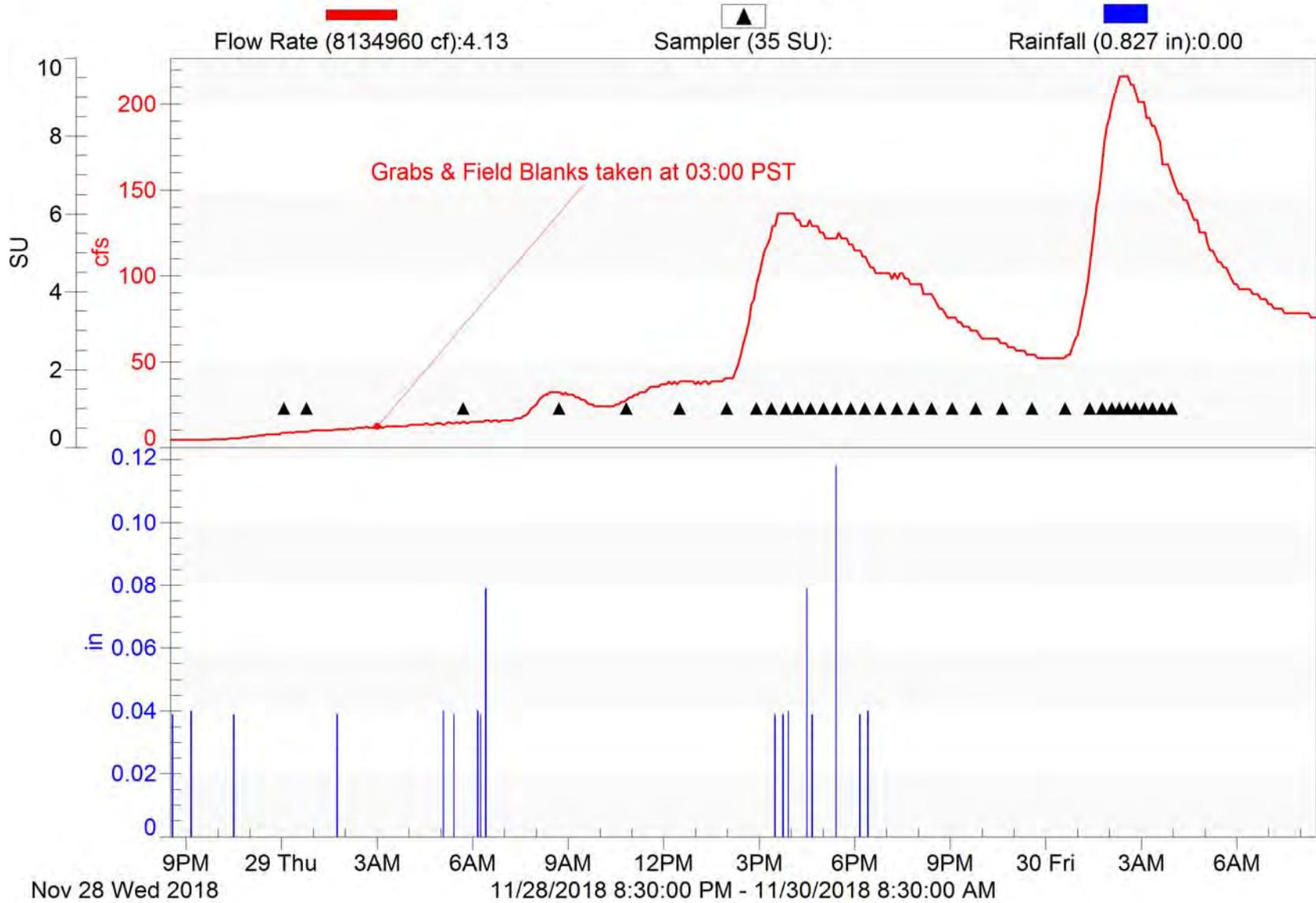
## Appendix B. Event Hydrographs

ME-CC  
2018/19 NPDES Event 1 (Wet)

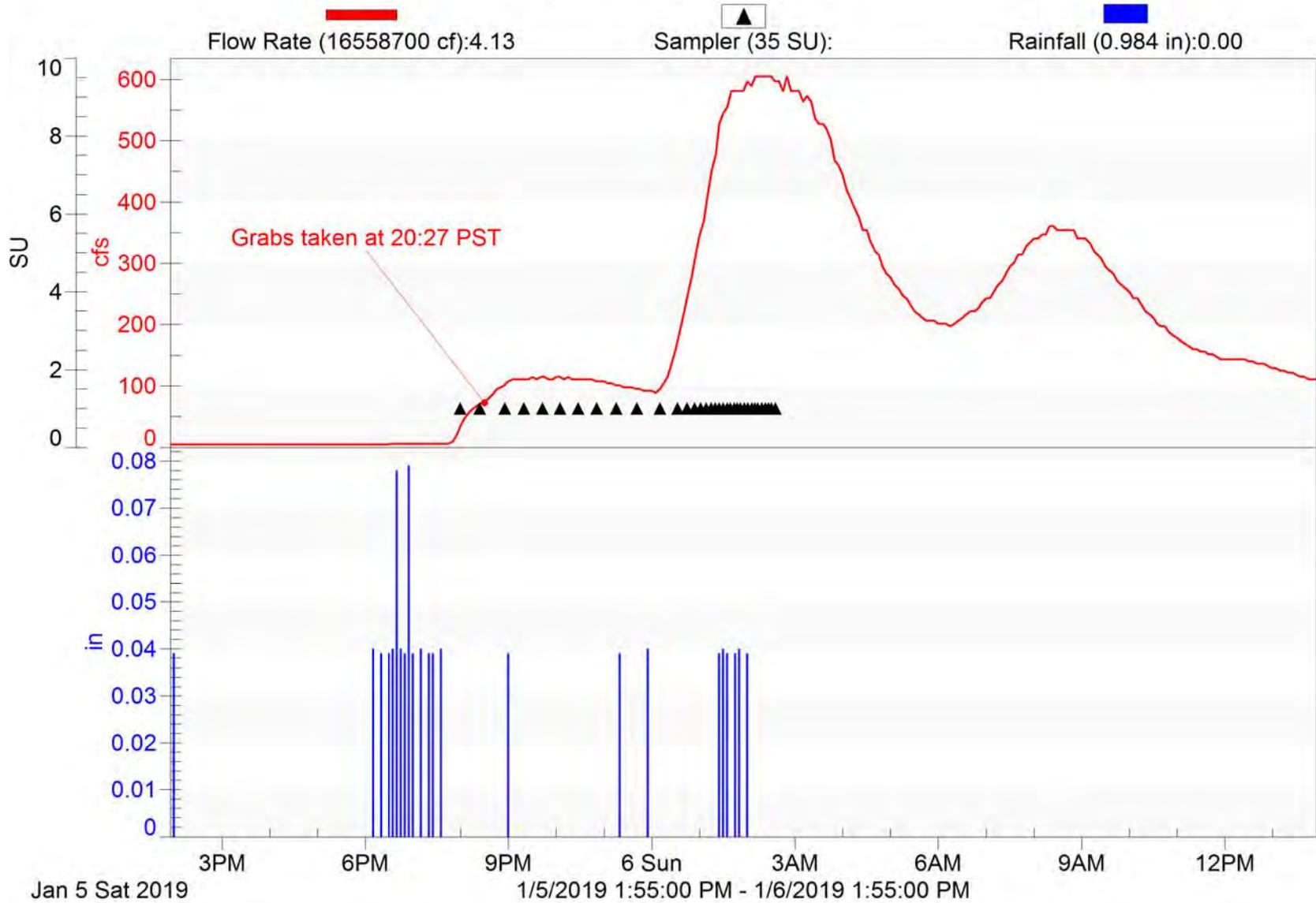


# ME-CC

2018/19 NPDES Event 2 (Wet)

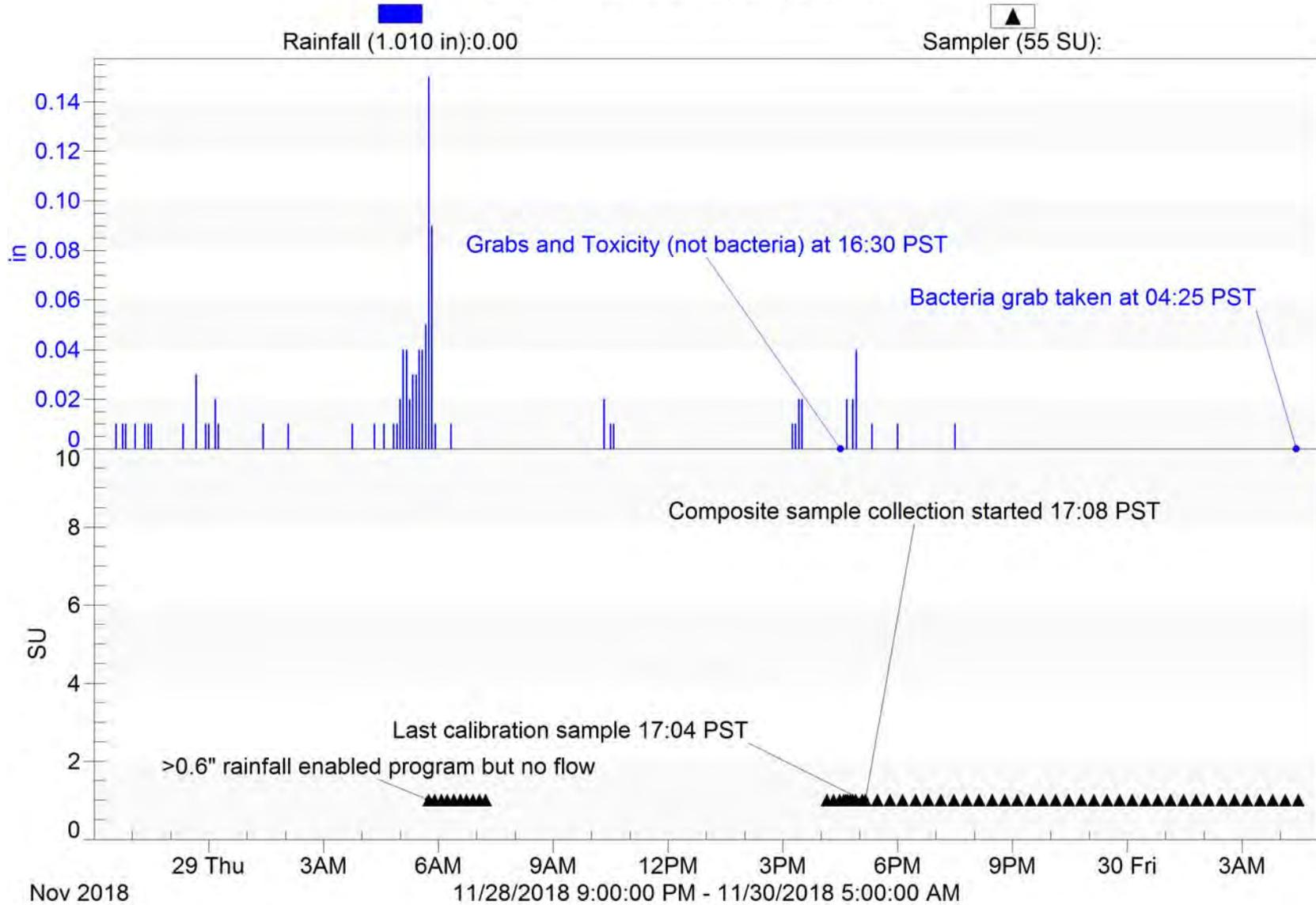


ME-CC  
2018/19 NPDES Event 3 (Wet)



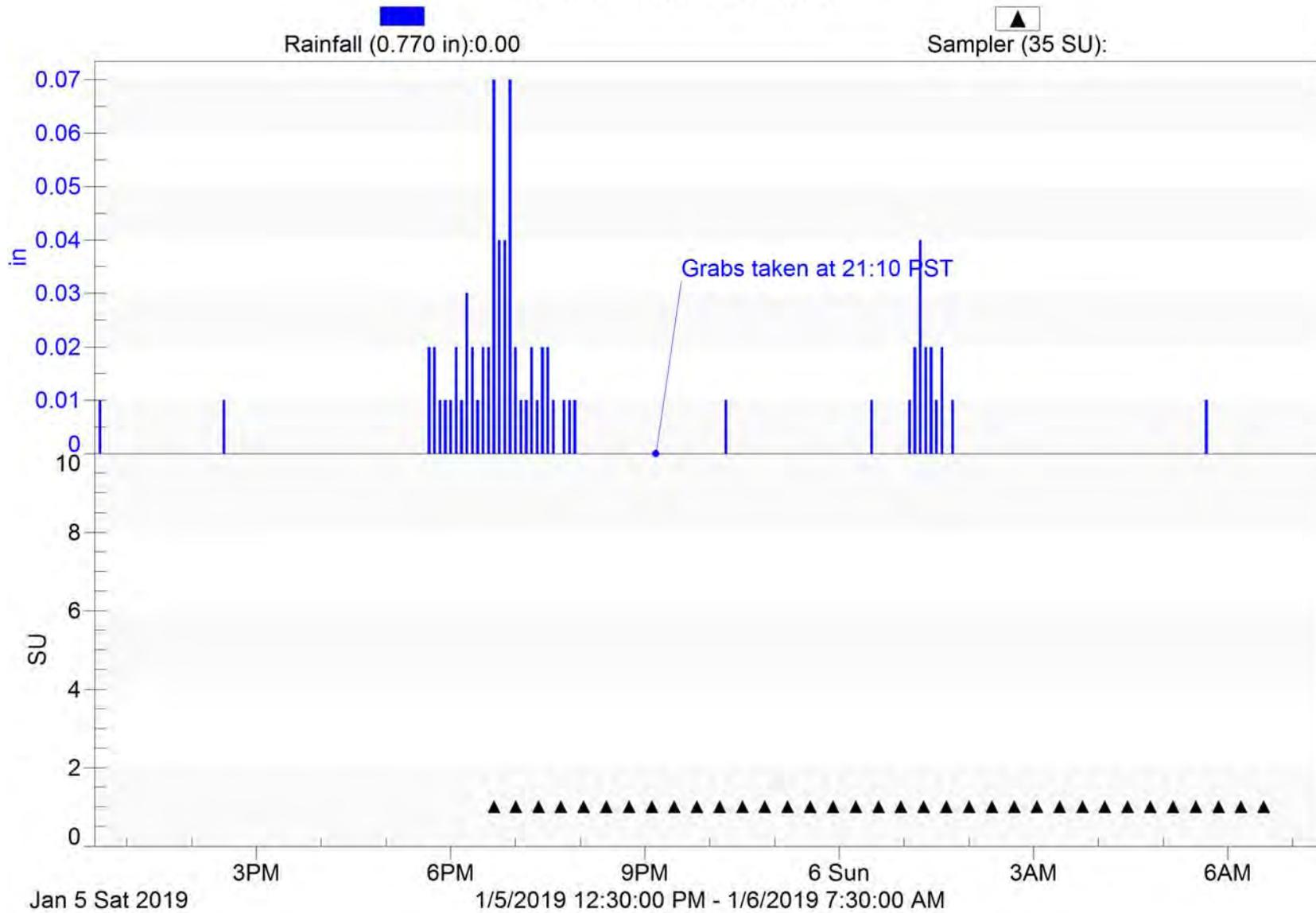
# ME-SCR

2018/19 NPDES Event #2 First Flush (Wet)



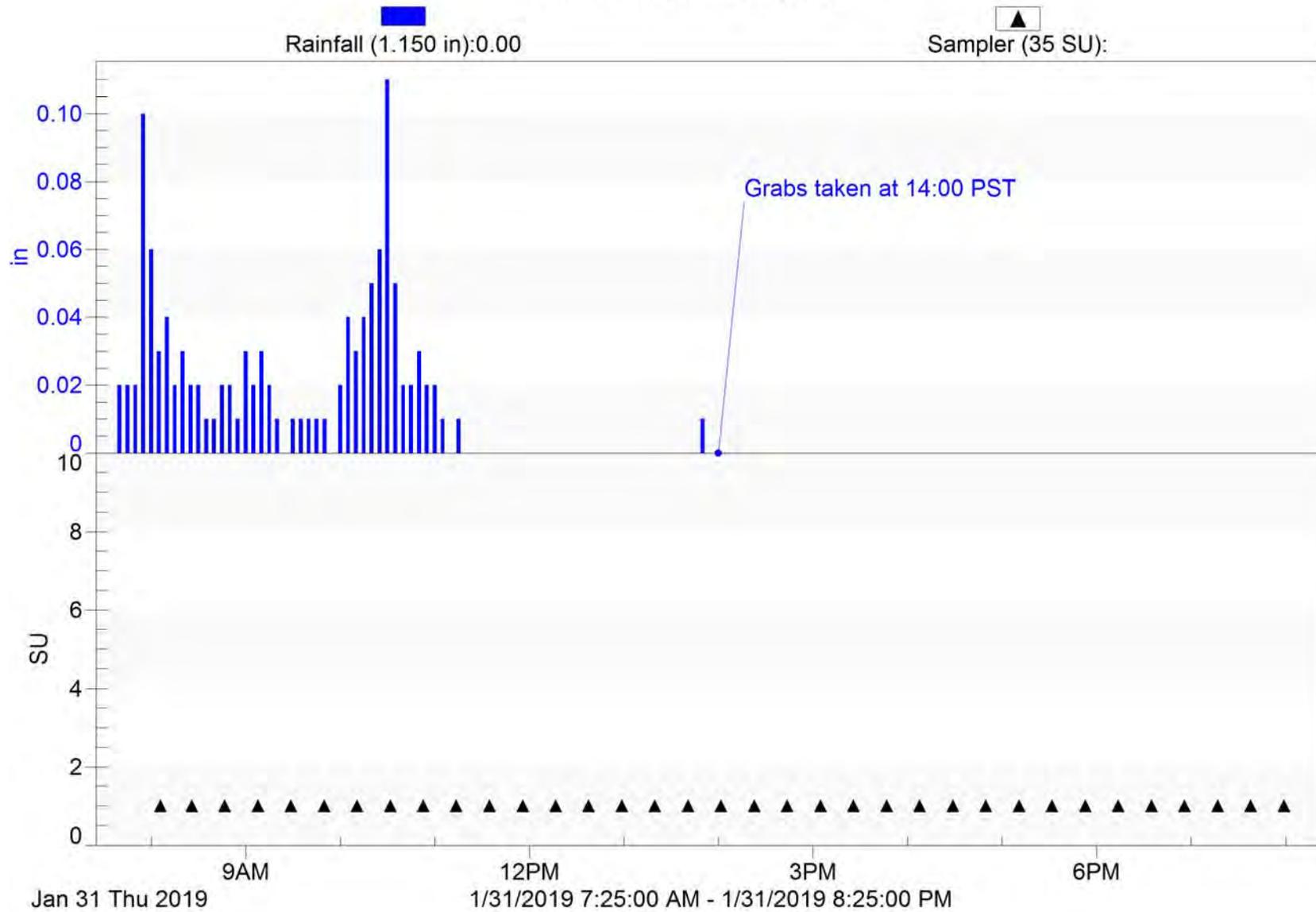
# ME-SCR

2018/19 NPDES Event #3 (Wet)



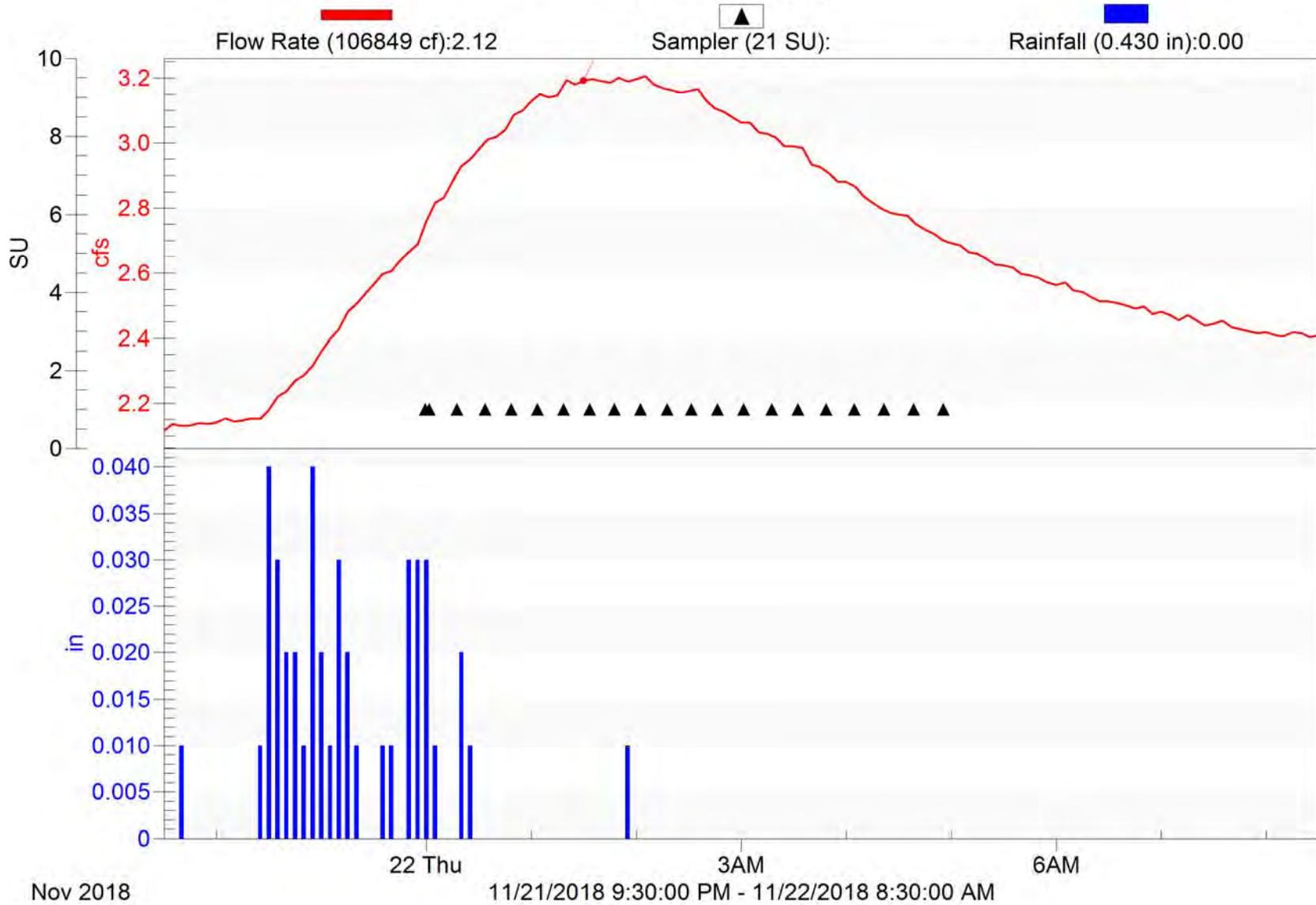
# ME-SCR

2018/19 NPDES Event #4 (Wet)



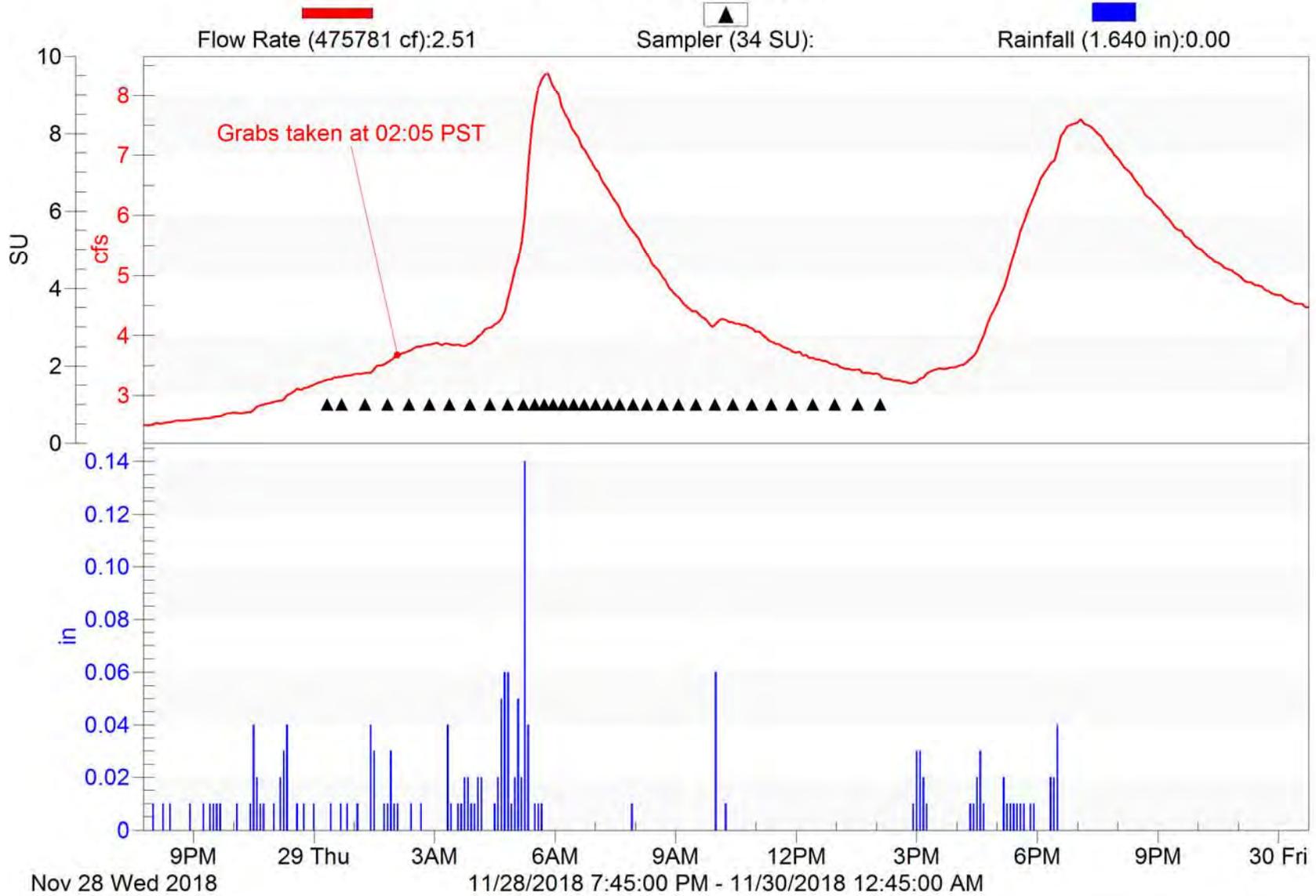
# ME-VR2

2018/19 NPDES Event #1 (Wet)



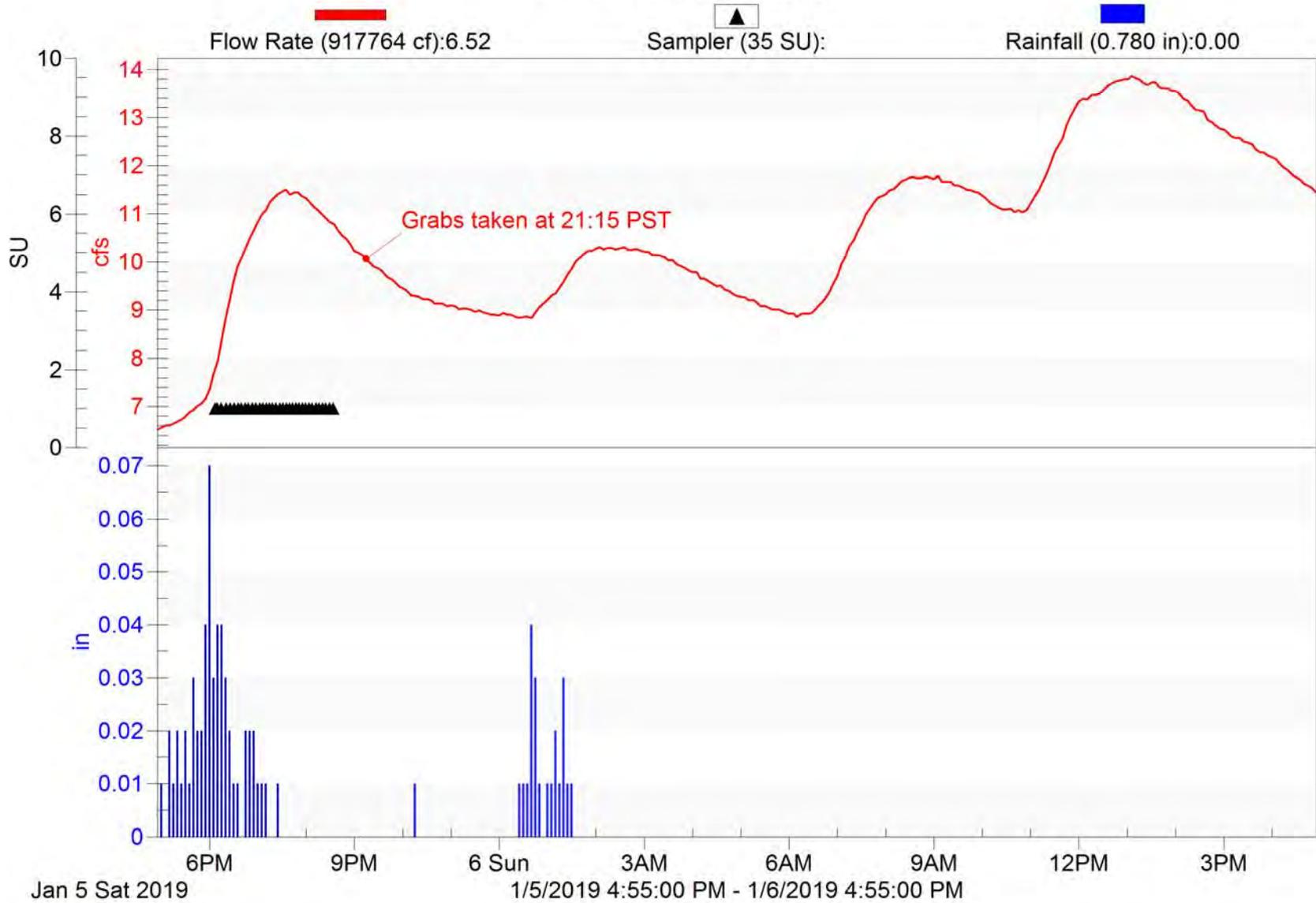
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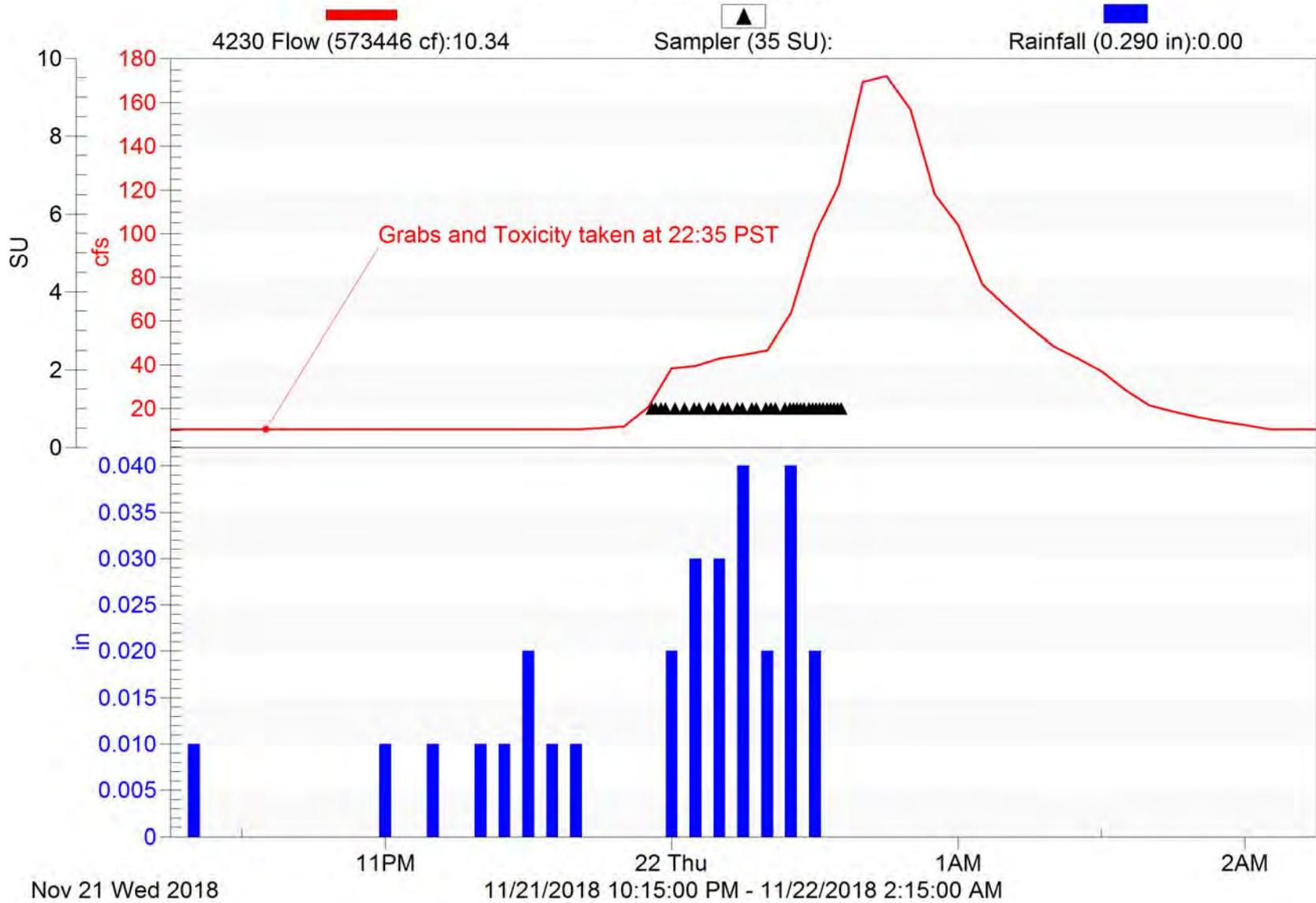
# ME-VR2

