



*Ventura Countywide
Stormwater Quality
Management Program*

2016-2017
Permit Year

Ventura Countywide Stormwater Quality
Management Program Annual Report
Attachment D1 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 15, 2017

Appendix A: Major Outfall Station Fact Sheets

Camarillo

Waterbody: Camarillo Hills Drain (tributary to Revolon Slough)

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

Pros: Likely well-defined rating table

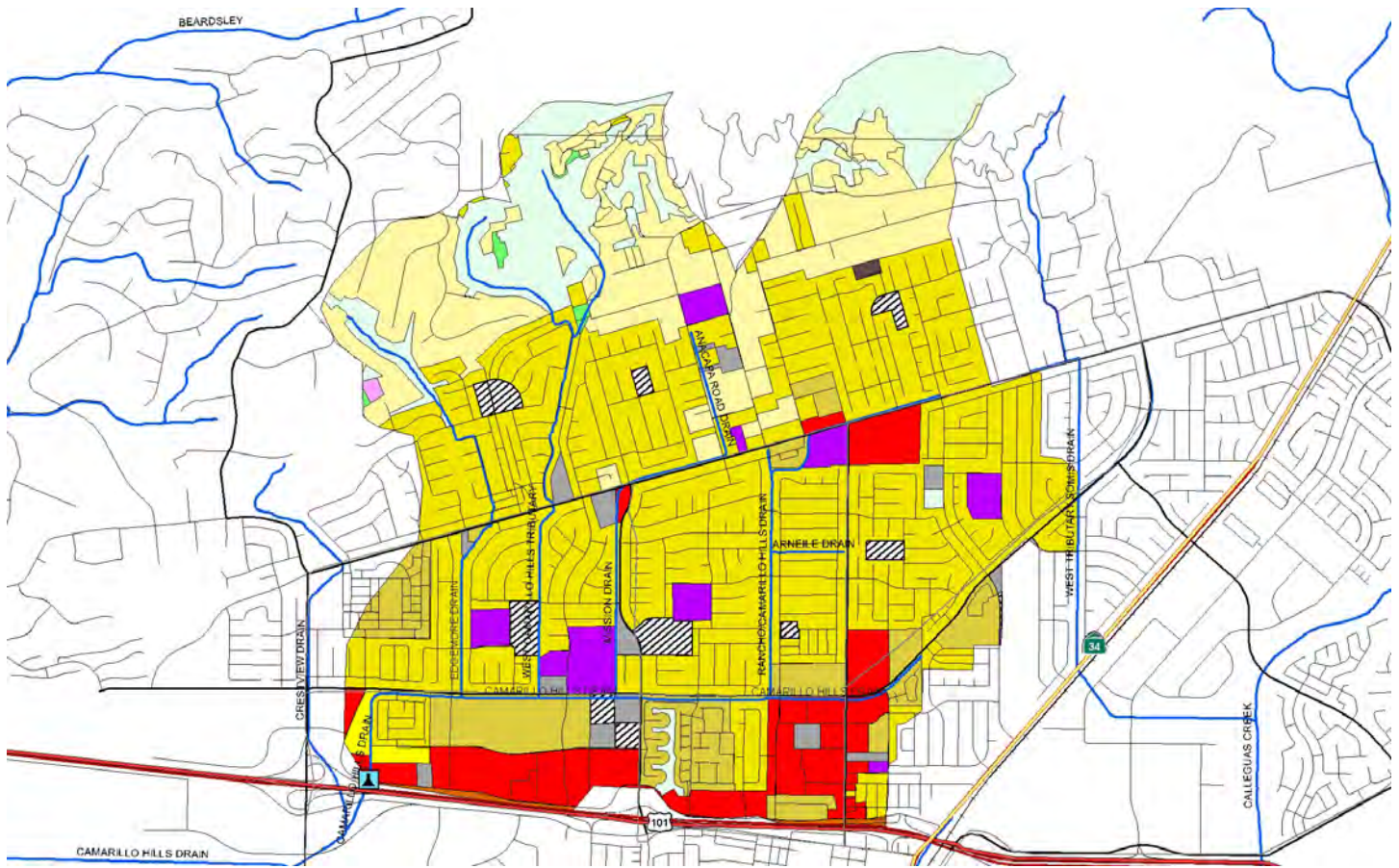
Cons: Moderate potential for vandalism

Outstanding Site Selection Tasks: None

Other Potential Sites: None

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





Entire City

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

Selected Subwatershed

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

Fillmore

Waterbody: North Fillmore Drain (tributary to Sespe Creek)

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

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

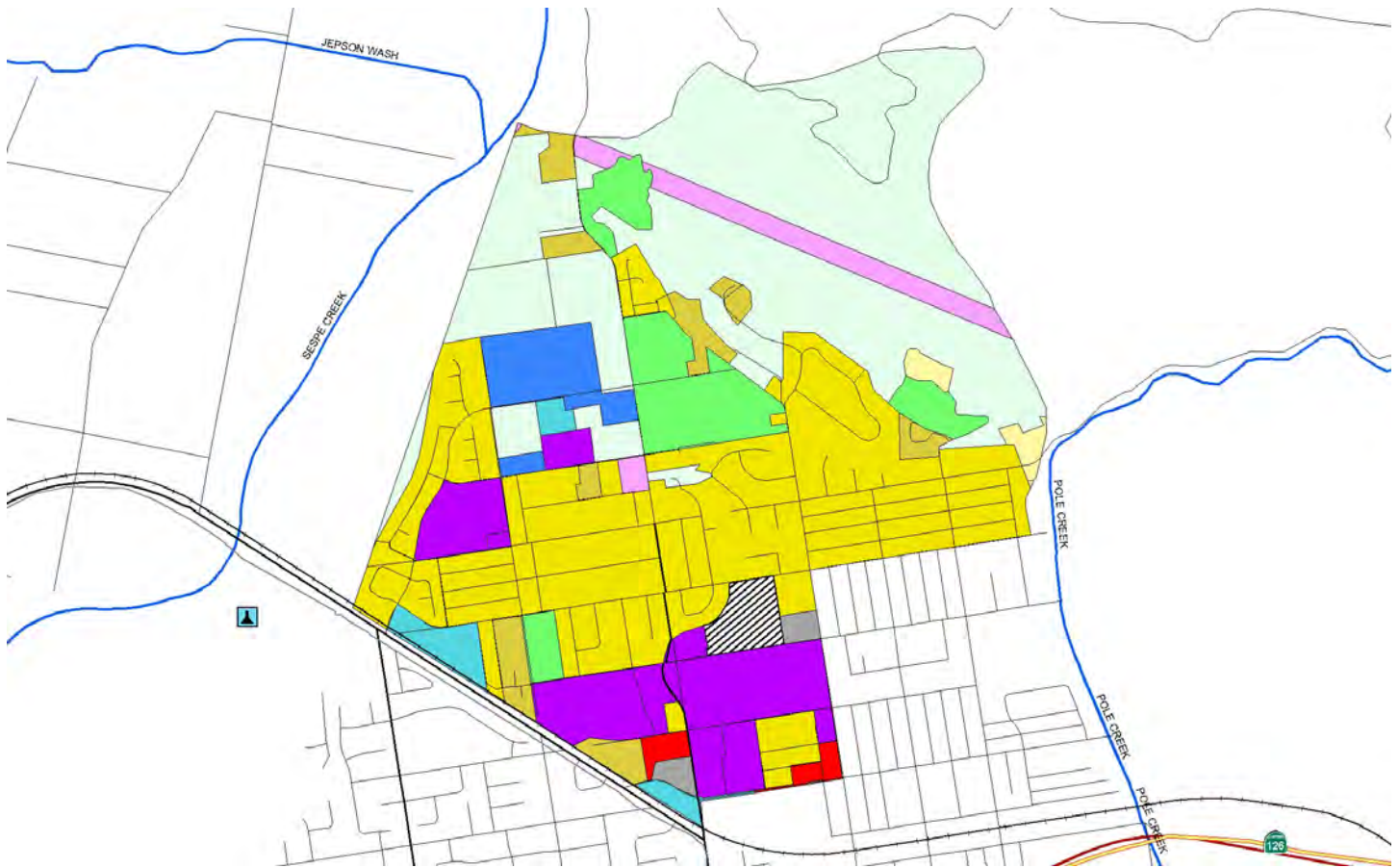
Cons: Potential for vandalism

Outstanding Site Selection Tasks: None

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

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





Entire City

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

Selected Subwatershed

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

Meiners Oaks (Unincorporated)

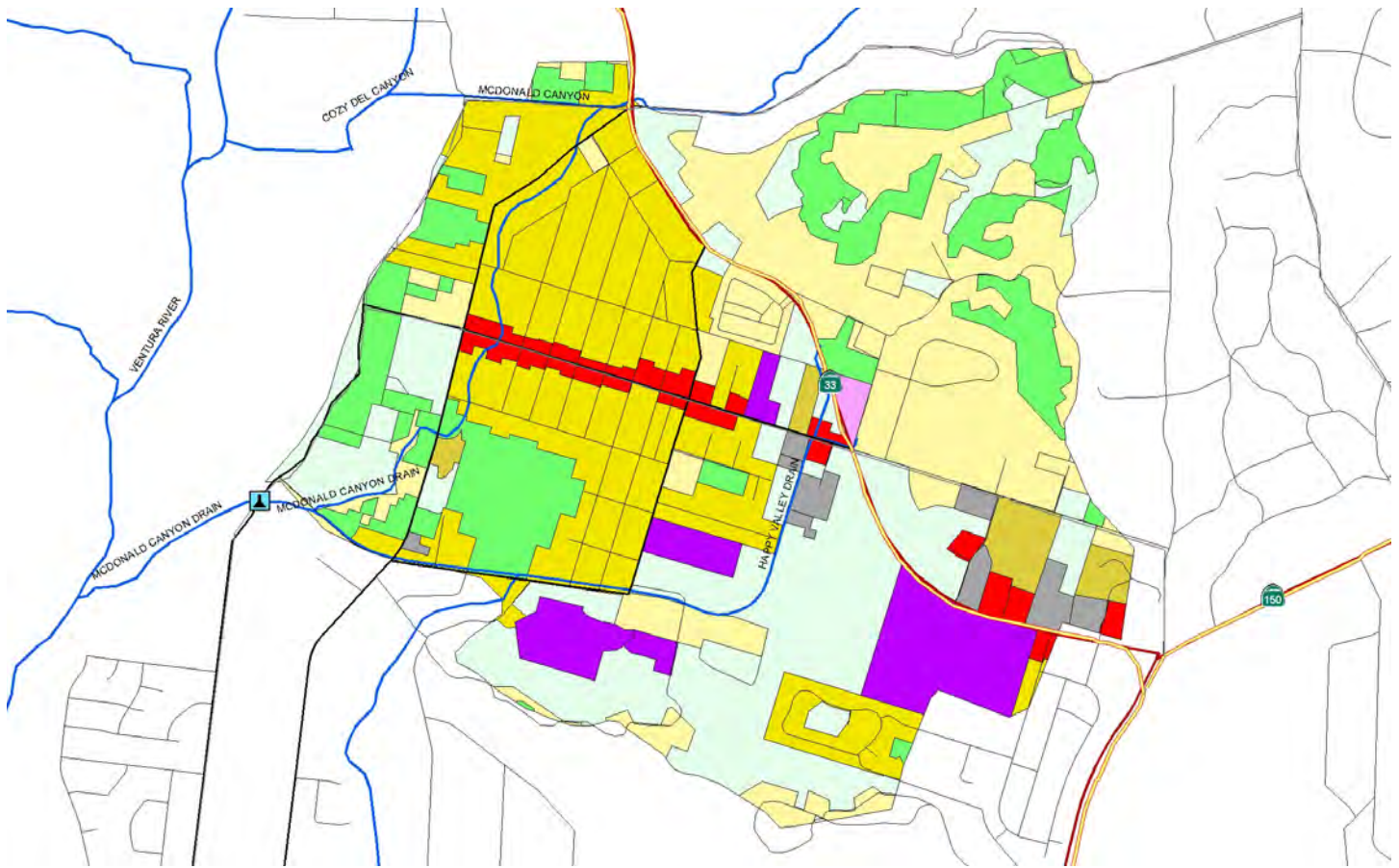
Waterbody: Happy Valley Drain (tributary to Ventura River)

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

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

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





Entire City

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

Selected Subwatershed

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

Moorpark

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

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

Pros: Likely well-defined rating table

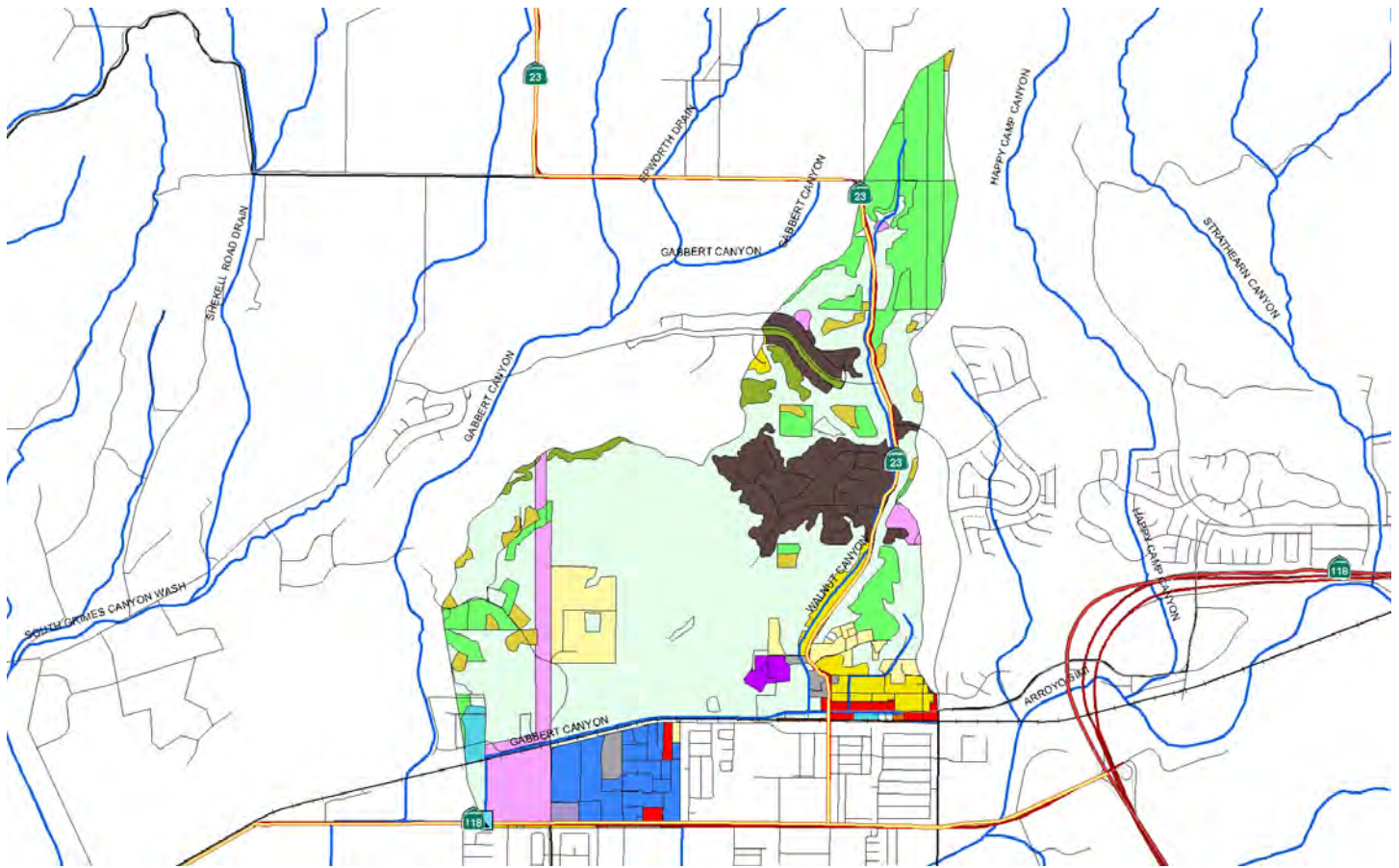
Cons: Aerial deposition from vehicular traffic on 118, potential for vandalism

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

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

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





Entire City

Land Use	Acres	% of Total Watershed
Land Use	Acres	% of Total Watershed
Agriculture	351.7	4.0%
Com_Indus. Mix	9.1	0.0%
Commercial	196.3	2.0%
Extraction	39.2	0.0%
Facility	40.9	1.0%
Industrial_1	21.3	0.0%
Industrial_3	225.2	3.0%
No Info Given	148.3	2.0%
Recreation	186.1	2.0%
Res.1	213.5	3.0%
Res.2	190.4	2.0%
Res.3	1854.6	23.0%
Res.4	106.8	1.0%
Schools	302.1	4.0%
Transportation	198.0	2.0%
Under Construction	472.9	6.0%
Utilities	211.9	3.0%
Vacant Undifferentiated	3213.1	40.0%
Totals	7981.5	100.0%

Selected Subwatershed

Land Use	Acres	% of Total Watershed
Agriculture	230.0	12.7%
Commercial	19.9	1.1%
Extraction	5.8	0.3%
Facility	16.8	0.9%
Industrial_1	13.3	0.7%
Industrial_3	90.4	5.0%
Recreation	31.0	1.7%
Res.1	82.3	4.5%
Res.2	37.4	2.1%
Res.3	56.3	3.1%
Res.4	1.5	0.1%
Schools	10.5	0.6%
Transportation	3.1	0.2%
Under Construction	166.2	9.2%
Utilities	100.7	5.5%
Vacant Undifferentiated	950.8	52.4%
Totals	1816.2	100.0%

Ojai

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

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

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

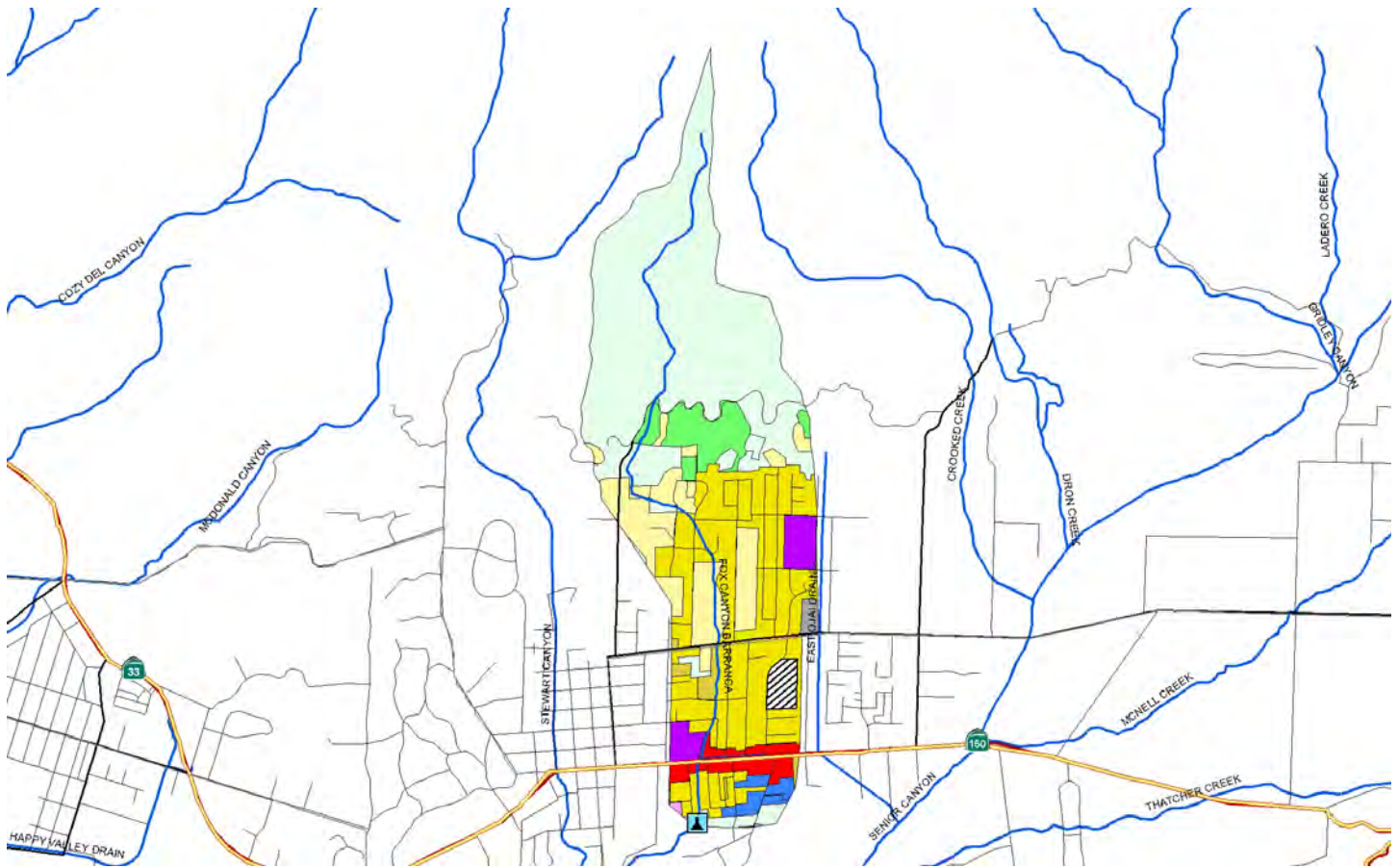
Cons: Some potential for vandalism

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

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

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





Entire Watershed

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

Selected Subwatershed

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

Oxnard

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

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

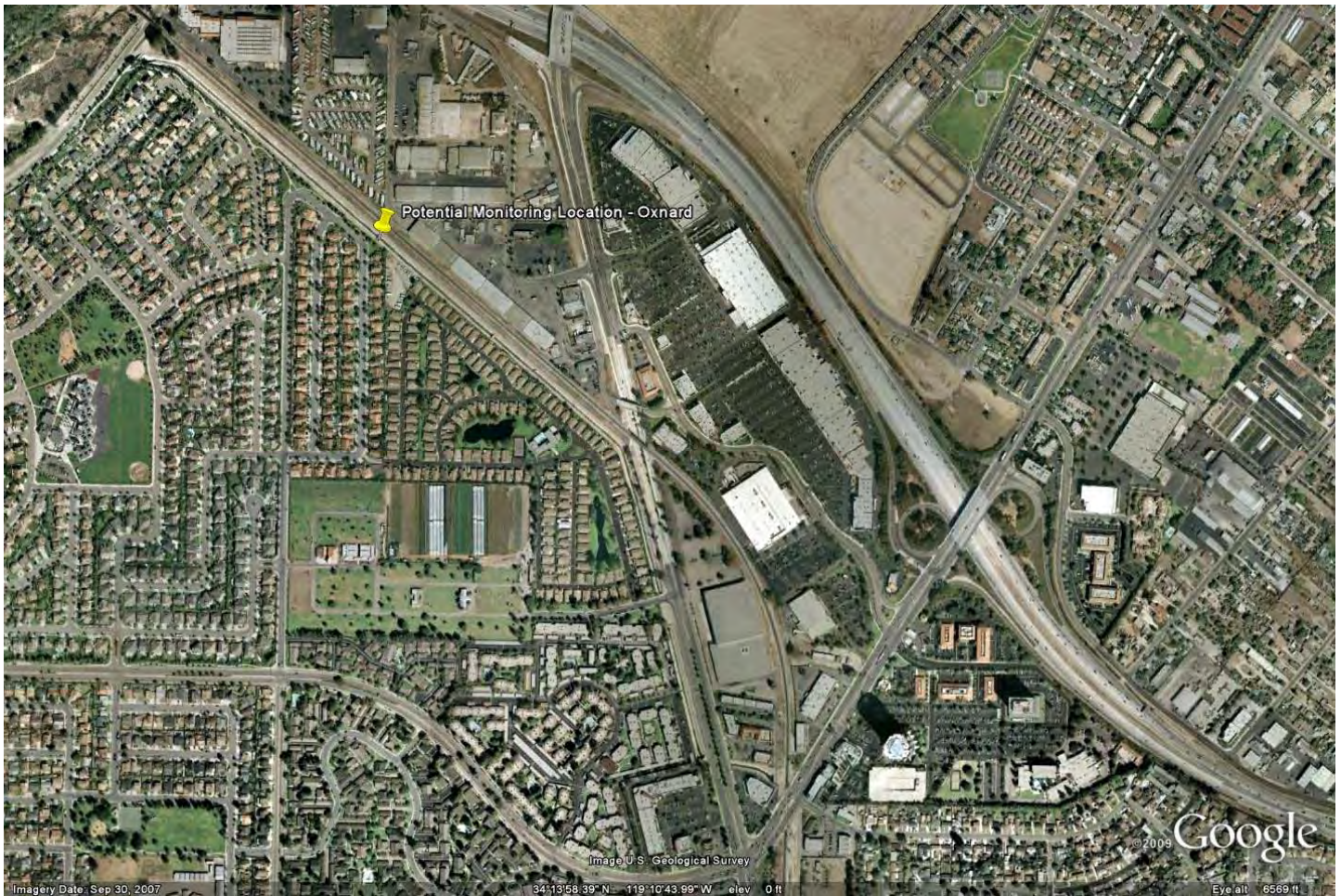
Pros: Likely well-defined rating table

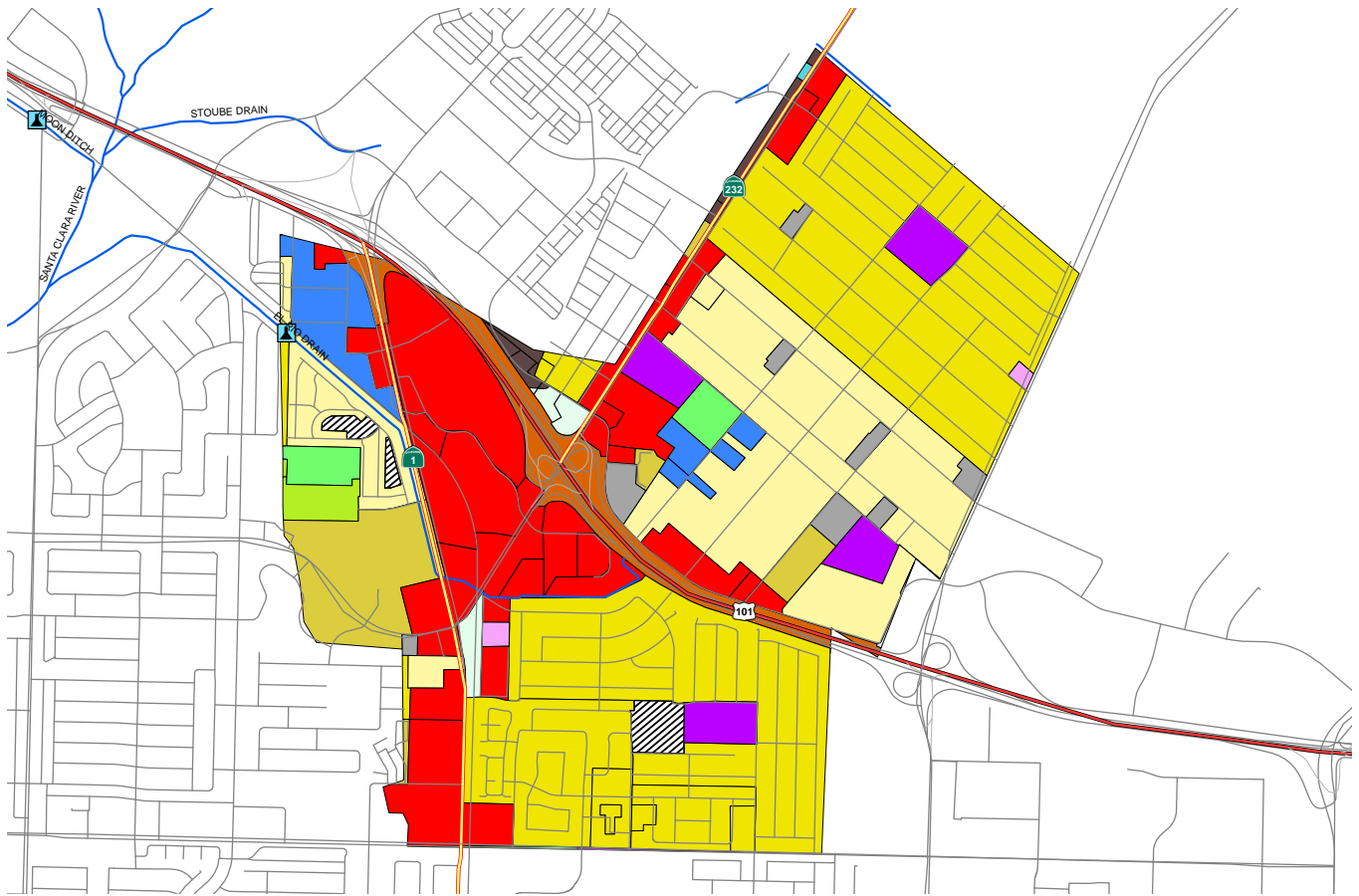
Cons: High potential for vandalism

Outstanding Site Selection Tasks: None

Other Potential Sites: None

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





Entire City

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

Selected Subwatershed

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

Port Hueneme

Waterbody: Hueneme Drain (tributary to Pacific Ocean)

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

Pros: Grass-covered sides fairly stable

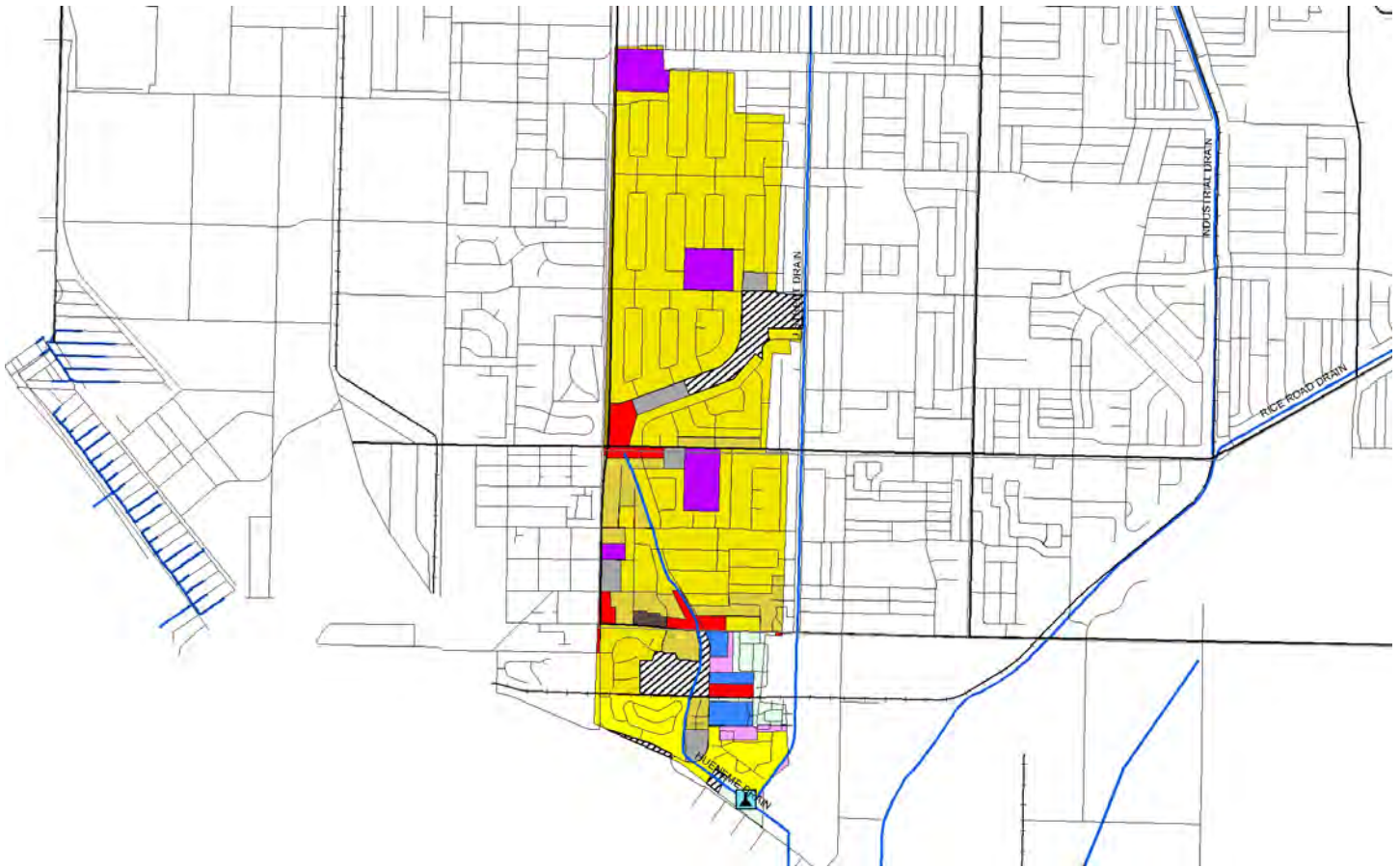
Cons: Lots of activity nearby, high potential for vandalism, stagnant water

Outstanding Site Selection Tasks: Verify positive flow

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

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





Entire City

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

Selected Subwatershed

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

Santa Paula

Waterbody: 11th Street Drain (tributary to Santa Clara River)

Location: Upstream Santa Paula Airport
(34°20'54.99"N, 119° 3'19.82"W)

Pros: Excellent flat pad on top of outfall for sampling equipment

Cons: High potential for vandalism

Outstanding Site Selection Tasks: None

Other Potential Sites: None

Dry Season Flow Potential: Likely intermittent year-round flow due to urban runoff. No flow at time of initial observation





Entire City

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

Selected Subwatershed

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

Simi Valley

Waterbody: Bus Canyon Drain (tributary to Arroyo Simi)

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

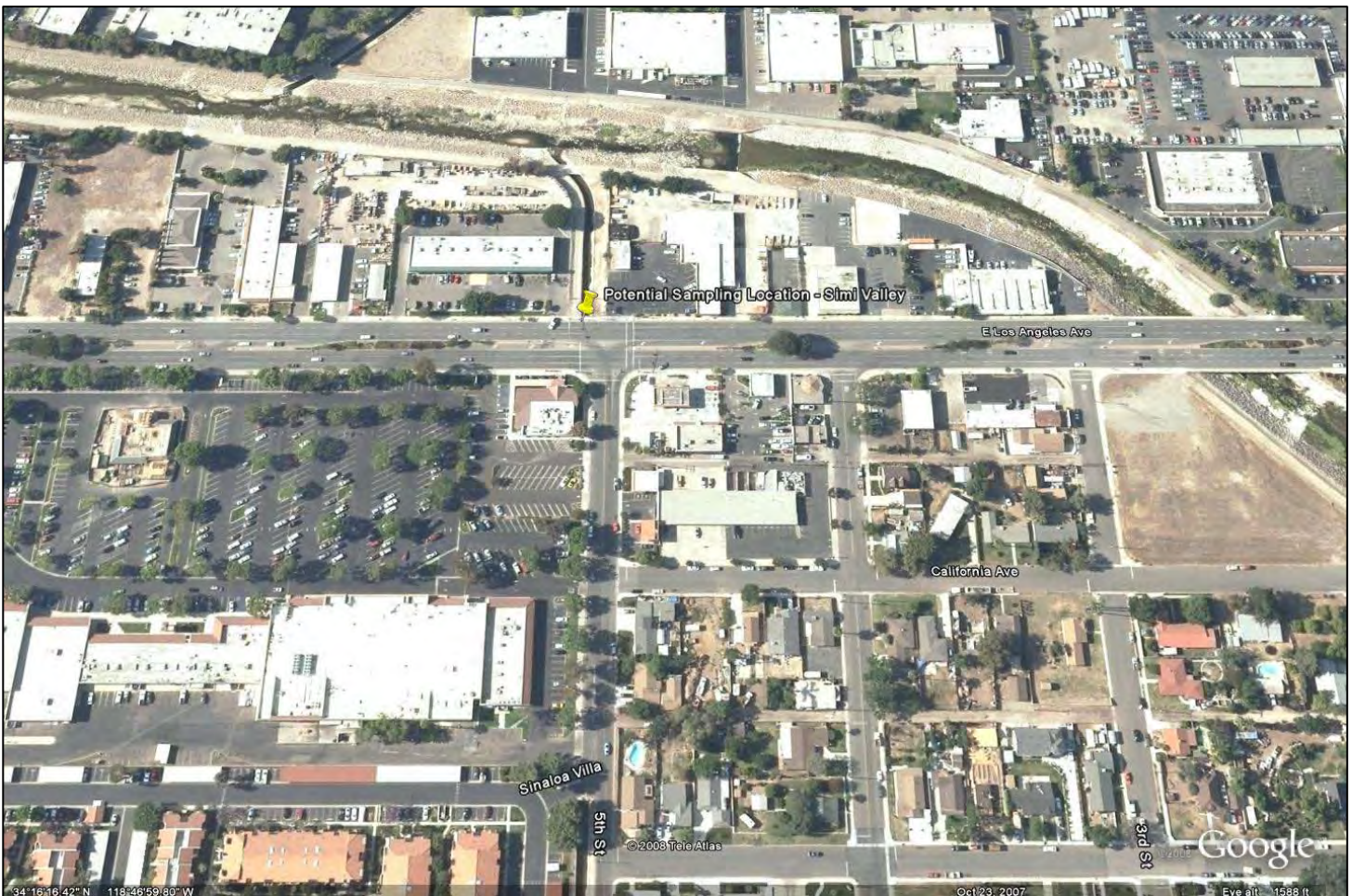
Pros: Likely well-defined rating table, located behind VCWPD gate

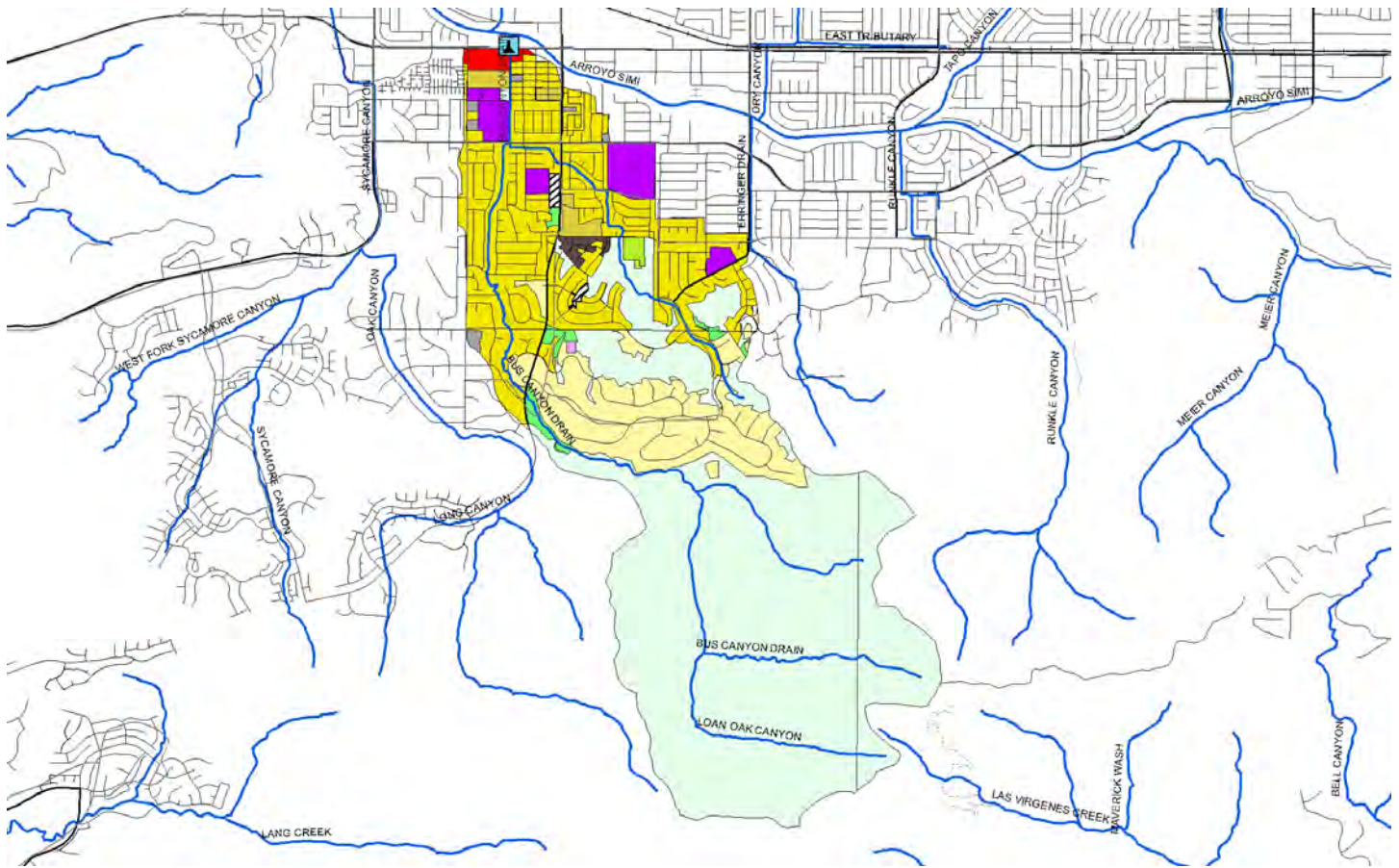
Cons: Pedestrian traffic on levee nearby

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

Other Potential Sites: Upstream at 5th and Ventura Ave.

