



*Ventura Countywide
Stormwater Quality
Management Program*

2015-2016
Permit Year

Ventura Countywide Stormwater Quality Management Program Annual Report

Attachment D Monitoring Appendices A, B, C, D and F



December 15, 2016

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

Ventura County Watershed Protection District

Appendix A: Major Outfall Station Fact Sheets

Camarillo

Waterbody: Camarillo Hills Drain (tributary to Revolon Slough)

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

Pros: Likely well-defined rating table

Cons: Moderate potential for vandalism

Outstanding Site Selection Tasks: None

Other Potential Sites: None

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





Entire City

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

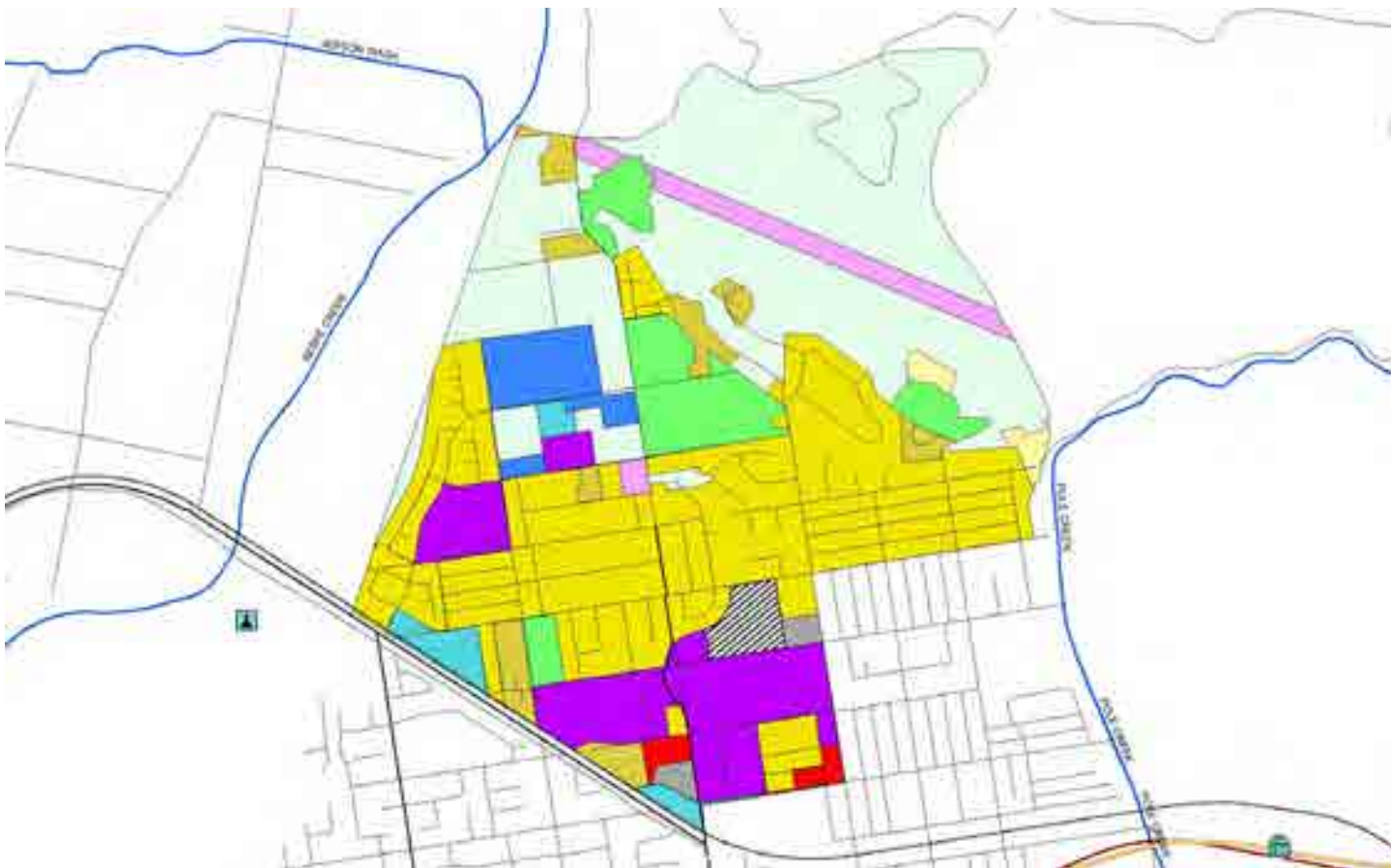
Cons: Potential for vandalism

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



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

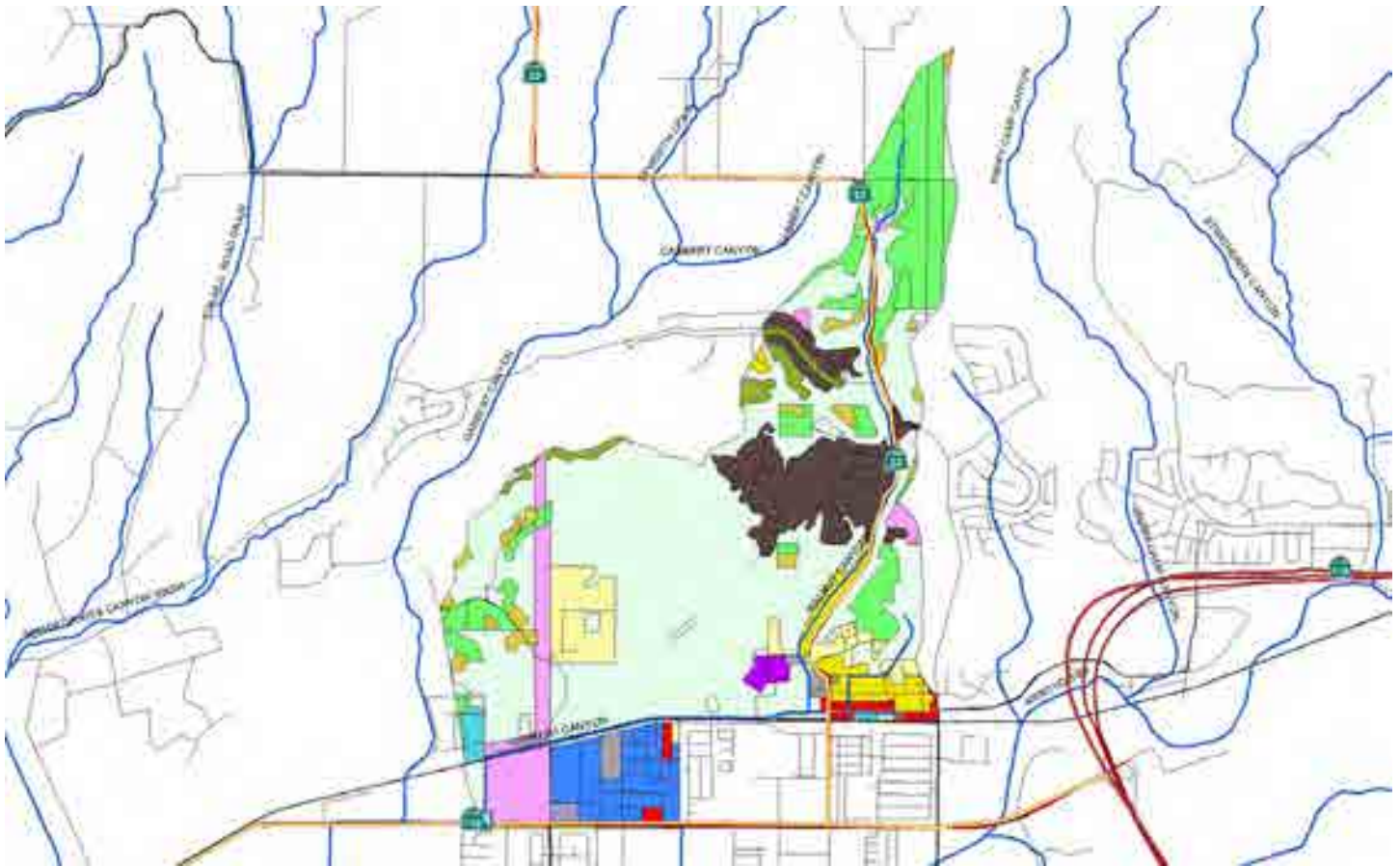
Cons: Aerial deposition from vehicular traffic on 118, potential for vandalism

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

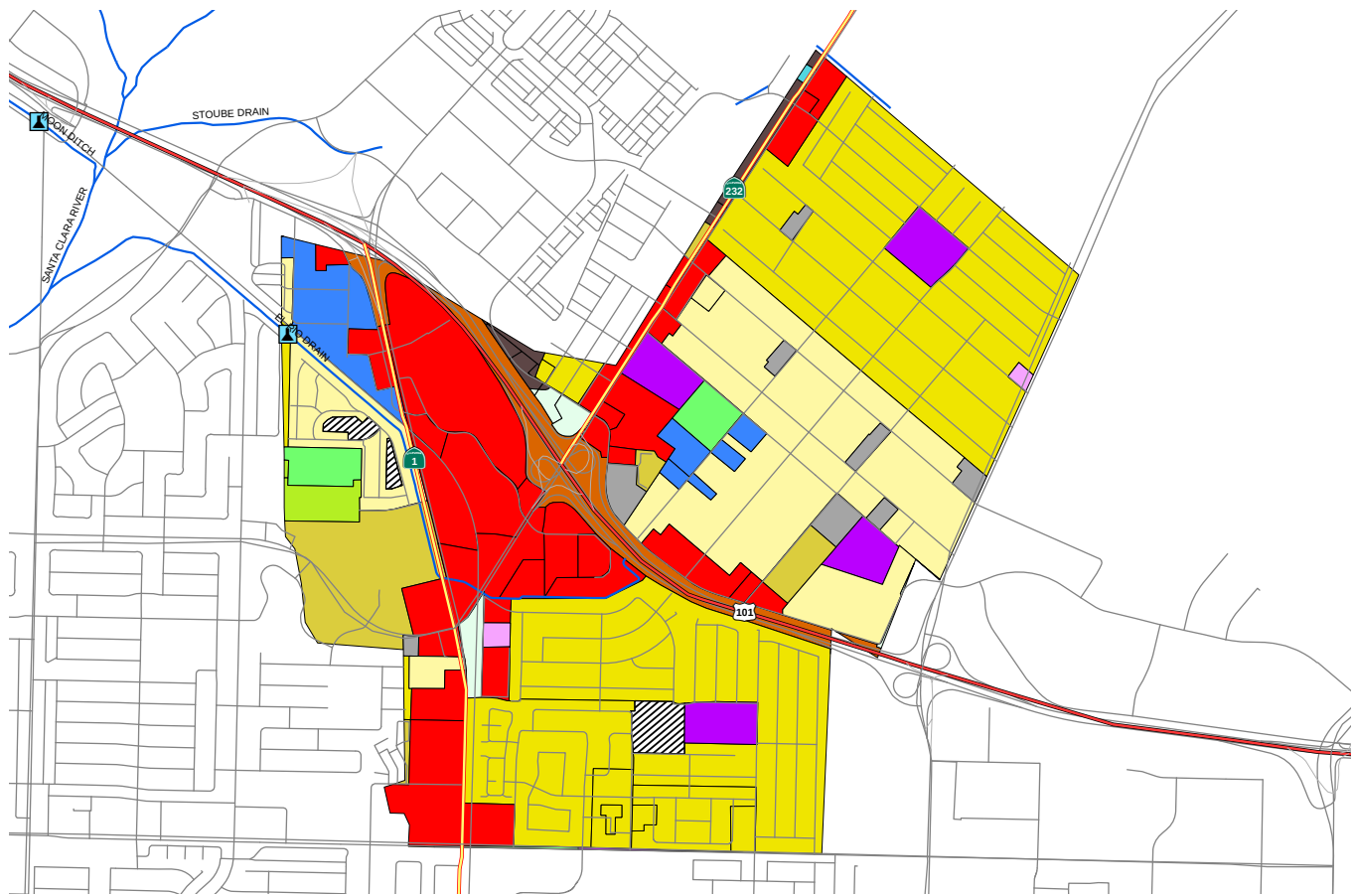
Cons: High potential for vandalism

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

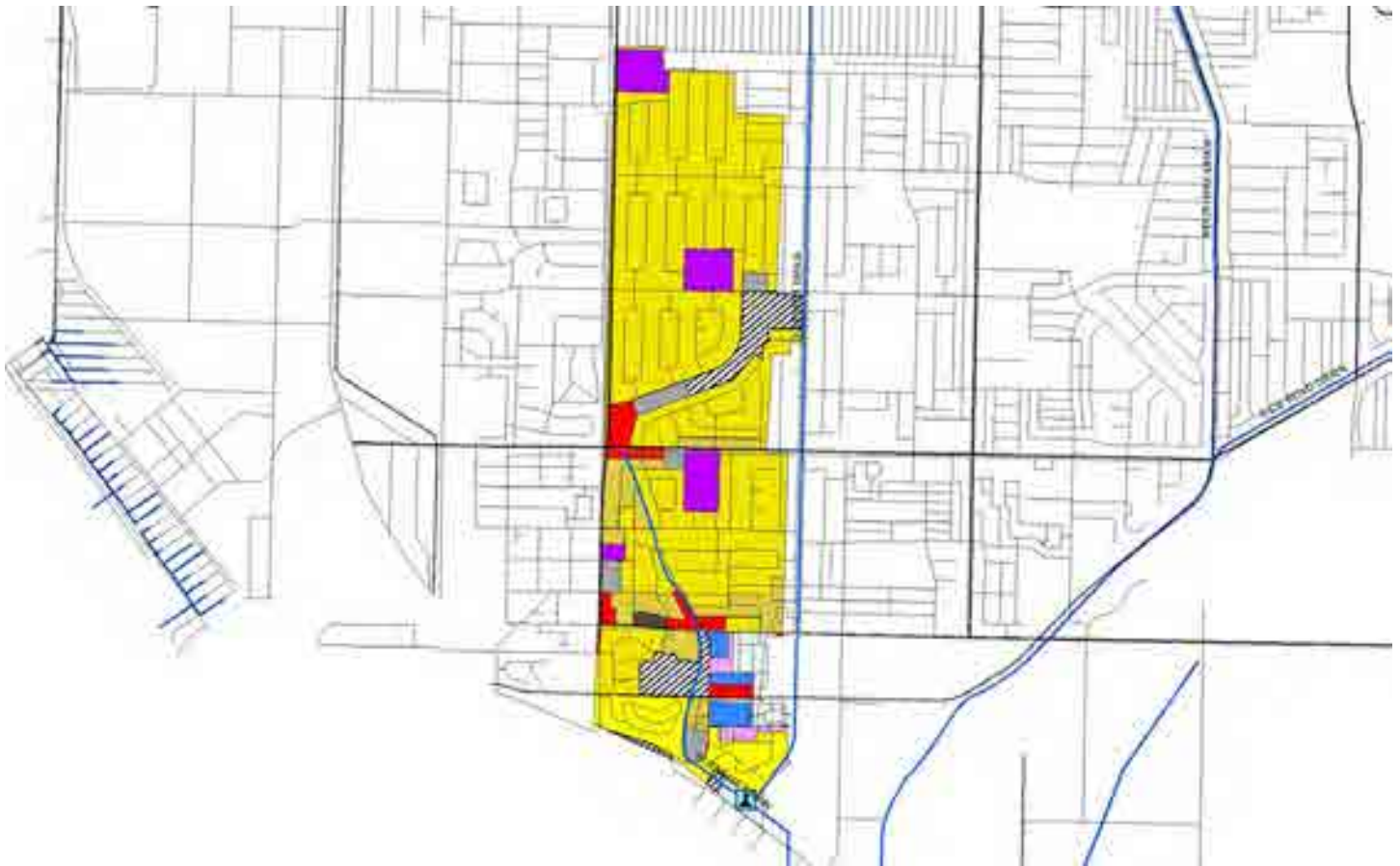
Cons: Lots of activity nearby, high potential for vandalism, stagnant water

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)

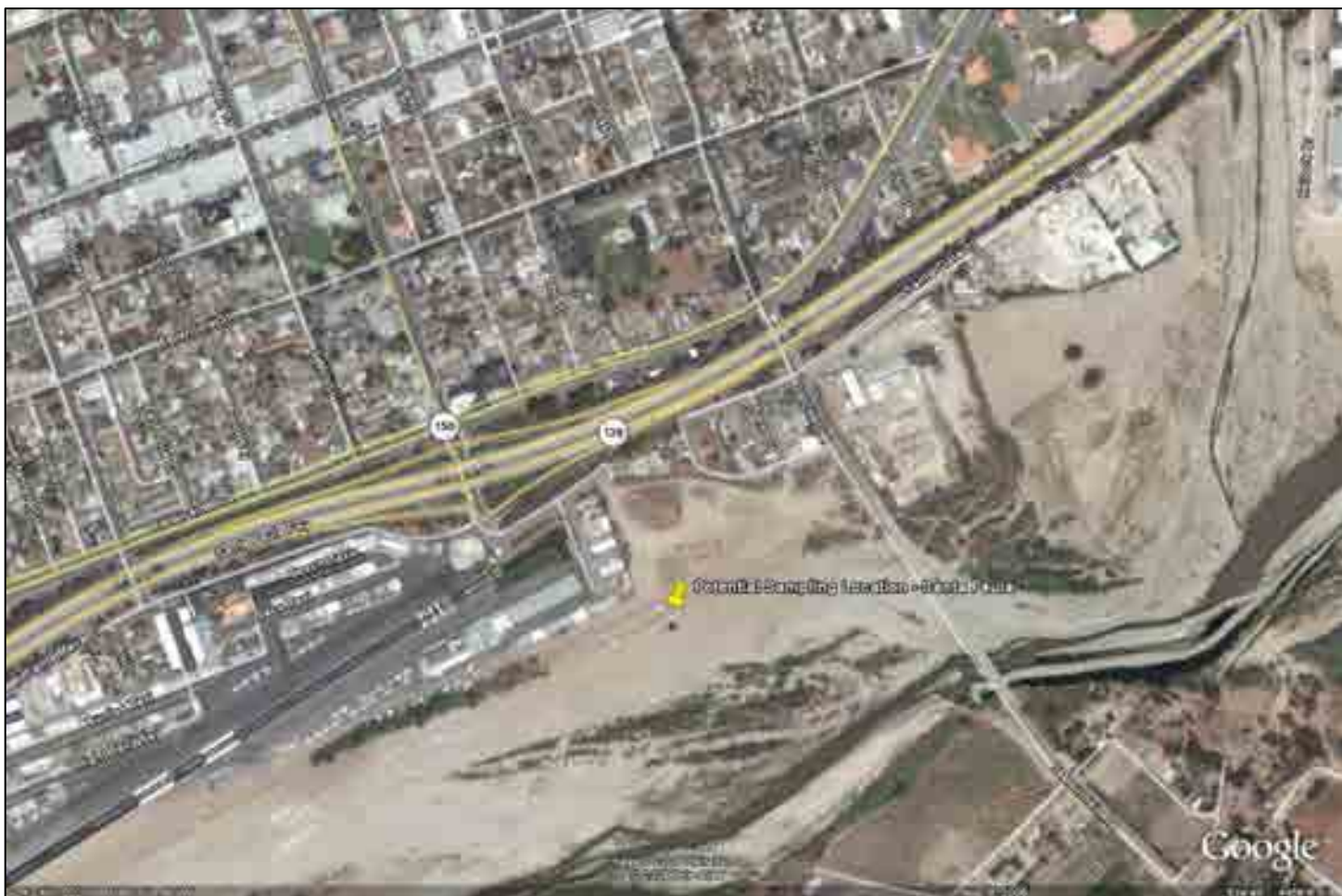
Pros: Excellent flat pad on top of outfall for sampling equipment

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

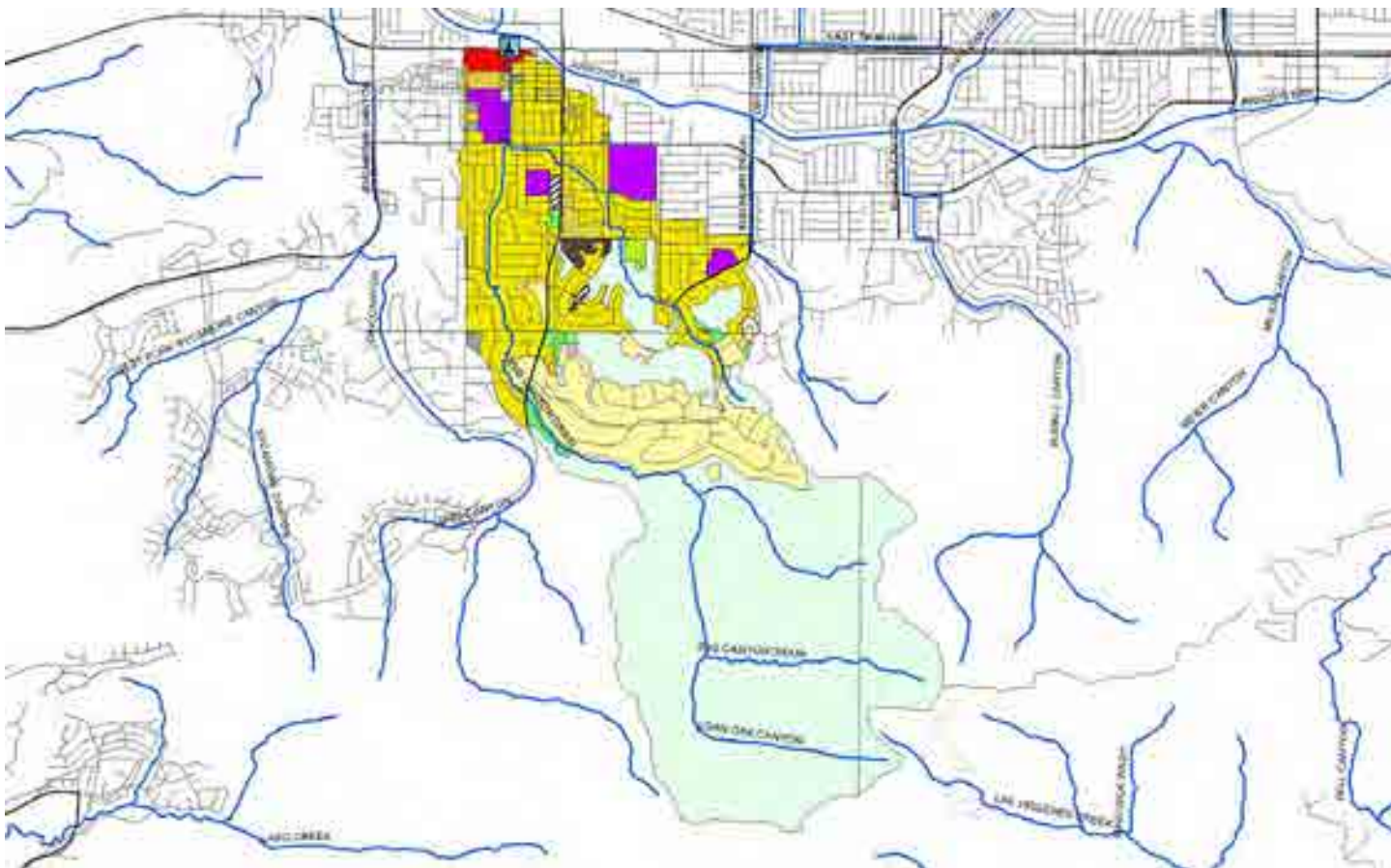
Cons: Pedestrian traffic on levee nearby

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

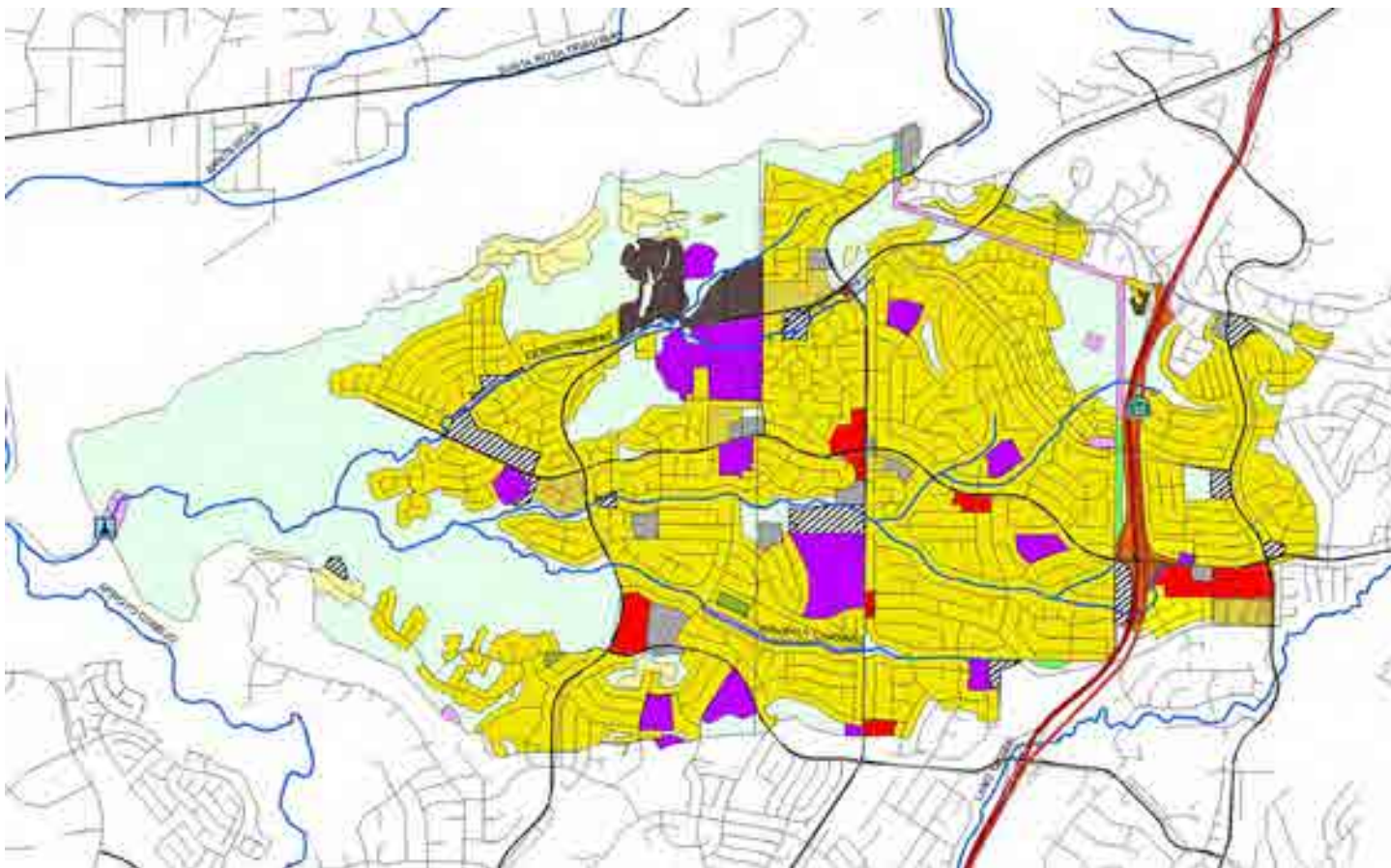
Cons: Late-night access to WWTP could present problem

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)

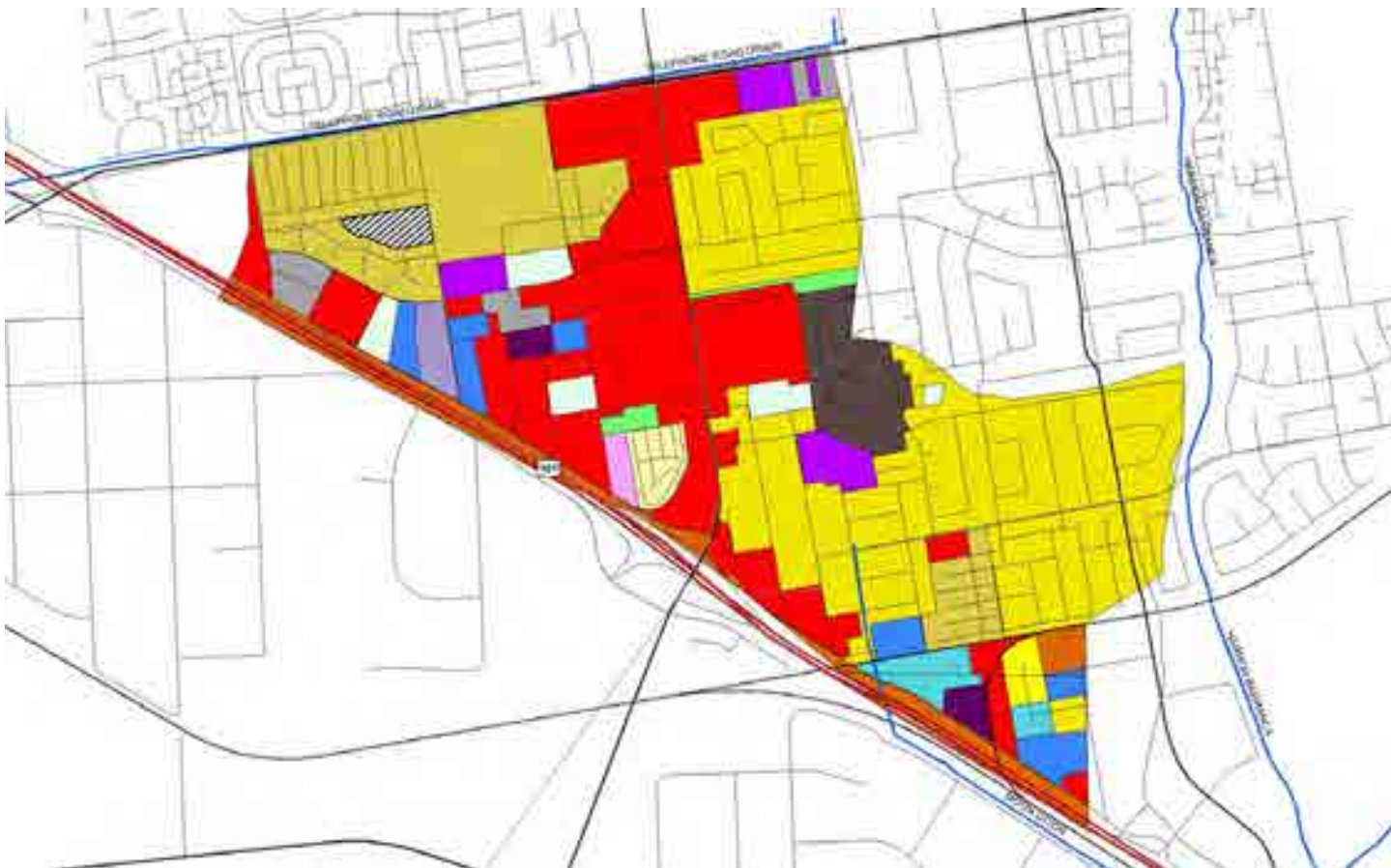
Cons: Wide concrete bottom will spread out low flows, placement of intake somewhat difficult

Outstanding Site Selection Tasks: None

Other Potential Sites: None

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





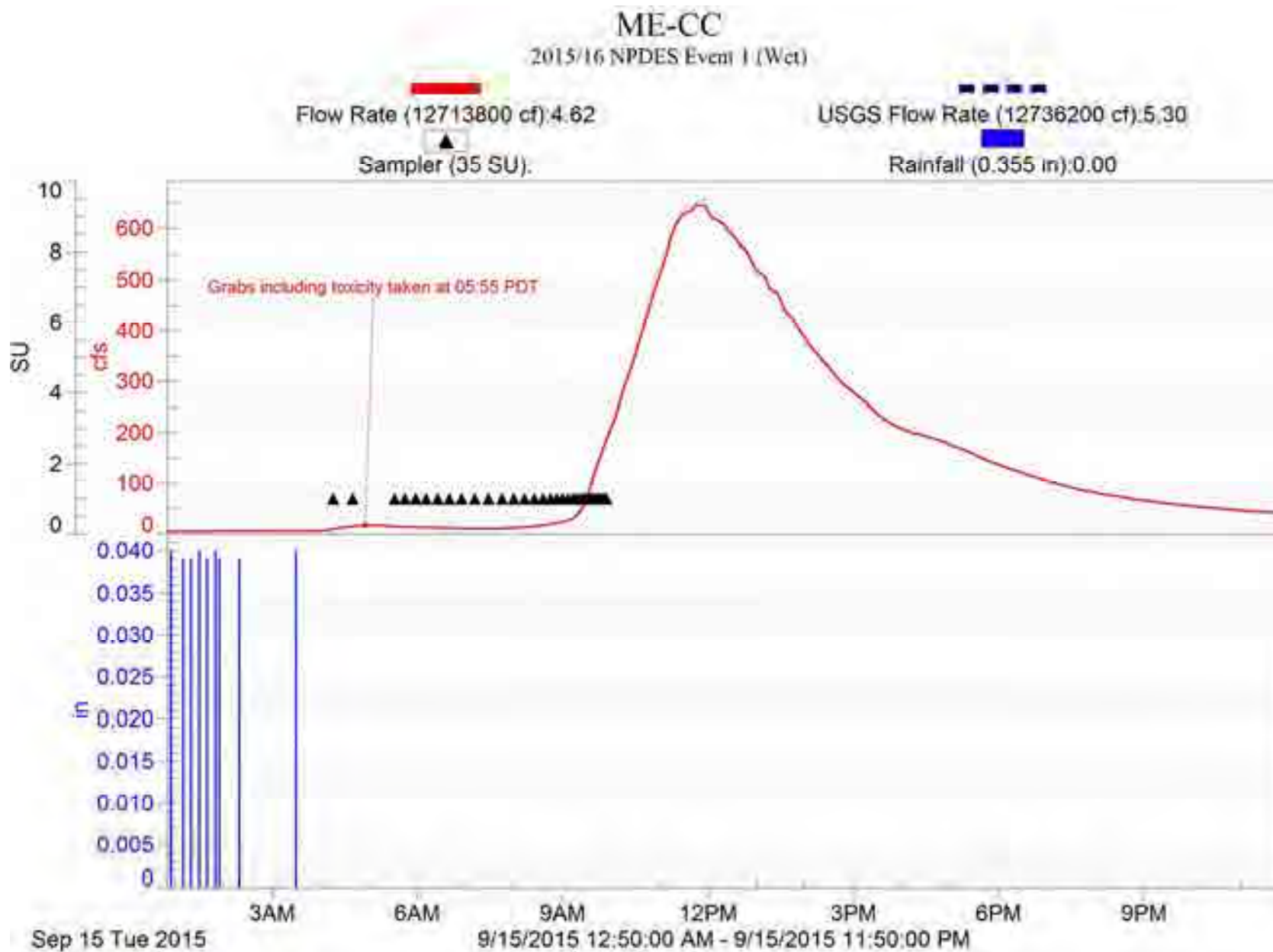
Entire City

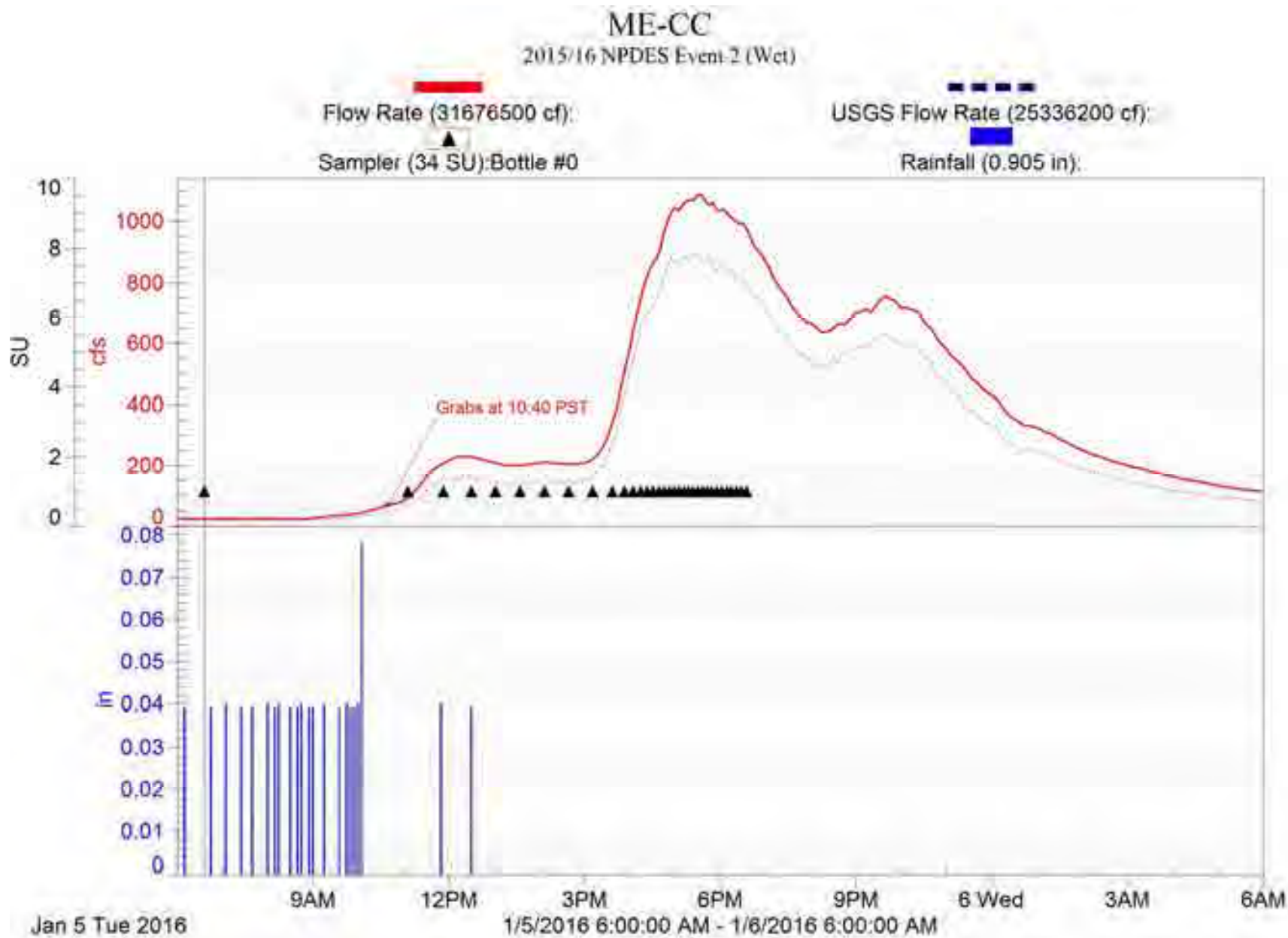
Land Use	Acres	% of Total Watershed
Agriculture	667.6	4.7%
Cemeteries	72.6	0.5%
Com_Indus. Mix	95.4	0.7%
Commercial	1402.9	10.0%
Extraction	39.2	0.3%
Facility	303.8	2.2%
Industrial_1	90.5	0.6%
Industrial_3	619.6	4.5%
Military_2	3.6	0.0%
No Info Given	285.7	2.1%
Recreation	516.3	3.7%
Res.1	361.1	2.6%
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