2018/19 NPDES Event #3 (Wet)



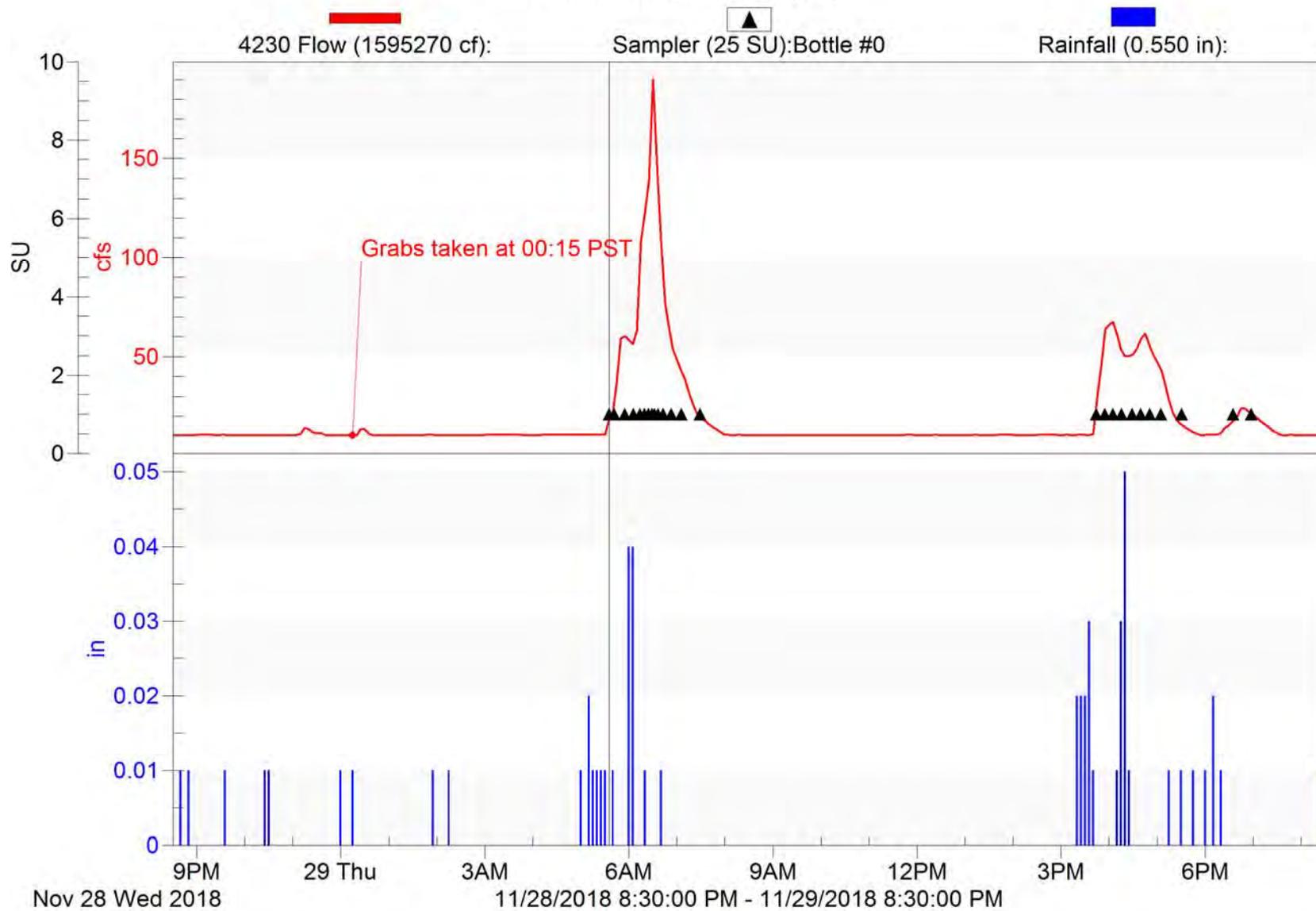
# Camarillo-1

2018/19 NPDES Event #1 (Wet)



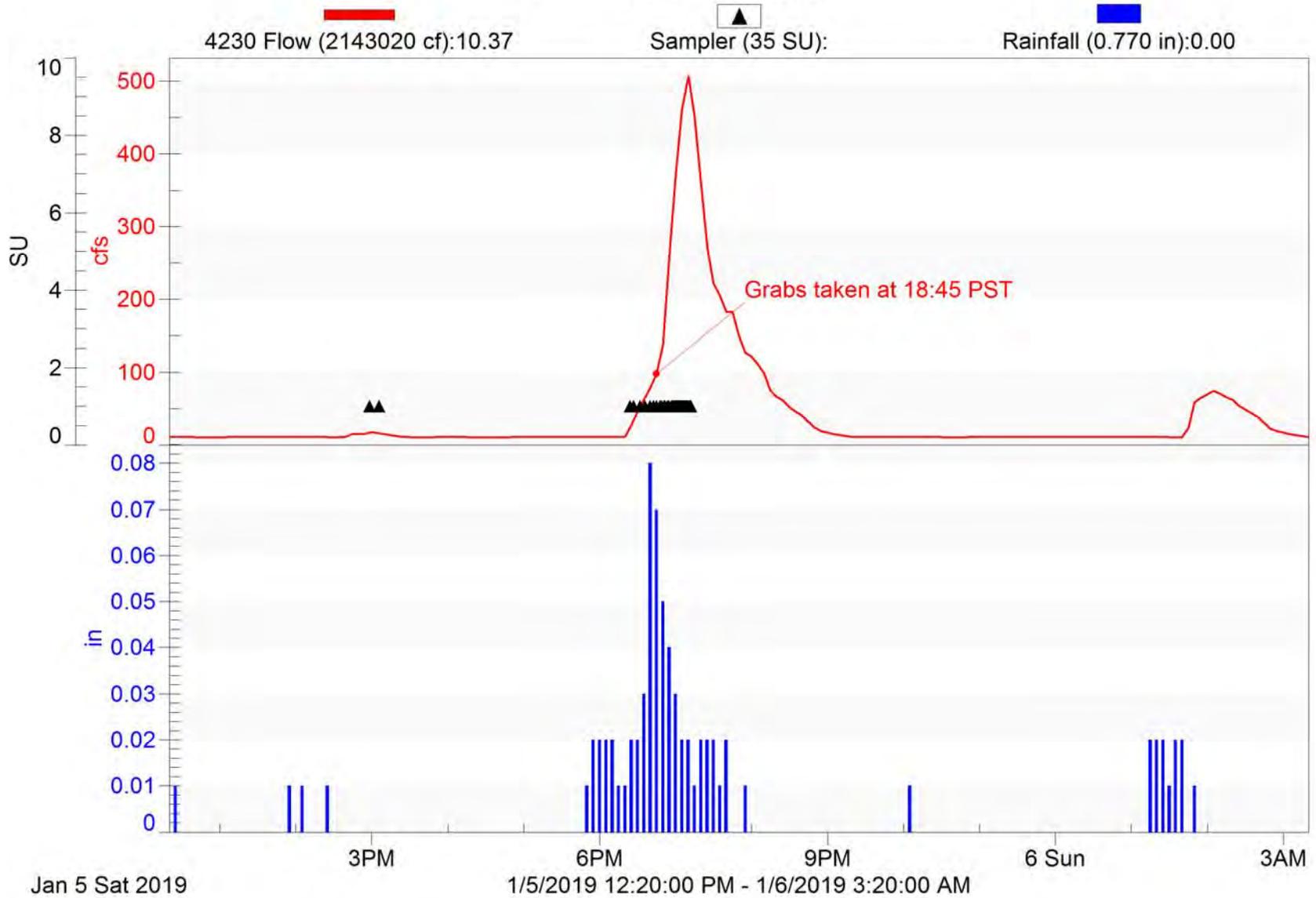
# Camarillo-1

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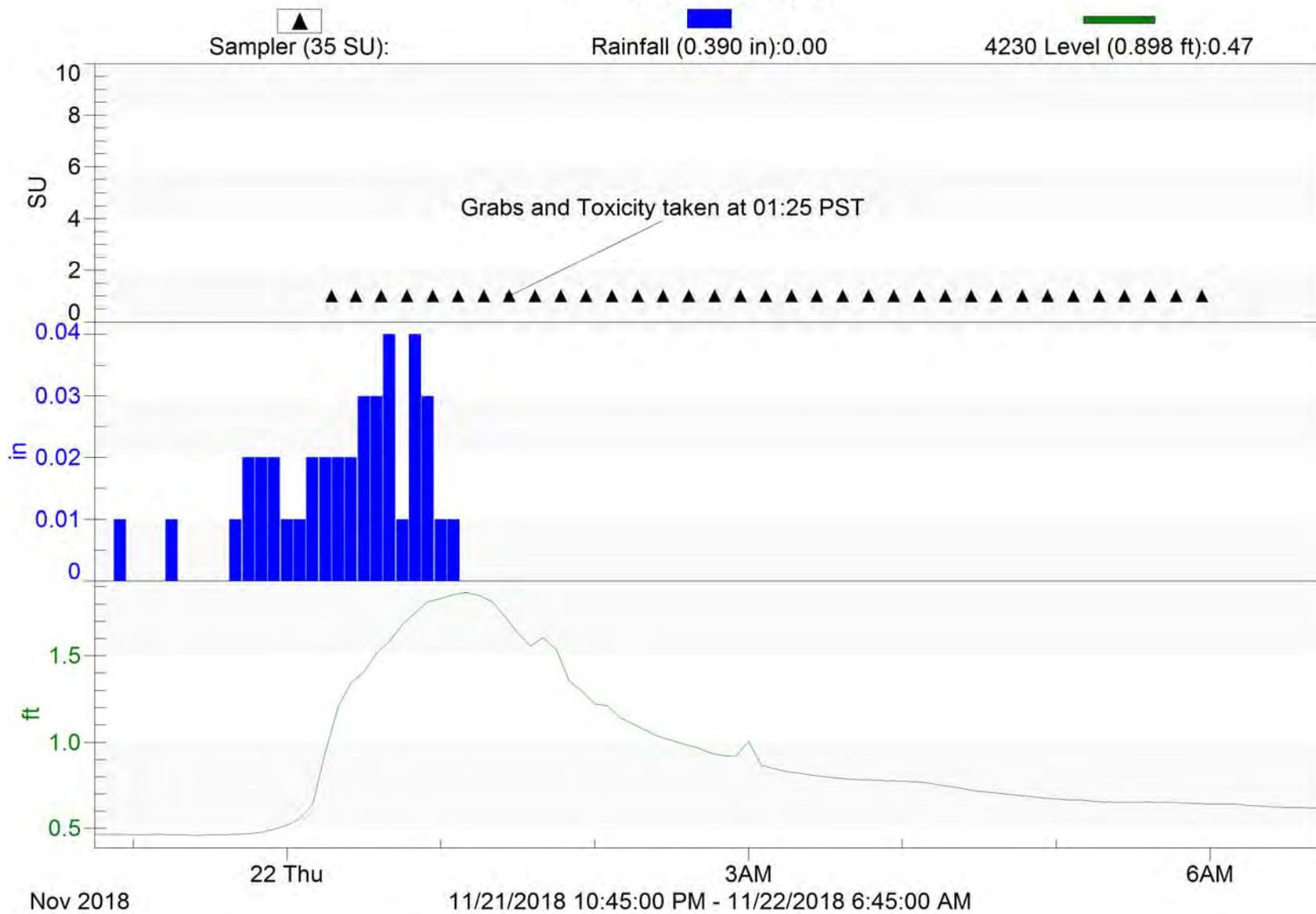
# Camarillo-1

2018/19 NPDES Event #3 (Wet)



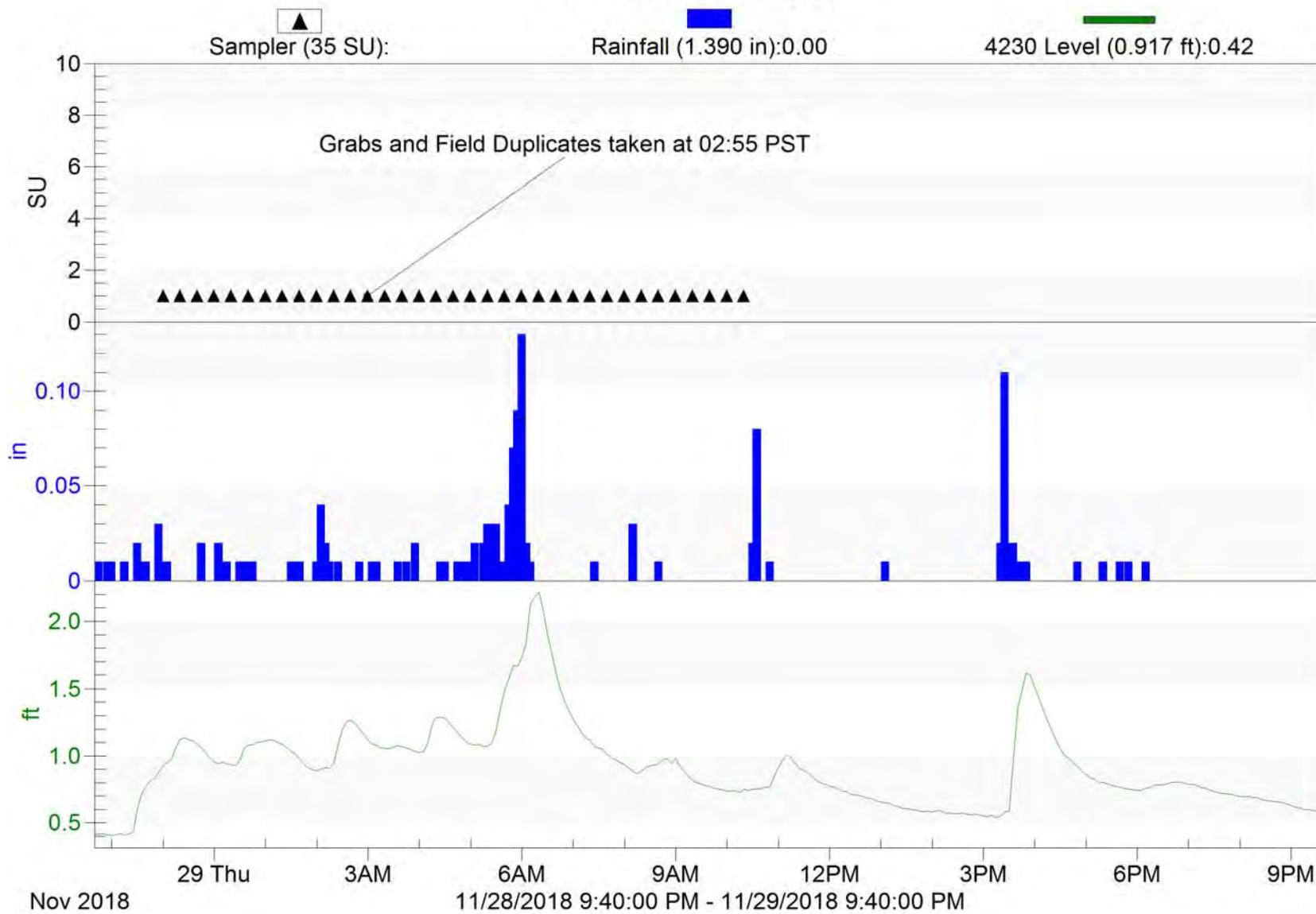
# Fillmore-1

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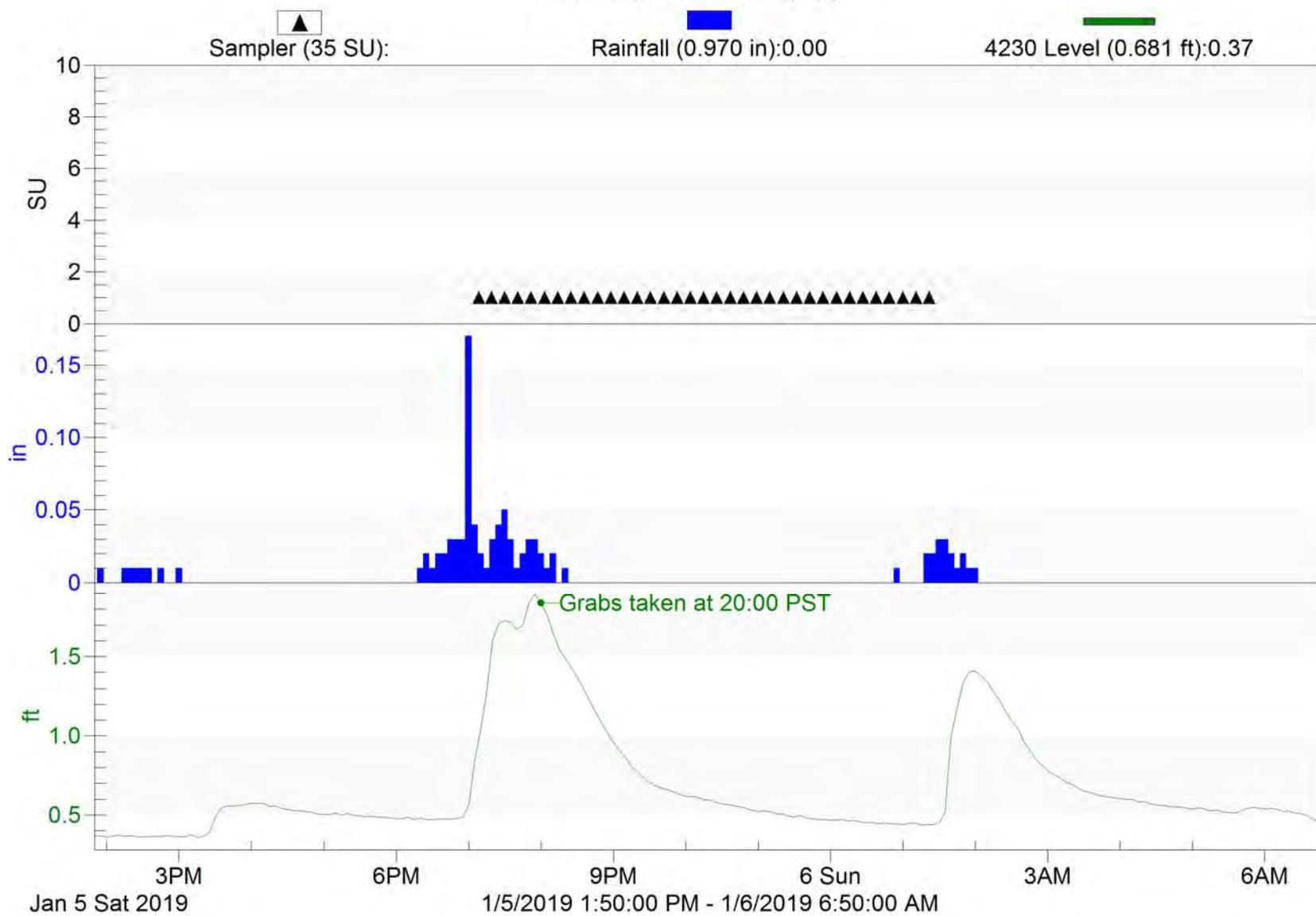
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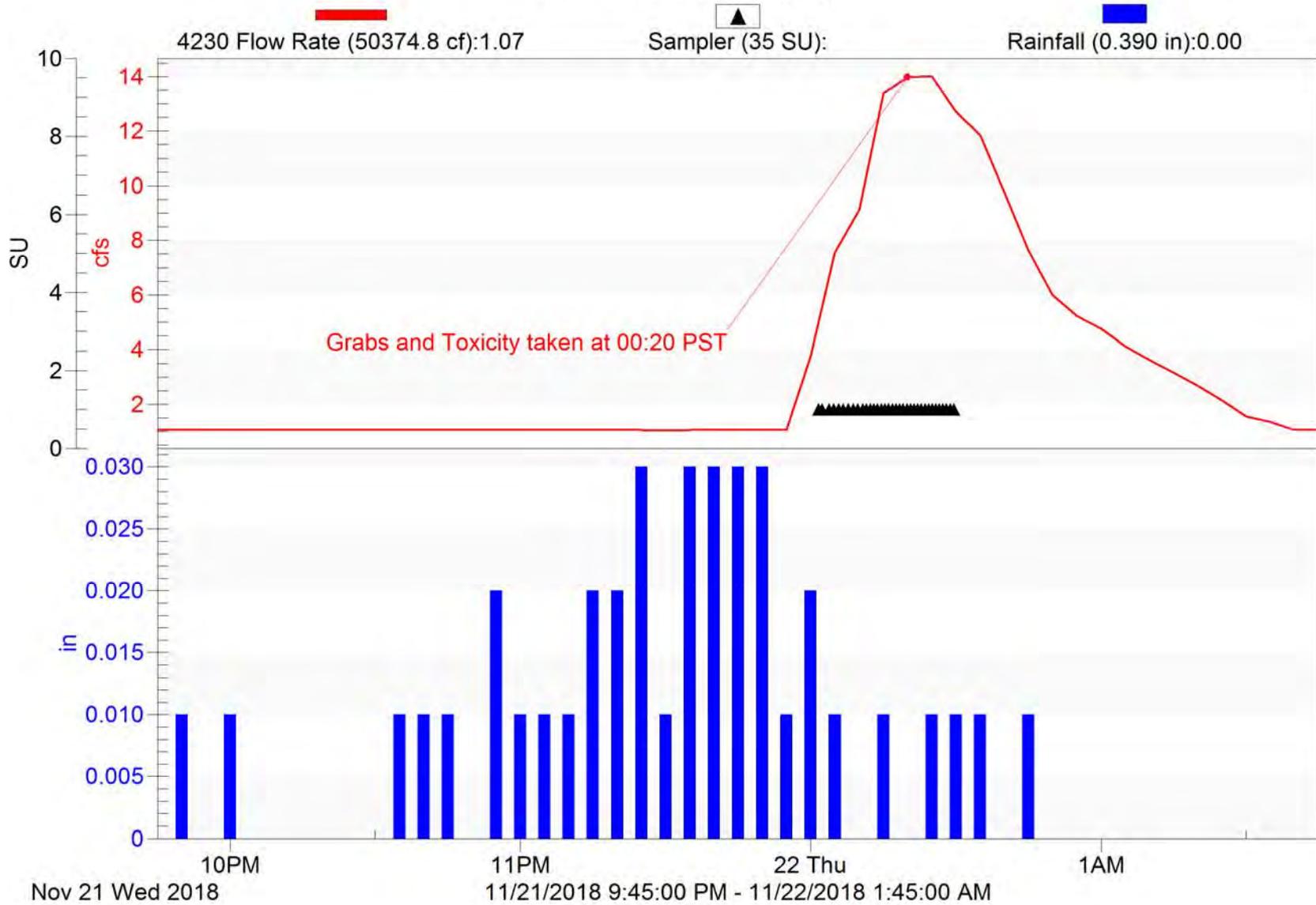
# Fillmore-1

2018/19 NPDES Event #3 (Wet)



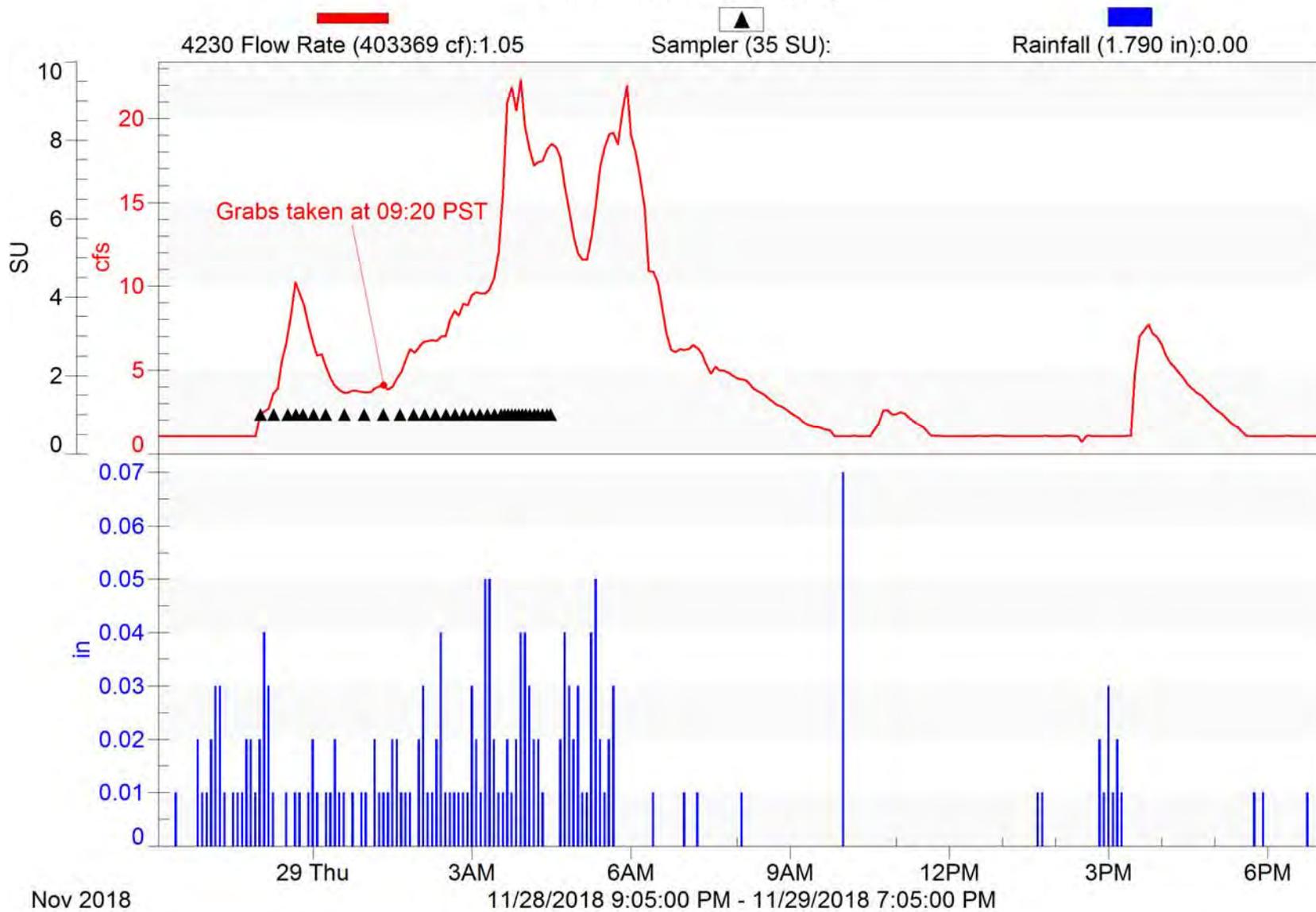
# Meiners Oaks-1

2018/19 NPDES Event #1 (Wet)



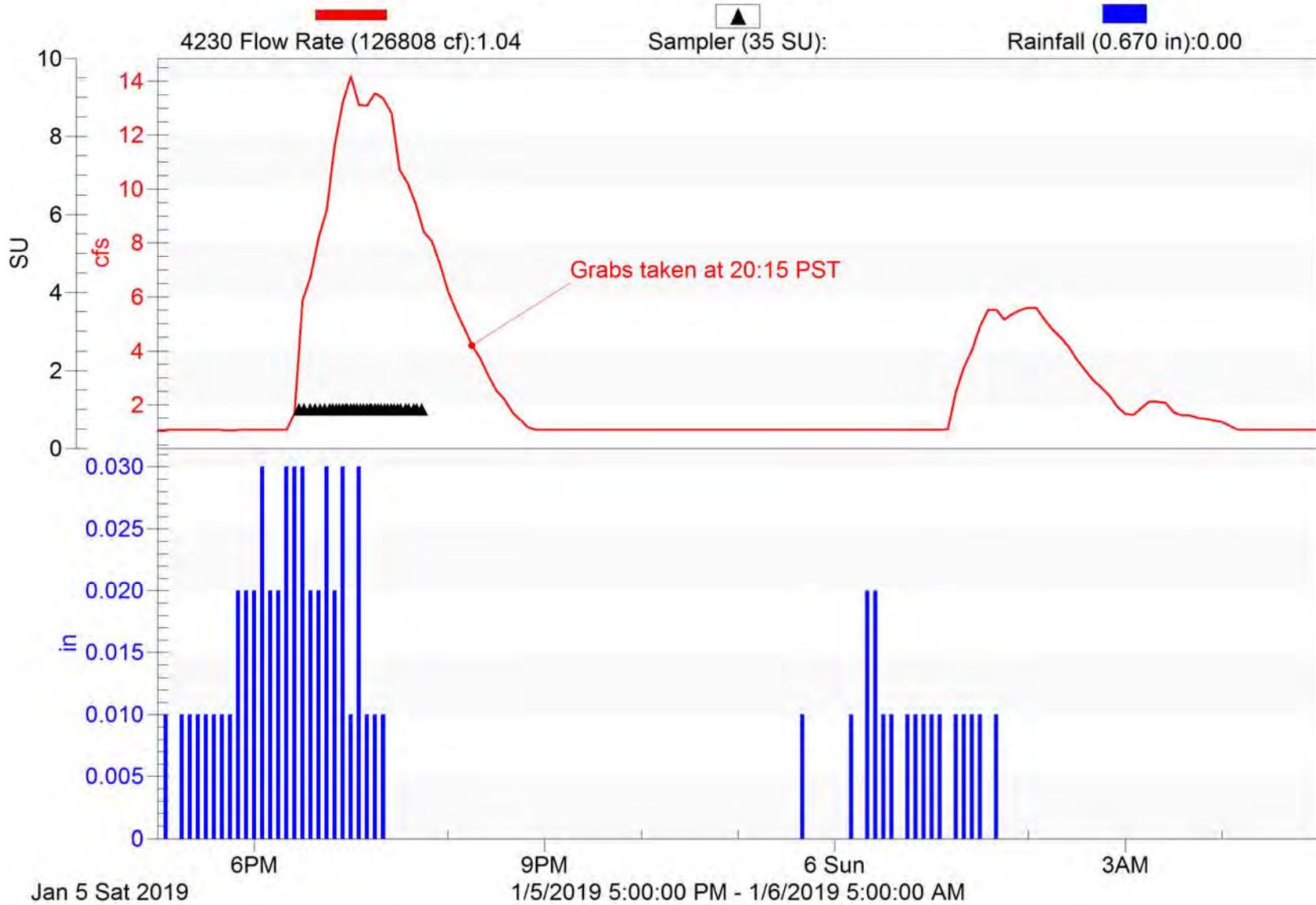
# Meiners Oaks-1

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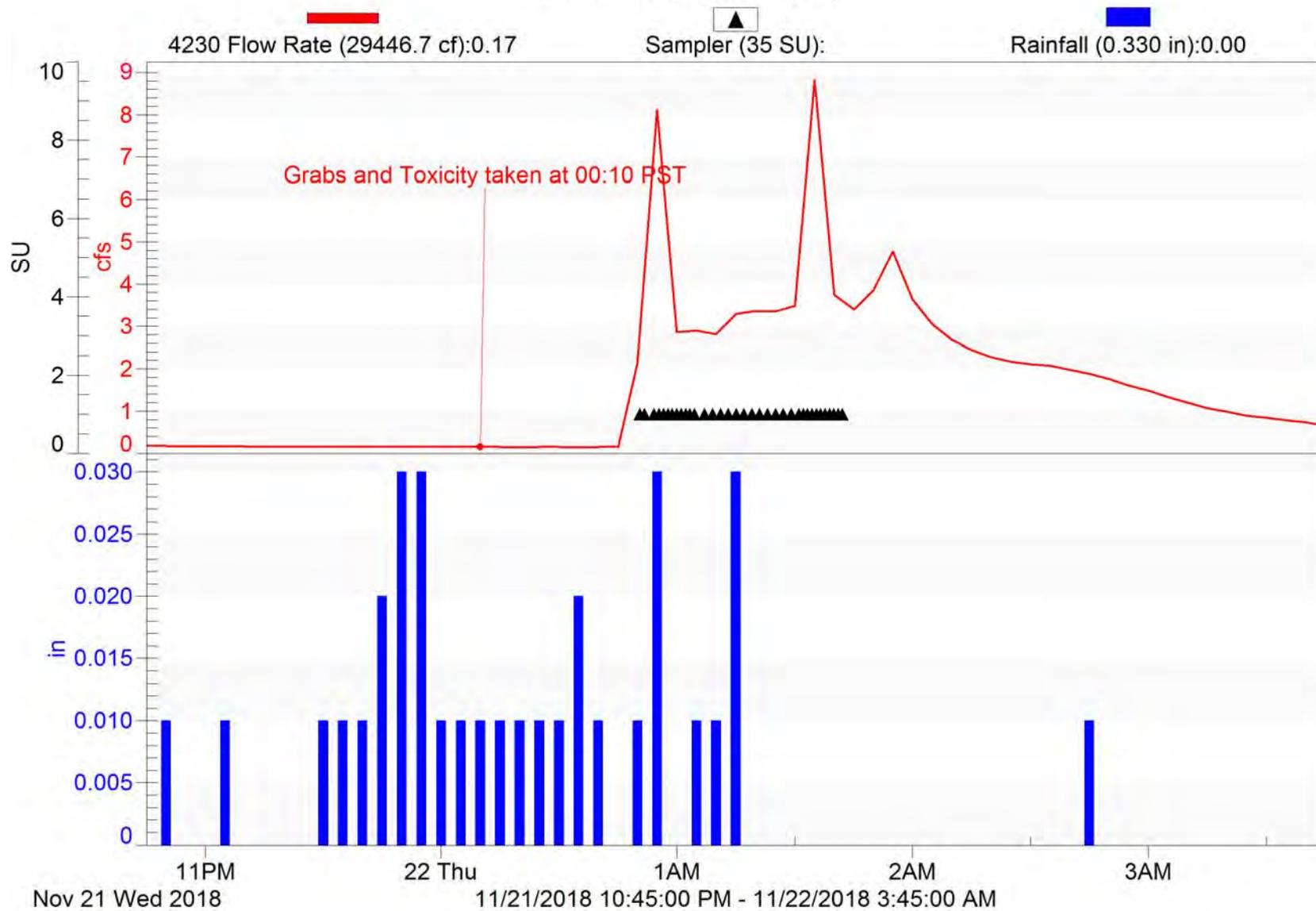
# Meiners Oaks-1