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





Entire City

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

Selected Subwatershed

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

Thousand Oaks

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

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

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

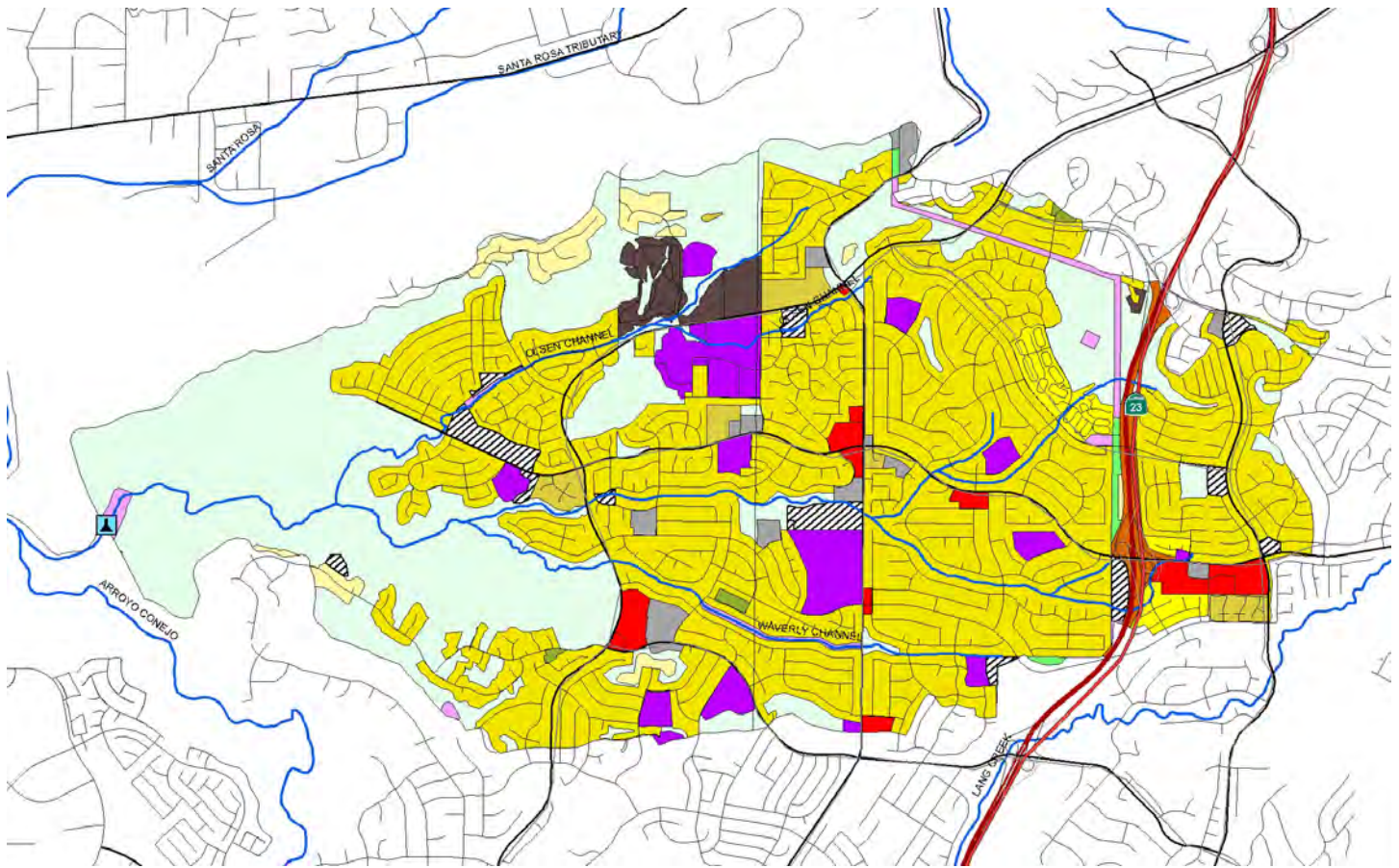
Cons: Late-night access to WWTP could present problem

Outstanding Site Selection Tasks: None

Other Potential Sites: None

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





Entire City

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

Selected Subwatershed

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

Ventura

Waterbody: Moon Ditch (tributary to Santa Clara River)

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

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

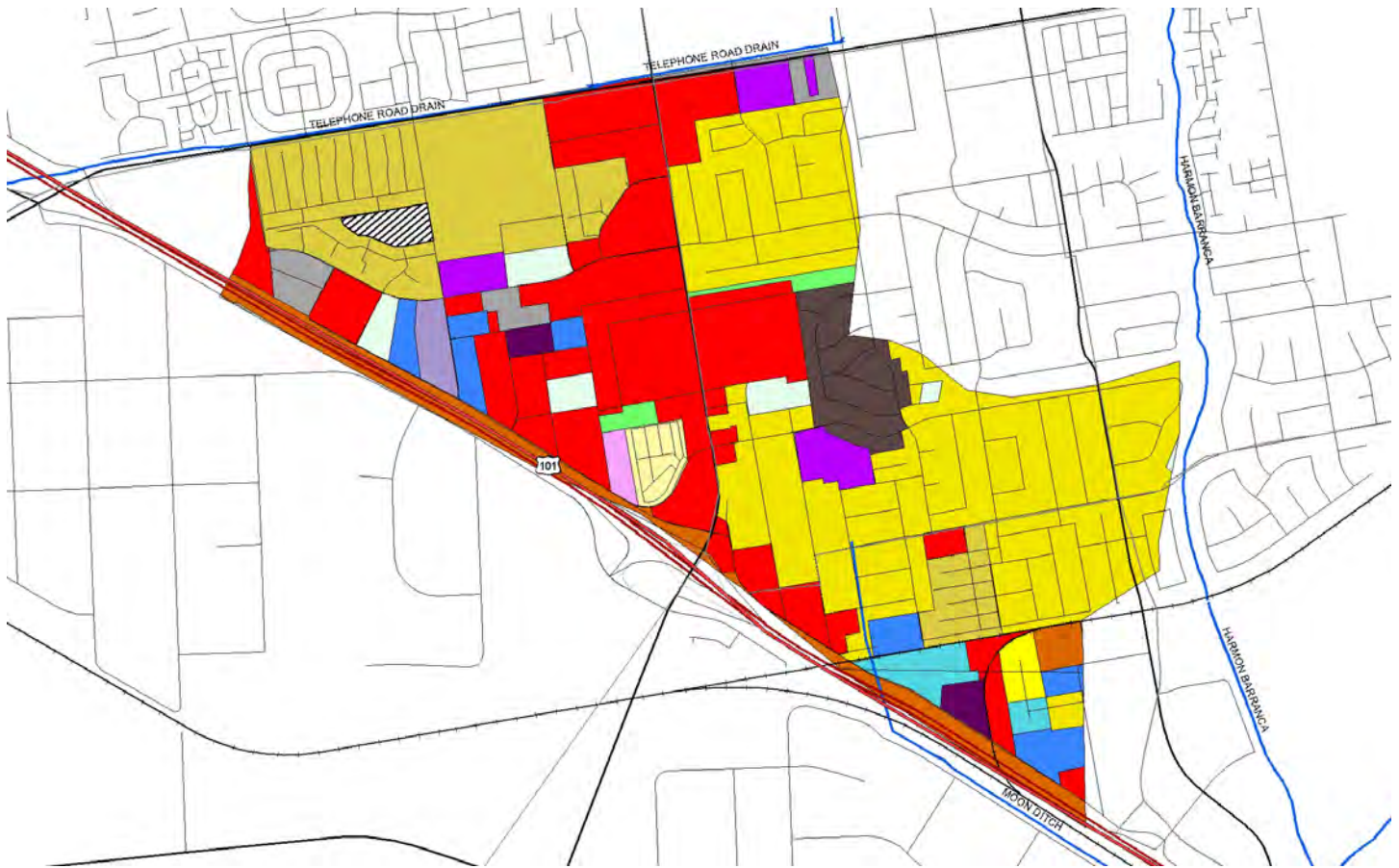
Cons: Wide concrete bottom will spread out low flows, placement of intake somewhat difficult

Outstanding Site Selection Tasks: None

Other Potential Sites: None

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





Entire City

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

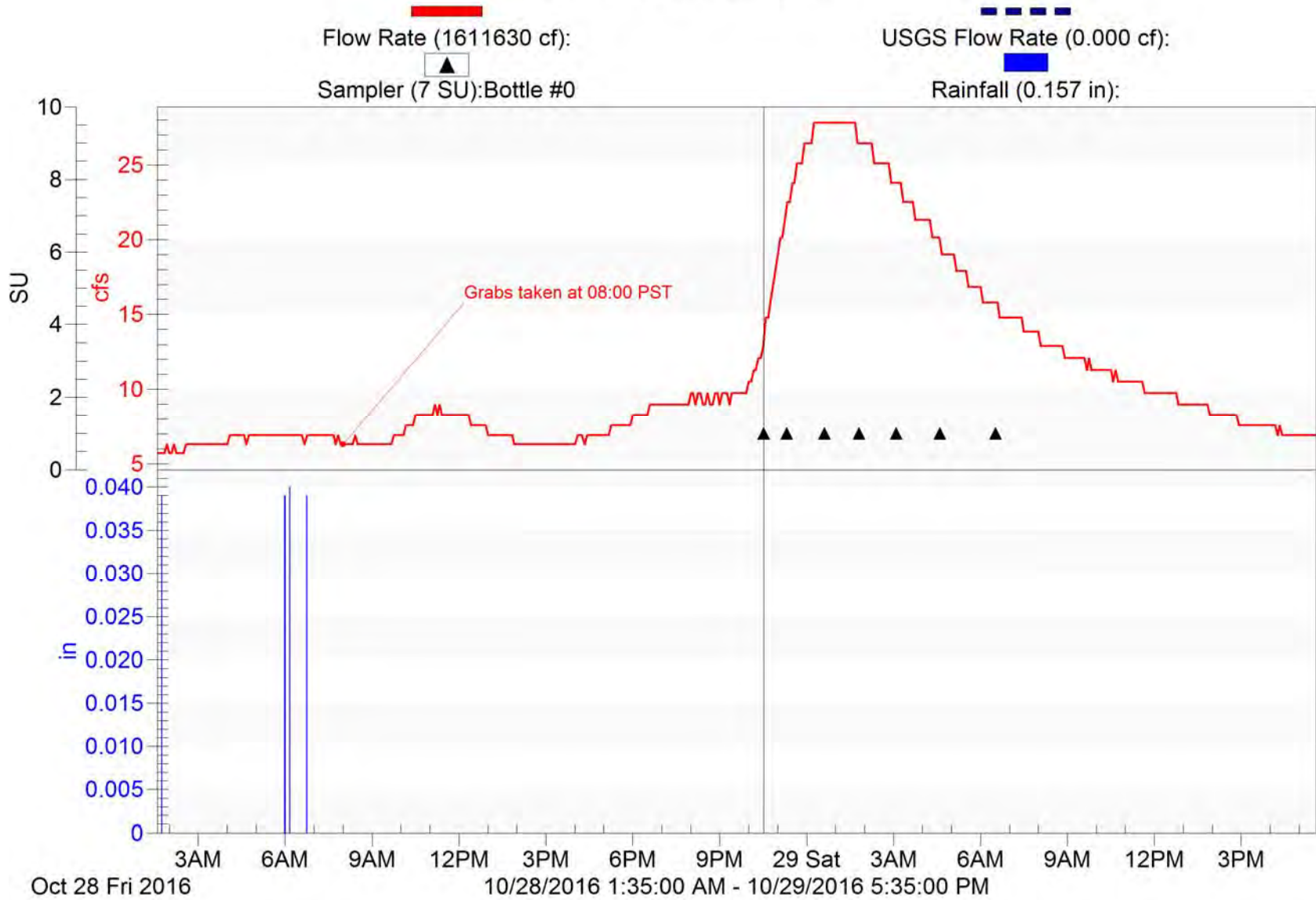
Selected Subwatershed

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

Appendix B. Event Hydrographs

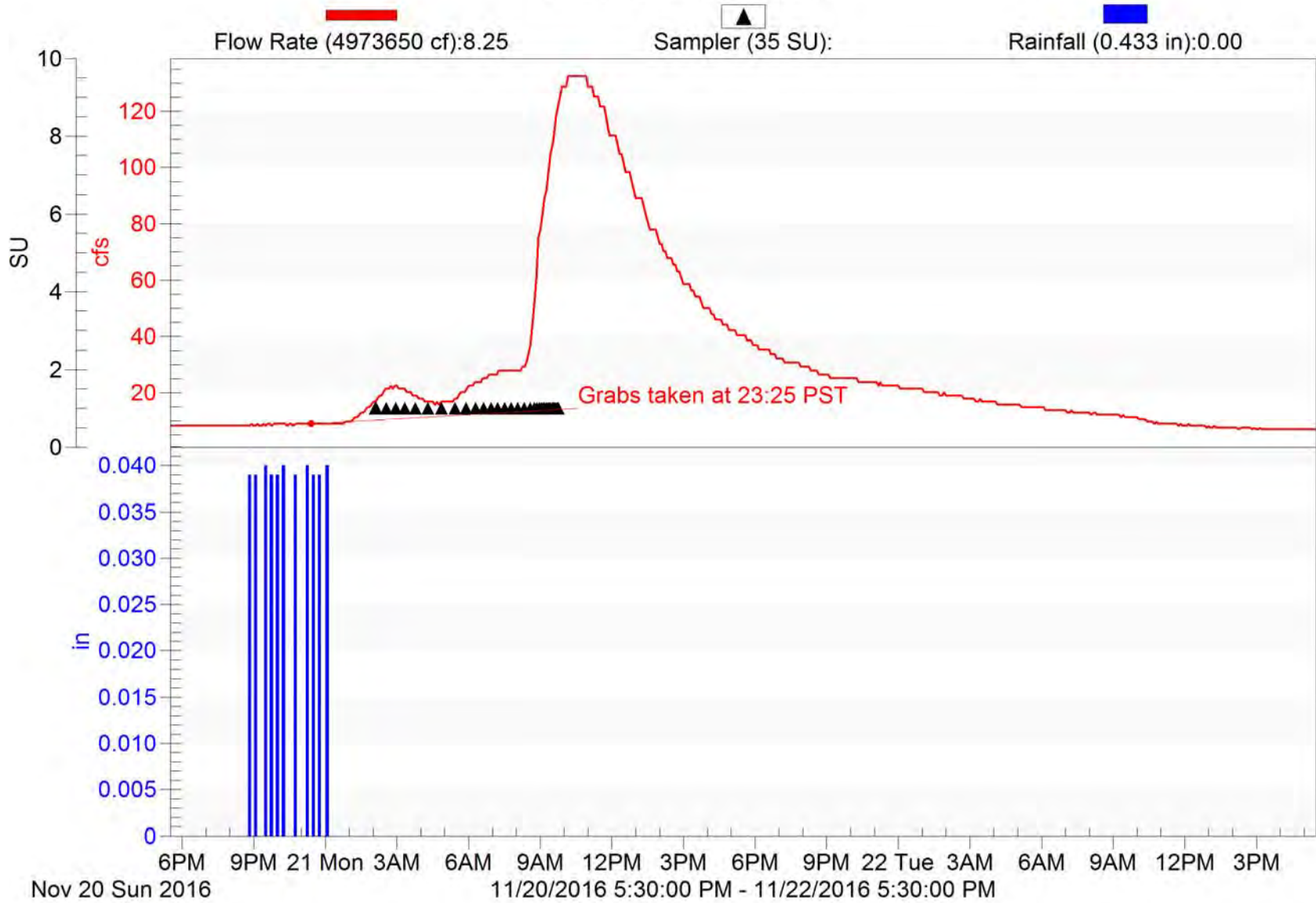
ME-CC

2016/17 NPDES Event 1 (Wet)



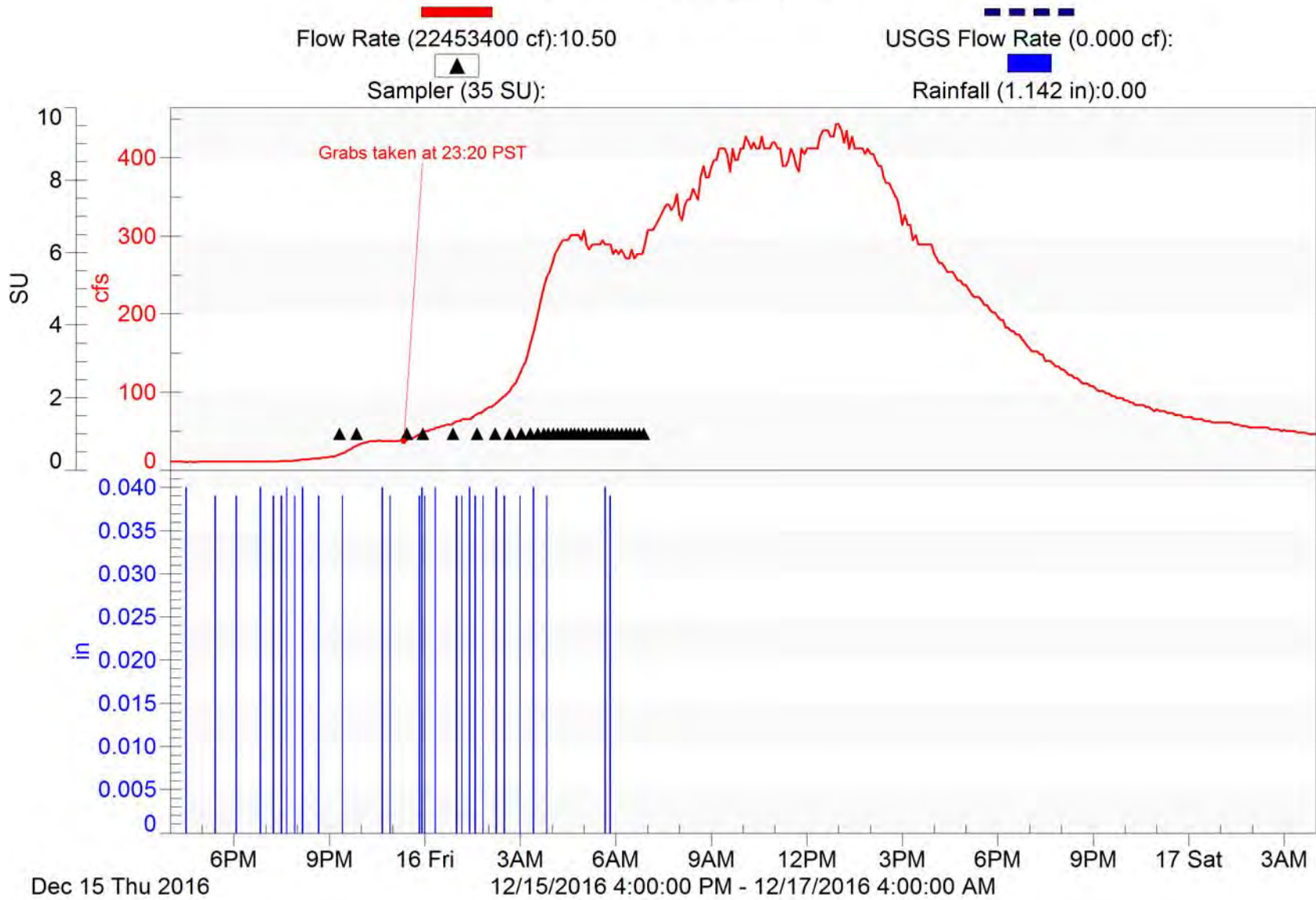
ME-CC

2016/17 NPDES Event 2 (Wet)



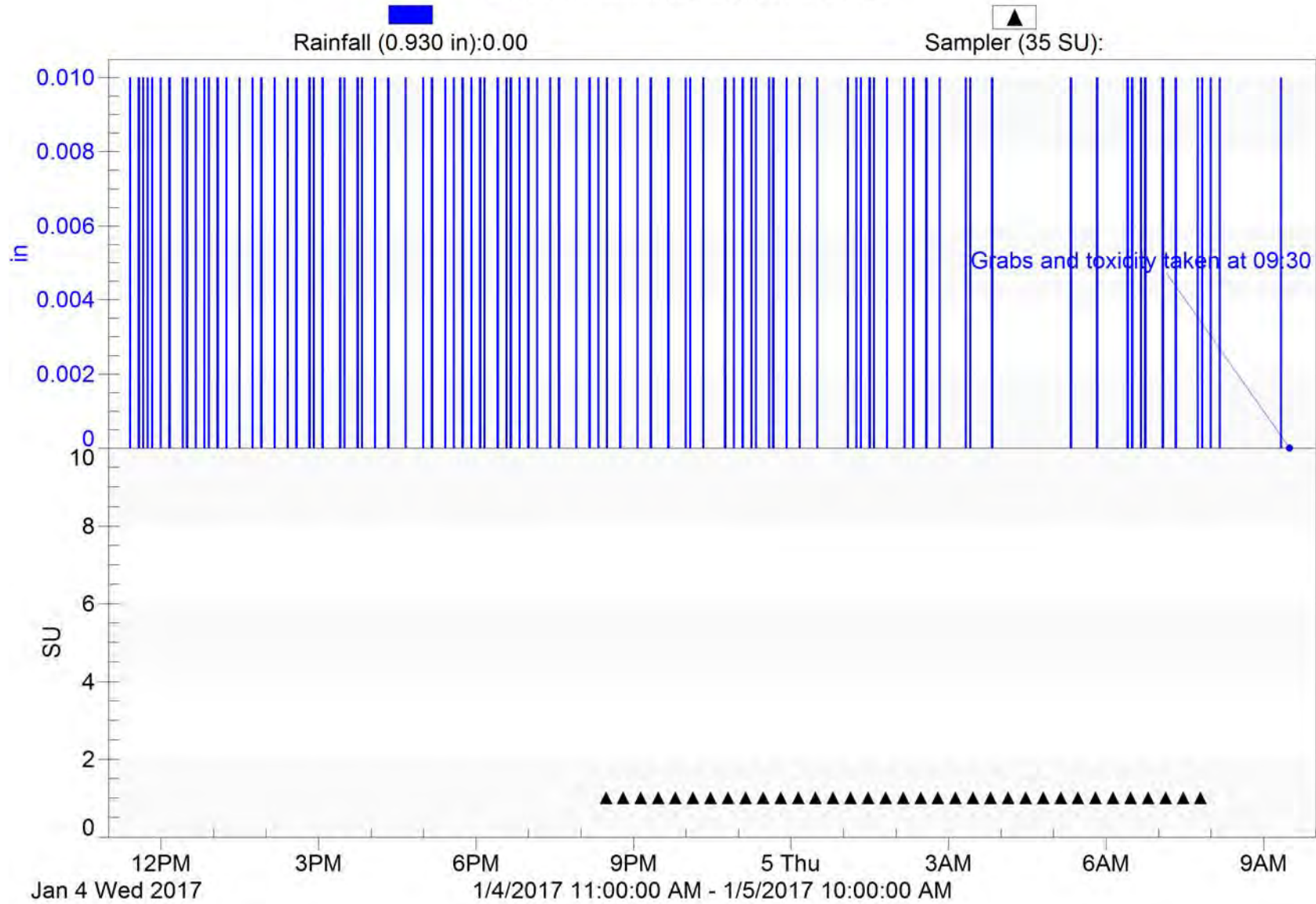
ME-CC

2016/17 NPDES Event 3 (Wet)



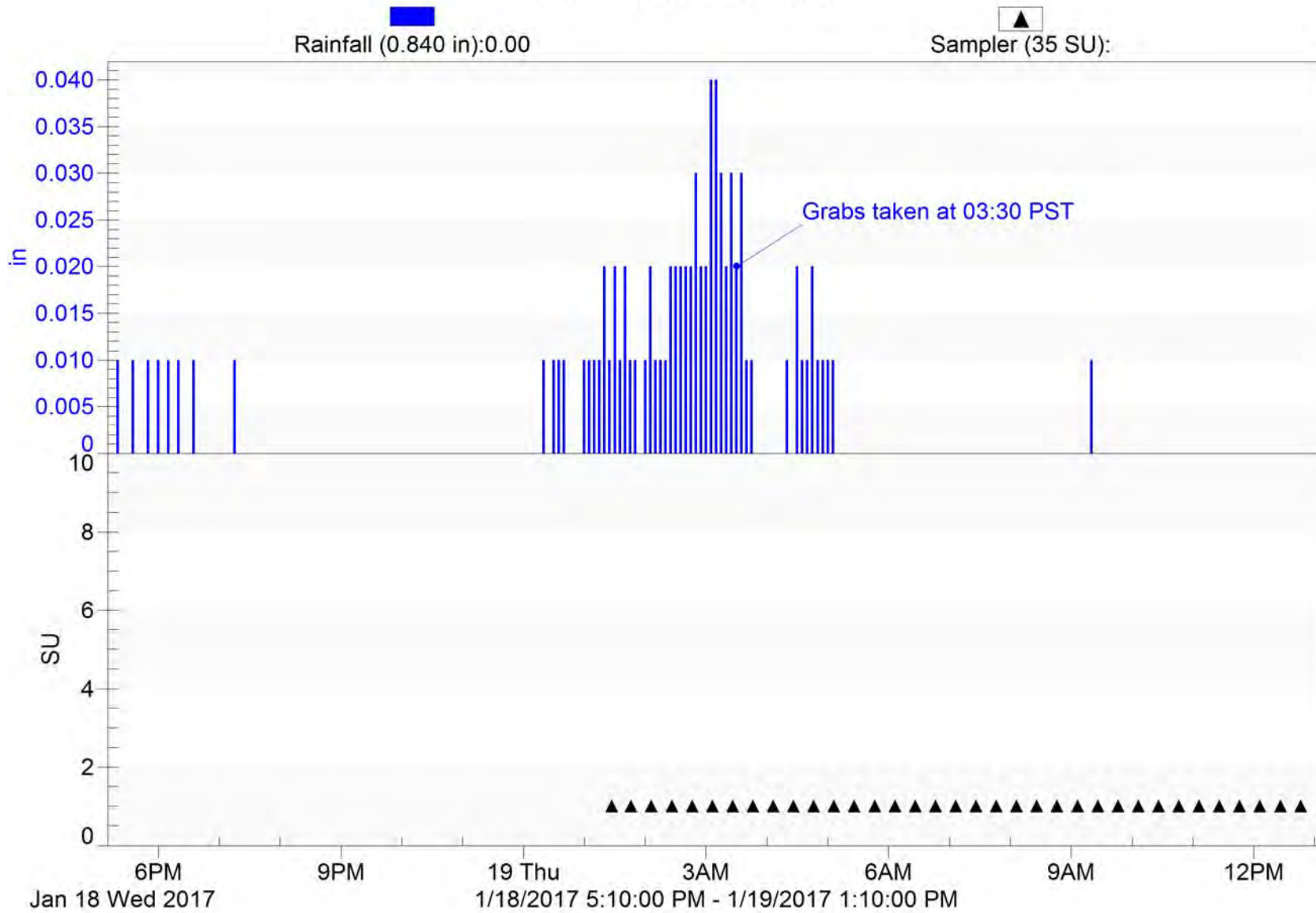
ME-SCR

2016/17 NPDES Event #4 (Wet) First Flush



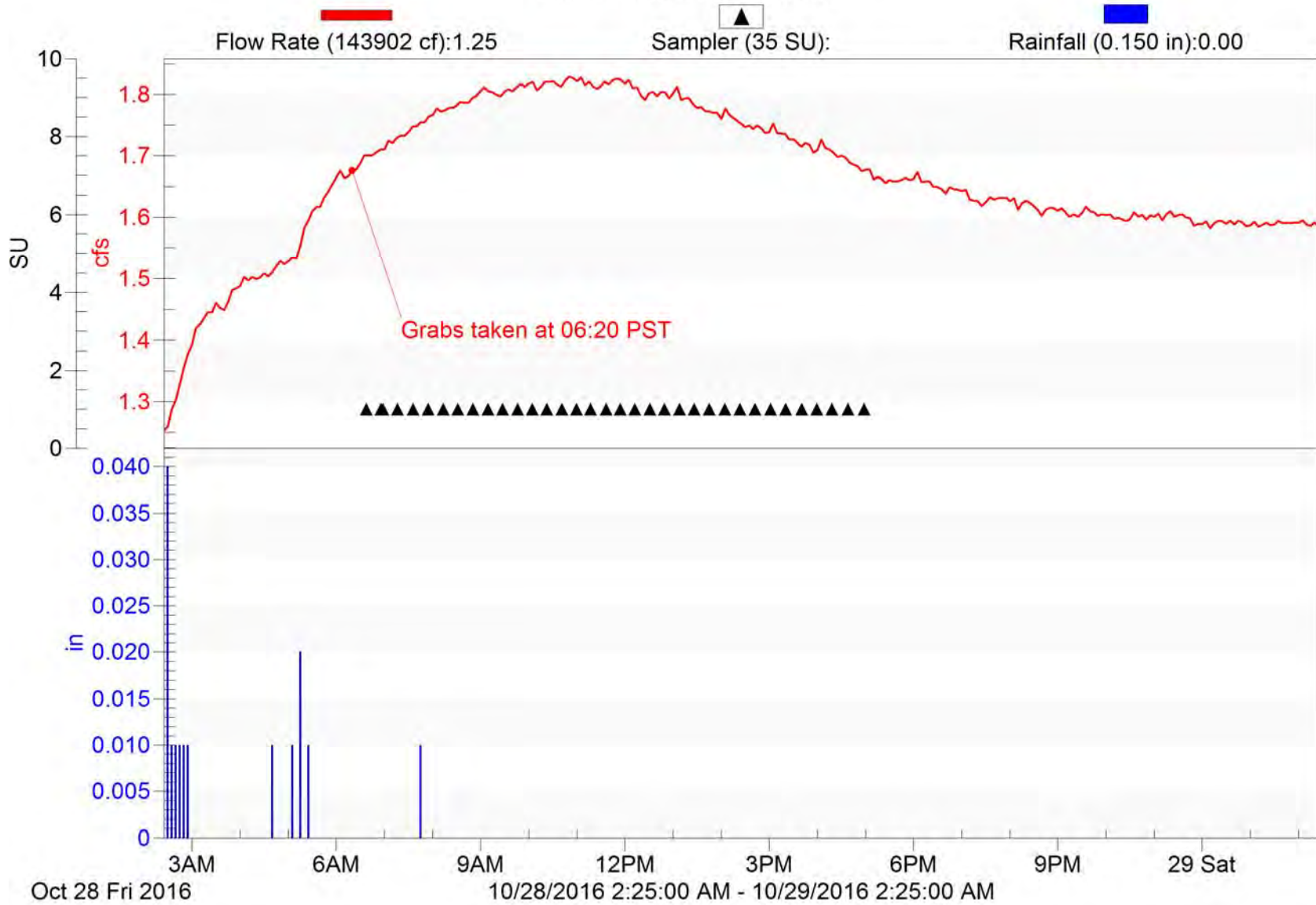
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2016/17 NPDES Event #5 (Wet)

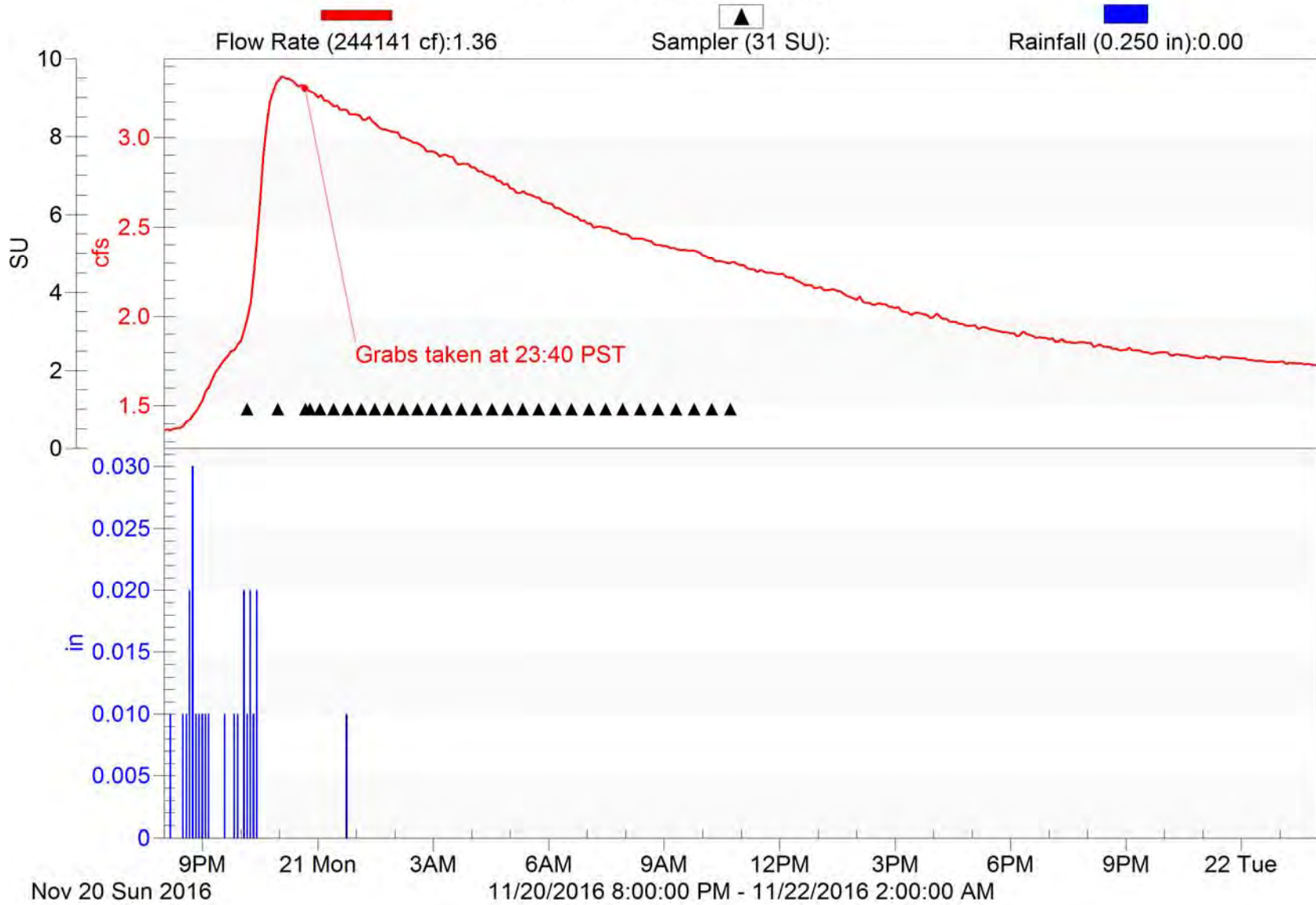


ME-VR2

2016/17 NPDES Event #1 (Wet)

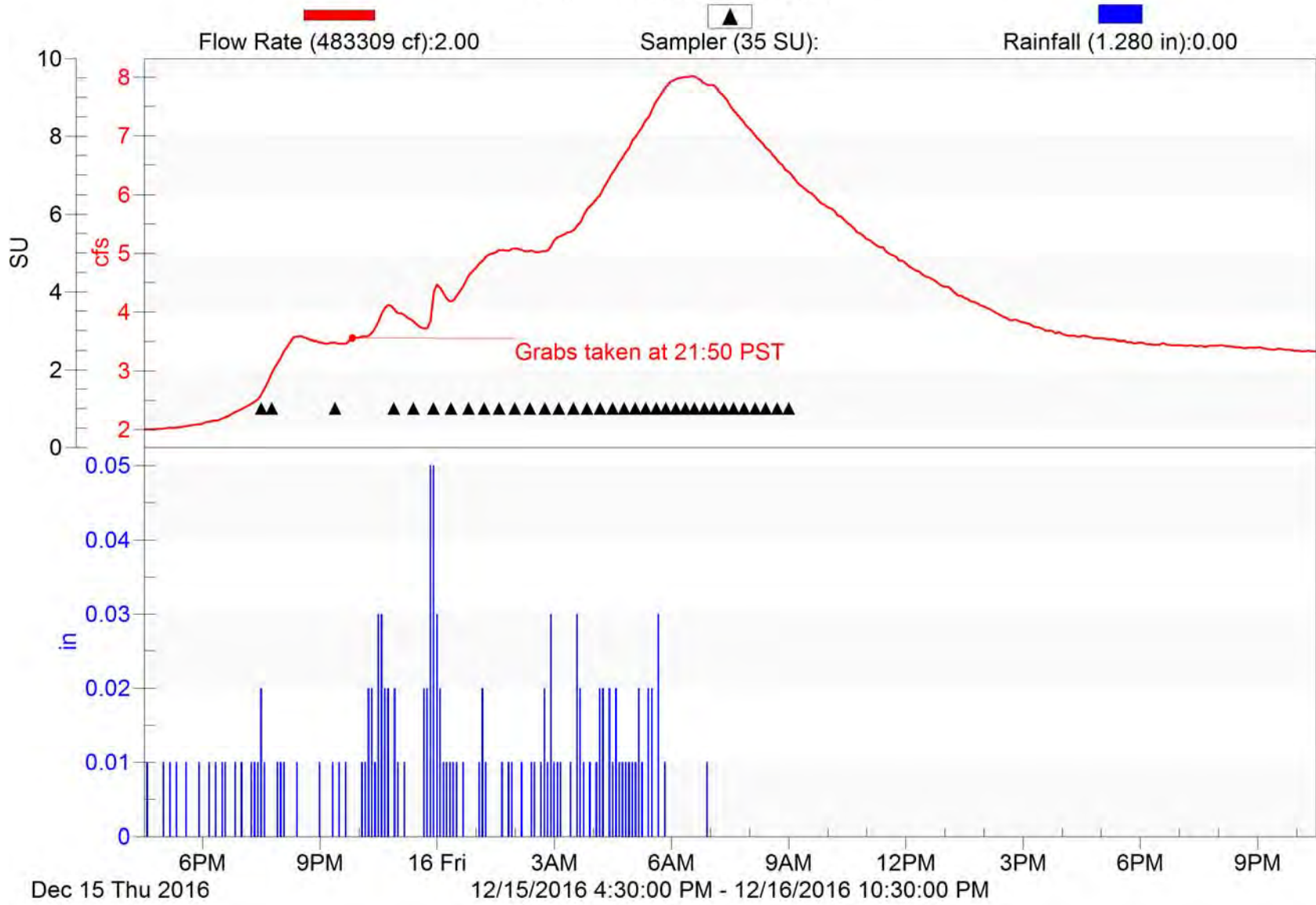


ME-VR2
2016/17 NPDES Event #2 (Wet)



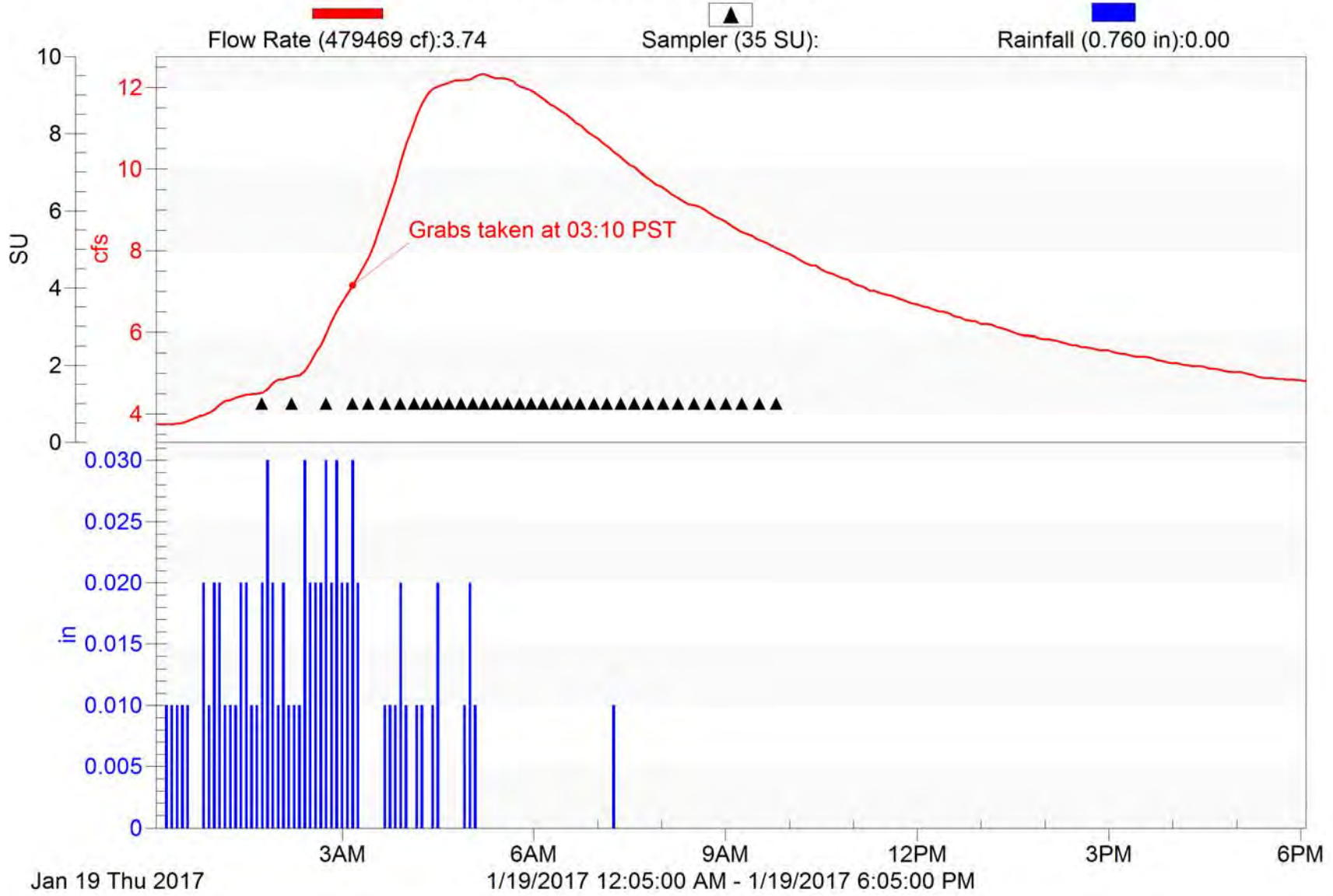
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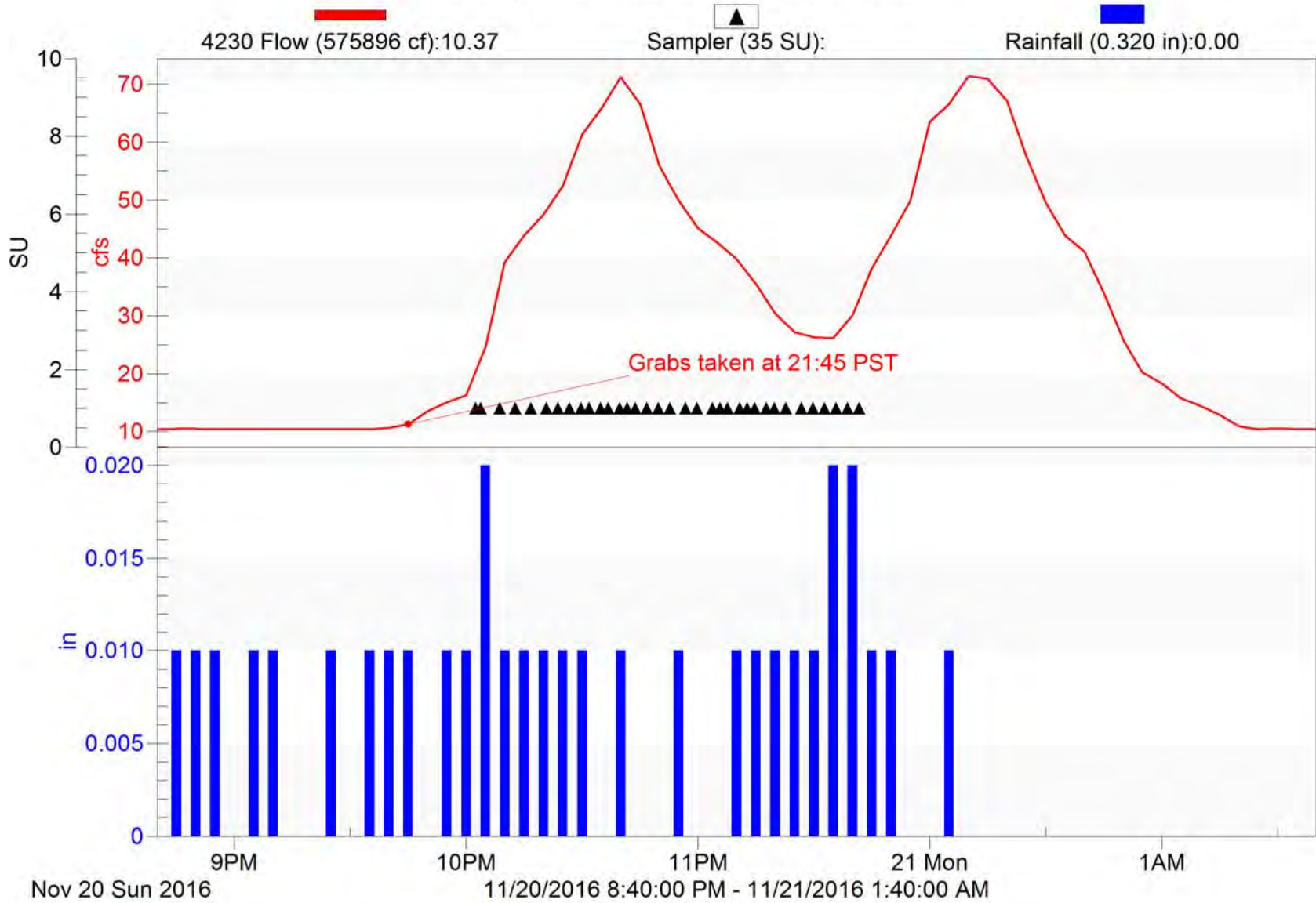
ME-VR2