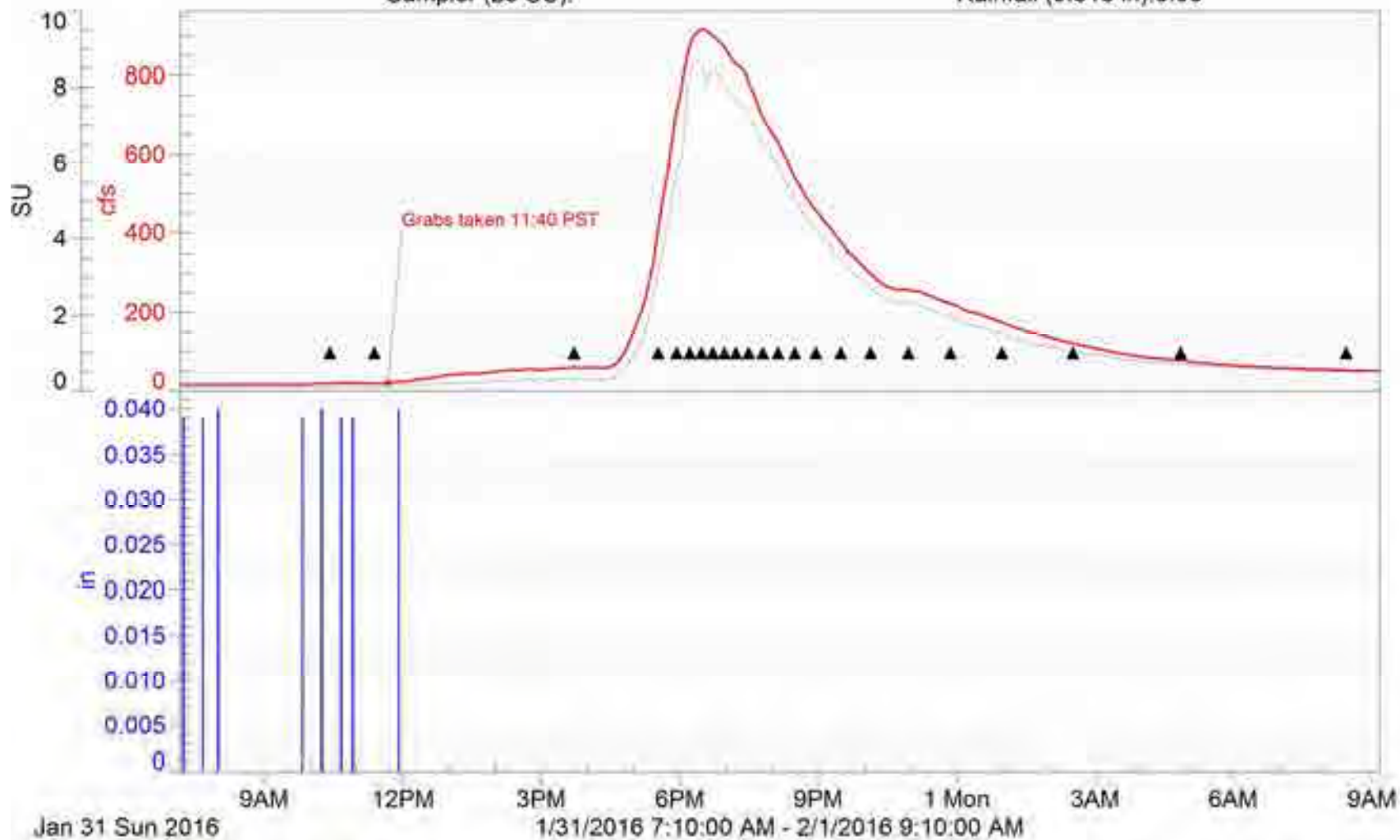
ME-CC 2015/16 NPDES Event 3 (Wet)

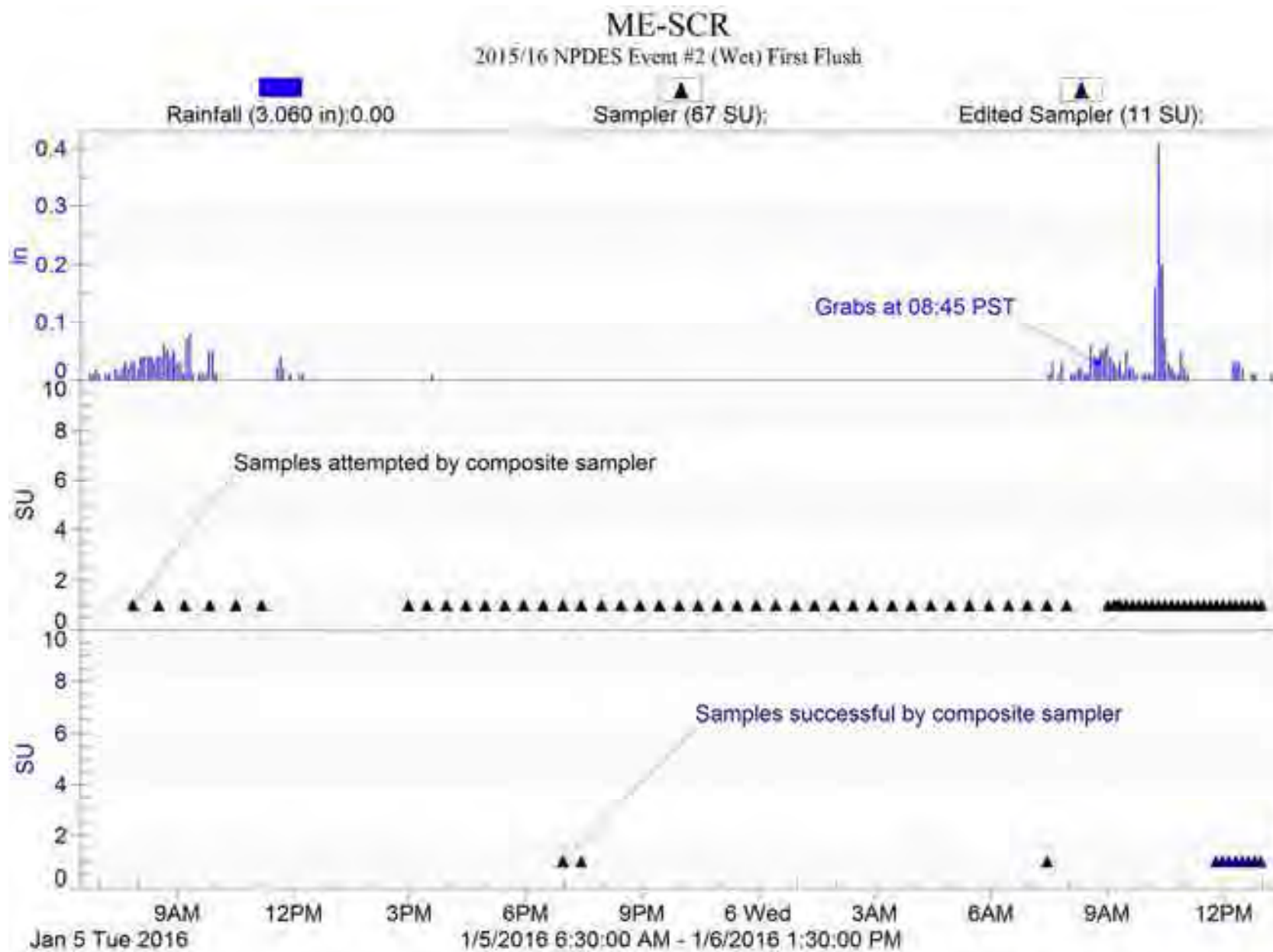
Flow Rate (17030700 cf):15.86

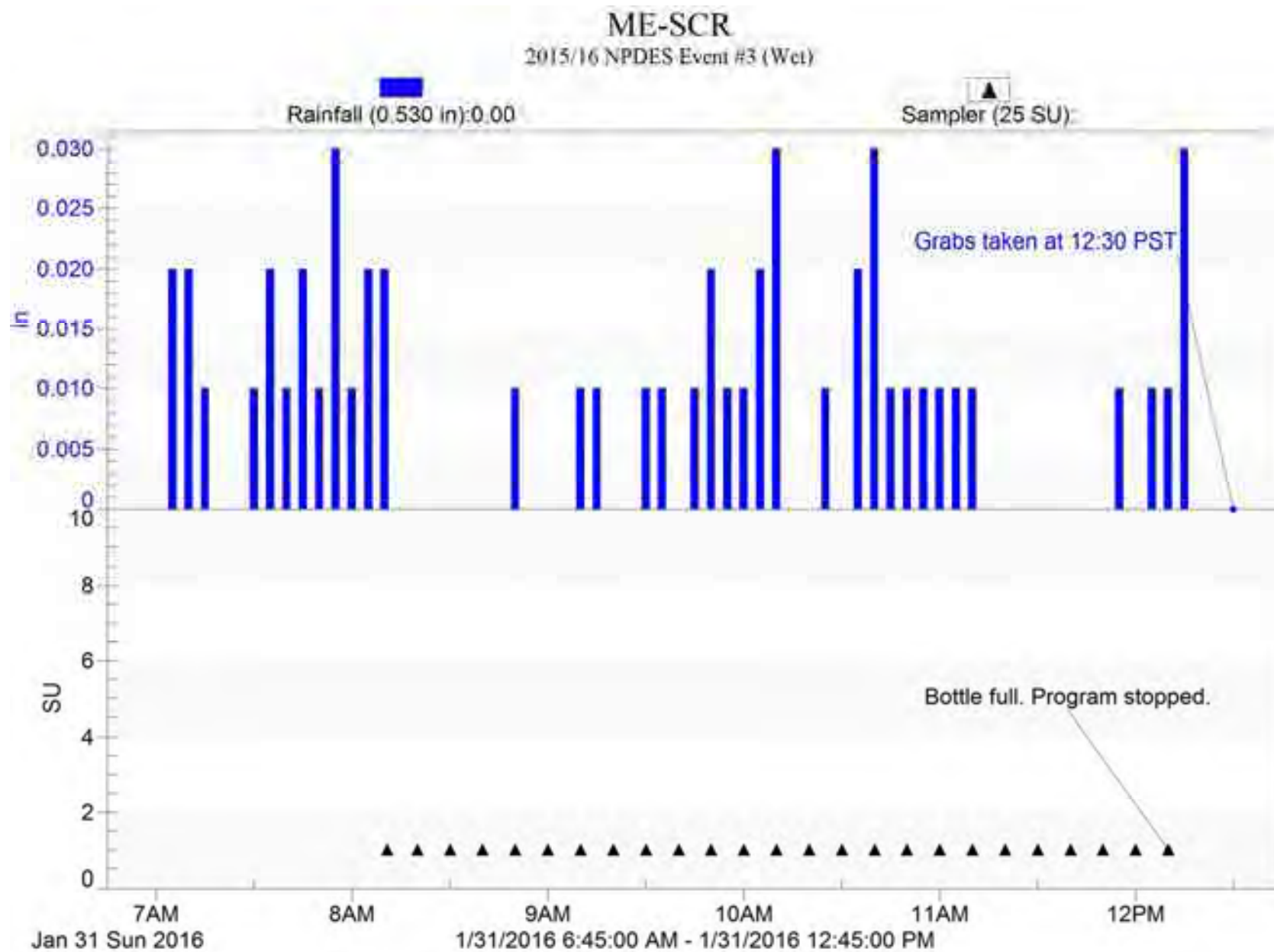
USGS Flow Rate (14346000 cf):8.00

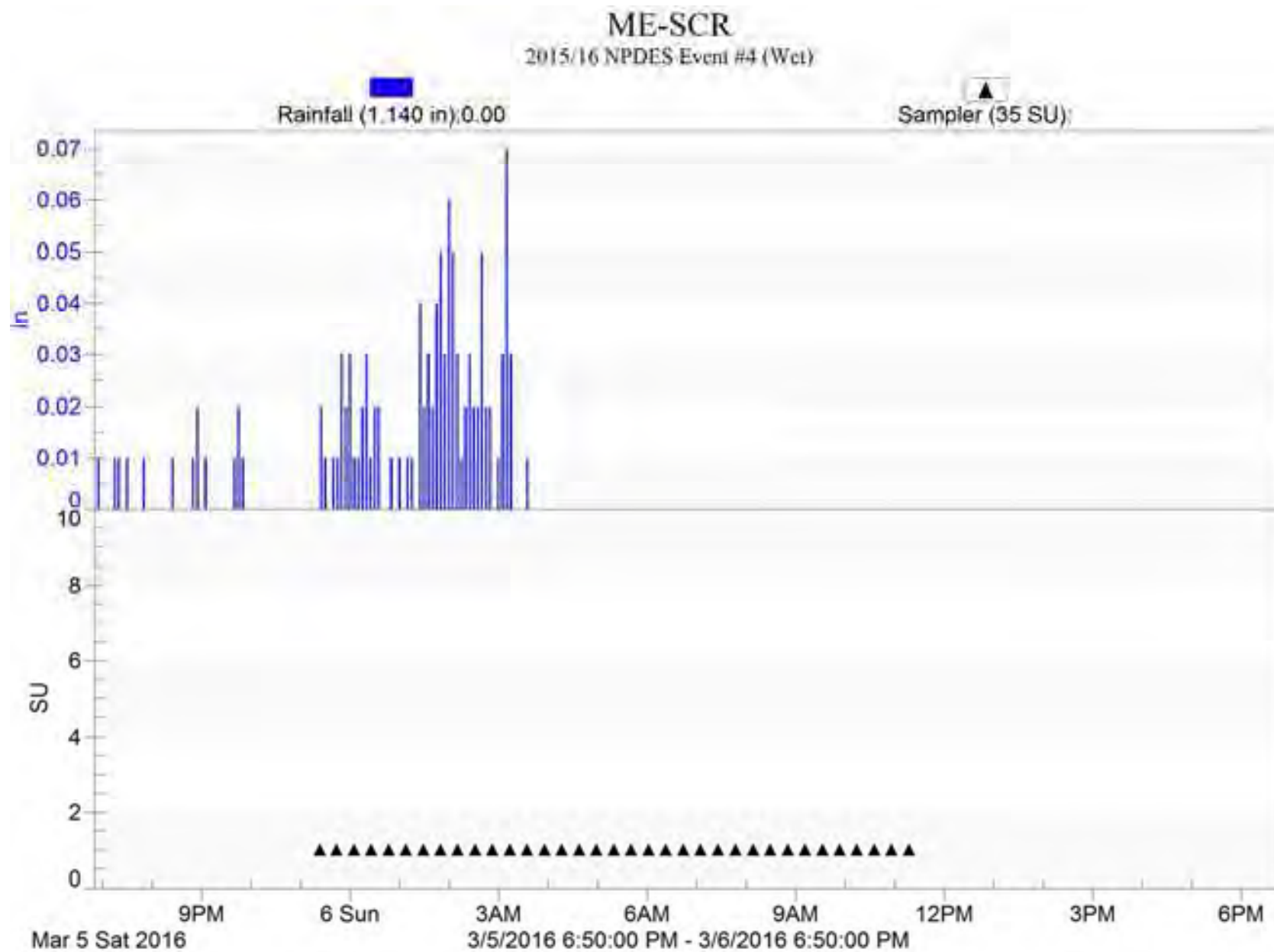
Sampler (23 SU):