2018/19 NPDES Event #3 (Wet)



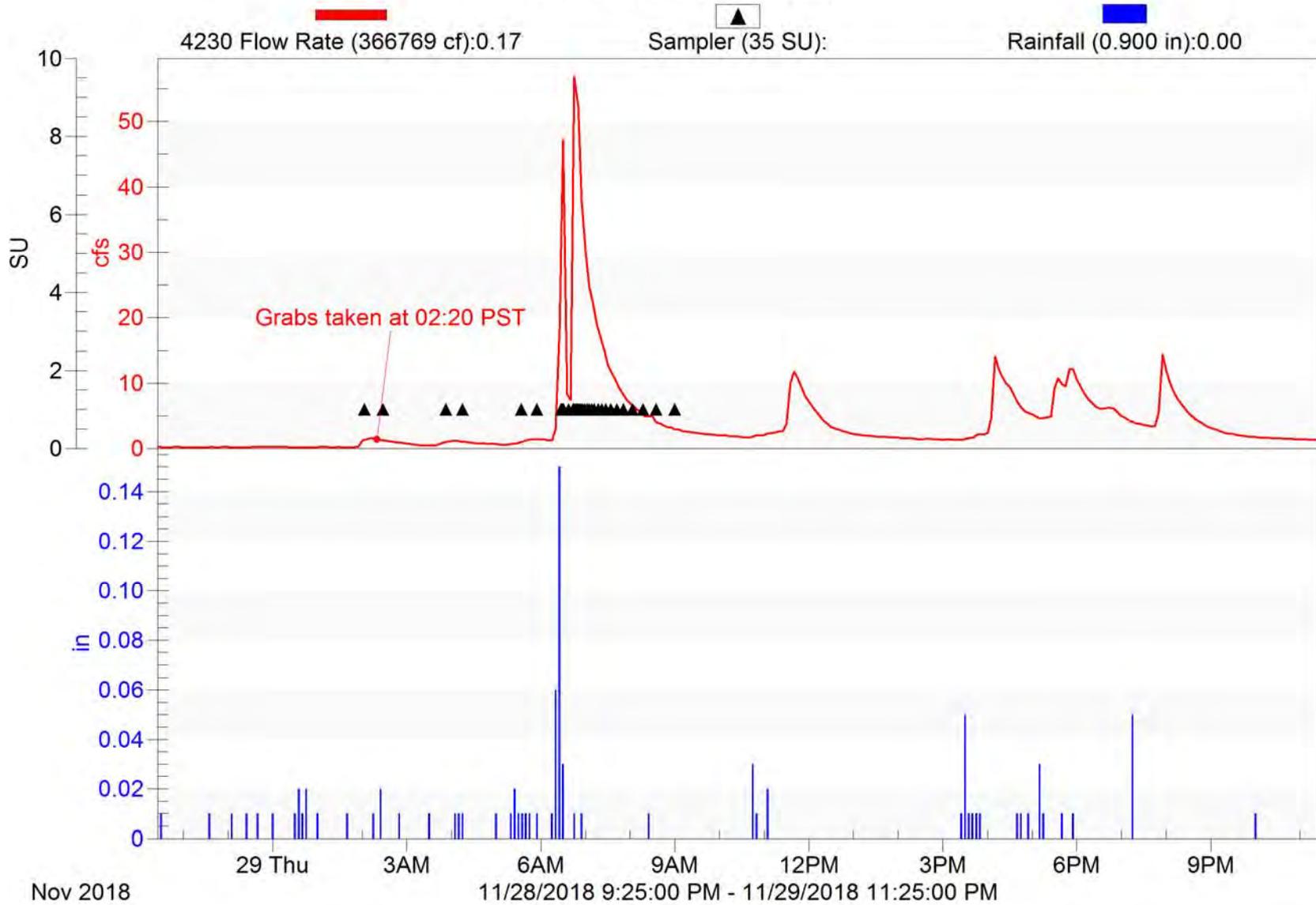
# Moorpark-1

2018/19 NPDES Event #1 (Wet)



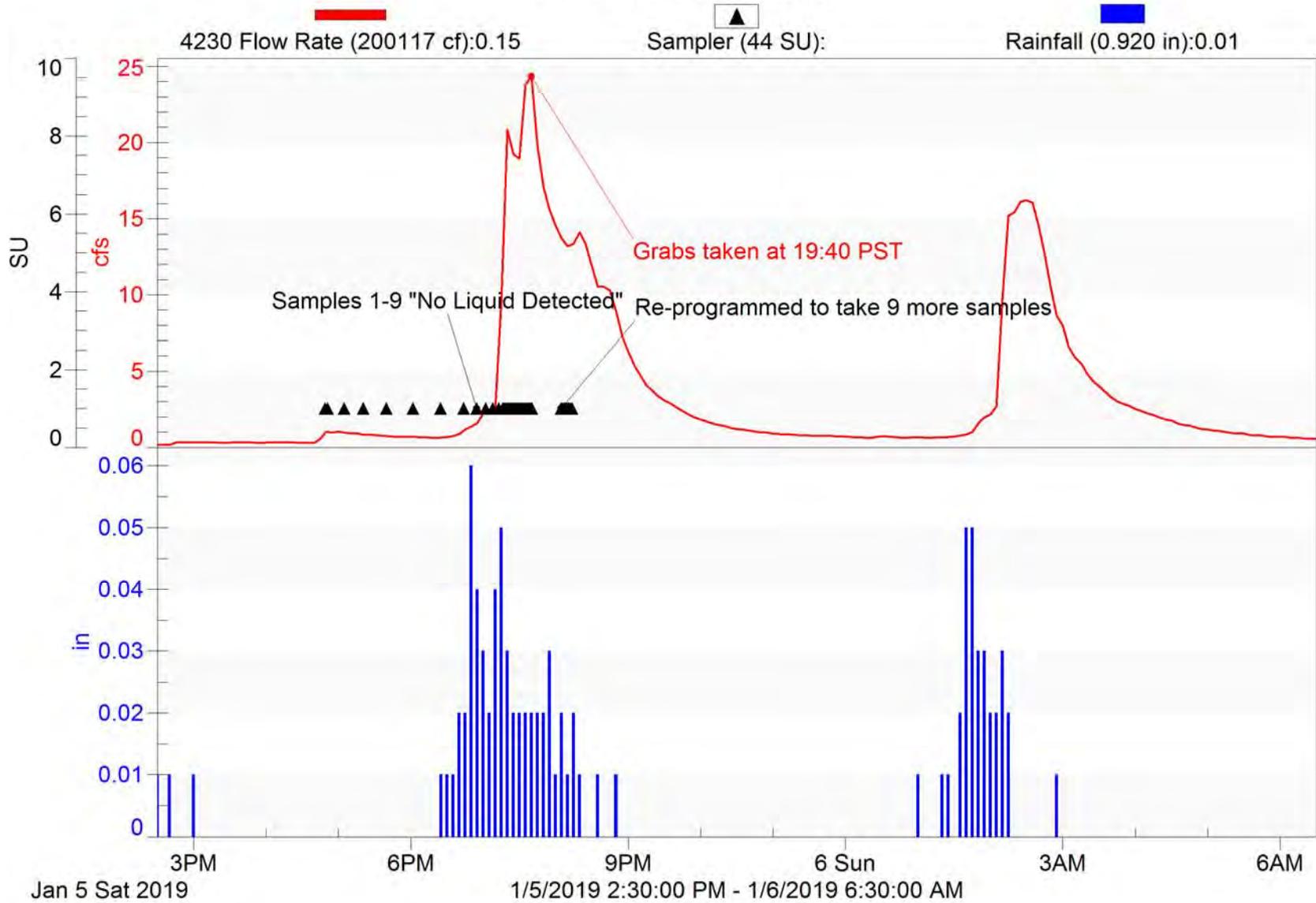
# Moorpark-1

2018/19 NPDES Event #2 (Wet)



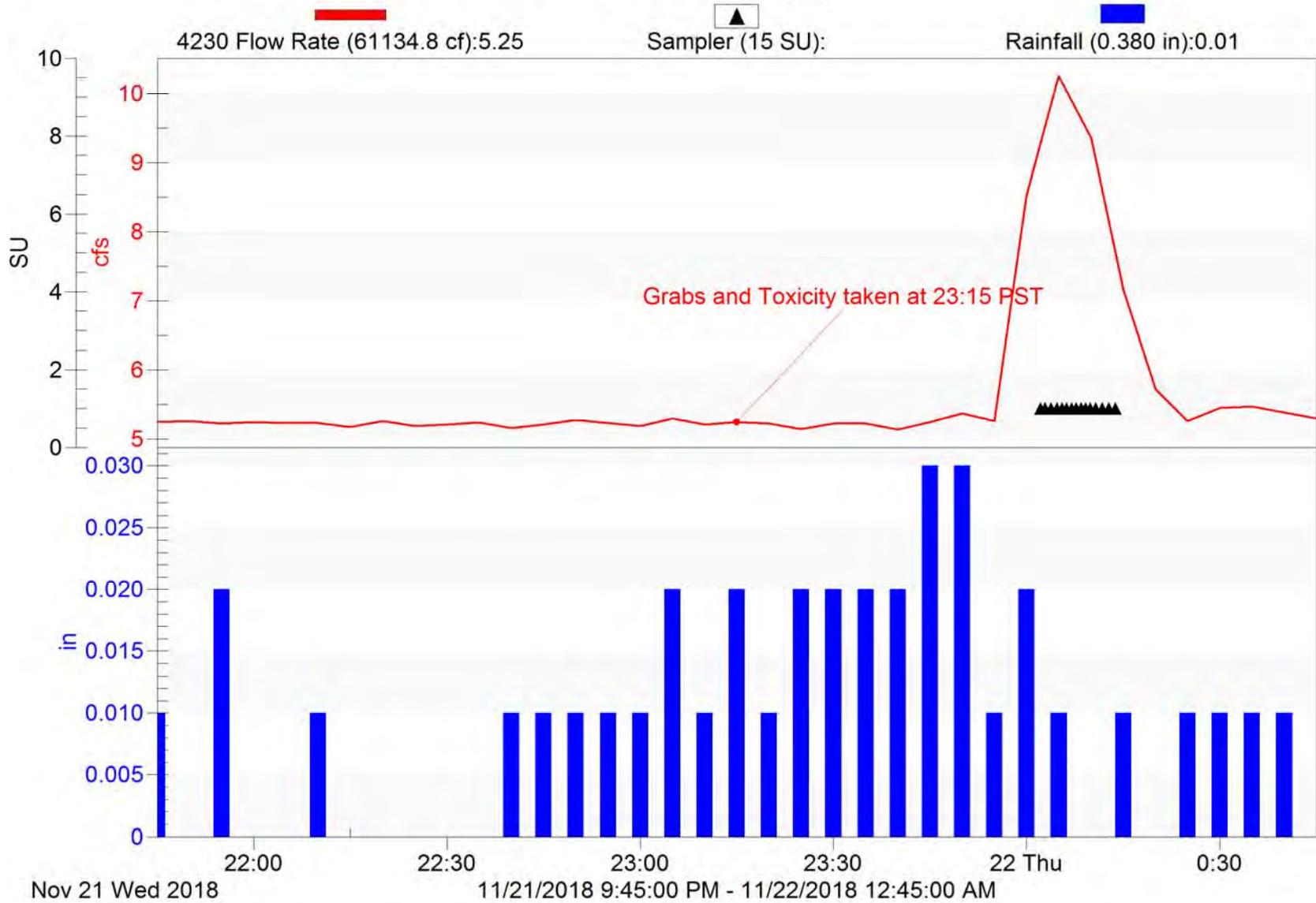
# Moorpark-1

2018/19 NPDES Event #3 (Wet)



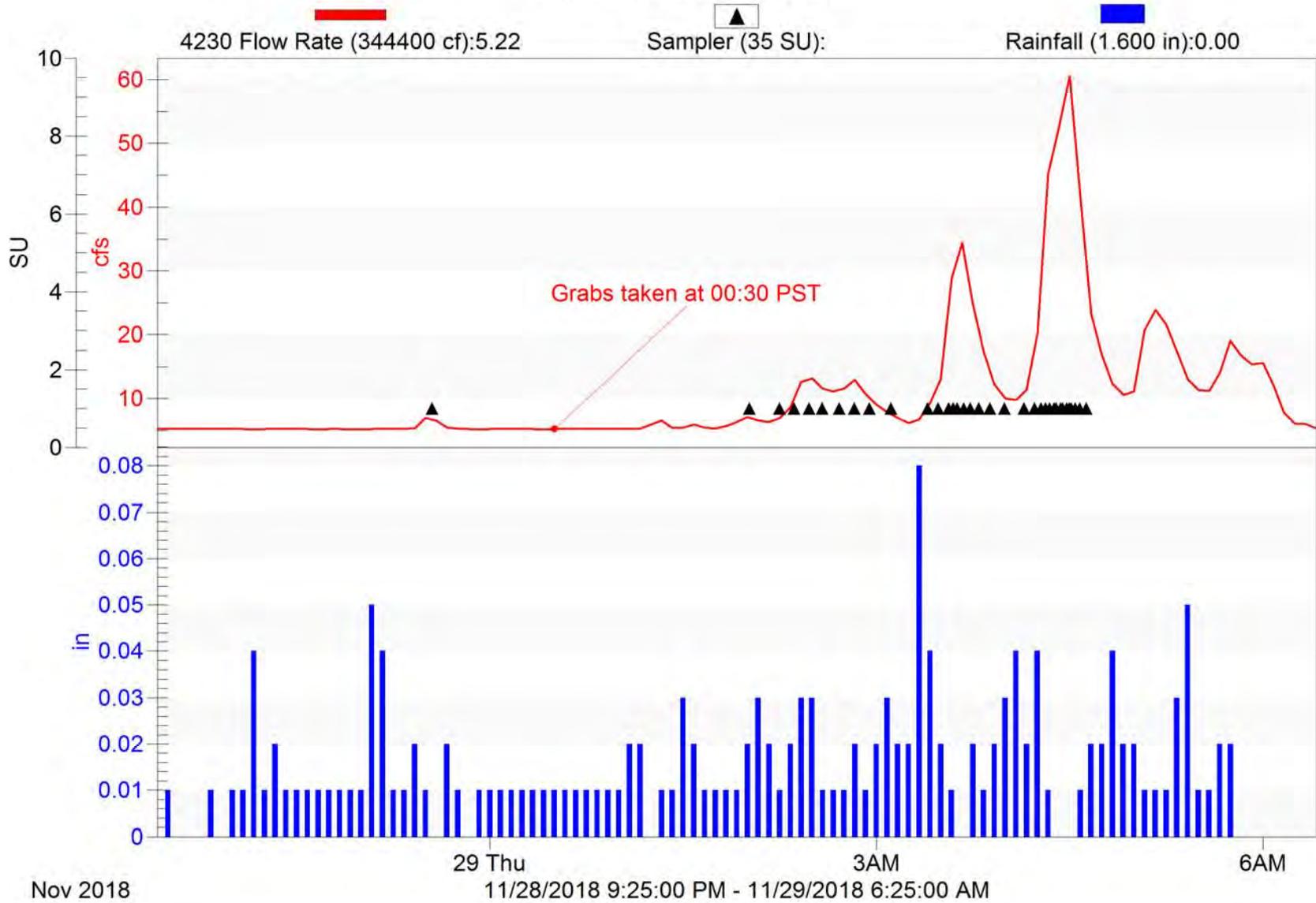
# Ojai-1

2018/19 NPDES Event #1 (Wet)



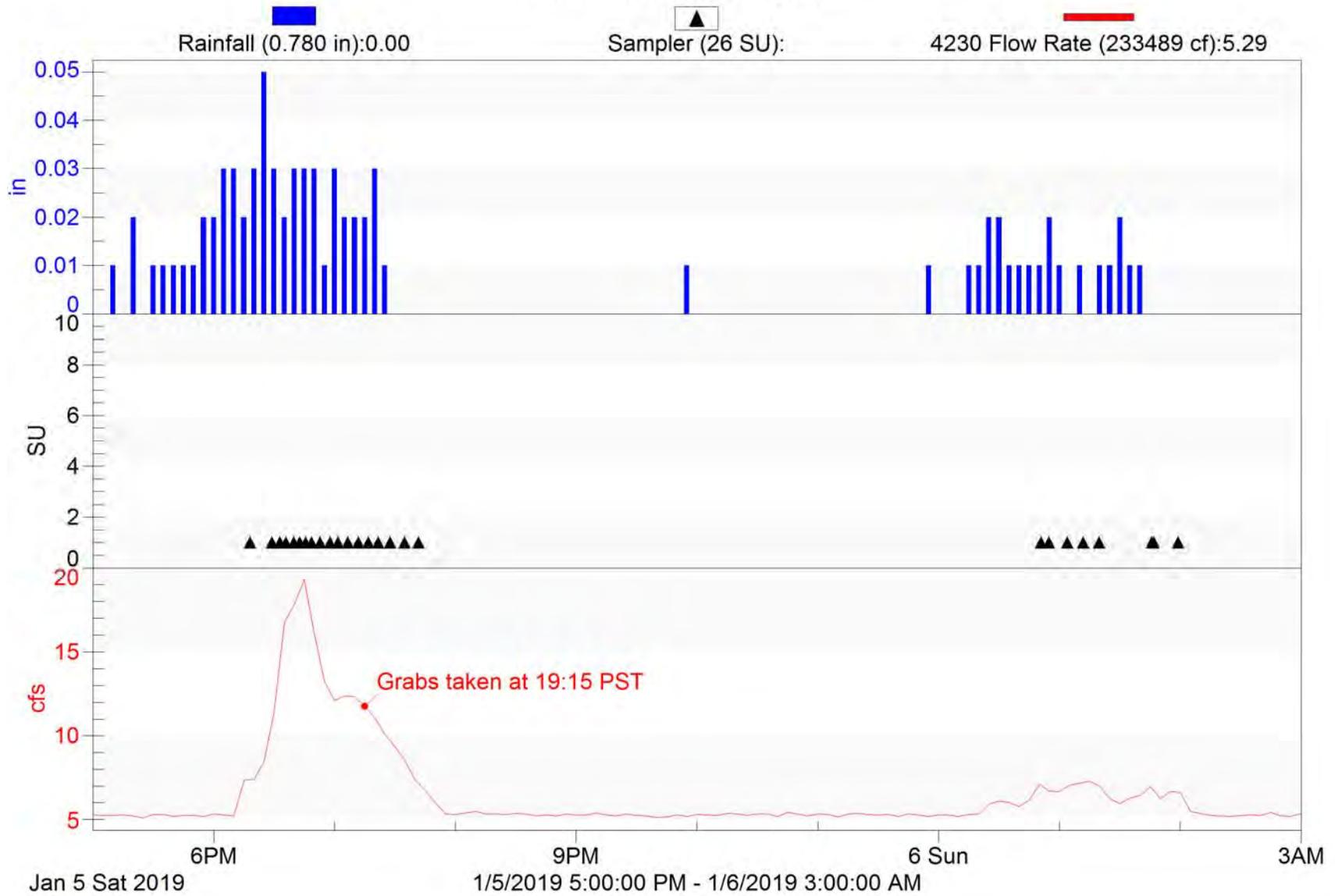
# Ojai-1

2018/19 NPDES Event #2 (Wet)



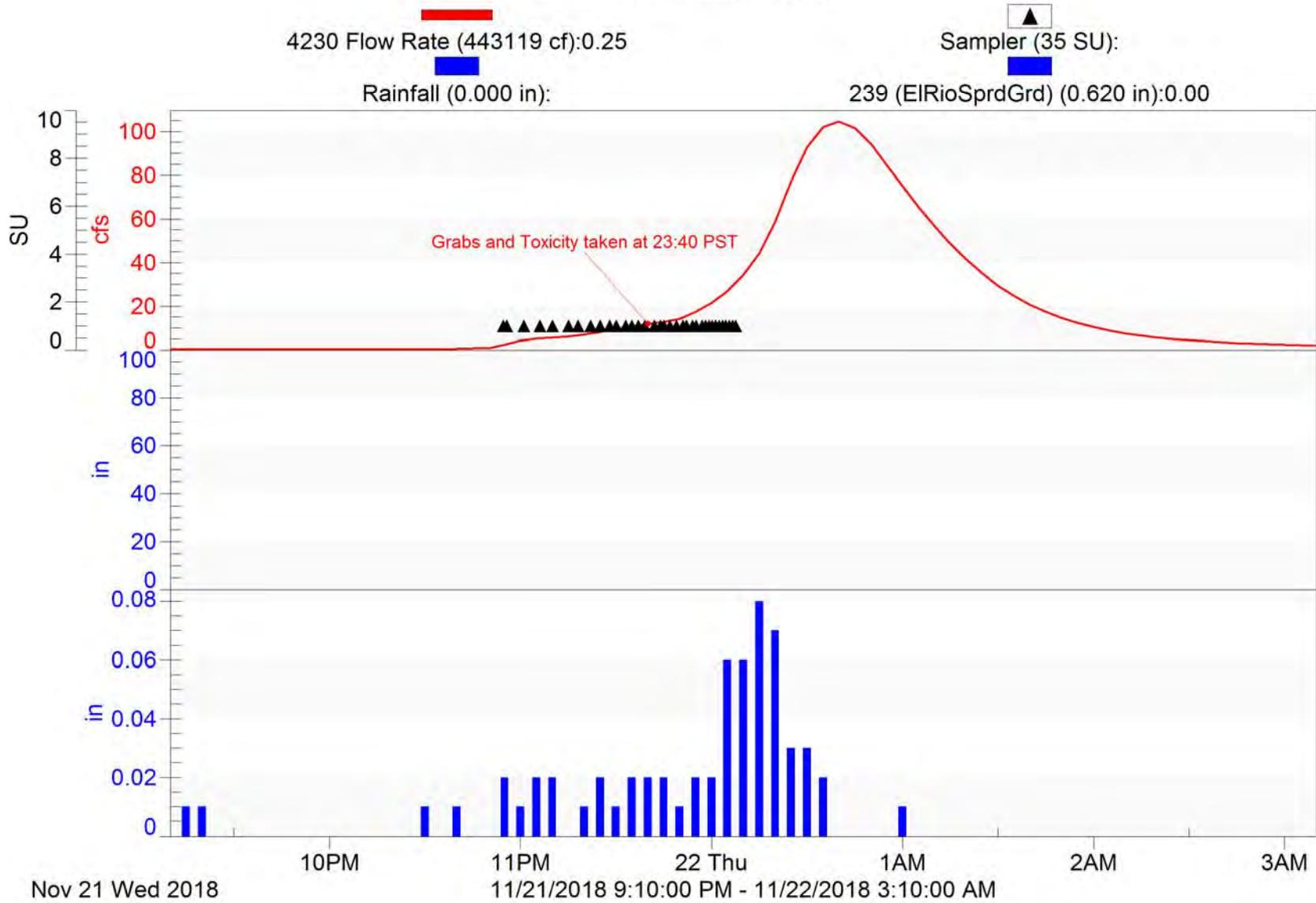
# Ojai-1

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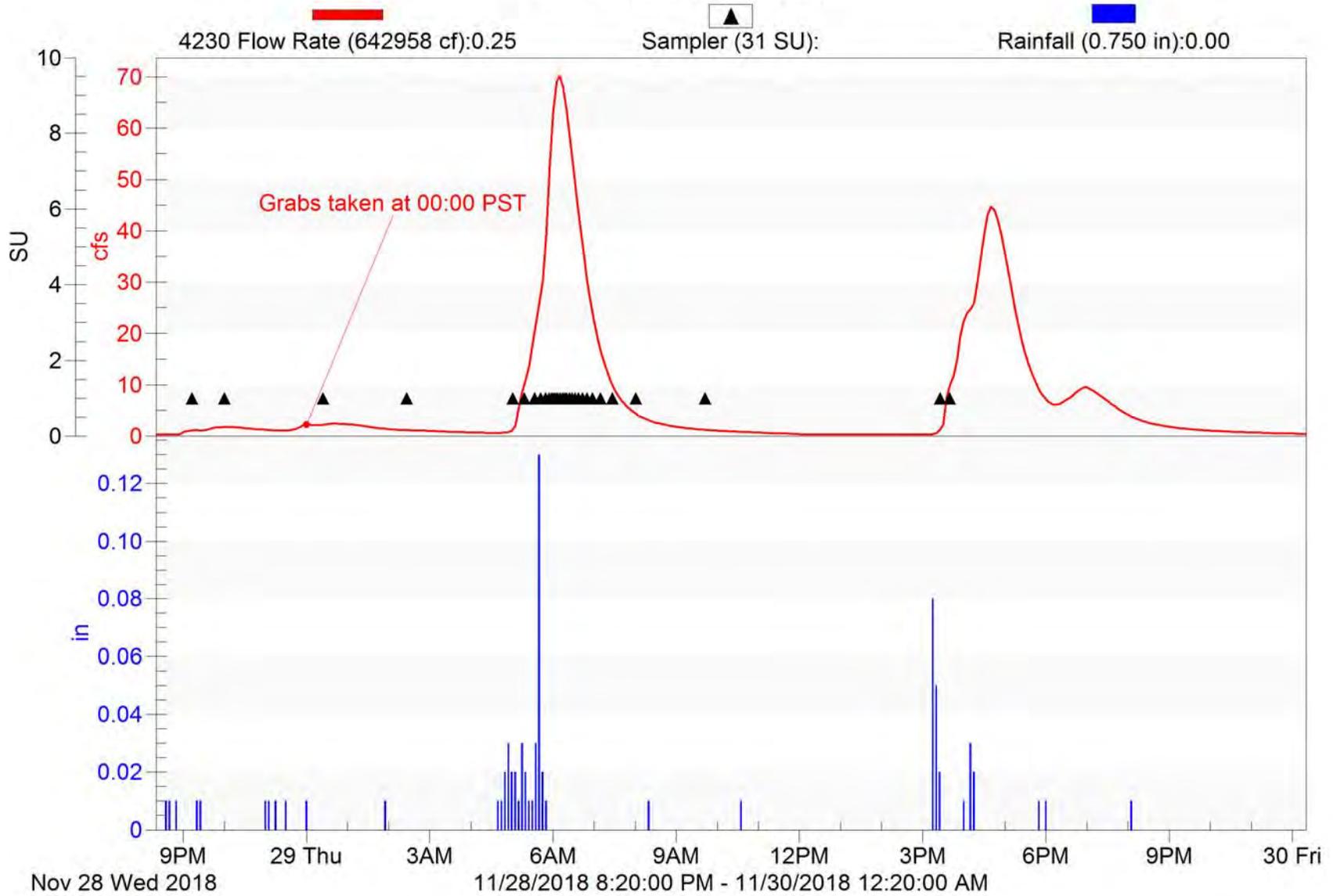
# Oxnard-1

2018/19 NPDES Event #1 (Wet)



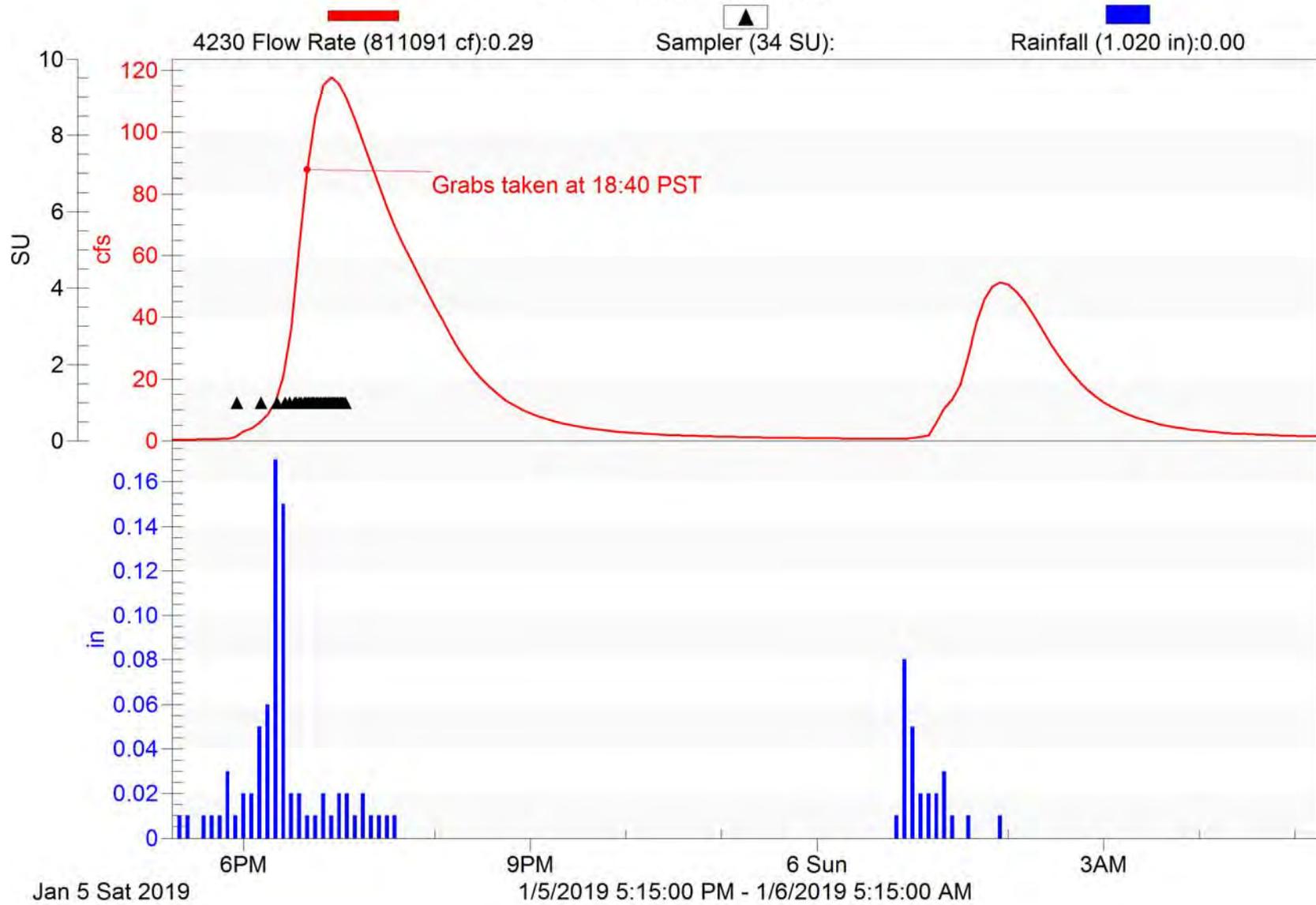
# Oxnard-1

2018/19 NPDES Event #2 (Wet)



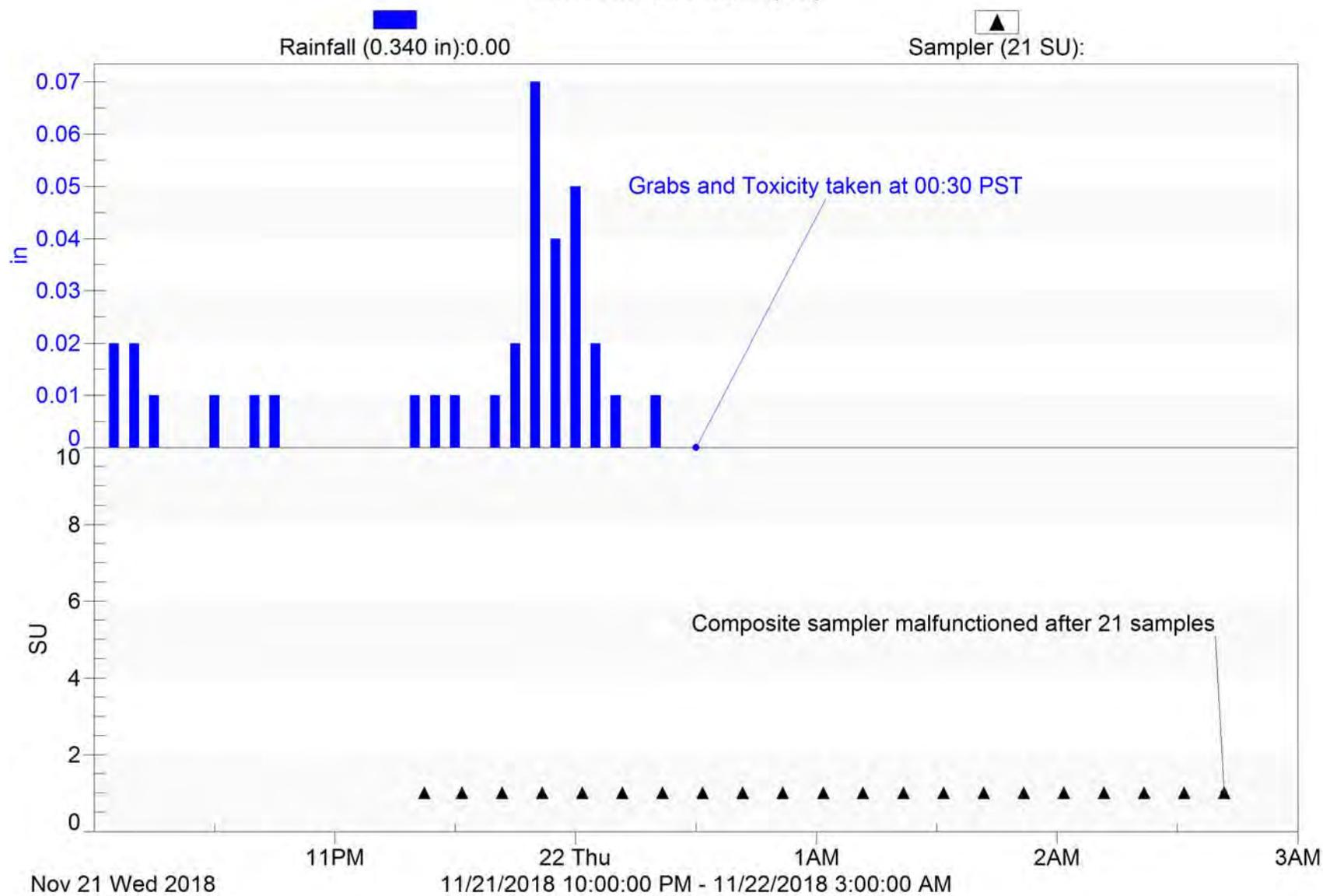
# Oxnard-1

2018/19 NPDES Event #3 (Wet)