2016/17 NPDES Event #5 (Wet)



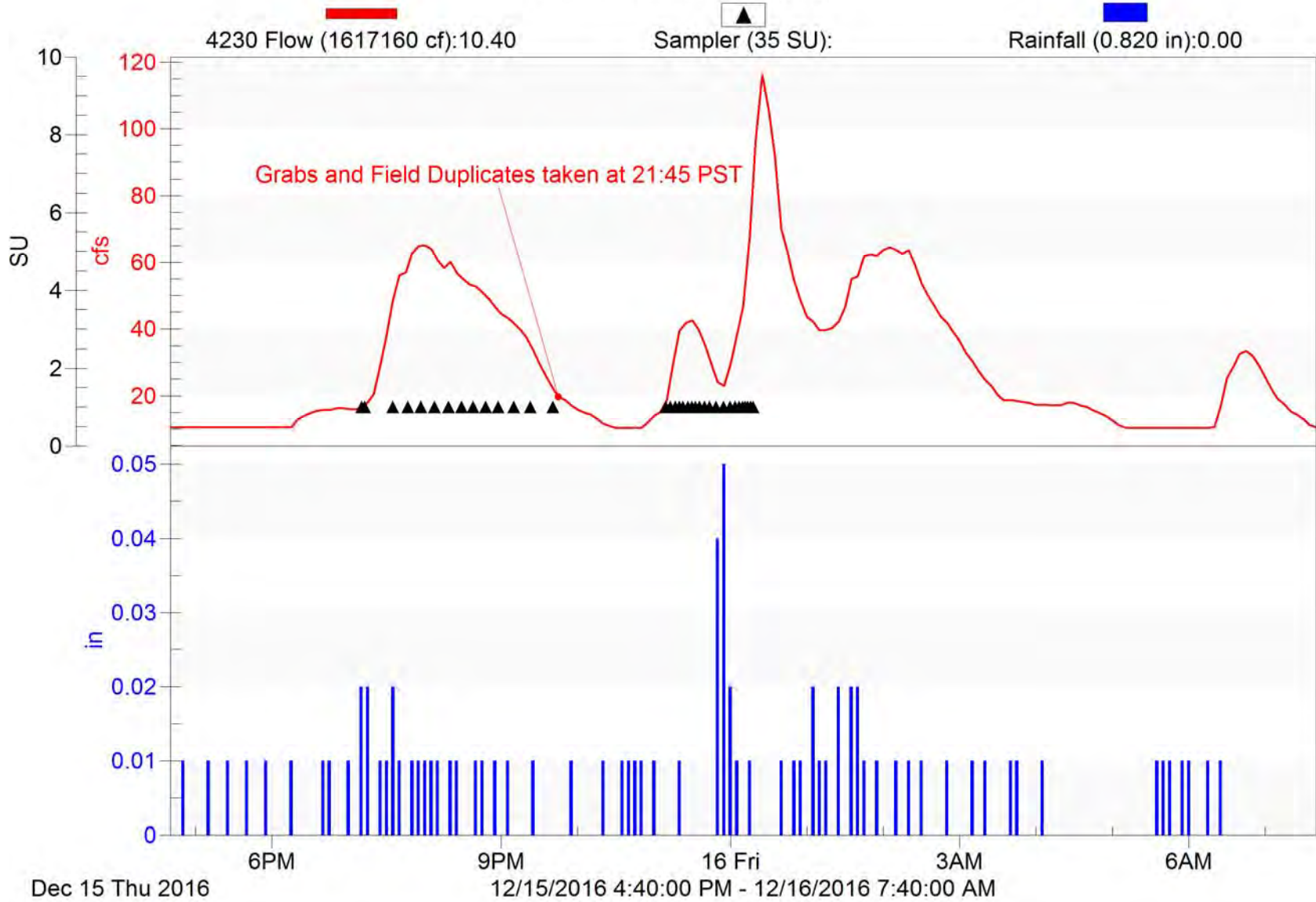
Camarillo-1

2016/17 NPDES Event #2 (Wet) - First Flush Event



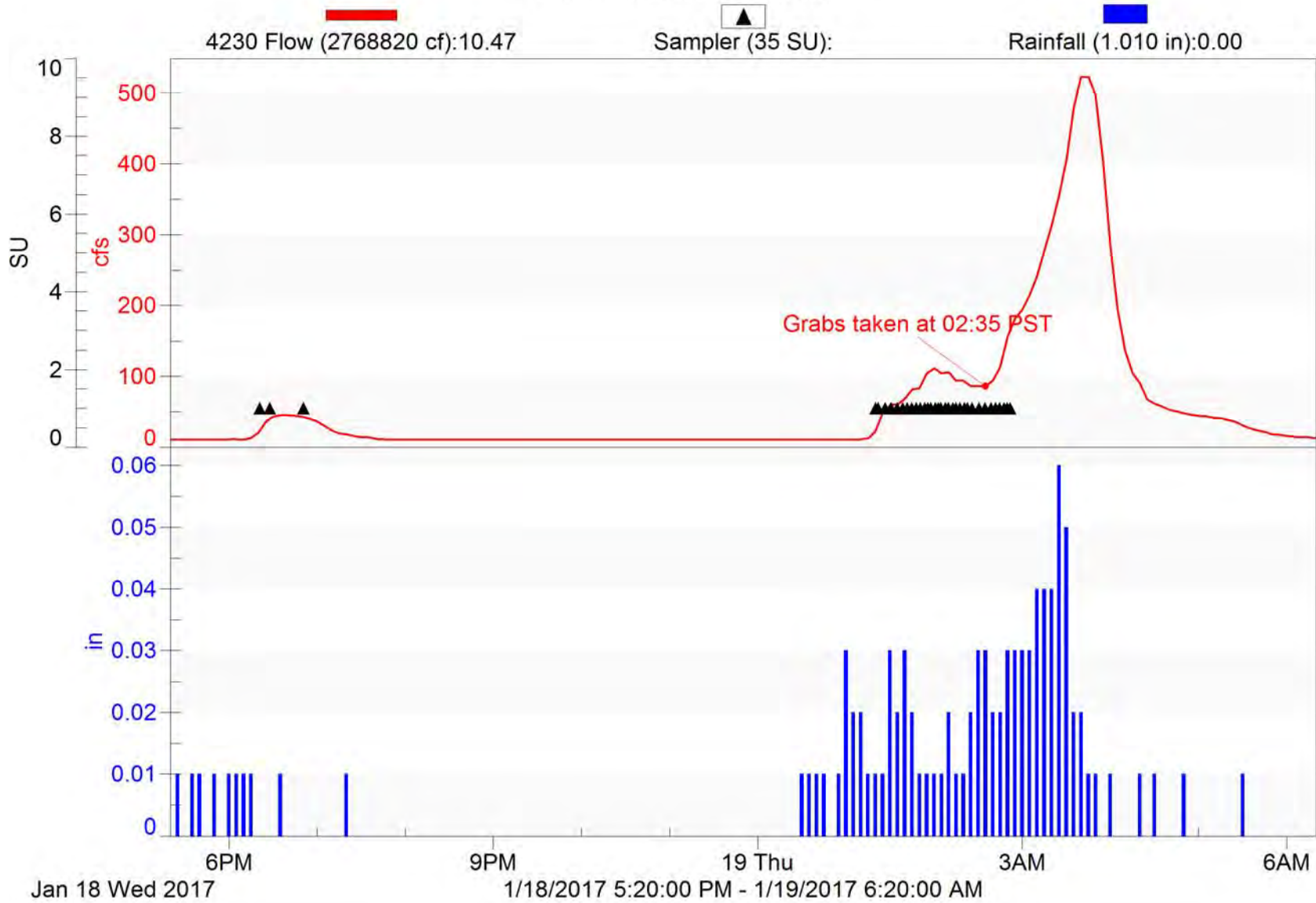
Camarillo-1

2016/17 NPDES Event #3 (Wet)



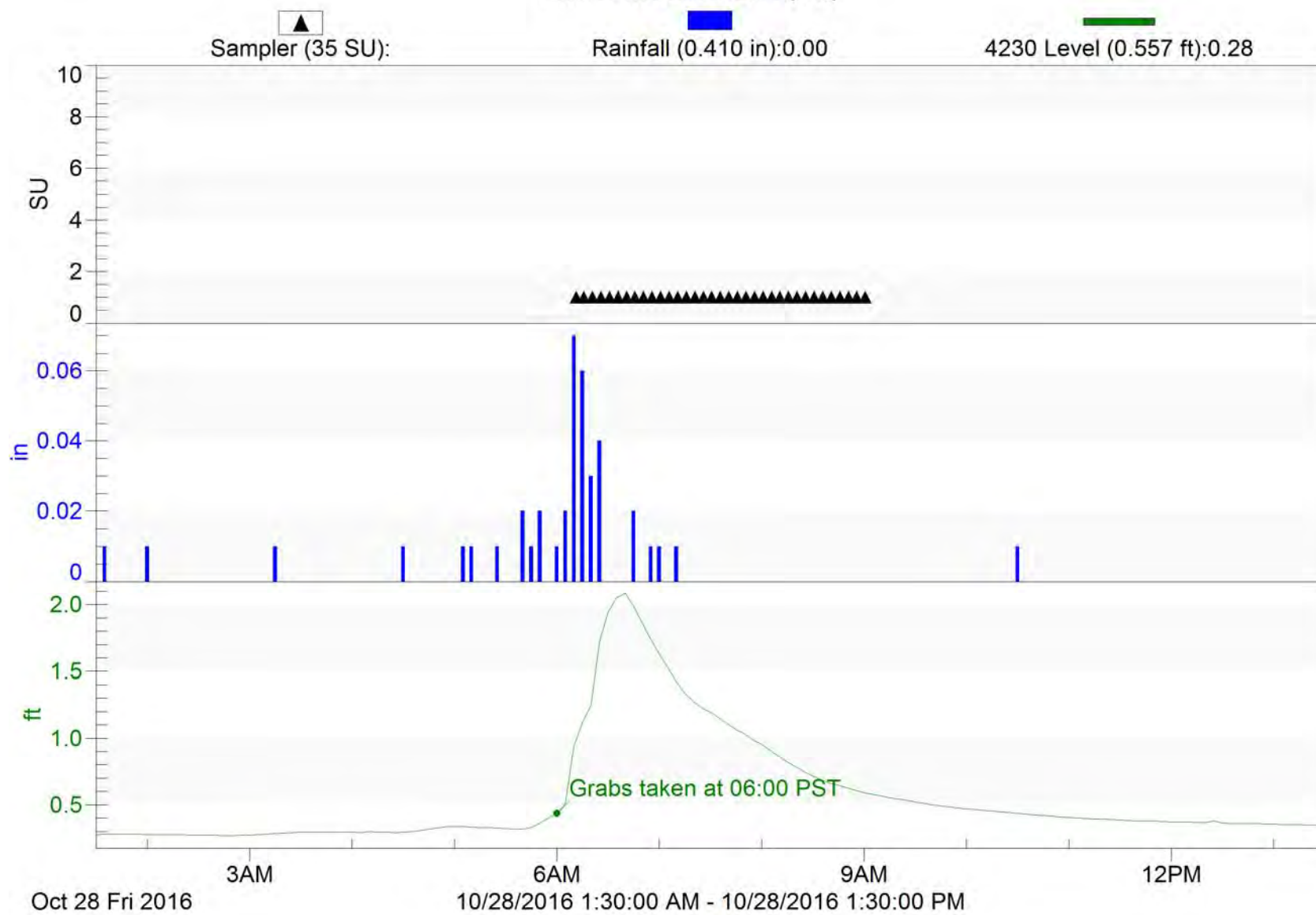
Camarillo-1

2016/17 NPDES Event #5 (Wet)



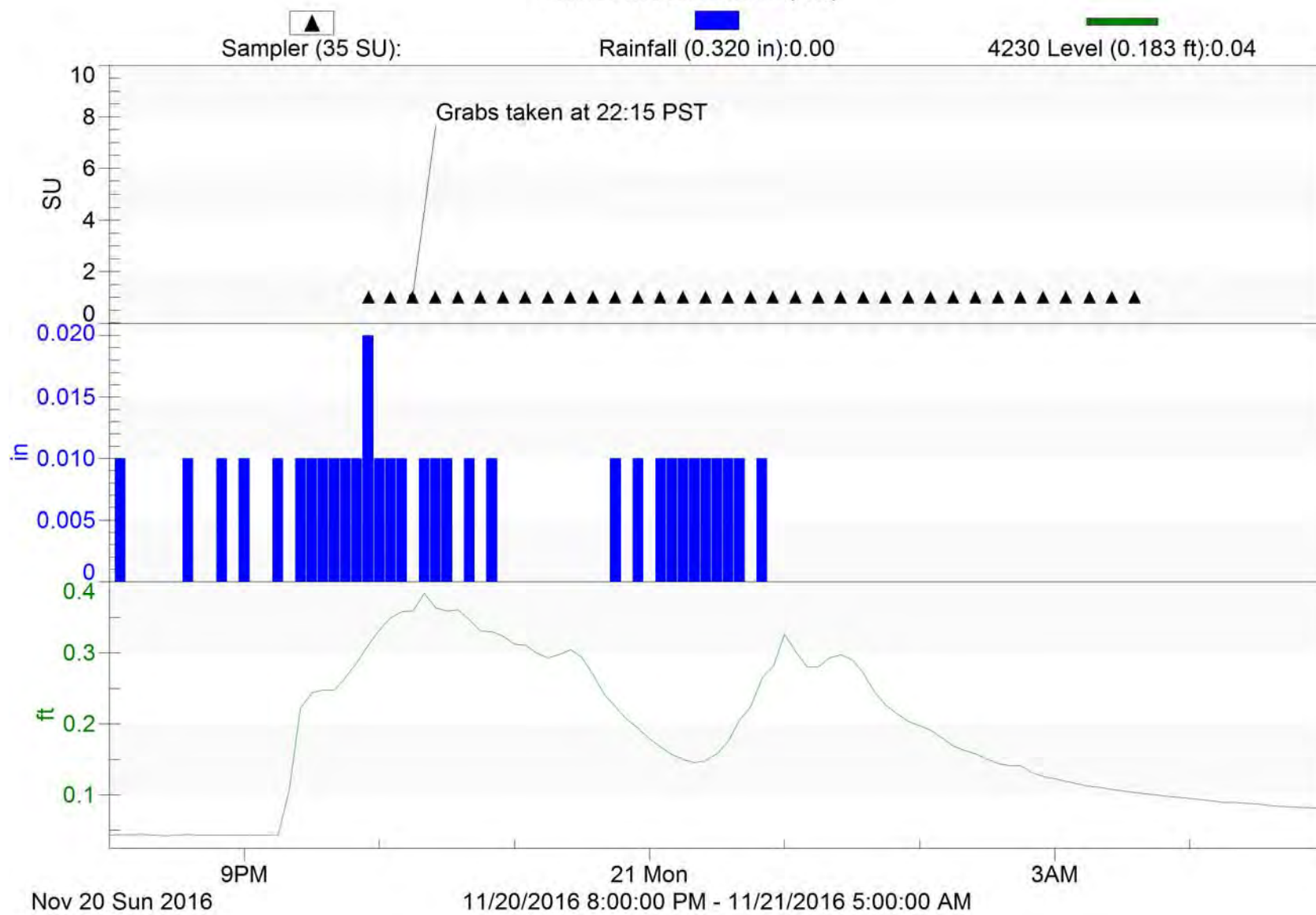
Fillmore-1

2016/17 NPDES Event #1 (Wet)



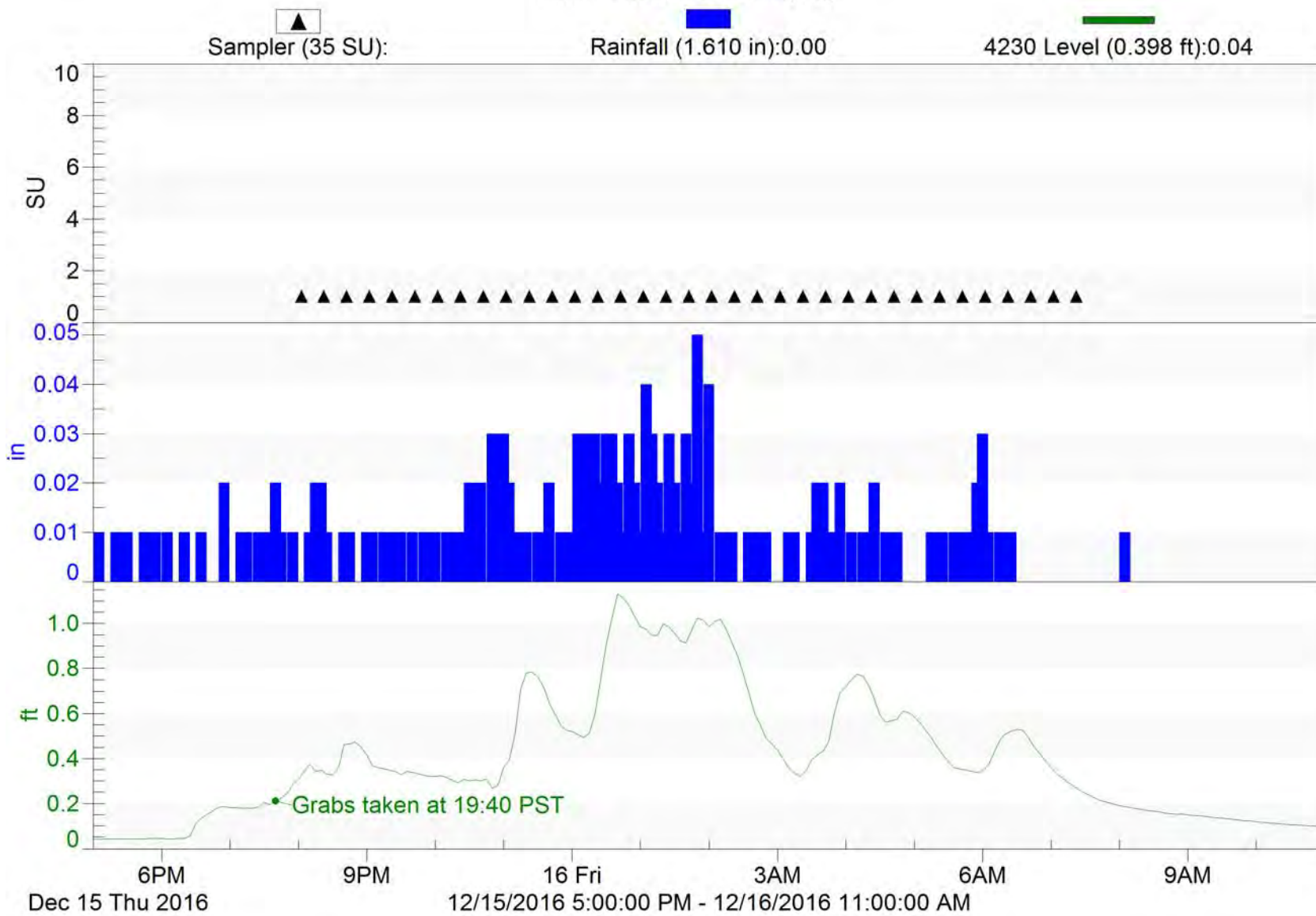
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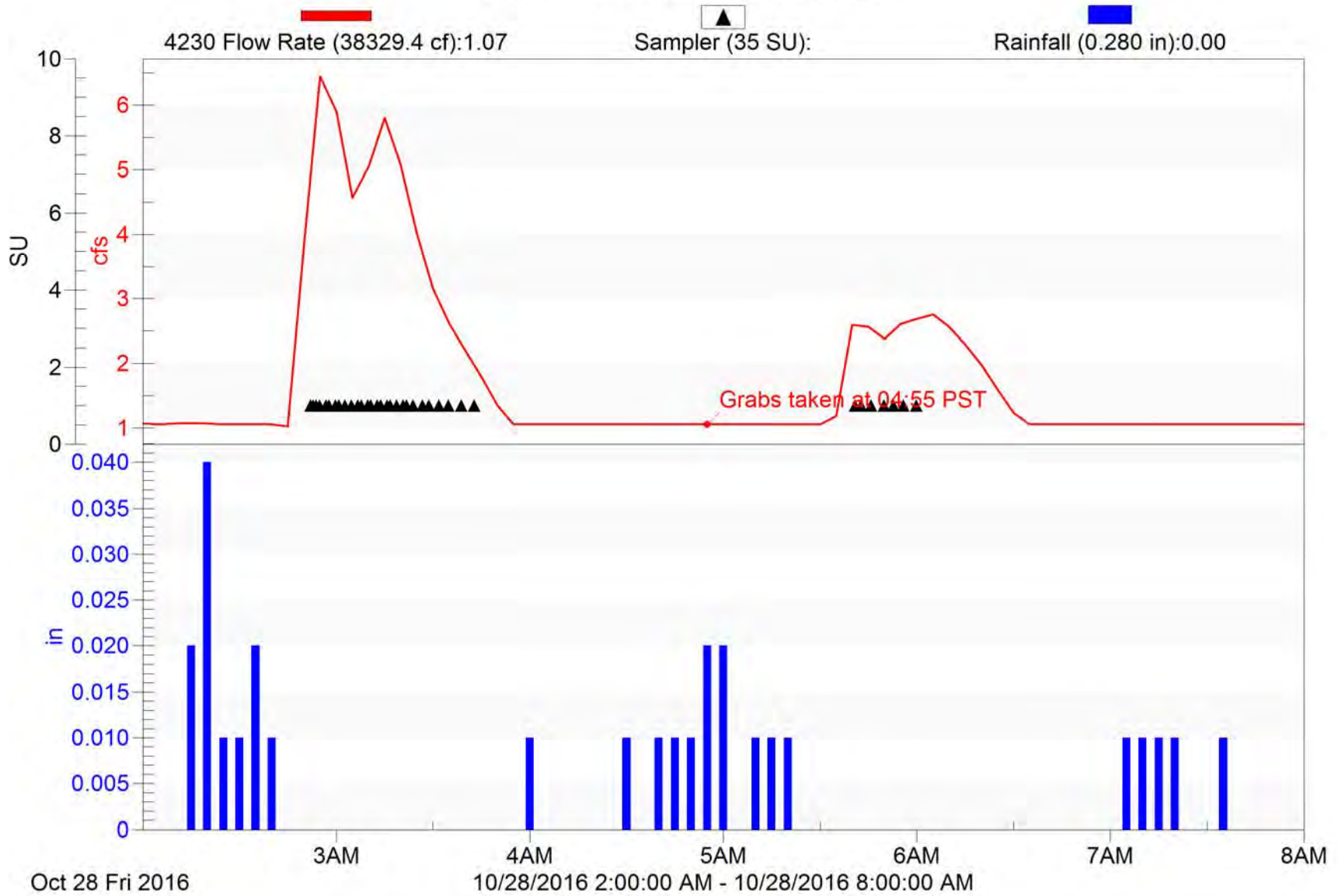
Fillmore-1

2016/17 NPDES Event #3 (Wet)



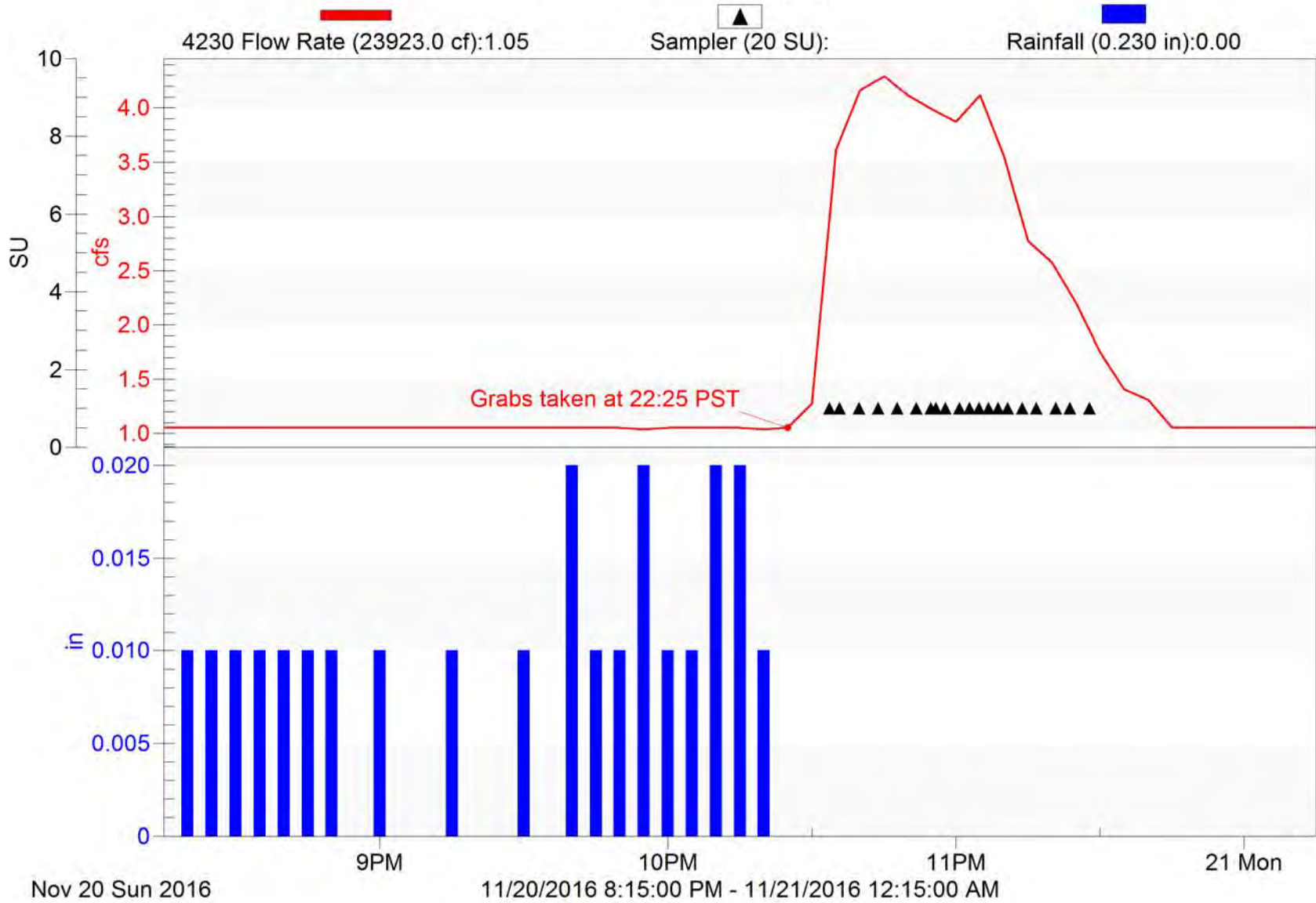
Meiners Oaks-1

2016/17 NPDES Event #1 (Wet) First Flush



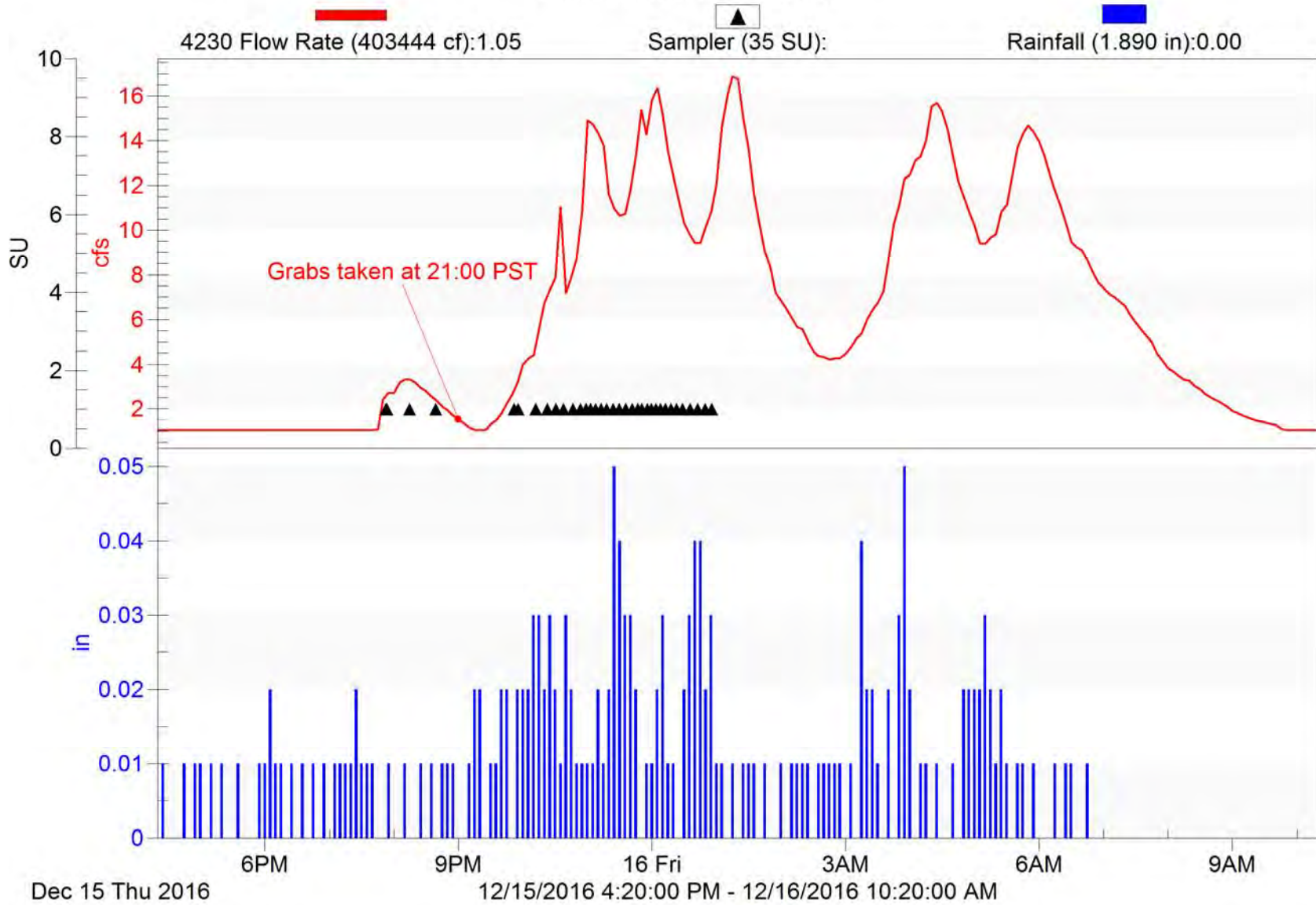
Meiners Oaks-1

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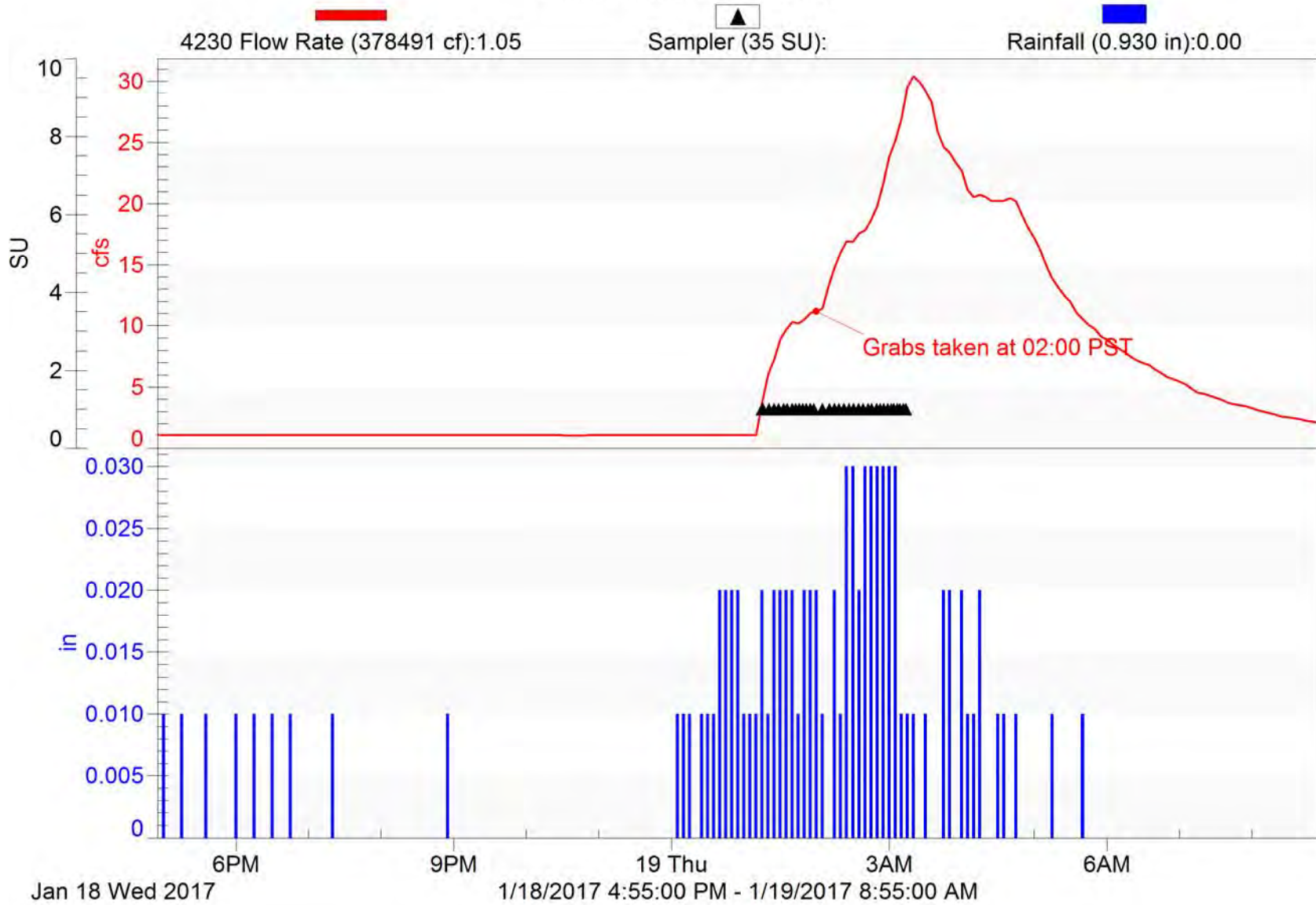
Meiners Oaks-1

2016/17 NPDES Event #3 (Wet)



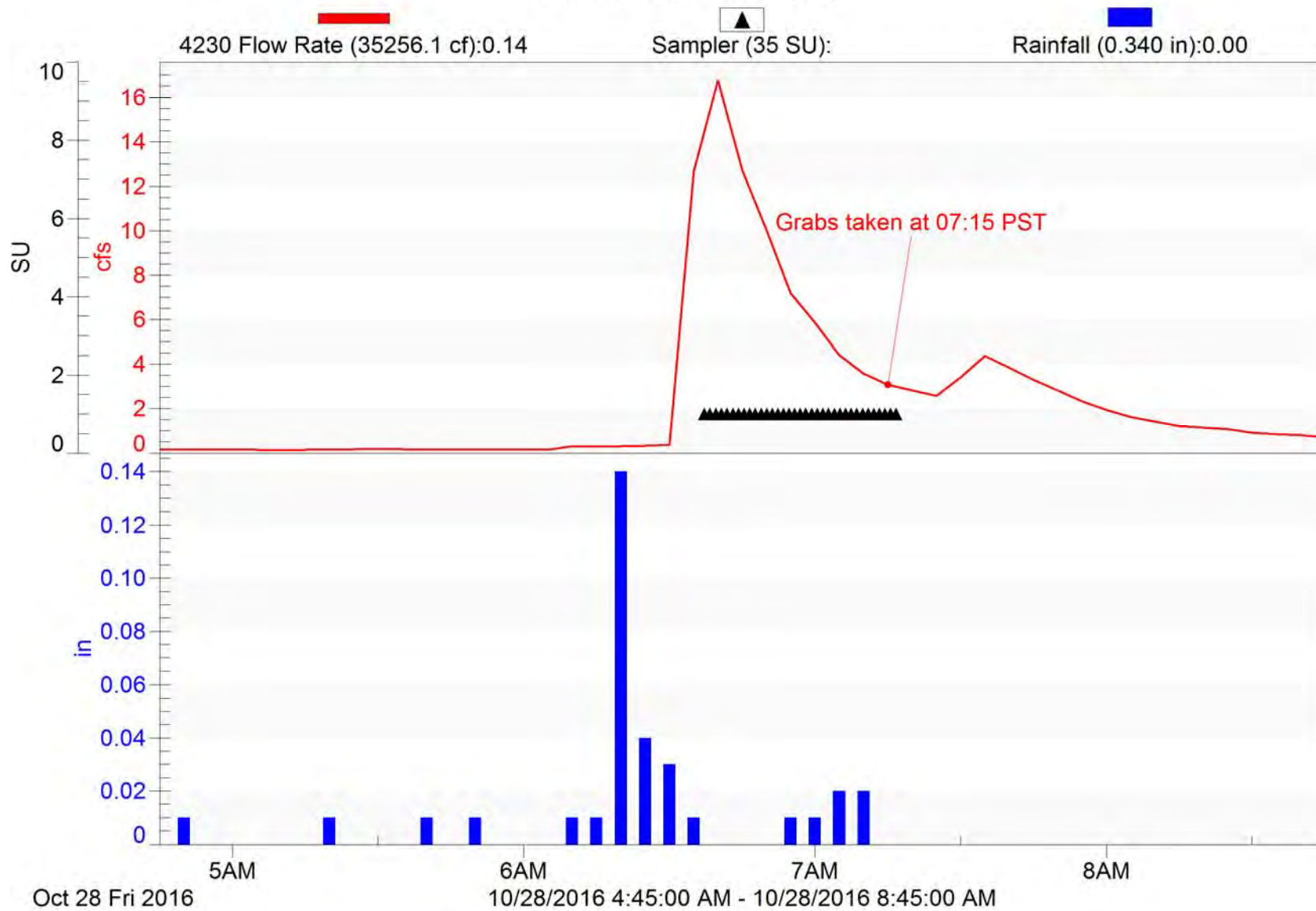
Meiners Oaks-1

2016/17 NPDES Event #5 (Wet)



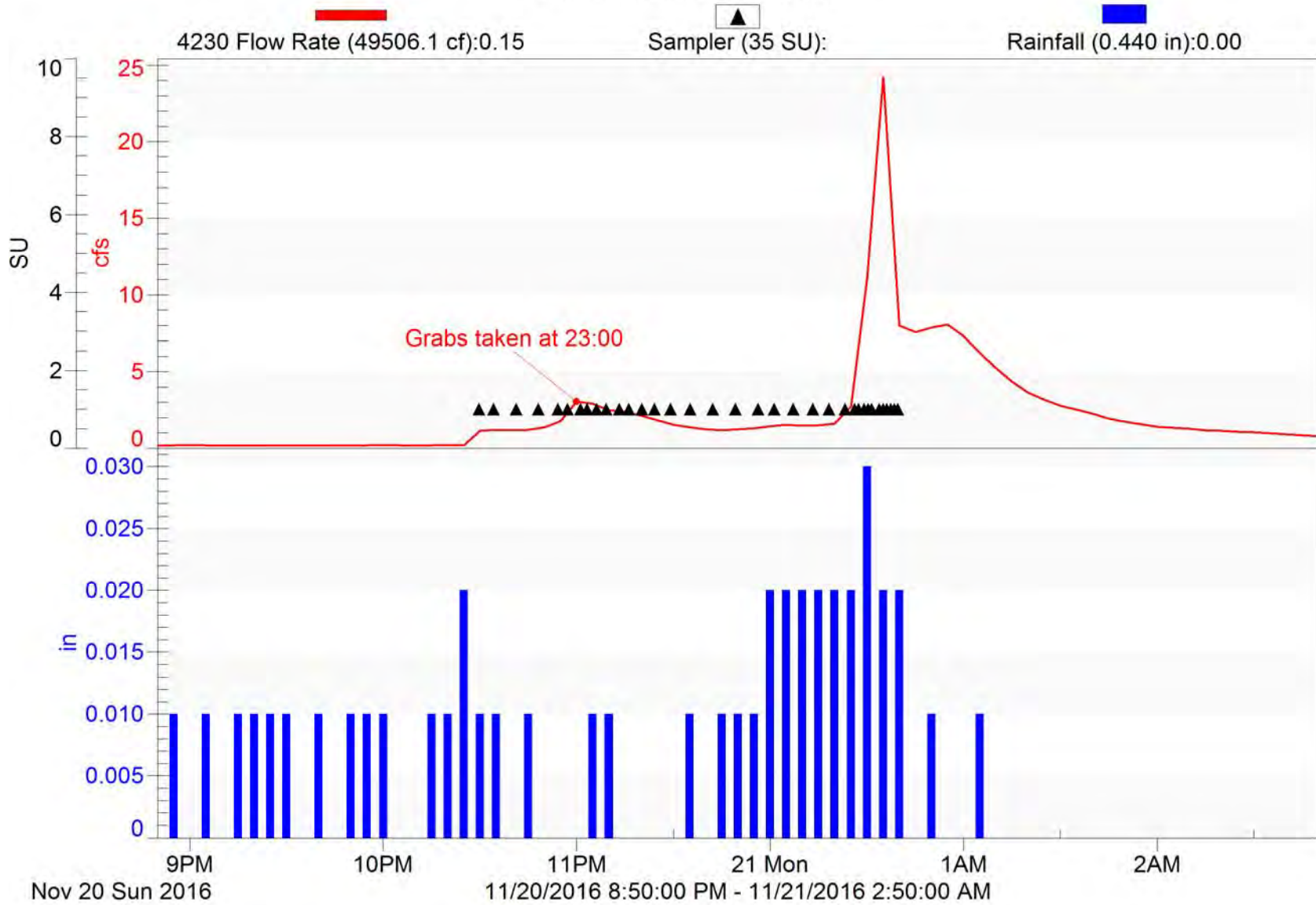
Moorpark-1

2016/17 NPDES Event #1 (Wet)