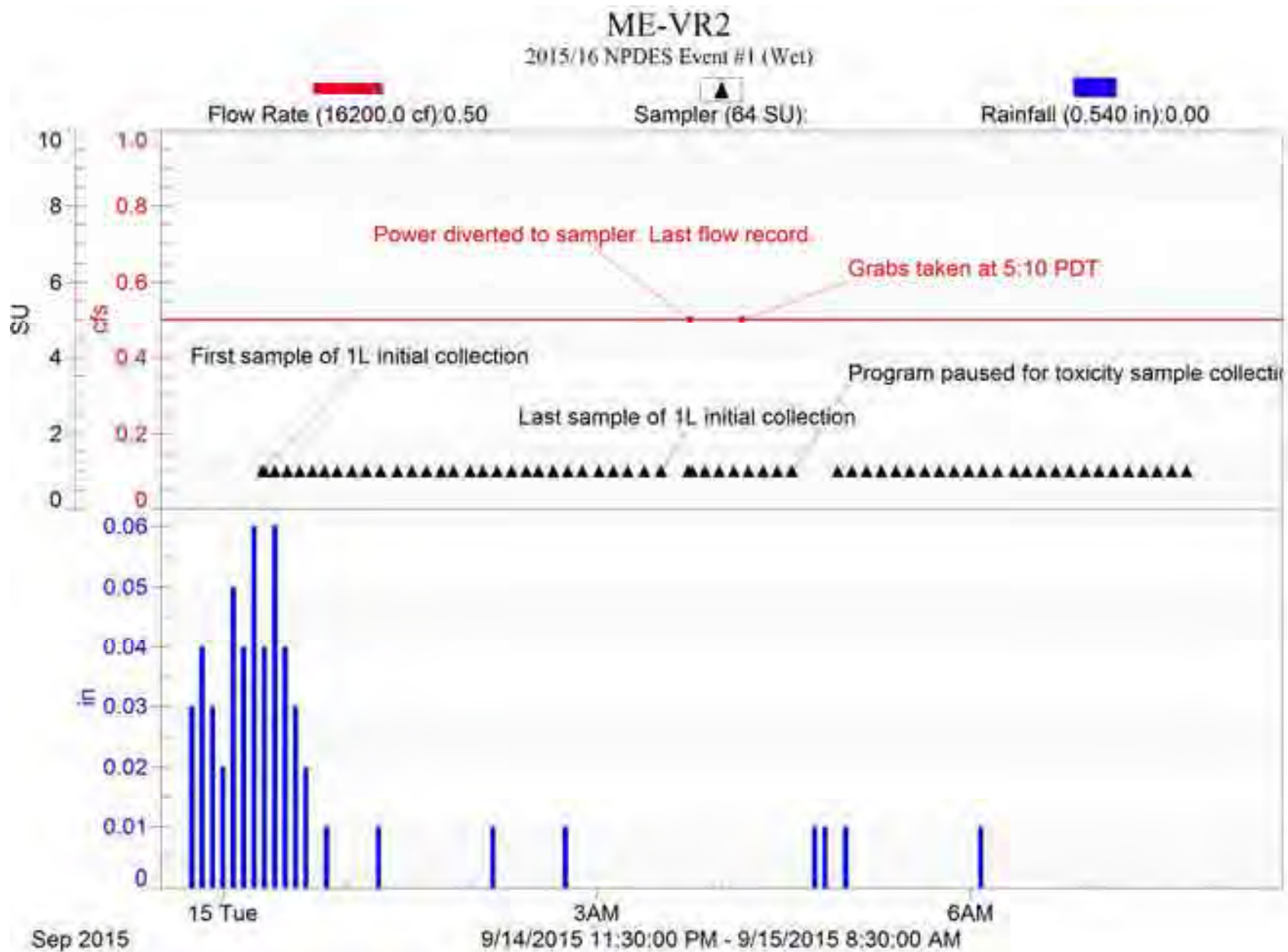
Rainfall (0.315 in):0.00

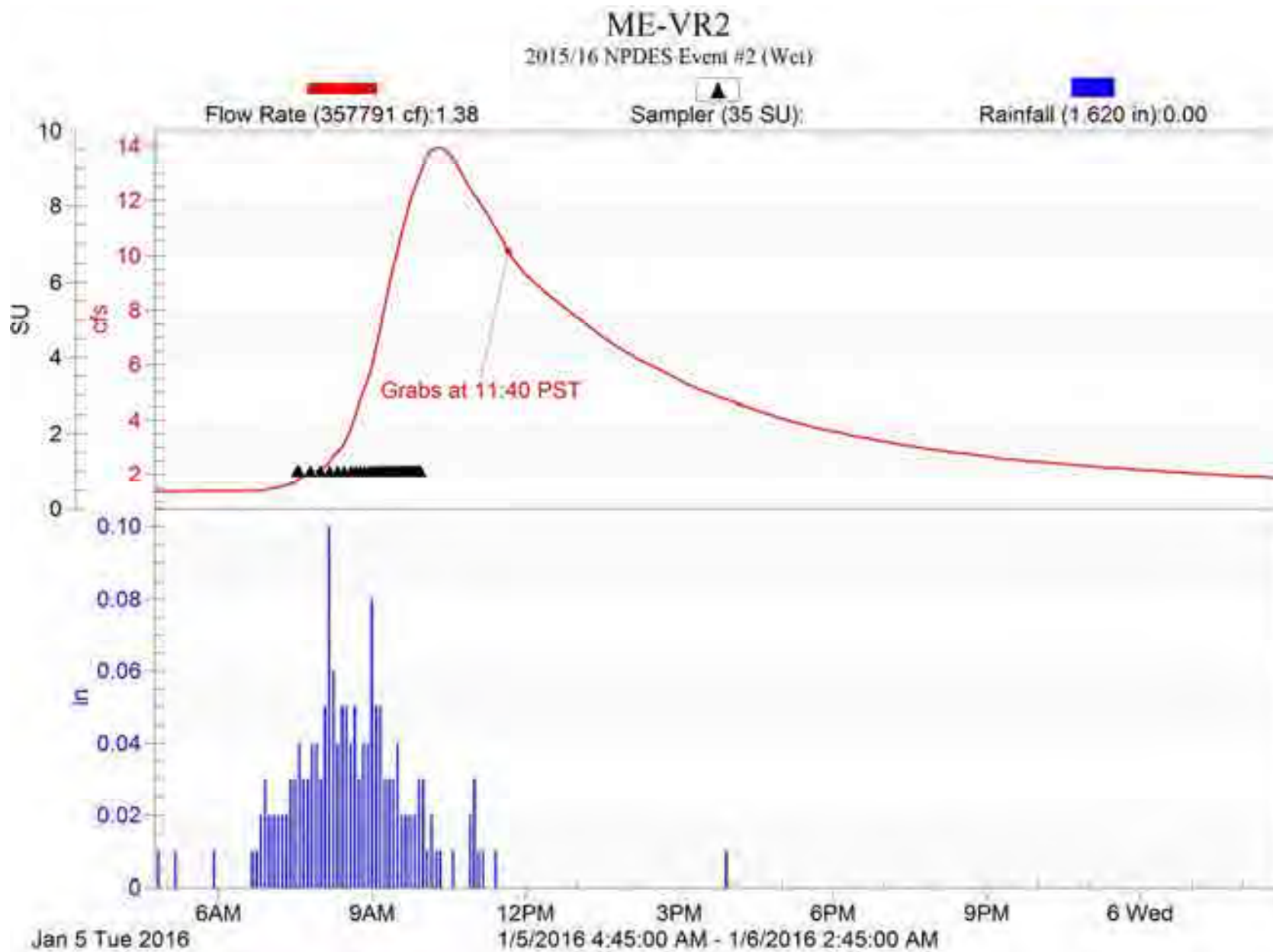


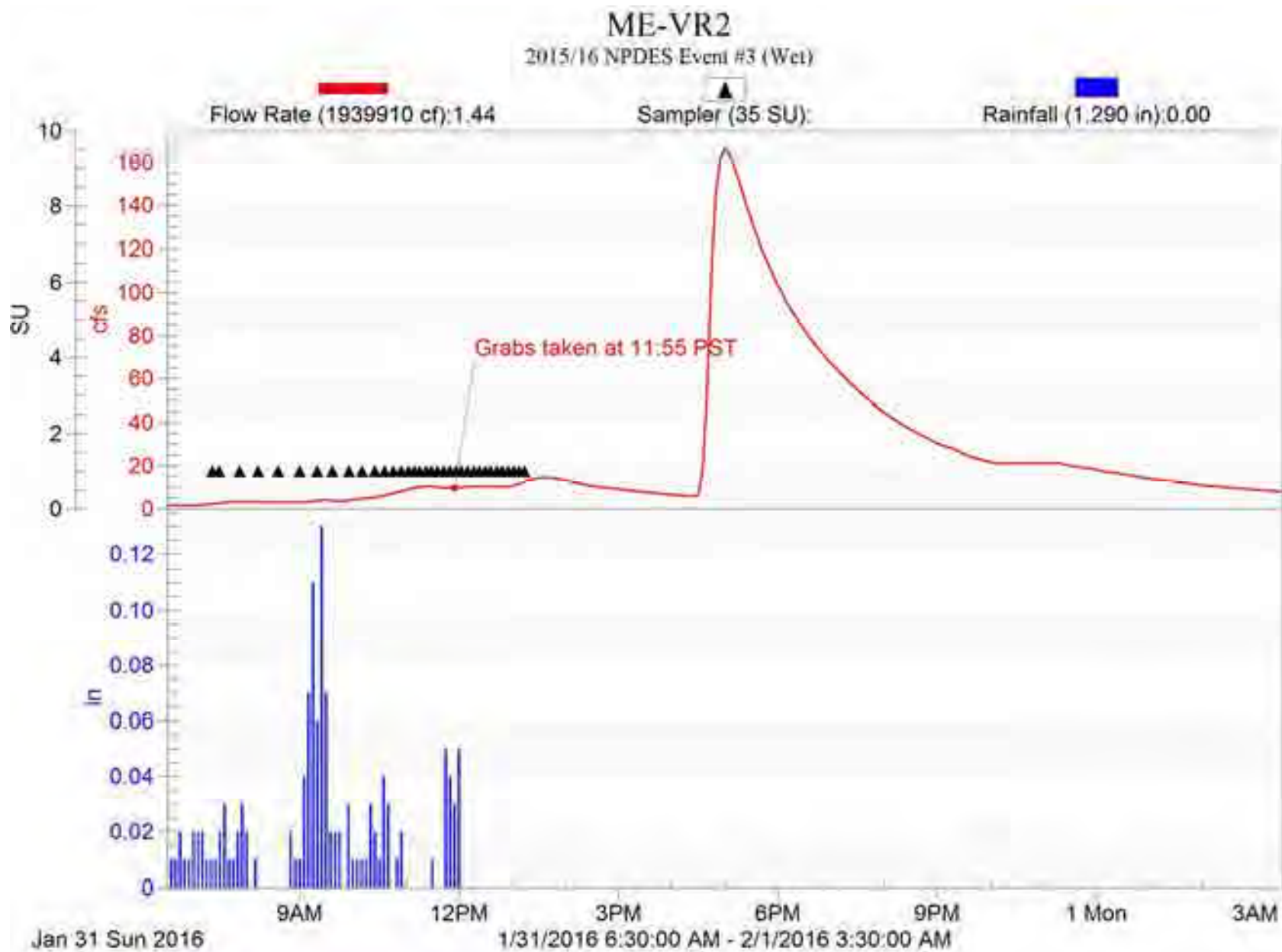


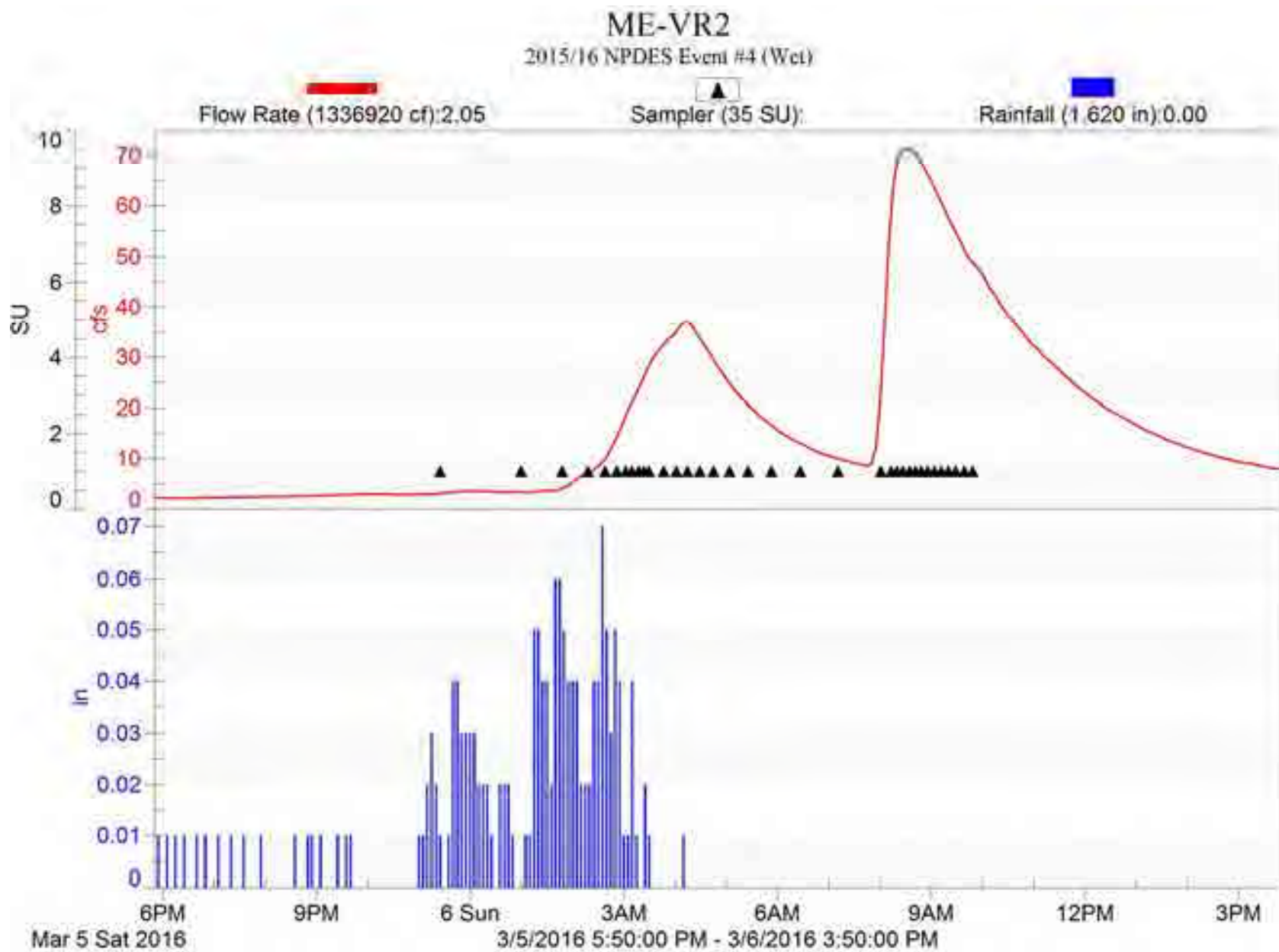


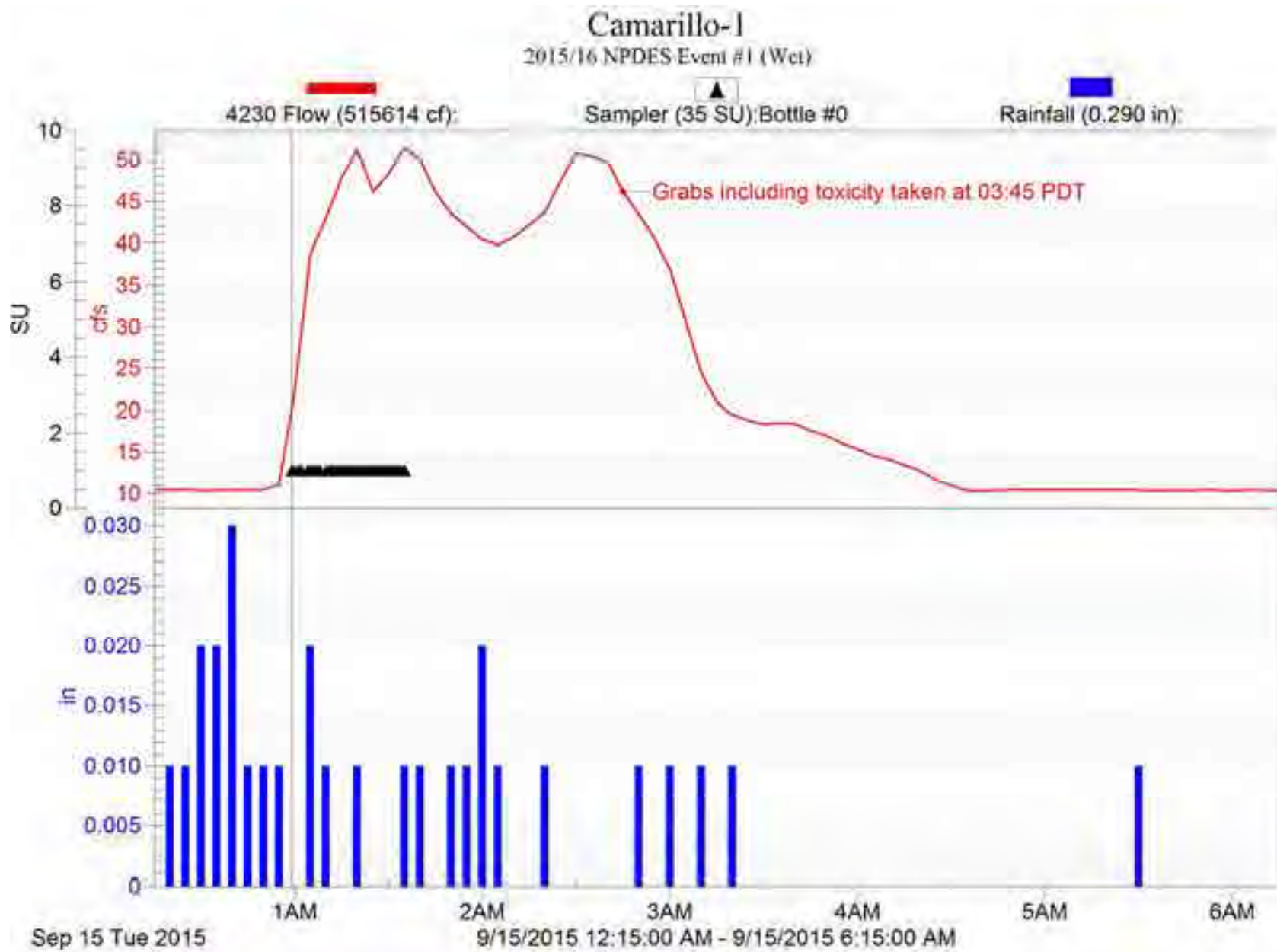


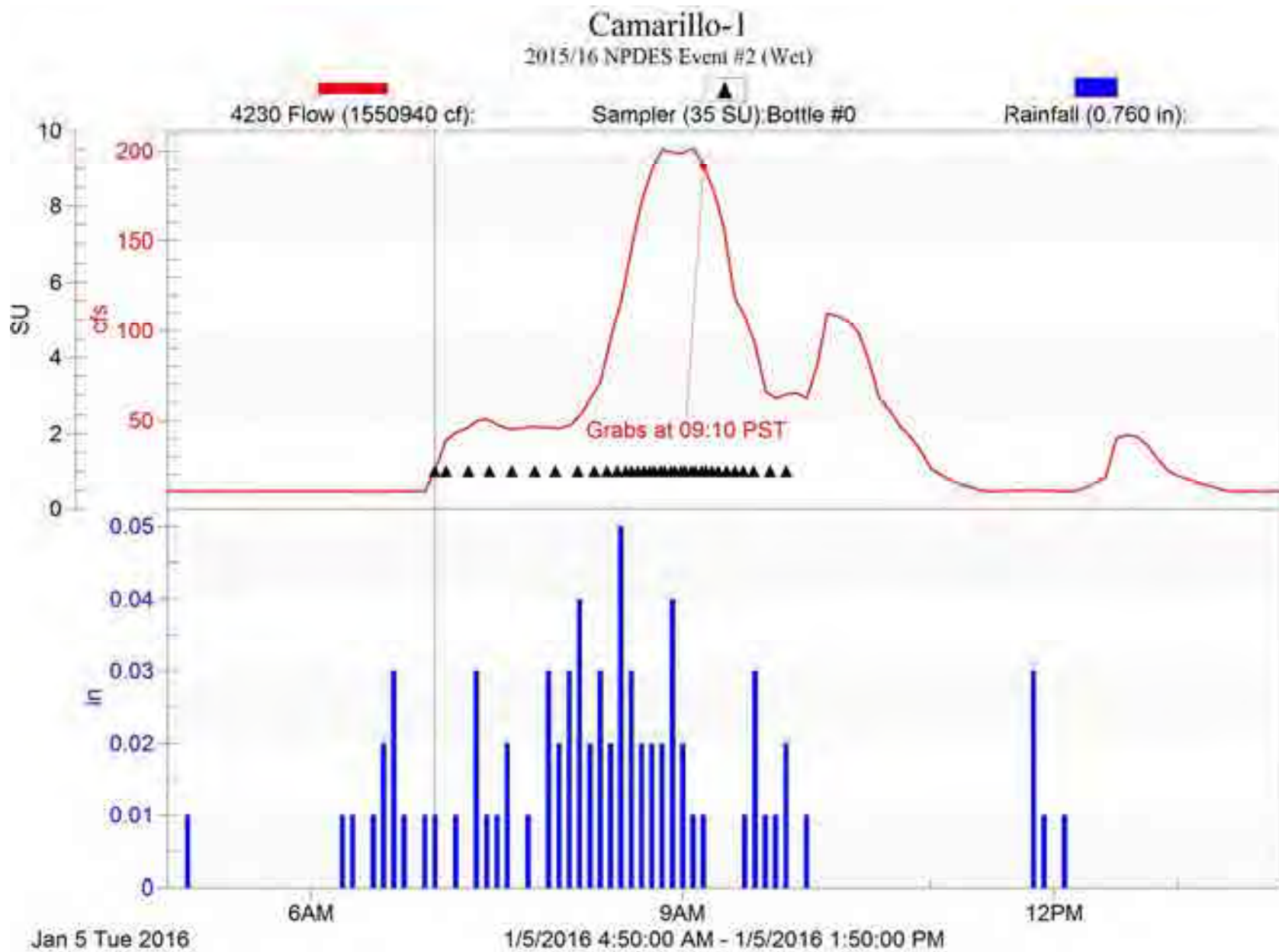


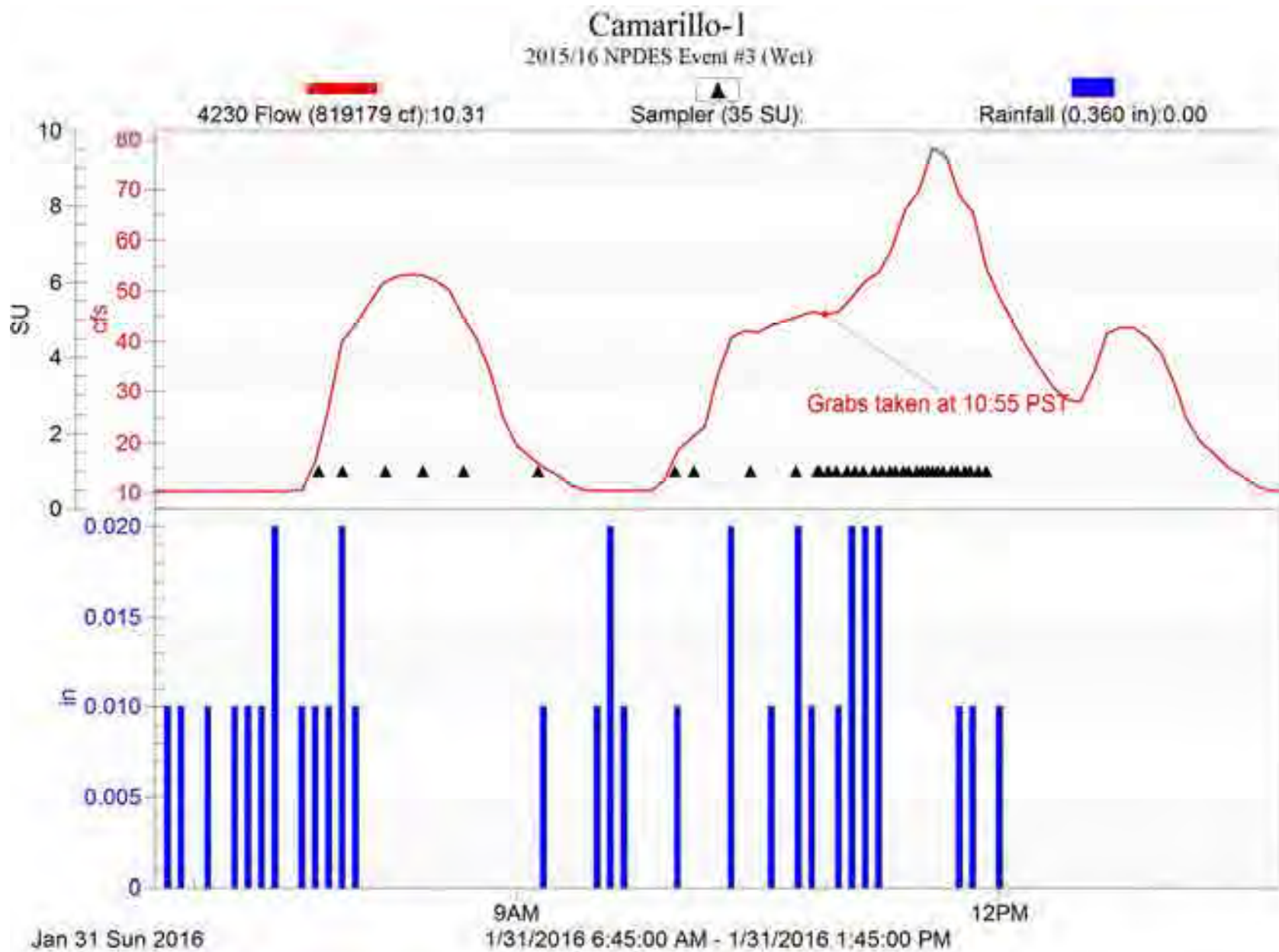


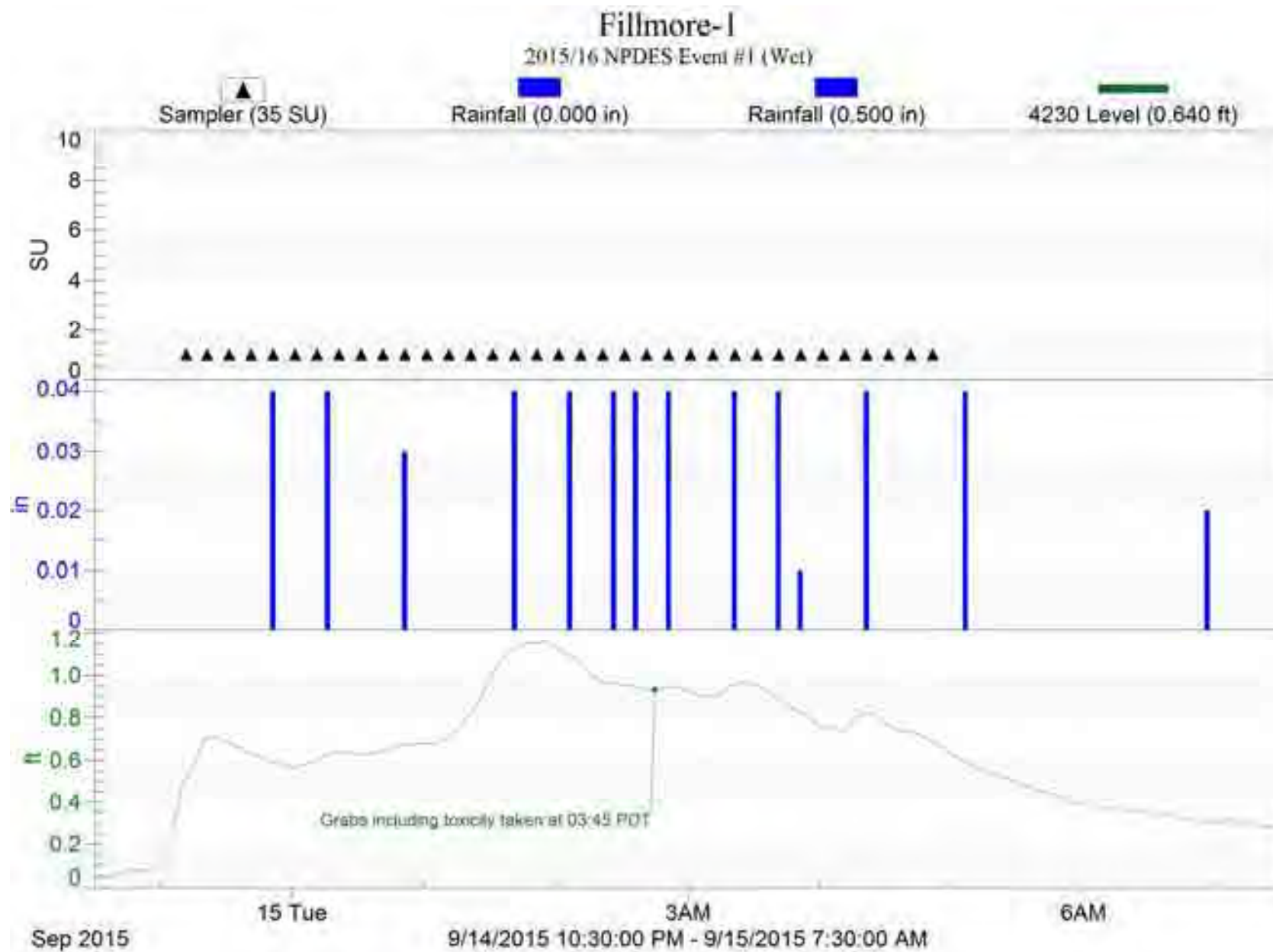


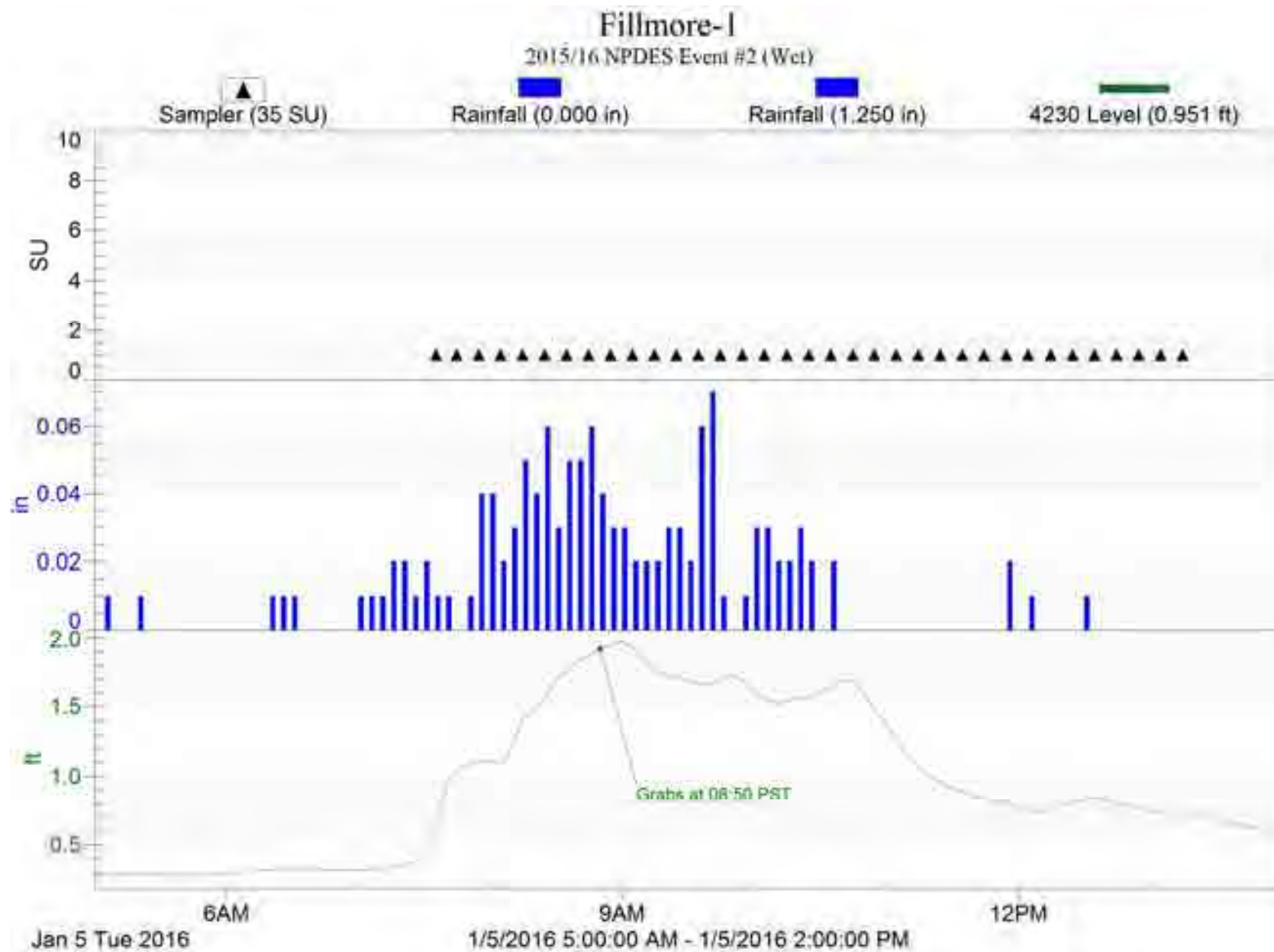


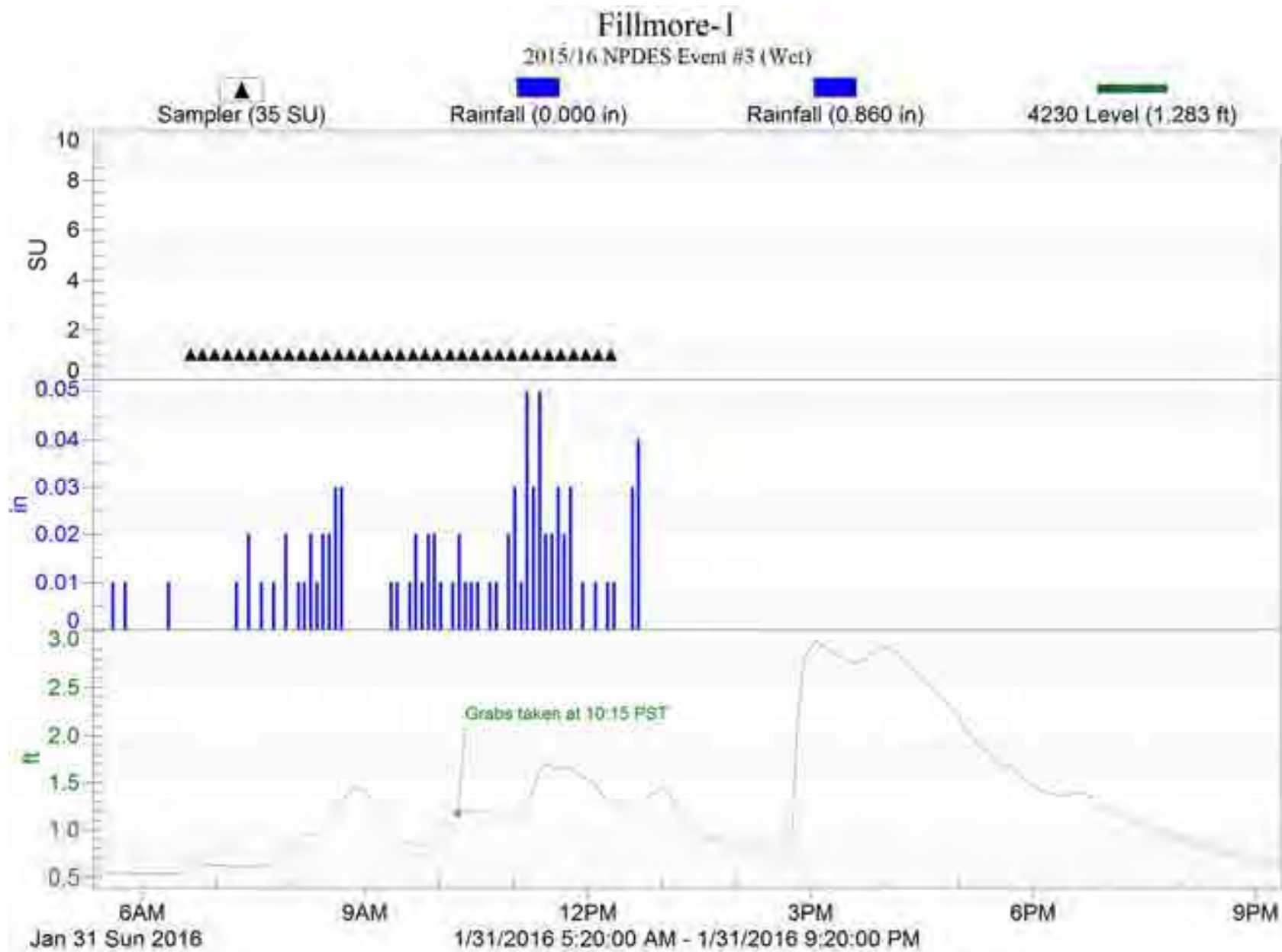


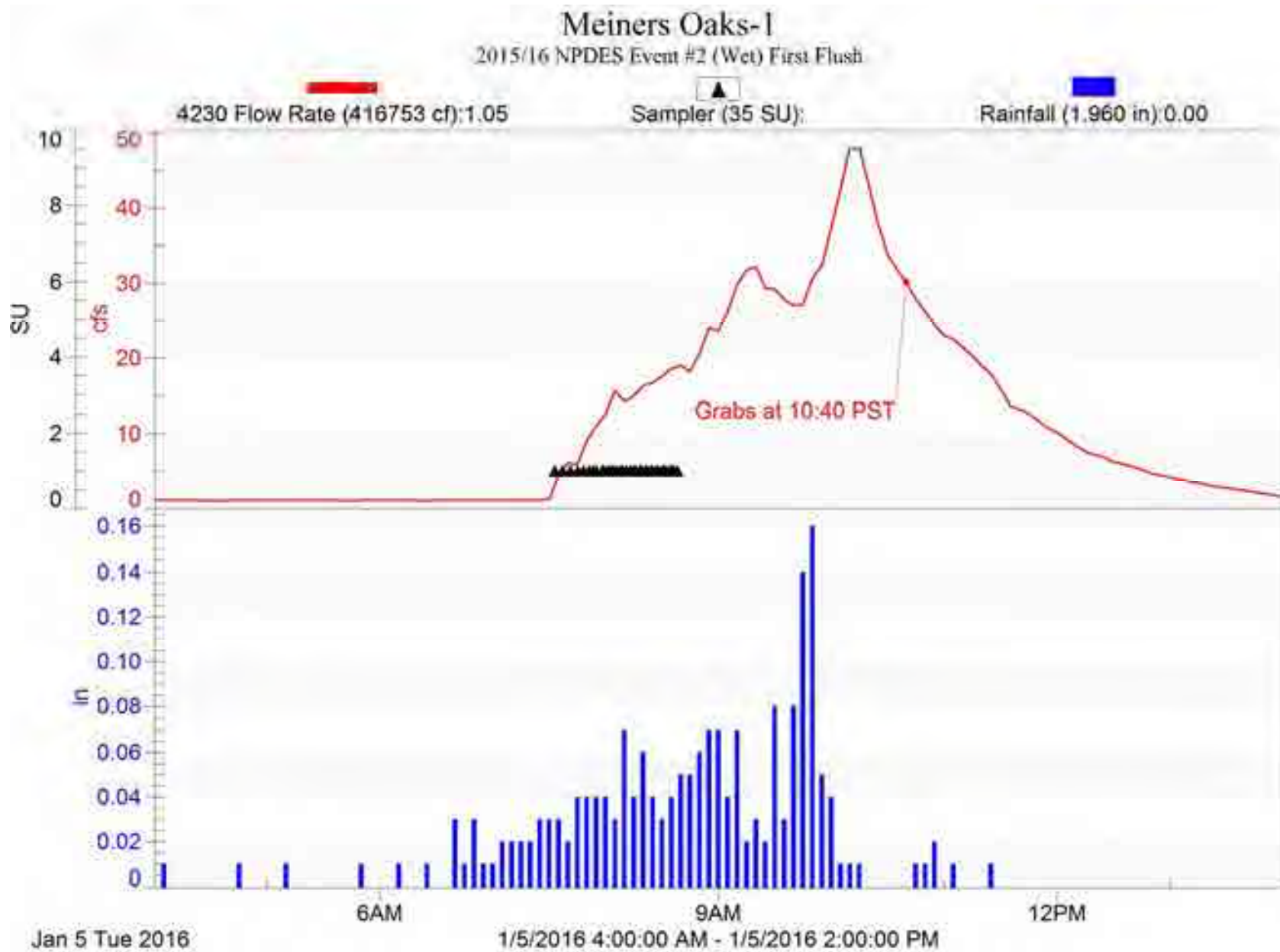








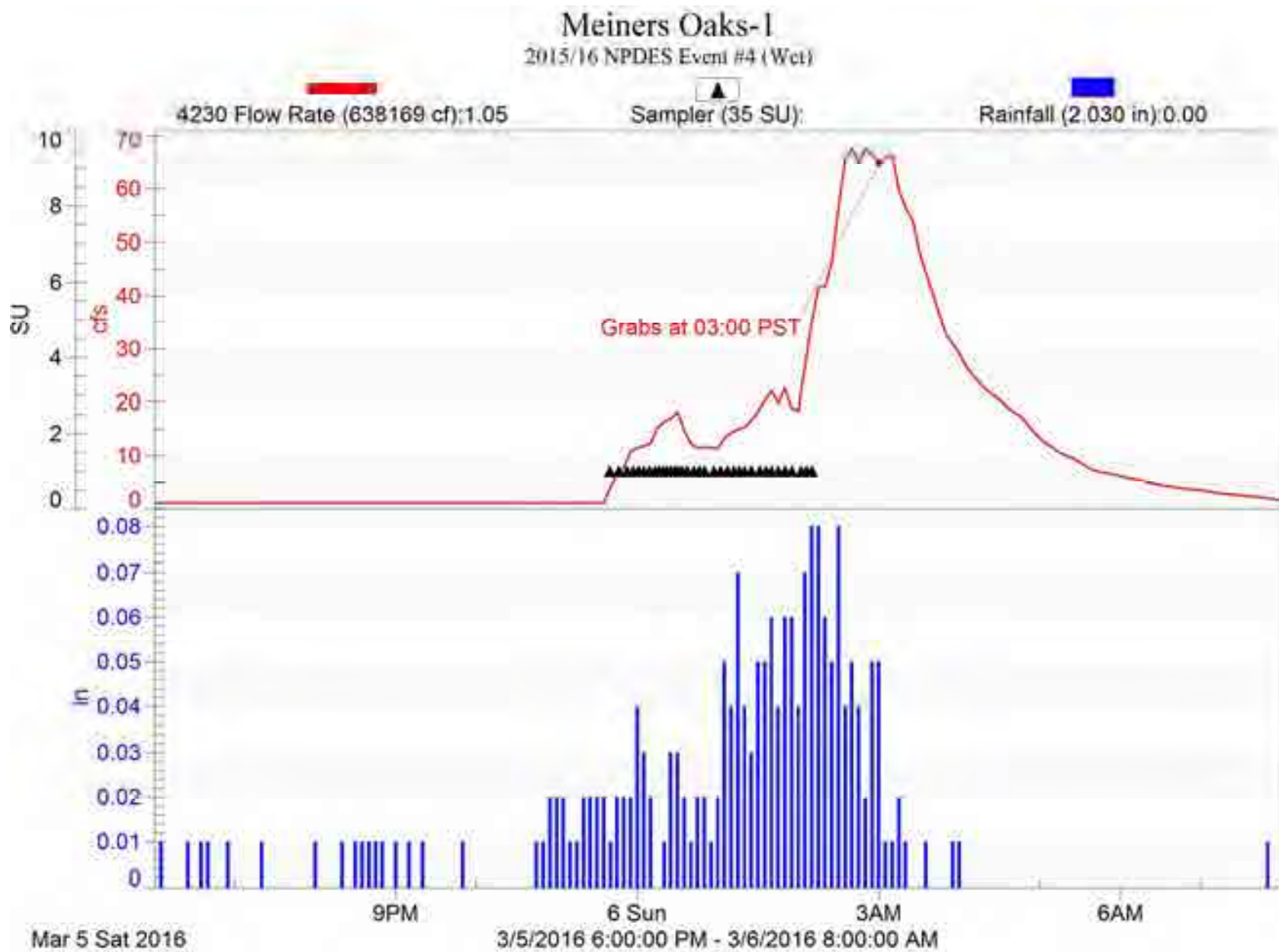


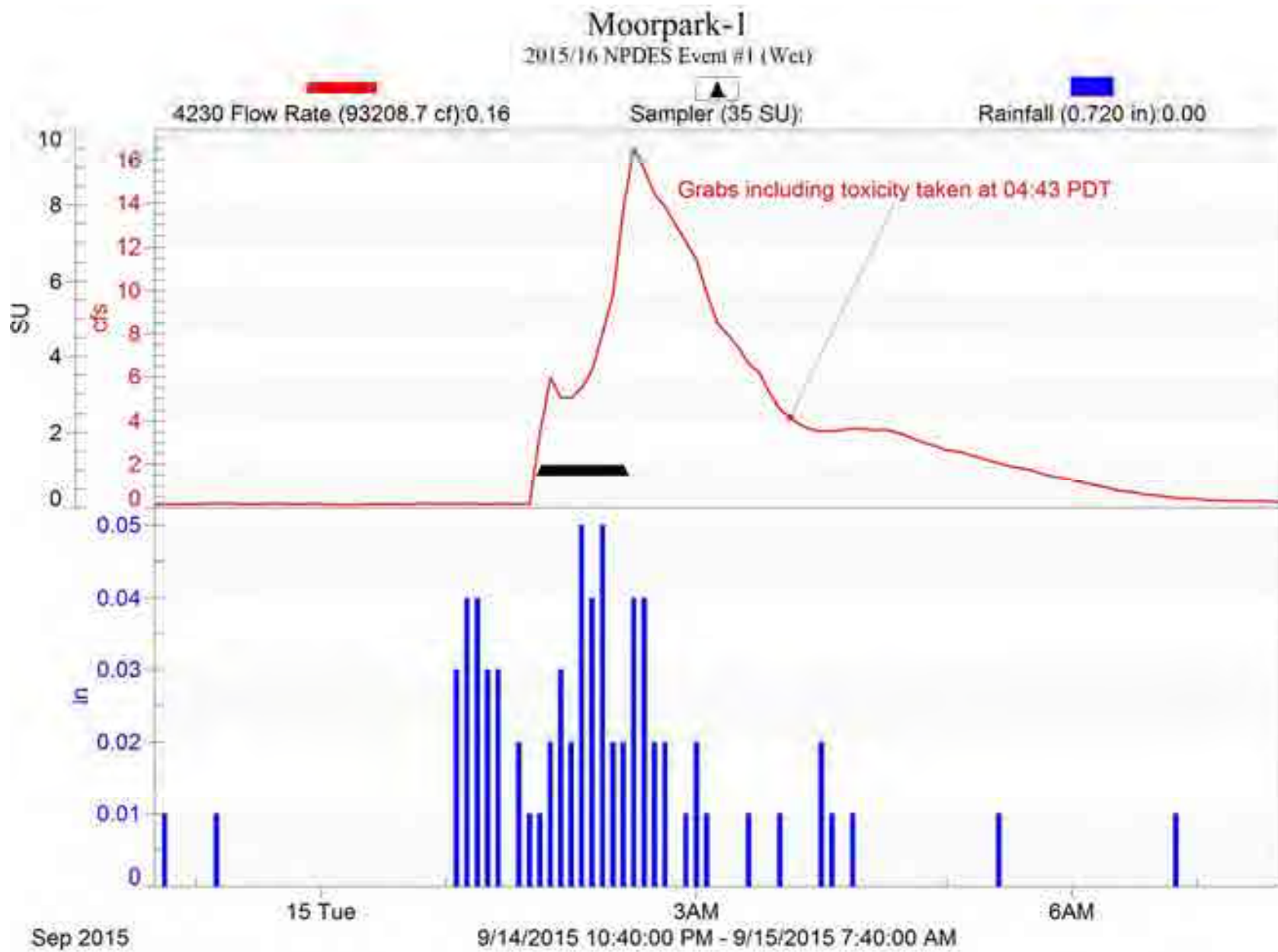


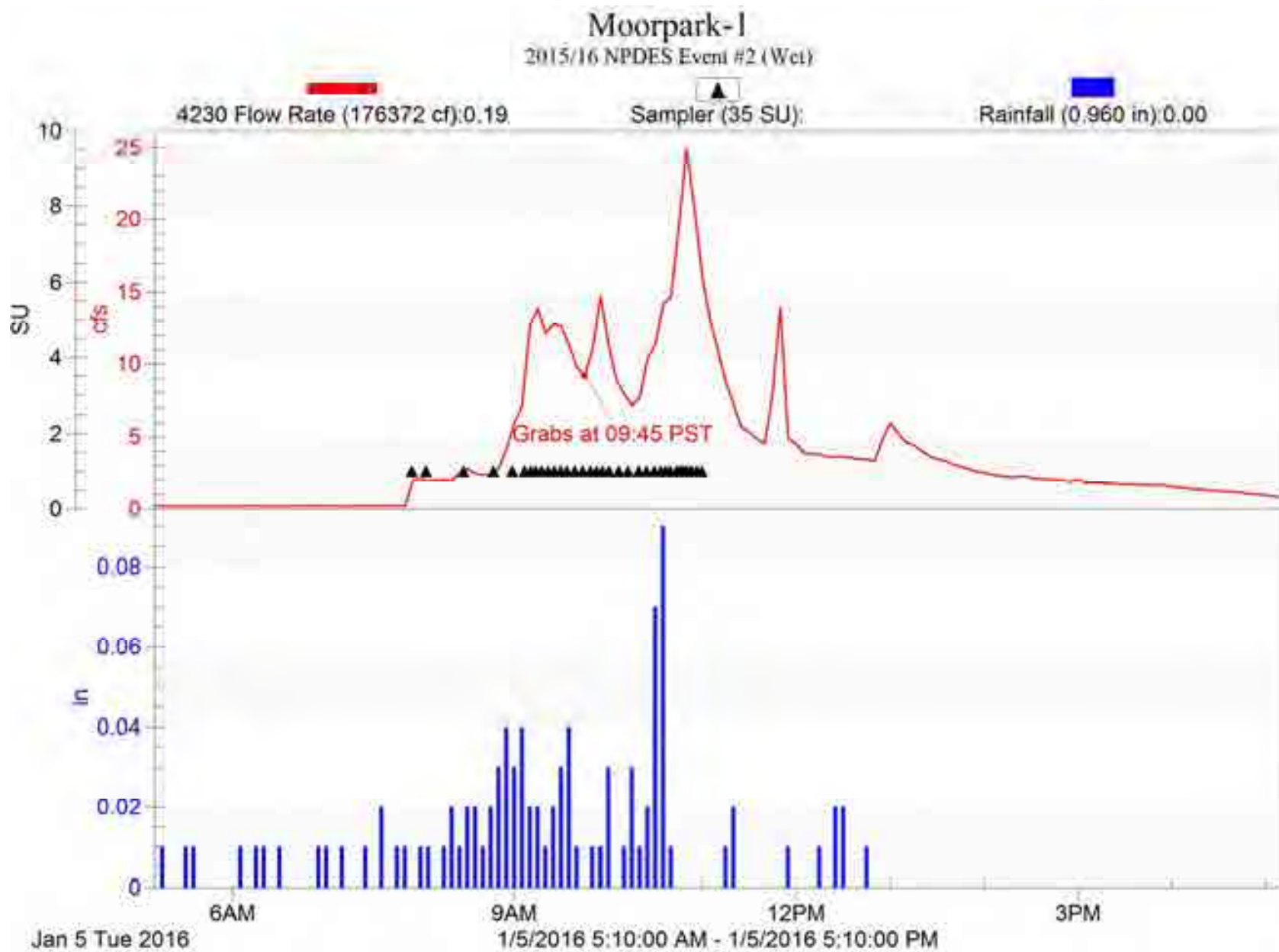
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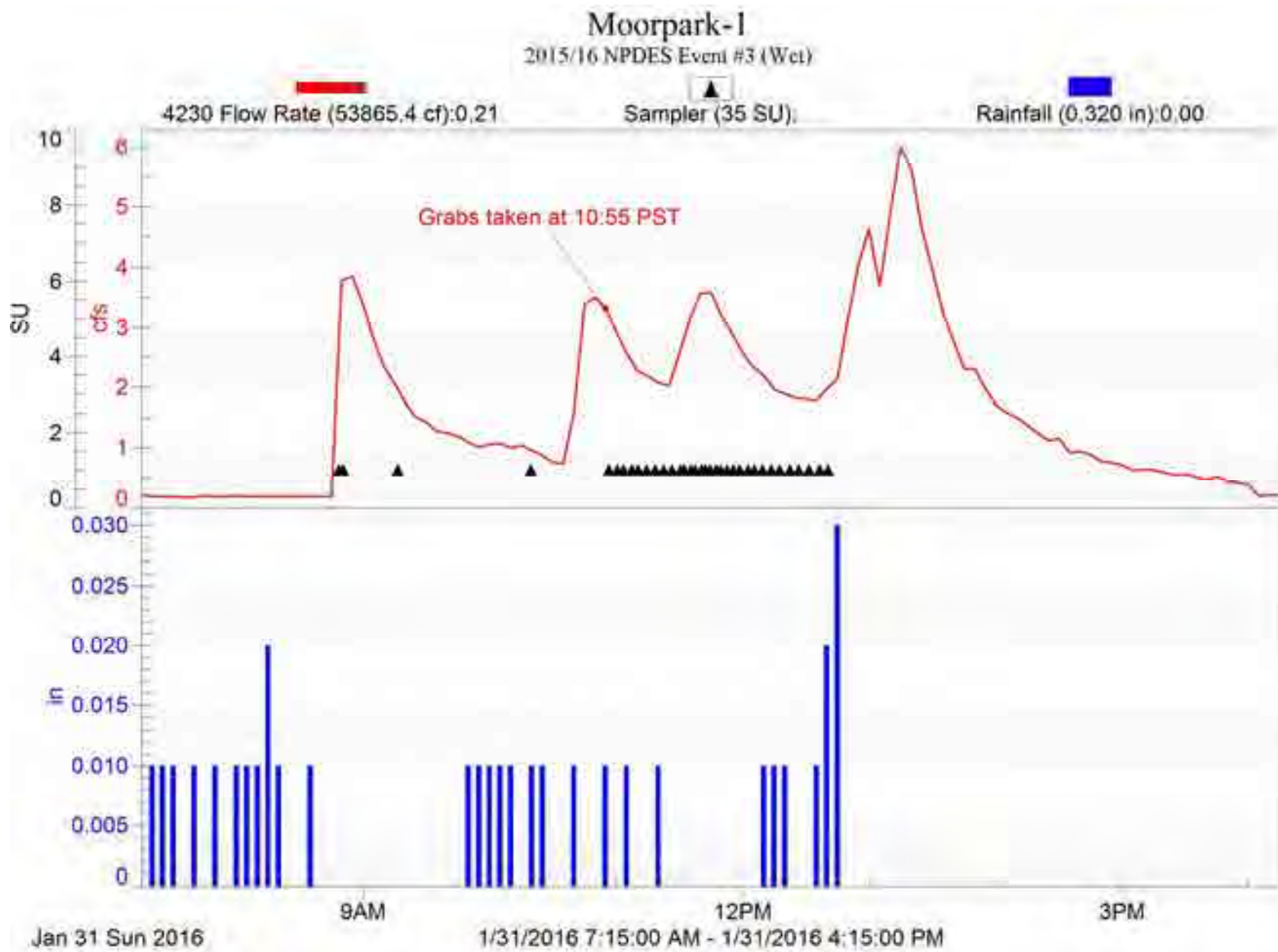
Grabs taken at 09:35 PST

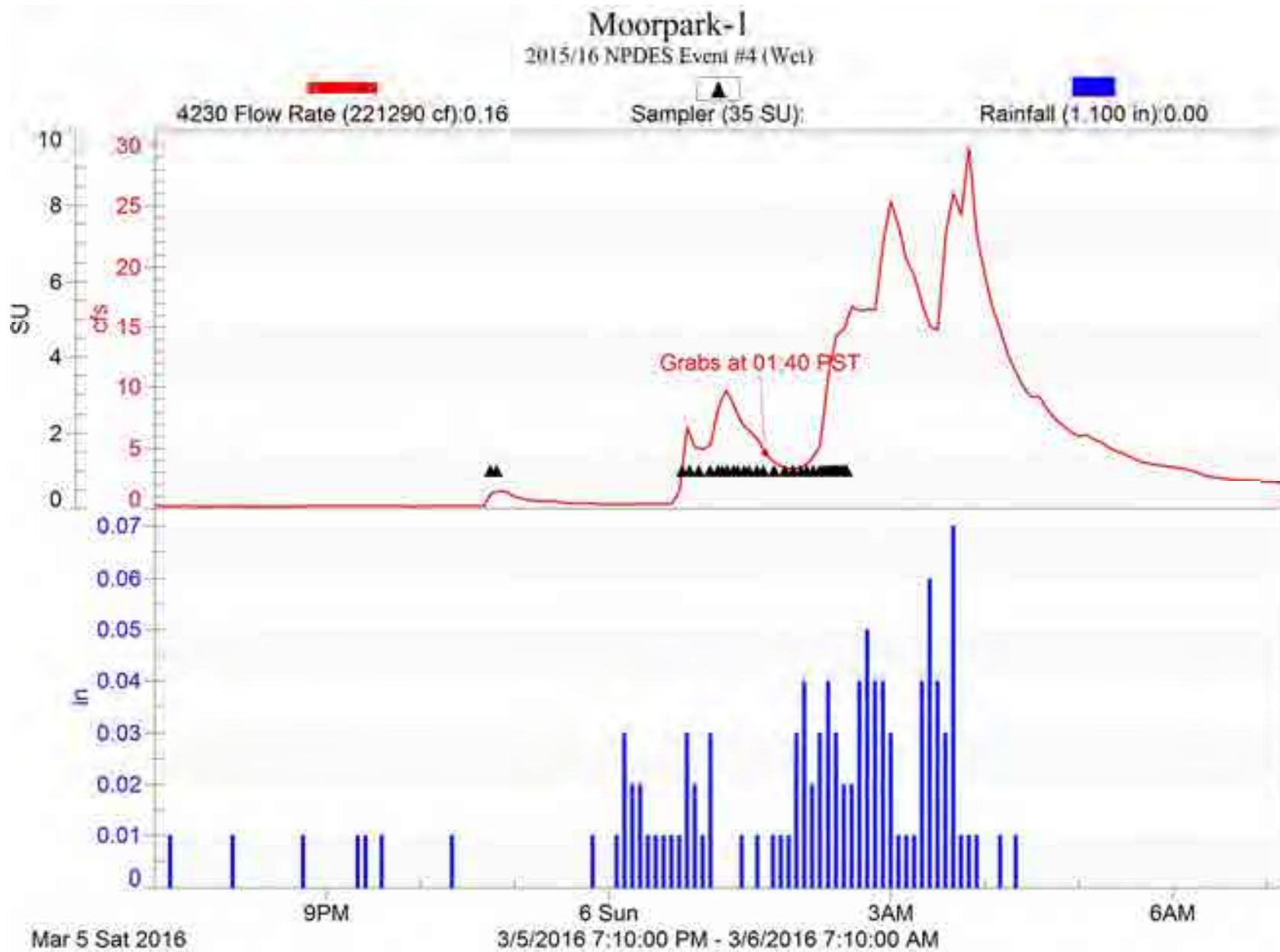
Jan 31 Sun 2016 1/31/2016 6:00:00 AM - 1/31/2016 4:00:00 PM