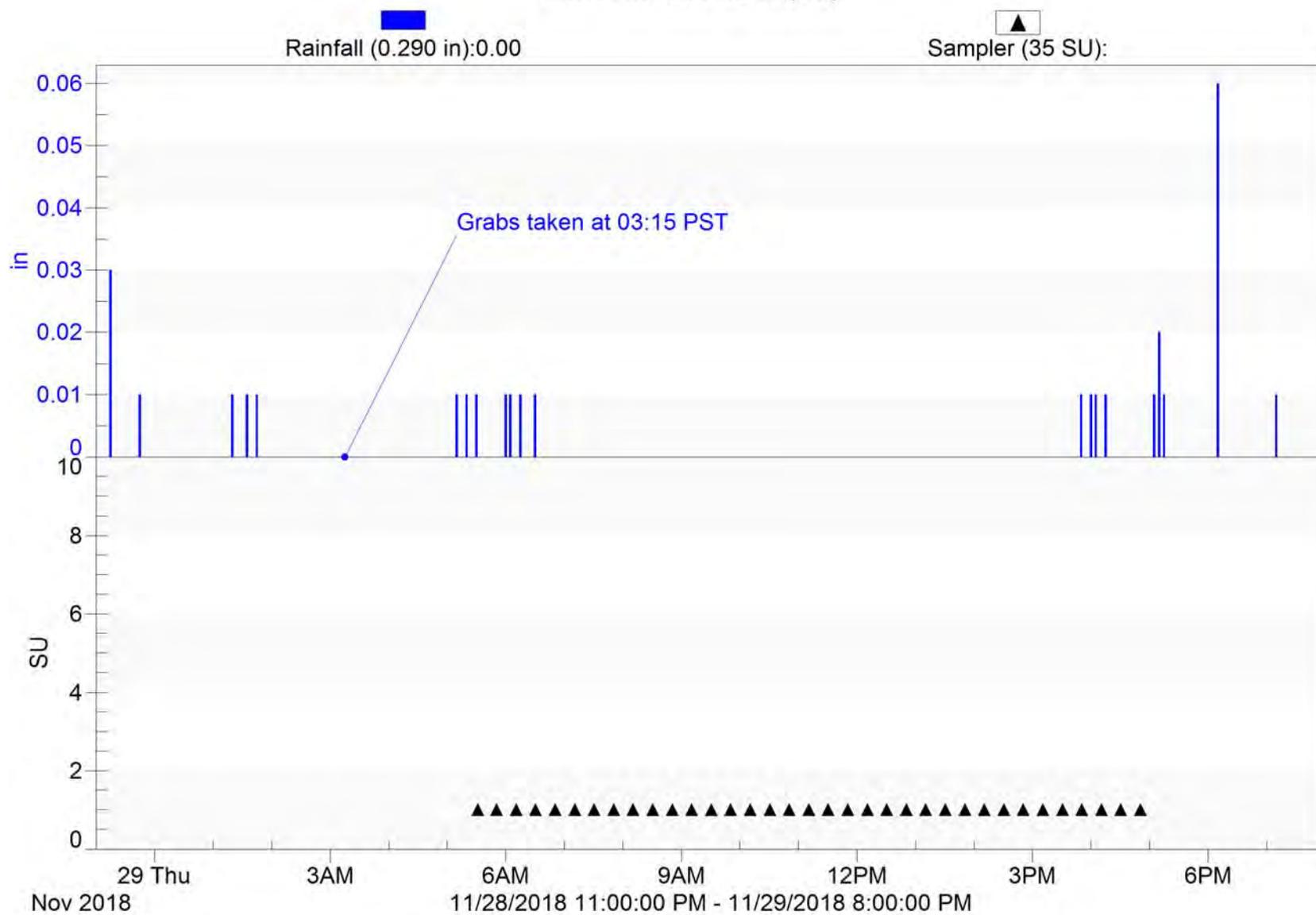
# Port Hueneme-1

2018/19 NPDES Event #1 (Wet)



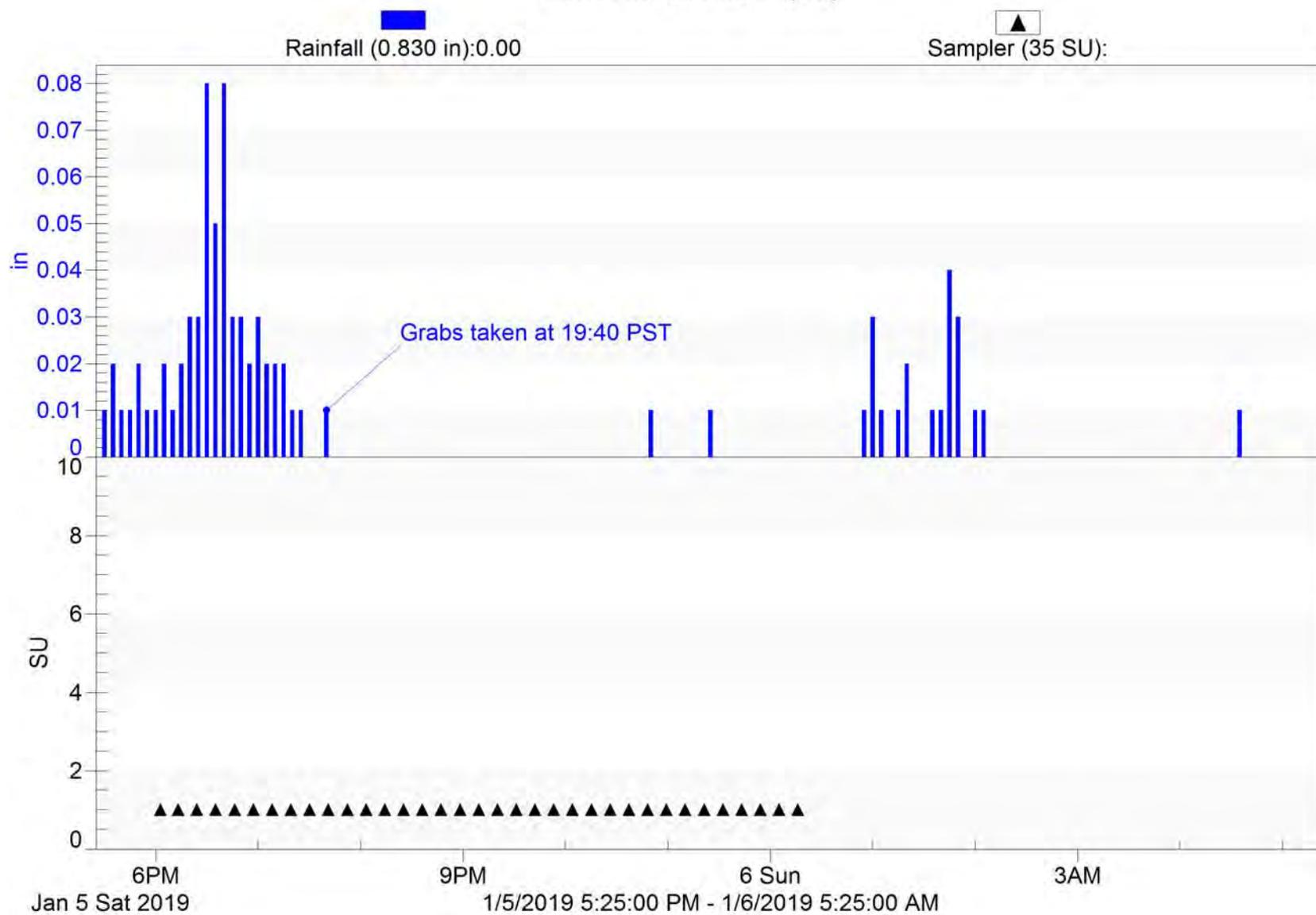
# Port Hueneme-1

2018/19 NPDES Event #2 (Wet)



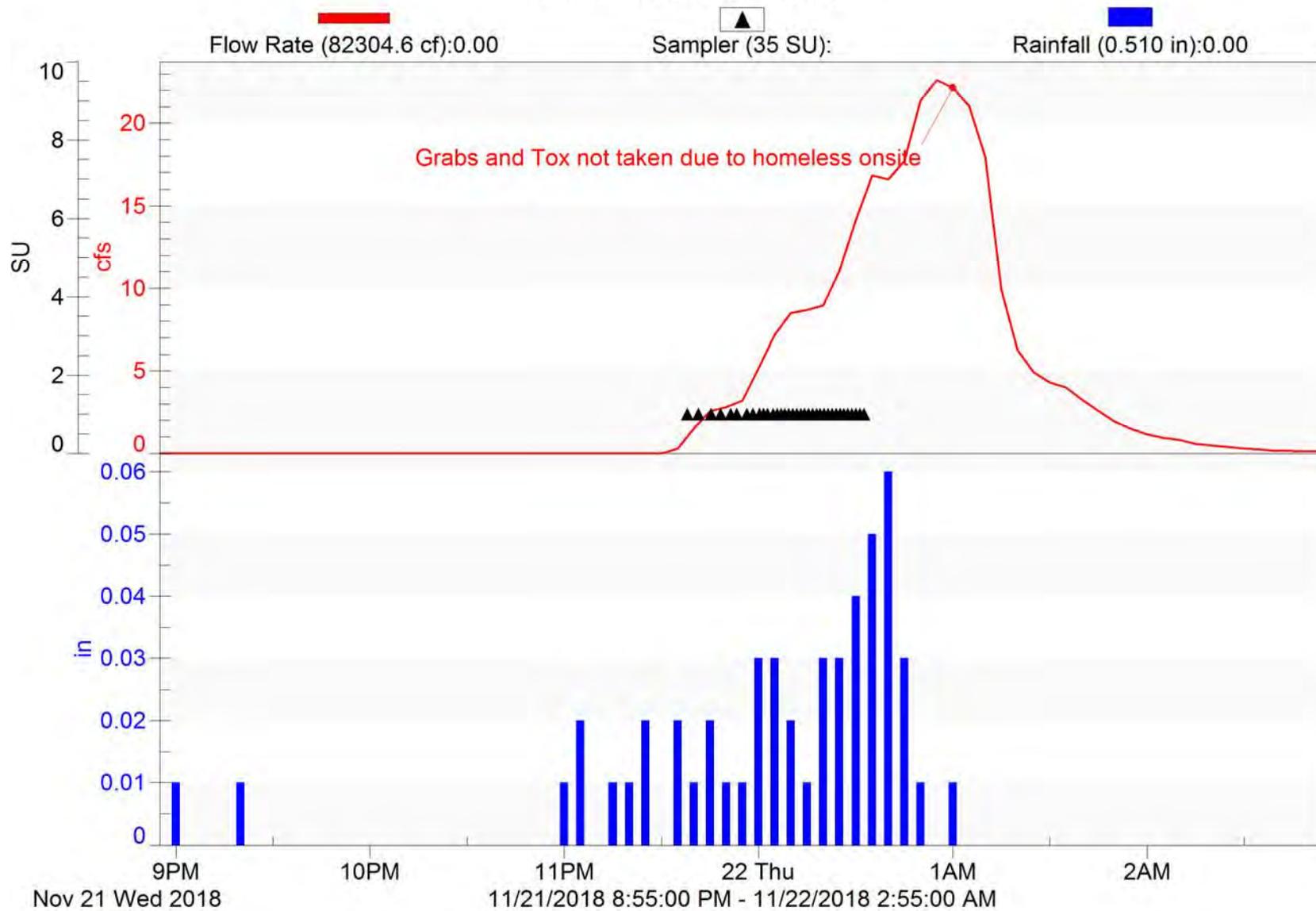
# Port Hueneme-1

2018/19 NPDES Event #3 (Wet)



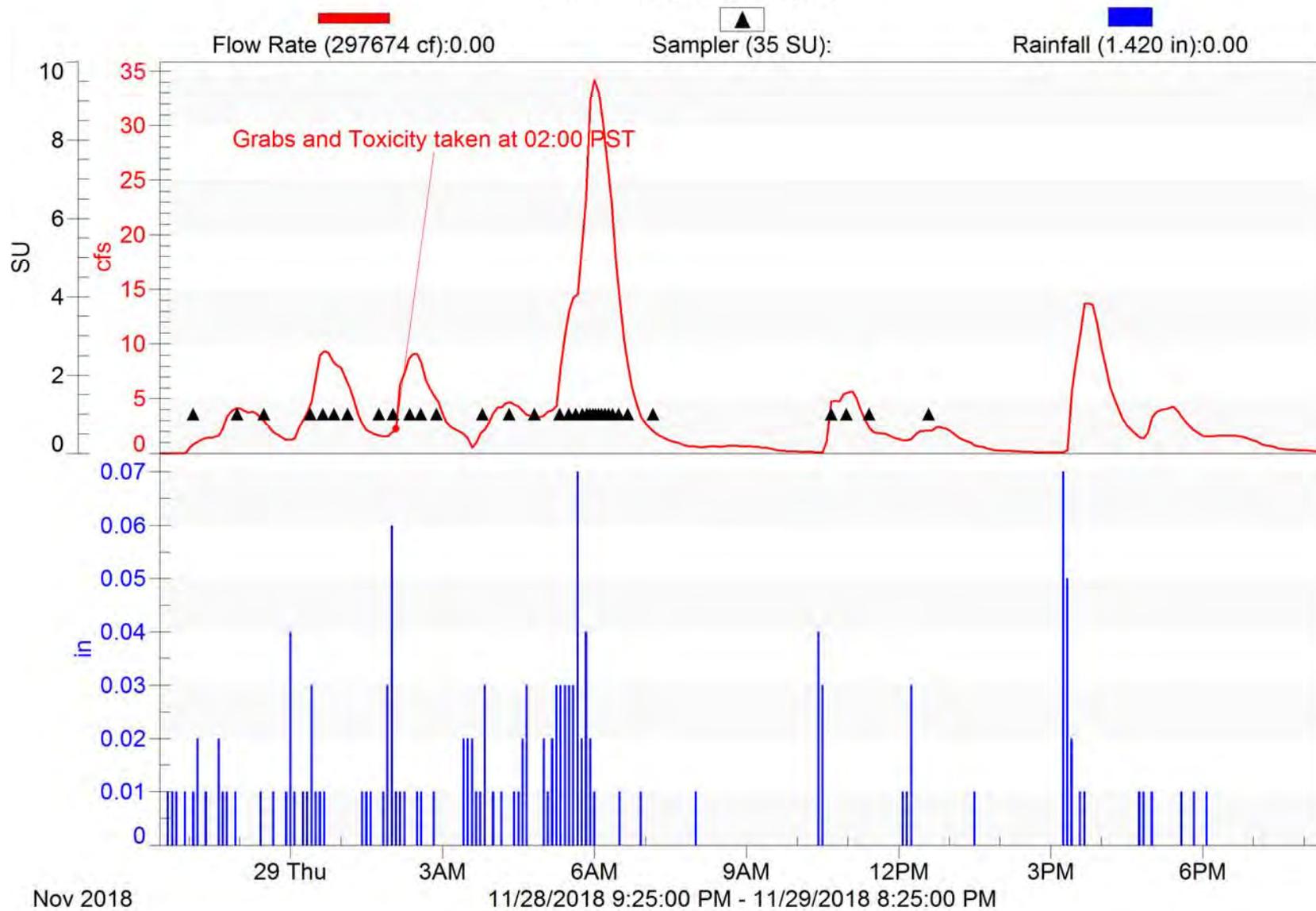
# Santa Paula-1

2018/19 NPDES Event #1 (Wet)



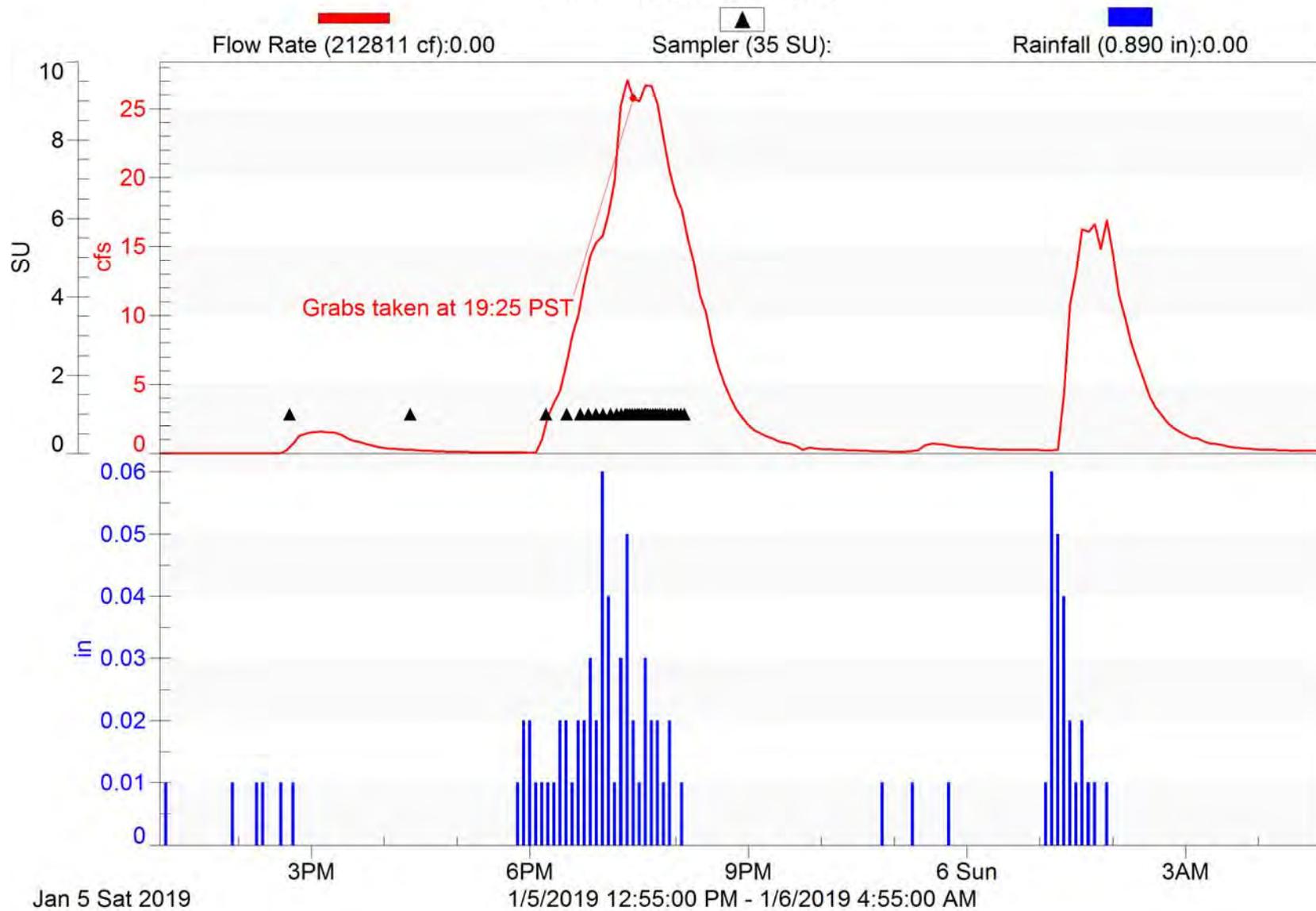
# Santa Paula-1

2018/19 NPDES Event #2 (Wet)



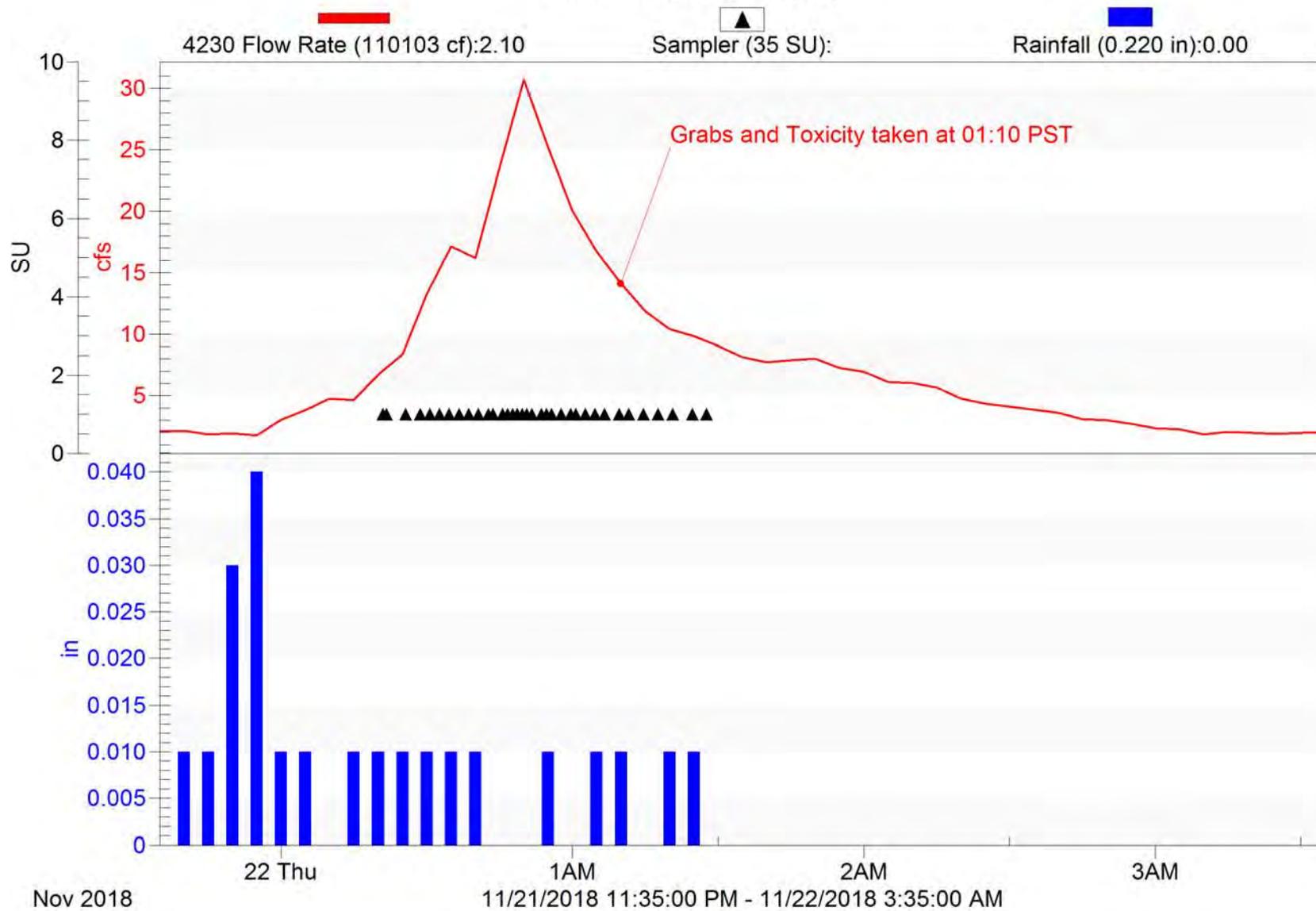
# Santa Paula-1

2018/19 NPDES Event #3 (Wet)



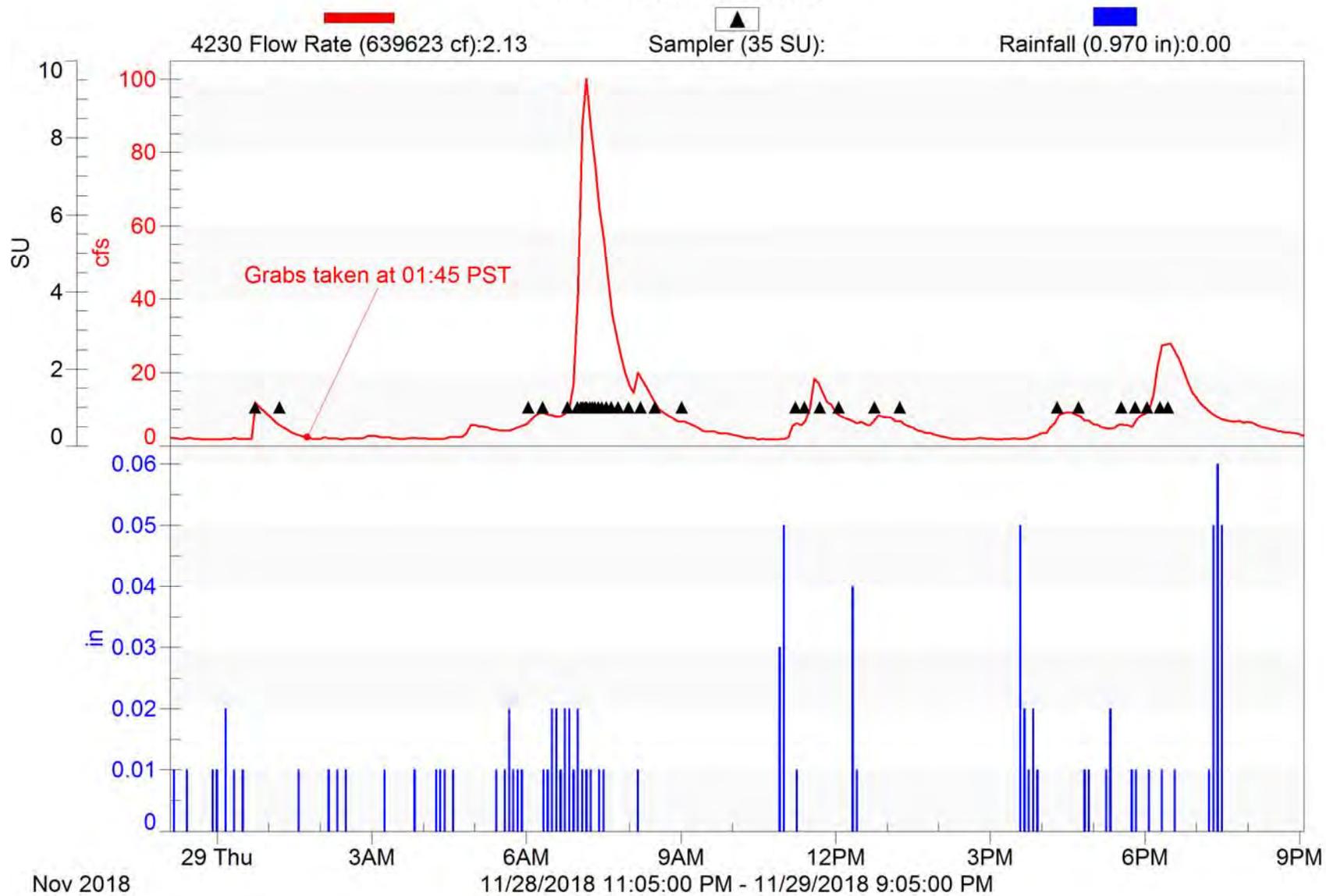
# Simi Valley-1

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



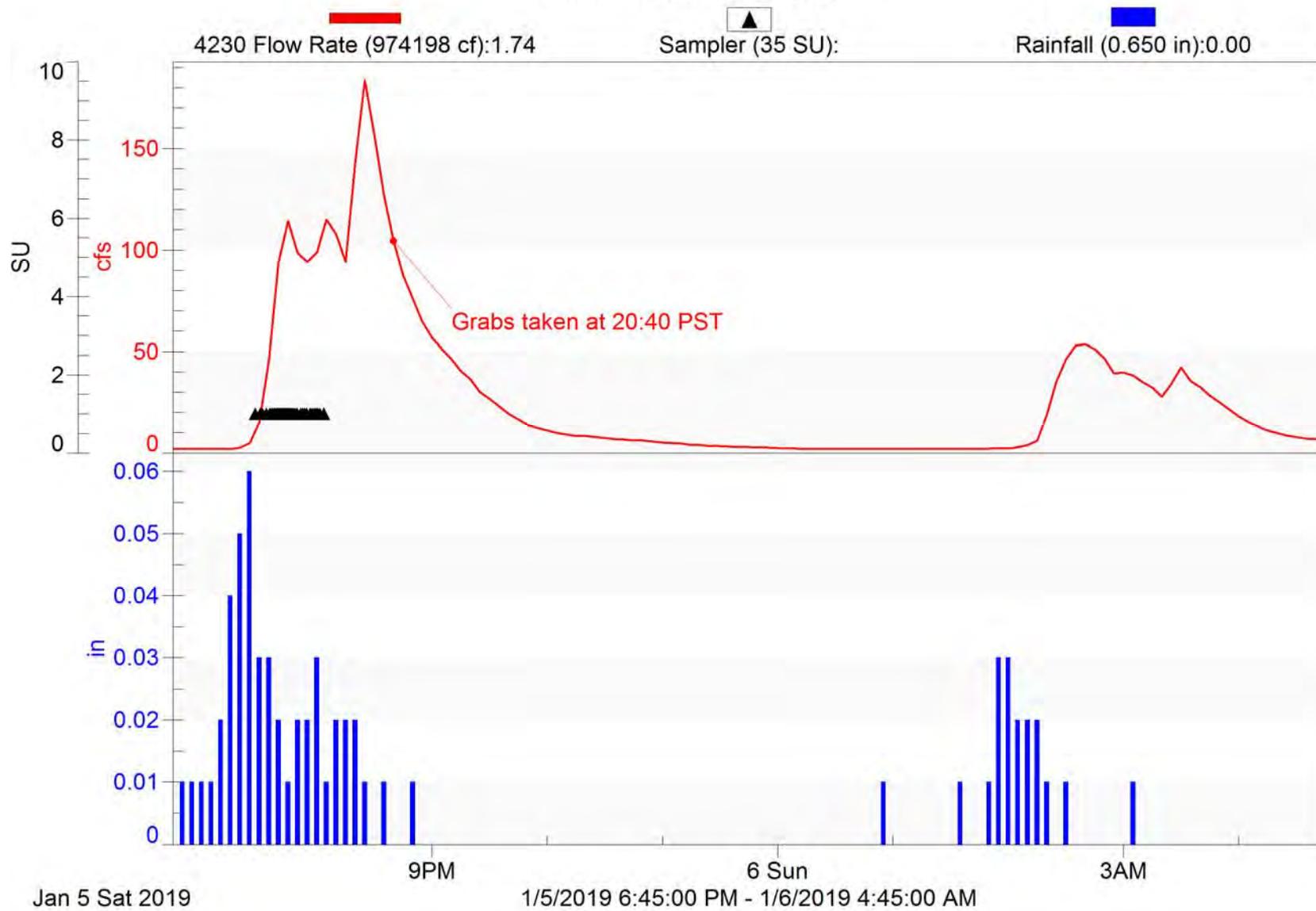
# Simi Valley-1

## 2018/19 NPDES Event #2 (Wet)



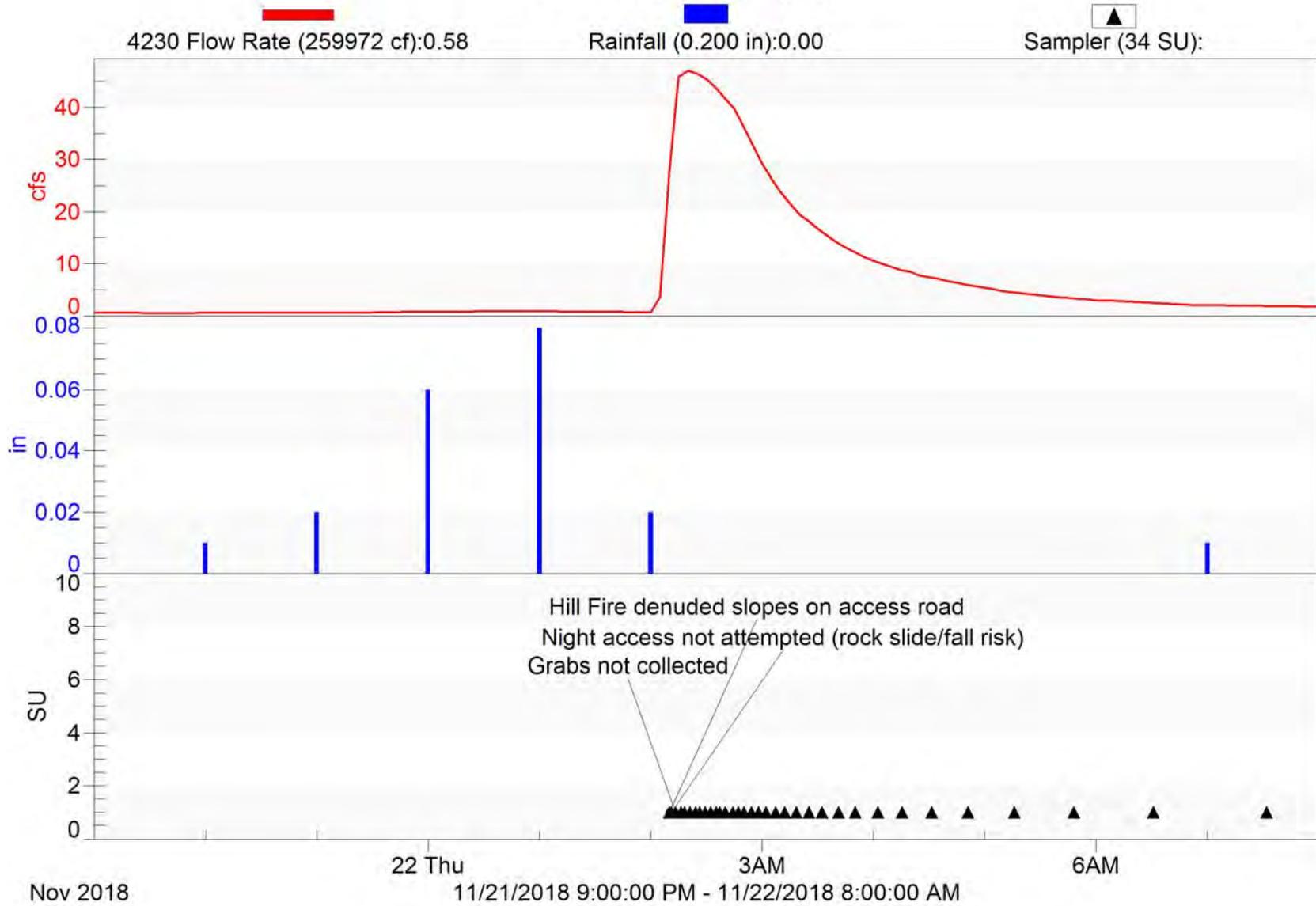
# Simi Valley-1

2018/19 NPDES Event #3 (Wet)