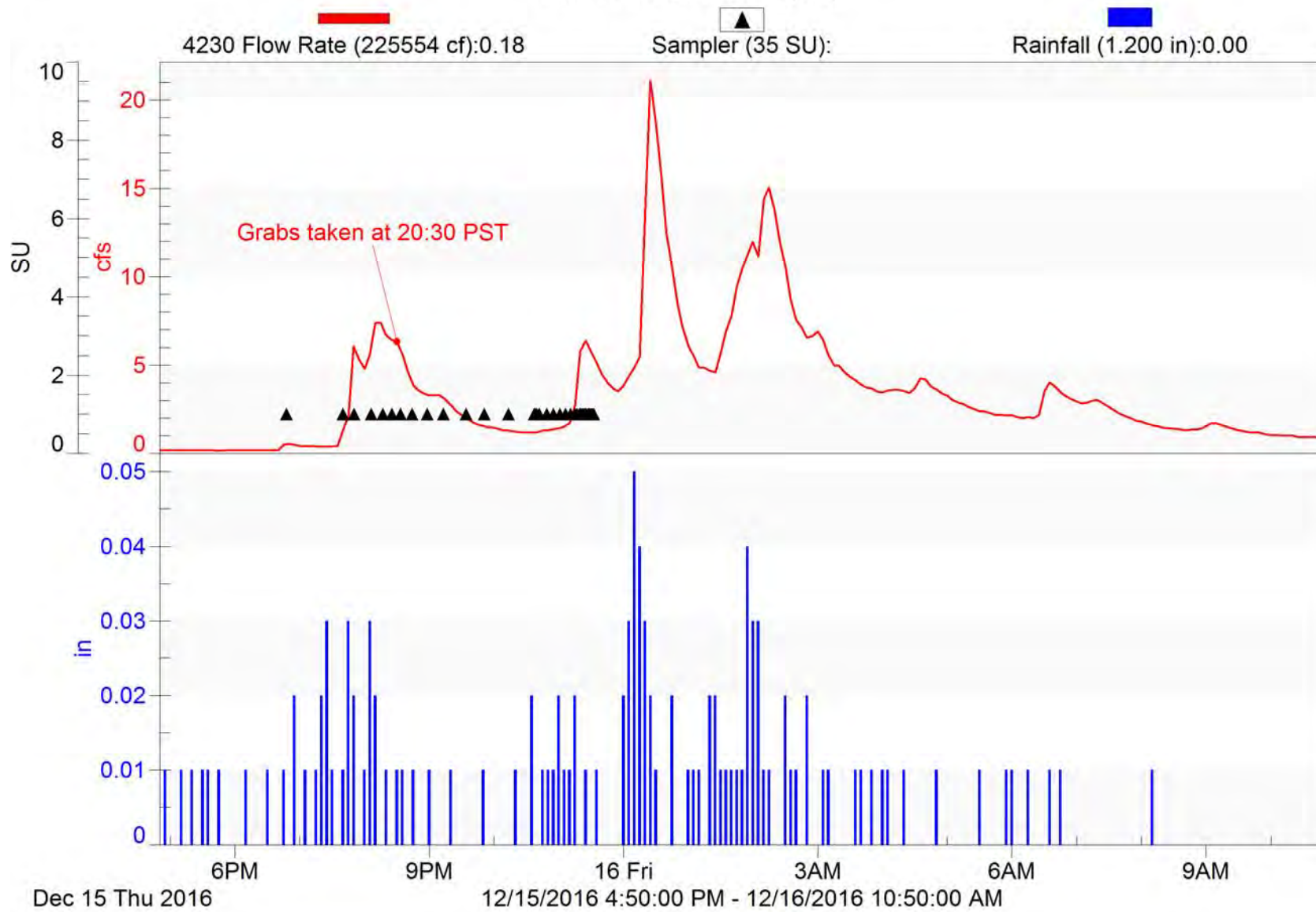
Moorpark-1

2016/17 NPDES Event #2 (Wet)



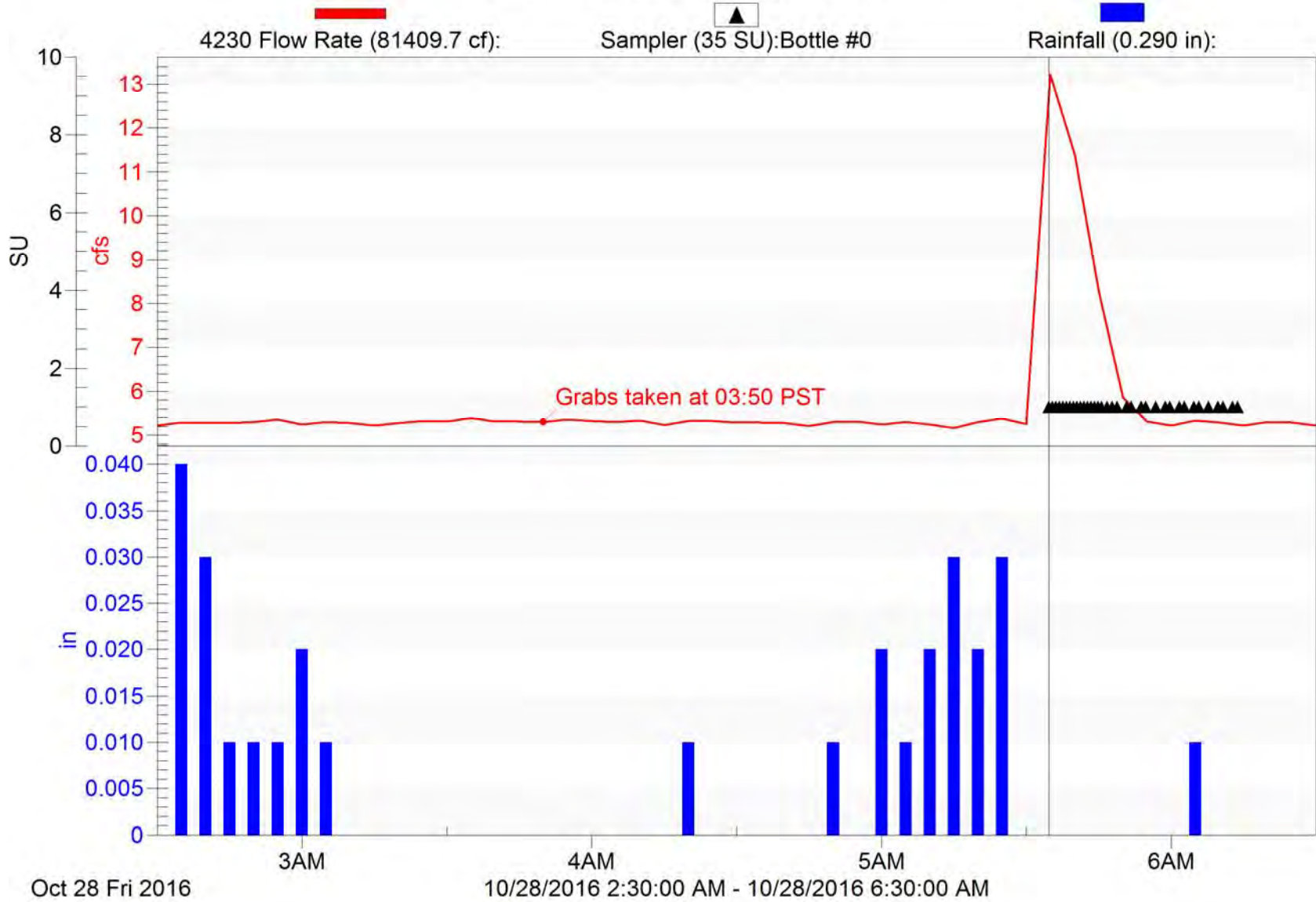
Moorpark-1

2016/17 NPDES Event #3 (Wet)



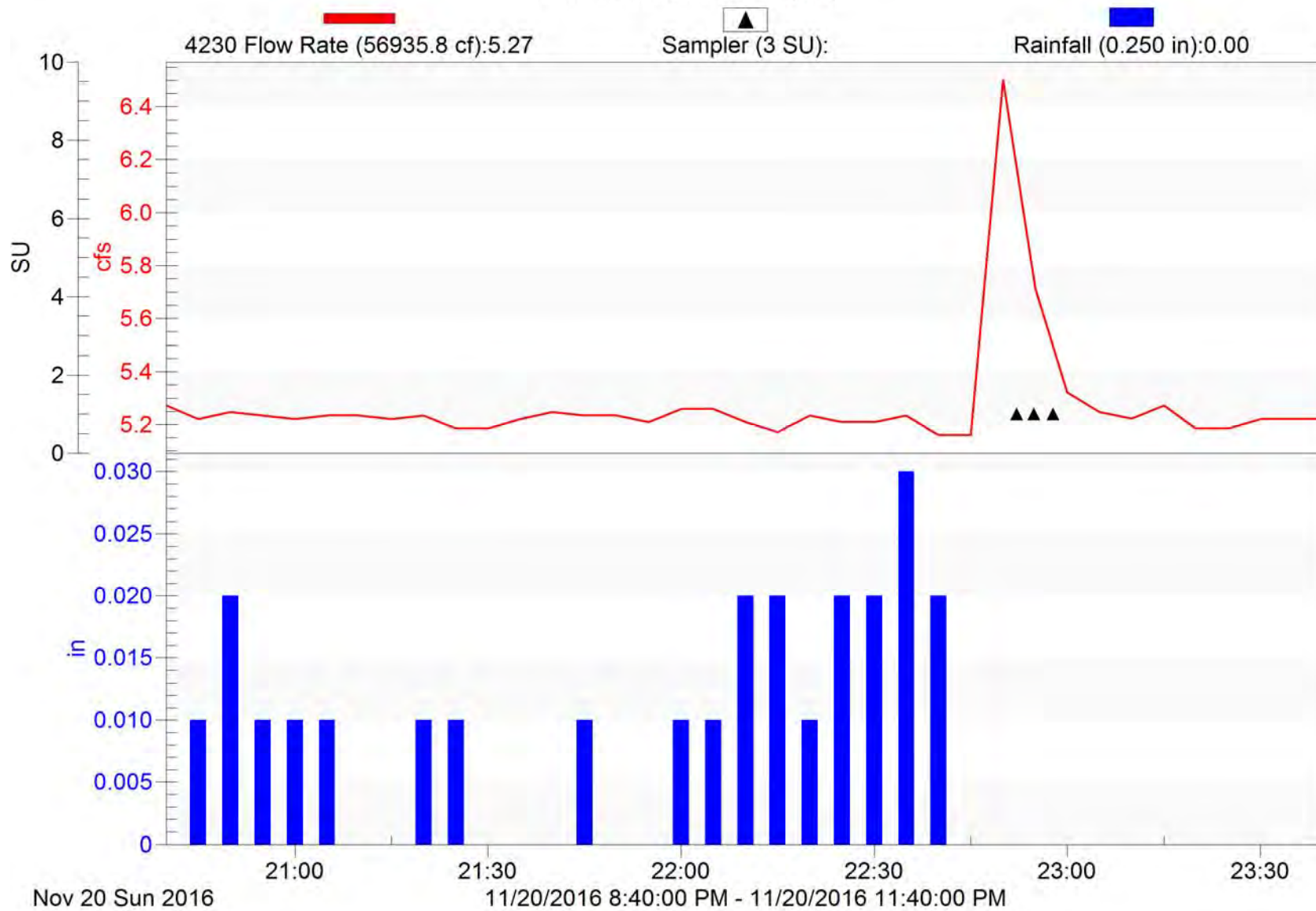
Ojai-1

2016/17 NPDES Event #1 (Wet) First Flush



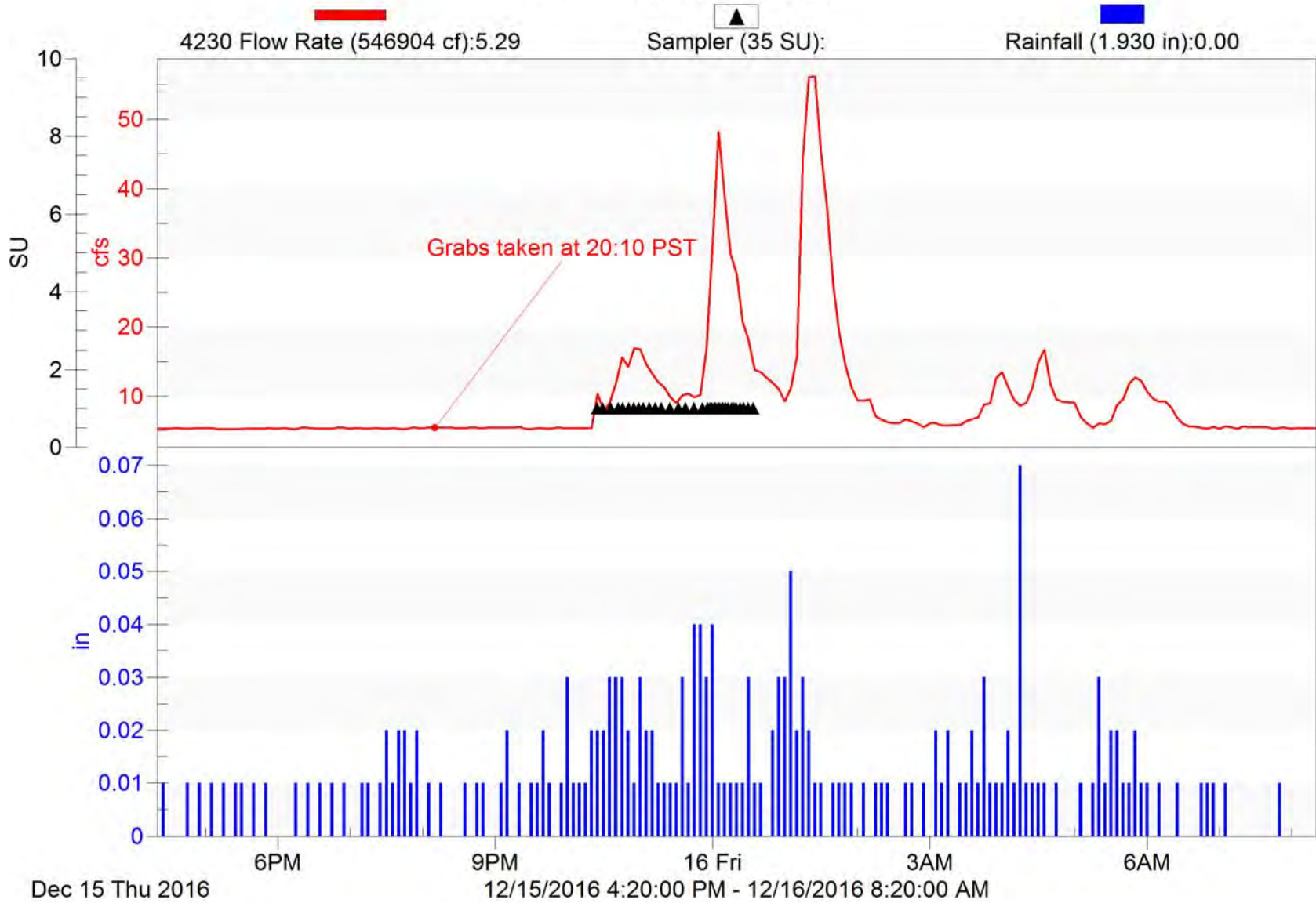
Ojai-1

2016/17 NPDES Event #2 (Wet)



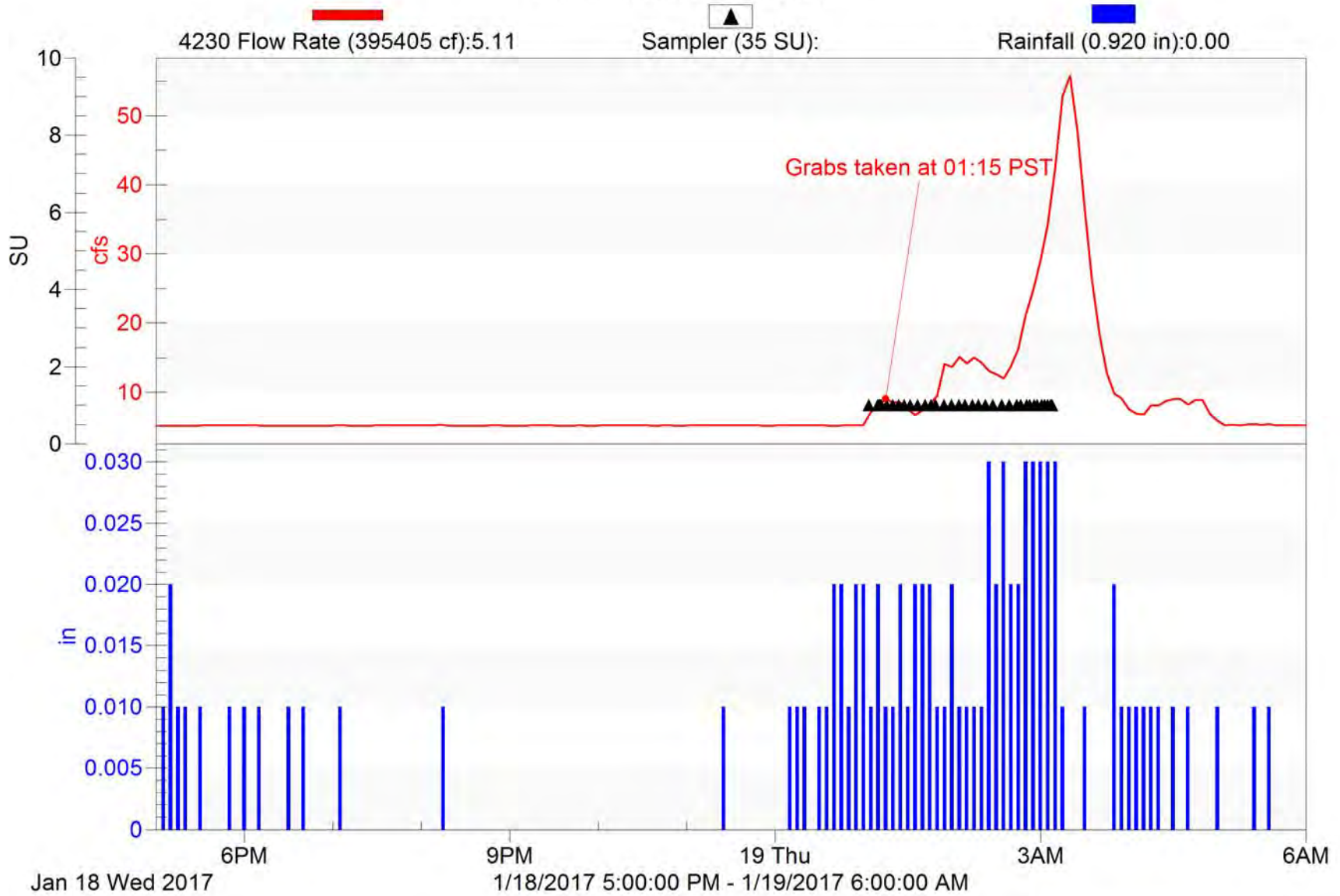
Ojai-1

2016/17 NPDES Event #3 (Wet)



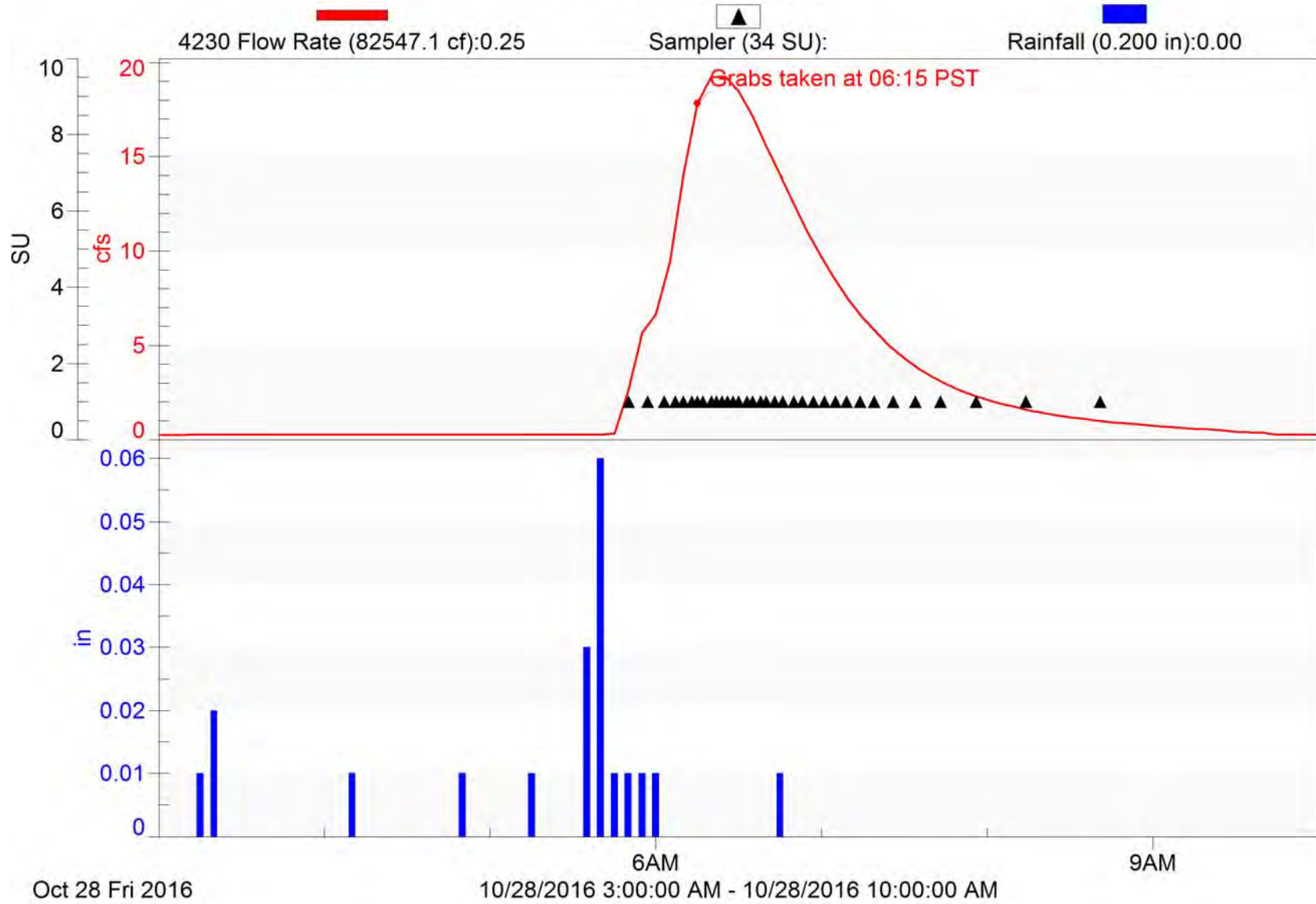
Ojai-1

2016/17 NPDES Event #5 (Wet)



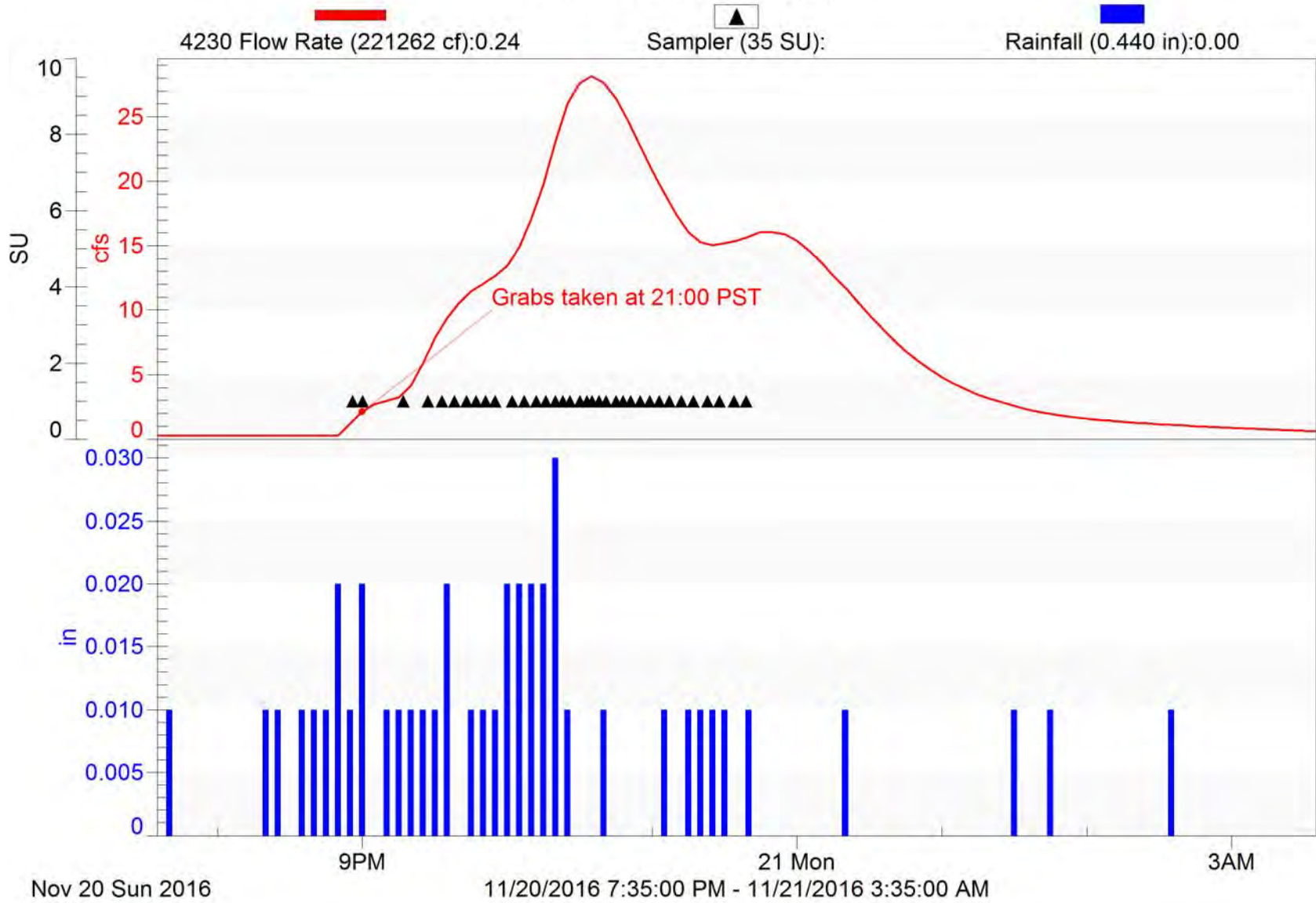
Oxnard-1

2016/17 NPDES Event #1 (Wet)



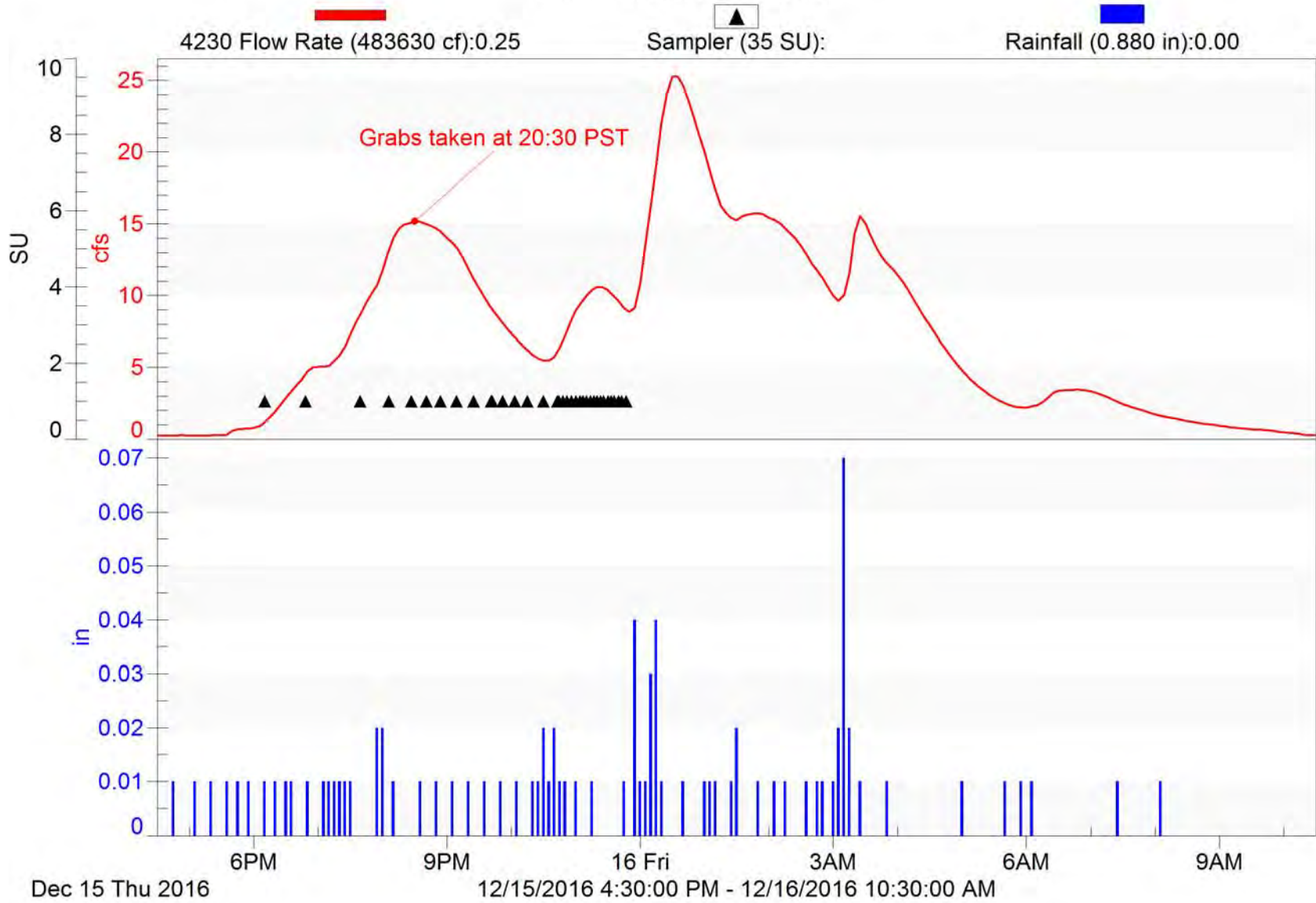
Oxnard-1

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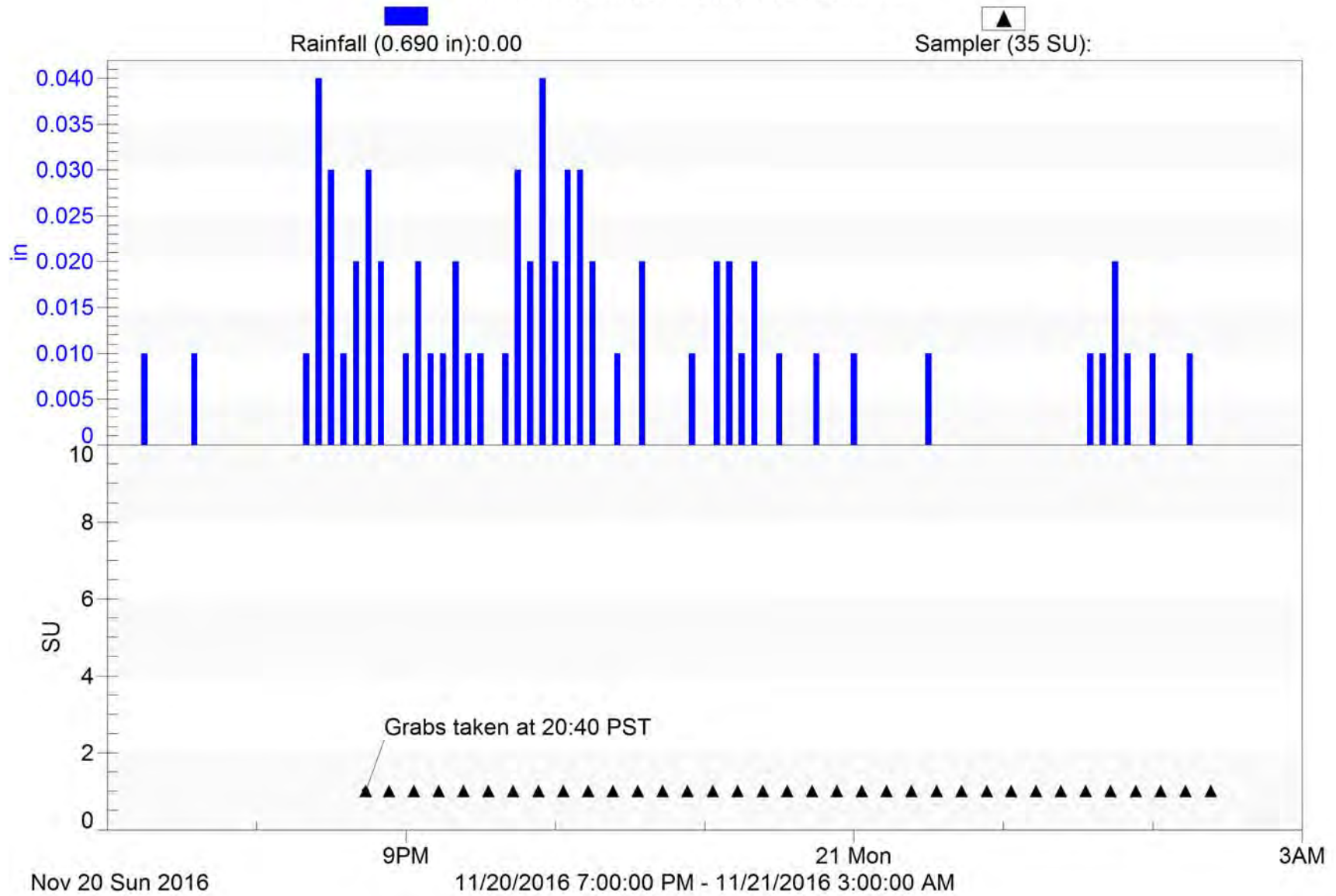
Oxnard-1

2016/17 NPDES Event #3 (Wet)



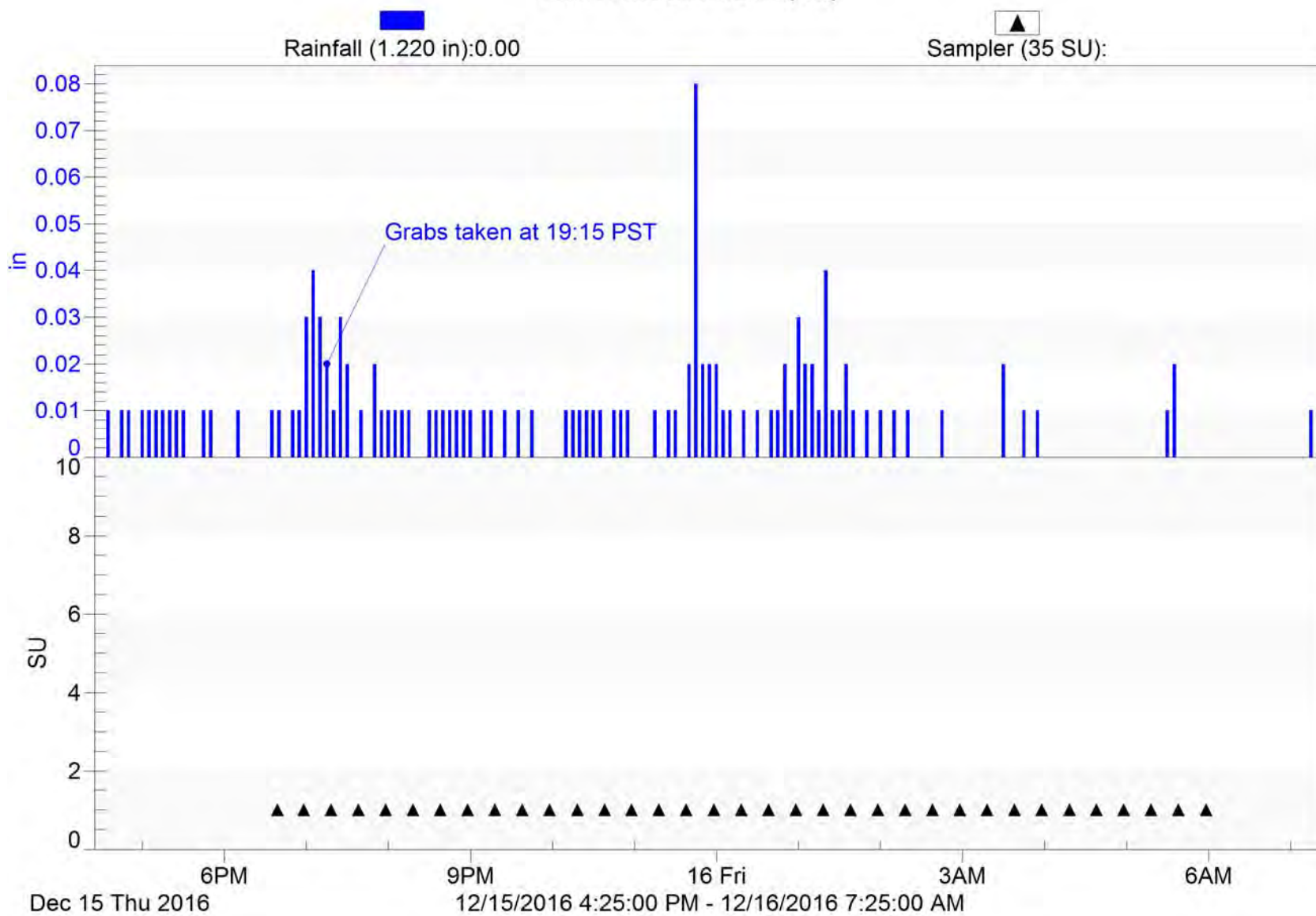
Port Hueneme-1

2016/17 NPDES Event #2 (Wet) First Flush Event



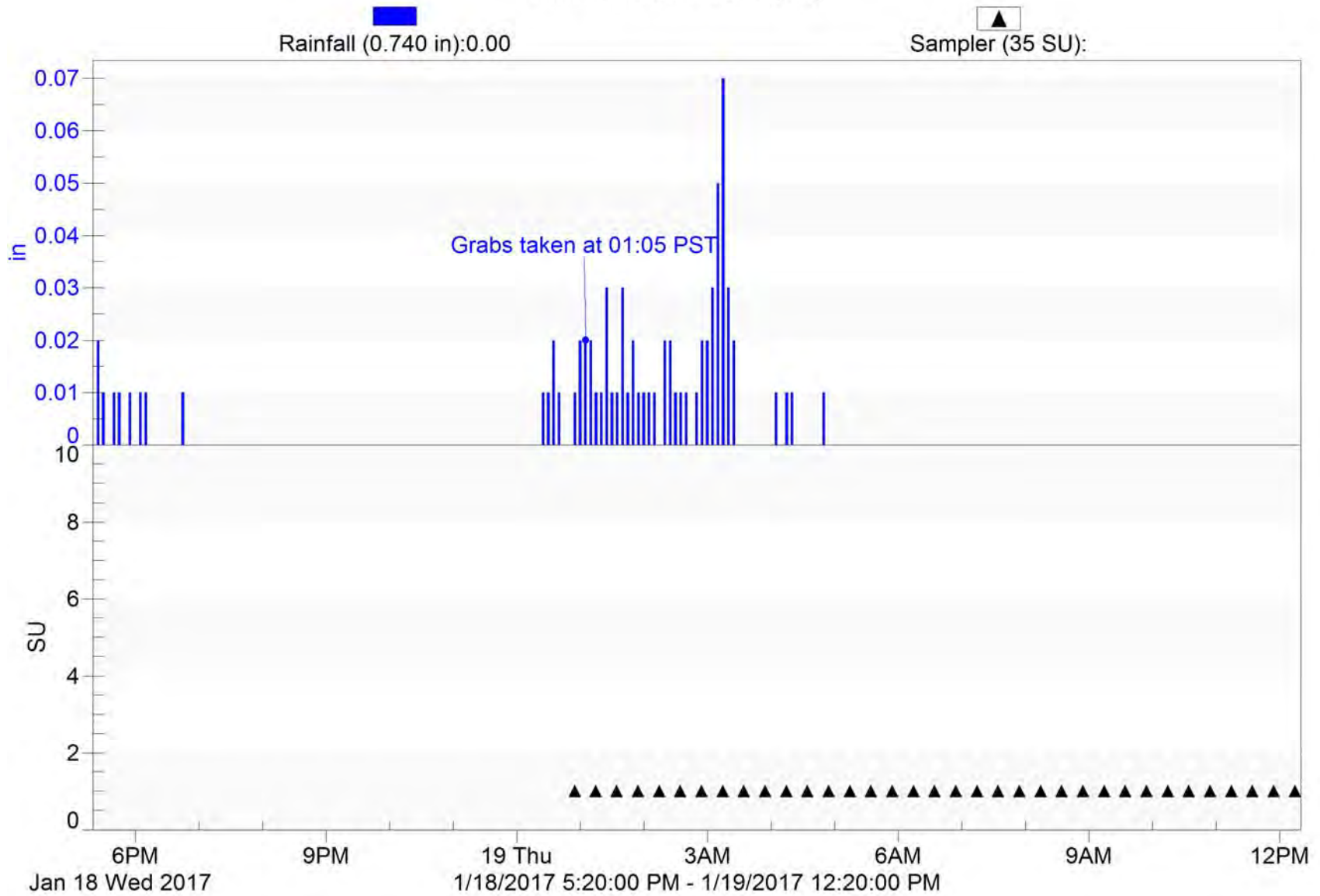
Port Hueneme-1

2016/17 NPDES Event #3 (Wet)