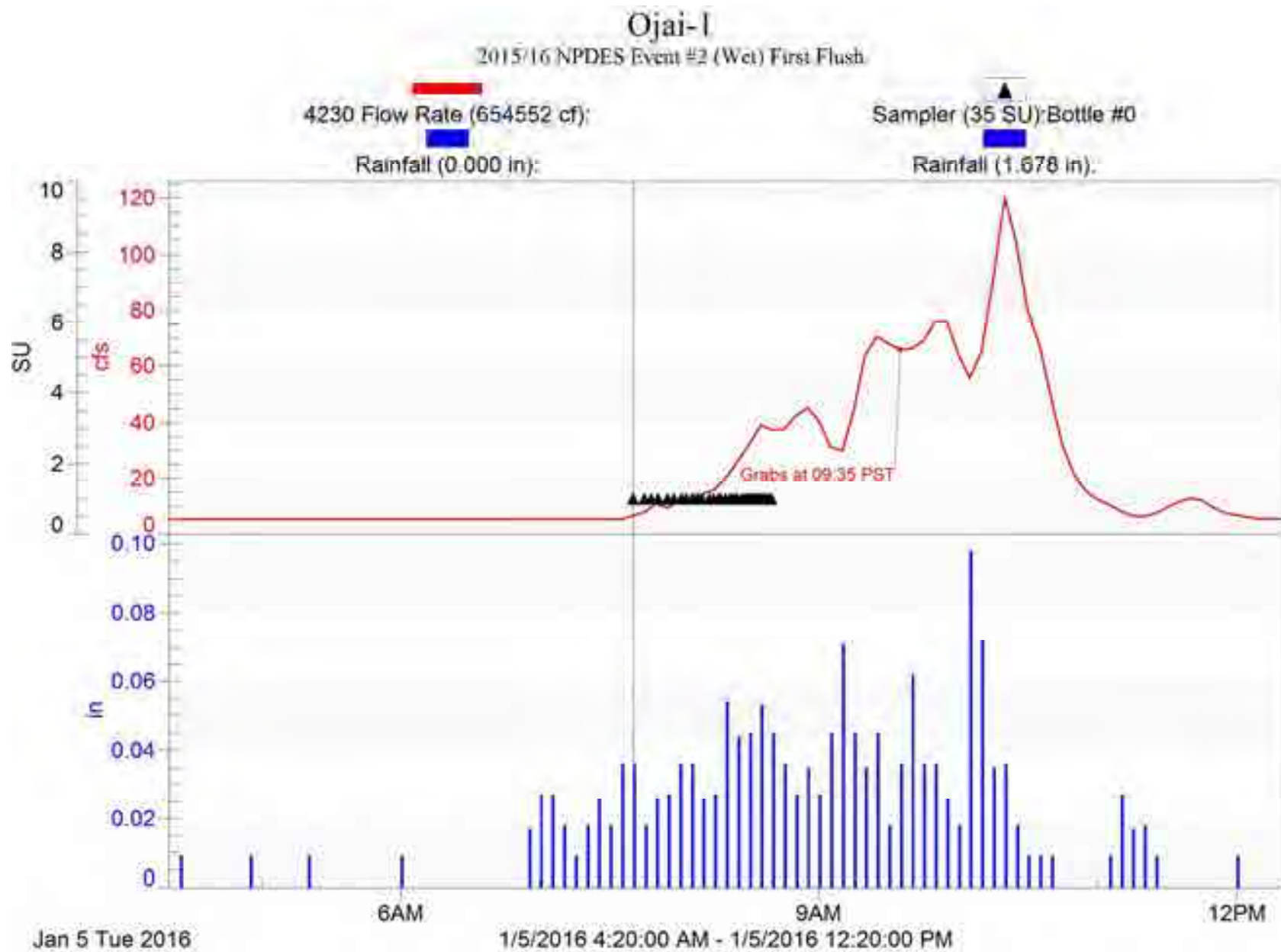


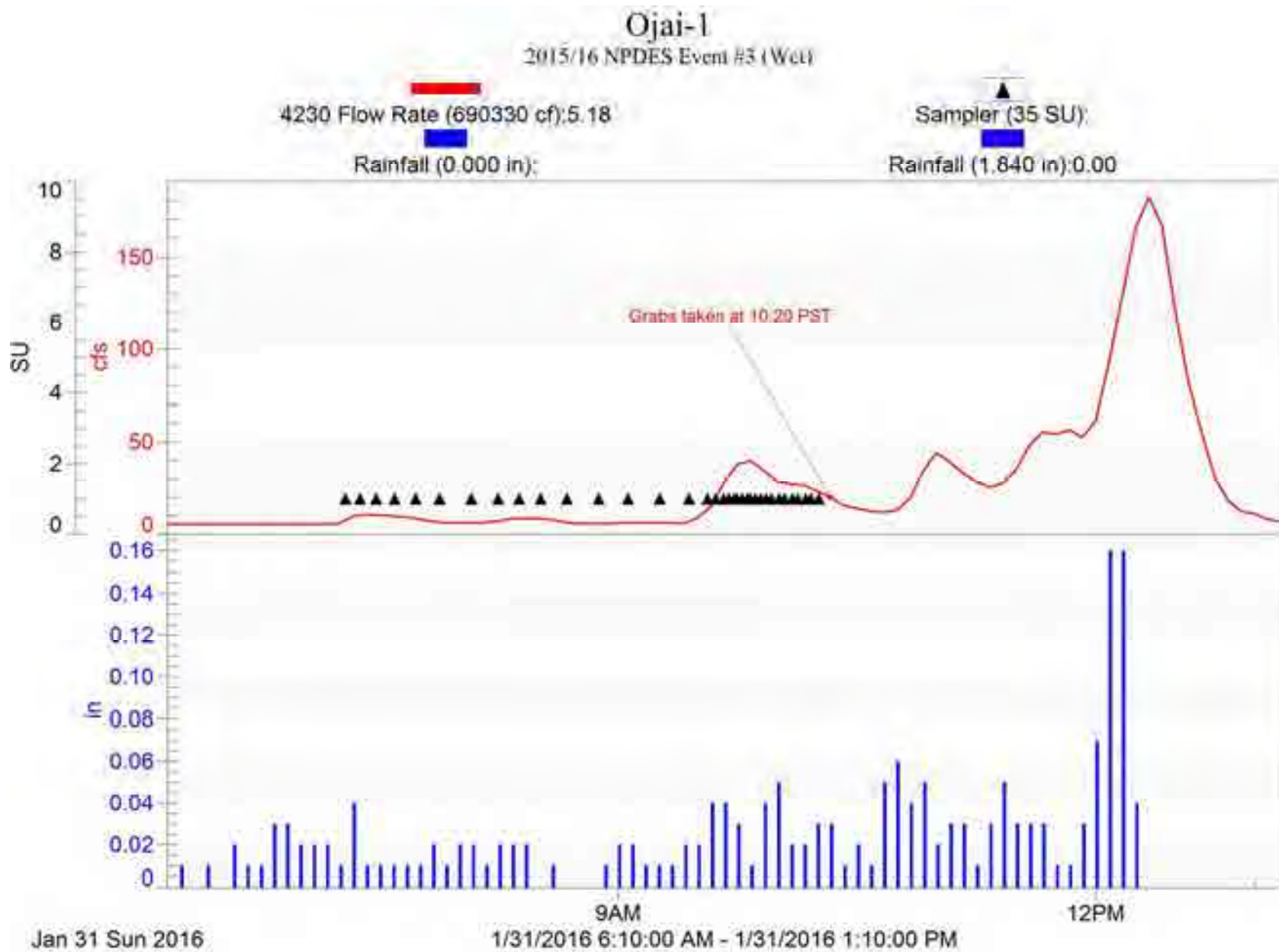


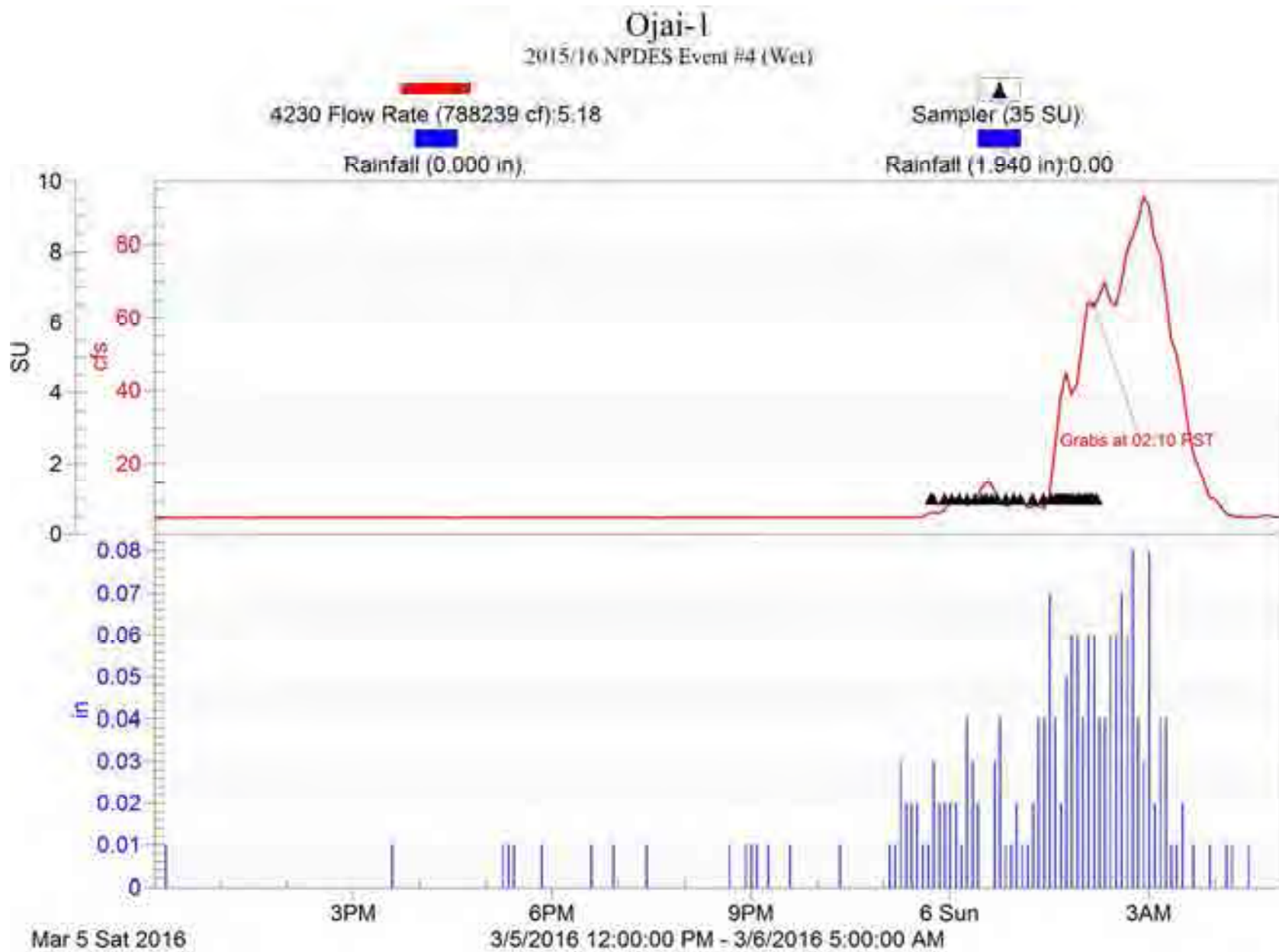


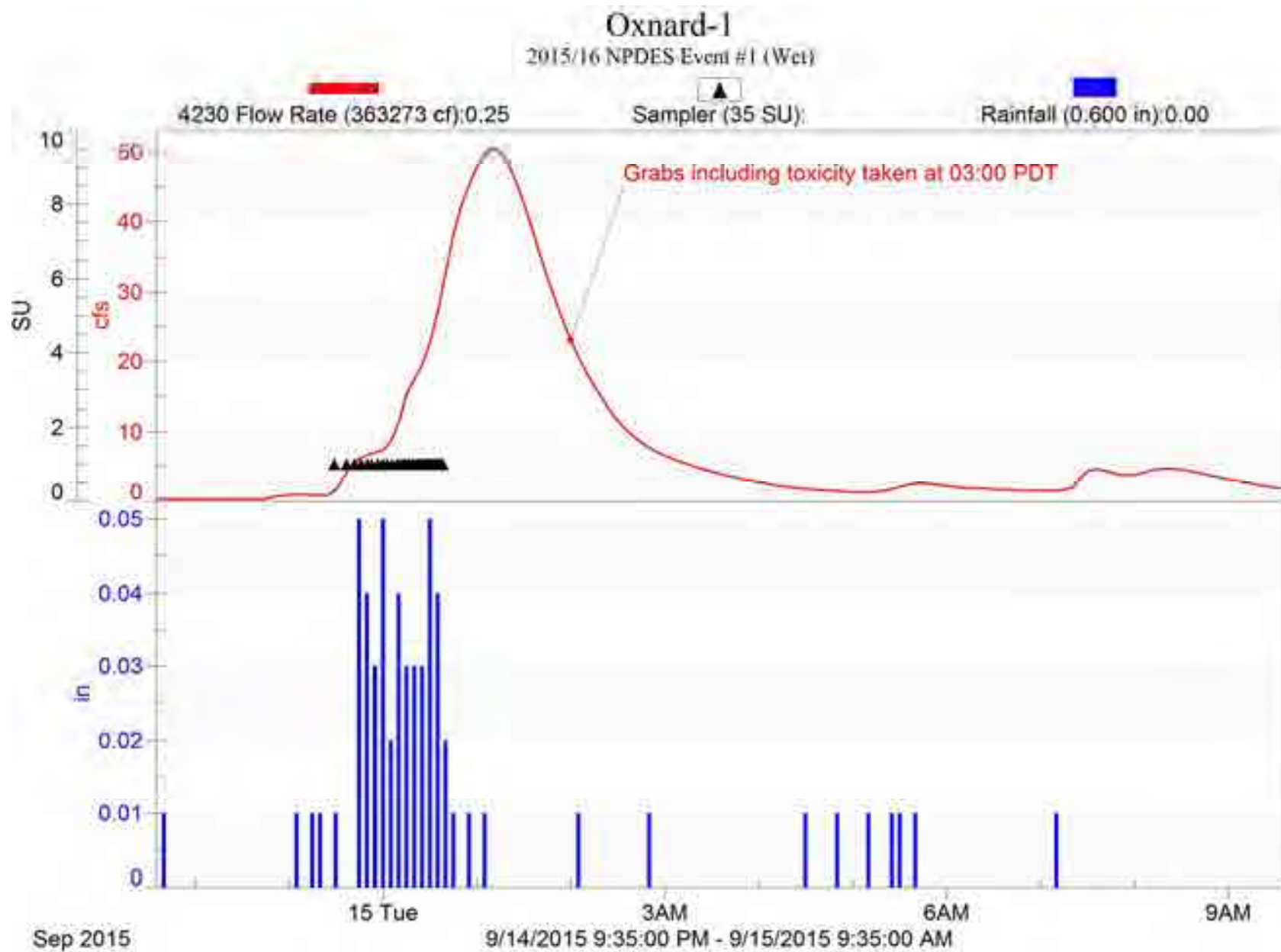


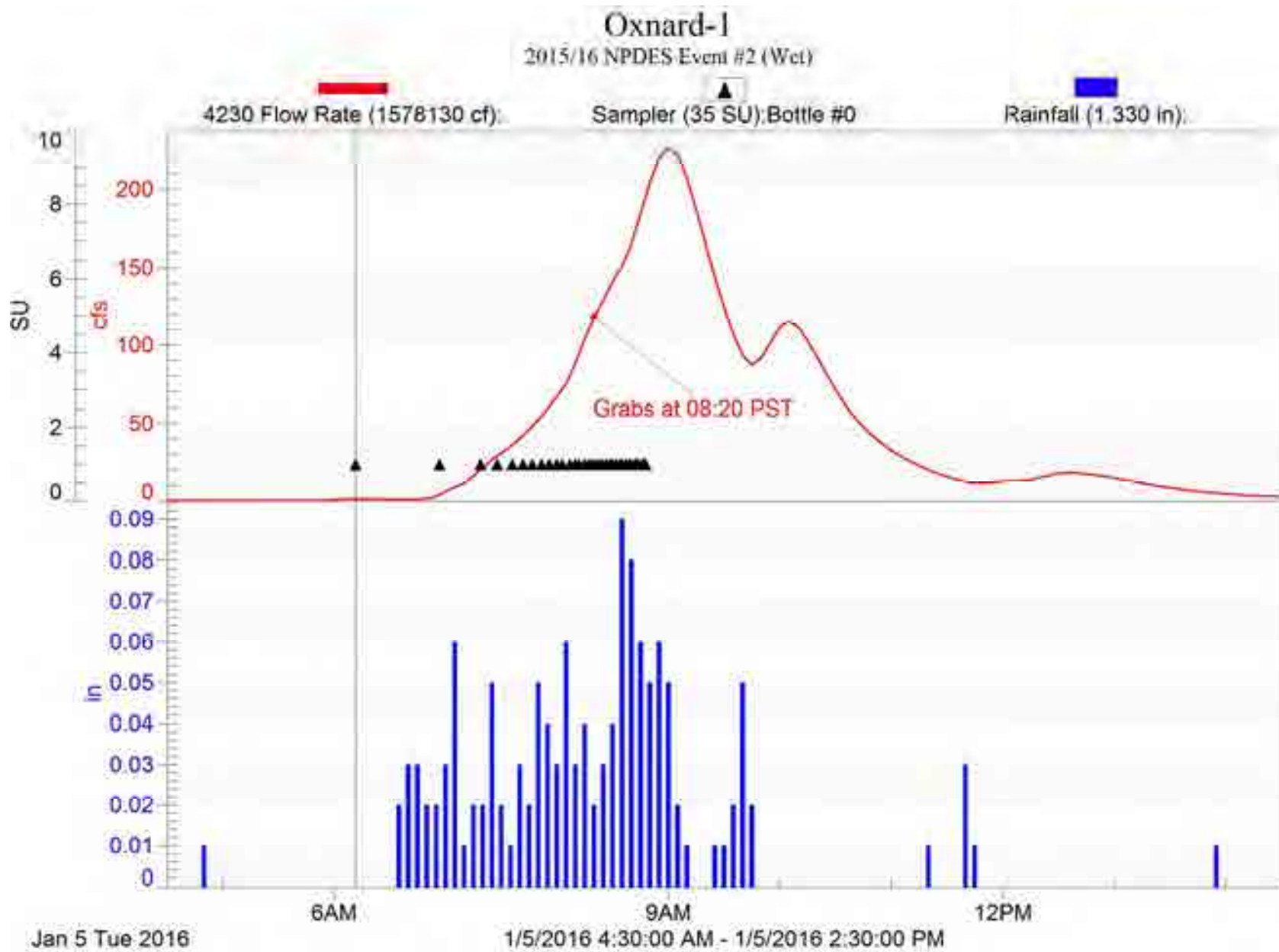


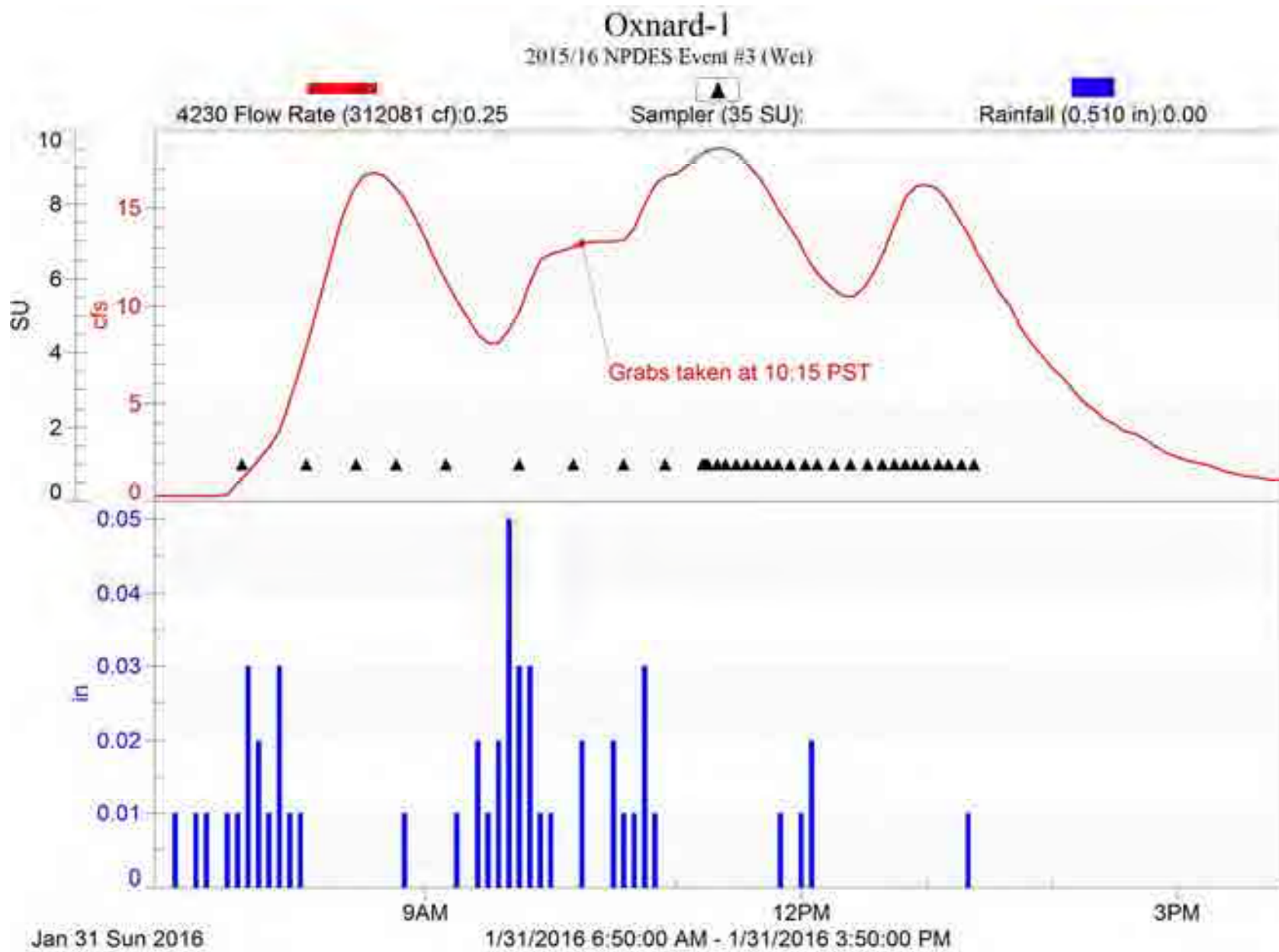


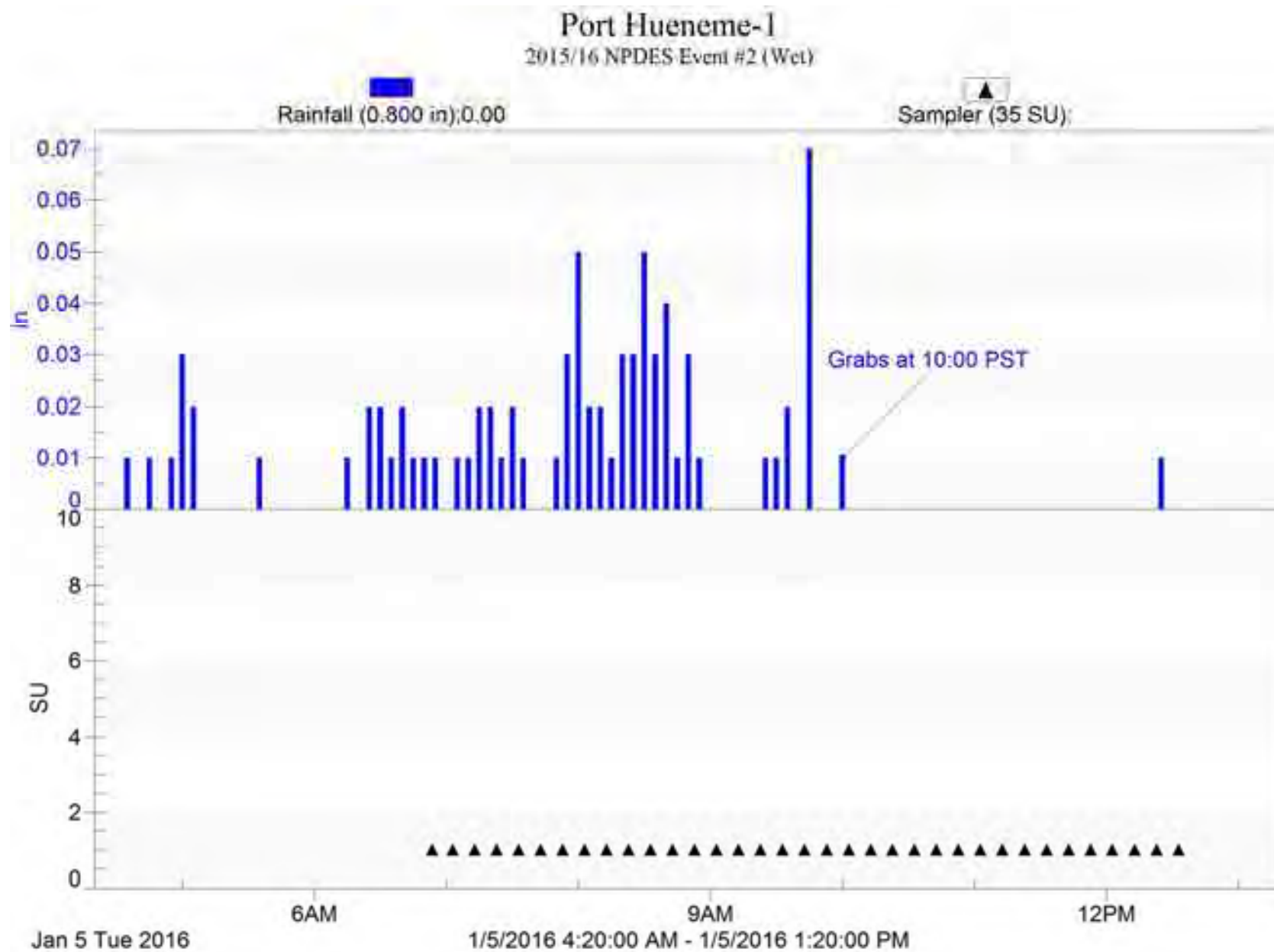


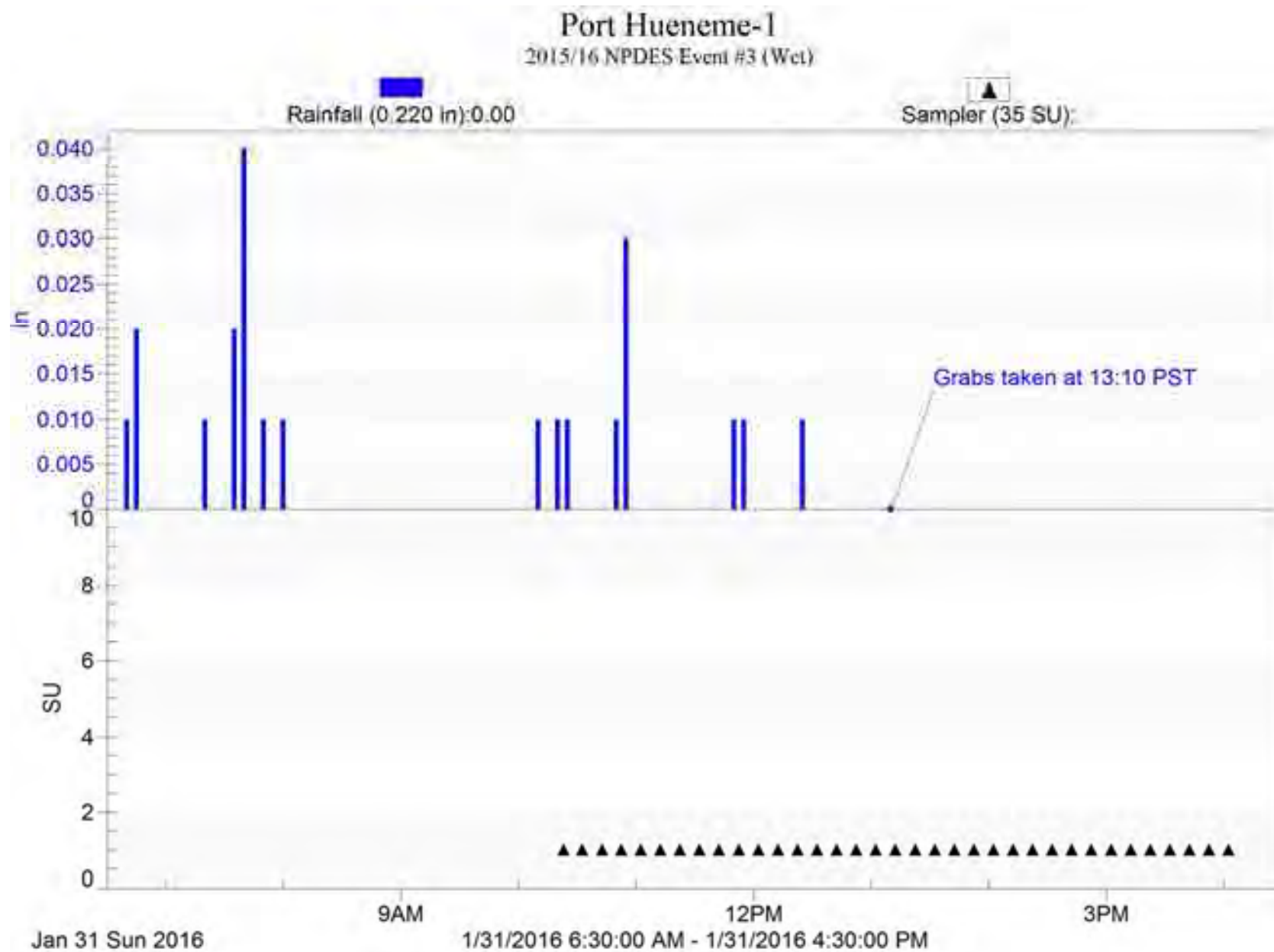


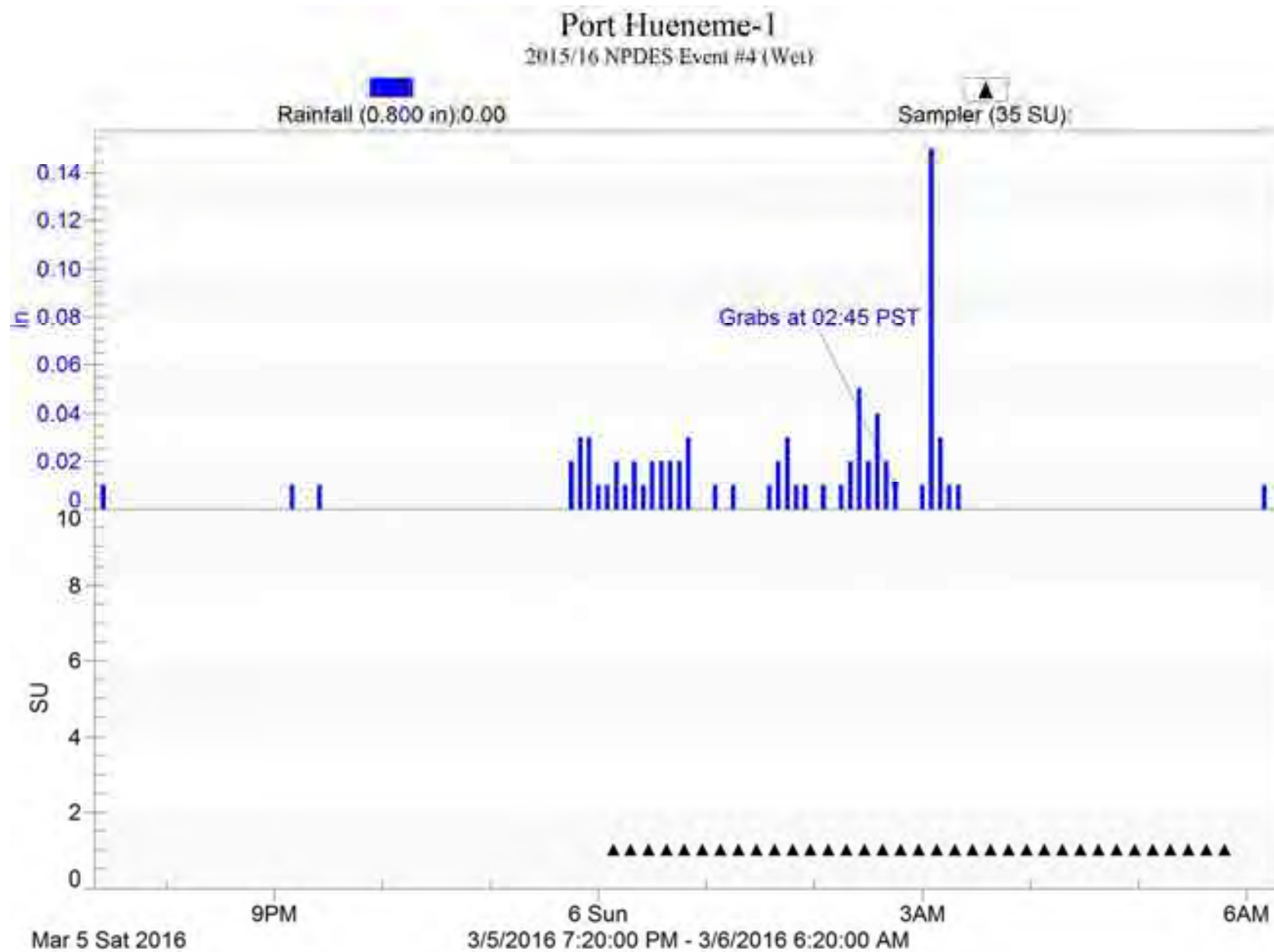


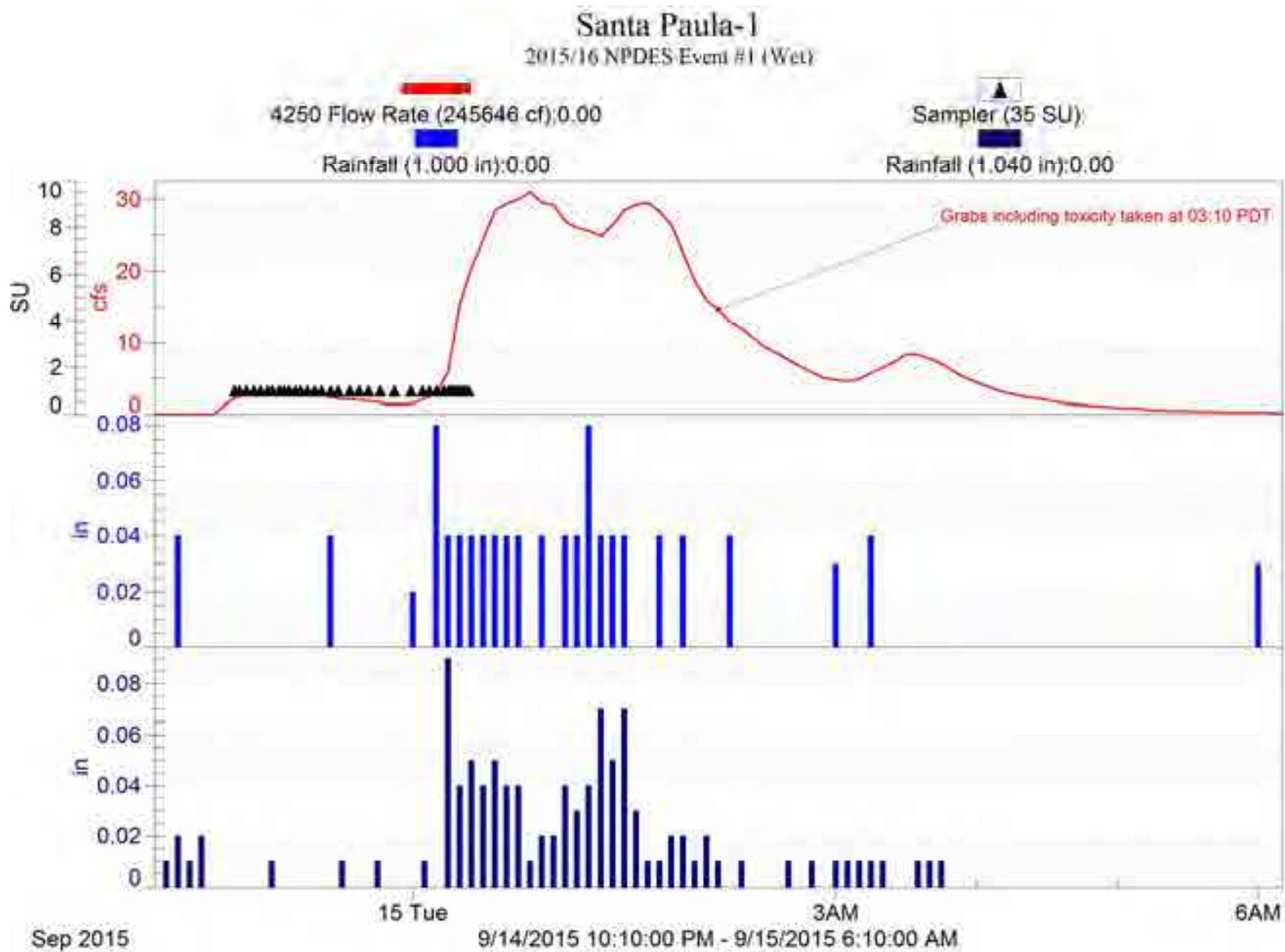


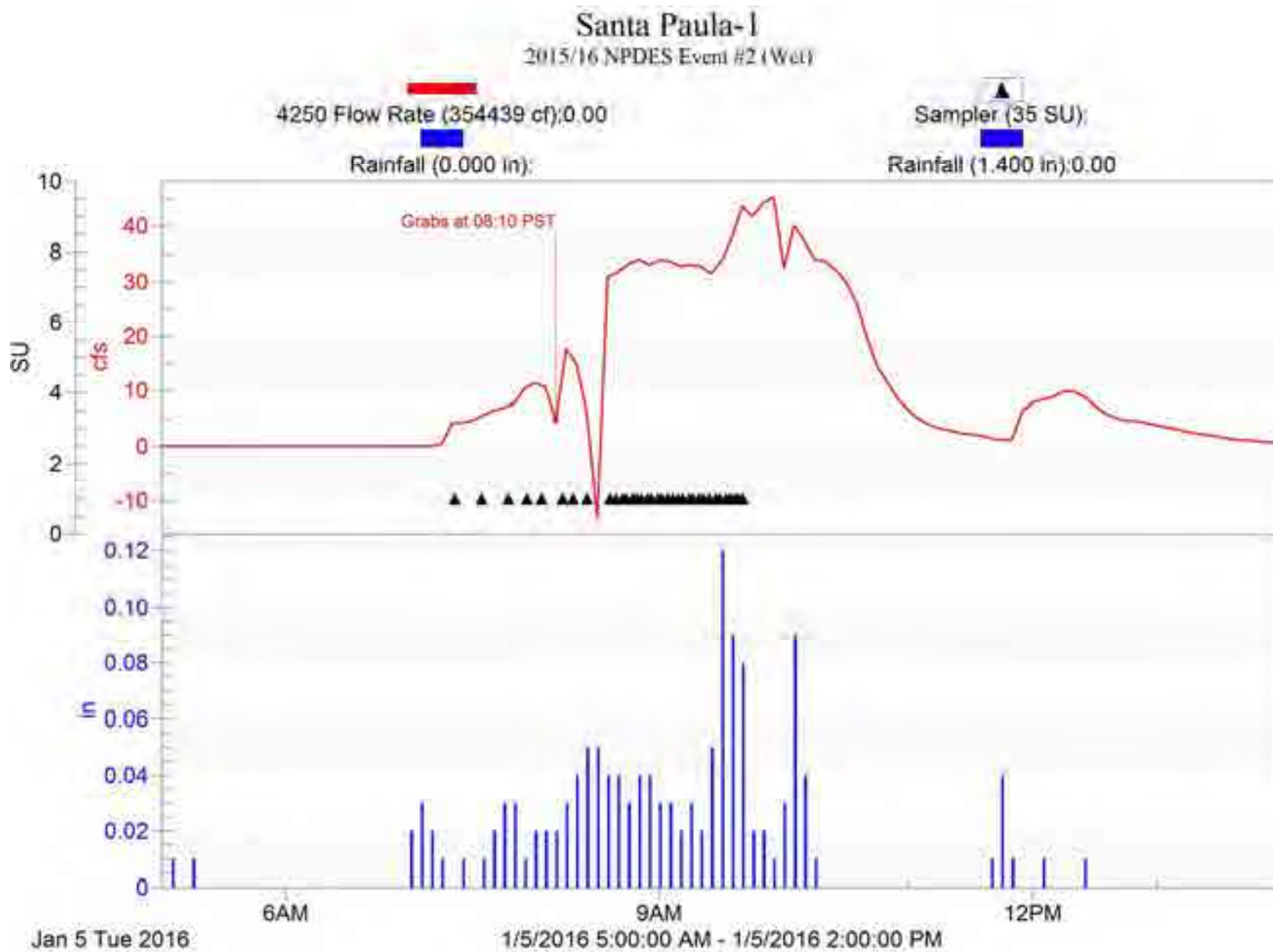


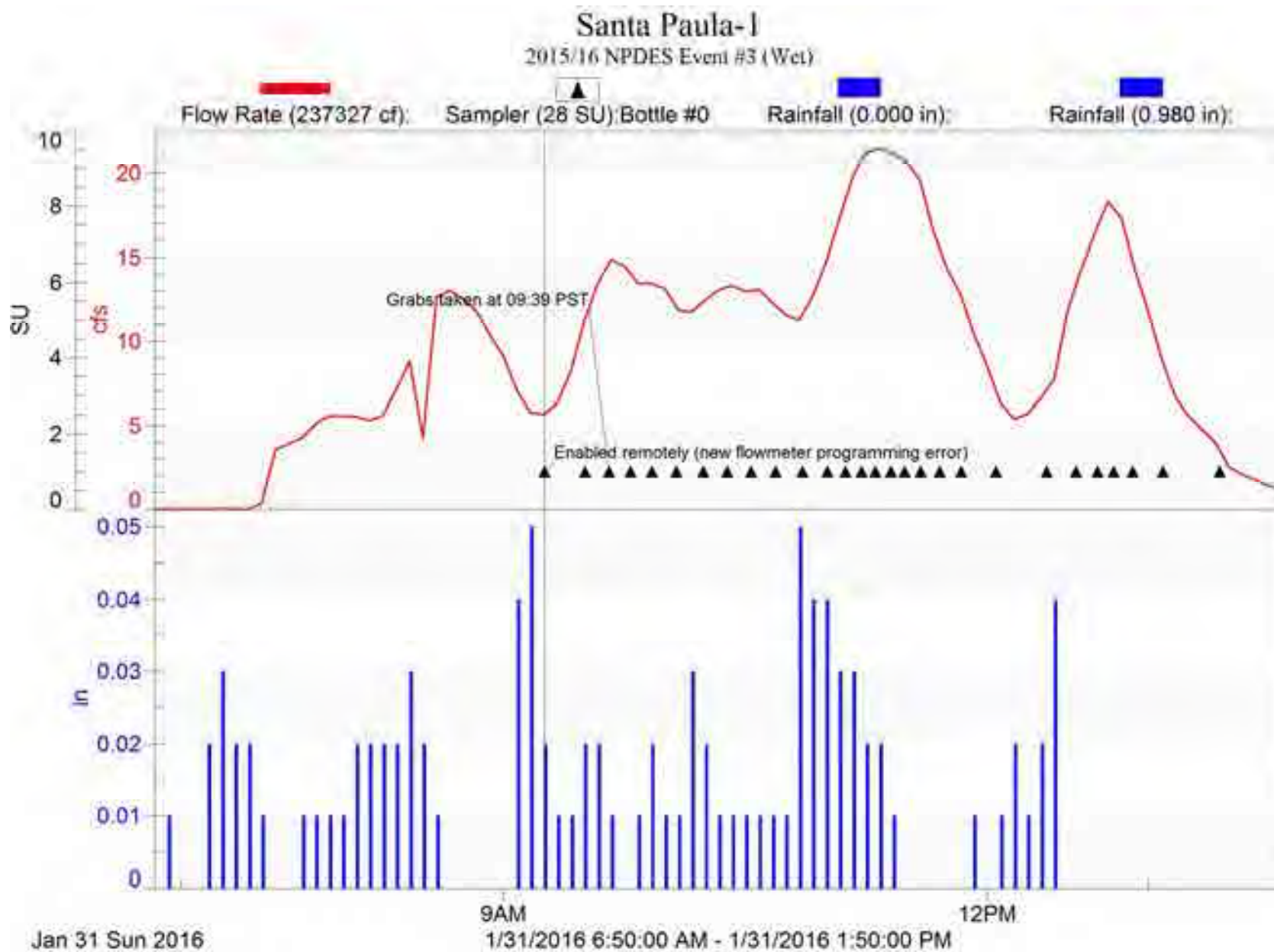












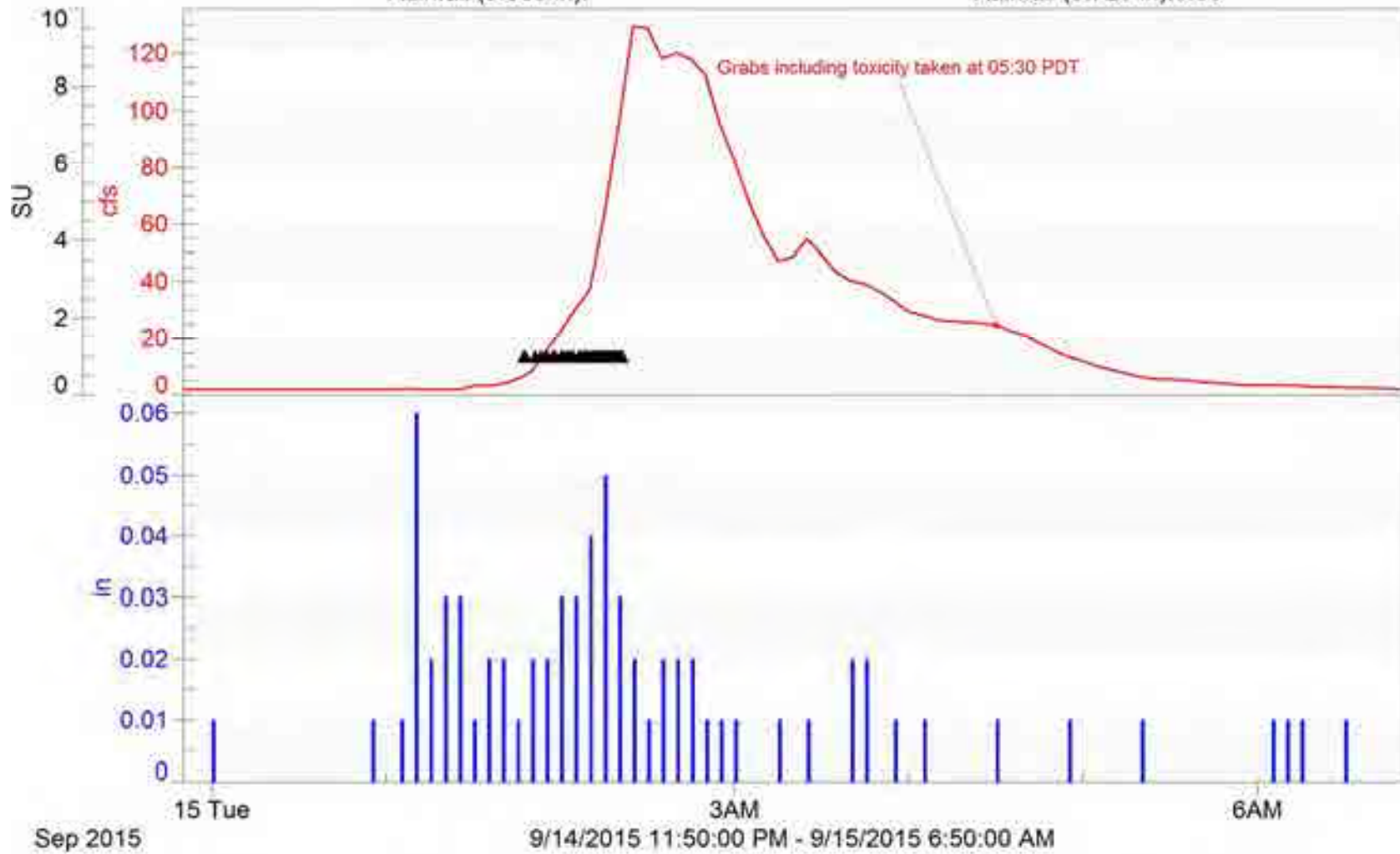
Simi Valley-1 2015/16 NPDES Event #1 (Wet)