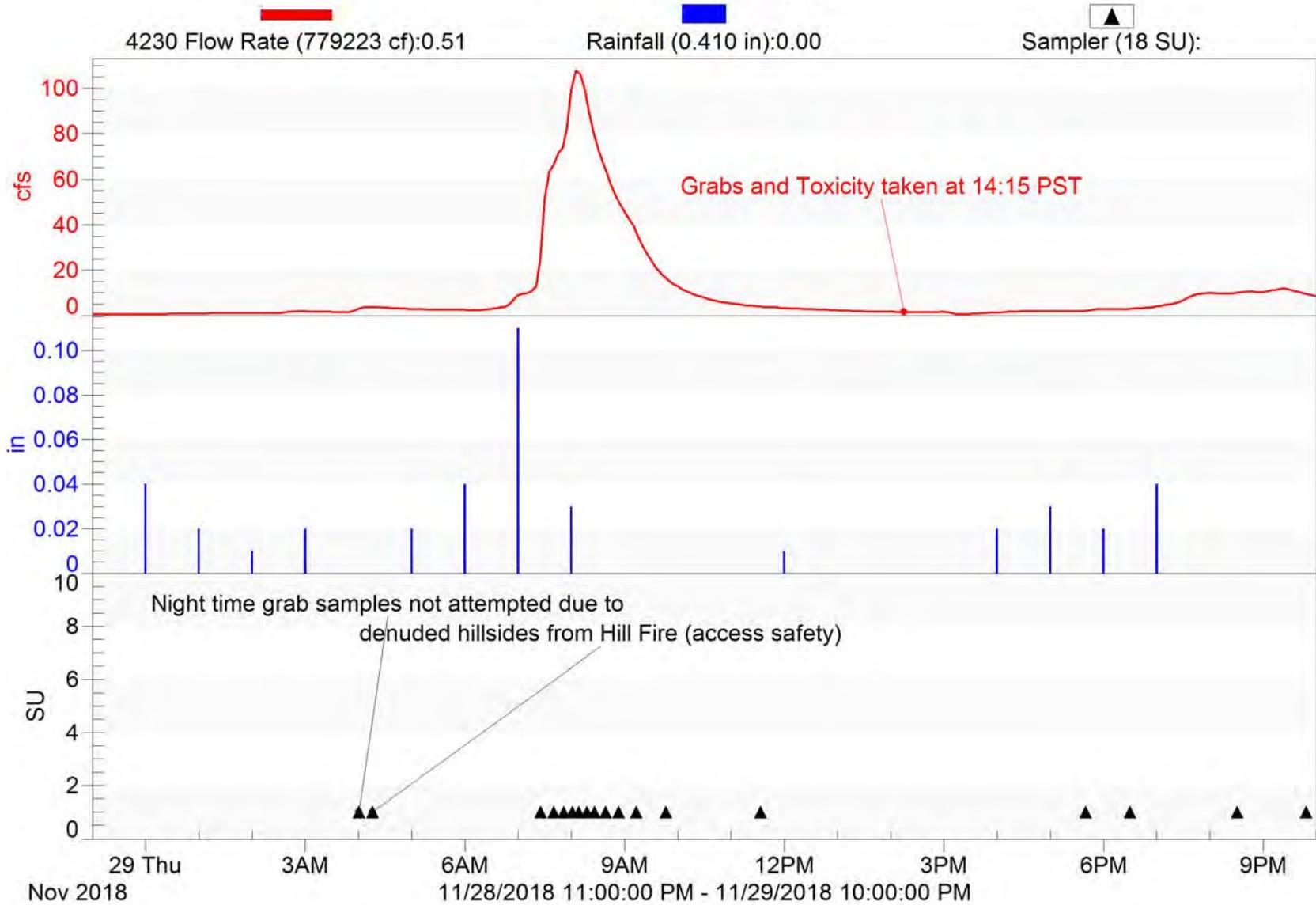
# Thousand Oaks-1

2018/19 NPDES Event #1 (Wet)



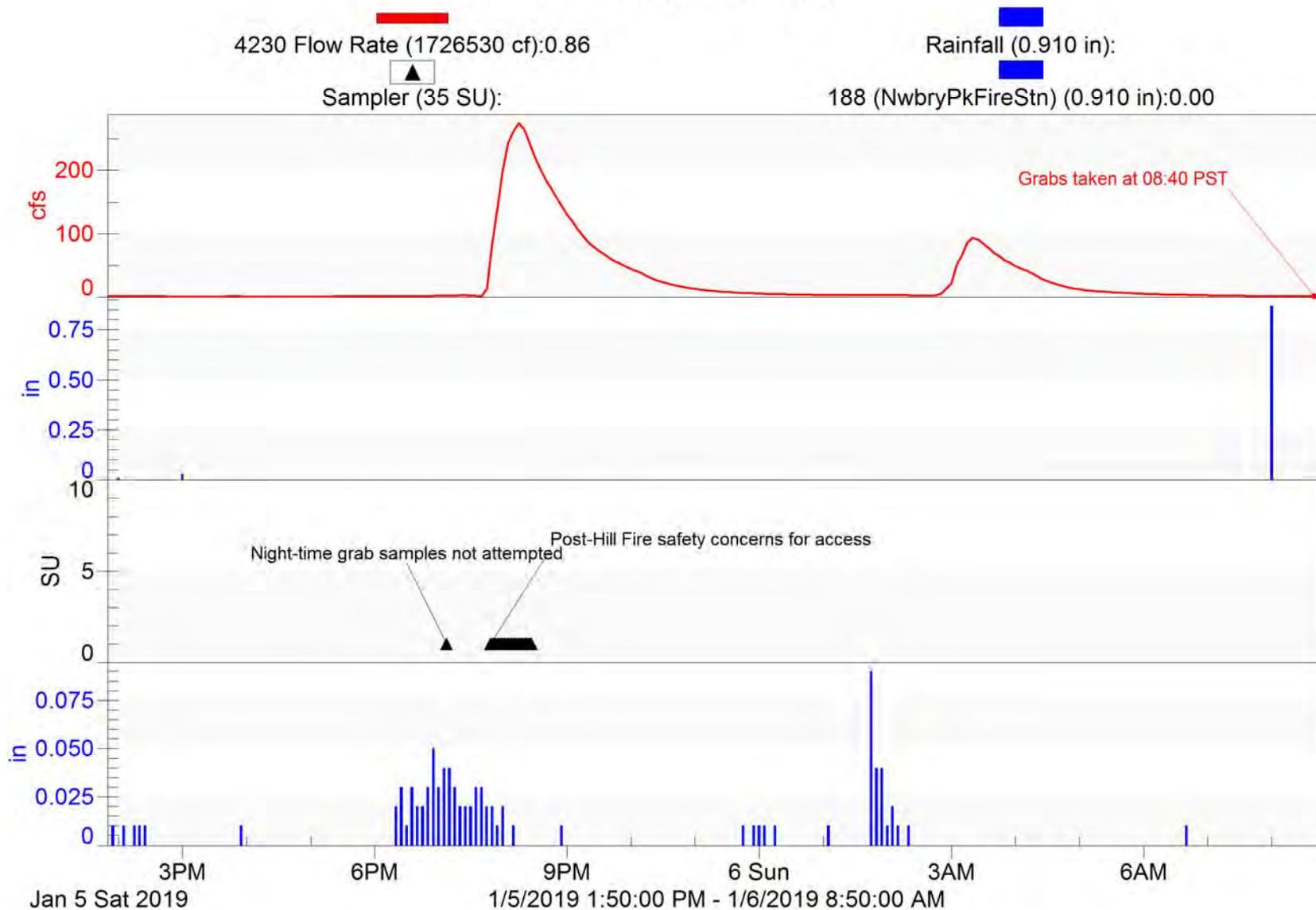
# Thousand Oaks-1

2018/19 NPDES Event #2 (Wet)



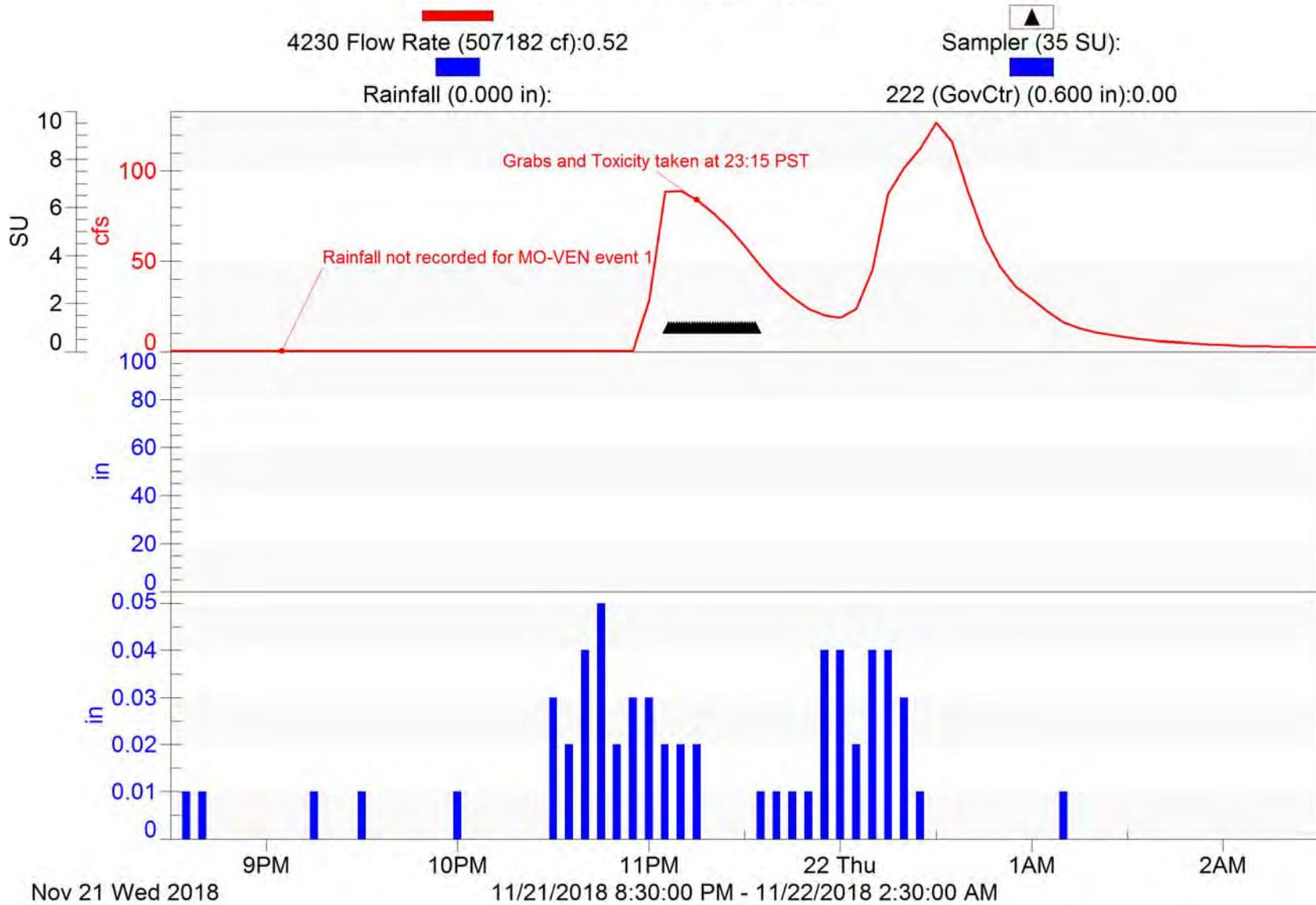
# Thousand Oaks-1

2018/19 NPDES Event #3 (Wet)



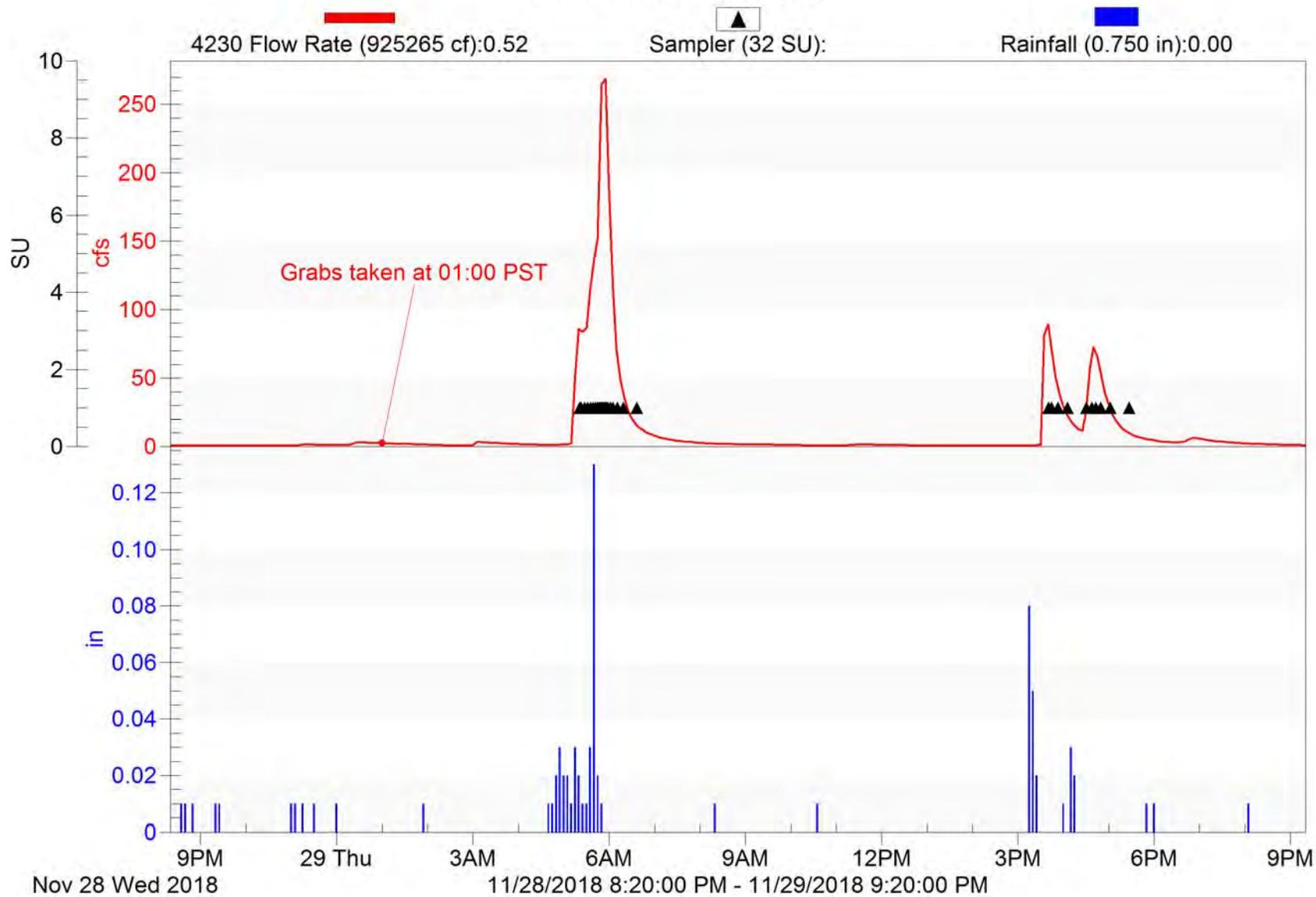
# Ventura-1

2018/19 NPDES Event #1 (Wet)



# Ventura-1

2018/19 NPDES Event #2 (Wet)





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



# Ventura County Watershed Protection District

## Planning & Regulatory Hydrology Section

### MEMORANDUM

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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.

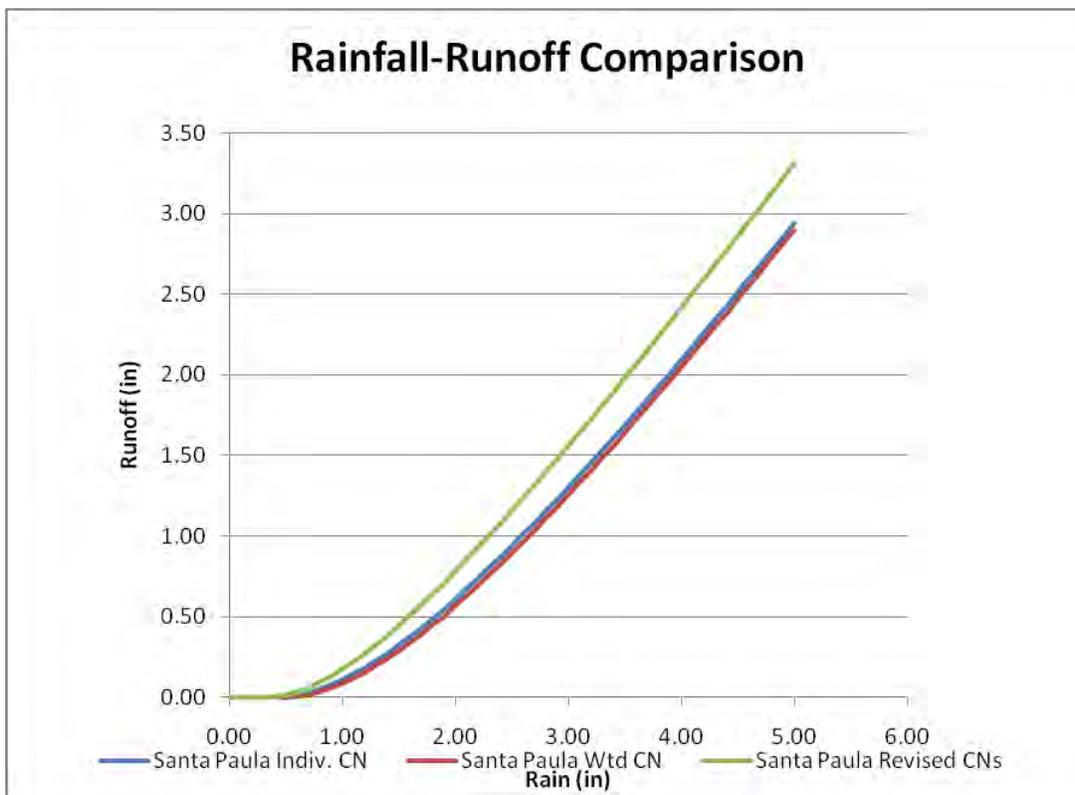
Table 3: Storm Yield Results- Weighted Average Curve Numbers with Updated CNs

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_MonitoringSitesRunoff9-09.xls	9-09 CN data
NPDES_MonitoringSitesRunoff8-10.xls	8-10 updated analysis for 11 sites total
NPDES_MonitoringSitesRunoff8-10RevCNs.xls	8-10 analysis using revised CNs
MonitoringSites9-09.mxd	ArcMap project file for analysis

# Ventura Watershed

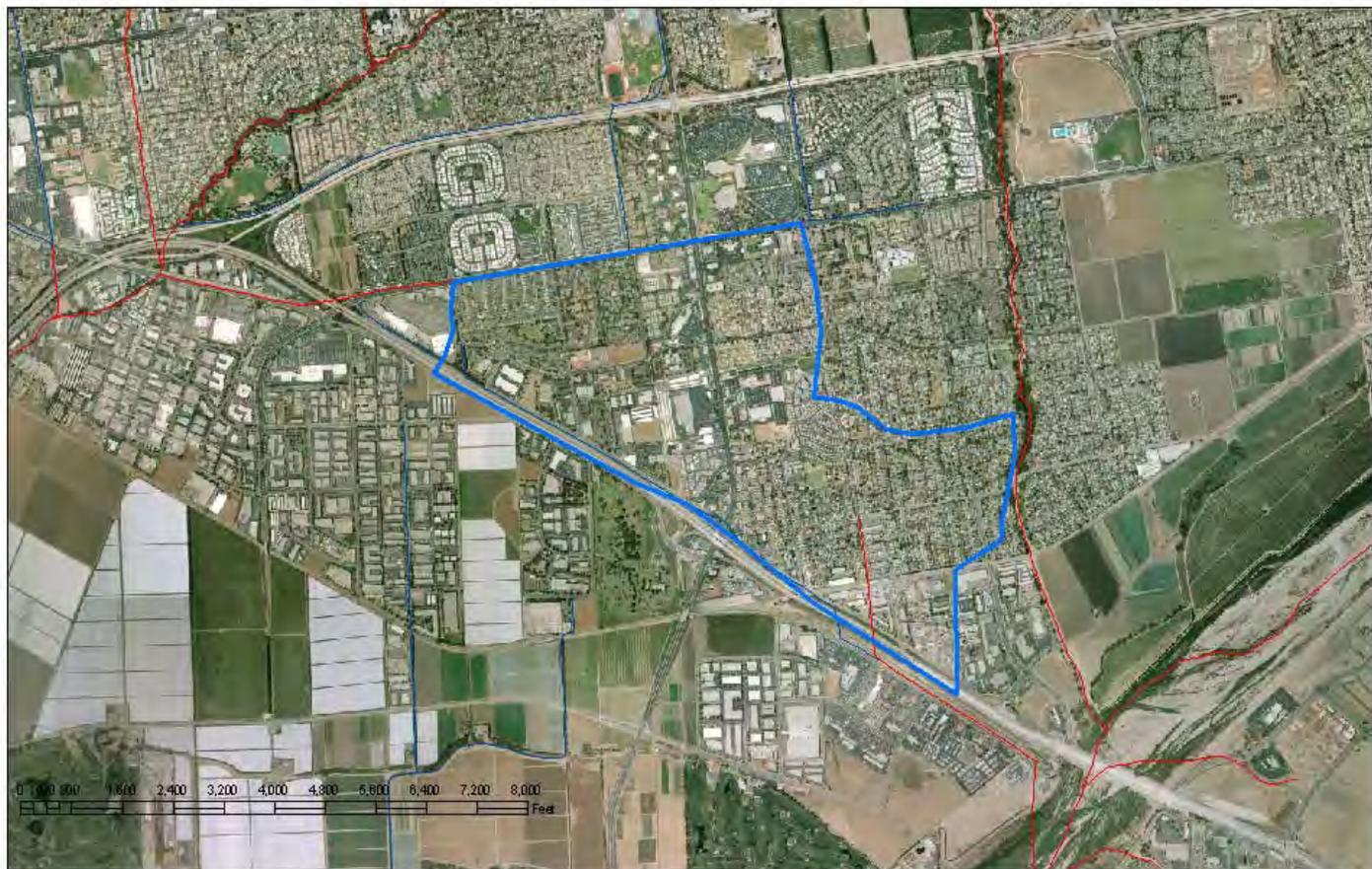


Figure 2

# Meiners Oaks Happy Valley Watershed



Figure 3

# Ojai Fox Watershed

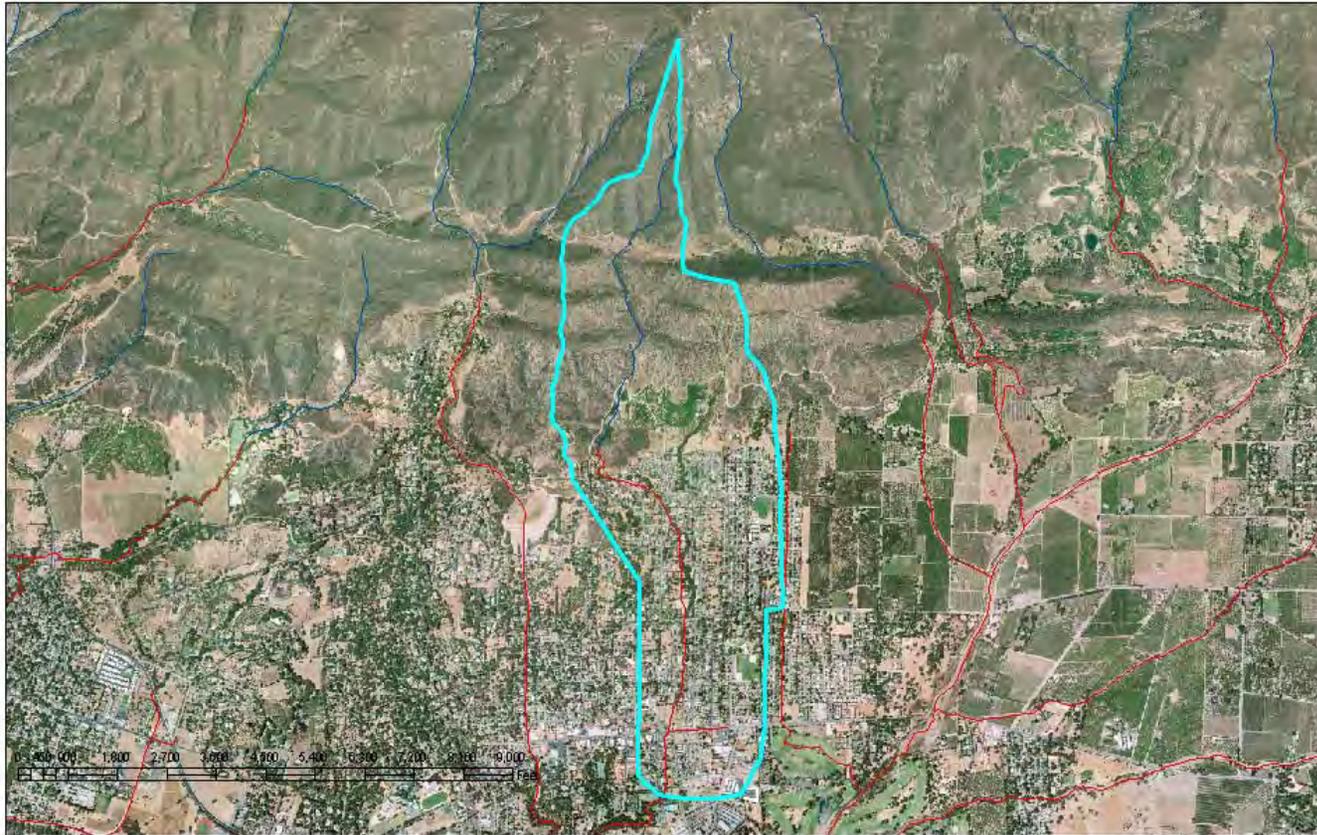


Figure 4

### Camarillo Hills Drain Watershed

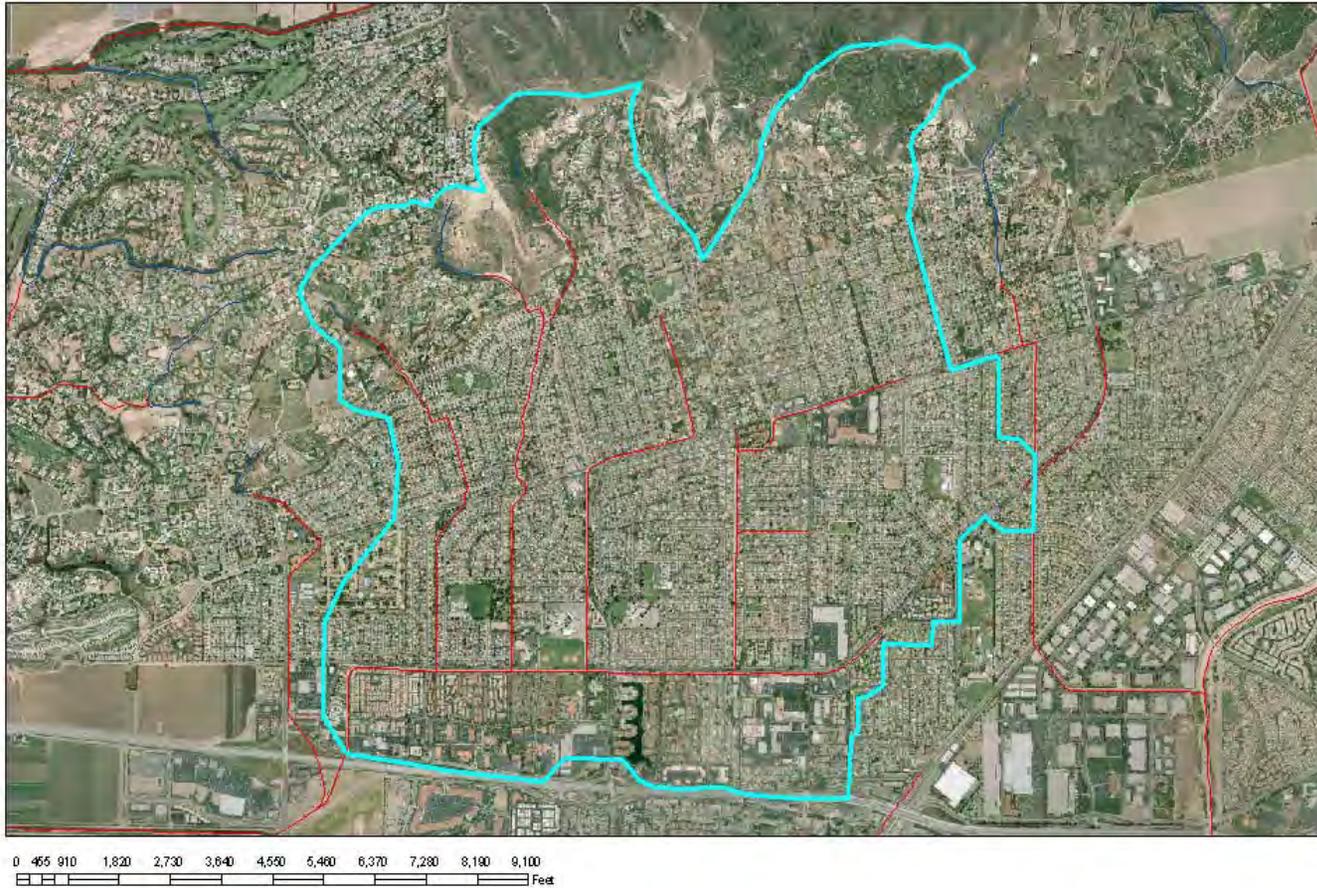


Figure 5

Simi Valley Watershed

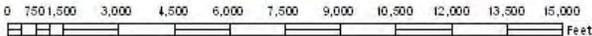
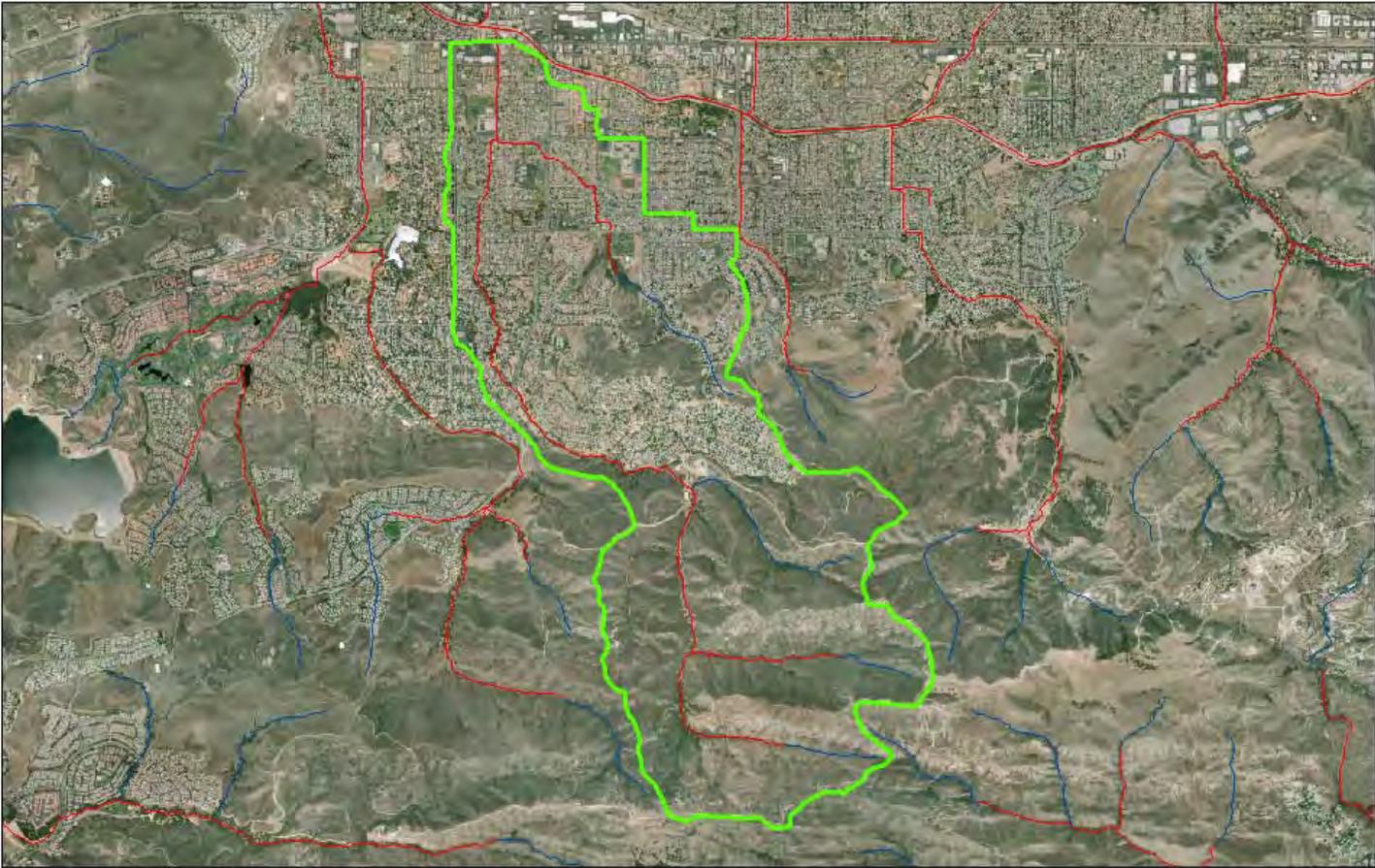