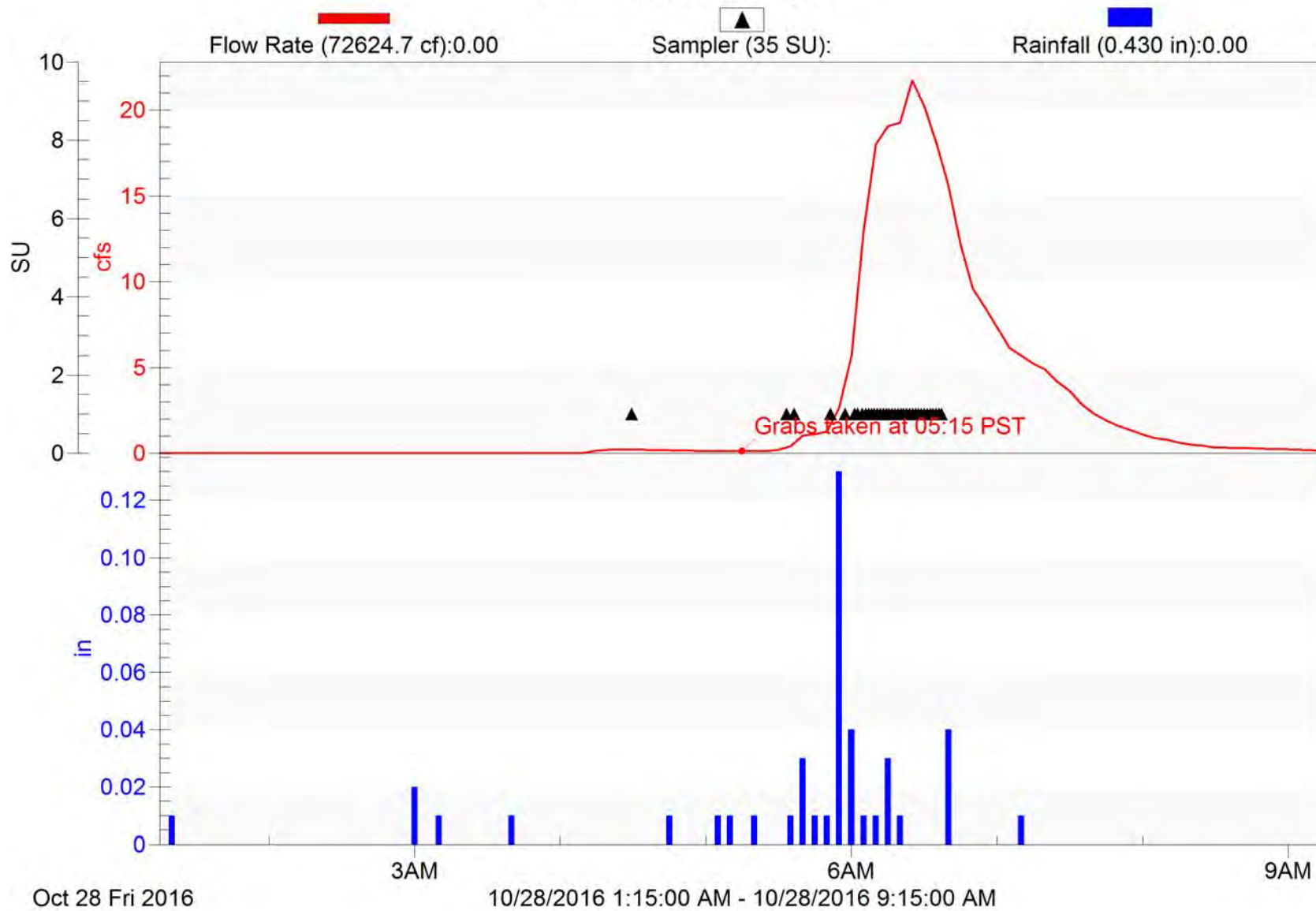
Port Hueneme-1

2016/17 NPDES Event #5 (Wet)



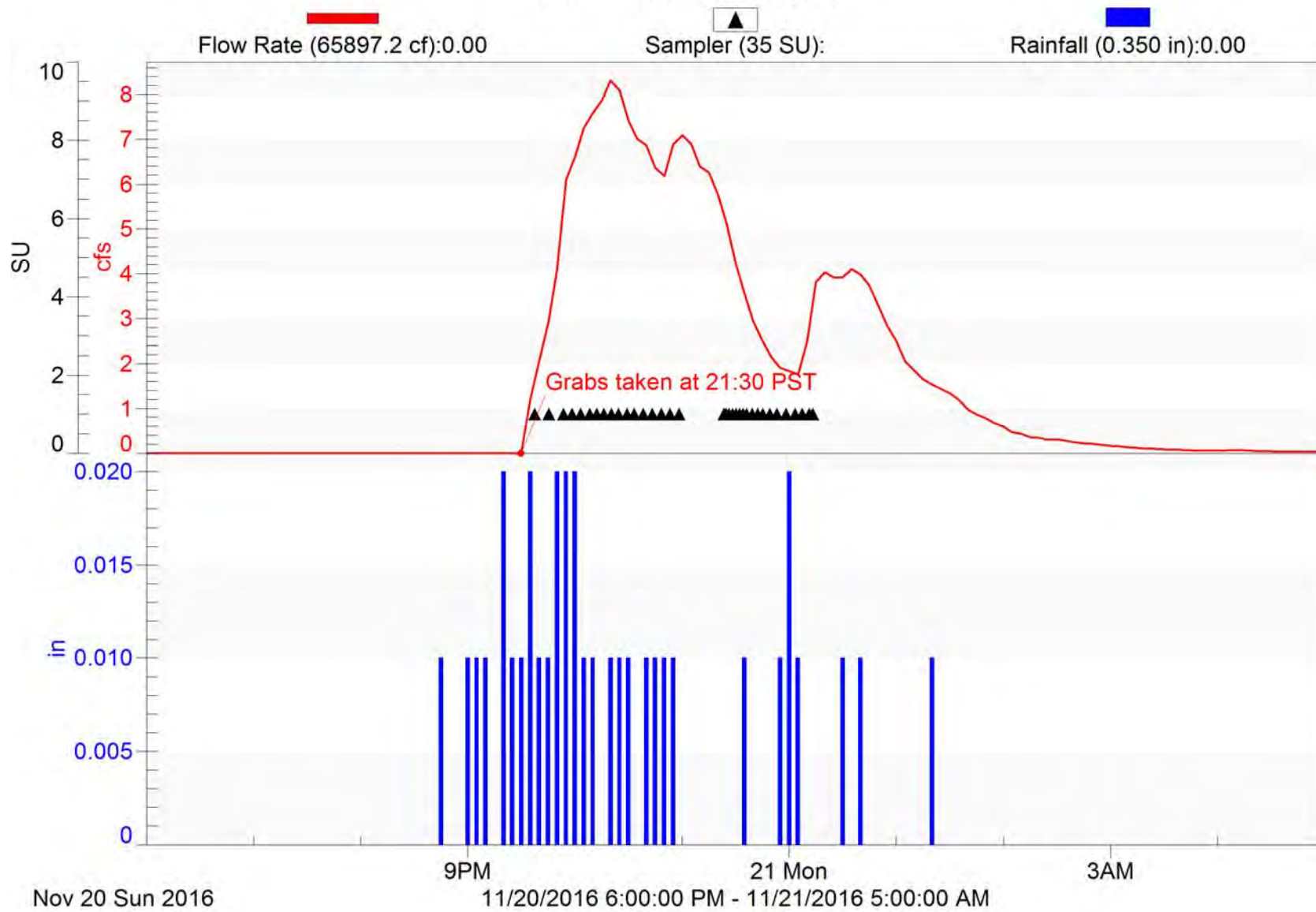
Santa Paula-1

2016/17 NPDES Event #1 (Wet)



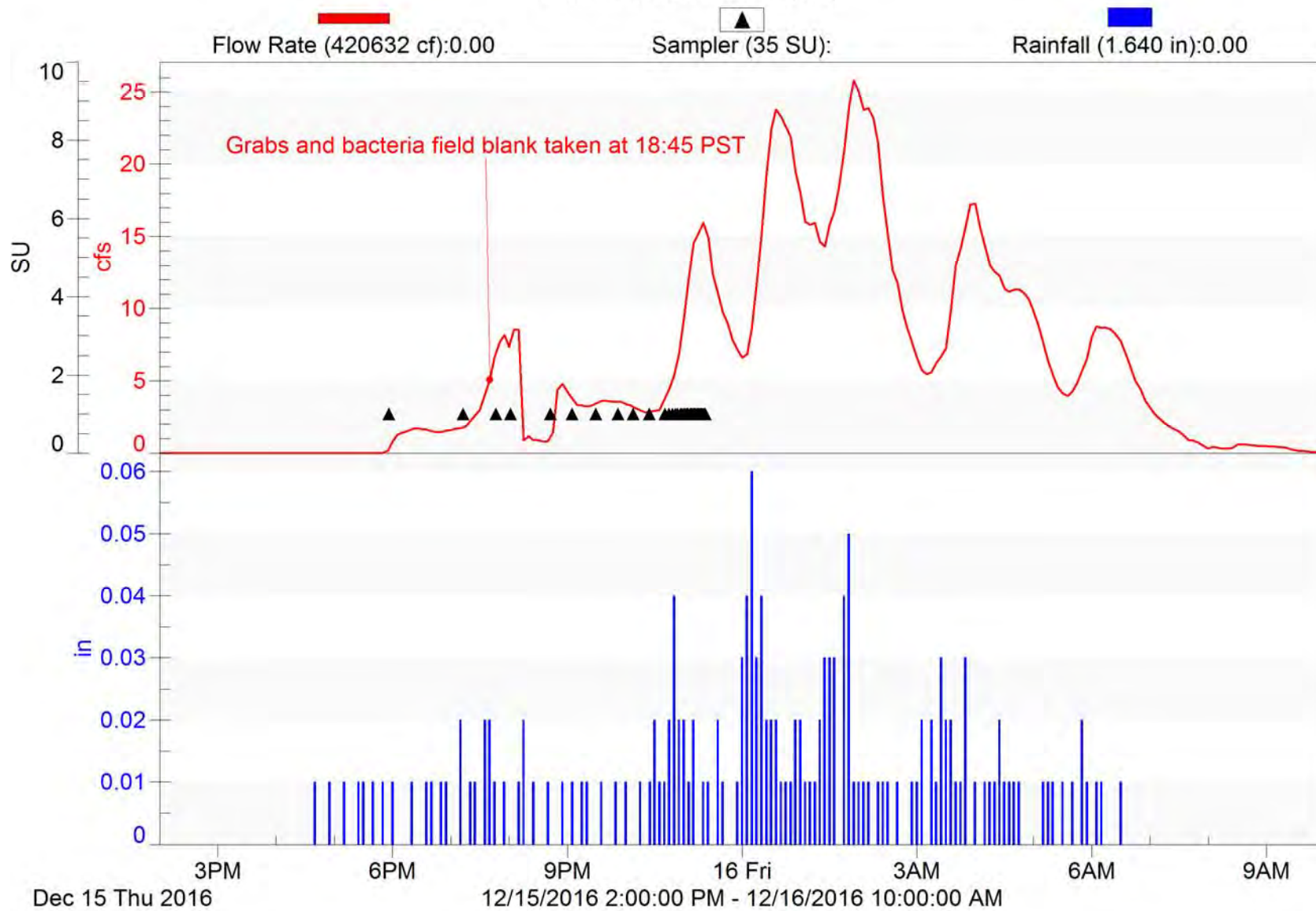
Santa Paula-1

2016/17 NPDES Event #2 (Wet)



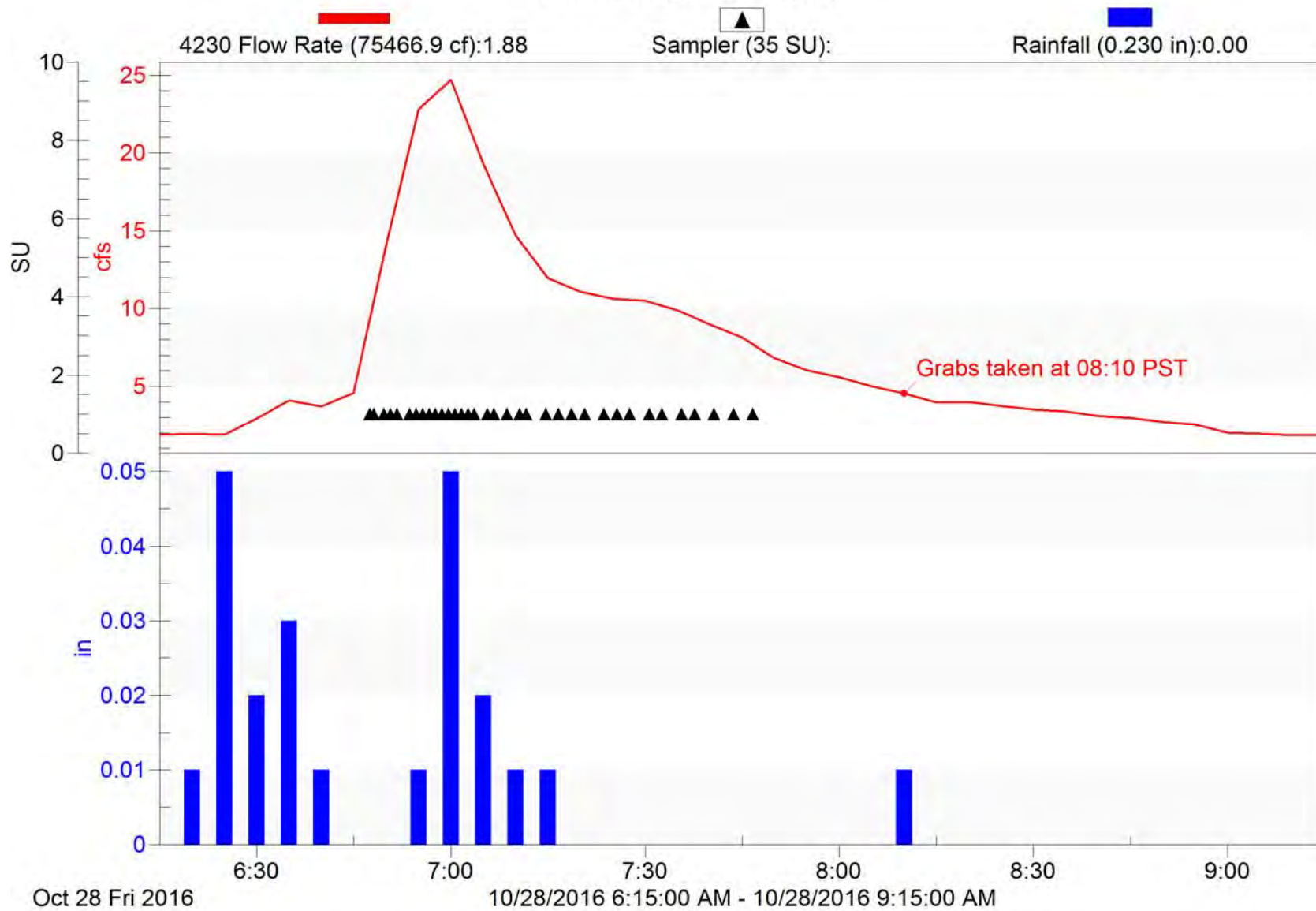
Santa Paula-1

2016/17 NPDES Event #3 (Wet)



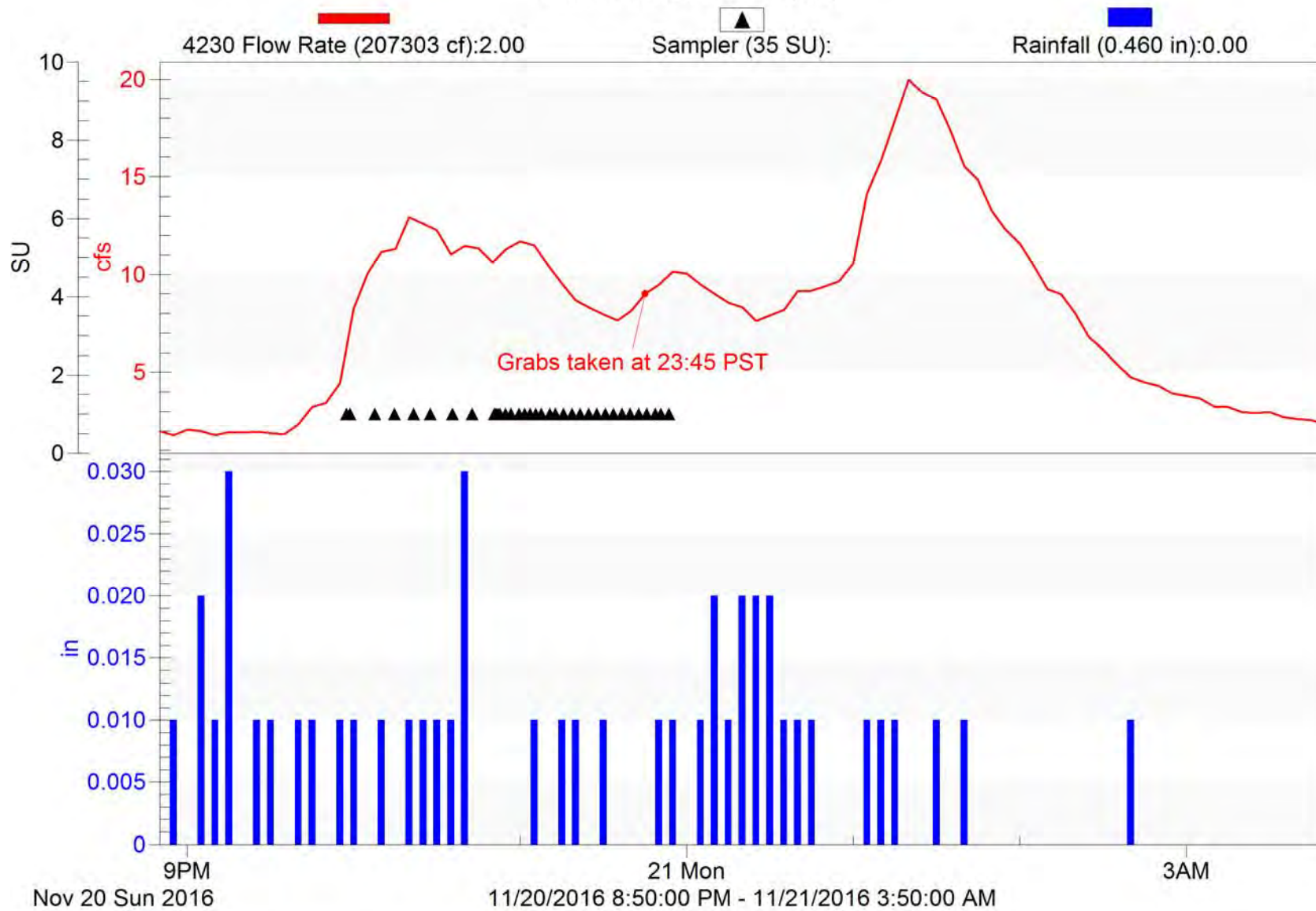
Simi Valley-1

2016/17 NPDES Event #1 (Wet)



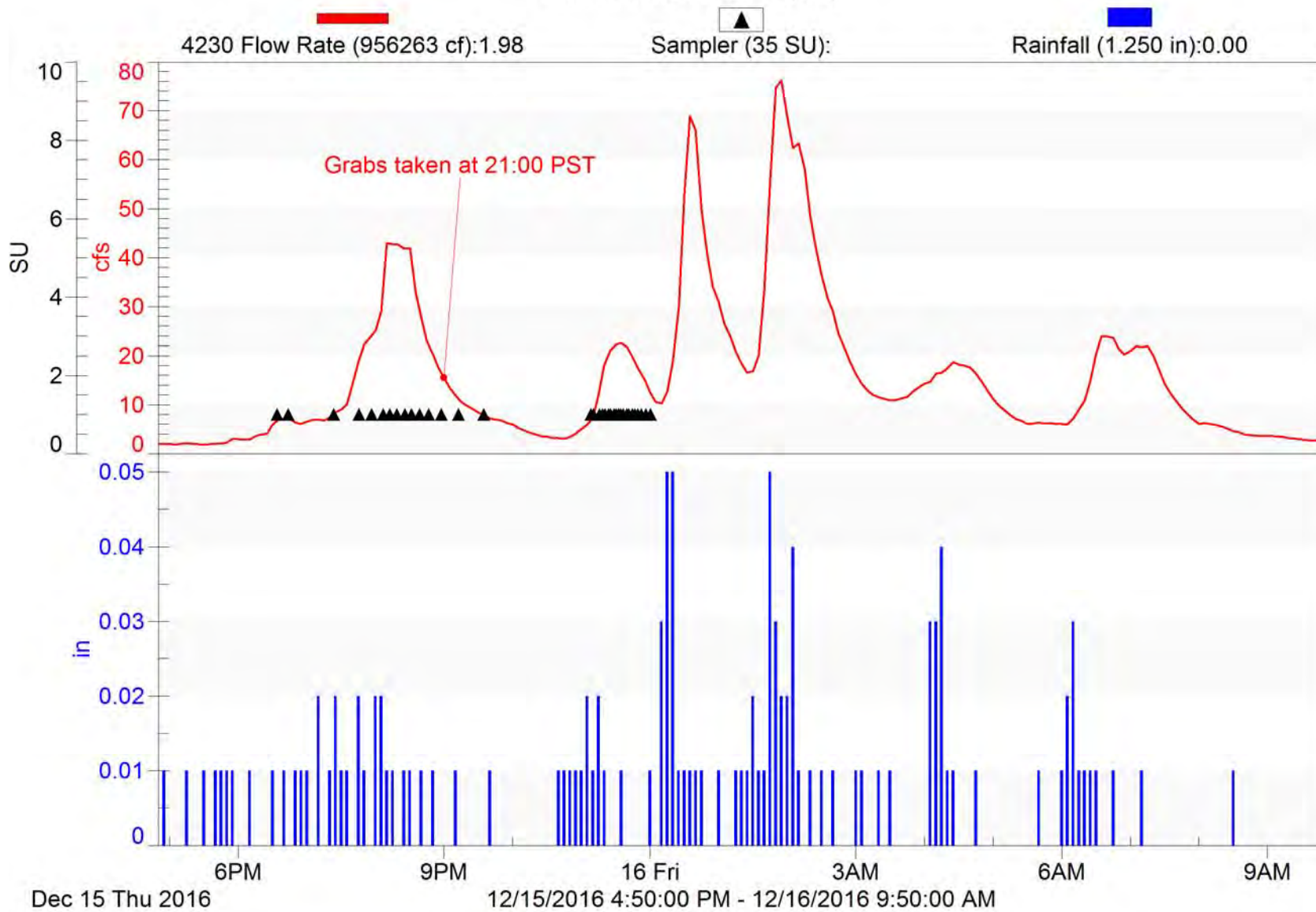
Simi Valley-1

2016/17 NPDES Event #2 (Wet)



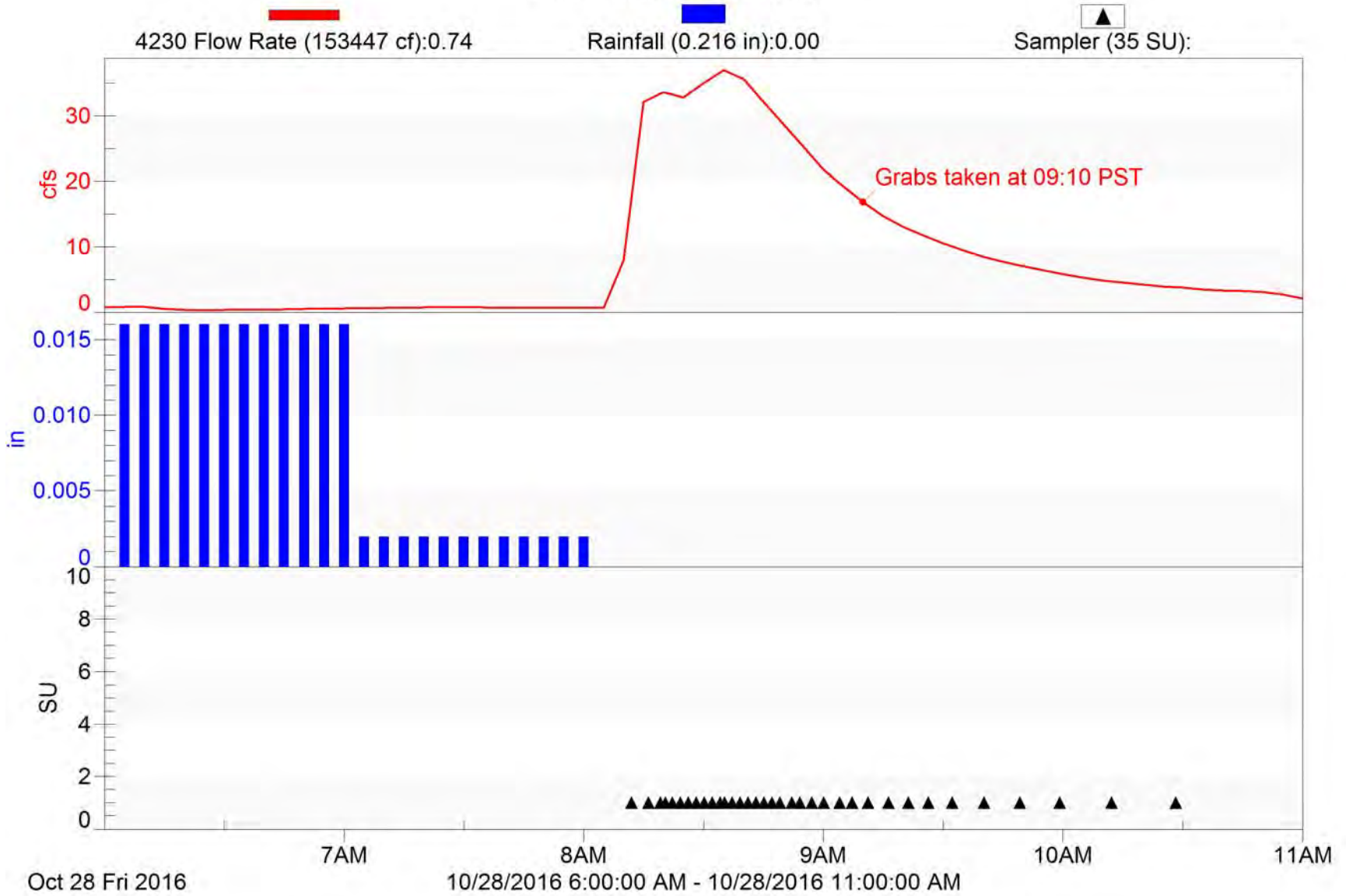
Simi Valley-1

2016/17 NPDES Event #3 (Wet)



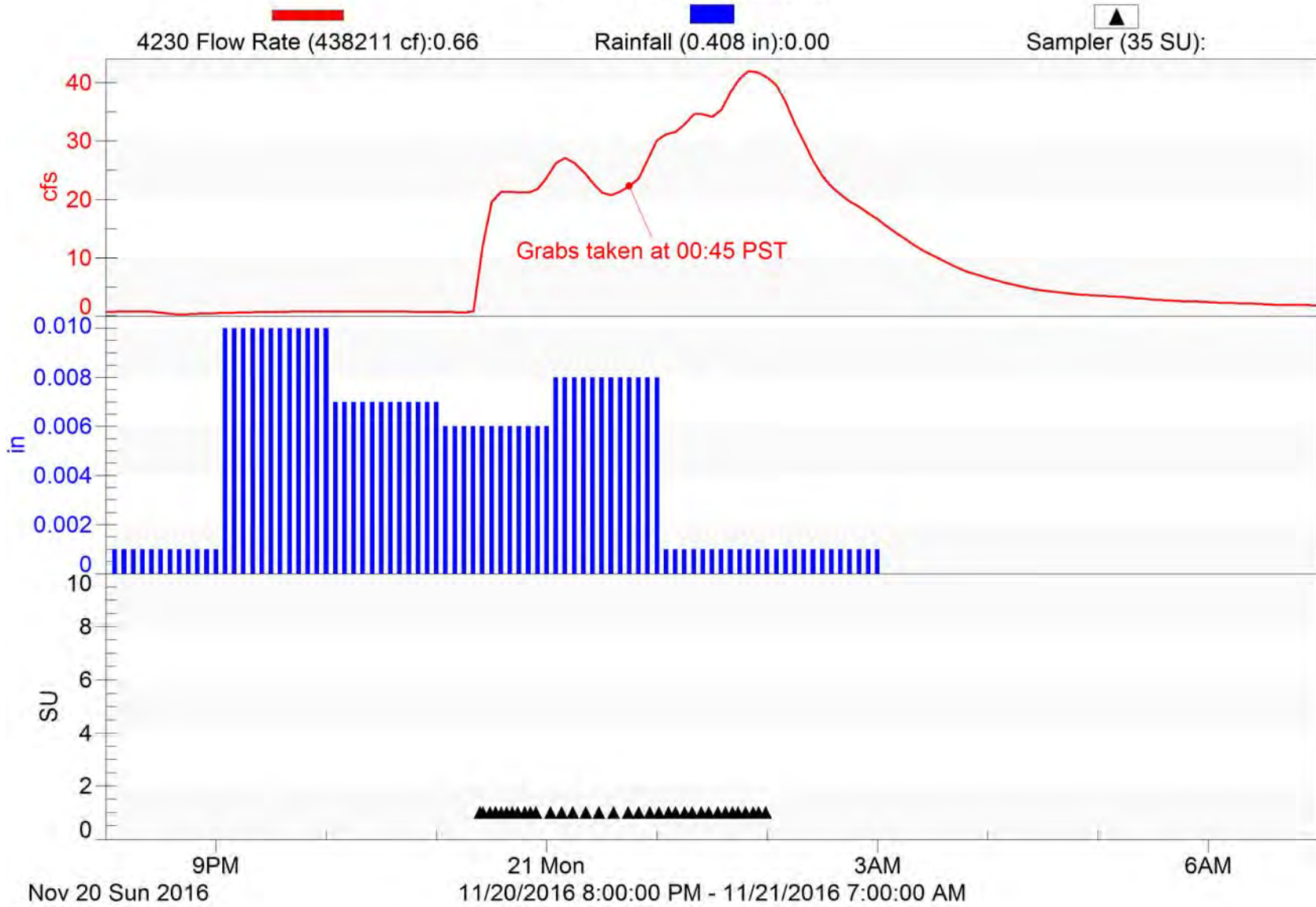
Thousand Oaks-1

2016/17 NPDES Event #1 (Wet)



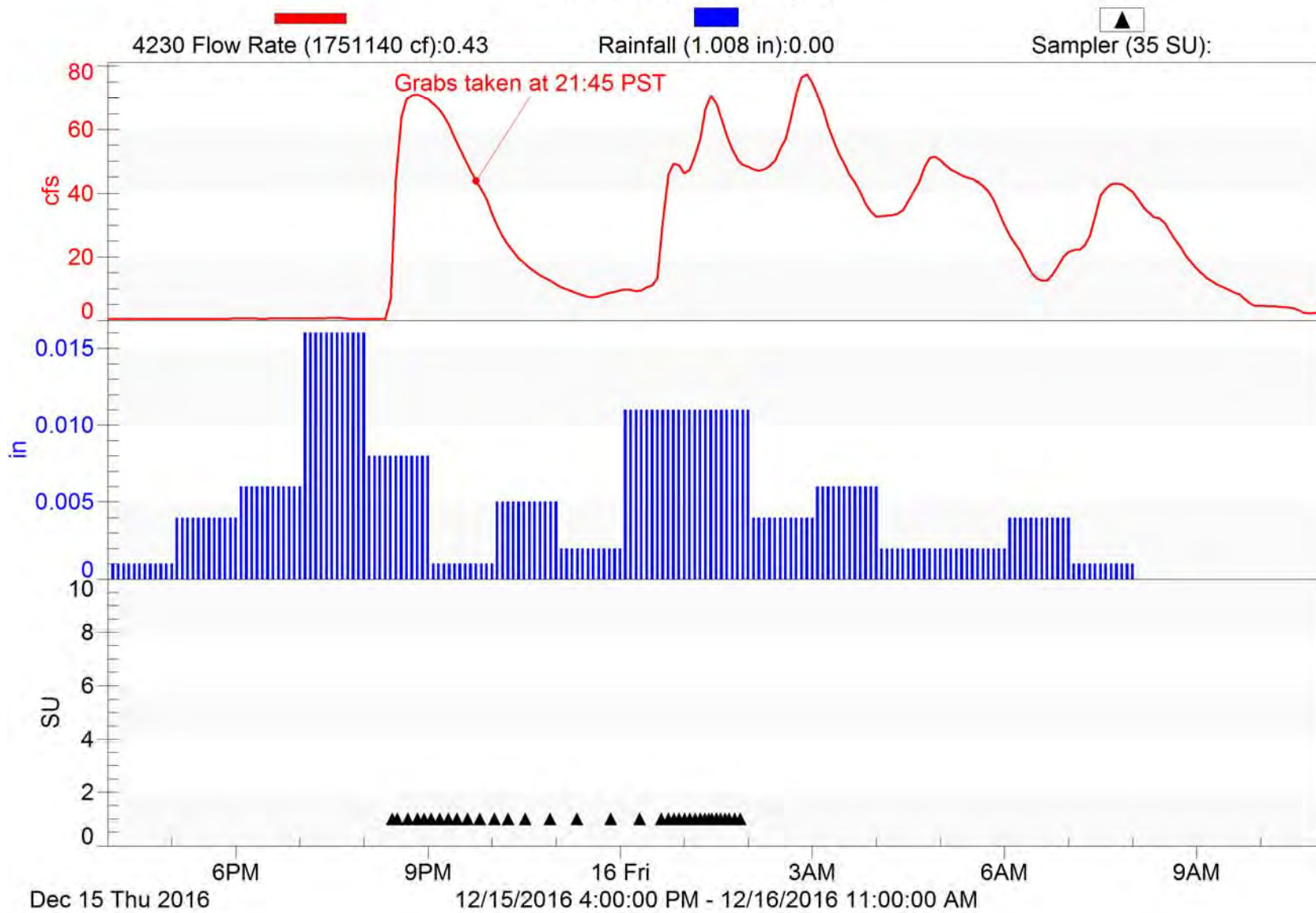
Thousand Oaks-1

2016/17 NPDES Event #2 (Wet)



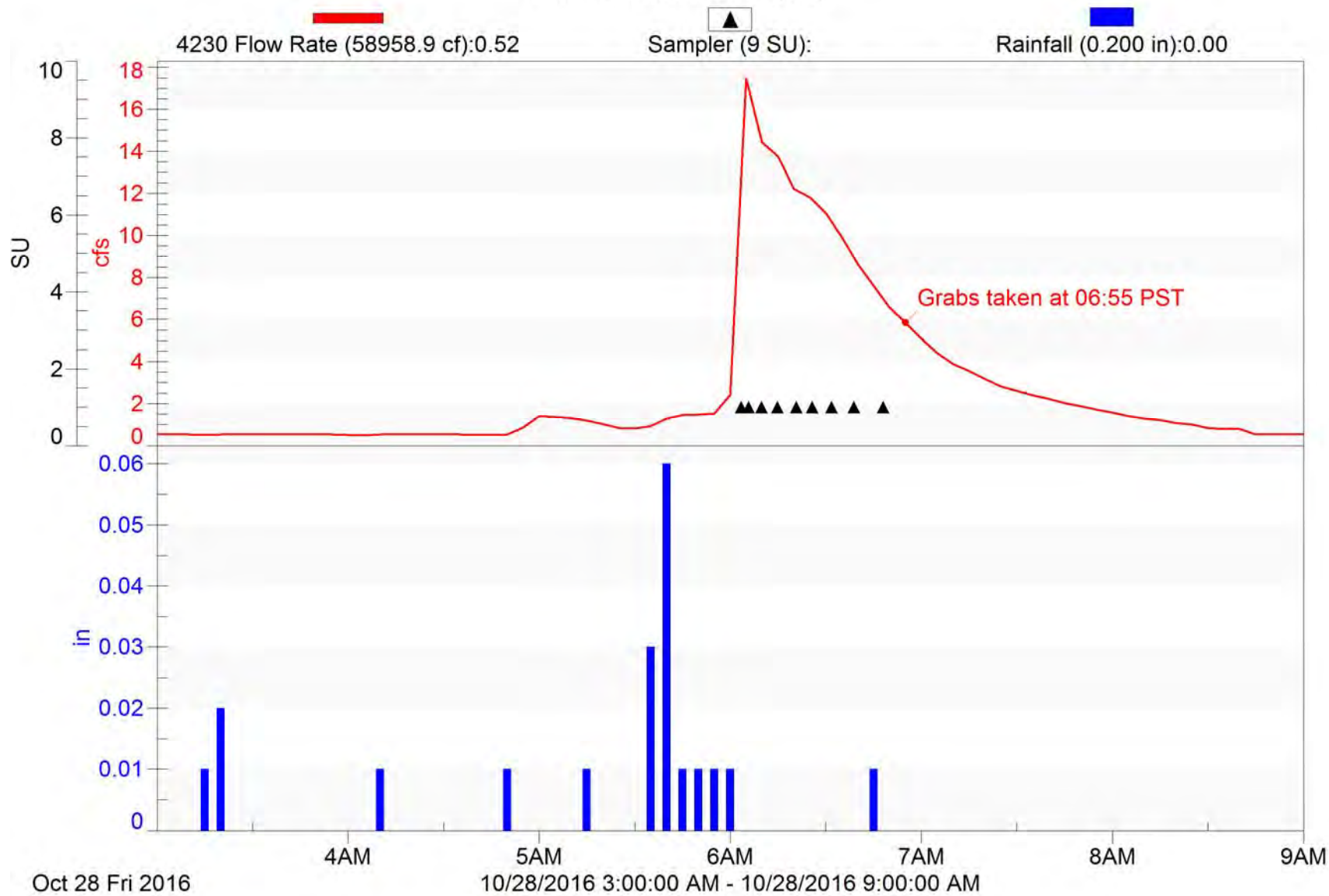
Thousand Oaks-1

2016/17 NPDES Event #3 (Wet)



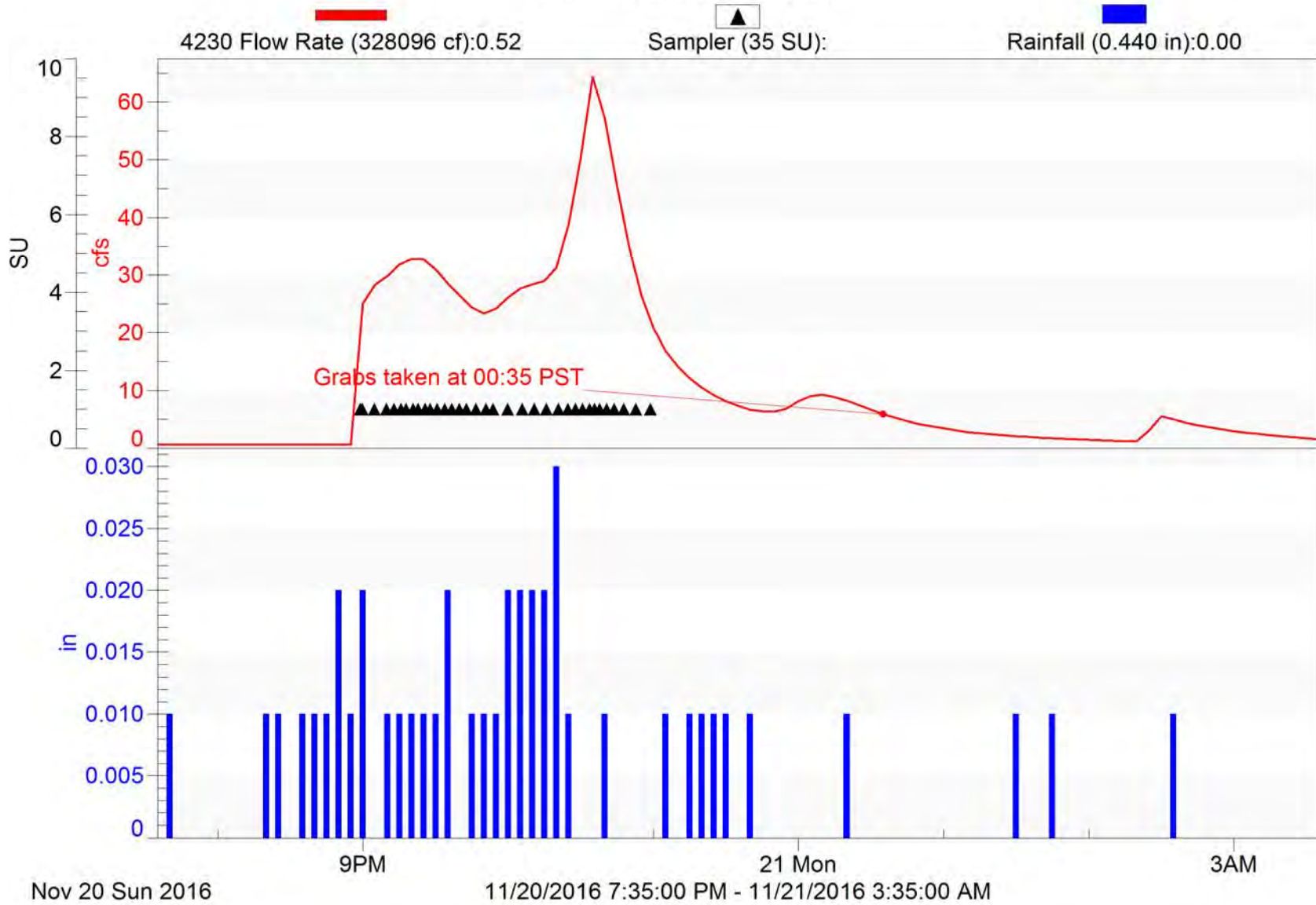
Ventura-1

2016/17 NPDES Event #1 (Wet)