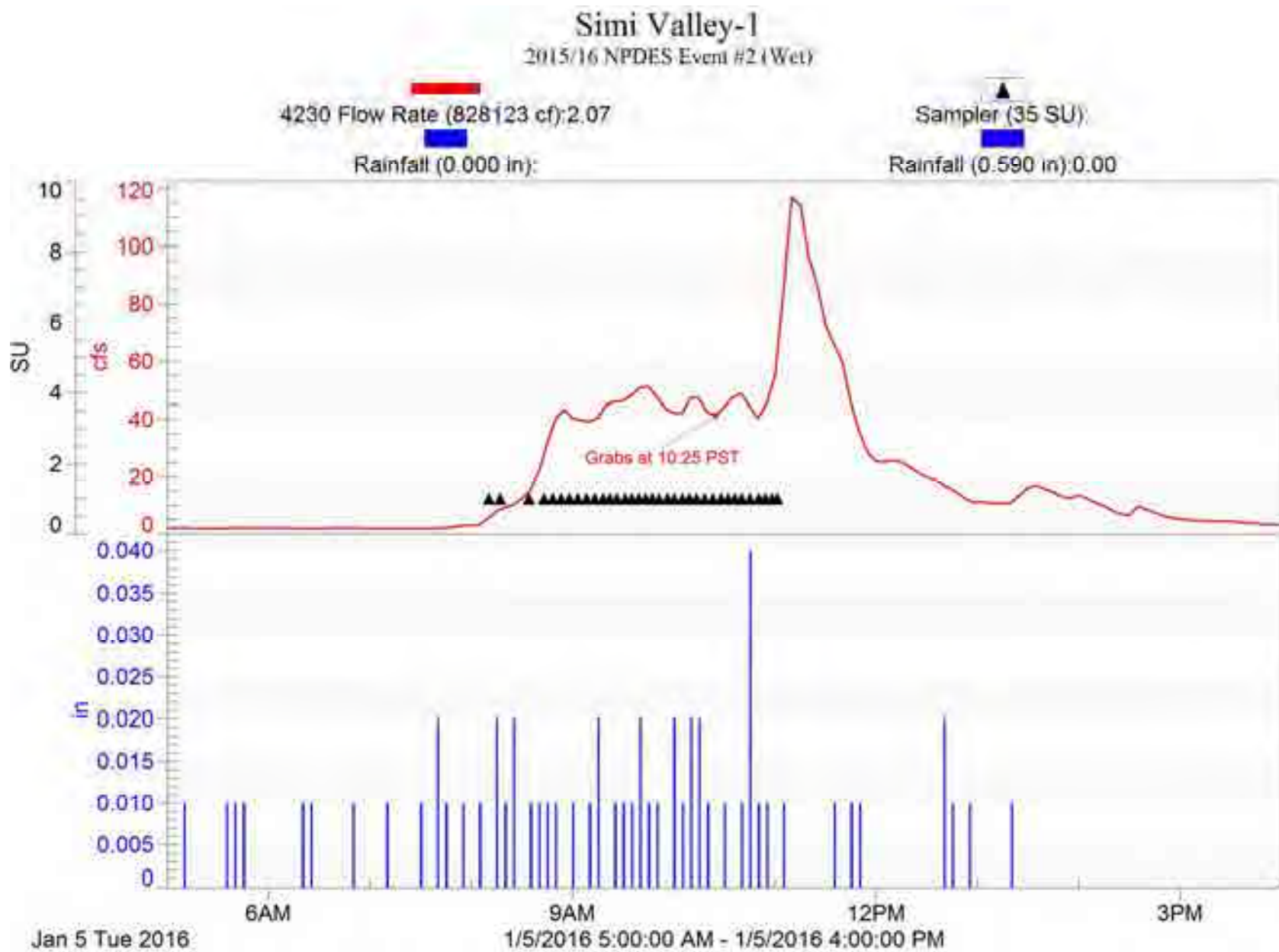
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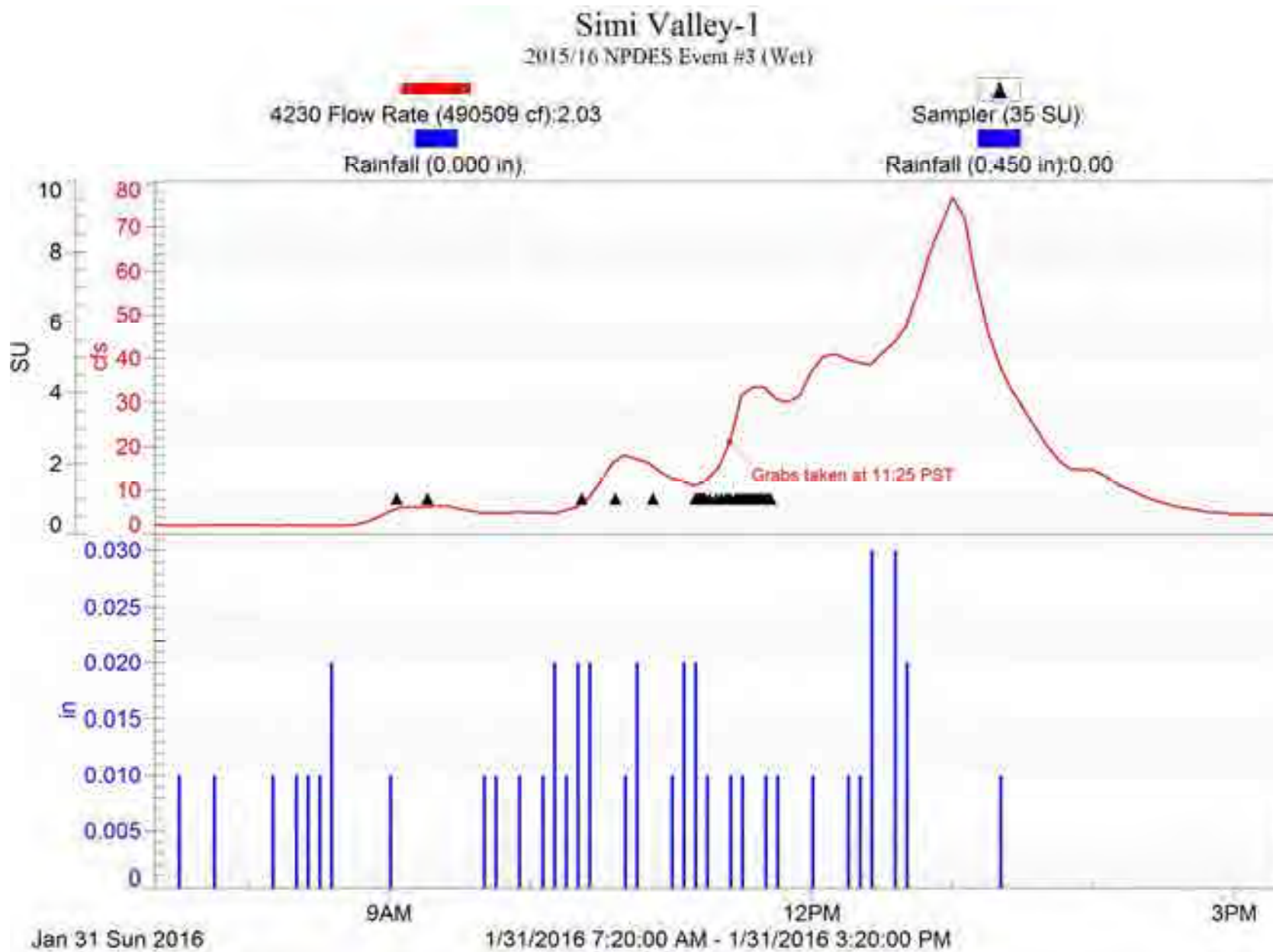
Rainfall (0.000 in):

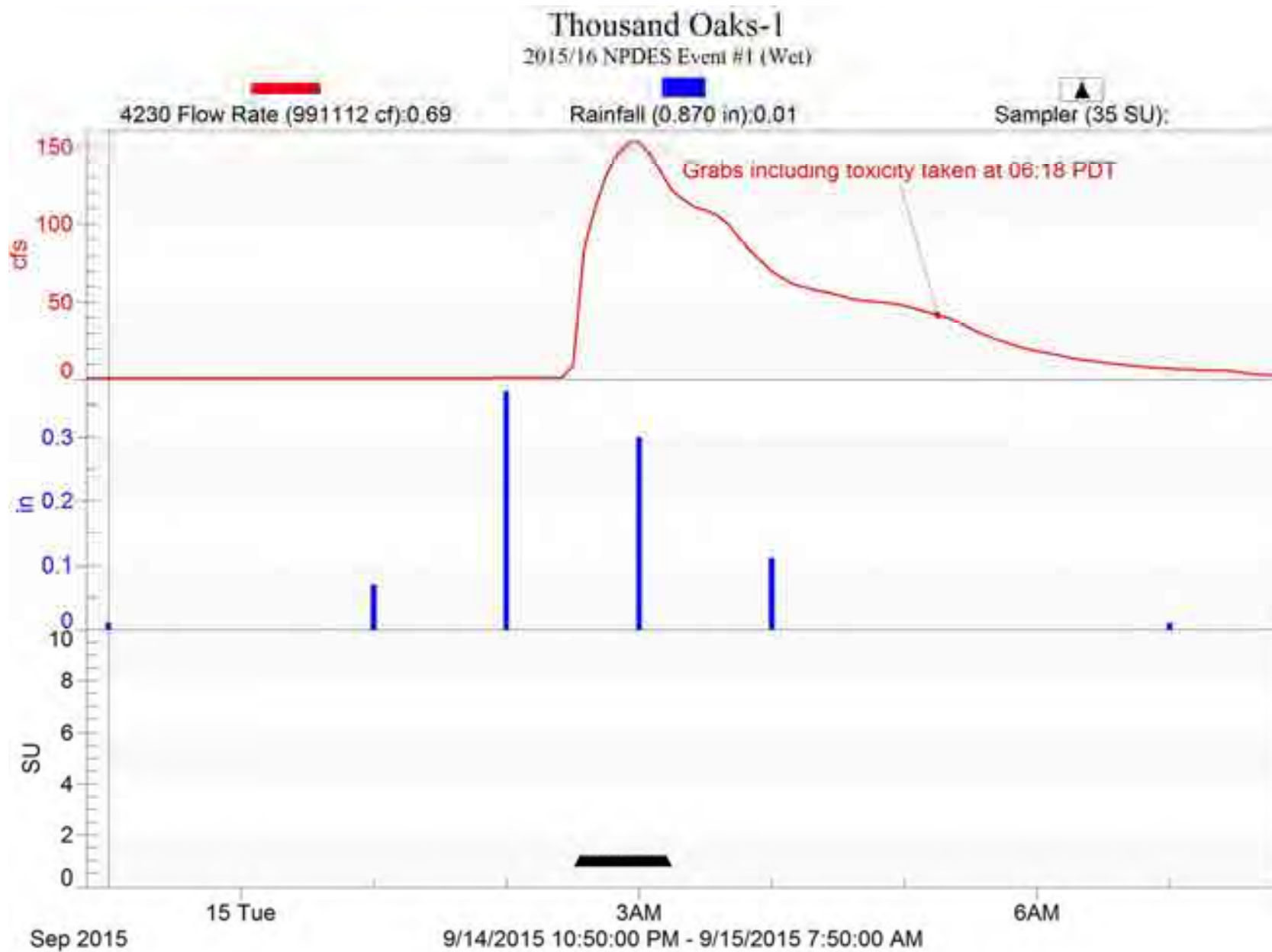
Sampler (35 SU):

Rainfall (0.720 in):0.00



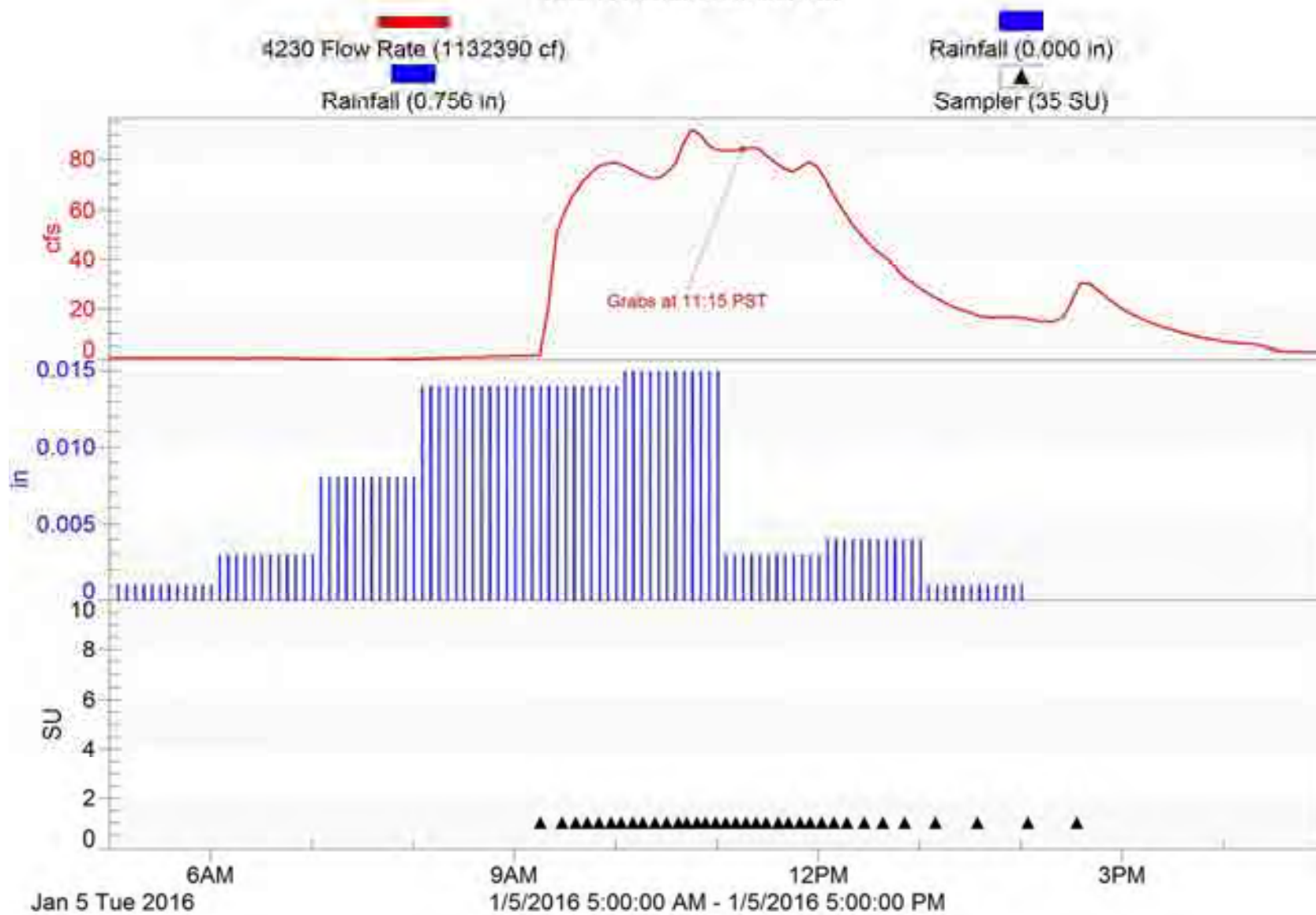


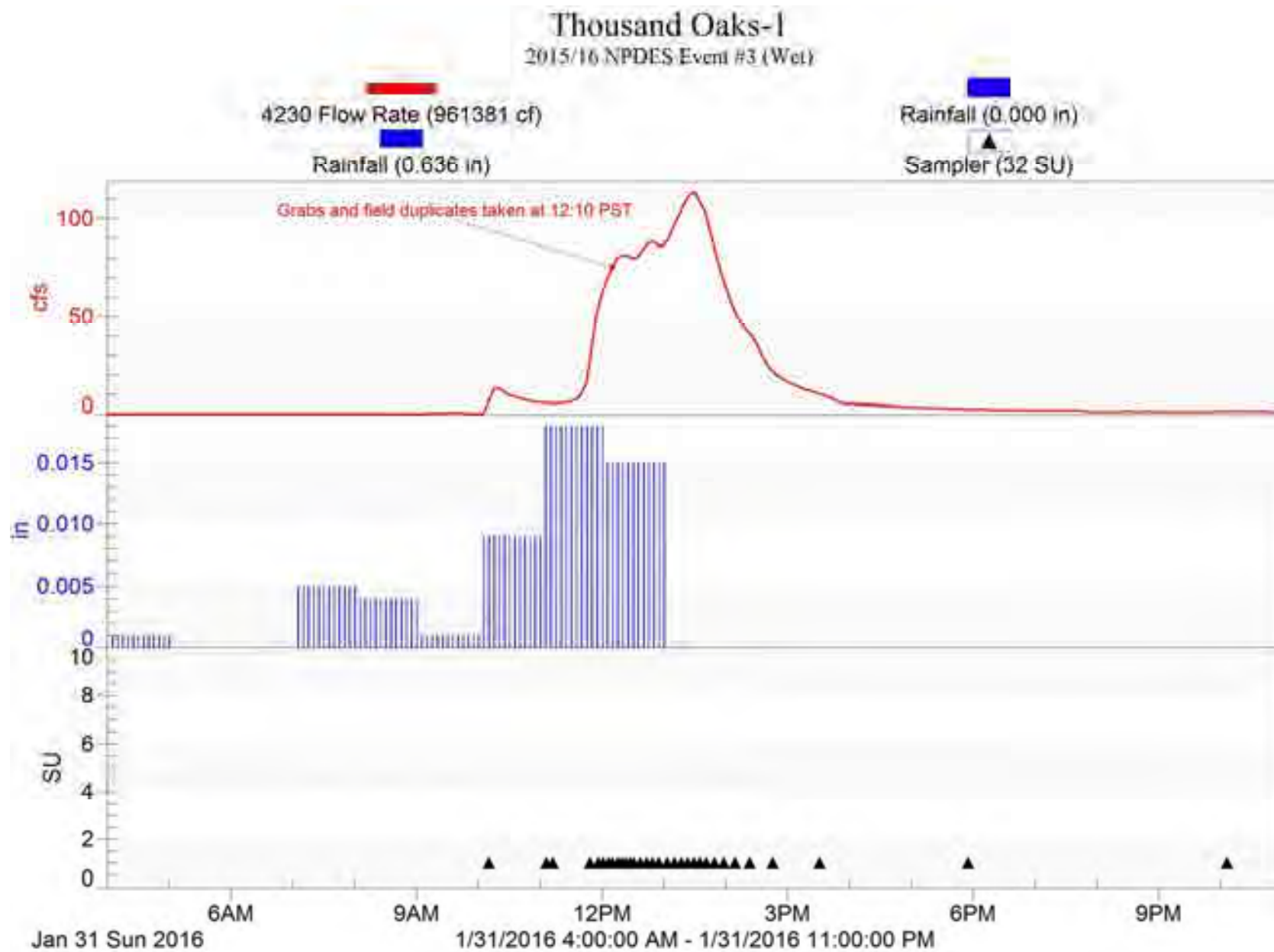


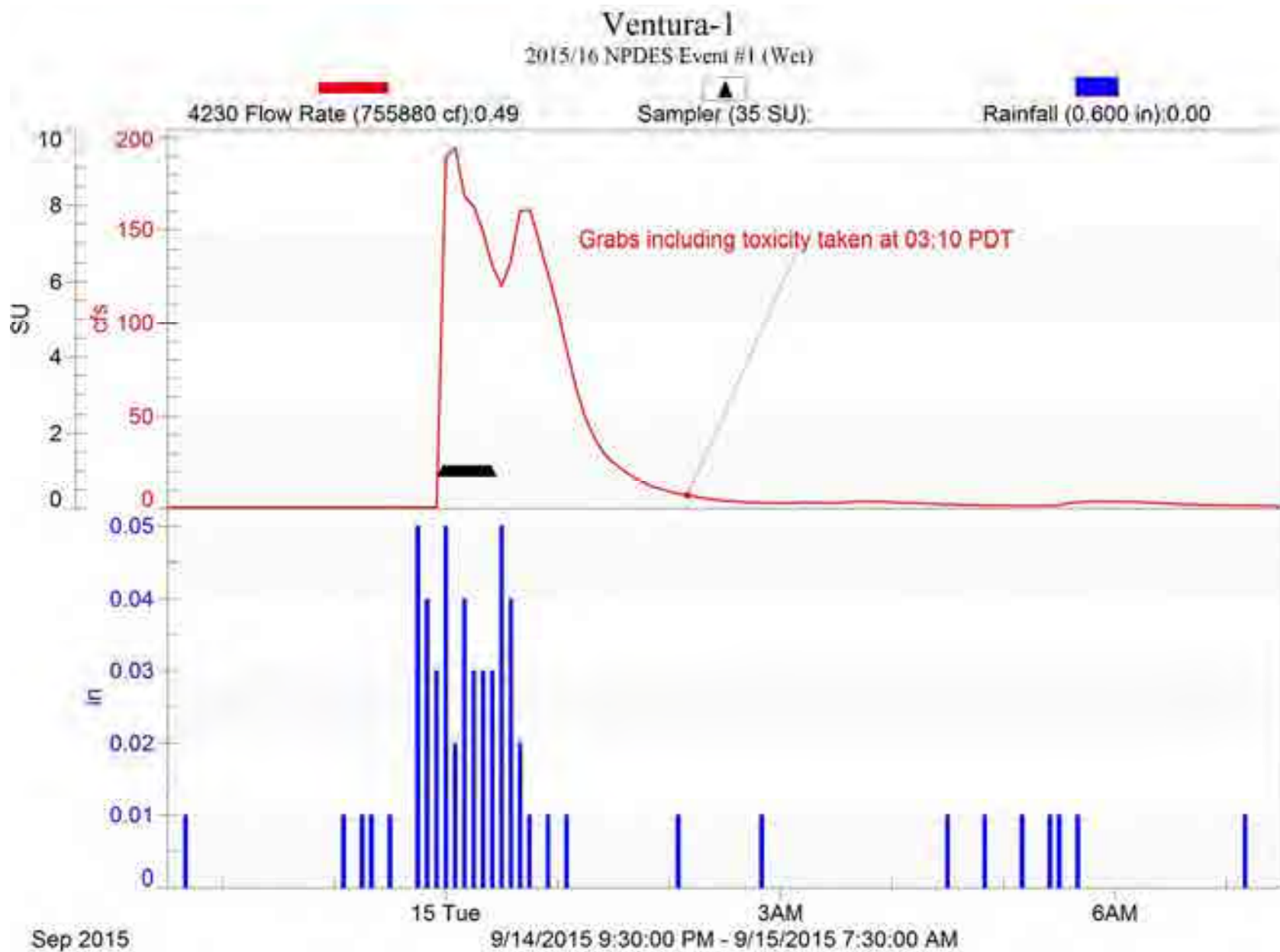


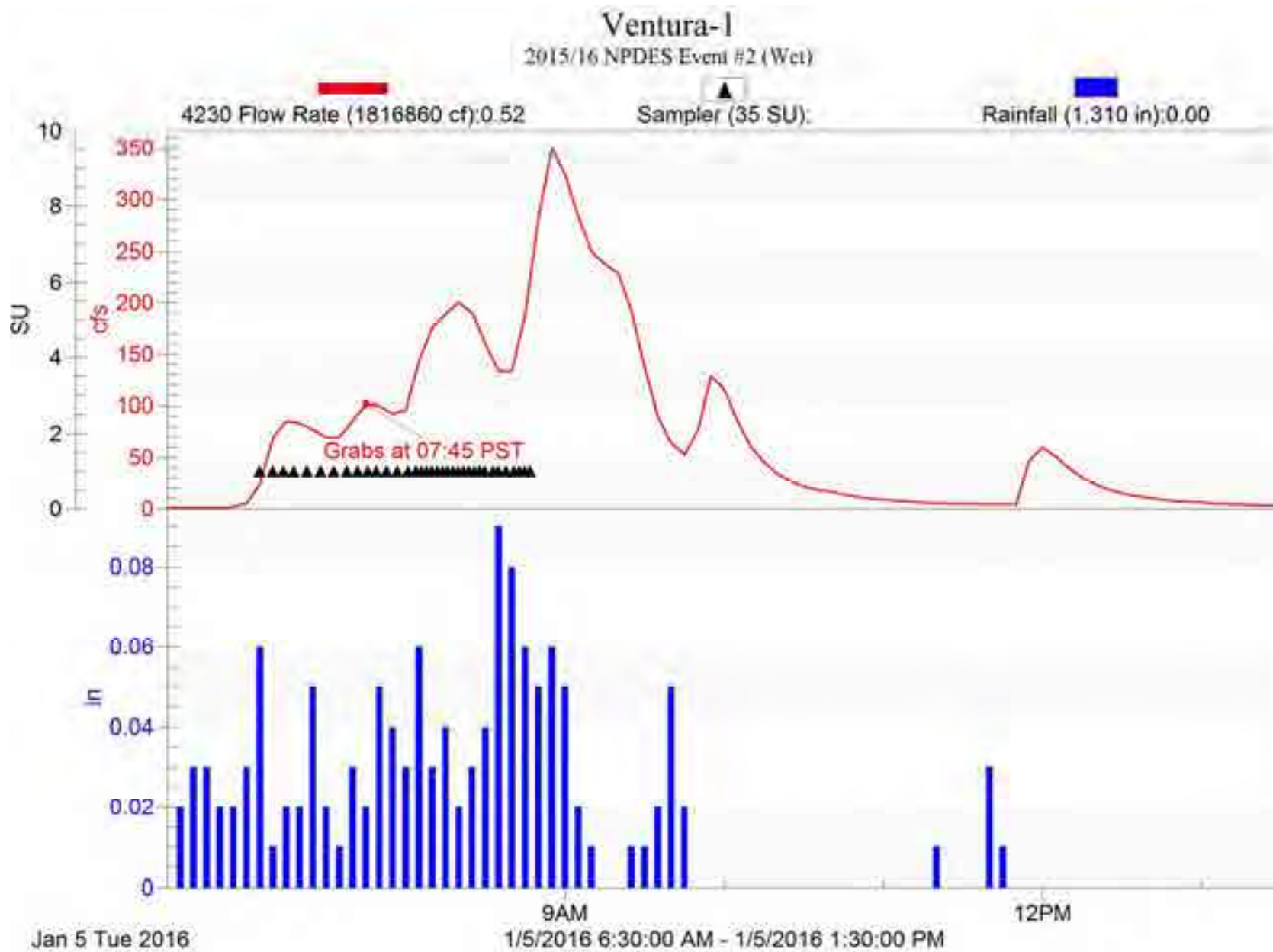
Thousand Oaks-1

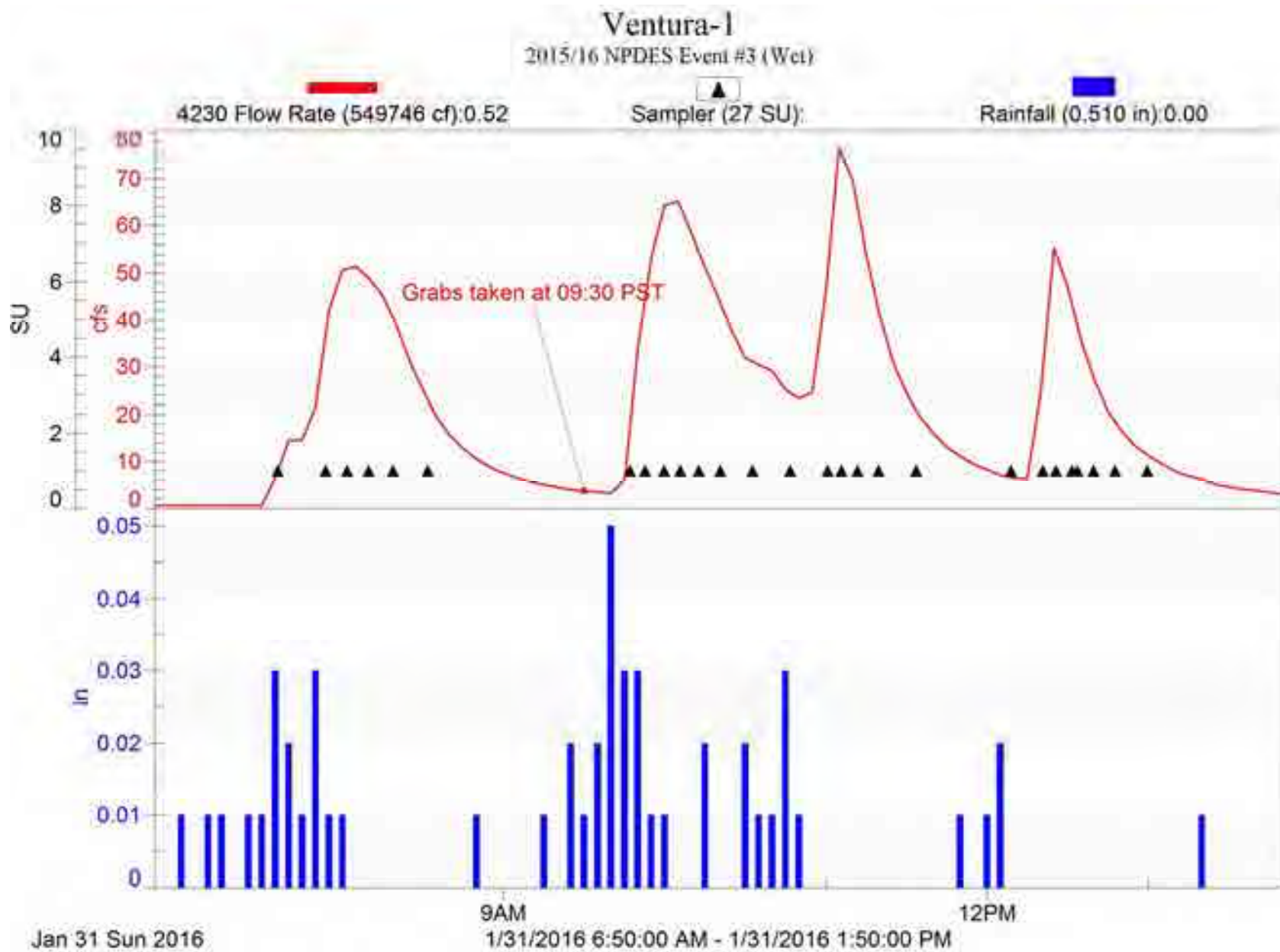
2015/16 NPDES Event #2 (Wet)











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

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

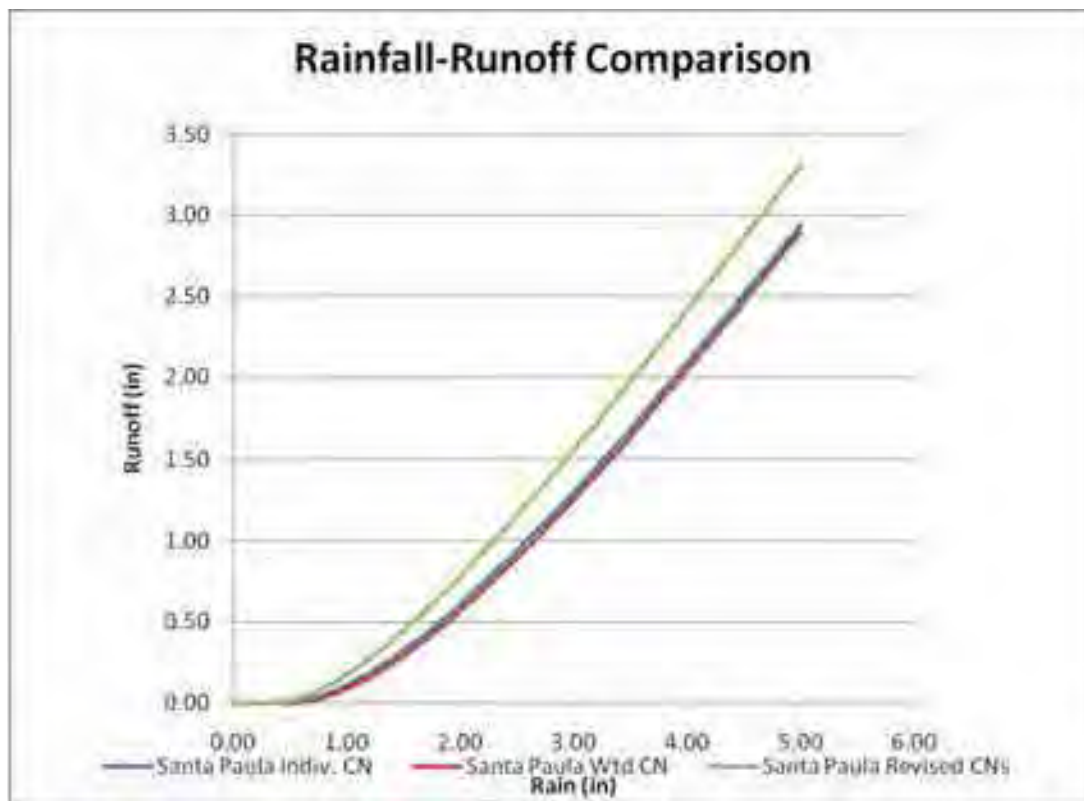
Table 3: Storm Yield Results- Weighted Average Curve Numbers with Updated CNs