Figure 6

Oxnard Watershed



Figure 7

### Moorpark Watershed

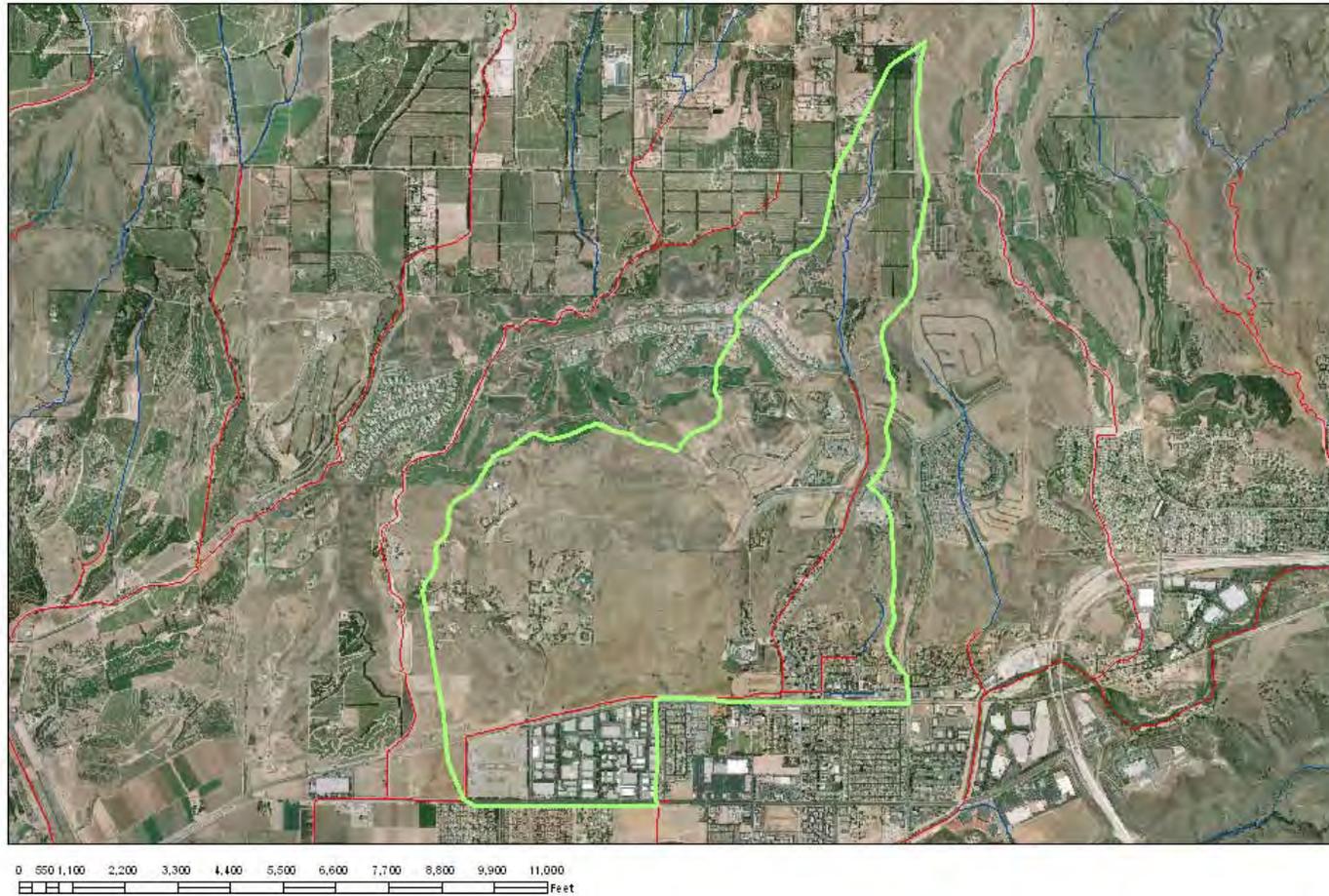


Figure 8

# Port Hueneme Watershed

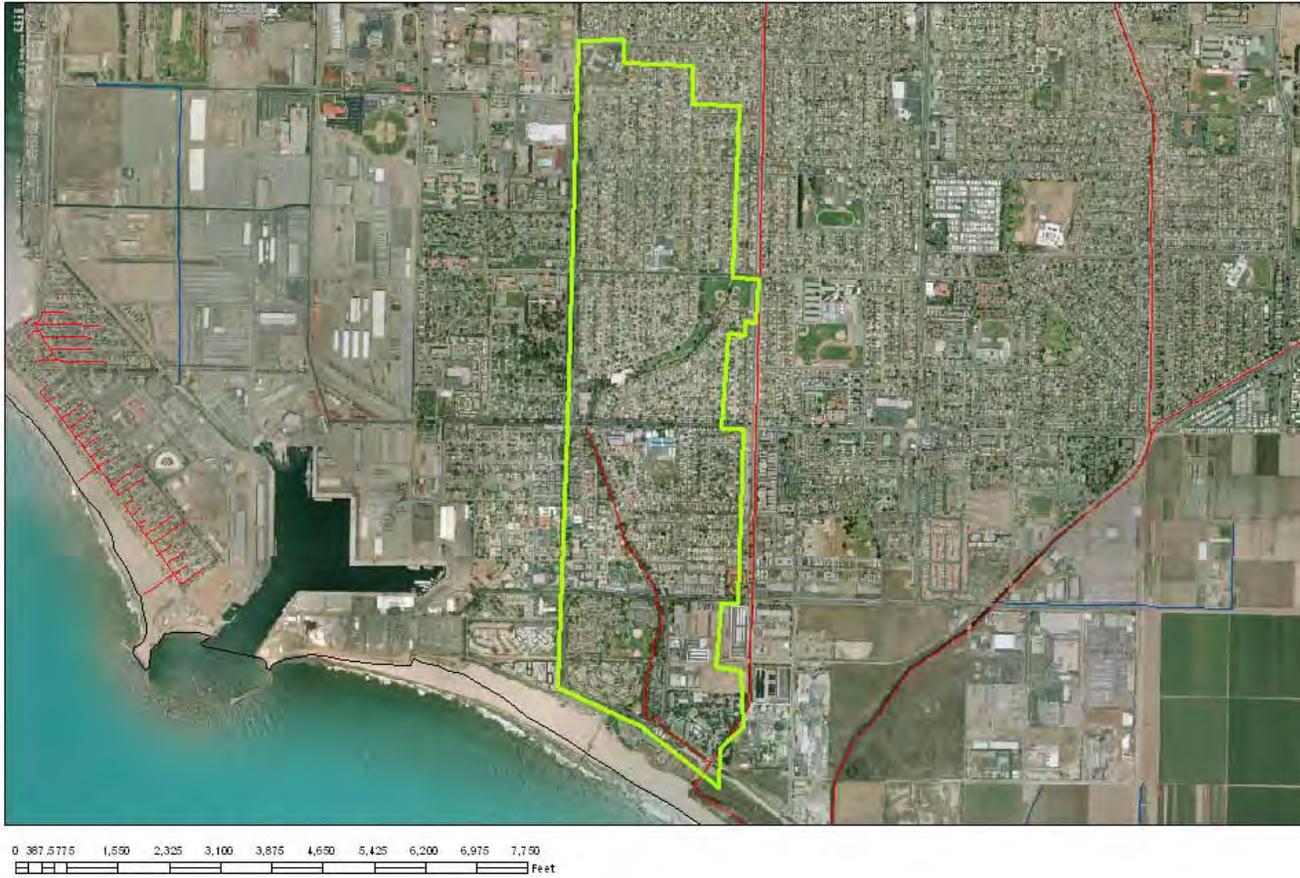


Figure 9

# Fillmore Watershed



Figure 10

# Thousand Oaks Watershed

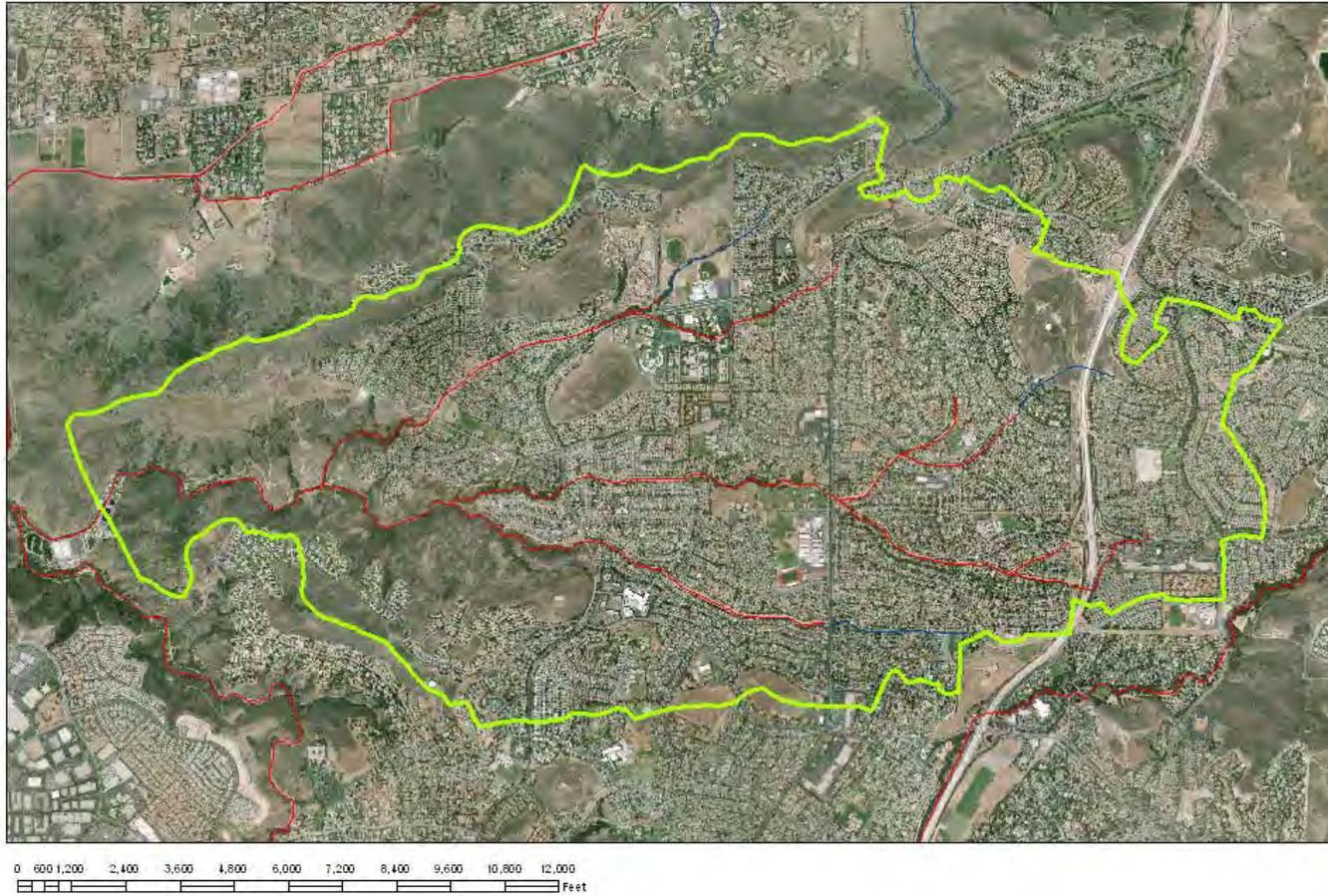


Figure 11

# Santa Paula Watershed

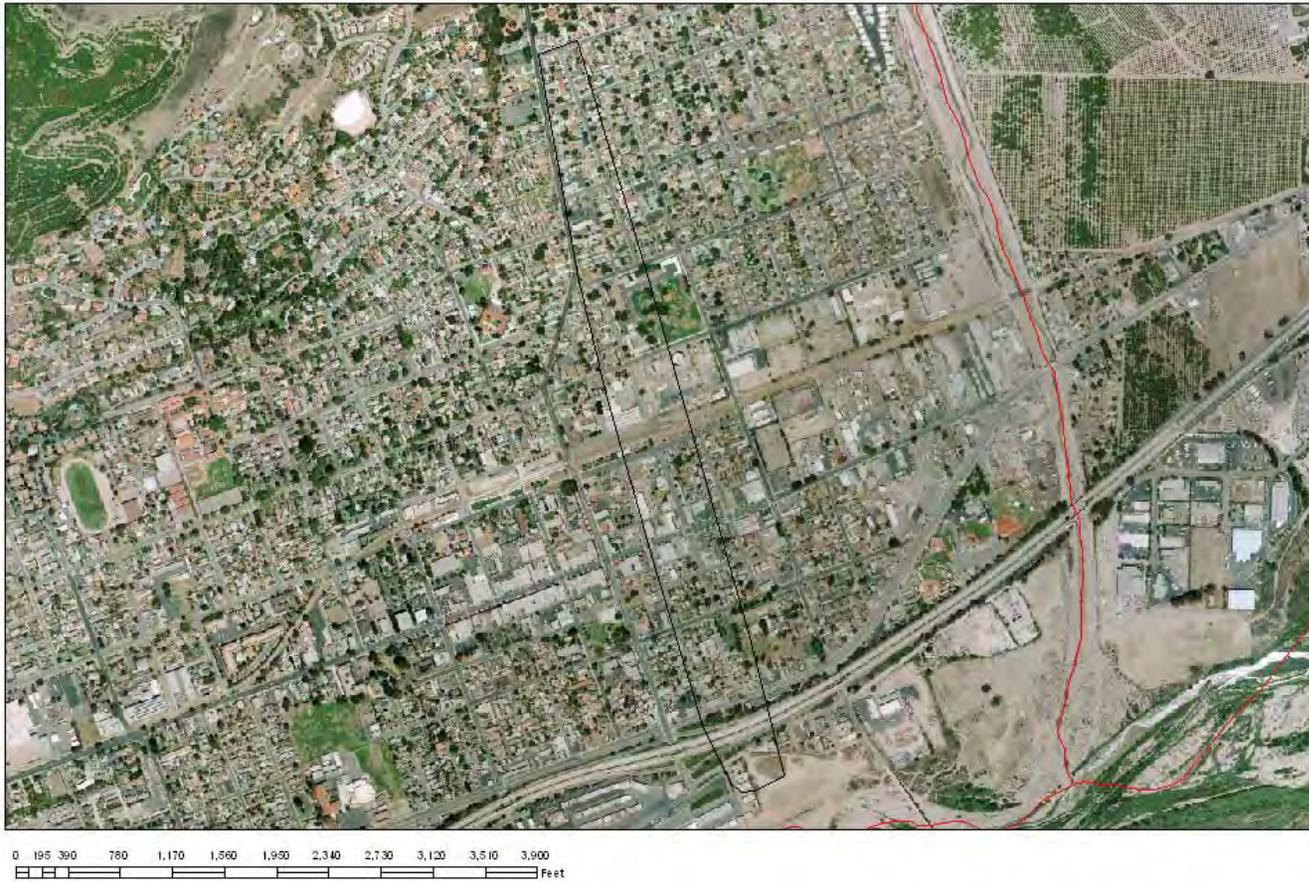


Figure 12

## Appendix D. Event Summaries

Site	Event	Visit	Staff	Date	Arrival Time	PST/PDT	Flowmeter			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)	Flowmeter Flow (cfs)	Outside Staff (ft)										
ME-CC	1	1	KH	11/20/2018	1410	PST	1.089	NA	1.08	Turned on	4L Distilled	72,484	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				Inside of house very dusty. (Since last visit in October.) Desiccant turning pink but still ok.	
ME-CC	1	2	JM,PD	11/22/2018	0120	PST	1.244			3			Sample 3 after 1 pulse	3L		0130	0130		
ME-CC	1	3	JM,PD	11/22/2018	1002	PST	1.378			7	2L Distilled	187,515	Sample 17 after 1 pulse. Turned off.	Overflowed		1006		Turned fridge off, propped open, and unplugged to drain.	
ME-VR2	1	1	WBC	11/20/2018	1526	PST	1.258			1	2L Distilled	34,831	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				Intake looks good.	
ME-VR2	1	2	DL,MD	11/22/2018	0114	PST	1.365			2			Sample 8 after 1 pulse	4L		0130	0130		
ME-VR2	1	3	DL,SG	11/22/2018	1015	PST	1.297			2	2L Distilled	239,368	Program disabled	15L		1020			
ME-SCR	1	1				PST				Turned on	4L Distilled		Time: 10 min/500mlx35, program disabled	Uncapped bottle				Set up but no runoff	
ME-SCR	1	2				PST													
ME-SCR	1	3				PST													
MO-OJA	1	1	WBC	11/20/2018	1350	PST	0.101	5		2	2L Distilled	23,817	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				Programmed onsite	
MO-OJA	1	2	DL,MD	11/21/2018	2307	PST	0.1	5	No flow	1			Program disabled	Empty		2315	2315		
MO-OJA	1	3	DL,SG	11/22/2018	0921	PST	0.0991	5	<toe	2	2L Distilled	65,367	Program disabled	7L		0925			
MO-MEI	1	1	WBC	11/20/2018	1442	PST	0.08	1	dry	Turned on	2L Distilled	21,889	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				Removed 2105 from office 9:18. Cycled power on 2105 in MEI. Programmed onsite. 4230 desiccant brown.	
MO-MEI	1	2	DL,MD	11/22/2018	0010	PST	0.244	12	0.2	2			Continuously pumping	00:10 8L		0020	0020	Comp bottle left onsite since pickup not possible until Friday with the holiday.	
MO-MEI	1	3	DL,SG	11/22/2018	0942	PST	0.082	1	<toe	2	2L Distilled	107,053	Program done	17L		0950		Turned fridge off, propped open	
MO-FIL	1	1	WBC	11/21/2018	1022	PST	0.568			Turned on	2L Distilled	21,059	Time: 10 min/500mlx35, program disabled	Uncapped bottle				4230 desiccant purple. Cleared around intake.	
MO-FIL	1	2	SG,EL	11/22/2018	0120	PST	1.711			-2				20%		0125	0125	Large amounts of trash in creek	
MO-FIL	1	3	KH,WBC	11/22/2018	0925	PST	0.571			3	2L Distilled	173,151	Program done	19L		0925		Turned fridge off, propped open	
MO-OXN	1	1	KH	11/20/2018	1030	PST	0.108	0.2	dry	Turned on	4L Distilled	37,065	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				4230 desiccant pink but none on truck to replace it. Lots of graffiti on house	
MO-OXN	1	2	SG,EL	11/21/2018	NR	PST	0.69	12	0.5	2			Sample 16 after 1 pulse	NR		2340	2340		
MO-OXN	1	3	JM,PD	11/22/2018	0900	PST	0.11	0.3	dry	4	2L Distilled	168,984	Program done	19L		0904		Turned fridge off, propped open	
MO-CAM	1	1	KH	11/20/2018	1105	PST	0.033	10	~1 cfs	Turned on	4L Distilled	35,277	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				4230 desiccant pink but none on truck to replace it.	
MO-CAM	1	2	LM,AA	11/21/2018	NR	PST	0.033	10	<oss	-3			Program disabled	Empty		2235	2235		
MO-CAM	1	3	JM,PD	11/22/2018	1023	PST	0.031	10	<oss	5	2L Distilled	123,332	Program done	18L		1026		Turned fridge off, propped open	
MO-SIM	1	1	KH	11/20/2018	1320	PST	0.141	2	~1 cfs	Turned on	4L Distilled	19,934	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				4230 desiccant mostly pink.	
MO-SIM	1	2.1	LM,AA	11/22/2018	0100	PST	0.391	20	NR	4			Sample 24 after 1 pulse			0110	0110		
MO-SIM	1	2.2	LM,AA	11/22/2018		PST	0.247	7		0	2L Distilled	94,503	Program done	Full				Turned fridge off, propped open	
MO-MPK	1	1	WBC	11/21/2018	1126	PST	0.072	0.2	<oss	Turned on	2L Distilled	59,416	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				Cycled power on 2105	
MO-MPK	1	2	LM,AA	11/22/2018	0000	PST	0.072	0.2	0	3			Program disabled	Empty		0010	0010		
MO-MPK	1	3	KH,WBC	11/22/2018	1000	PST	0.069	0.2	<toe	4	2L Distilled	200,955	Program done	18L		1000		Channel full of tumbleweeds upstream of site. Turned fridge off, propped open	
MO-THO	1	1	KH	11/20/2018	1230	PST	1.986	0	NR	2	4L Distilled	18,686	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				4230 desiccant blue. Hill Fire burnt along access road. No after dark access until we see how the hillsides fare in the rain. Many potential rock fall/slide areas.	
MO-THO	1	2	KH,WBC	11/22/2018	1026	PST	2.116	1	2.1	2	2L Distilled	195,196	Errors have occurred. Program disabled.	Overflowed		1026	Meter only	NS	
MO-VEN	1	1	WBC	11/21/2018	1225	PST	0.04	1	NR	Turned on	2L Distilled	19,983	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle				Replaced 4230 desiccant. Programmed onsite.	
MO-VEN	1	2	JM,PD	11/21/2018	2201	PST	0.039	1		4			22:01 program disabled. 23:41 program done.			2315	2315	Flow started 2304 and at 2310 - 4230 0.956, 88cfs. OSS 0.9 @ 2317. Comp bottle left onsite since pickup not possible until Friday with the holiday.+	

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		Toxicity Time	Notes
							Level (feet)	Flow (cfs)						status/Estimated Vol (L)	Duration (nearest half hrs)		
MO-VEN	1	3	DL,SG	11/22/2018	1041	PST	0.045	1	<oss	1	2L Distilled	115,382	Program done	19L	1045		Turned fridge off, propped open
MO-HUE	1	1	KH	11/20/2018	1500	PST	NA	NA		0	4L Distilled	29,980	Time: 10 min/500mlx35, program disabled	Uncapped bottle			
MO-HUE	1	2	JM,PD	11/22/2018	0020	PST	NA	NA		3.5			Sample 8 in 00:06	5L		0030	0030
MO-HUE	1	3	JM,PD	11/22/2018	0934	PST	NA	NA		3.5	2L Distilled	NR	Display only showing 1/2 pixels. Unplugged/replugged power and all pixels appeared.	12L		0936	
MO-SPA	1	1	WBC	11/21/2018	0938	PST	NA	NA	No flow	Turned on	2L Distilled	50,632	Flow: 1 pulse/500mlx35, program disabled	Uncapped bottle			Cycled power on 2105. Replaced light bulb for house. Programmed 2105 onsite. Many footprints in areas indicative of homeless activity.
MO-SPA	1	2	SG,EL	11/22/2018	~0100	PST	NA	NA									Bicycle leaning against house so unknown persons in area. Crew did not approach for safety reasons.
MO-SPA	1	3	KH,WBC	11/22/2018	0900	PST	NA	NA	Damp	2	2L Distilled	204,136	Program done	16.5L		0905	Turned fridge off, propped open. No evidence of bike but a partial box of fresh (not rained on) donuts at back of house.

**Event Notes:**

NR: Not recorded  
 All times are recorded here in PST  
 Forecast Rain: 0.25-0.75" across the county  
 Actual Rainfall: ~0.25-0.5" across the county  
 Storm Control: Kelly Hahs  
 SPA - no grabs (homeless), THO - no grabs (access road concerns post-Hill Fire), SCR - no flow

**Sample Tracking:**

Bacteria samples to VCHCA:  
 11/22/2018 @ 02:20 (VR2/MEI/OJA) by Dave Laak  
 11/22/1018 @ 02:22 (CAM(+FD)/SIM/MPK) by Arne Anselm  
 11/22/2018 @ 02:30 (FIL/OXN) by Steven Greer  
 11/22/2018 @ 02:15 (CC/HUE/VEN) by Jaime McClain

Toxicity samples to Pacific EcoRisk (via Redline Courier)  
 11/22/2018 @ 15:10 (All sites) by Bill Carey

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier (Reliable Messenger Service))  
 11/22/2018 @ 05:30 (All sampled grabs and composites) to David Levy by Bill Carey

**Meters:**

CAM/MPK/SIM (AA,LM): Beckman 255 # 2151, YSI 85 # 05E1126  
 OJA/MEI/VR2 (DL,MD): Beckman 255 # 2554, YSI 85 # 03D0375  
 CC/HUE/VEN (JM,PD): Beckman 410 # 130240875, YSI 85 # 05E1042  
 FIL/OXN (SG,EL): Beckman 410 # 110341139, YSI 85 # 01G0625

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

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 Time	Notes
							Level (feet)	Flow (cfs)										
ME-CC	2	1.1	DL	11/28/2018	1121	PST	1.074	NA	1.08	on	4L Distilled	192,730	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Grab bottles and field blanks/water placed onsite. 4230 desiccant good.
ME-CC	2	1.2	DL	11/28/2018	1532	PST		NA			2L Distilled	232,514	Flow: 1 pulse/500mlx35, program disabled				Calibrated volume to 540 ml. Flushed line and reprogrammed 1 pulse.	
ME-CC	2	2	JM,MD	11/29/2018	0245	PST	1.219	NA	Photo	4			Sample 3 after 1 pulse			0300		Dark conditions so photo too grainy for OSS determination
ME-CC	2	3	PD,KB	11/30/2018	0525	PST	1.82	NA	2	5	2L Distilled	464,367	Flow paced is done	Overflowed		0525		Turned Fridge off and propped open.
ME-VR2	2	1	WBC	11/28/2018	0815	PST	1.307	NA	NA	2	4L Distilled	243,625	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Desiccant good 4330, needs replaced 6712.
ME-VR2	2	2	DL,KF	11/29/2018	0154	PST	1.397	NA	NA	2			Sample 5 after 1 pulse	2L		0205		Grab bottles placed onsite.
ME-VR2	2	3	KH,WBC	11/29/2018	1455	PST	1.372	NA	NA	2	2L Distilled	568,326	Program disabled. Replace pump tubing.	18.5L		1455		Turned 6712 off
ME-SCR	2	1	DL	11/28/2018	1413	PST	1.084	NA	NA	1	4L Distilled	42,398	Time: 10 min/500mlx35, program disabled.	Installed, lid off.				Lowered swing arm. Grab bottles still onsite.
ME-SCR	2	2	KH,WBC	11/29/2018	1605	PST	1.084	NA	NA	2			Program had enabled but flow<intake. Reprogrammed 6712 20 min pacing. Backed off stopper to lower swing arm. Volume delivery high so recalibrated.	Empty		1630		Flow started ~1500 PST. Collected all grabs except bacteria because lab unable to accept it tonight.
ME-SCR	2	3	KH,JM	11/30/2018	0421	PST	1.084	NA	NA	2	2L Distilled	539,711	Program done	17L		0431	0425	Grabs - bacteria only. Turned outside light and 6712 off. Raised swing arm and secured to railing.
MO-OJA	2	1	WBC	11/28/2018	1008	PST	0.099	5	No flow	3	4L Distilled	68,335	Flow: 1 pulse/500mlx35, program disabled.	Installed, lid off.				Cycled power 2105 and programmed enable/pacing onsite. 4230 desiccant good.
MO-OJA	2	2	DL,KF	11/29/2018	0022	PST	0.1	5	0	2			Program disabled.	Empty		0030		Grab bottles placed onsite.
MO-OJA	2	3	KH,WBC	11/29/2018	0608	PST	0.13	7		1	2L Distilled	158,309	Program done	18L		0610		Turned 6712 off
MO-MEI	2	1	WBC	11/28/2018	0905	PST	0.081		Channel dry	Turned on	4L Distilled	110,602	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				4230 desiccant okay. Programmed enable/pacing onsite. Grab bottles placed onsite.
MO-MEI	2	2	DL,KF	11/29/2018	0109	PST	0.144	4	0.1	2			Sample 10 after 1 pulse	3L		0120		
MO-MEI	2	3	KH,WBC	11/29/2018	0630	PST	0.227	10		3	2L Distilled	195,748	Program done	17L		0630		Turned off 6712 and fridge (propped open).
MO-FIL	2	1	WBC	11/28/2018	1157	PST	0.393	NA		Turned on	4L Distilled	176,822	Time: 20 min/500mlx35, program disabled	Installed, lid off.				Cleared intake of sand. 4230 desiccant good. Grab bottles placed onsite.
MO-FIL	2	2	PD,TD	11/29/2018	0245	PST	1.169	NA		4			Sample 13 in 00:04	5L		0255		
MO-FIL	2	3	LM,DW	11/29/2018	1245	PST	0.69	NA		-2	2L Distilled	327,416	Program done	Full		1250		Turned off 6712 and fridge (propped open).
MO-OXN	2	1	DL	11/28/2018	1308	PST	0.109	0.2	Dry	Turned on	4L Distilled	173,828	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Grab bottles placed onsite.
MO-OXN	2	2	PD,TD	11/29/2018	(2355*)	PST	0.283	2.2	0.25	4			Sample 3 after 1 pulse	1L		0000		*11/28/2018
MO-OXN	2	3	LM,DW	11/29/2018	1545	PST	0.712	12.5		-3	2L Distilled	291,509	Sample 32 after 1 pulse	Near full		1546		Turned off 6712 and fridge (propped open).
MO-CAM	2	1	DL	11/28/2018	0837	PST	0.033	10	Dry	Turned on	4L Distilled	128,467	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Changed desiccant. Grab bottles placed onsite.
MO-CAM	2	2	JM,MD	11/29/2018	0000	PST	0.033	10	0	-4			Program disabled	Empty		0015		
MO-CAM	2	3	PD,KB	11/30/2018	0550	PST	0.034	10	0	-2	2L Distilled	195,413	Program disabled, errors have occurred.	14L		0555		Turned off fridge and propped open.
MO-SIM	2	1	DL	11/28/2018	0940	PST	0.149	2	<toe	Turned on	4L Distilled	99,502	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Changed desiccant. Grab bottles placed onsite.
MO-SIM	2	2	JM,MD	11/29/2018	0130	PST	0.173	3	~1	0			Program disabled	1L		0145		
MO-SIM	2	3	KH,JM	11/30/2018	0530	PST	0.146	2	<toe	4	2L Distilled	174,527	Program done	19L		0530		Turned off fridge and propped open.
MO-MPK	2	1	WBC	11/28/2018	1323	PST	0.075	0.2		Turned on	4L Distilled	204,464	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Changed desiccant. Grab bottles placed onsite.
MO-MPK	2	2	JM,MD	11/29/2018	0205	PST	0.141	1.5	~1	4			Sample 2 after 1 pulse	5L		0220		
MO-MPK	2	3	LM,DW	11/29/2018	1340	PST	0.155	1.8		4	2L Distilled	367,651	Program done. Errors have occurred. No more liquid samples	2-7.		1340		Turned off 6712 and fridge (propped open). Drained fridge (~2" water in bottom).