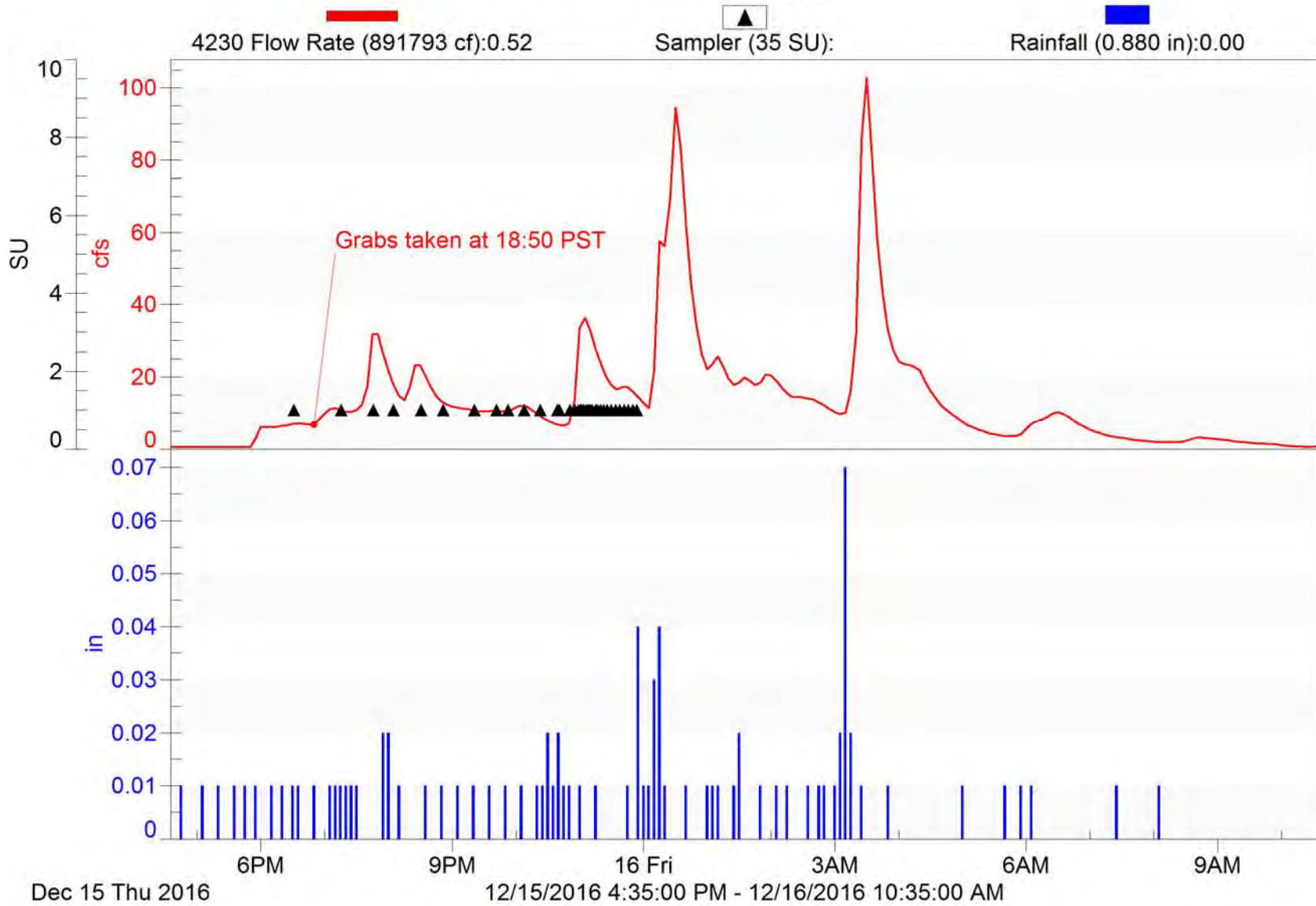
Ventura-1

2016/17 NPDES Event #2 (Wet)



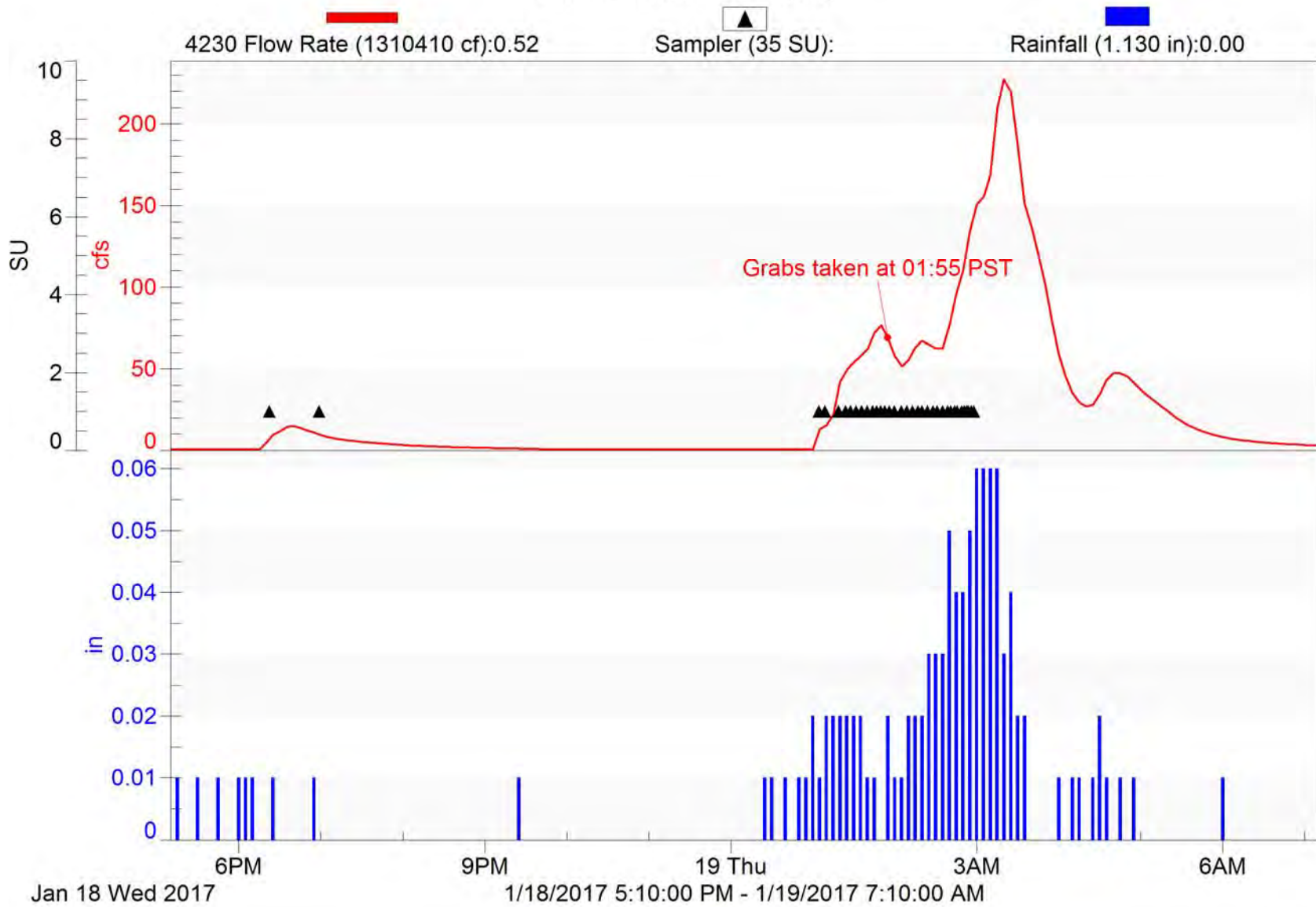
Ventura-1

2016/17 NPDES Event #3 (Wet)



Ventura-1

2016/17 NPDES Event #5 (Wet)



Appendix C. NRCS Curve Number Methodology Discussion



Ventura County Watershed Protection District

Planning & Regulatory Hydrology Section

MEMORANDUM

DATE: September 4, 2009 Updated August 12, 2010

TO: Tommy Liddell

VIA: Bruce Rindahl

FROM: Mark Bandurraga

SUBJECT: **NPDES Monitoring Site Yield Evaluation**

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

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

Curve Number Calculation Methodology

Land Use Data

Land Use data used in the study were provided by the Water Quality Section already clipped to the monitoring site boundaries and in a geodatabase. The land use data were extracted from the Assessor's Parcel database which is considered to be current as of the date of extraction (Feb 12, 2009). The various classifications in the file based on the assessor's 4-digit site use codes were sorted and assigned hydrologic land use names associated with the various classifications contained in the Curve Number (CN) Table from the Hydrology Manual (2006) as shown in Table 1. The categories in the land use file corresponded well with the land uses in the VCWPD CN Table with the following exceptions:

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

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

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

Soils Information

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

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

Combined Soils and Land Use Information and Weighted Curve Numbers

The soils and land use shapefiles were then unioned in GIS to obtain the combinations of soil type and land uses in the watersheds. The resulting table was imported into excel and sorted to group the various land uses. The land uses were then assigned a name associated with the data in the District CN Table. Based on the name and soil number, excel functions “match” and “offset” were used to obtain a CN from the CN Table. The weighted soil number and Curve Number for each watershed were calculated using the areas, soil numbers, and CN’s. The weighted soil types were checked against the data in the original watershed soil files and were found to be the same. The weighted Curve Numbers were linked to a summary worksheet to be used to calculate the yields by the Water Quality Section. This procedure was also applied to the 7 additional watersheds added to the study in August 2010. The results are shown in Table 2.

Table 2: Storm Yield Results- Weighted Average Curve Numbers

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

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

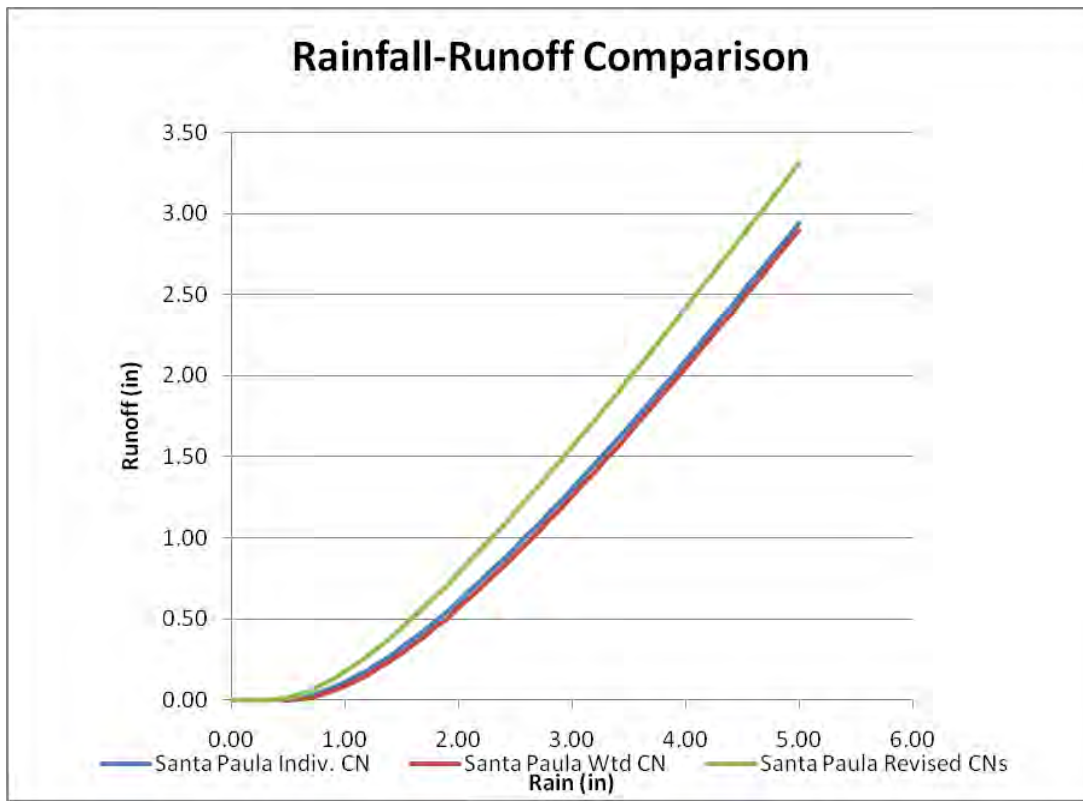
Table 3: Storm Yield Results- Weighted Average Curve Numbers with Updated CNs

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

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

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

Figure 1



Conclusions and Limitations

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

List of Files in Work Directory K:\PR\hydrology\Watersheds\NPDES\Monitoring_Sites

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

Ventura Watershed

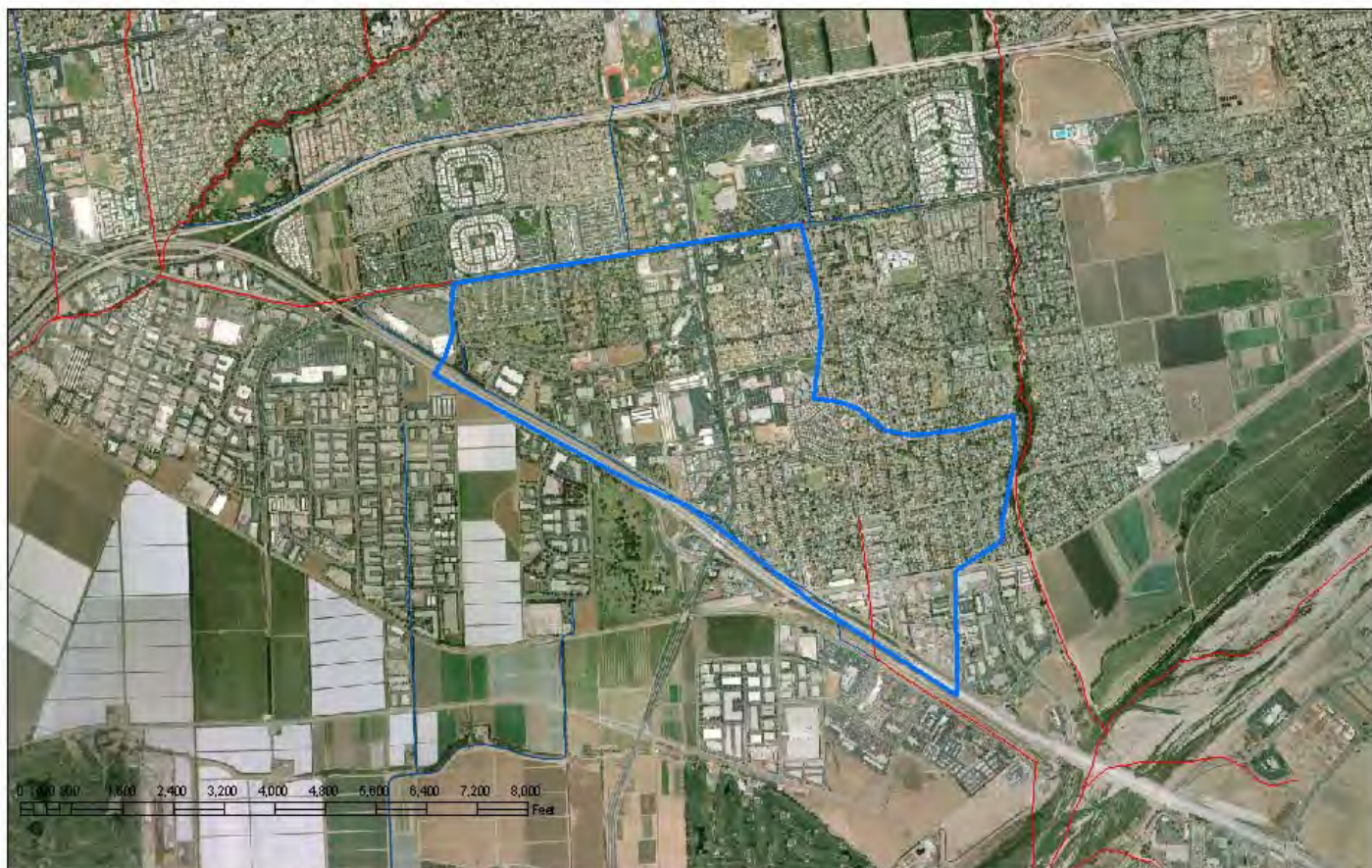


Figure 2

Meiners Oaks Happy Valley Watershed



Figure 3

Ojai Fox Watershed

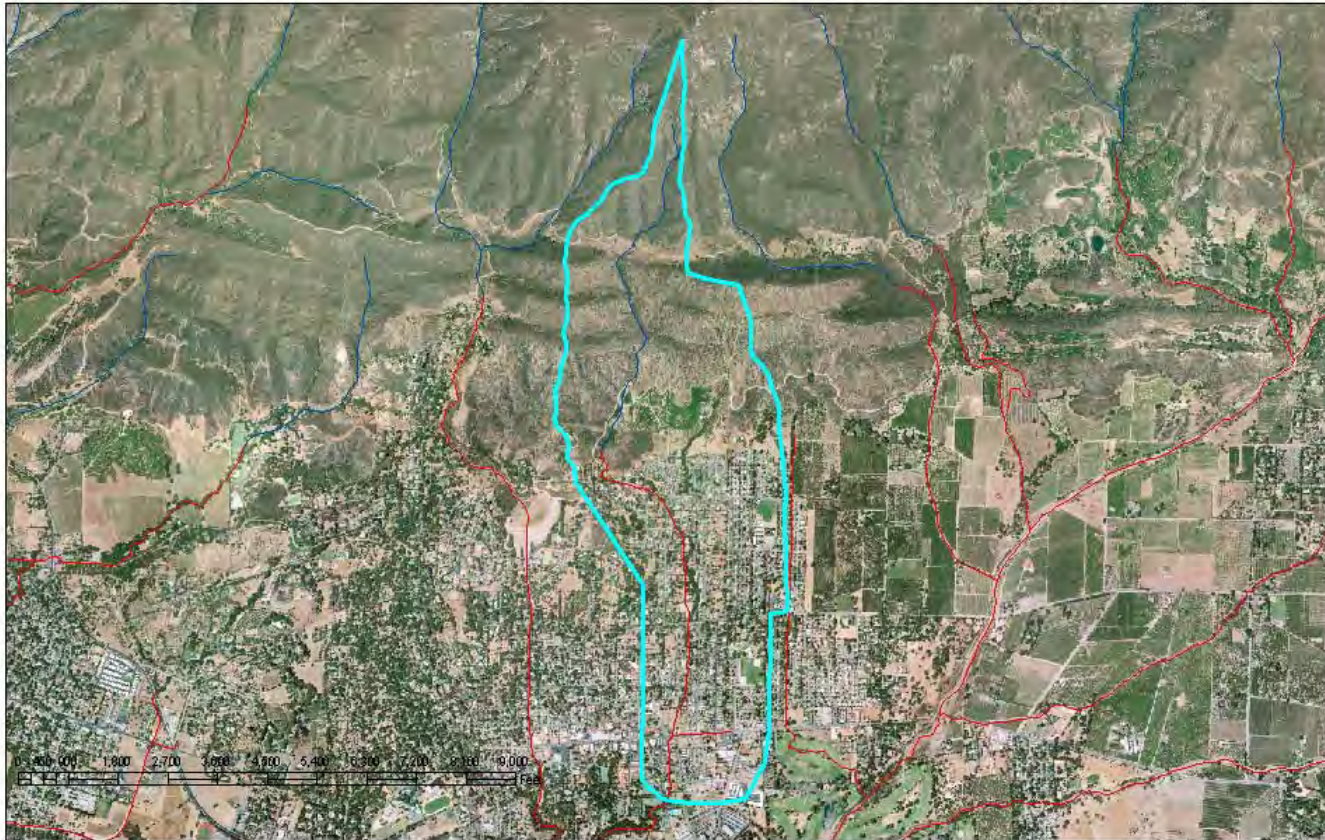


Figure 4

Camarillo Hills Drain Watershed

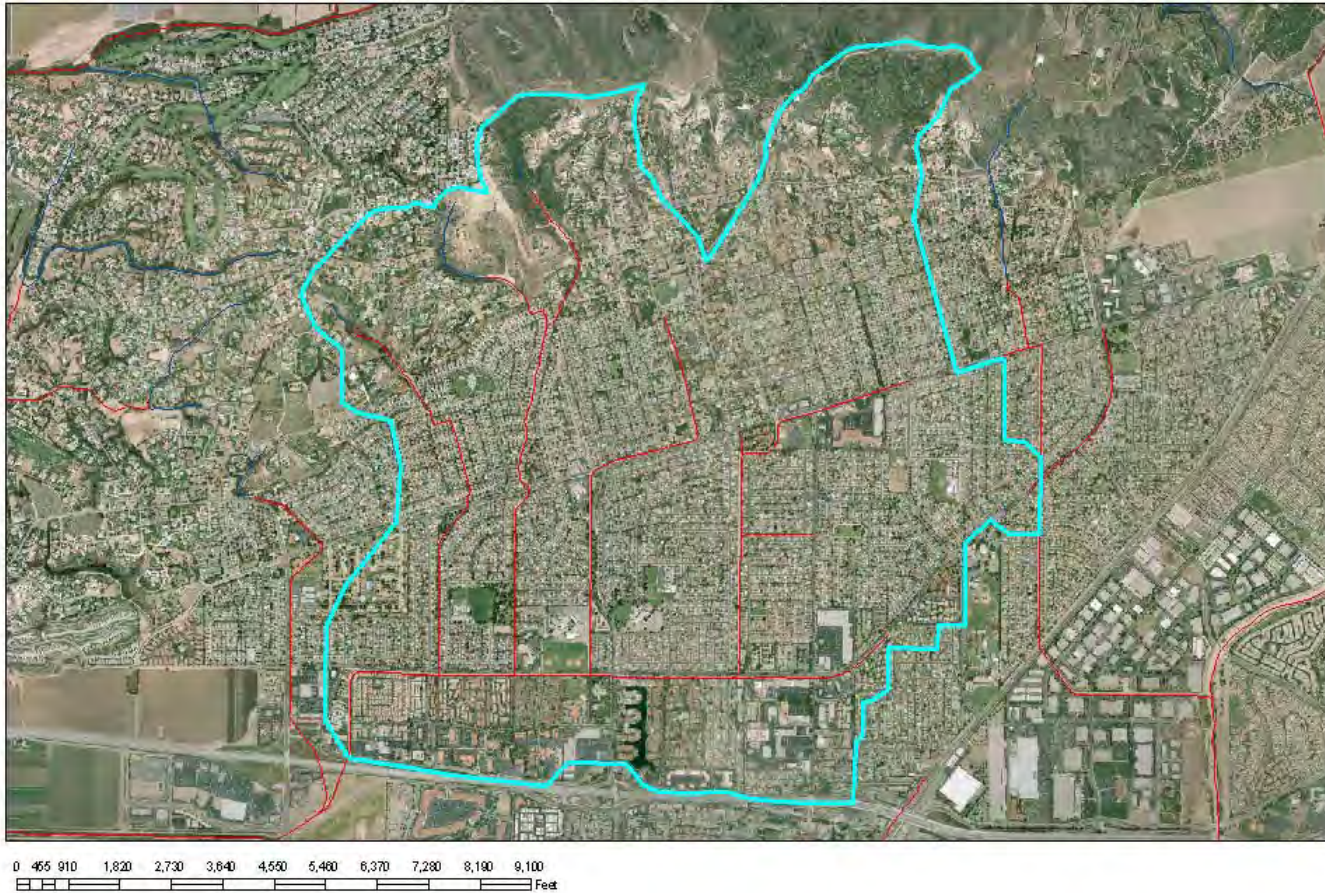


Figure 5

Simi Valley Watershed

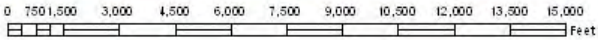
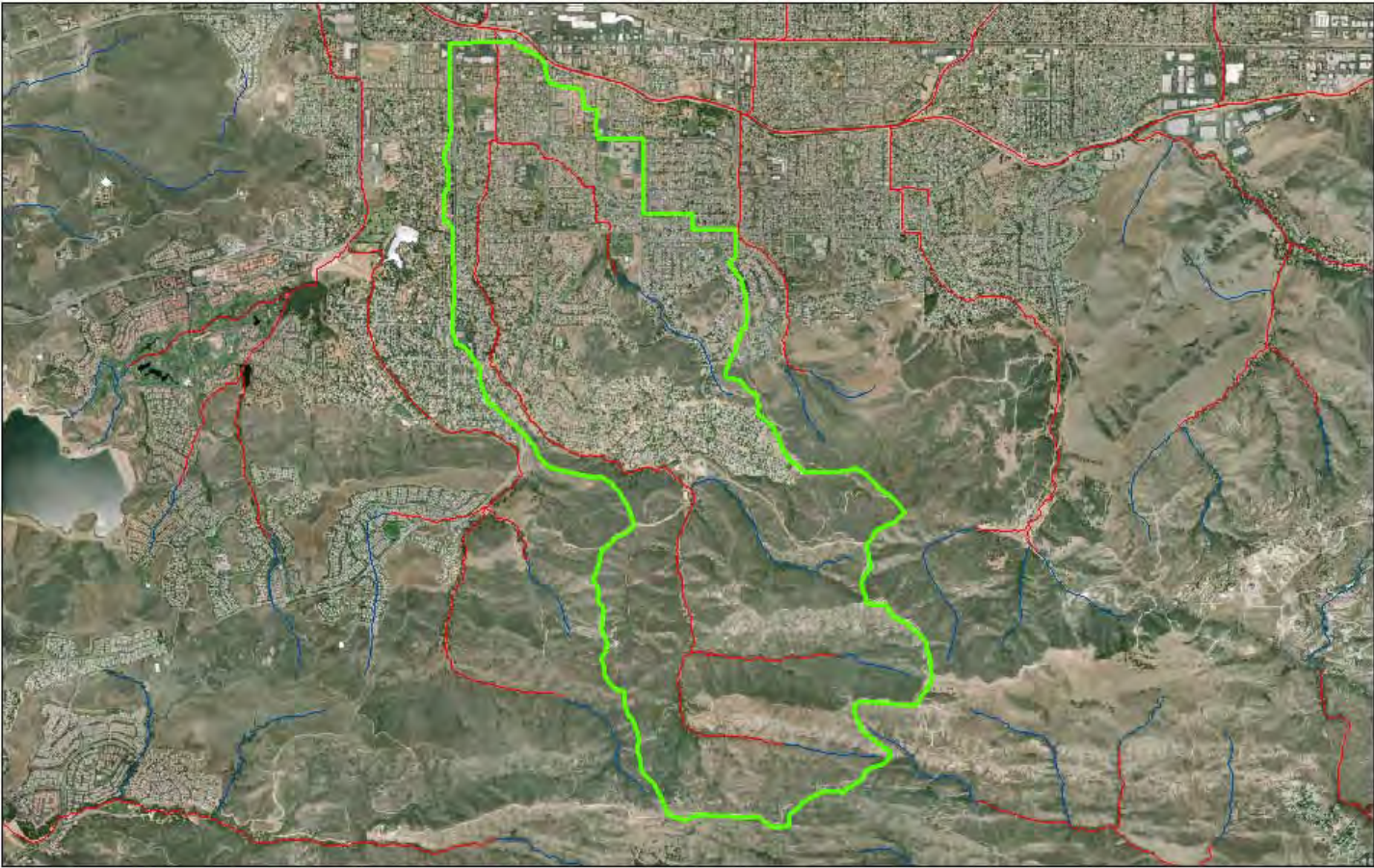


Figure 6

Oxnard Watershed



Figure 7

Moorpark Watershed

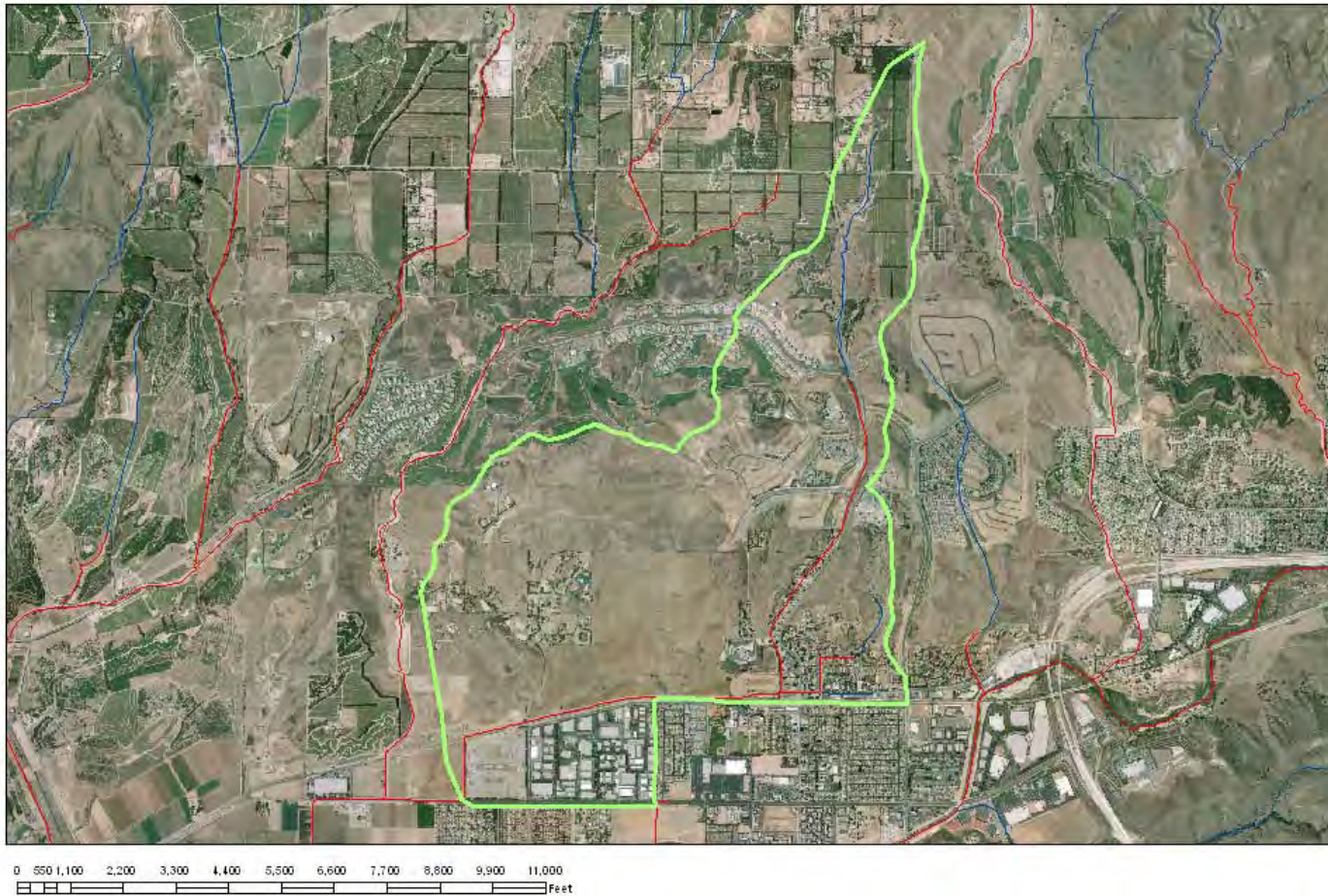


Figure 8

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/		Comp Duration		Grab Time	Toxicity Time	Notes
							Level (feet)	Flowmeter Flow (cfs)	Outside Staff (ft)					Estimated Vol (L)	(nearest half hrs)	Comp Time				
ME-CC	1	1	KH	10/26/2016	1040	PDT	1.055	5	~1.06	0	4L Distilled	266,044	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.						
ME-CC	1	2	TL,DW	10/28/2016	0853	PDT	1.119	8	1.1	5			Program disabled				0900	0900		
ME-CC	1	3	SG	10/29/2016	0932	PDT	1.207	21	1.2	0	2L Distilled	344,528	Sample 8 after 1 pulse	30% full		1000			Limited volume!	
ME-VR2	1	1	WBC	10/26/2016	1240	PDT	1.806	1		3	4L Distilled	52,899	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.						
ME-VR2	1	2	LM,SG	10/28/2016	0710	PDT	1.852	1	1.85	1			Program disabled	Empty			720	720		
ME-VR2	1	3	SG	10/29/2016	0738	PDT	1.843	1			2L Distilled	389,814	Program done.	18.5L		0742				
ME-SCR	1	1	DRY			PDT					2L Distilled		Time: 10 min/500mlx35, program disabled	Bottle in, lid off.						
ME-SCR	1	2	DRY			PDT							Sample 26 in 1 min. Stopped program	Almost full						
ME-SCR	1	3	DRY			PDT					2L Distilled		Stopped	18L						
MO-OJA	1	1	WBC	10/26/2016	1045	PDT	0.104	5	-	0	4L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.						
MO-OJA	1	2	LM,SG	10/28/2016	0438	PDT	0.101	5	0	2			Program disabled	Empty			0450	0450		
MO-OJA	1	3	LM,SG	10/28/2016	0845	PDT	0.101	5	0	0	2L Distilled	105,433	Program done.	85% full		0845				
MO-MEI	1	1	WBC	10/26/2016	1200	PDT	0.082	1	0	on	4L Distilled	20,462	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.					Chalked barrel	
MO-MEI	1	2	LM,SG	10/28/2016	0547	PDT	0.08	1	0	2			Program disabled	3/4 full			0555	0555		
MO-MEI	1	3	LM,SG	10/28/2016	0914	PDT	0.081	1		0	2L Distilled	104,478	Program done.	80% full		0915				
MO-FIL	1	1	WBC	10/26/2016	1350	PDT	0.259	-		4	2L Distilled	-	Time: 5 min/500mlx35, program disabled	Bottle in, lid off.						
MO-FIL	1	2	WBC,SC	10/28/2016	0700	PDT	0.998	-		2			Sample 5 in 20 sec.	2L			0700	0700		
MO-FIL	1	3	LM,SG	10/28/2016	1316	PDT	0.364	-		1.5	2L Distilled	194,642	Program done.	85% full		1318				
MO-OXN	1	1	KH	10/27/2016	1255	PDT	0.109	0.2	No flow	0	4L Distilled	28,115	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.						
MO-OXN	1	2	TL,DW	10/28/2016	0703	PDT	0.475	5.9	0.5	4			Sample 2 after 1 pulse	0.5			0715	0715		
MO-OXN	1	3	TL,DW	10/28/2016	0917	PDT	0.157	0.6		4	2L Distilled	154,973	Program disabled	17.5L		1020				
MO-CAM	1	1	KH	10/26/2016	1020	PDT	0.033	10	<<0.033	on	4L Distilled	26,897	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.						
MO-CAM	1	2	TL,DW	10/28/2016	0936	PDT	0.034	10			2L Distilled		Insufficient rain for site. Dumped sample.	75% full but dumped					Non-qualifying event	
MO-SIM	1	1	KH	10/26/2016	1215	PDT	0.137	2	<channel toe	4	4L Distilled	63,500	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.					6712 time in PDT so updated back to PST	
MO-SIM	1	2	WBC,SC	10/28/2016	0902	PDT	0.216	5		0	2L Distilled		Program done.	16L		0925	0910	0910		
MO-MPK	1	1	KH	10/26/2016	1250	PDT	0.077	0.2	<<channel toe	4	4L Distilled	80,388	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.					6712 time in PDT so updated back to PST	
MO-MPK	1	2	WBC,SC	10/28/2016	0804	PDT	0.214	3.8		2	2L Distilled		Program done.	NR		0830	0815	0815		
MO-MPK	1	3				PDT					2L Distilled		Program done.	18L						
MO-THO	1	1	KH	10/26/2016	1130	PDT	2.027	0		3	4L Distilled	28,854	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.						
MO-THO	1	2	WBC,SC	10/28/2016	0953	PDT	2.882	28		4			Sample 20 after 1 pulse	9L			1010	1010		
MO-THO	1	3	SG	10/29/2016	0849	PDT	1.986	0		0	2L Distilled	187,199	Program done.	18.5L		0852				
MO-VEN	1	1	WBC	10/26/2016	1315	PDT	NR			on	4L Distilled	17,978	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.						
MO-VEN	1	2	TL,DW	10/28/2016	0745	PDT	0.227	8	0.21	0			Sample 9 after 1 pulse	4L			0755	0755	Field Dups at 0755	
MO-VEN	1	3	TL,DW	10/28/2016	1140	PDT	0.41	1		0	2L Distilled	49,550	Errors have occurred	4.5L		1240			Fridge too cold, partially freezing sample surface. Limited volume! Priority list.	
MO-HUE	1	1	KH	10/27/2016	1205	PDT	-	-	-	0	4L Distilled	25,142	Time: 6 min/500mlx35, program disabled	Bottle in, lid off.						
MO-HUE	1	2	LM,SG	10/28/2016	1045	PDT	-	-	-	1			Program disabled	Empty					Capped bottle. Insufficient rain to qualify.	
MO-SPA	1	1	WBC	10/26/2016	1426	PDT			Dry	0	4L Distilled	59,979	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.						

MO-SPA	1	2	WBC,SC	10/28/2016	0615	PDT	Flowing	2	Sample 3 after 1 pulse	1.5L	0615	0615
MO-SPA	1	3	LM,SG	10/28/2016	1255	PDT	Trickle flow	1	2L Distilled	Sample 35 after 1 pulse. Stopped program	85% full	1255

Event Notes:

NR: Not recorded

All times are recorded here in PDT

Forecast Rain: 0.25"

Actual Rainfall: 0.1-0.5" across the county

Storm Control: Kelly Hahs

Sample Tracking:

Bacteria samples to VCHCA:

10/28/16 @ 10:55 (SPA/FIL/SIM/MPK/THO) by Sean Casey

10/28/16 @ 10:00 (CC/OXN/VEN/FD-1) by Tommy Liddel

10/28/16 @ 10:17 (VR2/OJA/MEI) by Lara Meeker

Toxicity samples to ABC:

10/28/16 @ 12:10 (SPA/FIL/SIM/MPK/THO) by Sean Casey

10/28/16 @ 10:55 (CC/OXN/VEN) by Tommy Liddel

10/28/16 @ 09:47 (VR2/OJA/MEI) by Lara Meeker

Grab and composite samples to Weck Laboratories, Inc. by Weck-provided courier

10/28/16 @ 15:35 (All grabs and composites except SCR/CAM (not sampled) and CC/VR2/THO composites) by Steven S. Greer to Hector S. (Courier Service)

10/29/16 @ 11:20 (CC/VR2/THO composites) by Bill Carey to Hector S. (Courier Service)

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

MO-VEN and MO-OXN grab and composite sample times were incorrectly recorded as PST not PDT. Error was noticed and labs were notified to update their records on 11/30/2016

Site	Event	Visit	Staff	Date	Flowmeter				Pump Count	Flush (L)	Program/6712 Display	Comp bottle status/ Estimated Vol (L)	Comp Duration			Toxicity Time	Notes	
					Arrival Time	PST/PDT	Level (feet)	Flowmeter Flow (cfs)					Outside Staff (ft)	Fridge T °C	(nearest half hrs)			Comp Time
ME-CC	2	1	KH	11/18/2016	1300	PST	1.026	5	1.02	3	4L Distilled	356,797	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
ME-CC	2	2	AA,DW	11/20/2016	2310	PST	1.112	8		2			Program disabled	Empty		2325		
ME-CC	2	3	KH,SC	11/21/2016	1035	PST	1.846	264	~1.82	1	2L Distilled	735,685	Program done.	20L		1035		
ME-VR2	2	1	SG	11/18/2016	1506	PST	1.794	1		2	4L Distilled	11,448	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
ME-VR2	2	2	LM,SG	11/20/2016	2325	PST	1.98	3	1.95	3			Sample 3 after 1 pulse	Couple inches		2340		
ME-VR2	2	3	SG	11/21/2016	1047	PST	1.91	1	1.95	0	4L Distilled	704,379	Sample 32 after 1 pulse	18.5L		1052	Replace pump tubing!	
ME-SCR	2	1	DRY			PST					2L Distilled		Time: 10 min/500mlx35, program disabled	Bottle in, lid off.				
ME-SCR	2	2	DRY			PST							Sample 26 in 1 min. Stopped program	Almost full				
ME-SCR	2	3	DRY			PST					2L Distilled		Stopped	18L				
MO-OJA	2	1	SG	11/18/2016	1403	PST	0.101	5	0	2	4L Distilled	5,419	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-OJA	2	2	LM,SG	11/20/2016	2105	PST	0.101	5	0	2			Program disabled	Empty		2105		
MO-OJA	2	3	SG	11/21/2016	0923	PST	0.1	5	0	4	4L Distilled	122,397	Program disabled	~1.5L		0928	Very limited volume - priority list	
MO-MEI	2	1	SG	11/18/2016	1428	PST	0.081	1	0	0	4L Distilled	4,181	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-MEI	2	2	LM,SG	11/20/2016	2140	PST	0.081	1	0	1			Sample 15 after 1 pulse	Empty		2225	Had to wait for flow to be deep enough to take grabs	
MO-MEI	2	3	SG	11/21/2016	0953	PST	0.081	1	0	0	4L Distilled	157,524	Program disabled	40% full		0958	Limited volume - priority list	
MO-FIL	2	1	KH	11/18/2016	1020	PST	0.043	-		3	4L Distilled	204,053	Time: 10 min/500mlx35, program disabled	Bottle in, lid off.				
MO-FIL	2	2	WBC,BM	11/20/2016	2215	PST	0.368	-		2			Sample 4 in 7 min.	2L		2215		
MO-FIL	2	3	KH,SC	11/21/2016	0900	PST	0.044	-		1	2L Distilled	363,989	Program done, errors occurred.	15L		0900	Samples 33-35 (03:11-03:31) No More Liquid.	
MO-OXN	2	1	SG	11/18/2016	1018	PST	0.108	0.2		0	4L Distilled	4,980	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-OXN	2	2	AA,DW	11/20/2016	2045	PST	0.109	0.2		0.5			Program disabled			2100	Light in house not working	
MO-OXN	2	3	LM,DW	11/21/2016	0956	PST	0.108	0.2		3	2L Distilled	291,015	Program done.	19L		1000	Tubing inside fridge needs changed.	
MO-CAM	2	1	KH	11/18/2016	1330	PST	0.033	10	Channel mostly dry	Turned on	4L Distilled	111,629	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-CAM	2	2	AA,DW	11/20/2016	2130	PST	0.035	10		-6			Program disabled	Empty		2145	2145	
MO-CAM	2	3	LM,DW	11/21/2016	0840	PST	0.035	10		2	2L Distilled	198,138	Program done	Full (18.5L)		0845		
MO-SIM	2	1	KH	11/18/2016	1135	PST	0.139	2	<channel toe	0	4L Distilled	144,600	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-SIM	2	2	WBC,BM	11/20/2016	2345	PST	0.271	9		4	2L Distilled		Sample 32 in 3 min	15L		0004	2345	Composite pulled 11/21/16
MO-MPK	2	1	KH	11/18/2016	1100	PST	0.0671	0.1	center of channel damp	2	4L Distilled	228,205	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-MPK	2	2	WBC,BM	11/20/2016	2300	PST	0.152	1.8		4			Sample 5 after 1 pulse	2L		2300		
MO-MPK	2	3	KH,SC	11/21/2016	0935	PST	0.072	0.2	<bubbler	2	2L Distilled		Program done, Errors occurred	16L		0935		Sample 30 @ 00:41 - No more liquid.
MO-THO	2	1	KH,SC	11/18/2016	1220	PST	2.033	0		0	4L Distilled	198,787	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-THO	2	2	WBC,BM	11/21/2016	0045	PST	2.771	21		4			Sample 17 after 1 pulse	50%		0045		
MO-THO	2	3	KH,SC	11/21/2016	1000	PST	2.099	1		2	2L Distilled	358,911	Program done	18L		1000		
MO-VEN	2	1	SG	11/18/2016	1110	PST	0.041	1		Turned on	4L Distilled	5,497	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-VEN	2	2	LM,SG	11/21/2016	0020	PST	0.235	8		15	2L Distilled	148,659	Program done	18.5L		0025	0035	
MO-HUE	2	1	SG	11/18/2016	1153	PST	-	-	-	6	4L Distilled	4,776	Time: 10 min/500mlx35, program disabled	Bottle in, lid off.				
MO-HUE	2	2	AA,DW	11/20/2016	2220	PST	-	-	-	2			Sample 13 in 8 min	25%		2240	2240	Salinity >2ppt so add topsmelt for tox
MO-HUE	2	3	LM,DW	11/21/2016	0919	PST	-	-	-	1	2L Distilled	192,406	Program done.	18.5L		0920		

MO-SPA	2	1	KH	11/18/2016	0956	PST	-	-	Dry	-1	4L Distilled	214,068	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.		
MO-SPA	2	2	WBC,BM	11/20/2016	2100	PST	-	-	Flowing	2			Sample 3 after 1 pulse	1L	2130	Bacteria field blank collected at MO-SPA.
MO-SPA	2	3	KH,SC	11/21/2016	0840	PST	-	-	No flow	2	2L Distilled	366,067	Program done.	14L	0840	Might be non-qual event (0.12" at #245). Check after hydros download gauge.