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

Ventura Watershed

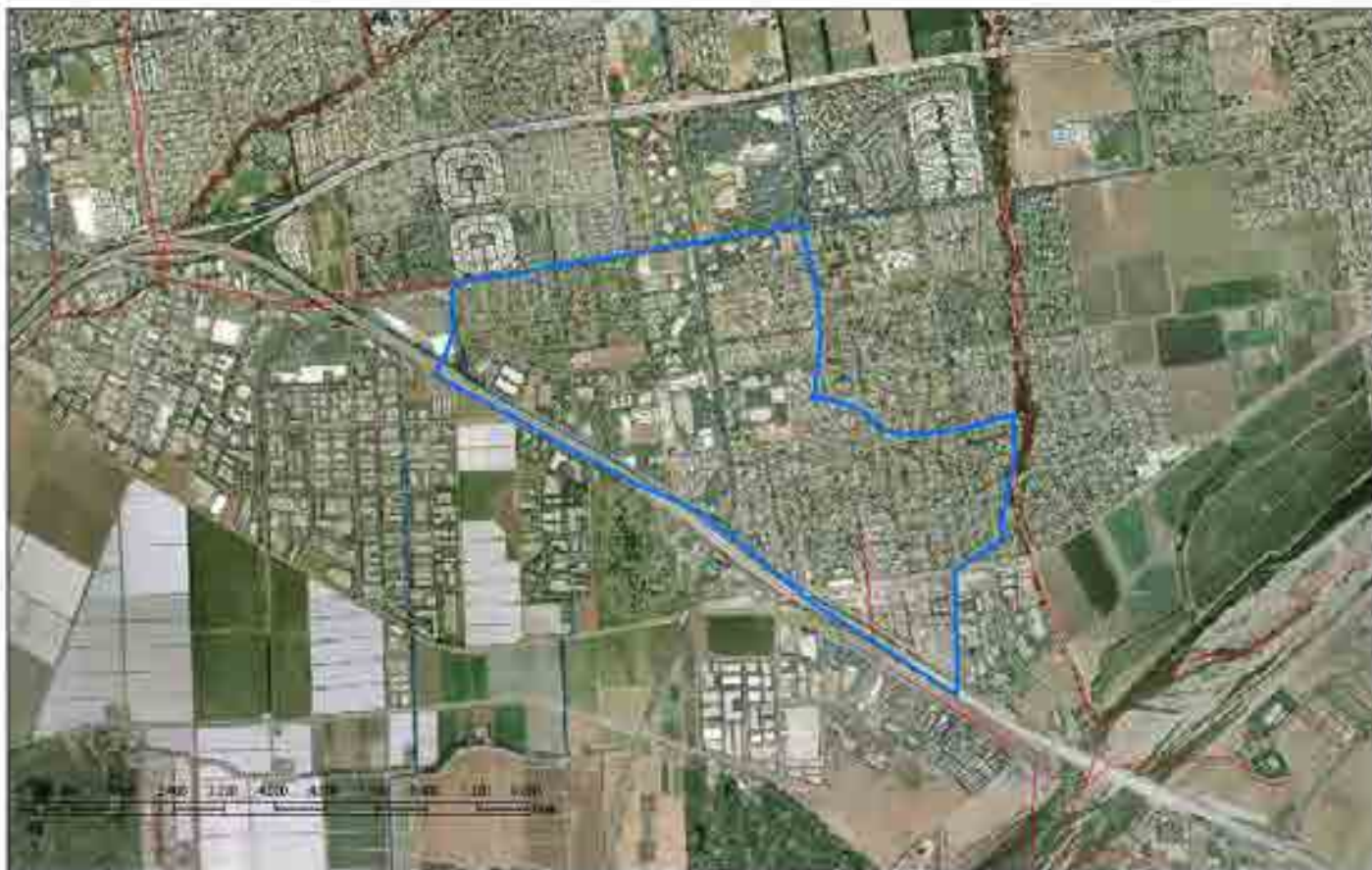


Figure 2

Meiners Oaks Happy Valley Watershed



Figure 3

Ojai Fox Watershed

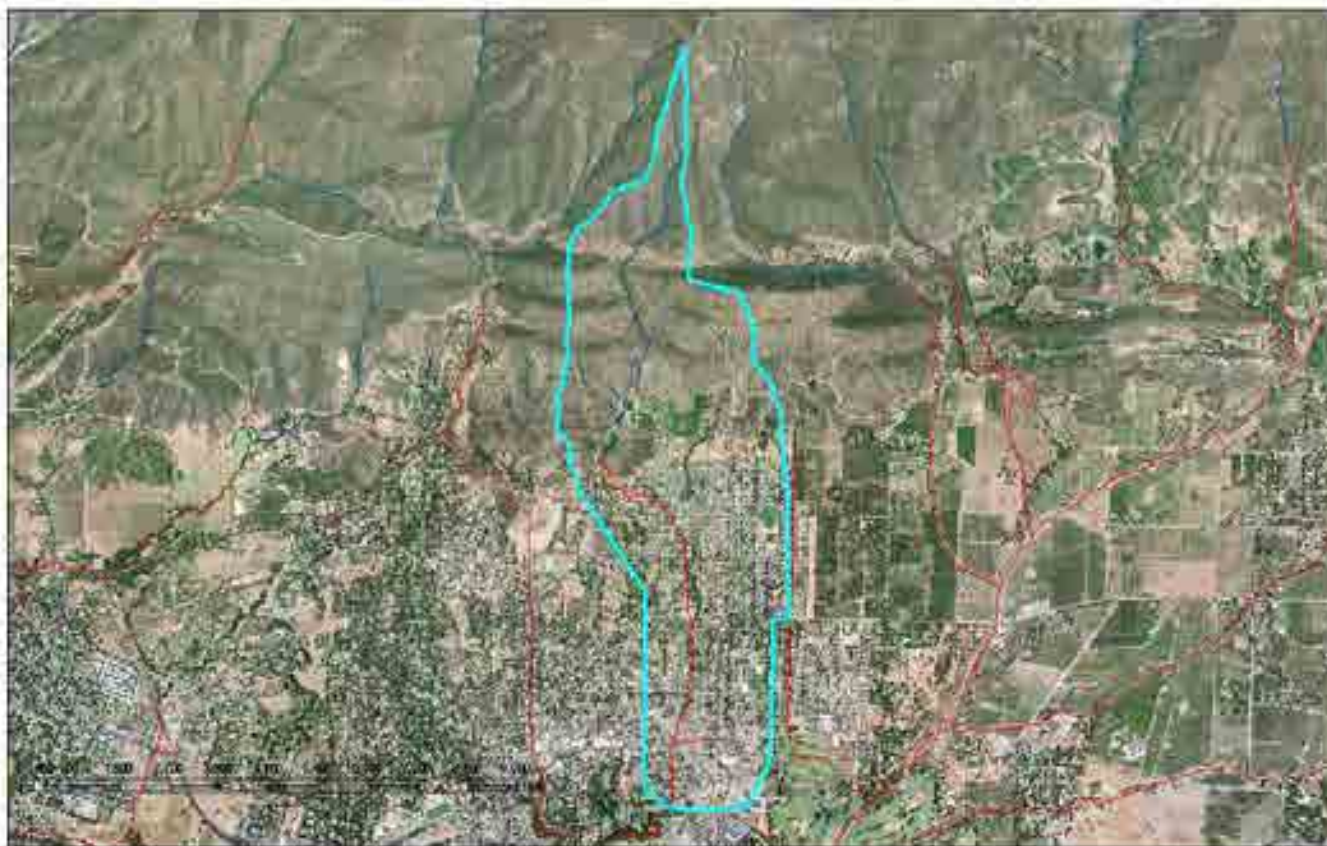


Figure 4

Camarillo Hills Drain Watershed



Figure 5

Simi Valley Watershed



Figure 6

Oxnard Watershed



Figure 7

Moorpark Watershed

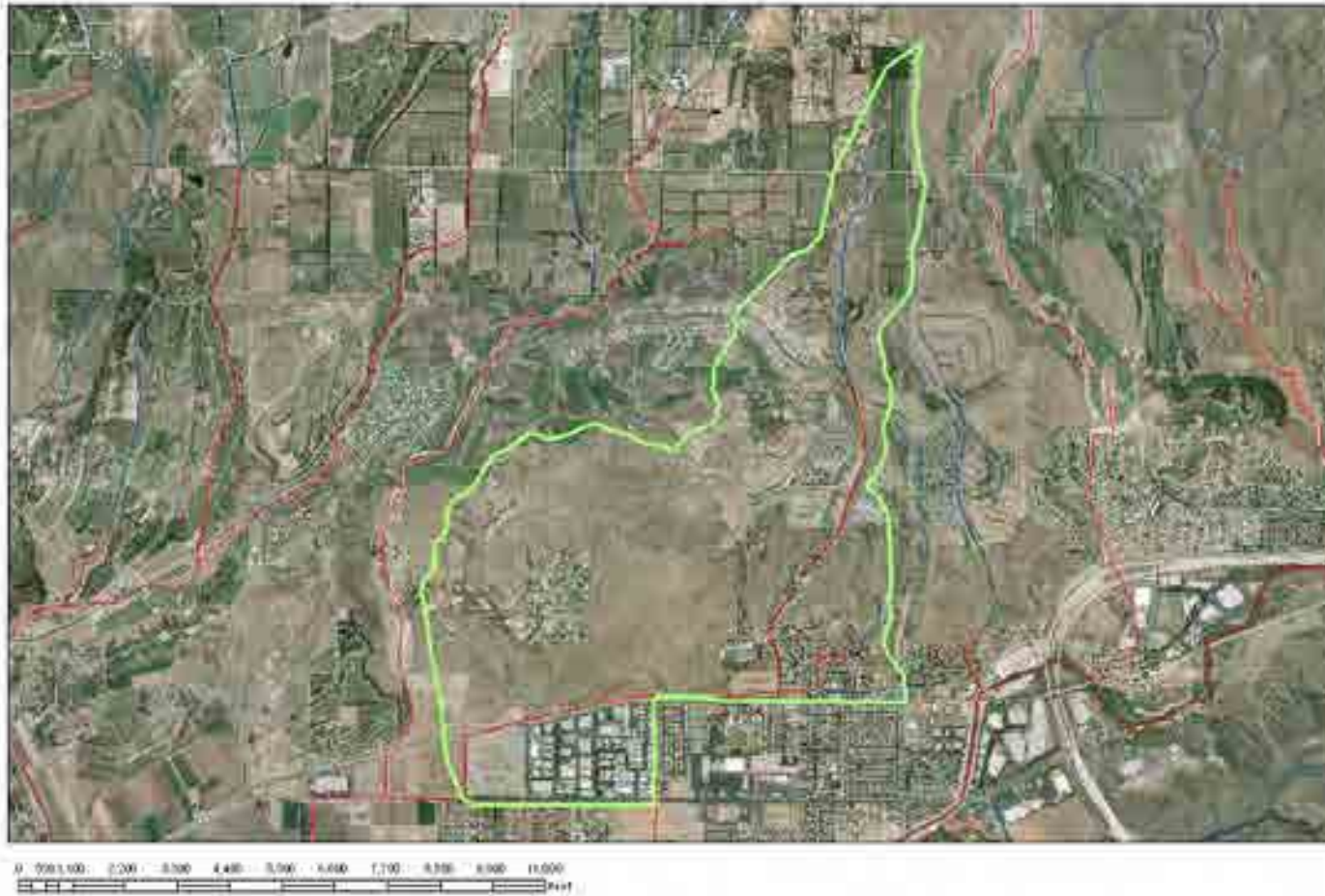


Figure 8

Port Hueneme Watershed



Figure 9

Fillmore Watershed



Figure 10

Thousand Oaks Watershed



Figure 11

Santa Paula Watershed



Figure 12

Appendix D. Event Summaries

Site	Event	Visit	Staff	Date	Arrival Time	PDT/ PST	Flowmeter Display	Outside Staff (ft)	Fridge T °C	Other Flush (L)	Distil H2O Flush (L)	Pump Count	Program/6712 Display	Comp bottle status	Est Comp Vol (L)	Comp Duration (nearest half hrs)	Comp Time	Grab Time	Toxicity Time	Notes
ME-CC	0	1	JM	9/2/2015					NR		2	Reset to 0								Cleaned house, solar panel, new pump tube, calibrated to 500 ml, replaced dessicant
ME-CC	1	1	AA	9/14/2015	16:00				4		2	67703	Flow:1 pulse/500mlx35, program disabled	Installed, lid off						
ME-CC	1	2	TL,SG	9/15/2015	5:45	PDT	1.179', 18 cfs	NA-Dark	-1.5				Sample 3 after 1 pulse	Good	1			5:55	5:55	Samples at check dam. Grabs include DNA filters
ME-CC	1	3	KH	9/16/2015	12:40	PDT	1.160, 14 cfs	1.16	-2		2	433829	Done. Turned off	Good	18	5.5	12:40	12:45	NA	Grab for DNA Filter only
ME-VR2	1	1	KH,LM	9/14/2015	15:30	PDT	1.718', 0 cfs	1.65	3	1L 1% HNO3	2	Reset to 0	Flow:1 pulse/500mlx35, program disabled	Installed, lid off						Changed tubing both pumps, reset counts. Checked vol 1)240ml, 2)620ml. Changed 4230 internal dessicant. Cleared bubbler orifice and vicinity. Captured HNO3 waste. Grab and tox bottles onsite.
ME-VR2	1	2	KH,LM	9/15/2015	4:20	PDT	1.784, 0 cfs		11*				Sample 28 after 1 pulse. See notes. 2 grabs to check function after repairs, then reprogrammed Time: 7 mins, 32 samplesx500ml	Too low	1			5:10	5:10	*Fridge and lower pump not working. Fridge likely blew fuse. Put comp bottle on ice in grey bucket in fridge. Connected pumphead to 4230 power pack (so 4230 unpowered for remainder of event) and set time paced, every 7 minutes (~same pacing as flow-paced). Sample vol 1) high, 2) good. Grabs include DNA filters
ME-VR2	1	3	TL	9/15/2015	10:55	PDT	No power		11*				Done	Still iced	18.5	4	11:08			No distilled water on truck, flush later. DNA filter only. Checked fridge fuse - blown. Needs replaced. Note: repaired fridge installed 10/2/2015.
ME-VR2	1	4	KH,WBC	9/17/2015	11:35	PDT	No power				2	493832						11:35		
ME-SCR	1	NS																		Dry antecedent. No flow/response at site.
MO-OJA	1	NS																		Dry antecedent. No flow/response at site.
MO-MEI	1	NS																		Dry antecedent. No flow/response at site.
MO-FIL	0	1	JM	9/3/2015						1L 1% HNO3	2	Reset to 0								Cleaned house, solar panel, new pump tube, calibrated to 500 ml, replaced dessicant
MO-FIL	1	1	TL	9/14/2015	11:48	PDT	0.121		0.5		2		Time:10min/500mlx35, program disabled	Installed, lid off						Grab and tox bottles onsite.
MO-FIL	1	2	AA,ND	9/15/2015	3:40	PDT	0.948		1				Sample 23 in 4:52		12	5.5		3:45	3:45	Grabs include DNA filters
MO-FIL	1	3	TL	9/15/2015	8:40	PDT	0.287		0.5		2	178176	Done				8:45			
MO-OXN	0	1	JM	9/4/2015						1L 1% HNO3	2	Reset to 0								Cleaned house, solar panel, new pump tube, calibrated to 500 ml, replaced dessicant
MO-OXN	1	1	AA	9/14/2015	16:45	PDT			-1		2	19190	Flow: 1 pulse/500mlx35, program disabled	Lid off						
MO-OXN	1	2	TL,SG	9/15/2015	2:55	PDT	1.141', 28.9 cfs	0.95@3:10	1				Done	Full	18			3:00	3:00	Capped comp bottle
MO-OXN	1	3	KH,LM	9/15/2015	11:00	PDT	0.223',1.4 cfs		-2		2	115569	Done	Full	18	1	11:00			Turned 6712 off
MO-CAM	0	1	JM	9/11/2015						1L 1% HNO3	2	Reset to 0								Cleaned house, solar panel, rain gauge, new pump tube, calibrated to 500 ml, replaced dessicant
MO-CAM	1	1	AA	9/14/2015	12:45	PDT	10 cfs	<	3		2	16569	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off						
MO-CAM	1	2	TL,SG	9/15/2015	3:37	PDT	0.339', 51 cfs	0.31@3:41	1				Done					3:45	3:45	Capped comp bottle. Grabs include DNA filters
MO-CAM	1	3	KH,LM	9/15/2015	10:30	PDT	0.033', 10 cfs	<	4		2	104341	Done	Full	18	0.5	10:30			6712 off
MO-SIM	0	1	JM	9/7/2015						1L 1% HNO3	2	Reset to 0								Cleaned house, solar panel, new pump tube, calibrated to 500 ml, replaced dessicant

MO-SIM	1	1	TL	9/14/2015	11:54	PDT	0.142', 2 cfs	1	2	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off								
MO-SIM	1	2	AA,ND	9/15/2015	5:15	PDT	0.449', 26 cfs	1		Done	Full	18	0.5	5:20	5:30	5:30	Grabs include DNA filters		
MO-SIM	1	3	WBC	9/16/2015	12:49	PDT	0.141', 0.2 cfs		2										
MO-MPK	0	1	JM	9/3/2015					1L 1% HNO3	2	Reset to 0							Cleaned house, solar panel, new pump tube, calibrated to 500 ml, replaced dessicant	
MO-MPK	1	1	TL	9/14/2015	14:29	PDT	0.075', 0.2 cfs	1	1L 1% HNO3	2	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off						Installed low flow strainer	
MO-MPK	1	2	AA,ND	9/15/2015	4:33	PDT	0.281', 6.4 cfs	1			Done	Almost full	-	0.5	4:53	4:43	4:43	No flow Edison. Grabs include DNA filters	
MO-MPK	1	3	WBC	9/16/2015	12:22	PDT	0.078', 0.2 cfs			2									
MO-THO	0	1	KH,LM	9/2/2015	10:15	PDT	2.069', 1 cfs	4	1L 1% HNO3	2	Reset to 0							Cleaned house, new pump tube, cleaned intake and bubbler orifice, calibrated to 500 ml by adjusting programmed suction head height, replaced 4230 external dessicant, internal dessicant needs replaced. No corrosion on battery terminals.	
MO-THO	1	1	AA	9/14/2015	13:55	PDT	2.052', 1 cfs	2		2	35788	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off						
MO-THO	1	2	AA,ND	9/15/2015	6:15	PDT	3.067', 43 cfs	0.1				Done	Full	18	0.5	6:30	6:18	6:18	
MO-THO	1	3	WBC	9/16/2015	13:27	PDT	2.112', 1 cfs			2									
MO-VEN	0	1	JM	9/4/2015					1L 1% HNO3	2	Reset to 0							Cleaned house, rain gauge, solar panel, new pump tube, calibrated to 500 ml, replaced dessicant	
MO-VEN	1	1	JM	9/14/2015	17:15	PDT	0.038', 0 cfs	3		2	3508	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off						
MO-VEN	1	2	KH,LM	9/15/2015	3:00	PDT	0.272', 11 cfs	0.28	4	2	110586	Done	Full	19	0.5	3:30	3:10	3:10	Turned 6712 off. Grabs include DNA filters
MO-HUE	0	1	JM	9/11/2015						2	Reset to 0							Cleaned house, rain gauge, new pump tube, calibrated to 500 ml, replaced dessicant	
MO-HUE	1	1	AA	9/14/2015				-2		2	18317	Time: 10min/500mlx35, program disabled	Installed, lid off						
MO-HUE	1	2	TL,SG	9/15/2015	4:36	PDT		1				Sample 20 in 00:03	Volume good			4:45	4:45	Sample 20 volume good	
MO-HUE	1	3	KH,LM	9/15/2015	8:00	PDT		0		2	171280	Done	Full	18	5.5	8:00		Turned 6712 off. Grabs include DNA filters	
MO-SPA	0	1	JM	9/3/2015					1L 1% HNO3	2	Reset to 0							Cleaned house, solar panel, new pump tube, calibrated to 500 ml, replaced dessicant	
MO-SPA	1	1	JM	9/1/2015	14:06	PDT	0.090', 0.00 cfs	2		2	3261	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off						
MO-SPA	1	2	AA,ND	9/15/2015	2:55	PDT	0.8', 14.5 cfs	4				Done	Full	18	1.5	3:23	3:10	3:10	Grabs include DNA filters
MO-SPA	1	3	WBC	9/16/2015	11:00	PDT	0.075', 0.01 cfs			2									

Event Notes:

All times are recorded here in PDT

Forecast Rain: 0.10" – 0.25.

Actual Rainfall: 0.25" - 1" at most sites across the county (more than expected).

Storm Control: Bill Carey

Sample Tracking:

Bacteria samples to VCHCA:

9/15/15 @ 07:30 PDT (SPA/FIL/SIM/MPK/THO) to Nadia Van Buren by Arne Anselr

9/15/15 @ 07:50 PDT (CC/CAM/OXN/HUE) to Nadia Van Buren by Tommy Liddel

9/15/15 @ 08:40 PDT (VR2/VEN) to Sherri Hurd by Kelly Hahs

Toxicity samples to Aquatic Bioassay & Consulting Laboratories, Inc. (Elizabeth Maturino)

9/15/2015 @ 10:25 PDT (CC/VR2/CAM/OXN/VEN/HUE/FIL/SPA/SIM/MPK/THO) by Tommy Liddel

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

9/15/15 @ 12:30 PDT (All sampled grabs and composites except CC composite by Kelly Hahs to J Ramirez (Reliable Messenger Service

9/16/15 @ 14:20 PDT (CC composite)by Kelly Hahs to Allan Goldberg (Weck)

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)	(nearest half hrs)			
ME-CC	2	1	TL	1/4/2016	1353	PST	1.116	9	1.11	3	2L Distilled	437,360	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off. Needs label.				Adjust clock 1354 to 1404. Turned fridge cooler. Grab bottles onsite. Samples at check dam. Grabs included DNA filters but bottles not rinsed of acid so sample discarded after delivery to lab. USGS onsite taking discharge measurement.
ME-CC	2	2	TL,SC	1/5/2016	1031	PST	1.423	75	1.4	2			Sample 3 after 1 pulse	1L		1040		Grab for DNA Filter only. Mold growing on centering rack. Opened drain in fridge to drain bottle overflow.
ME-CC	2	3	KH,LM	1/6/2016	1215	PST	2.202	526		0	2L Distilled	807,218	Done. Turned off	Overflowed		1215	1210	
ME-VR2	2	1	AA	1/3/2016	1548	PST		1		2	2L Distilled	546,526	Flow:1 pulse/500mlx35, program disabled	Onsite, lid off.				Grab bottles onsite. Grabs included DNA filters but bottles not rinsed of acid so sample discarded after delivery to lab. Collected DNA filter sample only.
ME-VR2	2	2	LM,WBC	1/5/2016	1130	PST	2.245	10		4	2L Distilled	771,710	Program done	18L		1130	1140	
ME-VR2	2	3	KH,LM	1/6/2016	1050	PST	3.377	144					Done			1055		
ME-SCR	2	1	TL	1/4/2016	1200	PST	1.312			0	2L Distilled	348,920	Time: 24 hr event, 40 mins, 500mlx35, program disabled	Installed, lid off.				Channel dry and recently scraped out to concrete bottom (photo). Grab bottles and tox buckets onsite. No water in bottle. Some water in channel but too low to sample (photo). Reprogrammed to allow time for runoff to overcome extremely dry antecedent conditions.
ME-SCR	2	2	TL,SC	1/5/2016	1141	PST	1.312						"Errors have occurred. Sample 7 in 00:11:18." Reprogrammed time 18 hr event, 30 mins with 3 hour start delay (15:00)	Dry				
ME-SCR	2	3	KH,LM	1/6/2016	0835	PST	1.281			0			"Program done, errors occurred". Still within 24 hr sample window so reprogrammed 10 min pacing.	6L		0845	0845	No liquid detected #1-8,11-33,35. No more liquid #9. Good #10,34. Restarted program, no liquid detected #1 but water level marginal at intake. Removed rope to lower intake ~2" to channel bottom. 6712 grab twice yielded 0 ml. Restarted program 10 min pacing in case water level rises with more runoff. DNA filter sample collected. No liquid detected #1-18. Good #19-24. Gate open and high flow (level and velocity) in channel. Raised intake arm ~horizontal and secured to railing with rope.
ME-SCR	2	4	KH,LM	1/6/2016	1300	PST	5.297			0	2L Distilled	991,395	"Sample 23 in 00:06. Errors have occurred".	8L		1300		
MO-OJA	2	1	AA	1/3/2016	NR	PST	0.101	5		3	2L Distilled	37,932	Flow: 1 pulse/500mlx35, program disabled	Onsite, lid off.				Grab bottles and tox buckets onsite. Collected DNA filter sample.
MO-OJA	2	2	LM,WBC	1/5/2016	0914	PST	0.579	64	0.6	4	2L Distilled	NR	Program done	18L		0955	0935	0935
MO-MEI	2	1	AA	1/3/2016	1704	PST	0.081	1		10	2L Distilled	20,426	Flow: 1 pulse/500mlx35, program disabled	Onsite, lid off.				Turned on fridge, set thermostat at 50%. Grab bottles and tox buckets onsite. Collected DNA filter sample.
MO-MEI	2	2	LM,WBC	1/5/2016	1030	PST	0.446	35	0.4	4	2L Distilled	NR	Program done	18L		1032	1040	1040
MO-FIL	2	1	TL	1/4/2016	1042	PST	0.351			0	2L Distilled	182,540	Time: 6 hr event, 10 mins, 500mlx35, program disabled	Bottle in, lid off. Needs label.				Grab bottles onsite. Channel photo taken. Collected DNA filter sample.
MO-FIL	2	2	AEA,BGM	1/5/2016	0838	PST	1.887			1			"Sample 8 in 00:25"	10% full		0850		
MO-FIL	2	3	AEA,BGM	1/5/2016	1303	PST				0.5	Not flushed		"Sample 35 in 08:10"	18L		1315		Removed centering device from fridge and stored in house
MO-FIL	2	4	WBC	1/7/2016	1320	PST					2L Distilled							
MO-OXN	2	1	KH,LM	1/4/2016	1650	PST	0.108	0.2		3	2L Distilled	119,839	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.				Grab bottles onsite. Collected DNA filter sample. Needs flushed
MO-OXN	2	2	TL,SC	1/5/2016	0811	PST	1.949	77.2	1.95	1			Sample 11	5L		0820		
MO-OXN	2	3	TL,SC	1/5/2016	1250	PST	0.862	17.6		1		213,356	Program done	18L		1252		
MO-OXN	2	4	LM	1/8/2016	1555	PST	0.109	0.2		2	2L Distilled	216,722						Tubing in fridge looks moldy or dirty inside

MO-CAM	2	1	TL	1/4/2016	1241	PST	0.033	10		1	2L Distilled	106,385	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off. Needs label.		Grab bottles onsite.
MO-CAM	2	2	TL,SC	1/5/2016	0856	PST	0.992	200	1	3			"Sample 17 after 1 pulse"	9L	0910	Turned fridge colder, Collected DNA filter sample.
MO-CAM	2	3	TL,SC	1/5/2016	1059	PST	0.276	40		3		191,979	Program done	18L	1105	Needs flushed
MO-CAM	2	4	LM	1/8/2016	1519	PST	0.033	10		3	2L Distilled	194,530				
MO-SIM	2	1	KH,LM	1/4/2016	1516	PST	0.139	2	<oss	3	2L Distilled	88,515	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.		Grab bottles onsite
MO-SIM	2	2	AEA,BGM	1/5/2016	1042	PST	0.622	48	0.6	4			"Sample 24 after 1 pulse"	Half full	1025	Monitoring team from Kinetics Lab onsite conducting Calleguas TMDL monitoring (same constituents as NPDES).
MO-SIM	2	3	WBC,SC	1/6/2016	0906	PST	0.246	7		4	2L Distilled	164,724	Program done	18L	0906	
MO-MPK	2	1	KH,LM	1/4/2016	1440	PST	0.077	0.2	<oss	0	2L Distilled	181,143	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.		Mold growing on bottle positioning device. Shoveled intake clear of accumulated sediment.
MO-MPK	2	2	AEA,BGM	1/5/2016	0935	PST	0.402	13.4	0.45	3			"Sample 12 after 1 pulse"	10%	0945	
MO-MPK	2	3	WBC,SC	1/6/2016	0840	PST	0.078	0.2		4	2L Distilled	320,901	Program done	8L	0840	
MO-THO	2	1	KH,LM	1/4/2016	1555	PST	2.098	1	2.1	2	2L Distilled	201,258	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.		Grab bottles onsite
MO-THO	2	2	AEA,BGM	1/5/2016	1058	PST	3.823	85		4			"Sample 16 after 1 pulse"	20% full	1115	
MO-THO	2	3	WBC,SC	1/6/2016	0945	PST	2.242	2		4	2L Distilled	358,412	Program done	18L	0945	
MO-VEN	2	1	KH,LM	1/4/2016	1715	PST	0.039	1	dry	4	2L Distilled	114,096	Flow: 1 pulse/500mlx35, program disabled	Installed, lid off.		Grab bottles onsite
MO-VEN	2	2	LM,WBC	1/5/2016	0735	PST	0.822	67		3			"Sample 8 after 1 pulse"	3L	0745	
MO-VEN	2	3	LM,WBC	1/5/2016	1305	PST	0.175	5		4	2L Distilled	209,477	Program done	14L	1305	
MO-HUE	2	1	TL	1/4/2016	1636	PST	NA	NA	NA	0	2L Distilled	173,170	Time: 6 hr event, 10 mins, 500mlx35, program disabled	Bottle in, lid off. Needs label.		Grab bottles onsite
MO-HUE	2	2	TL,SC	1/5/2016	0951	PST	NA	NA	NA	1			"Sample 20 in 08:48"	10L	1000	
MO-HUE	2	3	KH,LM	1/6/2016	1140	PST	NA	NA	NA	4	2L Distilled	328,186	Program done	10L	1140	Comp bottle and cube cooler had been put in fridge. Cooler half full of water. Intake line not secured to narrow neck bottle.
MO-SPA	2	1	TL	1/4/2016	1001	PST	0.057	0	dry	-1	2L Distilled	194,942	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off. Needs label.		Grab bottles onsite
MO-SPA	2	2	AEA,BGM	1/5/2016	0801	PST	7.57 f/s	12.63		2			"Sample 6 after 1 pulse"	10% full	0810	
MO-SPA	2	3	AEA,BGM	1/5/2016	1228	PST	7.3 f/s	7.14		1		347,077	Program done	18L		Line not flushed
MO-SPA	2	4	WBC	1/7/2016	1255	PST					2L Distilled					Removed centering device from fridge, stored in house.

Event Notes:

All times are recorded here in PST

Forecast Rain: 0.75" - 1.5"

Actual Rainfall: 0.5" - 2" at most sites across the county (more than expected).

Storm Control: Kelly Hahs

Sample Tracking:

Bacteria samples to VCHCA:

1/5/16 @ 11:58 (SPA/FIL/SIM/MPK/THO) by Arne Anselm

1/5/16 @ 12:11 (CC/CAM/OXN/HUE) by Tommy Liddell (not DNA filters)

1/5/16 @ 12:48 (VR2/OJA/MEI/VEN) by Lara Meeker

1/5/16 @ 14:50 (CC/CAM/OXN/HUE/SPA(duplicate)) by Lara Meeker (DNA filters only)

1/6/16 @ 14:15 (CC/SCR/VR2) by Lara Meeker (DNA filters plus bacti for SCR) - samples may be too sediment laden to be analyzed for DNA filter

Toxicity samples to Aquatic Bioassay & Consulting Laboratories, Inc. (Elizabeth Maturino)

1/5/16 @ 12:22 (MEI/OJA) by Lara Meeker

1/6/16 @ 10:35 (SCR) by Kelly Hahs

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

1/5/16 @ 14:45 (Grabs-all but SCR, Composites- VR2(includes imazapyr)/OJA/MEI/CAM/VEN/SPA/FIL/OXN) by Bill Carey to David Levy (Reliable Messenger Service)

1/6/16 @ 14:30 (Grabs- SCR, Composites- CC/SCR/SIM/MPK/THO/HUE by Kelly Hahs to Juan Flores (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

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)	(nearest half hrs)			
ME-CC	3	1	SG	1/29/2016	1555	PST	1.075	6	1.11	-2	2L Distilled	24,922	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
ME-CC	3	2	WBC,SC	1/31/2016	1130	PST	1.212	23		0			Sample 3 after 1 pulse	2L		1140		
ME-CC	3	3	KH,SG	2/1/2016	0945	PST	1.336	51	See notes	-3	2L Distilled	267,436	Sample 24 after 1 pulse	18L		0950		42301.340 abd oss 1.34 @0947. Bight '08 DNA bacti sample 0950. Turned fridge warmer.
ME-VR2	3	1	KH,SC	1/29/2016	0945	PST	1.983	3	See notes	0	2L Distilled	0	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Changed tubing both pumps. Shoveled out communication channel and bubbler. Cleared area around intake. Checked calibration 1. 300 ml. Flushed 2L distilled. Cal 2. 650ml. Flushed line 2L distilled. Grab bottles onsite. OSS inaccurate when left due to sediment. More clearing done by SG later that day. Beckman 410 pH meter 410 S/N # 110341139 won't turn on. pH sample collected for analysis at SOY and Weck. (SOY@14:05 (Beckman 255): pH 7.06, temp 6.7 degC)
ME-VR2	3	2	LM,SG	1/31/2016	1140	PST	2.221	10		2			Sample 22 after 1 pulse	3/4 full		1155		
ME-VR2	3	3	LM,SC	2/1/2016	0950	PST	1.976	3		3	2L Distilled	252,952	Program done.	18.5L		0955		Bight '08 DNA bacti sample 0950
ME-SCR	3	1	KH,SC	1/29/2016	1500	PST	6.719			2	2L Distilled	19,608	Time: 10 min/500mlx35, program disabled	Bottle in, lid off.				
ME-SCR	3	2	WBC,SC	1/31/2016	1225	PST	7.025			2			Sample 26 in 1 min. Stopped program	Almost full		1230		
ME-SCR	3	3	KH,SG	2/1/2016	0810	PST	10.176			0	2L Distilled	190,444	Stopped	18L		0815		Bight '08 DNA bacti sample 0820. Swing arm still down.
MO-OJA	3	1	SG	1/29/2016	NR	PST	0.101	5		4	2L Distilled	133,174	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-OJA	3	2	LM,SG	1/31/2016	1015	PST	0.309	25	0.3	3			Program done.	Full		1020		
MO-OJA	3	3	LM,SC	2/1/2016	0845	PST	0.1	5		2	2L Distilled	223,189	Program done.	18.5L		0855		
MO-MEI	3	1	SG	1/29/2016	1308	PST	0.082	1		16	2L Distilled	108,373	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Turned fridge on to 75%
MO-MEI	3	2	LM,SG	1/31/2016	0925	PST	0.143	4	0.1	3			Sample 15 after 1 pulse	1/2 full		0935		
MO-MEI	3	3	LM,SC	2/1/2016	0920	PST	0.083	1		4	2L Distilled	193,006	Program done.	19L		0925		
MO-FIL	3	1	KH,SC	1/29/2016	1226	PST	0.464			-2	2L Distilled	339,818	Time: 10 min/500mlx35, program disabled	Bottle in, lid off.				Shoveled sand from near intake/bubbler orifice
MO-FIL	3	2	AEA,DW	1/31/2016	1005	PST	1.119			0.5			Sample 22 in 1 min.	1/2 full		1015		
MO-FIL	3	3	WBC	2/1/2016	0850	PST	0.528			1	2L Distilled	488,639	Program done.	18L		0855		Turned off 4230
MO-oxn	3	1	KH,SC	1/29/2016	1600	PST	0.108	0.2	<toe	3	2L Distilled	220,009	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-oxn	3	2	WBC,SC	1/31/2016	1000	PST	0.712	12.5		3			Sample 7 after 1 pulse	3L		1015		
MO-oxn	3	3	KH,SG	2/1/2016	0850	PST	0.108	0.2	<toe	4	2L Distilled	317,021	Program done.	19L		0850		
MO-CAM	3	1	SG	1/29/2016	1630	PST	0.033	10		2	2L Distilled	196,863	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Homeless camped near flood control gate
MO-CAM	3	2	WBC,SC	1/31/2016	1045	PST	0.292	43		3			Sample 10 after 1 pulse/Errors have occurred	5L		1055		
MO-CAM	3	3	KH,SG	2/1/2016	1015	PST	0.04	11	<toe	0	2L Distilled	287,199	Errors have occurred/Program done	19L		1015		Sample 6: no more liquid
MO-SIM	3	1	KH,SC	1/29/2016	1337	PST	0.141	2	<toe	4	2L Distilled	168,002	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-SIM	3	2	AEA,DW	1/31/2016	1117	PST	0.373	18		0.5			Sample 17 after 1 pulse	5 inches		1125		
MO-SIM	3	3	WBC	2/1/2016	1010	PST	0.137	2			2L Distilled	239,988	Program done.	19L		1015		
MO-MPK	3	1	KH,SC	1/29/2016	1300	PST	0.078	0.2	dry	4	2L Distilled	327,342	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				No sediment on intake
MO-MPK	3	2	AEA,DW	1/31/2016	1048	PST	0.207	3.5		2.5			Sample 5 after 1 pulse	2 inches		1055		
MO-MPK	3	3	WBC	2/1/2016	0940	PST	0.075	0.2		3	2L Distilled	467,100	Program done.	18L		0945		
MO-THO	3	1	KH,SC	1/29/2016	1410	PST	2.106	1	0.91	2	2L Distilled	365,162	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-THO	3	2	AEA,DW	1/31/2016	1200	PST	3.343	56		3			Sample 6 after 1 pulse	3 inches		1210		Field dups collected at 1210 PST

MO-THO	3	3	WBC	2/1/2016	1050	PST	2.096	1		3	2L Distilled	509,014	Disabled. Stopped program	18L	1100	
MO-VEN	3	1	KH,SC	1/29/2016	1619	PST	0.042	1	dry	0	2L Distilled	213,025	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.		
MO-VEN	3	2	WBC,SC	1/31/2016	0915	PST	0.17	5		0			Disabled.	1L	0930	
MO-VEN	3	3	KH,SG	2/1/2016	0915	PST	0.048	1	<toe	-1	2L Distilled	288,704	Errors have occurred/Disabled	13L	0915	Sample 20: no more liquid @ 1214 PST. Last sample #27.
MO-HUE	3	1	LM	1/29/2016	1600	PST				2	2L Distilled	331,238	Time: 10 min/500mlx35, program disabled	Bottle in, lid off.		
MO-HUE	3	2	LM,SG	1/31/2016	1300	PST				3			Sample 18 in 8:30	1/2 full	1310	Collected extra grab sample for pH since meter won't turn on. (SOY@14:05 (Beckman 255): pH 7.11, temp 9.8 degC)
MO-HUE	3	3	LM,SC	2/1/2016	1045	PST				0	2L Distilled	483,425	Program done.	18L	1050	
MO-SPA	3	0	WBC, JM	1/27/2016	830	PST	Changed									Replaced 4250 flowmeter with 2150 AV flowmeter
MO-SPA	3	1	KH,SC	1/29/2016	1200	PST			dry	0	2L Distilled	354,944	Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.		
MO-SPA	3	2	AEA,DW	1/31/2016	0931	PST			Flowing	0.1			Sample 9 after 1 pulse	3 inches	0939	
MO-SPA	3	3	WBC	2/1/2016	0820	PST				4	2L Distilled	502,755	Sample 35 after 1 pulse. Stopped program	17L	0825	

Event Notes:

NR: Not recorded

All times are recorded here in PST

Forecast Rain: 0.5-1"

Actual Rainfall: 0.2" - 2" at most sites across the county

Storm Control: Kelly Hahs

Sample Tracking:

Bacteria samples to VCHCA:

1/31/16 @ 13:05 (SPA/FIL/SIM/MPK/THO+FD) by Arne Anselm

1/31/16 @ 13:20 (CC/SCR/CAM/OXN/VEN) by Bill Carey

1/31/16 @ 13:50 (VR2/OJA/MEI/HUE) by Lara Meeker

2/1/16 @ 10:35 (CC/SCR) by Kelly Hahs (Bight '08 DNA filters only)

2/1/16 @ 11:25 (VR2) by Lara Meeker (Bight '08 DNA filters only)

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

2/1/16 @ 13:45 (All sites, grabs and composites) by Bill Carey to Joe Ngok Liu Chow (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

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-VR2	4	1	WBC	3/4/2016	0937	PST	1.881	1		4	2L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Changed tubing both pumps. Shoveled out communication channel and bubbler. Cleared area around intake. Checked calibration 1. 300 ml. Flushed 2L distilled. Cal 2. 650ml. Flushed line 2L distilled. Grab bottles onsite. OSS inaccurate when left due to sediment. More clearing done by SG later that day.
ME-VR2	4	2	LM,DW	3/6/2016	0415	PST	2.673	35	2.6	3			Sample 15 after 1 pulse	1/2 full		0425		
ME-VR2	4	3	KH,SG	3/6/2016	1230	PST	2.445	19	2.4	4	2L Distilled	491,162	Program done	20L		1230		
ME-SCR	4	1	WBC	3/4/2016	1138	PST	6.762	NA	NA	2	2L Distilled		Time: 21 minutes for 12 hours, program disabled	Bottle in, lid off.				No grab bottles onsite No liquid detected - samples 25 (0750 PST) through 35 (11:20 PST)
ME-SCR	4	2	TL, JM	3/6/2016	0441	PST	0.358	NA	NA	3			Sample 17 in 18:39	9L		0440		
ME-SCR	4	3	KH,SG	3/6/2016	1315	PST	0.988	NA	NA	2	2L Distilled	474,238	Program done, errors have occurred.	16L		1315		
MO-OJA	4	1	WBC	3/4/2016	0900	PST	0.1	5		3	2L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				
MO-OJA	4	2	LM,DW	3/6/2016	0150	PST	0.469	47	0.6	4			Sample 29 after 1 pulse	3/4 full		0210		
MO-OJA	4	3	LM,DW	3/6/2016	0340	PST	0.267	10		4	2L Distilled	324,862	Program done	20L		0345		
MO-MEI	4	1	WBC	3/4/2016	0810	PST	0.081	1		-	2L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Fridge turned on. Installed centering rack.
MO-MEI	4	2	LM,DW	3/6/2016	0245	PST	0.648	70	0.65	4	2L Distilled	284,173	Program done	20L		0310	0300	
MO-MPK	4	1	WBC	3/3/2016	NR	PST	0.078	0.2		4	2L Distilled		Flow: 1 pulse/500mlx35, program disabled	Bottle in, lid off.				Edison outfall ~ 1 cfs
MO-MPK	4	2	TL, JM	3/6/2016	0132	PST	0.279	6.2		4			Sample 13 after 1 pulse	7L		0140		
MO-MPK	4	3	TL, JM	3/6/2016	0350	PST	0.651	29.9		4	2L Distilled	623,514	Program done	18L		0400		
MO-HUE	4	1	WBC	3/4/2016	1055	PST	NA	NA	NA	4	2L Distilled		Time: 10 minutes for 6 hours, program disabled	Bottle in, lid off.				No grab bottles onsite
MO-HUE	4	2	TL, JM	3/6/2016	0238	PST	NA	NA	NA	4			Sample 17 in 07:15	9L		0245		
MO-HUE	4	3	TL, JM	3/6/2016	0615	PST	NA	NA	NA	5	2L Distilled	643,210	Program done	17L		0618		

Event Notes:

All times are recorded here in PST

Forecast Rain: Most sites ~0.75 with mountains up to 1.5"

Actual Rainfall: 0.8- 2" at sampled sites across the county (more than expected).