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 Time	Notes
							Level (feet)	Flowmeter Flow (cfs)										
MO-THO	2	1	DL	11/28/2018	1030	PST	2.084	1	2.02	1	4L Distilled	199,900	Flow: 1 pulse/500mlx35, program disabled					Desiccant good. Grab bottles placed onsite.
MO-THO	2	3	LM,DW	11/29/2018	1405	PST	2.199	2	2.2	2			Program disabled			1415	1415	
MO-THO	2	2	KH,JM	11/30/2018	0605	PST	2.083	1		4	2L Distilled	295,677	Errors have occurred. Program disabled.			0610		No more liquid samples 1-2, good 3-18, then disabled. Turned 6712 off.
MO-VEN	2	1	WBC	11/28/2018	1615	PST	0.04	1		Turned on	4L Distilled	119,072	Flow: 1 pulse/500mlx35, program disabled					Cycled power 2105 and programmed enable/pacing onsite. 4230 desiccant good. Grab bottles placed onsite.
MO-VEN	2	2	PD,TD	11/29/2018	0045	PST	0.113	2	0.1	0			Program disabled			0100		
MO-VEN	2	3	PD,KB	11/30/2018	NR	PST	0.043	1	0	2	2L Distilled	204,631	Program disabled			0420		Turned off 6712 and fridge (propped open).
MO-HUE	2	1.1	DL	11/28/2018	1203	PST	NA	NA			Power failed		Power failed					6712 power failed during flushing. Pump head to be replaced for event
MO-HUE	2	1.2	WBC	11/28/2018	1530	PST	NA	NA			4L Distilled		Time: 20 min/500mlx35, program disabled					Replaced pump head.
MO-HUE	2	2	DL,KF	11/29/2018	0304	PST	NA	NA	4	1			Program disabled			0315		
MO-HUE	2	3	PD,KB	11/30/2018	0455	PST	NA	NA		2	2L Distilled	161,905	Program done			0455		Turned off 6712.
MO-SPA	2	1	WBC	11/28/2018	1117	PST	NA	NA	No flow	Turned on	4L Distilled	207,905	Flow: 1 pulse/500mlx35, program disabled					Grab bottles still onsite. 2105 not feeding data to server since 2200 so cycled power and it resumed feeding ~ 0150. (Pulled wrong fuse first - 6712 lost power)
MO-SPA	2	2	PD,TD	11/29/2018	0150	PST	NA	NA	Flowing	2			Sample 9 after 1 pulse			0200	0200	
MO-SPA	2	3	KH,WBC	11/29/2018	1240	PST	NA	NA	Flowing	1	2L Distilled	361,498	Program done, errors have occurred (samples 1-35 good, so error likely result of wrong fuse pulled ~0150 PST)			1240		Turned off 6712 and fridge (propped open).

**Event Notes:**

NR: Not recorded  
 All times are recorded here in PST  
 Forecast Rain: (NWS) 1-2" coasts and valleys, 1.5-3" mountains. Most forecasts agree 0.8-1.25" for our sites.  
 Actual Rainfall: ~ 0.3-3" across the county  
 Storm Control: Kelly Hahs

**Sample Tracking:**

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

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

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

**Meters:**

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

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

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	WBC	1/4/2019	1008	PST	1.112	NA				Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.					Calibrated 6712 to 440ml. 4230 desiccant pink. Grab bottles placed in house.	
ME-CC	3	2	SG,DW	1/5/2019	2018	PST	1.621	NA		2	4L Distilled	659,940	Sample 3 after 1 pulse	5%		2027		Turned fridge off, drained, propped lid open. 4230 desiccant is pink.	
ME-CC	3	3	KH,WBC	1/6/2019	0925	PST	2.279	NA		2	2L Distilled	839,325	Program done	Overflowed		0925			
ME-VR2	3	1	KH	1/5/2019	0805	PST	1.566	NA		2	2L Distilled		Replaced aux tube. Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Site not feeding data to Flowlink so cycled power on 2105ci. Calibrated 6712 to 500 ml. Desiccant 1/2 pink. Grab bottles placed in house.	
ME-VR2	3	2	WBC,DY	1/5/2019	2100	PST	1.724	NA		2	2L Distilled	370,615	Program done	17.5		2120	2115	Turned off 6712.	
ME-SCR	3	1	DL	1/4/2019	1436	PST	5.894	NA	NA	Turned warmer -3,	4L Distilled	544,484	Time: 12 min/500mlx35, program disabled	Installed, lid off.				Lowered swing arm, rope in house. Grab bottles placed in house.	
ME-SCR	3	2	JM,PD	1/5/2019	2054	PST	6.036	NA	NA	0			Sample 8 in 00:01	8		2110		Turned off 6712 and outside light. Raised intake and tied to rail.	
ME-SCR	3	3	KH,WBC	1/6/2019	1000	PST	6.313	NA	NA	2	2L Distilled	859,460	Program done	Overflowed		1000			
MO-OJA	3	1	WBC	1/4/2019	1550	PST	0.099	5		2	4L Distilled	161,788	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Site not feeding data to Flowlink so cycled power on 2105ci. Desiccant pink. Grab bottles (+FD) placed in house. Programmed 2105 direct connection.	
MO-OJA	3	2	WBC,DY	1/5/2019	1900	PST	0.191	12		2			Sample 11 after 1 pulse	5		1915			
MO-OJA	3	3	EL,SG	1/6/2019	0833	PST	0.102	5	0	2	2L Distilled	230,310	Program disabled	13		0836		Turned 6712 off	
MO-MEI	3	1	KH	1/5/2019	0904	PST	0.081		channel dry	Turned on	4L Distilled	201,076	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Grab bottles placed in house.	
MO-MEI	3	2	WBC,DY	1/5/2019	2000	PST	0.163	5		4	2L Distilled	286,541	Program done	16.5		2020	2015	Turned fridge off, propped open.	
MO-FIL	3	1	WBC	1/4/2019	1317	PST	0.477	NA	NA	Turned on	4L Distilled	327,416	Time: 11 min/500mlx35, program disabled	Installed, lid off.				Dug out intake strainer. 4230 desiccant pink. Grab bottles placed in house.	
MO-FIL	3	2	JM,PD	1/5/2019	1950	PST	1.899	NA	NA	4			Sample 6 in 00:07	4		2000			
MO-FIL	3	3	EL,SG	1/6/2019	0931	PST	0.39	NA	NA	1	2L Distilled	483,917	Program done	19		0934		Turned off fridge and 6712	
MO-OXN	3	1	DL	1/4/2019	1302	PST	0.109	0.2	dry	Turned on	4L Distilled	296,292	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				4230 desiccant blue. Grab bottles placed in house.	
MO-OXN	3	2	SG,DW	1/5/2019	NR	PST	1.65	57.3	2.25	2			Sample 9 after 1 pulse	25%		1840			
MO-OXN	3	3	SG,DW	1/5/2019	2135	PST	0.383	3.9		2	2L Distilled	430,771	Program done	Full		2140		Turned off fridge, propped open.	
MO-CAM	3	1	DL	1/4/2019	0930	PST	0.035	10	no flow	Turned on	4L Distilled	200,720	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				4230 Desiccant pink. Grab bottles placed in house.	
MO-CAM	3	2	DL,MC	1/5/2019	1833	PST	0.4	63	0.35	2			Sample 6 after 1 pulse	3		1845		Distributor arm loose and ~1" water in bottom of fridge. Turned off fridge, drained, propped lid open. 6712 off.	
MO-CAM	3	3	DL,MC	1/5/2019	2210	PST	0.034	10	0.05	3	2L Distilled	288,537	Program done	14		2215			
MO-SIM	3	1	DL	1/4/2019	1025	PST	0.138	2	0	Turned on	4L Distilled	179,576	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				4230 Desiccant pink with blue. Grab bottles placed in house.	
MO-SIM	3	2	DL,MC	1/5/2019	2030	PST	1.162	146	1	5	2L Distilled	253,998	Program done	19		2055	2040	Turned off 6712 and fridge, propped open. Water very muddy (Woolsey Fire burned Bus Canyon watershed).	
MO-MPK	3	1	KH	1/5/2019	1125	PST	0.072	0.2	<0.1, toe	Turned on	4L Distilled	373,736	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Site not feeding data to Flowlink so cycled power on 2105ci. Programmed 2105ci direct connection. Desiccant 1/2 pink. Grab bottles placed in house.	
MO-MPK	3	2	DL,MC	1/5/2019	1928	PST	0.501	19.4	0.6	3			Program done, errors have occurred. No liquid detected samples 1-9. Reprogrammed 9 samples. Sample after 1 pulse.	7		1940			
MO-MPK	3	3	DL,MC	1/5/2019	2126	PST	0.199	3.2	0.2	4	2L Distilled	566,322	Program done	19		2130		Turned off fridge and propped open. Turned off 6712.	

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)	Duration (nearest half hrs)	Comp Time	Grab Time	Toxicity Time	Notes
							Level (feet)	Flow (cfs)											
MO-THO	3	1	DL	1/4/2019	1105	PST	2.087	1	2.21	2	4L Distilled	300,362	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.					Replaced distributor arm style (to elbow). 4230 desiccant blue. Grab bottles placed onsite. Grabs not collected during storm due to rain intensity/flood warning in Hill Canyon Burn area (for safety) but collected at sample pickup (no bacti due to lab schedule). Turned 6712 off.
MO-THO	3	2	KH,WBC	1/6/2019	0830	PST	2.181	1		1	2L Distilled	465,740	liquid. Samples 2-35 good.	20	0830	0840		Turned 6712 off.	
MO-VEN	3	1	DL	1/4/2019	1356	PST	0.043	1		Turned on	4L Distilled	209,322	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				4230 desiccant half pink, half blue. Grab bottles placed in house.	
MO-VEN	3	2	JM,PD	1/5/2019	1818	PST	0.863	74	2.2	3			Sample 4 after 1 pulse	1		1830			
MO-VEN	3	3	SG,DW	1/5/2019	2203	PST	0.113	3		2	2L Distilled	303,661	Program done	Full	2205			Turned off fridge, propped open.	
MO-HUE	3	1	DL	1/4/2019	1210	PST	NA	NA		2	4L Distilled	166,951	Time: 11 min/500mlx35, program disabled	Installed, lid off.				Grab bottles placed onsite.	
MO-HUE	3	2	SG,DW	1/5/2019	1932	PST	NA	NA	~4'	2			Sample 10 in 00:02	35%		1940			
MO-HUE	3	3	EL,SG	1/6/2019	1023	PST	NA	NA		0	2L Distilled	322,223	Program done	18	1025			Turned 6712 off	
MO-SPA	3	1	WBC	1/4/2019	1455	PST	NA	NA		Turned on	4L Distilled	364,780	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Cycled power on 2105ci. Programmed pacing 2105ci direct connection. Cleared some vegetation around house. Placed grab bottles onsite.	
MO-SPA	3	2	JM,PD	1/5/2019	1917	PST	NA	NA	no flow	3			Sample 12 after 1 pulse	4		1925			
MO-SPA	3	3	JM,PD	1/5/2019	2025	PST	NA	NA	Flowing	3	2L Distilled	517,813	Program done	16	2028			Turned 6712 and fridge off, propped open.	

**Event Notes:**

NR: Not recorded  
 All times are recorded here in PST  
 Forecast Rain: (NWS) 0.5-1" coasts and valleys, 1-2" mountains, orographic enhancement south-facing slopes. Other forecasts vary 0.25-1.3" across the county.  
 Actual Rainfall: 0.3-1" across the county  
 Storm Control: Kelly Hahs and Lara Meeker

**Sample Tracking:**

Bacteria samples to VCHCA:  
 01/05/2019 @ 21:57 (VR2/MEI/OJA+FD) by Danielle Yaconelli  
 01/05/2019 @ 22:40 (CAM/SIM/MPK) by Dave Laak  
 01/05/2019 @ 21:45 (VEN/SPA/FIL/SCR) by Jaime McClain  
 01/05/2019 @ 21:15 (OXN/HUE/CC) by Steven Greer

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

**Meters:**

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

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

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

**Event Notes:**

NR: Not recorded  
 All times are recorded here in PST  
 Forecast Rain: (NWS) 0.25-0.75" coasts and valleys  
 Actual Rainfall: 1.15"  
 Storm Control: Kelly Hahs

**Sample Tracking:**

Bacteria samples to VCHCA (Cameron Chandler):  
 01/31/2019 @ 14:32 (SCR) by Kelly Hahs

Chemistry samples to Weck Laboratories, Inc. (via Weck-provided courier (Hector Sanchez)):  
 02/01/2019 @ 10:00 (All sampled grabs and composite) to Hector Sanchez by Bill Carey

**Meters:**

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

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

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/	Comp Duration (nearest half hrs)	Comp Time	Grab Time	Toxicity Time	Notes
							Level (feet)							Estimated Vol (L)					
ME-SCR	5	1	KH,WBC	5/1/2019	10:15	PDT	8.168	NA	NA	0	4L Distilled	362,413	Time: 41 min/500mlx35. Program started	Installed labeled bottle, lid off					Lowered swing arm. Grab bottles placed onsite. Sample 1 volume good. Raised swing arm. Grabs taken in diversion canal. Turned 6712 off.
ME-SCR	5	2	KH,WBC	5/2/2019	10:20	PDT	8.115	NA	NA	2	2L Distilled	656,846	Program done	17	24	10:25	10:25		
MO-FIL	5	1	KH,WBC	5/1/2019	08:16	PDT	0.441	NA	NA	Turned on	4L Distilled	490,456	Time: 41 min/500mlx35. Program started	Installed labeled bottle, lid off					Replaced 4230 desiccant. Cleared debris around intake. Grab bottles placed onsite. Sample 1 volume good. Turned fridge off. Propped open with positioning rack.
MO-FIL	5	2	KH,WBC	5/2/2019	09:14	PDT	0.37	NA	NA	2	2L Distilled	643,485	Program done	18	24	09:20	09:20		
MO-VEN	5	1	KH,WBC	5/1/2019	11:10	PDT	0.042		trickle flow <OSS	Turned on	4L Distilled	309,395	Time: 41 min/500mlx35. Program started	Installed labeled bottle, lid off					Installed silicone dam and calibration line. Replaced 4230 desiccant. Grab bottles placed onsite. Installed Oxnard module 2105ci and renamed Ventura-1x. Sample 1 volume good. Removed silicone dam and calibration line. Turned fridge off, propped lid open. Removed temporary 2105ci.
MO-VEN	5	2	KH,WBC	5/2/2019	11:18	PDT	0.043		trickle flow <OSS	4	2L Distilled	405,861	Program done, errors occurred. No more liquid samples 7-11 (14:46-17:30)	18	24	11:25	11:25		
MO-OXN	5	1	DRY			PDT							4L Distilled						
MO-OXN	5	2				PDT							2L Distilled						
MO-SPA	5	1	DRY			PDT	NA	NA					4L Distilled						
MO-SPA	5	2				PDT	NA	NA					2L Distilled						
ME-VR2	5	1	WBC,DW	5/7/2019	10:25	PDT	0.398	NA		4	4L Distilled	382,994	Time: 41 min/500mlx35. Program started	Installed labeled bottle, lid off					Cycled power on 2105ci. Placed grab bottles onsite.
ME-VR2	5	2	WBC,DW	5/8/2019	10:15	PDT	0.395	NA		3	2L Distilled	726,604	Program done	15.5	24	10:15	10:15		Cycled power on 2105ci. Turned 6712 off.
MO-OJA	5	1	WBC,DW	5/7/2019	09:05	PDT	0.102	5	trickle flow <OSS	2	4L Distilled	230,310	Time: 41 min/500mlx35. Program started	Installed labeled bottle, lid off					Installed silicone dam and low flow strainer.
MO-OJA	5	2	WBC,DW	5/8/2019	09:10	PDT	0.102	5	trickle flow <OSS	3	2L Distilled	328,097	Program done	16.8	24	09:10	09:10		Turned 6712 off.
MO-HUE	5	1	WBC,DW	5/7/2019	11:25	PDT	NA	NA		2	4L Distilled	322,223	Time: 41 min/500mlx35. Program started	Installed labeled bottle, lid off					Placed grab bottles onsite. Replaced 2105ci desiccant.
MO-HUE	5	2	WBC,DW	5/8/2019	12:15	PDT	NA	NA		4	2L Distilled	483,751	Program done	17.5	24	12:15	12:15		Turned 6712 off.
MO-MEI	5	1	DRY			PDT							4L Distilled						
MO-MEI	5	2				PDT							2L Distilled						
ME-CC	5	1	KH,WBC	5/13/2019	11:05	PDT	1.125	NA		Turned on	4L Distilled		Changed tubing reset to 0	Time: 41 min/800ml (delivers ~450ml) x35, program started	Installed labeled bottle, lid off				Replaced 4230 and 2105ci desiccant. 6712 needs desiccant. Would not calibrate, so workaround to get ~ 450ml samples is pre-purge 5,000 and post-purge 500 counts, 800 ml sample for 30L bottle. Programming will need updated for next event. Tried recalibrating with liquid detector on but not working. Turned 6712 and fridge off, propped open.
ME-CC	5	2	KH,WBC	5/14/2019	11:12	PDT	1.217	NA		4	2L Distilled	536,653	"Sample 35 in 00:33". Stopped program.	20	24	11:20	11:20		
MO-CAM	5	1	KH,WBC	5/13/2019	12:00	PDT	0.035	10	trickle flow <0.1 cfs	Turned on	4L Distilled	293,637	Time: 41 min/500mlx35. Program started	Installed labeled bottle, lid off					Installed silicone dam and calibration line. Replaced pink 4230 and 2105ci desiccant. Grab bottles placed onsite. Sample 1 volume good. Removed silicone dam and calibration line. Turned fridge off, propped lid open. Turned 6712 off.
MO-CAM	5	2	KH,WBC	5/14/2019	12:00	PDT	0.033	10	trickle flow <0.1 cfs	18	2L Distilled	381,211	"Sample 35 in 00:20". Stopped program.	18	24	12:10	12:10		
MO-SIM	5	1	KH,WBC	5/13/2019	09:20	PDT	0.144	2	OSS<toe <1 cfs	Turned on	4L Distilled	259,563	Time: 41 min/500mlx35, program started. Sample 1 "Error no more liquid" so resecured intake below water line and reprogrammed.	Installed labeled bottle, lid off					Installed calibration line and secured in channel with concrete block. Replaced pink 4230 desiccant. Grab bottles placed onsite. Sample 1 volume good. Reconnected intake line. Replaced pink 2105ci desiccant. Turned fridge off, propped lid open.
MO-SIM	5	2	KH,WBC	5/14/2019	09:38	PDT	0.145	2	OSS<toe <1 cfs	2	2L Distilled	340,940	Program done	18	24	09:40	09:40		

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	Duration (nearest half hrs)	Comp Time	Grab Time	Toxicity	Notes
							Level (feet)							Comp bottle status/ Estimated Vol (L)					
MO-MPK	5	1	KH,WBC	5/13/2019	08:25	PDT	0.071	0.2	trickle flow <0.1 cfs	Turned on	4L Distilled	571,807	Time: 41 min/500mx35, program disabled	Installed labeled bottle, lid off					Cleared debris from collection area. Installed silicone dam and calibration line. Replaced pink 4230 desiccant. Grab bottles placed onsite. Sample 1 volume good. Removed silicone dam and calibration line. Replaced pink 2105ci desiccant. Turned fridge off, propped lid open. Turned 6712 off.
MO-MPK	5	2	KH,WBC	5/14/2019	08:47	PDT	0.074	0.2	trickle flow <0.1 cfs	4	4L Distilled	720,255	Program done	18	24	08:55	08:55		
MO-THO	5	1	KH,WBC	5/13/2019	10:20	PDT	2.086	1		2	4L Distilled	472,174	Time: 41 min/500mx35, program disabled	Installed labeled bottle, lid off					4230 desiccant purple. 2105 desiccant replaced. 6712 needs desiccant. Grab bottles placed onsite. 6712 pre-purge purges as programmed, but then stops purging and display continues to say purging. Disconnected power to reset. Same thing happened. Changed AC power to connect to pump instead of battery. Initially nothing happened but then the display came up. Ran program but still hanging up on purge cycle. After 1-2 minutes sampler then pumps sample. Sample 1 volume good.
MO-THO	5	2	KH,WBC	5/14/2019	10:28	PDT	2.128	1	2.1	4	2L Distilled	654,100	Program done	Overflowed	24	10:40	10:40		Turned 6712 off.

**Event Notes:**

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

**Sample Tracking:**

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

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

05/02/2019 @ 14:00 (SCR/FIL/VEN) to Hector Sanchez by Kelly Hahs  
 05/08/2019 @ 13:55 (VR2/OJA/HUE) to Bruce Markovich by W.B. Carey  
 05/14/2019 @ 13:40 (CC/CAM/THO/SIM/MPK) to Bruce Markovich by W.B. Carey

**Meters:**

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

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

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

**Appendix E. Chain-of Custody Forms**



8H09113

**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: 8/9/18 Project Number: 2018/19-PRE  
 Sampling Team: K. HAHS, W.B. CARBY

SAMPLE ID	DATE/TIME COLLECTED	EPA 525.2	EPA 625-CTR	EPA 353.2 (NO2+NO3-N)	EPA 200.8* (total only, see list in side bar)	EPA 245.1. Hg (total only)	No action required	Clean with detergent and HNO3 (see notes #2)	Please dispose of per Lab SOP	Bottle Quantity	NOTES
EB lines	8/9/18 0845	X	X	X	X					7	See note #1
EB composite	↓ 1240	X	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 HAHS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 8/9/18 / 1508

Received Printed Name Alina Goldberg  
 Signature [Signature]  
 Affiliation Weck Labs Date/Time 8/9/18 1505

- 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.

Relinquish X [Signature] 8/9/18 1745  
[Signature] 8/9/18 17:45 4.2°C



**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: 11/21-22/18 Project Number: 2018/19-1 (Wet)  
 Sampling Team: David Laak + Megan Desillier

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>ME-CC</del>		X	X							1	
	<del>ME-SCR</del>		X	X							1	
	ME-VR2	11/22/18 01:30	X	X							1	
	<del>MO-CAM</del>		X	X							1	
	MO-OJA	11/21/18 23:15	X	X							1	
	MO-MEI	11/22/18 00:20	X	X							1	
	<del>MO-VEN</del>		X	X							1	
	FB-1		X	X							1	

Relinquished Printed Name David Laak  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 11/22/18 02:20

Received Printed Name Denise Von Bargaen  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 11/22/18 02:23

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

Sampling Team: Lara M. & Arne A.

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>MO-SPA</del>		X	X							1	
	<del>MO-FEL</del>		X	X							1	
	MO-SIM	11/22/18 01:10	X	X							1	
	MO-MPK	11/22/18 00:10	X	X							1	
	<del>MO-THO</del>		X	X							1	
	<del>MO-OXN</del>		X	X							1	
	<del>MO-HUE</del>		X	X							1	
	FD-1	11/21/18 22:35	X	X							1	(CAM)

Relinquished Printed Name Lara Meeker  
 Signature [Signature]  
 Affiliation WPD Date/Time 11/22/18 02:20

Received Printed Name Denise Von Rosenberg  
 Signature [Signature]  
 Affiliation PH. Lab Date/Time 11/22/18 02:22

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: 11/22/18 - 11/22/18 Project Number: 2018/19-1 (Wet)  
 Sampling Team: Steven S. Green, Emily Comeli

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)							Number of Bottles	NOTES
	MO-SPA		X	X							1	
	MO-FIL	11/22/18 0125	X	X							1	SG, EL
	MO-SIM		X	X							1	
	MO-MPK		X	X							1	
	MO-THO		X	X							1	
	MO-OXN	11/22/18 11:40	X	X							1	SG, EL
	MO-HUE		X	X							1	
	FD-1		X	X							1	

Relinquished Printed Name Steven S. Green  
 Signature [Signature]  
 Affiliation VCPD Date/Time 11/22/18

Received Printed Name Denise Von Borgen  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 11/22/18 0230

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

Sampling Team: JM / PD

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)								Number of Bottles	NOTES
	MO-SPA		X	X								1	
	MO-FIL		X	X								1	
	MO-SIM		X	X								1	
	MO-MPK		X	X								1	
	MO-THO		X	X								1	
	MO-OXN		X	X								1	
	MO-HUE	11/22/18/0030	X	X								1	
	FD-1		X	X								1	

Relinquished Printed Name Jaime McClain  
 Signature [Signature]  
 Affiliation Rincon Consultants Date/Time 11/22/18 0213

Received Printed Name Denise Von Bergen  
 Signature [Signature]  
 Affiliation PH. Lab Date/Time 11/22/18 0215

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: 11/21/18 / 11/22/18

Project Number: 2018/19-1 (Wet)

Sampling Team: JM / PD

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)							Number of Bottles	NOTES
	ME-CC	11/22/18 / 0130	X	X							1	
	ME-SCR		X	X							1	
	ME-VR2		X	X							1	
	MO-CAM		X	X							1	
	MO-OJA		X	X							1	
	MO-MEI		X	X							1	
	MO-VEN	11/21/18 / 2315	X	X							1	
	FB-1		X	X							1	

Relinquished Printed Name Jaime McClain  
 Signature [Signature]  
 Affiliation Pinnac Consultants Date/Time 11/22/18 0213

Received Printed Name Denise Von Bergen  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 11/22/18 0215

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



8223002

**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: 11/21-22/18 Project Number: 2018/19-1 (Wet) Grabs  
 Sampling Team: DL+MD, LM+AA, JM+PD, SG+EL

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			
ME-CC	11/22/18/ 0130	2	1	2	3	1	9	JM + PD	
<del>ME-SCF</del>	<del></del>	<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>	<del>9</del>	<del>No flow</del>	
ME-VR2	11/22/18 0130	2	1	2	3	1	9	DL + MD	
MO-CAM	11/21/18 2235	3	1	2	3	1	10	LM+AA	
MO-OJA	11/21/18 2315	2	1	2	3	1	9	DL+MD	
MO-MEI	11/22/18 0020	2	1	2	3	1	9	DL+MD	
MO-VEN	11/21/18/2315	2	1	2	3	1	9	JM + PD	
MO-OXN	11/21/18 2340	2	1	2	3	1	9	SG + <del>EL</del> EL	
FD-1	11/21/18 2235	2	1	2	3	1	9	LM & AA	

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

Relinquished Printed Name Kelly Hols W.B. CAREY  
 Signature [Signature] W.B. Carey  
 Affiliation VCWPD Date/Time 11-23-18 0530

Received Printed Name David Lee  
 Signature [Signature]  
 Affiliation Waste Management Date/Time 11/23/18 0530

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] 11/23/18 0735 0.3%

BK23002



**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: 11/21 + 22/18 Project Number: 2018/19-1 (Wet) Grabs  
 Sampling Team: DL+MD, LM+AA, JM+PD, SE+EL

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			
<del>MO-SPA</del>		2	1	2	3	1	9		
MO-FIL	11/22/18 0125	2	1	2	3	1	9	SE+EL	
MO-SIM	11/22/18 0110	2	1	2	3	1	9	LM & AA	
MO-HUE	11/22/18 / 0030	2	1	2	3	1	9	JM+PD	
<del>MO-THO</del>		2	1	2	3	1	9		
MO-MPK	11/22/18 0010	2	1	2	3	1	9	LM & AA	

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

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 11-23-18 0530

Received Printed Name DR. J. ...  
 Signature [Signature]  
 Affiliation Revalore ... Date/Time 11/23/18 0530

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] 11/23/18 0735 0.32

8423003



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

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

Sampling Team: KH + WBC, LM + AA, JM + PD, DL + SG

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
ME-CC	11/22/18/1006		X	X	X	X	X	X	X	X	X	X	X	X	1	JM, PD
ME-SCR			X		X	X	X	X	X	X	X	X	X	X	1	
ME-VR2	11/22/18 1020	X	X		X	X	X	X	X	X	X	X	X	X	1	DL, SG
MO-CAM	11/22/18/1026		X		X	X	X	X	X	X	X	X	X	X	1	JM, PD
MO-OJA	11/22/18 0925		X		X	X	X	X	X	X	X	X	X	X	1	DL, SG
MO-MEI	11/22/18 0950		X		X	X	X	X	X	X	X	X	X	X	1	DL, SG
MO-VEN	11/22/18 1045		X		X	X	X	X	X	X	X	X	X	X	1	DL, SG

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 11-23-18 0530

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 11/23/18 0530

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

3K23003



**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: 11/22/18 Project Number: 2018/19-1 (Wet) Composites

Sampling Team: KH, WBC, LM + AA, JM + PD, DL + SG

SAMPLE ID	DATE/TIME COLLECTED																	NOTES
																		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
MO-SPA	11/22/18 0905																	KH, WBC
MO-FIL	11/22/18 0925																	KH, WBC
MO-SIM	11/22/18 0135																	LM, AA
MO-MPK	↓ 1000																	KH, WBC
MO-THO	11/22/18 1026																	KH, WBC *10-26
MO-OXN	11/22/18 0904																	JM, PD
MO-HUE	11/22/18 0936																	JM, PD

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 11-23-18 0530

Received Printed Name Reliable Messenger  
 Signature [Signature]  
 Affiliation Reliable Messenger Date/Time 11/23/18 0530

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).





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		Topsinein (Vibrio) spp. Survival and Growth, EPA 1006.011 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> Karen Goodman																		
<b>E-mail:</b> Kelly.Hahs@ventura.org		<b>E-mail:</b>																		
<b>Project Name:</b> NPDES Stormwater Monitoring Program - 2018/19-1 (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	11/22/18	0130	STRMW	Grab	2	2.5-gal jerrican	X													
2 <del>ME-SCR</del>			<del>STRMW</del>	<del>Grab</del>	<del>2</del>	<del>2.5-gal jerrican</del>		X												
3 ME-VR2	11/22/18	0130	STRMW	Grab	2	2.5-gal jerrican	X													
4 MO-CAM	11/21/18	2235	STRMW	Grab	2	2.5-gal jerrican								X						
5 MO-OJA	11/21/18	2315	STRMW	Grab	2	2.5-gal jerrican								X						
6 MO-MEI	11/22/18	0020	STRMW	Grab	2	2.5-gal jerrican								X						
7 MO-VEN	11/21/18	2315	STRMW	Grab	2	2.5-gal jerrican							X							
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>								<b>RECEIVED BY:</b>								
				Signature: W.B. CAREY								Signature: [Handwritten Signature]								
				Print: W.B. CAREY								Print: FRANK BUSTAMANTE								
				Organization: VCWPD								Organization: REDLINE COURIER								
				Date: 11-22-18 Time: 1510								Date: 11/22/18 Time: 310pm								
				<b>RELINQUISHED BY:</b>								<b>RECEIVED BY:</b>								
Signature: [Handwritten Signature]								Signature: Travis Fischer												
Print: FRANK BUSTAMANTE								Print: TRAVIS FISCHER												
Organization: REDLINE								Organization: PER												
Date: 11/23/18 Time: 802am								Date: 11/23/18 Time: 0802												

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



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		<b>Address:</b> Engineering Services Division 800 South Victoria Ave., L#1670 Ventura, CA 93009-1670		topsmelt ( <i>Asteriopsis armis</i> ) Survival and Growth, EPA 1006.011 Purple Urchin ( <i>S. purpuratus</i> ) Sperm Fertilization, EPA 1008.0 <i>Selenastrum Capricornutum</i> Algal Growth, EPA 1003.0 <i>Ceriodaphnia dubia</i> Survival and Reproduction, EPA 1002.0 Fathead Minnow ( <i>F. promelas</i> ) Survival and Growth, EPA 1000.0																	
<b>Phone:</b> (805) 658-4375		<b>Phone:</b>																			
<b>Attn:</b> Kelly Hahs		<b>Attn:</b> Karen Goodman																			
<b>E-mail:</b> Kelly.Hahs@ventura.org		<b>E-mail:</b>																			
<b>Project Name:</b> NPDES Stormwater Monitoring Program - 2018/19-2 (Wet)																					
<b>P.O.#/Ref:</b> Contract No. AE18-015																					
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Grab/Comp	Container																
					Number	Type															
<del>MO-GYN</del>			STRMW	Grab	2	2.5-gal jerrican														X	
<del>MO-HUE</del>			STRMW	Grab	2	2.5-gal jerrican														X	
MO-THO	11-29-18	1415	STRMW	Grab	2	2.5-gal jerrican														X	
<del>MO-MPK</del>			STRMW	Grab	2	2.5-gal jerrican						X									
<del>MO-SIM</del>			STRMW	Grab	2	2.5-gal jerrican														X	
<del>MO-FIL</del>			STRMW	Grab	2	2.5-gal jerrican														X	
MO-SPA	11/27/18	0200	STRMW	Grab	2	2.5-gal jerrican														X	
ME-SCR	✓	1630	STRMW	Grab	2	"						X									
<b>Samples collected by:</b>																					
<b>Comments/Special Instruction:</b>  <i>All sites/species: 100% concentration only</i> <i>Perform TIE if &gt;50% effect; notify client immediately if toxicity is observed</i>  <i>MO-HUE: If salinity &gt;2ppt, perform additional topsmelt test for comparison</i>				<b>RELINQUISHED BY:</b>								<b>RECEIVED BY:</b>									
				Signature: Kelly Hahs				Signature: P.B.				Signature: P.B.				Signature: P.B.					
				Print: KELLY HAHS				Print: VIKTOR REZNIK				Print: VIKTOR REZNIK				Print: VIKTOR REZNIK					
				Organization: VCWPD				Organization: VCWPD				Organization: VCWPD				Organization: VCWPD					
				Date: 11/30/18 Time: 0730				Date: 11/30/18 Time: 7:30am				Date: 11/30/18 Time: 7:30am				Date: 11/30/18 Time: 7:30am					
				Date: 11/30/18 Time: 1415				Date: 11-30-18 Time: 1415				Date: 11-30-18 Time: 1415				Date: 11-30-18 Time: 1415					

\*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 4)**

Sampling Date: 11-29-18 Project Number: 2018/19-2 (Wet)

Sampling Team: Jaime McClain, Megan Desillier

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)						Number of Bottles	NOTES
	ME-CC	11/29/18 0300	X	X						1	
	<del>MO-TR1</del> MO-MPK	11/29/18 0220	X	X						1	
	<del>MO-TR2</del> MO-SIM	11/29/18 0145	X	X						1	
	MO-CAM	11/29/18 0015	X	X						1	
	<del>MO-SJA</del>		X	X						1	
	<del>MO-LEI</del>		X	X						1	
	<del>MO-VER</del>		X	X						1	
	FB-1	11/29/18 0300	X	X						1	(CC)

Relinquished Printed Name Megan Desillier  
 Signature Megan Desillier  
 Affiliation VCHCA Date/Time 11/29/18 0335

Received Printed Name Nadia West  
 Signature Nadia West  
 Affiliation Lab Date/Time 11/29/18 0335

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)**

Sampling Date: 2 Dave Laak & Kelly Fortner Project Number: 2018/19-2 (Wet)

Sampling Team: 11/29/18

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>ME-CC</del>	<del></del>	<del>X</del>	<del>X</del>							
	<del>ME-SCP</del>	<del></del>	<del>X</del>	<del>X</del>							
	ME-VR2	11/29/18 02:05	X	X						1	
	<del>MO-CAM</del>	<del></del>	<del>X</del>	<del>X</del>							
	MO-OJA	11/29/18 00:30	X	X						1	
	MO-MEI	11/29/18 01:20	X	X						1	
	<del>MO-LEN</del>	<del></del>	<del>X</del>	<del>X</del>							
	<del>FR-1</del>	<del></del>	<del>X</del>	<del>X</del>							
	MO-HUE	11/29/18 03:15	X	X						1	

Relinquished Printed Name David Laak  
 Signature [Signature]  
 Affiliation VcwPD Date/Time 11/29/18 04:15

Received Printed Name Nadia West  
 Signature [Signature]  
 Affiliation Lab Date/Time 11/29/18 @ 04:15

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)**

Sampling Date: 11-29-18 Project Number: 2018/19-2 (Wet)

Sampling Team: Lara Meeker and Dean W.