Event Notes:

NR: Not recorded

All times are recorded here in PST

Forecast Rain: 0.5-1.5"

Actual Rainfall: 0.25" - 0.67" at most sites across the county

Storm Control: Kelly Hahs

Sample Tracking:

Bacteria samples to VCHCA:

11/21/16 @ 01:30 (SPA/FIL/SIM/MPK/THO+FB) by WB Carey

11/21/16 @ 00:05 (CC/CAM/OXN/HUE) by Arne Anselm

11/21/16 @ 01:20 (VR2/OJA/MEI/VEN) by Steven (Scott) Greer

Toxicity samples to ABC:

11/21/16 @ 08:42 (CAM/HUE) by Steven (Scott) Greer

Grab and composite samples to Weck Laboratories, Inc. by Weck-provided courier

11/21/16 @ 13:45 (All sites, grabs and composites) by Kelly Hahs to Austin Sy (Courier)

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)	Flowmeter Flow (cfs)	Outside Staff (ft)										
ME-CC	3	1	WBC	12/15/2016	1040	PST	1.107	8			4	2L Distilled	735,685	Flow: 1 pulse/500mlx35, program disabled					
ME-CC	3	2	LM,BM	12/15/2016	2315	PST	1.337	52	1		2			disabled					6712 needs desiccant
ME-CC	3	3	LM,BM	12/16/2016	1050	PST	2.485	781			2	2L Distilled	1,118,939	Sample 3 after 1 pulse			2320		
ME-VR2	3	1	WBC	12/14/2016	1413	PST	1.881	1			4	2L Distilled	718,711	Flow: 1 pulse/500mlx35, program disabled					
ME-VR2	3	2	SG,DW	12/15/2016	2135	PST	1.989	3	2		0			disabled					
ME-VR2	3	3	SG,DW	12/16/2016	1032	PST	2.079	5	2	2	2L Distilled	1,059,451		Sample 4 after 1 pulse			2150		
ME-VR2	3	3	SG,DW	12/16/2016	1032	PST	2.079	5	2	2	2L Distilled	1,059,451		Program done.			1035		Change pump tubing
ME-SCR	3	1	No flow			PST								Time: 20 min/500mlx35, program disabled					Uncapped bottle
MO-OJA	3	1	WBC	12/14/2016	1315	PST	0.102	5	No flow	4	2L Distilled	126,476		Flow: 1 pulse/500mlx35, program disabled					
MO-OJA	3	2	SG,DW	12/15/2016	2010	PST	0.102	5		2				disabled					
MO-OJA	3	3	SG,DW	12/16/2016	0933	PST	0.108	6		0	4L Distilled	217,137		Program disabled				2010	
MO-OJA	3	3	SG,DW	12/16/2016	0933	PST	0.108	6		0	4L Distilled	217,137		Program done.			0936		
MO-MEI	3	1	WBC	12/14/2016	1344	PST	0.08	1	No flow	Turned on	4	2L Distilled	161,172	Flow: 1 pulse/500mlx35, program disabled					
MO-MEI	3	2	SG,DW	12/15/2016	2046	PST	0.12	3		0				disabled					
MO-MEI	3	3	SG,DW	12/16/2016	0956	PST	0.089	1		0	4L Distilled	245,613		Sample 4 after 1 pulse			2100		
MO-MEI	3	3	SG,DW	12/16/2016	0956	PST	0.089	1		0	4L Distilled	245,613		Program done.			1000		Fridge turned off
MO-FIL	3	1	WBC	12/14/2016	1118	PST	0.066	-		4	2L Distilled	363,989		Time: 20 min/500mlx35, program disabled					
MO-FIL	3	2	WBC,DM	12/15/2016	1928	PST	0.197	-		4				disabled					
MO-FIL	3	3	KH,DM	12/16/2016	0920	PST	0.136	-		3	2L Distilled	521,451		Program disabled				1940	
MO-FIL	3	3	KH,DM	12/16/2016	0920	PST	0.136	-		3	2L Distilled	521,451		Program done.			0920		
MO-OXN	3	1	SG	12/14/2016	0920	PST	0.109	0.3		2	4L Distilled			Flow: 1 pulse/500mlx35, program disabled					
MO-OXN	3	2	LM,BM	12/15/2016	2025	PST	0.788	14.9	0.8	2				disabled					
MO-OXN	3	3	LM,BM	12/16/2016	0930	PST	0.169	0.7		0	2L Distilled	428,869		Sample 5 after 1 pulse				2030	
MO-OXN	3	3	LM,BM	12/16/2016	0930	PST	0.169	0.7		0	2L Distilled	428,869		Program done.			0935		Channel water green - Oxnard rep notified
MO-CAM	3	1	SG	12/14/2016	1111	PST	0.031	10	~1' wide flow in invert	Turned on	4	4L Distilled	203,515	Flow: 1 pulse/500mlx35, program disabled					
MO-CAM	3	2	LM,BM	12/15/2016	NR	PST	0.208	30	0.1	-1				disabled					
MO-CAM	3	3	LM,BM	12/16/2016	1124	PST	0.033	10	Flow ~ 1/2 way to toe	1	2L Distilled	290,375		Sample 14 after 1 pulse				2145	
MO-CAM	3	3	LM,BM	12/16/2016	1124	PST	0.033	10	Flow ~ 1/2 way to toe	1	2L Distilled	290,375		Program done.			1126		
MO-SIM	3	1	WBC	12/15/2016	0921	PST	0.145	2		4	2L Distilled	218,677		Flow: 1 pulse/500mlx35, program disabled					
MO-SIM	3	2	WBC,DM	12/15/2016	2100	PST	0.348	16		4				disabled					
MO-SIM	3	3	KH,DM	12/16/2016	1020	PST	0.145	2	Almost to channel toe	2	2L Distilled	296,201		Sample 14 after 1 pulse				2100	
MO-SIM	3	3	KH,DM	12/16/2016	1020	PST	0.145	2	Almost to channel toe	2	2L Distilled	296,201		Program done.			1020		
MO-MPK	3	1	WBC	12/15/2016	0843	PST	0.072	0.1	Dry	4	2L Distilled	373,367		Flow: 1 pulse/500mlx35, program disabled					
MO-MPK	3	2	WBC,DM	12/15/2016	2030	PST	0.304	7.8		4				disabled					
MO-MPK	3	3	KH,DM	12/16/2016	0950	PST	0.131	1.2	<channel toe	2	2L Distilled	520,592		Sample 5 after 1 pulse				2030	
MO-MPK	3	3	KH,DM	12/16/2016	0950	PST	0.131	1.2	<channel toe	2	2L Distilled	520,592		Program done.			0950		
MO-THO	3	1	WBC	12/15/2016	1003	PST	2.008	0		4	2L Distilled	358,911		Flow: 1 pulse/500mlx35, program disabled					
MO-THO	3	2	WBC,DM	12/15/2016	2145	PST	3.198	49		4				disabled					
MO-THO	3	3	KH,DM	12/16/2016	1056	PST	2.249	2		2	2L Distilled	522,887		Sample 10 after 1 pulse				2145	
MO-THO	3	3	KH,DM	12/16/2016	1056	PST	2.249	2		2	2L Distilled	522,887		Program done.			1100		Fridge needs PVC distributor
MO-VEN	3	1	WBC	12/15/2016	1124	PST	0.041	1	Dry	4	2L Distilled	148,659		Flow: 1 pulse/500mlx35, program disabled					
MO-VEN	3	2	SG,DW	12/15/2016	1838	PST	0.211	7		0				disabled					
MO-VEN	3	3	SG,DW	12/16/2016	1128	PST	0.046	1	~0.05	0	4L Distilled	245,807		Errors have occurred				1850	
MO-VEN	3	3	SG,DW	12/16/2016	1128	PST	0.046	1	~0.05	0	4L Distilled	245,807		Program done/Errors have occurred.				1130	
MO-HUE	3	1	SG	12/14/2016	1008	PST	NA	NA	NA	0	4L Distilled	NR		Time: 20 min/500mlx35, program disabled					
MO-HUE	3	1	SG	12/14/2016	1008	PST	NA	NA	NA	0	4L Distilled	NR		disabled					

MO-HUE	3	2	LM,BM	12/15/2016	1908	PST	NA	NA	4.4	2			Sample 3 in 00:05	1L	1915	
MO-HUE	3	3	LM,BM	12/16/2016	1017	PST	NA	NA	NA	0	2L Distilled	351,459	Program done.	19L	1018	
MO-SPA	3	1	WBC	12/14/2016	1053	PST	NA	NA	NA	4	2L Distilled	369,157	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.		
MO-SPA	3	2	WBC,DM	12/15/2016	1845	PST	NA	NA	NA	4			Sample 2 after 1 pulse	1L	1845	Bacteria Field Blank @ 1845
MO-SPA	3	3	KH,DM	12/16/2016	0853	PST	NA	NA	Flow present	4	2L Distilled	520,867	Program done.	14L	0853	

Event Notes:

NR: Not recorded
 All times are recorded here in PST
 Forecast Rain: 1-3" across county
 Actual Rainfall: 1" - 2" at most sites across the county
 Storm Control: Kelly Hahs

Sample Tracking:

Bacteria samples to VCHCA:
 12/15/16 @ 22:40 (SPA+FB/FIL/SIM/MPK/THO) by WB Carey
 12/16/16 @ 00:15 (CC/CAM+FD/OXN/HUE) by Lara Meeker
 12/15/16 @ 22:47 (VR2/OJA/MEI/VEN) by Steven (Scott) Green

Toxicity samples to ABC:
 None

Grab and composite samples to Weck Laboratories, Inc. by Weck-provided courier
 12/16/16 @ 14:20 (All sites, grabs and composites) by Kelly Hahs to Leon Pinuelas (Essentials Courier)

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	Comp	Grab Time	Toxicity Time	Notes	
							Level (feet)							status/ Estimated Vol (L)	Duration (nearest half hrs)				
ME-SCR	4	1	WBC	1/4/2016	1019	PST	6.471	NA	NA	2	2L Distilled	NR	disabled	Onsite, removed lid.				Checked calibration. Pulling 600ml.	
ME-SCR	4	2	WBC,LM	1/5/2016	0908	PST	7.22	NA	NA	2	2L Distilled	644,483	Program done	Overfull		0910	0930	0930	

Event Notes:

NR: Not recorded
 All times are recorded here in PST
 Forecast Rain: 0.5"
 Actual Rainfall: 0.93"
 Storm Control: Bill Carey

Sample Tracking:

Bacteria samples to VCHCA:
 01/05/17 @ 10:50 by Lara Meeker to Salvador Barragan

Toxicity samples to ABC:
 01/05/17 @ 11:11 by Lara Meeker to Wendy Willis

Grab and composite samples to Weck Laboratories, Inc. by Weck courier:
 01/05/17 @ 14:20 (SCR grabs and composites) by Bill Carey to Carlos N. (Weck)

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		Toxicity	Notes
							Level (feet)	Flow (cfs)							nearest half hrs	Time		
ME-VR2	5	1	WBC	1/18/2017	1120	PST	1.994	3	1.99	4	2L Distilled	0	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Replaced both pump tubes and reset counts to 0. Calibrated 500ml. Replaced 4230 and 2105 desiccant.
ME-VR2	5	2	SG,DW	1/19/2017	0250	PST	2.128	7	2.15	0			Sample 4 after 1 pulse	~2L		03:10		
ME-VR2	5	3	KH,WBC	1/19/2017	0945	PST	2.166	8	NR	2	2L Distilled	366,649	Program done.	18.5L (overfilled)	8	09:45		
ME-SCR	5	1	KH	1/18/2017	1110	PST	7.086	NA	NA	0	3L Distilled	644,483	Time: 20 min/500mlx35, program disabled	Bottle in, lid off.				Checked calibration with grab sample. Heavy sediment load. 540 ml delivered.
ME-SCR	5	2	LM,SC	1/19/2017	0317	PST	6.377	NA	NA	1			Sample 7 in 06:40	~4.5L		03:30		
ME-SCR	5	3	KH,SC	1/19/2017	1315	PST	8.375	NA	NA	0	2L Distilled	902,416	Program done.	18.5L (overfilled)	11.5	13:15	Change pump tubing. Distinct sediment line in bottle (approx 1/3 sediment)	
MO-OJA	5	1	WBC	1/18/2017	0938	PST	0.101	5	No flow	4	2L Distilled	220,124	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Needs 4230 and 6712 desiccant Get OSS from SG photo once he uploads them to K drive. Heavy flow from nearby upstream pipe while sampling Get OSS from SG photo once he uploads them to K drive.
MO-OJA	5	2	SG,DW	1/19/2017	0105	PST	0.151	9	Not Recorded	0			Sample 6 after 1 pulse	~2.5L		01:15		
MO-OJA	5	3	SG,DW	1/19/2017	0330	PST	0.129	7	Recorded	0	4L Distilled	310,830	Program done.	17L	2	04:00		
MO-MEI	5	1	WBC	1/18/2017	1013	PST	0.082	1	No flow	Turned on	2L Distilled	248,586	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Get OSS from SG photo once he uploads them to K drive. Get OSS from SG photo once he uploads them to K drive. Turned fridge off.
MO-MEI	5	2	SG,DW	1/19/2017	0150	PST	0.24	11	Not Recorded	2			Sample 14 after 1 pulse	~5L		02:00		
MO-MEI	5	3	SG,DW	1/19/2017	0420	PST	0.33	20	~0.2	0	2L Distilled	332,422	Program done.	20L	2	04:20		
MO-CAM	5	1	KH	1/18/2017	1015	PST	0.033	10	<0.01 cfs invert only	Turned on	4L Distilled	292,795	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Turned fridge off. 4230 needs desiccant.
MO-CAM	5	2	LM,SC	1/19/2017	0223	PST	0.499	87	0.5	1			Sample 27 after 1 pulse	~10L		02:35		
MO-CAM	5	3	KH,WBC	1/19/2017	1025	PST	0.031	10	<0.01 cfs invert only	4	2L Distilled	381,775	Program done.	18L	8.5	10:25		
MO-VEN	5	1	KH	1/18/2017	0840	PST	0.04	0	mostly dry	4	4L Distilled	252,152	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Turned fridge off.
MO-VEN	5	2	LM,SC	1/19/2017	0140	PST	0.89	77	NR	4			Sample 11 after 1 pulse	~3L		01:55		
MO-VEN	5	3	KH,WBC	1/19/2017	1050	PST	0.054	1	sheet flow to toe	0	2L Distilled	349,786	Program done.	18L	8.5	10:50		
MO-HUE	5	1	KH	1/18/2017	0930	PST	NA	NA	NA	1	4L Distilled	356,812	Time: 20 min/500mlx35, program disabled	Bottle in, lid off.				01:05
MO-HUE	5	2	LM,SC	1/19/2017	0052	PST	NA	NA	~4.6	1			Sample 2 in 00:17	~1L				
MO-HUE	5	3	KH,SC	1/19/2017	12:25	PST	NA	NA	2	2L Distilled	509,430	Program done.	18L	11.5	12:25			

Event Notes:

NR: Not recorded
 All times are recorded here in PST
 Forecast Rain: ~1"
 Actual Rainfall: ~1"
 Storm Control: Kelly Hahs

Sample Tracking:

Bacteria samples to VCHCA:
 01/19/2017 @ 05:25 (VR2/OJA/MEI) by Steven (Scott) Greer
 01/19/2017 @ 04:15 (SCR/CAM/VEN/HUE) by Sean Casey

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

Toxicity samples to ABC:
None

Grab and composite samples to Weck Laboratories, Inc. by Weck-provided courier:
01/19/2017 @ 14:30 (All sites, grabs and composites) by Kelly Hahs to Steve Yudani (?(Essentials Courier)

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			Toxicity	Notes
							Level (feet)	Flow (cfs)							(nearest half hrs)	Comp Time	Grab Time		
ME-SCR	6	1	KH,WBC	5/3/2017	0855	PDT	7.413			4	4L Distilled	134,259	Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Fridge not working properly. Thin layer of ice on top of bottle. Grabs taken in diversion canal.
ME-SCR	6	2	KH,SSG	5/4/2017	0930	PDT	6.772			-13	4L Distilled	346,417	Program done	18L	24	0940	0940		
MO-FIL	6	1	KH,WBC	5/3/2017	0740	PDT	0.256			4	4L Distilled	527,886	Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Cleared sediment in channel from near intake and bubbler to redirect flow past them.
MO-FIL	6	2	KH,SSG	5/4/2017	0815	PDT	0.265			2	4L Distilled		Program done	16L	24	0820	0820		
MO-OXN	6	1	KH,WBC	5/3/2017	1020	PDT	DRY		DRY	2	4L Distilled		Time: 20 min/500mlx35, delay start 12 hrs. Program disabled	Bottle in, lid off					Homeless camp directly behind sampler house. Channel completely dry. No evidence of recent flow. Delayed start 12 hour in case flow starts. Used silicone dam and calibration line for sampling.
MO-OXN	6	2	KH,SSG	5/4/2017	1145	PDT	0.109		DRY	0	4L Distilled	679,730	Program done. Errors.	0.5L	12	1150	1150		Program errors: No liquid detected samples 1-11 and 15-35; no more liquid samples 12-14. Very small flow overnight. Channel dry ~ 300m upstream. Extremely limited composite sample volume.
MO-VEN	6	1	KH,WBC	5/3/2017	0945	PDT	0.04		<<oss (trickle)	Turned on	4L Distilled	355,145	Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Used silicone dam and calibration line for sampling.
MO-VEN	6	2	KH,SSG	5/4/2017	1040	PDT	0.057		<<oss (trickle)	2	4L Distilled	459,333	Program done. Errors.	13L	24	1050	1050		Program errors: Good samples 1-16 and 32-35, no liquid detected samples 20-28; no more liquid samples 17-19 and 29-31.
MO-SPA	6	1	KH,WBC	5/3/2017	0815	PDT	DRY		DRY	4	4L Distilled	526,737	Time: 5 min/500mlx35, program disabled. Set to enable with flow	Bottle in, lid off					Used silicone dam in case of overnight flow.
MO-SPA	6	2	KH,SSG	5/4/2017	0855	PDT	DRY		DRY	3	4L Distilled		Disabled	DRY		DRY	DRY		No samples taken
ME-CC	6	1	KH,WBC	5/17/2017	1010	PDT	1.052	5		Turned on	4L Distilled	Replaced	Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Calibrated sample volume.
ME-CC	6	2	KH,WBC	5/18/2017	1040	PDT	1.095	7		0	4L Distilled	368,952	Program done	Full (>18.5L)	24	1035	1040		
MO-CAM	6	1	KH,WBC	5/17/2017	1055	PDT	0.034	10		<<oss (trickle)	Turned on	4L Distilled	Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Used silicone dam and calibration line for sampling.
MO-CAM	6	2	KH,WBC	5/18/2017	1120	PDT	0.034	10		<<oss (trickle)	4	4L Distilled	Program done. Errors.	17L	24	1120	1125		Program errors: Good samples 1-14 and 19-35; no more liquid samples 15-18.
MO-SIM	6	1	KH,WBC	5/17/2017	0850	PDT	0.162	3		-4	4L Distilled		Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Used calibration line for sampling.
MO-SIM	6	2	KH,WBC	5/18/2017	0915	PDT	0.157	2		NR	4L Distilled	377,327	Program done.	18.5L	24	0915	0915		
MO-MPK	6	1	KH,WBC	5/17/2017	0800	PDT	0.074	0.2		<<oss (trickle)	0	4L Distilled	Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.					Used silicone dam and calibration line for sampling.

MO-MPK	6	2	KH,WBC	5/18/2017	0810	PDT	0.075	0.2	<<oss (trickle)	0	4L Distilled	709,434	Program done. Errors.	11L	24	0810	0810	Program errors: Good samples 1-16, 18, and 20-35, no liquid detected sample 19; no more liquid sample 17.
MO-THO	6	1	KH,WBC	5/17/2017	0930	PDT	1.989	0		4	4L Distilled		Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.				Program errors: Good samples 1-14 and 34-35, no liquid detected samples 17-33; no more liquid samples 15-16.
MO-THO	6	2	KH,WBC	5/18/2017	1000	PDT	2.035	0		3	4L Distilled	695,280	Program done. Errors.	17L	24	1010	1010	
ME-VR2	6	1	KH,WBC	5/22/2017	1000	PDT	Malfunction			0	4L Distilled		Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.				Found intake (moved by winter storms). Line still functioning. Checked calibration. Flowmeter malfunctioning. Cleared out sediment but malfunction continued. Flowmeter reading taken after digging out, reaming and purging line.
ME-VR2	6	2	KH,WBC	5/23/2017	1055	PDT	1.582			2	4L Distilled	732,553	Program done.	18.5L	24	1110	1110	
MO-OJA	6	1	KH,WBC	5/22/2017	0815	PDT	0.101	5	<<oss (trickle)	2	4L Distilled		Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.				Used silicone dam and calibration line for sampling.
MO-OJA	6	2	KH,WBC	5/23/2017	0910	PDT	0.101	5	<<oss (trickle)	2	4L Distilled	408,300	Program done.	18.5L	24	0920	0920	
MO-MEI	6	1	KH,WBC	5/22/2017	0920	PDT	DRY			Turned on	4L Distilled		Time: 20 min/500mlx35, delay start 12 hrs. Program disabled	Bottle in, lid off				Used silicone dam and calibration line for sampling.
MO-MEI	6	2	KH,WBC	5/23/2017	1026	PDT	DRY						Program done.	DRY		DRY	DRY	Removed comp and grab bottles from site.
MO-HUE	6	1	KH,WBC	5/22/2017	1115	PDT	NA			20	4L Distilled		Time: 40 min/500mlx35	Bottle in, lid off. Sample 1 vol good.				Fridge broken. Put ice in cube container around comp bottle and entire cooler in fridge to keep cold.
MO-HUE	6	2	KH,WBC	5/23/2017	1210	PDT	NA			NA	4L Distilled	664,829	Program done.	17L	24	1220	1220	Ice still present in cooler. Station pumps off. Dead bird at steps near grab sample area.

Event Notes:

NA: Not applicable
NR: Not recorded

Sample Tracking:

Bacteria samples to VCHCA:
05/04/17 @ 13:41 PDT (SCR/FIL/OXN/VEN) by Kelly Hahs
05/18/17 @ 12:08 PDT (CC/CAM/MPK/SIM/THO) by Kelly Hahs
05/23/17 @ 13:04 PDT (VR2/OJA/HUE) by Kelly Hahs

Toxicity samples to ABC:

NA

Grab and composite samples to Weck Laboratories, Inc. by Weck-provided courier:
05/04/17 @ 14:55 PDT (SCR/FIL/OXN/VEN) by Kelly Hahs to David Levy (Reliable Messenger Service)
05/18/17 @ 15:20 PDT (CC/CAM/MPK/SIM/THO) by Kelly Hahs to David Levy (Reliable Messenger Service)
05/23/17 @ 14:40 PDT (VR2/OJA/HUE) by Kelly Hahs to David Levy (Reliable Messenger Service)

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



6118075

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: 8/18/16 Project Number: 2016/17-PRE
 Sampling Team: K. HAHS, W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED	EPA 525.2	EPA 625-CTR	EPA 200.8* (total only, see list in side bar) EPA 245.1. Hg (total only)	No action required	Clean with detergent and HNO3**	Please dispose of per Lab SOP	Quantity	NOTES
EB lines	8/18/16 1045	4	2	1				7	(MO-VEN)
EB composite	↓ 1430	X	X	X				1	To be split in lab
18.5 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							X	2	~3L (1 quart 1% HNO3 + 2L distilled water used for cleaning our equipment)

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VCWPD Date/Time 8/18/16 / 1520

Received Printed Name ALLAN GOLDBERG
 Signature [Signature]
 Affiliation Weck Labs Date/Time 8/18/16 / 1520

Other Notes: RECING X
ALLAN G 8/18/16 1818
 Please use for MS/MSD analysis when sample volume permits.

** Please clean with detergent, nitric acid, and deionized water per SOP.



6507066

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

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

Sampling Date: 10/7/16

Project Number: 2016/17-PRE

Sampling Team: K. HAHS

SAMPLE ID	DATE/TIME COLLECTED	EPA 200.8* (total only, Al, Cr, Cu, Fe, Ni, Pb, Zn)							Quantity	NOTES
Blank bottle 1	10/7/16 10:00	X							1	Test is to check for contaminant residue. Please use as little water as possible to create sample. Do not overdilute sample!
Blank bottle 2	10/7/16 10:00	X							1	Test is to check for contaminant residue. Please use as little water as possible to create sample. Do not overdilute sample!

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VCWPD Date/Time 10/7/16 / 1330

Received Printed Name ALLAN GOLDBERG
 Signature [Signature] ALLAN G
 Affiliation Weck Labs Date/Time 10/7/16 / 1330

Other Notes: new 2 x [Signature] ALAN G 10/7/16 1638 Jamethen 10/7/16 1638

21.50



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: 10/28/16

Project Number: 2016/17-1 (Net)

Sampling Team: T. LIDDELL, D. WILKINSON

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	ME-CC	10/28/16 ^{PDT} 0900	X	X	X	X	X	X	2	
	ME-SCR		X	X	X	X	X	X	2	
	ME-VR2		X	X	X	X	X	X	2	
	MO-CAM		X	X		X	X	X	2	
	MO-OJA		X	X		X	X	X	2	
	MO-MEI		X	X		X	X	X	2	
	MO-VEN	10/28/16 ⁰⁷⁵⁵ 0655	X	X		X	X	X	2	
	FD-1	10/28/16 ⁰⁷⁵⁵ 0655	X	X		X	X		1	

Relinquished Printed Name TOMMY LIDDELL
 Signature *Tommy Liddell*
 Affiliation VCWPD Date/Time 10/28/16 1000

Received Printed Name Nadia West
 Signature *Nadia West*
 Affiliation PHIAB Date/Time 10/28/16 1000

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



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

Sampling Date: 10/28/16 Project Number: 2016/17-1 (Wet)
 Sampling Team: T. LIDDELL, D. WILKINSON

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)		Fecal Coliform (25 Tube Method - MPNX)		Enterococcus (Tray Method - WQ IDEXX)		E. coli (Tray Method - WQ IDEXX)		DNA Filter	Number of Bottles	NOTES
	MO-SPA		X	X			X	X	X	X		2	
	MO-FIL		X	X			X	X	X	X		2	
	MO-SIM		X	X			X	X	X	X		2	
	MO-MPK		X	X			X	X	X	X		2	
	MO-THO		X	X			X	X	X	X		2	
	MO-OXN	10/28/16 06:58	X	X			X	X	X	X		2	
	MO-HUE	0715	X	X			X	X	X	X		2	

Relinquished Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

Received Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

Set aside

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



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

Sampling Date: 10-28-16

Project Number: 2016/17-1 (Wet)

Sampling Team: Lara Meeker & Scott Greer

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
ME-CC	ME-CC		X	X	X	X	X	X	2	
ME-SCR	ME-SCR		X	X	X	X	X	X	2	
ME-VR2		10/28/16 0720	X	X	X	X	X	X	2	
MO-CAM	MO-CAM		X	X	X	X	X	X	2	
MO-OJA		10/28/16 0450	X	X		X	X	X	2	
MO-MEI		10/28/16 0555	X	X		X	X	X	2	
MO-VEN	MO-VEN		X	X	X	X	X	X	2	
FD-1			X	X		X	X		1	

Relinquished Printed Name Lara Meeker
 Signature [Signature]
 Affiliation VCWPD Date/Time 10-28-16 10:17

Received Printed Name Nadia West
 Signature [Signature]
 Affiliation PH LAB Date/Time 10/28/16 10:17

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



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Bacteriological - VCHCA Lab (SIDE 2/012) 1 of 1

Sampling Date: 10/28/16 Project Number: 2016/17-1 (Wet)
 Sampling Team: WAC, SC

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	MO-SPA	10/28/16 06:15	X	X		X	X	X	2	
	MO-FIL	10/28/16 07:00	X	X		X	X	X	2	
	MO-SIM	10/28/16 09:10	X	X		X	X	X	2	
	MO-MPK	10/28/16 08:15	X	X		X	X	X	2	
	MO-THO	10/28/16 10:10	X	X		X	X	X	2	
	MO-oxn		X	X		X	X	X	2	
	MO-TUE		X	X		X	X	X	2	

Relinquished Printed Name SEAN CASEY
 Signature [Signature]
 Affiliation VCWPD Date/Time 10/28/16 10:50

Received Printed Name Sgt Y. BARRAGAN
 Signature [Signature]
 Affiliation P.H. - LAB Date/Time 10/28/16 10:55

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



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Toxicity - ABC Laboratories

Side 1 of 4 |

Sampling Date: 10-28-16

Project Number: 2016/17-1 (Wet)

Sampling Team: Lara Meeker & Scott Greer

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt (<i>Atherinops affinis</i>)	Chronic toxicity - inland silverside (<i>Menidia beryllina</i>)	Chronic toxicity - giant kelp (<i>Macrocystis pyrifera</i>)	Chronic toxicity - purple sea urchin (<i>Strongylocentrotus purpuratus</i>)	Chronic toxicity - fathead minnow (<i>Pimephales promelas</i>)	Chronic toxicity - daphnid (<i>Ceriodaphnia dubia</i>)	Chronic toxicity - green alga (<i>Raphidocelis subcapitata</i>)	Number of 5-Gallon Buckets	NOTES
ME-CC		X							2	Note 1, Note 2, Note 3
ME-SCR					X				1	Note 1, Note 2, Note 3
ME-VR2	10/28/16 0720	X							2	Note 1, Note 2, Note 3
MO-CAM						X			2	Note 1, Note 2, Note 3
MO-OJA	10/28/16 0420					X			2	Note 1, Note 2, Note 3
MO-MEI	10/28/16 0555					X			2	Note 1, Note 2, Note 3
MO-VEN							X		2	Note 1, Note 2, Note 3

Relinquished

Printed Name Lara Meeker

Signature [Signature]

Affiliation VC WPD

Date/Time 10-28-16 9:47

Received

Printed Name Karin Wisembaker

Signature [Signature]

Affiliation ABC

Date/Time 10-28-16 9:47

Other Notes:

Note 1: Dilutions - 6.25%, 12.5%, 25%, 50%, 100% Note 2: Please execute TIE if mortality > 50%

Note 3: Notify District within 24 hours if significant toxicity is observed.



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Toxicity - ABC Laboratories

Side 2 of 2 10/1

Sampling Date: 10/28/16

Project Number: 2016/17-1 (Wet)

Sampling Team: WBC, SC

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt (<i>Atherinops affinis</i>)	Chronic toxicity - inland silverside (<i>Menidia beryllina</i>)	Chronic toxicity - giant kelp (<i>Macrocystis pyrifera</i>)	Chronic toxicity - purple sea urchin (<i>Strongylocentrotus purpuratus</i>)	Chronic toxicity - fathead minnow (<i>Pimephales promelas</i>)	Chronic toxicity - daphnid (<i>Ceriodaphnia dubia</i>)	Chronic toxicity - green alga (<i>Raphidocelis subcapitata</i>)	Number of 5-Gallon Buckets	NOTES
MO-OXN						X			2	Note 1, Note 2, Note 3
MO-HUE							X		3	Note 1, Note 2, Note 3, Note 4
MO-THO	10/28/16 10:10						X		2	Note 1, Note 2, Note 3
MO-MPK	10/28/16 08:15							X	2	Note 1, Note 2, Note 3
MO-SIM	10/28/16 09:10						X		2	Note 1, Note 2, Note 3
MO-FIL	10/28/16 07:00						X		2	Note 1, Note 2, Note 3
MO-SPA	10/28/16 06:15					X			2	Note 1, Note 2, Note 3

Relinquished Printed Name SRAN CASEY
 Signature [Signature]
 Affiliation VCWPD Date/Time 10/28/16 10:50

Received Printed Name E-MADRANO
 Signature [Signature]
 Affiliation ABC LABS Date/Time 10/28/16 12:00

Other Notes: Note 1: Dilutions - 6.25%, 12.5%, 25%, 50%, 100% Note 2: Please execute TIE if mortality > 50%
Note 3: Notify District within 24 hours if significant toxicity is observed.
Note 4: If salinity >2 ppt then also run topsmelt for comparison. If topsmelt unavailable, use *Hyalella*



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Toxicity - ABC Laboratories

Side 1 of 2

Sampling Date: 10/28/16 Project Number: 2016/17-1 (Wet)
 Sampling Team: T. LIDDELL, D. WILKINSON

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt (<i>Atherinops affinis</i>)	Chronic toxicity - inland silverside (<i>Menidia beryllina</i>)	Chronic toxicity - giant kelp (<i>Macrocystis pyrifera</i>)	Chronic toxicity - purple sea urchin (<i>Strongylocentrotus purpuratus</i>)	Chronic toxicity - fathead minnow (<i>Pimephales promelas</i>)	Chronic toxicity - daphnid (<i>Ceriodaphnia dubia</i>)	Chronic toxicity - green alga (<i>Raphidocelis subcapitata</i>)	Number of 5-Gallon Buckets	NOTES
ME-CC	10/28/16 0900 PPT	X							2	Note 1, Note 2, Note 3
ME-SCR					X				1	Note 1, Note 2, Note 3
ME-VR2		X							2	Note 1, Note 2, Note 3
MO-CAM						X			2	Note 1, Note 2, Note 3
MO-OJA						X			2	Note 1, Note 2, Note 3
MO-MEI						X			2	Note 1, Note 2, Note 3
MO-VEN	10/28/16 0655-0755						X		2	Note 1, Note 2, Note 3

Relinquished Printed Name TOMMY LIDDELL
 Signature [Signature]
 Affiliation VCCWPD Date/Time 10/28/16 1055 PPT

Received Printed Name D. WILKINSON
 Signature [Signature]
 Affiliation ABC LABS. Date/Time 10-28-16 1055

Other Notes: Note 1: Dilutions - 6.25%, 12.5%, 25%, 50%, 100% Note 2: Please execute TIE if mortality > 50%
Note 3: Notify District within 24 hours if significant toxicity is observed.



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Toxicity - ABC Laboratories

Side 2 of 2

Sampling Date: _____

10/28/16

Project Number: 2016/17-1 (Wet)

Sampling Team: _____

T.L., D.W.

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt (<i>Atherinops affinis</i>)	Chronic toxicity - inland silverside (<i>Menidia beryllina</i>)	Chronic toxicity - giant kelp (<i>Macrocystis pyrifera</i>)	Chronic toxicity - purple sea urchin (<i>Strongylocentrotus purpuratus</i>)	Chronic toxicity - fathead minnow (<i>Pimephales promelas</i>)	Chronic toxicity - daphnid (<i>Ceriodaphnia dubia</i>)	Chronic toxicity - green alga (<i>Raphidocelis subcapitata</i>)	Number of 5-Gallon Buckets	NOTES
MO-OXN	10/28/16 0815 PPT					X			2	Note 1, Note 2, Note 3
MO-HUE	0715 PPT						X		3	Note 1, Note 2, Note 3, Note 4
MO-THO							X		2	Note 1, Note 2, Note 3
MO-MPK								X	2	Note 1, Note 2, Note 3
MO-SIM							X		2	Note 1, Note 2, Note 3
MO-FIL							X		2	Note 1, Note 2, Note 3
MO-SPA						X			2	Note 1, Note 2, Note 3

Relinquished Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

Received Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

Other Notes: Note 1: Dilutions - 6.25%, 12.5%, 25%, 50%, 100% Note 2: Please execute TIE if mortality > 50%
Note 3: Notify District within 24 hours if significant toxicity is observed.
Note 4: If salinity >2 ppt then also run topsmelt for comparison. If topsmelt unavailable, use *Hyabella*

628068



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: 10/28/2016 Project Number: 2016/17-1 (Wet) Grabs
 Sampling Team: Steven Greer, Kelly Hahn, W.B. Carey, Lara Meeker, Tommy L. Dean W. Sean C.

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	10/28/16 0900	2	1	2	3	1										Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
ME-SCR		2	1	2	3	1										
ME-VR2	10/28/16 0720	2	1	2	3	1										
MO-CAM		2	1	2	3	1										
MO-OJA	10/28/16 0450	2	1	2	3	1										
MO-MEI	10/28/16 0555	2	1	2	3	1										
MO-VEN	10/28/16 0655	2	1	2	3	1										
MO-OXN	10/28/16 0615	2	1	2	3	1										
FD-1	10/28/16 0655	2	1	2	3	1								9	Data and time was taken from sample containers	

Relinquished Printed Name Steven S. Greer
 Signature [Signature]
 Affiliation VCWPD: WRSI Date/Time 10/28/2016

Received Printed Name MATT AULIN
 Signature [Signature]
 Affiliation COURIER DRIVER Date/Time 10/28/2016 3:34pm

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

Jamman 10/28/16 18:15 10°C

6328068



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: 10/28/2016 Project Number: 2016/17-1 (Wet) Grabs
 Sampling Team: Steven Greer, Kelly Hahn, Coby Conroy, Lara Meeker, Tommy L, Dean W, Sean C.

SAMPLE ID	DATE/TIME COLLECTED	Weck Laboratories						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	10/28/16 06:15	2	1	2	3	1		9	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
MO-FIL	10/29/16 07:00	2	1	2	3	1		9	
MO-SIM	10/29/16 09:10	2	1	2	3	1		9	
MO-HUE		2	1	2	3	1		9	
MO-THO	10/29/16 10:10	2	1	2	3	1		9	
MO-MPK	10/28/16 08:15	2	1	2	3	1		9	

Relinquished Printed Name Steven S. Greer
 Signature [Signature]
 Affiliation WVWD: WRSI Date/Time 10/28/2016

Received Printed Name MATT ALLEN
 Signature [Signature]
 Affiliation CARRIER DRIVER Date/Time 10/28/2016 3:34pm

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



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

6JZ8070

Sampling Date: 10/28/2016

Project Number: 2016/17-1 (Wet) Composites

Sampling Team: Steven Green, Kelly Hahn, WB Carey, Lara Meeker, Tommy L., Dean W., Sean C.

SAMPLE ID	DATE/TIME COLLECTED	Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO3-N, Total Chlorine Residual	Metals, total & dissolved (+ Hardness); & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
ME-CC		X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-SCR		X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-VR2	10/28/16 0730	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-CAM	10/28/16	X	X	X	X	X	X	X	X	X	X	X	X	1	Cleaned
MO-OJA	10/28/16 ⁰⁹⁴⁵ 0915	X	X	X	X	X	X	X	X	X	X	X	X	1	Time: 845
MO-MEI	10/28/16 ⁰⁹¹⁵ 0915	X	X	X	X	X	X	X	X	X	X	X	X	1	Time: 915
MO-VEN	10/28/16 1140 1147	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, Ti, Zn, Hg
 Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K
 608 include alpha- & gamma-chlordane
 * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS
 Lab to select samples for MS/MSD where extra volume permits (all test)

Relinquished Printed Name Steven S. Green
 Signature [Signature]
 Affiliation VCWPD: WRSI Date/Time 10/28/2016

Received Printed Name MATT AUBEN
 Signature [Signature]
 Affiliation COVERLYE DRIVER Date/Time 10/28/2016 3:35 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).

[Handwritten notes and signatures]



6528070

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: 10/28/2016

Project Number: 2016/17-1 (Wet) Composites

Sampling Team: Steven Green, Kelly Hahn, WPA Gary, Lara Meeker, Tommy L., Dean W., Sean C.