Storm Control: Kelly Hahs

Sample Tracking:

Bacteria samples to VCHCA:

3/6/16 @ 05:35 (SCR/MPK/HUE) by Tommy Liddell (DNA filters SCR only)

3/6/16 @ 05:50 (VR2/OJA/MEI) by Lara Meeker (DNA filters SCR only)

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

3/6/16 @ ~14:45 (VR2/OJA/MEI/SCR/MPK/HUE) by Kelly Hahs to Hector Sanchez(?) (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

Site	Event	Visit	Staff	Date	Arrival Time	PST/ PDT	Flowmeter	Flowmeter Flow (cfs)	Outside Staff (ft)	Fridge T	Flush (L)	Pump Count	Program/6712 Display	Comp bottle	Comp	Grab Time	Toxicity Time	Notes
							Level (feet)			°C				status/ Estimated Vol (L)	Duration (nearest half hrs)			
ME-VR2	5	1	WBC	6/14/2016	1040	PDT	2.007	3		4	2L Distilled	508,278	Time: 41 min/500mlx35. Sample 2 in 38:00	Bottle in, lid off.				Replaced dessicant in 2105 & 4230
ME-VR2	5	2	WBC,DW	6/15/2016	0935	PDT	2.002	3		4	2L Distilled	718,798	Sample 34 in 18:00	Full	24	0945	0945	
MO-HUE	5	1	WBC	6/14/2016	0900	PDT	NA	NA		4	2L Distilled	3,204	Time: 41 min/500mlx35. Sample 2 in 38:00	Bottle in, lid off.				
MO-HUE	5	2	WBC,DW	6/15/2016	1045	PDT	NA	NA		0	2L Distilled	160,854	Program done.	16	24	1055	1055	
ME-SCR	5	1	WBC,DW	6/20/2016	10:21	PDT	1.279	NA		0	2L Distilled	765,365	Time: 41 min/500mlx35. Sample 2 in 37:00	Bottle in, lid off.				
ME-SCR	5	2	WBC,DW	6/21/2016	0930	PDT	1.279	NA		1	2L Distilled	NR	Program done.	16	24	0940	0940	
MO-FIL	5	1	WBC,DW	6/20/2016	0851	PDT	NR	NA		0	2L Distilled	2,732	Time: 41 min/500mlx35. Sample 2 in 38:00					
MO-FIL	5	2	WBC,DW	6/21/2016	0830	PDT	NR	NA		2	2L Distilled	177,461	Program done.	Full	24	0830	0830	
ME-CC	5	1	WBC,JM	6/22/2016	0838	PDT	1.03	5		3	2L Distilled	28,114	Time: 41 min/500mlx35. Sample 2 in 38:00	Bottle in, lid off.				Checked grab sample volume 560 ml. Replaced dessicant in 2105ci and 4230. Field Dup grabs 10:10
ME-CC	5	2	WBC,JM	6/23/2016	1003	PDT	1.018	5		3	2L Distilled	340,556	Program done.	18	24	1015	1010	
MO-CAM	5	1	WBC,JM	6/22/2016	10:21	PDT	<0.033	<10	<toe	-5	2L Distilled	2,875	Time: 41 min/500mlx35. Sample 2 in 38:00	Bottle in, lid off.				Pump count reset during firmware update on 5/26/2016 Cycled power on 2105ci which re-started data push but date is now two months in the future. Clock reset on 6/29/2016
MO-CAM	5	2	WBC,JM	6/23/2016	10:55	PDT	<0.033	<10 (Est 0.10)	<toe	-2	2L Distilled	90,313	Program done.	18	24	1100	1100	
MO-SIM	5	1	WBC	6/22/2016	0730	PDT	0.139	2		2	2L Distilled		Time: 41 min/500mlx35. Sample 2 in 38:00	Bottle in, lid off.				
MO-SIM	5	2	WBC,JM	6/23/2016	0815	PDT	0.146	2		2	2L Distilled	319,421	Program done.	19	24	0815	0815	
MO-THO	5	1	WBC,JM	6/22/2016	0806	PDT	2.092	1		2	2L Distilled	2,734	Time: 41 min/500mlx35. Sample 2 in 38:00	Bottle in, lid off.				
MO-THO	5	2	WBC,JM	6/23/2016	0905	PDT	2.06	1		3	2L Distilled	161,758	Program done.	17	24	0915	0915	

Event Notes:

NR: Not recorded

NA: Not applicable

All times are recorded here in PDT

Dry Sites: MO-MEI, MO-OJA, MO-SPA, MO-OXN, MO-VEN, MO-MPK

Sample Tracking:

Bacteria samples to VCHCA:

6/15/16 @ 12:05 (VR2/HUE) by Bill Carey to Nadia Van Burer

6/21/16 @ 10:30 (SCR/FIL) by Bill Carey to Nadia Van Burer

6/23/16 @ 12:00 (CC/CAM/SIM/THO/FD(CC)) by Bill Carey to Syreeta Steele

Grab and composite samples to Weck Laboratories, Inc. by Weck-provided courier (Allan Goldberg)

6/15/16 @ 13:35 (VR2/HUE) by Bill Carey

6/21/16 @ 15:00 (SCR/FIL) by Bill Carey

6/23/16 @ 15:00 (CC/CAM/SIM/THO/FD(CC)) by Bill Carey

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

Appendix E. Chain-of Custody Forms



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Pre-season - Week Laboratories

SH20071
 SH20070-36
 8/20/15

Sampling Date:

8/20/15

Project Number: 2015/16-PRE

Sampling Team:

K. HAAS, 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	8/20/15 / 0925	2	2					5	
EB composite	8/20/15 / 0800	X	X	X				1	To be split in lab
20 L carboy and lid						X		1	Please place tape or plastic bag over top
Blue cube cooler					X			1	
Black bag					X			1	
Waste Dilute HNO3							X	1	2L (1 quart 1% HNO3 + 1L distilled water used for cleaning our equipment)

Relinquished

Printed Name

KELLY HAAS

Signature

Kelly Haas

Affiliation

VCWPD

Date/Time

8/20/15 / 1345

Received

Printed Name

ALLAN GOLDBERG

Signature

Allan Goldberg

Affiliation

Week Labs

Date/Time

8/20/15 / 1345

Other Notes:

Please use for MS/MSD analysis when sample volume permits.

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

Jamison 8/20/15 1415
 2.96



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Pre-season - Week Laboratories

5117024

Sampling Date:

9/16/15

Project Number: 2015/16-PRE2

Sampling Team:

K. HAHS

SAMPLE ID	Sample Date/Time	EPA 525.2	EPA 625-CTR	EPA 200.8 (Al, Cr, Cu, Pb)	Number of Bottles	
EB composite	_____			X	3	See note (#2) below for instructions
Silicone line only (pre-nitric rinse)	_____			X	3	
Silicone line only (post-nitric rinse)	_____			X	3	
EB Lines	_____			X	3	
Preseason 1 Blank water	_____			X	3	
Preseason 2 Blank water	_____			X	3	
Preseason 1 BW1	9/16/15 11:20			X	1	
Preseason 1 BW2	9/16/15 11:20			X	1	

Relinquished

Printed Name

Kelly Hahs

Signature

Kelly Hahs

Affiliation

VCWPD

Date/Time

9/16/15 14:15

Received

Printed Name

ALLAN COLOMBINI

Signature

ALLAN COLOMBINI

Affiliation

Week Labs

Date/Time

9/16/15 14:20

Notes:

Note (1) Please use for MS/MSM analysis when sample volume permits

Note (2) Instructions - Perform a blank analysis on one bottle by adding a sufficient quantity (to perform requested analyses) of ultra-pure water directly to composite bottle. do not use intermediary container, cap bottle, swirl water around to maximize contact with interior bottle surfaces, then split sample to perform requested analyses.

RECEIVED

ALLAN

ALLAN C. COLOMBINI

9/16/15 17:50

Jordan

9/16/15 17:50 2:30



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Pre-season - Weck Laboratories

5118052

Sampling Date: 9/17/15 + 9/18/15 Project Number: 2015/16-PRE2
 Sampling Team: K. HANS, W.B. CAREY

SAMPLE ID	Sample Date/Time	(EPA 200.8) Al, Cr, Cu, Pb (Total only)	Number of Bottles
Carboy BW	9/18/15 08:30	X	1
Silicone Tube DW	9/17/15 10:05	X	1
Silicone Tube NA	10:08	X	1
EB Lines DW	10:40	X	1
EB Lines NA	10:45	X	1
Preseason2 BW	10:00	X	1
Comp BW	✓ 08:30	X	1

Relinquished Printed Name: Kelly HANS
 Signature: [Signature]
 Affiliation: VCWPD Date/Time: 9/18/15 1220

Received Printed Name: ALLAN GOLDBERG
 Signature: [Signature]
 Affiliation: Week Labs Date/Time: 9/18/15 1220

RECEIVED [Signature] 9/18/15 1750

Received Printed Name: _____
 Signature: _____
 Affiliation: Week Labs Date/Time: _____

Notes: Jamie HANS 9/18/15 1750 130



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: 9-15-15

Project Number: 2015/16 1 (Wet)

Sampling Team: AA, ND

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	9-15-15 03:10	X	X		X	X	X	2	2 DNA Filters
	MO BL	9-15-15 03:45	X	X		X	X	X	2	2 DNA Filters
	MO SIM	9-15-15 05:15	X	X		X	X	X	2	2 DNA Filters
	MO MPK	9-15-15 04:33	X	X		X	X	X	2	2 DNA Filters
	MO THO	9-15-15 06:18	X	X		X	X	X	2	2 DNA Filters
	MO DSK		X	X		X	X	X	2	2 DNA Filters
	MO HUK		X	X		X	X	X	2	2 DNA Filters

Relinquished Printed Name: AGNE ANSELM
 Signature: [Signature]
 Affiliation: VCHCA Date/Time: 07:30 9-15-15

Received Printed Name: Nedra Van Buren 9815131
 Signature: [Signature]
 Affiliation: PH Lab Date/Time: 09/15 @ 0730

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

11/23/15, PH: According to yellowball for mo-sim, grabs were taken at 5:30. Site arrival time was 5:15. Similarly for mo-mpk. Arrival time 4:33 Grabs at 4:45



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: 9/15/15 Project Number: 2/15/16-1 (Wet)
Sampling Team: K. HABS, L. MEERER

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNN)	Fecal Coliform (25 Tube Method - MPNN)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)	DNA Filter	Number of Bottles	NOTES
	MO VR1	_____	X	X	X	X	X	X	2	2 DNA Filters
	MO VR2	_____	X	X	X	X	X	X	2	2 DNA Filters
	MO VR2	9/15/15 08:10	X	X	X	X	X	X	3	3 DNA Filters
	MO VR3	_____	X	X	X	X	X	X	2	2 DNA Filters
	MO VR4	_____	X	X	X	X	X	X	2	2 DNA Filters
	MO VR5	_____	X	X	X	X	X	X	2	2 DNA Filters
	MO VR6	9/15/15 03:10	X	X	X	X	X	X	2	2 DNA Filters
	MO VR7	_____	X	X	X	X	X	X	2	2 DNA Filters

Relinquished: Printed Name: Kelly Habs
Signature: [Signature]
Affiliation: VCHCA Date/Time: 9/15/15 08:40

Received: Printed Name: Sherril Hurd
Signature: [Signature]
Affiliation: VCPHD Date/Time: 9/15/15 8:40 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 9/15/15 Project Number 2015/16-1 (Wet)
 Sampling Team I. LIDDELL, 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 Filter	Number of Bottles	NOTES
	ME CC	9/15/15 0555	X	X	X	X	X	X	2	3 DNA Filters
	ME SCR		X	X	X	X	X	X	2	3 DNA Filters
	ME VR2		X	X	X	X	X	X	2	3 DNA Filters
	MO CAM	9/15/15 0745	X	X		X	X	X	2	2 DNA Filters
	MO CJA		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
	ME L		X	X		X	X	X	2	2 DNA Filters

Relinquished Printed Name Tommy LIDDELL
 Signature [Signature]
 Affiliation VCHCA Date/Time 9/15/15 0750

Received Printed Name Alexandra U. Baxen
 Signature [Signature]
 Affiliation PH Lab Date/Time 09/15/15 0700

Other Notes Perform bacteriological analyses within 6 hours of sample collection time
1 to 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: 9/15/15 Project Number: 2015/16 L (Wet)
 Sampling Team: T. LIDWELL S. GREED

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNXX)	Fecal Coliform (25 Tube Method - MPNXX)	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 SEM		X	X		X	X	X	2	2 DNA Filters
	MO MPK		X	X		X	X	X	2	2 DNA Filters
	MO TIR		X	X		X	X	X	2	2 DNA Filters
	MO OXN	9/15/15 0300	X	X		X	X	X	2	2 DNA Filters
	MO HUE	9/15/15 0415	X	X		X	X	X	2	2 DNA Filters

Relinquished Printed Name: Thomas L. Lidwell
 Signature: [Signature]
 Affiliation: ICWPD Date/Time: 9/15/15 0756

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
Toxicity - ABC Laboratories

Sampling Date: 9/15/15 Project Number: 2015/16 1 (Wet)
 Sampling Team: KH, LM, AA, ND, TL, SG

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topmuck (<i>Adiantum 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	9/15/15 0300					X			2	Note 1, Note 2, Note 3 TL, SG
MO HUE	↓ 0445						X		3	Note 1, Note 2, Note 3, Note 4 TL, SG
MO THO	9-15-15 06:18						X		2	Note 1, Note 2, Note 3 AA, ND
MO MPK	9-15-15 07:43							X	2	Note 1, Note 2, Note 3 AA, ND
MO SIM	9-15-15 05:30						X		2	Note 1, Note 2, Note 3 AA, ND
MO FIL	9-15-15 03:45						X		2	Note 1, Note 2, Note 3 AA, ND
MO STA	9-15-15 05:10					X			2	Note 1, Note 2, Note 3 AA, ND

Relinquished Printed Name: JOHN LIDDELL
 Signature: [Signature]
 Affiliation: VCWPD Date/Time: 10/25

Received Printed Name: F. MATHIAS
 Signature: [Signature]
 Affiliation: ABRIL GUERRA LUIS Date/Time: 9/15/15

Other Notes: Note 1: Dilutions: 6.25%, 12.5%, 25%, 50%, 100% Note 2: Please exercise 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 topmuck for comparison. If topmuck unavailable, use *Ilyobrya*



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

Sampling Date: 4/15/15

Project Number: 2015/16-1 (Wet)

Sampling Team: KH, LM; AA, ND; TL, SG

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topmelt (<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
MS-CC	4/15/15 0555	X							2	Note 1, Note 2, Note 3 <u>TL, SG</u>
MS-CCR					X				1	Note 1, Note 2, Note 3
MS-VR2	4/15/15 0510	X							2	Note 1, Note 2, Note 3 <u>KH, LM</u>
MO-CAM	↓ 0345					X			2	Note 1, Note 2, Note 3 <u>TL, SG</u>
MO-OJA						X			2	Note 1, Note 2, Note 3
MO-MR2						X			2	Note 1, Note 2, Note 3
MS-VEN	4/15/15 0310						X		2	Note 1, Note 2, Note 3 <u>KH, LM</u>

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

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

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
Grabs - Week Laboratories (SIDE 2 of 2)

5116003

Sampling Date: 9-15-15 Project Number: 2015/16-1 (Wet Grabs)
 Sampling Team: KH, LM, AA, ND, TL, SG

SAMPLE ID	DATE/TIME COLLECTED						Number of Bottles	NOTES
		Oil & Grease (EPA 166.1A)	Cyanide (ASTM D750)	GRO (EPA 8015B)	MTBE & 2-CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits		
MO SPA	9-15-15 03:10	2	1	2	3	1	9	AA, ND
MO FIL	9-15-15 03:45	2	1	2	3	1	9	AA, ND
MO SIM	9-15-15 05:30	2	1	2	3	1	9	AA, ND
MO HUE	9/15/15 04:45	2	1	2	3	1	9	TL, SG
MO TIO	9-15-15 06:18	2	1	2	3	1	9	AA, ND
MO MPK	9-15-15 04:43	2	1	2	3	1	9	AA, ND

Relinquished: Printed Name: Kelly Habs
 Signature: [Signature]
 Affiliation: VCPD Date/Time: 9/15/15 12:30

Received: Printed Name: J. Ramirez
 Signature: [Signature]
 Affiliation: RMS Date/Time: 9/15/15 12:30

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
* Travel Blanks were not received for any site - SG
9/15/15



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

5I16003

Sampling Date: 9/15/15
 Sampling Team: KH, LM, AA, NO, TL, SG

Project Number: 2015/16 1 (Wet) Grabs

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease (EPA 1661A) Cyanide (ASTM D7511) GRO (EPA 8015B) MTBE & 2-CLEVE (EPA 624) <i>Travel Blanks (EPA 624)-only analyze if this</i>										Number of Bottles	NOTES
MR CC	9/15/15 0555	3	1	2	3	1						10	TL, SG
MR SCR		2	1	2	3	1						9	
MR VR2	9/15/15 0510	2	1	2	3	1						9	KH, LM
MR CAM	↓ 0345	2	1	2	3	1						9	TL, SG
MR CAM		2	1	2	3	1						9	
MR WHF		2	1	2	3	1						9	
MR VEN	9/15/15 0310	2	1	2	3	1						9	KH, LM
MR COXN	↓ 0300	2	1	2	3	1						9	TL, SG
MR L		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 _____
 Signature _____
 Affiliation _____ Date/Time _____

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

SEE SIDE 2

Other Notes:

Travel blanks are only analyzed if samples have less or MTBE or 2 CLEVE
 EPA 624 has replaced EPA 524 2 for MTBE and 2 Clev

Janahan 9/15/15 1430
 2.12



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

5115076

Sampling Date: 9/15/15

Project Number: 2015/16 1 (Wet) Composites

Sampling Team: KH, LM, AA, ND, TL, SG

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, MRAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (304.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	815.3-Herb 547-Glyphosate, 648-CTR	825.2 Reg 1 507, 525-COPP-1.1.	DRO/ORO (EPA 8015B)	ALK, ClO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
NO-CC														1	
NO-CC														1	
NO-VR2	9/15/15 1100													1	TL
NO-CAM	↓ 1030													1	KH, LM
NO-CC														1	
NO-CC														1	
NO-VRN	9/15/15 0830													1	KH, LM

Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg

Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), **AND** Hg, Pb

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/MSO where extra volume permits (all test

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

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

SEE SIDE 2

Other Notes: 1) Filter for dissolved metals and perform conductivity analyses immediately.
 2) Na, K, SO4, dissolved organic carbon and dissolved inorganic carbon are new for all sites for 2015/16 monitoring season.
 3) Please do not dilute limited volume samples when enacting priority list (low reporting limits are important)

Jonathan 9/15/15 MKS
 All Hand PPT

CSS 9/16/15

3.0c



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

5J15076

Sampling Date: 9/15/15 Project Number: 2015/16-1 (Wet) Composites
 Sampling Team: KH, LM; AA, ND; TL, SG

SAMPLE ID	DATE/TIME COLLECTED	Disinfectant-Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (P Hardness), & Barium (total only)	Cu+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), Cl, F, SO4 (349.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.5-Fe+3, 547-Glyphosate, 608-CTR	525.2 Reg 4507, 525-OPP-L.I.	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
MO-STA	9-15-15 03:23	X	X	X	X	X	X	X	X	X	X	X	1	AA, ND
MO-PH	9/15/15 0845	X	X	X	X	X	X	X	X	X	X	X	1	TL
MO-SIM	9-15-15 05:20	X	X	X	X	X	X	X	X	X	X	X	1	AA, ND
MO-MPK	9-15-15 04:53	X	X	X	X	X	X	X	X	X	X	X	1	AA, ND
MO-TRD	9-15-15 06:30	X	X	X	X	X	X	X	X	X	X	X	1	AA, ND
MO-ONN	9/15/15 11:00	X	X	X	X	X	X	X	X	X	X	X	1	TL, SG
MO-FUE	↓ 0800	X	X	X	X	X	X	X	X	X	X	X	1	KH, LM

Requested: Printed Name: KELLY HAHLS
 Signature: [Signature]
 Affiliation: VWDPT Date/Time: 9/15/15/ 12:30
 Received: Printed Name: J. Ramirez
 Signature: [Signature]
 Affiliation: RMS Date/Time: 9/15/15 12:26 pm

Other Notes: 1) filter for dissolved metals and perform conductivity analyses immediately. Sampled 9/15/15 1415
2) SO4, dissolved organic carbon and dissolved inorganic carbon are new for all sites for 2015/16 monitoring season.
 3) Please do not dilute limited volume samples when entering priority list (low reporting limits are important): All times POC



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

Sampling Date 9/15/15 Project Number 2015/16-1 (Wet) Cleaning

Sampling Team KH

EQUIPMENT	Clean with detergent and HNO ₃	Clean with detergent, HNO ₃ , and methanol*	No action required		NOTES
18.5 L. wide neck carboy and lid	5				Please place tape or plastic bag over top and fully cover up if bottle was cleaned with methanol
Blue cube cooler	9		9		
Black bags	10		10		
20 L. narrow neck carboy, 1/2" lid, attachment assembly	5				Please place tape or plastic bag over top and fully cover up if bottle was cleaned with methanol
Grey bucket			1		

Relinquished Printed Name KELLY HAHS

Signature [Signature]

Affiliation Ventura County Watershed Protection District Date/Time 9/15/15 12:30

Received Printed Name J. Ramirez

Signature [Signature]

Affiliation RMC Date/Time 9/15/15 12:26 pm

Other Notes * Please clean with detergent, urine, and methanol and do not rinse after methanol step (allow to air dry after methanol cleaning to avoid organic 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
Composites - Week Laboratories

5I17003

Sampling Date

9/16/15

Project Number: 2015/16 1 (Wet) Composites

Sampling Team:

K. HAHS

SAMPLE ID	DATE/TIME COLLECTED	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, 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 (BPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
M1 CC	9/16/15 / 12:40	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.). 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 methods)
_____	_____													
_____	_____													
_____	_____													
_____	_____													
_____	_____													
_____	_____													
_____	_____													
_____	_____													
_____	_____													

Relinquished

Printed Name

Kelly Haas

Signature

Kelly Haas

Affiliation

Ventura

Date/Time

9/16/15 / 14:15

Received

Printed Name

Allen Gollerson

Signature

Allen Gollerson

Affiliation

WPCU

Date/Time

9/16/15 14:26

Other Notes

1) Filter for dissolved metals and perform conductivity analyses immediately.

2) ~~NO3-N, SO4, dissolved organic carbon and dissolved inorganic carbon are new for all sites for 2015/16 monitoring season.~~

3) Please do not dilute limited volume samples when extracting priority list flow reporting limits are important.

Janae 9/16/15 17:50 234



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

517003

Sampling Date: 9/16/15 Project Number: 2015/16 Lower Cleaning
 Sampling Team: R. HAHN

EQUIPMENT	Clean with detergent and HNO ₃	Clean with detergent, HNO ₃ , and methanol*	No action required	NOTES
1x 5.1 wide neck carboy and lid	1			Please place carboy inside bag over top and tie or wrap if neck was cleaned with methanol.
Blue cube cooler			12	
Black bags			12	
2x 1.0 liter wide neck carboys, 1x 1.0 liter wide neck carboy assembly	1			Please place tape or plastic bag over top and tie or wrap if neck was cleaned with methanol.

Relinquished Printed Name: Kelly Hahn
 Signature: [Signature]
 Affiliation: VCWD Date/Time: 9/16/15/14:15

Received Printed Name: Allison Goldberg
 Signature: [Signature]
 Affiliation: WPCU Date/Time: 9/16/15 14:20

Other Notes: RELINQUISH
 * 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.

Sampled 9/16/15 17:30 232



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

Sampling Date: 9/18/15 Project Number: 2015-16 1st Wet Cleaning
 Sampling Team: K. HAYS

EQUIPMENT	Clean with detergent and HNO ₃	Clean with detergent, HNO ₃ , and methanol*	No action required		NOTES
18.5 L. wide neck carboy and lid					Please place tops of plastic bags over top and bottom of carboy. Carboy was cleaned with methanol.
Blue cube cooler			2		
Black bags			2		
20 L. narrow neck carboy, 7 lid, attachment assembly	2				Please place tops of plastic bags over top and bottom of carboy. Carboy was cleaned with methanol.

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

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

Other Notes: * Please clean with detergent, nitric, and methanol and do not rinse after methanol step follow 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 1-5-2015 Project Number 2015/16 2 (Wet)
 Sampling Team Lara Meeker, Bill 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 Filter	Number of Bottles	NOTES
	ME-CC	1/5/16 9:35	X	X	X	X	X	X	2	3 DNA Filters
	ME-SCR		X	X	X	X	X	X	2	3 DNA Filters
	ME-VR2	1/5/16 11:40	X	X	X	X	X	X	2	3 DNA Filters
	MO-CAM		X	X		X	X	X	2	2 DNA Filters
	MO-OJA	1/5/16 9:35	X	X		X	X	X	2	2 DNA Filters
	MO-MEJ	1/5/16 10:40	X	X		X	X	X	2	2 DNA Filters
	MO-VEN	1/5/16 0745	X	X		X	X	X	2	2 DNA Filters
	FD-1		X	X		X	X	?	?	

Relinquished Printed Name Lara Meeker
 Signature [Signature]
 Affiliation WPD Date/Time 1/5/16 12:48

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

Other Notes Perform bacteriological analyses within 6 hours of sample collection time
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 AEA & BGM

Project Number 2015/16 2 (Wet)

Sampling Team 1-5-16

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPN X)	Fecal Coliform (25 Tube Method - MPN X)	Enterococcus (Tray Method - WQ ID#XX)	E. coli (Tray Method - WQ ID#XX)	Total Coliform (Tray Method - WQ ID#XX)	DNA Filter	Number of Bottles	NOTES
	MO SPA	1-5-16 08:10	X	X		X	X	X	2	2 DNA Filters
	MO DEL	1-5-16 08:50	X	X		X	X	X	2	2 DNA Filters
	MO SIM	1-5-16 10:25	X	X		X	X	X	2	2 DNA Filters
	MO MPK	1-5-16 09:45	X	X		X	X	X	2	2 DNA Filters
	MO THO	1-5-16 11:15	X	X		X	X	X	2	2 DNA Filters
	MO OXN		X	X		X	X	X	2	2 DNA Filters
	MO HEE		X	X		X	X	X	2	2 DNA Filters

Relinquished Printed Name ARNE ANSELM
 Signature [Signature]
 Affiliation VCHCA Date/Time 1-5-16 11:58

Received Printed Name Nick Van Buren
 Signature [Signature]
 Affiliation VCHCA Date/Time 1-5-16 12:00

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: 1/5/16 Project Number: 2015/16 2 Wet

Sampling Team: T. LIDDELL, S. CASEY

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-GC1	1/5/16 1040	X	X	X	X	X	X	1	3 DNA Filters
	MO-SCR		X	X	X	X	X	X	2	3 DNA Filters
	MO-VR2		X	X	X	X	X	X	2	3 DNA Filters
	MO-GAM	1/5/16 0910	X	X		X	X	X	1	2 DNA Filters
	MO-OJA		X	X		X	X	X	2	2 DNA Filters
	MO-MEL		X	X		X	X	X	2	2 DNA Filters
	MO-VIN		X	X		X	X	X	2	2 DNA Filters
	PD-1		X	X		X	X	?	?	

Relinquished Printed Name: TOMMY LIDDELL
 Signature: [Signature]
 Affiliation: VCHCA Date/Time: 1/5/16 1211

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

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time
1:100, 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: _____ Project Number: 2015/16-2 (Wet)

Sampling Team: _____

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 Hours	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-MCK		X	X		X	X	X	2	2 DNA Filters
	MO-THO		X	X		X	X	X	2	2 DNA Filters
	MO-ONN	1/5/16 0820	X	X		X	X	X	2	2 DNA Filters
	MO-FUE	1/5/16 1000	X	X		X	X	X	2	2 DNA Filters

Relinquished	Printed Name	_____
	Signature	_____
	Affiliation	_____
Received	Printed Name	_____
	Signature	_____
	Affiliation	_____
Other Notes	Perform bacteriological analyses within 6 hours of sample collection time	
	1:10, 1:100, and 1:1000 dilutions for Enterococcus and E. coli	



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

Sampling Date: 1/6/16 Project Number: 2015/16 2 (Xel)
 Sampling Team: FH, LM

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	1/6/16 1210	X	X	X	X	X	X	1	3 DNA Filters
	ME-SCR	1/6/16 0845	X	X	X	X	X	X	2	3 DNA Filters
	ME-VR2	1/6/16 1055	X	X	X	X	X	X	1	3 DNA Filters

Relinquished Printed Name: Kelly Harris Lara Meeker
 Signature: [Signature] [Signature]
 Affiliation: VCHCA Date/Time: 1/6/16 14:15

Received Printed Name: Lauren Stead
 Signature: [Signature]
 Affiliation: VC Public Health Lab Date/Time: 1/6/16 14:15

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time
1:10 1:100, and 1 1/4 dilutions for Enterococcus and E. coli



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

Sampling Date: 1/5/2016

Project Number: 2015/16 2 (Wet)

Sampling Team: Tommy Lidel & Anne Aslam's teams

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	1/5/16 11:40	X	X	X	X	X	X	1	3 DNA Filters TL
	ME-SCB	1/5/16 11:40	X	X	X	X	X	X	1	3 DNA Filters
	ME-VIO	1/5/16 11:40	X	X	X	X	X	X	1	3 DNA Filters
	MO-ONN	1/5/16 8:20						X	1	2 DNA Filters AL
duplicate → Alb	MO-SPA	1/5/16 10:40						X	1	2 DNA Filters AA
	MO-CAM	1/5/16 9:40						X	1	2 DNA Filters TL
	MO-HUE	1/5/16 10:00						X	1	2 DNA Filters TL

Relinquished Printed Name: Lara Meeker
 Signature: [Signature]
 Affiliation: WPD Date/Time: 1/5/2016 28 14:50

Received Printed Name: [Signature]
 Signature: [Signature]
 Affiliation: PH Lab Date/Time: 1/5/16 14:50

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

Sampling Date: 1/6/16 Project Number: 2015/16 2 (Wet)
 Sampling Team: K.H., L.M.

SAMPLE ID	DATE/TIME COLLECTED	Chronic toxicity - topmelt (<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-STR	1/6/16 0845				X				2	Note 1, Note 2, Note 3

Relinquished Printed Name: Kelly Hahn
 Signature: [Signature]
 Affiliation: VCWPD Date/Time: 1/6/16 / 1035

Received Printed Name: E. MATTHEW
 Signature: [Signature]
 Affiliation: ARMAND BIOASSAY Date/Time: 1-6-16 / 1035

Other Notes: Note 1: Dilutions 6.25%, 12.5%, 25%, 50%, 100% Note 2: Please execute T10 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

Sampling Date: 1-5-2016 Project Number: 2015/16 2 (Wet)
 Sampling Team: L.M. and B.L.

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 - daphnoid (<i>Ceriodaphnia dubia</i>)	Chronic toxicity - green alga (<i>Raphidocelis subcapitata</i>)	Number of 5-Gallon Buckets	NOTES
MSH-001					X				4	Note 1, Note 2, Note 3
MSH-002	1-5-16 9:35					X			2	Note 1, Note 2, Note 3
MSH-003	1-5-16 10:40					X			2	Note 1, Note 2, Note 3
										CPH - M&E

Relinquished: Printed Name Laura Meeker
 Signature [Signature]
 Affiliation WFO Date/Time 1-5-16 12:22

Received: Printed Name E. MATHIAS
 Signature [Signature]
 Affiliation AVANTIC BIOASSAY Date/Time 1-5-16 12:12

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



6A0606Z

Chain of Custody Record

Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Grabs - Week Laboratories (SIDE 1 of 2)

Sampling Date: 1/5/2016 Project Number: 2015/16 2 (Wet) Grabs
 Sampling Team: Lara Necker, Bill Carey

SAMPLE ID	DATE/TIME COLLECTED													Number of Bottles	NOTES
		Oil & Grease (EPA 1661A)	Cyanide (ASTM D7511)	URO (EPA 8015B)	MTBE & 2-CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if Ints									
ME CC	1/5/16 1040	1	1	2	1	1								10	TL SC
ME SCR		2	1	2	1	1								9	
ME VR2	1/5/16 11:40	2	1	2	1	1								9	
MO CAM	1/5/16 0910	2	1	2	1	1								9	TL SC
MO CIA	1/5/16 9:35	2	1	2	1	1								9	
MO MEL	1/5/16 10:40	2	1	2	1	1								9	
MO VEN	1/5/16 7:45	2	1	2	1	1								9	
MO OXN	1/5/16 0820 1/5/16 0820	2	1	2	1	1								9	TL SC 1 out bottle received for metals
TRB		2	1	2	1	1								9	

Relinquished: Printed Name W.B. Carey
 Signature W.B. Carey
 Affiliation VCWPD Date/Time 1-5-16/1445

Received: Printed Name [Signature]
 Signature [Signature]
 Affiliation Rebecca Messerly Date/Time 1-5-16/1445

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

*NO Travel blanks were received for any sample
 Ventura Countywide Stormwater Quality Management Program 2015/16 Annual Report



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

6A06062

Sampling Date: 1-5-16

Project Number: 2015/16 2 (Wet) Grabs

Sampling Team: AA, BGM, TL, SC

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	1-5-16 8:10	2	1	2	3	1				9	AA
MO PE	1-5-16 8:50	2	1	2	3	1				9	AA
MO SIM	1-5-16 10:25	2	1	2	3	1				9	AA
MO HUE	1-5-16 10:00	2	1	2	3	1				9	TL SC
MO THO	1-5-16 11:15	2	1	2	1	1				9	AA
MO MPK	1-5-16 09:45	2	1	2	1	1				9	AA

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

Relinquished Printed Name: W.B. CAREY

Signature: W.B. Carey

Affiliation: VCWPD

Date/Time: 1-5-16/1445

Received Printed Name: DAVID

Signature: [Signature]

Affiliation: RELIABLE MESSINER

Date/Time: 1-5-16/1445

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

January 18/16 10:15
2:30



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

6A05083

Sampling Date: 1/5/2016

Project Number: 2015/16 2 (Wet) Composites

Sampling Team: Lara Medsker, Bill Carey

SAMPLE ID	DATE/TIME COLLECTED	EPA 553 - Inorganic only (bill this analysis to POW PC6500BT624019)	Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO3-N, Total Chlorine Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MRAS, TKN, Ammonia, TOC	NO3+NO2 (33.2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270STM-Phenols *	515.3-Hicb 547-Glyphosate, 608-CTR	825.2 Reg 4-07, 525-GPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
MIX CC		X	X	X	X	X	X	X	X	X	X	X	X	X	1	
MIX SCR		X	X	X	X	X	X	X	X	X	X	X	X	X	1	
MIX VR2	1/5/16 11:40	X	X	X	X	X	X	X	X	X	X	X	X	X	1	
MIX CAM	1/5/16 11:40	X	X	X	X	X	X	X	X	X	X	X	X	X	1	T+ SL
MIX OLA	1/5/16 9:35	X	X	X	X	X	X	X	X	X	X	X	X	X	1	
MIX ME2	1/5/16 10:40	X	X	X	X	X	X	X	X	X	X	X	X	X	1	
MIX VEN	1/5/16 7:45	X	X	X	X	X	X	X	X	X	X	X	X	X	1	

Relinquished Printed Name: W.B. CAREY

Signature: W.B. Carey

Affiliation: VCWPD

Date/Time: 1-5-16/1445

Received Printed Name: DAVID LEVY

Signature: [Signature]

Affiliation: [Signature]

Date/Time: 1-5-16/1445

Other Notes: 1) Filter for dissolved metals and perform conductivity analyses immediately.

2) Na, K, SO4, dissolved organic carbon and dissolved inorganic carbon are new for all sites for 2015-16 monitoring season.

3) Please do not dilute limited volume samples when creating priority list (low reporting limits are important).

January 15th 2016

29



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

66A05003

Sampling Date: 1-5-16

Project Number: 2015/16-2 (Wet) Composites

Sampling Time: 4A, 8AM,

SAMPLE ID	DATE/TIME COLLECTED	Disolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TRN, Ammonia, TQC	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	BRO/ORO (EPA 8015B)	ALK, ClO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
AROSPA	1-5-16 12:28	X	X	X	X	X	X	X	X	X	X	X	1	44
MOEHL	1-5-16 13:15	X	X	X	X	X	X	X	X	X	X	X	1	44
MO SIM		X	X	X	X	X	X	X	X	X	X	X	1	
MO MCPK		X	X	X	X	X	X	X	X	X	X	X	1	
MO TIRE		X	X	X	X	X	X	X	X	X	X	X	1	
MO GLEN	1/5/16 12:52	X	X	X	X	X	X	X	X	X	X	X	1	FL SC
MO HICK		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 methods)

Relinquished

Printed Name: W.B. CAREY

Signature: W.B. Carey

Affiliation: VCWPD

Date/Time: 1-5-16/1445

Received

Printed Name: [Signature]

Signature: [Signature]

Affiliation: [Signature]

Date/Time: 1-5-16/1445

Other Notes

1) Filter for dissolved metals and perform conductivity analyses immediately.

2) Na, K, SO4, dissolved organic carbon and dissolved inorganic carbon are new for all sites for 2015/16 monitoring season

3) Please do not dilute limited volume samples when making priority list flow reporting limits are important



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

Sampling Date: 1/6/16 Project Number: 2015/16 2 (Wet) Grabs

Sampling Team: KH, LM

SAMPLE ID	DATE/TIME COLLECTED						Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2-CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits		
ME-CH		2	1	2	3	1	4	
ME-SCR	<u>1/6/16 / 0845</u>	2	1	2	3	1	4	
ME-VR2		2	1	2	3	1	4	
MO-CAY		2	1	2	3	1	4	
MO-CH		2	1	2	3	1	4	
MO-ME		2	1	2	3	1	4	
MO-VEN		2	1	2	3	1	4	
MO-CH		2	1	2	3	1	4	
ED-1		2	1	2	3	1	4	

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

Relinquished Printed Name: Kelly Hobs
 Signature: [Signature]
 Affiliation: VCWPD Date/Time: 1/6/16 / 1430

Received Printed Name: JUAN C. FLORES
 Signature: [Signature]
 Affiliation: H.R-S Date/Time: 1-6-16 1430

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
Composites - Week Laboratories (SIDE 1 of 2)

6606080

Sampling Date

1/6/16

Project Number: 2015/16 2 (Wet) Composites

Sampling Team

KH, LM, WOC, JC

SAMPLE ID	DATE/TIME COLLECTED	BPA 553 - Imazapyr only (bill this analysis to PO# P06500B162809)	Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO3-N, Total Chloride Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	Ct+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353.2), CL F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-flec, 547-Glyphosate, 608-CTR	525.2 Rcyt 507, 525-OPP-LI	DRO/ORO (EPA 8015B)	AL, K, CLO4, Turb, IDS, TSS, VSS, Cond	Number of Bottles	NOTES
ME-CC	1/6/16 1215	X	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, LM
ME-SCR	1/6/16 1300	X	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, LM
ME-LVR2		X	X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-CAM		X	X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-OJA		X	X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-MEI		X	X	X	X	X	X	X	X	X	X	X	X	X	1	
ME-VIN		X	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

Signature

Affiliation

Date/Time

Received

Printed Name

Signature

Affiliation

Date/Time

Client Notes:

1) Filter for dissolved metals and perform conductivity analyses immediately.