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>ME-CC</del>		X	X						1	
	<del>ME-SCR</del>		X	X						1	
	<del>M</del> MD-THO	11-29-18 1415	X	X						1	LM & DW
	<del>MO-CAM</del>		X	X						1	
	<del>MO-CJA</del>		X	X						1	
	<del>MO-MEI</del>		X	X						1	
	<del>MO-MEN</del>		X	X						1	
	<del>EP-1</del>		X	X						1	

Relinquished Printed Name Lara Meeker  
 Signature [Signature]  
 Affiliation VC WPD Date/Time 11-29-18 15:19

Received Printed Name Nadia West  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 11/29/18 15:26

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)**

Sampling Date: 11/30/18 Project Number: 2018/19-2 (Wet)

Sampling Team: K. HAHS, J. McClain

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)							Number of Bottles	NOTES
	<del>ME-VB2</del> ME-SGR	11/30/18 0425	X	X							1	
	<del>MO-MEI</del>		X	X							1	
	<del>MO-OJA</del>		X	X							1	
	<del>MO-HUE</del>		X	X							1	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 11/30/18 / 0700

Received Printed Name Nadia West  
 Signature [Signature]  
 Affiliation Lab Date/Time 11/30/18 0700

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



8K30009

**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: 11/29/18 Project Number: 2018/19-2 (Wet) Grabs

Sampling Team: Kelly Hays, Bill Carey, Jamie McClain, Megan Desillier, Dave Laak, Kellie Farther, Peter Durn, David Meeker, Debi Wilkinson, Tim Delaney

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
		2	1	2	3	1														
ME-CC	11/29/18 0300	2	1	2	3	1													9	JM, MD
ME-SCR	11/29/18 1630	2	1	2	3	1													9	KH, WBC
ME-VR2	11/29/18 02:05	2	1	2	3	1													9	DL, KF
MO-CAM	11/29/18 0015	3	1	2	3	1													10	JM, MD
MO-OJA	11/29/18 00:30	2	1	2	3	1													9	DL, KF
MO-MEI	11/29/18 01:20	2	1	2	3	1													9	DL, KF
MO-VEN	11/29/18 0100	2	1	2	3	1													9	PD, TD
MO-OXN	11/29/18 0000	2	1	2	3	1													9	PD, TD
ED-1 FB-1	11/29/18 0300	2	1	2	3	1													9	JM, MD

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

Relinquished Printed Name KELLY HAYS

Signature Kelly Hays

Affiliation VWPD Date/Time 11/30/18 / 0915

Received Printed Name D/L Laak

Signature D/L Laak

Affiliation Rms Date/Time 11/30/18/0915

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

Jamie McClain 11/30/18 11:20 1.8°C



EK30009

## 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: 11/29/18 ~~11/29/18~~ 11/29/18      Project Number: 2018/19-2 (Wet) Grabs

Sampling Team: KH, WBC; KH, JM; JM, MD; PD, TD; DL, KF; LM, DW

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	11/29/18 0200	2	1	2	3	1	9	PD, TD	
MO-FIL	11/29/18 0255	2	1	2	3	1	9	PD, TD	
MO-SIM	11/29/18 0145	2	1	2	3	1	9	JM, MD	
MO-HUE	11/29/18 03:15	2	1	2	3	1	9	DL, KF	
MO-THO	11/29/18 14:15	2	1	2	3	1	9	LM, DW	
MO-MPK	11/29/18 0220	2	1	2	3	1	9	JM, MD	
FD-1	11/29/18 0255	2	1	2	3	1	9	PD, TD	

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 11/30/18 / 0915

Received      Printed Name Daniel Lars  
 Signature [Signature]  
 Affiliation RMS      Date/Time 11/30/18 0915

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

Jamahan 11/30/18 11:20 1.82



**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)**

OK30011

Sampling Date: 11/29 + 30/18 Project Number: 2018/19-2 (Wet) Composites *Kelly Hahs, Bill Coe*  
 Sampling Team: Kelly Hahs, Jaime McClain, Peter Doran, Kierra Botalik, Lara Meeker, Dean Wilkinson

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	11/30/18/0525	X	X	X	X	X	X	X	X	X	X	X	X	1	PD, KB
ME-SCR	11/30/18/0431	X	X	X	X	X	X	X	X	X	X	X	X	1	PD, KB, KH, JM
ME-VR2	11/29/18/1455	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, WBC
MO-CAM	11/30/18/0555	X	X	X	X	X	X	X	X	X	X	X	X	1	PD, KB
MO-OJA		X	X	X	X	X	X	X	X	X	X	X	X	1	<del>PD, WBC</del>
MO-MEI		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-VEN	11/30/18/0420	X	X	X	X	X	X	X	X	X	X	X	X	1	PD, KB

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 11/30/18/0915

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation RMS Date/Time 11/30/18 9:15 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).

*Jaime McClain 11/30/18 11:20 1.2<sup>c</sup>*



8K30011

**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: 11/29 + 30/18 Project Number: 2018/19-2 (Wet) Composites

Sampling Team: KH, JM, KH, WBC, LM, DW, PD, KB

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-SPA	11/29/18 1240			X	X	X	X	X	X	X	X	X	X	X	X	X	X	1 KH, WBC
MO-FIL	11-29-18 1250			X	X	X	X	X	X	X	X	X	X	X	X	X	X	1 LM, DW
MO-SIM	11/30/18 0530			X	X	X	X	X	X	X	X	X	X	X	X	X	X	1 KH, JM
MO-MPK	11-29-18 1340			X	X	X	X	X	X	X	X	X	X	X	X	X	X	1 LM, DW
MO-THO	11/30/18 0610			X	X	X	X	X	X	X	X	X	X	X	X	X	X	1 KH, JM
MO-OXN	11-29-18 1545			X	X	X	X	X	X	X	X	X	X	X	X	X	X	1 LM, DW
MO-HUE	11-30-18 / 0455			X	X	X	X	X	X	X	X	X	X	X	X	X	X	1 PD, KB

Relinquished Printed Name KELLY HARTS  
 Signature [Signature]  
 Affiliation VCLWPD Date/Time 11/30/18 / 0915

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation RWS Date/Time 11/30/18 9:15 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).

Tamara 11/30/18 11:20 124



**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: 11/29+30/18 Project Number: 2018/19-2 (Wet) Cleaning  
 Sampling Team: K. HATS

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid	3			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	9			
Blue cube cooler	8			
Grey bucket	4			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Black bottle bag	10			
Bottle harness	2			

Relinquished Printed Name KELLY HATS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 11/30/18 / 0915

Received Printed Name DARIL LLOYD  
 Signature [Signature]  
 Affiliation [Signature] Date/Time 11/30/18 9:15 AM

Other Notes: Jamela 11/30/18 11:20

81229059



**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: 11/29/18 Project Number: 2018/19-2 (Wet) Composites  
 Sampling Team: K. HAHS, W.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-CG	_____	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)
ME-SCR	_____	X	X	X	X	X	X	X	X	X	X	X	X	1	
<del>ME-VR2</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-CAM	_____	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-OJA	11/29/18 0610	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-MEI	11/29/18 0630	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-VEN	_____	X	X	X	X	X	X	X	X	X	X	X	X	1	

Relinquished Printed Name: Steven S. Greer  
 Signature: [Signature]  
 Affiliation: VCWPD Date/Time: 11/29/2018 0830

Received Printed Name: EDUARDO ROJAS  
 Signature: [Signature]  
 Affiliation: \_\_\_\_\_ Date/Time: 11/29/18 8:30

Other Notes: 1) Filter for dissolved metals and perform conductivity analyses immediately. Edm Rojas 11-29-18  
 2) Please do not dilute limited volume samples when enacting priority list (low reporting limits are important). 11:12

Please wash bottles w/ detergent + HNO3 rinse + water (per standard method for VCWPD composite bottles, stormwater quality management program 2018/19 Annual Report)  
VCWPD composite bottles, stormwater quality management program 2018/19 Annual Report  
neck + wide mouth bottle + lids, blue edge caps, and black bags  
11/29/18 1112 6.7°C



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

Sampling Date: 1/5/19 Dave Laak / Michelle Carter Project Number: 2018/19-3 (Wet)  
 Sampling Team: 1/5/19

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>MO-CAM</del>	1/5/19 18:45	X	X							1	
	<del>MO-MPK</del>	1/5/19 19:40	X	X							1	
	<del>MO-SIM</del>	1/5/19 20:40	X	X							1	
	<del>MO-TRO</del>		X	X							1	
	<del>MO-FD-1</del>		X	X							1	
	<del>MO-MET</del>		X	X							1	
	<del>MO-VLN</del>		X	X							1	
	<del>MO</del>		X	X							1	

Relinquished Printed Name David Laak  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/5/19 2240

Received Printed Name Cameron Chandler  
 Signature [Signature]  
 Affiliation PHL Date/Time 1/5/19 1040

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)**

Sampling Date: January 5, 2019 Project Number: 2018/19-3 (Wet)

Sampling Team: Bill Carey and Danielle Yaconelli

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>ME-VR2</del> ME-VR2	1/5/19 21:15	X	X							1	
	<del>MO-OJA</del> MO-OJA	1/5/19 19:15	X	X							1	
	<del>ME-VR2</del> MO-MEI	1/5/19 20:15	X	X							1	
	<del>MO-CAM</del> FD-1	1/5/19 19:15										(OJA)
	<del>MO-OJA</del>		X	X							1	
	<del>MO-MEI</del>		X	X							1	
	<del>MO-MEI</del>		X	X							1	
	<del>MO-MEI</del>		X	X							1	
	<del>MO-MEI</del>		X	X							1	

Relinquished Printed Name Danielle Yaconelli  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/5/19 = 21:57

Received Printed Name Cameron Chandler  
 Signature [Signature]  
 Affiliation PHL Date/Time 1/5/19 21:57

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: 1/5/19

Project Number: 2018/19-3 (Wet)

Sampling Team: JM + PD

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>MO-SC</del> MO-VEN	1/5/19 1830	X	X								1	
	<del>MO-SP</del> MO-SPA	1/5/19 1925	X	X								1	
	<del>MO-FIL</del> MO-FIL	1/5/19 2000	X	X								1	
	<del>MO-SCR</del> ME-SCR	1/5/19 2110	X	X								1	
	<del>MO-FD</del> FD-1		X	X								1	
	<del>MO-MEL</del>		X	X								1	
	<del>MO-MIN</del>		X	X								1	
	<del>MO-FIL</del>		X	X								1	

Relinquished Printed Name Jaime McClain  
 Signature [Signature]  
 Affiliation Rincon consultants Date/Time 1/5/19 2145

Received Printed Name Cameron Chanier  
 Signature [Signature]  
 Affiliation PHL Date/Time 1/5/19 2145

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)**

Sampling Date: 1/5/2019 Project Number: 2018/19-3 (Wet)  
 Sampling Team: Steven S. Greer, Dean Wilkinson

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	<i>E. coli</i> (Tray Method - WQ IDEXX)							Number of Bottles	NOTES
	ME-CC	1/5/19 20:27	X	X							1	
	<del>ME-CCR</del> MO-HLE	1/5/19 19:40	X	X							1	
	<del>ME-VRE</del> MO-ONN	1/5/19 18:40	X	X							1	
	<del>ME-CCM</del> FD-1	<del>1/5/19</del>	X	X							1	
	<del>ME-CCJ</del>		<del>X</del>	<del>X</del>							<del>1</del>	
	<del>ME-MEF</del>		<del>X</del>	<del>X</del>							<del>1</del>	
	<del>ME-VLN</del>		<del>X</del>	<del>X</del>							<del>1</del>	
	<del>ME-T</del>		<del>X</del>	<del>X</del>							<del>1</del>	

Relinquished Printed Name Steven S. Greer  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 1/5/2019 9:15pm

Received Printed Name Cameron A. Chantler  
 Signature [Signature]  
 Affiliation PHL Date/Time 1/5/19 9:15

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

9A06019



**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: 1/5/19 + 1/6/19 Project Number: 2018/193 (Wet) Grabs  
 Sampling Team: see notes

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	1/5/19 20:27	2	1	2	3	1							9	SG, OW
ME-SCR	1/5/19 2110	2	1	2	3	1							9	JM / PD
ME-VR2	1/5/19 2115	2	1	2	3	1							9	WBC, DY
MO-CAM	1/5/19 1845	3	1	2	3	1							10	DL/MC
MO-OJA	1/5/19 1915	2	1	2	3	1							9	WBC, DY
MO-MEI	1/5/19 2015	2	1	2	3	1							9	WBC, DY
MO-VEN	1/5/19 1830	2	1	2	3	1							9	JM / PD
MO-OXN	1/5/19 1840	2	1	2	3	1							9	SG, OW
FD-1	1/5/19 1915	2	1	2	3	1							9	WBC, DY

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 1/6/19 1300

Received Printed Name Joshua Johnson  
 Signature [Signature]  
 Affiliation ESSENTIAL Date/Time 1-6-19 1:00 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] 1/6/19 1530 4.4



**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: 1/5/19 + 1/6/19 Project Number: 2018/193 (Wet) Grabs  
 Sampling Team: we see notes

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	1/5/19 1925	2	1	2	3	1	9	JM / PD	
MO-FIL	1/5/19 2000	2	1	2	3	1	9	JM / PD	
MO-SIM	1/5/19 2040	2	1	2	3	1	9	DL / MC	
MO-HUE	1/5/19 1940	2	1	2	3	1	9	SG, DW	
<del>MO-THO</del>	<del>                    </del>	<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>	<del>9</del>	<del>                    </del>	
MO-MPK	1/5/19 1940	2	1	2	3	1	9	DL / MC	
MO-THO	1/6/19 0840	2	1	2	3	1	9	KH, WBC	

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

Relinquished Printed Name KELLY HAAS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/6/19/ 1300

Received Printed Name Joshua Johnson  
 Signature [Signature]  
 Affiliation essential Date/Time 1-6-19 1:00

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

9A06018



**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: 1/5/19 + 1/6/19 Project Number: 2018/19-3 (Wet) Composites

Sampling Team: see notes

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	1/5/19 2028				X	X	X	X	X	X	X	X	X	X	X	X	1	JM/DP
MO-FIL	1/6/19 0934				X	X	X	X	X	X	X	X	X	X	X	X	1	SG, EL
MO-SIM	1/5/19 2055				X	X	X	X	X	X	X	X	X	X	X	X	1	DL/MC
MO-MPK	1/5/19 2130				X	X	X	X	X	X	X	X	X	X	X	X	1	DL/MC
MO-THO	1/6/19 0830				X	X	X	X	X	X	X	X	X	X	X	X	1	KH, WBC
MO-OXN	1/5/19 2140				X	X	X	X	X	X	X	X	X	X	X	X	1	SG, DW
MO-HUE	1/6/19 1025				X	X	X	X	X	X	X	X	X	X	X	X	1	SG, EL

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 1/6/19/ 1300

Received Printed Name Joshua Johnson

Signature [Signature]

Affiliation ESSEN-TIAL Date/Time 1-6-19 1:00 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).



**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: 1/5/19 + 1/6/19 Project Number: 2018/19-3 (Wet) Composites  
 Sampling Team: see notes

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
															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
ME-CC	1/6/19 09:25	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, WBC
ME-SCR	1/6/19 10:00	X		X	X	X	X	X	X	X	X	X	X	1	KH, WBC
ME-VR2	1/5/19 2120	X		X	X	X	X	X	X	X	X	X	X	1	WBC, DY
MO-CAM	1/5/19 2215	X		X	X	X	X	X	X	X	X	X	X	1	DL/MC
MO-OJA	<del>1/5/19 1920</del>	X		X	X	X	X	X	X	X	X	X	X	1	SG, EL 1/6/19 0836
MO-MEI	1/5/19 2020	X		X	X	X	X	X	X	X	X	X	X	1	SG, DW
MO-VEN	1/5/19 2205	X		X	X	X	X	X	X	X	X	X	X	1	SG, DW

Relinquished Printed Name KELLY HAYS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/6/19 / 1300

Received Printed Name Joshua Johnson  
 Signature [Signature]  
 Affiliation Essential L Date/Time 1-6-19 1:00 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).



**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: 1/6/19 Project Number: 2018/19-3 (Wet) Cleaning  
 Sampling Team: —

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	1			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
20 L narrow neck carboy and lid (+assembly) or silicone stopper	13			
Blue cube cooler			14	
Grey bucket				Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Black bottle bag			(14)	
Bottle harness				

Relinquished Printed Name KELLY HAYS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 1/6/19 / 1300

Received Printed Name Joshua Johnson  
 Signature [Signature]  
 Affiliation ESSENTIAL Date/Time 1-6-19 1:00 pm

Other Notes: \_\_\_\_\_



**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)**

2018/19-4 (wet)

Sampling Date: 1/31/19 Project Number: 2017/18-2-01/02  
 Sampling Team: WBC, KH

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MDNY)	Total Coliform (5 Tube Method - MDNY)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
<del>ME-SC</del>	<del>ME-SC</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
ME-SCR		1/31/19 / 1400	X	X	X	X	1	
<del>ME-SD</del>	<del>ME-SD</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-CAM</del>	<del>MO-CAM</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-CJA</del>	<del>MO-CJA</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-MEL</del>	<del>MO-MEL</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<del>MO-YEN</del>	<del>MO-YEN</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	
<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>FB-1</del>	<del>FB-1</del>	<del></del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>1</del>	

Relinquished Printed Name KELLY HAHIS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 1/31/19 1432

Received Printed Name Cameron Chapier  
 Signature [Signature]  
 Affiliation PHL Date/Time 1/31/19 1432

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

9301014



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

Sampling Date: 1/31/19 Project Number: 2018/19-4 (Wet) Grabs  
 Sampling Team: WBC, KH

SAMPLE ID	DATE/TIME COLLECTED	Number of Bottles					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		
<del>ME-CC</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.
ME-SCR	1/31/19 1400	2	1	2	3	1	9	
<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-YEN</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>	<del>9</del>	
<del>MO-ONN</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>	

Relinquished Printed Name W.B. Carey  
 Signature W.B. CAREY  
 Affiliation VCWPD Date/Time 2-1-19/1000

Received Printed Name Heather Sanchez  
 Signature [Signature]  
 Affiliation Weck Labs Date/Time 2-1-19/1000

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

Heather Sanchez  
 2

[Signature]  
 Page DE - 37

2/1/19 1145 2.102  
 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)**  
**Composites - Weck Laboratories (SIDE 1 of 1)**

Sampling Date: 2-1-19 Project Number: 2018/19-4 (Wet) Composites  
 Sampling Team: W-B. CAREY & D. LAAK

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
<del>ME-CC</del>		X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-SCR	2-1-19/0900	X	X	X	X	X	X	X	X	X	X	X	X	1	
<del>ME-VRS</del>		X	X	X	X	X	X	X	X	X	X	X	X	1	
<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	
<del>MO-VEN</del>		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 2-1-19/1000

Received Printed Name Heck Sanchez  
 Signature [Signature]  
 Affiliation WECKLAB Date/Time 2-1-19/1000

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: 2-1-19

Project Number: 2018/19 <sup>34</sup> (Wet) Cleaning

Sampling Team: W.B. CAREY & D. LAAK

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, 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.
20 L narrow neck carboy and lid (+assembly) or silicone stopper	1			
Blue cube cooler				
Grey bucket			1	Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Black bottle bag				
Bottle harness			1	

Relinquished Printed Name W.B. CAREY

Signature W.B. Carey

Affiliation VCWPD Date/Time 2-1-19/1000

Received Printed Name Heather Smith

Signature [Signature]

Affiliation WECKLABS Date/Time 2-1-19/1000

Other Notes: \_\_\_\_\_

Heather Smith  
 Ventura Countywide Stormwater Quality  
 Management Program 2018/19 Annual Report



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

Sampling Date: 5/2/19  
 Sampling Team: K. HANS, W.B. CAREY

Project Number: ~~2017/18-2 (Wet)~~ 2018/19-5 (Dry) SCRW

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	<del>Total Coliform (5-Tube Method - MPN)</del>	<del>Fecal Coliform (5-Tube Method - MPN)</del>	<del>E. coli (Tray Method - WQ IDEXX)</del>	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	<del>MO-SPA</del>		X	X	X	X	1	DRY
	MO-FIL	5/2/19 09:20	X	X	X	X	1	
	<del>MO-SPK</del> ME-SCR	10:25	X	X	X	X	1	
	<del>MO-SPK</del> MO-VEN	11:25	X	X	X	X	1	
	<del>MO-TRO</del>		X	X	X	X	1	
	MO-oxn		X	X	X	X	1	DRY
	<del>MO-HUE</del>		X	X	X	X	1	

Relinquished Printed Name KELLY HANS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 5/2/19 / 1212

Received Printed Name Cameron Chandler  
 Signature [Signature]  
 Affiliation PHL Date/Time 5/2/19 1212

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 ~~Watershed~~ <sup>by weather</sup>  
 Bacteriological - VCHCA Lab (SIDE 1 of 1)

Sampling Date: 5-8-19  
 Sampling Team: WBC & BW

Project Number: 2018/19-5(Dry) VRW+HUE  
2017/18-2 (Wet)

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPN)	Fecal Coliform (25 Tube Method - MPN)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	Number of Bottles	NOTES
	<del>MO-ME</del> ME-VR2	5-8-19/1015	X	X	X	X	1	
	<del>MO-ME</del>		X	X	X	X	1	
	<del>MO-ME</del> MO-OJA	5-8-19/0910	X	X	X	X	1	
	<del>MO-ME</del> MO-HUE	5-8-19/1215	X	X	X	X	1	
	<del>MO-THO</del>		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 W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 5-8-19/1245

Received Printed Name SALVADOR Y. BARRAGAN  
 Signature [Signature]  
 Affiliation P.H. LAB Date/Time 5-8-19

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**  
**Bacteriological - VCHCA Lab (SIDE 1 of 1)**

Sampling Date: 5/14/19 Project Number: 2018/19-5 (Dry) CCW

Sampling Team: W.B. CAREY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)							Number of Bottles	NOTES
	ME-CC	5/14/19 11:20	X	X							1	
	MO-CAM	12:10	X	X							1	
	MO-MPK	0855	X	X							1	
	MO-SIM	0940	X	X							1	
	MO-THO	↓ 1040	X	X							1	

Relinquished Printed Name KELLY HAHS  
 Signature [Signature]  
 Affiliation VCWPD Date/Time 5/14/19 12:50

Received Printed Name SALVADOR Y. BARRAGAN  
 Signature [Signature]  
 Affiliation P.H. Lab Date/Time 5/14/19 12:52

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



9E14080

**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: 5/14/19  
 Sampling Team: N.B. CAREY

Project Number: 2018/19-5 (Dry) Grabs CCW

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
		3	1	2	3	1	3	1	2	3	1	3	1	2	3	1	3	1	2	3	1									
MB-CC	5/14/19 11:20	3	1	2	3	1																							10	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
MO-CAM	12:10	2	1	2	3	1																						9		
MO-MPK	0855	2	1	2	3	1																						9		
MO-SIM	0940	2	1	2	3	1																						9		
MO-THO	1040	2	1	2	3	1																						9		

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation NCWPD Date/Time 5-14-19 / 1340

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation Weck Labs Date/Time 5/14/19 1340

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

Relinquished: [Signature] 5/14/19 1550  
 Received: [Signature] 5/14/19 1550  
 Attachment Appendix E 22°C TO 19M



9E02042

**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: 5/2/19  
 Sampling Team: KHANS, W.B. CAREY

Project Number: 2018/19-5 (Dry) Grabs SCRW

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2-CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits								Number of Bottles	NOTES
ME-SCR	5/2/19 10:25	2	1	2	3	1								9	
MO-FIL	↓ 09:20	2	1	2	3	1								9	
<del>MO-OXN</del>		<del>2</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>								<del>9</del>	<del>DRY</del>
<del>MO-SPA</del>		<del>3</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>1</del>								<del>10</del>	<del>DRY</del>
MO-VEN	5/2/19 11:25	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 HANS  
 Signature [Signature]  
 Affiliation WVED Date/Time 5/2/19 / 1400

Received Printed Name Hector Sanchez  
 Signature [Signature]  
 Affiliation WCKLABS Date/Time 5-2-19 / 1400

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 Jamohan 5/2/19 1638  
5-02-19 16:38 TOWN 3.3°





9E4077

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

Sampling Date: 5/14/19 Project Number: 2018/19-5 (Dry) Composites CCW  
 Sampling Team: W.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	5/14/19 11:20	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-CAM	12:10	X		X	X	X	X	X	X	X	X	X	X	1	
MO-MPK	0855	X		X	X	X	X	X	X	X	X	X	X	1	
MO-SIM	0940	X		X	X	X	X	X	X	X	X	X	X	1	
MO-THO	1040	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 5-14-19 / 1340  
 Received Printed Name B. Makarewicz  
 Signature [Signature]  
 Affiliation Weck Labs Date/Time 5/14/19 93AD

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).

Ventura Countywide Stormwater Quality Management Program 2018/19 Annual Report  
 Relinquished = [Signature] 5/14/19 1550  
 Rec'd by: Jamison 5/14/19 1550  
 Attachment D Appendix E  
 1.8 70194

9E4077



**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: 5/14/19 Project Number: 2018/19-5 (Dry) Cleaning CCW  
 Sampling Team: W.B. CAREY

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, 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.
20 L narrow neck carboy and lid (+assembly) or silicone stopper	5			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Silicone stoppers				
Blue cube cooler			5	
Grey bucket				
Black bottle bag			5	
Bottle harness				

Relinquished Printed Name W. B. CAREY  
 Signature W. B. Carey  
 Affiliation VCWPD Date/Time 5/14/19 1340

Received Printed Name B. Markovits  
 Signature [Signature]  
 Affiliation Weck Labs Date/Time 5/14/19 1340

Other Notes: \* Allow to air dry (don't rinse) after methanol step to avoid organics contamination.  
Record the bottles cleaned with methanol.

Ventura Countywide Stormwater Quality Management Program 2018/19 Annual Report  
 Relinquished: [Signature] 5/14/19 1550  
 Received by: [Signature] 5/14/19 1550  
 Page DE-47



9E02041

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

Sampling Date: 5/2/19  
 Sampling Team: K.HAMS, W.B. CAREY

Project Number: 2018/19-5 (Dry) Composites SCRW

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
																	Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg
ME-SCR	5/2/19 10:25				X	X	X	X	X	X	X	X	X	X	X	1	
<del>MO-FIL</del>	<del>5/2/19 10:25</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>DRY</del>
MO-ONN					X	X	X	X	X	X	X	X	X	X	X	1	DRY
<del>MO-ONN</del>	<del>5/2/19 10:25</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>DRY</del>
MO-VEN	5/2/19 11:25				X	X	X	X	X	X	X	X	X	X	X	1	
MO-FIL	↓ 09:20				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 KELLY HAMS  
 Signature [Signature]  
 Affiliation WVSD Date/Time 5/2/19 / 1400

Received Printed Name Heather Sarch  
 Signature [Signature]  
 Affiliation WCKLABS Date/Time 5-02-19 / 1400

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).

Heather Sarch Jamie 5/2/19 1430 1.7C T031  
 Ventura Countywide Stormwater Quality Management Program 2018/19 Annual Report Page DE - 48 Attachment D Appendix E



9E08104

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

Sampling Date: 5-8-19 Project Number: 2018/19-5 (Dry) Composites VRW+HUE  
 Sampling Team: WBC & DW

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
ME-VR2	5-8-19/1015	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)
<del>MO-VEA</del>		X	X	X	X	X	X	X	X	X	X	X	1	
MO-OJA	5-8-19/0910	X	X	X	X	X	X	X	X	X	X	X	1	
MO-HUE	5-8-19/1215	X	X	X	X	X	X	X	X	X	X	X	1	

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 5-8-19/1330 1335

Received Printed Name S. Markovich  
 Signature [Signature]  
 Affiliation Weck Date/Time 5/8/19 1400

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).

Relinquished: [Signature] 5/8/19  
 Ventura Countywide Stormwater Quality Management Program 2018/19 Annual Report  
 Relinquished: [Signature] 5/8/19 1750  
 Attachment D Appendix E  
Jawahar 5/8/19 1750 4.16  
 T-013)



9E08104

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

Equipment - Weck Laboratories

Sampling Date: 5-8-19 Project Number: 2018/19-5 (Dry) Cleaning VRW+HUE  
 Sampling Team: WBC & DW

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, 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.
20 L narrow neck carboy and lid (+assembly) or silicone stopper	3			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Silicone stoppers	2			
Blue cube cooler	3			
<del>Grey bucket</del>				
Black bottle bag	1			
Bottle harness	2			

Relinquished Printed Name W.B. CAREY  
 Signature W.B. Carey  
 Affiliation VCWPD Date/Time 5-8-19 / 1330 1355

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation Weck Date/Time 5/8/19 1400

Other Notes: \* Allow to air dry (don't rinse) after methanol step to avoid organics contamination).  
Record the bottles cleaned with methanol.



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



Sampling Date: 8/20/19 Sample Event: DRY 2019  
 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											MO-CAM
	Fillmore-1	8/20/19 0935	x	x							1	MO-FIL
	Moorpark-1											MO-MPK
	Ojai-6	8/20/19 11:35	x	x							1	<del>MO-OJA</del> DRY-OJAG
	Oxnard-2	8/20/19 0810	x	x							1	<del>MO-OXN</del> DRY-OXN2
	Port Hueneme-3	8/20/19 <sup>1410</sup> 1300	x	x							1	DRY-HUE3 delivery #2 e 14:40
	Santa Paula-3	8/20/19 1045	x	x							1	DRY-SPA3
	Simi Valley-1											MO-SIM
	Thousand Oaks-1											MO-THO
	Unincorporated-4											DRY-UNI4
	Ventura-5	8/20/19 1305	x	x							1	<del>MO-VEN</del> DRY-VEN5

Relinquished Printed Name KELLY HANS  
 Signature [Signature]  
 Affiliation VCHCA Date/Time 8/20/19 1340 8/20/19 Port Hueneme-3

Received Printed Name CAROL CHANDLER [Signature]  
 Signature [Signature] SAN. Y. BARRON  
 Affiliation PHL Date/Time 8/20/19 1340 8/20/19 14:40

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**  
**Bacteriological - VCHCA Lab**

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

Sampling Team: WB 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	8/21/19 0730	X	X							1	MO-CAM
	Fillmore-1											MO-FIL
	Moorpark-2	8/21/19 0815	X	X							1	<del>MO-MPK</del> DRY- <del>MPK</del> 2 MPK
	Ojai-1											MO-OJA
	Oxnard-1											MO-OXN
	Port Hueneme-3											DRY-HUE3
	Santa Paula-2											DRY-SPA2
	Simi Valley-1	8/21/19 0910 <del>1020</del>	X	X							1	<del>MO-SIM</del> MO-SIM
	Thousand Oaks-1	8/21/19 1020	X	X							1	MO-THO
	Unincorporated-4	8/21/19 0945	X	X							1	DRY-UNI4
	Ventura-1											MO-VEN

Relinquished Printed Name KELLY HAYS  
 Signature [Signature]  
 Affiliation VCSPO Date/Time 8/21/19 / 1059

Received Printed Name Nadia Lee  
 Signature [Signature]  
 Affiliation PH Lab Date/Time 8/21/19 1059

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



9421095

**Chain of Custody Record**  
**Ventura County Watershed Protection District**  
**NPDES Stormwater Monitoring Program**  
**Major Outfall Dry Weather Monitoring**  
**Grabs - Weck Laboratories**  
**Invoice Contract No. AE17-001**

Sampling Date: 8/20/19 + 8/21/19 Sample Event: DRY 2019  
 Sampling Team: W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED	Total Hardness	TOC	Dissolved Metals by 200.8 (Lead, Zinc, Copper)	Number of Bottles	NOTES
Camarillo-1	8/21/19 0730	X	X	X		
Fillmore-1	8/20/19 0935	X	X	X		
Moorpark-2	8/21/19 0815	X	X	X		
Ojai-6	8/20/19 1135	X	X	X		
Oxnard-2	8/20/19 0810	X	X	X		
Port Hueneme-3	8/20/19 1410	X	X	X		
Santa Paula-3	8/20/19 1045	X	X	X		
Simi Valley-1	8/21/19 0910	X	X	X		
Thousand Oaks-1	8/21/19 1020	X	X	X		
Unincorporated-4	8/21/19 0945	X	X	X		
Ventura-5	8/20/19 1305	X	X	X		

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 [Signature]  
 Affiliation VCEWD Date/Time 8/21/19 / 1335

Received Printed Name [Signature]  
 Signature [Signature]  
 Affiliation Weck Labs Date/Time 8/21/19 1340

Other Notes: [Signature]