SAMPLE ID	DATE/TIME COLLECTED																NOTES
MO-SPA	10/28/2016 12:35pm																<p>Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg</p> <p>Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K</p> <p>608 include alpha- & gamma-chlordane</p> <p>* Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS</p> <p>Lab to select samples for MS/MSD where extra volume permits (all test</p>
MO-FIL	10/28/2016 1:18pm																
MO-SIM	10/28/16 09:25																
MO-MPK	10/28/16 08:30																
MO-TTG	10/28/16																
MO-oxn	10/29/16 0920 157																
MO-LIT																	

Reinspected: _____ Printed Name: Steven J. Green
 Signature: [Signature]
 Affiliation: VCWPD / WRSI Date: 10/28/2016

Received: _____ Printed Name: [Name]
 Signature: [Signature] Date: 10/28/2016 3:35 pm



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: 10/28/2016 Project Number: 2016/17-1 (Wet) Cleaning
 Sampling Team: Steven Gineon, Kelly Hah, WTB Conroy, Lura Meeker, Tommy L., Dean W, Sean C

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.
Blue cube cooler	3		9	
Black bags			9	
20 L narrow neck carboy, 2 lids, attachment assembly	6			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name Steven S. Gineon
 Signature [Signature]
 Affiliation VCWPD: WFSI Date/Time 10/28/2016

Received Printed Name MATT ALEN
 Signature [Signature]
 Affiliation CARRIER DRIVER Date/Time 10/28/2016 3:35 PM

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



EJ 29001

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: 10/29/16 Project Number: 2016/17-1 (Wet) Composites
 Sampling Team: S. GREER

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	10/29/16 1000	X	X	X	X	X	X	X	X	X	X	X	X	1	PRIORITY
ME-SCR		X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-VR2	10/29/16 0742	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-CAM		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-OJA		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-MEI		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-VEN		X	X	X	X	X	X	X	X	X	X	X	X	1	

Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg
 Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K
 608 include alpha- & gamma-chlordane
 * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS
 Lab to select samples for M5/MSD where extra volume permits (all test)

Relinquished Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation VCWPD Date/Time 10/29/16 1126

Received Printed Name Hector Sanchez
 Signature [Signature]
 Affiliation WECKLABS Date/Time 10-29-16 11:20

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 2 of 2)

Sampling Date: 10/29/16
 Sampling Team: S. GREER

Project Number: 2016/17-1 (Wet) Composites

SAMPLE ID	DATE/TIME COLLECTED	Dissolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
MO-SPA		X	X	X	X	X	X	X	X	X	X	X	1	Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K 608 include alpha- & gamma-chlordane * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS Lab to select samples for MS/MSD where extra volume permits (all test
MO-FIL		X	X	X	X	X	X	X	X	X	X	X	1	
MO-SIM		X	X	X	X	X	X	X	X	X	X	X	1	
MO-MPK		X	X	X	X	X	X	X	X	X	X	X	1	
MO-THO	10/29/16 0852	X	X	X	X	X	X	X	X	X	X	X	1	
MO-OXN		X	X	X	X	X	X	X	X	X	X	X	1	
MO-HUE		X	X	X	X	X	X	X	X	X	X	X	1	

Relinquished Printed Name W.B. CARNEY
 Signature W.B. Carney
 Affiliation VCWPD Date/Time 10/29/16 1120

Received Printed Name Hecher Sanchez
 Signature [Signature]
 Affiliation WECKLABS Date/Time 10-29-16 11:20

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
Bacteriological - VCHCA Lab (SIDE 1 of 2)

Sampling Date: 11-20 & 11-21 2016
 Sampling Team: W.B. CAREY & B. MEINEAS

Project Number: 2016/17-2 (Wet)

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
ME-CC	ME-CC		X	X	X	X	X	X	2	2 DNA Filters
ME-SCR	ME-SCR		X	X	X	X	X	X	2	2 DNA Filters
ME-VR2	ME-VR2		X	X	X	X	X	X	2	2 DNA Filters
MO-GAM	MO-GAM		X	X		X	X	X	2	2 DNA Filters
MO-OJA	MO-OJA		X	X		X	X	X	2	2 DNA Filters
MO-MEI	MO-MEI		X	X		X	X	X	2	2 DNA Filters
MO-YEN	MO-YEN		X	X		X	X	X	2	2 DNA Filters
FB-1		11-20-16/2130	X	X		X	X		1	(no SPA)

Relinquished Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation VCWPD Date/Time 11/21/16 0130

Received Printed Name Lauren Stead
 Signature [Signature]
 Affiliation Pit Lab Date/Time 11/21/16 @ 1:30pm

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



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

Sampling Date: W.B. CAREY & B. MEINEAS Project Number: 2016/17-2 (Wet)

Sampling Team: 11-20 & 11-21 2016

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filters	Number of Bottles	NOTES
	MO-SPA	11-20-16/2130	X	X		X	X	X	1	2 DNA Filters
	MO-FIL	11-20-16/2215	X	X		X	X	X	1	2 DNA Filters
	MO-SIM	11-20-16/2345	X	X		X	X	X	1	2 DNA Filters
	MO-MPK	11-20-16/2300	X	X		X	X	X	1	2 DNA Filters
	MO-THO	11-21-16/0045	X	X		X	X	X	1	2 DNA Filters
	MO OXN		X	X		X	X	X	2	2 DNA Filters
	MO HUE		X	X		X	X	X	2	2 DNA Filters

Relinquished Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation VCWPD Date/Time 11-21-16 0130

Received Printed Name Lauren Stead
 Signature L Stead
 Affiliation PH Lab Date/Time 11/21/16 @ 1:30 am

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



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

Sampling Date: 11/20/16 Project Number: 2016/17-2 (Wet)

Sampling Team: A. ANSELM, D. WILKINSON

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	ME-CC	23:25 11-20-16	X	X	X	X	X	X	2	2 DNA Filters
	ME-SCR	23:15 per back route 2325 chemnitz	X	X	X	X	X	X	2	2 DNA Filters
	ME-VR2	col	X	X	X	X	X	X	2	2 DNA Filters
	MO-CAM	21:45 11-20-16	X	X		X	X	X	2	2 DNA Filters
	MO-OJA		X	X		X	X	X	2	2 DNA Filters
	MO-MEI		X	X		X	X	X	2	2 DNA Filters
	MO-VEN		X	X		X	X	X	2	2 DNA Filters
	FB-1		X	X		X	X		1	

Relinquished Printed Name ARNE ANSELM
 Signature [Signature]
 Affiliation VCWPD Date/Time 11-21-16 12:05 AM

Received Printed Name Nadia Ogn Buren
 Signature [Signature]
 Affiliation PH LAB Date/Time 11/21/16 12:05 AM

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



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

Sampling Date: 11/20/16 Project Number: 2016/17-2 (Wet)

Sampling Team: A. ANSELM, D. WILKINSON

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	MO-SPA		X	X		X	X	X	2	2 DNA Filters
	MO-FIL		X	X		X	X	X	2	2 DNA Filters
	MO-SIM		X	X		X	X	X	2	2 DNA Filters
	MO-MPK		X	X		X	X	X	2	2 DNA Filters
	MO-THO		X	X		X	X	X	2	2 DNA Filters
	MO-OXN	21:00 11/20/16	X	X		X	X	X	2	2 DNA Filters
	MO-HUE	22:40 11-20-16	X	X		X	X	X	2	2 DNA Filters

Relinquished Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

Received Printed Name _____
 Signature see side 1 _____
 Affiliation _____ Date/Time _____

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



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

Sampling Date: 11/20/2016, 11/21/2016 Project Number: 2016/17-2 (Wet)
 Sampling Team: Steven S. Greer, Lara Meeker

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	ME-CC		X	X	X	X	X	X	2	2 DNA Filters
	MAASCA-ME-VR2	<u>11/20/16 23:40</u>	X	X	X	X	X	X	2	2 DNA Filters
	ME-VR2		X	X	X	X	X	X	2	2 DNA Filters
	MO-CAM		X	X	X	X	X	X	2	2 DNA Filters
	MO-OJA	<u>11/20/16 21:05</u>	X	X	X	X	X	X	2	2 DNA Filters
	MO-MEI	<u>11/20/16 22:25</u>	X	X	X	X	X	X	2	2 DNA Filters
	MO-VEN	<u>11/21/16 00:35</u>	X	X	X	X	X	X	2	2 DNA Filters
	EB-1		X	X	X	X	X	X	1	

Relinquished Printed Name Steven S. Greer
 Signature [Signature]
 Affiliation VCWPD Date/Time 11/21/2016 01:20 AM

Received Printed Name Nadia Van Buren
 Signature [Signature]
 Affiliation PH LAB Date/Time 0120

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



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Toxicity - ABC Laboratories

Side 1 of 1

Sampling Date: 11/20/2016

Project Number: 2016/17-2 (Wet)

Sampling Team: Anne A., Dean W., Steven G.

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt (<i>Atherinops affinis</i>)	Chronic toxicity - inland silverside (<i>Menidia beryllina</i>)	Chronic toxicity - giant kelp (<i>Macrocystis pyrifera</i>)	Chronic toxicity - purple sea urchin (<i>Strongylocentrotus purpuratus</i>)	Chronic toxicity - fathead minnow (<i>Pimephales promelas</i>)	Chronic toxicity - daphnid (<i>Ceriodaphnia dubia</i>)	Chronic toxicity - green alga (<i>Raphidocelis subcapitata</i>)	Number of 5-Gallon Buckets	NOTES
ME-SCR					X				2	Note 1, Note 2, Note 3
MO-CAM	11-20-16 21145					X			2	Note 1, Note 2, Note 3
MO-HUE	11-20-16 22140						X		2	Note 1, Note 2, Note 3, Note 4

Relinquished

Printed Name Steven S. Green

Signature [Signature]

Affiliation VCDWD

Date/Time 11/21/2016 0842

Received

Printed Name ELIZABETH MANNING

Signature [Signature]

Affiliation ABC LABS

Date/Time 11-21-16 0842

Other Notes:

Note 1: Dilutions - 6.25%, 12.5%, 25%, 50%, 100% Note 2: Please execute TIE if mortality > 50%

Note 3: Notify District within 24 hours if significant toxicity is observed.

Note 4: If salinity >2 ppt then also run topsmelt for comparison. If topsmelt unavailable, use *Hyaella*



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)

6K21127

Sampling Date: 11/20/16 + 11/21/16 Project Number: 2016/17-2 (Wet) Grabs
 Sampling Team: see side 2

SAMPLE ID	DATE/TIME COLLECTED						Travel Blanks (EPA 624)-only analyze if hits							Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)										
ME-CC	11/20/16 23:25	2	1	2	3	1								9	AA, DW
ME-SCR		2	1	2	3	1								9	DRY
ME-VR2	11/20/16 23:40	2	1	2	3	1								9	LM, SG
MO-CAM	11/20/16 21:45	2	1	2	3	1								9	AA, DW
MO-OJA	11/20/16 21:05	2	1	2	3	1								9	LM, SG
MO-MEI	11/20/16 22:25	2	1	2	3	1								9	LM, SG
MO-VEN	11/21/16 00:35	2	1	2	3	1								9	LM, SG
MO-OXN	11/20/16 21:00	2	1	2	3	1								9	AA, DW
FD-1															

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

Relinquished Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

Received Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

see side 2

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

6K21127



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: 11/20/16 + 11/21/16 Project Number: 2016/17-2 (Wet) Grabs
 Sampling Team: WBC, BM; AA, DW; LM, SC

SAMPLE ID	DATE/TIME COLLECTED	Analytes					Travel Blanks (EPA 624)-only analyze if hits	Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)				
MO-SPA	11/20/16 21:30	2	1	2	3	1	9	WBC, BM	
MO-FIL	11/20/16 22:15	2	1	2	3	1	9	WBC, BM	
MO-SIM	11/20/16 23:45	2	1	2	3	1	9	WBC, BM	
MO-HUE	11/20/16 23:40	2	1	2	3	1	9	AA, DW	
MO-THO	11/21/16 00:45	2	1	2	3	1	9	WBC, BM	
MO-MPK	11/20/16 23:00	2	1	2	3	1	9	WBC, BM	

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

Relinquished Printed Name Kelly Hols
 Signature [Signature]
 Affiliation VCWPD Date/Time 11/21/16 1345

Received Printed Name AUSTIN SY
 Signature [Signature]
 Affiliation WECK LABS Date/Time 11-21-16 1345

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 Sample from 11/21/16 16:35
1.96



6K21093

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: 11/21/16 Project Number: 2016/17-2 (Wet) Composites
 Sampling Team: KH, SC, SG, LM, J.G., WBC, BM

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	11/21/16 1035	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, SC
ME-SCR		X	X	X	X	X	X	X	X	X	X	X	X	1	DRY
ME-VR2	11/21/16 1052	X	X	X	X	X	X	X	X	X	X	X	X	1	SG
MO-CAM	11/21/16 08:45	X	X	X	X	X	X	X	X	X	X	X	X	1	LM, SG
MO-OJA	11/21/16 0928	X	X	X	X	X	X	X	X	X	X	X	X	1	SG Priority list Ltd volume
MO-MEI	11/21/16 0958	X	X	X	X	X	X	X	X	X	X	X	X	1	SG Priority list Ltd volume
MO-VEN	11/21/2016 00:25	X	X	X	X	X	X	X	X	X	X	X	X	1	LM, SG

Relinquished Printed Name Kelly Habs
 Signature [Signature]
 Affiliation Ventura Watershed Protection District Date/Time 11/21/16 / 1345

Received Printed Name ALISTIN SY
 Signature [Signature]
 Affiliation WECK LABS Date/Time 11-21-16 13:45

Other Notes: 1) Filter for dissolved metals and perform conductivity analyses immediately.
 2) Please do not dilute limited volume samples when enacting priority list (low reporting limits are important).
Jamieanna 11/21/16 16:35
1.92



621093

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: 11/21/16 Project Number: 2016/17-2 (Wet) Composites
 Sampling Team: see side 1

SAMPLE ID	DATE/TIME COLLECTED	Disolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (+ Hardness), & Eiarium (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-Heb 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	11/21/16 0840	X	X	X	X	X	X	X	X	X	X	X	1	7, SC
MO-FIL	11/21/16 0900	X	X	X	X	X	X	X	X	X	X	X	1	7, SC
MO-SIM	11/21/16 00:04	X	X	X	X	X	X	X	X	X	X	X	1	WBC, BM
MO-MPK	11/21/16 0935	X	X	X	X	X	X	X	X	X	X	X	1	7, SC
MO-THO	11/21/16 1000	X	X	X	X	X	X	X	X	X	X	X	1	7, SC
MO-OXN	11/21/16 10:00	X	X	X	X	X	X	X	X	X	X	X	1	LM, SG
MO-HUE	11/21/16 09:20	X	X	X	X	X	X	X	X	X	X	X	1	LM, SG

Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg
 Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), AND Na, K
 608 include alpha- & gamma-chlordane
 * Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS
 Lab to select samples for MS/MSD where extra volume permits (all test

Relinquished Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____
 Received Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

SEE SIDE ONE

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: 11/21/16 Project Number: 2016/17-2 (Wet) Cleaning
 Sampling Team: KH

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.
Blue cube cooler			13	
Black bags			13	
20 L narrow neck carboy, 2 lids, attachment assembly	10?			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
				13 total glass carboys

Relinquished Printed Name Kelly Hols
 Signature [Signature]
 Affiliation VCWPD Date/Time 11/21/16 / 1345

Received Printed Name ALISTAR SY
 Signature [Signature]
 Affiliation WECK LABS Date/Time 11-21-16 13:45

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



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: 12/15/16 Project Number: 2016/17-3 (Wet)
 Sampling Team: Lara Medler and Brad G

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	ME-CC	23:20	X	X	X	X	X	X	2	2 DNA Filters
	ME-SCR		X	X	X	X	X	X	2	2 DNA Filters
	ME-VR2		X	X	X	X	X	X	2	2 DNA Filters
	MO-CAM	21:45	X	X		X	X		1	
	MO-OJA		X	X		X	X		1	
	MO-MEI		X	X		X	X		1	
	MO-VEN		X	X		X	X		1	
	FB-1		X	X		X	X		1	
	FD-1	21:45	X	X		X	X		1	

Relinquished Printed Name Lara Medler
 Signature [Signature]
 Affiliation WPD Date/Time 12/16/16 0:15

Received Printed Name Nadia Van Buren
 Signature [Signature]
 Affiliation QA-LAB Date/Time 12/16/16 00:15

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



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

Sampling Date: 12/15/16 Project Number: 2016/17-3 (Wet)
 Sampling Team: Lara Melker & BO

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	MO-SPA		X	X	X	X		1		
	MO-FIL		X	X	X	X		1		
	MO-SIM		X	X	X	X		1		
	MO-MPK		X	X	X	X		1		
	MO-THO		X	X	X	X		1		
	MO-OXN	20:30	X	X	X	X		1		
	MO-HUE	19:15	X	X	X	X		1		

Relinquished Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

Received Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

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



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

Sampling Date: 12/15/2016 Project Number: 2016/17-3 (Wet)

Sampling Team: Steven S. Greer, Dean Wilkanson

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	ME-GC		X	X	X	X	X	X	2	2 DNA Filters
	ME-SCR		X	X	X	X	X	X	2	2 DNA Filters
	ME-VR2	12/15/2016 21:50	X	X	X	X	X	X	2	2 DNA Filters
	MO-CAM		X	X		X	X		1	
	MO-OJA	12/15/2016 20:10	X	X		X	X		1	
	MO-MEI	12/15/2016 21:00	X	X		X	X		1	
	MO-VEN	12/15/2016 18:50	X	X		X	X		1	
	FB-1		X	X		X	X		1	
	FD-1		X	X		X	X		1	

Relinquished Printed Name Steven S. Greer
 Signature Steven S. Greer
 Affiliation VCWPD Date/Time 12/15/2016 10:46 pm

Received Printed Name Cameron Chagnier
 Signature Cameron Chagnier
 Affiliation PHL 96 Date/Time 12/15/16 10:47 AM

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



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

Sampling Date: 12-15-16

Project Number: 2016/17-3 (Wet)

Sampling Team: WB CAREY & D. MARZIO

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
ME-CC			X	X	X	X	X	X	2	2 DNA Filters
ME-SCR			X	X	X	X	X	X	2	2 DNA Filters
ME-VR2			X	X	X	X	X	X	2	2 DNA Filters
MO-GAM			X	X		X	X		1	
MO-OJA			X	X		X	X		1	
MO-MEI			X	X		X	X		1	
MO-VEN			X	X		X	X		1	
FB-1		12/15/16 1845	X	X		X	X		1	(MO-SPA)
FD-1			X	X		X	X		1	

Relinquished Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation VCWPD Date/Time 12-15-16 / 1035

Received Printed Name Nadia Van Buren
 Signature [Signature]
 Affiliation PH LABS Date/Time 12/15/16 1040

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



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

Sampling Date: 12-15-16

Project Number: 2016/17-3 (Wet)

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

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	MO-SPA	12/15/16 6:45 PM	X	X		X	X		1	
	MO-FIL	12/15/16 7:40 PM	X	X		X	X		1	
	MO-SIM	12/15/16 9:00 PM	X	X		X	X		1	
	MO-MPK	12/15/16 8:30 PM	X	X		X	X		1	
	MO-THO	12/15/16 9:45 PM	X	X		X	X		1	
	MO-oxn		X	X		X	X		1	
	MO-HUE		X	X		X	X		1	

Relinquished Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation VCWPD Date/Time 12-15-16 / 1035

Received Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

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



6L17025

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: 12/15/16 Project Number: 2016/17-3 (Wet) Grabs
 Sampling Team: WBC, DM; SG, DW; LM, BM

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease (EPA 1664A)					Travel Blanks (EPA 624)-only analyze if hits								Number of Bottles	NOTES
ME-CC	12/15/16 23:20	2	1	2	3	1								9	LM, BM	
ME-SCR	 	2	1	2	3	1								9		
ME-VR2	12/15/16 21:50	2	1	2	3	1								9	SG, DW	
MO-CAM	12/15/16 21:45	2	1	2	3	1								9	LM, BM	
MO-OJA	12/15/16 20:10	2	1	2	3	1								9	SG, DW	
MO-MEI	12/15/16 21:00	2	1	2	3	1								9	SG, DW	
MO-VEN	12/15/16 18:50	2	1	2	3	1								9	SG, DW	
MO-OXN	12/15/16 20:30	2	1	2	3	1								9	LM, BM	
FD-1	12/15/16 21:45	2	1	2	3	1								9	LM, BM	

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

Relinquished Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

Received Printed Name _____
 Signature _____
 Affiliation _____ Date/Time _____

SEE SIDE TWO

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 All times PST

TL



6017025

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: 12/15/16 Project Number: 2016/17-3 (Wet) Grabs
 Sampling Team: WBC, DM; SG, DN; LM, BM

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
MO-SPA	12/15/16 1845 6:45 PM	2	1	2	3	1							9	WBC, DM
MO-FIL	12/15/16 1940 7:40 PM	2	1	2	3	1							9	WBC, DM
MO-SIM	12/15/16 21:00 9:00 PM	2	1	2	3	1							9	WBC, DM
MO-HUE	12/15/16 19:15	2	1	2	3	1							9	LM, BM
MO-THO	12/15/16 21:45 9:45 PM	2	1	2	3	1							9	WBC, DM
MO-MPK	12/15/16 2030 8:30 PM	2	1	2	3	1							9	WBC, DM

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 12/16/16 / 1420

Received Printed Name Leon Pinuelas
 Signature [Signature]
 Affiliation Essential Date/Time 12/16/16 1420

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

6116061



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: 12/16/16 Project Number: 2016/17-3 (Wet) Composites

Sampling Team: KH, DM; SG, DW; LM, BM

SAMPLE ID	DATE/TIME COLLECTED				Dissolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (+ Hardness), & Barium (total only)	Crt6	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	12/16/16 0853				X	X	X	X	X	X	X	X	X	X	X	1	KH, DM
MO-FIL	0920				X	X	X	X	X	X	X	X	X	X	X	1	KH, DM
MO-SIM	1020				X	X	X	X	X	X	X	X	X	X	X	1	KH, DM
MO-MPK	0950				X	X	X	X	X	X	X	X	X	X	X	1	KH, DM
MO-THO	1100				X	X	X	X	X	X	X	X	X	X	X	1	KH, DM
MO-OXN	0935				X	X	X	X	X	X	X	X	X	X	X	1	LM, BM
MO-HUE	1018				X	X	X	X	X	X	X	X	X	X	X	1	LM, BM

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 12/16/16 / 1420

Received Printed Name Leann P. Proctor
 Signature [Signature]
 Affiliation Essentrac Date/Time 12/16/16 / 1720

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).



GL160001

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: 12/16/16 Project Number: 2016/17-3 (Wet) Composites
 Sampling Team: KN, DM, SG, DW, LM, BM

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	12/16/16 10:55	X	X	X	X	X	X	X	X	X	X	X	X	1	LM, BM
ME-SCR		X	X	X	X	X	X	X	X	X	X	X	X	1	DRY
ME-VR2	1035	X	X	X	X	X	X	X	X	X	X	X	X	1	SG, DW
MO-CAM	1126	X	X	X	X	X	X	X	X	X	X	X	X	1	LM, BM
MO-OJA	0936	X	X	X	X	X	X	X	X	X	X	X	X	1	SG, DW
MO-MEI	1000	X	X	X	X	X	X	X	X	X	X	X	X	1	SG, DW
MO-VEN	1130	X	X	X	X	X	X	X	X	X	X	X	X	1	SG, DW

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 _____
 Signature _____
 Affiliation _____
 Date/Time _____

Received Printed Name _____
 Signature _____
 Affiliation _____
 Date/Time _____

SEE SIDE TWO

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).



(CEL1606)

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: 12/16/16 Project Number: 2016/17-3 (Wet) Cleaning
 Sampling Team: KH

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid		5		Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			13	
Black bags			13	
20 L narrow neck carboy, 2 lids, attachment assembly		7		Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name Kelly Hays
 Signature [Signature]
 Affiliation VWAPD Date/Time 12/16/16 / 1420

Received Printed Name Leon Pinodas
 Signature [Signature]
 Affiliation Essentia 1 Date/Time 12/16/16 / 1420

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



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

Sampling Date: 1-5-17

Project Number: 2016/17-⁴ (Wet)

Sampling Team: W.B. CAREY & L. MEEKER

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	ME-CC		X	X	X	X	X	X	2	
	ME-SCR	1/5/17 9:30	X	X	X	X	X	X	2	
	ME-VR2		X	X	X	X	X	X	2	
	MO-CAM		X	X		X	X	X	2	
	MO-OJA		X	X		X	X	X	2	
	MO-MEI		X	X		X	X	X	2	
	MO-VEN		X	X		X	X	X	2	
	FD 1		X	X		X	X		1	

Relinquished Printed Name Lara Meeker
 Signature [Signature]
 Affiliation WPD Date/Time 1/5/17 10:45

Received Printed Name SALVADOR Y. BARRAGAN
 Signature [Signature]
 Affiliation P.H. - Lab Date/Time 1-5-17 10:50

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



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Toxicity - ABC Laboratories

Side 1 of 1

Sampling Date: 1-5-17

Project Number: 2016/17-4 (Wet)

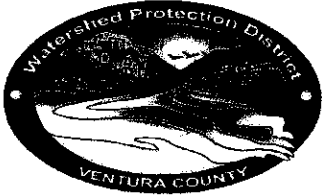
Sampling Team: W.B. CAREY & L. MEEKER

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topsmelt (<i>Atherinops affinis</i>)	Chronic toxicity - inland silverside (<i>Menidia beryllina</i>)	Chronic toxicity - giant kelp (<i>Macrocystis pyrifera</i>)	Chronic toxicity - purple sea urchin (<i>Strongylocentrotus purpuratus</i>)	Chronic toxicity - fathead minnow (<i>Pimephales promelas</i>)	Chronic toxicity - daphnid (<i>Ceriodaphnia dubia</i>)	Chronic toxicity - green alga (<i>Raphidocelis subcapitata</i>)	Number of 5-Gallon Buckets	NOTES
ME-SCR	1/5/17 9:30				X				2	Note 1, Note 2, Note 3

Relinquished Printed Name Lara Meeker
 Signature [Signature]
 Affiliation WPD Date/Time 1/5/17 11:11

Received Printed Name Wendy Willis
 Signature [Signature]
 Affiliation ABC Labs Date/Time 01/05/17 11:11

Other Notes: Note 1: Dilutions - 6.25%, 12.5%, 25%, 50%, 100% Note 2: Please execute TIE if mortality > 50%
Note 3: Notify District within 24 hours if significant toxicity is observed.
Note 4: If salinity >2 ppt then also run topsmelt for comparison. If topsmelt unavailable, use *Hyakella*



7A05114

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: 1-5-17

Project Number: 2016/17-4 (Wet) Grabs

Sampling Team: W.B. CAREY & L. MEEKER

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-SCR	1/5/17 4:10 0930 WBC	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 ~~John Meeker~~ W.B. CAREY
 Signature ~~John Meeker~~ W.B. Carey
 Affiliation WPD Date/Time 1-5-17/1420

Received Printed Name James N
 Signature [Signature]
 Affiliation Weck Labs Date/Time 1-5-17 220

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

James N 1/5/17 1603 1.2"



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)

7A05096

Sampling Date: 1-5-17

Project Number: 2016/17-4 (Wet) Composites

Sampling Team: W.B. CAREY & L. MEEKER

SAMPLE ID	DATE/TIME COLLECTED	Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO3-N, Total Chlorine Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
ME-CC		X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-SCR	1-5-17/0900	X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-VR2		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-CAM		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-OJA		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-MEL		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	

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

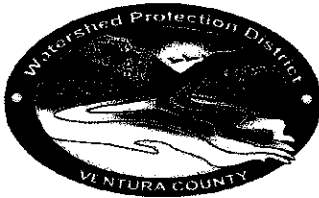
* Same extraction with low-level spike for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS

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 1-5-17/1420

Received Printed Name [Signature]
 Signature [Signature]
 Affiliation Weck Labs Date/Time 1-5-17 220

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: 1-5-17 Project Number: 2016/17-⁴(Wet) Cleaning
 Sampling Team: W.B. CAREY & L. MEEKER

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required		NOTES
18.5 L wide neck carboy and lid	1				Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler	1				
Black bags	1				
20 L narrow neck carboy, 2 lids, attachment assembly	1				Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation VCWPD Date/Time 1-5-17/1420

Received Printed Name Carlos N
 Signature Carlos N
 Affiliation Wecklabs Date/Time 1-5-17 220

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



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

Sampling Date: 1/19/17

Sampling Team: LARA MEEKER, SEAN CASEY

Project Number: 2016/17-5 (Wet)

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	ME-SC	1/19/17 3:30	X	X	X	X	X	X	2	
	ME-SCR	1/19/17 3:30	X	X	X	X	X	X	2	
	ME-VR2	1/19/17 2:35	X	X	X	X	X	X	2	
	MO-CAM	1/19/17 2:35	X	X		X	X			
	MO-OJA	1/19/17 1:55	X	X	X	X	X	X	1	
	MO-MEI	1/19/17 1:40	X	X	X	X	X	X	1	
	MO-VEN	1/19/17 1:40	X	X		X	X			
	MO-HVE	1/19/17 1:05	X	X	X	X	X	X	1	
	MO-HVE	1/19/17 1:05	X	X		X	X			

Relinquished
 Printed Name: SEAN CASEY
 Signature: [Signature]
 Affiliation: VCHCA

Received
 Printed Name: Nadia West
 Signature: [Signature]
 Affiliation: RH LAB

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



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

Sampling Date: 1/19/2017 Project Number: 2016/17-5 (Wet)
 Sampling Team: Steven S. Greer, Dean W.

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
ME-SC	ME-SC		X	X	X	X	X	X	2	
ME-SCR			X	X	X	X	X	X	2	
ME-VR2		1/19/2017 0210	X	X	X	X	X	X	2	
MO-CAM			X	X	X	X	X	X	2	
MO-OJA		1/19/2017 0115	X	X	X	X	X	X	2	
MO-MEI		1/19/2017 0200	X	X	X	X	X	X	2	
MO-VEN			X	X	X	X	X	X	2	
MO-HUE	MO-HUE		X	X	X	X	X	X	2	

Relinquished Printed Name Steven S. Greer
 Signature [Signature]
 Affiliation VCDPD: WRSE Date/Time 1/19/2017 @ 0525

Received Printed Name Nadia West
 Signature [Signature]
 Affiliation PH LAB Date/Time 01/19/17 @ 0525

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



Chain of Custody Record

Ventura County Watershed Protection District **7A0063**
 NPDES Stormwater Monitoring Program
 Project: NPDES Stormwater Wet Season (Contract AE17-001)
 Grabs - Weck Laboratories (SIDE 1 of 1)

Sampling Date: 01/19/2017 Project Number: 2016/17-5 (Wet) Grabs
 Sampling Team: LM, SC; SG, DW

SAMPLE ID	DATE/TIME COLLECTED						Travel Blanks (EPA 624)-only analyze if hits							Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)										
ME-SCR	1/19/17 03:30	2	1	2	3	1								9	LM, SC
ME-VR2	03:10	2	1	2	3	1								9	SG, DW
MO-OJA	01:15	2	1	2	3	1								9	SG, DW
MO-MEI	02:00	2	1	2	3	1								9	SG, DW
MO-CAM	02:35	2	1	2	3	1								9	LM, SC
MO-VEN	01:55	2	1	2	3	1								9	LM, SC
MO-HUE	✓ 01:05	2	1	2	3	1								9	LM, SC

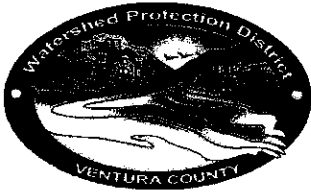
Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VCWSPD Date/Time 1/19/17 / 1430

Received Printed Name STEVE YIPANI
 Signature [Signature]
 Affiliation ESSENTIAL Date/Time 1/19-17 2:20pm

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] 1/19/17 1035 1.0²

[Signature]
 Ventura Countywide Stormwater Quality Management Program 2016/17 Annual Report



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

7A19070

Sampling Date: 01/19/2017 Project Number: 2016/17-5 (Wet) Composites

Sampling Team: SG, DW; KH, WBC; KH, SC

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-SCR	1/19/17 13:15	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, SC
ME-VR2	* 09:45	X	X	X	X	X	X	X	X	X	X	X	X	1	* 09:45 KH, WBC
MO-OJA	0400	X	X	X	X	X	X	X	X	X	X	X	X	1	SG, DW
MO-MEI	0420	X	X	X	X	X	X	X	X	X	X	X	X	1	SG, DW
MO-CAM	10:25	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, WBC
MO-VEN	10:50	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, WBC
MO-HUE	✓ 12:25	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, SC

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 VCWED Date/Time 1/19/17 1:430

Received Printed Name STEVE YUMKAL
 Signature [Signature]
 Affiliation ESSENTIAL Date/Time 1/19/17 2:20

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

[Signature] 1/19/17 1:435 1.02



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: 01/19/2017 Project Number: 2016/17-5 (Wet) Cleaning

Sampling Team: _____

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid	4			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			7	
Black bags			7	
20 L narrow neck carboy, 2 lids, attachment assembly	3			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name KELLY HAHS

Signature *Kelly HaHS*

Affiliation VCWPD Date/Time 1/19/17 / 1430

Received Printed Name STEPHANIE

Signature *[Signature]*

Affiliation ESSENTIAL Date/Time 1/19/17 2:00

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



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

Sampling Date: 5/4/17 Project Number: 2016/17-6 (Dry)
 Sampling Team: K. HAHS, S. GREER

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filters	Number of Bottles	NOTES
	ME-SCR	5/4/17 0940	X	X	X	X	X	X	2	2 DNA Filters
	MO-SPA	DRY	X	X	X	X	X	X		2 DNA Filters
	MO-FIL	5/4/17 0820	X	X	X	X	X	X	2	2 DNA Filters
	MO-OXN	↓ 11:50	X	X	X	X	X	X	2	2 DNA Filters
	MO-VEN	↓ 1050	X	X	X	X	X	X	2	2 DNA Filters

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VcwPD Date/Time 5/4/17

Received Printed Name Nadia West
 Signature [Signature]
 Affiliation PH LAB Date/Time 1341 05/04/17

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



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

Sampling Date: 5/18/17 Project Number: 2016/17-6 (Dry)
 Sampling Team: K. HAHS, W.B. CAREY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filters	Number of Bottles	NOTES
	ME-CC	5/18/17 1040	X	X	X	X	X	X		2 DNA Filters
	MO-MPK	0810	X	X	X	X	X	X		2 DNA Filters
	MO-SIM	0915	X	X	X	X	X	X		2 DNA Filters
	MO-THO	1010	X	X	X	X	X	X		2 DNA Filters
	MO-CAM	11:25	X	X	X	X	X	X		2 DNA Filters

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation (VCWPD) Date/Time 5/18/17

Received Printed Name Soel Y. Banzagan
 Signature [Signature]
 Affiliation P.H. - Lab Date/Time 5/18/17 12:08

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



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

Sampling Date: 5/23/17 Project Number: 2016/17-6 (Dry)
 Sampling Team: K. HAHS

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filters	Number of Bottles	NOTES
	ME-VR2	5/23/17 1110	X	X	X	X	X	X		2 DNA Filters
	MO-OJA	↓ 0920	X	X	X	X	X	X		2 DNA Filters
	MO-ME1	_____	X	X	X	X	X	X		2 DNA Filters DRY
	MO-HUE	5/23/17 1220	X	X	X	X	X	X		2 DNA Filters

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VCPD Date/Time 5/23/17

Received Printed Name Salvador A. Barragan
 Signature [Signature]
 Affiliation V.H. Lab Date/Time 5/23/17 13:04

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



7E23083

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: 5/23/17 Project Number: 2016/17-6 (Dry) Grabs
 Sampling Team: K. HAHS

SAMPLE ID	DATE/TIME COLLECTED							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-VR2	5/23/17 1110	2	1	2	3	1	9		
MO-OJA	↓ 0920	2	1	2	3	1	9		
MO-MEI		2	1	2	3	1	9	DRY	
MO-HUE	5/23/17 1220	2	1	2	3	1	9		

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

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VCWPD Date/Time 5/23/17 / 1440

Received Printed Name [Signature]
 Signature [Signature]
 Affiliation VCWPD Date/Time 5-23-17

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

James [Signature] 5/23/17 1642 1.70



7E05012
7E080 36
SAB

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: 5/4/17 Project Number: 2016/17-6 (Dry) Grabs
 Sampling Team: K. HANS, S. GREER

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease (EPA 1664A)					Travel Blanks (EPA 624)-only analyze if hits	Number of Bottles	NOTES
		Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLEVE (EPA 624)					
ME-SCR	5/4/17 0940	2	1	2	3	1	9		
MO-SPA	DRY	2	1	2	3	1	9	DRY	
MO-FIL	5/4/17 0820	2	1	2	3	1	9		
MO-OXN	1150	2	1	2	3	1	9		
MO-VEN	↓ 1050	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 VCWPD Date/Time 5/4/17 / 1455

Received Printed Name _____
 Signature [Signature]
 Affiliation _____ Date/Time 5-4-17

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] 5/4/17 HNS
1.70



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)

7E18056

Sampling Date: 5/18/17 Project Number: 2016/17-6 (Dry) Grabs
 Sampling Team: K. HAHNS, W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED						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	5/18/17 1040	2	1	2	3	1	9	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.
MO-MPK	0810	2	1	2	3	1	9	
MO-SIM	0915	2	1	2	3	1	9	
MO-THO	1010	2	1	2	3	1	9	
MO-CAM	1125	2	1	2	3	1	9	

Relinquished Printed Name KELLY HAHNS
 Signature [Signature]
 Affiliation Ventura County Watershed Protection District Date/Time 5/18/17 / 1520

Received Printed Name [Signature]
 Signature [Signature]
 Affiliation Reliate Date/Time 5-18-17

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

[Signature] 5/18/17 1822 34

7E23082



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: 5/23/17 Project Number: 2016/17-6 (Dry) Composites

Sampling Team: K. HAHS

Table with columns: 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.

Relinquished Printed Name KELLY HAHS
Signature [Handwritten Signature]
Affiliation VCWPD Date/Time 5/23/17/ 1440

Received Printed Name [Handwritten Name]
Signature [Handwritten Signature]
Affiliation [Handwritten Name] Date/Time 5-23-17

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).



7E23082

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: 5/23/17 Project Number: 2016/17-6 (Dry) Cleaning
 Sampling Team: K. HAHS

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid	3	2		Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			3	
Black bags			3	
20 L narrow neck carboy, 2 lids, attachment assembly	2			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name KELLY HAHS

Signature [Signature]

Affiliation VcwPD Date/Time 5/23/17 / 1440

Received Printed Name [Signature]

Signature [Signature]

Affiliation Reliable Date/Time 5-23-17

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

Sometimes 5/23/17 note



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

7E0405A

Sampling Date: 5/4/17
 Sampling Team: K. HAHS, S. GREER

Project Number: 2016/17-6 (Dry) Composites

SAMPLE ID	DATE/TIME COLLECTED				Dissolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
																	Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Tl, Zn, Hg
ME-SCR	5/4/17 0940				X	X	X	X	X	X	X	X	X	X	X	1	
MO-SPA	DRY				X	X	X	X	X	X	X	X	X	X	X	1	DRY
MO-FIL	5/4/17 0820				X	X	X	X	X	X	X	X	X	X	X	1	
MO-oxn	↓ 11050				X	X	X	X	X	X	X	X	X	X	X	1	
MO-ven	↓ 1050				X	X	X	X	X	X	X	X	X	X	X	1	

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VCDWP Date/Time 5/4/17 / 1455

Received Printed Name _____
 Signature [Signature]
 Affiliation _____ Date/Time 5-4-17 2:40pm

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).

Jana Inca 5/4/17 1745



7E04057

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: 5/4/17 Project Number: 2016/17-6 (Dry) Cleaning
 Sampling Team: K. HAHS, S. GREER

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

Relinquished Printed Name KELLY HAHS
 Signature Kelly HaHS
 Affiliation VWCPD Date/Time 5/4/17 / 1455

Received Printed Name _____
 Signature _____
 Affiliation _____ Date/Time 5-4-17

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

James Hines 5/4/17 1745 2016

7E18055



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: 5/18/17 Project Number: 2016/17-6 (Dry) Composites
 Sampling Team: K. HAHS, W.B. CAREY

SAMPLE ID	DATE/TIME COLLECTED	NO3-N, Total Chlorine Residual	Dissolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
ME-CC	5/18/17 036	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO-MPK	0810		X	X	X	X	X	X	X	X	X	X	X	1	
MO-SIM	0915		X	X	X	X	X	X	X	X	X	X	X	1	
MO-THO	1010		X	X	X	X	X	X	X	X	X	X	X	1	
MO-CAM	✓ 1120		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 K KELLY HAHS
 Signature [Signature]
 Affiliation VWCPD Date/Time 5/18/17 1520

Received Printed Name [Signature]
 Signature DAVID LEY
 Affiliation _____ Date/Time 5-18-17

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 Dry Weather (Contract AE17-001)
Equipment - Weck Laboratories

Sampling Date: 5/18/17 Project Number: 2016/17-6 (Dry) Cleaning
 Sampling Team: K. HANS

EQUIPMENT	Clean with detergent and HNO3	Clean with detergent, HNO3, and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid	2			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler			5	
Black bags			5	
20 L narrow neck carboy, 2 lids, attachment assembly	3			Please place tape or plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name KELLY HANS
 Signature [Signature]
 Affiliation Ventura County Watershed Protection District Date/Time 5/18/17 / 1520

Received Printed Name [Signature]
 Signature [Signature]
 Affiliation Reliable Date/Time 5-18-17

Other Notes: * Please clean with detergent, nitric, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organics contamination). Record the bottles cleaned with methanol.
[Signature] 5/18/17 1822



Start @
1400
incubate @
1420

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

Sampling Date: 8/3/17 Sample Event: DRY 2017
 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
1	Camarillo-4	8/3/17 0915	X	X							1	MO-CAM DRY-CAM4
	Fillmore-1											MO-FIL
2	Moorpark-1	8/3/17 1020	X	X							1	MO-MPK
	Ojai-1											MO-OJA
3	Oxnard-2	8/3/17 0800	X	X							1	MO-oxn DRY- oxn ^{oxn} 2
GA	Port Huaceme-3	0803170 1420	X	X								DRY HUE3
	Santa Paula-2											DRY-SPA2
4	Simi Valley-1	8/3/17 1055	X	X							1	MO-SIM
5	Thousand Oaks-1	8/3/17 1140	X	X							1	MO-THO
6	Unincorporated-2	8/3/17 1240	X	X							1	DRY-UNI 2
	Ventura-1											MO-VEN

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VCWPD Date/Time 8/3/17/1351

Received Printed Name Nadia West
 Signature [Signature]
 Affiliation PH LAB Date/Time 0803170 1355

Other Notes: 1:10, 1:100, and 1:1000 dilutions
Port Huaceme-3 Rnd @ 1457



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

Sampling Date: 8/2/17 Sample Event: DRY 2017

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

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)						Number of Bottles	NOTES
	Gamatillo-1										MO-GAM
	Fillmore-1	8/2/17 0945	x	x							MO-FIL
	Moorpark-1										MO-MPK
	Ojai-6	8/2/17 1120									MO-OJA
	Oxnard-1										MO-oxn
	Port Hueneeme-3										DRY-HUE3
	Santa Paula-4	8/2/17 0850									DRY-SPA4
	Simi Valley-1										MO-SIM
	Thousand Oaks-1										MO-THO
	Unincorporated-4										DRY-UNI4
	Ventura-5	8/2/17 13:15									MO-VEN

Relinquished Printed Name KELLY HAHS
 Signature [Signature]
 Affiliation VCHCA Date/Time 8/2/17/1410

Received Printed Name SAL Y. BARRALAN
 Signature [Signature]
 Affiliation P.H.-LAB Date/Time 8/2/17 14:14

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



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

7H04092

Sampling Date: 8/2/17 + 8/3/17 Sample Event: DRY 2017
 Sampling Team: W.B. CAREY, K. HAYS

SAMPLE ID	DATE/TIME COLLECTED	Total Hardness	TOC	Dissolved Metals by 200.8 (Lead, Zinc, Copper)	Number of Bottles	NOTES
Camarrillo-4	8/3/17 0915	X	X	X		<div style="border: 1px solid black; padding: 5px;"> 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.) </div>
Fillmore-1	8/2/17 0945	X	X	X		
Moorpark-1	8/3/17 1020	X	X	X		
Ojai-6	8/2/17 1120	X	X	X		
Oxnard-2	8/3/17 0800	X	X	X		
Port Hueneme-3	8/3/17 1420	X	X	X		
Santa Paula-4	8/2/17 0850	X	X	X		
Simi Valley-1	8/3/17 1055	X	X	X		
Thousand Oaks-1	1140	X	X	X		
Unincorporated-2	1240	X	X	X		
Ventura-5	8/2/17 13:15	X	X	X		

Relinquished Printed Name Lara Meeker
 Signature [Signature]
 Affiliation VCWPP Date/Time 8/4/17 11:05

Received Printed Name [Signature]
 Signature [Signature]
 Affiliation Weck Labs Date/Time 8/4/17 11:05

Other Notes: Dissolved metals field filtered but need preserved.

[Signature] 8/4/17 3pm [Signature] 8/4/17 1500 1.3°C
 Ventura Countywide Stormwater Quality Management Program 2016/17 Annual Report Page DE - 64 Attachment D Appendix E