2) Na, K, SCN, dissolved organic carbon and dissolved inorganic carbon are new for all sites for 2015/16 monitoring season

3) Please do not dilute limited volume samples when extracting peroxide test (low reporting limits are important)

SEE SIDE TWO

Signature: [Signature] Date: 1/14/16

* The following sample was not a sample therefore pouring bit was filled. In 1/14/16



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

6A06058

Sampling Date: 1/6/16

Project Number: 2015/16-2 (Wet) Composites

Sampling Team: K.H., L.M., WBC, SC

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	NO ₃ +NO ₂ (353.2), CL F, SO ₄ (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3-Herb 547-Glyphosate, 608-CTR	525.2 R ₆ +507, 525-OPP-LL	ORO/ORO (EPA 8015B)	ALK, CLO ₄ , Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
MO SRA		X	X	X	X	X	X	X	X	X	X	X	1	Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Co, 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 sp ke for 3 methods: 625CTR, 8270SIM-PAH, & 8270SIM-PHENOLS Lab to select samples for MS/MSD where extra volume permits (all test methods)
MO THL		X	X	X	X	X	X	X	X	X	X	X	1	
MO SIM	1/6/16 0906	X	X	X	X	X	X	X	X	X	X	X	1	WBC, SC
MO MPK	↓ 0840	X	X	X	X	X	X	X	X	X	X	X	1	WBC, SC
MO THO	↓ 0840	X	X	X	X	X	X	X	X	X	X	X	1	WBC, SC
MO THN		X	X	X	X	X	X	X	X	X	X	X	1	
MO THL	1/6/16 1140	X	X	X	X	X	X	X	X	X	X	X	1	KH, LM

Relinquished

Printed Name

Kelly Hahn



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

Sampling Date: 1/6/16 Project Number: 2015/16-2 (Wet Season)
 Sampling Time: KH, CM, WBC, SC

EQUIPMENT	Cleaning Method			NOTES
	Clean with detergent and HNO ₃	Clean with detergent, HNO ₃ , and methanol*	No action required	
18.5 L. wide neck carboy and lid	2			Please place tape on plastic bag over top and tape on sides of bottle was cleaned with H ₂ O and
Blue cube cooler	6		6	
Black bags	6		6	
20 L. narrow neck carboy 1/2 lid, attachment assembly	4			Please place tape on plastic bag over top and tape on sides of bottle was cleaned with methanol

Relinquished: Printed Name Kelly Habs
 Signature [Signature]
 Affiliation VCLWPD Date/Time 1/6/16/1430

Received: Printed Name J.C. TIJERES
 Signature [Signature]
 Affiliation D-H-S Date/Time 1-16-16-1430

Other Notes: * Please clean with detergent, nitric, and methanol and do not rinse after methanol step follow 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: 1-31-16 Project Number: 2015/16-3 (Wet)

Sampling Team: W.R. CAREY & S. CASEY

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	1-31-16 / 1140	X	X	X	X	X	X	2	3 DNA Filters ✓
	ME SUR	1-31-16 / 1230	X	X	X	X	X	X	2	3 DNA Filters ✓
	ME VR2	1-31-16	X	X	X	X	X	X	2	3 DNA Filters
	MO CAM	1-31-16 / 1055	X	X		X	X	X	2	2 DNA Filters ✓
	MO CHA		X	X		X	X	X	2	2 DNA Filters
	MO MET		X	X		X	X	X	2	2 DNA Filters
	MO VEN	1-31-16 / 0930	X	X		X	X	X	2	3 DNA Filters ✓
	MO 1		X	X		X	X		1	

Relinquished: Printed Name: WILLIAM CAREY

Signature: William Carey

Affiliation: VCWPD Date/Time: 1-31-16 / 1315

Received: Printed Name: S. Steeple

Signature: [Signature]

Affiliation: DHC Date/Time: 1/31/16 120

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

1 to 1:100 and 1:1000 dilutions for Enterococcus and E. coli



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

Sampling Date 1-31-16 Project Number 2015/16 3 (Wet)

Sampling Team W.B. CARR & S. CASEY

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-ONN	1-31-16/1015	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. CARR

Signature W.B. Carr

Affiliation VCHCA Date/Time 1-31-16/1315

Received Printed Name _____

Signature _____

Affiliation _____ Date/Time _____

Other Notes Performs bacteriological analyses within 6 hours of sample collection time

1 (1), 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: 1/31/2016 Project Number: 2015/16-3
 Sampling Team: Lara Melker, Scott Greer CWA/IDW (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
	ML-4X		X	X	X	X	X	X	3	3 DNA Filters
	ML-8X		X	X	X	X	X	X	3	3 DNA Filters
	ME-VR2	1/31/2016 11:55	X	X	X	X	X	X	2	3 DNA Filters
	MO-CAM		X	X		X	X	X	2	2 DNA Filters
	MO-OJA	1/31/2016 10:20	X	X		X	X	X	2	2 DNA Filters
	MO-MEI	1/31/2016 9:35	X	X		X	X	X	2	2 DNA Filters
	MO-VEN		X	X		X	X	X	2	2 DNA Filters
	PID-1		X	X		X	X		1	

Relinquished Printed Name: Lara Melker
 Signature: [Signature]
 Affiliation: WPD Date/Time: 12:50

Received Printed Name: S. Steele
 Signature: [Signature]
 Affiliation: PHC Date/Time: 1/31/16 2:50 pm

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time
1:10 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)

2015/16-3(wet)
 2016/17-4(wet)

Sampling Date: _____

Project Number: _____

Sampling Team: _____

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-SPT		X	X		X	X	X	2	2 DNA Filters
	MO-TTH		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-OWN		X	X		X	X	X	2	2 DNA Filters
	MO-HUC	1/31/2016 13:10	X	X		X	X	X	2	2 DNA Filters

Relinquished Printed Name: Lara Meeker
 Signature: [Signature]
 Affiliation: WPD Date/Time: 1/31/2016 13:50

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

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



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

Sampling Date: 1-31-16

Project Number: 2015/16 V (Wet)

Sampling Team: AA & DW

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 Routes	NOTES
	MO SPA	1-31-16 9:39	X	X		X	X	X	2	2 DNA Filters ✓
	MO PIL	1-31-16 10:45	X	X		X	X	X	2	2 DNA Filters ✓
	MO SIM	1-31-16 11:25	X	X		X	X	X	2	2 DNA Filters ✓
	MO MPK	1-31-16 10:55	X	X		X	X	X	2	2 DNA Filters ✓
	MO THO	1-31-16 12:10	X	X		X	X	X	2	2 DNA Filters ✓
	MO CNN		X	X		X	X	X	2	2 DNA Filters
	MO HVE		X	X		X	X	X	2	2 DNA Filters
	FD-1	1-31-16 12:10	X	X		X	X		1	✓

Requested:

Printed Name

ARNE ANSELM

Signature

[Signature]

Affiliation

CWTD

Date/Time

1-31-16

Received:

Printed Name

Syretta Steele

Signature

[Signature]

Affiliation

PHE

Date/Time

105 1/31/16

Other Notes

Perform bacteriological analyses within 6 hours of sample collection time

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



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

Sampling Date 2/1/2016 Project Number 2015/16-3 (Wet)
 Sampling Team LARA MEEKER, JEAN CASEY

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 CG	2/1/2016 09:50	Y	Y	Y	Y	Y	Y	1	3 DNA Filters
	ME CR	2/1/2016 09:50	Y	Y	Y	Y	Y	Y	1	3 DNA Filters
	ME VR2	2/1/2016 09:50	Y	Y	Y	Y	Y	N	1	3 DNA Filters

Relinquished Printed Name Lara Meeker
 Signature [Signature]
 Affiliation WPD Date/Time 2/1/2016 11:25

Received Printed Name N. Don West
 Signature [Signature]
 Affiliation PH LAB Date/Time 2/1/2016 11:25

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



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

Sampling Date: 2/1/16 Project Number: ~~2015-001~~ 814T

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 Filter	Number of Bottles	NOTES
	MR-CC	2/1/16 0950	10/20/20	10/20/20	10/20/20	10/20/20	10/20/20	X	1	3 DNA filters
	MR-SCR	2/1/16 0820	10/20/20	10/20/20	10/20/20	10/20/20	10/20/20	X	1	3 DNA filters
	MR-CC	————	10/20/20	10/20/20	10/20/20	10/20/20	10/20/20	X	1	3 DNA filters

Relinquished Printed Name: KELLY HAHS
 Signature: [Signature]
 Affiliation: VCHCA Date/Time: 2/1/16 / 1035

Received Printed Name: SOLVADOR Y. BARRAGAN
 Signature: [Signature]
 Affiliation: PH-LAB Date/Time: 2/1/16 1042

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



6Bollab

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

Sampling Date: 1-31-16 Project Number: 2015-16-3 (Wet) Grabs
 Sampling Team: AA, DV, WDC, SC, LM & SO

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2CLPVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hit	pH							Number of Bottles	NOTES
ME CC	1-31-16/1140	3	1	2	3	1								10	
ME SCR	1-31-16/1230	2	1	2	3	1								9	
ME VR2	1-31-16/1155	2	1	2	3	1	1							9 10	
MO CAM	1-31-16/1055	2	1	2	3	1								9	
MO OJA	1-31-16/1020	2	1	2	3	1								9	
MO MBI	1-31-16/0935	2	1	2	3	1								9	
MO VEN	1-31-16/0930	2	1	2	3	1								9	
MO ONN	1-31-16/1015	2	1	2	3	1								9	
FD 1	1-31-16/1210	2	1	2	3	1								9	

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

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

SEE PAGE 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



6B01106

Chain of Custody Record

Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Grabs - Week Laboratories (SIDE 2 of 2)

Sampling Date: 1-31-16 Project Number: 2015/16 V (Wet) Grabs

Sampling Team: AA, BW, WBC, SC, LM, JSG

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease (EPA 1664A)					Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2-CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits	pH	Number of Bottles	NOTES
MO SPA	1-31-16/0939	2	1	2	3	1						9	
MO FJL	1-31-16/1015	2	1	2	3	1						9	
MO SIM	1-31-16/1125	2	1	2	3	1						9	
MO TUE	1-31-16/1130	2	1	2	3	1					1	X40	
MO TRO	1-31-16/1210	2	1	2	3	1						9	
MO MPK	1-31-16/1055	2	1	2	3	1						9	
FO-1	1-31-16/1210												

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

Relinquished: Printed Name W.B. CARRY

Signature: W.B. Carry

Affiliation: VCWPD Date/Time: 2-1-16/1345

Received: Printed Name: Joe NGOKLIN Cflow

Signature: Joe Ngoklin

Affiliation: RELIABLE Date/Time: 2/1/16 1345

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEAVE

EPA 624 has replaced EPA 524.2 for MTBE and 2-Cleve

Tamela 2/1/16 16:30



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

Sampling Date: 2/1/16

Project Number: 2015/16-3 (Wet) Composites

Sampling Team: KH, SG, WBC, LM, SC

SAMPLE ID	DATE/TIME COLLECTED		Disolved 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 (35.2), Cl, F, SO4 (300.0), Piconoles	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	516.3-Herb 547-Glyphosate, 608-CTR	525.2 Reg+507, 525-OPP-1.1,	DRO/ORO (EPA 8015B)	ALK, ClO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
MOCC	2/1/16 0950		X	X	X	X	X	X	X	X	X	X	X	X	1	KH, SG
ME-SUR	0815		X		X	X	X	X	X	X	X	X	X	X	1	KH, SG
ME-VRO	0955	X	X	X	X	X	X	X	X	X	X	X	X	X	1	LM, SC
MO-CAM	10:15		X		X	X	X	X	X	X	X	X	X	X	1	KH, SG
MO-GA	08:55		X		X	X	X	X	X	X	X	X	X	X	1	LM, SC
MO-MP	09:25		X		X	X	X	X	X	X	X	X	X	X	1	LM, SC
MO-VIN	0915	✓	X		X	X	X	X	X	X	X	X	X	X	1	KH, SG

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

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

SEE PAGE TWO

- Other Notes: 1) Filter for dissolved metals and perform conductivity analyses immediately.
 2) Na, K, NH4, dissolved organic carbon and dissolved inorganic carbon are new for all sites for 2015/16 monitoring season.
 3) Please do not dilute limited volume samples when analyzing priority list (low reporting times are important)



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

Sampling Date: 2/1/16

Project Number: 2015/16 A (Wet) Composites

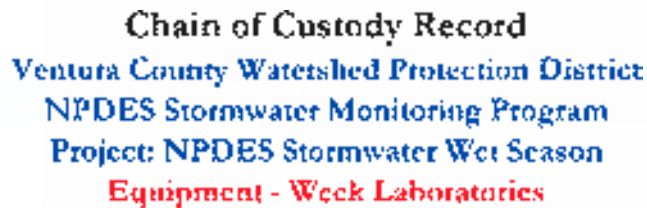
Sampling Team: KH, SG, WBC, LM, SC

SAMPLE ID	DATE/TIME COLLECTED	Disolved Inorganic Carbon and Dissolved Organic Carbon	Metals, total & dissolved (± Hardness), & Barium (total only)	Ct+6	ROD, 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, 604-CTR	525.2 Reg+507, 525-OPP-LL	820/OKO (EPA 8015B)	ALK, CLO4, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
MO SPA	2/1/16 0825	X	X	X	X	X	X	X	X	X	X	X	1	WBC
MO HIL	1 0855	X	X	X	X	X	X	X	X	X	X	X	1	WBC
MO SIM	1015	X	X	X	X	X	X	X	X	X	X	X	1	WBC
MO MPK	0945	X	X	X	X	X	X	X	X	X	X	X	1	WBC
MO HIO	1100	X	X	X	X	X	X	X	X	X	X	X	1	WBC
MO OXN	0850	X	X	X	X	X	X	X	X	X	X	X	1	KH, SG
MO HUC	✓ 10:50	X	X	X	X	X	X	X	X	X	X	X	1	LM, SC

Relinquished: Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation VCWPD Date/Time 2-1-16 / 1345

Received: Printed Name Joc Ngok Liu CHOW
 Signature Joc Ngok Liu Chow
 Affiliation RELIABLE Date/Time 2/1/16 / 1345

Other Notes: 1) Filter the dissolved metals and perform conductivity analyses immediately.
 2) Na, K, NH4, dissolved organic carbon and dissolved inorganic carbon are test for all sites for 2015/16 monitoring season
 3) Please do not dilute limited volume samples when enacting priority list (flow reporting limits are important)



Sampling Team: _____

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



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

Sampling Date: 3-6-2016 Project Number: 2015/16-4 (Wet)
 Sampling Team: Lara Meeker & Dawn L. McKee

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-MKR		X	X	X	X	X	X	X	1 DNA Filter
	ME-MR2	3-6-16 4:25	X	X	X	X	X	X	X	1 DNA Filter 3 DNA Jars
	MO-01A	3-6-16 2:10	X	X		X	X	X	X	1 DNA Filter 1 Jar
	MO-ME1	3-6-16 3:00	X	X		X	X	X	X	1 DNA Filter 1 Jar
	MO-HUB		X	X		X	X	X	X	1 DNA Filter
	MO-MPK		X	X		X	X	X	X	1 DNA Filter

Relinquished Printed Name: Lara Meeker
 Signature: [Signature]
 Affiliation: VCHCA Date/Time: 3-6-2016 5:50

Received Printed Name: Syreetta Steele
 Signature: [Signature]
 Affiliation: PHC Date/Time: 3/6/16 5:50 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 1)

Sampling Date 3/6/16 Project Number: 2015/16-4 (Wet)
 Sampling Team T. LIDDELL, J. MCRODY

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-SCR	3/6/16 0440	X	X	X	X	X	X	1	1 DNA Filter
	ME-VR2 <i>JS</i>		X	X	X	X	X	X	2	3 DNA Filters
	MO-CHA <i>JS</i>		X	X		X	X	X	2	2 DNA Filters
	MO-MTH <i>JS</i>		X	X		X	X	X	2	2 DNA Filters
	MO-FUR	3/6/16 0245	X	X		X	X	X	1	1 DNA Filter
	MO-MTK	3/6/16 0140	X	X		X	X	X	1	1 DNA Filter

Relinquished Printed Name TOMMY LIDDELL
 Signature *T. Liddell*
 Affiliation VCWPP Date/Time 3/6/16 0525

Received Printed Name Syreea Steele
 Signature *Syreea Steele*
 Affiliation PHL Date/Time 3/6/16 535

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time
1:10 1:500, and 1:1000 dilutions for Enterococcus and E. coli



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

Sampling Date: 3/6/16 Project Number: 15G1FF08
 Sampling Team: T. LIDDELL, J. MCKORY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	DNA Filter								Number of Bottles	NOTES
	ME SCR <i>J</i>		X								1	3 DNA Filters
	ME SCR	3/6/16 0440	X								1	3 DNA Filters
	ME SCR2 <i>J</i>		X								1	3 DNA Filters

Relinquished Printed Name: TAMM LIDDELL
 Signature: *T. Liddell*
 Affiliation: VCHCA Date/Time: 3/6/16 0525

Received Printed Name: Syreea Steele
 Signature: *Syreea Steele*
 Affiliation: PHL Date/Time: 3/6/16 535

Other Notes: Perform bacteriological analyses within 6 hours of sample collection time
1:10 E. coli, and 1:10000 dilutions for heterotrophic and T. coli



607098

Chain of Custody Record

Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Wet Season
Grabs - Weck Laboratories (SIDE 1 of 1)

Sampling Date: 3-6-2016

Project Number: 2015/16-4 (Wet) Grabs

Sampling Team: Tommy Liddle & Jim Gray; Lora Meeker & Dean Wilkinson

SAMPLE ID	DATE/TIME COLLECTED						Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2-CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if hits						Number of Bottles	NOTES
ME-SCR	3/6/16 0440	2	1	2	3	1											9	TL, JM
ME-VR2	3/6/16 0425	2	1	2	3	1											9	LM, DW
MO-OJA	3/6/16 0210	2	1	2	3	1											9	LM, DW
MO-MEI	3/6/16 0300	2	1	2	3	1											9	LM, DW
MO-HUE	3/6/16 0245	2	1	2	3	1											9	TL, JM
MO-MPK	3/6/16 0140	2	1	2	3	1											9	TL, JM

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

Relinquished Printed Name: Kelly Habs
Signature: [Signature]
Affiliation: FWPD Date/Time: 3/6/16/

Received Printed Name: Heather Sanchez
Signature: [Signature]
Affiliation: Weck Labs Date/Time: 3-6-16 14:30

Other Notes: Travel blanks are only to be analyzed if samples have hits of MTBE or 2-CLEVE
EPA #24 has replaced EPA 524.2 for MTBE and 2-Cleve
Lab: 3/6/16 16:20 240



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

6607005

Sampling Date: 3/6/16

Project Number: 2015/16 (Wet) Composites

Sampling Team: KH, SG, LM, DW, TL, JM

SAMPLE ID	DATE/TIME COLLECTED	Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO ₃ -N, Total Chlorine Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MEAS, TKN, Ammonia, TOC	NO ₃ +NO ₂ (353.2), Cl ₂ , F ₂ , SO ₄ (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.3- Herb 547-Glyphosate, 608-CTR	525.2 Reg-907, 525-OPP-LL	DRO/ORO (EPA 8015B)	ALK, CLO ₄ , 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	3/6/16 1315	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, SG
ME-VR2	3/6/16 1230	X	X	X	X	X	X	X	X	X	X	X	X	1	KH, SG
MO-HUE	3/6/16 0609	X	X	X	X	X	X	X	X	X	X	X	X	1	TL, SJM
MO-OJA	3/6/16 0345	X	X	X	X	X	X	X	X	X	X	X	X	1	LM, DW
MO-MEI	3/6/16 0400	X	X	X	X	X	X	X	X	X	X	X	X	1	LM, DW
MO-MPK	3/6/16 0400	X	X	X	X	X	X	X	X	X	X	X	X	1	TL, JM

Relinquished Printed Name: Kelly Habs
 Signature: [Signature]
 Affiliation: VWD Date/Time: 3/6/16

Received Printed Name: Heather Sanchez
 Signature: [Signature]
 Affiliation: Week 1-19.5 Date/Time: 3-6-16/14:30

(Other Notes: 1) Filter for dissolved metals and perform conductivity analyses immediately. Reck
 2) N₃, K, SC₄, dissolved organic carbon and dissolved inorganic carbon are new for all sites for 2015/16 monitoring season.
 3) Please do not dilute limited volume samples when coating priority list (low reporting limits are important). 3/6/16 16:20 206



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

6607005

Sampling Date: 3/6/16 Project Number: 2015/16-4 (Wet) Cleaning
 Sampling Team: KH

EQUIPMENT	Clean with detergent and HNO ₃	Clean with detergent, HNO ₃ , and methanol*	No action required	NOTES
18.5 L wide neck carboy and lid				Please place cap or plastic bag over top and store on wrap if bottle was cleaned with methanol
Blue cube cooler				
Black bags			6	
20 L narrow neck carboy, 2 lids, attachment assembly	6			Please place cap or plastic bag over top and store on wrap if bottle was cleaned with methanol
Grey buckets			6	

Relinquished Printed Name Kelly Hols
 Signature [Signature]
 Affiliation VWPD Date/Time 3/6/16

Received Printed Name Heather Sanchez
 Signature [Signature]
 Affiliation WSP/AGS Date/Time 3-6-16 14:30

Other Notes: * Please clean with detergent, nitric, and methanol and do not reuse 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: 6-15-16

Project Number: 2015/16-5 (Dry)

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

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)				Number of Routes	NOTES
MO-CC			X	X	X	X	X					
MO-SGR			X	X	X	X	X					
	MO-VR2	6-15-16/0945	X	X	X	X	X					
	MO-HUE	6-15-16/1055	X	X		X	X					
MO-BL			X	X		X	X					
MO-GAM			X	X		X	X					
MO-SIM			X	X		X	X					
MO-THO			X	X		X	X					

Relinquished Printed Name: W.B. CAREY
 Signature: W.B. Carey
 Affiliation: VCWPD Date/Time: 6-15-16/1205

Received Printed Name: Nadia Van Buren
 Signature: Nadia Van Buren
 Affiliation: PHLAD Date/Time: 061516 1205

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 (Contract AE12-001)
Grabs - Week Laboratories (SIDE 1 of 1)

Sampling Date: 6-15-16

Project Number: 2015/16 5 (Dry) Grabs

Sampling Team: WBC & DW

SAMPLE ID	DATE/TIME COLLECTED	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding travel blanks.					Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2-CLEVE (EPA 624)	Travel Blanks (EPA 624)-only analyze if file		
ME-CC		2	1	2	3	1	9	
ME-SCR		2	1	2	3	1	9	
ME-VR2	<u>6-15-16/0945</u>	2	1	2	3	1	9	
MO-FUE	<u>6-15-16/1035</u>	2	1	2	3	1	9	
MO-FIL		2	1	2	3	1	9	
MO-GAM		2	1	2	3	1	9	
MO-GM		2	1	2	3	1	9	
MO-THO		2	1	2	3	1	9	

Relinquished: Printed Name: W.B. CAREY
 Signature: W.B. CAREY
 Affiliation: VCWPD Date/Time: 6-15-16/ 1335

Received: Printed Name: ALAN G.
 Signature: [Signature]
 Affiliation: WEEK Date/Time: 6/15/16 1335

Other Notes: Travel blanks are only to be analyzed if samples have lip or MTBE or 2 CLEVE
EPA 624 has replaced EPA 524.2 for MTBE and 2 Clev



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Dry Weather (Contract AE12-001)
Composites - Week Laboratories (SIDE 1 of 1)

Sampling Date: **6-15-16**

Project Number: 2015/16 5 (Dry) Composites

Sampling Team: **WBC & DW**

SAMPLE ID	DATE/TIME COLLECTED	Dissolved Inorganic Carbon and Dissolved Organic Carbon	NO ₃ -N, Total Chloride Residual	Metals, total & dissolved (+ Hardness), & Barium (total only)	Cr+6	BOD, COD, MBAS, TKN, Ammonia, TOC	NO ₃ +NO ₂ (353.2), Cl, F, SO ₄ (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-LI.	DRO/ORO (EPA 8015B)	ALK, ClO ₄ , Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
ME-CE														1	
ME-CEH														1	
ME-VR2	6-15-16/0945													1	
MO-HUF	6-15-16/1055													1	
MO-FIL														1	
MO-CLM														1	
MO-FIM														1	
MO-THO														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.), 4% 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. CARST**

Signature: **W.B. CARST**

Affiliation: **VCWPD**

Date/Time: **6-15-16/1325**

Received Printed Name: **ALAN G.**

Signature: **ALAN G.**

Affiliation: **WBC**

Date/Time: **6/15/16 1335**

Other Notes: 1) Filter for dissolved metals and perform conductivity analyses immediately

2) Please do not dilute limited volume samples when collecting preservatives (low rep. main. limit. are important)



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Dry Weather (Contract AE12-001)
Equipment - Week Laboratories

Sampling Date: 6-15-16 Project Number: 2015/16-5 (Dry) Cleaning
 Sampling Team: WBC & BW

EQUIPMENT	Clean with detergent and HNO ₃	Clean with detergent, HNO ₃ , and methanol*	No action required		NOTES
18.5 L. wide neck carboy and lid	2				Please place tape on plastic bag over top and note on wrap if bottle was cleaned with methanol.
Blue cube cooler	2				
Black bags	2				
20 L. narrow neck carboy, 2 lids, attachment assembly	1				Please place tape on plastic bag over top and note on wrap if bottle was cleaned with methanol.

Relinquished Printed Name: W.B. CAREY
 Signature: W.B. Carey
 Affiliation: VCWPD Date/Time: 6-15-16 / 1335

Received Printed Name: MILAN C
 Signature: [Signature]
 Affiliation: WBC Date/Time: 6/15/16 1335

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: 6-21-16 Project Number: 2015/16 S-1030
 Sampling Team: W.B. CAREY & D. WILKINSON

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNXX)	Fecal Coliform (25 Tube Method - MPNXX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
MO-CC			X	X	X	X	X				
MO-SCR		<u>6-21-16/0940</u>	X	X	X	X	X			<u>1</u>	
MO-VR2			X	X	X	X	X				
MO-HUE			X	X		X	X				
MO-FIL		<u>6-21-16/0930</u>	X	X		X	X			<u>1</u>	
MO-GAM			X	X		X	X				
MO-SIM			X	X		X	X				
MO-THO			X	X		X	X				

Relinquished Printed Name: W.B. CAREY
 Signature: W.B. Carey
 Affiliation: VCWPD Date/Time: 6-21-16/1050

Received Printed Name: Nadia Van Buren
 Signature: Nadia Van Buren
 Affiliation: PHILAB Date/Time: 6-21-16/1030

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



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Dry Weather (Contract A12-001)
Grabs - Week Laboratories (SIDE 1 of 1)

Sampling Date: 6-21-16 Project Number: 2015/16-5 (Dry) Grabs
 Sampling Team: W.B. CAREY & D. WILKINSON

SAMPLE ID	DATE/TIME COLLECTED																Number of Bottles	NOTES
		Oil & Grease (EPA 1664A)	Cyanide (ASTM D7511)	GRO (EPA 8015B)	MTBE & 2-CLEVE (EPA 621)	Travel Blanks (EPA 624)-only analyze if hits												
ME-CC		2	1	2	1	1											0	
ME-SCR	6-21-16 / 0940	2	1	2	1	1											0	
ME-VBZ		2	1	2	1	1											0	
MO-HUE		2	1	2	1	1											0	
MO-FUL	6-21-16 / 0830	2	1	2	1	1											0	
MO-CAM		2	1	2	1	1											0	
MO-SIM		2	1	2	1	1											0	
MO-THO		2	1	2	1	1											0	

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

Relinquished Printed Name: W.B. CAREY
 Signature: W.B. Carey
 Affiliation: VCWPD Date/Time: 6-21-16/

Received Printed Name: _____
 Signature: _____
 Affiliation: WEEK Date/Time: 6-21-16/

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 Dry Weather (Contract AE12-001)
Composites - Week Laboratories (SIDE 1 of 1)

Sampling Date: 6-21-16

Project Number: 2015/16-5 (Dry) Composites

Sampling Team: W.B. CAREY & D. WILKINS+V

SAMPLE ID	DATE/TIME COLLECTED																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cl, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg

Metals by 200.7, Total (only): Ca, Mg [for Hardness calc.], Al, Na, K

608 include alpha- & gamma-chlordane

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

Lab to select samples for MS/MSD where extra volume permits (a.i test)

Relinquished: Printed Name W.B. CAREY

Signature: W.B. Carey

Affiliation: VCWPD

Date/Time: 6-21-16 / 1500

Received: Printed Name ALLAN G.

Signature: Allan G.

Affiliation: WECK

Date/Time: 6-21-16 / 1500

Other Notes: 1) Filter for dissolved metals and perform conductivity analyses immediately.

2) Dissolved organic carbon and dissolved inorganic carbon are very sensitive to 20°C temperature change.

* Please do not dilute limited volume samples when analyzing priority list. Your reporting limits are important!



Chain of Custody Record
Ventura County Watershed Protection District
NPDES Stormwater Monitoring Program
Project: NPDES Stormwater Dry Weather (Contract AF-12-001)
Equipment - Weck Laboratories

Sampling Date: 6-21-16 Project Number: 2015/16-5 (Dry) Clearing
 Sampling Team: W.B. CAREY & D. WILKINSON

EQUIPMENT	CLEANING METHOD				NOTES
	Clean with detergent and HNO ₃	Clean with detergent, HNO ₃ , and methanol*	No action required		
18.5 l. wide neck carboy and lid	1				Please place tape on plastic bag over top and note on wrap of bottle was cleaned with methanol.
Blue cubic container	2				
Black bags	2				
20 L. narrow neck carboy, 2 lds, attachment assembly	1				Please place tape on plastic bag over top and note on wrap of bottle was cleaned with methanol.

Relinquished Printed Name: W.B. CAREY
 Signature: W.B. Carey
 Affiliation: VCWPD Date/Time: 6-21-16 / 1500

Received Printed Name: Allen G
 Signature: Allen
 Affiliation: WECK Date/Time: 6-21-16 / 1500

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 organic 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 6-23-16 Project Number 2015/16-5 (Dry)
 Sampling Team W.B. CAREY & J. McCRAY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (25 Tube Method - MPNX)	Fecal Coliform (25 Tube Method - MPNX)	Enterococcus (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)	Total Coliform (Tray Method - WQ IDEXX)			Number of Bottles	NOTES
	ME-CC ✓	6/23/16 10:10	X	X	X	X	X				
	ME-SCH		X	X	X	X	X				
	ME-VB2		X	X	X	X	X				
	MO-HUE		X	X		X	X				
	MO-PH		X	X		X	X				
	MO-CAM ✓	6/23/16 11:00	X	X		X	X				
	MO-SIM ✓	6/23/16 8:15	X	X		X	X				
	MO-THO ✓	6/23/16 9:15	X	X		X	X				
	FD-1 ✓	6/23/16 10:10	X	X	X	X	X				collected over phone

Relinquished Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation NEWAD Date/Time 6-23-16 / 1200

Received Printed Name Sydney Steele
 Signature [Signature]
 Affiliation DHL Date/Time 6/23/16 1200

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 (Contract AE12-001)

Grabs - Week Laboratories (SIDE 1 of 1)

Sampling Date: 6-23-16

Project Number: 2015/16-5 (Dry) Grabs

Sampling Team: W.B. CAREY & J. MCCABRY

SAMPLE ID	DATE/TIME COLLECTED	Oil & Grease (EPA 1664A) Cyanide (ASTM D7511) GRO (EPA 8015B) MTBE & 2CLBE (EPA 624) Grab & Blanks (EPA 624)-only analyze if data					Number of Bottles	NOTES
		1	2	3	4	5		
MR-CC	6-23-16/1010	1	1	2	3	1	9	Lab to select samples for MS/MSD where extra volume permits (all test methods) excluding leave blanks.
MR-SCR		2	1	2	3	1	9	
MR-VT2		2	1	2	3	1	9	
MR-HGE		2	1	2	3	1	9	
MR-PIL		2	1	2	3	1	9	
MR-CAM	6-23-16/1100	2	1	2	3	1	9	← bottles submitted but not marked up to request analyses collected on 6/27. J. Smith, left with email 6/27 - not confirmed called.
MR-SIM	6-23-16/0815	2	1	2	3	1	9	
MR-THO	6-23-16/0915	2	1	2	3	1	9	
FD-1	6/23/16/10:00	2	1	2	3	1	9	

Relinquished

Printed Name: W.B. CAREY

Signature: W.B. Carey

Affiliation: VCWPD

Date/Time: 6-23-16/1500

Received

Printed Name: ALLAN GULOSANG

Signature: Allan Gulosang

Affiliation: WICK

Date/Time: 6-23-16/1500

Other Notes:

Final 1 tanks are only to be analyzed if samples were less than 10% (ASTM)

EPA 624 has replaced EPA 824.2 for MTBE and 2-ClBE



Chain of Custody Record

Ventura Countywide Stormwater Management District
 NPDES Stormwater Management Program
 Project NPDES Stormwater Dis. # 00101 (Contract 4212-001)
 Composites - Week Laboratories (SITDF 1 of 1)

Sampling Date: 6-23-16

Project Number: 2015/16 S (Dist) Composites

Sampling Team: W.B. CAREY & J. McCURRY

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	ROD, COB, MBAS, TKN, Ammonia, TOC	NO3+NO2 (353-2), Cl, F, SO4 (300.0), Phenolics	Phosphorus-P Total & Dissolved	625-CTR, 8270SIM-PAH, 8270SIM-Phenols *	515.5-Herb 547-Cyphusate, 608-CTR	525.2 Reg+507, 525-OPP-I.L	DRO/ORO (EPA 8015f)	ALK, CL04, Turb, TDS, TSS, VSS, Cond	Number of Bottles	NOTES
MO CC	6-23-16/1010	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO FCR		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO VR2		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO HUE		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO PH		X	X	X	X	X	X	X	X	X	X	X	X	1	
MO CAM	6-23-16/1100	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO SIM	6-23-16/0815	X	X	X	X	X	X	X	X	X	X	X	X	1	
MO TRIO	6-23-16/0915	X	X	X	X	X	X	X	X	X	X	X	X	1	

Metals by 200.8, Total & Dissolved: Sb, Ag, Al, As, Be, Cd, Cr, Cu, Fe, Ni, Pb, Se, Ti, Zn, Hg
 Metals by 200.7, Total (only): Ca, Mg (for Hardness calc.), etc.
 608 include alpha- & gamma-chlorane
 * 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 lab test

Relinquished Printed Name W.B. CAREY
 Signature W.B. Carey
 Affiliation UCWPB Date/Time 6-23-16/1500

Received Printed Name ALLAN FOLMERT
 Signature [Signature]
 Affiliation WACK Date/Time 6-23-16/1500

Other Notes By Filter for dissolved metals and perform conductivity analysis immediately

Notes: 1. Do not fill out this form. 2. Do not fill out this form when conducting an initial or routine monitoring program.



Chain of Custody Record
 Ventura County Watershed Protection District
 NPDES Stormwater Monitoring Program
 Project: NPDES Stormwater Dry Weather (Contract AF22-05)
 Equipment - Week Laboratories

Sampling Date 6-23-16 Project Number 2015/16 5 (Dry) Cleaning
 Sampling Team W.B. CARY & J. MCCABE

EQUIPMENT	Clean with detergent and HNO ₃	Clean with detergent, HNO ₃ , and methanol*	No action required		NOTES
15.5 L. wide neck carboy and lid	1				Plastic carboy & plastic bag over top and bottom were rinsed & then was cleaned with methanol
Blue cube coulet	4				
Black bags	4				
20 L. narrow neck carboy, 4 lids, attachment assembly	3				Plastic carboy & plastic bag over top and bottom were rinsed & then was cleaned with methanol

Relinquished Printed Name W.B. CARY
 Signature W.B. Cary
 Affiliation VCWQB Date/Time 6-23-16/1500

Received Printed Name ALLAN GUDGER
 Signature Allan
 Affiliation Wick Date/Time 6-23-16/1500

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 organic contamination). Record the bottles cleaned with methanol.



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

Invoice Contract No. AE12-001

Sampling Date: 8/16/16, 8/17/16, 8/18/16 Sample Event: DRYWEA 2016-DRY

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

SAMPLE ID	DATE/TIME COLLECTED	Total Hardness	TOC	Dissolved Metals by 200.µ (Lead, Zinc, Copper)	Number of Batches	NOTES
Camarillo 4	8/17/16 11:50	X	X	X	3	West Tishwinis Drain
Pillmore 1	8/16/16 12:00	X	X	X	3	MO-FIL
Newspark 2	13:25	X	X	X	3	Gokbert Cyn
Cape 6	09:30	X	X	X	3	Pox Cyn Trib
Oxnard 2	8/17/16 10:30	X	X	X	3	Strake Drain
Pied Huernemo 3	8/18/16 09:30	X	X	X	3	Bubbling Springs
Santa Paula 4	8/16/16 11:20	X	X	X	3	Richmond Drain
Santa Valley 1	14:10	X	X	X	3	MO-Sim
Thousand Oaks 1	8/17/16 13:40	X	X	X	3	MO-MO (at bridge)
Trinidad 4	12:50	X	X	X	3	Arroyo Santa Rosa
Ventura 5	08:55	X	X	X	3	Dent Drain

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 ca't.)

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

Received Printed Name: ALLAN GOLDBERG
 Signature: [Signature]
 Affiliation: WEEK LABS Date/Time: 8/18/16 / 1520

Other Notes: _____



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

Sampling Date

8/16/16

Sample Event DRY 2016

Sampling Team

K. HAHS W.B. CAREY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)									Number of Bottles	NOTES
	Camarillo 1	—												MO-CAM
	Fallbrook 1	8/16/16 12:00	X	X										MO-FB
	Montezuma 2	13:25	X	X										MO-MPK
	Ojai 6	↓ 0930	X	X										MO-OJA
	Orland 1	—												MO-ORN
	Post Flume 3	—												DRY-FLU
	Santa Paula 4	8/16/16 11:20	X	X										DRY-SPA
	Sand Valley 1	↓ 14:10	X	X										MO-SVM
	Thousand Oaks 1	—												MO-THO
	Unincorporated 4	—												DRY-UN4
	Ventura 1	—												MO-VEN

Relinquished

Printed Name

KELLY HAHS

Signature

Kelly HaHS

Affiliation

VCWPD

Date/Time

8/16/16 / 15:00

Received

Printed Name

Nadia Van Buren

Signature

Nadia Van B

Affiliation

PH LAB

Date/Time

08/16/16 @ 1500

Other Notes

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



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

Sampling Date: 8/17/16

Sample Event: DDRY 2016

Sampling Team: K. HAHS, L. MECKER

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)							Number of Bottles	NOTES
	Camarillo 4	8/17/16 1150	X	X							1	MO CAM
	Fillmore 4	—										MO FIL
	Mariposa 1	—										MO MPK
	Port 1	—										MO OJA
	Onard 2	8/17/16 1030	X	X							1	MO ONN
	Red Bluff 3	—										DRY HUE3
	Santa Paula 2	—										DRY SPA2
	San Valley 1	—										MO SIM
	Thousand Oaks 1	8/17/16 1340	X	X							1	MO THO
	Unincorporated 4	1250	X	X							1	DRY UNI4
	Ventura 5	8/17/16 0855	X	X							1	MO VEN

Relinquished

Printed Name

Kelly Haas

Signature

[Signature]

Affiliation

VCHCA

Date/Time

8/17/16 / 1435

Received

Printed Name

Nadine [Signature]

Signature

[Signature]

Affiliation

PH LAB

Date/Time

8/17/16 1435

Other Notes:

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



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

Sampling Date: 8/18/16 Sample Event: DRY 2016
 Sampling Team: K. HAYS, W.B. CAREY

LAB USE ONLY	SAMPLE ID	DATE/TIME COLLECTED	Total Coliform (Tray Method - WQ IDEXX)	E. coli (Tray Method - WQ IDEXX)								Number of Bottles	NOTES
	Camarillo-1	_____	_____	_____									MO CAM
	Pillmore-1	_____	_____	_____									MO-PIL
	Mosipak-1	_____	_____	_____									MO-MPK
	Ojai-1	_____	_____	_____									MO-OJA
	Oxnard-1	_____	_____	_____									MO-ONN
	Port Huernito-3	8/18/16 0930											DRY HUE*
	Santa Paula-2	_____	_____	_____									DRY SPA2
	Star Valley-1	_____	_____	_____									MO-SIM
	Thousand Oaks-1	_____	_____	_____									MO-THO
	Unincorporated-1	_____	_____	_____									DRY UNH
	Ventura-1	_____	_____	_____									MO-VEN

Relinquished Printed Name: Kelly Hays
 Signature: [Signature]
 Affiliation: VCHCA Date/Time: 8/18/16 10:00

Received Printed Name: Nadia Van Buren
 Signature: [Signature]
 Affiliation: PA LAB Date/Time: 08/18/16 1000

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